Full wwPDB X-ray Structure Validation Report ⓘ

Jan 3, 2024 – 02:11 am GMT

PDB ID	:	4V5Q
Title	:	The crystal structure of EF-Tu and G24A-tRNA-Trp bound to a near- cognate codon on the 70S ribosome
Authors	:	Schmeing, T.M.; Voorhees, R.M.; Ramakrishnan, V.
Deposited on	:	2010-12-07
Resolution	:	3.10 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

The following versions of software and data (see references ⓘ) were used in the production of this report:

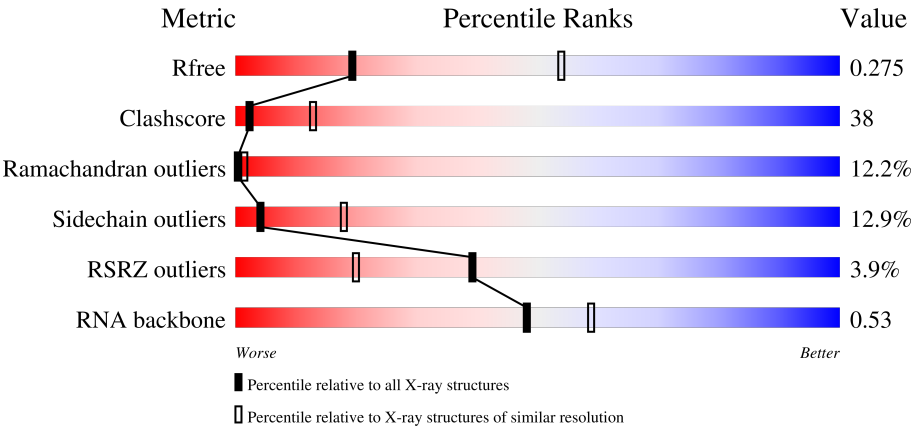
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.10 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1094 (3.10-3.10)
Clashscore	141614	1184 (3.10-3.10)
Ramachandran outliers	138981	1141 (3.10-3.10)
Sidechain outliers	138945	1141 (3.10-3.10)
RSRZ outliers	127900	1067 (3.10-3.10)
RNA backbone	3102	1116 (3.40-2.80)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1522	2% 36% 47% 13% • •
1	CA	1522	2% 28% 57% 12% • •
2	AB	256	% 28% 45% 17% • 9%
2	CB	256	% 19% 56% 16% • 9%

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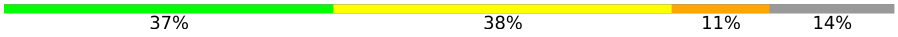
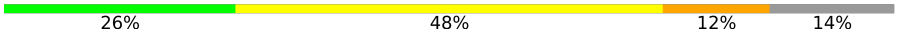
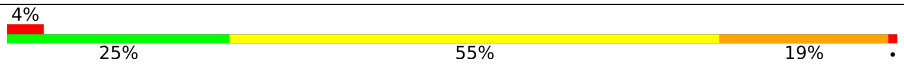
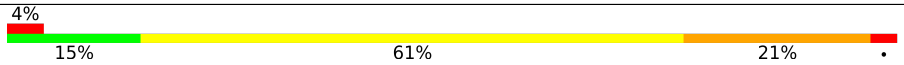
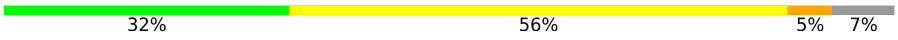
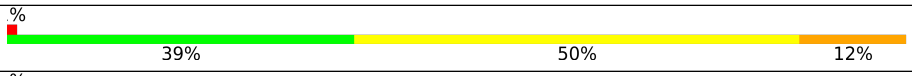
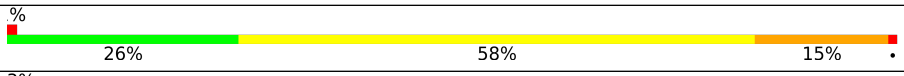
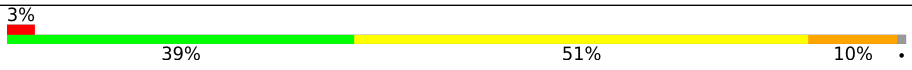
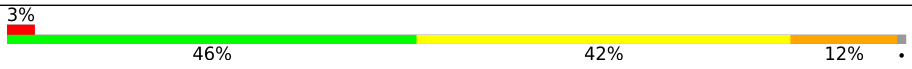
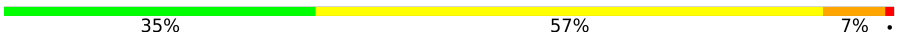
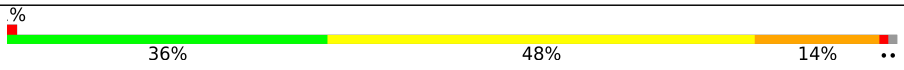
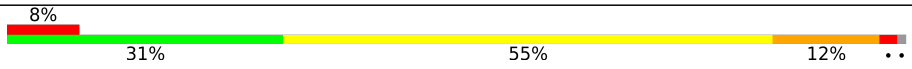
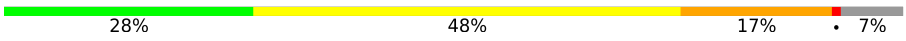
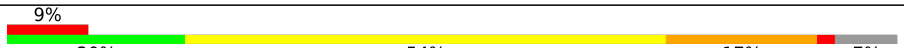
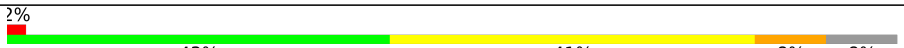
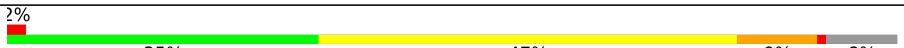
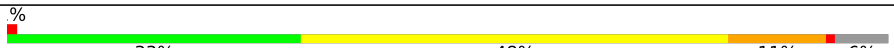
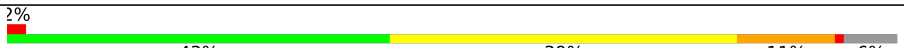
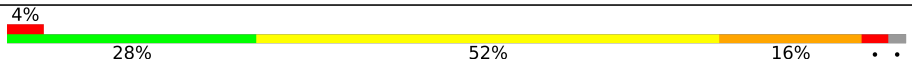
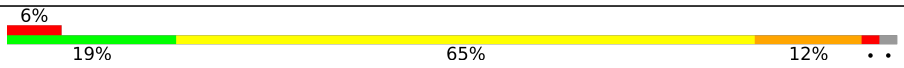
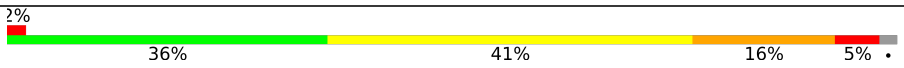
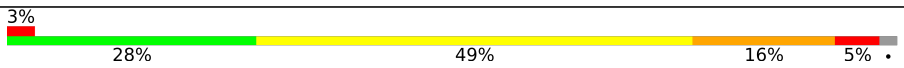
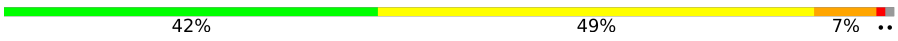
Mol	Chain	Length	Quality of chain
3	AC	239	
3	CC	239	
4	AD	209	
4	CD	209	
5	AE	162	
5	CE	162	
6	AF	101	
6	CF	101	
7	AG	156	
7	CG	156	
8	AH	138	
8	CH	138	
9	AI	128	
9	CI	128	
10	AJ	105	
10	CJ	105	
11	AK	129	
11	CK	129	
12	AL	132	
12	CL	132	
13	AM	126	
13	CM	126	
14	AN	61	
14	CN	61	
15	AO	89	

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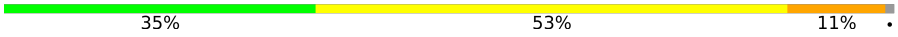
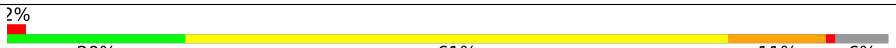
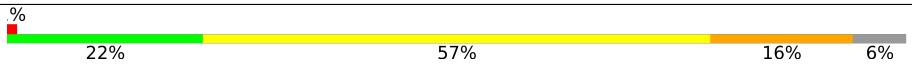
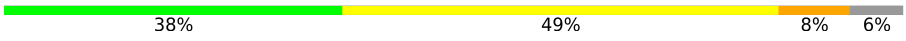
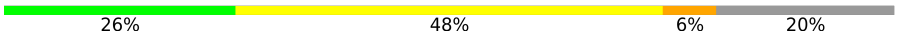
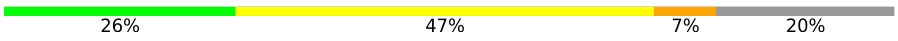
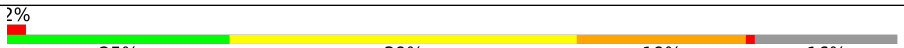
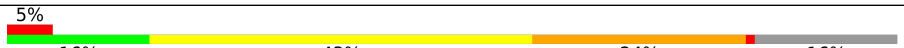
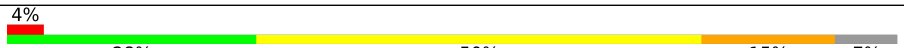
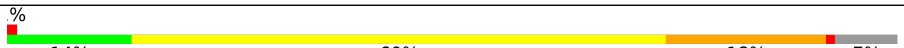
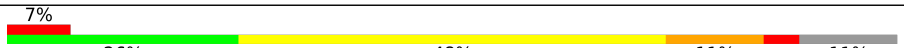
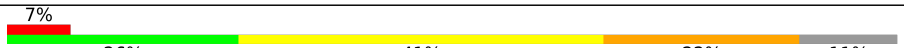
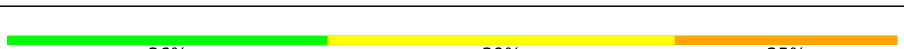
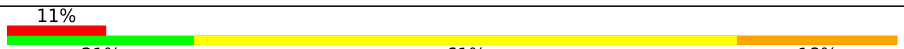
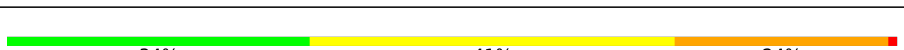
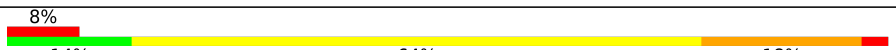
Mol	Chain	Length	Quality of chain
15	CO	89	
16	AP	88	
16	CP	88	
17	AQ	105	
17	CQ	105	
18	AR	88	
18	CR	88	
19	AS	93	
19	CS	93	
20	AT	106	
20	CT	106	
21	AU	27	
21	CU	27	
22	AV	76	
22	AW	76	
22	CV	76	
22	CW	76	
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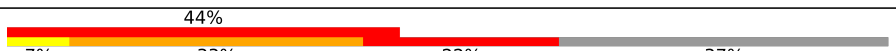
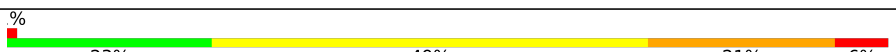
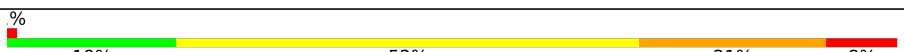
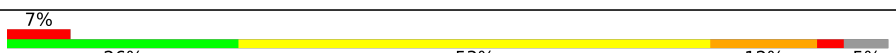
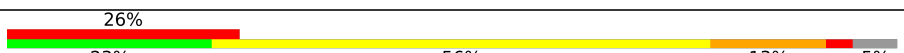
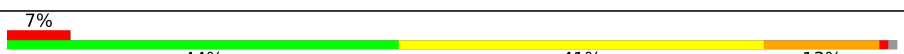
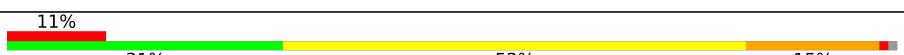
23	CX	27	
24	AY	77	
24	CY	77	
25	AZ	405	
25	CZ	405	
26	B0	85	
26	D0	85	

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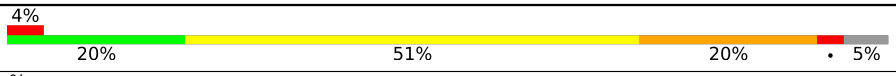
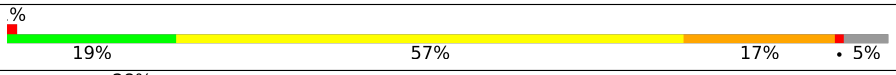
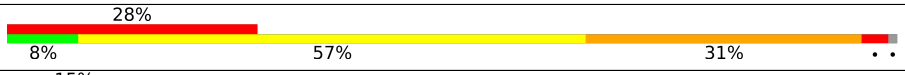
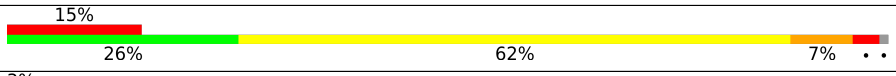
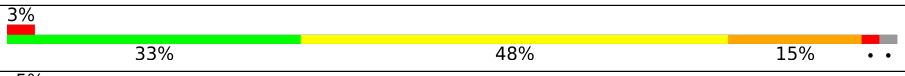
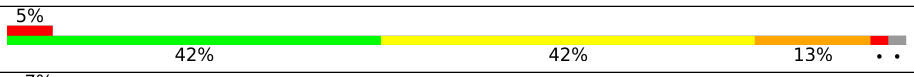
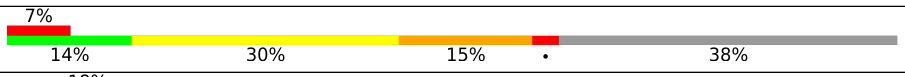
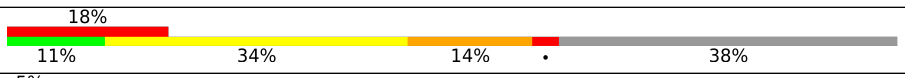
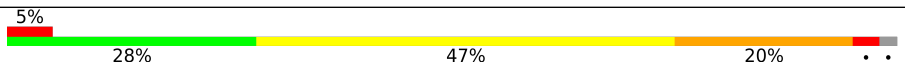
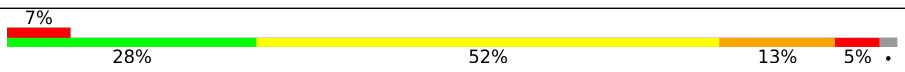
Mol	Chain	Length	Quality of chain
27	B1	98	
27	D1	98	
28	B2	72	
28	D2	72	
29	B3	60	
29	D3	60	
30	B4	71	
30	D4	71	
31	B5	60	
31	D5	60	
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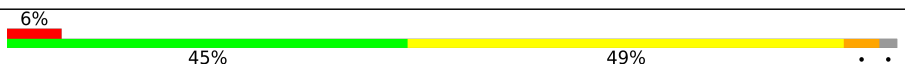
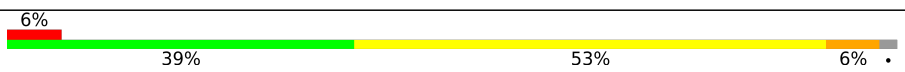
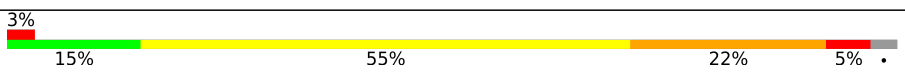
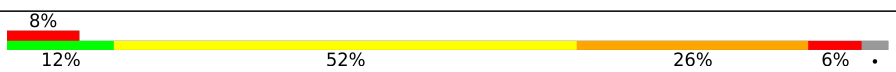
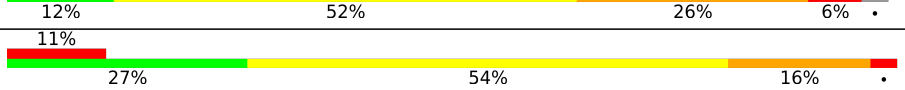
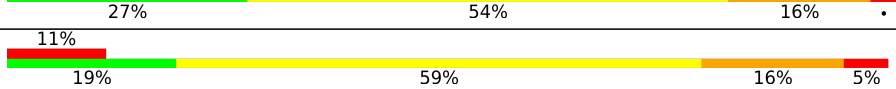
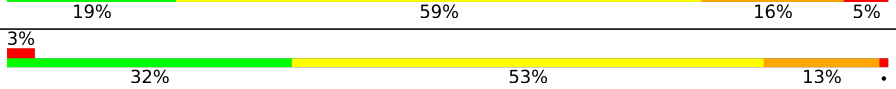
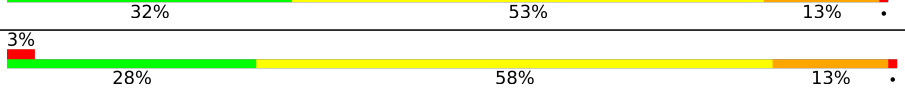
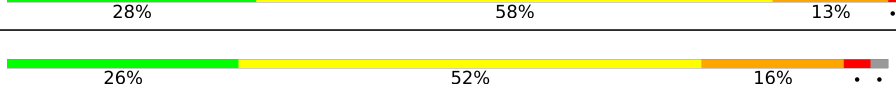
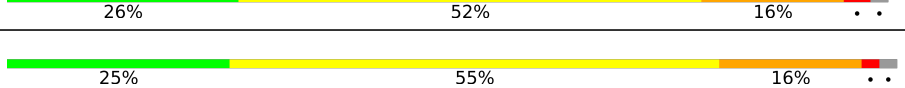
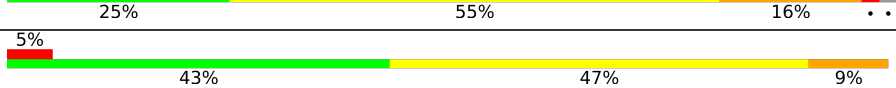
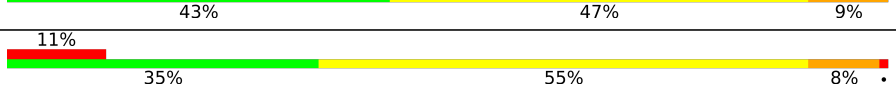
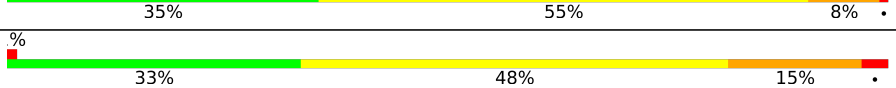
32	D6	54	
33	B7	49	
33	D7	49	
34	B8	65	
34	D8	65	
35	B9	37	
35	D9	37	
36	BA	2915	
36	DA	2915	
37	BB	122	
37	DB	122	
38	BC	229	
38	DC	229	
39	BD	276	

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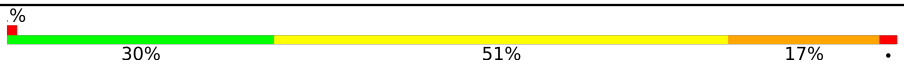
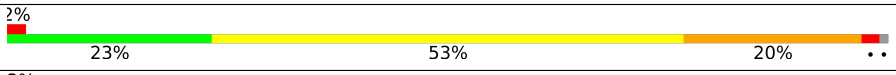
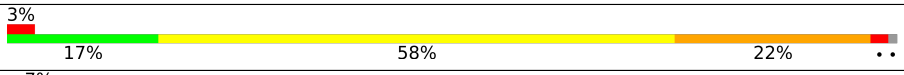
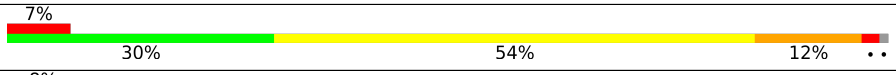
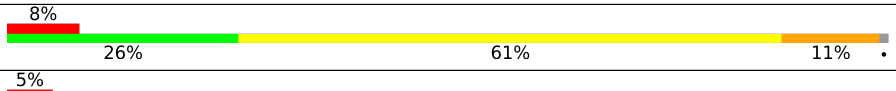
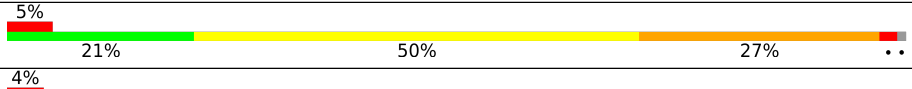
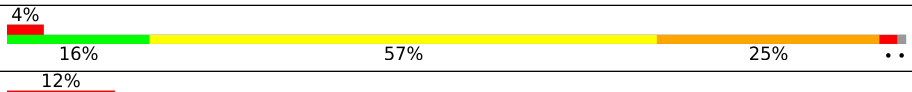
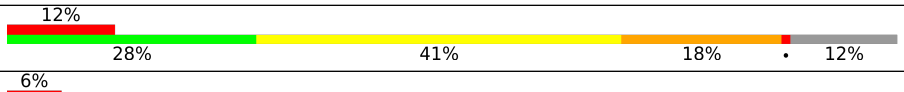
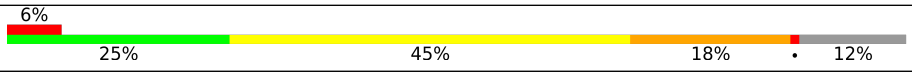
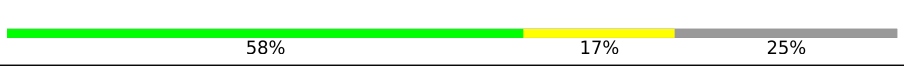
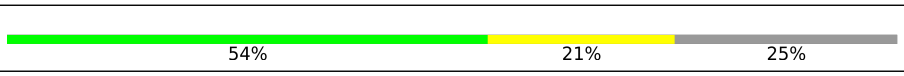
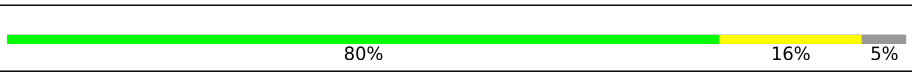
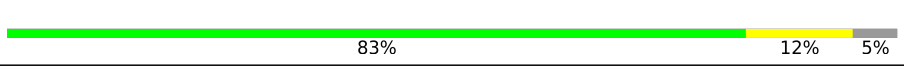
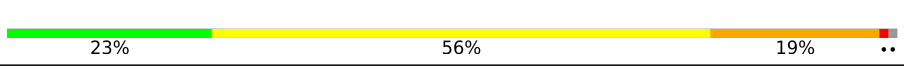
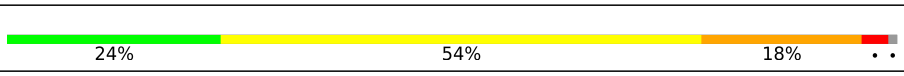
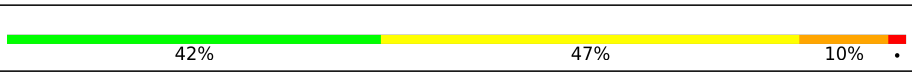
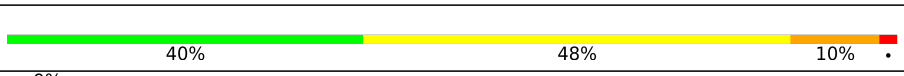
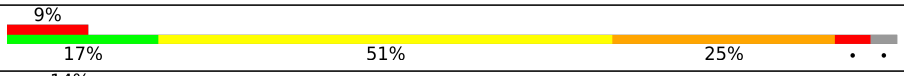
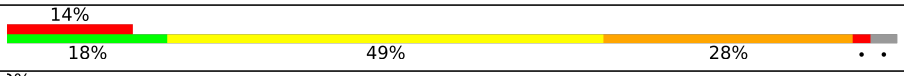
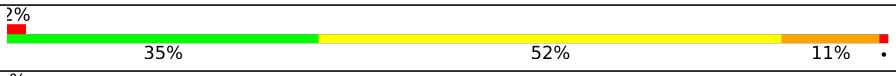
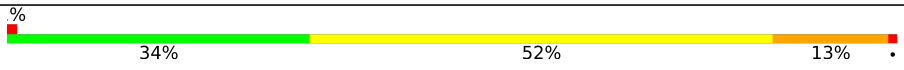
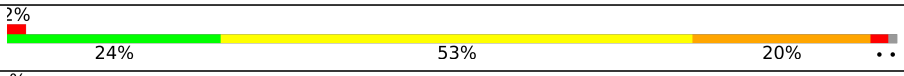
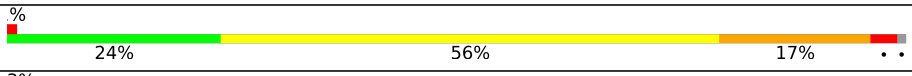
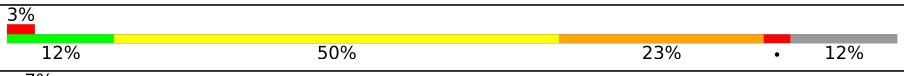
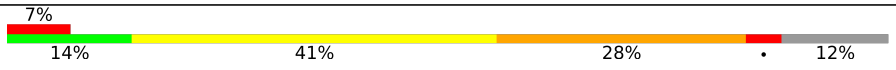
Mol	Chain	Length	Quality of chain
39	DD	276	
40	BE	206	
40	DE	206	
41	BF	210	
41	DF	210	
42	BG	182	
42	DG	182	
43	BH	180	
43	DH	180	
44	BJ	173	
44	DJ	173	
45	BK	147	
45	DK	147	
46	BN	140	
46	DN	140	
47	BO	122	
47	DO	122	
48	BP	150	
48	DP	150	
49	BQ	141	
49	DQ	141	
50	BR	118	
50	DR	118	
51	BS	112	
51	DS	112	

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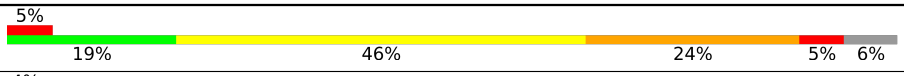
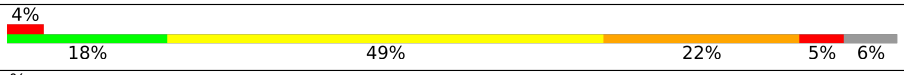
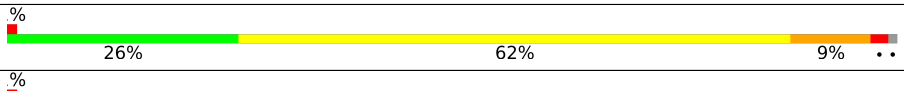
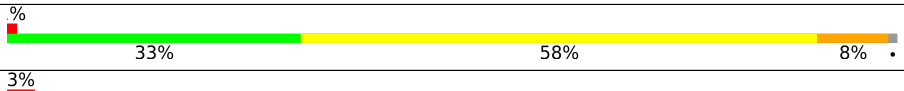
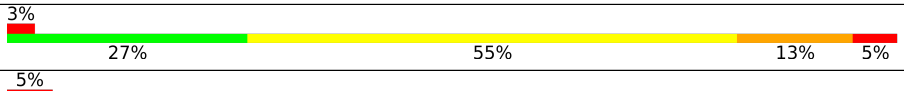
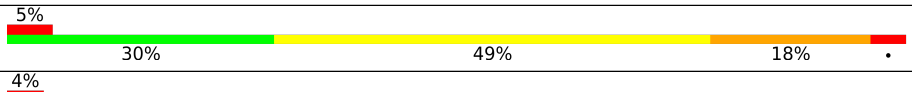
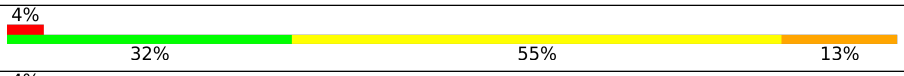
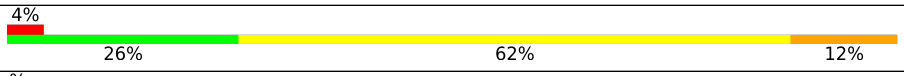
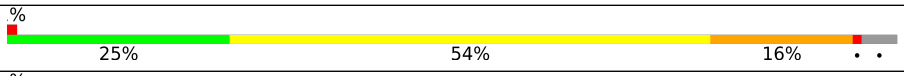
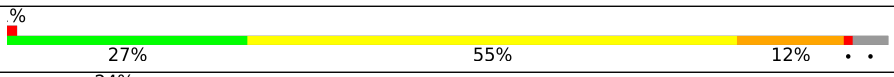
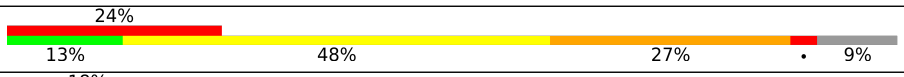
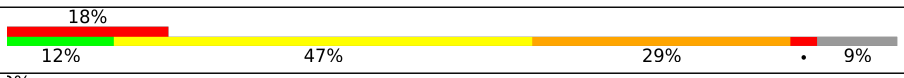
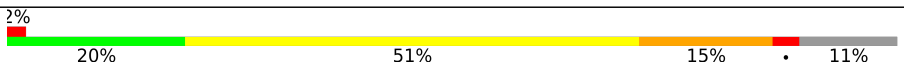
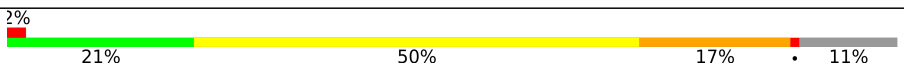
Mol	Chain	Length	Quality of chain
52	BT	146	
52	DT	146	
53	BU	118	
53	DU	118	
54	BV	101	
54	DV	101	
55	BW	113	
55	DW	113	
56	BX	96	
56	DX	96	
57	BY	110	
57	DY	110	
58	BZ	206	
58	DZ	206	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
24	H2U	AY	16	-	-	-	X
24	H2U	CY	16	-	-	-	X
24	H2U	CY	17	-	-	-	X
59	ZN	AN	101	-	-	X	-
60	GDP	AZ	501	-	-	X	-
60	GDP	CZ	501	-	-	X	-
61	KIR	CZ	502	-	-	-	X

2 Entry composition (i)

There are 61 unique types of molecules in this entry. The entry contains 307194 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a RNA chain called 16S RRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1504	Total	C	N	O	P	0	0	0
			32329	14390	5992	10444	1503			
1	CA	1504	Total	C	N	O	P	0	0	0
			32329	14390	5992	10444	1503			

- Molecule 2 is a protein called 30S RIBOSOMAL PROTEIN S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	234	Total	C	N	O	S	0	0	0
			1900	1213	341	341	5			
2	CB	234	Total	C	N	O	S	0	0	0
			1900	1213	341	341	5			

- Molecule 3 is a protein called 30S RIBOSOMAL PROTEIN S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			
3	CC	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			

- Molecule 4 is a protein called 30S RIBOSOMAL PROTEIN S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AD	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			
4	CD	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

- Molecule 5 is a protein called 30S RIBOSOMAL PROTEIN S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	150	Total	C	N	O	S	0	0	0
			1146	724	217	201	4			
5	CE	150	Total	C	N	O	S	0	0	0
			1146	724	217	201	4			

- Molecule 6 is a protein called 30S RIBOSOMAL PROTEIN S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			
6	CF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 7 is a protein called 30S RIBOSOMAL PROTEIN S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			
7	CG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

- Molecule 8 is a protein called 30S RIBOSOMAL PROTEIN S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			
8	CH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 9 is a protein called 30S RIBOSOMAL PROTEIN S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	AI	127	Total	C	N	O	0	0	0
			1010	639	197	174			
9	CI	127	Total	C	N	O	0	0	0
			1010	639	197	174			

- Molecule 10 is a protein called 30S RIBOSOMAL PROTEIN S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AJ	98	Total	C	N	O	S	0	0	0
			794	499	156	138	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CJ	98	Total	C	N	O	S	0	0	0
			794	499	156	138	1			

- Molecule 11 is a protein called 30S RIBOSOMAL PROTEIN S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AK	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			
11	CK	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			

- Molecule 12 is a protein called 30S RIBOSOMAL PROTEIN S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AL	124	Total	C	N	O	S	0	0	0
			970	611	195	163	1			
12	CL	124	Total	C	N	O	S	0	0	0
			970	611	195	163	1			

- Molecule 13 is a protein called 30S RIBOSOMAL PROTEIN S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	124	Total	C	N	O	S	0	0	0
			987	611	205	169	2			
13	CM	124	Total	C	N	O	S	0	0	0
			987	611	205	169	2			

- Molecule 14 is a protein called 30S RIBOSOMAL PROTEIN S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AN	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			
14	CN	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			

- Molecule 15 is a protein called 30S RIBOSOMAL PROTEIN S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AO	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			
15	CO	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			

- Molecule 16 is a protein called 30S RIBOSOMAL PROTEIN S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AP	83	Total	C	N	O	S	0	0	0
			700	443	139	117	1			
16	CP	83	Total	C	N	O	S	0	0	0
			700	443	139	117	1			

- Molecule 17 is a protein called 30S RIBOSOMAL PROTEIN S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			
17	CQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			

- Molecule 18 is a protein called 30S RIBOSOMAL PROTEIN S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	AR	70	Total	C	N	O	0	0	0
			574	367	112	95			
18	CR	70	Total	C	N	O	0	0	0
			574	367	112	95			

- Molecule 19 is a protein called 30S RIBOSOMAL PROTEIN S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	78	Total	C	N	O	S	0	0	0
			629	403	114	110	2			
19	CS	78	Total	C	N	O	S	0	0	0
			629	403	114	110	2			

- Molecule 20 is a protein called 30S RIBOSOMAL PROTEIN S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AT	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			
20	CT	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			

- Molecule 21 is a protein called 30S RIBOSOMAL PROTEIN THX.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	AU	24	Total	C	N	O	0	0	0
			208	128	50	30			
21	CU	24	Total	C	N	O	0	0	0
			208	128	50	30			

- Molecule 22 is a RNA chain called E-SITE TRNA PHE OR P-SITE TRNA PHE.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AV	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
22	AW	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
22	CV	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
22	CW	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			

- Molecule 23 is a RNA chain called MRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AX	17	Total	C	N	O	P	0	0	0
			361	164	68	113	16			
23	CX	17	Total	C	N	O	P	0	0	0
			361	164	68	113	16			

- Molecule 24 is a RNA chain called A-SITE TRNA G24A TRP-TRNA TRP.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
24	AY	77	Total	C	N	O	P	S	0	0	0
			1644	742	289	535	76	2			
24	CY	77	Total	C	N	O	P	S	0	0	0
			1644	742	289	535	76	2			

- Molecule 25 is a protein called ELONGATION FACTOR TU.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	AZ	385	Total	C	N	O	S	0	0	0
			2984	1885	524	563	12			
25	CZ	385	Total	C	N	O	S	0	0	0
			2984	1885	524	563	12			

- Molecule 26 is a protein called 50S RIBOSOMAL PROTEIN L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	B0	84	Total	C	N	O	S	0	0	0
			662	410	140	111	1			
26	D0	84	Total	C	N	O	S	0	0	0
			662	410	140	111	1			

- Molecule 27 is a protein called 50S RIBOSOMAL PROTEIN L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	B1	93	Total	C	N	O	S	0	0	0
			731	460	145	125	1			
27	D1	93	Total	C	N	O	S	0	0	0
			731	460	145	125	1			

- Molecule 28 is a protein called 50S RIBOSOMAL PROTEIN L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	B2	71	Total	C	N	O	S	0	0	0
			598	370	121	106	1			
28	D2	71	Total	C	N	O	S	0	0	0
			598	370	121	106	1			

- Molecule 29 is a protein called 50S RIBOSOMAL PROTEIN L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	B3	59	Total	C	N	O	S	0	0	0
			467	298	90	78	1			
29	D3	59	Total	C	N	O	S	0	0	0
			467	298	90	78	1			

- Molecule 30 is a protein called 50S RIBOSOMAL PROTEIN L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	B4	44	Total	C	N	O	S	0	0	0
			340	218	57	61	4			
30	D4	44	Total	C	N	O	S	0	0	0
			340	218	57	61	4			

- Molecule 31 is a protein called 50S RIBOSOMAL PROTEIN L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	B5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	D5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			

- Molecule 32 is a protein called 50S RIBOSOMAL PROTEIN L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	B6	50	Total	C	N	O	S	0	0	0
			433	270	88	71	4			
32	D6	50	Total	C	N	O	S	0	0	0
			433	270	88	71	4			

- Molecule 33 is a protein called 50S RIBOSOMAL PROTEIN L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	B7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			
33	D7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

- Molecule 34 is a protein called 50S RIBOSOMAL PROTEIN L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	B8	63	Total	C	N	O	S	0	0	0
			507	326	101	78	2			
34	D8	63	Total	C	N	O	S	0	0	0
			507	326	101	78	2			

- Molecule 35 is a protein called 50S RIBOSOMAL PROTEIN L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	B9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			
35	D9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

- Molecule 36 is a RNA chain called 23S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	BA	2901	Total	C	N	O	P	0	0	0
			62477	27807	11683	20087	2900			
36	DA	2901	Total	C	N	O	P	0	0	0
			62477	27807	11683	20087	2900			

- Molecule 37 is a RNA chain called 5S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			
37	DB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			

- Molecule 38 is a protein called 50S RIBOSOMAL PROTEIN L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BC	228	Total	C	N	O	S	0	0	0
			1742	1101	319	319	3			
38	DC	228	Total	C	N	O	S	0	0	0
			1742	1101	319	319	3			

- Molecule 39 is a protein called 50S RIBOSOMAL PROTEIN L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BD	275	Total	C	N	O	S	0	0	0
			2145	1353	428	361	3			
39	DD	275	Total	C	N	O	S	0	0	0
			2145	1353	428	361	3			

- Molecule 40 is a protein called 50S RIBOSOMAL PROTEIN L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BE	204	Total	C	N	O	S	0	0	0
			1563	988	299	270	6			
40	DE	204	Total	C	N	O	S	0	0	0
			1563	988	299	270	6			

- Molecule 41 is a protein called 50S RIBOSOMAL PROTEIN L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BF	207	Total	C	N	O	S	0	0	0
			1623	1035	303	282	3			
41	DF	207	Total	C	N	O	S	0	0	0
			1623	1035	303	282	3			

- Molecule 42 is a protein called 50S RIBOSOMAL PROTEIN L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			
42	DG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			

- Molecule 43 is a protein called 50S RIBOSOMAL PROTEIN L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BH	159	Total	C	N	O	S	0	0	0
			1222	773	228	220	1			
43	DH	159	Total	C	N	O	S	0	0	0
			1222	773	228	220	1			

- Molecule 44 is a protein called 50S RIBOSOMAL PROTEIN L10.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
44	BJ	130	Total	C	N	O	0	0	0
			651	391	130	130			
44	DJ	130	Total	C	N	O	0	0	0
			651	391	130	130			

- Molecule 45 is a protein called 50S RIBOSOMAL PROTEIN L11.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
45	BK	140	Total	C	N	O	0	0	0
			700	420	140	140			
45	DK	140	Total	C	N	O	0	0	0
			700	420	140	140			

- Molecule 46 is a protein called 50S RIBOSOMAL PROTEIN L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BN	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			
46	DN	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			

- Molecule 47 is a protein called 50S RIBOSOMAL PROTEIN L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	DO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			

- Molecule 48 is a protein called 50S RIBOSOMAL PROTEIN L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	BP	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			
48	DP	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			

- Molecule 49 is a protein called 50S RIBOSOMAL PROTEIN L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	BQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			
49	DQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			

- Molecule 50 is a protein called 50S RIBOSOMAL PROTEIN L17.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
50	BR	117	Total	C	N	O	0	0	0
			960	599	202	159			
50	DR	117	Total	C	N	O	0	0	0
			960	599	202	159			

- Molecule 51 is a protein called 50S RIBOSOMAL PROTEIN L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
51	BS	98	Total	C	N	O	0	0	0
			770	486	154	130			
51	DS	98	Total	C	N	O	0	0	0
			770	486	154	130			

- Molecule 52 is a protein called 50S RIBOSOMAL PROTEIN L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	BT	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			
52	DT	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			

- Molecule 53 is a protein called 50S RIBOSOMAL PROTEIN L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	BU	117	Total	C	N	O	S	0	0	0
			958	604	202	151	1			
53	DU	117	Total	C	N	O	S	0	0	0
			958	604	202	151	1			

- Molecule 54 is a protein called 50S RIBOSOMAL PROTEIN L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	BV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			
54	DV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 55 is a protein called 50S RIBOSOMAL PROTEIN L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	BW	113	Total	C	N	O	S	0	0	0
			896	563	176	155	2			
55	DW	113	Total	C	N	O	S	0	0	0
			896	563	176	155	2			

- Molecule 56 is a protein called 50S RIBOSOMAL PROTEIN L23.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
56	BX	92	Total	C	N	O	0	0	0
			725	471	131	123			
56	DX	92	Total	C	N	O	0	0	0
			725	471	131	123			

- Molecule 57 is a protein called 50S RIBOSOMAL PROTEIN L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	BY	100	Total	C	N	O	S	0	0	0
			775	500	148	123	4			
57	DY	100	Total	C	N	O	S	0	0	0
			775	500	148	123	4			

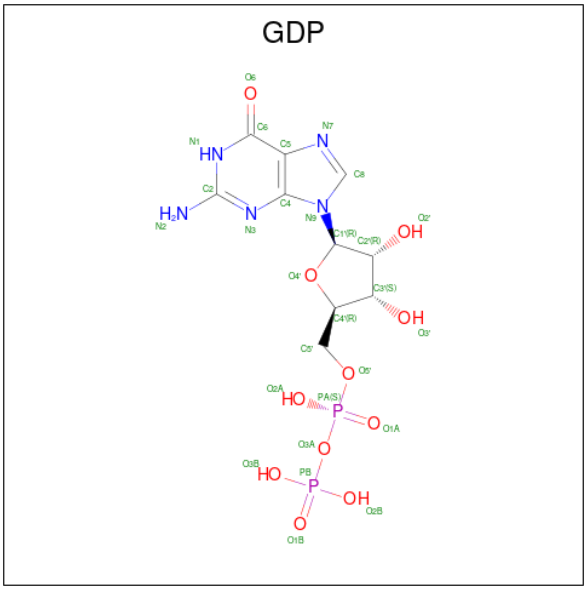
- Molecule 58 is a protein called 50S RIBOSOMAL PROTEIN L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
58	BZ	183	Total	C	N	O	S	0	0	0
			1459	932	260	265	2			
58	DZ	183	Total	C	N	O	S	0	0	0
			1459	932	260	265	2			

- Molecule 59 is ZINC ION (three-letter code: ZN) (formula: Zn).

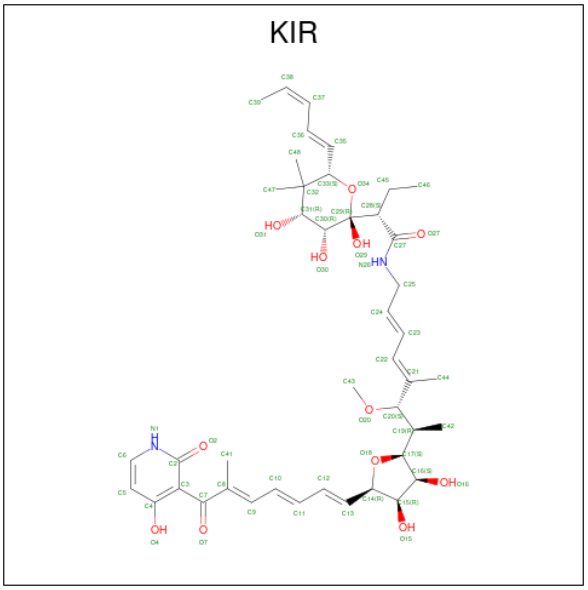
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	AD	1	Total	Zn	0	0
			1	1		
59	AN	1	Total	Zn	0	0
			1	1		
59	B4	1	Total	Zn	0	0
			1	1		
59	B9	1	Total	Zn	0	0
			1	1		
59	CD	1	Total	Zn	0	0
			1	1		
59	CN	1	Total	Zn	0	0
			1	1		
59	D4	1	Total	Zn	0	0
			1	1		
59	D9	1	Total	Zn	0	0
			1	1		

- Molecule 60 is GUANOSINE-5'-DIPHOSPHATE (three-letter code: GDP) (formula: $C_{10}H_{15}N_5O_{11}P_2$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
60	AZ	1	Total	C	N	O	P	0	0
			28	10	5	11	2		
60	CZ	1	Total	C	N	O	P	0	0
			28	10	5	11	2		

- Molecule 61 is KIRROMYCIN (three-letter code: KIR) (formula: $C_{43}H_{60}N_2O_{12}$).



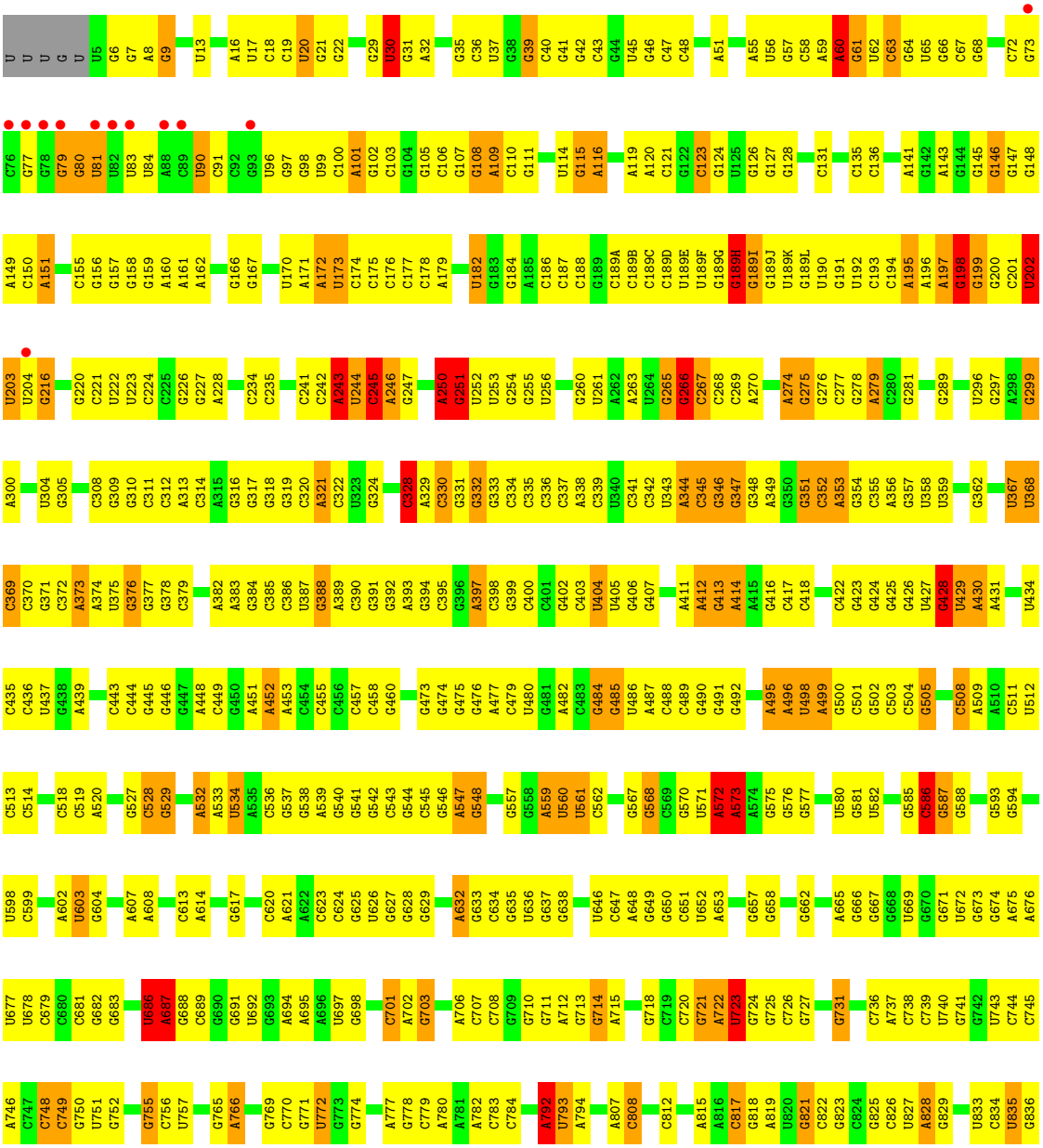
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
61	AZ	1	Total	C	N	O	0	0
			57	43	2	12		
61	CZ	1	Total	C	N	O	0	0
			57	43	2	12		

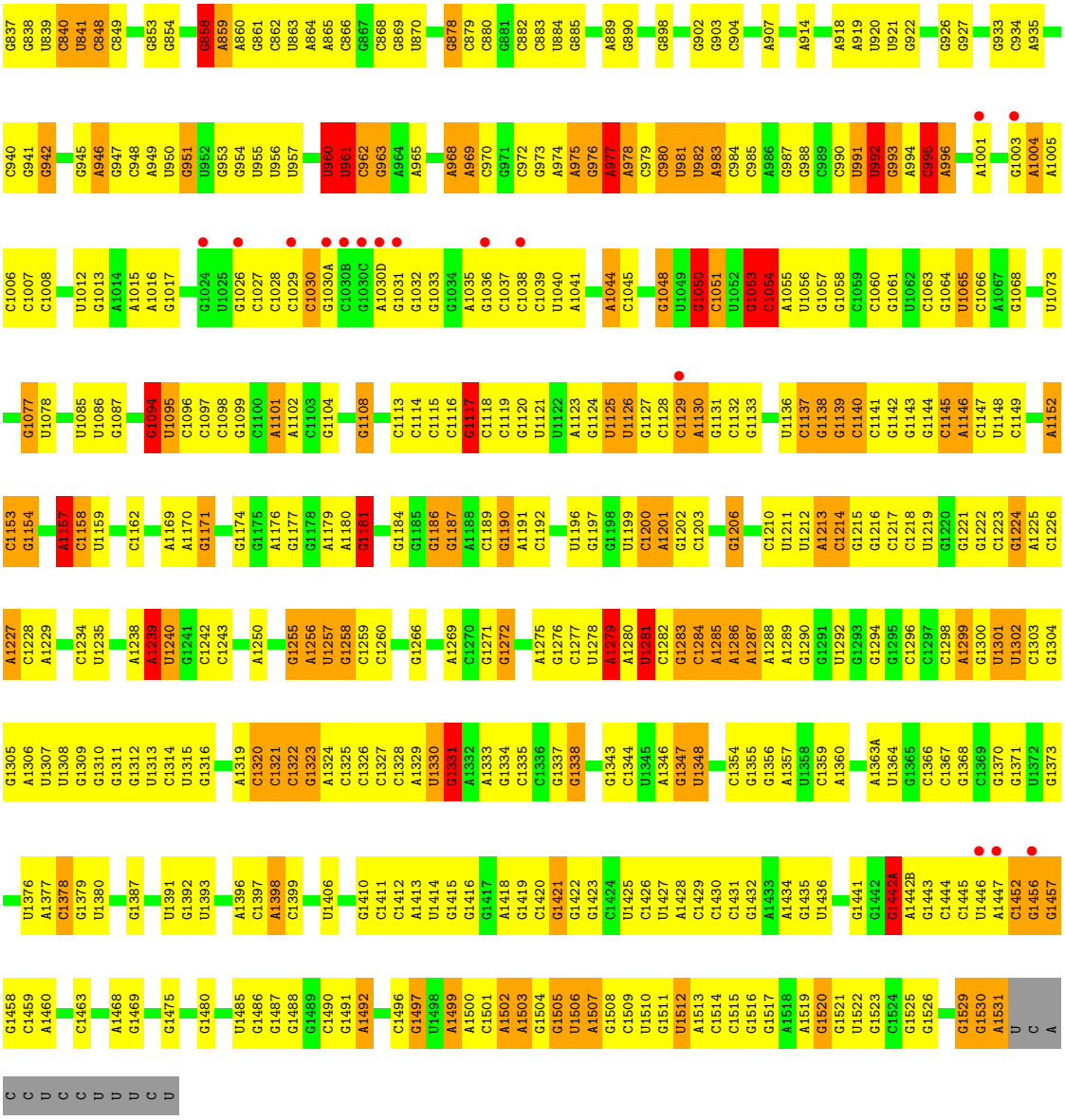
3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density (RSRZ > 2). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: 16S RRNA

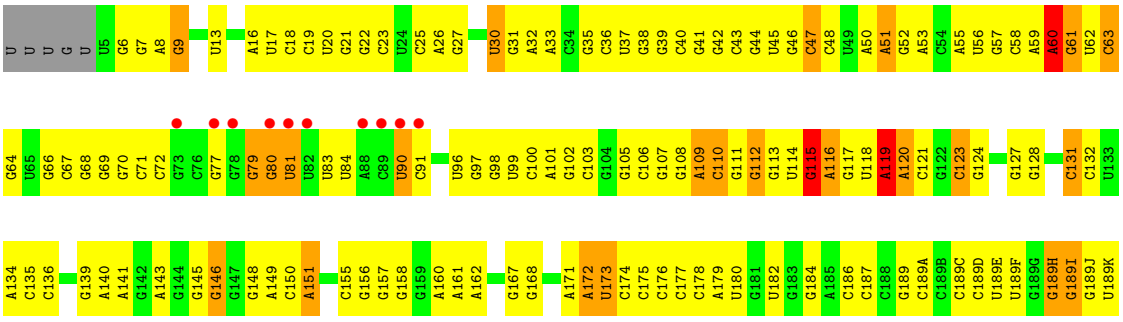
Chain AA: 

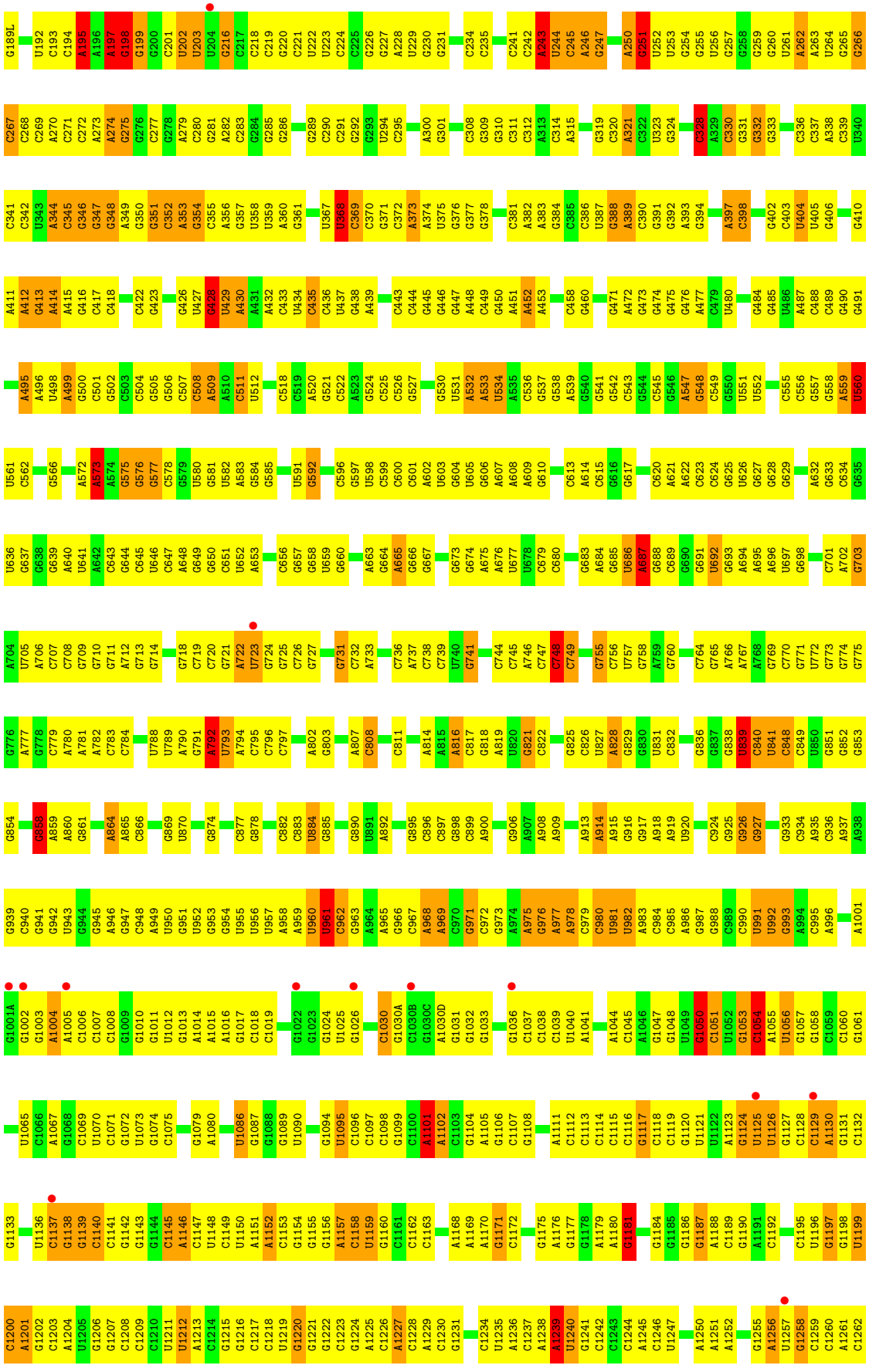


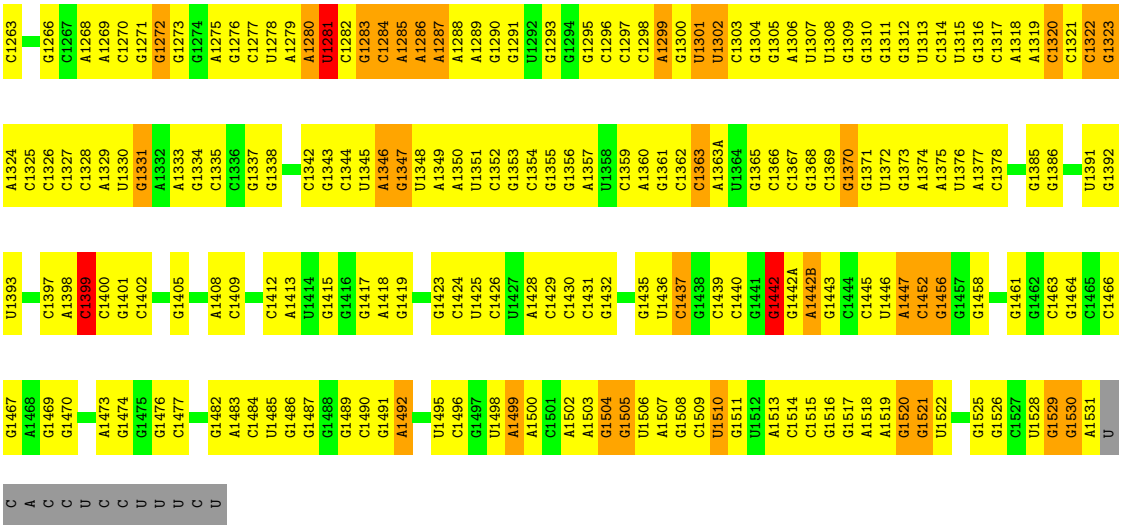


• Molecule 1: 16S RRNA

Chain CA:

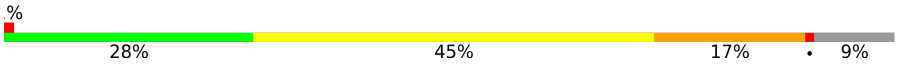


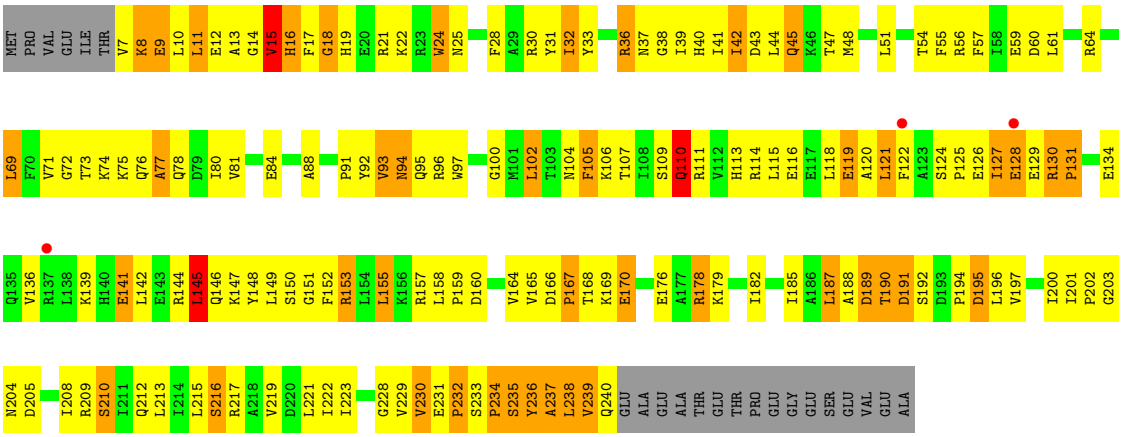




• Molecule 2: 30S RIBOSOMAL PROTEIN S2

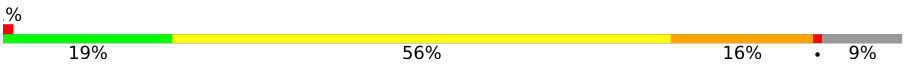
Chain AB:

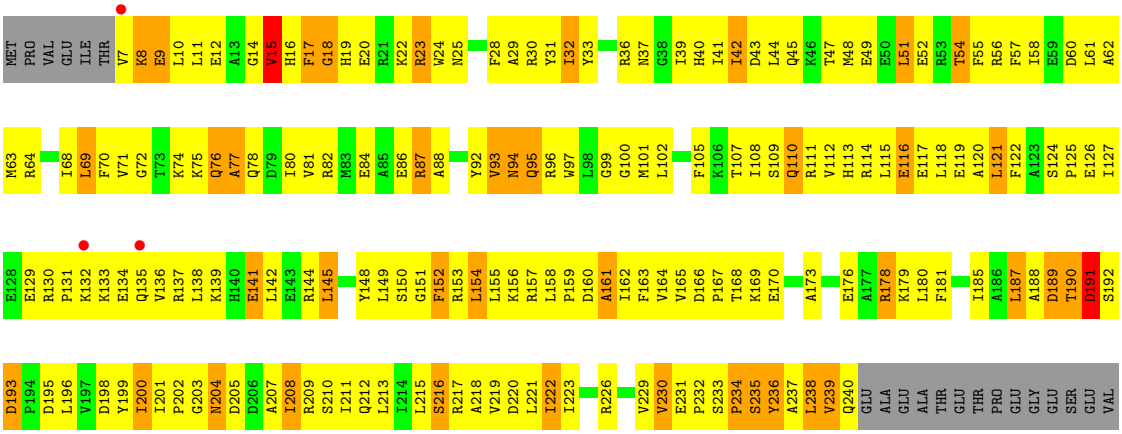




• Molecule 2: 30S RIBOSOMAL PROTEIN S2

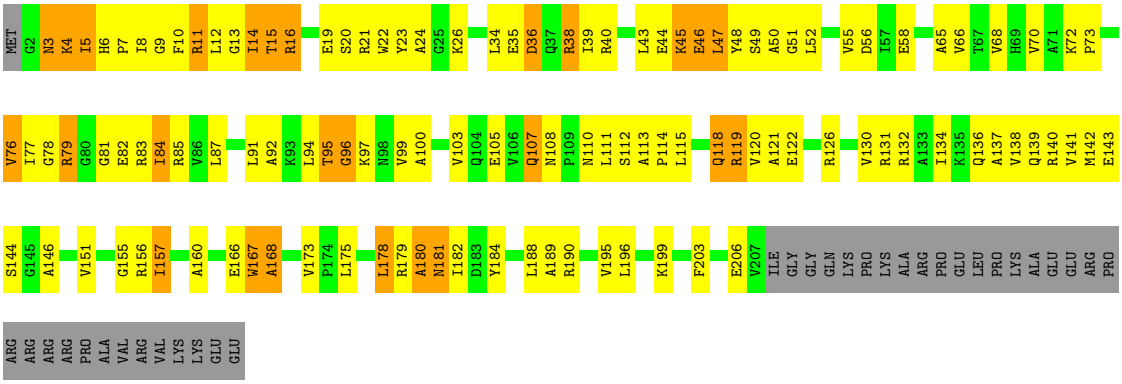
Chain CB:





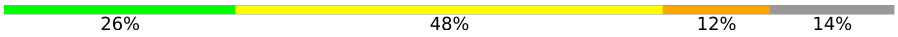
• Molecule 3: 30S RIBOSOMAL PROTEIN S3

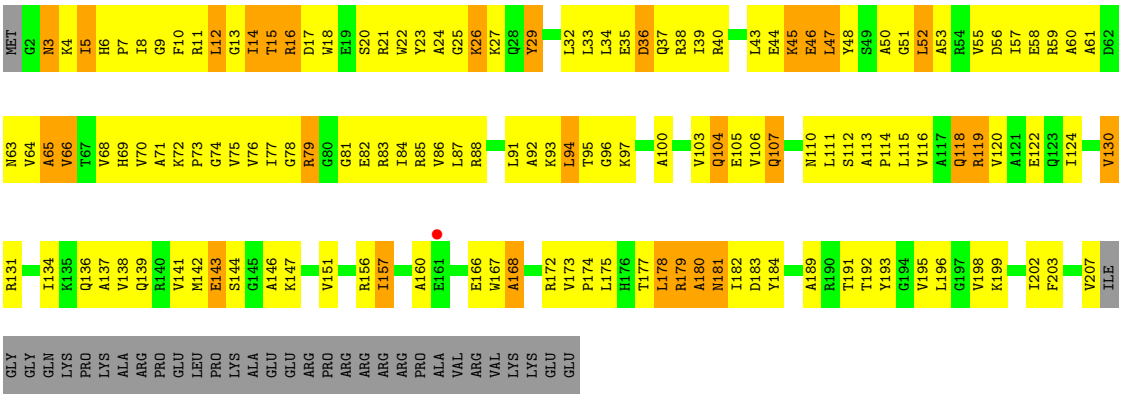
Chain AC:



• Molecule 3: 30S RIBOSOMAL PROTEIN S3

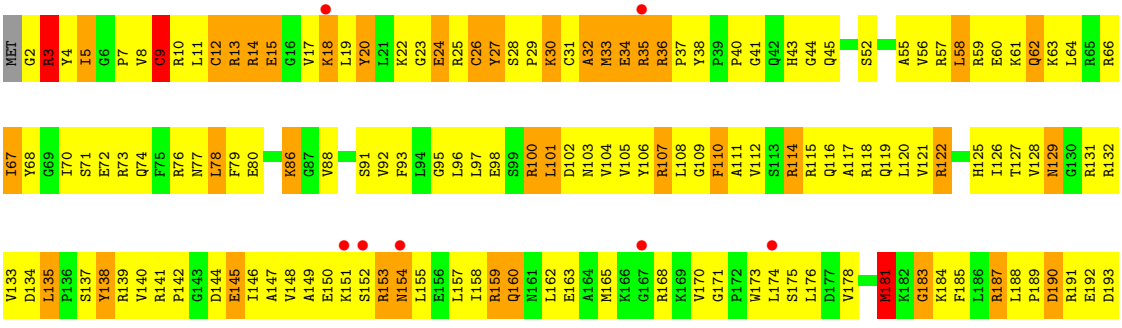
Chain CC:

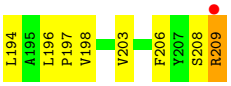




• Molecule 4: 30S RIBOSOMAL PROTEIN S4

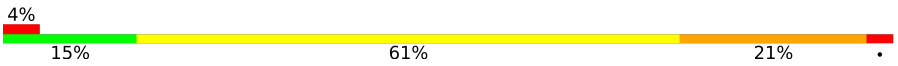
Chain AD:

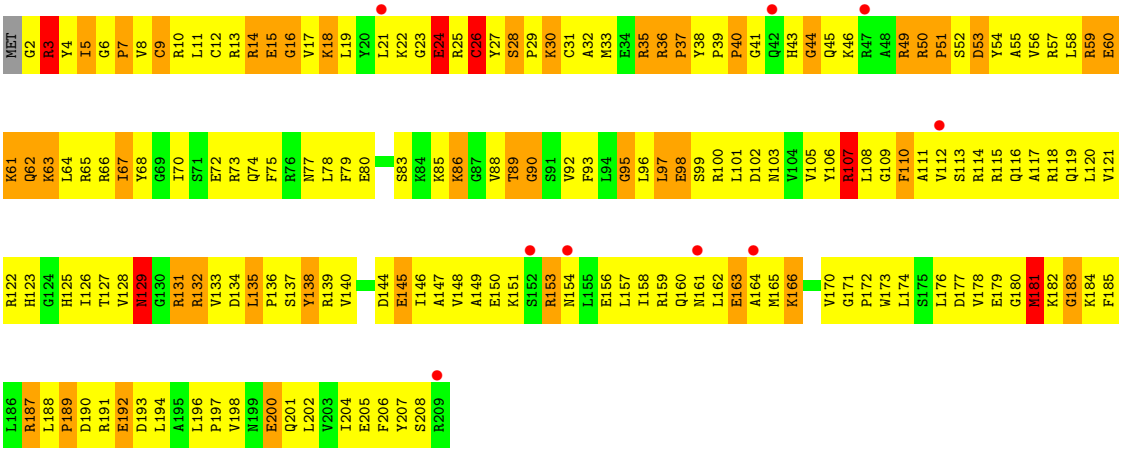




• Molecule 4: 30S RIBOSOMAL PROTEIN S4

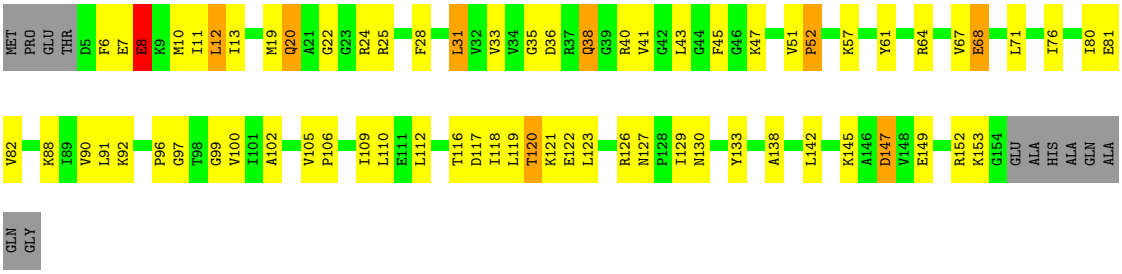
Chain CD:





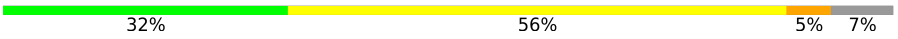
• Molecule 5: 30S RIBOSOMAL PROTEIN S5

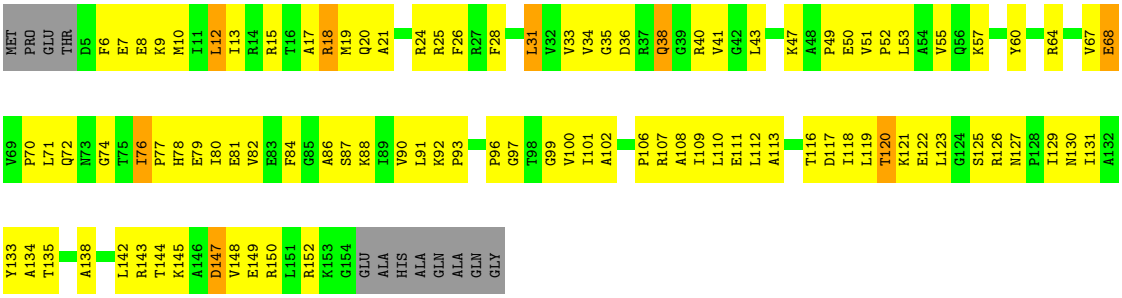
Chain AE:



• Molecule 5: 30S RIBOSOMAL PROTEIN S5

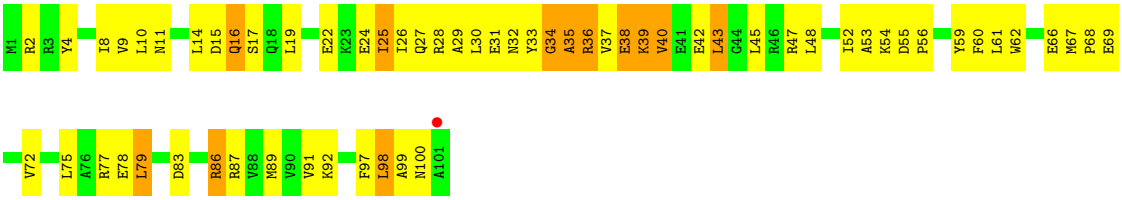
Chain CE:





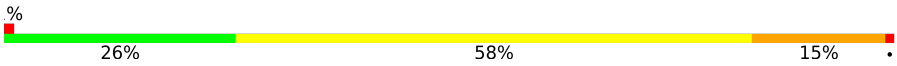
• Molecule 6: 30S RIBOSOMAL PROTEIN S6

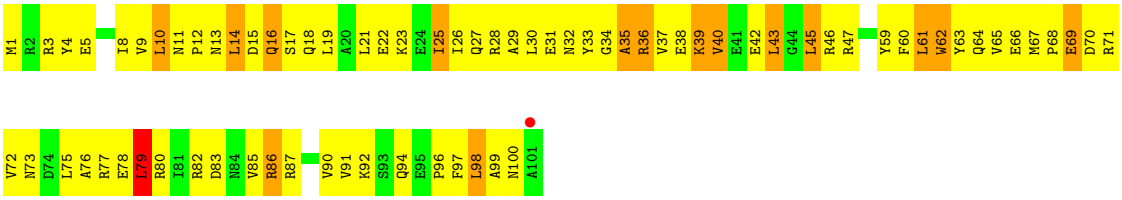
Chain AF:



• Molecule 6: 30S RIBOSOMAL PROTEIN S6

Chain CF:



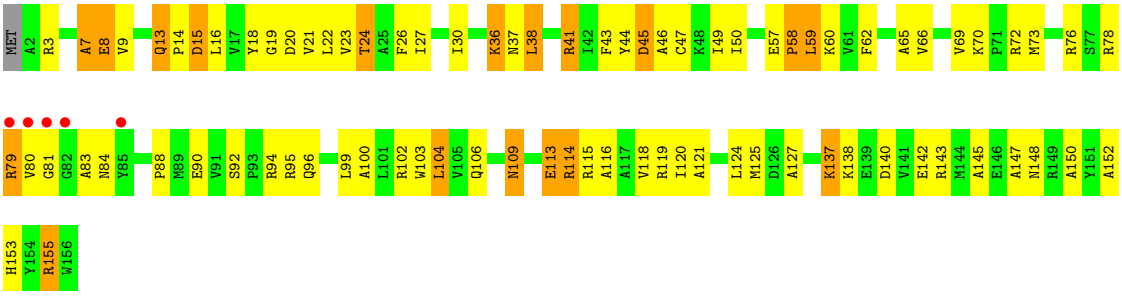


• Molecule 7: 30S RIBOSOMAL PROTEIN S7

Chain AG:

• Molecule 7: 30S RIBOSOMAL PROTEIN S7

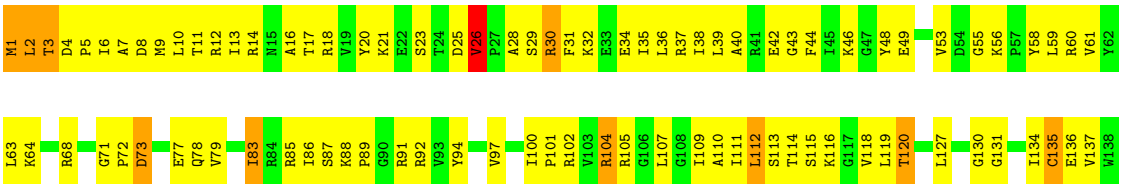
Chain CG:



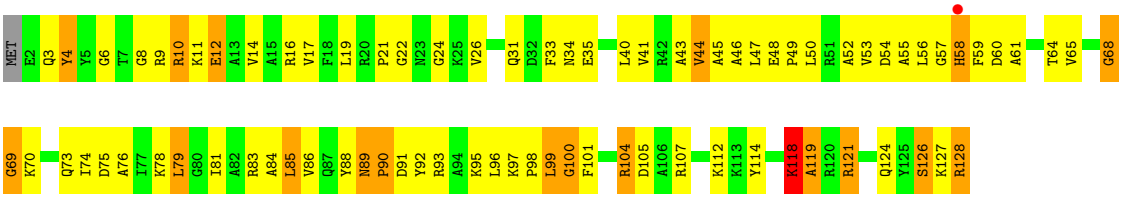
• Molecule 8: 30S RIBOSOMAL PROTEIN S8

Chain AH:

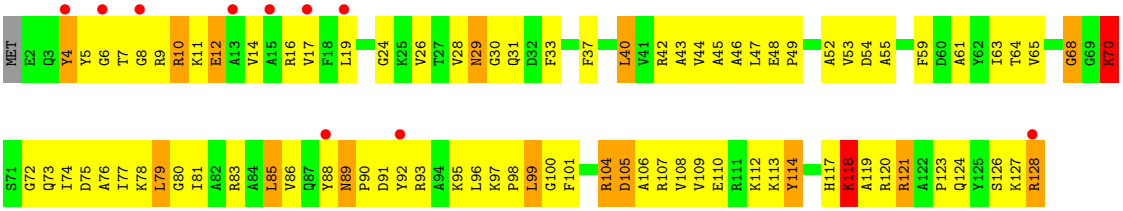
• Molecule 8: 30S RIBOSOMAL PROTEIN S8



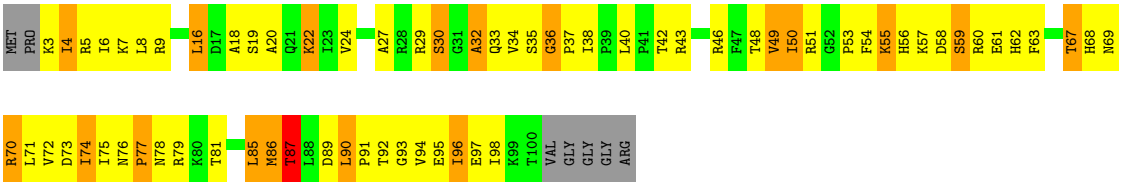
• Molecule 9: 30S RIBOSOMAL PROTEIN S9



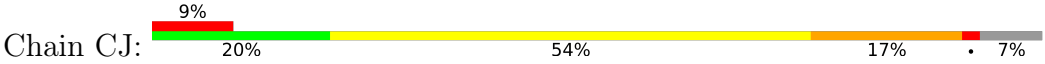
• Molecule 9: 30S RIBOSOMAL PROTEIN S9

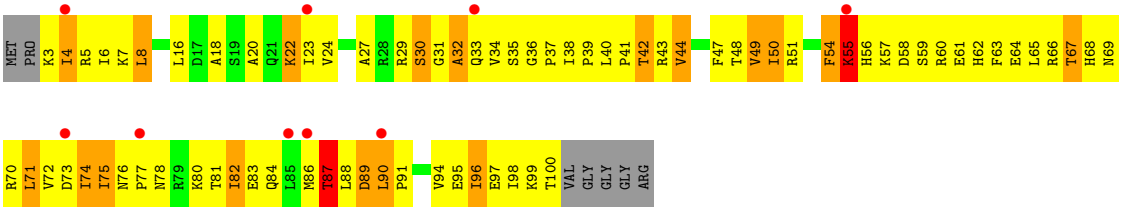


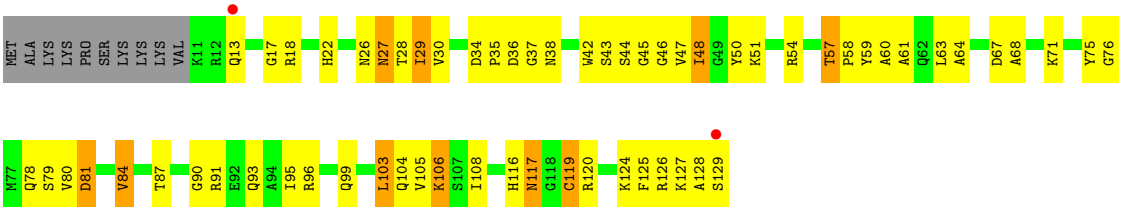
• Molecule 10: 30S RIBOSOMAL PROTEIN S10



• Molecule 10: 30S RIBOSOMAL PROTEIN S10

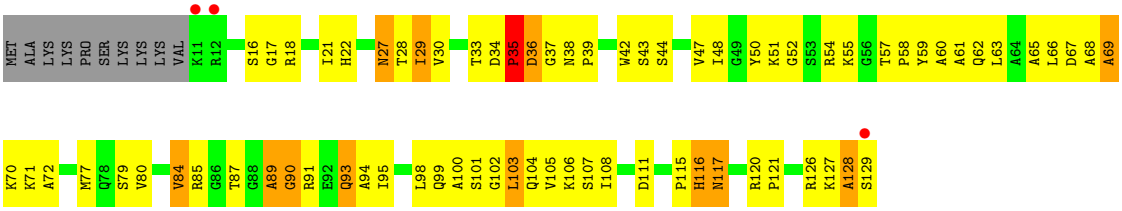




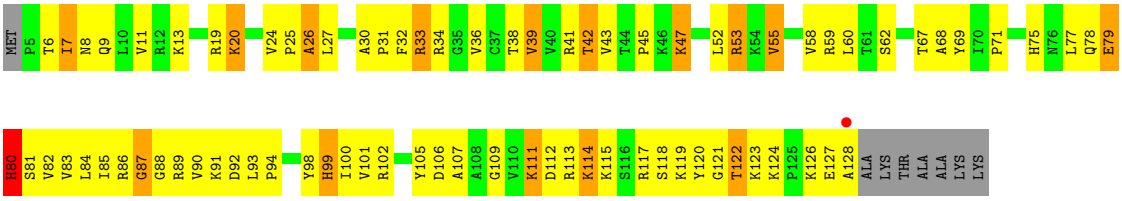


• Molecule 11: 30S RIBOSOMAL PROTEIN S11

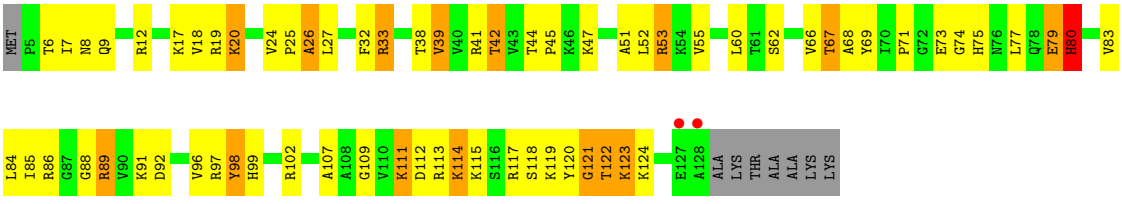
• Molecule 11: 30S RIBOSOMAL PROTEIN S11



• Molecule 12: 30S RIBOSOMAL PROTEIN S12

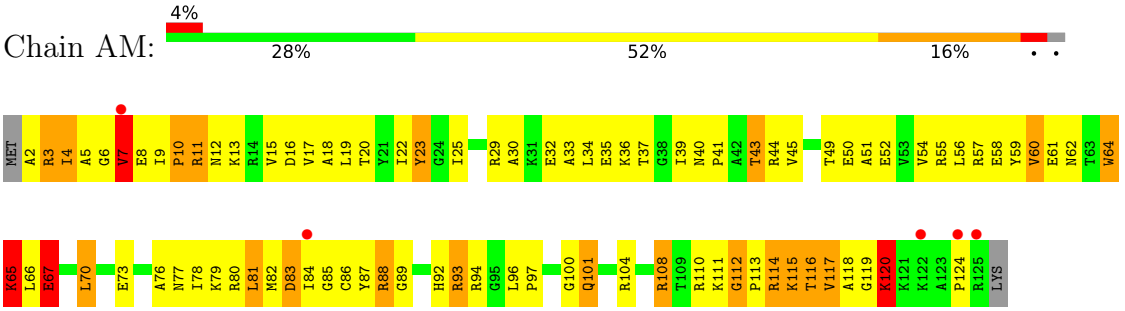


• Molecule 12: 30S RIBOSOMAL PROTEIN S12



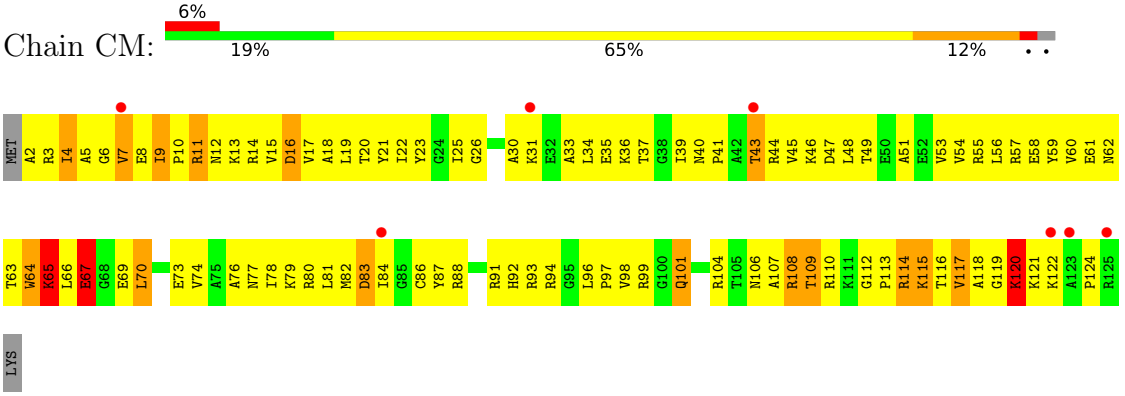
• Molecule 13: 30S RIBOSOMAL PROTEIN S13

Chain AM:



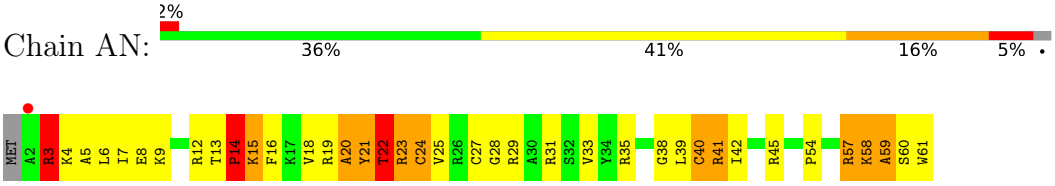
• Molecule 13: 30S RIBOSOMAL PROTEIN S13

Chain CM:



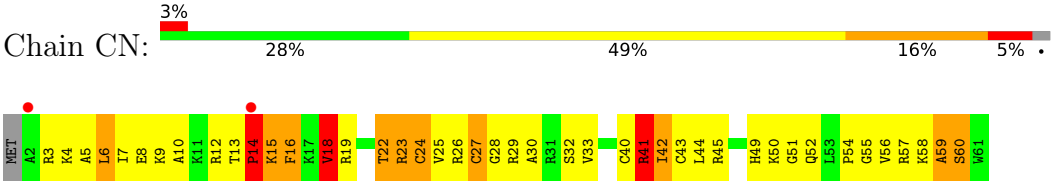
• Molecule 14: 30S RIBOSOMAL PROTEIN S14

Chain AN:



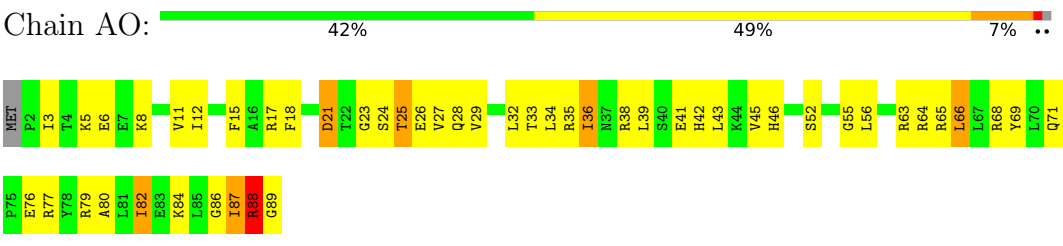
• Molecule 14: 30S RIBOSOMAL PROTEIN S14

Chain CN:



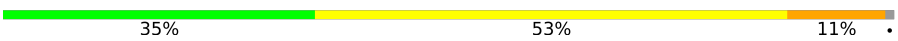
• Molecule 15: 30S RIBOSOMAL PROTEIN S15

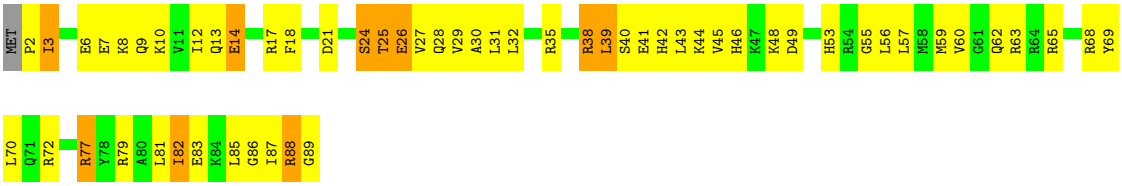
Chain AO:



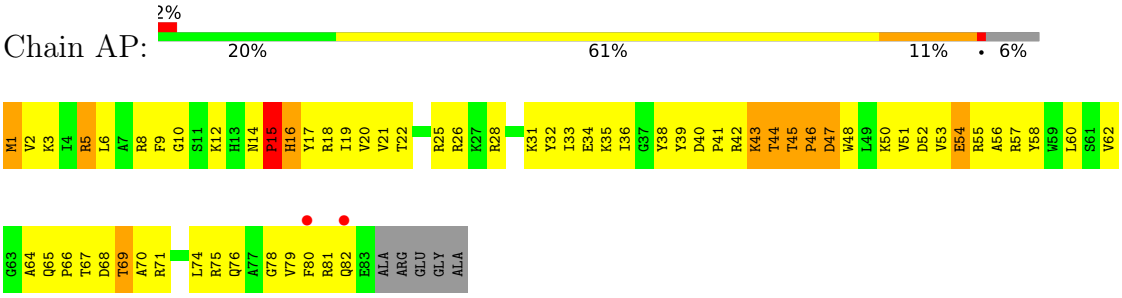
• Molecule 15: 30S RIBOSOMAL PROTEIN S15

Chain CO:

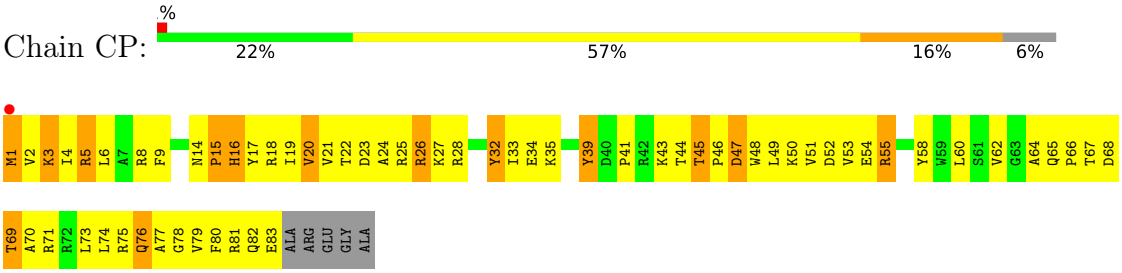




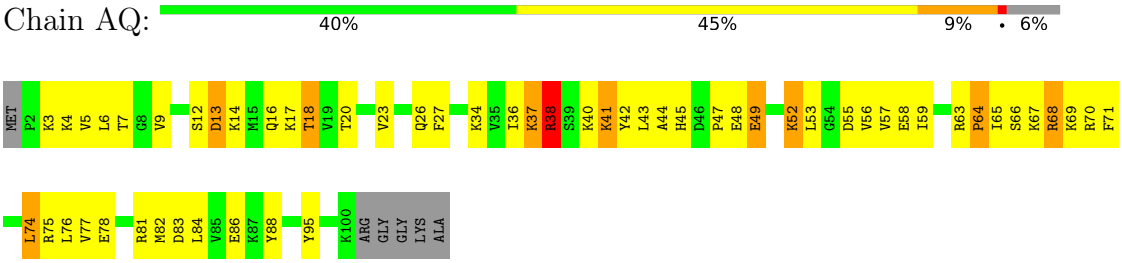
• Molecule 16: 30S RIBOSOMAL PROTEIN S16



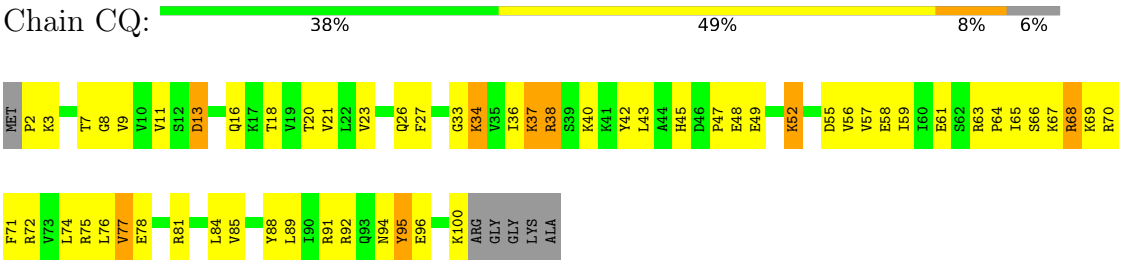
• Molecule 16: 30S RIBOSOMAL PROTEIN S16



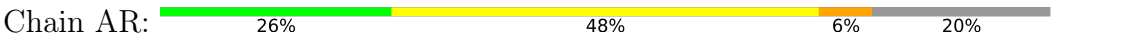
• Molecule 17: 30S RIBOSOMAL PROTEIN S17

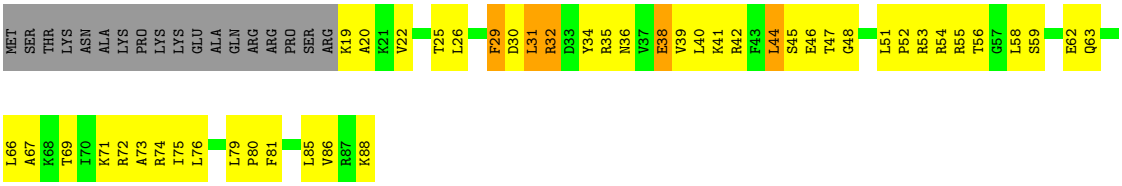


• Molecule 17: 30S RIBOSOMAL PROTEIN S17



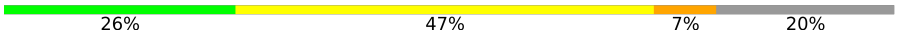
• Molecule 18: 30S RIBOSOMAL PROTEIN S18





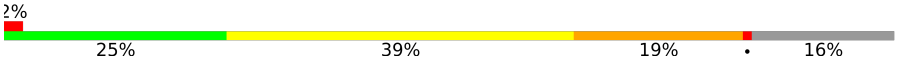
• Molecule 18: 30S RIBOSOMAL PROTEIN S18

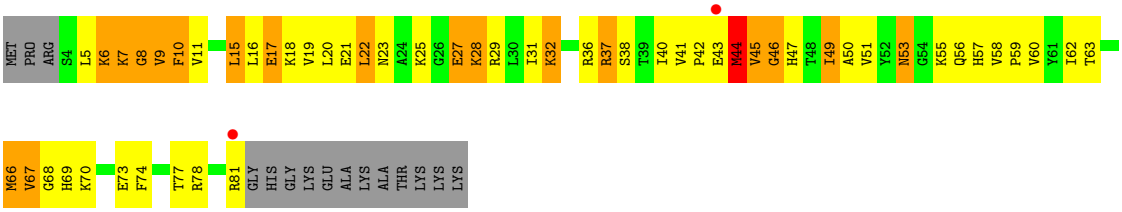
Chain CR:



• Molecule 19: 30S RIBOSOMAL PROTEIN S19

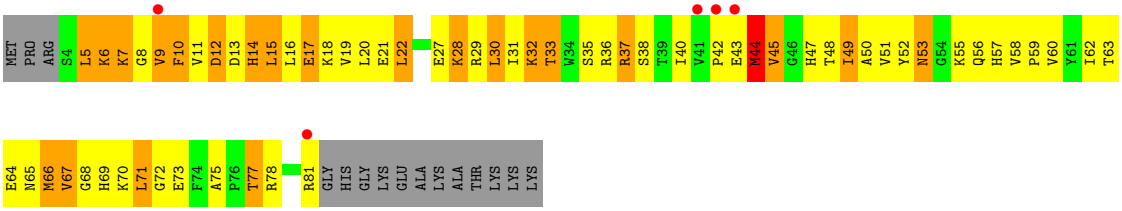
Chain AS:





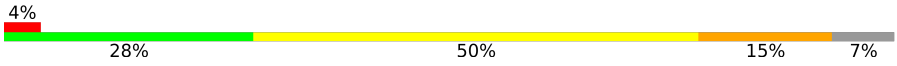
• Molecule 19: 30S RIBOSOMAL PROTEIN S19

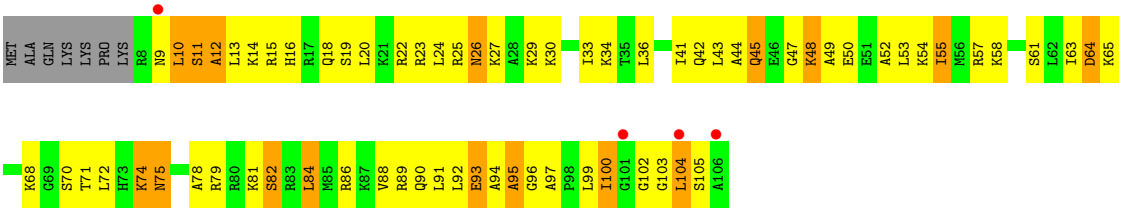
Chain CS:



• Molecule 20: 30S RIBOSOMAL PROTEIN S20

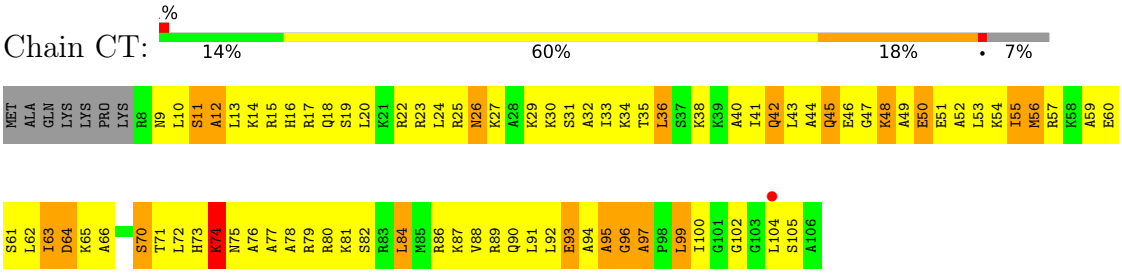
Chain AT:





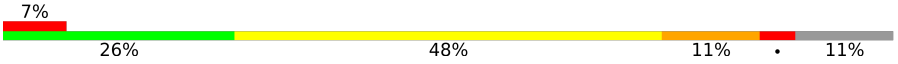
• Molecule 20: 30S RIBOSOMAL PROTEIN S20

Chain CT:



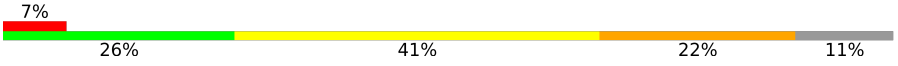
• Molecule 21: 30S RIBOSOMAL PROTEIN THX

Chain AU:



• Molecule 21: 30S RIBOSOMAL PROTEIN THX

Chain CU:

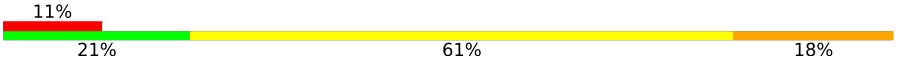


• Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE

Chain AV:

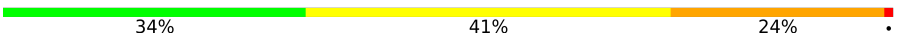
• Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE

Chain AW:



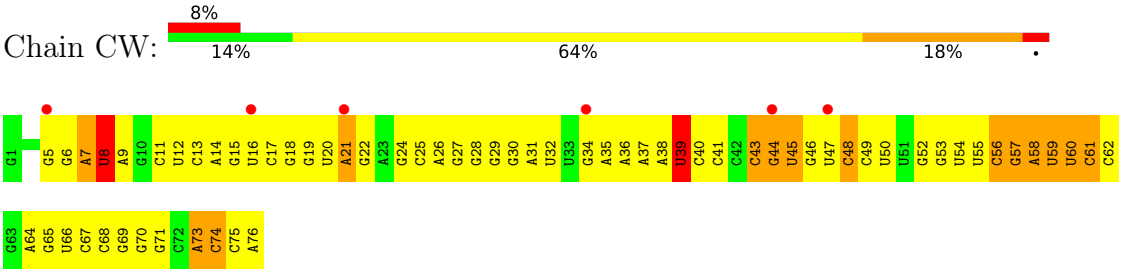
• Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE

Chain CV:



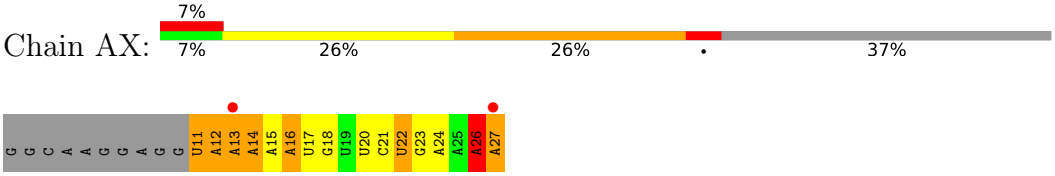
• Molecule 22: E-SITE TRNA PHE OR P-SITE TRNA PHE

Chain CW:



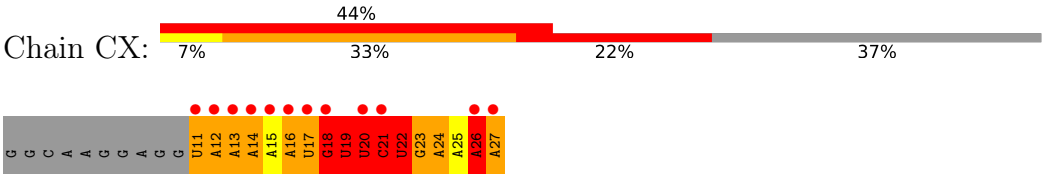
• Molecule 23: MRNA

Chain AX:



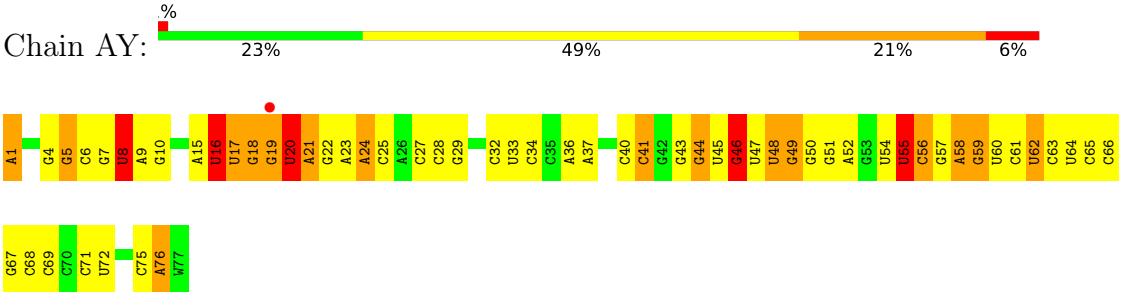
• Molecule 23: MRNA

Chain CX:



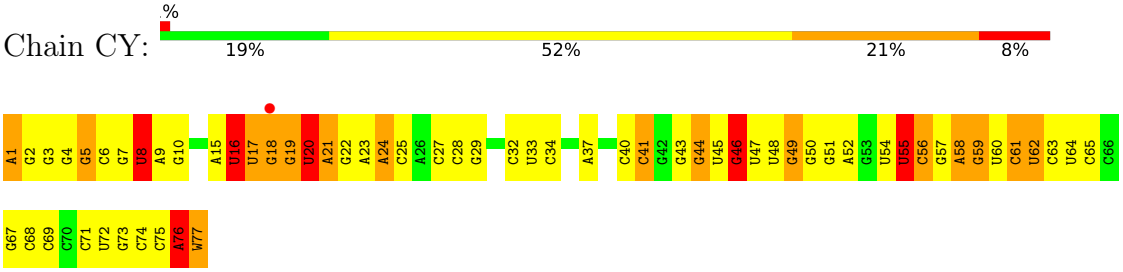
• Molecule 24: A-SITE TRNA G24A TRP-TRNA TRP

Chain AY:



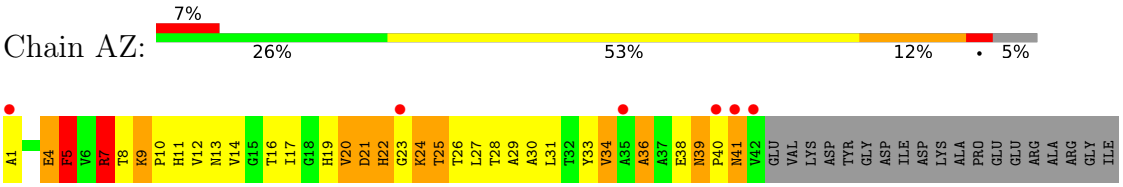
• Molecule 24: A-SITE TRNA G24A TRP-TRNA TRP

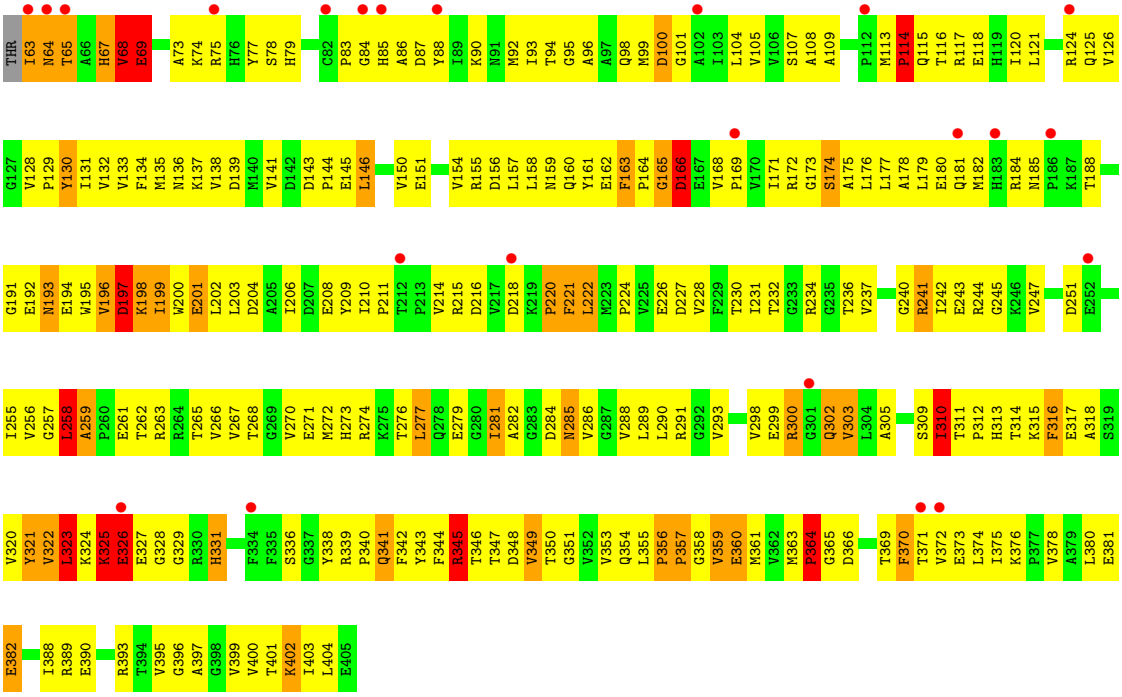
Chain CY:



• Molecule 25: ELONGATION FACTOR TU

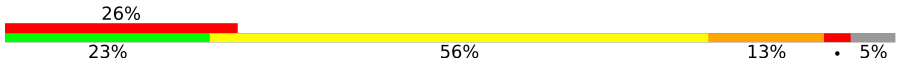
Chain AZ:

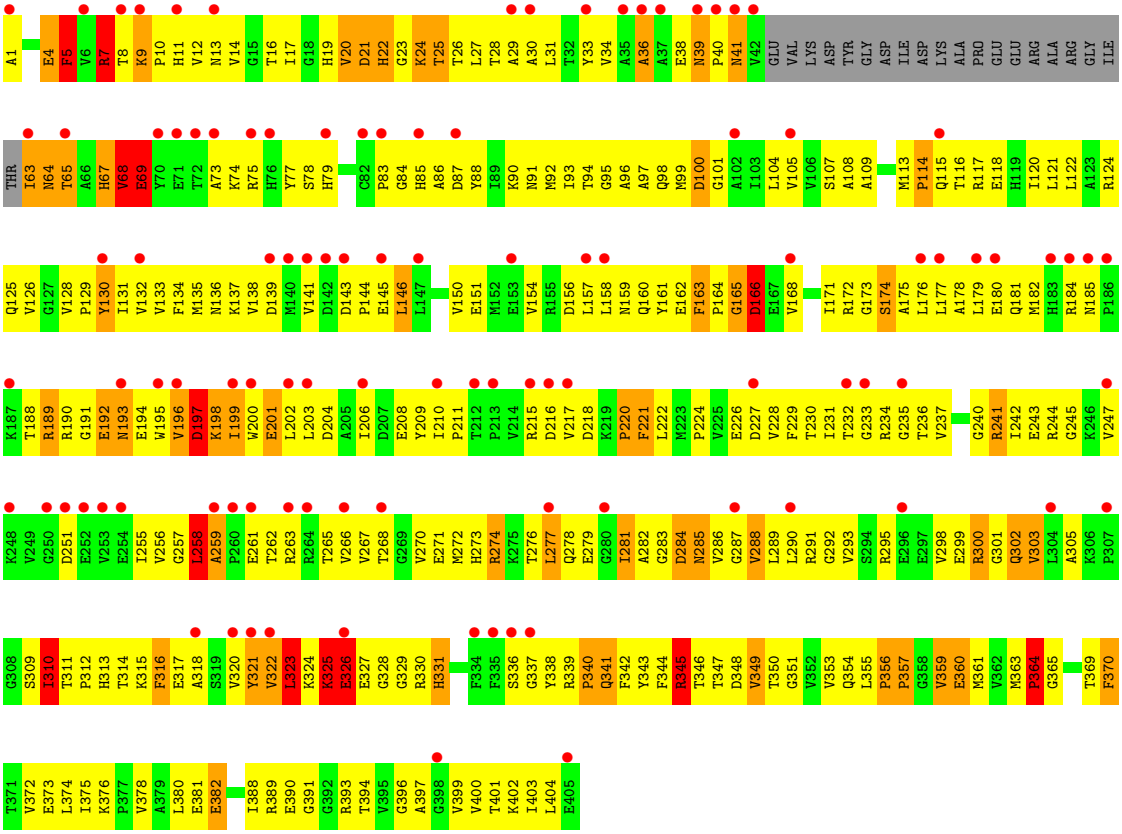




• Molecule 25: ELONGATION FACTOR TU

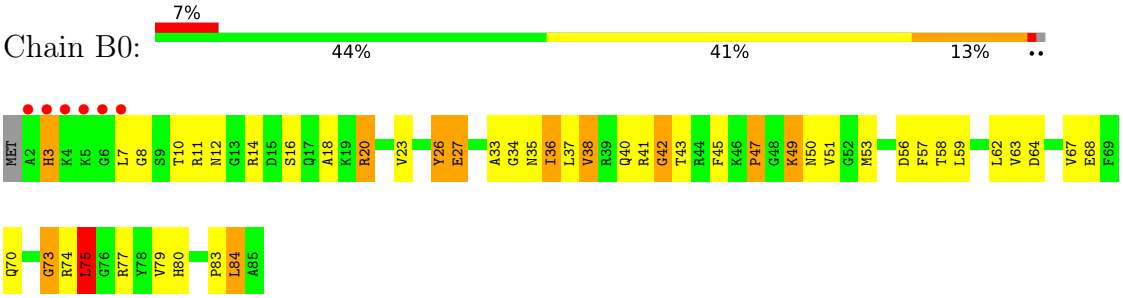
Chain CZ:





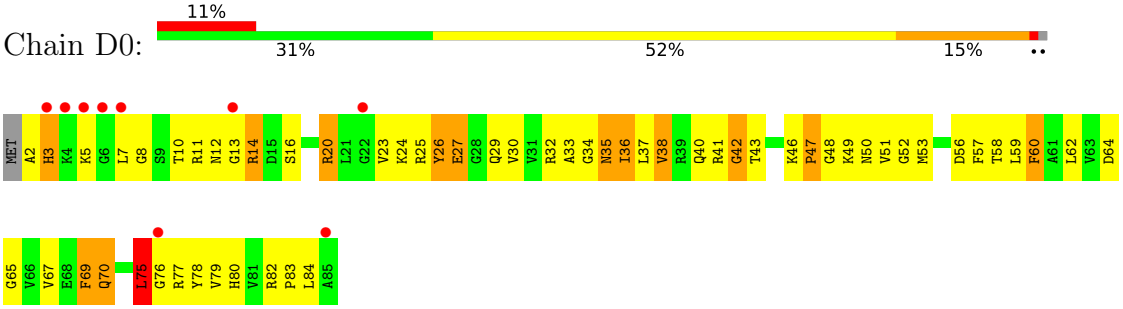
• Molecule 26: 50S RIBOSOMAL PROTEIN L27

Chain B0:



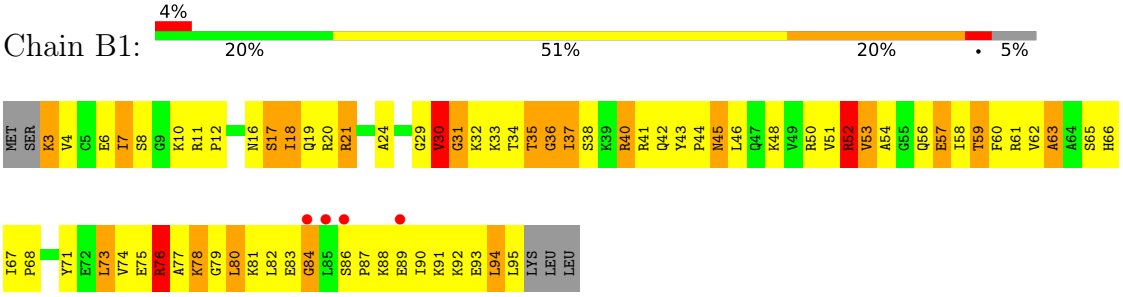
• Molecule 26: 50S RIBOSOMAL PROTEIN L27

Chain D0:



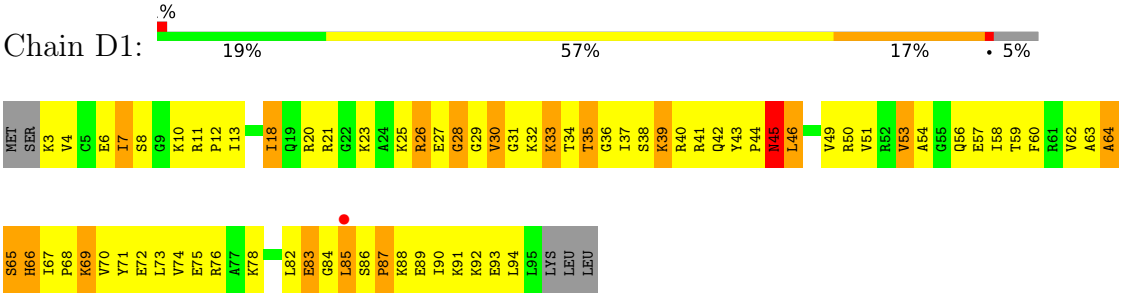
• Molecule 27: 50S RIBOSOMAL PROTEIN L28

Chain B1:



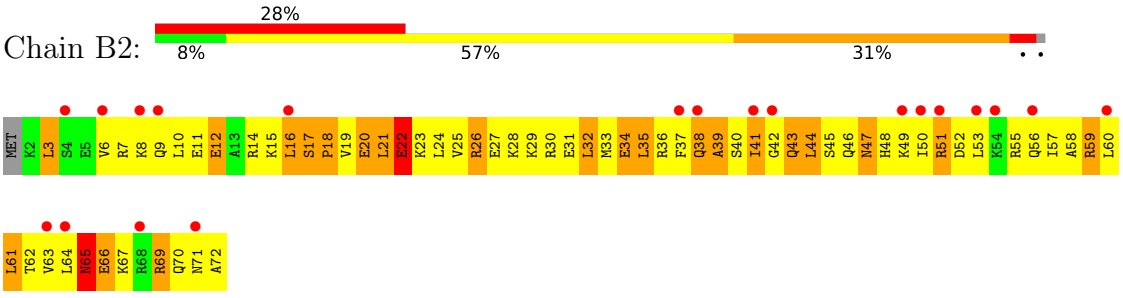
• Molecule 27: 50S RIBOSOMAL PROTEIN L28

Chain D1:



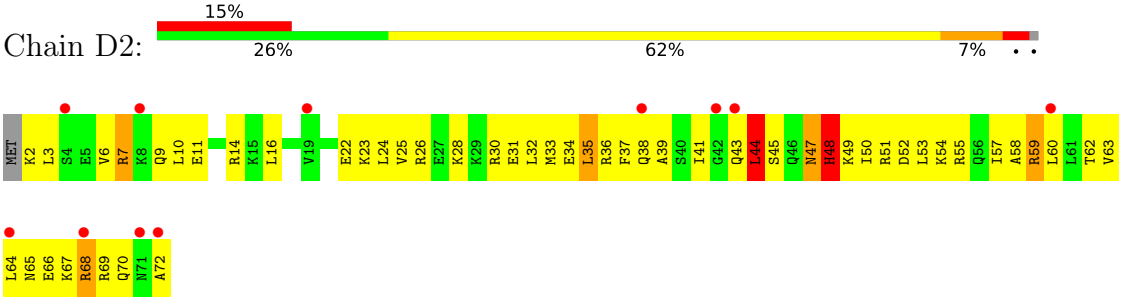
• Molecule 28: 50S RIBOSOMAL PROTEIN L29

Chain B2:



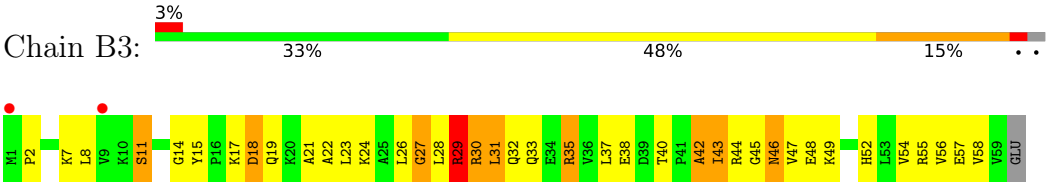
• Molecule 28: 50S RIBOSOMAL PROTEIN L29

Chain D2:



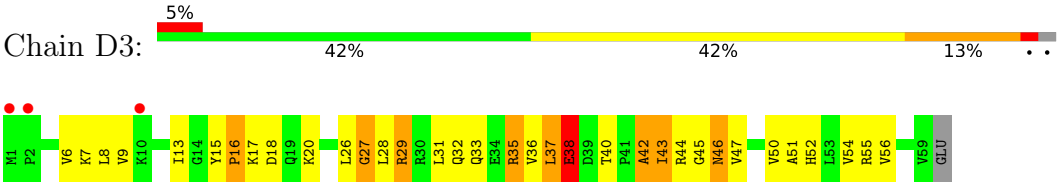
• Molecule 29: 50S RIBOSOMAL PROTEIN L30

Chain B3:



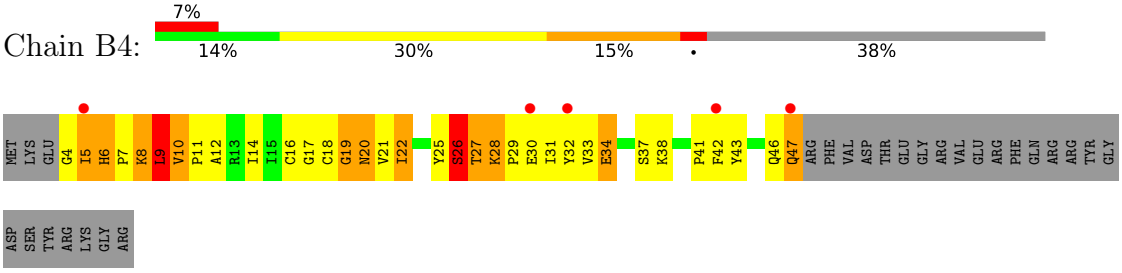
• Molecule 29: 50S RIBOSOMAL PROTEIN L30

Chain D3:



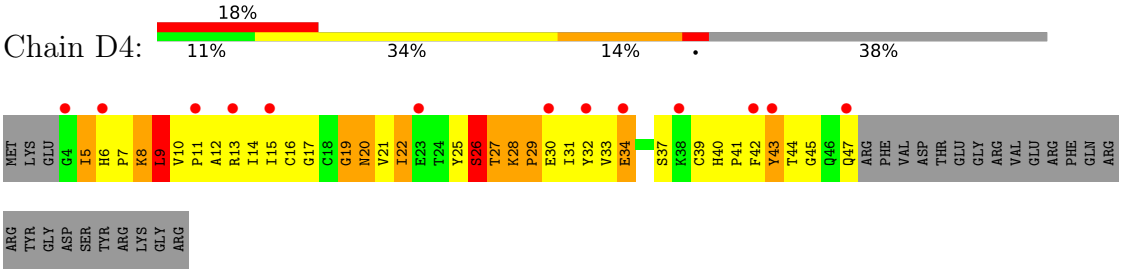
• Molecule 30: 50S RIBOSOMAL PROTEIN L31

Chain B4:



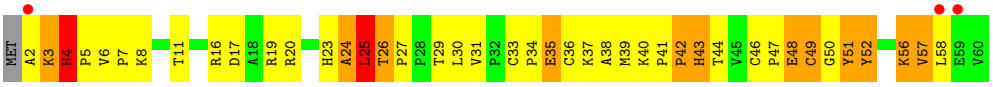
• Molecule 30: 50S RIBOSOMAL PROTEIN L31

Chain D4:



• Molecule 31: 50S RIBOSOMAL PROTEIN L32

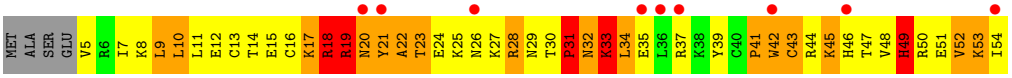
Chain B5:



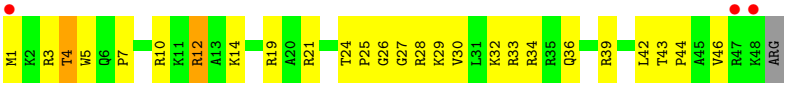
• Molecule 31: 50S RIBOSOMAL PROTEIN L32

• Molecule 32: 50S RIBOSOMAL PROTEIN L33

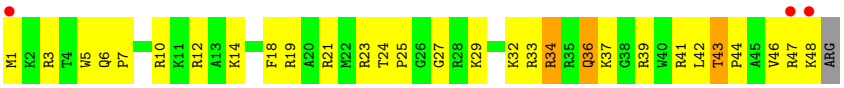
• Molecule 32: 50S RIBOSOMAL PROTEIN L33



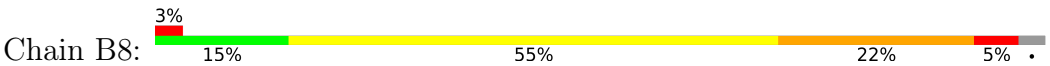
• Molecule 33: 50S RIBOSOMAL PROTEIN L34

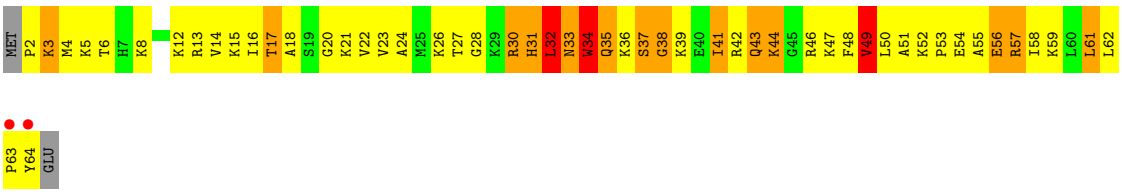


• Molecule 33: 50S RIBOSOMAL PROTEIN L34



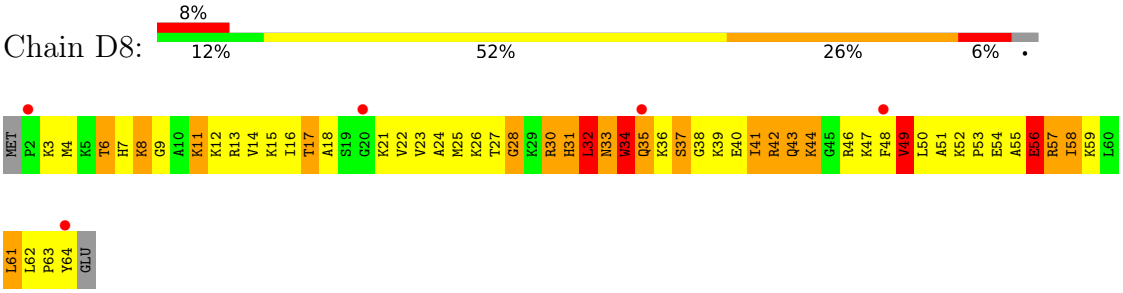
• Molecule 34: 50S RIBOSOMAL PROTEIN L35





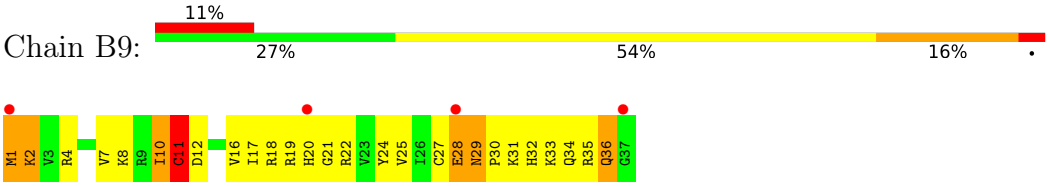
• Molecule 34: 50S RIBOSOMAL PROTEIN L35

Chain D8:



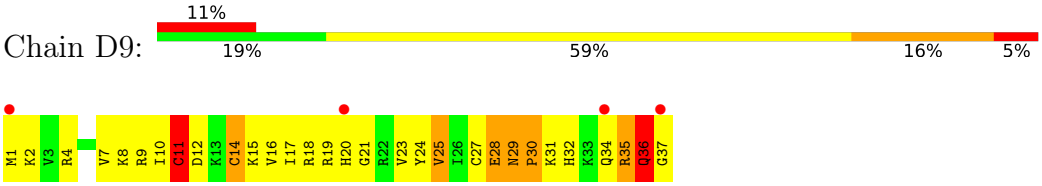
• Molecule 35: 50S RIBOSOMAL PROTEIN L36

Chain B9:



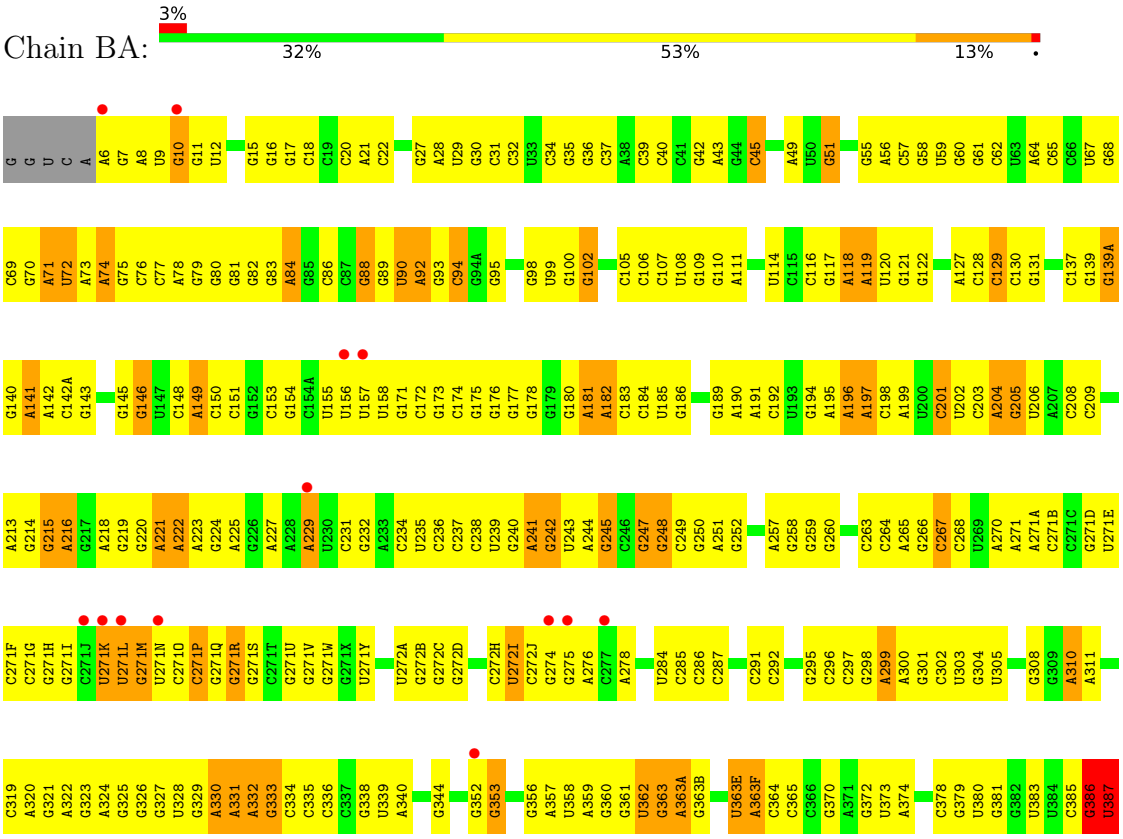
• Molecule 35: 50S RIBOSOMAL PROTEIN L36

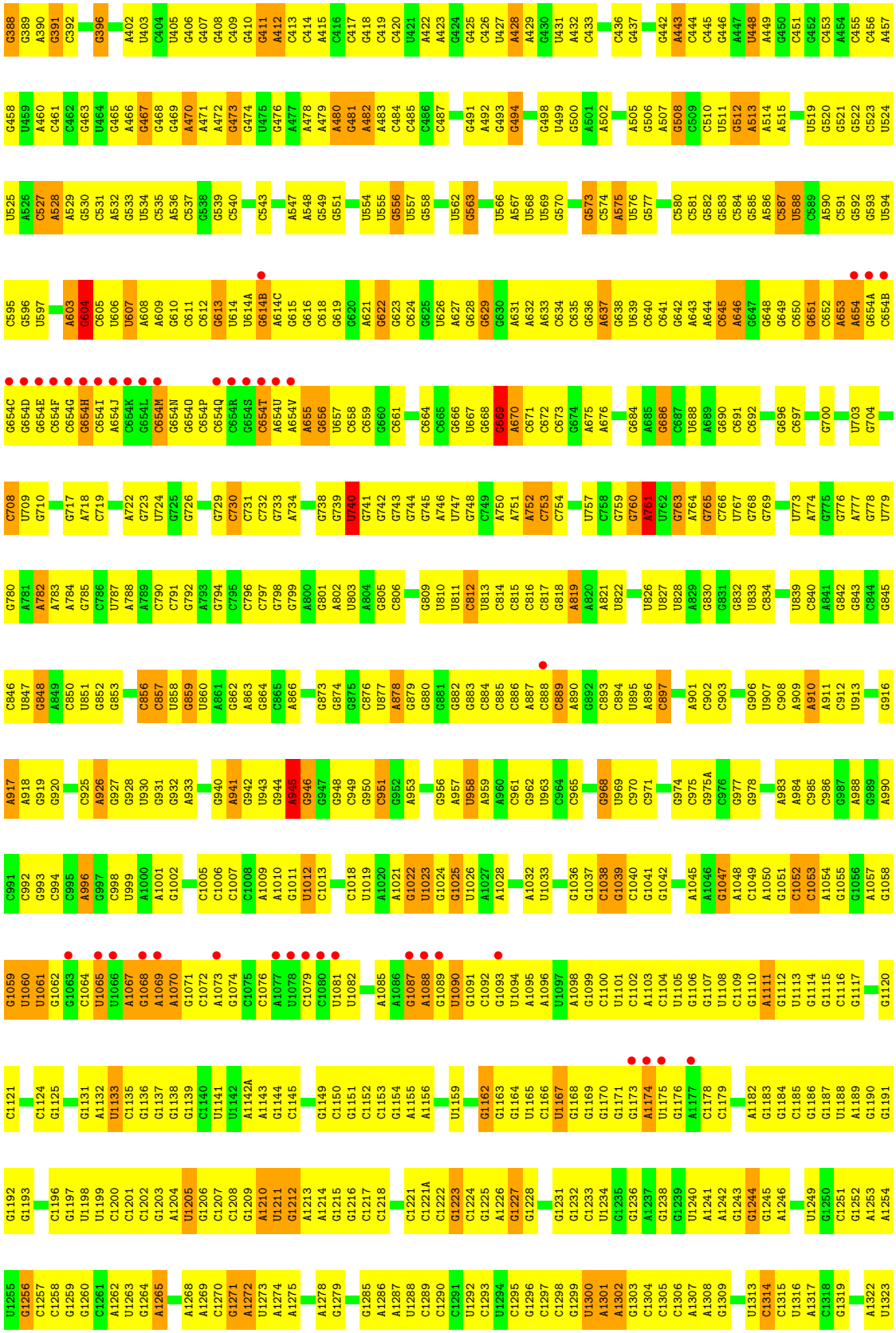
Chain D9:

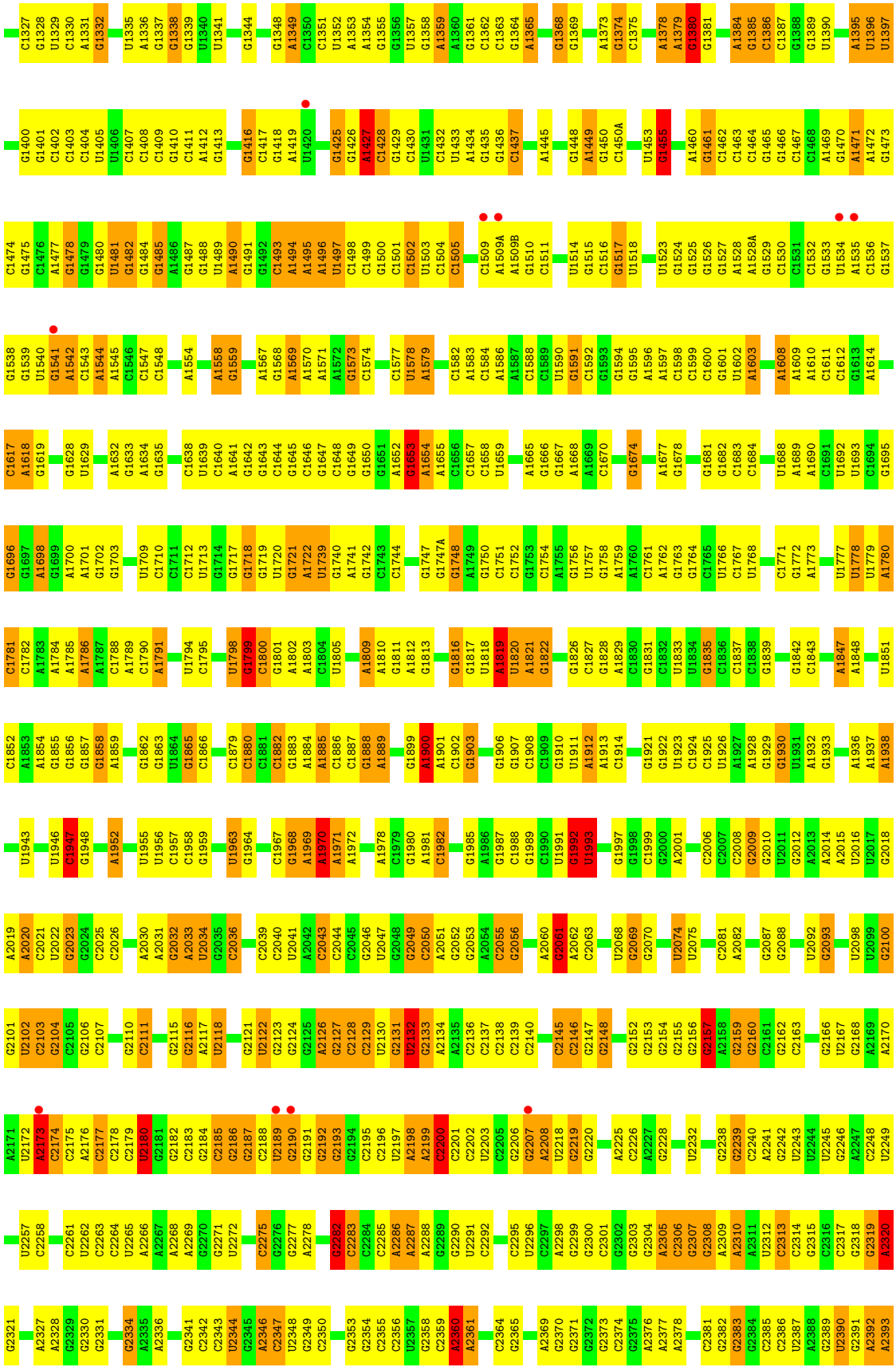


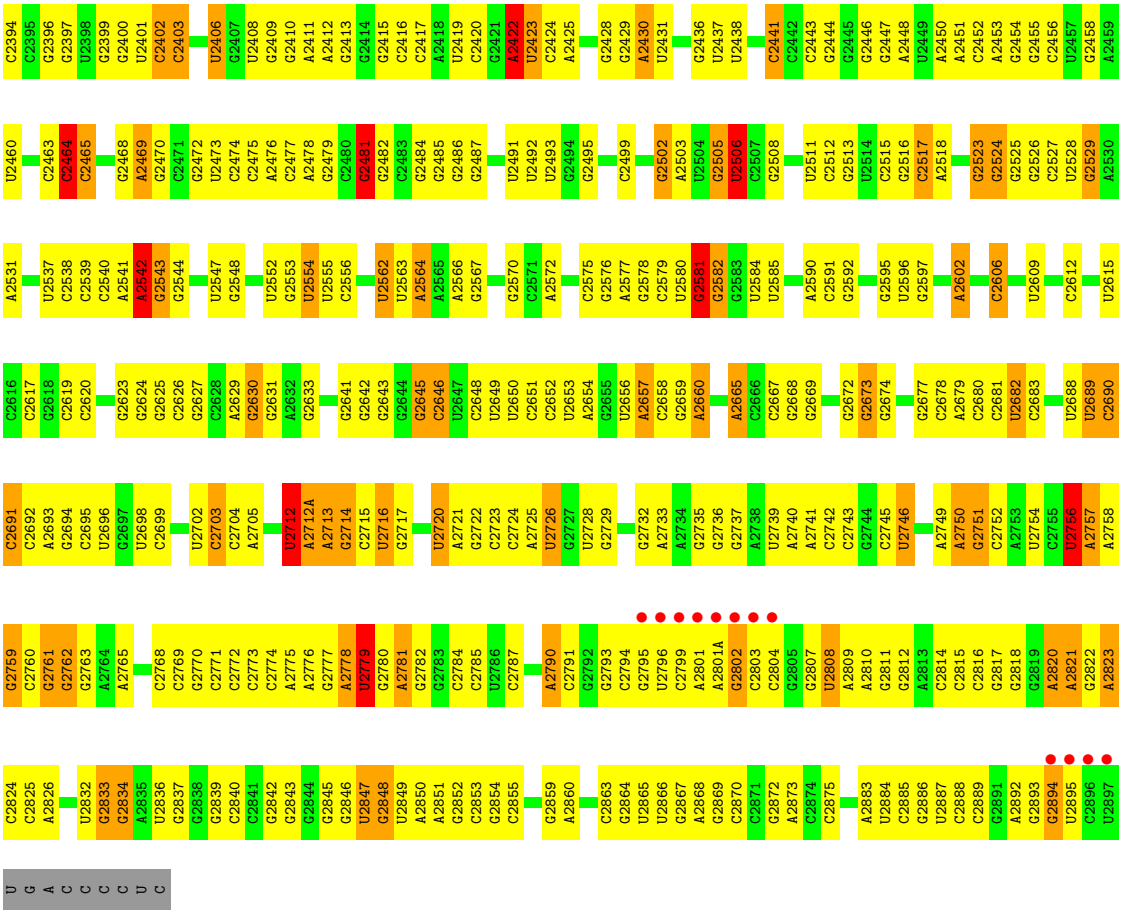
• Molecule 36: 23S RIBOSOMAL RNA

Chain BA:



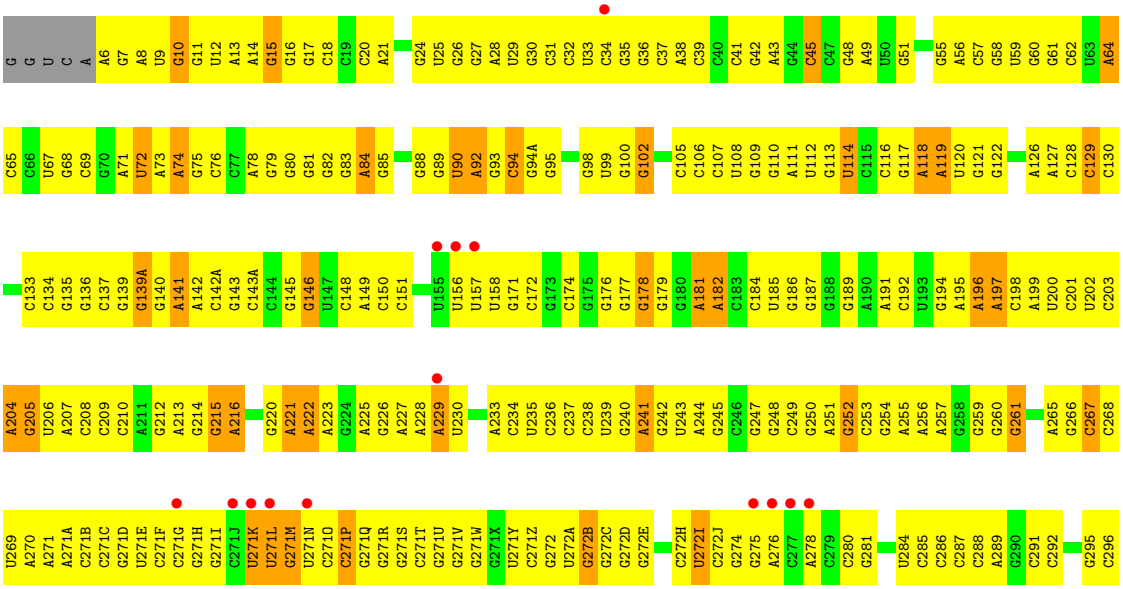


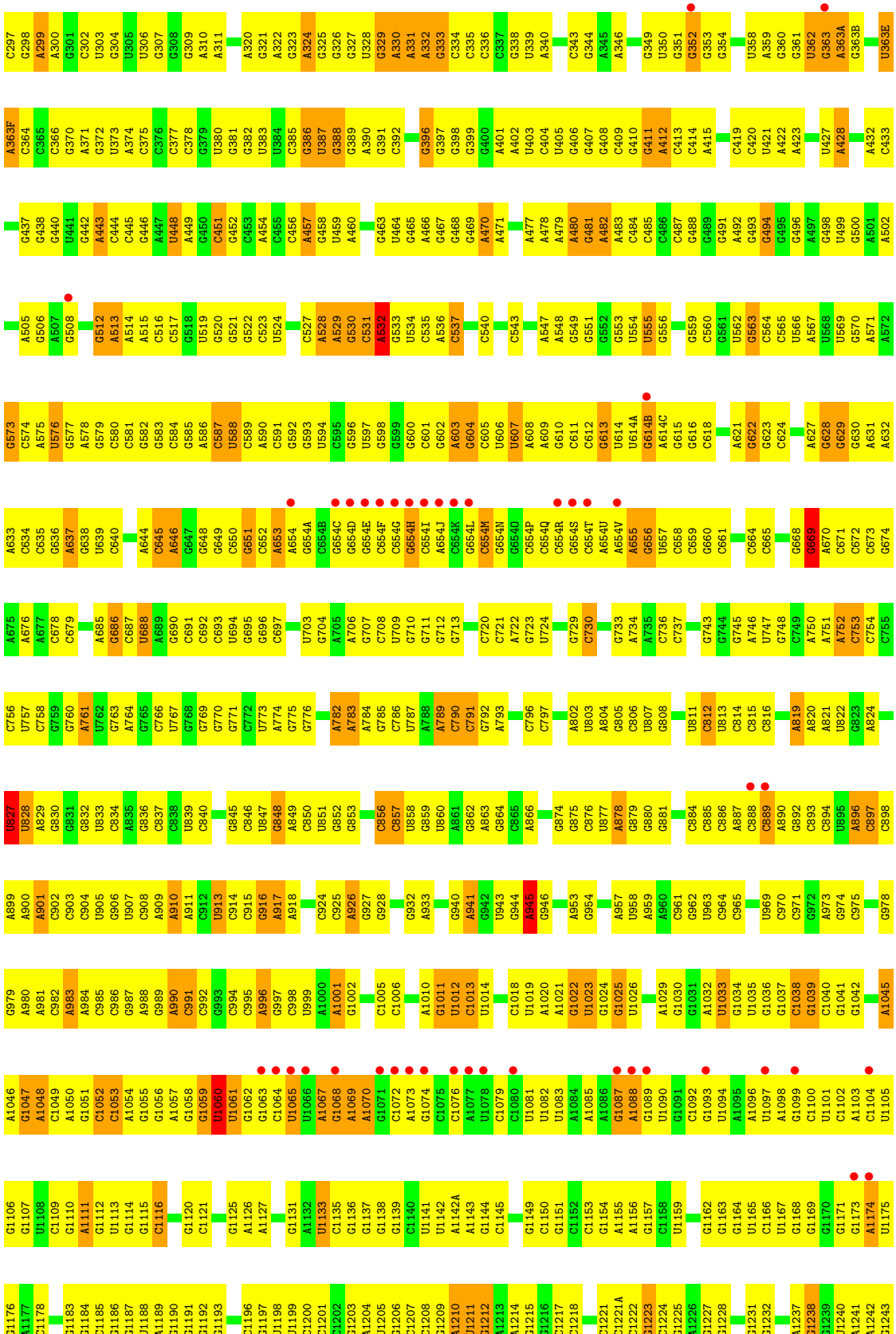


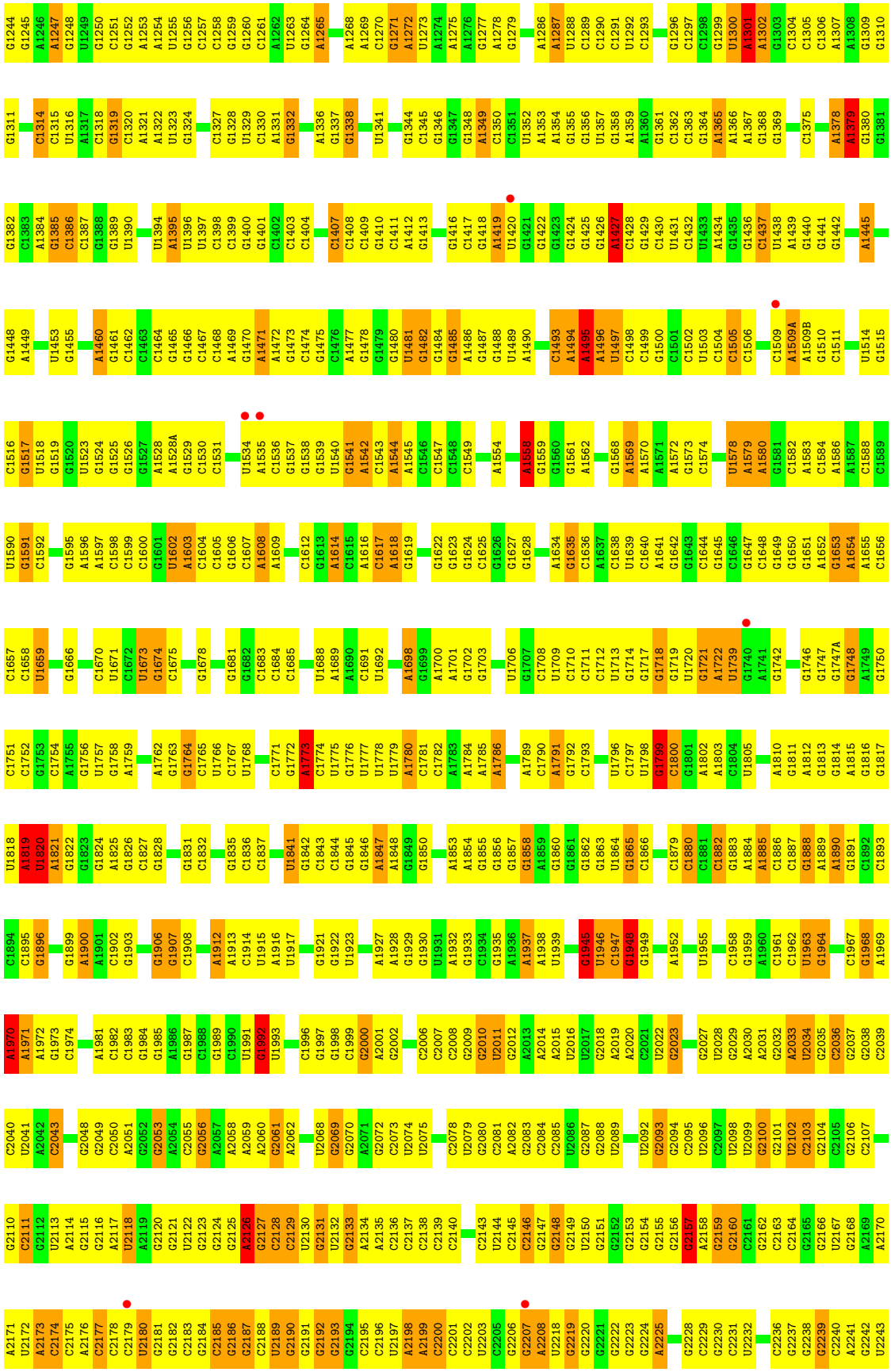


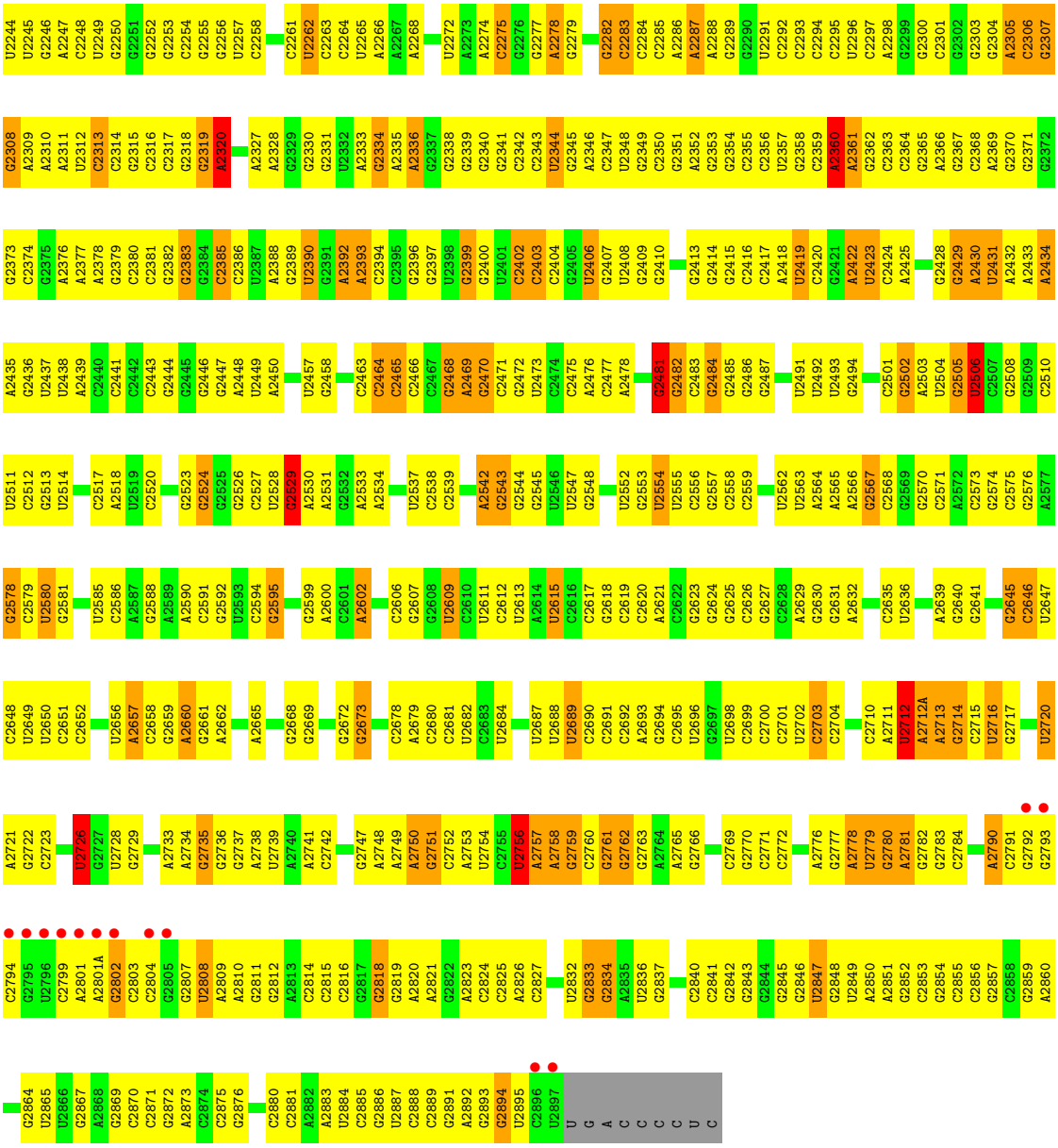
• Molecule 36: 23S RIBOSOMAL RNA

Chain DA:



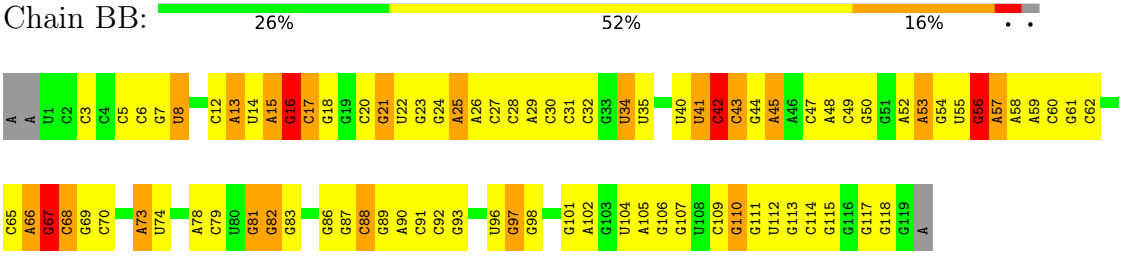






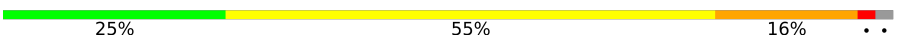
• Molecule 37: 5S RIBOSOMAL RNA

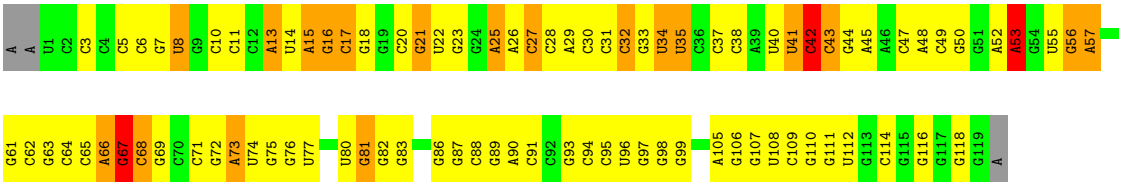
Chain BB:

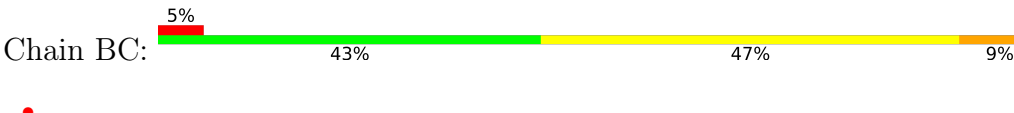


• Molecule 37: 5S RIBOSOMAL RNA

Chain DB:

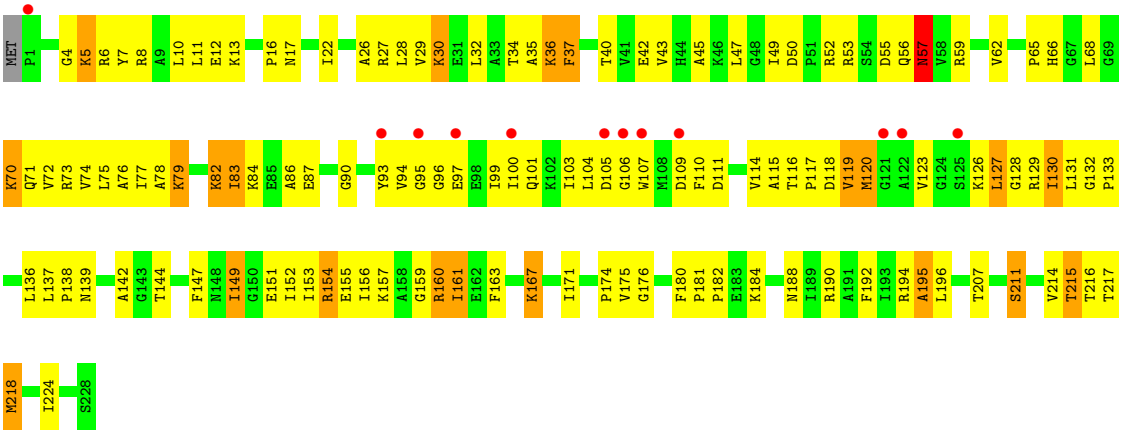






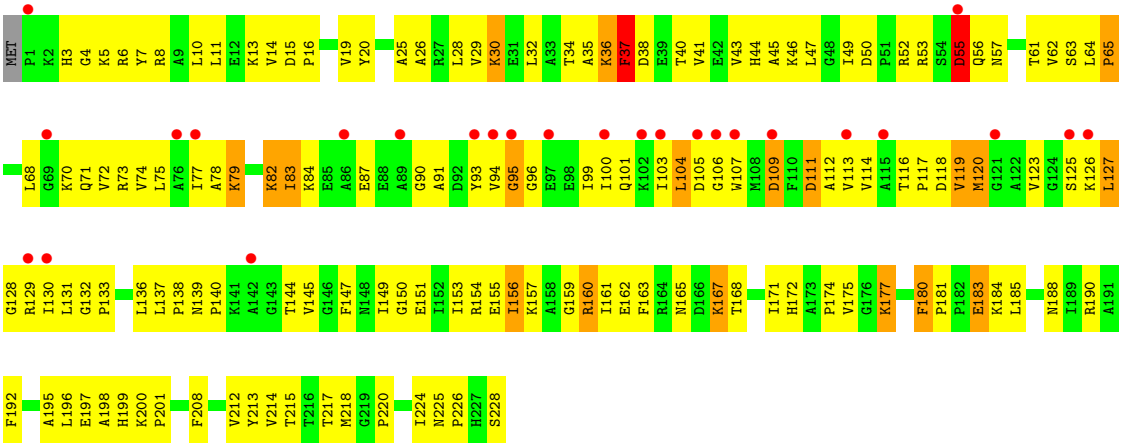
• Molecule 38: 50S RIBOSOMAL PROTEIN L1

Chain BC:



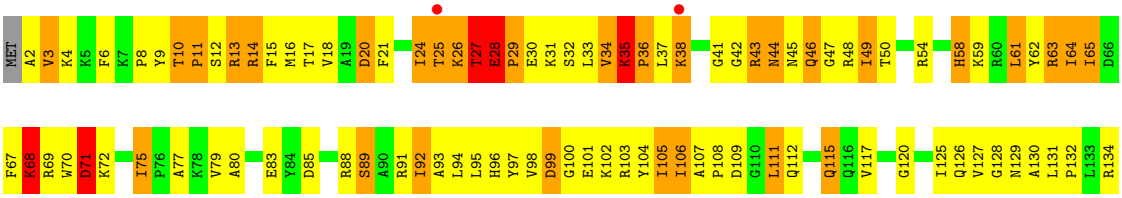
• Molecule 38: 50S RIBOSOMAL PROTEIN L1

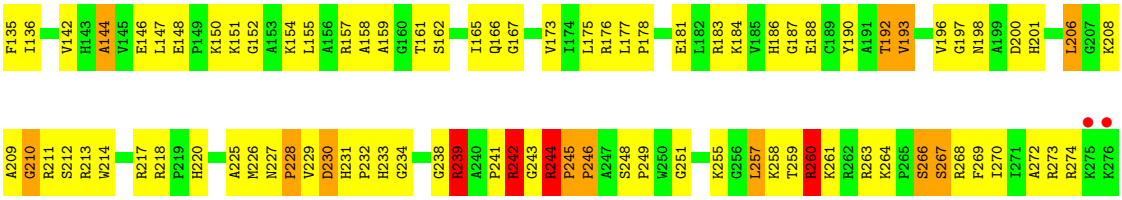
Chain DC:



• Molecule 39: 50S RIBOSOMAL PROTEIN L2

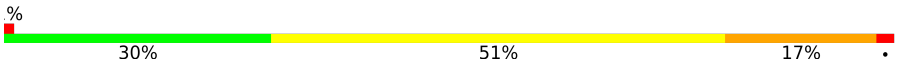
Chain BD:

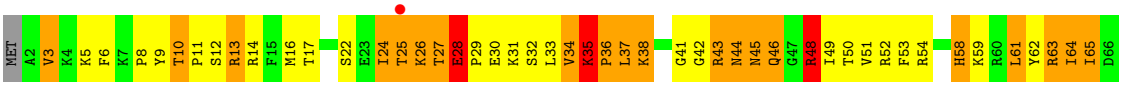


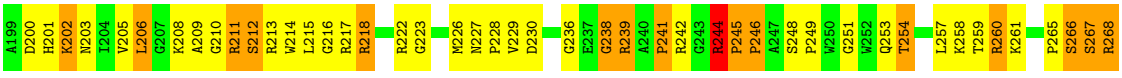


• Molecule 39: 50S RIBOSOMAL PROTEIN L2

Chain DD:

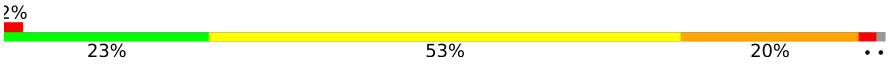


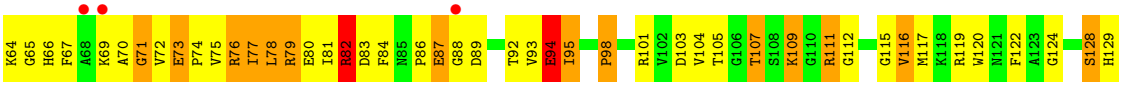




• Molecule 40: 50S RIBOSOMAL PROTEIN L3

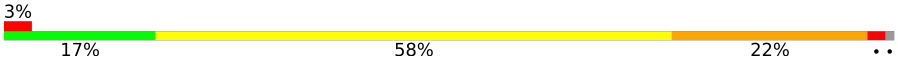
Chain BE:

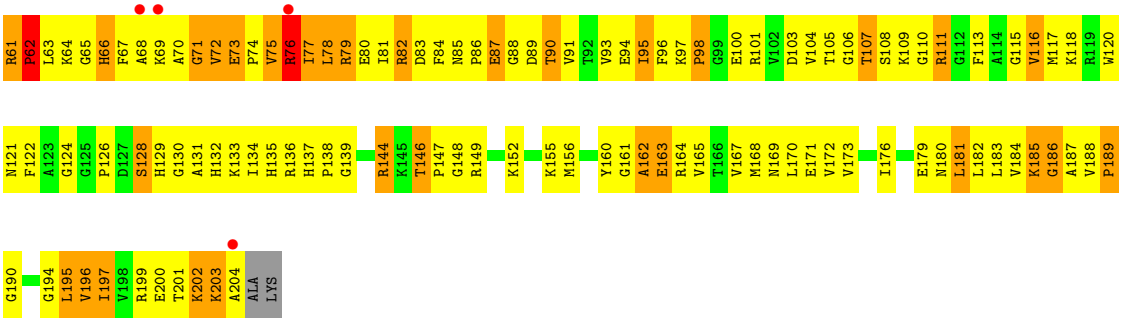




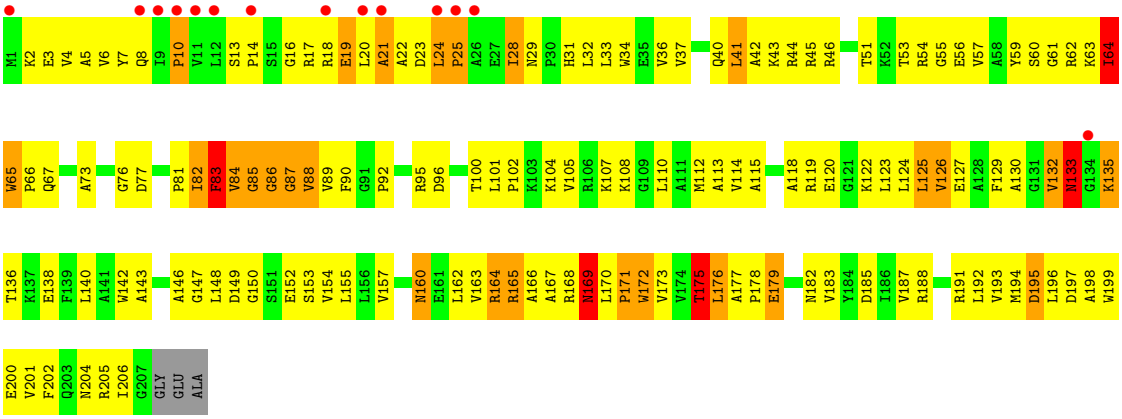
• Molecule 40: 50S RIBOSOMAL PROTEIN L3

Chain DE:

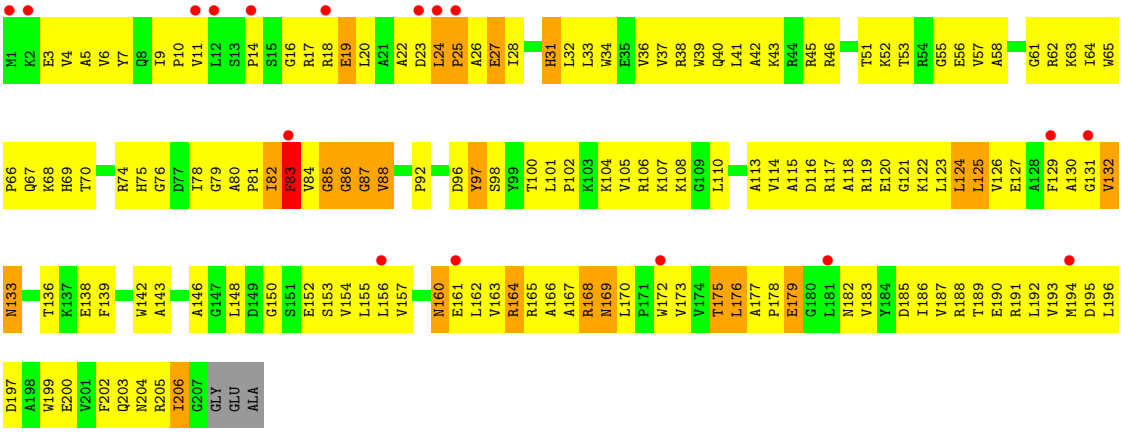




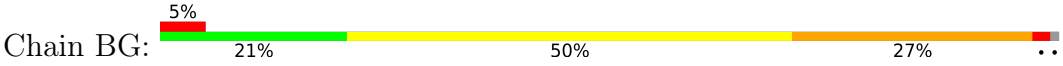
• Molecule 41: 50S RIBOSOMAL PROTEIN L4

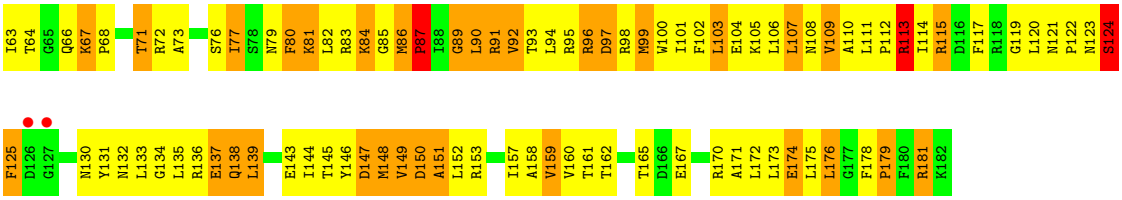


• Molecule 41: 50S RIBOSOMAL PROTEIN L4



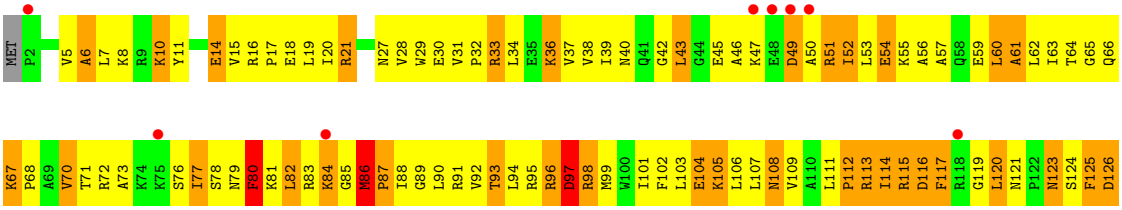
• Molecule 42: 50S RIBOSOMAL PROTEIN L5

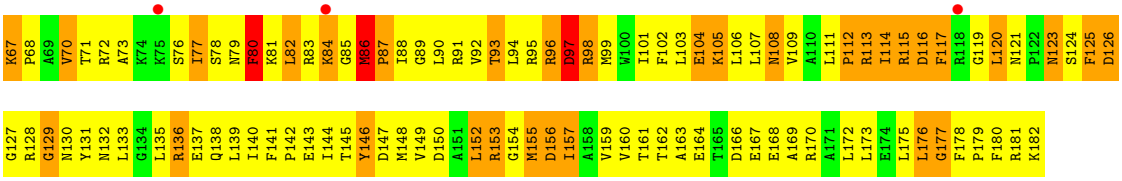




• Molecule 42: 50S RIBOSOMAL PROTEIN L5

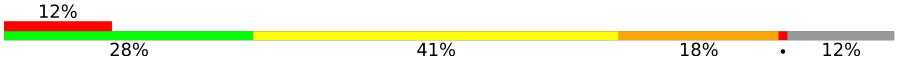
Chain DG:

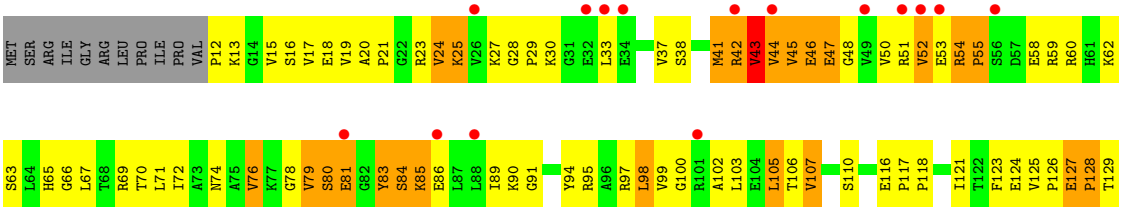




• Molecule 43: 50S RIBOSOMAL PROTEIN L6

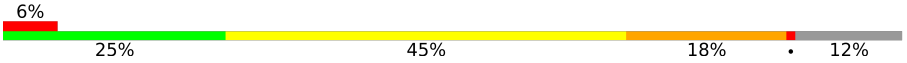
Chain BH:

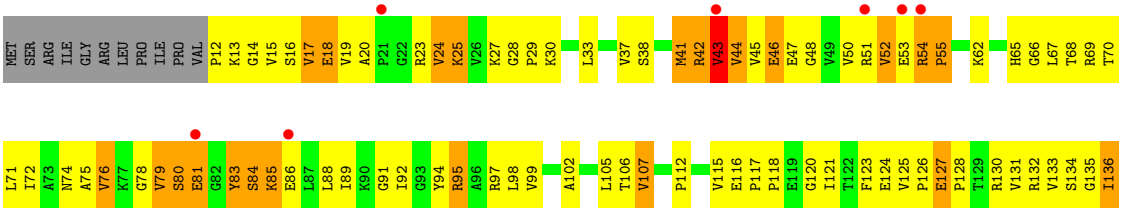


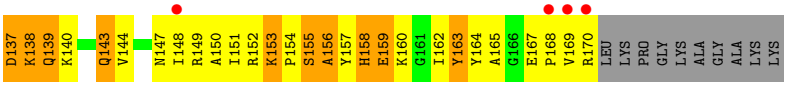


• Molecule 43: 50S RIBOSOMAL PROTEIN L6

Chain DH:

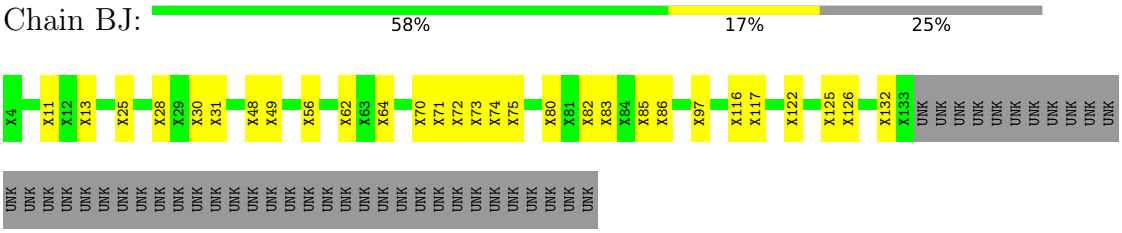






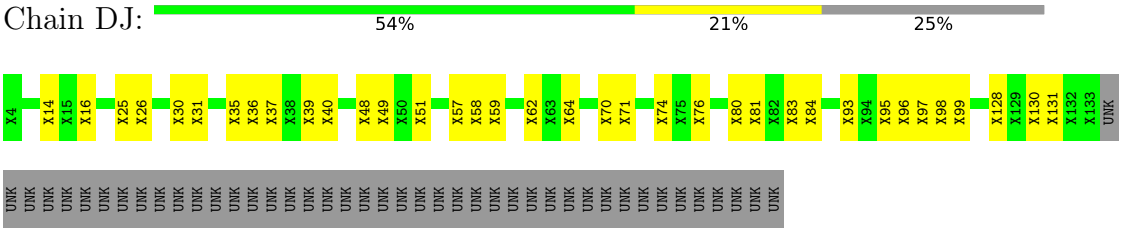
• Molecule 44: 50S RIBOSOMAL PROTEIN L10

Chain BJ:



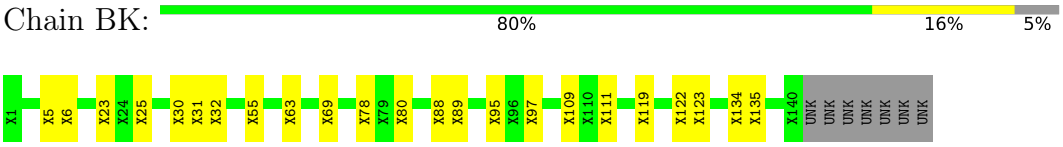
• Molecule 44: 50S RIBOSOMAL PROTEIN L10

Chain DJ:



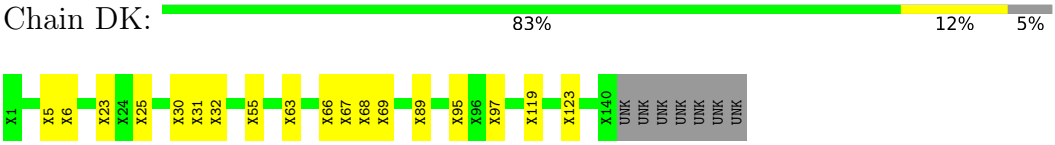
• Molecule 45: 50S RIBOSOMAL PROTEIN L11

Chain BK:



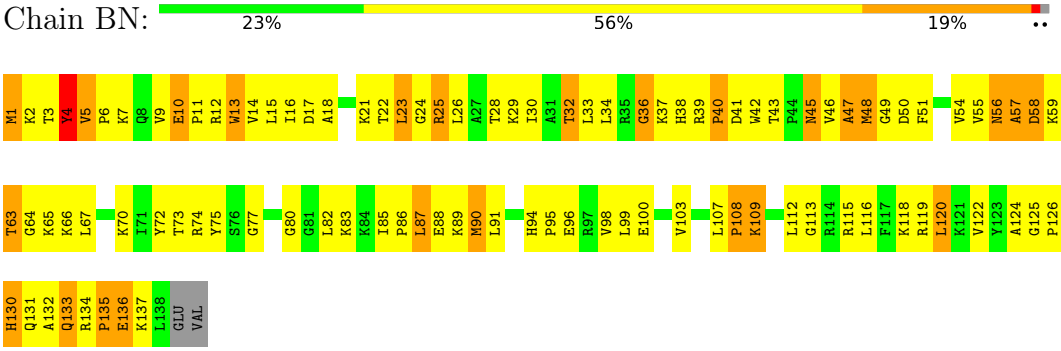
• Molecule 45: 50S RIBOSOMAL PROTEIN L11

Chain DK:



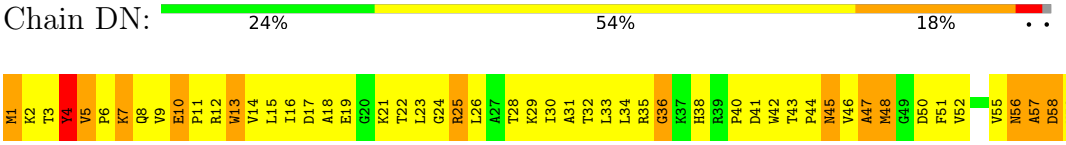
• Molecule 46: 50S RIBOSOMAL PROTEIN L13

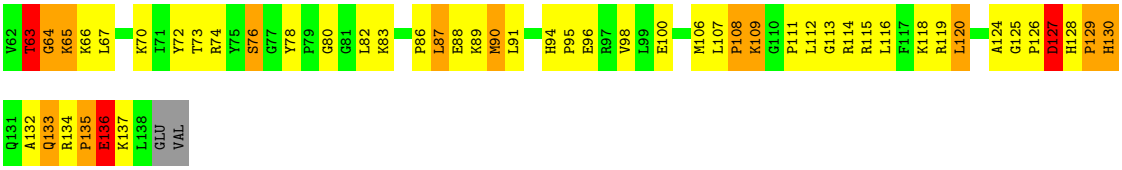
Chain BN:



• Molecule 46: 50S RIBOSOMAL PROTEIN L13

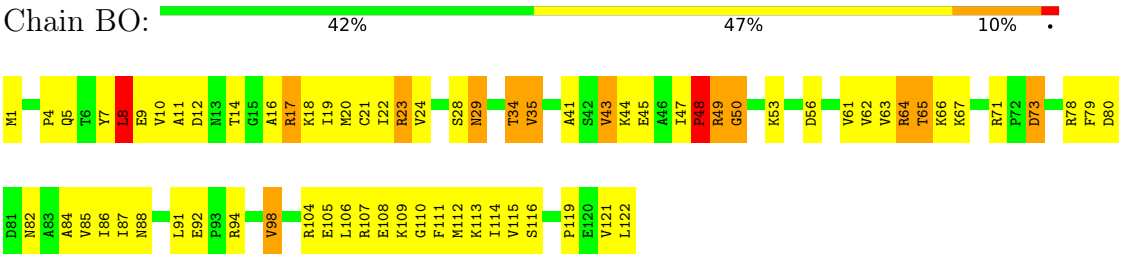
Chain DN:





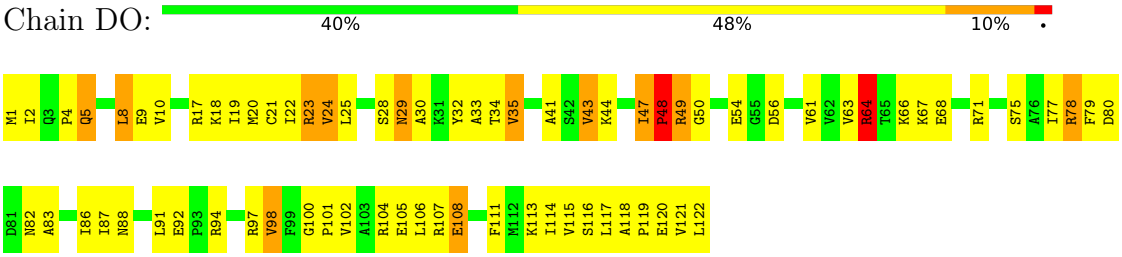
• Molecule 47: 50S RIBOSOMAL PROTEIN L14

Chain BO:



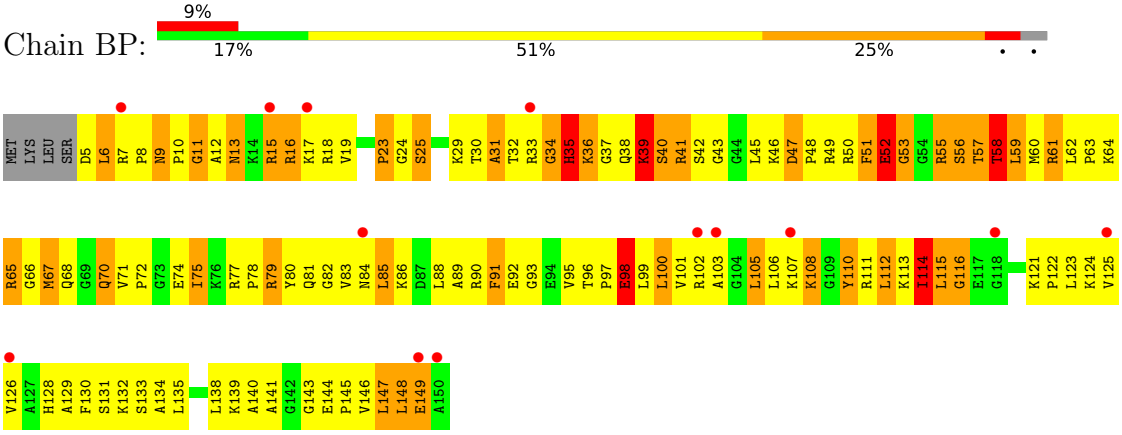
• Molecule 47: 50S RIBOSOMAL PROTEIN L14

Chain DO:



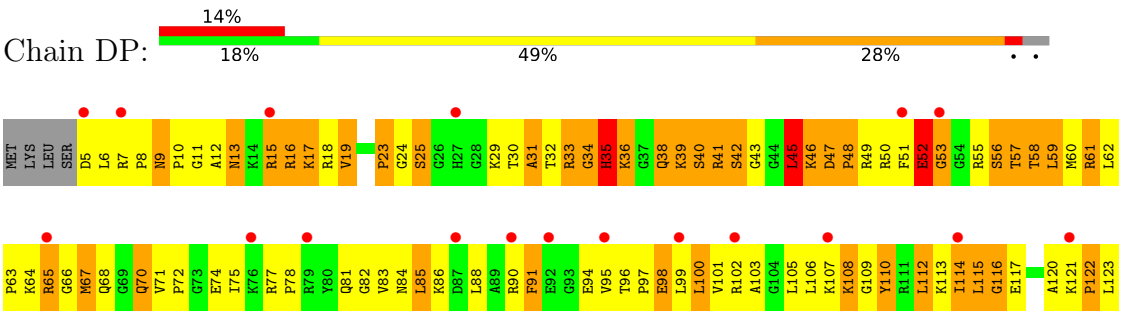
• Molecule 48: 50S RIBOSOMAL PROTEIN L15

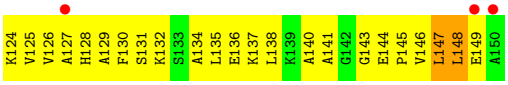
Chain BP:



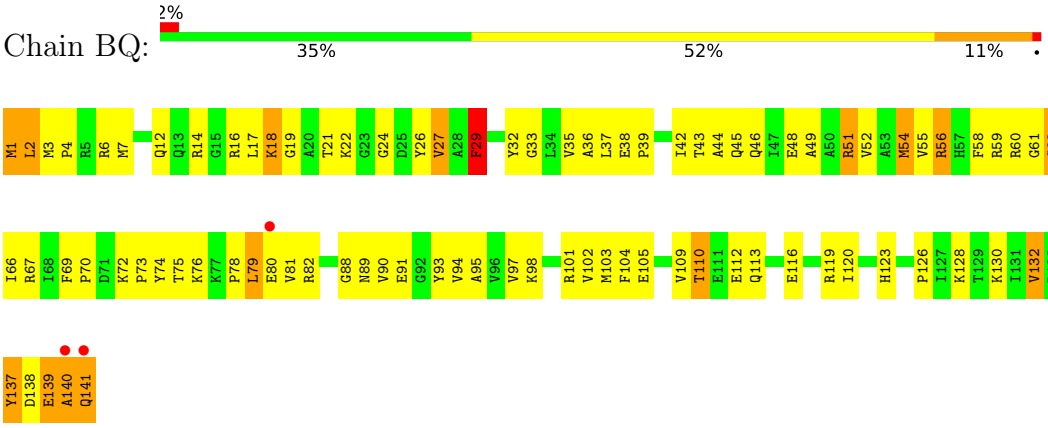
• Molecule 48: 50S RIBOSOMAL PROTEIN L15

Chain DP:

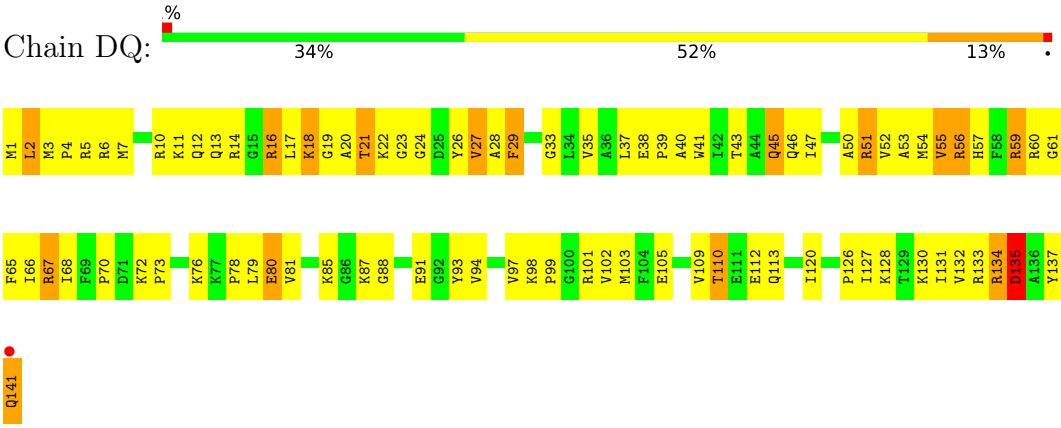




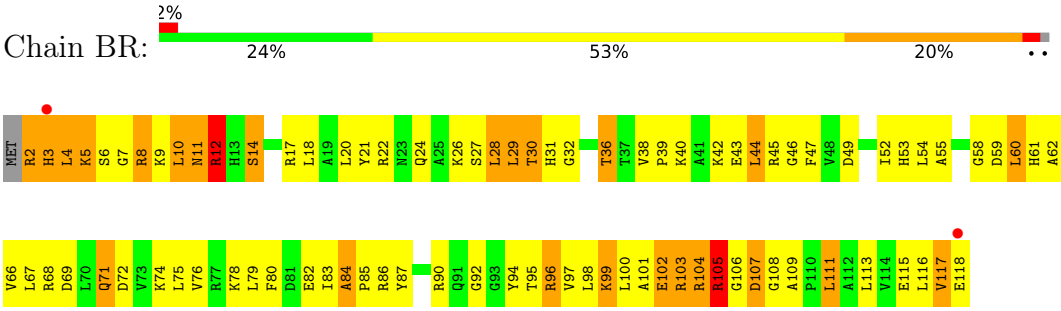
• Molecule 49: 50S RIBOSOMAL PROTEIN L16



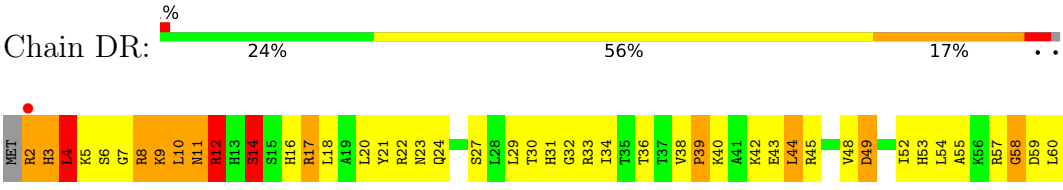
• Molecule 49: 50S RIBOSOMAL PROTEIN L16

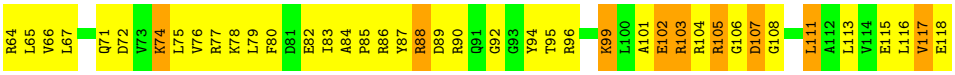


• Molecule 50: 50S RIBOSOMAL PROTEIN L17



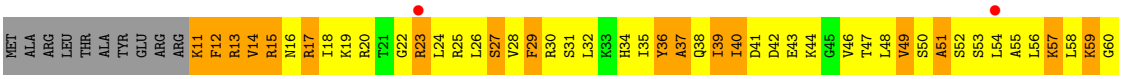
• Molecule 50: 50S RIBOSOMAL PROTEIN L17

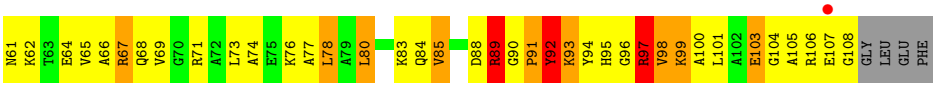




• Molecule 51: 50S RIBOSOMAL PROTEIN L18

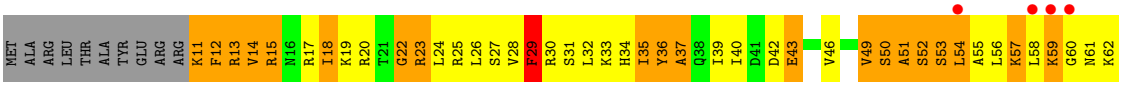
Chain BS:

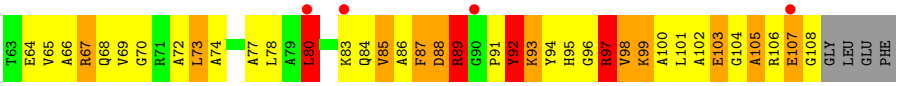




• Molecule 51: 50S RIBOSOMAL PROTEIN L18

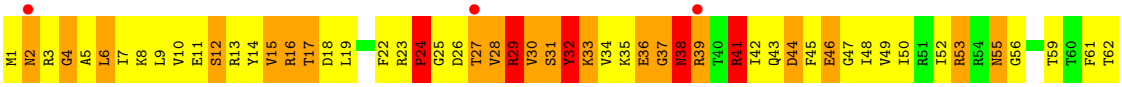
Chain DS:

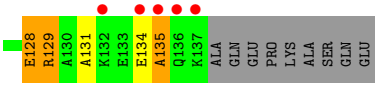




• Molecule 52: 50S RIBOSOMAL PROTEIN L19

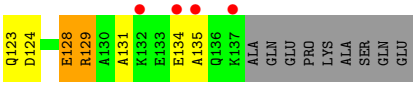
Chain BT:





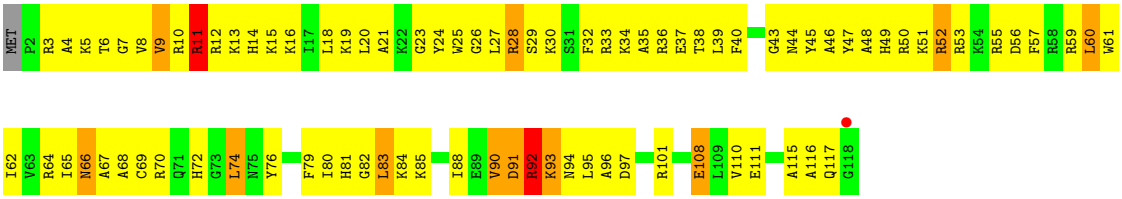
• Molecule 52: 50S RIBOSOMAL PROTEIN L19

Chain DT:



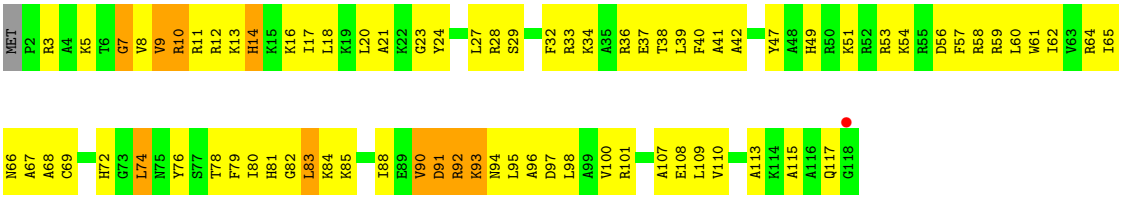
• Molecule 53: 50S RIBOSOMAL PROTEIN L20

Chain BU:



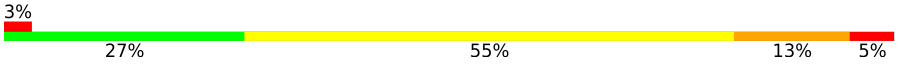
• Molecule 53: 50S RIBOSOMAL PROTEIN L20

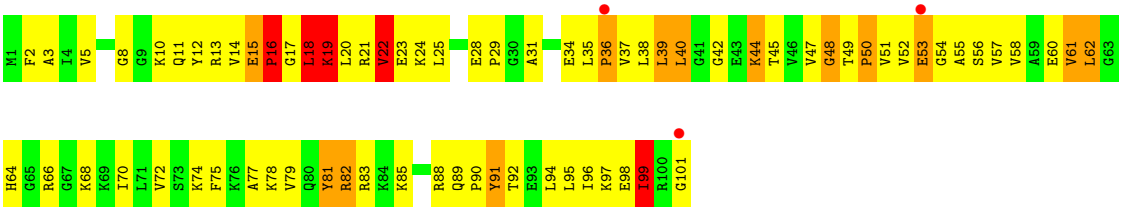
Chain DU:



• Molecule 54: 50S RIBOSOMAL PROTEIN L21

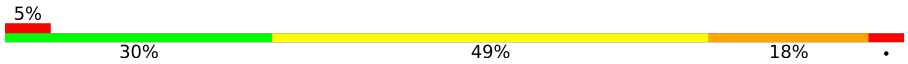
Chain BV:

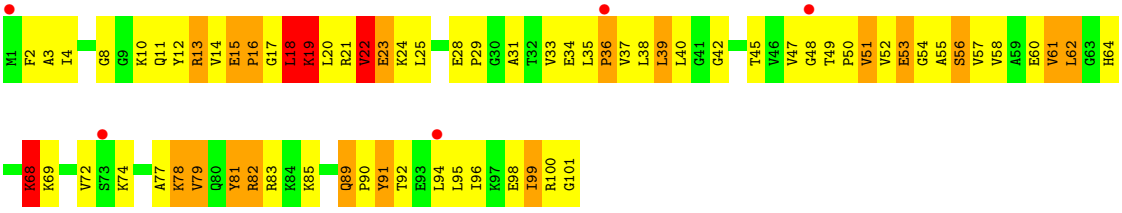




• Molecule 54: 50S RIBOSOMAL PROTEIN L21

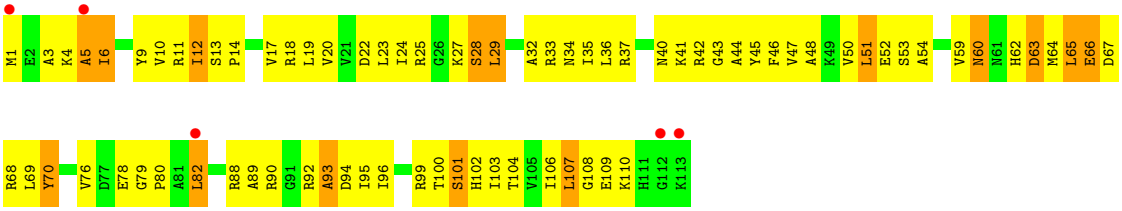
Chain DV:



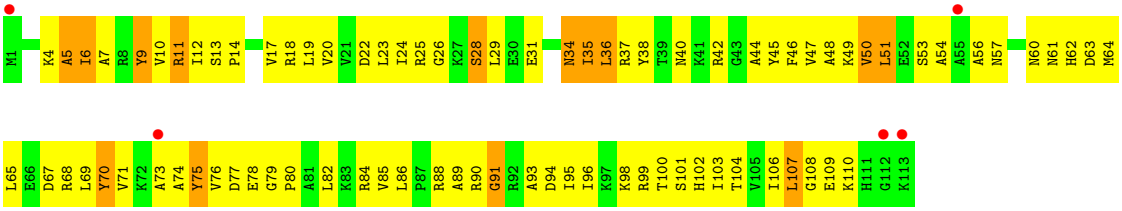


• Molecule 55: 50S RIBOSOMAL PROTEIN L22

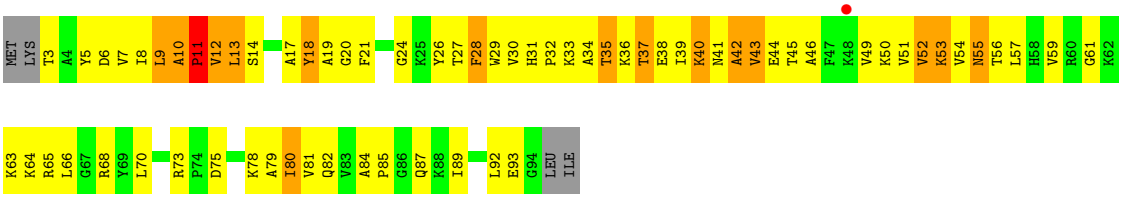
Chain BW:



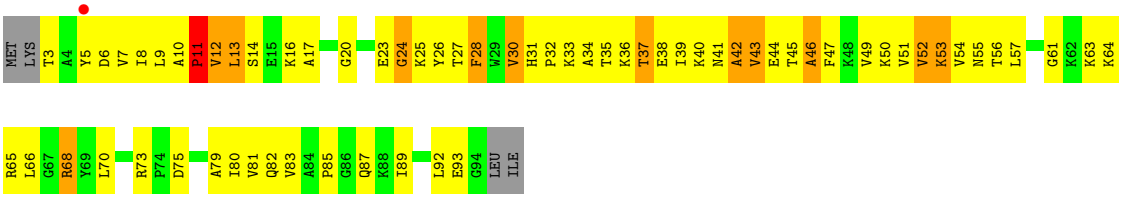
• Molecule 55: 50S RIBOSOMAL PROTEIN L22



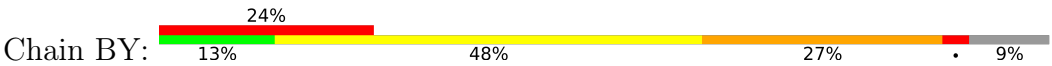
• Molecule 56: 50S RIBOSOMAL PROTEIN L23

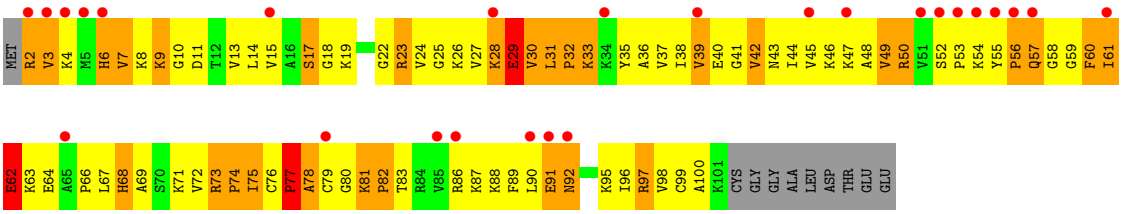


• Molecule 56: 50S RIBOSOMAL PROTEIN L23



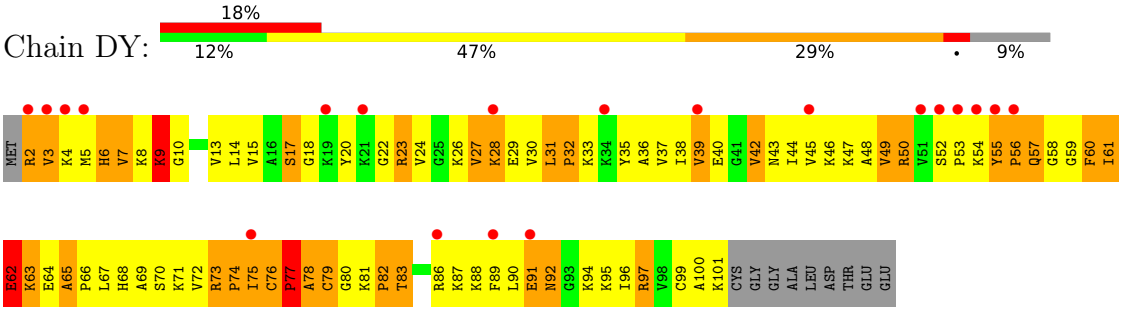
• Molecule 57: 50S RIBOSOMAL PROTEIN L24





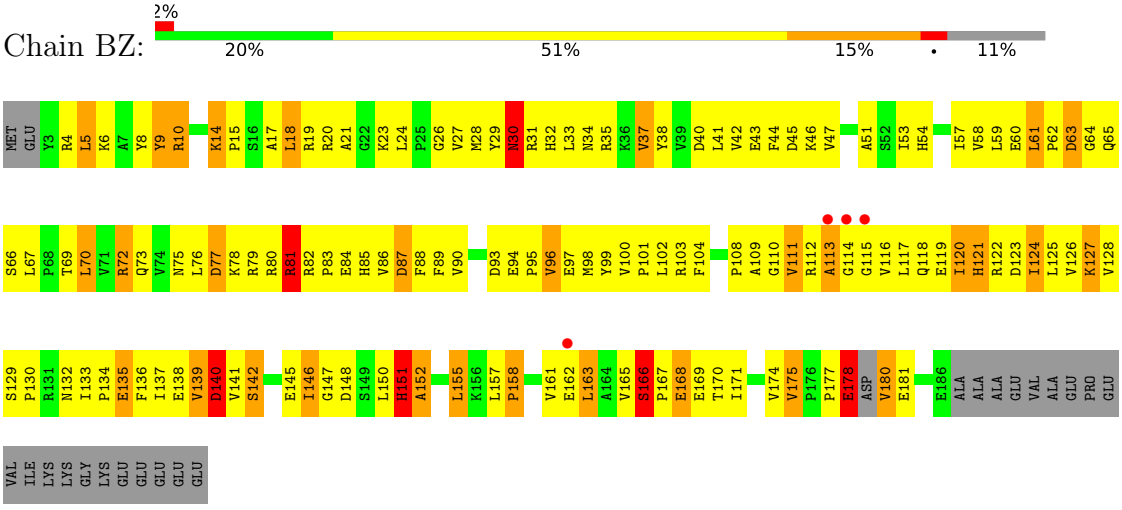
• Molecule 57: 50S RIBOSOMAL PROTEIN L24

Chain DY:



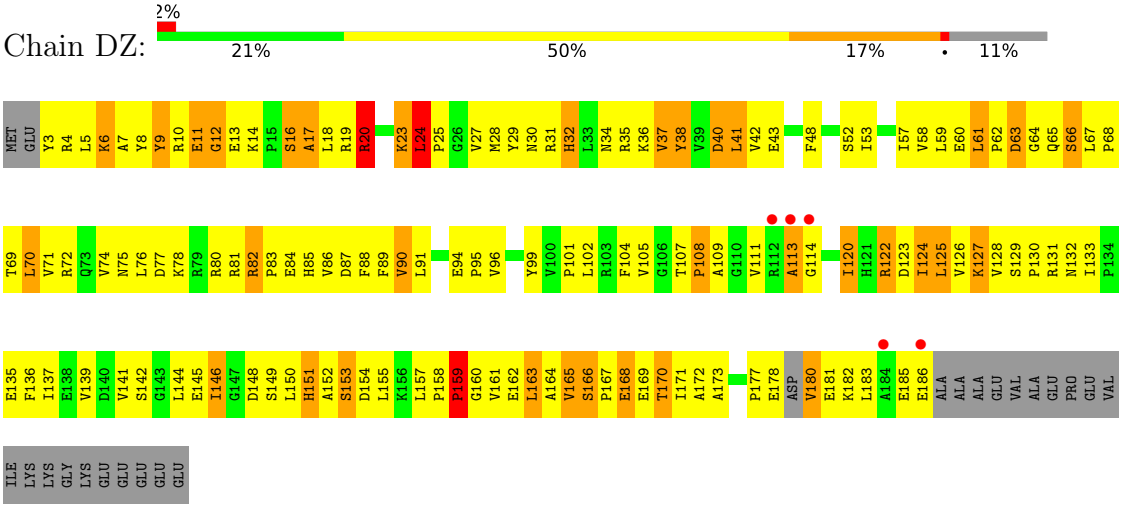
• Molecule 58: 50S RIBOSOMAL PROTEIN L25

Chain BZ:



• Molecule 58: 50S RIBOSOMAL PROTEIN L25

Chain DZ:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	289.90Å 269.40Å 404.50Å 90.00° 91.51° 90.00°	Depositor
Resolution (Å)	50.00 – 3.10 49.22 – 2.80	Depositor EDS
% Data completeness (in resolution range)	98.7 (50.00-3.10) 91.8 (49.22-2.80)	Depositor EDS
R_{merge}	0.02	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.18 (at 2.81Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, R_{free}	0.238 , 0.275 0.238 , 0.275	Depositor DCC
R_{free} test set	69565 reflections (4.99%)	wwPDB-VP
Wilson B-factor (Å^2)	65.1	Xtriage
Anisotropy	0.052	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.27 , 74.2	EDS
L-test for twinning[2]	$< \|L\| > = 0.45$, $< L^2 > = 0.27$	Xtriage
Estimated twinning fraction	0.024 for h,-k,-l	Xtriage
F_o,F_c correlation	0.91	EDS
Total number of atoms	307194	wwPDB-VP
Average B, all atoms (Å^2)	90.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 9.01% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: KIR, GDP, 4SU, MIA, 7MG, ZN, PSU, 5MU, H2U, OMC

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	AA	0.67	10/36190 (0.0%)	0.79	44/56486 (0.1%)
1	CA	0.54	3/36190 (0.0%)	0.74	25/56486 (0.0%)
2	AB	0.55	0/1935	0.76	0/2609
2	CB	0.43	0/1935	0.70	0/2609
3	AC	0.65	1/1636 (0.1%)	0.83	0/2205
3	CC	0.43	0/1636	0.70	0/2205
4	AD	0.48	1/1733 (0.1%)	0.75	1/2318 (0.0%)
4	CD	0.44	1/1733 (0.1%)	0.71	0/2318
5	AE	0.65	1/1162 (0.1%)	0.81	0/1564
5	CE	0.52	0/1162	0.77	0/1564
6	AF	0.50	0/856	0.70	1/1154 (0.1%)
6	CF	0.38	0/856	0.67	0/1154
7	AG	0.52	0/1276	0.73	1/1709 (0.1%)
7	CG	0.39	0/1276	0.63	0/1709
8	AH	0.57	0/1136	0.80	0/1527
8	CH	0.49	0/1136	0.79	0/1527
9	AI	0.55	0/1029	0.82	0/1379
9	CI	0.41	0/1029	0.68	0/1379
10	AJ	0.55	0/807	0.85	0/1085
10	CJ	0.40	0/807	0.75	1/1085 (0.1%)
11	AK	0.60	1/900 (0.1%)	0.80	0/1213
11	CK	0.46	0/900	0.76	1/1213 (0.1%)
12	AL	0.52	0/986	0.82	1/1320 (0.1%)
12	CL	0.44	0/986	0.77	0/1320
13	AM	0.51	0/998	0.80	0/1336
13	CM	0.39	0/998	0.74	0/1336
14	AN	0.70	1/501 (0.2%)	0.98	1/664 (0.2%)
14	CN	0.53	1/501 (0.2%)	0.86	1/664 (0.2%)
15	AO	0.52	0/745	0.77	0/992
15	CO	0.44	0/745	0.66	0/992
16	AP	0.46	0/716	0.74	0/963
16	CP	0.40	0/716	0.70	0/963

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AQ	0.54	0/836	0.76	0/1117
17	CQ	0.45	0/836	0.76	0/1117
18	AR	0.56	0/579	0.73	0/768
18	CR	0.46	0/579	0.72	0/768
19	AS	0.55	0/642	0.76	0/865
19	CS	0.40	0/642	0.76	0/865
20	AT	0.42	0/765	0.69	0/1007
20	CT	0.36	0/765	0.71	0/1007
21	AU	0.55	0/212	0.87	0/277
21	CU	0.48	0/212	0.80	0/277
22	AV	0.68	0/1809	0.79	0/2819
22	AW	0.47	0/1809	0.74	0/2819
22	CV	0.92	5/1809 (0.3%)	0.90	7/2819 (0.2%)
22	CW	0.41	0/1809	0.73	0/2819
23	AX	0.79	0/405	0.91	2/629 (0.3%)
23	CX	1.78	13/405 (3.2%)	1.64	16/629 (2.5%)
24	AY	0.49	1/1618 (0.1%)	0.71	0/2514
24	CY	0.64	2/1618 (0.1%)	0.76	0/2514
25	AZ	0.84	12/3042 (0.4%)	0.99	15/4129 (0.4%)
25	CZ	0.90	14/3042 (0.5%)	1.02	17/4129 (0.4%)
26	B0	0.47	0/671	0.78	0/892
26	D0	0.42	0/671	0.74	0/892
27	B1	0.51	0/738	0.81	1/981 (0.1%)
27	D1	0.42	0/738	0.76	0/981
28	B2	0.38	0/600	0.73	0/793
28	D2	0.35	0/600	0.60	0/793
29	B3	0.40	0/472	0.67	0/634
29	D3	0.38	0/472	0.68	0/634
30	B4	0.46	0/349	0.66	0/474
30	D4	0.51	0/349	0.62	0/474
31	B5	0.44	0/473	0.73	0/639
31	D5	0.43	0/473	0.74	0/639
32	B6	0.70	0/440	0.94	0/586
32	D6	0.58	0/440	0.85	0/586
33	B7	0.49	0/426	0.73	0/561
33	D7	0.44	0/426	0.74	1/561 (0.2%)
34	B8	0.58	0/515	0.89	1/679 (0.1%)
34	D8	0.52	0/515	0.87	1/679 (0.1%)
35	B9	0.56	0/310	0.73	0/407
35	D9	0.69	1/310 (0.3%)	0.81	0/407
36	BA	0.56	7/69976 (0.0%)	0.74	36/109244 (0.0%)
36	DA	0.51	3/69976 (0.0%)	0.73	25/109244 (0.0%)
37	BB	0.51	0/2853	0.77	3/4451 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
37	DB	0.48	0/2853	0.76	0/4451
38	BC	0.46	2/1774 (0.1%)	0.65	0/2391
38	DC	0.41	2/1774 (0.1%)	0.61	0/2391
39	BD	0.62	0/2195	0.93	3/2955 (0.1%)
39	DD	0.51	0/2195	0.86	1/2955 (0.0%)
40	BE	0.46	0/1596	0.77	1/2153 (0.0%)
40	DE	0.45	0/1596	0.75	1/2153 (0.0%)
41	BF	0.40	0/1658	0.65	0/2244
41	DF	0.40	0/1658	0.64	0/2244
42	BG	0.48	0/1499	0.78	0/2016
42	DG	0.40	0/1499	0.70	0/2016
43	BH	0.37	0/1245	0.66	0/1682
43	DH	0.35	0/1245	0.66	0/1682
46	BN	0.39	0/1131	0.72	0/1525
46	DN	0.39	0/1131	0.70	0/1525
47	BO	0.53	0/943	0.74	1/1269 (0.1%)
47	DO	0.51	1/943 (0.1%)	0.74	0/1269
48	BP	0.46	0/1131	0.96	4/1504 (0.3%)
48	DP	0.42	0/1131	0.93	4/1504 (0.3%)
49	BQ	0.52	0/1143	0.73	0/1527
49	DQ	0.51	0/1143	0.69	0/1527
50	BR	0.41	0/974	0.81	2/1302 (0.2%)
50	DR	0.38	0/974	0.77	2/1302 (0.2%)
51	BS	0.45	0/778	0.79	0/1036
51	DS	0.41	0/778	0.76	1/1036 (0.1%)
52	BT	0.48	0/1155	0.78	1/1542 (0.1%)
52	DT	0.44	0/1155	0.77	1/1542 (0.1%)
53	BU	0.42	0/975	0.69	0/1297
53	DU	0.44	0/975	0.69	0/1297
54	BV	0.38	0/790	0.68	0/1057
54	DV	0.37	0/790	0.67	0/1057
55	BW	0.39	0/907	0.76	0/1216
55	DW	0.39	0/907	0.68	0/1216
56	BX	0.45	0/739	0.70	0/993
56	DX	0.41	0/739	0.67	0/993
57	BY	0.36	0/788	0.69	0/1051
57	DY	0.38	0/788	0.70	0/1051
58	BZ	0.50	0/1491	0.75	0/2024
58	DZ	0.46	0/1491	0.72	0/2024
All	All	0.55	83/330116 (0.0%)	0.75	224/493186 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected

by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	AA	1	90
1	CA	2	54
5	AE	0	1
22	AV	0	1
22	CV	0	2
22	CW	0	2
23	AX	0	2
23	CX	0	6
24	CY	0	1
25	AZ	0	2
25	CZ	0	2
36	BA	2	87
36	DA	0	79
37	BB	0	4
37	DB	0	3
39	BD	0	1
46	BN	0	1
All	All	5	338

All (83) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	CV	34	G	C5-C6	-23.91	1.18	1.42
25	CZ	69	GLU	CB-CG	17.54	1.85	1.52
25	AZ	69	GLU	CB-CG	16.36	1.83	1.52
25	AZ	68	VAL	CA-C	12.52	1.85	1.52
25	CZ	68	VAL	CA-C	11.51	1.82	1.52
22	CV	35	A	C5-C6	-10.92	1.31	1.41
36	BA	761	A	C5-C6	-9.78	1.32	1.41
1	AA	858	G	C5-C6	-9.64	1.32	1.42
23	CX	19	U	N3-C4	9.25	1.46	1.38
23	CX	20	U	P-OP2	9.06	1.64	1.49
25	CZ	1	ALA	CA-CB	8.40	1.70	1.52
25	CZ	68	VAL	CB-CG1	8.40	1.70	1.52
36	DA	761	A	C5-C6	-8.38	1.33	1.41
36	BA	945	A	C5-C6	8.28	1.48	1.41
25	AZ	5	PHE	CE2-CZ	8.25	1.53	1.37
23	CX	20	U	C2-O2	8.13	1.29	1.22
35	D9	14	CYS	CB-SG	-8.08	1.68	1.82
22	CV	34	G	C6-O6	-8.06	1.16	1.24
25	AZ	1	ALA	CA-CB	7.97	1.69	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	CZ	5	PHE	CE2-CZ	7.68	1.51	1.37
25	AZ	68	VAL	C-O	7.47	1.37	1.23
23	CX	21	C	C2-N3	7.12	1.41	1.35
24	CY	1	A	OP3-P	-7.03	1.52	1.61
24	AY	1	A	OP3-P	-7.02	1.52	1.61
36	DA	2506	U	N1-C2	7.02	1.44	1.38
1	CA	858	G	C5-C6	-7.02	1.35	1.42
24	CY	77	TRP	CB-CG	-6.92	1.37	1.50
23	CX	20	U	N3-C4	6.89	1.44	1.38
4	AD	9	CYS	CB-SG	-6.84	1.70	1.82
22	CV	34	G	N9-C4	-6.75	1.32	1.38
22	CV	34	G	C8-N7	-6.66	1.26	1.30
25	CZ	68	VAL	C-O	6.62	1.35	1.23
25	AZ	68	VAL	CB-CG2	-6.61	1.39	1.52
1	CA	1054	C	C5-C6	-6.58	1.29	1.34
25	AZ	68	VAL	CB-CG1	6.57	1.66	1.52
36	BA	2506	U	N1-C2	6.57	1.44	1.38
14	AN	40	CYS	CB-SG	6.51	1.93	1.82
25	CZ	322	VAL	CB-CG1	6.47	1.66	1.52
25	CZ	69	GLU	CG-CD	6.43	1.61	1.51
23	CX	20	U	P-OP1	6.26	1.59	1.49
25	AZ	69	GLU	CA-CB	-6.23	1.40	1.53
1	AA	1108	G	C6-O6	6.18	1.29	1.24
1	AA	858	G	N1-C2	6.15	1.42	1.37
25	CZ	288	VAL	CB-CG2	6.12	1.65	1.52
4	CD	26	CYS	CB-SG	-6.07	1.72	1.82
23	CX	21	C	N1-C2	-6.03	1.34	1.40
23	CX	19	U	C2-N3	5.97	1.42	1.37
25	CZ	69	GLU	CA-CB	-5.97	1.40	1.53
25	AZ	69	GLU	CG-CD	5.91	1.60	1.51
23	CX	22	U	P-OP2	5.89	1.58	1.49
1	AA	766	A	P-OP2	5.86	1.58	1.49
1	AA	1281	U	N1-C2	5.84	1.43	1.38
38	DC	120	MET	CG-SD	5.78	1.96	1.81
38	DC	218	MET	CG-SD	5.77	1.96	1.81
1	AA	1054	C	C5-C6	-5.67	1.29	1.34
23	CX	19	U	C2-O2	5.49	1.27	1.22
36	DA	945	A	C5-C6	5.49	1.46	1.41
1	AA	299	G	C6-O6	5.45	1.29	1.24
36	BA	2180	U	N1-C2	5.43	1.43	1.38
1	AA	723	U	N1-C2	5.43	1.43	1.38
36	BA	761	A	C6-N6	-5.41	1.29	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	CZ	67	HIS	CA-C	5.41	1.67	1.52
23	CX	20	U	O3'-P	5.36	1.67	1.61
25	AZ	322	VAL	CB-CG1	5.32	1.64	1.52
25	CZ	184	ARG	CZ-NH2	5.30	1.40	1.33
23	CX	19	U	C4-O4	5.29	1.27	1.23
25	AZ	67	HIS	CA-C	5.29	1.66	1.52
25	AZ	5	PHE	CE1-CZ	5.26	1.47	1.37
36	BA	1795	C	N1-C2	5.24	1.45	1.40
5	AE	68	GLU	CB-CG	5.18	1.62	1.52
36	BA	1968	G	C5-C6	-5.18	1.37	1.42
1	CA	1054	C	C2-N3	-5.16	1.31	1.35
25	CZ	5	PHE	CE1-CZ	5.15	1.47	1.37
47	DO	21	CYS	CB-SG	-5.11	1.73	1.81
23	CX	19	U	O3'-P	5.10	1.67	1.61
14	CN	27	CYS	CB-SG	-5.10	1.73	1.81
1	AA	858	G	C5-C4	5.09	1.42	1.38
38	BC	218	MET	CG-SD	5.09	1.94	1.81
1	AA	1502	A	C5-C6	-5.05	1.36	1.41
38	BC	120	MET	CG-SD	5.04	1.94	1.81
3	AC	167	TRP	CB-CG	-5.03	1.41	1.50
25	CZ	322	VAL	CB-CG2	5.03	1.63	1.52
11	AK	119	CYS	CB-SG	-5.02	1.73	1.81

All (224) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	AZ	356	PRO	C-N-CD	-26.29	62.77	120.60
25	CZ	356	PRO	C-N-CD	-25.87	63.68	120.60
25	AZ	197	ASP	CB-CG-OD2	-14.50	105.25	118.30
25	AZ	69	GLU	N-CA-CB	-13.90	85.58	110.60
25	CZ	69	GLU	N-CA-CB	-13.63	86.07	110.60
25	CZ	197	ASP	CB-CG-OD2	-13.28	106.35	118.30
23	CX	20	U	O5'-P-OP1	-11.34	95.49	105.70
22	CV	34	G	C5-C6-O6	-11.03	121.98	128.60
23	CX	21	C	N1-C2-O2	-11.01	112.30	118.90
25	AZ	197	ASP	CB-CG-OD1	10.73	127.96	118.30
25	CZ	69	GLU	CA-CB-CG	10.27	135.99	113.40
25	AZ	69	GLU	CA-CB-CG	10.09	135.61	113.40
14	AN	24	CYS	CA-CB-SG	-10.03	95.94	114.00
25	CZ	197	ASP	CB-CG-OD1	9.88	127.19	118.30
22	CV	34	G	C6-C5-N7	-9.84	124.50	130.40
1	AA	508	C	C2'-C3'-O3'	9.71	130.87	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
14	CN	24	CYS	CA-CB-SG	-9.55	96.80	114.00
25	CZ	7	ARG	NE-CZ-NH1	-9.43	115.58	120.30
1	CA	508	C	C2'-C3'-O3'	9.32	130.00	109.50
36	DA	1786	A	N9-C1'-C2'	9.22	125.99	114.00
36	BA	1992	G	C2'-C3'-O3'	9.07	129.45	109.50
1	AA	1101	A	C2'-C3'-O3'	9.00	129.30	109.50
1	AA	687	A	C2'-C3'-O3'	8.99	129.27	109.50
1	CA	243	A	C2'-C3'-O3'	8.95	129.18	109.50
23	CX	23	G	O5'-P-OP1	-8.86	97.72	105.70
1	AA	245	C	N1-C1'-C2'	-8.77	102.36	112.00
36	BA	1820	U	C2'-C3'-O3'	8.51	128.23	109.50
1	AA	961	U	N1-C1'-C2'	-8.49	102.66	112.00
36	DA	1912	A	C5'-C4'-O4'	-8.47	98.93	109.10
1	CA	1399	C	C2'-C3'-O3'	8.47	128.13	109.50
25	CZ	68	VAL	CB-CA-C	8.43	127.41	111.40
36	BA	1786	A	N9-C1'-C2'	8.39	124.91	114.00
23	CX	19	U	O5'-P-OP1	-8.37	98.17	105.70
48	DP	53	GLY	N-CA-C	-8.36	92.20	113.10
1	AA	968	A	C2'-C3'-O3'	8.27	127.68	109.50
1	AA	243	A	C2'-C3'-O3'	8.25	127.65	109.50
1	CA	961	U	N1-C1'-C2'	-8.18	103.00	112.00
25	CZ	68	VAL	CA-C-O	-8.18	102.92	120.10
36	BA	1300	U	C2'-C3'-O3'	8.10	127.32	109.50
36	BA	1970	A	C5'-C4'-O4'	8.09	118.81	109.10
25	AZ	68	VAL	CB-CA-C	8.02	126.63	111.40
1	CA	792	A	C2'-C3'-O3'	7.98	127.06	109.50
25	CZ	201	GLU	OE1-CD-OE2	-7.92	113.80	123.30
1	AA	792	A	C2'-C3'-O3'	7.92	126.92	109.50
36	DA	1992	G	C2'-C3'-O3'	7.90	126.89	109.50
25	AZ	7	ARG	NE-CZ-NH1	-7.88	116.36	120.30
23	CX	21	C	N3-C2-O2	7.88	127.42	121.90
1	AA	189(H)	G	N9-C1'-C2'	-7.82	103.40	112.00
48	DP	52	GLU	N-CA-C	7.64	131.62	111.00
25	AZ	68	VAL	CA-C-O	-7.61	104.13	120.10
25	CZ	356	PRO	C-N-CA	7.58	153.86	122.00
36	BA	1970	A	C1'-O4'-C4'	-7.58	103.83	109.90
25	AZ	201	GLU	OE1-CD-OE2	-7.58	114.20	123.30
23	CX	24	A	O5'-P-OP1	-7.56	98.89	105.70
39	BD	244	ARG	C-N-CD	-7.52	104.05	120.60
25	AZ	356	PRO	C-N-CA	7.49	153.46	122.00
48	BP	53	GLY	N-CA-C	-7.48	94.41	113.10
36	DA	1300	U	C2'-C3'-O3'	7.43	125.85	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	982	U	C2'-C3'-O3'	7.35	125.67	109.50
1	AA	60	A	C2'-C3'-O3'	7.33	125.61	109.50
50	BR	12	ARG	N-CA-C	-7.24	91.45	111.00
36	BA	1819	A	C2'-C3'-O3'	7.20	125.35	109.50
48	BP	52	GLU	N-CA-C	7.19	130.41	111.00
1	AA	1050	G	N9-C1'-C2'	-7.16	104.13	112.00
36	BA	2360	A	N9-C1'-C2'	-7.14	104.14	112.00
50	DR	12	ARG	N-CA-C	-7.13	91.74	111.00
36	DA	1912	A	N9-C1'-C2'	7.10	123.23	114.00
36	BA	1835	G	C5'-C4'-C3'	-7.09	104.66	116.00
22	CV	34	G	N1-C6-O6	7.08	124.15	119.90
36	DA	1820	U	C2'-C3'-O3'	7.02	124.94	109.50
36	DA	2756	U	C2'-C3'-O3'	7.01	124.93	109.50
50	BR	4	LEU	CA-CB-CG	6.99	131.38	115.30
23	AX	26	A	N9-C1'-C2'	6.98	123.08	114.00
36	BA	2464	C	N1-C1'-C2'	-6.95	104.36	112.00
25	CZ	69	GLU	CA-C-N	-6.95	101.92	117.20
36	DA	2360	A	N9-C1'-C2'	-6.77	104.55	112.00
23	CX	26	A	N9-C1'-C2'	6.72	122.74	114.00
34	B8	32	LEU	CA-CB-CG	6.72	130.75	115.30
36	DA	1799	G	C2'-C3'-O3'	6.67	124.38	113.70
25	AZ	69	GLU	CA-C-N	-6.66	102.56	117.20
1	AA	328	C	N1-C1'-C2'	6.57	122.54	114.00
22	CV	34	G	C4-C5-C6	6.57	122.74	118.80
36	DA	1495	A	N9-C1'-C2'	6.53	122.49	114.00
22	CV	59	U	N1-C1'-C2'	-6.52	104.83	112.00
1	AA	1181	G	N9-C1'-C2'	6.51	122.47	114.00
36	BA	1799	G	C2'-C3'-O3'	6.49	124.08	113.70
36	BA	242	G	N9-C1'-C2'	6.45	122.39	114.00
1	CA	1101	A	C2'-C3'-O3'	6.45	124.02	113.70
1	AA	1387	G	C5'-C4'-C3'	-6.43	105.71	116.00
36	BA	1698	A	N9-C1'-C2'	6.39	122.30	114.00
36	BA	527	C	O4'-C1'-N1	6.34	113.27	108.20
36	BA	2157	G	N9-C1'-C2'	-6.34	105.02	112.00
1	AA	1239	A	C2'-C3'-O3'	6.33	123.83	113.70
23	AX	26	A	O4'-C1'-N9	6.33	113.27	108.20
23	CX	21	C	O5'-P-OP1	-6.33	100.00	105.70
36	DA	1948	G	C5'-C4'-O4'	-6.33	101.51	109.10
1	AA	428	G	N9-C1'-C2'	6.30	122.19	114.00
7	AG	145	ALA	N-CA-C	-6.30	94.00	111.00
1	AA	995	C	N1-C1'-C2'	-6.23	105.15	112.00
23	CX	26	A	O4'-C1'-N9	6.21	113.17	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	772	U	C5'-C4'-C3'	-6.21	106.06	116.00
36	DA	1427	A	C2'-C3'-O3'	6.21	123.63	113.70
1	AA	960	U	N1-C1'-C2'	6.20	122.06	114.00
25	CZ	184	ARG	NE-CZ-NH1	-6.18	117.21	120.30
50	DR	4	LEU	CA-CB-CG	6.18	129.51	115.30
36	BA	1970	A	C5'-C4'-C3'	6.18	125.88	116.00
36	BA	2132	U	N1-C1'-C2'	6.16	122.01	114.00
25	CZ	69	GLU	N-CA-C	6.13	127.55	111.00
1	AA	1506	U	O5'-P-OP2	-6.13	100.19	105.70
37	BB	16	G	N9-C1'-C2'	-6.11	105.28	112.00
1	AA	1502	A	N9-C1'-C2'	6.08	121.91	114.00
1	AA	1279	A	N9-C1'-C2'	6.07	121.89	114.00
1	AA	686	U	N1-C1'-C2'	6.07	121.88	114.00
23	CX	20	U	C5'-C4'-O4'	6.03	116.34	109.10
1	AA	1348	U	O5'-P-OP2	-5.99	100.31	105.70
39	BD	68	LYS	N-CA-C	-5.97	94.88	111.00
37	BB	67	G	N9-C1'-C2'	-5.94	105.47	112.00
36	BA	1820	U	C4'-C3'-O3'	5.93	124.85	113.00
36	DA	2111	C	N1-C1'-C2'	5.91	121.69	114.00
1	AA	858	G	C6-C5-N7	-5.91	126.85	130.40
25	AZ	69	GLU	N-CA-C	5.91	126.96	111.00
36	BA	2286	A	N9-C1'-C2'	5.88	121.65	114.00
1	CA	1239	A	N9-C1'-C2'	5.81	121.56	114.00
23	CX	20	U	OP1-P-O3'	5.81	117.98	105.20
36	BA	1300	U	C4'-C3'-O3'	5.77	124.54	113.00
12	AL	88	GLY	N-CA-C	-5.77	98.68	113.10
23	CX	20	U	N3-C2-O2	5.74	126.22	122.20
1	AA	1255	G	C5'-C4'-C3'	-5.72	106.84	116.00
36	DA	906	G	C5'-C4'-C3'	-5.72	106.84	116.00
36	BA	1653	G	C2'-C3'-O3'	5.70	122.83	113.70
1	CA	1050	G	N9-C1'-C2'	-5.70	105.73	112.00
34	D8	32	LEU	CA-CB-CG	5.68	128.37	115.30
39	DD	244	ARG	C-N-CD	-5.68	108.10	120.60
1	AA	376	G	N9-C1'-C2'	-5.66	105.78	112.00
52	BT	29	ARG	N-CA-C	5.66	126.27	111.00
1	CA	30	U	C2'-C3'-O3'	5.62	122.70	113.70
36	BA	2756	U	C2'-C3'-O3'	5.60	122.66	113.70
48	DP	59	LEU	CA-CB-CG	5.60	128.17	115.30
1	AA	961	U	C5'-C4'-C3'	-5.59	107.05	116.00
25	CZ	68	VAL	N-CA-C	-5.59	95.91	111.00
37	BB	56	G	N9-C1'-C2'	5.59	121.26	114.00
1	CA	687	A	C2'-C3'-O3'	5.58	122.63	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	AZ	258	LEU	CA-CB-CG	-5.58	102.46	115.30
1	CA	1399	C	C4'-C3'-O3'	5.58	124.15	113.00
1	CA	115	G	N9-C1'-C2'	5.57	121.24	114.00
1	CA	428	G	N9-C1'-C2'	5.57	121.23	114.00
1	AA	1077	G	N9-C1'-C2'	-5.56	105.88	112.00
1	AA	572	A	OP2-P-O3'	5.56	117.43	105.20
1	AA	1044	A	N9-C1'-C2'	-5.54	105.90	112.00
36	BA	387	U	C2'-C3'-O3'	5.54	122.57	113.70
1	AA	977	A	C5'-C4'-C3'	-5.53	107.15	116.00
36	DA	1300	U	C4'-C3'-O3'	5.53	124.06	113.00
10	CJ	55	LYS	N-CA-C	5.52	125.91	111.00
36	BA	527	C	N1-C1'-C2'	5.52	121.17	114.00
1	CA	971	G	N9-C1'-C2'	5.52	121.17	114.00
40	BE	168	MET	N-CA-C	5.51	125.87	111.00
1	CA	1181	G	N9-C1'-C2'	5.51	121.16	114.00
23	CX	21	C	N1-C1'-C2'	-5.51	105.94	112.00
47	BO	8	LEU	CA-CB-CG	5.50	127.96	115.30
36	DA	1819	A	C2'-C3'-O3'	5.49	122.49	113.70
4	AD	12	CYS	N-CA-C	-5.49	96.18	111.00
36	BA	1912	A	N9-C1'-C2'	5.48	121.13	114.00
36	BA	669	G	N9-C1'-C2'	5.47	121.11	114.00
1	AA	1054	C	N1-C1'-C2'	5.46	121.10	114.00
1	CA	748	C	N1-C1'-C2'	5.43	121.06	114.00
23	CX	21	C	C2-N3-C4	-5.43	117.19	119.90
36	DA	1970	A	C1'-O4'-C4'	-5.42	105.56	109.90
1	AA	202	U	C2'-C3'-O3'	5.41	122.36	113.70
36	DA	669	G	N9-C1'-C2'	5.40	121.02	114.00
22	CV	34	G	C2-N3-C4	-5.39	109.21	111.90
25	CZ	189	ARG	NE-CZ-NH2	-5.39	117.61	120.30
36	BA	1781	C	N1-C1'-C2'	5.38	121.00	114.00
52	DT	29	ARG	N-CA-C	5.38	125.52	111.00
36	BA	1698	A	O4'-C1'-N9	5.34	112.47	108.20
1	AA	1053	G	OP2-P-O3'	5.34	116.94	105.20
1	CA	119	A	N9-C1'-C2'	5.34	120.94	114.00
1	CA	198	G	N9-C1'-C2'	-5.33	106.13	112.00
1	CA	197	A	N9-C1'-C2'	5.31	120.90	114.00
11	CK	102	GLY	N-CA-C	-5.30	99.86	113.10
36	BA	2200	C	C5'-C4'-C3'	-5.29	107.53	116.00
36	BA	386	G	N9-C1'-C2'	5.29	120.87	114.00
36	BA	1947	C	C5'-C4'-C3'	-5.28	107.55	116.00
25	CZ	258	LEU	CA-CB-CG	-5.28	103.15	115.30
1	CA	839	U	N1-C1'-C2'	5.28	120.86	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	AZ	197	ASP	N-CA-C	-5.27	96.78	111.00
36	BA	2346	A	O4'-C1'-N9	5.25	112.40	108.20
36	DA	2559	C	C5'-C4'-C3'	-5.24	107.62	116.00
1	AA	30	U	N1-C1'-C2'	5.23	120.80	114.00
1	CA	328	C	N1-C1'-C2'	5.22	120.79	114.00
33	D7	6	GLN	N-CA-C	-5.22	96.90	111.00
1	CA	231	G	N9-C1'-C2'	-5.22	106.26	112.00
48	DP	45	LEU	N-CA-C	-5.22	96.91	111.00
27	B1	36	GLY	N-CA-C	5.20	126.11	113.10
22	CV	34	G	N1-C2-N3	-5.20	120.78	123.90
36	DA	1558	A	C2'-C3'-O3'	5.20	122.01	113.70
36	BA	906	G	C5'-C4'-C3'	-5.18	107.71	116.00
48	BP	51	PHE	N-CA-C	5.17	124.97	111.00
1	CA	508	C	C4'-C3'-O3'	5.17	123.34	113.00
25	AZ	7	ARG	NE-CZ-NH2	5.14	122.87	120.30
23	CX	19	U	C5'-C4'-O4'	5.14	115.27	109.10
1	AA	1157	A	N9-C1'-C2'	5.13	120.67	114.00
39	BD	210	GLY	N-CA-C	-5.12	100.30	113.10
36	DA	1301	A	N9-C1'-C2'	5.12	120.65	114.00
6	AF	38	GLU	N-CA-C	-5.11	97.22	111.00
1	AA	586	C	N1-C1'-C2'	-5.10	106.39	112.00
1	CA	560	U	C2'-C3'-O3'	5.10	121.86	113.70
36	DA	2126	A	N9-C1'-C2'	5.10	120.63	114.00
1	AA	1065	U	O4'-C1'-N1	5.08	112.26	108.20
1	AA	508	C	OP2-P-O3'	5.07	116.36	105.20
25	CZ	197	ASP	N-CA-C	-5.07	97.32	111.00
1	AA	1239	A	C4'-C3'-C2'	5.06	107.66	102.60
36	BA	1835	G	C5'-C4'-O4'	5.06	115.17	109.10
36	BA	2564	A	N9-C1'-C2'	5.06	120.58	114.00
1	AA	858	G	N1-C6-O6	5.05	122.93	119.90
51	DS	26	LEU	CA-CB-CG	5.05	126.91	115.30
1	CA	60	A	C2'-C3'-O3'	5.05	121.77	113.70
23	CX	20	U	C2-N1-C1'	-5.05	111.64	117.70
36	DA	2278	A	C5'-C4'-C3'	5.05	124.08	116.00
36	BA	2009	G	N9-C1'-C2'	-5.04	106.46	112.00
36	DA	1698	A	N9-C1'-C2'	5.04	120.55	114.00
48	BP	59	LEU	CA-CB-CG	5.03	126.87	115.30
40	DE	168	MET	N-CA-C	5.03	124.57	111.00
1	AA	1066	C	C5'-C4'-C3'	-5.00	108.00	116.00
36	DA	1159	U	C5'-C4'-C3'	-5.00	108.00	116.00

All (5) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	AA	508	C	C3'
36	BA	1300	U	C3'
36	BA	1820	U	C3'
1	CA	508	C	C3'
1	CA	1399	C	C3'

All (338) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1048	G	Sidechain
1	AA	1050	G	Sidechain
1	AA	1054	C	Sidechain
1	AA	1055	A	Sidechain
1	AA	1073	U	Sidechain
1	AA	1077	G	Sidechain
1	AA	108	G	Sidechain
1	AA	1085	U	Sidechain
1	AA	1094	G	Sidechain
1	AA	1117	G	Sidechain
1	AA	1153	C	Sidechain
1	AA	1181	G	Sidechain
1	AA	1190	G	Sidechain
1	AA	1206	G	Sidechain
1	AA	1214	C	Sidechain
1	AA	1224	G	Sidechain
1	AA	1227	A	Sidechain
1	AA	123	C	Sidechain
1	AA	1266	G	Sidechain
1	AA	1279	A	Sidechain
1	AA	1281	U	Sidechain
1	AA	1283	G	Sidechain
1	AA	1292	U	Sidechain
1	AA	1294	G	Sidechain
1	AA	13	U	Sidechain
1	AA	1330	U	Sidechain
1	AA	1331	G	Sidechain
1	AA	1348	U	Sidechain
1	AA	1378	C	Sidechain
1	AA	1406	U	Sidechain
1	AA	1414	U	Sidechain
1	AA	1421	G	Sidechain
1	AA	1442(A)	G	Sidechain
1	AA	1480	G	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1505	G	Sidechain
1	AA	1512	U	Sidechain
1	AA	1516	G	Sidechain
1	AA	1519	A	Sidechain
1	AA	1531	A	Sidechain
1	AA	189(G)	G	Sidechain
1	AA	189(H)	G	Sidechain
1	AA	198	G	Sidechain
1	AA	20	U	Sidechain
1	AA	244	U	Sidechain
1	AA	245	C	Sidechain
1	AA	250	A	Sidechain
1	AA	251	G	Sidechain
1	AA	265	G	Sidechain
1	AA	266	G	Sidechain
1	AA	279	A	Sidechain
1	AA	362	G	Sidechain
1	AA	404	U	Sidechain
1	AA	428	G	Sidechain
1	AA	498	U	Sidechain
1	AA	505	G	Sidechain
1	AA	528	C	Sidechain
1	AA	529	G	Sidechain
1	AA	557	G	Sidechain
1	AA	568	G	Sidechain
1	AA	570	G	Sidechain
1	AA	573	A	Sidechain
1	AA	586	C	Sidechain
1	AA	603	U	Sidechain
1	AA	667	G	Sidechain
1	AA	669	U	Sidechain
1	AA	686	U	Sidechain
1	AA	714	G	Sidechain
1	AA	727	G	Sidechain
1	AA	740	U	Sidechain
1	AA	741	G	Sidechain
1	AA	772	U	Sidechain
1	AA	774	G	Sidechain
1	AA	808	C	Sidechain
1	AA	835	U	Sidechain
1	AA	858	G	Sidechain
1	AA	864	A	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	868	C	Sidechain
1	AA	878	G	Sidechain
1	AA	898	G	Sidechain
1	AA	907	A	Sidechain
1	AA	942	G	Sidechain
1	AA	946	A	Sidechain
1	AA	951	G	Sidechain
1	AA	960	U	Sidechain
1	AA	961	U	Sidechain
1	AA	963	G	Sidechain
1	AA	974	A	Sidechain
1	AA	977	A	Sidechain
1	AA	992	U	Sidechain
1	AA	995	C	Sidechain
5	AE	133	TYR	Sidechain
22	AV	59	U	Sidechain
23	AX	22	U	Sidechain
23	AX	26	A	Sidechain
25	AZ	68	VAL	Mainchain
25	AZ	69	GLU	Mainchain
36	BA	1133	U	Sidechain
36	BA	114	U	Sidechain
36	BA	1156	A	Sidechain
36	BA	1162	G	Sidechain
36	BA	1227	G	Sidechain
36	BA	1374	G	Sidechain
36	BA	1380	G	Sidechain
36	BA	1397	U	Sidechain
36	BA	1425	G	Sidechain
36	BA	1427	A	Sidechain
36	BA	1455	G	Sidechain
36	BA	1573	G	Sidechain
36	BA	1647	G	Sidechain
36	BA	1690	A	Sidechain
36	BA	1772	G	Sidechain
36	BA	1778	U	Sidechain
36	BA	1798	U	Sidechain
36	BA	1809	A	Sidechain
36	BA	1822	G	Sidechain
36	BA	1831	G	Sidechain
36	BA	1900	A	Sidechain
36	BA	1938	A	Sidechain

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Mol	Chain	Res	Type	Group
36	BA	1943	U	Sidechain
36	BA	1952	A	Sidechain
36	BA	1964	G	Sidechain
36	BA	1978	A	Sidechain
36	BA	1985	G	Sidechain
36	BA	1988	C	Sidechain
36	BA	1993	U	Sidechain
36	BA	201	C	Sidechain
36	BA	2047	U	Sidechain
36	BA	2049	G	Sidechain
36	BA	2050	C	Sidechain
36	BA	2053	G	Sidechain
36	BA	2061	G	Sidechain
36	BA	2074	U	Sidechain
36	BA	2122	U	Sidechain
36	BA	2128	C	Sidechain
36	BA	2157	G	Sidechain
36	BA	2173	A	Sidechain
36	BA	2266	A	Sidechain
36	BA	2282	G	Sidechain
36	BA	2320	A	Sidechain
36	BA	2344	U	Sidechain
36	BA	2360	A	Sidechain
36	BA	2381	C	Sidechain
36	BA	2390	U	Sidechain
36	BA	2391	G	Sidechain
36	BA	2422	A	Sidechain
36	BA	2437	U	Sidechain
36	BA	2438	U	Sidechain
36	BA	2464	C	Sidechain
36	BA	247	G	Sidechain
36	BA	2481	G	Sidechain
36	BA	2506	U	Sidechain
36	BA	2508	G	Sidechain
36	BA	2517	C	Sidechain
36	BA	2523	G	Sidechain
36	BA	2525	G	Sidechain
36	BA	2542	A	Sidechain
36	BA	2562	U	Sidechain
36	BA	2564	A	Sidechain
36	BA	2581	G	Sidechain
36	BA	2582	G	Sidechain

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Mol	Chain	Res	Type	Group
36	BA	2595	G	Sidechain
36	BA	2606	C	Sidechain
36	BA	2665	A	Sidechain
36	BA	2712	U	Sidechain
36	BA	2716	U	Sidechain
36	BA	2746	U	Sidechain
36	BA	2779	U	Sidechain
36	BA	2817	G	Sidechain
36	BA	2848	G	Sidechain
36	BA	383	U	Sidechain
36	BA	463	G	Sidechain
36	BA	528	A	Sidechain
36	BA	604	G	Sidechain
36	BA	670	A	Sidechain
36	BA	700	G	Sidechain
36	BA	740	U	Sidechain
36	BA	757	U	Sidechain
36	BA	760	G	Sidechain
36	BA	763	G	Sidechain
36	BA	859	G	Sidechain
36	BA	946	G	Sidechain
36	BA	951	C	Sidechain
36	BA	968	G	Sidechain
37	BB	16	G	Sidechain
37	BB	24	G	Sidechain
37	BB	42	C	Sidechain
37	BB	67	G	Sidechain
39	BD	9	TYR	Sidechain
46	BN	4	TYR	Sidechain
1	CA	1050	G	Sidechain
1	CA	1054	C	Sidechain
1	CA	1086	U	Sidechain
1	CA	112	G	Sidechain
1	CA	1181	G	Sidechain
1	CA	1212	U	Sidechain
1	CA	1220	G	Sidechain
1	CA	123	C	Sidechain
1	CA	1281	U	Sidechain
1	CA	1283	G	Sidechain
1	CA	13	U	Sidechain
1	CA	1442	G	Sidechain
1	CA	1498	U	Sidechain

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Mol	Chain	Res	Type	Group
1	CA	1504	G	Sidechain
1	CA	1505	G	Sidechain
1	CA	1510	U	Sidechain
1	CA	1516	G	Sidechain
1	CA	1521	G	Sidechain
1	CA	1528	U	Sidechain
1	CA	189(H)	G	Sidechain
1	CA	195	A	Sidechain
1	CA	197	A	Sidechain
1	CA	198	G	Sidechain
1	CA	244	U	Sidechain
1	CA	245	C	Sidechain
1	CA	251	G	Sidechain
1	CA	253	U	Sidechain
1	CA	262	A	Sidechain
1	CA	277	C	Sidechain
1	CA	279	A	Sidechain
1	CA	319	G	Sidechain
1	CA	368	U	Sidechain
1	CA	404	U	Sidechain
1	CA	47	C	Sidechain
1	CA	498	U	Sidechain
1	CA	573	A	Sidechain
1	CA	592	G	Sidechain
1	CA	641	U	Sidechain
1	CA	652	U	Sidechain
1	CA	686	U	Sidechain
1	CA	692	U	Sidechain
1	CA	727	G	Sidechain
1	CA	741	G	Sidechain
1	CA	748	C	Sidechain
1	CA	760	G	Sidechain
1	CA	788	U	Sidechain
1	CA	808	C	Sidechain
1	CA	858	G	Sidechain
1	CA	864	A	Sidechain
1	CA	884	U	Sidechain
1	CA	898	G	Sidechain
1	CA	943	U	Sidechain
1	CA	961	U	Sidechain
1	CA	995	C	Sidechain
22	CV	12	U	Sidechain

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Mol	Chain	Res	Type	Group
22	CV	59	U	Sidechain
22	CW	39	U	Sidechain
22	CW	8	U	Sidechain
23	CX	18	G	Sidechain
23	CX	19	U	Sidechain
23	CX	20	U	Sidechain
23	CX	21	C	Sidechain
23	CX	22	U	Sidechain
23	CX	26	A	Sidechain
24	CY	76	A	Sidechain
25	CZ	68	VAL	Mainchain
25	CZ	69	GLU	Mainchain
36	DA	1001	A	Sidechain
36	DA	1060	U	Sidechain
36	DA	1133	U	Sidechain
36	DA	114	U	Sidechain
36	DA	1156	A	Sidechain
36	DA	1162	G	Sidechain
36	DA	1238	G	Sidechain
36	DA	1301	A	Sidechain
36	DA	1379	A	Sidechain
36	DA	1427	A	Sidechain
36	DA	15	G	Sidechain
36	DA	1614	A	Sidechain
36	DA	1647	G	Sidechain
36	DA	1659	U	Sidechain
36	DA	1666	G	Sidechain
36	DA	1673	U	Sidechain
36	DA	1674	G	Sidechain
36	DA	1772	G	Sidechain
36	DA	1773	A	Sidechain
36	DA	178	G	Sidechain
36	DA	1814	G	Sidechain
36	DA	1841	U	Sidechain
36	DA	1890	A	Sidechain
36	DA	1907	G	Sidechain
36	DA	1937	A	Sidechain
36	DA	1939	U	Sidechain
36	DA	1945	G	Sidechain
36	DA	1946	U	Sidechain
36	DA	1964	G	Sidechain
36	DA	2000	G	Sidechain

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Mol	Chain	Res	Type	Group
36	DA	2010	G	Sidechain
36	DA	2011	U	Sidechain
36	DA	2053	G	Sidechain
36	DA	2061	G	Sidechain
36	DA	2089	U	Sidechain
36	DA	2128	C	Sidechain
36	DA	2157	G	Sidechain
36	DA	2250	G	Sidechain
36	DA	2252	G	Sidechain
36	DA	2262	U	Sidechain
36	DA	2320	A	Sidechain
36	DA	2344	U	Sidechain
36	DA	2360	A	Sidechain
36	DA	2390	U	Sidechain
36	DA	2413	G	Sidechain
36	DA	2419	U	Sidechain
36	DA	2433	A	Sidechain
36	DA	2437	U	Sidechain
36	DA	2438	U	Sidechain
36	DA	2464	C	Sidechain
36	DA	2481	G	Sidechain
36	DA	2504	U	Sidechain
36	DA	2506	U	Sidechain
36	DA	2508	G	Sidechain
36	DA	2514	U	Sidechain
36	DA	2529	G	Sidechain
36	DA	2542	A	Sidechain
36	DA	2564	A	Sidechain
36	DA	2580	U	Sidechain
36	DA	2581	G	Sidechain
36	DA	2595	G	Sidechain
36	DA	2611	U	Sidechain
36	DA	2712	U	Sidechain
36	DA	2716	U	Sidechain
36	DA	2726	U	Sidechain
36	DA	2735	G	Sidechain
36	DA	2758	A	Sidechain
36	DA	463	G	Sidechain
36	DA	532	A	Sidechain
36	DA	555	U	Sidechain
36	DA	576	U	Sidechain
36	DA	686	G	Sidechain

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Mol	Chain	Res	Type	Group
36	DA	688	U	Sidechain
36	DA	783	A	Sidechain
36	DA	827	U	Sidechain
36	DA	913	U	Sidechain
36	DA	916	G	Sidechain
36	DA	990	A	Sidechain
36	DA	991	C	Sidechain
37	DB	42	C	Sidechain
37	DB	53	A	Sidechain
37	DB	67	G	Sidechain

5.2 Too-close contacts (i)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32329	0	16318	1034	0
1	CA	32329	0	16318	1280	0
2	AB	1900	0	1951	204	0
2	CB	1900	0	1951	237	0
3	AC	1612	0	1677	145	0
3	CC	1612	0	1677	183	0
4	AD	1703	0	1763	229	0
4	CD	1703	0	1763	265	0
5	AE	1146	0	1207	75	0
5	CE	1146	0	1207	108	0
6	AF	843	0	857	71	0
6	CF	843	0	857	94	0
7	AG	1257	0	1296	88	0
7	CG	1257	0	1296	87	0
8	AH	1116	0	1177	64	0
8	CH	1116	0	1177	92	0
9	AI	1010	0	1037	111	0
9	CI	1010	0	1037	117	0
10	AJ	794	0	840	126	0
10	CJ	794	0	840	169	0
11	AK	885	0	904	67	0
11	CK	885	0	904	77	0
12	AL	970	0	1057	112	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
12	CL	970	0	1057	87	0
13	AM	987	0	1059	122	0
13	CM	987	0	1059	139	0
14	AN	492	0	531	62	0
14	CN	492	0	530	77	0
15	AO	734	0	771	47	0
15	CO	734	0	771	56	0
16	AP	700	0	720	92	0
16	CP	700	0	720	102	0
17	AQ	823	0	891	70	0
17	CQ	823	0	891	76	0
18	AR	574	0	644	51	0
18	CR	574	0	644	54	0
19	AS	629	0	652	81	0
19	CS	629	0	652	104	0
20	AT	763	0	861	105	0
20	CT	763	0	861	110	0
21	AU	208	0	221	32	0
21	CU	208	0	221	29	0
22	AV	1619	0	822	74	0
22	AW	1619	0	822	75	0
22	CV	1619	0	822	78	0
22	CW	1619	0	822	90	0
23	AX	361	0	184	27	0
23	CX	361	0	184	30	0
24	AY	1644	0	853	71	0
24	CY	1644	0	853	130	0
25	AZ	2984	0	2997	433	0
25	CZ	2984	0	2997	513	0
26	B0	662	0	688	75	0
26	D0	662	0	688	96	0
27	B1	731	0	808	88	0
27	D1	731	0	808	116	0
28	B2	598	0	653	179	0
28	D2	598	0	653	81	0
29	B3	467	0	523	57	0
29	D3	467	0	523	40	0
30	B4	340	0	336	51	0
30	D4	340	0	335	55	0
31	B5	459	0	480	82	0
31	D5	459	0	480	86	0
32	B6	433	0	461	143	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	D6	433	0	461	147	0
33	B7	418	0	467	35	0
33	D7	418	0	467	40	0
34	B8	507	0	576	118	0
34	D8	507	0	576	134	0
35	B9	307	0	335	35	0
35	D9	307	0	336	49	0
36	BA	62477	0	31497	2270	0
36	DA	62477	0	31497	2492	0
37	BB	2551	0	1295	108	0
37	DB	2551	0	1295	108	0
38	BC	1742	0	1800	152	0
38	DC	1742	0	1800	181	0
39	BD	2145	0	2234	297	0
39	DD	2145	0	2234	321	0
40	BE	1563	0	1629	227	0
40	DE	1563	0	1629	256	0
41	BF	1623	0	1677	197	0
41	DF	1623	0	1677	209	0
42	BG	1474	0	1535	241	0
42	DG	1474	0	1535	275	0
43	BH	1222	0	1282	171	0
43	DH	1222	0	1282	159	0
44	BJ	651	0	170	19	0
44	DJ	651	0	162	25	0
45	BK	700	0	175	15	0
45	DK	700	0	171	13	0
46	BN	1104	0	1180	160	0
46	DN	1104	0	1180	159	0
47	BO	933	0	996	92	0
47	DO	933	0	996	100	0
48	BP	1114	0	1187	291	0
48	DP	1114	0	1187	301	0
49	BQ	1122	0	1179	141	0
49	DQ	1122	0	1179	138	0
50	BR	960	0	1021	131	0
50	DR	960	0	1021	136	0
51	BS	770	0	832	166	0
51	DS	770	0	832	159	0
52	BT	1141	0	1202	234	0
52	DT	1141	0	1202	211	0
53	BU	958	0	1015	141	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
53	DU	958	0	1015	152	0
54	BV	779	0	852	135	0
54	DV	779	0	852	124	0
55	BW	896	0	953	100	0
55	DW	896	0	953	97	0
56	BX	725	0	778	98	0
56	DX	725	0	778	107	0
57	BY	775	0	870	176	0
57	DY	775	0	870	164	0
58	BZ	1459	0	1488	216	0
58	DZ	1459	0	1488	206	0
59	AD	1	0	0	0	0
59	AN	1	0	0	2	0
59	B4	1	0	0	0	0
59	B9	1	0	0	0	0
59	CD	1	0	0	0	0
59	CN	1	0	0	0	0
59	D4	1	0	0	0	0
59	D9	1	0	0	1	0
60	AZ	28	0	12	12	0
60	CZ	28	0	12	13	0
61	AZ	57	0	59	11	0
61	CZ	57	0	59	14	0
All	All	307194	0	208701	19681	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 38.

All (19681) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:69:GLU:CB	25:CZ:69:GLU:CG	1.85	1.54
25:AZ:69:GLU:CG	25:AZ:69:GLU:CB	1.83	1.52
25:CZ:68:VAL:C	25:CZ:68:VAL:CA	1.82	1.46
25:AZ:68:VAL:C	25:AZ:68:VAL:CA	1.85	1.45
25:CZ:198:LYS:HE3	25:CZ:201:GLU:OE1	1.33	1.29
4:AD:20:TYR:HA	4:AD:26:CYS:SG	1.73	1.26
25:CZ:198:LYS:HA	25:CZ:198:LYS:NZ	1.49	1.26
25:AZ:198:LYS:HA	25:AZ:198:LYS:NZ	1.49	1.24
25:AZ:198:LYS:HE3	25:AZ:201:GLU:OE1	1.35	1.22
21:AU:6:ARG:HD3	21:AU:15:ARG:NH1	1.55	1.21

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:198:LYS:HA	25:AZ:198:LYS:CE	1.68	1.20
22:AV:46:G:H3'	22:AV:47:U:C5'	1.71	1.19
25:CZ:198:LYS:HA	25:CZ:198:LYS:CE	1.70	1.19
31:B5:4:HIS:HB3	31:B5:5:PRO:HD3	1.26	1.17
1:AA:973:G:H1'	10:AJ:55:LYS:NZ	1.60	1.17
38:BC:119:VAL:HG13	38:BC:120:MET:HE3	1.27	1.17
36:BA:2101:G:H2'	36:BA:2102:U:H5"	1.24	1.16
3:AC:79:ARG:HH11	3:AC:79:ARG:HB2	1.11	1.16
47:DO:111:PHE:HB3	47:DO:114:ILE:HD13	1.27	1.16
27:D1:82:LEU:HD21	27:D1:90:ILE:HD12	1.26	1.15
36:BA:11:G:H22	36:BA:2627:G:H5"	1.11	1.15
39:DD:35:LYS:HZ3	39:DD:36:PRO:HD3	1.05	1.15
24:CY:65:C:H4'	25:CZ:341:GLN:HG2	1.18	1.15
43:BH:149:ARG:HA	43:BH:162:ILE:HD11	1.25	1.14
26:D0:36:ILE:HD11	36:DA:2355:C:H5'	1.25	1.14
36:DA:996:A:H4'	53:DU:92:ARG:HG3	1.27	1.14
3:CC:34:LEU:HD22	3:CC:38:ARG:HE	1.12	1.14
51:DS:28:VAL:HG12	51:DS:29:PHE:H	1.12	1.14
36:BA:2833:G:H3'	36:BA:2834:G:H5"	1.26	1.14
1:CA:1271:G:H2'	1:CA:1272:G:H5"	1.16	1.14
26:D0:38:VAL:HG23	26:D0:59:LEU:HB2	1.22	1.14
10:AJ:38:ILE:HD11	10:AJ:71:LEU:HB3	1.16	1.13
22:AW:72:C:H2'	22:AW:73:A:H5"	1.21	1.13
31:D5:4:HIS:HB3	31:D5:5:PRO:HD3	1.17	1.13
36:BA:1899:G:N2	36:BA:1902:C:H41	1.45	1.13
36:BA:2761:G:H2'	36:BA:2762:G:H5"	1.17	1.13
1:CA:979:C:H3'	1:CA:980:C:H5"	1.26	1.13
4:AD:187:ARG:HH11	4:AD:187:ARG:HB3	1.11	1.13
57:BY:10:GLY:HA2	57:BY:27:VAL:HG13	1.28	1.13
4:CD:107:ARG:HH21	4:CD:194:LEU:HD12	1.10	1.12
1:AA:1250:A:H4'	9:AI:68:GLY:H	1.00	1.12
36:BA:612:C:H2'	36:BA:613:G:H5"	1.13	1.12
36:BA:2012:G:H4'	55:BW:96:ILE:HD11	1.19	1.12
36:DA:2092:U:H4'	36:DA:2093:G:H5"	1.15	1.12
36:BA:266:G:H2'	36:BA:267:C:H5"	1.32	1.11
43:BH:85:LYS:HE2	43:BH:133:VAL:H	1.04	1.11
52:DT:53:ARG:HH11	52:DT:53:ARG:HB3	1.03	1.11
1:CA:1221:G:H4'	19:CS:77:THR:HG21	1.31	1.11
1:AA:1271:G:H2'	1:AA:1272:G:H5"	1.31	1.11
42:BG:52:ILE:HG13	42:BG:53:LEU:H	1.00	1.11
1:CA:80:G:H22	1:CA:90:U:H5'	1.12	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D8:62:LEU:HD13	36:DA:242:G:H5"	1.23	1.11
49:DQ:51:ARG:HB2	49:DQ:51:ARG:HH11	1.07	1.11
36:BA:2131:G:H1'	36:BA:2133:G:H21	1.09	1.11
58:BZ:180:VAL:HG22	58:BZ:181:GLU:H	1.12	1.10
36:DA:612:C:H2'	36:DA:613:G:H5"	1.12	1.10
36:DA:2307:G:H21	36:DA:2308:G:H5"	1.16	1.10
52:DT:28:VAL:HG13	52:DT:46:GLU:HA	1.32	1.10
56:DX:35:THR:HG22	56:DX:37:THR:H	1.10	1.10
51:BS:49:VAL:HG12	51:BS:50:SER:H	1.12	1.10
25:CZ:272:MET:HB2	25:CZ:277:LEU:HD23	1.31	1.10
4:AD:107:ARG:HH21	4:AD:194:LEU:HD12	1.15	1.10
25:CZ:189:ARG:HG2	25:CZ:190:ARG:H	1.13	1.10
58:BZ:130:PRO:HA	58:BZ:133:ILE:HD11	1.23	1.10
28:B2:29:LYS:HA	28:B2:32:LEU:HB3	1.13	1.09
36:DA:2833:G:H3'	36:DA:2834:G:H5"	1.34	1.09
39:DD:31:LYS:HZ2	39:DD:33:LEU:HB2	1.16	1.09
36:DA:2502:G:H5"	36:DA:2503:A:H5"	1.30	1.09
25:CZ:310:ILE:HD12	25:CZ:311:THR:H	1.13	1.09
36:DA:2101:G:H2'	36:DA:2102:U:H5"	1.16	1.09
40:DE:57:LYS:HA	40:DE:57:LYS:HE3	1.29	1.09
2:AB:7:VAL:HG13	2:AB:11:LEU:HD12	1.24	1.08
36:DA:1270:C:H5"	36:DA:1271:G:H5"	1.18	1.08
42:BG:67:LYS:HD3	42:BG:67:LYS:H	0.99	1.08
1:CA:1271:G:C2'	1:CA:1272:G:H5"	1.84	1.08
36:BA:330:A:H2	36:BA:1210:A:H2'	1.18	1.08
42:DG:51:ARG:HH11	42:DG:53:LEU:HD13	1.15	1.08
34:B8:62:LEU:HD13	36:BA:242:G:H5"	1.29	1.07
36:BA:27:G:H22	36:BA:512:G:H2'	1.16	1.07
36:BA:2307:G:H21	36:BA:2308:G:H5"	1.01	1.07
4:CD:28:SER:HB3	4:CD:29:PRO:HD2	1.30	1.07
36:DA:330:A:H2	36:DA:1210:A:H2'	1.19	1.07
36:DA:1826:G:H4'	39:DD:242:ARG:HH21	0.93	1.07
42:BG:7:LEU:HD21	42:BG:176:LEU:HD21	1.34	1.07
26:D0:40:GLN:HE22	26:D0:43:THR:HA	1.16	1.07
36:DA:271(L):U:H5"	36:DA:271(M):G:H5'	1.36	1.07
25:AZ:181:GLN:HG2	25:AZ:184:ARG:NH2	1.69	1.07
28:B2:15:LYS:HG3	28:B2:16:LEU:H	1.20	1.07
36:BA:272(H):C:H2'	36:BA:272(I):U:H5"	1.37	1.07
53:BU:92:ARG:HD3	53:BU:94:ASN:HB3	1.35	1.07
43:DH:153:LYS:HD3	43:DH:153:LYS:H	1.13	1.07
57:DY:96:ILE:HG13	57:DY:99:CYS:HB3	1.31	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:59:LYS:HG2	51:BS:60:GLY:H	1.16	1.06
41:DF:24:LEU:HB3	41:DF:25:PRO:HD2	1.34	1.06
51:DS:49:VAL:HG12	51:DS:50:SER:H	1.19	1.06
58:BZ:151:HIS:HB3	58:BZ:170:THR:HA	1.36	1.06
24:CY:65:C:H4'	25:CZ:341:GLN:CG	1.83	1.06
36:DA:2131:G:H1'	36:DA:2133:G:H21	0.98	1.06
48:DP:41:ARG:HH11	48:DP:41:ARG:HB3	1.19	1.06
57:DY:38:ILE:HB	57:DY:66:PRO:HG3	1.36	1.06
1:AA:80:G:H22	1:AA:90:U:H5'	1.09	1.06
36:DA:1747(A):G:H2'	36:DA:1748:G:H5"	1.38	1.06
22:AV:46:G:H3'	22:AV:47:U:H5"	1.07	1.06
43:BH:117:PRO:HB3	43:BH:123:PHE:HE1	1.18	1.06
1:AA:1125:U:H1'	10:AJ:5:ARG:NH2	1.72	1.05
41:BF:24:LEU:HB3	41:BF:25:PRO:HD2	1.38	1.05
52:BT:53:ARG:HH11	52:BT:53:ARG:HB3	1.15	1.05
1:CA:1352:C:H2'	1:CA:1353:G:C8	1.92	1.05
52:DT:55:ASN:H	52:DT:59:THR:HG22	0.89	1.05
50:DR:99:LYS:HD2	50:DR:99:LYS:H	1.16	1.05
36:BA:2312:U:H4'	42:BG:71:THR:HG21	1.37	1.05
57:BY:47:LYS:HD2	57:BY:60:PHE:HE1	1.22	1.05
10:CJ:55:LYS:HE3	10:CJ:55:LYS:N	1.72	1.05
57:DY:28:LYS:HG2	57:DY:39:VAL:HG22	1.32	1.05
40:BE:57:LYS:HA	40:BE:57:LYS:HE3	1.37	1.04
43:BH:85:LYS:HZ3	43:BH:132:ARG:HA	1.14	1.04
43:DH:85:LYS:HE2	43:DH:133:VAL:N	1.71	1.04
48:DP:35:HIS:O	48:DP:36:LYS:HG2	1.54	1.04
25:AZ:272:MET:HB2	25:AZ:277:LEU:HD23	1.34	1.04
36:BA:2185:C:H2'	36:BA:2186:G:H5'	1.39	1.04
39:BD:35:LYS:HD2	39:BD:36:PRO:N	1.72	1.04
58:DZ:180:VAL:HG22	58:DZ:181:GLU:H	1.19	1.04
12:AL:8:ASN:HD22	17:AQ:34:LYS:NZ	1.54	1.04
31:B5:2:ALA:HA	36:BA:2015:A:H1'	1.39	1.04
34:B8:27:THR:HG21	48:BP:61:ARG:HA	1.39	1.04
25:CZ:198:LYS:HA	25:CZ:198:LYS:HZ3	1.06	1.04
36:DA:621:A:H2'	36:DA:622:G:H5'	1.38	1.04
27:B1:48:LYS:HG2	27:B1:50:ARG:HH21	1.19	1.04
25:CZ:64:ASN:N	25:CZ:83:PRO:HG2	1.72	1.04
36:DA:1301:A:O2'	36:DA:1302:A:H2'	1.57	1.04
41:BF:25:PRO:HB3	41:BF:119:ARG:HB2	1.35	1.04
56:BX:35:THR:HG22	56:BX:37:THR:H	1.20	1.04
36:DA:2159:G:H2'	36:DA:2160:G:H5"	1.38	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:29:ARG:HH21	52:DT:88:ILE:HD11	1.15	1.04
39:BD:43:ARG:HH11	39:BD:44:ASN:ND2	1.54	1.03
43:BH:153:LYS:HD3	43:BH:153:LYS:H	1.18	1.03
1:CA:1305:G:H22	1:CA:1331:G:H2'	1.19	1.03
10:CJ:54:PHE:C	10:CJ:55:LYS:HE3	1.78	1.03
40:DE:77:ILE:HG22	40:DE:78:LEU:H	1.22	1.03
52:DT:55:ASN:N	52:DT:59:THR:HG22	1.73	1.03
54:BV:8:GLY:HA3	54:BV:23:GLU:HG3	1.40	1.03
36:DA:1887:C:H2'	36:DA:1888:G:H5"	1.37	1.03
51:DS:13:ARG:HG3	51:DS:14:VAL:H	1.21	1.03
57:BY:38:ILE:HB	57:BY:66:PRO:HG3	1.40	1.03
4:AD:108:LEU:HD11	4:AD:176:LEU:HD13	1.39	1.03
50:BR:99:LYS:H	50:BR:99:LYS:HD2	1.17	1.03
52:BT:28:VAL:HG13	52:BT:46:GLU:HA	1.41	1.03
37:DB:8:U:H5'	37:DB:8:U:H6	1.17	1.03
28:B2:52:ASP:O	28:B2:56:GLN:HG2	1.58	1.02
25:AZ:325:LYS:O	25:AZ:327:GLU:N	1.92	1.02
43:BH:44:VAL:HG12	43:BH:45:VAL:H	1.21	1.02
30:D4:22:ILE:H	30:D4:22:ILE:HD12	1.23	1.02
52:DT:28:VAL:HG22	52:DT:47:GLY:N	1.73	1.02
54:DV:62:LEU:HD21	54:DV:95:LEU:HB2	1.39	1.02
1:AA:436:C:H4'	4:AD:157:LEU:HD11	1.39	1.02
5:AE:76:ILE:HD11	5:AE:142:LEU:HD21	1.41	1.02
58:BZ:114:GLY:H	58:BZ:146:ILE:HG21	1.20	1.02
36:DA:2312:U:H2'	36:DA:2313:C:H5"	1.33	1.02
21:CU:6:ARG:HD3	21:CU:15:ARG:NH1	1.73	1.02
36:BA:271(L):U:H5"	36:BA:271(M):G:H5'	1.41	1.02
36:BA:335:C:H4'	57:BY:73:ARG:HH12	1.23	1.02
54:BV:62:LEU:HD21	54:BV:95:LEU:HB2	1.40	1.02
16:CP:67:THR:H	16:CP:70:ALA:HB3	1.21	1.02
36:DA:612:C:C2'	36:DA:613:G:H5"	1.90	1.02
53:DU:92:ARG:HD3	53:DU:94:ASN:HB3	1.39	1.02
3:AC:5:ILE:HD12	3:AC:5:ILE:H	1.22	1.01
25:AZ:93:ILE:HD13	61:AZ:502:KIR:H381	1.42	1.01
27:B1:87:PRO:HA	27:B1:90:ILE:HB	1.41	1.01
32:B6:10:LEU:HD22	32:B6:10:LEU:H	1.24	1.01
36:BA:628:G:H2'	36:BA:629:G:H5"	1.42	1.01
39:BD:35:LYS:HZ3	39:BD:36:PRO:HD3	1.19	1.01
47:DO:88:ASN:HD21	47:DO:92:GLU:HB2	1.23	1.01
25:AZ:9:LYS:HG2	25:AZ:75:ARG:HA	1.41	1.01
36:DA:925:C:H2'	36:DA:926:A:H5"	1.38	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:47:ASP:HB2	48:DP:51:PHE:HB2	1.41	1.01
51:DS:99:LYS:NZ	51:DS:99:LYS:HB3	1.74	1.01
4:AD:28:SER:HB3	4:AD:29:PRO:HD2	1.41	1.01
20:AT:45:GLN:N	20:AT:45:GLN:HE21	1.57	1.01
25:AZ:191:GLY:N	25:AZ:197:ASP:OD2	1.93	1.01
25:AZ:310:ILE:HD12	25:AZ:311:THR:H	1.21	1.01
41:BF:29:ASN:HD22	41:BF:32:LEU:HB2	1.21	1.01
25:CZ:198:LYS:CE	25:CZ:201:GLU:OE1	2.08	1.01
58:DZ:166:SER:HB2	58:DZ:168:GLU:N	1.75	1.01
48:BP:45:LEU:HD13	48:BP:46:LYS:H	1.21	1.01
47:DO:24:VAL:HG12	47:DO:33:ALA:HB2	1.42	1.01
52:DT:53:ARG:HB3	52:DT:53:ARG:NH1	1.76	1.01
25:CZ:9:LYS:HG2	25:CZ:75:ARG:HA	1.40	1.01
26:D0:49:LYS:H	26:D0:80:HIS:HD1	1.02	1.01
1:AA:973:G:H1'	10:AJ:55:LYS:HZ3	1.23	1.00
19:AS:40:ILE:HG21	19:AS:62:ILE:HD11	1.37	1.00
22:CW:73:A:H2'	22:CW:74:C:H5"	1.37	1.00
43:DH:117:PRO:HB3	43:DH:123:PHE:HE1	1.24	1.00
3:AC:180:ALA:O	3:AC:181:ASN:HB2	1.57	1.00
25:AZ:198:LYS:CE	25:AZ:201:GLU:OE1	2.09	1.00
48:BP:41:ARG:HD3	48:BP:45:LEU:HD23	1.44	1.00
48:BP:59:LEU:HA	48:BP:61:ARG:NE	1.77	1.00
3:CC:5:ILE:H	3:CC:5:ILE:HD13	1.26	1.00
13:CM:3:ARG:HH21	13:CM:7:VAL:HG22	1.22	1.00
52:DT:50:ILE:HA	52:DT:99:LEU:HD11	1.43	1.00
57:DY:10:GLY:HA2	57:DY:27:VAL:HG13	1.42	1.00
31:B5:3:LYS:HA	31:B5:3:LYS:HE3	1.40	1.00
8:CH:9:MET:SD	8:CH:32:LYS:HG2	2.00	1.00
36:DA:1543:C:H3'	36:DA:1544:A:H5"	1.44	1.00
52:DT:89:VAL:HG11	52:DT:91:ARG:HE	1.26	1.00
54:DV:15:GLU:HB3	54:DV:16:PRO:CD	1.91	1.00
39:DD:31:LYS:NZ	39:DD:33:LEU:HB2	1.76	1.00
39:DD:35:LYS:HD2	39:DD:36:PRO:N	1.76	1.00
36:BA:1539:G:H2'	36:BA:1540:U:H5'	1.42	1.00
49:DQ:51:ARG:HB2	49:DQ:51:ARG:NH1	1.76	1.00
1:AA:980:C:H5'	1:AA:980:C:H6	1.25	1.00
36:BA:2068:U:H3	36:BA:2430:A:H2	1.05	1.00
25:CZ:325:LYS:O	25:CZ:327:GLU:N	1.92	1.00
35:D9:4:ARG:HG2	35:D9:34:GLN:NE2	1.76	1.00
36:DA:1826:G:H4'	39:DD:242:ARG:NH2	1.77	1.00
1:CA:63:C:H2'	1:CA:64:G:H5'	1.40	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1299:G:H22	36:BA:1640:C:H5”	1.26	0.99
15:CO:39:LEU:HD13	15:CO:56:LEU:HB2	1.43	0.99
36:DA:1884:A:H2’	36:DA:1885:A:H5”	1.39	0.99
39:DD:218:ARG:HH11	39:DD:218:ARG:HG3	1.27	0.99
39:BD:30:GLU:HG3	39:BD:63:ARG:HH21	1.26	0.99
25:CZ:191:GLY:N	25:CZ:197:ASP:OD2	1.95	0.99
36:DA:2187:G:H2’	36:DA:2188:C:H5’	1.42	0.99
39:DD:8:PRO:HB3	39:DD:14:ARG:HB3	1.43	0.99
13:AM:120:LYS:HE3	13:AM:120:LYS:HA	1.41	0.99
28:B2:29:LYS:HG2	28:B2:32:LEU:HD13	1.40	0.99
36:BA:1516:C:H2’	36:BA:1517:G:H5”	1.41	0.99
43:BH:117:PRO:HB3	43:BH:123:PHE:CE1	1.97	0.99
46:DN:3:THR:HG22	46:DN:4:TYR:H	1.23	0.99
22:AV:5:G:H8	22:AV:5:G:H5’	1.27	0.99
36:BA:2307:G:N2	36:BA:2308:G:H5”	1.77	0.99
25:CZ:313:HIS:HB3	25:CZ:403:ILE:HG21	1.42	0.99
36:BA:1884:A:H2’	36:BA:1885:A:H5”	1.43	0.99
48:BP:34:GLY:O	48:BP:35:HIS:HB2	1.61	0.99
36:BA:2312:U:H4’	42:BG:71:THR:CG2	1.92	0.99
4:CD:189:PRO:HB2	4:CD:194:LEU:HD21	1.44	0.99
36:DA:84:A:H5”	57:DY:9:LYS:HD2	1.45	0.99
36:DA:1568:G:H5”	39:DD:61:LEU:HD13	1.45	0.99
32:B6:52:VAL:HG12	32:B6:53:LYS:HD3	1.45	0.99
54:BV:99:ILE:HD13	54:BV:99:ILE:H	1.27	0.99
13:CM:65:LYS:HD3	13:CM:65:LYS:H	1.28	0.99
25:CZ:198:LYS:HA	25:CZ:198:LYS:HE2	1.45	0.99
26:D0:7:LEU:HD13	49:DQ:85:LYS:HG3	1.44	0.99
43:DH:85:LYS:HE2	43:DH:133:VAL:H	0.86	0.99
36:BA:1050:A:H2’	36:BA:1051:G:H5’	1.45	0.98
1:CA:1347:G:N2	1:CA:1373:G:H2’	1.78	0.98
17:AQ:26:GLN:HE21	17:AQ:37:LYS:HE2	1.26	0.98
39:BD:44:ASN:HB3	39:BD:49:ILE:HA	1.43	0.98
42:DG:67:LYS:HD3	42:DG:67:LYS:H	1.28	0.98
42:BG:67:LYS:HD3	42:BG:67:LYS:N	1.79	0.98
36:DA:1747(A):G:C2’	36:DA:1748:G:H5”	1.92	0.98
36:DA:1948:G:H5’	36:DA:1948:G:H8	1.28	0.98
22:AV:46:G:C3’	22:AV:47:U:H5”	1.91	0.98
56:DX:55:ASN:HB2	56:DX:80:ILE:HG23	1.45	0.98
25:AZ:313:HIS:HB3	25:AZ:403:ILE:HG21	1.45	0.98
56:BX:24:GLY:O	56:BX:82:GLN:HA	1.62	0.98
36:BA:2801(A):A:H4’	36:BA:2802:G:H5’	1.42	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:28:VAL:HG22	52:BT:47:GLY:N	1.79	0.98
22:AW:72:C:C2'	22:AW:73:A:H5"	1.93	0.98
28:B2:55:ARG:HA	28:B2:58:ALA:HB2	1.45	0.98
25:CZ:7:ARG:HH12	25:CZ:281:ILE:HG12	1.27	0.98
36:DA:266:G:H2'	36:DA:267:C:H5"	1.45	0.98
36:DA:655:A:H4'	36:DA:656:G:H5'	1.45	0.98
56:BX:12:VAL:HG23	56:BX:13:LEU:H	1.27	0.98
2:CB:94:ASN:N	2:CB:94:ASN:HD22	1.62	0.98
25:AZ:270:VAL:HG13	25:AZ:286:VAL:HG21	1.42	0.97
34:D8:61:LEU:HD12	34:D8:61:LEU:H	1.24	0.97
34:B8:14:VAL:HG23	34:B8:24:ALA:HB2	1.46	0.97
1:CA:1305:G:N2	1:CA:1331:G:H2'	1.78	0.97
25:CZ:93:ILE:HD13	61:CZ:502:KIR:H381	1.41	0.97
26:B0:49:LYS:H	26:B0:80:HIS:HD1	1.05	0.97
36:BA:2756:U:H1'	36:BA:2757:A:H5"	1.46	0.97
34:D8:14:VAL:HG23	34:D8:24:ALA:HB2	1.46	0.97
36:BA:2761:G:C2'	36:BA:2762:G:H5"	1.94	0.97
58:BZ:104:PHE:HA	58:BZ:139:VAL:HG22	1.46	0.97
12:AL:45:PRO:HB3	12:AL:92:ASP:HB3	1.45	0.97
1:CA:1431:C:H5	1:CA:1469:G:N1	1.62	0.97
31:D5:4:HIS:HB3	31:D5:5:PRO:CD	1.90	0.97
36:DA:2317:C:H2'	36:DA:2318:G:H5'	1.44	0.97
36:BA:1301:A:O2'	36:BA:1302:A:H2'	1.63	0.97
10:CJ:42:THR:HG23	10:CJ:68:HIS:HA	1.46	0.97
28:D2:68:ARG:HB2	28:D2:68:ARG:HH11	1.26	0.97
36:BA:1747(A):G:H2'	36:BA:1748:G:H5"	1.46	0.97
29:D3:35:ARG:HB2	29:D3:35:ARG:HH11	1.27	0.97
58:DZ:151:HIS:HB3	58:DZ:170:THR:HA	1.46	0.97
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.45	0.97
2:AB:95:GLN:HE21	2:AB:147:LYS:HE2	1.27	0.97
25:AZ:198:LYS:HA	25:AZ:198:LYS:HE2	1.43	0.97
32:B6:25:LYS:HE2	34:B8:34:TRP:HE1	1.26	0.97
36:BA:259:G:H21	36:BA:621:A:H8	1.11	0.97
43:BH:85:LYS:HE2	43:BH:133:VAL:N	1.79	0.97
58:DZ:125:LEU:HD23	58:DZ:164:ALA:HB3	1.47	0.97
36:DA:2245:U:H5'	36:DA:2246:G:H5'	1.46	0.97
37:DB:20:C:H2'	37:DB:21:G:H5"	1.47	0.97
1:AA:1271:G:C2'	1:AA:1272:G:H5"	1.94	0.97
4:AD:95:GLY:HA3	4:AD:188:LEU:HD21	1.46	0.97
36:BA:925:C:H2'	36:BA:926:A:H5"	1.44	0.97
36:DA:1799:G:H5"	36:DA:1819:A:H61	1.28	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2098:U:H3	36:DA:2191:G:H1	1.01	0.97
36:DA:2110:G:H1	36:DA:2178:C:H5	1.06	0.97
48:DP:16:ARG:CZ	48:DP:18:ARG:HG2	1.95	0.96
57:DY:7:VAL:HB	57:DY:8:LYS:HD2	1.47	0.96
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.46	0.96
25:AZ:198:LYS:NZ	25:AZ:198:LYS:CA	2.28	0.96
36:BA:2187:G:H2'	36:BA:2188:C:H5'	1.47	0.96
51:BS:28:VAL:HG12	51:BS:29:PHE:H	1.29	0.96
36:BA:106:C:H2'	36:BA:107:C:H6	1.25	0.96
36:BA:1879:C:H2'	36:BA:1880:C:H5"	1.44	0.96
38:DC:175:VAL:HG12	38:DC:188:ASN:HB3	1.44	0.96
36:BA:1681:G:O2'	36:BA:1762:A:H2'	1.66	0.96
38:BC:123:VAL:HG22	38:BC:127:LEU:CD2	1.96	0.96
53:BU:85:LYS:HD3	53:BU:117:GLN:HE22	1.28	0.96
52:DT:50:ILE:HD11	52:DT:64:ARG:HB2	1.46	0.96
36:BA:612:C:C2'	36:BA:613:G:H5"	1.96	0.96
52:DT:28:VAL:HB	52:DT:88:ILE:HG12	1.47	0.96
22:AW:71:G:H2'	22:AW:72:C:H5'	1.48	0.96
25:AZ:7:ARG:HH12	25:AZ:281:ILE:CG1	1.76	0.96
54:DV:99:ILE:H	54:DV:99:ILE:HD13	1.30	0.96
1:AA:1240:U:OP1	7:AG:116:ALA:HB2	1.64	0.96
39:BD:71:ASP:HB3	39:BD:103:ARG:HH22	1.28	0.96
48:BP:58:THR:O	48:BP:61:ARG:NE	1.99	0.96
1:CA:942:G:H21	9:CI:124:GLN:NE2	1.62	0.96
36:DA:1803:A:O3'	39:DD:259:THR:HG21	1.66	0.96
12:AL:6:THR:OG1	12:AL:9:GLN:HG3	1.65	0.96
33:B7:1:MET:HG3	33:B7:3:ARG:HH12	1.30	0.96
36:BA:1024:G:H3'	36:BA:1025:G:H5"	1.45	0.96
34:D8:27:THR:HG21	48:DP:61:ARG:HA	1.48	0.96
1:AA:858:G:C6	1:AA:869:G:N7	2.34	0.96
25:AZ:64:ASN:N	25:AZ:83:PRO:HG2	1.79	0.96
26:B0:16:SER:HB2	36:BA:2262:U:H5	1.26	0.96
36:DA:1826:G:C4'	39:DD:242:ARG:HH21	1.78	0.96
54:DV:8:GLY:HA3	54:DV:23:GLU:HG3	1.48	0.96
1:AA:1305:G:N2	1:AA:1331:G:H2'	1.81	0.95
36:BA:2875:C:H4'	52:BT:5:ALA:HB2	1.44	0.95
25:CZ:198:LYS:NZ	25:CZ:198:LYS:CA	2.27	0.95
31:D5:40:LYS:HE2	31:D5:46:CYS:HB3	1.46	0.95
48:BP:124:LYS:HD3	48:BP:143:GLY:HA3	1.48	0.95
43:DH:85:LYS:CE	43:DH:133:VAL:H	1.78	0.95
12:AL:45:PRO:HG3	12:AL:53:ARG:HD3	1.47	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:75:ILE:HG13	10:CJ:76:ASN:H	1.31	0.95
56:DX:65:ARG:HD3	56:DX:70:LEU:HD23	1.47	0.95
25:AZ:198:LYS:HA	25:AZ:198:LYS:HZ3	1.12	0.95
25:AZ:198:LYS:CE	25:AZ:198:LYS:CA	2.39	0.95
36:BA:140:G:H1'	36:BA:141:A:H2	1.30	0.95
36:BA:1516:C:C2'	36:BA:1517:G:H5"	1.94	0.95
51:BS:34:HIS:HB3	51:BS:53:SER:HB3	1.47	0.95
25:AZ:198:LYS:HZ1	25:AZ:201:GLU:CG	1.78	0.95
30:B4:8:LYS:O	30:B4:9:LEU:HB2	1.65	0.95
2:CB:7:VAL:HG13	2:CB:11:LEU:HD12	1.48	0.95
31:D5:3:LYS:HA	31:D5:3:LYS:HE3	1.45	0.95
1:AA:1250:A:H4'	9:AI:68:GLY:N	1.81	0.95
36:BA:2092:U:H4'	36:BA:2093:G:H5"	1.45	0.95
42:BG:52:ILE:HG13	42:BG:53:LEU:N	1.81	0.95
58:BZ:4:ARG:HG2	58:BZ:58:VAL:HB	1.47	0.95
25:CZ:7:ARG:HH12	25:CZ:281:ILE:CG1	1.78	0.95
48:DP:66:GLY:O	48:DP:67:MET:HB2	1.67	0.95
54:DV:15:GLU:HB3	54:DV:16:PRO:HD3	1.48	0.95
29:B3:35:ARG:HH11	29:B3:35:ARG:HB2	1.32	0.95
1:AA:1314:C:H5	1:AA:1323:G:H1	1.13	0.95
36:BA:1543:C:H3'	36:BA:1544:A:H5"	1.48	0.95
36:BA:2491:U:H5'	36:BA:2570:G:H5"	1.48	0.95
5:CE:76:ILE:HG13	5:CE:142:LEU:HD13	1.49	0.95
10:CJ:50:ILE:HD13	10:CJ:50:ILE:H	1.30	0.95
43:DH:85:LYS:HZ3	43:DH:132:ARG:HA	1.32	0.95
8:AH:112:LEU:H	8:AH:112:LEU:HD23	1.32	0.94
42:BG:67:LYS:H	42:BG:67:LYS:CD	1.80	0.94
25:CZ:25:THR:HB	60:CZ:501:GDP:O2B	1.67	0.94
36:DA:2101:G:C2'	36:DA:2102:U:H5"	1.96	0.94
36:BA:2317:C:H2'	36:BA:2318:G:H5'	1.49	0.94
36:DA:2068:U:H3	36:DA:2430:A:H2	0.99	0.94
25:AZ:7:ARG:HH12	25:AZ:281:ILE:HG12	1.31	0.94
28:B2:69:ARG:H	28:B2:69:ARG:HD2	1.31	0.94
51:BS:39:ILE:HD11	51:BS:73:LEU:HD21	1.48	0.94
1:CA:1430:C:H5	1:CA:1470:G:H1	0.97	0.94
6:CF:43:LEU:H	6:CF:43:LEU:HD22	1.32	0.94
50:DR:55:ALA:HA	50:DR:80:PHE:HE1	1.29	0.94
1:AA:1117:G:H8	1:AA:1117:G:H5'	1.29	0.94
47:BO:107:ARG:HD3	52:BT:36:GLU:HG3	1.47	0.94
58:BZ:9:TYR:OH	58:BZ:35:ARG:HG3	1.66	0.94
36:DA:1484:G:H2'	36:DA:1485:G:H5"	1.45	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1464:C:HO2'	36:BA:1528:A:H8	1.12	0.94
36:BA:1480:G:H2'	36:BA:1481:U:H5"	1.48	0.94
47:BO:19:ILE:HG22	47:BO:43:VAL:HA	1.47	0.94
47:BO:63:VAL:O	47:BO:64:ARG:HB3	1.64	0.94
48:BP:47:ASP:HB3	48:BP:48:PRO:CA	1.98	0.94
58:BZ:69:THR:HG22	58:BZ:90:VAL:HA	1.46	0.94
58:DZ:18:LEU:HG	58:DZ:23:LYS:HD2	1.50	0.94
36:BA:1351:C:H5	36:BA:1380:G:H1	1.10	0.94
36:DA:1899:G:H21	36:DA:1902:C:H41	1.05	0.94
12:AL:6:THR:H	12:AL:9:GLN:HE21	1.10	0.94
28:B2:23:LYS:HG2	28:B2:26:ARG:HD2	1.48	0.94
36:BA:631:A:H5"	48:BP:65:ARG:HH11	1.32	0.94
36:BA:2415:G:O3'	48:BP:66:GLY:HA3	1.68	0.94
48:BP:105:LEU:H	48:BP:105:LEU:HD12	1.33	0.94
1:CA:961:U:HO2'	1:CA:962:C:H6	1.14	0.94
35:D9:11:CYS:SG	35:D9:12:ASP:N	2.40	0.94
39:DD:91:ARG:HH11	39:DD:91:ARG:HG2	1.32	0.94
43:DH:52:VAL:HG21	43:DH:69:ARG:HG3	1.48	0.94
25:AZ:25:THR:HB	60:AZ:501:GDP:O2B	1.68	0.94
36:BA:1747(A):G:C2'	36:BA:1748:G:H5"	1.97	0.94
26:B0:36:ILE:HD11	36:BA:2355:C:H5'	1.48	0.94
38:BC:123:VAL:CG2	38:BC:127:LEU:CD2	2.46	0.94
36:DA:2833:G:H3'	36:DA:2834:G:C5'	1.98	0.94
4:AD:3:ARG:NH1	4:AD:118:ARG:HD3	1.83	0.93
12:AL:33:ARG:HD3	12:AL:62:SER:OG	1.68	0.93
38:BC:6:ARG:O	38:BC:10:LEU:HD23	1.68	0.93
36:DA:1860:G:H1	36:DA:1882:C:H42	1.03	0.93
34:B8:23:VAL:HG12	34:B8:46:ARG:HD3	1.46	0.93
4:CD:28:SER:HB3	4:CD:29:PRO:CD	1.98	0.93
34:D8:49:VAL:HB	34:D8:53:PRO:HD3	1.47	0.93
10:AJ:33:GLN:HB2	10:AJ:75:ILE:HD11	1.47	0.93
54:BV:51:VAL:HG12	54:BV:52:VAL:H	1.32	0.93
35:B9:10:ILE:H	35:B9:10:ILE:HD12	1.33	0.93
36:BA:1012:U:O4	46:BN:28:THR:HG21	1.67	0.93
36:BA:2098:U:H3	36:BA:2191:G:H1	1.15	0.93
36:BA:2833:G:H3'	36:BA:2834:G:C5'	1.97	0.93
24:CY:40:C:H2'	24:CY:41:C:H5"	1.47	0.93
32:D6:27:LYS:HB3	32:D6:30:THR:HB	1.50	0.93
57:DY:95:LYS:HG3	57:DY:100:ALA:HA	1.50	0.93
24:AY:40:C:H2'	24:AY:41:C:H5"	1.47	0.93
31:B5:41:PRO:HG2	31:B5:44:THR:OG1	1.69	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:198:LYS:HZ1	25:CZ:201:GLU:CG	1.80	0.93
41:DF:132:VAL:HG13	41:DF:133:ASN:H	1.33	0.93
53:DU:59:ARG:HH11	53:DU:59:ARG:HG2	1.33	0.93
50:BR:84:ALA:HB3	50:BR:85:PRO:HD3	1.49	0.93
25:CZ:133:VAL:HG23	25:CZ:168:VAL:HG11	1.49	0.93
30:D4:9:LEU:HD13	30:D4:10:VAL:H	1.31	0.93
36:DA:2131:G:H1'	36:DA:2133:G:N2	1.83	0.93
52:DT:55:ASN:H	52:DT:59:THR:CG2	1.82	0.93
14:AN:13:THR:N	14:AN:14:PRO:HD2	1.83	0.93
41:DF:25:PRO:HB3	41:DF:119:ARG:HB2	1.47	0.93
42:DG:77:ILE:H	42:DG:77:ILE:HD13	1.34	0.93
26:B0:49:LYS:N	26:B0:80:HIS:HD1	1.66	0.93
4:CD:59:ARG:HA	4:CD:59:ARG:HE	1.33	0.93
39:DD:75:ILE:HG21	39:DD:99:ASP:HB2	1.51	0.93
57:DY:47:LYS:HD2	57:DY:60:PHE:HE1	1.33	0.93
10:AJ:4:ILE:HD13	10:AJ:74:ILE:HG13	1.49	0.92
21:AU:9:ARG:HH12	21:AU:23:PRO:HD2	1.34	0.92
36:BA:654(E):G:N2	36:BA:654(Q):C:H1'	1.84	0.92
38:BC:123:VAL:CG2	38:BC:127:LEU:HD22	1.99	0.92
5:CE:6:PHE:HB3	5:CE:35:GLY:O	1.69	0.92
13:CM:101:GLN:N	13:CM:101:GLN:HE21	1.67	0.92
24:CY:75:C:H5	25:CZ:232:THR:H	1.05	0.92
43:BH:52:VAL:HG21	43:BH:69:ARG:HG3	1.49	0.92
22:CV:35:A:H61	23:CX:20:U:H3	1.01	0.92
24:CY:76:A:P	25:CZ:274:ARG:HD2	2.09	0.92
1:CA:8:A:H62	4:CD:208:SER:HB2	1.31	0.92
1:CA:351:G:H4'	1:CA:352:C:OP1	1.67	0.92
1:AA:573:A:H8	1:AA:573:A:H5'	1.34	0.92
4:AD:114:ARG:HH11	4:AD:114:ARG:HG3	1.32	0.92
4:AD:187:ARG:HB3	4:AD:187:ARG:NH1	1.84	0.92
52:BT:91:ARG:HA	52:BT:117:ASP:H	1.31	0.92
22:CV:35:A:N6	23:CX:20:U:H3	1.68	0.92
36:BA:2160:G:H8	36:BA:2160:G:H5'	1.33	0.92
4:AD:133:VAL:HG11	4:AD:138:TYR:HD2	1.34	0.92
46:BN:126:PRO:O	46:BN:127:ASP:HB2	1.70	0.92
25:AZ:181:GLN:HG2	25:AZ:184:ARG:HH21	1.34	0.92
32:B6:15:GLU:CD	32:B6:18:ARG:CZ	2.38	0.92
50:BR:55:ALA:HA	50:BR:80:PHE:HE1	1.35	0.92
10:AJ:38:ILE:HD11	10:AJ:71:LEU:CB	1.99	0.92
25:CZ:270:VAL:HG13	25:CZ:286:VAL:HG21	1.47	0.92
48:DP:34:GLY:O	48:DP:35:HIS:HB2	1.65	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:35:GLU:HB2	32:B6:51:GLU:HB2	1.52	0.92
34:B8:6:THR:HG22	34:B8:63:PRO:HD3	1.52	0.92
10:CJ:54:PHE:CE2	10:CJ:55:LYS:HD2	2.05	0.92
36:DA:1311:G:H21	36:DA:1603:A:H62	1.17	0.92
52:DT:2:ASN:HB2	52:DT:7:ILE:HD11	1.50	0.92
36:BA:2312:U:H2'	36:BA:2313:C:H5"	1.52	0.92
43:BH:85:LYS:CE	43:BH:133:VAL:H	1.83	0.92
29:D3:26:LEU:HB2	29:D3:28:LEU:HD12	1.52	0.92
32:D6:12:GLU:HA	32:D6:23:THR:HG22	1.50	0.92
52:DT:85:LYS:HZ3	52:DT:85:LYS:HB3	1.34	0.92
4:AD:189:PRO:HB2	4:AD:194:LEU:HD21	1.51	0.91
13:AM:11:ARG:HA	13:AM:45:VAL:HB	1.51	0.91
22:AW:18:G:H1	22:AW:55:U:H1'	1.36	0.91
28:B2:3:LEU:HG	28:B2:7:ARG:CZ	2.00	0.91
58:BZ:151:HIS:CB	58:BZ:170:THR:HA	2.00	0.91
36:DA:2780:G:OP2	46:DN:118:LYS:HE3	1.70	0.91
42:BG:39:ILE:HG12	42:BG:92:VAL:HG12	1.52	0.91
48:BP:47:ASP:HB3	48:BP:48:PRO:HA	1.47	0.91
53:BU:92:ARG:NH2	54:BV:11:GLN:H	1.67	0.91
26:D0:49:LYS:N	26:D0:80:HIS:HD1	1.67	0.91
32:D6:17:LYS:HB2	32:D6:18:ARG:HH12	1.32	0.91
1:AA:265:G:H2'	1:AA:266:G:H5"	1.52	0.91
25:CZ:198:LYS:HZ3	25:CZ:198:LYS:CA	1.81	0.91
27:D1:41:ARG:NH2	36:DA:1365:A:H5"	1.84	0.91
36:DA:1407:C:H42	36:DA:1595:G:H1	0.98	0.91
56:DX:31:HIS:HB3	56:DX:34:ALA:HB2	1.48	0.91
38:BC:123:VAL:HG22	38:BC:127:LEU:HD23	1.52	0.91
40:BE:77:ILE:HG22	40:BE:78:LEU:H	1.35	0.91
48:BP:147:LEU:HG	48:BP:148:LEU:H	1.33	0.91
32:D6:11:LEU:O	32:D6:12:GLU:HG2	1.71	0.91
36:DA:1270:C:H5"	36:DA:1271:G:C5'	2.01	0.91
32:B6:26:ASN:HA	36:BA:2286:A:H2	1.34	0.91
36:DA:1209:G:H21	36:DA:1210:A:H62	1.16	0.91
48:DP:125:VAL:O	48:DP:145:PRO:HD2	1.71	0.91
13:AM:88:ARG:HG2	13:AM:88:ARG:HH11	1.36	0.91
36:BA:676:A:H8	36:BA:2069:G:H21	1.13	0.91
42:DG:73:ALA:HB3	42:DG:87:PRO:HG3	1.50	0.91
36:BA:1826:G:H4'	39:BD:242:ARG:HH21	1.35	0.91
1:CA:59:A:H3'	1:CA:331:G:H22	1.36	0.91
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.05	0.91
24:CY:56:C:C6	36:DA:1067:A:H2	1.88	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:D9:7:VAL:HG22	35:D9:34:GLN:HG2	1.53	0.91
36:DA:28:A:N6	36:DA:512:G:H1'	1.86	0.91
36:BA:1064:C:H2'	36:BA:1065:U:H5"	1.50	0.91
36:BA:1484:G:H2'	36:BA:1485:G:H5"	1.50	0.91
25:CZ:215:ARG:HB3	25:CZ:282:ALA:HB3	1.52	0.91
33:D7:1:MET:HG3	33:D7:3:ARG:HH12	1.34	0.91
36:DA:1854:A:H62	36:DA:1888:G:H8	0.95	0.91
1:AA:1452:C:H4'	1:AA:1456:G:N2	1.85	0.91
51:DS:52:SER:HB2	51:DS:55:ALA:HB3	1.53	0.91
2:AB:7:VAL:O	2:AB:11:LEU:HB2	1.71	0.90
36:BA:1902:C:H1'	39:BD:244:ARG:HG3	1.53	0.90
52:BT:129:ARG:CZ	52:BT:131:ALA:HB3	2.00	0.90
58:BZ:114:GLY:N	58:BZ:146:ILE:HG21	1.85	0.90
42:DG:73:ALA:H	42:DG:87:PRO:HG2	1.36	0.90
52:DT:80:SER:HB3	52:DT:81:PRO:HD3	1.51	0.90
1:AA:1442(B):A:OP1	1:AA:1442(B):A:H3'	1.70	0.90
36:BA:84:A:H5'	57:BY:9:LYS:HB3	1.51	0.90
36:BA:106:C:H2'	36:BA:107:C:C6	2.05	0.90
3:CC:157:ILE:HD13	3:CC:166:GLU:HG2	1.53	0.90
10:CJ:24:VAL:HG21	10:CJ:37:PRO:HG3	1.50	0.90
24:CY:4:G:H2'	24:CY:5:G:H5"	1.53	0.90
36:DA:581:C:H2'	36:DA:582:G:C8	2.06	0.90
41:DF:101:LEU:HD12	41:DF:102:PRO:HD2	1.51	0.90
36:BA:1209:G:H21	36:BA:1210:A:H62	1.13	0.90
24:CY:65:C:C4'	25:CZ:341:GLN:HG2	2.01	0.90
36:BA:852:G:H2'	36:BA:853:G:H8	1.35	0.90
41:BF:29:ASN:ND2	41:BF:32:LEU:HB2	1.86	0.90
27:D1:18:ILE:HD11	27:D1:20:ARG:CZ	2.01	0.90
42:DG:123:ASN:H	42:DG:123:ASN:ND2	1.68	0.90
22:AV:4:C:H2'	22:AV:5:G:H5"	1.53	0.90
56:BX:35:THR:CG2	56:BX:37:THR:H	1.84	0.90
57:BY:7:VAL:HB	57:BY:8:LYS:HD2	1.54	0.90
35:D9:14:CYS:SG	35:D9:27:CYS:HB2	2.12	0.90
36:DA:2756:U:H1'	36:DA:2757:A:H5"	1.53	0.90
38:DC:120:MET:HA	38:DC:123:VAL:HG12	1.52	0.90
1:AA:351:G:H4'	1:AA:352:C:OP1	1.69	0.90
10:AJ:55:LYS:HE3	10:AJ:55:LYS:N	1.87	0.90
53:BU:59:ARG:HH11	53:BU:59:ARG:HG2	1.34	0.90
9:CI:16:ARG:HB2	9:CI:64:THR:HB	1.53	0.90
20:CT:31:SER:HA	20:CT:34:LYS:HD2	1.54	0.90
36:DA:2185:C:H2'	36:DA:2186:G:H5'	1.52	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:69:THR:HG22	58:DZ:90:VAL:HA	1.52	0.90
3:AC:79:ARG:HB2	3:AC:79:ARG:NH1	1.87	0.90
12:AL:8:ASN:HD22	17:AQ:34:LYS:HZ3	0.90	0.90
36:BA:1270:C:H5"	36:BA:1271:G:H5"	1.51	0.90
36:BA:1826:G:H4'	39:BD:242:ARG:NH2	1.86	0.90
42:DG:10:LYS:O	42:DG:14:GLU:HB3	1.71	0.90
50:DR:55:ALA:HA	50:DR:80:PHE:CE1	2.07	0.90
31:B5:29:THR:HG21	36:BA:2814:C:O2'	1.72	0.90
36:BA:2485:G:H5"	49:BQ:46:GLN:HE21	1.33	0.90
57:BY:81:LYS:NZ	57:BY:99:CYS:HB2	1.85	0.90
36:BA:614(A):U:H4'	36:BA:614(B):G:H5"	1.53	0.90
36:BA:860:U:H5	36:BA:917:A:N7	1.70	0.90
36:DA:1602:U:H3'	36:DA:1603:A:C5'	2.02	0.90
2:AB:106:LYS:HG3	2:AB:107:THR:H	1.36	0.90
10:AJ:24:VAL:HG21	10:AJ:37:PRO:HG3	1.54	0.90
36:BA:2126:A:H4'	36:BA:2127:G:O5'	1.71	0.90
40:BE:50:GLY:HA2	40:BE:78:LEU:HB3	1.52	0.90
2:CB:94:ASN:HD22	2:CB:94:ASN:H	1.18	0.90
27:D1:41:ARG:HH22	36:DA:1365:A:H5"	1.35	0.90
39:DD:69:ARG:HH11	39:DD:130:ALA:HB2	1.35	0.90
52:DT:83:ILE:HG13	52:DT:84:GLN:N	1.86	0.90
54:DV:19:LYS:HZ3	54:DV:20:LEU:H	1.12	0.90
52:BT:96:ARG:NH1	52:BT:96:ARG:HB2	1.87	0.89
36:DA:2801(A):A:H4'	36:DA:2802:G:H5'	1.54	0.89
54:DV:19:LYS:NZ	54:DV:20:LEU:H	1.71	0.89
3:CC:79:ARG:HB2	3:CC:79:ARG:HH11	1.36	0.89
5:CE:76:ILE:HD11	5:CE:142:LEU:HD22	1.54	0.89
10:CJ:61:GLU:HG3	14:CN:58:LYS:HE2	1.53	0.89
25:CZ:26:THR:HB	60:CZ:501:GDP:O2A	1.73	0.89
36:DA:1064:C:H2'	36:DA:1065:U:H5"	1.53	0.89
36:DA:1464:C:HO2'	36:DA:1528:A:H8	1.20	0.89
36:DA:2712:U:H1'	36:DA:2712(A):A:C8	2.07	0.89
37:DB:30:C:H1'	37:DB:57:A:H61	1.36	0.89
39:DD:132:PRO:HG3	39:DD:190:TYR:CE1	2.05	0.89
1:CA:194:C:H2'	1:CA:195:A:H5"	1.54	0.89
36:DA:2491:U:H5'	36:DA:2570:G:H5"	1.54	0.89
52:BT:53:ARG:HB3	52:BT:53:ARG:NH1	1.86	0.89
1:CA:979:C:C3'	1:CA:980:C:H5"	2.01	0.89
3:CC:113:ALA:HB3	3:CC:114:PRO:HD3	1.53	0.89
13:CM:120:LYS:HA	13:CM:120:LYS:HE3	1.53	0.89
19:CS:53:ASN:HD21	19:CS:56:GLN:N	1.71	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D1:53:VAL:HG22	27:D1:74:VAL:HG13	1.53	0.89
36:DA:2781:A:H5'	36:DA:2782:G:H5'	1.53	0.89
10:AJ:38:ILE:CD1	10:AJ:71:LEU:HB3	2.00	0.89
24:CY:75:C:C6	25:CZ:231:ILE:HA	2.08	0.89
36:DA:1480:G:H2'	36:DA:1481:U:H5"	1.52	0.89
42:DG:32:PRO:HB2	42:DG:172:LEU:HD12	1.55	0.89
55:DW:22:ASP:HA	55:DW:25:ARG:HH12	1.37	0.89
57:DY:13:VAL:HG23	57:DY:73:ARG:O	1.73	0.89
1:AA:201:C:C3'	1:AA:202:U:H5"	2.02	0.89
31:B5:50:GLY:HA3	31:B5:56:LYS:HE2	1.54	0.89
48:BP:66:GLY:O	48:BP:67:MET:HB2	1.72	0.89
52:BT:23:ARG:HG2	52:BT:120:ARG:HH12	1.37	0.89
52:BT:89:VAL:HG12	52:BT:91:ARG:HG3	1.53	0.89
40:DE:116:VAL:HG22	40:DE:117:MET:N	1.86	0.89
52:DT:100:TYR:HB3	52:DT:103:ARG:HE	1.36	0.89
36:BA:1899:G:H21	36:BA:1902:C:H41	0.93	0.89
36:DA:1038:C:H2'	36:DA:1039:G:H5"	1.55	0.89
36:DA:2305:A:H3'	36:DA:2306:C:H5"	1.54	0.89
36:BA:1602:U:H3'	36:BA:1603:A:C5'	2.03	0.89
36:BA:1803:A:H4'	39:BD:259:THR:HG21	1.55	0.89
36:BA:1884:A:C2'	36:BA:1885:A:H5"	2.02	0.89
36:BA:2183:C:H2'	36:BA:2184:G:H8	1.38	0.89
1:CA:358:U:H4'	25:CZ:234:ARG:C	1.93	0.89
12:CL:80:HIS:NE2	24:CY:69:C:H5'	1.87	0.89
25:CZ:23:GLY:HA3	25:CZ:105:VAL:HG11	1.55	0.89
25:CZ:309:SER:O	25:CZ:310:ILE:HG22	1.73	0.89
48:DP:59:LEU:HA	48:DP:61:ARG:NE	1.86	0.89
13:AM:97:PRO:HA	13:AM:110:ARG:HD3	1.55	0.89
3:CC:8:ILE:HG23	3:CC:16:ARG:HG2	1.53	0.89
32:D6:41:PRO:HG2	32:D6:44:ARG:O	1.73	0.89
1:AA:80:G:N2	1:AA:90:U:H5'	1.88	0.89
4:AD:18:LYS:HE3	4:AD:31:CYS:CB	2.03	0.89
22:CW:26:A:H61	22:CW:44:G:H1	1.18	0.89
26:D0:23:VAL:HG13	26:D0:38:VAL:HG13	1.52	0.89
31:D5:49:CYS:O	31:D5:56:LYS:HG3	1.73	0.89
36:DA:1598:C:H5'	56:DX:36:LYS:HG2	1.54	0.89
42:DG:141:PHE:HB3	42:DG:142:PRO:HD2	1.55	0.89
47:DO:107:ARG:HD3	52:DT:36:GLU:HG3	1.53	0.89
4:AD:100:ARG:HH21	4:AD:118:ARG:HH12	1.10	0.88
36:BA:650:C:H3'	36:BA:651:G:H5"	1.55	0.88
36:BA:2100:G:H2'	36:BA:2101:G:C8	2.08	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:189:ARG:HG2	25:CZ:190:ARG:N	1.86	0.88
32:D6:35:GLU:HB2	32:D6:51:GLU:HB2	1.52	0.88
36:DA:2092:U:C4'	36:DA:2093:G:H5"	2.03	0.88
9:AI:19:LEU:HD21	9:AI:59:PHE:HB3	1.54	0.88
51:BS:97:ARG:NH2	51:BS:98:VAL:HA	1.87	0.88
52:BT:28:VAL:HB	52:BT:88:ILE:HG12	1.53	0.88
7:CG:46:ALA:O	7:CG:50:ILE:HG12	1.72	0.88
36:DA:1902:C:H1'	39:DD:244:ARG:HG3	1.55	0.88
1:AA:1003:G:C2'	1:AA:1004:A:H4'	2.02	0.88
31:B5:40:LYS:HE2	31:B5:46:CYS:HB3	1.55	0.88
38:BC:27:ARG:CZ	38:BC:182:PRO:HG2	2.04	0.88
1:CA:975:A:H4'	1:CA:976:G:H5"	1.56	0.88
27:D1:87:PRO:HG2	27:D1:88:LYS:H	1.36	0.88
36:DA:1139:G:H5"	46:DN:70:LYS:HZ3	1.38	0.88
36:DA:1539:G:H2'	36:DA:1540:U:H5'	1.55	0.88
42:DG:123:ASN:N	42:DG:123:ASN:HD22	1.67	0.88
56:DX:53:LYS:HG3	56:DX:55:ASN:HD21	1.38	0.88
1:AA:1221:G:H4'	19:AS:77:THR:HG21	1.54	0.88
20:AT:45:GLN:HE21	20:AT:45:GLN:H	0.92	0.88
36:BA:631:A:H5"	48:BP:65:ARG:NH1	1.88	0.88
48:BP:16:ARG:NH1	48:BP:16:ARG:HB2	1.88	0.88
1:CA:1250:A:H4'	9:CI:68:GLY:H	1.36	0.88
36:DA:61:G:H1	36:DA:94:C:H42	1.18	0.88
48:BP:146:VAL:HG22	48:BP:147:LEU:H	1.38	0.88
36:DA:1221(A):C:H2'	36:DA:1222:C:H6	1.37	0.88
1:CA:80:G:N2	1:CA:90:U:H5'	1.89	0.88
39:DD:270:ILE:HD12	39:DD:270:ILE:O	1.71	0.88
42:DG:67:LYS:HD3	42:DG:67:LYS:N	1.87	0.88
56:DX:35:THR:HG22	56:DX:37:THR:N	1.88	0.88
46:BN:47:ALA:HB2	46:BN:112:LEU:HD11	1.56	0.88
56:BX:11:PRO:HA	56:BX:28:PHE:HB3	1.55	0.88
58:BZ:177:PRO:O	58:BZ:178:GLU:HB3	1.71	0.88
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.54	0.88
36:DA:984:A:H5"	36:DA:985:C:H5	1.39	0.88
42:DG:123:ASN:H	42:DG:123:ASN:HD22	0.91	0.88
45:DK:55:UNK:HA	45:DK:69:UNK:HA	1.55	0.88
52:DT:83:ILE:HG13	52:DT:84:GLN:H	1.38	0.88
36:BA:886:C:O2'	36:BA:887:A:H4'	1.72	0.88
41:BF:40:GLN:HE22	41:BF:182:ASN:HB2	1.38	0.88
47:BO:71:ARG:HH12	47:BO:104:ARG:HG2	1.34	0.88
4:CD:88:VAL:HG13	5:CE:97:GLY:HA2	1.54	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:114:TYR:HE2	10:CJ:60:ARG:H	1.21	0.88
36:DA:1042:G:H1	36:DA:1113:U:H3	1.21	0.88
56:DX:35:THR:CG2	56:DX:37:THR:H	1.86	0.88
1:AA:1039:C:H6	1:AA:1040:U:H5	1.17	0.88
38:BC:68:LEU:HD11	38:BC:161:ILE:HG23	1.56	0.88
39:BD:162:SER:O	39:BD:178:PRO:HG3	1.74	0.88
17:CQ:52:LYS:H	17:CQ:52:LYS:HE3	1.39	0.88
36:DA:259:G:H21	36:DA:621:A:H8	1.14	0.88
36:DA:1050:A:H2'	36:DA:1051:G:H5'	1.54	0.88
36:DA:1899:G:N2	36:DA:1902:C:H41	1.70	0.88
12:AL:33:ARG:HG2	12:AL:60:LEU:HD12	1.56	0.88
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.56	0.88
39:BD:239:ARG:HH11	39:BD:239:ARG:HG2	1.36	0.88
5:CE:76:ILE:HD11	5:CE:142:LEU:CD2	2.04	0.88
31:D5:24:ALA:O	31:D5:25:LEU:HB2	1.73	0.88
43:DH:136:ILE:H	43:DH:136:ILE:HD12	1.39	0.88
48:DP:147:LEU:HG	48:DP:148:LEU:H	1.35	0.88
3:AC:134:ILE:HG21	3:AC:167:TRP:O	1.74	0.87
28:B2:41:ILE:HG13	28:B2:42:GLY:H	1.39	0.87
36:BA:2101:G:C2'	36:BA:2102:U:H5"	2.04	0.87
38:BC:96:GLY:H	38:BC:99:ILE:HD11	1.37	0.87
57:BY:96:ILE:HG13	57:BY:99:CYS:HB3	1.55	0.87
17:CQ:76:LEU:HD12	17:CQ:77:VAL:H	1.38	0.87
36:DA:650:C:H3'	36:DA:651:G:H5"	1.55	0.87
43:DH:117:PRO:HB3	43:DH:123:PHE:CE1	2.09	0.87
25:AZ:309:SER:O	25:AZ:310:ILE:HG22	1.74	0.87
47:BO:104:ARG:HE	52:BT:33:LYS:HZ2	1.18	0.87
32:D6:35:GLU:CB	32:D6:51:GLU:HB2	2.05	0.87
36:DA:774:A:H2	36:DA:787:U:HO2'	0.95	0.87
48:DP:146:VAL:HG22	48:DP:147:LEU:H	1.39	0.87
49:DQ:79:LEU:HD23	49:DQ:80:GLU:N	1.89	0.87
54:DV:29:PRO:HA	54:DV:61:VAL:HG22	1.56	0.87
3:AC:43:LEU:HD22	3:AC:47:LEU:HD22	1.57	0.87
8:AH:7:ALA:HB2	8:AH:85:ARG:HD3	1.56	0.87
36:BA:1899:G:N2	36:BA:1902:C:N4	2.22	0.87
36:BA:2672:G:H2'	36:BA:2673:G:H5"	1.56	0.87
13:CM:15:VAL:HG11	13:CM:48:LEU:HD11	1.54	0.87
52:DT:23:ARG:O	52:DT:25:GLY:N	2.08	0.87
1:AA:1127:G:H1	1:AA:1145:C:H42	1.23	0.87
1:AA:1314:C:OP2	19:AS:6:LYS:HG3	1.74	0.87
13:AM:22:ILE:HD13	13:AM:25:ILE:HD12	1.55	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:658:C:H2'	36:BA:659:C:C6	2.10	0.87
41:BF:114:VAL:HG21	41:BF:202:PHE:HE2	1.39	0.87
41:BF:143:ALA:HB1	41:BF:148:LEU:HB2	1.57	0.87
46:BN:48:MET:H	46:BN:48:MET:HE3	1.39	0.87
46:BN:55:VAL:HG22	46:BN:126:PRO:HA	1.55	0.87
51:BS:101:LEU:O	51:BS:101:LEU:HD12	1.73	0.87
22:CW:73:A:C2'	22:CW:74:C:H5"	2.04	0.87
39:DD:267:SER:O	39:DD:269:PHE:N	2.06	0.87
47:DO:19:ILE:HG22	47:DO:43:VAL:HA	1.54	0.87
48:DP:29:LYS:HD2	48:DP:29:LYS:H	1.38	0.87
48:DP:124:LYS:HD3	48:DP:143:GLY:HA3	1.54	0.87
6:AF:30:LEU:O	6:AF:35:ALA:HB3	1.74	0.87
1:CA:1190:G:H3'	3:CC:3:ASN:ND2	1.89	0.87
1:CA:1250:A:H4'	9:CI:68:GLY:N	1.88	0.87
22:CW:69:G:H2'	22:CW:70:G:C8	2.09	0.87
36:DA:628:G:H2'	36:DA:629:G:H5"	1.57	0.87
36:DA:2189:U:H2'	36:DA:2190:G:H4'	1.56	0.87
1:AA:1432:G:OP1	52:BT:107:ASP:HB2	1.73	0.87
4:AD:138:TYR:HD1	4:AD:139:ARG:N	1.71	0.87
10:AJ:53:PRO:HA	14:AN:42:ILE:HD11	1.55	0.87
57:BY:47:LYS:HD2	57:BY:60:PHE:CE1	2.10	0.87
13:CM:49:THR:HG22	13:CM:51:ALA:H	1.37	0.87
42:DG:139:LEU:HA	42:DG:144:ILE:HG12	1.55	0.87
52:DT:85:LYS:HB3	52:DT:85:LYS:NZ	1.88	0.87
52:BT:28:VAL:CG1	52:BT:46:GLU:HA	2.05	0.87
5:CE:110:LEU:HD13	5:CE:118:ILE:HD13	1.57	0.87
24:CY:40:C:C2'	24:CY:41:C:H5"	2.04	0.87
38:DC:123:VAL:CG2	38:DC:127:LEU:HD22	2.04	0.87
41:DF:113:ALA:HB1	41:DF:186:ILE:HG21	1.56	0.87
51:DS:42:ASP:O	51:DS:43:GLU:HB3	1.75	0.87
22:AV:68:C:C2'	22:AV:69:G:H5"	2.04	0.87
36:DA:2656:U:H3	36:DA:2665:A:H2	1.19	0.87
39:DD:35:LYS:NZ	39:DD:36:PRO:HD3	1.89	0.87
42:DG:45:GLU:HB2	42:DG:53:LEU:HG	1.55	0.87
1:AA:1016:A:H2'	1:AA:1017:G:O4'	1.75	0.87
36:BA:1879:C:C2'	36:BA:1880:C:H5"	2.05	0.87
58:BZ:110:GLY:HA2	58:BZ:113:ALA:HB3	1.56	0.87
30:D4:8:LYS:O	30:D4:9:LEU:HB2	1.73	0.87
32:D6:25:LYS:HE2	34:D8:34:TRP:HE1	1.38	0.87
52:DT:29:ARG:NH2	52:DT:88:ILE:HD11	1.90	0.87
52:DT:92:GLY:HA3	52:DT:120:ARG:NH2	1.89	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:23:GLY:HA3	4:AD:112:VAL:HG22	1.56	0.86
28:B2:34:GLU:HA	28:B2:37:PHE:HB2	1.55	0.86
55:BW:107:LEU:H	55:BW:107:LEU:HD12	1.39	0.86
58:BZ:33:LEU:HD23	58:BZ:90:VAL:HG21	1.55	0.86
2:CB:87:ARG:HH11	2:CB:223:ILE:HD11	1.40	0.86
6:CF:11:ASN:HB3	6:CF:14:LEU:HD23	1.54	0.86
36:DA:2761:G:H2'	36:DA:2762:G:H5"	1.57	0.86
25:AZ:12:VAL:O	25:AZ:77:TYR:HA	1.75	0.86
36:BA:888:C:H2'	36:BA:889:C:H4'	1.57	0.86
39:BD:30:GLU:HG3	39:BD:63:ARG:NH2	1.89	0.86
49:BQ:51:ARG:HB2	49:BQ:51:ARG:HH11	1.39	0.86
57:BY:67:LEU:HD23	57:BY:68:HIS:H	1.38	0.86
25:CZ:198:LYS:HZ1	25:CZ:201:GLU:HG3	1.39	0.86
36:DA:1257:C:H2'	36:DA:1258:C:H6	1.40	0.86
36:DA:1899:G:H21	36:DA:1902:C:N4	1.73	0.86
2:AB:69:LEU:HD23	2:AB:91:PRO:HB2	1.56	0.86
58:BZ:18:LEU:H	58:BZ:18:LEU:HD22	1.37	0.86
1:CA:1285:A:H4'	1:CA:1286:A:O5'	1.72	0.86
10:CJ:96:ILE:HD13	10:CJ:96:ILE:H	1.40	0.86
25:CZ:7:ARG:NH1	25:CZ:281:ILE:HG12	1.90	0.86
1:AA:1286:A:H2	21:AU:18:TYR:HH	1.22	0.86
49:BQ:56:ARG:HH11	49:BQ:56:ARG:HG3	1.39	0.86
3:CC:20:SER:HB2	3:CC:40:ARG:HH22	1.40	0.86
25:CZ:288:VAL:HG12	25:CZ:290:LEU:HD23	1.55	0.86
34:D8:8:LYS:O	34:D8:12:LYS:HG3	1.74	0.86
48:DP:62:LEU:HD23	48:DP:62:LEU:H	1.41	0.86
52:DT:89:VAL:HG12	52:DT:91:ARG:HG3	1.54	0.86
2:AB:18:GLY:H	2:AB:42:ILE:HG22	1.40	0.86
24:AY:4:G:H2'	24:AY:5:G:H5"	1.57	0.86
36:BA:240:G:H3'	36:BA:241:A:H5"	1.55	0.86
1:CA:1318:A:H1'	19:CS:37:ARG:HH21	1.38	0.86
40:DE:61:ARG:HB3	40:DE:62:PRO:HD3	1.55	0.86
20:AT:55:ILE:HD13	20:AT:55:ILE:H	1.40	0.86
36:BA:2645:G:H3'	36:BA:2646:C:H5'	1.57	0.86
42:BG:51:ARG:HA	42:BG:51:ARG:HE	1.39	0.86
1:CA:368:U:OP2	25:CZ:291:ARG:HD3	1.74	0.86
13:CM:25:ILE:HD11	13:CM:60:VAL:HG11	1.56	0.86
13:CM:84:ILE:HG21	19:CS:60:VAL:HG23	1.57	0.86
36:DA:145:G:H2'	36:DA:146:G:H5"	1.58	0.86
36:DA:886:C:O2'	36:DA:887:A:H4'	1.75	0.86
41:DF:110:LEU:HD12	41:DF:206:ILE:HD11	1.57	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DO:104:ARG:HE	52:DT:33:LYS:HZ2	1.21	0.86
1:AA:1305:G:H22	1:AA:1331:G:H2'	1.35	0.86
1:AA:1502:A:H2	1:AA:1505:G:H1	1.21	0.86
13:AM:49:THR:HB	13:AM:52:GLU:HG3	1.57	0.86
39:BD:267:SER:C	39:BD:269:PHE:H	1.77	0.86
36:DA:590:A:H2'	36:DA:591:C:C6	2.09	0.86
49:DQ:141:GLN:HE22	58:DZ:72:ARG:HA	1.36	0.86
1:AA:979:C:C3'	1:AA:980:C:H5"	2.06	0.86
2:AB:33:TYR:HB2	2:AB:43:ASP:HB2	1.57	0.86
36:DA:330:A:C2	36:DA:1210:A:H2'	2.10	0.86
36:DA:1139:G:H5"	46:DN:70:LYS:NZ	1.91	0.86
40:DE:50:GLY:HA2	40:DE:78:LEU:HB3	1.58	0.86
48:DP:23:PRO:HB2	48:DP:33:ARG:HG3	1.57	0.86
1:AA:1003:G:N2	1:AA:1039:C:H42	1.73	0.86
20:AT:23:ARG:O	20:AT:27:LYS:HB2	1.76	0.86
32:B6:12:GLU:HA	32:B6:23:THR:HG22	1.58	0.86
54:BV:25:LEU:H	54:BV:92:THR:HG21	1.41	0.86
9:CI:19:LEU:HD21	9:CI:59:PHE:HB3	1.56	0.86
41:DF:37:VAL:HG11	48:DP:7:ARG:HH22	1.37	0.86
47:DO:2:ILE:HB	47:DO:33:ALA:HB3	1.55	0.86
36:BA:2131:G:H1'	36:BA:2133:G:N2	1.89	0.86
42:BG:77:ILE:HD13	42:BG:77:ILE:H	1.40	0.86
4:CD:96:LEU:HG	4:CD:139:ARG:NH2	1.90	0.86
4:CD:107:ARG:NH2	4:CD:194:LEU:HD12	1.90	0.86
4:CD:121:VAL:O	4:CD:134:ASP:HA	1.76	0.86
18:CR:36:ASN:OD1	18:CR:39:VAL:HB	1.75	0.86
36:DA:2126:A:H4'	36:DA:2127:G:O5'	1.76	0.86
55:DW:5:ALA:HB2	55:DW:54:ALA:HB2	1.56	0.86
56:DX:11:PRO:HA	56:DX:28:PHE:HB3	1.58	0.86
57:DY:47:LYS:HD2	57:DY:60:PHE:CE1	2.09	0.86
24:AY:40:C:C2'	24:AY:41:C:H5"	2.05	0.85
36:BA:2524:G:H8	36:BA:2524:G:H5'	1.41	0.85
42:BG:15:VAL:O	42:BG:19:LEU:HD23	1.74	0.85
43:BH:18:GLU:HB2	43:BH:25:LYS:HB2	1.55	0.85
58:BZ:180:VAL:HG22	58:BZ:181:GLU:N	1.91	0.85
5:CE:31:LEU:CD2	5:CE:43:LEU:HD11	2.04	0.85
27:D1:8:SER:HB3	27:D1:66:HIS:NE2	1.90	0.85
36:DA:1803:A:H4'	39:DD:259:THR:HG21	1.57	0.85
7:AG:20:ASP:HB3	7:AG:23:VAL:HG23	1.57	0.85
10:AJ:6:ILE:HG22	10:AJ:98:ILE:HD12	1.57	0.85
28:B2:57:ILE:HG22	28:B2:61:LEU:HG	1.56	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:15:GLU:HB2	32:D6:20:ASN:HB3	1.58	0.85
36:BA:272(H):C:C2'	36:BA:272(I):U:H5"	2.06	0.85
36:BA:1039:G:H1	36:BA:1116:C:H42	1.20	0.85
38:BC:100:ILE:HD11	38:BC:123:VAL:HG23	1.58	0.85
12:CL:24:VAL:HG12	12:CL:27:LEU:HD13	1.57	0.85
36:DA:1221(A):C:H2'	36:DA:1222:C:C6	2.11	0.85
36:DA:1517:G:H8	36:DA:1517:G:H5'	1.41	0.85
1:AA:1190:G:H3'	3:AC:3:ASN:HD22	1.40	0.85
36:BA:2446:G:H2'	36:BA:2447:G:H5"	1.57	0.85
38:BC:34:THR:HG22	38:BC:35:ALA:H	1.40	0.85
52:BT:85:LYS:HB3	52:BT:85:LYS:NZ	1.90	0.85
19:CS:53:ASN:HD21	19:CS:56:GLN:H	0.89	0.85
25:CZ:12:VAL:O	25:CZ:77:TYR:HA	1.75	0.85
25:CZ:271:GLU:HG2	25:CZ:276:THR:HA	1.59	0.85
36:DA:529:A:H62	36:DA:2041:U:H3	1.23	0.85
36:DA:2036:C:H5'	36:DA:2036:C:H6	1.42	0.85
57:DY:81:LYS:NZ	57:DY:99:CYS:HB2	1.91	0.85
58:DZ:23:LYS:O	58:DZ:24:LEU:HB2	1.73	0.85
34:B8:27:THR:CG2	48:BP:61:ARG:HA	2.06	0.85
36:BA:2245:U:H5'	36:BA:2246:G:H5'	1.59	0.85
25:CZ:310:ILE:HD12	25:CZ:311:THR:N	1.92	0.85
41:DF:40:GLN:HE22	41:DF:182:ASN:HB2	1.41	0.85
41:DF:187:VAL:HB	48:DP:7:ARG:HH11	1.41	0.85
51:DS:28:VAL:HG12	51:DS:29:PHE:N	1.90	0.85
20:AT:45:GLN:H	20:AT:45:GLN:NE2	1.72	0.85
36:BA:2305:A:H3'	36:BA:2306:C:H5"	1.59	0.85
37:BB:20:C:H2'	37:BB:21:G:H5"	1.59	0.85
40:BE:52:LEU:HB3	40:BE:75:VAL:HB	1.58	0.85
48:BP:75:ILE:H	48:BP:75:ILE:HD12	1.40	0.85
54:BV:15:GLU:HB3	54:BV:16:PRO:CD	2.06	0.85
36:DA:2317:C:C2'	36:DA:2318:G:H5'	2.06	0.85
36:DA:2771:C:H2'	36:DA:2772:C:C6	2.12	0.85
49:DQ:141:GLN:NE2	58:DZ:72:ARG:HA	1.91	0.85
21:AU:23:PRO:O	21:AU:24:ARG:HB2	1.75	0.85
36:BA:266:G:C2'	36:BA:267:C:H5"	2.06	0.85
1:CA:1321:C:H5"	1:CA:1322:C:H5"	1.58	0.85
36:DA:2307:G:N2	36:DA:2308:G:H5"	1.91	0.85
36:DA:2312:U:C2'	36:DA:2313:C:H5"	2.07	0.85
39:DD:43:ARG:HE	39:DD:49:ILE:HG22	1.39	0.85
39:DD:63:ARG:HH11	39:DD:63:ARG:HG2	1.41	0.85
48:DP:121:LYS:O	48:DP:123:LEU:HD23	1.75	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DQ:141:GLN:O	58:DZ:53:ILE:HB	1.77	0.85
25:AZ:198:LYS:HZ1	25:AZ:201:GLU:HG3	1.41	0.85
36:BA:2781:A:H5'	36:BA:2782:G:H5'	1.59	0.85
40:BE:116:VAL:HG23	40:BE:120:TRP:HB2	1.57	0.85
41:BF:126:VAL:HG11	41:BF:142:TRP:HH2	1.39	0.85
12:CL:79:GLU:O	12:CL:80:HIS:HB2	1.73	0.85
19:CS:53:ASN:ND2	19:CS:56:GLN:H	1.73	0.85
36:DA:1336:A:OP1	56:DX:64:LYS:HE2	1.77	0.85
38:DC:96:GLY:H	38:DC:99:ILE:HD11	1.41	0.85
58:DZ:114:GLY:H	58:DZ:146:ILE:HG21	1.41	0.85
25:AZ:200:TRP:CE3	25:AZ:203:LEU:HD12	2.12	0.85
28:B2:15:LYS:HG3	28:B2:16:LEU:N	1.91	0.85
48:BP:115:LEU:HG	48:BP:116:GLY:H	1.40	0.85
1:CA:358:U:O3'	25:CZ:235:GLY:HA2	1.77	0.85
36:DA:2579:C:O2'	40:DE:131:ALA:HB2	1.75	0.85
41:DF:107:LYS:HE3	41:DF:205:ARG:HG2	1.57	0.85
43:DH:54:ARG:HH11	43:DH:54:ARG:HG2	1.42	0.85
48:DP:16:ARG:HB2	48:DP:16:ARG:NH1	1.90	0.85
58:DZ:82:ARG:HH12	58:DZ:84:GLU:HA	1.41	0.85
1:AA:9:G:H5"	5:AE:122:GLU:OE1	1.76	0.85
36:BA:11:G:N2	36:BA:2627:G:H5"	1.92	0.85
39:BD:131:LEU:HB2	39:BD:136:ILE:HD11	1.59	0.85
37:DB:8:U:H5'	37:DB:8:U:C6	2.10	0.85
21:AU:6:ARG:HD3	21:AU:15:ARG:HH12	1.41	0.84
36:BA:330:A:C2	36:BA:1210:A:H2'	2.10	0.84
36:BA:2415:G:H4'	48:BP:66:GLY:C	1.97	0.84
1:CA:1354:C:H2'	1:CA:1355:G:H8	1.42	0.84
24:CY:77:TRP:O	25:CZ:273:HIS:N	2.10	0.84
31:D5:2:ALA:HA	36:DA:2015:A:H1'	1.57	0.84
37:DB:106:G:H5"	58:DZ:31:ARG:HG2	1.59	0.84
16:AP:64:ALA:O	16:AP:66:PRO:HD3	1.75	0.84
28:B2:29:LYS:HA	28:B2:32:LEU:CB	2.03	0.84
38:DC:123:VAL:CG2	38:DC:127:LEU:CD2	2.55	0.84
25:AZ:198:LYS:CA	25:AZ:198:LYS:HZ3	1.90	0.84
28:B2:67:LYS:HA	28:B2:70:GLN:HE21	1.41	0.84
36:BA:1301:A:H4'	36:BA:1302:A:OP1	1.76	0.84
42:BG:97:ASP:O	42:BG:101:ILE:HG13	1.77	0.84
43:BH:16:SER:HB2	43:BH:27:LYS:HB2	1.59	0.84
50:BR:2:ARG:O	50:BR:2:ARG:HD2	1.78	0.84
19:CS:11:VAL:HG23	19:CS:38:SER:HB2	1.57	0.84
36:DA:1012:U:O4	46:DN:28:THR:HG21	1.76	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2392:A:H2	36:DA:2424:C:H42	1.21	0.84
36:DA:2672:G:H2'	36:DA:2673:G:H5"	1.59	0.84
1:AA:1285:A:H4'	1:AA:1286:A:O5'	1.76	0.84
28:B2:29:LYS:O	28:B2:33:MET:HG3	1.77	0.84
36:BA:2036:C:H5'	36:BA:2036:C:H6	1.41	0.84
36:BA:2657:A:H2'	36:BA:2658:C:H5'	1.58	0.84
38:BC:87:GLU:HG2	38:BC:94:VAL:HG11	1.59	0.84
25:CZ:189:ARG:CG	25:CZ:190:ARG:H	1.87	0.84
29:D3:38:GLU:HB3	29:D3:40:THR:HG23	1.59	0.84
36:DA:2012:G:H4'	55:DW:96:ILE:HD11	1.59	0.84
40:DE:101:ARG:HD2	40:DE:169:ASN:O	1.77	0.84
1:AA:1086:U:H2'	1:AA:1087:G:H5'	1.59	0.84
13:AM:17:VAL:O	13:AM:20:THR:HB	1.75	0.84
25:AZ:265:THR:HG22	25:AZ:266:VAL:N	1.93	0.84
1:CA:573:A:H8	1:CA:573:A:H5'	1.43	0.84
1:CA:947:G:H2'	1:CA:948:C:C6	2.11	0.84
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.12	0.84
5:CE:147:ASP:HB3	5:CE:150:ARG:HH12	1.43	0.84
11:CK:33:THR:HG22	11:CK:39:PRO:HA	1.59	0.84
1:AA:150:C:H2'	1:AA:151:A:H5"	1.58	0.84
4:AD:18:LYS:HE3	4:AD:31:CYS:SG	2.17	0.84
36:BA:259:G:N2	36:BA:621:A:H8	1.74	0.84
36:BA:628:G:C2'	36:BA:629:G:H5"	2.07	0.84
38:BC:120:MET:HA	38:BC:123:VAL:HG12	1.56	0.84
57:BY:9:LYS:HZ2	57:BY:9:LYS:HB2	1.41	0.84
26:D0:43:THR:H	36:DA:2331:G:H4'	1.41	0.84
36:DA:1884:A:C2'	36:DA:1885:A:H5"	2.06	0.84
54:DV:24:LYS:HA	54:DV:92:THR:HG23	1.56	0.84
25:AZ:7:ARG:NH1	25:AZ:281:ILE:HG12	1.91	0.84
25:AZ:133:VAL:HG23	25:AZ:168:VAL:HG11	1.60	0.84
49:DQ:135:ASP:H	49:DQ:137:TYR:HD2	1.24	0.84
52:DT:25:GLY:HA2	52:DT:92:GLY:HA2	1.57	0.84
52:DT:28:VAL:CG1	52:DT:46:GLU:HA	2.05	0.84
54:DV:35:LEU:HD23	54:DV:57:VAL:HG13	1.56	0.84
56:DX:50:LYS:H	56:DX:87:GLN:HE22	1.24	0.84
28:B2:61:LEU:HD13	36:BA:72:U:H4'	1.60	0.84
32:B6:26:ASN:HA	36:BA:2286:A:C2	2.13	0.84
37:BB:40:U:H3'	37:BB:41:U:H5"	1.58	0.84
48:BP:62:LEU:HD23	48:BP:62:LEU:H	1.41	0.84
2:CB:97:TRP:HH2	2:CB:176:GLU:CD	1.81	0.84
34:D8:27:THR:CG2	48:DP:61:ARG:HA	2.07	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2502:G:H5”	36:DA:2503:A:C5’	2.07	0.84
36:BA:1539:G:C2’	36:BA:1540:U:H5’	2.08	0.84
43:BH:136:ILE:HD12	43:BH:136:ILE:H	1.42	0.84
10:CJ:4:ILE:HD13	10:CJ:74:ILE:HG13	1.57	0.84
42:DG:60:LEU:O	42:DG:64:THR:HG22	1.77	0.84
51:DS:17:ARG:HA	51:DS:20:ARG:HH12	1.40	0.84
36:BA:2179:C:H4’	36:BA:2180:U:N3	1.93	0.84
36:BA:2443:C:O2’	36:BA:2444:G:H5’	1.78	0.84
43:BH:66:GLY:HA2	43:BH:69:ARG:HB3	1.58	0.84
1:CA:977:A:N3	1:CA:977:A:H2’	1.91	0.84
36:DA:733:G:N7	36:DA:761:A:C6	2.46	0.84
36:DA:1024:G:H3’	36:DA:1025:G:H5”	1.59	0.84
42:DG:135:LEU:HD13	42:DG:140:ILE:HD11	1.60	0.84
19:AS:49:ILE:H	19:AS:49:ILE:HD12	1.41	0.83
36:BA:1480:G:H1	36:BA:1511:C:H42	1.26	0.83
36:BA:1803:A:H4’	39:BD:259:THR:CG2	2.08	0.83
48:BP:16:ARG:NE	48:BP:18:ARG:HG2	1.93	0.83
36:DA:2068:U:N3	36:DA:2430:A:H2	1.75	0.83
17:AQ:67:LYS:O	17:AQ:68:ARG:HB2	1.76	0.83
51:BS:42:ASP:O	51:BS:43:GLU:HB3	1.78	0.83
51:BS:49:VAL:HG12	51:BS:50:SER:N	1.93	0.83
58:BZ:86:VAL:HG12	58:BZ:87:ASP:H	1.43	0.83
2:CB:72:GLY:O	2:CB:94:ASN:HA	1.78	0.83
39:DD:35:LYS:HG2	39:DD:63:ARG:HA	1.59	0.83
52:DT:89:VAL:HG21	52:DT:91:ARG:HH21	1.41	0.83
2:AB:130:ARG:HB3	2:AB:131:PRO:HD2	1.58	0.83
13:AM:54:VAL:HA	13:AM:57:ARG:NH1	1.93	0.83
25:AZ:310:ILE:HD11	25:AZ:380:LEU:O	1.77	0.83
27:B1:73:LEU:HD22	27:B1:94:LEU:HB3	1.59	0.83
40:BE:101:ARG:NH1	40:BE:171:GLU:HB2	1.93	0.83
36:DA:997:G:OP1	53:DU:93:LYS:HD3	1.78	0.83
42:DG:60:LEU:HD22	42:DG:63:ILE:HD11	1.60	0.83
58:DZ:7:ALA:HB3	58:DZ:61:LEU:HD23	1.60	0.83
25:AZ:215:ARG:HB3	25:AZ:282:ALA:HB3	1.59	0.83
30:B4:20:ASN:HD22	30:B4:21:VAL:N	1.76	0.83
40:BE:128:SER:OG	40:BE:129:HIS:N	2.11	0.83
4:CD:21:LEU:HD11	4:CD:66:ARG:O	1.78	0.83
12:CL:69:TYR:O	12:CL:71:PRO:HD3	1.79	0.83
36:DA:1516:C:C2’	36:DA:1517:G:H5”	2.07	0.83
38:DC:163:PHE:HB2	38:DC:171:ILE:HD11	1.60	0.83
47:DO:114:ILE:H	47:DO:114:ILE:HD12	1.43	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1190:G:H3'	3:AC:3:ASN:ND2	1.94	0.83
32:B6:53:LYS:HG2	32:B6:54:ILE:H	1.42	0.83
38:BC:79:LYS:HD3	38:BC:119:VAL:HB	1.59	0.83
1:CA:201:C:C3'	1:CA:202:U:H5"	2.08	0.83
36:DA:996:A:H4'	53:DU:92:ARG:CG	2.07	0.83
42:DG:91:ARG:HD2	42:DG:92:VAL:N	1.93	0.83
51:DS:67:ARG:HA	51:DS:67:ARG:HE	1.42	0.83
52:DT:55:ASN:HD22	52:DT:58:ASN:HB2	1.43	0.83
9:AI:19:LEU:HD21	9:AI:59:PHE:CD2	2.14	0.83
50:BR:96:ARG:NH1	50:BR:117:VAL:HG21	1.93	0.83
36:DA:2179:C:H4'	36:DA:2180:U:C2	2.13	0.83
41:DF:176:LEU:HG	41:DF:177:ALA:H	1.42	0.83
47:DO:87:ILE:CG2	47:DO:91:LEU:HA	2.08	0.83
58:DZ:10:ARG:H	58:DZ:37:VAL:HA	1.44	0.83
58:DZ:72:ARG:HG3	58:DZ:89:PHE:HB2	1.60	0.83
1:AA:975:A:H4'	1:AA:976:G:H5"	1.57	0.83
57:BY:17:SER:HA	57:BY:71:LYS:HD2	1.59	0.83
36:DA:2781:A:C5'	36:DA:2782:G:H5'	2.08	0.83
40:DE:116:VAL:HG22	40:DE:117:MET:H	1.43	0.83
46:DN:67:LEU:O	46:DN:88:GLU:HG3	1.79	0.83
24:AY:20:H2U:H4'	24:AY:21:A:C5'	2.08	0.83
25:AZ:267:VAL:HG23	25:AZ:288:VAL:HG13	1.60	0.83
34:B8:48:PHE:O	34:B8:49:VAL:HG22	1.77	0.83
37:BB:48:A:H4'	51:BS:95:HIS:CD2	2.12	0.83
57:BY:95:LYS:HG3	57:BY:100:ALA:HA	1.60	0.83
3:CC:52:LEU:HD11	3:CC:55:VAL:HG22	1.61	0.83
10:CJ:49:VAL:HG22	14:CN:41:ARG:HG3	1.57	0.83
36:DA:200:U:H2'	36:DA:201:C:H5'	1.61	0.83
36:DA:1948:G:H5'	36:DA:1948:G:C8	2.13	0.83
36:DA:2415:G:O3'	48:DP:66:GLY:HA3	1.79	0.83
48:DP:126:VAL:HA	48:DP:145:PRO:HB2	1.61	0.83
53:DU:92:ARG:O	53:DU:94:ASN:N	2.11	0.83
53:DU:92:ARG:HH21	54:DV:10:LYS:HB3	1.44	0.83
10:AJ:89:ASP:O	10:AJ:90:LEU:HB2	1.77	0.83
25:AZ:26:THR:HB	60:AZ:501:GDP:O2A	1.77	0.83
36:BA:419:C:H2'	36:BA:420:C:H6	1.43	0.83
47:BO:1:MET:HG3	47:BO:67:LYS:HG2	1.61	0.83
58:BZ:166:SER:HB2	58:BZ:167:PRO:C	1.98	0.83
55:DW:28:SER:O	55:DW:70:TYR:HA	1.77	0.83
2:AB:94:ASN:HD22	2:AB:94:ASN:N	1.76	0.83
32:B6:5:VAL:N	32:B6:8:LYS:HB3	1.94	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:325:G:H2'	36:BA:326:G:H8	1.42	0.83
36:BA:1599:C:H2'	36:BA:1600:C:H6	1.44	0.83
39:BD:65:ILE:HD13	39:BD:65:ILE:H	1.42	0.83
48:BP:41:ARG:HH11	48:BP:41:ARG:HB3	1.41	0.83
25:CZ:325:LYS:HD3	25:CZ:331:HIS:HB3	1.61	0.83
36:DA:84:A:H5'	57:DY:9:LYS:HB3	1.61	0.83
36:DA:1790:C:H5"	36:DA:1791:A:OP1	1.78	0.83
51:DS:83:LYS:HG2	51:DS:105:ALA:HB3	1.60	0.83
20:AT:89:ARG:HD2	20:AT:104:LEU:HD11	1.61	0.82
24:AY:56:C:C6	36:BA:1067:A:H2	1.97	0.82
41:BF:178:PRO:HG2	41:BF:179:GLU:OE1	1.78	0.82
48:BP:77:ARG:HD3	48:BP:78:PRO:HD2	1.59	0.82
48:BP:80:TYR:HE1	48:BP:111:ARG:HD2	1.42	0.82
48:BP:148:LEU:O	48:BP:149:GLU:HB2	1.78	0.82
49:BQ:21:THR:O	49:BQ:22:LYS:HB3	1.79	0.82
58:BZ:102:LEU:HD21	58:BZ:124:ILE:HD11	1.61	0.82
3:CC:76:VAL:HG21	3:CC:103:VAL:HG11	1.61	0.82
25:CZ:163:PHE:HD1	25:CZ:164:PRO:HD2	1.44	0.82
36:DA:910:A:H62	49:DQ:12:GLN:HA	1.42	0.82
36:DA:2533:A:H2'	36:DA:2534:A:O4'	1.79	0.82
40:DE:171:GLU:HB3	40:DE:185:LYS:HG2	1.61	0.82
2:AB:7:VAL:HG13	2:AB:11:LEU:CD1	2.09	0.82
6:AF:11:ASN:HB3	6:AF:14:LEU:HD23	1.60	0.82
12:AL:32:PHE:HB3	12:AL:84:LEU:HD21	1.60	0.82
27:B1:88:LYS:O	27:B1:91:LYS:HG2	1.80	0.82
36:BA:1336:A:OP1	56:BX:64:LYS:HE2	1.78	0.82
51:BS:34:HIS:HB2	51:BS:36:TYR:HE1	1.45	0.82
1:CA:1347:G:H22	1:CA:1373:G:H2'	1.44	0.82
12:CL:38:THR:O	12:CL:39:VAL:HG23	1.78	0.82
36:DA:2179:C:H4'	36:DA:2180:U:N3	1.95	0.82
43:DH:153:LYS:HD3	43:DH:153:LYS:N	1.94	0.82
13:AM:10:PRO:CB	13:AM:18:ALA:HB1	2.08	0.82
13:AM:23:TYR:HB3	13:AM:67:GLU:HB2	1.60	0.82
49:BQ:19:GLY:H	49:BQ:98:LYS:HD3	1.43	0.82
52:BT:95:ARG:HH11	52:BT:95:ARG:HB3	1.44	0.82
1:CA:1313:U:H2'	1:CA:1314:C:O2	1.79	0.82
28:D2:65:ASN:ND2	36:DA:112:U:H5'	1.94	0.82
49:DQ:29:PHE:HB2	49:DQ:105:GLU:OE2	1.79	0.82
2:AB:17:PHE:HB2	2:AB:44:LEU:HD11	1.61	0.82
2:AB:91:PRO:HG2	2:AB:155:LEU:HD23	1.61	0.82
9:AI:53:VAL:H	9:AI:95:LYS:HZ2	1.26	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:22:THR:HB	14:AN:33:VAL:HG21	1.59	0.82
17:AQ:12:SER:HB3	17:AQ:20:THR:HB	1.60	0.82
36:BA:203:C:H3'	36:BA:204:A:H5"	1.60	0.82
36:BA:621:A:H2'	36:BA:622:G:H5'	1.60	0.82
36:BA:1058:G:H2'	36:BA:1059:G:H5"	1.62	0.82
43:BH:149:ARG:HA	43:BH:162:ILE:CD1	2.09	0.82
48:BP:125:VAL:O	48:BP:145:PRO:HD2	1.79	0.82
42:DG:51:ARG:NH1	42:DG:53:LEU:HD13	1.93	0.82
46:DN:13:TRP:O	46:DN:135:PRO:HD2	1.79	0.82
51:DS:28:VAL:CG1	51:DS:29:PHE:H	1.92	0.82
32:B6:33:LYS:HE2	32:B6:33:LYS:HA	1.62	0.82
50:BR:2:ARG:HD2	50:BR:2:ARG:C	2.00	0.82
7:CG:45:ASP:O	7:CG:49:ILE:HG12	1.80	0.82
25:CZ:27:LEU:HG	25:CZ:31:LEU:HD11	1.59	0.82
36:DA:925:C:C2'	36:DA:926:A:H5"	2.08	0.82
42:DG:39:ILE:HD12	42:DG:60:LEU:HD11	1.61	0.82
4:CD:30:LYS:C	4:CD:32:ALA:H	1.81	0.82
24:CY:20:H2U:H4'	24:CY:21:A:C5'	2.09	0.82
36:DA:910:A:C5	49:DQ:13:GLN:HG3	2.14	0.82
36:DA:2408:U:H2'	36:DA:2409:G:H8	1.43	0.82
51:DS:13:ARG:CG	51:DS:14:VAL:H	1.93	0.82
57:DY:27:VAL:HG12	57:DY:29:GLU:H	1.44	0.82
10:AJ:54:PHE:CE2	10:AJ:55:LYS:HD2	2.15	0.82
57:BY:46:LYS:HG2	57:BY:47:LYS:H	1.43	0.82
32:D6:11:LEU:HD23	32:D6:25:LYS:HA	1.61	0.82
35:D9:10:ILE:HG13	36:DA:2477:C:N4	1.93	0.82
36:DA:302:C:H2'	36:DA:303:U:C6	2.15	0.82
36:DA:639:U:H2'	36:DA:640:C:C6	2.15	0.82
36:DA:2131:G:C1'	36:DA:2133:G:H21	1.88	0.82
28:B2:39:ALA:HA	28:B2:44:LEU:HB2	1.60	0.82
36:BA:1578:U:H2'	36:BA:1579:A:H5"	1.62	0.82
39:BD:24:ILE:O	39:BD:26:LYS:N	2.13	0.82
47:BO:87:ILE:CG2	47:BO:91:LEU:HA	2.10	0.82
50:BR:55:ALA:HA	50:BR:80:PHE:CE1	2.14	0.82
51:BS:83:LYS:HG2	51:BS:105:ALA:HB3	1.59	0.82
1:CA:37:U:OP1	12:CL:124:LYS:HB3	1.80	0.82
1:CA:201:C:H3'	1:CA:202:U:H5"	1.59	0.82
1:CA:1125:U:H1'	10:CJ:5:ARG:NH2	1.94	0.82
20:CT:47:GLY:O	20:CT:49:ALA:N	2.11	0.82
23:CX:13:A:H5"	23:CX:14:A:OP1	1.79	0.82
36:DA:814:C:H2'	36:DA:815:C:H6	1.43	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1799:G:H5”	36:DA:1819:A:N6	1.92	0.82
4:AD:78:LEU:HD21	4:AD:96:LEU:HB3	1.62	0.82
22:AV:72:C:C3’	22:AV:73:A:H5”	2.10	0.82
31:B5:4:HIS:HB3	31:B5:5:PRO:CD	2.05	0.82
54:BV:24:LYS:HA	54:BV:92:THR:HG23	1.61	0.82
56:BX:31:HIS:HB3	56:BX:34:ALA:HB2	1.60	0.82
58:BZ:104:PHE:HA	58:BZ:139:VAL:CG2	2.09	0.82
4:CD:162:LEU:O	4:CD:162:LEU:HD13	1.80	0.82
36:DA:2524:G:H8	36:DA:2524:G:H5’	1.42	0.82
1:AA:377:G:OP1	16:AP:3:LYS:HD2	1.80	0.82
36:BA:1887:C:H2’	36:BA:1888:G:H5”	1.62	0.82
40:BE:61:ARG:HB3	40:BE:62:PRO:HD3	1.62	0.82
54:BV:15:GLU:HB3	54:BV:16:PRO:HD2	1.61	0.82
1:CA:1053:G:H4’	1:CA:1054:C:H5’	1.60	0.82
1:CA:1314:C:H5	1:CA:1323:G:H1	1.28	0.82
9:CI:10:ARG:HD3	9:CI:75:ASP:HB3	1.60	0.82
36:DA:325:G:H2’	36:DA:326:G:H8	1.43	0.82
57:DY:13:VAL:O	57:DY:24:VAL:HG13	1.80	0.82
58:DZ:126:VAL:HA	58:DZ:163:LEU:HA	1.60	0.82
5:AE:76:ILE:HD11	5:AE:142:LEU:CD2	2.09	0.81
18:AR:59:SER:OG	18:AR:62:GLU:HG3	1.79	0.81
36:BA:389:G:H1	48:BP:72:PRO:HD3	1.44	0.81
39:BD:43:ARG:HH11	39:BD:44:ASN:HD22	1.25	0.81
57:BY:13:VAL:HG23	57:BY:73:ARG:O	1.80	0.81
1:CA:1116:C:H2’	1:CA:1117:G:H5”	1.62	0.81
3:CC:52:LEU:HD11	3:CC:55:VAL:CG2	2.10	0.81
32:D6:32:ASN:O	32:D6:33:LYS:HB2	1.80	0.81
39:DD:43:ARG:HH21	39:DD:49:ILE:HG23	1.45	0.81
1:AA:194:C:H2’	1:AA:195:A:H5”	1.62	0.81
42:BG:7:LEU:HA	42:BG:10:LYS:HD2	1.62	0.81
51:BS:106:ARG:HH12	51:BS:108:GLY:N	1.78	0.81
30:D4:10:VAL:HG23	30:D4:11:PRO:HD2	1.61	0.81
36:DA:323:G:H2’	41:DF:169:ASN:ND2	1.94	0.81
57:DY:81:LYS:HZ3	57:DY:99:CYS:HB2	1.43	0.81
3:AC:20:SER:HB2	3:AC:40:ARG:HH22	1.44	0.81
18:AR:53:ARG:HG3	18:AR:63:GLN:HE21	1.45	0.81
20:AT:71:THR:O	20:AT:72:LEU:HD23	1.79	0.81
25:AZ:325:LYS:C	25:AZ:327:GLU:H	1.83	0.81
36:BA:1270:C:H5”	36:BA:1271:G:C5’	2.08	0.81
36:BA:2317:C:C2’	36:BA:2318:G:H5’	2.09	0.81
49:BQ:141:GLN:NE2	58:BZ:72:ARG:HA	1.93	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:111:ARG:HH11	52:BT:111:ARG:HB3	1.41	0.81
36:DA:581:C:H2'	36:DA:582:G:H8	1.42	0.81
36:DA:1887:C:C2'	36:DA:1888:G:H5"	2.10	0.81
38:DC:100:ILE:HD11	38:DC:123:VAL:HG23	1.62	0.81
42:DG:131:TYR:HB3	42:DG:159:VAL:CG1	2.11	0.81
1:AA:59:A:H3'	1:AA:331:G:H22	1.43	0.81
39:BD:4:LYS:HD2	39:BD:18:VAL:HG12	1.62	0.81
39:BD:43:ARG:NH1	39:BD:44:ASN:ND2	2.28	0.81
1:CA:150:C:H2'	1:CA:151:A:H5"	1.60	0.81
25:CZ:317:GLU:HG3	25:CZ:404:LEU:HD21	1.63	0.81
32:D6:15:GLU:CD	32:D6:18:ARG:CZ	2.49	0.81
1:AA:505:G:H5'	1:AA:534:U:H2'	1.63	0.81
1:AA:1392:G:N2	1:AA:1502:A:H8	1.78	0.81
19:AS:44:MET:SD	19:AS:44:MET:N	2.53	0.81
22:AV:5:G:H5'	22:AV:5:G:C8	2.14	0.81
25:AZ:193:ASN:OD1	25:AZ:195:TRP:HB2	1.80	0.81
27:B1:51:VAL:HG23	27:B1:58:ILE:HG23	1.63	0.81
36:BA:322:A:OP2	41:BF:169:ASN:HB2	1.80	0.81
36:BA:655:A:H4'	36:BA:656:G:H5'	1.63	0.81
51:BS:36:TYR:N	51:BS:36:TYR:HD1	1.77	0.81
22:CV:44:G:H2'	22:CV:45:U:H5'	1.63	0.81
33:D7:34:ARG:HH11	33:D7:34:ARG:HG3	1.44	0.81
38:DC:82:LYS:HG3	38:DC:116:THR:HG21	1.62	0.81
43:DH:83:TYR:HB3	43:DH:135:GLY:H	1.45	0.81
52:DT:29:ARG:HB3	52:DT:85:LYS:HA	1.62	0.81
8:AH:85:ARG:HH11	8:AH:85:ARG:HG3	1.46	0.81
41:BF:132:VAL:HG13	41:BF:133:ASN:H	1.46	0.81
50:BR:63:ARG:HG3	50:BR:80:PHE:HE2	1.45	0.81
52:BT:29:ARG:HB3	52:BT:85:LYS:HA	1.62	0.81
52:BT:29:ARG:HH21	52:BT:88:ILE:HD11	1.45	0.81
53:BU:52:ARG:HH11	53:BU:52:ARG:HB3	1.46	0.81
36:DA:654(E):G:N2	36:DA:654(Q):C:H1'	1.95	0.81
41:DF:164:ARG:HH11	41:DF:164:ARG:HG2	1.45	0.81
50:DR:63:ARG:HG3	50:DR:80:PHE:HE2	1.44	0.81
3:AC:5:ILE:H	3:AC:5:ILE:CD1	1.93	0.81
16:AP:74:LEU:O	16:AP:79:VAL:HG23	1.81	0.81
36:BA:413:C:H42	36:BA:2410:G:H1	1.29	0.81
36:BA:733:G:N7	36:BA:761:A:C6	2.48	0.81
36:BA:2408:U:H2'	36:BA:2409:G:H8	1.46	0.81
42:BG:79:ASN:O	42:BG:80:PHE:HB2	1.77	0.81
50:BR:67:LEU:HD13	50:BR:76:VAL:HG21	1.63	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:130:ARG:HB3	2:CB:131:PRO:HD2	1.61	0.81
38:DC:10:LEU:HD12	38:DC:32:LEU:HA	1.60	0.81
41:DF:167:ALA:HB1	41:DF:173:VAL:HG11	1.63	0.81
27:B1:4:VAL:HG23	27:B1:10:LYS:O	1.81	0.81
27:B1:76:ARG:NH1	27:B1:95:LEU:HD22	1.96	0.81
2:CB:7:VAL:HG13	2:CB:11:LEU:CD1	2.11	0.81
1:AA:973:G:OP1	10:AJ:57:LYS:HE2	1.81	0.81
26:B0:49:LYS:HG3	26:B0:80:HIS:ND1	1.96	0.81
27:B1:40:ARG:NH1	27:B1:41:ARG:O	2.14	0.81
17:CQ:67:LYS:O	17:CQ:68:ARG:HB2	1.81	0.81
19:CS:29:ARG:HG2	19:CS:47:HIS:HA	1.63	0.81
42:DG:135:LEU:HB2	42:DG:155:MET:HG3	1.63	0.81
32:B6:18:ARG:HH11	32:B6:18:ARG:HG2	1.45	0.81
36:BA:325:G:H2'	36:BA:326:G:C8	2.16	0.81
41:BF:40:GLN:NE2	41:BF:182:ASN:HB2	1.95	0.81
48:BP:59:LEU:HA	48:BP:61:ARG:HE	1.45	0.81
51:BS:36:TYR:N	51:BS:36:TYR:CD1	2.47	0.81
56:BX:27:THR:HG22	56:BX:80:ILE:HB	1.60	0.81
9:CI:126:SER:O	9:CI:128:ARG:HD2	1.81	0.81
10:CJ:89:ASP:O	10:CJ:90:LEU:HB2	1.80	0.81
21:CU:6:ARG:O	21:CU:12:LYS:HD3	1.81	0.81
25:CZ:198:LYS:CE	25:CZ:198:LYS:CA	2.40	0.81
36:DA:1368:G:O2'	36:DA:1369:G:H5'	1.81	0.81
48:DP:77:ARG:HD3	48:DP:78:PRO:HD2	1.61	0.81
26:B0:84:LEU:H	26:B0:84:LEU:HD12	1.46	0.80
36:BA:1314:C:H5'	36:BA:1314:C:H6	1.45	0.80
39:BD:63:ARG:HH11	39:BD:63:ARG:HG3	1.46	0.80
49:BQ:29:PHE:HB2	49:BQ:105:GLU:OE2	1.81	0.80
54:BV:18:LEU:HG	54:BV:19:LYS:H	1.46	0.80
1:CA:1003:G:C2'	1:CA:1004:A:H4'	2.10	0.80
13:CM:51:ALA:O	13:CM:55:ARG:HB2	1.81	0.80
25:CZ:181:GLN:OE1	25:CZ:193:ASN:ND2	2.14	0.80
27:D1:39:LYS:HB3	27:D1:39:LYS:NZ	1.96	0.80
32:D6:52:VAL:HG12	32:D6:53:LYS:HD3	1.61	0.80
33:D7:10:ARG:HH11	33:D7:10:ARG:HG2	1.45	0.80
49:DQ:18:LYS:HA	49:DQ:18:LYS:NZ	1.96	0.80
51:DS:99:LYS:HB3	51:DS:99:LYS:HZ2	1.44	0.80
52:DT:92:GLY:HA3	52:DT:120:ARG:HH21	1.46	0.80
10:AJ:4:ILE:HD12	10:AJ:4:ILE:N	1.96	0.80
36:BA:140:G:H1'	36:BA:141:A:C2	2.14	0.80
36:BA:2472:G:H5'	36:BA:2473:U:H5"	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:51:ARG:HB3	42:BG:53:LEU:HD23	1.61	0.80
49:BQ:18:LYS:HA	49:BQ:18:LYS:NZ	1.96	0.80
52:BT:91:ARG:HA	52:BT:117:ASP:N	1.96	0.80
4:CD:187:ARG:HB3	4:CD:187:ARG:NH1	1.96	0.80
25:CZ:200:TRP:CE3	25:CZ:203:LEU:HD12	2.16	0.80
36:DA:11:G:H22	36:DA:2627:G:H5"	1.46	0.80
36:DA:189:G:H2'	36:DA:205:G:H22	1.45	0.80
36:DA:1270:C:C5'	36:DA:1271:G:H5"	2.07	0.80
36:DA:2185:C:H2'	36:DA:2186:G:C5'	2.11	0.80
38:DC:79:LYS:HD3	38:DC:119:VAL:HB	1.62	0.80
17:AQ:82:MET:O	17:AQ:86:GLU:HG2	1.82	0.80
32:B6:32:ASN:O	32:B6:33:LYS:HB2	1.80	0.80
43:BH:149:ARG:CA	43:BH:162:ILE:HD11	2.07	0.80
53:BU:91:ASP:O	53:BU:95:LEU:HB2	1.82	0.80
57:BY:81:LYS:HZ3	57:BY:99:CYS:HB2	1.47	0.80
3:CC:20:SER:HB2	3:CC:40:ARG:NH2	1.96	0.80
5:CE:18:ARG:HG3	5:CE:18:ARG:HH11	1.45	0.80
26:D0:34:GLY:O	26:D0:60:PHE:HB2	1.82	0.80
39:DD:44:ASN:HB3	39:DD:49:ILE:HA	1.64	0.80
40:DE:117:MET:HE2	40:DE:124:GLY:HA3	1.62	0.80
55:DW:17:VAL:O	55:DW:20:VAL:HG22	1.80	0.80
25:AZ:163:PHE:HD1	25:AZ:164:PRO:HD2	1.44	0.80
28:B2:8:LYS:O	28:B2:12:GLU:HB3	1.82	0.80
36:BA:2298:A:H62	36:BA:2318:G:H8	1.29	0.80
1:CA:617:G:H1	1:CA:623:C:H42	1.29	0.80
8:CH:13:ILE:O	8:CH:17:THR:HG23	1.82	0.80
26:D0:50:ASN:O	26:D0:62:LEU:HB2	1.82	0.80
36:DA:1049:C:O2	36:DA:1113:U:H4'	1.80	0.80
2:AB:22:LYS:HE2	2:AB:22:LYS:HA	1.63	0.80
31:B5:57:VAL:HG12	31:B5:58:LEU:H	1.45	0.80
34:B8:6:THR:CG2	34:B8:63:PRO:HD3	2.12	0.80
13:CM:88:ARG:HH11	13:CM:88:ARG:HG2	1.46	0.80
25:CZ:277:LEU:HD12	25:CZ:279:GLU:H	1.46	0.80
36:DA:479:A:O2'	36:DA:481:G:H5'	1.81	0.80
36:DA:1854:A:N6	36:DA:1888:G:H8	1.76	0.80
36:DA:2110:G:N1	36:DA:2178:C:H5	1.80	0.80
36:DA:2159:G:C2'	36:DA:2160:G:H5"	2.11	0.80
38:DC:175:VAL:CG1	38:DC:188:ASN:HB3	2.11	0.80
48:DP:47:ASP:HB3	48:DP:48:PRO:CA	2.11	0.80
22:AV:72:C:H3'	22:AV:73:A:H5"	1.63	0.80
25:AZ:325:LYS:HD3	25:AZ:331:HIS:HB3	1.64	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1480:G:C2'	36:BA:1481:U:H5"	2.11	0.80
36:BA:2185:C:H2'	36:BA:2186:G:C5'	2.10	0.80
40:BE:26:ILE:HG13	40:BE:182:LEU:HB3	1.62	0.80
1:CA:265:G:H2'	1:CA:266:G:H5"	1.64	0.80
25:CZ:313:HIS:CB	25:CZ:403:ILE:HG21	2.10	0.80
31:D5:41:PRO:HG2	31:D5:44:THR:OG1	1.82	0.80
39:DD:68:LYS:HB2	39:DD:70:TRP:CH2	2.17	0.80
42:DG:64:THR:HG23	42:DG:66:GLN:H	1.47	0.80
58:DZ:144:LEU:HD12	58:DZ:149:SER:HA	1.63	0.80
36:BA:1389:G:H2'	36:BA:1390:U:C6	2.17	0.80
36:BA:1536:C:H2'	36:BA:1537:G:H4'	1.62	0.80
38:DC:123:VAL:HG22	38:DC:127:LEU:CD2	2.10	0.80
11:AK:27:ASN:HD22	11:AK:28:THR:H	1.30	0.80
14:AN:25:VAL:HG23	14:AN:38:GLY:O	1.81	0.80
1:CA:547:A:H4'	1:CA:548:G:O5'	1.81	0.80
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	1.64	0.80
9:CI:99:LEU:O	9:CI:101:PHE:N	2.14	0.80
16:CP:67:THR:N	16:CP:70:ALA:HB3	1.96	0.80
36:DA:1907:G:O2'	36:DA:1908:C:H5'	1.82	0.80
43:DH:149:ARG:HA	43:DH:162:ILE:HD11	1.64	0.80
48:DP:70:GLN:HB3	48:DP:72:PRO:HD2	1.63	0.80
19:AS:16:LEU:H	19:AS:16:LEU:HD12	1.45	0.80
24:AY:7:G:H3'	24:AY:8:4SU:H5'	1.61	0.80
36:BA:1061:U:H4'	36:BA:1070:A:H1'	1.64	0.80
36:BA:2866:U:H6	36:BA:2868:A:H1'	1.47	0.80
39:BD:43:ARG:HB2	39:BD:54:ARG:HB2	1.63	0.80
46:BN:119:ARG:HH11	46:BN:119:ARG:HG3	1.47	0.80
56:BX:12:VAL:HB	56:BX:17:ALA:HB1	1.64	0.80
32:D6:13:CYS:O	32:D6:21:TYR:HA	1.82	0.80
38:DC:30:LYS:HE2	38:DC:180:PHE:O	1.82	0.80
49:DQ:101:ARG:HH11	49:DQ:101:ARG:HG3	1.47	0.80
50:DR:105:ARG:HD2	50:DR:105:ARG:H	1.45	0.80
23:AX:13:A:H5"	23:AX:14:A:OP1	1.81	0.80
36:BA:27:G:N2	36:BA:512:G:H2'	1.94	0.80
36:BA:1348:G:H2'	36:BA:1349:A:H5"	1.62	0.80
40:BE:60:ASN:OD1	40:BE:62:PRO:HD2	1.81	0.80
52:BT:85:LYS:HB3	52:BT:85:LYS:HZ3	1.46	0.80
52:BT:95:ARG:HB3	52:BT:95:ARG:NH1	1.97	0.80
54:BV:29:PRO:HA	54:BV:61:VAL:HG22	1.63	0.80
55:BW:6:ILE:HG12	55:BW:104:THR:CG2	2.12	0.80
56:BX:35:THR:HG22	56:BX:37:THR:N	1.96	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1306:A:H61	1:CA:1331:G:H1'	1.47	0.80
6:CF:69:GLU:O	6:CF:72:VAL:HG12	1.81	0.80
19:CS:63:THR:HG22	19:CS:66:MET:SD	2.21	0.80
31:D5:32:PRO:HG3	31:D5:39:MET:SD	2.22	0.80
36:DA:1689:A:H62	36:DA:1698:A:H2	1.29	0.80
39:DD:275:LYS:HD2	39:DD:276:LYS:H	1.46	0.80
26:B0:26:TYR:HE2	36:BA:857:C:H1'	1.47	0.79
50:BR:2:ARG:HD3	50:BR:5:LYS:HE2	1.63	0.79
1:CA:737:A:H2'	1:CA:738:C:C6	2.15	0.79
1:CA:1221:G:H4'	19:CS:77:THR:CG2	2.12	0.79
1:CA:1430:C:H5	1:CA:1470:G:N1	1.77	0.79
24:CY:77:TRP:N	25:CZ:285:ASN:O	2.14	0.79
25:CZ:64:ASN:H	25:CZ:83:PRO:HG2	1.47	0.79
36:DA:2187:G:C2'	36:DA:2188:C:H5'	2.12	0.79
37:DB:48:A:H4'	51:DS:95:HIS:CD2	2.17	0.79
1:AA:979:C:H2'	1:AA:980:C:H5"	1.62	0.79
25:AZ:135:MET:SD	25:AZ:150:VAL:HG11	2.22	0.79
26:B0:16:SER:HB2	36:BA:2262:U:C5	2.16	0.79
38:BC:107:TRP:CH2	38:BC:109:ASP:HA	2.17	0.79
48:BP:23:PRO:HD2	48:BP:33:ARG:HE	1.45	0.79
1:CA:186:C:H2'	1:CA:187:C:H6	1.46	0.79
2:CB:200:ILE:HD12	2:CB:200:ILE:H	1.45	0.79
7:CG:120:ILE:O	7:CG:124:LEU:HG	1.81	0.79
25:AZ:20:VAL:HG13	25:AZ:115:GLN:NE2	1.96	0.79
31:B5:50:GLY:HA3	31:B5:56:LYS:CE	2.11	0.79
36:BA:925:C:C2'	36:BA:926:A:H5"	2.12	0.79
36:BA:1970:A:H5"	36:BA:1971:A:OP1	1.82	0.79
36:BA:2579:C:O2'	40:BE:131:ALA:HB2	1.82	0.79
36:BA:2668:G:O2'	36:BA:2669:G:H5'	1.81	0.79
40:BE:98:PRO:HD3	40:BE:175:VAL:HG12	1.63	0.79
43:BH:42:ARG:O	43:BH:43:VAL:HG13	1.81	0.79
51:BS:89:ARG:HH11	51:BS:89:ARG:HG2	1.47	0.79
1:CA:973:G:O4'	10:CJ:55:LYS:HE2	1.83	0.79
31:D5:40:LYS:CE	31:D5:46:CYS:HB3	2.13	0.79
1:AA:201:C:H3'	1:AA:202:U:H5"	1.64	0.79
6:AF:35:ALA:HA	6:AF:67:MET:HB3	1.65	0.79
25:AZ:313:HIS:CB	25:AZ:403:ILE:HG21	2.13	0.79
37:BB:7:G:H4'	51:BS:29:PHE:CD2	2.18	0.79
39:BD:142:VAL:HG23	39:BD:193:VAL:HA	1.64	0.79
42:BG:111:LEU:O	42:BG:114:ILE:HG22	1.82	0.79
48:BP:24:GLY:HA3	48:BP:33:ARG:NH1	1.98	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:122:PRO:HB3	48:BP:141:ALA:HB1	1.64	0.79
22:CV:68:C:H2'	22:CV:69:G:H5'	1.63	0.79
31:D5:2:ALA:HB2	36:DA:2014:A:O2'	1.81	0.79
48:DP:122:PRO:HB3	48:DP:141:ALA:HB1	1.65	0.79
1:AA:675:A:H1'	11:AK:116:HIS:ND1	1.98	0.79
1:AA:973:G:H1'	10:AJ:55:LYS:CE	2.11	0.79
1:AA:1190:G:OP1	3:AC:5:ILE:HD12	1.82	0.79
3:AC:166:GLU:OE1	3:AC:166:GLU:HA	1.83	0.79
4:AD:61:LYS:HA	4:AD:203:VAL:HG13	1.63	0.79
26:B0:40:GLN:HE22	26:B0:43:THR:HA	1.46	0.79
32:B6:35:GLU:CB	32:B6:51:GLU:HB2	2.12	0.79
36:BA:708:C:H42	36:BA:723:G:H1	1.28	0.79
43:BH:102:ALA:HB2	43:BH:116:GLU:OE1	1.81	0.79
48:BP:81:GLN:NE2	48:BP:106:LEU:HA	1.98	0.79
52:BT:38:ASN:HD22	52:BT:38:ASN:C	1.84	0.79
1:CA:1241:G:H2'	1:CA:1242:C:C6	2.17	0.79
24:CY:7:G:H3'	24:CY:8:4SU:H5'	1.63	0.79
25:CZ:136:ASN:CG	60:CZ:501:GDP:O6	2.21	0.79
34:D8:33:ASN:HA	34:D8:36:LYS:HD2	1.65	0.79
52:DT:50:ILE:HA	52:DT:99:LEU:CD1	2.12	0.79
5:AE:76:ILE:HG13	5:AE:142:LEU:HD13	1.62	0.79
19:AS:43:GLU:O	19:AS:45:VAL:N	2.15	0.79
51:BS:89:ARG:NH1	51:BS:92:TYR:HA	1.96	0.79
1:CA:624:C:H2'	1:CA:625:G:C8	2.17	0.79
20:CT:23:ARG:O	20:CT:27:LYS:HB2	1.82	0.79
36:DA:751:A:H5'	55:DW:90:ARG:HA	1.65	0.79
51:DS:66:ALA:HB1	51:DS:99:LYS:HG2	1.64	0.79
52:DT:53:ARG:HH11	52:DT:53:ARG:CB	1.93	0.79
6:AF:19:LEU:HD11	6:AF:59:TYR:CZ	2.17	0.79
17:AQ:4:LYS:HE3	17:AQ:6:LEU:HD21	1.65	0.79
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.65	0.79
31:B5:34:PRO:O	31:B5:35:GLU:HG2	1.82	0.79
39:BD:267:SER:O	39:BD:269:PHE:N	2.16	0.79
46:BN:62:VAL:HG21	46:BN:66:LYS:HD2	1.64	0.79
52:BT:89:VAL:HG11	52:BT:91:ARG:HE	1.46	0.79
22:CV:51:U:H2'	22:CV:52:G:H8	1.47	0.79
24:CY:41:C:H5'	24:CY:41:C:H6	1.47	0.79
26:D0:20:ARG:HH11	26:D0:20:ARG:HG2	1.48	0.79
36:DA:140:G:H1'	36:DA:141:A:H2	1.46	0.79
36:DA:888:C:H2'	36:DA:889:C:H4'	1.65	0.79
49:DQ:79:LEU:CD2	49:DQ:80:GLU:HG3	2.12	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:62:THR:HG22	52:DT:75:ILE:HG13	1.64	0.79
13:AM:11:ARG:HG2	13:AM:12:ASN:ND2	1.97	0.79
25:AZ:317:GLU:HG3	25:AZ:404:LEU:HD21	1.64	0.79
35:B9:1:MET:SD	36:BA:2477:C:H2'	2.23	0.79
41:BF:25:PRO:CB	41:BF:119:ARG:HB2	2.11	0.79
50:BR:111:LEU:HD12	50:BR:111:LEU:N	1.97	0.79
17:CQ:52:LYS:H	17:CQ:52:LYS:CE	1.96	0.79
24:CY:68:C:H2'	24:CY:69:C:H6	1.48	0.79
46:DN:7:LYS:H	46:DN:7:LYS:HE3	1.47	0.79
49:DQ:140:ALA:HB1	58:DZ:99:TYR:CZ	2.18	0.79
2:AB:126:GLU:HA	2:AB:129:GLU:CD	2.03	0.79
6:AF:22:GLU:O	6:AF:25:ILE:HG22	1.83	0.79
25:AZ:68:VAL:O	25:AZ:69:GLU:HB3	1.78	0.79
25:AZ:277:LEU:HD12	25:AZ:279:GLU:H	1.47	0.79
43:BH:33:LEU:HD21	43:BH:136:ILE:HG22	1.65	0.79
11:CK:54:ARG:O	11:CK:57:THR:HG22	1.83	0.79
25:CZ:313:HIS:CD2	25:CZ:403:ILE:HG13	2.17	0.79
36:DA:2485:G:H5"	49:DQ:46:GLN:HE21	1.47	0.79
42:DG:73:ALA:O	42:DG:85:GLY:HA2	1.83	0.79
12:AL:8:ASN:ND2	17:AQ:34:LYS:HZ3	1.75	0.79
41:BF:65:TRP:HZ3	41:BF:73:ALA:O	1.65	0.79
1:CA:186:C:H2'	1:CA:187:C:C6	2.18	0.79
1:CA:736:C:H2'	1:CA:737:A:H8	1.47	0.79
3:CC:58:GLU:HB2	3:CC:65:ALA:HB2	1.64	0.79
53:DU:17:ILE:HG23	53:DU:39:LEU:HD12	1.65	0.79
1:AA:961:U:O2'	1:AA:962:C:H6	1.66	0.78
25:AZ:139:ASP:CG	25:AZ:177:LEU:HD11	2.02	0.78
28:B2:47:ASN:HA	28:B2:50:ILE:HB	1.62	0.78
37:BB:91:C:H5'	49:BQ:17:LEU:O	1.83	0.78
49:BQ:3:MET:HB2	49:BQ:4:PRO:HD2	1.65	0.78
13:CM:101:GLN:HE21	13:CM:101:GLN:H	1.30	0.78
20:CT:75:ASN:HA	20:CT:78:ALA:HB3	1.64	0.78
41:DF:24:LEU:HB3	41:DF:25:PRO:CD	2.12	0.78
43:DH:42:ARG:O	43:DH:43:VAL:HG13	1.82	0.78
1:AA:1321:C:H5"	1:AA:1322:C:H5"	1.65	0.78
3:AC:81:GLY:O	3:AC:85:ARG:HD3	1.83	0.78
10:AJ:33:GLN:HB2	10:AJ:75:ILE:CD1	2.13	0.78
22:AV:4:C:C2'	22:AV:5:G:H5"	2.13	0.78
25:AZ:27:LEU:HG	25:AZ:31:LEU:HD11	1.65	0.78
29:B3:19:GLN:NE2	29:B3:52:HIS:HE1	1.81	0.78
36:BA:2408:U:H2'	36:BA:2409:G:C8	2.18	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2801(A):A:C4'	36:BA:2802:G:H5'	2.12	0.78
42:BG:11:TYR:OH	42:BG:33:ARG:HB3	1.83	0.78
42:BG:45:GLU:HG3	42:BG:53:LEU:HG	1.63	0.78
58:BZ:115:GLY:HA2	58:BZ:175:VAL:O	1.83	0.78
10:CJ:38:ILE:HD11	10:CJ:71:LEU:HB3	1.65	0.78
50:DR:4:LEU:HD13	50:DR:7:GLY:N	1.98	0.78
56:DX:35:THR:O	56:DX:39:ILE:HG12	1.81	0.78
1:AA:547:A:H4'	1:AA:548:G:O5'	1.84	0.78
9:AI:65:VAL:HG21	9:AI:73:GLN:HB3	1.66	0.78
10:AJ:75:ILE:HG13	10:AJ:76:ASN:H	1.47	0.78
28:B2:62:THR:HG21	36:BA:76:C:O2'	1.84	0.78
49:BQ:43:THR:HG22	49:BQ:94:VAL:HG12	1.64	0.78
49:BQ:141:GLN:H	58:BZ:53:ILE:HD12	1.48	0.78
1:CA:1271:G:H2'	1:CA:1272:G:C5'	2.07	0.78
22:CW:38:A:H2'	22:CW:39:U:H5"	1.65	0.78
24:CY:76:A:OP1	25:CZ:274:ARG:HD2	1.82	0.78
36:DA:2840:C:H2'	36:DA:2841:C:C6	2.18	0.78
58:DZ:10:ARG:HE	58:DZ:36:LYS:HB2	1.49	0.78
1:AA:559:A:P	5:AE:126:ARG:HH22	2.06	0.78
3:AC:58:GLU:HB2	3:AC:65:ALA:HB2	1.64	0.78
22:AV:76:A:H3'	36:BA:2585:U:N3	1.98	0.78
24:AY:68:C:H2'	24:AY:69:C:H6	1.47	0.78
28:B2:46:GLN:HB3	28:B2:48:HIS:ND1	1.98	0.78
36:BA:626:U:O2	48:BP:105:LEU:HG	1.83	0.78
36:BA:658:C:H2'	36:BA:659:C:H6	1.48	0.78
36:BA:1210:A:H5"	36:BA:1212:G:O4'	1.84	0.78
52:BT:88:ILE:HG22	52:BT:89:VAL:HG23	1.64	0.78
1:CA:1251:A:H4'	9:CI:12:GLU:OE2	1.84	0.78
4:CD:109:GLY:O	4:CD:111:ALA:N	2.16	0.78
17:CQ:18:THR:HG23	17:CQ:69:LYS:HD2	1.66	0.78
25:CZ:310:ILE:HD11	25:CZ:380:LEU:O	1.83	0.78
47:DO:88:ASN:ND2	47:DO:92:GLU:HB2	1.98	0.78
1:AA:63:C:H2'	1:AA:64:G:H5'	1.65	0.78
3:AC:5:ILE:CD1	3:AC:5:ILE:N	2.46	0.78
4:AD:20:TYR:HD2	4:AD:26:CYS:O	1.66	0.78
34:B8:62:LEU:CD1	36:BA:242:G:H5"	2.11	0.78
36:BA:191:A:O2'	36:BA:192:C:H5'	1.84	0.78
46:BN:46:VAL:CG1	46:BN:48:MET:HG3	2.13	0.78
21:CU:18:TYR:HB3	21:CU:22:ARG:O	1.83	0.78
22:CV:36:A:H61	23:CX:19:U:H3	1.29	0.78
40:DE:77:ILE:HG22	40:DE:78:LEU:N	1.97	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:75:LYS:HA	2:AB:78:GLN:HE21	1.46	0.78
4:AD:28:SER:HB3	4:AD:29:PRO:CD	2.13	0.78
5:AE:12:LEU:CD1	5:AE:31:LEU:HB2	2.13	0.78
25:AZ:194:GLU:O	25:AZ:194:GLU:HG2	1.83	0.78
28:B2:31:GLU:O	28:B2:34:GLU:HB2	1.84	0.78
32:B6:11:LEU:HD12	32:B6:51:GLU:HG3	1.63	0.78
39:BD:4:LYS:NZ	39:BD:20:ASP:HA	1.99	0.78
2:CB:14:GLY:O	2:CB:15:VAL:HG13	1.84	0.78
6:CF:61:LEU:O	6:CF:62:TRP:HB2	1.84	0.78
14:CN:7:ILE:HG13	14:CN:8:GLU:N	1.97	0.78
36:DA:1721:G:C6	36:DA:1739:U:H5'	2.18	0.78
43:DH:19:VAL:HG12	43:DH:20:ALA:H	1.47	0.78
1:AA:108:G:H5'	1:AA:109:A:H5"	1.66	0.78
8:AH:119:LEU:HD12	8:AH:123:GLU:HB2	1.65	0.78
26:B0:23:VAL:HG22	26:B0:38:VAL:HG13	1.64	0.78
36:BA:1227:G:OP1	53:BU:13:LYS:HD2	1.84	0.78
36:BA:1569:A:O2'	39:BD:38:LYS:HE2	1.82	0.78
36:BA:2185:C:C2'	36:BA:2186:G:H5'	2.12	0.78
52:BT:2:ASN:HB2	52:BT:7:ILE:HD11	1.65	0.78
53:BU:13:LYS:HD3	53:BU:13:LYS:N	1.99	0.78
57:BY:95:LYS:HE3	57:BY:99:CYS:O	1.83	0.78
14:CN:13:THR:N	14:CN:14:PRO:HD2	1.96	0.78
25:CZ:19:HIS:HB2	25:CZ:116:THR:OG1	1.83	0.78
25:CZ:20:VAL:HG13	25:CZ:115:GLN:NE2	1.98	0.78
36:DA:1543:C:H3'	36:DA:1544:A:C5'	2.14	0.78
36:DA:2416:C:H2'	36:DA:2417:C:H6	1.48	0.78
1:AA:1186:G:H2'	1:AA:1187:G:H5"	1.65	0.78
4:AD:59:ARG:HE	4:AD:59:ARG:HA	1.49	0.78
8:AH:112:LEU:HD23	8:AH:112:LEU:N	1.96	0.78
31:B5:25:LEU:O	31:B5:26:THR:HB	1.82	0.78
32:B6:17:LYS:HB2	32:B6:18:ARG:HH12	1.49	0.78
36:BA:419:C:H2'	36:BA:420:C:C6	2.19	0.78
40:BE:147:PRO:HB2	40:BE:149:ARG:HG2	1.65	0.78
42:BG:16:ARG:O	42:BG:20:ILE:HG12	1.84	0.78
48:BP:64:LYS:O	48:BP:66:GLY:N	2.17	0.78
1:CA:926:G:O2'	23:CX:16:A:C2	2.37	0.78
6:CF:35:ALA:HA	6:CF:67:MET:HB3	1.65	0.78
32:D6:41:PRO:HD2	32:D6:45:LYS:HA	1.64	0.78
36:DA:483:A:O3'	57:DY:49:VAL:HG22	1.84	0.78
36:DA:761:A:H8	36:DA:761:A:O5'	1.66	0.78
36:DA:2408:U:H2'	36:DA:2409:G:C8	2.18	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:71:ASP:HB3	39:DD:103:ARG:HH22	1.48	0.78
36:BA:597:U:O2'	48:BP:15:ARG:HG2	1.84	0.78
36:BA:1299:G:N2	36:BA:1640:C:H5"	1.98	0.78
36:BA:1854:A:H62	36:BA:1888:G:H8	1.30	0.78
36:BA:2110:G:H1	36:BA:2178:C:H5	1.32	0.78
36:BA:2313:C:H5'	36:BA:2313:C:H6	1.49	0.78
39:BD:27:THR:HG21	39:BD:83:GLU:HG2	1.65	0.78
58:BZ:109:ALA:H	58:BZ:142:SER:HA	1.48	0.78
36:DA:1061:U:H4'	36:DA:1070:A:H1'	1.66	0.78
46:DN:3:THR:HG22	46:DN:4:TYR:N	1.98	0.78
51:DS:59:LYS:HG2	51:DS:60:GLY:H	1.47	0.78
13:AM:119:GLY:O	13:AM:120:LYS:HB2	1.84	0.78
24:AY:20:H2U:H4'	24:AY:21:A:H5'	1.66	0.78
36:BA:614(A):U:H4'	36:BA:614(B):G:C5'	2.14	0.78
48:BP:38:GLN:HG3	48:BP:39:LYS:H	1.48	0.78
57:BY:42:VAL:HG21	57:BY:67:LEU:HD12	1.66	0.78
1:CA:624:C:H2'	1:CA:625:G:H8	1.48	0.78
1:CA:984:C:H2'	1:CA:985:C:H6	1.49	0.78
1:CA:1499:A:H8	1:CA:1499:A:H5'	1.49	0.78
16:CP:1:MET:HG3	16:CP:65:GLN:HG2	1.64	0.78
36:DA:622:G:O2'	36:DA:623:G:H5'	1.84	0.78
36:DA:644:A:H2	36:DA:2369:A:H1'	1.49	0.78
40:DE:137:HIS:HB3	40:DE:138:PRO:HD2	1.66	0.78
50:DR:67:LEU:HD13	50:DR:76:VAL:HG21	1.66	0.78
51:DS:106:ARG:HH11	51:DS:106:ARG:HG2	1.48	0.78
1:AA:980:C:H5'	1:AA:980:C:C6	2.16	0.77
17:AQ:58:GLU:HB2	17:AQ:74:LEU:HB3	1.65	0.77
25:AZ:23:GLY:HA3	25:AZ:105:VAL:HG11	1.65	0.77
36:BA:284:U:H2'	36:BA:285:C:H6	1.49	0.77
36:BA:2183:C:H2'	36:BA:2184:G:C8	2.18	0.77
36:BA:2726:U:O2	36:BA:2726:U:H5'	1.84	0.77
36:BA:2761:G:H2'	36:BA:2762:G:C5'	2.10	0.77
52:BT:66:VAL:HA	52:BT:71:GLY:HA2	1.65	0.77
25:CZ:19:HIS:HE1	36:DA:2661:G:OP1	1.68	0.77
36:BA:2188:C:H2'	36:BA:2189:U:C6	2.19	0.77
38:BC:47:LEU:HD11	38:BC:171:ILE:HG22	1.65	0.77
55:BW:22:ASP:HA	55:BW:25:ARG:HH12	1.48	0.77
1:CA:620:C:H2'	1:CA:621:A:O4'	1.84	0.77
4:CD:187:ARG:HB3	4:CD:187:ARG:HH11	1.48	0.77
10:CJ:30:SER:OG	10:CJ:81:THR:HG22	1.85	0.77
22:CW:59:U:H2'	22:CW:60:U:H5'	1.63	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1865:G:H5'	36:DA:1866:C:OP2	1.84	0.77
36:DA:2659:G:H2'	36:DA:2660:A:H5"	1.65	0.77
38:DC:87:GLU:HG2	38:DC:94:VAL:HG21	1.66	0.77
52:DT:90:GLN:O	52:DT:92:GLY:N	2.17	0.77
57:DY:2:ARG:HD3	57:DY:3:VAL:HG23	1.65	0.77
1:AA:255:G:H1'	17:AQ:16:GLN:NE2	1.99	0.77
1:AA:882:C:O2'	1:AA:883:C:H5'	1.85	0.77
12:AL:80:HIS:NE2	24:AY:69:C:H5'	1.97	0.77
32:B6:10:LEU:H	32:B6:10:LEU:CD2	1.97	0.77
32:B6:16:CYS:SG	32:B6:48:VAL:HG22	2.25	0.77
43:BH:118:PRO:HG2	43:BH:121:ILE:HD12	1.65	0.77
46:BN:40:PRO:HB3	53:BU:68:ALA:HB2	1.67	0.77
58:BZ:69:THR:CG2	58:BZ:90:VAL:HA	2.15	0.77
36:DA:2555:U:H2'	36:DA:2556:C:H5'	1.64	0.77
52:DT:89:VAL:CG1	52:DT:91:ARG:HE	1.97	0.77
56:DX:24:GLY:O	56:DX:82:GLN:HA	1.85	0.77
25:AZ:136:ASN:CG	60:AZ:501:GDP:O6	2.23	0.77
26:B0:43:THR:H	36:BA:2331:G:H4'	1.48	0.77
29:B3:19:GLN:HE22	29:B3:52:HIS:HE1	1.27	0.77
36:BA:607:U:OP1	41:BF:102:PRO:HA	1.83	0.77
39:BD:108:PRO:HG2	39:BD:111:LEU:HB2	1.64	0.77
51:BS:17:ARG:O	51:BS:20:ARG:HG2	1.82	0.77
57:BY:2:ARG:HD3	57:BY:3:VAL:HG23	1.66	0.77
22:CW:38:A:H3'	22:CW:39:U:H5"	1.67	0.77
25:CZ:325:LYS:C	25:CZ:327:GLU:H	1.85	0.77
32:D6:10:LEU:H	32:D6:10:LEU:HD22	1.47	0.77
36:DA:1257:C:H2'	36:DA:1258:C:C6	2.18	0.77
36:DA:1602:U:H3'	36:DA:1603:A:H5'	1.64	0.77
41:DF:34:TRP:HB2	48:DP:10:PRO:O	1.85	0.77
41:DF:37:VAL:CG1	48:DP:7:ARG:HH22	1.97	0.77
55:DW:10:VAL:HG23	55:DW:101:SER:O	1.84	0.77
1:AA:542:G:OP1	4:AD:10:ARG:NH2	2.18	0.77
1:AA:979:C:C2'	1:AA:980:C:H5"	2.14	0.77
2:AB:17:PHE:CB	2:AB:44:LEU:HD11	2.15	0.77
4:AD:145:GLU:HA	4:AD:184:LYS:HA	1.65	0.77
34:B8:50:LEU:C	34:B8:52:LYS:H	1.88	0.77
36:BA:2159:G:C2'	36:BA:2160:G:H5"	2.15	0.77
36:BA:2189:U:H2'	36:BA:2190:G:H4'	1.65	0.77
46:BN:2:LYS:HZ1	54:BV:13:ARG:H	1.29	0.77
48:BP:16:ARG:CZ	48:BP:18:ARG:HG2	2.14	0.77
58:BZ:96:VAL:HG13	58:BZ:97:GLU:N	1.97	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:46:GLU:O	3:CC:47:LEU:HB3	1.85	0.77
13:CM:54:VAL:O	13:CM:58:GLU:HG2	1.84	0.77
20:CT:20:LEU:O	20:CT:23:ARG:HB3	1.85	0.77
22:CW:6:G:O2'	22:CW:7:A:H5'	1.85	0.77
25:CZ:64:ASN:N	25:CZ:64:ASN:HD22	1.83	0.77
46:DN:73:THR:HG22	46:DN:82:LEU:HD11	1.64	0.77
50:DR:99:LYS:H	50:DR:99:LYS:CD	1.94	0.77
1:AA:1459:C:H2'	1:AA:1460:A:C8	2.19	0.77
30:B4:22:ILE:H	30:B4:22:ILE:HD12	1.48	0.77
39:BD:63:ARG:HH11	39:BD:63:ARG:CG	1.98	0.77
50:BR:99:LYS:H	50:BR:99:LYS:CD	1.92	0.77
4:CD:100:ARG:HG2	4:CD:102:ASP:OD1	1.84	0.77
13:CM:3:ARG:NH2	13:CM:7:VAL:HG22	1.99	0.77
25:CZ:194:GLU:HG2	25:CZ:194:GLU:O	1.85	0.77
25:CZ:363:MET:HB3	25:CZ:364:PRO:HD2	1.67	0.77
28:D2:33:MET:O	28:D2:37:PHE:HB2	1.85	0.77
32:D6:14:THR:HB	32:D6:52:VAL:CG2	2.15	0.77
33:D7:37:LYS:HG2	36:DA:458:G:C8	2.19	0.77
53:DU:91:ASP:OD1	53:DU:96:ALA:HB2	1.85	0.77
1:AA:1316:G:H4'	14:AN:18:VAL:HG11	1.65	0.77
2:AB:110:GLN:OE1	2:AB:111:ARG:HG2	1.85	0.77
2:AB:229:VAL:HG12	2:AB:230:VAL:N	2.00	0.77
25:AZ:20:VAL:HG13	25:AZ:115:GLN:HE22	1.48	0.77
31:B5:4:HIS:CB	31:B5:5:PRO:HD3	2.13	0.77
50:BR:18:LEU:HD11	50:BR:22:ARG:CZ	2.15	0.77
51:BS:28:VAL:HG12	51:BS:29:PHE:N	1.97	0.77
58:BZ:103:ARG:CZ	58:BZ:136:PHE:HB2	2.14	0.77
1:CA:1251:A:H2'	1:CA:1252:A:C8	2.20	0.77
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.20	0.77
9:CI:114:TYR:HD2	10:CJ:60:ARG:HG2	1.50	0.77
10:CJ:61:GLU:HG3	14:CN:58:LYS:CE	2.15	0.77
27:D1:67:ILE:O	27:D1:70:VAL:HG12	1.85	0.77
30:D4:7:PRO:HG2	42:DG:65:GLY:HA2	1.67	0.77
31:D5:48:GLU:O	31:D5:49:CYS:SG	2.43	0.77
36:DA:1242:A:H5'	36:DA:1243:G:OP2	1.83	0.77
36:DA:1485:G:H1'	36:DA:1505:C:N4	2.00	0.77
36:DA:2784:C:H1'	40:DE:37:ARG:HH12	1.49	0.77
40:DE:128:SER:OG	40:DE:129:HIS:N	2.17	0.77
50:DR:21:TYR:OH	50:DR:43:GLU:HG2	1.84	0.77
52:DT:38:ASN:HD22	52:DT:38:ASN:C	1.88	0.77
9:AI:43:ALA:HA	9:AI:74:ILE:HD13	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:36:VAL:HG12	12:AL:82:VAL:HG22	1.65	0.77
12:AL:55:VAL:HG23	12:AL:68:ALA:O	1.85	0.77
17:AQ:58:GLU:HG3	17:AQ:75:ARG:HG2	1.67	0.77
24:AY:41:C:H5'	24:AY:41:C:H6	1.50	0.77
36:BA:2068:U:N3	36:BA:2430:A:H2	1.82	0.77
36:BA:2287:A:H62	36:BA:2344:U:H3	1.32	0.77
38:BC:163:PHE:HB2	38:BC:171:ILE:HD11	1.64	0.77
1:CA:265:G:H5'	17:CQ:64:PRO:O	1.85	0.77
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.19	0.77
25:CZ:234:ARG:O	25:CZ:289:LEU:HD11	1.84	0.77
36:DA:271(L):U:H5"	36:DA:271(M):G:C5'	2.15	0.77
36:DA:1348:G:H2'	36:DA:1349:A:H5"	1.65	0.77
40:DE:132:HIS:HA	40:DE:135:HIS:NE2	1.99	0.77
36:BA:297:C:H2'	36:BA:298:G:O4'	1.83	0.77
36:BA:852:G:H2'	36:BA:853:G:C8	2.20	0.77
38:BC:161:ILE:HG21	38:BC:174:PRO:HG2	1.66	0.77
1:CA:1139:G:H5'	1:CA:1140:C:OP1	1.85	0.77
36:DA:99:U:H4'	36:DA:102:G:H1'	1.65	0.77
36:DA:655:A:C4'	36:DA:656:G:H5'	2.15	0.77
42:DG:73:ALA:H	42:DG:87:PRO:CG	1.97	0.77
21:AU:17:THR:O	21:AU:22:ARG:NH1	2.18	0.77
36:BA:2176:A:H3'	36:BA:2177:C:H5"	1.65	0.77
36:BA:2781:A:C5'	36:BA:2782:G:H5'	2.14	0.77
42:BG:53:LEU:C	42:BG:55:LYS:H	1.87	0.77
50:BR:32:GLY:O	50:BR:115:GLU:HA	1.84	0.77
51:BS:49:VAL:CG1	51:BS:50:SER:H	1.96	0.77
53:BU:70:ARG:HA	53:BU:74:LEU:O	1.84	0.77
1:CA:537:G:H5"	12:CL:113:ARG:HH12	1.50	0.77
36:DA:250:G:H2'	36:DA:251:A:C8	2.20	0.77
36:DA:633:A:H2'	36:DA:634:C:H5'	1.64	0.77
5:AE:80:ILE:HG22	5:AE:91:LEU:HB2	1.68	0.76
13:AM:113:PRO:O	13:AM:114:ARG:HB3	1.85	0.76
13:AM:116:THR:HG22	13:AM:116:THR:O	1.83	0.76
27:B1:76:ARG:HH12	27:B1:95:LEU:HD22	1.48	0.76
34:B8:15:LYS:HG2	48:BP:65:ARG:NH2	2.00	0.76
34:B8:16:ILE:HD12	34:B8:57:ARG:HG2	1.67	0.76
42:BG:102:PHE:CZ	42:BG:106:LEU:HD12	2.20	0.76
50:BR:38:VAL:HB	50:BR:39:PRO:HD3	1.67	0.76
13:CM:58:GLU:O	13:CM:62:ASN:HB2	1.85	0.76
16:CP:51:VAL:HG12	16:CP:52:ASP:O	1.84	0.76
51:DS:56:LEU:O	51:DS:56:LEU:HD23	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:27:THR:O	52:DT:28:VAL:HB	1.84	0.76
13:AM:5:ALA:HB2	13:AM:66:LEU:HD23	1.67	0.76
34:B8:23:VAL:CG1	34:B8:46:ARG:HD3	2.15	0.76
36:BA:61:G:H1	36:BA:94:C:H42	1.32	0.76
36:BA:2159:G:H2'	36:BA:2160:G:H5"	1.68	0.76
36:BA:2645:G:H3'	36:BA:2646:C:C5'	2.14	0.76
5:CE:152:ARG:HB3	8:CH:43:GLY:HA3	1.67	0.76
22:CW:7:A:H5"	22:CW:8:U:OP2	1.85	0.76
25:CZ:19:HIS:CE1	36:DA:2661:G:OP1	2.38	0.76
1:AA:624:C:H2'	1:AA:625:G:C8	2.21	0.76
13:AM:65:LYS:HD3	13:AM:65:LYS:H	1.50	0.76
15:AO:25:THR:O	15:AO:29:VAL:HG23	1.84	0.76
36:BA:806:C:OP2	48:BP:39:LYS:HD2	1.84	0.76
36:BA:2312:U:C4'	42:BG:71:THR:HG21	2.13	0.76
1:CA:1227:A:H2	1:CA:1228:C:H1'	1.50	0.76
1:CA:1442(A):G:H3'	1:CA:1442(B):A:H5"	1.66	0.76
19:CS:53:ASN:ND2	19:CS:55:LYS:H	1.82	0.76
27:D1:50:ARG:HG2	27:D1:59:THR:HG22	1.65	0.76
33:D7:10:ARG:O	33:D7:14:LYS:HG2	1.84	0.76
40:DE:195:LEU:O	40:DE:196:VAL:HG22	1.85	0.76
48:DP:16:ARG:NE	48:DP:18:ARG:HG2	2.00	0.76
51:DS:67:ARG:NH2	51:DS:100:ALA:H	1.83	0.76
52:DT:28:VAL:O	52:DT:29:ARG:HB2	1.85	0.76
1:AA:407:G:O2'	4:AD:116:GLN:HG3	1.86	0.76
12:AL:79:GLU:O	12:AL:80:HIS:HB2	1.82	0.76
28:B2:29:LYS:CA	28:B2:32:LEU:HB3	2.07	0.76
36:BA:1049:C:H2'	36:BA:1050:A:H8	1.50	0.76
39:BD:4:LYS:HZ3	39:BD:20:ASP:HA	1.48	0.76
39:BD:24:ILE:HD13	39:BD:25:THR:N	2.00	0.76
52:BT:27:THR:O	52:BT:28:VAL:HB	1.85	0.76
1:CA:973:G:H1'	10:CJ:55:LYS:CE	2.15	0.76
1:CA:1086:U:H2'	1:CA:1087:G:H5'	1.68	0.76
25:CZ:135:MET:SD	25:CZ:150:VAL:HG11	2.26	0.76
36:DA:83:G:N2	36:DA:102:G:H2'	1.99	0.76
36:DA:2183:C:H2'	36:DA:2184:G:H8	1.51	0.76
53:DU:90:VAL:HG21	54:DV:47:VAL:CG2	2.15	0.76
58:DZ:94:GLU:HB3	58:DZ:95:PRO:HD2	1.66	0.76
19:AS:53:ASN:HD21	19:AS:56:GLN:H	1.33	0.76
25:AZ:23:GLY:O	25:AZ:26:THR:HG22	1.86	0.76
34:B8:50:LEU:HD12	34:B8:51:ALA:H	1.50	0.76
34:B8:61:LEU:HD23	36:BA:593:G:H4'	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1523:U:H2'	36:BA:1524:G:H8	1.49	0.76
1:CA:736:C:H2'	1:CA:737:A:C8	2.21	0.76
1:CA:1037:C:H2'	1:CA:1038:C:O4'	1.85	0.76
8:CH:35:ILE:HG23	8:CH:111:ILE:HD13	1.65	0.76
20:CT:73:HIS:O	20:CT:76:ALA:HB3	1.85	0.76
36:DA:28:A:H61	36:DA:512:G:H1'	1.49	0.76
36:DA:272(H):C:H2'	36:DA:272(I):U:H5"	1.66	0.76
41:DF:148:LEU:HD23	41:DF:191:ARG:HH11	1.50	0.76
43:DH:16:SER:HB2	43:DH:27:LYS:HB2	1.65	0.76
43:DH:66:GLY:HA2	43:DH:69:ARG:HB3	1.65	0.76
51:DS:89:ARG:NH1	51:DS:92:TYR:HA	2.01	0.76
51:DS:101:LEU:HD12	51:DS:101:LEU:O	1.86	0.76
1:AA:353:A:H5'	1:AA:353:A:H8	1.51	0.76
35:B9:1:MET:HA	35:B9:4:ARG:NH2	2.00	0.76
36:BA:1771:C:H1'	36:BA:1786:A:C8	2.21	0.76
53:BU:6:THR:O	53:BU:9:VAL:HG22	1.85	0.76
1:CA:1268:A:H2'	1:CA:1269:A:C8	2.20	0.76
7:CG:20:ASP:HB3	7:CG:23:VAL:HG23	1.68	0.76
29:D3:45:GLY:C	29:D3:47:VAL:H	1.88	0.76
32:D6:20:ASN:ND2	32:D6:21:TYR:H	1.83	0.76
35:D9:4:ARG:O	35:D9:36:GLN:HA	1.85	0.76
38:DC:181:PRO:HB2	38:DC:183:GLU:OE2	1.85	0.76
42:DG:6:ALA:C	42:DG:10:LYS:HD3	2.05	0.76
42:DG:82:LEU:HD13	42:DG:87:PRO:CB	2.15	0.76
51:DS:88:ASP:OD1	51:DS:89:ARG:N	2.19	0.76
6:AF:87:ARG:HH11	6:AF:87:ARG:HG2	1.50	0.76
29:B3:43:ILE:O	29:B3:47:VAL:HG23	1.86	0.76
32:B6:25:LYS:CE	34:B8:34:TRP:HE1	1.98	0.76
54:BV:62:LEU:HD21	54:BV:95:LEU:CB	2.16	0.76
56:BX:12:VAL:HG23	56:BX:13:LEU:N	2.00	0.76
56:BX:18:TYR:O	56:BX:20:GLY:N	2.19	0.76
10:CJ:71:LEU:HD12	10:CJ:72:VAL:N	2.01	0.76
14:CN:24:CYS:SG	14:CN:25:VAL:N	2.58	0.76
16:CP:22:THR:HG22	16:CP:32:TYR:CB	2.15	0.76
36:DA:500:G:N2	36:DA:502:A:H3'	2.00	0.76
36:DA:1480:G:C2'	36:DA:1481:U:H5"	2.15	0.76
43:DH:42:ARG:HG2	43:DH:43:VAL:H	1.50	0.76
46:DN:72:TYR:HD2	46:DN:90:MET:HG3	1.49	0.76
1:AA:1127:G:H1	1:AA:1145:C:N4	1.83	0.76
22:AW:68:C:H2'	22:AW:69:G:H8	1.48	0.76
25:AZ:363:MET:HB3	25:AZ:364:PRO:HD2	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B3:17:LYS:HE2	29:B3:17:LYS:HA	1.68	0.76
33:B7:29:LYS:HB3	33:B7:29:LYS:HZ2	1.51	0.76
34:B8:61:LEU:H	34:B8:61:LEU:HD12	1.49	0.76
36:BA:449:A:H4'	53:BU:3:ARG:HH21	1.51	0.76
49:BQ:140:ALA:HB1	58:BZ:99:TYR:CE2	2.21	0.76
24:CY:51:G:O2'	25:CZ:338:TYR:CD1	2.39	0.76
27:D1:18:ILE:HD11	27:D1:20:ARG:NH2	2.00	0.76
36:DA:297:C:H2'	36:DA:298:G:O4'	1.86	0.76
36:DA:2416:C:H2'	36:DA:2417:C:C6	2.20	0.76
38:DC:114:VAL:HG12	38:DC:144:THR:HA	1.68	0.76
42:DG:39:ILE:HG22	42:DG:157:ILE:HG23	1.65	0.76
3:AC:5:ILE:HD12	3:AC:5:ILE:N	1.98	0.76
12:AL:8:ASN:ND2	17:AQ:34:LYS:NZ	2.32	0.76
20:AT:11:SER:O	20:AT:13:LEU:N	2.19	0.76
25:AZ:181:GLN:OE1	25:AZ:193:ASN:ND2	2.19	0.76
36:BA:2187:G:C2'	36:BA:2188:C:H5'	2.14	0.76
39:BD:210:GLY:O	39:BD:211:ARG:HB3	1.85	0.76
52:BT:91:ARG:O	52:BT:93:ARG:N	2.19	0.76
3:CC:34:LEU:HD22	3:CC:38:ARG:NE	1.96	0.76
22:CV:2:C:H2'	22:CV:3:C:C6	2.20	0.76
27:D1:65:SER:O	27:D1:66:HIS:HB2	1.84	0.76
34:D8:52:LYS:O	34:D8:55:ALA:HB3	1.86	0.76
36:DA:1301:A:HO2'	36:DA:1302:A:H2'	1.49	0.76
36:DA:2313:C:H5'	36:DA:2313:C:H6	1.51	0.76
36:DA:2777:G:H5"	36:DA:2778:A:H5'	1.65	0.76
42:DG:139:LEU:CA	42:DG:144:ILE:HG12	2.14	0.76
50:DR:32:GLY:O	50:DR:115:GLU:HA	1.86	0.76
2:AB:7:VAL:CG1	2:AB:11:LEU:HD12	2.11	0.76
12:AL:24:VAL:HG11	12:AL:27:LEU:HD22	1.67	0.76
19:AS:43:GLU:O	19:AS:45:VAL:HG13	1.86	0.76
25:AZ:277:LEU:CD1	25:AZ:279:GLU:H	1.99	0.76
36:BA:181:A:H8	36:BA:181:A:H5'	1.49	0.76
36:BA:2306:C:H5	36:BA:2307:G:HO2'	1.33	0.76
39:BD:68:LYS:HB2	39:BD:70:TRP:CH2	2.19	0.76
39:BD:83:GLU:HB2	39:BD:92:ILE:HD11	1.68	0.76
39:BD:155:LEU:HD23	39:BD:177:LEU:HD22	1.68	0.76
40:BE:30:PRO:HD3	40:BE:180:ASN:CG	2.07	0.76
1:CA:627:G:O2'	1:CA:628:G:H5'	1.86	0.76
2:CB:121:LEU:HG	2:CB:126:GLU:CB	2.16	0.76
3:CC:134:ILE:HG22	3:CC:168:ALA:HB3	1.66	0.76
24:CY:56:C:C6	36:DA:1067:A:C2	2.73	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:27:G:H22	36:DA:512:G:H2'	1.49	0.76
36:DA:585:G:H2'	36:DA:1251:C:H42	1.50	0.76
42:DG:66:GLN:O	42:DG:92:VAL:HG21	1.86	0.76
50:DR:62:ALA:O	50:DR:66:VAL:HG23	1.86	0.76
57:DY:96:ILE:CG1	57:DY:99:CYS:HB3	2.13	0.76
58:DZ:6:LYS:HG3	58:DZ:60:GLU:HB2	1.68	0.76
1:AA:1116:C:H2'	1:AA:1117:G:H5"	1.68	0.75
20:AT:100:ILE:HG22	20:AT:102:GLY:H	1.50	0.75
32:B6:18:ARG:HG2	32:B6:18:ARG:NH1	1.99	0.75
36:BA:483:A:O3'	57:BY:49:VAL:HG22	1.86	0.75
36:BA:2469:A:H2'	36:BA:2470:G:H5'	1.67	0.75
36:BA:2887:U:H2'	36:BA:2888:C:C6	2.21	0.75
50:BR:14:SER:HA	50:BR:17:ARG:HH12	1.51	0.75
10:CJ:50:ILE:HD13	10:CJ:50:ILE:N	2.00	0.75
24:CY:76:A:H2	25:CZ:270:VAL:HA	1.51	0.75
25:CZ:193:ASN:OD1	25:CZ:195:TRP:HB2	1.86	0.75
36:DA:597:U:O2'	48:DP:15:ARG:HG2	1.86	0.75
36:DA:1210:A:H5"	36:DA:1212:G:O4'	1.86	0.75
36:DA:1701:A:H5'	36:DA:1702:G:OP2	1.85	0.75
36:DA:2176:A:H3'	36:DA:2177:C:H5"	1.66	0.75
1:AA:368:U:O4	25:AZ:234:ARG:HD3	1.85	0.75
4:AD:149:ALA:O	4:AD:153:ARG:HG3	1.86	0.75
28:B2:6:VAL:O	28:B2:10:LEU:HG	1.87	0.75
36:BA:1598:C:H5'	56:BX:36:LYS:CG	2.16	0.75
36:BA:2502:G:H5"	36:BA:2503:A:H5"	1.66	0.75
46:BN:3:THR:HG22	46:BN:4:TYR:H	1.51	0.75
52:BT:5:ALA:HA	52:BT:8:LYS:HE2	1.68	0.75
21:CU:9:ARG:NH1	21:CU:22:ARG:HA	2.00	0.75
36:DA:548:A:H2'	36:DA:549:G:H5'	1.68	0.75
36:DA:2761:G:C2'	36:DA:2762:G:H5"	2.17	0.75
39:DD:70:TRP:CZ3	39:DD:150:LYS:HA	2.22	0.75
41:DF:7:TYR:HB3	41:DF:16:GLY:O	1.85	0.75
46:DN:58:ASP:C	46:DN:60:ILE:H	1.87	0.75
1:AA:371:G:H1'	1:AA:482:A:H1'	1.67	0.75
3:AC:70:VAL:HG12	3:AC:72:LYS:H	1.51	0.75
27:B1:16:ASN:O	27:B1:17:SER:HB3	1.86	0.75
48:BP:23:PRO:O	48:BP:33:ARG:HD2	1.86	0.75
25:CZ:68:VAL:C	25:CZ:68:VAL:N	2.40	0.75
25:CZ:74:LYS:O	25:CZ:75:ARG:HG3	1.85	0.75
30:D4:14:ILE:HG13	30:D4:31:ILE:HB	1.68	0.75
36:DA:59:U:H3	36:DA:68:G:H1	1.30	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1038:C:C2'	36:DA:1039:G:H5"	2.17	0.75
30:B4:10:VAL:HG23	30:B4:11:PRO:HD2	1.69	0.75
48:BP:47:ASP:HB2	48:BP:51:PHE:HB2	1.68	0.75
58:BZ:96:VAL:HG22	58:BZ:97:GLU:H	1.51	0.75
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.21	0.75
1:CA:1116:C:C2'	1:CA:1117:G:H5"	2.16	0.75
9:CI:48:GLU:N	9:CI:49:PRO:HD2	2.01	0.75
24:CY:65:C:C5'	25:CZ:341:GLN:HG2	2.15	0.75
32:D6:8:LYS:O	32:D6:9:LEU:HB3	1.86	0.75
32:D6:18:ARG:HH11	32:D6:18:ARG:HG2	1.51	0.75
36:DA:2287:A:H62	36:DA:2344:U:H3	1.31	0.75
37:DB:91:C:H5'	49:DQ:17:LEU:O	1.86	0.75
43:DH:30:LYS:HG3	43:DH:79:VAL:C	2.05	0.75
48:DP:56:SER:O	48:DP:58:THR:N	2.20	0.75
1:AA:627:G:O2'	1:AA:628:G:H5'	1.86	0.75
4:AD:148:VAL:HG12	4:AD:149:ALA:H	1.50	0.75
13:AM:94:ARG:HH21	19:AS:81:ARG:HB2	1.49	0.75
32:B6:30:THR:CG2	32:B6:31:PRO:HD2	2.16	0.75
36:BA:1047:G:H2'	36:BA:1110:G:H21	1.50	0.75
36:BA:2884:U:H2'	36:BA:2885:C:H5'	1.66	0.75
52:BT:50:ILE:HA	52:BT:99:LEU:HD11	1.68	0.75
1:CA:405:U:H3'	1:CA:406:G:H5'	1.69	0.75
6:CF:25:ILE:HD13	6:CF:25:ILE:O	1.85	0.75
25:CZ:117:ARG:HG2	25:CZ:157:LEU:HD11	1.68	0.75
36:DA:189:G:H2'	36:DA:205:G:N2	2.00	0.75
36:DA:1484:G:C2'	36:DA:1485:G:H5"	2.15	0.75
36:DA:1494:A:C2'	36:DA:1495:A:H5"	2.15	0.75
36:DA:1899:G:N2	36:DA:1902:C:N4	2.32	0.75
46:DN:73:THR:CG2	46:DN:82:LEU:HD11	2.16	0.75
52:DT:88:ILE:HG22	52:DT:89:VAL:HG23	1.67	0.75
57:DY:42:VAL:HG21	57:DY:67:LEU:CD1	2.17	0.75
1:AA:1117:G:H5'	1:AA:1117:G:C8	2.18	0.75
1:AA:1157:A:H4'	1:AA:1158:C:O5'	1.87	0.75
14:AN:4:LYS:O	14:AN:7:ILE:HG12	1.86	0.75
21:AU:3:LYS:HD3	21:AU:14:TRP:CD1	2.22	0.75
25:AZ:19:HIS:HB2	25:AZ:116:THR:OG1	1.87	0.75
27:B1:44:PRO:HG2	27:B1:46:LEU:HG	1.68	0.75
36:BA:1336:A:H2'	36:BA:1337:G:C8	2.22	0.75
36:BA:1779:U:H5	36:BA:1784:A:N7	1.85	0.75
36:BA:2092:U:C4'	36:BA:2093:G:H5"	2.16	0.75
37:BB:7:G:O5'	51:BS:29:PHE:HE2	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:56:SER:O	48:BP:58:THR:N	2.19	0.75
51:BS:99:LYS:NZ	51:BS:99:LYS:HB3	2.00	0.75
21:CU:9:ARG:HH12	21:CU:23:PRO:HD2	1.52	0.75
24:CY:20:H2U:H4'	24:CY:21:A:H5'	1.67	0.75
28:D2:43:GLN:O	28:D2:44:LEU:HB2	1.84	0.75
28:D2:48:HIS:CD2	28:D2:49:LYS:H	2.05	0.75
32:D6:7:ILE:HB	32:D6:27:LYS:NZ	2.02	0.75
32:D6:17:LYS:HE2	32:D6:17:LYS:HA	1.68	0.75
32:D6:53:LYS:HG2	32:D6:54:ILE:H	1.51	0.75
38:DC:34:THR:HG22	38:DC:35:ALA:H	1.51	0.75
42:DG:115:ARG:O	42:DG:116:ASP:HB2	1.85	0.75
48:DP:131:SER:OG	48:DP:134:ALA:HB3	1.85	0.75
13:AM:120:LYS:HA	13:AM:120:LYS:CE	2.13	0.75
31:B5:31:VAL:HG21	36:BA:2886:G:H1'	1.68	0.75
36:BA:45:C:OP2	36:BA:215:G:H5"	1.87	0.75
36:BA:267:C:H2'	36:BA:268:C:H6	1.52	0.75
1:CA:393:A:O2'	1:CA:394:G:H5'	1.86	0.75
18:CR:67:ALA:O	18:CR:71:LYS:HG3	1.87	0.75
22:CV:44:G:C3'	22:CV:45:U:H5'	2.16	0.75
25:CZ:68:VAL:O	25:CZ:69:GLU:HB3	1.76	0.75
25:CZ:397:ALA:HB1	61:CZ:502:KIR:O27	1.87	0.75
36:DA:27:G:N2	36:DA:512:G:H2'	2.01	0.75
36:DA:371:A:H61	36:DA:401:A:H5"	1.51	0.75
36:DA:1860:G:H1	36:DA:1882:C:N4	1.83	0.75
40:DE:3:GLY:HA3	40:DE:81:ILE:HD12	1.67	0.75
50:DR:84:ALA:HB3	50:DR:85:PRO:HD3	1.67	0.75
9:AI:16:ARG:HB2	9:AI:64:THR:HB	1.68	0.75
34:B8:8:LYS:O	34:B8:12:LYS:HG3	1.85	0.75
36:BA:666:G:H4'	48:BP:49:ARG:NH2	2.01	0.75
50:BR:21:TYR:HB3	50:BR:47:PHE:CD2	2.21	0.75
1:CA:63:C:C2'	1:CA:64:G:H5'	2.16	0.75
8:CH:89:PRO:HA	8:CH:92:ARG:NH1	2.00	0.75
25:CZ:20:VAL:HG13	25:CZ:115:GLN:HE22	1.50	0.75
35:D9:7:VAL:HG22	35:D9:34:GLN:CG	2.16	0.75
36:DA:380:U:H2'	36:DA:381:G:H8	1.51	0.75
36:DA:1058:G:H2'	36:DA:1059:G:H5"	1.67	0.75
36:DA:1087:G:O2'	36:DA:1089:G:H5'	1.86	0.75
44:DJ:25:UNK:O	44:DJ:84:UNK:HA	1.87	0.75
1:AA:1306:A:P	21:AU:6:ARG:HH22	2.09	0.75
16:AP:58:TYR:O	16:AP:62:VAL:HG23	1.86	0.75
25:AZ:117:ARG:HG2	25:AZ:157:LEU:HD11	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:24:LEU:HB2	28:B2:64:LEU:HD12	1.69	0.75
40:BE:27:LEU:HD12	40:BE:180:ASN:O	1.87	0.75
55:BW:78:GLU:OE2	55:BW:99:ARG:HD2	1.87	0.75
36:DA:2512:C:H2'	36:DA:2513:G:O4'	1.87	0.75
39:DD:28:GLU:H	39:DD:29:PRO:HD2	1.50	0.75
40:DE:116:VAL:CG2	40:DE:117:MET:H	1.99	0.75
51:DS:74:ALA:HB2	51:DS:101:LEU:HD22	1.67	0.75
2:AB:212:GLN:HE22	2:AB:216:SER:HB2	1.48	0.74
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.51	0.74
36:BA:27:G:H22	36:BA:512:G:C2'	1.99	0.74
40:BE:9:VAL:HG12	40:BE:25:VAL:O	1.87	0.74
46:BN:30:ILE:O	46:BN:34:LEU:HB2	1.86	0.74
47:BO:88:ASN:ND2	47:BO:92:GLU:HB2	2.02	0.74
3:CC:73:PRO:O	3:CC:76:VAL:HG22	1.87	0.74
13:CM:23:TYR:HB3	13:CM:67:GLU:HB3	1.68	0.74
22:CV:4:C:C3'	22:CV:5:G:H5"	2.16	0.74
26:D0:25:ARG:HD2	26:D0:29:GLN:NE2	2.02	0.74
32:D6:15:GLU:HG2	32:D6:47:THR:HG21	1.69	0.74
35:D9:34:GLN:HG3	35:D9:35:ARG:H	1.52	0.74
36:DA:442:G:H4'	41:DF:46:ARG:HB2	1.68	0.74
36:DA:1517:G:H5'	36:DA:1517:G:C8	2.22	0.74
43:DH:167:GLU:HB3	43:DH:168:PRO:HD2	1.69	0.74
46:DN:96:GLU:O	46:DN:100:GLU:HG3	1.87	0.74
2:AB:115:LEU:HB2	2:AB:145:LEU:HD12	1.69	0.74
12:AL:80:HIS:CD2	24:AY:69:C:H5'	2.21	0.74
13:AM:89:GLY:O	13:AM:93:ARG:HD2	1.87	0.74
18:AR:45:SER:HB3	18:AR:51:LEU:HD21	1.69	0.74
20:AT:14:LYS:O	20:AT:18:GLN:HG3	1.87	0.74
20:AT:29:LYS:O	20:AT:33:ILE:HG13	1.88	0.74
21:AU:6:ARG:CD	21:AU:15:ARG:NH1	2.46	0.74
25:AZ:397:ALA:HB1	61:AZ:502:KIR:O27	1.87	0.74
31:B5:31:VAL:HG23	36:BA:2886:G:O2'	1.86	0.74
8:CH:119:LEU:HD23	8:CH:119:LEU:H	1.52	0.74
40:DE:24:THR:HG22	40:DE:184:VAL:HG23	1.68	0.74
41:DF:19:GLU:O	41:DF:20:LEU:HG	1.87	0.74
51:DS:54:LEU:HD13	51:DS:57:LYS:HA	1.68	0.74
58:DZ:37:VAL:HG23	58:DZ:38:TYR:N	2.02	0.74
58:DZ:180:VAL:HG22	58:DZ:181:GLU:N	1.99	0.74
11:AK:54:ARG:O	11:AK:57:THR:HG22	1.87	0.74
27:B1:53:VAL:O	27:B1:57:GLU:HA	1.87	0.74
32:B6:7:ILE:HB	32:B6:27:LYS:NZ	2.03	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:50:ARG:HH11	48:BP:50:ARG:HG2	1.50	0.74
52:BT:23:ARG:HG2	52:BT:120:ARG:NH1	2.01	0.74
54:BV:25:LEU:H	54:BV:92:THR:CG2	1.99	0.74
1:CA:979:C:H3'	1:CA:980:C:C5'	2.13	0.74
5:CE:31:LEU:HD21	5:CE:43:LEU:HD11	1.67	0.74
22:CV:21:A:O2'	22:CV:22:G:H5"	1.88	0.74
36:DA:1210:A:H8	36:DA:1210:A:H5'	1.52	0.74
46:DN:58:ASP:O	46:DN:60:ILE:N	2.20	0.74
53:DU:24:TYR:HB3	53:DU:28:ARG:HB2	1.66	0.74
55:DW:20:VAL:HG23	55:DW:47:VAL:HG21	1.69	0.74
3:AC:8:ILE:HG23	3:AC:16:ARG:HG2	1.69	0.74
36:BA:1348:G:C2'	36:BA:1349:A:H5"	2.17	0.74
36:BA:1902:C:H4'	39:BD:244:ARG:HA	1.68	0.74
48:BP:23:PRO:HA	48:BP:29:LYS:O	1.86	0.74
50:BR:55:ALA:HB2	50:BR:79:LEU:HD11	1.68	0.74
55:BW:33:ARG:HD2	55:BW:52:GLU:OE1	1.87	0.74
1:CA:358:U:H2'	1:CA:359:U:C6	2.22	0.74
1:CA:559:A:P	5:CE:126:ARG:HH22	2.09	0.74
4:CD:43:HIS:O	4:CD:45:GLN:N	2.19	0.74
19:CS:12:ASP:H	19:CS:38:SER:HB3	1.51	0.74
22:CV:21:A:C2'	22:CV:22:G:H5"	2.18	0.74
22:CW:56:C:HO2'	22:CW:57:G:H8	1.35	0.74
28:D2:65:ASN:HD21	36:DA:112:U:H5'	1.49	0.74
33:D7:29:LYS:NZ	33:D7:29:LYS:HB3	2.02	0.74
34:D8:17:THR:HG23	34:D8:21:LYS:HB2	1.67	0.74
36:DA:590:A:H2'	36:DA:591:C:H6	1.49	0.74
36:DA:2190:G:C2	36:DA:2191:G:H1'	2.22	0.74
38:DC:32:LEU:HD13	38:DC:220:PRO:HG2	1.69	0.74
38:DC:119:VAL:HG13	38:DC:120:MET:HE3	1.70	0.74
40:DE:7:VAL:HG12	40:DE:27:LEU:HB3	1.69	0.74
56:DX:12:VAL:HG23	56:DX:13:LEU:H	1.53	0.74
56:DX:14:SER:HB3	56:DX:17:ALA:HB2	1.69	0.74
12:AL:20:LYS:HD2	12:AL:20:LYS:H	1.52	0.74
22:AV:17:C:H2'	22:AV:18:G:H5'	1.70	0.74
25:AZ:113:MET:HB3	25:AZ:114:PRO:HD2	1.70	0.74
30:B4:12:ALA:HB2	30:B4:29:PRO:HA	1.70	0.74
32:B6:17:LYS:HE2	32:B6:17:LYS:HA	1.67	0.74
36:BA:945:A:H5'	36:BA:945:A:N3	2.03	0.74
36:BA:1252:G:N3	53:BU:33:ARG:HD2	2.02	0.74
36:BA:2779:U:H1'	36:BA:2781:A:C5	2.21	0.74
17:CQ:21:VAL:HG21	17:CQ:59:ILE:HD11	1.67	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CW:66:U:H5'	32:D6:28:ARG:HH22	1.53	0.74
25:CZ:85:HIS:HE1	36:DA:2661:G:O2'	1.69	0.74
36:DA:271(A):A:H5'	36:DA:271(B):C:OP2	1.87	0.74
36:DA:691:C:H1'	39:DD:43:ARG:NH1	2.01	0.74
51:DS:49:VAL:HG12	51:DS:50:SER:N	2.01	0.74
55:DW:37:ARG:HH11	55:DW:37:ARG:HG3	1.52	0.74
1:AA:1036:G:H5"	1:AA:1037:C:C5	2.22	0.74
2:AB:124:SER:OG	2:AB:125:PRO:HD2	1.87	0.74
4:AD:138:TYR:CD1	4:AD:139:ARG:N	2.55	0.74
28:B2:25:VAL:HG22	28:B2:57:ILE:HG21	1.69	0.74
36:BA:2306:C:H4'	42:BG:136:ARG:NH2	2.02	0.74
57:BY:67:LEU:HD23	57:BY:68:HIS:N	2.01	0.74
1:CA:719:C:H1'	18:CR:49:LYS:HB3	1.69	0.74
8:CH:6:ILE:H	8:CH:6:ILE:HD12	1.53	0.74
10:CJ:54:PHE:CD2	10:CJ:55:LYS:HD2	2.22	0.74
13:CM:64:TRP:O	13:CM:66:LEU:HD13	1.88	0.74
35:D9:4:ARG:HB2	36:DA:2466:C:OP1	1.87	0.74
36:DA:201:C:O2'	36:DA:202:U:H5'	1.86	0.74
36:DA:1047:G:H2'	36:DA:1110:G:H21	1.52	0.74
39:DD:27:THR:HG23	39:DD:83:GLU:HG2	1.69	0.74
40:DE:14:ILE:HD11	40:DE:173:VAL:HG11	1.68	0.74
52:DT:13:ARG:HA	52:DT:13:ARG:NE	2.02	0.74
52:DT:28:VAL:HG22	52:DT:47:GLY:H	1.50	0.74
55:DW:4:LYS:HG2	55:DW:5:ALA:H	1.52	0.74
58:DZ:123:ASP:O	58:DZ:124:ILE:HG23	1.87	0.74
3:AC:94:LEU:O	3:AC:95:THR:HB	1.88	0.74
4:AD:19:LEU:O	4:AD:26:CYS:SG	2.46	0.74
10:AJ:54:PHE:CG	10:AJ:55:LYS:HE3	2.22	0.74
25:AZ:313:HIS:CD2	25:AZ:403:ILE:HG13	2.23	0.74
32:B6:43:CYS:O	32:B6:44:ARG:HB2	1.86	0.74
39:BD:155:LEU:HD23	39:BD:177:LEU:CD2	2.18	0.74
42:BG:16:ARG:H	42:BG:17:PRO:HD2	1.50	0.74
46:BN:45:ASN:HD22	46:BN:45:ASN:H	1.35	0.74
9:CI:4:TYR:HB2	9:CI:19:LEU:HB3	1.69	0.74
36:DA:628:G:C2'	36:DA:629:G:H5"	2.18	0.74
36:DA:1494:A:H2'	36:DA:1495:A:H5"	1.69	0.74
46:DN:43:THR:HB	46:DN:46:VAL:HG11	1.70	0.74
53:DU:79:PHE:O	53:DU:83:LEU:HD13	1.86	0.74
32:B6:5:VAL:N	32:B6:9:LEU:H	1.86	0.74
34:B8:15:LYS:CG	48:BP:65:ARG:HH21	2.01	0.74
36:BA:83:G:N2	36:BA:102:G:H2'	2.03	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1484:G:C2'	36:BA:1485:G:H5"	2.15	0.74
42:BG:96:ARG:O	42:BG:97:ASP:HB2	1.87	0.74
50:BR:116:LEU:O	50:BR:117:VAL:HG12	1.87	0.74
55:BW:82:LEU:HD12	55:BW:82:LEU:N	2.02	0.74
1:CA:1006:C:H2'	1:CA:1007:C:C6	2.23	0.74
2:CB:8:LYS:NZ	2:CB:217:ARG:HH12	1.86	0.74
5:CE:79:GLU:N	5:CE:79:GLU:OE1	2.19	0.74
13:CM:2:ALA:N	13:CM:9:ILE:HG23	2.01	0.74
25:CZ:265:THR:HG22	25:CZ:266:VAL:N	2.02	0.74
26:D0:10:THR:HG22	26:D0:12:ASN:H	1.52	0.74
28:D2:68:ARG:HH11	28:D2:68:ARG:CB	2.00	0.74
36:DA:654(G):C:H1'	36:DA:654(N):G:H22	1.53	0.74
36:DA:953:A:OP2	49:DQ:16:ARG:NE	2.20	0.74
36:DA:1379:A:N3	36:DA:1379:A:H5"	2.03	0.74
36:DA:1536:C:H2'	36:DA:1537:G:H4'	1.70	0.74
36:DA:1817:G:H2'	36:DA:1818:U:H5'	1.70	0.74
39:DD:43:ARG:HB2	39:DD:54:ARG:HB2	1.69	0.74
51:DS:92:TYR:O	51:DS:93:LYS:HB2	1.86	0.74
57:DY:7:VAL:HB	57:DY:8:LYS:CD	2.17	0.74
1:AA:192:U:H2'	1:AA:193:C:H6	1.53	0.74
1:AA:723:U:H2'	1:AA:723:U:O2	1.87	0.74
9:AI:88:TYR:O	9:AI:89:ASN:HB2	1.87	0.74
22:AV:68:C:H2'	22:AV:69:G:C5'	2.17	0.74
36:BA:252:G:OP2	48:BP:50:ARG:NH2	2.19	0.74
36:BA:1803:A:O3'	39:BD:259:THR:HG21	1.87	0.74
39:BD:186:HIS:CD2	39:BD:188:GLU:HB2	2.23	0.74
51:BS:92:TYR:O	51:BS:93:LYS:HB2	1.88	0.74
1:CA:858:G:C6	1:CA:869:G:N7	2.56	0.74
2:CB:215:LEU:O	2:CB:219:VAL:HG23	1.87	0.74
27:D1:82:LEU:CD2	27:D1:90:ILE:HD12	2.13	0.74
28:D2:11:GLU:HA	28:D2:14:ARG:HB3	1.68	0.74
36:DA:1023:U:H2'	36:DA:1024:G:H5'	1.69	0.74
36:DA:1879:C:C3'	36:DA:1880:C:H5"	2.17	0.74
39:DD:121:PRO:HB3	39:DD:135:PHE:CE2	2.22	0.74
40:DE:9:VAL:HG12	40:DE:25:VAL:O	1.86	0.74
41:DF:125:LEU:HD23	41:DF:125:LEU:H	1.51	0.74
48:DP:29:LYS:HD2	48:DP:29:LYS:N	2.03	0.74
57:DY:28:LYS:HB3	57:DY:37:VAL:HB	1.68	0.74
1:AA:1325:C:H5"	21:AU:15:ARG:HH21	1.53	0.74
3:AC:46:GLU:O	3:AC:47:LEU:HB2	1.88	0.74
4:AD:19:LEU:O	4:AD:31:CYS:SG	2.45	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:29:LYS:HD2	48:BP:29:LYS:H	1.52	0.74
51:BS:88:ASP:OD1	51:BS:89:ARG:N	2.21	0.74
52:BT:56:GLY:O	52:BT:59:THR:HG23	1.87	0.74
12:CL:8:ASN:HD22	17:CQ:34:LYS:NZ	1.86	0.74
25:CZ:277:LEU:CD1	25:CZ:279:GLU:H	2.01	0.74
28:D2:39:ALA:HA	28:D2:45:SER:HB3	1.69	0.74
36:DA:2113:U:H2'	36:DA:2114:A:H8	1.53	0.74
1:AA:691:G:H2'	1:AA:692:U:C6	2.23	0.73
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.68	0.73
2:AB:92:TYR:HE1	2:AB:94:ASN:HD21	1.33	0.73
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.70	0.73
19:AS:53:ASN:ND2	19:AS:56:GLN:H	1.86	0.73
36:BA:2303:G:H4'	42:BG:124:SER:O	1.87	0.73
42:BG:102:PHE:O	42:BG:103:LEU:HB2	1.86	0.73
48:BP:58:THR:O	48:BP:58:THR:HG22	1.88	0.73
57:BY:10:GLY:HA2	57:BY:27:VAL:CG1	2.14	0.73
4:CD:180:GLY:O	4:CD:182:LYS:HG3	1.88	0.73
22:CW:14:A:H2'	22:CW:15:G:H5'	1.70	0.73
36:DA:1971:A:C4	39:DD:241:PRO:HD3	2.23	0.73
36:DA:2334:G:H5'	51:DS:13:ARG:HD3	1.68	0.73
36:DA:2672:G:C2'	36:DA:2673:G:H5"	2.17	0.73
41:DF:84:VAL:HG13	41:DF:85:GLY:N	2.03	0.73
42:DG:133:LEU:HD23	42:DG:133:LEU:H	1.53	0.73
1:AA:1325:C:P	21:AU:15:ARG:HH21	2.12	0.73
16:AP:67:THR:HG22	16:AP:68:ASP:H	1.51	0.73
17:AQ:18:THR:HG23	17:AQ:69:LYS:HD2	1.70	0.73
25:AZ:310:ILE:HD12	25:AZ:311:THR:N	2.01	0.73
31:B5:40:LYS:CE	31:B5:46:CYS:HB3	2.18	0.73
36:BA:1578:U:C2'	36:BA:1579:A:H5"	2.18	0.73
36:BA:2652:C:H2'	36:BA:2653:U:C6	2.23	0.73
40:BE:98:PRO:HG3	40:BE:174:ASP:HA	1.68	0.73
58:BZ:30:ASN:HD22	58:BZ:30:ASN:C	1.92	0.73
14:CN:27:CYS:SG	14:CN:29:ARG:HB2	2.28	0.73
24:CY:76:A:C4	25:CZ:271:GLU:HB2	2.23	0.73
36:DA:203:C:H3'	36:DA:204:A:H5"	1.71	0.73
36:DA:1516:C:H2'	36:DA:1517:G:C5'	2.18	0.73
51:DS:67:ARG:HH22	51:DS:100:ALA:HB3	1.50	0.73
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.24	0.73
3:AC:180:ALA:O	3:AC:181:ASN:CB	2.35	0.73
25:AZ:136:ASN:ND2	60:AZ:501:GDP:O6	2.21	0.73
28:B2:7:ARG:HA	28:B2:10:LEU:HD12	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:15:GLU:OE2	32:B6:41:PRO:HG3	1.88	0.73
34:B8:41:ILE:HD12	36:BA:2419:U:OP1	1.89	0.73
36:BA:760:G:C2'	36:BA:761:A:H5'	2.19	0.73
36:BA:1865:G:H5'	36:BA:1866:C:OP2	1.87	0.73
36:BA:2298:A:H2'	36:BA:2299:G:O4'	1.88	0.73
43:BH:41:MET:HG3	43:BH:42:ARG:O	1.88	0.73
51:BS:106:ARG:HH11	51:BS:106:ARG:HG2	1.51	0.73
56:BX:40:LYS:HG2	56:BX:41:ASN:ND2	2.04	0.73
8:CH:7:ALA:HB2	8:CH:85:ARG:HD3	1.70	0.73
22:CV:44:G:C2'	22:CV:45:U:H5'	2.18	0.73
26:D0:38:VAL:HG23	26:D0:59:LEU:CB	2.12	0.73
36:DA:1311:G:N2	36:DA:1603:A:H62	1.85	0.73
37:DB:56:G:H5'	42:DG:27:ASN:ND2	2.03	0.73
42:DG:139:LEU:CB	42:DG:144:ILE:HG12	2.18	0.73
54:DV:72:VAL:HG23	54:DV:85:LYS:HB3	1.69	0.73
57:DY:44:ILE:HG22	57:DY:45:VAL:N	2.03	0.73
1:AA:405:U:H3'	1:AA:406:G:H5'	1.69	0.73
25:AZ:318:ALA:HB1	25:AZ:399:VAL:O	1.88	0.73
25:AZ:375:ILE:HD12	25:AZ:376:LYS:HG3	1.69	0.73
27:B1:48:LYS:CG	27:B1:50:ARG:HH21	2.01	0.73
28:B2:69:ARG:HD2	28:B2:69:ARG:N	2.03	0.73
36:BA:709:U:H2'	36:BA:710:G:H8	1.54	0.73
42:BG:98:ARG:HH11	42:BG:98:ARG:HG2	1.53	0.73
48:BP:75:ILE:HD12	48:BP:75:ILE:N	2.03	0.73
2:CB:22:LYS:HE2	2:CB:22:LYS:HA	1.70	0.73
4:CD:129:ASN:HD22	4:CD:129:ASN:H	1.34	0.73
25:CZ:198:LYS:HE2	25:CZ:198:LYS:CA	2.06	0.73
35:D9:24:TYR:O	35:D9:25:VAL:HG23	1.88	0.73
36:DA:621:A:H2'	36:DA:622:G:C5'	2.17	0.73
36:DA:1311:G:H21	36:DA:1603:A:N6	1.86	0.73
36:DA:1516:C:O2'	36:DA:1517:G:H5"	1.89	0.73
40:DE:55:ASN:CG	40:DE:75:VAL:HG22	2.09	0.73
50:DR:2:ARG:HD3	50:DR:5:LYS:HE2	1.69	0.73
51:DS:15:ARG:O	51:DS:18:ILE:HG13	1.88	0.73
1:AA:187:C:O2	20:AT:105:SER:HB3	1.88	0.73
1:AA:356:A:H2	1:AA:368:U:O2	1.70	0.73
4:AD:120:LEU:HB3	4:AD:126:ILE:CD1	2.18	0.73
19:AS:53:ASN:HD22	19:AS:53:ASN:C	1.89	0.73
20:AT:26:ASN:HB2	20:AT:71:THR:HG23	1.68	0.73
25:AZ:198:LYS:HE2	25:AZ:198:LYS:CA	2.06	0.73
35:B9:1:MET:HG2	35:B9:31:LYS:O	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:59:U:H3	36:BA:68:G:H1	1.36	0.73
36:BA:185:U:H2'	36:BA:186:G:C8	2.23	0.73
36:BA:303:U:H2'	36:BA:304:G:C8	2.23	0.73
41:BF:7:TYR:OH	41:BF:10:PRO:HB3	1.88	0.73
42:BG:63:ILE:HA	42:BG:143:GLU:HG3	1.70	0.73
3:CC:84:ILE:O	3:CC:88:ARG:HG3	1.89	0.73
6:CF:19:LEU:O	6:CF:23:LYS:HB2	1.88	0.73
6:CF:91:VAL:HG12	6:CF:92:LYS:N	2.03	0.73
7:CG:15:ASP:HB3	7:CG:20:ASP:H	1.53	0.73
12:CL:45:PRO:HG3	12:CL:53:ARG:HD3	1.70	0.73
39:DD:69:ARG:HH11	39:DD:130:ALA:CB	1.99	0.73
42:DG:54:GLU:O	42:DG:57:ALA:HB3	1.88	0.73
46:DN:57:ALA:HB3	46:DN:124:ALA:HA	1.70	0.73
46:DN:126:PRO:O	46:DN:127:ASP:HB2	1.88	0.73
50:DR:99:LYS:HD2	50:DR:99:LYS:N	2.00	0.73
51:DS:34:HIS:HB3	51:DS:53:SER:HB3	1.69	0.73
1:AA:1452:C:H4'	1:AA:1456:G:H22	1.51	0.73
7:AG:46:ALA:O	7:AG:50:ILE:HG12	1.88	0.73
16:AP:67:THR:H	16:AP:70:ALA:HB3	1.53	0.73
19:AS:45:VAL:HG23	19:AS:46:GLY:N	2.03	0.73
28:B2:62:THR:HG22	28:B2:66:GLU:HB3	1.71	0.73
32:B6:15:GLU:OE1	32:B6:18:ARG:NE	2.22	0.73
46:BN:21:LYS:HD3	46:BN:22:THR:H	1.53	0.73
48:BP:29:LYS:HD2	48:BP:29:LYS:N	2.02	0.73
1:CA:41:G:H2'	1:CA:42:G:C8	2.23	0.73
1:CA:80:G:O2'	1:CA:81:U:H5'	1.89	0.73
24:CY:32:OMC:HM22	24:CY:33:U:H5'	1.69	0.73
26:D0:42:GLY:HA3	36:DA:2331:G:O4'	1.87	0.73
36:DA:583:G:OP2	53:DU:10:ARG:HD2	1.88	0.73
36:DA:657:U:H2'	36:DA:658:C:C6	2.23	0.73
36:DA:1539:G:C2'	36:DA:1540:U:H5'	2.18	0.73
38:DC:151:GLU:HA	38:DC:154:ARG:HD2	1.71	0.73
43:DH:12:PRO:HD3	43:DH:48:GLY:HA2	1.68	0.73
49:DQ:141:GLN:C	58:DZ:53:ILE:HD12	2.08	0.73
57:DY:8:LYS:HB3	57:DY:28:LYS:NZ	2.04	0.73
1:AA:1125:U:O4	10:AJ:38:ILE:HG12	1.88	0.73
22:AV:44:G:C3'	22:AV:45:U:H5'	2.18	0.73
28:B2:35:LEU:HA	28:B2:39:ALA:CB	2.19	0.73
42:BG:6:ALA:C	42:BG:10:LYS:HE2	2.09	0.73
48:BP:45:LEU:CD1	48:BP:46:LYS:H	2.00	0.73
1:CA:45:U:H2'	1:CA:46:G:C8	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:658:G:H2'	1:CA:659:U:H6	1.52	0.73
1:CA:1228:C:OP1	13:CM:115:LYS:HE3	1.87	0.73
22:CW:38:A:C3'	22:CW:39:U:H5"	2.18	0.73
25:CZ:375:ILE:HD12	25:CZ:376:LYS:HG3	1.70	0.73
32:D6:18:ARG:HG2	32:D6:18:ARG:NH1	2.04	0.73
36:DA:2853:C:H2'	36:DA:2854:G:H8	1.54	0.73
40:DE:59:VAL:HG13	40:DE:60:ASN:H	1.53	0.73
42:DG:52:ILE:HD13	42:DG:52:ILE:H	1.52	0.73
53:DU:91:ASP:O	53:DU:95:LEU:HB2	1.88	0.73
57:DY:31:LEU:HB2	57:DY:32:PRO:HA	1.71	0.73
58:DZ:166:SER:H	58:DZ:167:PRO:HA	1.52	0.73
1:AA:265:G:H5'	17:AQ:64:PRO:O	1.88	0.73
1:AA:376:G:H5"	16:AP:5:ARG:HB2	1.70	0.73
1:AA:706:A:O2'	11:AK:29:ILE:HD11	1.88	0.73
4:AD:129:ASN:HD21	4:AD:144:ASP:HA	1.52	0.73
27:B1:58:ILE:HD11	27:B1:60:PHE:CE2	2.23	0.73
28:B2:32:LEU:HA	28:B2:53:LEU:HD22	1.70	0.73
36:BA:336:C:H4'	57:BY:7:VAL:HG21	1.70	0.73
36:BA:1599:C:H2'	36:BA:1600:C:C6	2.23	0.73
36:BA:2312:U:C2'	36:BA:2313:C:H5"	2.18	0.73
50:BR:87:TYR:HD1	50:BR:90:ARG:HD2	1.52	0.73
2:CB:8:LYS:HZ1	2:CB:217:ARG:HH12	1.33	0.73
10:CJ:34:VAL:HG22	10:CJ:74:ILE:HG22	1.71	0.73
20:CT:38:LYS:O	20:CT:41:ILE:HG12	1.88	0.73
32:D6:33:LYS:HE2	32:D6:33:LYS:HA	1.69	0.73
36:DA:1209:G:N2	36:DA:1210:A:H62	1.86	0.73
39:DD:35:LYS:HZ3	39:DD:36:PRO:CD	1.94	0.73
4:AD:59:ARG:HH21	4:AD:62:GLN:HG3	1.53	0.73
31:B5:4:HIS:O	36:BA:2056:G:N2	2.16	0.73
36:BA:20:C:O2'	36:BA:21:A:H5'	1.89	0.73
36:BA:2160:G:H5'	36:BA:2160:G:C8	2.23	0.73
41:BF:6:VAL:HG12	41:BF:7:TYR:H	1.54	0.73
43:BH:158:HIS:ND1	43:BH:168:PRO:HB2	2.03	0.73
1:CA:376:G:H5"	16:CP:5:ARG:HB2	1.71	0.73
1:CA:656:C:H4'	15:CO:62:GLN:HE22	1.53	0.73
36:DA:184:C:H2'	36:DA:185:U:C6	2.23	0.73
36:DA:1654:A:OP1	50:DR:3:HIS:N	2.21	0.73
37:DB:25:A:H2'	37:DB:25:A:N3	2.04	0.73
37:DB:48:A:H4'	51:DS:95:HIS:HD2	1.52	0.73
40:DE:87:GLU:HG3	40:DE:89:ASP:H	1.52	0.73
58:DZ:29:TYR:CB	58:DZ:34:ASN:HB3	2.18	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:94:ASN:N	2:AB:94:ASN:ND2	2.37	0.73
3:AC:14:ILE:HG12	3:AC:15:THR:N	2.02	0.73
25:AZ:242:ILE:CG2	25:AZ:282:ALA:HA	2.19	0.73
32:B6:30:THR:O	32:B6:32:ASN:HB2	1.87	0.73
36:BA:1899:G:H21	36:BA:1902:C:N4	1.78	0.73
41:BF:36:VAL:O	41:BF:40:GLN:HG3	1.89	0.73
54:BV:49:THR:HB	54:BV:50:PRO:HD2	1.71	0.73
2:CB:126:GLU:HA	2:CB:129:GLU:CD	2.09	0.73
20:CT:78:ALA:HA	20:CT:81:LYS:HD3	1.69	0.73
22:CW:65:G:O3'	32:D6:28:ARG:NH2	2.22	0.73
25:CZ:136:ASN:ND2	60:CZ:501:GDP:O6	2.22	0.73
36:DA:634:C:H2'	36:DA:635:C:C6	2.24	0.73
36:DA:969:U:H2'	36:DA:970:C:C6	2.23	0.73
36:DA:1803:A:C4'	39:DD:259:THR:HG21	2.18	0.73
41:DF:84:VAL:O	41:DF:86:GLY:N	2.22	0.73
1:AA:686:U:H1'	11:AK:42:TRP:HE1	1.54	0.72
1:AA:977:A:H2'	1:AA:977:A:N3	2.04	0.72
2:AB:97:TRP:HZ2	2:AB:102:LEU:HD12	1.54	0.72
4:AD:13:ARG:O	4:AD:15:GLU:N	2.22	0.72
4:AD:95:GLY:CA	4:AD:188:LEU:HD21	2.18	0.72
13:AM:118:ALA:HB3	22:AV:29:G:H5'	1.69	0.72
17:AQ:4:LYS:HE3	17:AQ:6:LEU:CD2	2.18	0.72
18:AR:45:SER:HB3	18:AR:51:LEU:CD2	2.19	0.72
31:B5:2:ALA:HA	36:BA:2015:A:C1'	2.15	0.72
47:BO:107:ARG:CD	52:BT:36:GLU:HG3	2.19	0.72
50:BR:7:GLY:O	50:BR:8:ARG:NE	2.22	0.72
57:BY:61:ILE:O	57:BY:62:GLU:HB2	1.87	0.72
1:CA:1030(A):G:H1'	1:CA:1031:G:H1	1.53	0.72
3:CC:173:VAL:O	3:CC:173:VAL:HG12	1.89	0.72
4:CD:150:GLU:CD	4:CD:151:LYS:H	1.91	0.72
20:CT:45:GLN:HE21	20:CT:45:GLN:H	1.36	0.72
24:CY:54:5MU:H3'	24:CY:55:PSU:O4'	1.89	0.72
40:DE:9:VAL:CG1	40:DE:25:VAL:HB	2.19	0.72
40:DE:104:VAL:HG11	40:DE:188:VAL:HG21	1.71	0.72
41:DF:68:LYS:HB3	41:DF:69:HIS:CD2	2.24	0.72
53:DU:90:VAL:HG21	54:DV:47:VAL:HG21	1.70	0.72
10:AJ:18:ALA:O	10:AJ:22:LYS:HB2	1.89	0.72
32:B6:15:GLU:HB2	32:B6:20:ASN:HB3	1.69	0.72
37:BB:48:A:H4'	51:BS:95:HIS:HD2	1.54	0.72
39:BD:35:LYS:CG	39:BD:63:ARG:HG2	2.19	0.72
40:BE:77:ILE:HG22	40:BE:78:LEU:HD12	1.69	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1502:A:H2	1:CA:1505:G:H1	1.36	0.72
4:CD:10:ARG:HH11	4:CD:10:ARG:HG2	1.52	0.72
13:CM:11:ARG:HG2	13:CM:12:ASN:ND2	2.04	0.72
14:CN:24:CYS:SG	14:CN:26:ARG:N	2.62	0.72
16:CP:67:THR:HG22	16:CP:68:ASP:H	1.53	0.72
18:CR:59:SER:H	18:CR:62:GLU:HB2	1.54	0.72
25:CZ:25:THR:CB	60:CZ:501:GDP:O2B	2.37	0.72
36:DA:118:A:N3	36:DA:178:G:H1'	2.04	0.72
36:DA:240:G:H3'	36:DA:241:A:H5"	1.72	0.72
36:DA:325:G:H2'	36:DA:326:G:C8	2.24	0.72
36:DA:2840:C:H2'	36:DA:2841:C:H6	1.53	0.72
39:DD:91:ARG:HG2	39:DD:91:ARG:NH1	1.98	0.72
52:DT:25:GLY:CA	52:DT:92:GLY:HA2	2.18	0.72
53:DU:92:ARG:NH2	54:DV:10:LYS:HB3	2.04	0.72
1:AA:143:A:H2	1:AA:220:G:H1	1.36	0.72
2:AB:148:TYR:O	2:AB:149:LEU:HD23	1.89	0.72
31:B5:57:VAL:HG12	31:B5:58:LEU:N	2.04	0.72
32:B6:11:LEU:HD23	32:B6:26:ASN:H	1.53	0.72
34:B8:34:TRP:HA	36:BA:2420:C:OP1	1.90	0.72
36:BA:2291:U:H2'	36:BA:2292:C:C6	2.24	0.72
1:CA:505:G:H5'	1:CA:534:U:H2'	1.71	0.72
2:CB:8:LYS:HE2	2:CB:217:ARG:HH22	1.54	0.72
24:CY:4:G:C2'	24:CY:5:G:H5"	2.19	0.72
43:DH:91:GLY:HA3	43:DH:94:TYR:CD2	2.24	0.72
43:DH:153:LYS:H	43:DH:153:LYS:CD	1.98	0.72
52:DT:38:ASN:O	52:DT:38:ASN:ND2	2.18	0.72
10:AJ:9:ARG:HH22	10:AJ:97:GLU:HG3	1.55	0.72
17:AQ:52:LYS:HD2	17:AQ:55:ASP:OD2	1.89	0.72
25:AZ:74:LYS:O	25:AZ:75:ARG:HG3	1.88	0.72
39:BD:71:ASP:HB3	39:BD:103:ARG:NH2	2.02	0.72
1:CA:426:G:H4'	4:CD:41:GLY:O	1.87	0.72
1:CA:1203:C:OP1	14:CN:3:ARG:HD3	1.88	0.72
18:CR:69:THR:O	18:CR:72:ARG:HB2	1.88	0.72
25:CZ:20:VAL:HG21	36:DA:2661:G:H5"	1.71	0.72
36:DA:1407:C:N4	36:DA:1595:G:H1	1.81	0.72
36:DA:2415:G:H4'	48:DP:66:GLY:C	2.09	0.72
36:DA:2590:A:OP2	39:DD:238:GLY:HA2	1.89	0.72
41:DF:53:THR:HG23	41:DF:55:GLY:H	1.54	0.72
42:DG:51:ARG:NE	42:DG:51:ARG:HA	2.03	0.72
1:AA:1320:C:H5'	1:AA:1320:C:H6	1.55	0.72
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.69	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:9:MET:SD	8:AH:32:LYS:HG2	2.28	0.72
39:BD:45:ASN:OD1	39:BD:46:GLN:N	2.23	0.72
48:BP:126:VAL:HA	48:BP:145:PRO:HB2	1.71	0.72
1:CA:194:C:C2'	1:CA:195:A:H5"	2.20	0.72
1:CA:358:U:H4'	25:CZ:235:GLY:N	2.05	0.72
4:CD:100:ARG:NH1	4:CD:137:SER:HA	2.05	0.72
19:CS:37:ARG:O	19:CS:70:LYS:HD2	1.88	0.72
32:D6:26:ASN:HA	36:DA:2286:A:H2	1.53	0.72
36:DA:607:U:OP1	41:DF:102:PRO:HA	1.89	0.72
36:DA:1299:G:H22	36:DA:1640:C:H5"	1.52	0.72
41:DF:114:VAL:HG21	41:DF:202:PHE:HE2	1.55	0.72
46:DN:43:THR:HB	46:DN:46:VAL:CG1	2.19	0.72
2:AB:96:ARG:HD3	2:AB:148:TYR:CE1	2.25	0.72
20:AT:50:GLU:HA	20:AT:100:ILE:HD13	1.70	0.72
36:BA:240:G:H3'	36:BA:241:A:C5'	2.20	0.72
36:BA:1842:G:H2'	36:BA:1843:C:C6	2.25	0.72
43:BH:167:GLU:HB3	43:BH:168:PRO:HD2	1.71	0.72
52:BT:28:VAL:HG22	52:BT:47:GLY:H	1.52	0.72
1:CA:1104:G:O5'	2:CB:111:ARG:HD2	1.90	0.72
9:CI:88:TYR:O	9:CI:89:ASN:HB2	1.88	0.72
10:CJ:38:ILE:HD11	10:CJ:71:LEU:CB	2.18	0.72
13:CM:119:GLY:O	13:CM:120:LYS:HB2	1.90	0.72
25:CZ:313:HIS:HB3	25:CZ:403:ILE:CG2	2.16	0.72
46:DN:23:LEU:HD23	46:DN:24:GLY:N	2.05	0.72
58:DZ:72:ARG:CG	58:DZ:89:PHE:HB2	2.18	0.72
1:AA:573:A:H5'	1:AA:573:A:C8	2.23	0.72
8:AH:123:GLU:O	8:AH:127:LEU:HD23	1.88	0.72
9:AI:52:ALA:HB3	9:AI:95:LYS:NZ	2.05	0.72
17:AQ:7:THR:O	17:AQ:23:VAL:HG13	1.88	0.72
41:BF:136:THR:HG23	41:BF:170:LEU:HD21	1.72	0.72
46:BN:108:PRO:O	46:BN:109:LYS:HG3	1.89	0.72
48:BP:39:LYS:HD3	48:BP:40:SER:H	1.54	0.72
58:BZ:152:ALA:HB1	58:BZ:167:PRO:HB2	1.71	0.72
1:CA:713:G:H2'	1:CA:714:G:C8	2.24	0.72
3:CC:77:ILE:HG22	3:CC:78:GLY:O	1.89	0.72
9:CI:52:ALA:HB3	9:CI:95:LYS:NZ	2.04	0.72
20:CT:61:SER:O	20:CT:65:LYS:HG3	1.88	0.72
32:D6:17:LYS:CB	32:D6:18:ARG:HH12	2.02	0.72
38:DC:100:ILE:HD13	38:DC:127:LEU:HB2	1.72	0.72
50:DR:2:ARG:HD2	50:DR:2:ARG:C	2.09	0.72
57:DY:28:LYS:CB	57:DY:37:VAL:HB	2.20	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:114:ARG:CZ	2:AB:118:LEU:HD21	2.20	0.72
3:AC:188:LEU:HD13	3:AC:195:VAL:HG11	1.71	0.72
15:AO:87:ILE:HG22	15:AO:88:ARG:N	2.04	0.72
31:B5:20:ARG:HA	31:B5:23:HIS:ND1	2.05	0.72
36:BA:850:C:H2'	36:BA:851:U:H6	1.54	0.72
36:BA:1810:A:H2'	36:BA:1811:G:O4'	1.89	0.72
39:BD:70:TRP:CH2	39:BD:150:LYS:HA	2.25	0.72
47:BO:104:ARG:HE	52:BT:33:LYS:NZ	1.85	0.72
52:BT:13:ARG:HA	52:BT:13:ARG:NE	2.04	0.72
1:CA:1227:A:C2	1:CA:1228:C:H1'	2.24	0.72
2:CB:168:THR:CG2	2:CB:192:SER:HA	2.19	0.72
13:CM:94:ARG:HH21	19:CS:81:ARG:HB2	1.55	0.72
36:DA:2777:G:H5"	36:DA:2778:A:C5'	2.20	0.72
36:DA:2887:U:H2'	36:DA:2888:C:C6	2.25	0.72
40:DE:116:VAL:O	40:DE:117:MET:HB2	1.89	0.72
43:DH:19:VAL:HG12	43:DH:20:ALA:N	2.05	0.72
48:DP:59:LEU:HA	48:DP:61:ARG:CZ	2.19	0.72
1:AA:975:A:H8	1:AA:975:A:H5'	1.54	0.72
7:AG:79:ARG:HB2	7:AG:84:ASN:HD22	1.55	0.72
9:AI:19:LEU:HD21	9:AI:59:PHE:HD2	1.51	0.72
10:AJ:92:THR:HG23	10:AJ:93:GLY:H	1.55	0.72
14:AN:13:THR:N	14:AN:14:PRO:CD	2.53	0.72
31:B5:49:CYS:SG	31:B5:50:GLY:N	2.63	0.72
36:BA:709:U:H2'	36:BA:710:G:C8	2.25	0.72
36:BA:886:C:C2'	36:BA:887:A:H4'	2.20	0.72
36:BA:1389:G:H2'	36:BA:1390:U:H6	1.53	0.72
37:BB:73:A:H2'	37:BB:74:U:H5'	1.72	0.72
41:BF:84:VAL:C	41:BF:86:GLY:H	1.93	0.72
54:BV:49:THR:HB	54:BV:50:PRO:CD	2.19	0.72
3:CC:34:LEU:CD2	3:CC:38:ARG:HE	1.99	0.72
4:CD:107:ARG:HH21	4:CD:194:LEU:CD1	1.98	0.72
7:CG:115:ARG:O	7:CG:118:VAL:HG22	1.89	0.72
31:D5:2:ALA:HB3	36:DA:747:U:N1	2.04	0.72
36:DA:1599:C:H2'	36:DA:1600:C:H6	1.54	0.72
36:DA:2183:C:H2'	36:DA:2184:G:C8	2.25	0.72
36:DA:2591:C:H2'	36:DA:2592:G:C8	2.25	0.72
43:DH:118:PRO:HG2	43:DH:121:ILE:HD12	1.71	0.72
46:DN:46:VAL:CG1	46:DN:48:MET:HG3	2.19	0.72
1:AA:624:C:H2'	1:AA:625:G:H8	1.53	0.72
3:AC:34:LEU:O	3:AC:38:ARG:HG2	1.90	0.72
3:AC:157:ILE:HD12	3:AC:166:GLU:HG2	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:50:ILE:H	10:AJ:50:ILE:HD13	1.55	0.72
13:AM:4:ILE:HG22	13:AM:5:ALA:N	2.05	0.72
22:AV:17:C:H2'	22:AV:18:G:C5'	2.20	0.72
22:AW:71:G:C2'	22:AW:72:C:H5'	2.18	0.72
36:BA:2524:G:H5'	36:BA:2524:G:C8	2.23	0.72
39:BD:35:LYS:NZ	39:BD:36:PRO:HD3	2.02	0.72
39:BD:134:ARG:NH1	39:BD:135:PHE:CZ	2.58	0.72
40:BE:34:VAL:HG13	40:BE:48:GLN:HE21	1.54	0.72
42:BG:29:TRP:CE3	42:BG:29:TRP:HA	2.23	0.72
43:BH:85:LYS:HG2	43:BH:86:GLU:N	2.04	0.72
1:CA:542:G:P	4:CD:10:ARG:HH21	2.12	0.72
1:CA:858:G:C5'	1:CA:858:G:H8	2.03	0.72
9:CI:98:PRO:HB2	9:CI:99:LEU:HD22	1.71	0.72
21:CU:9:ARG:HH12	21:CU:23:PRO:CD	2.03	0.72
36:DA:197:A:H8	36:DA:197:A:H5'	1.55	0.72
51:DS:24:LEU:HB3	51:DS:85:VAL:HG12	1.71	0.72
53:DU:95:LEU:CD1	54:DV:11:GLN:HG3	2.19	0.72
58:DZ:113:ALA:CB	58:DZ:146:ILE:HD13	2.20	0.72
25:AZ:64:ASN:N	25:AZ:64:ASN:HD22	1.83	0.71
30:B4:12:ALA:CB	30:B4:29:PRO:HA	2.20	0.71
36:BA:139:G:H2'	36:BA:139(A):G:H5"	1.70	0.71
36:BA:298:G:H5'	36:BA:299:A:OP1	1.88	0.71
42:BG:103:LEU:O	42:BG:107:LEU:HD22	1.89	0.71
47:BO:110:GLY:HA2	47:BO:112:MET:HE1	1.70	0.71
48:BP:59:LEU:CA	48:BP:61:ARG:HE	2.02	0.71
52:BT:89:VAL:CG1	52:BT:91:ARG:HG3	2.20	0.71
54:BV:34:GLU:HA	54:BV:57:VAL:O	1.90	0.71
57:BY:74:PRO:O	57:BY:75:ILE:HB	1.87	0.71
58:BZ:70:LEU:HD23	58:BZ:70:LEU:H	1.55	0.71
1:CA:390:C:H4'	16:CP:28:ARG:HH21	1.54	0.71
34:D8:33:ASN:ND2	36:DA:2419:U:H5"	2.05	0.71
36:DA:1516:C:H2'	36:DA:1517:G:H5"	1.71	0.71
36:DA:1578:U:H2'	36:DA:1579:A:H5"	1.72	0.71
37:DB:16:G:HO2'	37:DB:17:C:H6	1.36	0.71
1:AA:1125:U:H1'	10:AJ:5:ARG:HH21	1.49	0.71
16:AP:51:VAL:HG12	16:AP:52:ASP:O	1.89	0.71
31:B5:24:ALA:O	31:B5:25:LEU:HB2	1.90	0.71
36:BA:2469:A:O2'	49:BQ:56:ARG:HD2	1.90	0.71
39:BD:270:ILE:O	39:BD:270:ILE:HD12	1.90	0.71
40:BE:6:GLY:HA2	40:BE:27:LEU:O	1.90	0.71
42:BG:72:ARG:HA	42:BG:87:PRO:HD2	1.70	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:58:ASP:C	46:BN:60:ILE:H	1.92	0.71
47:BO:35:VAL:HG22	47:BO:64:ARG:H	1.55	0.71
51:BS:52:SER:HB3	51:BS:55:ALA:HB3	1.72	0.71
1:CA:882:C:O2'	1:CA:883:C:H5'	1.89	0.71
4:CD:158:ILE:O	4:CD:162:LEU:HB2	1.90	0.71
33:D7:29:LYS:HB3	33:D7:29:LYS:HZ2	1.54	0.71
36:DA:671:C:O2'	36:DA:672:C:H5'	1.90	0.71
36:DA:2672:G:C3'	36:DA:2673:G:H5"	2.20	0.71
46:DN:133:GLN:HG2	46:DN:135:PRO:HD3	1.70	0.71
16:AP:20:VAL:HG21	16:AP:32:TYR:HB2	1.72	0.71
17:AQ:76:LEU:HD12	17:AQ:77:VAL:H	1.55	0.71
32:B6:11:LEU:O	32:B6:12:GLU:HG2	1.91	0.71
36:BA:2866:U:C6	36:BA:2868:A:H1'	2.24	0.71
43:BH:19:VAL:HG12	43:BH:20:ALA:H	1.55	0.71
44:BJ:85:UNK:HG3	44:BJ:86:UNK:H	1.53	0.71
50:BR:96:ARG:NH1	50:BR:117:VAL:HG11	2.04	0.71
58:BZ:180:VAL:CG2	58:BZ:181:GLU:H	1.97	0.71
1:CA:176:C:H2'	1:CA:177:C:H6	1.54	0.71
1:CA:192:U:O2'	20:CT:57:ARG:HG3	1.89	0.71
1:CA:1149:C:H2'	1:CA:1150:U:C6	2.24	0.71
1:CA:1162:C:H2'	1:CA:1163:C:C6	2.25	0.71
10:CJ:43:ARG:HH11	10:CJ:43:ARG:HG3	1.55	0.71
10:CJ:78:ASN:HD22	10:CJ:81:THR:HG21	1.56	0.71
25:CZ:13:ASN:HB3	25:CZ:78:SER:HB2	1.71	0.71
36:DA:127:A:H5"	36:DA:128:C:O4'	1.90	0.71
36:DA:2524:G:H5'	36:DA:2524:G:C8	2.24	0.71
37:DB:105:A:H2'	37:DB:106:G:O4'	1.90	0.71
40:DE:116:VAL:HG21	40:DE:122:PHE:CG	2.24	0.71
1:AA:636:U:H2'	1:AA:637:G:H8	1.55	0.71
2:AB:59:GLU:HB2	2:AB:221:LEU:HD11	1.70	0.71
4:AD:25:ARG:C	4:AD:27:TYR:H	1.90	0.71
9:AI:40:LEU:HD11	9:AI:70:LYS:HG2	1.71	0.71
10:AJ:16:LEU:HD12	10:AJ:70:ARG:HE	1.54	0.71
19:AS:29:ARG:O	19:AS:31:ILE:HG22	1.89	0.71
27:B1:40:ARG:HG2	27:B1:41:ARG:N	2.04	0.71
32:B6:27:LYS:HB3	32:B6:30:THR:HB	1.73	0.71
34:B8:42:ARG:O	34:B8:44:LYS:N	2.23	0.71
36:BA:1473:G:H2'	36:BA:1474:C:O4'	1.90	0.71
36:BA:2334:G:H5'	51:BS:13:ARG:HD3	1.72	0.71
38:BC:123:VAL:CG2	38:BC:127:LEU:HD23	2.14	0.71
41:BF:24:LEU:HB3	41:BF:25:PRO:CD	2.17	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:21:LYS:HD3	46:BN:22:THR:N	2.06	0.71
48:BP:58:THR:C	48:BP:61:ARG:HE	1.93	0.71
50:BR:83:ILE:HG22	50:BR:87:TYR:HE2	1.55	0.71
51:BS:59:LYS:HG2	51:BS:60:GLY:N	1.98	0.71
52:BT:80:SER:HB3	52:BT:81:PRO:CD	2.20	0.71
3:CC:40:ARG:HG3	3:CC:40:ARG:HH11	1.55	0.71
4:CD:129:ASN:HD21	4:CD:145:GLU:H	1.39	0.71
12:CL:41:ARG:HG3	12:CL:42:THR:H	1.55	0.71
20:CT:89:ARG:HD2	20:CT:104:LEU:HD11	1.72	0.71
22:CW:66:U:H5'	32:D6:28:ARG:NH2	2.04	0.71
25:CZ:267:VAL:HG23	25:CZ:288:VAL:HG13	1.72	0.71
36:DA:668:G:H2'	36:DA:670:A:H62	1.54	0.71
36:DA:782:A:H5'	36:DA:783:A:C2	2.25	0.71
42:DG:85:GLY:C	42:DG:87:PRO:HD3	2.10	0.71
46:DN:72:TYR:CD2	46:DN:90:MET:HG3	2.26	0.71
48:DP:23:PRO:HB2	48:DP:33:ARG:CG	2.19	0.71
49:DQ:79:LEU:HD23	49:DQ:80:GLU:H	1.53	0.71
1:AA:337:C:H2'	1:AA:338:A:C8	2.26	0.71
7:AG:91:VAL:HG23	7:AG:95:ARG:HD3	1.70	0.71
9:AI:52:ALA:HB3	9:AI:95:LYS:CE	2.21	0.71
20:AT:26:ASN:ND2	20:AT:26:ASN:H	1.88	0.71
22:AV:20:U:H2'	22:AV:21:A:C5'	2.21	0.71
36:BA:1224:C:H2'	36:BA:1224:C:O2	1.91	0.71
36:BA:1602:U:H3'	36:BA:1603:A:H5'	1.72	0.71
42:BG:34:LEU:HD23	42:BG:161:THR:HG22	1.72	0.71
48:BP:35:HIS:O	48:BP:36:LYS:HG2	1.91	0.71
48:BP:81:GLN:HE22	48:BP:106:LEU:HA	1.54	0.71
1:CA:1125:U:O4	10:CJ:38:ILE:HG12	1.90	0.71
7:CG:113:GLU:O	7:CG:119:ARG:HD3	1.91	0.71
14:CN:6:LEU:HD13	14:CN:23:ARG:HH22	1.56	0.71
22:CW:35:A:H2'	22:CW:36:A:H8	1.54	0.71
36:DA:536:A:H2'	36:DA:537:C:C6	2.26	0.71
36:DA:1105:U:H2'	36:DA:1106:G:C8	2.25	0.71
36:DA:2645:G:H3'	36:DA:2646:C:H5'	1.72	0.71
38:DC:123:VAL:HG22	38:DC:127:LEU:HD23	1.72	0.71
41:DF:164:ARG:O	41:DF:168:ARG:HB2	1.91	0.71
50:DR:2:ARG:HD2	50:DR:2:ARG:O	1.90	0.71
50:DR:7:GLY:O	50:DR:8:ARG:NE	2.23	0.71
1:AA:1217:C:OP1	14:AN:9:LYS:HE3	1.90	0.71
13:AM:2:ALA:N	13:AM:9:ILE:HG23	2.06	0.71
25:AZ:288:VAL:HG12	25:AZ:290:LEU:HD23	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:996:A:H4'	53:BU:92:ARG:HG3	1.72	0.71
36:BA:2693:A:H2'	36:BA:2694:G:H8	1.56	0.71
1:CA:1436:U:H2'	1:CA:1437:C:O4'	1.89	0.71
24:CY:76:A:H2	25:CZ:270:VAL:CA	2.04	0.71
25:CZ:222:LEU:HB3	25:CZ:243:GLU:HB2	1.72	0.71
27:D1:64:ALA:O	27:D1:65:SER:C	2.29	0.71
31:D5:29:THR:HG21	36:DA:2814:C:O2'	1.89	0.71
48:DP:41:ARG:HB3	48:DP:41:ARG:NH1	1.99	0.71
55:DW:95:ILE:O	55:DW:95:ILE:HG13	1.90	0.71
56:DX:61:GLY:HA3	56:DX:73:ARG:O	1.91	0.71
57:DY:44:ILE:HG22	57:DY:45:VAL:H	1.56	0.71
1:AA:1217:C:O2'	1:AA:1218:C:H5'	1.91	0.71
21:AU:5:ASP:O	21:AU:11:GLY:HA3	1.89	0.71
22:AV:20:U:H2'	22:AV:21:A:H5'	1.72	0.71
22:AV:68:C:H2'	22:AV:69:G:H5"	1.71	0.71
25:AZ:313:HIS:HB3	25:AZ:403:ILE:CG2	2.20	0.71
33:B7:1:MET:HG3	33:B7:3:ARG:NH1	2.05	0.71
36:BA:740:U:H2'	36:BA:741:G:H8	1.55	0.71
1:CA:1306:A:N6	1:CA:1331:G:H1'	2.04	0.71
22:CV:51:U:H2'	22:CV:52:G:C8	2.25	0.71
24:CY:2:G:OP1	25:CZ:90:LYS:HB2	1.89	0.71
34:D8:52:LYS:H	34:D8:53:PRO:HD2	1.56	0.71
40:DE:52:LEU:HB3	40:DE:75:VAL:HB	1.72	0.71
42:DG:42:GLY:O	42:DG:89:GLY:HA2	1.90	0.71
16:AP:20:VAL:HG21	16:AP:32:TYR:CB	2.21	0.71
24:AY:54:5MU:H3'	24:AY:55:PSU:O4'	1.91	0.71
25:AZ:13:ASN:HB3	25:AZ:78:SER:HB2	1.72	0.71
25:AZ:25:THR:CB	60:AZ:501:GDP:O2B	2.38	0.71
34:B8:50:LEU:HD12	34:B8:51:ALA:N	2.05	0.71
36:BA:28:A:N6	36:BA:512:G:H1'	2.06	0.71
36:BA:1722:A:O2'	36:BA:1739:U:H5"	1.90	0.71
38:BC:34:THR:HG22	38:BC:35:ALA:N	2.04	0.71
58:BZ:166:SER:HB2	58:BZ:167:PRO:CA	2.21	0.71
20:CT:42:GLN:C	20:CT:45:GLN:HE22	1.94	0.71
36:DA:1057:A:H2'	36:DA:1058:G:H8	1.55	0.71
36:DA:1188:U:O2'	36:DA:1189:A:H5'	1.91	0.71
39:DD:125:ILE:HG22	39:DD:125:ILE:O	1.90	0.71
54:DV:39:LEU:HD12	54:DV:47:VAL:HG11	1.73	0.71
58:DZ:81:ARG:HB3	58:DZ:81:ARG:NH1	2.04	0.71
2:AB:215:LEU:O	2:AB:219:VAL:HG23	1.91	0.71
22:AW:65:G:H4'	32:B6:28:ARG:NH2	2.05	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:51:ARG:HG3	28:B2:52:ASP:OD1	1.90	0.71
28:B2:67:LYS:HG2	28:B2:70:GLN:HG2	1.73	0.71
43:BH:37:VAL:HG12	43:BH:38:SER:N	2.06	0.71
1:CA:1220:G:H2'	1:CA:1221:G:H8	1.56	0.71
3:CC:5:ILE:HD13	3:CC:5:ILE:N	2.02	0.71
9:CI:19:LEU:HD21	9:CI:59:PHE:CD2	2.26	0.71
19:CS:16:LEU:H	19:CS:16:LEU:HD12	1.56	0.71
22:CW:38:A:C2'	22:CW:39:U:H5"	2.21	0.71
25:CZ:26:THR:HG21	60:CZ:501:GDP:C8	2.26	0.71
25:CZ:113:MET:HB3	25:CZ:114:PRO:HD2	1.73	0.71
27:D1:62:VAL:HG11	27:D1:67:ILE:HG23	1.72	0.71
32:D6:10:LEU:HD22	32:D6:10:LEU:N	2.05	0.71
36:DA:84:A:C5'	57:DY:9:LYS:HD2	2.18	0.71
41:DF:160:ASN:HD21	41:DF:162:LEU:HD13	1.56	0.71
47:DO:35:VAL:CG2	47:DO:64:ARG:H	2.03	0.71
51:DS:93:LYS:O	51:DS:95:HIS:N	2.23	0.71
1:AA:45:U:H2'	1:AA:46:G:C8	2.26	0.71
1:AA:102:G:O2'	1:AA:103:C:H5'	1.91	0.71
1:AA:572:A:H5'	1:AA:573:A:OP2	1.91	0.71
1:AA:1003:G:H21	1:AA:1039:C:H42	1.39	0.71
4:AD:100:ARG:HH21	4:AD:118:ARG:NH1	1.87	0.71
27:B1:94:LEU:H	27:B1:94:LEU:HD12	1.54	0.71
30:B4:16:CYS:SG	30:B4:17:GLY:N	2.64	0.71
43:BH:42:ARG:HG2	43:BH:43:VAL:H	1.55	0.71
58:BZ:114:GLY:H	58:BZ:146:ILE:CG2	2.00	0.71
1:CA:858:G:H8	1:CA:858:G:H5"	1.56	0.71
25:CZ:65:THR:HA	25:CZ:83:PRO:HD3	1.73	0.71
36:DA:363:G:H2'	36:DA:363(A):A:H8	1.56	0.71
41:DF:66:PRO:HD2	41:DF:70:THR:HG21	1.72	0.71
42:DG:125:PHE:HB3	42:DG:130:ASN:O	1.90	0.71
48:DP:23:PRO:HB2	48:DP:33:ARG:CD	2.21	0.71
48:DP:39:LYS:HD3	48:DP:40:SER:H	1.55	0.71
54:DV:38:LEU:O	54:DV:52:VAL:HG12	1.90	0.71
58:DZ:109:ALA:HB3	58:DZ:144:LEU:O	1.90	0.71
1:AA:1053:G:H4'	1:AA:1054:C:C5'	2.18	0.70
9:AI:11:LYS:O	9:AI:12:GLU:HB2	1.90	0.70
10:AJ:35:SER:HB3	10:AJ:73:ASP:HB2	1.72	0.70
14:AN:57:ARG:HH11	14:AN:57:ARG:CB	2.03	0.70
25:AZ:68:VAL:O	25:AZ:69:GLU:HG2	1.90	0.70
32:B6:30:THR:HG22	32:B6:31:PRO:HD2	1.73	0.70
36:BA:1782:C:H1'	36:BA:2609:U:H5"	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:30:GLU:CG	39:BD:63:ARG:HH21	2.02	0.70
39:BD:35:LYS:HG2	39:BD:63:ARG:HA	1.72	0.70
46:BN:23:LEU:HD23	46:BN:24:GLY:N	2.06	0.70
49:BQ:56:ARG:HH11	49:BQ:56:ARG:CG	2.04	0.70
56:BX:65:ARG:HB2	56:BX:70:LEU:HD23	1.73	0.70
1:CA:1060:C:H2'	1:CA:1061:G:H8	1.56	0.70
4:CD:59:ARG:HE	4:CD:59:ARG:CA	2.04	0.70
5:CE:144:THR:O	5:CE:148:VAL:HG23	1.91	0.70
7:CG:65:ALA:HB1	7:CG:127:ALA:HB3	1.73	0.70
36:DA:130:C:O3'	36:DA:1349:A:H1'	1.91	0.70
36:DA:2248:C:H2'	36:DA:2249:U:H5'	1.73	0.70
37:DB:40:U:C2	37:DB:43:C:H5"	2.26	0.70
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.26	0.70
1:AA:1499:A:H5'	1:AA:1499:A:H8	1.55	0.70
26:B0:50:ASN:HD22	26:B0:63:VAL:CG2	2.04	0.70
36:BA:650:C:C3'	36:BA:651:G:H5"	2.22	0.70
57:BY:37:VAL:HG22	57:BY:69:ALA:HB2	1.73	0.70
1:CA:260:G:H2'	1:CA:261:U:C6	2.27	0.70
20:CT:57:ARG:NH1	20:CT:102:GLY:HA3	2.06	0.70
22:CW:13:C:H2'	22:CW:13:C:O2	1.91	0.70
30:D4:5:ILE:O	30:D4:5:ILE:HG12	1.91	0.70
36:DA:614(A):U:H4'	36:DA:614(B):G:H5"	1.71	0.70
36:DA:1434:A:H61	36:DA:1558:A:N6	1.89	0.70
38:DC:119:VAL:HG13	38:DC:120:MET:CE	2.21	0.70
40:DE:75:VAL:O	40:DE:77:ILE:N	2.24	0.70
41:DF:18:ARG:NH1	41:DF:196:LEU:HD22	2.06	0.70
41:DF:167:ALA:HB1	41:DF:173:VAL:CG1	2.20	0.70
43:DH:137:ASP:O	43:DH:138:LYS:HB2	1.90	0.70
48:DP:85:LEU:HA	48:DP:88:LEU:HB3	1.73	0.70
49:DQ:17:LEU:HD13	49:DQ:39:PRO:HB2	1.73	0.70
58:DZ:113:ALA:HB3	58:DZ:146:ILE:HG21	1.73	0.70
1:AA:1104:G:O5'	2:AB:111:ARG:HD2	1.91	0.70
9:AI:10:ARG:HD3	9:AI:75:ASP:HB3	1.72	0.70
10:AJ:55:LYS:N	10:AJ:55:LYS:CE	2.54	0.70
15:AO:17:ARG:HG3	15:AO:17:ARG:HH11	1.57	0.70
30:B4:30:GLU:C	30:B4:31:ILE:HD12	2.11	0.70
32:B6:18:ARG:HH11	32:B6:18:ARG:CG	2.04	0.70
36:BA:108:U:H2'	36:BA:109:G:C8	2.27	0.70
36:BA:1657:C:H2'	36:BA:1658:C:H6	1.56	0.70
41:BF:125:LEU:N	41:BF:125:LEU:HD23	2.06	0.70
41:BF:175:THR:O	41:BF:176:LEU:HB2	1.89	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:130:ASN:OD1	42:BG:160:VAL:HA	1.91	0.70
47:BO:71:ARG:NH1	47:BO:104:ARG:HG2	2.06	0.70
52:BT:39:ARG:HD2	52:BT:39:ARG:H	1.56	0.70
58:BZ:86:VAL:HG12	58:BZ:87:ASP:N	2.05	0.70
1:CA:1047:G:H5"	14:CN:4:LYS:HE2	1.73	0.70
1:CA:1321:C:H3'	1:CA:1322:C:H5"	1.72	0.70
6:CF:33:TYR:O	6:CF:35:ALA:N	2.22	0.70
14:CN:4:LYS:O	14:CN:7:ILE:HG12	1.91	0.70
29:D3:29:ARG:HB2	29:D3:29:ARG:HH11	1.57	0.70
32:D6:10:LEU:H	32:D6:10:LEU:CD2	2.04	0.70
36:DA:271(L):U:C5'	36:DA:271(M):G:H5'	2.18	0.70
39:DD:259:THR:HG22	39:DD:260:ARG:N	2.06	0.70
43:DH:83:TYR:CB	43:DH:135:GLY:H	2.04	0.70
56:DX:49:VAL:HG12	56:DX:87:GLN:HB3	1.72	0.70
9:AI:86:VAL:CG2	9:AI:93:ARG:HG2	2.21	0.70
26:B0:40:GLN:NE2	26:B0:43:THR:HA	2.06	0.70
36:BA:2087:G:O2'	36:BA:2088:G:H5'	1.90	0.70
38:BC:16:PRO:HG2	38:BC:17:ASN:OD1	1.91	0.70
41:BF:110:LEU:HD12	41:BF:206:ILE:HD11	1.73	0.70
46:BN:46:VAL:HG11	46:BN:48:MET:HG3	1.72	0.70
47:BO:114:ILE:H	47:BO:114:ILE:HD12	1.56	0.70
1:CA:975:A:H4'	1:CA:976:G:C5'	2.21	0.70
4:CD:149:ALA:O	4:CD:153:ARG:HG3	1.92	0.70
13:CM:118:ALA:HB3	22:CV:29:G:H5'	1.74	0.70
27:D1:86:SER:HB2	27:D1:89:GLU:HB2	1.73	0.70
34:D8:50:LEU:C	34:D8:52:LYS:H	1.93	0.70
36:DA:2762:G:H8	36:DA:2762:G:H5'	1.56	0.70
42:DG:114:ILE:O	42:DG:116:ASP:N	2.24	0.70
48:DP:75:ILE:N	48:DP:75:ILE:HD12	2.07	0.70
3:AC:175:LEU:HD23	3:AC:182:ILE:HD12	1.74	0.70
15:AO:74:ASP:OD1	15:AO:76:GLU:HB3	1.91	0.70
22:AW:18:G:H22	22:AW:55:U:H6	1.36	0.70
22:AW:72:C:H2'	22:AW:73:A:C5'	2.11	0.70
36:BA:1351:C:H5	36:BA:1380:G:N1	1.87	0.70
38:BC:127:LEU:O	38:BC:129:ARG:N	2.24	0.70
43:BH:44:VAL:HG12	43:BH:45:VAL:N	2.02	0.70
45:BK:55:UNK:HA	45:BK:69:UNK:HA	1.73	0.70
3:CC:142:MET:C	3:CC:144:SER:H	1.94	0.70
6:CF:15:ASP:OD2	6:CF:17:SER:HB3	1.90	0.70
9:CI:46:ALA:HB2	9:CI:74:ILE:HG23	1.72	0.70
13:CM:97:PRO:HA	13:CM:110:ARG:HD3	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:397:ALA:HB2	61:CZ:502:KIR:H252	1.72	0.70
36:DA:814:C:H2'	36:DA:815:C:C6	2.25	0.70
37:DB:56:G:H4'	37:DB:57:A:O5'	1.91	0.70
41:DF:148:LEU:HD23	41:DF:191:ARG:NH1	2.06	0.70
48:DP:38:GLN:O	48:DP:39:LYS:HB2	1.89	0.70
48:DP:83:VAL:CG1	48:DP:112:LEU:HD21	2.22	0.70
50:DR:45:ARG:O	50:DR:49:ASP:HB2	1.91	0.70
56:DX:27:THR:HG22	56:DX:80:ILE:HB	1.73	0.70
56:DX:55:ASN:HB2	56:DX:80:ILE:CG2	2.21	0.70
1:AA:979:C:H3'	1:AA:980:C:C5'	2.22	0.70
1:AA:1039:C:H6	1:AA:1040:U:C5	2.05	0.70
9:AI:17:VAL:HG11	9:AI:81:ILE:HD13	1.73	0.70
36:BA:1151:G:H2'	36:BA:1152:C:H6	1.55	0.70
36:BA:2074:U:H2'	36:BA:2075:U:C6	2.26	0.70
52:BT:50:ILE:HA	52:BT:99:LEU:CD1	2.22	0.70
1:CA:673:G:H2'	1:CA:674:G:C8	2.25	0.70
1:CA:1053:G:H4'	1:CA:1054:C:C5'	2.21	0.70
5:CE:81:GLU:OE1	5:CE:90:VAL:HG22	1.91	0.70
5:CE:152:ARG:O	8:CH:64:LYS:NZ	2.23	0.70
8:CH:85:ARG:HH12	8:CH:134:ILE:HG23	1.55	0.70
29:D3:17:LYS:HE2	29:D3:17:LYS:HA	1.73	0.70
36:DA:30:G:O2'	36:DA:31:C:H5'	1.90	0.70
36:DA:637:A:OP2	48:DP:115:LEU:HB2	1.91	0.70
36:DA:2415:G:H2'	36:DA:2416:C:C6	2.25	0.70
39:DD:43:ARG:HH21	39:DD:49:ILE:CG2	2.04	0.70
42:DG:40:ASN:HB3	42:DG:156:ASP:OD2	1.91	0.70
51:DS:52:SER:CB	51:DS:55:ALA:HB3	2.20	0.70
1:AA:495:A:H61	4:AD:119:GLN:HE22	1.39	0.70
1:AA:1186:G:C2'	1:AA:1187:G:H5"	2.22	0.70
13:AM:87:TYR:HE1	19:AS:81:ARG:HH22	1.37	0.70
36:BA:1403:C:H5"	36:BA:1471:A:H1'	1.73	0.70
36:BA:1517:G:H5'	36:BA:1517:G:H8	1.57	0.70
36:BA:2712:U:H1'	36:BA:2712(A):A:C8	2.27	0.70
38:BC:132:GLY:N	38:BC:133:PRO:HD2	2.06	0.70
40:BE:52:LEU:CB	40:BE:75:VAL:HB	2.22	0.70
41:BF:201:VAL:HA	41:BF:204:ASN:HD22	1.56	0.70
49:BQ:1:MET:HE2	49:BQ:44:ALA:HB1	1.72	0.70
52:BT:90:GLN:C	52:BT:92:GLY:H	1.93	0.70
56:BX:49:VAL:HG12	56:BX:87:GLN:HE21	1.55	0.70
1:CA:9:G:OP1	5:CE:122:GLU:HG3	1.92	0.70
1:CA:1502:A:H2	1:CA:1505:G:N1	1.87	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:15:THR:HG21	3:CC:181:ASN:HA	1.72	0.70
36:DA:45:C:OP2	36:DA:215:G:H5"	1.92	0.70
36:DA:266:G:C2'	36:DA:267:C:H5"	2.19	0.70
36:DA:383:U:H2'	36:DA:385:C:H5	1.56	0.70
39:DD:24:ILE:O	39:DD:26:LYS:N	2.25	0.70
54:DV:2:PHE:HB2	54:DV:42:GLY:HA2	1.73	0.70
6:AF:98:LEU:H	6:AF:98:LEU:HD12	1.55	0.70
25:AZ:320:VAL:HG13	25:AZ:397:ALA:O	1.92	0.70
28:B2:15:LYS:CG	28:B2:16:LEU:H	2.01	0.70
29:B3:35:ARG:HD3	29:B3:37:LEU:HD11	1.72	0.70
36:BA:671:C:O2'	36:BA:672:C:H5'	1.91	0.70
36:BA:1209:G:H21	36:BA:1210:A:N6	1.88	0.70
40:BE:59:VAL:HG13	40:BE:60:ASN:H	1.55	0.70
40:BE:77:ILE:HG22	40:BE:78:LEU:N	2.06	0.70
54:BV:2:PHE:HB2	54:BV:42:GLY:HA2	1.72	0.70
2:CB:94:ASN:H	2:CB:94:ASN:ND2	1.88	0.70
3:CC:112:SER:HB3	3:CC:115:LEU:HB2	1.72	0.70
8:CH:49:GLU:O	8:CH:49:GLU:HG3	1.92	0.70
36:DA:2373:G:H2'	36:DA:2374:C:C6	2.27	0.70
37:DB:40:U:O2	37:DB:43:C:H5"	1.91	0.70
52:DT:23:ARG:HA	52:DT:52:ILE:CD1	2.21	0.70
54:DV:34:GLU:O	54:DV:36:PRO:HD3	1.92	0.70
9:AI:10:ARG:HD3	9:AI:75:ASP:CB	2.22	0.70
13:AM:23:TYR:HD1	13:AM:23:TYR:O	1.75	0.70
22:AV:21:A:C2'	22:AV:22:G:H5"	2.22	0.70
32:B6:42:TRP:HA	32:B6:42:TRP:CE3	2.27	0.70
33:B7:26:GLY:O	33:B7:30:VAL:HG23	1.91	0.70
33:B7:29:LYS:HB3	33:B7:29:LYS:NZ	2.07	0.70
36:BA:1336:A:H2'	36:BA:1337:G:H8	1.56	0.70
36:BA:2342:C:O2'	36:BA:2374:C:H5"	1.91	0.70
40:BE:38:THR:HG22	40:BE:40:GLU:H	1.56	0.70
43:BH:94:TYR:HD1	43:BH:107:VAL:HA	1.57	0.70
1:CA:1117:G:H5'	1:CA:1117:G:H8	1.56	0.70
2:CB:7:VAL:CG1	2:CB:11:LEU:HD12	2.22	0.70
2:CB:33:TYR:HB2	2:CB:43:ASP:HB2	1.73	0.70
36:DA:880:G:H22	36:DA:897:C:H42	1.37	0.70
36:DA:1434:A:H61	36:DA:1558:A:H62	1.39	0.70
41:DF:52:LYS:HA	41:DF:56:GLU:OE1	1.92	0.70
42:DG:19:LEU:HD13	42:DG:32:PRO:HG2	1.72	0.70
3:AC:79:ARG:HH11	3:AC:79:ARG:CB	2.00	0.70
7:AG:37:ASN:HD21	9:AI:40:LEU:HA	1.57	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:85:LEU:O	10:AJ:87:THR:N	2.25	0.70
25:AZ:397:ALA:HB2	61:AZ:502:KIR:H252	1.73	0.70
36:BA:587:C:C5	48:BP:33:ARG:HG2	2.27	0.70
36:BA:1590:U:H2'	36:BA:1591:G:C8	2.26	0.70
39:BD:85:ASP:HB2	39:BD:92:ILE:HG23	1.72	0.70
39:BD:244:ARG:HG2	39:BD:245:PRO:HG3	1.74	0.70
42:BG:125:PHE:HA	42:BG:130:ASN:O	1.92	0.70
43:BH:85:LYS:NZ	43:BH:132:ARG:HA	2.01	0.70
5:CE:82:VAL:HG21	5:CE:138:ALA:HA	1.74	0.70
25:CZ:23:GLY:O	25:CZ:26:THR:HG22	1.92	0.70
25:CZ:101:GLY:HA3	25:CZ:210:ILE:HD12	1.74	0.70
32:D6:16:CYS:SG	32:D6:48:VAL:HG22	2.31	0.70
36:DA:330:A:O2'	36:DA:331:A:H8	1.74	0.70
42:DG:138:GLN:HB3	42:DG:153:ARG:O	1.91	0.70
53:DU:16:LYS:O	53:DU:20:LEU:HD23	1.92	0.70
53:DU:82:GLY:O	53:DU:84:LYS:N	2.24	0.70
55:DW:6:ILE:HG12	55:DW:104:THR:CG2	2.22	0.70
1:AA:1392:G:H21	1:AA:1502:A:H8	1.37	0.69
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.73	0.69
16:AP:53:VAL:HG23	16:AP:54:GLU:H	1.56	0.69
28:B2:29:LYS:HG2	28:B2:32:LEU:CD1	2.21	0.69
36:BA:389:G:C6	48:BP:70:GLN:HG3	2.27	0.69
40:BE:117:MET:CE	40:BE:136:ARG:HA	2.22	0.69
41:BF:125:LEU:HD23	41:BF:125:LEU:H	1.54	0.69
57:BY:28:LYS:HG2	57:BY:39:VAL:HG22	1.74	0.69
58:BZ:130:PRO:CA	58:BZ:133:ILE:HD11	2.13	0.69
22:CW:11:C:H2'	22:CW:12:U:H6	1.56	0.69
24:CY:64:U:H1'	25:CZ:391:GLY:H	1.55	0.69
36:DA:1494:A:H3'	36:DA:1494:A:N3	2.06	0.69
37:DB:3:C:H42	37:DB:118:G:H1	1.36	0.69
38:DC:127:LEU:O	38:DC:129:ARG:N	2.25	0.69
48:DP:148:LEU:O	48:DP:149:GLU:HB2	1.91	0.69
49:DQ:19:GLY:H	49:DQ:98:LYS:HD3	1.56	0.69
52:DT:74:ARG:C	52:DT:75:ILE:HD12	2.12	0.69
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.26	0.69
4:AD:11:LEU:HD13	4:AD:66:ARG:HD3	1.73	0.69
24:AY:32:OMC:HM22	24:AY:33:U:H5'	1.72	0.69
31:B5:48:GLU:O	31:B5:49:CYS:SG	2.50	0.69
32:B6:45:LYS:HB2	36:BA:2371:G:H4'	1.74	0.69
36:BA:156:U:H2'	36:BA:157:U:O4'	1.91	0.69
36:BA:612:C:H2'	36:BA:613:G:C5'	2.08	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:760:G:H2'	36:BA:761:A:H5'	1.72	0.69
36:BA:1038:C:H2'	36:BA:1039:G:H5"	1.74	0.69
36:BA:1657:C:H2'	36:BA:1658:C:C6	2.27	0.69
52:BT:29:ARG:HD3	52:BT:30:VAL:H	1.57	0.69
1:CA:1054:C:N4	24:CY:34:C:C2	2.60	0.69
8:CH:86:ILE:HD11	8:CH:136:GLU:HG2	1.74	0.69
19:CS:31:ILE:HG23	19:CS:49:ILE:HG23	1.71	0.69
29:D3:44:ARG:O	29:D3:47:VAL:HB	1.92	0.69
36:DA:1209:G:H21	36:DA:1210:A:N6	1.90	0.69
36:DA:2309:A:H2'	36:DA:2310:A:H5"	1.73	0.69
36:DA:2657:A:H2'	36:DA:2658:C:H5'	1.74	0.69
49:DQ:46:GLN:NE2	49:DQ:126:PRO:HD3	2.07	0.69
50:DR:60:LEU:O	50:DR:64:ARG:HG3	1.91	0.69
52:DT:23:ARG:HA	52:DT:52:ILE:HD11	1.72	0.69
1:AA:1116:C:C2'	1:AA:1117:G:H5"	2.22	0.69
1:AA:1277:C:HO2'	1:AA:1279:A:H8	1.40	0.69
1:AA:1325:C:C5'	21:AU:15:ARG:HH21	2.05	0.69
4:AD:62:GLN:HA	4:AD:62:GLN:HE21	1.57	0.69
4:AD:173:TRP:HB3	4:AD:187:ARG:HH22	1.55	0.69
8:AH:83:ILE:HG13	8:AH:137:VAL:HG22	1.75	0.69
32:B6:13:CYS:O	32:B6:21:TYR:HA	1.91	0.69
36:BA:984:A:H5"	36:BA:985:C:H5	1.56	0.69
39:BD:26:LYS:O	39:BD:27:THR:HB	1.91	0.69
42:BG:138:GLN:O	42:BG:144:ILE:HG21	1.93	0.69
47:BO:111:PHE:O	47:BO:115:VAL:HG23	1.92	0.69
48:BP:45:LEU:HD13	48:BP:46:LYS:N	2.02	0.69
50:BR:18:LEU:O	50:BR:18:LEU:HD13	1.91	0.69
53:BU:115:ALA:C	53:BU:117:GLN:H	1.95	0.69
58:BZ:40:ASP:HB3	58:BZ:43:GLU:CG	2.21	0.69
16:CP:4:ILE:HG13	16:CP:64:ALA:HB1	1.73	0.69
22:CW:64:A:H2'	22:CW:65:G:H8	1.56	0.69
27:D1:34:THR:HG21	27:D1:37:ILE:HG23	1.74	0.69
31:D5:31:VAL:HG21	36:DA:2886:G:H1'	1.74	0.69
36:DA:2870:C:H5"	50:DR:65:LEU:HD21	1.73	0.69
36:DA:2875:C:H4'	52:DT:5:ALA:HB2	1.72	0.69
41:DF:37:VAL:HG11	48:DP:7:ARG:NH2	2.06	0.69
47:DO:20:MET:HE3	47:DO:44:LYS:HE3	1.72	0.69
51:DS:12:PHE:O	51:DS:14:VAL:HG23	1.92	0.69
56:DX:35:THR:HB	56:DX:38:GLU:HG3	1.75	0.69
1:AA:1423:G:H5'	47:BO:49:ARG:NH2	2.08	0.69
4:AD:73:ARG:O	4:AD:77:ASN:HB2	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:24:CYS:SG	14:AN:25:VAL:N	2.64	0.69
34:B8:50:LEU:N	34:B8:53:PRO:HD3	2.07	0.69
36:BA:284:U:H2'	36:BA:285:C:C6	2.26	0.69
36:BA:1297:C:O2'	36:BA:1298:C:H5'	1.92	0.69
36:BA:1315:C:O2'	36:BA:1316:U:H5'	1.91	0.69
57:BY:27:VAL:HG12	57:BY:29:GLU:H	1.56	0.69
1:CA:534:U:H5'	1:CA:534:U:H6	1.56	0.69
4:CD:129:ASN:HD22	4:CD:129:ASN:N	1.88	0.69
9:CI:4:TYR:CD2	9:CI:88:TYR:HB2	2.27	0.69
32:D6:25:LYS:O	32:D6:25:LYS:HG3	1.92	0.69
36:DA:122:G:H1	36:DA:129:C:H42	1.41	0.69
38:DC:6:ARG:O	38:DC:10:LEU:HD23	1.93	0.69
40:DE:101:ARG:NH1	40:DE:171:GLU:HB2	2.07	0.69
43:DH:89:ILE:HD11	43:DH:128:PRO:O	1.93	0.69
49:DQ:43:THR:HG22	49:DQ:94:VAL:HG12	1.73	0.69
50:DR:29:LEU:O	50:DR:75:LEU:HD21	1.91	0.69
57:DY:61:ILE:O	57:DY:62:GLU:HB2	1.91	0.69
58:DZ:57:ILE:N	58:DZ:69:THR:O	2.25	0.69
7:AG:102:ARG:O	7:AG:106:GLN:HG3	1.92	0.69
12:AL:92:ASP:O	12:AL:94:PRO:HD3	1.92	0.69
25:AZ:8:THR:CG2	25:AZ:9:LYS:N	2.54	0.69
41:BF:19:GLU:O	41:BF:20:LEU:HG	1.92	0.69
42:BG:11:TYR:HA	42:BG:15:VAL:HB	1.72	0.69
43:BH:28:GLY:HA3	43:BH:79:VAL:HB	1.74	0.69
48:BP:105:LEU:HD12	48:BP:105:LEU:N	2.05	0.69
1:CA:377:G:OP1	16:CP:3:LYS:HD2	1.92	0.69
1:CA:722:A:H2'	1:CA:722:A:N3	2.07	0.69
1:CA:961:U:O2'	1:CA:962:C:H6	1.75	0.69
4:CD:189:PRO:HB2	4:CD:194:LEU:CD2	2.22	0.69
24:CY:24:A:H2'	24:CY:25:C:C6	2.27	0.69
36:DA:363:G:H2'	36:DA:363(A):A:C8	2.27	0.69
36:DA:1720:U:H3'	36:DA:1721:G:H5"	1.75	0.69
36:DA:2351:G:HO2'	36:DA:2352:A:H8	1.40	0.69
39:DD:65:ILE:H	39:DD:65:ILE:HD13	1.57	0.69
39:DD:275:LYS:HD2	39:DD:276:LYS:N	2.06	0.69
40:DE:116:VAL:HG23	40:DE:120:TRP:HB2	1.75	0.69
42:DG:131:TYR:HB3	42:DG:159:VAL:HG13	1.73	0.69
45:DK:32:UNK:HA	45:DK:63:UNK:CB	2.22	0.69
46:DN:17:ASP:OD1	46:DN:56:ASN:HB3	1.92	0.69
46:DN:111:PRO:HA	46:DN:114:ARG:NH1	2.08	0.69
48:DP:84:ASN:ND2	48:DP:116:GLY:HA2	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:83:LYS:CG	51:DS:105:ALA:HB3	2.22	0.69
54:DV:77:ALA:O	54:DV:79:VAL:HG22	1.92	0.69
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.73	0.69
2:AB:178:ARG:NH1	8:AH:71:GLY:O	2.25	0.69
3:AC:11:ARG:O	3:AC:14:ILE:O	2.10	0.69
3:AC:130:VAL:O	3:AC:134:ILE:HG13	1.92	0.69
8:AH:83:ILE:O	8:AH:83:ILE:HG23	1.91	0.69
10:AJ:78:ASN:HD22	10:AJ:81:THR:CG2	2.06	0.69
24:AY:62:U:H5'	24:AY:62:U:H6	1.57	0.69
25:AZ:64:ASN:H	25:AZ:83:PRO:HG2	1.54	0.69
36:BA:330:A:HO2'	36:BA:331:A:H8	1.40	0.69
36:BA:860:U:C5	36:BA:917:A:N7	2.59	0.69
36:BA:880:G:H22	36:BA:897:C:H42	1.38	0.69
36:BA:884:C:H2'	36:BA:885:C:H5'	1.75	0.69
36:BA:999:U:H5"	36:BA:1154:G:O6	1.92	0.69
36:BA:2189:U:C2'	36:BA:2190:G:H4'	2.22	0.69
36:BA:2304:G:H22	36:BA:2312:U:H3	1.39	0.69
36:BA:2672:G:C2'	36:BA:2673:G:H5"	2.22	0.69
40:BE:38:THR:HB	40:BE:41:LYS:HG2	1.75	0.69
40:BE:101:ARG:HD2	40:BE:169:ASN:O	1.93	0.69
40:BE:197:ILE:HD11	40:BE:199:ARG:HH21	1.58	0.69
58:BZ:155:LEU:HD23	58:BZ:155:LEU:H	1.57	0.69
1:CA:35:G:H2'	1:CA:36:C:C6	2.27	0.69
2:CB:54:THR:HG21	2:CB:201:ILE:HD11	1.74	0.69
3:CC:5:ILE:H	3:CC:5:ILE:CD1	2.04	0.69
4:CD:18:LYS:HB2	4:CD:33:MET:HG2	1.73	0.69
4:CD:26:CYS:HA	4:CD:31:CYS:HA	1.75	0.69
12:CL:89:ARG:NH1	12:CL:91:LYS:HG2	2.08	0.69
13:CM:15:VAL:O	13:CM:19:LEU:HD23	1.92	0.69
24:CY:75:C:H6	25:CZ:231:ILE:HA	1.55	0.69
26:D0:51:VAL:HG21	26:D0:79:VAL:O	1.92	0.69
34:D8:52:LYS:N	34:D8:53:PRO:HD2	2.08	0.69
40:DE:38:THR:HG22	40:DE:40:GLU:H	1.58	0.69
41:DF:155:LEU:HB2	41:DF:189:THR:HG21	1.74	0.69
41:DF:157:VAL:HG22	41:DF:193:VAL:O	1.93	0.69
57:DY:96:ILE:HD11	57:DY:99:CYS:SG	2.32	0.69
1:AA:266:G:C5'	1:AA:267:C:H5	2.05	0.69
7:AG:65:ALA:HB1	7:AG:127:ALA:HB3	1.75	0.69
7:AG:78:ARG:O	7:AG:78:ARG:HG3	1.93	0.69
12:AL:91:LYS:NZ	12:AL:91:LYS:HB3	2.07	0.69
22:AV:59:U:O2'	22:AV:60:U:C6	2.45	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:138:VAL:HG21	25:AZ:172:ARG:HB3	1.74	0.69
25:AZ:200:TRP:CD2	25:AZ:203:LEU:HD12	2.27	0.69
32:B6:30:THR:O	32:B6:32:ASN:N	2.26	0.69
36:BA:1678:G:H22	36:BA:1989:G:H22	1.40	0.69
38:BC:96:GLY:N	38:BC:99:ILE:HD11	2.08	0.69
40:BE:171:GLU:HB3	40:BE:185:LYS:HG2	1.75	0.69
41:BF:160:ASN:HD21	41:BF:162:LEU:HB2	1.57	0.69
42:BG:119:GLY:HA3	42:BG:181:ARG:HB3	1.75	0.69
51:BS:12:PHE:HD1	51:BS:13:ARG:N	1.89	0.69
1:CA:946:A:H2'	1:CA:947:G:C8	2.28	0.69
7:CG:79:ARG:HB2	7:CG:84:ASN:HD22	1.57	0.69
22:CV:4:C:H3'	22:CV:5:G:H5"	1.74	0.69
25:CZ:8:THR:CG2	25:CZ:9:LYS:N	2.55	0.69
36:DA:266:G:H2'	36:DA:267:C:C5'	2.22	0.69
36:DA:691:C:C1'	39:DD:43:ARG:NH1	2.56	0.69
52:DT:30:VAL:HA	52:DT:44:ASP:HA	1.75	0.69
58:DZ:20:ARG:HH11	58:DZ:20:ARG:HB3	1.58	0.69
1:AA:1039:C:C6	1:AA:1040:U:H5	2.07	0.69
1:AA:1502:A:H2	1:AA:1505:G:N1	1.89	0.69
25:AZ:198:LYS:HZ1	25:AZ:201:GLU:CD	1.95	0.69
27:B1:73:LEU:CD2	27:B1:94:LEU:HB3	2.22	0.69
35:B9:7:VAL:HG22	35:B9:34:GLN:HG3	1.74	0.69
36:BA:184:C:H2'	36:BA:185:U:C6	2.28	0.69
36:BA:1344:G:H4'	36:BA:1384:A:C5	2.28	0.69
36:BA:1681:G:HO2'	36:BA:1762:A:H2'	1.56	0.69
36:BA:1925:C:O2'	36:BA:1926:U:H5'	1.91	0.69
39:BD:45:ASN:CG	39:BD:46:GLN:H	1.95	0.69
42:BG:31:VAL:HG22	42:BG:33:ARG:HG3	1.74	0.69
43:BH:94:TYR:HE2	43:BH:160:LYS:HB3	1.58	0.69
56:BX:40:LYS:HG2	56:BX:41:ASN:HD22	1.58	0.69
1:CA:977:A:N3	1:CA:977:A:C2'	2.56	0.69
2:CB:44:LEU:HA	2:CB:47:THR:HB	1.75	0.69
5:CE:18:ARG:HG3	5:CE:18:ARG:NH1	2.07	0.69
9:CI:114:TYR:CD2	10:CJ:60:ARG:HG2	2.27	0.69
13:CM:15:VAL:HG22	13:CM:43:THR:O	1.93	0.69
13:CM:17:VAL:O	13:CM:20:THR:HB	1.92	0.69
16:CP:18:ARG:O	16:CP:20:VAL:HG12	1.91	0.69
19:CS:40:ILE:HB	19:CS:68:GLY:HA2	1.74	0.69
20:CT:50:GLU:HA	20:CT:100:ILE:HD13	1.74	0.69
22:CW:39:U:H2'	22:CW:40:C:H5'	1.74	0.69
25:CZ:19:HIS:HE1	36:DA:2661:G:P	2.16	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:198:LYS:HZ1	25:CZ:201:GLU:CD	1.96	0.69
28:D2:47:ASN:HB2	36:DA:95:G:H1'	1.75	0.69
36:DA:291:C:H2'	36:DA:292:C:C6	2.27	0.69
36:DA:361:G:H2'	36:DA:362:U:H4'	1.74	0.69
36:DA:1779:U:C5	36:DA:1784:A:N7	2.61	0.69
36:DA:2304:G:H22	36:DA:2312:U:H3	1.41	0.69
36:DA:2309:A:H2'	36:DA:2310:A:C5'	2.22	0.69
39:DD:63:ARG:HG2	39:DD:63:ARG:NH1	2.05	0.69
39:DD:68:LYS:HB2	39:DD:70:TRP:CZ2	2.27	0.69
40:DE:33:VAL:HG13	40:DE:69:LYS:HD2	1.73	0.69
42:DG:68:PRO:HB3	42:DG:91:ARG:O	1.93	0.69
52:DT:29:ARG:CB	52:DT:85:LYS:HA	2.22	0.69
1:AA:353:A:H5'	1:AA:353:A:C8	2.27	0.69
1:AA:1006:C:H2'	1:AA:1007:C:C6	2.28	0.69
1:AA:1286:A:C2	21:AU:18:TYR:OH	2.46	0.69
2:AB:16:HIS:HB3	2:AB:210:SER:HB2	1.75	0.69
4:AD:133:VAL:HG11	4:AD:138:TYR:CD2	2.23	0.69
22:AW:27:G:O2'	22:AW:28:G:H5'	1.91	0.69
25:AZ:64:ASN:HD22	25:AZ:64:ASN:H	1.39	0.69
42:BG:119:GLY:HA3	42:BG:181:ARG:CB	2.22	0.69
46:BN:13:TRP:O	46:BN:135:PRO:HD2	1.93	0.69
48:BP:99:LEU:O	48:BP:99:LEU:HD23	1.93	0.69
48:BP:126:VAL:HG22	48:BP:145:PRO:HG2	1.73	0.69
57:BY:14:LEU:HB3	57:BY:73:ARG:HB2	1.74	0.69
1:CA:105:G:H2'	1:CA:106:C:C6	2.27	0.69
1:CA:724:G:O2'	1:CA:725:G:H5'	1.93	0.69
5:CE:96:PRO:HA	5:CE:117:ASP:OD2	1.92	0.69
6:CF:82:ARG:HB2	6:CF:85:VAL:HG23	1.74	0.69
13:CM:65:LYS:H	13:CM:65:LYS:CD	2.05	0.69
14:CN:22:THR:HB	14:CN:33:VAL:HG21	1.74	0.69
27:D1:67:ILE:N	27:D1:68:PRO:HD2	2.08	0.69
36:DA:1436:G:C3'	36:DA:1437:C:H5"	2.23	0.69
36:DA:1722:A:O2'	36:DA:1739:U:H5"	1.93	0.69
41:DF:25:PRO:CB	41:DF:119:ARG:HB2	2.22	0.69
51:DS:24:LEU:O	51:DS:85:VAL:HB	1.93	0.69
51:DS:89:ARG:HH11	51:DS:89:ARG:HG2	1.57	0.69
53:DU:32:PHE:CB	53:DU:36:ARG:HH22	2.05	0.69
56:DX:12:VAL:HG23	56:DX:13:LEU:N	2.08	0.69
58:DZ:163:LEU:HD11	58:DZ:167:PRO:HB3	1.75	0.69
2:AB:18:GLY:H	2:AB:42:ILE:CG2	2.05	0.69
22:AV:18:G:O2'	22:AV:57:G:N2	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:4:G:C2'	24:AY:5:G:H5"	2.23	0.69
25:AZ:121:LEU:HD22	61:AZ:502:KIR:O4	1.93	0.69
36:BA:1061:U:H4'	36:BA:1070:A:C1'	2.23	0.69
36:BA:2138:C:H2'	36:BA:2139:C:H6	1.57	0.69
36:BA:2631:G:H21	40:BE:61:ARG:NH1	1.91	0.69
36:BA:2807:G:H2'	36:BA:2808:U:H5"	1.74	0.69
51:BS:80:LEU:O	51:BS:80:LEU:HD23	1.93	0.69
57:BY:13:VAL:HG21	57:BY:72:VAL:HB	1.73	0.69
57:BY:75:ILE:HG23	57:BY:76:CYS:N	2.07	0.69
58:BZ:108:PRO:HB3	58:BZ:141:VAL:HG11	1.76	0.69
4:CD:67:ILE:O	4:CD:67:ILE:HG23	1.93	0.69
4:CD:194:LEU:HB3	4:CD:196:LEU:HD13	1.73	0.69
34:D8:13:ARG:NH2	36:DA:250:G:OP2	2.26	0.69
42:DG:95:ARG:O	42:DG:96:ARG:HG2	1.92	0.69
43:DH:51:ARG:HG3	43:DH:52:VAL:H	1.58	0.69
47:DO:78:ARG:HG3	47:DO:79:PHE:N	2.07	0.69
1:AA:1459:C:H2'	1:AA:1460:A:H8	1.57	0.68
29:B3:2:PRO:HB2	29:B3:58:VAL:CG1	2.22	0.68
36:BA:197:A:H5'	36:BA:197:A:C8	2.28	0.68
36:BA:1019:U:HO2'	36:BA:1021:A:H2	1.41	0.68
36:BA:2756:U:H1'	36:BA:2757:A:C5'	2.21	0.68
46:BN:115:ARG:HA	46:BN:118:LYS:NZ	2.08	0.68
48:BP:96:THR:HG22	48:BP:126:VAL:CG2	2.23	0.68
48:BP:147:LEU:CG	48:BP:148:LEU:H	2.00	0.68
1:CA:1499:A:H5'	1:CA:1499:A:C8	2.28	0.68
3:CC:40:ARG:O	3:CC:44:GLU:HB2	1.92	0.68
5:CE:64:ARG:HG3	5:CE:64:ARG:HH11	1.59	0.68
17:CQ:45:HIS:CD2	17:CQ:47:PRO:HD3	2.28	0.68
19:CS:53:ASN:O	19:CS:77:THR:HG22	1.94	0.68
24:CY:62:U:H5'	24:CY:62:U:H6	1.56	0.68
36:DA:1779:U:H5	36:DA:1784:A:N7	1.91	0.68
36:DA:2189:U:C2'	36:DA:2190:G:H4'	2.23	0.68
36:DA:2298:A:H62	36:DA:2318:G:H8	1.40	0.68
36:DA:2645:G:H3'	36:DA:2646:C:C5'	2.23	0.68
37:DB:8:U:H6	37:DB:8:U:C5'	2.01	0.68
41:DF:168:ARG:HG3	41:DF:175:THR:HG21	1.74	0.68
41:DF:187:VAL:HG12	48:DP:7:ARG:HA	1.75	0.68
42:DG:105:LYS:O	42:DG:109:VAL:HB	1.92	0.68
43:DH:76:VAL:O	43:DH:79:VAL:HG22	1.93	0.68
46:DN:107:LEU:HB3	46:DN:108:PRO:HD2	1.75	0.68
48:DP:45:LEU:HD13	48:DP:46:LYS:H	1.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:63:ARG:HA	50:DR:80:PHE:CZ	2.28	0.68
52:DT:77:PRO:O	52:DT:78:LEU:HB2	1.93	0.68
57:DY:67:LEU:HD23	57:DY:68:HIS:N	2.08	0.68
58:DZ:152:ALA:O	58:DZ:154:ASP:N	2.24	0.68
1:AA:111:G:H1	1:AA:330:C:H41	1.38	0.68
1:AA:1226:C:N4	13:AM:104:ARG:HD2	2.08	0.68
3:AC:3:ASN:O	3:AC:4:LYS:HB2	1.93	0.68
25:AZ:242:ILE:HB	25:AZ:282:ALA:HA	1.75	0.68
32:B6:52:VAL:HG12	32:B6:53:LYS:H	1.58	0.68
36:BA:1494:A:C2'	36:BA:1495:A:H5"	2.23	0.68
36:BA:2162:G:O2'	36:BA:2173:A:N6	2.26	0.68
49:BQ:78:PRO:HD2	49:BQ:81:VAL:HG11	1.74	0.68
51:BS:40:ILE:HA	51:BS:47:THR:HA	1.75	0.68
55:BW:24:ILE:HG21	55:BW:36:LEU:HD21	1.73	0.68
57:BY:13:VAL:HG11	57:BY:28:LYS:HD3	1.75	0.68
1:CA:187:C:O2	20:CT:105:SER:HB3	1.94	0.68
2:CB:57:PHE:HE2	2:CB:185:ILE:HD11	1.59	0.68
3:CC:82:GLU:CD	3:CC:82:GLU:H	1.96	0.68
3:CC:116:VAL:HG21	3:CC:202:ILE:HD11	1.75	0.68
13:CM:74:VAL:HA	13:CM:77:ASN:HD22	1.59	0.68
32:D6:42:TRP:CE3	32:D6:42:TRP:HA	2.28	0.68
36:DA:482:A:H4'	57:DY:47:LYS:HG3	1.74	0.68
36:DA:709:U:H2'	36:DA:710:G:C8	2.26	0.68
48:DP:41:ARG:HH11	48:DP:41:ARG:CB	2.01	0.68
50:DR:4:LEU:HD13	50:DR:7:GLY:H	1.55	0.68
57:DY:67:LEU:HD23	57:DY:68:HIS:H	1.58	0.68
2:AB:134:GLU:C	2:AB:136:VAL:H	1.96	0.68
25:AZ:324:LYS:O	25:AZ:327:GLU:HG3	1.93	0.68
36:BA:335:C:H4'	57:BY:73:ARG:NH1	2.03	0.68
36:BA:1039:G:H1	36:BA:1116:C:N4	1.92	0.68
36:BA:1064:C:H2'	36:BA:1065:U:C5'	2.23	0.68
1:CA:148:G:H1	1:CA:174:C:H42	1.40	0.68
17:CQ:18:THR:CG2	17:CQ:69:LYS:HD2	2.23	0.68
25:CZ:313:HIS:CG	25:CZ:403:ILE:HG21	2.28	0.68
27:D1:30:VAL:HG23	27:D1:31:GLY:H	1.56	0.68
36:DA:1921:G:O2'	36:DA:1922:G:H5'	1.94	0.68
36:DA:2327:A:H2'	36:DA:2328:A:C8	2.28	0.68
13:AM:25:ILE:HD11	13:AM:60:VAL:HG11	1.76	0.68
15:AO:26:GLU:OE2	15:AO:77:ARG:HD2	1.93	0.68
16:AP:20:VAL:CG2	16:AP:32:TYR:HB2	2.23	0.68
21:AU:6:ARG:HD3	21:AU:15:ARG:HH11	1.50	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:28:C:H2'	24:AY:29:G:H8	1.58	0.68
26:B0:43:THR:HG22	36:BA:2331:G:O3'	1.93	0.68
39:BD:99:ASP:OD1	39:BD:99:ASP:C	2.32	0.68
40:BE:167:VAL:HG22	40:BE:170:LEU:HD11	1.74	0.68
42:BG:29:TRP:HA	42:BG:29:TRP:HE3	1.55	0.68
47:BO:47:ILE:HG23	47:BO:48:PRO:HD2	1.73	0.68
1:CA:1258:G:O2'	1:CA:1259:C:H5'	1.92	0.68
13:CM:5:ALA:HB2	13:CM:66:LEU:HD23	1.74	0.68
16:CP:39:TYR:CD2	16:CP:73:LEU:HD11	2.28	0.68
16:CP:58:TYR:CE1	16:CP:62:VAL:HG21	2.29	0.68
25:CZ:85:HIS:CE1	36:DA:2661:G:O2'	2.46	0.68
25:CZ:324:LYS:O	25:CZ:327:GLU:HG3	1.93	0.68
32:D6:53:LYS:HD3	32:D6:53:LYS:H	1.58	0.68
36:DA:621:A:C2'	36:DA:622:G:H5'	2.18	0.68
36:DA:2845:G:H2'	36:DA:2846:G:H8	1.57	0.68
39:DD:147:LEU:HD13	39:DD:155:LEU:HD11	1.75	0.68
41:DF:65:TRP:CZ3	41:DF:75:HIS:HD2	2.11	0.68
43:DH:155:SER:O	43:DH:157:TYR:N	2.24	0.68
46:DN:3:THR:CG2	46:DN:4:TYR:H	2.05	0.68
47:DO:19:ILE:HD12	47:DO:41:ALA:CB	2.24	0.68
48:DP:81:GLN:NE2	48:DP:106:LEU:HA	2.09	0.68
50:DR:96:ARG:NH1	50:DR:117:VAL:HG21	2.09	0.68
25:AZ:198:LYS:O	25:AZ:198:LYS:HD3	1.93	0.68
32:B6:8:LYS:O	32:B6:9:LEU:HB3	1.92	0.68
36:BA:1050:A:C2'	36:BA:1051:G:H5'	2.23	0.68
36:BA:1678:G:N2	36:BA:1989:G:H22	1.90	0.68
36:BA:2262:U:H2'	36:BA:2263:C:H6	1.57	0.68
36:BA:2287:A:H2	36:BA:2346:A:N1	1.90	0.68
36:BA:2308:G:O6	36:BA:2310:A:H2'	1.93	0.68
40:BE:104:VAL:HG11	40:BE:188:VAL:HG21	1.76	0.68
48:BP:112:LEU:H	48:BP:128:HIS:HD2	1.41	0.68
1:CA:411:A:H62	1:CA:413:G:H21	1.41	0.68
1:CA:1157:A:H4'	1:CA:1158:C:O5'	1.93	0.68
1:CA:1308:U:H5"	13:CM:98:VAL:CG2	2.23	0.68
16:CP:2:VAL:HG22	16:CP:2:VAL:O	1.92	0.68
36:DA:2850:A:H2	50:DR:61:HIS:HD1	1.34	0.68
38:DC:87:GLU:HG2	38:DC:94:VAL:HG11	1.76	0.68
41:DF:32:LEU:O	41:DF:36:VAL:HG23	1.93	0.68
53:DU:95:LEU:HD12	54:DV:11:GLN:HG3	1.74	0.68
2:AB:106:LYS:HG3	2:AB:107:THR:N	2.08	0.68
2:AB:200:ILE:H	2:AB:200:ILE:HD12	1.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:16:LEU:HD12	19:AS:16:LEU:N	2.08	0.68
25:AZ:193:ASN:OD1	25:AZ:195:TRP:CB	2.41	0.68
36:BA:925:C:H2'	36:BA:926:A:C5'	2.23	0.68
36:BA:2673:G:O2'	36:BA:2674:G:H5'	1.93	0.68
41:BF:37:VAL:HG11	48:BP:7:ARG:HH22	1.59	0.68
53:BU:92:ARG:HH21	54:BV:10:LYS:HB3	1.58	0.68
58:BZ:151:HIS:HA	58:BZ:171:ILE:HG12	1.74	0.68
1:CA:737:A:H2'	1:CA:738:C:H6	1.57	0.68
13:CM:16:ASP:HA	13:CM:34:LEU:HD11	1.74	0.68
18:CR:73:ALA:HB3	18:CR:79:LEU:HD12	1.75	0.68
20:CT:43:LEU:HD22	20:CT:48:LYS:HG3	1.75	0.68
24:CY:77:TRP:CE2	25:CZ:67:HIS:HB2	2.29	0.68
36:DA:1348:G:C2'	36:DA:1349:A:H5"	2.23	0.68
38:DC:20:TYR:CE2	38:DC:28:LEU:HD12	2.28	0.68
41:DF:132:VAL:HG13	41:DF:133:ASN:N	2.09	0.68
47:DO:78:ARG:HH11	47:DO:78:ARG:CB	2.06	0.68
54:DV:2:PHE:H	54:DV:42:GLY:HA3	1.58	0.68
4:AD:120:LEU:HB3	4:AD:126:ILE:HD13	1.73	0.68
4:AD:162:LEU:HD13	4:AD:162:LEU:O	1.93	0.68
5:AE:68:GLU:O	5:AE:68:GLU:HG3	1.94	0.68
17:AQ:66:SER:O	17:AQ:70:ARG:NH1	2.26	0.68
28:B2:35:LEU:HG	28:B2:50:ILE:HG23	1.76	0.68
35:B9:22:ARG:NH2	36:BA:2741:A:OP1	2.25	0.68
36:BA:1821:A:H2'	36:BA:1822:G:C8	2.29	0.68
38:BC:171:ILE:HD13	38:BC:196:LEU:HD21	1.76	0.68
40:BE:37:ARG:HA	40:BE:42:ASP:OD2	1.94	0.68
46:BN:48:MET:HE3	46:BN:48:MET:N	2.07	0.68
52:BT:65:LYS:HG3	52:BT:66:VAL:H	1.58	0.68
1:CA:560:U:H5'	1:CA:566:G:N2	2.07	0.68
2:CB:47:THR:HA	2:CB:202:PRO:HG2	1.74	0.68
10:CJ:75:ILE:HG13	10:CJ:76:ASN:N	2.07	0.68
32:D6:11:LEU:CD1	32:D6:51:GLU:HG3	2.24	0.68
36:DA:1305:C:O2'	36:DA:1306:C:H5'	1.94	0.68
36:DA:2761:G:H2'	36:DA:2762:G:C5'	2.22	0.68
40:DE:57:LYS:HE3	40:DE:57:LYS:CA	2.18	0.68
50:DR:63:ARG:HG3	50:DR:80:PHE:CE2	2.27	0.68
53:DU:34:LYS:HA	53:DU:34:LYS:HE2	1.75	0.68
54:DV:72:VAL:CG2	54:DV:85:LYS:HB3	2.24	0.68
1:AA:1120:G:H2'	1:AA:1121:U:C6	2.29	0.68
4:AD:59:ARG:HA	4:AD:59:ARG:NE	2.08	0.68
18:AR:44:LEU:HD23	18:AR:80:PRO:HD2	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:B9:35:ARG:HD3	36:BA:2742:C:OP1	1.93	0.68
36:BA:761:A:H8	36:BA:761:A:O5'	1.77	0.68
36:BA:1051:G:H2'	36:BA:1052:C:C4	2.28	0.68
36:BA:1879:C:C3'	36:BA:1880:C:H5"	2.24	0.68
51:BS:59:LYS:CG	51:BS:60:GLY:H	1.99	0.68
58:BZ:151:HIS:HB2	58:BZ:169:GLU:O	1.93	0.68
1:CA:723:U:O2	1:CA:723:U:H2'	1.92	0.68
1:CA:992:U:H3	1:CA:1044:A:H62	1.41	0.68
1:CA:1277:C:H1'	1:CA:1282:C:O2	1.93	0.68
3:CC:95:THR:HG22	3:CC:95:THR:O	1.91	0.68
9:CI:95:LYS:HG3	9:CI:96:LEU:HD13	1.74	0.68
17:CQ:7:THR:O	17:CQ:23:VAL:HG13	1.94	0.68
24:CY:7:G:H3'	24:CY:8:4SU:C5'	2.24	0.68
25:CZ:93:ILE:HD11	25:CZ:389:ARG:NH1	2.09	0.68
36:DA:186:G:H2'	36:DA:187:G:H8	1.58	0.68
36:DA:914:C:H2'	36:DA:915:C:H5'	1.75	0.68
36:DA:2264:C:H2'	36:DA:2265:U:H6	1.59	0.68
36:DA:2886:G:H2'	36:DA:2887:U:H6	1.59	0.68
38:DC:10:LEU:HD13	38:DC:13:LYS:NZ	2.09	0.68
49:DQ:68:ILE:HD13	49:DQ:103:MET:HG2	1.75	0.68
58:DZ:162:GLU:C	58:DZ:163:LEU:HD23	2.14	0.68
1:AA:1139:G:H5'	1:AA:1140:C:OP1	1.92	0.68
13:AM:70:LEU:O	13:AM:73:GLU:HB3	1.94	0.68
22:AV:68:C:O2'	22:AV:69:G:H5"	1.93	0.68
36:BA:2422:A:H4'	36:BA:2423:U:OP1	1.94	0.68
37:BB:7:G:H4'	51:BS:29:PHE:HD2	1.59	0.68
39:BD:69:ARG:HH11	39:BD:130:ALA:CB	2.06	0.68
42:BG:5:VAL:HG12	42:BG:6:ALA:N	2.09	0.68
57:BY:7:VAL:HB	57:BY:8:LYS:CD	2.24	0.68
57:BY:46:LYS:HG2	57:BY:47:LYS:N	2.08	0.68
1:CA:973:G:C1'	10:CJ:55:LYS:HE2	2.23	0.68
6:CF:3:ARG:HD3	6:CF:64:GLN:HE21	1.59	0.68
36:DA:296:C:O2'	36:DA:297:C:H5'	1.94	0.68
36:DA:512:G:O2'	36:DA:513:A:H8	1.77	0.68
36:DA:521:G:H2'	36:DA:522:G:H8	1.59	0.68
36:DA:945:A:N3	36:DA:945:A:H5'	2.08	0.68
46:DN:46:VAL:HG13	46:DN:48:MET:HG3	1.76	0.68
50:DR:96:ARG:NH1	50:DR:117:VAL:HG11	2.09	0.68
52:DT:100:TYR:HD2	52:DT:103:ARG:HH21	1.40	0.68
58:DZ:157:LEU:HD11	58:DZ:163:LEU:CD2	2.24	0.68
11:AK:27:ASN:ND2	11:AK:28:THR:H	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:74:ARG:HD3	18:AR:81:PHE:CD1	2.29	0.68
24:AY:23:A:C2'	24:AY:24:A:H5'	2.24	0.68
25:AZ:26:THR:HG21	60:AZ:501:GDP:C8	2.28	0.68
36:BA:445:C:O2'	36:BA:446:G:H5'	1.93	0.68
36:BA:2377:A:H4'	51:BS:107:GLU:O	1.92	0.68
38:BC:53:ARG:HB3	38:BC:53:ARG:NH1	2.09	0.68
43:BH:13:LYS:HE2	43:BH:13:LYS:HA	1.76	0.68
53:BU:34:LYS:HE2	53:BU:34:LYS:HA	1.74	0.68
1:CA:1127:G:H1	1:CA:1145:C:H42	1.42	0.68
16:CP:50:LYS:HD3	16:CP:51:VAL:N	2.09	0.68
33:D7:43:THR:HG23	33:D7:44:PRO:HD2	1.75	0.68
36:DA:512:G:HO2'	36:DA:513:A:H8	1.39	0.68
36:DA:1717:G:H2'	36:DA:1718:G:H5"	1.76	0.68
38:DC:47:LEU:HD12	38:DC:47:LEU:N	2.09	0.68
38:DC:100:ILE:CD1	38:DC:127:LEU:HB2	2.24	0.68
38:DC:181:PRO:HG2	38:DC:184:LYS:HG2	1.75	0.68
39:DD:176:ARG:HH11	39:DD:176:ARG:HG2	1.58	0.68
1:AA:731:G:OP1	1:AA:766:A:H1'	1.94	0.67
17:AQ:43:LEU:O	17:AQ:69:LYS:HG3	1.93	0.67
22:AV:44:G:H3'	22:AV:45:U:H5'	1.75	0.67
28:B2:42:GLY:O	28:B2:43:GLN:HG3	1.93	0.67
32:B6:15:GLU:O	32:B6:15:GLU:HG2	1.93	0.67
36:BA:1538:G:H2'	36:BA:1539:G:C8	2.28	0.67
1:CA:367:U:H4'	25:CZ:291:ARG:NH1	2.09	0.67
1:CA:1305:G:H3'	21:CU:6:ARG:NH2	2.09	0.67
4:CD:138:TYR:HD1	4:CD:139:ARG:N	1.92	0.67
5:CE:7:GLU:O	5:CE:8:GLU:HB3	1.94	0.67
13:CM:35:GLU:C	13:CM:37:THR:H	1.94	0.67
23:CX:22:U:O2'	23:CX:23:G:H5'	1.94	0.67
27:D1:87:PRO:CG	27:D1:88:LYS:H	2.07	0.67
30:D4:28:LYS:HA	30:D4:28:LYS:HE3	1.76	0.67
40:DE:188:VAL:CG2	40:DE:189:PRO:HD2	2.23	0.67
46:DN:21:LYS:HE3	46:DN:25:ARG:HB3	1.76	0.67
48:DP:126:VAL:HG22	48:DP:145:PRO:HG2	1.76	0.67
52:DT:28:VAL:HG23	52:DT:47:GLY:O	1.94	0.67
52:DT:129:ARG:CZ	52:DT:131:ALA:HB3	2.25	0.67
53:DU:59:ARG:HG2	53:DU:59:ARG:NH1	2.05	0.67
58:DZ:145:GLU:HA	58:DZ:145:GLU:OE1	1.94	0.67
1:AA:1125:U:O4	10:AJ:38:ILE:HG21	1.95	0.67
1:AA:1531:A:H5"	1:AA:1531:A:H8	1.59	0.67
5:AE:82:VAL:HG21	5:AE:138:ALA:HA	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:8:4SU:H5"	24:AY:8:4SU:H6	1.75	0.67
27:B1:12:PRO:HB3	27:B1:43:TYR:CD1	2.29	0.67
27:B1:46:LEU:HD23	27:B1:63:ALA:HA	1.75	0.67
38:BC:175:VAL:HG12	38:BC:188:ASN:HB3	1.76	0.67
40:BE:5:LEU:HD12	40:BE:51:PHE:HB2	1.77	0.67
41:BF:157:VAL:HG23	41:BF:194:MET:HG3	1.76	0.67
1:CA:192:U:H2'	1:CA:193:C:H6	1.58	0.67
3:CC:107:GLN:CD	3:CC:107:GLN:H	1.96	0.67
7:CG:140:ASP:HA	7:CG:143:ARG:NH1	2.09	0.67
10:CJ:24:VAL:HG21	10:CJ:37:PRO:CG	2.24	0.67
25:CZ:163:PHE:CD1	25:CZ:164:PRO:HD2	2.29	0.67
27:D1:27:GLU:O	27:D1:29:GLY:N	2.27	0.67
36:DA:320:A:H2'	41:DF:136:THR:OG1	1.94	0.67
36:DA:1064:C:H2'	36:DA:1065:U:C5'	2.22	0.67
36:DA:1069:A:H1'	36:DA:1070:A:OP2	1.95	0.67
36:DA:1352:U:O2'	36:DA:1353:A:H5'	1.94	0.67
36:DA:1400:G:H2'	36:DA:1401:G:C8	2.29	0.67
36:DA:1932:A:H2'	36:DA:1933:G:O4'	1.94	0.67
36:DA:2720:U:H2'	36:DA:2720:U:O2	1.93	0.67
39:DD:70:TRP:O	39:DD:73:VAL:HG23	1.94	0.67
40:DE:203:LYS:O	40:DE:203:LYS:HD2	1.93	0.67
43:DH:136:ILE:HD12	43:DH:136:ILE:N	2.08	0.67
46:DN:21:LYS:HD3	46:DN:22:THR:N	2.09	0.67
48:DP:52:GLU:HA	48:DP:52:GLU:OE1	1.92	0.67
51:DS:19:LYS:HB3	51:DS:20:ARG:NH2	2.09	0.67
4:AD:57:ARG:HB3	4:AD:206:PHE:HB2	1.75	0.67
5:AE:99:GLY:O	5:AE:117:ASP:HA	1.94	0.67
6:AF:15:ASP:OD2	6:AF:17:SER:HB3	1.94	0.67
13:AM:54:VAL:HA	13:AM:57:ARG:HH12	1.60	0.67
20:AT:20:LEU:O	20:AT:24:LEU:HD23	1.94	0.67
28:B2:47:ASN:CA	28:B2:50:ILE:HB	2.24	0.67
29:B3:22:ALA:CB	29:B3:46:ASN:HD21	2.07	0.67
32:B6:18:ARG:HG3	32:B6:19:ARG:N	2.09	0.67
36:BA:84:A:H5"	57:BY:9:LYS:HD2	1.75	0.67
36:BA:1331:A:O2'	36:BA:1332:G:H8	1.78	0.67
40:BE:63:LEU:O	40:BE:63:LEU:HD23	1.94	0.67
41:BF:114:VAL:HG21	41:BF:202:PHE:CE2	2.27	0.67
47:BO:87:ILE:HG22	47:BO:88:ASN:O	1.93	0.67
52:BT:105:LEU:O	52:BT:107:ASP:OD1	2.12	0.67
58:BZ:69:THR:HB	58:BZ:89:PHE:O	1.95	0.67
1:CA:686:U:H1'	11:CK:42:TRP:HE1	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:41:ARG:CG	12:CL:42:THR:H	2.07	0.67
17:CQ:40:LYS:HD3	17:CQ:42:TYR:OH	1.93	0.67
20:CT:87:LYS:O	20:CT:91:LEU:HG	1.95	0.67
39:DD:218:ARG:HH11	39:DD:218:ARG:CG	2.04	0.67
48:DP:64:LYS:O	48:DP:66:GLY:N	2.27	0.67
49:DQ:79:LEU:HD22	49:DQ:80:GLU:HG3	1.75	0.67
50:DR:117:VAL:HG22	50:DR:118:GLU:H	1.58	0.67
1:AA:189(H):G:O2'	1:AA:189(I):G:H8	1.77	0.67
1:AA:1321:C:H3'	1:AA:1322:C:H5"	1.77	0.67
9:AI:99:LEU:N	9:AI:99:LEU:HD22	2.08	0.67
10:AJ:50:ILE:HD13	10:AJ:50:ILE:N	2.10	0.67
25:AZ:222:LEU:HB3	25:AZ:243:GLU:HB2	1.76	0.67
31:B5:33:CYS:HB3	31:B5:36:CYS:O	1.94	0.67
32:B6:17:LYS:CB	32:B6:18:ARG:HH12	2.08	0.67
42:BG:60:LEU:O	42:BG:64:THR:HG22	1.95	0.67
43:BH:37:VAL:HG12	43:BH:38:SER:H	1.59	0.67
52:BT:11:GLU:CD	52:BT:11:GLU:H	1.96	0.67
58:BZ:100:VAL:HG11	58:BZ:137:ILE:HG12	1.76	0.67
1:CA:538:G:P	12:CL:115:LYS:HB2	2.34	0.67
1:CA:1116:C:H2'	1:CA:1117:G:C5'	2.23	0.67
3:CC:79:ARG:HB2	3:CC:79:ARG:NH1	2.09	0.67
16:CP:26:ARG:HH11	16:CP:26:ARG:HG2	1.59	0.67
25:CZ:320:VAL:HG13	25:CZ:397:ALA:O	1.94	0.67
32:D6:7:ILE:HG22	32:D6:27:LYS:HZ3	1.60	0.67
36:DA:121:G:H4'	36:DA:149:A:H5'	1.76	0.67
36:DA:419:C:H2'	36:DA:420:C:H6	1.59	0.67
36:DA:1747(A):G:H2'	36:DA:1748:G:C5'	2.22	0.67
36:DA:2074:U:H2'	36:DA:2075:U:C6	2.29	0.67
52:DT:32:TYR:CD1	52:DT:32:TYR:N	2.59	0.67
1:AA:255:G:H1'	17:AQ:16:GLN:HE21	1.56	0.67
1:AA:973:G:C1'	10:AJ:55:LYS:CE	2.71	0.67
4:AD:173:TRP:O	4:AD:174:LEU:HD23	1.95	0.67
24:AY:24:A:H2'	24:AY:25:C:C6	2.30	0.67
25:AZ:68:VAL:C	25:AZ:68:VAL:N	2.48	0.67
25:AZ:124:ARG:O	61:AZ:502:KIR:H443	1.95	0.67
32:B6:30:THR:O	32:B6:31:PRO:C	2.33	0.67
36:BA:1021:A:H2'	36:BA:1023:U:H5"	1.76	0.67
36:BA:1821:A:H2'	36:BA:1822:G:H8	1.59	0.67
40:BE:36:ARG:NH2	40:BE:88:GLY:HA2	2.09	0.67
46:BN:119:ARG:HG3	46:BN:119:ARG:NH1	2.06	0.67
51:BS:90:GLY:C	51:BS:92:TYR:H	1.98	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BW:65:LEU:HD23	55:BW:68:ARG:HD2	1.76	0.67
57:BY:42:VAL:HG21	57:BY:67:LEU:CD1	2.25	0.67
1:CA:691:G:H2'	1:CA:692:U:C6	2.29	0.67
4:CD:18:LYS:H	4:CD:33:MET:HE3	1.60	0.67
8:CH:6:ILE:HD12	8:CH:6:ILE:N	2.08	0.67
17:CQ:11:VAL:HG22	17:CQ:20:THR:O	1.95	0.67
22:CW:55:U:C3'	22:CW:56:C:H5"	2.24	0.67
25:CZ:198:LYS:O	25:CZ:198:LYS:HD3	1.94	0.67
34:D8:32:LEU:HB2	34:D8:36:LYS:HZ2	1.59	0.67
36:DA:527:C:C4	36:DA:2779:U:H5"	2.29	0.67
36:DA:636:G:H2'	48:DP:115:LEU:HD12	1.76	0.67
36:DA:1495:A:N3	36:DA:1496:A:C2	2.63	0.67
37:DB:61:G:O2'	37:DB:62:C:H5'	1.94	0.67
39:DD:102:LYS:O	39:DD:103:ARG:HG2	1.95	0.67
43:DH:94:TYR:HD1	43:DH:107:VAL:HA	1.58	0.67
48:DP:23:PRO:O	48:DP:33:ARG:HD2	1.95	0.67
50:DR:38:VAL:HB	50:DR:39:PRO:HD3	1.75	0.67
56:DX:12:VAL:HB	56:DX:17:ALA:HB1	1.76	0.67
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.29	0.67
36:BA:1453:U:H5'	50:BR:63:ARG:CZ	2.25	0.67
36:BA:2115:G:N3	36:BA:2117:A:N7	2.42	0.67
41:BF:168:ARG:HG3	41:BF:175:THR:HG21	1.77	0.67
43:BH:30:LYS:HG3	43:BH:79:VAL:C	2.14	0.67
51:BS:92:TYR:CD1	51:BS:93:LYS:N	2.62	0.67
52:BT:6:LEU:O	52:BT:10:VAL:HG23	1.95	0.67
53:BU:69:CYS:O	53:BU:74:LEU:HD12	1.94	0.67
1:CA:108:G:H5'	1:CA:109:A:H5"	1.75	0.67
1:CA:1330:U:H3'	1:CA:1331:G:O4'	1.94	0.67
3:CC:130:VAL:O	3:CC:134:ILE:HG13	1.94	0.67
14:CN:23:ARG:NH1	14:CN:30:ALA:HB2	2.10	0.67
24:CY:23:A:C2'	24:CY:24:A:H5'	2.24	0.67
25:CZ:198:LYS:NZ	25:CZ:198:LYS:C	2.48	0.67
32:D6:53:LYS:HG2	32:D6:54:ILE:N	2.09	0.67
36:DA:176:G:O2'	36:DA:177:G:H5'	1.95	0.67
36:DA:2657:A:H5'	36:DA:2657:A:N3	2.10	0.67
1:AA:299:G:H2'	1:AA:300:A:C8	2.30	0.67
2:AB:73:THR:HG22	2:AB:94:ASN:C	2.14	0.67
7:AG:111:ARG:NH2	7:AG:126:ASP:OD2	2.28	0.67
13:AM:19:LEU:HB3	13:AM:25:ILE:HG21	1.77	0.67
13:AM:23:TYR:CE1	13:AM:70:LEU:HD13	2.30	0.67
25:AZ:65:THR:HA	25:AZ:83:PRO:HD3	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:265:THR:CG2	25:AZ:266:VAL:N	2.58	0.67
36:BA:185:U:H2'	36:BA:186:G:H8	1.59	0.67
36:BA:332:A:H4'	36:BA:333:G:OP1	1.94	0.67
36:BA:761:A:O5'	36:BA:761:A:C8	2.48	0.67
36:BA:2039:C:O2'	36:BA:2040:C:H5'	1.95	0.67
36:BA:2572:A:C8	40:BE:144:ARG:HD2	2.30	0.67
40:BE:57:LYS:HA	40:BE:57:LYS:CE	2.20	0.67
40:BE:117:MET:HE2	40:BE:124:GLY:HA3	1.76	0.67
43:BH:83:TYR:HB3	43:BH:135:GLY:O	1.95	0.67
43:BH:85:LYS:NZ	43:BH:86:GLU:HA	2.10	0.67
44:BJ:28:UNK:HA	44:BJ:82:UNK:HA	1.76	0.67
46:BN:46:VAL:O	46:BN:47:ALA:HB3	1.93	0.67
49:BQ:51:ARG:HH11	49:BQ:51:ARG:CB	2.07	0.67
1:CA:1256:A:H1'	1:CA:1258:G:C6	2.29	0.67
3:CC:29:TYR:HE2	10:CJ:65:LEU:HD21	1.60	0.67
6:CF:19:LEU:O	6:CF:19:LEU:HD23	1.94	0.67
6:CF:43:LEU:HD22	6:CF:43:LEU:N	2.06	0.67
36:DA:1411:C:H2'	36:DA:1412:A:H8	1.60	0.67
36:DA:1879:C:H3'	36:DA:1880:C:H5"	1.75	0.67
36:DA:1902:C:C1'	39:DD:244:ARG:HG3	2.24	0.67
36:DA:2314:C:O2'	36:DA:2315:G:H5'	1.94	0.67
38:DC:132:GLY:N	38:DC:133:PRO:HD2	2.09	0.67
41:DF:84:VAL:CG1	41:DF:85:GLY:N	2.58	0.67
53:DU:82:GLY:C	53:DU:84:LYS:H	1.98	0.67
54:DV:19:LYS:HZ3	54:DV:20:LEU:N	1.91	0.67
1:AA:266:G:H5'	1:AA:267:C:C5	2.30	0.67
24:AY:7:G:H3'	24:AY:8:4SU:C5'	2.25	0.67
26:B0:26:TYR:CE2	36:BA:857:C:H1'	2.29	0.67
26:B0:43:THR:HG23	26:B0:43:THR:O	1.94	0.67
36:BA:121:G:H4'	36:BA:149:A:H5'	1.76	0.67
36:BA:740:U:H2'	36:BA:741:G:C8	2.30	0.67
38:BC:78:ALA:HA	38:BC:116:THR:H	1.60	0.67
40:BE:95:ILE:N	40:BE:95:ILE:HD13	2.10	0.67
43:BH:85:LYS:HZ3	43:BH:132:ARG:CA	2.00	0.67
51:BS:56:LEU:O	51:BS:56:LEU:HD23	1.94	0.67
56:BX:55:ASN:HB2	56:BX:80:ILE:HG23	1.76	0.67
1:CA:924:C:H2'	1:CA:925:G:C8	2.29	0.67
3:CC:22:TRP:CE2	14:CN:54:PRO:HG2	2.30	0.67
10:CJ:4:ILE:HD12	10:CJ:4:ILE:N	2.10	0.67
18:CR:47:THR:HG21	18:CR:49:LYS:NZ	2.09	0.67
24:CY:8:4SU:H6	24:CY:8:4SU:H5"	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:318:ALA:HB1	25:CZ:399:VAL:O	1.95	0.67
36:DA:796:C:H2'	36:DA:797:C:C6	2.30	0.67
36:DA:1963:U:O2	36:DA:1963:U:H2'	1.95	0.67
38:DC:140:PRO:HA	38:DC:145:VAL:HB	1.77	0.67
40:DE:37:ARG:HA	40:DE:42:ASP:OD2	1.95	0.67
50:DR:49:ASP:OD1	50:DR:95:THR:HG22	1.94	0.67
1:AA:961:U:HO2'	1:AA:962:C:H6	1.42	0.67
1:AA:1371:G:O3'	9:AI:69:GLY:HA3	1.95	0.67
2:AB:22:LYS:HE2	2:AB:22:LYS:CA	2.24	0.67
2:AB:56:ARG:HH11	2:AB:56:ARG:HG2	1.59	0.67
2:AB:95:GLN:NE2	2:AB:147:LYS:HE2	2.06	0.67
3:AC:15:THR:HG21	3:AC:181:ASN:HA	1.77	0.67
19:AS:47:HIS:O	19:AS:62:ILE:HG22	1.94	0.67
32:B6:11:LEU:HD23	32:B6:26:ASN:N	2.10	0.67
36:BA:654(G):C:H1'	36:BA:654(N):G:H22	1.59	0.67
46:BN:133:GLN:HG2	46:BN:135:PRO:HD3	1.76	0.67
51:BS:30:ARG:NH2	51:BS:62:LYS:HD3	2.09	0.67
55:BW:6:ILE:HG12	55:BW:104:THR:HG22	1.75	0.67
57:BY:6:HIS:HB3	57:BY:35:TYR:HE1	1.60	0.67
58:BZ:110:GLY:HA2	58:BZ:113:ALA:CB	2.24	0.67
1:CA:59:A:H3'	1:CA:331:G:N2	2.08	0.67
4:CD:85:LYS:NZ	4:CD:92:VAL:HG13	2.10	0.67
25:CZ:64:ASN:H	25:CZ:64:ASN:HD22	1.41	0.67
25:CZ:68:VAL:CA	25:CZ:69:GLU:N	2.57	0.67
25:CZ:255:ILE:HG22	25:CZ:302:GLN:NE2	2.10	0.67
26:D0:43:THR:O	26:D0:43:THR:HG23	1.95	0.67
27:D1:7:ILE:HG22	27:D1:8:SER:N	2.10	0.67
40:DE:199:ARG:HG2	40:DE:200:GLU:OE1	1.95	0.67
41:DF:125:LEU:HD23	41:DF:125:LEU:N	2.09	0.67
43:DH:74:ASN:HB3	43:DH:138:LYS:HD3	1.77	0.67
50:DR:2:ARG:HE	50:DR:5:LYS:HE2	1.59	0.67
51:DS:13:ARG:HG3	51:DS:14:VAL:N	2.03	0.67
53:DU:92:ARG:NH1	54:DV:11:GLN:O	2.28	0.67
58:DZ:29:TYR:HB3	58:DZ:34:ASN:HB3	1.76	0.67
5:AE:33:VAL:HG11	5:AE:109:ILE:HA	1.76	0.67
20:AT:92:LEU:C	20:AT:94:ALA:H	1.96	0.67
28:B2:55:ARG:HH11	28:B2:55:ARG:HG3	1.59	0.67
33:B7:34:ARG:HB2	33:B7:42:LEU:CD2	2.25	0.67
34:B8:61:LEU:CD2	36:BA:593:G:H4'	2.25	0.67
50:BR:63:ARG:HG3	50:BR:80:PHE:CE2	2.30	0.67
1:CA:1128:C:O2'	1:CA:1130:A:N7	2.26	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:187:ARG:HG2	4:CD:188:LEU:N	2.10	0.67
11:CK:80:VAL:HG22	11:CK:103:LEU:HD12	1.76	0.67
25:CZ:138:VAL:HG21	25:CZ:172:ARG:HB3	1.76	0.67
31:D5:25:LEU:O	31:D5:26:THR:HB	1.95	0.67
36:DA:271(H):G:H1'	36:DA:271(I):G:C8	2.30	0.67
36:DA:593:G:H1	36:DA:664:C:H42	1.40	0.67
36:DA:1053:C:H2'	36:DA:1054:A:C8	2.29	0.67
58:DZ:68:PRO:O	58:DZ:91:LEU:HB2	1.95	0.67
58:DZ:114:GLY:H	58:DZ:146:ILE:CG2	2.08	0.67
1:AA:973:G:O4'	10:AJ:55:LYS:HE2	1.95	0.66
1:AA:1392:G:N2	1:AA:1502:A:C8	2.63	0.66
2:AB:212:GLN:NE2	2:AB:216:SER:HB2	2.09	0.66
4:AD:35:ARG:O	4:AD:36:ARG:HG3	1.94	0.66
16:AP:25:ARG:HG3	16:AP:25:ARG:HH11	1.60	0.66
25:AZ:68:VAL:O	25:AZ:69:GLU:CB	2.42	0.66
27:B1:48:LYS:HG2	27:B1:50:ARG:NH2	2.02	0.66
32:B6:12:GLU:HA	32:B6:23:THR:CG2	2.25	0.66
36:BA:1053:C:H2'	36:BA:1054:A:C8	2.29	0.66
36:BA:1717:G:C3'	36:BA:1718:G:H5"	2.25	0.66
36:BA:1747(A):G:H2'	36:BA:1748:G:C5'	2.24	0.66
36:BA:2287:A:C2	36:BA:2346:A:N1	2.63	0.66
39:BD:102:LYS:O	39:BD:103:ARG:HG2	1.94	0.66
40:BE:107:THR:O	40:BE:190:GLY:HA2	1.95	0.66
52:BT:6:LEU:HG	52:BT:9:LEU:HD12	1.77	0.66
54:BV:19:LYS:HZ3	54:BV:20:LEU:H	1.42	0.66
1:CA:179:A:H2'	1:CA:180:U:C6	2.30	0.66
1:CA:918:A:H2'	1:CA:919:A:C8	2.31	0.66
1:CA:1365:G:O2'	1:CA:1366:C:H5'	1.95	0.66
13:CM:23:TYR:HB3	13:CM:67:GLU:CB	2.25	0.66
27:D1:86:SER:HA	27:D1:89:GLU:OE2	1.95	0.66
29:D3:43:ILE:O	29:D3:47:VAL:HG23	1.96	0.66
36:DA:85:G:O5'	57:DY:30:VAL:HB	1.95	0.66
36:DA:2160:G:H8	36:DA:2160:G:H5'	1.59	0.66
36:DA:2309:A:C2'	36:DA:2310:A:H5"	2.25	0.66
39:DD:267:SER:C	39:DD:269:PHE:H	1.97	0.66
40:DE:11:MET:HB2	40:DE:23:VAL:O	1.94	0.66
40:DE:203:LYS:HE3	40:DE:204:ALA:HB2	1.76	0.66
41:DF:160:ASN:HD21	41:DF:162:LEU:HB2	1.59	0.66
46:DN:12:ARG:HB3	46:DN:50:ASP:OD1	1.95	0.66
51:DS:36:TYR:N	51:DS:36:TYR:CD1	2.61	0.66
53:DU:13:LYS:HD3	53:DU:13:LYS:H	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:165:VAL:HG23	2:AB:165:VAL:O	1.96	0.66
7:AG:38:LEU:HD12	7:AG:38:LEU:O	1.95	0.66
9:AI:118:LYS:O	9:AI:119:ALA:HB3	1.95	0.66
19:AS:29:ARG:HG2	19:AS:47:HIS:HA	1.77	0.66
36:BA:481:G:OP2	57:BY:47:LYS:HG2	1.94	0.66
40:BE:30:PRO:O	40:BE:32:PRO:HD3	1.94	0.66
42:BG:10:LYS:HA	42:BG:14:GLU:OE2	1.95	0.66
42:BG:43:LEU:HD11	42:BG:153:ARG:HD2	1.75	0.66
1:CA:628:G:O2'	1:CA:629:G:H5'	1.95	0.66
2:CB:75:LYS:HA	2:CB:78:GLN:HE21	1.59	0.66
26:D0:70:GLN:NE2	26:D0:80:HIS:NE2	2.43	0.66
32:D6:15:GLU:CG	32:D6:47:THR:HG21	2.25	0.66
36:DA:145:G:C2'	36:DA:146:G:H5"	2.24	0.66
36:DA:271(Z):C:H2'	36:DA:272:G:C8	2.31	0.66
36:DA:481:G:OP2	57:DY:47:LYS:HG2	1.94	0.66
36:DA:910:A:H2'	36:DA:911:A:C8	2.30	0.66
36:DA:1050:A:C2'	36:DA:1051:G:H5'	2.24	0.66
36:DA:1279:G:H4'	50:DR:31:HIS:CD2	2.30	0.66
36:DA:1799:G:C5'	36:DA:1819:A:H61	2.05	0.66
36:DA:2310:A:O2'	36:DA:2311:A:H5'	1.93	0.66
40:DE:9:VAL:HG12	40:DE:25:VAL:HB	1.74	0.66
43:DH:12:PRO:CD	43:DH:48:GLY:HA2	2.26	0.66
49:DQ:97:VAL:HG21	49:DQ:103:MET:CE	2.26	0.66
52:DT:3:ARG:O	52:DT:5:ALA:N	2.28	0.66
55:DW:6:ILE:HG12	55:DW:104:THR:HG22	1.76	0.66
1:AA:434:U:H2'	1:AA:435:C:C6	2.29	0.66
1:AA:636:U:H2'	1:AA:637:G:C8	2.30	0.66
1:AA:1503:A:H2'	23:AX:16:A:N6	2.10	0.66
12:AL:25:PRO:O	12:AL:26:ALA:HB2	1.94	0.66
25:AZ:256:VAL:HG13	25:AZ:312:PRO:HG3	1.77	0.66
36:BA:1058:G:C2'	36:BA:1059:G:H5"	2.24	0.66
38:BC:100:ILE:HD13	38:BC:127:LEU:HB2	1.77	0.66
39:BD:77:ALA:HB2	39:BD:97:TYR:CD1	2.30	0.66
43:BH:124:GLU:HB3	43:BH:126:PRO:HD3	1.77	0.66
47:BO:104:ARG:HH21	52:BT:33:LYS:HE3	1.58	0.66
48:BP:58:THR:O	48:BP:58:THR:CG2	2.44	0.66
48:BP:113:LYS:HG2	48:BP:114:ILE:H	1.61	0.66
52:BT:3:ARG:O	52:BT:5:ALA:N	2.27	0.66
1:CA:438:G:H4'	4:CD:123:HIS:ND1	2.10	0.66
1:CA:1437:C:H42	1:CA:1464:G:H1	1.43	0.66
4:CD:171:GLY:HA3	4:CD:173:TRP:CZ3	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CY:51:G:O2'	25:CZ:338:TYR:HD1	1.78	0.66
36:DA:296:C:H42	36:DA:343:C:H42	1.43	0.66
36:DA:1304:C:H2'	36:DA:1305:C:H6	1.61	0.66
36:DA:2295:C:H2'	36:DA:2296:U:H6	1.60	0.66
40:DE:181:LEU:HD21	52:DT:7:ILE:CG2	2.26	0.66
42:DG:11:TYR:HA	42:DG:15:VAL:CG2	2.25	0.66
42:DG:46:ALA:HB2	42:DG:88:ILE:CG1	2.26	0.66
52:DT:29:ARG:HD3	52:DT:30:VAL:H	1.59	0.66
54:DV:19:LYS:HE2	54:DV:19:LYS:HA	1.77	0.66
57:DY:28:LYS:CG	57:DY:39:VAL:HG22	2.17	0.66
5:AE:92:LYS:HB3	5:AE:119:LEU:HB2	1.76	0.66
12:AL:33:ARG:CG	12:AL:60:LEU:HD12	2.24	0.66
25:AZ:93:ILE:HD11	25:AZ:389:ARG:NH1	2.10	0.66
36:BA:1242:A:H5'	36:BA:1243:G:OP2	1.95	0.66
36:BA:2206:G:N2	36:BA:2207:G:H5'	2.11	0.66
39:BD:32:SER:O	39:BD:36:PRO:HG3	1.95	0.66
39:BD:72:LYS:HD3	39:BD:75:ILE:HG13	1.77	0.66
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.29	0.66
1:CA:1016:A:H2'	1:CA:1017:G:O4'	1.95	0.66
1:CA:1234:C:H2'	1:CA:1235:U:H6	1.60	0.66
16:CP:1:MET:O	16:CP:24:ALA:HB2	1.95	0.66
29:D3:35:ARG:HD3	29:D3:37:LEU:HD21	1.76	0.66
33:D7:10:ARG:HG2	33:D7:10:ARG:NH1	2.06	0.66
34:D8:42:ARG:O	34:D8:44:LYS:N	2.29	0.66
36:DA:26:G:OP1	55:DW:80:PRO:HB3	1.96	0.66
36:DA:761:A:O5'	36:DA:761:A:C8	2.46	0.66
36:DA:2850:A:C2	50:DR:61:HIS:ND1	2.59	0.66
47:DO:87:ILE:HG21	47:DO:91:LEU:HA	1.75	0.66
54:DV:39:LEU:HD12	54:DV:51:VAL:HA	1.78	0.66
4:AD:20:TYR:CA	4:AD:26:CYS:SG	2.68	0.66
4:AD:31:CYS:O	4:AD:32:ALA:HB3	1.96	0.66
7:AG:20:ASP:HB3	7:AG:23:VAL:CG2	2.25	0.66
9:AI:50:LEU:O	9:AI:56:LEU:HA	1.95	0.66
10:AJ:54:PHE:CD1	10:AJ:55:LYS:NZ	2.63	0.66
20:AT:12:ALA:O	20:AT:15:ARG:HB2	1.96	0.66
22:AV:21:A:H2'	22:AV:22:G:H5"	1.76	0.66
28:B2:67:LYS:HA	28:B2:70:GLN:NE2	2.11	0.66
36:BA:330:A:O2'	36:BA:331:A:H8	1.78	0.66
36:BA:730:C:O2'	36:BA:731:C:H5'	1.95	0.66
36:BA:1279:G:H4'	50:BR:31:HIS:CD2	2.30	0.66
38:BC:87:GLU:HG2	38:BC:94:VAL:HG21	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:118:PRO:CG	43:BH:121:ILE:HD12	2.25	0.66
55:BW:82:LEU:HD12	55:BW:82:LEU:H	1.59	0.66
1:CA:6:G:O2'	1:CA:7:G:H5"	1.96	0.66
1:CA:1126:U:OP2	1:CA:1281:U:O2	2.14	0.66
2:CB:134:GLU:C	2:CB:136:VAL:H	1.97	0.66
4:CD:49:ARG:O	4:CD:51:PRO:HD3	1.96	0.66
11:CK:80:VAL:O	11:CK:105:VAL:HA	1.95	0.66
35:D9:10:ILE:HG13	36:DA:2477:C:C4	2.30	0.66
36:DA:902:C:H2'	36:DA:903:C:H6	1.59	0.66
36:DA:1227:G:OP1	53:DU:13:LYS:HD2	1.96	0.66
36:DA:1771:C:H1'	36:DA:1786:A:C8	2.30	0.66
41:DF:185:ASP:HA	41:DF:188:ARG:HG2	1.75	0.66
42:DG:46:ALA:HB3	42:DG:82:LEU:HD11	1.76	0.66
43:DH:105:LEU:HD23	43:DH:105:LEU:H	1.61	0.66
46:DN:48:MET:HE3	46:DN:48:MET:N	2.11	0.66
50:DR:2:ARG:CD	50:DR:5:LYS:HE2	2.25	0.66
57:DY:10:GLY:HA2	57:DY:27:VAL:CG1	2.23	0.66
1:AA:1277:C:H2'	1:AA:1278:U:H5'	1.78	0.66
2:AB:229:VAL:HG12	2:AB:230:VAL:H	1.61	0.66
3:AC:189:ALA:HB3	3:AC:196:LEU:HB2	1.78	0.66
5:AE:6:PHE:HB3	5:AE:35:GLY:O	1.95	0.66
26:B0:38:VAL:HG23	26:B0:59:LEU:HB2	1.78	0.66
31:B5:43:HIS:HD2	36:BA:2815:C:O2'	1.78	0.66
32:B6:11:LEU:CD2	32:B6:26:ASN:H	2.09	0.66
34:B8:61:LEU:HD12	34:B8:61:LEU:N	2.09	0.66
38:BC:73:ARG:O	38:BC:111:ASP:HB2	1.96	0.66
40:BE:137:HIS:HB3	40:BE:138:PRO:HD2	1.77	0.66
40:BE:197:ILE:O	40:BE:197:ILE:HG13	1.95	0.66
41:BF:107:LYS:HE3	41:BF:205:ARG:HG2	1.76	0.66
46:BN:12:ARG:HB3	46:BN:50:ASP:OD1	1.96	0.66
46:BN:55:VAL:CG2	46:BN:126:PRO:HA	2.26	0.66
51:BS:58:LEU:HD23	51:BS:65:VAL:HG13	1.77	0.66
53:BU:88:ILE:HG22	54:BV:47:VAL:HG23	1.77	0.66
1:CA:1287:A:H2'	1:CA:1288:A:C8	2.30	0.66
9:CI:53:VAL:H	9:CI:95:LYS:HZ2	1.43	0.66
13:CM:11:ARG:HA	13:CM:45:VAL:HB	1.76	0.66
13:CM:19:LEU:HB3	13:CM:25:ILE:HG21	1.76	0.66
13:CM:118:ALA:HB3	22:CV:29:G:C5'	2.25	0.66
19:CS:53:ASN:HD22	19:CS:55:LYS:H	1.43	0.66
25:CZ:20:VAL:HG23	25:CZ:21:ASP:H	1.60	0.66
28:D2:3:LEU:HB3	36:DA:98:G:OP1	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:902:C:H2'	36:DA:903:C:C6	2.31	0.66
37:DB:93:G:H2'	37:DB:94:C:H6	1.60	0.66
37:DB:106:G:C5'	58:DZ:31:ARG:HG2	2.25	0.66
43:DH:83:TYR:HB3	43:DH:135:GLY:O	1.96	0.66
1:AA:1129:C:OP1	1:AA:1130:A:H5'	1.95	0.66
25:AZ:5:PHE:C	25:AZ:5:PHE:CD1	2.69	0.66
34:B8:50:LEU:O	34:B8:51:ALA:HB3	1.96	0.66
40:BE:105:THR:O	40:BE:196:VAL:HA	1.95	0.66
51:BS:28:VAL:CG1	51:BS:29:PHE:H	2.07	0.66
52:BT:90:GLN:O	52:BT:92:GLY:N	2.28	0.66
55:BW:12:ILE:HD12	55:BW:42:ARG:NH1	2.10	0.66
56:BX:26:TYR:CD2	56:BX:92:LEU:HD12	2.31	0.66
1:CA:189(H):G:O2'	1:CA:189(I):G:H8	1.79	0.66
3:CC:32:LEU:HD22	3:CC:59:ARG:NE	2.11	0.66
4:CD:134:ASP:O	4:CD:136:PRO:HD3	1.95	0.66
9:CI:86:VAL:HG23	9:CI:93:ARG:HG2	1.77	0.66
15:CO:45:VAL:HG12	15:CO:46:HIS:CD2	2.29	0.66
17:CQ:37:LYS:O	17:CQ:38:ARG:HB2	1.94	0.66
17:CQ:59:ILE:HG22	17:CQ:71:PHE:CD2	2.31	0.66
31:D5:25:LEU:HD12	55:DW:19:LEU:HG	1.77	0.66
36:DA:1409:C:H2'	36:DA:1410:G:H8	1.61	0.66
39:DD:43:ARG:HG2	39:DD:43:ARG:O	1.94	0.66
39:DD:95:LEU:HD11	39:DD:105:ILE:HG22	1.76	0.66
41:DF:177:ALA:HB1	41:DF:178:PRO:HD2	1.78	0.66
53:DU:90:VAL:O	53:DU:92:ARG:N	2.29	0.66
58:DZ:58:VAL:HG12	58:DZ:68:PRO:HA	1.78	0.66
7:AG:9:VAL:HG22	7:AG:94:ARG:HD3	1.78	0.66
24:AY:20:H2U:H4'	24:AY:21:A:H5"	1.76	0.66
27:B1:40:ARG:NH1	27:B1:42:GLN:HG2	2.11	0.66
27:B1:86:SER:O	27:B1:90:ILE:HG12	1.95	0.66
30:B4:20:ASN:HD22	30:B4:21:VAL:H	1.42	0.66
36:BA:1301:A:O2'	36:BA:1302:A:C2'	2.40	0.66
36:BA:1784:A:H4'	36:BA:1785:A:O5'	1.95	0.66
36:BA:2153:G:H2'	36:BA:2154:G:H8	1.59	0.66
36:BA:2179:C:H4'	36:BA:2180:U:C2	2.30	0.66
41:BF:155:LEU:HD11	41:BF:176:LEU:HD22	1.78	0.66
46:BN:2:LYS:NZ	54:BV:13:ARG:H	1.94	0.66
48:BP:135:LEU:HD13	48:BP:135:LEU:O	1.95	0.66
51:BS:66:ALA:HA	51:BS:69:VAL:HG12	1.77	0.66
52:BT:24:PRO:HD3	52:BT:52:ILE:HG13	1.77	0.66
58:BZ:75:ASN:O	58:BZ:84:GLU:HB3	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:78:ARG:CZ	7:CG:80:VAL:HG21	2.25	0.66
11:CK:103:LEU:HD13	11:CK:104:GLN:H	1.61	0.66
12:CL:6:THR:OG1	12:CL:9:GLN:HG3	1.95	0.66
15:CO:26:GLU:OE2	15:CO:77:ARG:HD2	1.95	0.66
25:CZ:272:MET:CB	25:CZ:277:LEU:HD23	2.19	0.66
35:D9:4:ARG:HG2	35:D9:34:GLN:HE22	1.60	0.66
36:DA:116:C:H2'	36:DA:117:G:C8	2.31	0.66
36:DA:181:A:H2'	36:DA:182:A:C8	2.31	0.66
36:DA:191:A:O2'	36:DA:192:C:H5'	1.96	0.66
36:DA:521:G:H2'	36:DA:522:G:C8	2.30	0.66
36:DA:907:U:OP1	49:DQ:24:GLY:N	2.24	0.66
39:DD:248:SER:HB2	39:DD:249:PRO:HD2	1.76	0.66
40:DE:61:ARG:CB	40:DE:62:PRO:HD3	2.26	0.66
40:DE:69:LYS:HD3	40:DE:89:ASP:HA	1.78	0.66
51:DS:85:VAL:HG23	51:DS:106:ARG:HD3	1.77	0.66
1:AA:367:U:H5"	1:AA:394:G:H21	1.59	0.66
3:AC:134:ILE:HG22	3:AC:168:ALA:HB3	1.76	0.66
17:AQ:27:PHE:CE2	17:AQ:36:ILE:HD11	2.31	0.66
17:AQ:37:LYS:O	17:AQ:38:ARG:HB2	1.96	0.66
28:B2:25:VAL:HG22	28:B2:57:ILE:HD13	1.77	0.66
31:B5:6:VAL:HG22	36:BA:2015:A:C2	2.31	0.66
36:BA:271(H):G:H1'	36:BA:271(I):G:C8	2.31	0.66
39:BD:8:PRO:HB3	39:BD:14:ARG:HB3	1.78	0.66
42:BG:7:LEU:HD22	42:BG:100:TRP:CE3	2.31	0.66
49:BQ:135:ASP:H	49:BQ:137:TYR:HD1	1.42	0.66
52:BT:92:GLY:HA3	52:BT:120:ARG:NH2	2.11	0.66
54:BV:39:LEU:HD12	54:BV:47:VAL:HG11	1.77	0.66
57:BY:30:VAL:HA	57:BY:37:VAL:HG12	1.75	0.66
1:CA:250:A:H4'	1:CA:251:G:O5'	1.95	0.66
12:CL:80:HIS:HD2	24:CY:68:C:H4'	1.58	0.66
16:CP:76:GLN:HG2	16:CP:76:GLN:O	1.95	0.66
20:CT:71:THR:HG22	20:CT:72:LEU:CD2	2.25	0.66
22:CW:59:U:H5'	22:CW:60:U:C5	2.31	0.66
25:CZ:124:ARG:O	61:CZ:502:KIR:H443	1.95	0.66
32:D6:12:GLU:OE2	32:D6:23:THR:HG21	1.95	0.66
32:D6:15:GLU:HA	32:D6:49:HIS:CE1	2.30	0.66
34:D8:23:VAL:CG1	34:D8:46:ARG:HB3	2.25	0.66
36:DA:234:C:H2'	36:DA:235:U:C6	2.31	0.66
36:DA:323:G:H2'	41:DF:169:ASN:HD21	1.59	0.66
36:DA:2199:A:H3'	36:DA:2200:C:H6	1.61	0.66
47:DO:63:VAL:O	47:DO:63:VAL:HG23	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DV:15:GLU:CB	54:DV:16:PRO:CD	2.72	0.66
1:AA:487:A:H2'	1:AA:488:C:O4'	1.95	0.66
8:AH:114:THR:HG22	8:AH:130:GLY:O	1.95	0.66
12:AL:24:VAL:HG12	12:AL:27:LEU:HD13	1.78	0.66
13:AM:39:ILE:HD12	13:AM:56:LEU:HD23	1.78	0.66
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.59	0.66
19:AS:67:VAL:HG12	19:AS:68:GLY:N	2.10	0.66
25:AZ:241:ARG:HH11	25:AZ:241:ARG:HB3	1.61	0.66
34:B8:15:LYS:HG2	48:BP:65:ARG:HH21	1.60	0.66
36:BA:993:G:H4'	54:BV:70:ILE:HD12	1.78	0.66
36:BA:1024:G:H3'	36:BA:1025:G:C5'	2.21	0.66
36:BA:1538:G:H2'	36:BA:1539:G:H8	1.60	0.66
37:BB:17:C:H2'	37:BB:18:G:O4'	1.96	0.66
46:BN:23:LEU:CD1	46:BN:98:VAL:HG12	2.26	0.66
57:BY:14:LEU:HD12	57:BY:15:VAL:H	1.60	0.66
57:BY:90:LEU:O	57:BY:91:GLU:HG2	1.96	0.66
3:CC:32:LEU:O	3:CC:35:GLU:HB3	1.96	0.66
4:CD:19:LEU:O	4:CD:31:CYS:SG	2.54	0.66
10:CJ:54:PHE:CD1	10:CJ:55:LYS:NZ	2.63	0.66
11:CK:30:VAL:HG21	11:CK:65:ALA:HA	1.78	0.66
12:CL:55:VAL:HG23	12:CL:68:ALA:O	1.96	0.66
36:DA:2469:A:H2	36:DA:2481:G:H21	1.44	0.66
36:DA:2635:C:OP1	40:DE:77:ILE:HG21	1.96	0.66
47:DO:61:VAL:HG12	47:DO:87:ILE:HD11	1.78	0.66
58:DZ:6:LYS:HG3	58:DZ:60:GLU:CB	2.26	0.66
1:AA:80:G:O2'	1:AA:81:U:H5'	1.95	0.65
1:AA:687:A:H4'	11:AK:47:VAL:HG12	1.78	0.65
5:AE:64:ARG:HH11	5:AE:64:ARG:HG3	1.61	0.65
6:AF:19:LEU:O	6:AF:19:LEU:HD23	1.96	0.65
11:AK:44:SER:H	11:AK:47:VAL:CG2	2.08	0.65
12:AL:6:THR:HG23	12:AL:9:GLN:NE2	2.11	0.65
30:B4:7:PRO:O	30:B4:8:LYS:HB3	1.95	0.65
36:BA:943:U:OP2	48:BP:38:GLN:CD	2.34	0.65
36:BA:1777:U:O2'	36:BA:1778:U:H5'	1.95	0.65
36:BA:2033:A:H4'	36:BA:2034:U:OP1	1.97	0.65
40:BE:13:ARG:HB3	40:BE:22:PRO:HA	1.78	0.65
51:BS:27:SER:HA	51:BS:88:ASP:HB3	1.79	0.65
52:BT:55:ASN:H	52:BT:59:THR:HG22	1.61	0.65
4:CD:24:GLU:O	4:CD:27:TYR:HB3	1.95	0.65
10:CJ:54:PHE:CA	10:CJ:55:LYS:HE3	2.25	0.65
25:CZ:136:ASN:OD1	60:CZ:501:GDP:O6	2.14	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D4:42:PHE:O	30:D4:42:PHE:CG	2.48	0.65
36:DA:259:G:H1'	36:DA:621:A:O2'	1.96	0.65
36:DA:1543:C:C3'	36:DA:1544:A:H5"	2.24	0.65
41:DF:84:VAL:C	41:DF:86:GLY:H	1.99	0.65
42:DG:107:LEU:HD21	42:DG:178:PHE:CD1	2.31	0.65
43:DH:143:GLN:CA	43:DH:143:GLN:HE21	2.09	0.65
47:DO:104:ARG:HE	52:DT:33:LYS:NZ	1.94	0.65
47:DO:104:ARG:CZ	52:DT:33:LYS:HD2	2.26	0.65
1:AA:376:G:O2'	1:AA:377:G:H5'	1.95	0.65
1:AA:1499:A:H5'	1:AA:1499:A:C8	2.30	0.65
3:AC:11:ARG:HH11	3:AC:11:ARG:HG2	1.59	0.65
5:AE:127:ASN:HD22	5:AE:130:ASN:H	1.41	0.65
9:AI:95:LYS:HG3	9:AI:96:LEU:HD13	1.78	0.65
13:AM:11:ARG:HG2	13:AM:12:ASN:N	2.10	0.65
16:AP:43:LYS:O	16:AP:45:THR:N	2.30	0.65
22:AV:16:U:H3	22:AV:59:U:H3	1.44	0.65
28:B2:21:LEU:HB3	28:B2:64:LEU:HG	1.77	0.65
32:B6:16:CYS:SG	32:B6:49:HIS:N	2.69	0.65
36:BA:585:G:H2'	36:BA:1251:C:H42	1.61	0.65
36:BA:1600:C:O2'	36:BA:1601:G:H5'	1.95	0.65
36:BA:2286:A:H4'	36:BA:2287:A:O4'	1.95	0.65
36:BA:2886:G:H2'	36:BA:2887:U:H6	1.61	0.65
52:BT:27:THR:O	52:BT:28:VAL:CB	2.44	0.65
54:BV:28:GLU:HB3	54:BV:29:PRO:HD2	1.78	0.65
54:BV:72:VAL:O	54:BV:72:VAL:HG23	1.96	0.65
1:CA:189(J):G:O2'	1:CA:189(K):U:H5'	1.95	0.65
1:CA:658:G:H2'	1:CA:659:U:C6	2.31	0.65
4:CD:100:ARG:HH21	4:CD:118:ARG:HH12	1.43	0.65
17:CQ:66:SER:OG	17:CQ:69:LYS:HB2	1.96	0.65
24:CY:51:G:H4'	25:CZ:339:ARG:H	1.59	0.65
25:CZ:27:LEU:HD11	25:CZ:31:LEU:HD21	1.77	0.65
36:DA:631:A:H5"	48:DP:65:ARG:NH1	2.11	0.65
36:DA:1192:G:O2'	36:DA:1193:G:H5'	1.96	0.65
36:DA:2308:G:O6	36:DA:2310:A:H2'	1.96	0.65
41:DF:120:GLU:HB3	41:DF:122:LYS:HD3	1.78	0.65
48:DP:47:ASP:HB3	48:DP:48:PRO:HA	1.76	0.65
48:DP:58:THR:HG22	48:DP:58:THR:O	1.95	0.65
48:DP:114:ILE:HG21	48:DP:130:PHE:CD2	2.32	0.65
49:DQ:67:ARG:HD2	49:DQ:105:GLU:HG2	1.79	0.65
50:DR:2:ARG:NE	50:DR:5:LYS:HE2	2.11	0.65
52:DT:89:VAL:CG1	52:DT:91:ARG:HG3	2.23	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:89:PHE:HE2	58:DZ:96:VAL:HG23	1.61	0.65
1:AA:534:U:H5'	1:AA:534:U:H6	1.62	0.65
10:AJ:78:ASN:HD22	10:AJ:81:THR:HG21	1.61	0.65
24:AY:23:A:O2'	24:AY:24:A:H5'	1.95	0.65
26:B0:27:GLU:OE1	36:BA:856:C:H1'	1.96	0.65
28:B2:39:ALA:HA	28:B2:44:LEU:CB	2.25	0.65
28:B2:49:LYS:O	28:B2:53:LEU:HG	1.96	0.65
28:B2:59:ARG:HD3	28:B2:59:ARG:H	1.60	0.65
34:B8:52:LYS:N	34:B8:53:PRO:HD2	2.11	0.65
36:BA:1539:G:C2	36:BA:1540:U:H4'	2.31	0.65
36:BA:1884:A:H2'	36:BA:1885:A:C5'	2.25	0.65
36:BA:2464:C:O2'	36:BA:2465:C:H6	1.79	0.65
36:BA:2720:U:O2	36:BA:2720:U:H2'	1.96	0.65
39:BD:131:LEU:HB2	39:BD:136:ILE:CD1	2.25	0.65
41:BF:32:LEU:O	41:BF:36:VAL:HG23	1.97	0.65
52:BT:33:LYS:HE3	52:BT:43:GLN:NE2	2.12	0.65
56:BX:12:VAL:HB	56:BX:17:ALA:CB	2.26	0.65
1:CA:731:G:OP1	1:CA:766:A:H1'	1.96	0.65
2:CB:43:ASP:OD2	2:CB:45:GLN:HB3	1.97	0.65
2:CB:121:LEU:HG	2:CB:126:GLU:HB3	1.76	0.65
24:CY:6:C:H42	24:CY:67:G:H1	1.44	0.65
24:CY:23:A:O2'	24:CY:24:A:H5'	1.96	0.65
27:D1:3:LYS:HE3	36:DA:1364:G:OP2	1.96	0.65
36:DA:1151:G:H5"	53:DU:81:HIS:CE1	2.31	0.65
37:DB:7:G:H2'	37:DB:8:U:H5"	1.79	0.65
39:DD:72:LYS:NZ	39:DD:101:GLU:HB3	2.12	0.65
43:DH:158:HIS:ND1	43:DH:168:PRO:HB2	2.12	0.65
51:DS:34:HIS:HB2	51:DS:36:TYR:HE1	1.61	0.65
55:DW:24:ILE:HG21	55:DW:36:LEU:HD21	1.77	0.65
56:DX:14:SER:HB3	56:DX:17:ALA:CB	2.26	0.65
1:AA:1202:G:C2	14:AN:42:ILE:HG21	2.32	0.65
3:AC:95:THR:HG22	3:AC:95:THR:O	1.95	0.65
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.76	0.65
15:AO:17:ARG:HD3	15:AO:26:GLU:OE2	1.97	0.65
17:AQ:45:HIS:CD2	17:AQ:47:PRO:HD3	2.31	0.65
22:AV:2:C:H2'	22:AV:2:C:O2	1.96	0.65
26:B0:50:ASN:O	26:B0:62:LEU:HB2	1.96	0.65
28:B2:21:LEU:HA	28:B2:24:LEU:CD1	2.25	0.65
30:B4:26:SER:HB2	42:BG:143:GLU:OE2	1.95	0.65
36:BA:1517:G:H5'	36:BA:1517:G:C8	2.31	0.65
36:BA:1598:C:H5'	56:BX:36:LYS:HG2	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1665:A:O2'	47:BO:1:MET:HB2	1.96	0.65
36:BA:2840:C:H5"	50:BR:53:HIS:CD2	2.32	0.65
40:BE:116:VAL:HG22	40:BE:117:MET:H	1.61	0.65
41:BF:6:VAL:HG12	41:BF:7:TYR:N	2.10	0.65
45:BK:32:UNK:HA	45:BK:63:UNK:CB	2.25	0.65
48:BP:101:VAL:HG23	48:BP:102:ARG:N	2.12	0.65
57:BY:81:LYS:HZ2	57:BY:99:CYS:HB2	1.60	0.65
1:CA:358:U:H2'	1:CA:359:U:H6	1.62	0.65
12:CL:117:ARG:HB3	12:CL:122:THR:HG23	1.79	0.65
14:CN:7:ILE:HG13	14:CN:8:GLU:H	1.61	0.65
22:CV:2:C:H2'	22:CV:3:C:H6	1.62	0.65
22:CV:59:U:H2'	22:CV:60:U:C6	2.32	0.65
24:CY:28:C:H2'	24:CY:29:G:H8	1.59	0.65
36:DA:1436:G:H2'	36:DA:1437:C:H5"	1.78	0.65
36:DA:2716:U:O2'	36:DA:2717:G:H5'	1.97	0.65
40:DE:32:PRO:HA	40:DE:90:THR:HG23	1.79	0.65
40:DE:117:MET:CE	40:DE:136:ARG:HA	2.27	0.65
41:DF:51:THR:OG1	41:DF:92:PRO:HD2	1.97	0.65
57:DY:17:SER:HA	57:DY:71:LYS:HD2	1.79	0.65
1:AA:8:A:H62	4:AD:208:SER:HB2	1.61	0.65
1:AA:972:C:OP2	10:AJ:57:LYS:HE3	1.97	0.65
4:AD:76:ARG:O	4:AD:80:GLU:HG2	1.96	0.65
11:AK:80:VAL:HG13	11:AK:103:LEU:HD11	1.79	0.65
15:AO:3:ILE:O	15:AO:3:ILE:HG13	1.96	0.65
25:AZ:198:LYS:NZ	25:AZ:201:GLU:OE1	2.30	0.65
25:AZ:312:PRO:O	25:AZ:313:HIS:ND1	2.29	0.65
25:AZ:345:ARG:HH11	25:AZ:345:ARG:HG2	1.60	0.65
34:B8:24:ALA:HA	34:B8:46:ARG:NH1	2.11	0.65
36:BA:667:U:H2'	36:BA:668:G:O4'	1.96	0.65
36:BA:1827:C:O2'	36:BA:1828:G:H5'	1.97	0.65
42:BG:83:ARG:HB2	42:BG:84:LYS:HD2	1.79	0.65
46:BN:16:ILE:HG23	46:BN:54:VAL:HG22	1.78	0.65
49:BQ:78:PRO:O	49:BQ:81:VAL:HG12	1.97	0.65
52:BT:32:TYR:N	52:BT:32:TYR:CD1	2.62	0.65
54:BV:8:GLY:CA	54:BV:23:GLU:HG3	2.23	0.65
57:BY:28:LYS:HB3	57:BY:39:VAL:HG22	1.76	0.65
3:CC:58:GLU:H	3:CC:65:ALA:HB3	1.62	0.65
3:CC:134:ILE:HG22	3:CC:168:ALA:CB	2.27	0.65
6:CF:98:LEU:H	6:CF:98:LEU:HD12	1.62	0.65
11:CK:22:HIS:HB3	11:CK:29:ILE:HG13	1.78	0.65
24:CY:20:H2U:H4'	24:CY:21:A:H5"	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:549:G:O2'	36:DA:551:G:H5'	1.97	0.65
36:DA:708:C:H42	36:DA:723:G:H1	1.45	0.65
36:DA:1332:G:N2	36:DA:1609:A:O2'	2.29	0.65
36:DA:1441:G:O2'	36:DA:1442:G:H5'	1.97	0.65
36:DA:2396:G:O2'	36:DA:2397:G:H5'	1.95	0.65
39:DD:43:ARG:NE	39:DD:44:ASN:ND2	2.44	0.65
39:DD:70:TRP:CH2	39:DD:150:LYS:HA	2.31	0.65
42:DG:84:LYS:H	42:DG:84:LYS:HD2	1.61	0.65
47:DO:66:LYS:H	47:DO:82:ASN:ND2	1.94	0.65
1:AA:1315:U:O2	1:AA:1360:A:H2	1.79	0.65
4:AD:12:CYS:SG	4:AD:19:LEU:O	2.55	0.65
4:AD:78:LEU:CD2	4:AD:96:LEU:HB3	2.26	0.65
12:AL:41:ARG:CG	12:AL:42:THR:H	2.10	0.65
12:AL:122:THR:O	12:AL:122:THR:HG23	1.95	0.65
20:AT:57:ARG:NH1	20:AT:102:GLY:HA3	2.12	0.65
25:AZ:138:VAL:HG21	25:AZ:173:GLY:H	1.62	0.65
25:AZ:163:PHE:CD1	25:AZ:164:PRO:HD2	2.29	0.65
25:AZ:255:ILE:HG22	25:AZ:302:GLN:NE2	2.12	0.65
28:B2:57:ILE:HG22	28:B2:61:LEU:CG	2.26	0.65
34:B8:32:LEU:HD22	36:BA:2392:A:OP1	1.97	0.65
37:BB:20:C:C2'	37:BB:21:G:H5"	2.27	0.65
42:BG:109:VAL:O	42:BG:112:PRO:HG2	1.95	0.65
54:BV:39:LEU:CD1	54:BV:51:VAL:HA	2.27	0.65
1:CA:269:C:H2'	1:CA:270:A:H8	1.62	0.65
24:CY:64:U:C1'	25:CZ:391:GLY:H	2.08	0.65
36:DA:1018:C:H2'	36:DA:1019:U:H6	1.60	0.65
39:DD:31:LYS:HZ2	39:DD:33:LEU:CB	2.04	0.65
41:DF:185:ASP:HA	41:DF:188:ARG:CG	2.27	0.65
51:DS:15:ARG:HH12	51:DS:18:ILE:HD11	1.61	0.65
55:DW:82:LEU:HD12	55:DW:82:LEU:H	1.60	0.65
55:DW:107:LEU:N	55:DW:107:LEU:HD12	2.12	0.65
1:AA:853:G:O2'	1:AA:854:G:H5'	1.96	0.65
7:AG:78:ARG:CZ	7:AG:80:VAL:HG21	2.27	0.65
8:AH:29:SER:OG	8:AH:32:LYS:HB2	1.97	0.65
9:AI:85:LEU:HD13	9:AI:92:TYR:HD2	1.62	0.65
11:AK:43:SER:HB3	11:AK:68:ALA:HB2	1.78	0.65
19:AS:11:VAL:HG23	19:AS:38:SER:HB2	1.79	0.65
28:B2:20:GLU:O	28:B2:22:GLU:HG3	1.97	0.65
28:B2:27:GLU:HA	28:B2:30:ARG:HB2	1.79	0.65
31:B5:31:VAL:CG2	36:BA:2886:G:H1'	2.26	0.65
36:BA:643:A:C2'	36:BA:644:A:H5'	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BB:114:C:O2'	51:BS:46:VAL:HG13	1.97	0.65
43:BH:163:TYR:N	43:BH:163:TYR:CD1	2.64	0.65
47:BO:63:VAL:O	47:BO:63:VAL:HG23	1.96	0.65
48:BP:101:VAL:HG12	48:BP:106:LEU:HB2	1.79	0.65
51:BS:14:VAL:HG12	51:BS:15:ARG:N	2.12	0.65
52:BT:32:TYR:O	52:BT:33:LYS:HB2	1.97	0.65
52:BT:62:THR:HG22	52:BT:75:ILE:HG13	1.78	0.65
58:BZ:102:LEU:HD23	58:BZ:137:ILE:HB	1.78	0.65
1:CA:1221:G:C4'	19:CS:77:THR:HG21	2.17	0.65
19:CS:31:ILE:HG23	19:CS:49:ILE:HA	1.78	0.65
25:CZ:8:THR:HG23	25:CZ:9:LYS:N	2.11	0.65
31:D5:47:PRO:HG2	31:D5:48:GLU:OE1	1.95	0.65
34:D8:25:MET:CG	48:DP:64:LYS:HB2	2.26	0.65
35:D9:30:PRO:HB2	36:DA:2527:C:H4'	1.78	0.65
36:DA:212:G:O2'	36:DA:213:A:H5'	1.97	0.65
36:DA:650:C:C3'	36:DA:651:G:H5"	2.26	0.65
36:DA:1058:G:H1'	36:DA:1082:U:O4	1.96	0.65
40:DE:95:ILE:N	40:DE:95:ILE:HD13	2.12	0.65
40:DE:188:VAL:HG23	40:DE:189:PRO:HD2	1.78	0.65
52:DT:31:SER:HB2	52:DT:32:TYR:CD1	2.32	0.65
1:AA:1003:G:H2'	1:AA:1004:A:C4'	2.23	0.65
2:AB:30:ARG:HB2	2:AB:30:ARG:HH11	1.61	0.65
4:AD:148:VAL:HG12	4:AD:149:ALA:N	2.12	0.65
9:AI:83:ARG:O	9:AI:86:VAL:HG12	1.97	0.65
12:AL:24:VAL:CG1	12:AL:27:LEU:HD22	2.26	0.65
22:AW:71:G:H2'	22:AW:72:C:C5'	2.24	0.65
27:B1:37:ILE:HG22	27:B1:37:ILE:O	1.95	0.65
28:B2:6:VAL:HG21	28:B2:59:ARG:NE	2.11	0.65
28:B2:59:ARG:HH21	28:B2:60:LEU:HD12	1.62	0.65
32:B6:11:LEU:HD23	32:B6:25:LYS:HA	1.79	0.65
38:BC:47:LEU:HD11	38:BC:171:ILE:CG2	2.26	0.65
38:BC:120:MET:HA	38:BC:120:MET:HE2	1.77	0.65
39:BD:3:VAL:CG1	39:BD:17:THR:HB	2.27	0.65
40:BE:24:THR:HG22	40:BE:186:GLY:HA2	1.78	0.65
43:BH:66:GLY:CA	43:BH:69:ARG:HB3	2.26	0.65
46:BN:67:LEU:O	46:BN:88:GLU:HG3	1.96	0.65
49:BQ:52:VAL:O	49:BQ:56:ARG:HB2	1.97	0.65
51:BS:89:ARG:HH11	51:BS:89:ARG:CG	2.09	0.65
52:BT:32:TYR:CD2	52:BT:81:PRO:HG2	2.32	0.65
1:CA:625:G:H2'	1:CA:626:U:C6	2.32	0.65
1:CA:1492:A:OP1	12:CL:47:LYS:HB2	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:9:GLU:N	2:CB:9:GLU:OE1	2.30	0.65
3:CC:77:ILE:O	3:CC:83:ARG:HB3	1.97	0.65
3:CC:92:ALA:O	3:CC:96:GLY:HA2	1.96	0.65
5:CE:145:LYS:O	5:CE:149:GLU:HG3	1.96	0.65
12:CL:80:HIS:CD2	24:CY:68:C:O2'	2.49	0.65
30:D4:31:ILE:HG22	30:D4:33:VAL:HG23	1.79	0.65
35:D9:4:ARG:HG2	35:D9:34:GLN:CD	2.15	0.65
36:DA:691:C:C1'	39:DD:43:ARG:HH11	2.09	0.65
36:DA:1403:C:H5"	36:DA:1471:A:H1'	1.77	0.65
36:DA:2019:A:C4'	53:DU:34:LYS:HD2	2.27	0.65
36:DA:2100:G:H2'	36:DA:2101:G:C8	2.32	0.65
46:DN:23:LEU:HB2	46:DN:60:ILE:CG2	2.27	0.65
46:DN:46:VAL:O	46:DN:47:ALA:HB3	1.96	0.65
49:DQ:133:ARG:HH11	49:DQ:133:ARG:CB	2.10	0.65
54:DV:68:LYS:HD3	54:DV:69:LYS:H	1.62	0.65
57:DY:13:VAL:HG23	57:DY:73:ARG:H	1.61	0.65
1:AA:1307:U:H2'	1:AA:1308:U:H6	1.61	0.65
22:AW:59:U:H2'	22:AW:60:U:H5'	1.77	0.65
31:B5:11:THR:OG1	36:BA:1263:U:O3'	2.15	0.65
36:BA:659:C:H4'	41:BF:100:THR:O	1.96	0.65
36:BA:1316:U:H2'	36:BA:1317:A:C8	2.32	0.65
36:BA:2176:A:C3'	36:BA:2177:C:H5"	2.27	0.65
37:BB:3:C:H42	37:BB:118:G:H1	1.45	0.65
49:BQ:60:ARG:HB3	49:BQ:60:ARG:NH1	2.11	0.65
49:BQ:141:GLN:O	58:BZ:53:ILE:HB	1.97	0.65
53:BU:92:ARG:HH21	54:BV:11:GLN:H	1.42	0.65
1:CA:984:C:H2'	1:CA:985:C:C6	2.31	0.65
1:CA:1368:G:H5'	9:CI:112:LYS:O	1.97	0.65
4:CD:100:ARG:HH12	4:CD:137:SER:HA	1.62	0.65
6:CF:9:VAL:HG12	6:CF:86:ARG:HG3	1.79	0.65
10:CJ:44:VAL:HG13	10:CJ:66:ARG:HB3	1.79	0.65
36:DA:528:A:H2	36:DA:2043:C:O5'	1.79	0.65
43:DH:30:LYS:HB2	43:DH:79:VAL:HA	1.78	0.65
48:DP:147:LEU:CG	48:DP:148:LEU:H	2.05	0.65
53:DU:83:LEU:HG	53:DU:88:ILE:HD11	1.77	0.65
58:DZ:7:ALA:HB3	58:DZ:61:LEU:CD2	2.27	0.65
58:DZ:81:ARG:HB3	58:DZ:81:ARG:HH11	1.60	0.65
1:AA:452:A:O2'	1:AA:453:A:H8	1.79	0.65
1:AA:942:G:H21	9:AI:124:GLN:NE2	1.94	0.65
9:AI:86:VAL:HG23	9:AI:93:ARG:HG2	1.77	0.65
13:AM:113:PRO:O	13:AM:114:ARG:CB	2.45	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:27:CYS:SG	59:AN:101:ZN:ZN	1.86	0.65
20:AT:45:GLN:HB3	20:AT:91:LEU:HD13	1.79	0.65
32:B6:41:PRO:HD2	32:B6:45:LYS:HA	1.79	0.65
36:BA:221:A:H4'	36:BA:222:A:O5'	1.96	0.65
36:BA:1198:U:H2'	36:BA:1199:U:C6	2.32	0.65
36:BA:1516:C:H2'	36:BA:1517:G:C5'	2.23	0.65
36:BA:1642:G:O2'	36:BA:1643:G:H5'	1.97	0.65
36:BA:1907:G:O2'	36:BA:1908:C:H5'	1.97	0.65
38:BC:175:VAL:HG12	38:BC:175:VAL:O	1.95	0.65
43:BH:51:ARG:HG3	43:BH:52:VAL:H	1.61	0.65
43:BH:84:SER:O	43:BH:85:LYS:HB3	1.97	0.65
43:BH:136:ILE:HD12	43:BH:136:ILE:N	2.11	0.65
50:BR:75:LEU:HD13	50:BR:75:LEU:O	1.97	0.65
52:BT:25:GLY:HA2	52:BT:92:GLY:HA2	1.79	0.65
52:BT:28:VAL:HG23	52:BT:47:GLY:O	1.96	0.65
53:BU:92:ARG:NH2	54:BV:10:LYS:HB3	2.12	0.65
53:BU:108:GLU:HG3	54:BV:44:LYS:HD3	1.79	0.65
54:BV:61:VAL:HA	54:BV:94:LEU:HD23	1.79	0.65
1:CA:367:U:O5'	25:CZ:291:ARG:HD2	1.96	0.65
1:CA:1277:C:HO2'	1:CA:1279:A:H8	1.42	0.65
1:CA:1317:C:H2'	1:CA:1318:A:O4'	1.97	0.65
1:CA:1486:G:H2'	1:CA:1487:G:O4'	1.97	0.65
3:CC:180:ALA:O	3:CC:181:ASN:HB2	1.96	0.65
3:CC:192:THR:HG22	3:CC:192:THR:O	1.97	0.65
5:CE:127:ASN:HD22	5:CE:130:ASN:H	1.45	0.65
10:CJ:27:ALA:HB3	10:CJ:34:VAL:HG21	1.79	0.65
11:CK:121:PRO:HG2	11:CK:126:ARG:HB2	1.79	0.65
19:CS:16:LEU:HD12	19:CS:16:LEU:N	2.11	0.65
20:CT:60:GLU:O	20:CT:63:ILE:HB	1.96	0.65
25:CZ:121:LEU:HD22	61:CZ:502:KIR:O4	1.96	0.65
25:CZ:198:LYS:NZ	25:CZ:201:GLU:HG3	2.12	0.65
36:DA:2483:C:H3'	36:DA:2484:G:H5"	1.79	0.65
36:DA:2720:U:H5'	36:DA:2721:A:OP2	1.97	0.65
37:DB:20:C:C2'	37:DB:21:G:H5"	2.25	0.65
39:DD:238:GLY:O	39:DD:239:ARG:O	2.15	0.65
43:DH:89:ILE:O	43:DH:89:ILE:HG13	1.97	0.65
43:DH:158:HIS:O	43:DH:159:GLU:HB2	1.97	0.65
54:DV:25:LEU:H	54:DV:92:THR:HG21	1.61	0.65
1:AA:64:G:H4'	1:AA:66:G:OP1	1.96	0.64
2:AB:144:ARG:HG3	2:AB:144:ARG:O	1.96	0.64
3:AC:107:GLN:CD	3:AC:107:GLN:H	2.00	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:119:ARG:O	3:AC:122:GLU:HB2	1.97	0.64
9:AI:11:LYS:O	9:AI:12:GLU:CB	2.46	0.64
11:AK:27:ASN:ND2	11:AK:28:THR:N	2.45	0.64
27:B1:75:GLU:C	27:B1:77:ALA:H	2.01	0.64
36:BA:195:A:OP1	48:BP:46:LYS:HE2	1.97	0.64
36:BA:2190:G:C2	36:BA:2191:G:H1'	2.32	0.64
36:BA:2502:G:H5"	36:BA:2503:A:C5'	2.27	0.64
39:BD:35:LYS:HG3	39:BD:63:ARG:HG2	1.79	0.64
47:BO:66:LYS:H	47:BO:82:ASN:ND2	1.95	0.64
48:BP:101:VAL:HG12	48:BP:106:LEU:CB	2.27	0.64
50:BR:106:GLY:O	50:BR:107:ASP:HB3	1.96	0.64
1:CA:990:C:H2'	1:CA:991:U:C6	2.32	0.64
18:CR:42:ARG:HG3	18:CR:42:ARG:HH11	1.62	0.64
24:CY:50:G:O2'	25:CZ:339:ARG:HD3	1.96	0.64
32:D6:52:VAL:HG12	32:D6:53:LYS:H	1.62	0.64
36:DA:806:C:OP2	48:DP:39:LYS:HD2	1.97	0.64
36:DA:1528:A:N1	36:DA:1542:A:H2	1.93	0.64
36:DA:2022:U:O2'	36:DA:2617:C:H5'	1.97	0.64
36:DA:2491:U:H4'	36:DA:2570:G:OP1	1.96	0.64
37:DB:74:U:H2'	37:DB:75:G:O4'	1.97	0.64
43:DH:137:ASP:OD2	43:DH:140:LYS:HE3	1.96	0.64
48:DP:38:GLN:HG3	48:DP:39:LYS:H	1.62	0.64
48:DP:77:ARG:CD	48:DP:78:PRO:HD2	2.27	0.64
51:DS:61:ASN:O	51:DS:65:VAL:HG23	1.97	0.64
10:AJ:38:ILE:HG13	10:AJ:71:LEU:O	1.97	0.64
15:AO:28:GLN:OE1	15:AO:66:LEU:HD21	1.96	0.64
15:AO:82:ILE:HD11	15:AO:88:ARG:N	2.12	0.64
36:BA:761:A:H8	36:BA:761:A:H3'	1.62	0.64
36:BA:2704:C:H2'	36:BA:2705:A:H8	1.61	0.64
40:BE:52:LEU:CG	40:BE:75:VAL:HB	2.27	0.64
56:BX:54:VAL:HG22	56:BX:81:VAL:HG12	1.77	0.64
1:CA:1036:G:H5"	1:CA:1037:C:C5	2.33	0.64
1:CA:1288:A:H2'	1:CA:1289:A:C8	2.32	0.64
2:CB:102:LEU:HB2	2:CB:176:GLU:OE1	1.97	0.64
3:CC:189:ALA:HB3	3:CC:196:LEU:HB2	1.79	0.64
13:CM:65:LYS:HD3	13:CM:65:LYS:N	2.08	0.64
20:CT:71:THR:O	20:CT:72:LEU:HD23	1.97	0.64
25:CZ:34:VAL:HG21	25:CZ:199:ILE:CG2	2.26	0.64
25:CZ:328:GLY:O	25:CZ:393:ARG:HD3	1.96	0.64
32:D6:7:ILE:HG23	32:D6:29:ASN:HD22	1.62	0.64
36:DA:1803:A:O3'	39:DD:259:THR:CG2	2.43	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:45:ASN:CG	39:DD:46:GLN:H	1.99	0.64
42:DG:27:ASN:OD1	42:DG:28:VAL:N	2.29	0.64
42:DG:130:ASN:OD1	42:DG:160:VAL:HA	1.97	0.64
43:DH:126:PRO:O	43:DH:127:GLU:HB2	1.98	0.64
52:DT:105:LEU:O	52:DT:107:ASP:OD1	2.13	0.64
56:DX:65:ARG:HD3	56:DX:70:LEU:CD2	2.23	0.64
4:AD:36:ARG:C	4:AD:38:TYR:H	2.00	0.64
6:AF:69:GLU:O	6:AF:72:VAL:HG12	1.97	0.64
25:AZ:7:ARG:NH1	25:AZ:281:ILE:CG1	2.53	0.64
25:AZ:29:ALA:O	25:AZ:33:TYR:CE2	2.50	0.64
36:BA:234:C:H2'	36:BA:235:U:C6	2.32	0.64
36:BA:460:A:H2'	36:BA:461:C:O4'	1.98	0.64
36:BA:882:G:H2'	36:BA:883:G:H8	1.60	0.64
36:BA:1105:U:H2'	36:BA:1106:G:C8	2.32	0.64
36:BA:1803:A:C4'	39:BD:259:THR:HG21	2.25	0.64
36:BA:1946:U:H2'	36:BA:1947:C:C6	2.32	0.64
36:BA:2464:C:HO2'	36:BA:2465:C:H6	1.42	0.64
39:BD:152:GLY:O	39:BD:154:LYS:HG3	1.98	0.64
40:BE:105:THR:HG21	40:BE:164:ARG:NH1	2.13	0.64
1:CA:1305:G:H3'	21:CU:6:ARG:HH22	1.61	0.64
9:CI:79:LEU:HD12	9:CI:83:ARG:HD2	1.77	0.64
14:CN:22:THR:O	14:CN:23:ARG:HB3	1.97	0.64
27:D1:62:VAL:HG21	27:D1:67:ILE:HA	1.79	0.64
36:DA:631:A:H5"	48:DP:65:ARG:HH11	1.61	0.64
36:DA:863:A:O2'	36:DA:864:G:H5'	1.97	0.64
36:DA:1019:U:H3	36:DA:1142(A):A:H62	1.44	0.64
36:DA:1053:C:H2'	36:DA:1054:A:H8	1.62	0.64
36:DA:1652:A:H2'	36:DA:1653:G:H5'	1.77	0.64
37:DB:7:G:H4'	51:DS:29:PHE:CD2	2.32	0.64
39:DD:76:PRO:HG2	39:DD:98:VAL:CG2	2.28	0.64
1:AA:59:A:H5"	1:AA:60:A:H5"	1.79	0.64
1:AA:376:G:H4'	16:AP:5:ARG:NH1	2.12	0.64
2:AB:9:GLU:N	2:AB:9:GLU:OE1	2.31	0.64
6:AF:35:ALA:O	6:AF:36:ARG:HB2	1.96	0.64
9:AI:4:TYR:CD2	9:AI:88:TYR:HB2	2.32	0.64
19:AS:22:LEU:HD13	19:AS:22:LEU:O	1.97	0.64
25:AZ:8:THR:HG23	25:AZ:9:LYS:N	2.11	0.64
25:AZ:270:VAL:CG1	25:AZ:286:VAL:HG21	2.22	0.64
25:AZ:313:HIS:CG	25:AZ:403:ILE:HG21	2.32	0.64
36:BA:622:G:O2'	36:BA:623:G:H5'	1.96	0.64
36:BA:2228:G:OP1	39:BD:261:LYS:HE3	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:7:VAL:HG12	40:BE:27:LEU:HB3	1.78	0.64
42:BG:7:LEU:O	42:BG:7:LEU:HD23	1.97	0.64
42:BG:32:PRO:HA	42:BG:162:THR:OG1	1.96	0.64
46:BN:4:TYR:N	46:BN:4:TYR:CD1	2.66	0.64
48:BP:70:GLN:HB3	48:BP:72:PRO:HD2	1.78	0.64
58:BZ:126:VAL:HA	58:BZ:163:LEU:HA	1.80	0.64
1:CA:226:G:O2'	1:CA:227:G:H5'	1.96	0.64
7:CG:44:TYR:HA	7:CG:47:CYS:SG	2.38	0.64
24:CY:75:C:H5	25:CZ:232:THR:N	1.87	0.64
25:CZ:198:LYS:NZ	25:CZ:201:GLU:OE1	2.30	0.64
36:DA:49:A:H5"	36:DA:51:G:O4'	1.97	0.64
36:DA:1010:A:H1'	36:DA:1153:C:H1'	1.80	0.64
36:DA:1638:C:H5"	36:DA:2710:C:O2'	1.98	0.64
41:DF:65:TRP:CZ3	41:DF:75:HIS:CD2	2.86	0.64
41:DF:195:ASP:OD2	41:DF:197:ASP:HB2	1.98	0.64
52:DT:82:LEU:O	52:DT:83:ILE:C	2.34	0.64
58:DZ:59:LEU:O	58:DZ:66:SER:HA	1.98	0.64
1:AA:187:C:H2'	1:AA:188:C:H6	1.61	0.64
6:AF:91:VAL:HG11	18:AR:72:ARG:HH12	1.62	0.64
20:AT:61:SER:O	20:AT:65:LYS:HG3	1.96	0.64
25:AZ:265:THR:HG22	25:AZ:266:VAL:H	1.59	0.64
32:B6:11:LEU:CD1	32:B6:51:GLU:HG3	2.28	0.64
36:BA:1658:C:H2'	36:BA:1659:U:C6	2.32	0.64
36:BA:2392:A:H2	36:BA:2424:C:H42	1.45	0.64
40:BE:112:GLY:O	40:BE:159:HIS:HA	1.98	0.64
41:BF:157:VAL:HG12	41:BF:176:LEU:HD23	1.78	0.64
47:BO:88:ASN:HD21	47:BO:92:GLU:HB2	1.60	0.64
47:BO:110:GLY:HA2	47:BO:112:MET:CE	2.27	0.64
48:BP:23:PRO:HB2	48:BP:33:ARG:HG3	1.78	0.64
51:BS:89:ARG:O	51:BS:92:TYR:HB3	1.96	0.64
53:BU:59:ARG:HG2	53:BU:59:ARG:NH1	2.06	0.64
54:BV:47:VAL:HG23	54:BV:47:VAL:O	1.98	0.64
1:CA:437:U:H3	1:CA:495:A:H62	1.46	0.64
1:CA:1186:G:C3'	1:CA:1187:G:H5"	2.27	0.64
5:CE:51:VAL:HB	5:CE:52:PRO:HD3	1.79	0.64
7:CG:15:ASP:OD1	7:CG:16:LEU:N	2.29	0.64
13:CM:77:ASN:O	13:CM:81:LEU:HD22	1.97	0.64
27:D1:4:VAL:HB	27:D1:11:ARG:HG2	1.80	0.64
36:DA:566:U:O4	54:DV:78:LYS:HE3	1.97	0.64
36:DA:608:A:H2'	36:DA:609:A:C8	2.31	0.64
36:DA:633:A:C2'	36:DA:634:C:H5'	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1654:A:OP1	50:DR:2:ARG:HA	1.97	0.64
36:DA:2528:U:O2'	36:DA:2529:G:H3'	1.97	0.64
36:DA:2777:G:C5'	36:DA:2778:A:H5'	2.26	0.64
47:DO:71:ARG:NH2	47:DO:77:ILE:HG21	2.12	0.64
48:DP:31:ALA:C	48:DP:33:ARG:H	1.98	0.64
49:DQ:51:ARG:O	49:DQ:55:VAL:HG13	1.97	0.64
49:DQ:56:ARG:HH11	49:DQ:56:ARG:HG3	1.62	0.64
52:DT:24:PRO:HD3	52:DT:52:ILE:CD1	2.27	0.64
55:DW:20:VAL:CG2	55:DW:47:VAL:HG21	2.28	0.64
57:DY:74:PRO:O	57:DY:75:ILE:HB	1.97	0.64
1:AA:145:G:H5'	1:AA:146:G:OP2	1.96	0.64
31:B5:49:CYS:O	31:B5:56:LYS:HG3	1.98	0.64
36:BA:1493:C:O2	36:BA:1493:C:H2'	1.97	0.64
36:BA:1827:C:C2'	36:BA:1828:G:H5'	2.28	0.64
36:BA:1887:C:C2'	36:BA:1888:G:H5"	2.27	0.64
36:BA:2020:A:O2'	36:BA:2021:C:H5'	1.98	0.64
36:BA:2555:U:H2'	36:BA:2556:C:H5'	1.79	0.64
37:BB:81:G:O6	37:BB:96:U:O2	2.15	0.64
39:BD:132:PRO:HG3	39:BD:190:TYR:CZ	2.32	0.64
40:BE:9:VAL:CG1	40:BE:25:VAL:HB	2.28	0.64
40:BE:69:LYS:HD3	40:BE:89:ASP:HA	1.79	0.64
40:BE:184:VAL:O	40:BE:186:GLY:N	2.30	0.64
42:BG:131:TYR:HE2	42:BG:133:LEU:HD23	1.63	0.64
43:BH:98:LEU:HB3	43:BH:125:VAL:HG21	1.80	0.64
46:BN:126:PRO:O	46:BN:127:ASP:CB	2.45	0.64
52:BT:53:ARG:HH11	52:BT:53:ARG:CB	2.01	0.64
52:BT:89:VAL:HG21	52:BT:91:ARG:HH21	1.62	0.64
1:CA:67:C:O2'	1:CA:171:A:H1'	1.97	0.64
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.32	0.64
16:CP:22:THR:HG22	16:CP:32:TYR:HB3	1.80	0.64
17:CQ:26:GLN:HE21	17:CQ:37:LYS:HE2	1.62	0.64
19:CS:20:LEU:O	19:CS:22:LEU:N	2.29	0.64
25:CZ:256:VAL:HG13	25:CZ:312:PRO:HG3	1.80	0.64
26:D0:36:ILE:CD1	36:DA:2355:C:H5'	2.16	0.64
30:D4:37:SER:C	30:D4:39:CYS:H	1.99	0.64
36:DA:1252:G:OP2	53:DU:14:HIS:HE1	1.80	0.64
36:DA:2286:A:H4'	36:DA:2287:A:O4'	1.98	0.64
36:DA:2523:G:C2'	36:DA:2524:G:H5"	2.27	0.64
36:DA:2668:G:O2'	36:DA:2669:G:H5'	1.97	0.64
39:DD:35:LYS:CG	39:DD:63:ARG:HA	2.26	0.64
43:DH:15:VAL:HG12	43:DH:28:GLY:HA2	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:92:SER:O	7:AG:96:GLN:HG3	1.98	0.64
9:AI:98:PRO:HB2	9:AI:99:LEU:HD22	1.79	0.64
13:AM:58:GLU:O	13:AM:62:ASN:HB2	1.97	0.64
13:AM:84:ILE:HG21	19:AS:60:VAL:HG23	1.78	0.64
22:AV:46:G:C3'	22:AV:47:U:C5'	2.62	0.64
28:B2:17:SER:C	28:B2:19:VAL:H	2.00	0.64
32:B6:15:GLU:HG3	32:B6:47:THR:OG1	1.97	0.64
36:BA:64:A:C4	56:BX:66:LEU:HD12	2.32	0.64
36:BA:267:C:H2'	36:BA:268:C:C6	2.31	0.64
36:BA:1543:C:H3'	36:BA:1544:A:C5'	2.24	0.64
48:BP:24:GLY:HA3	48:BP:33:ARG:HH12	1.63	0.64
52:BT:22:PHE:HE2	52:BT:85:LYS:HZ1	1.44	0.64
52:BT:28:VAL:O	52:BT:29:ARG:HB2	1.97	0.64
53:BU:52:ARG:HB3	53:BU:52:ARG:NH1	2.12	0.64
57:BY:96:ILE:CG1	57:BY:99:CYS:HB3	2.27	0.64
58:BZ:18:LEU:HB3	58:BZ:23:LYS:HB2	1.78	0.64
3:CC:25:GLY:O	3:CC:27:LYS:N	2.30	0.64
16:CP:20:VAL:HG23	16:CP:34:GLU:O	1.96	0.64
16:CP:43:LYS:O	16:CP:45:THR:N	2.31	0.64
17:CQ:52:LYS:HD2	17:CQ:55:ASP:OD2	1.97	0.64
25:CZ:126:VAL:HB	25:CZ:128:VAL:HG23	1.80	0.64
32:D6:14:THR:HB	32:D6:52:VAL:HG21	1.79	0.64
36:DA:371:A:N6	36:DA:401:A:H5"	2.13	0.64
36:DA:1214:A:H2'	36:DA:1215:G:O4'	1.97	0.64
36:DA:2870:C:H5"	50:DR:65:LEU:CD2	2.27	0.64
38:DC:63:SER:HA	38:DC:160:ARG:HA	1.80	0.64
39:DD:77:ALA:HB2	39:DD:97:TYR:CD2	2.33	0.64
40:DE:52:LEU:HD23	40:DE:75:VAL:HB	1.79	0.64
41:DF:36:VAL:O	41:DF:40:GLN:HG3	1.98	0.64
47:DO:114:ILE:HD12	47:DO:114:ILE:N	2.13	0.64
58:DZ:69:THR:CG2	58:DZ:90:VAL:HA	2.25	0.64
58:DZ:166:SER:HB2	58:DZ:168:GLU:H	1.58	0.64
1:AA:67:C:OP1	1:AA:199:G:H5"	1.98	0.64
1:AA:722:A:H2'	1:AA:722:A:N3	2.12	0.64
1:AA:1125:U:C1'	10:AJ:5:ARG:NH2	2.55	0.64
24:AY:6:C:H42	24:AY:67:G:H1	1.45	0.64
25:AZ:34:VAL:HG21	25:AZ:199:ILE:CG2	2.27	0.64
25:AZ:222:LEU:HG	25:AZ:303:VAL:HG11	1.80	0.64
28:B2:57:ILE:HA	28:B2:60:LEU:HB3	1.79	0.64
32:B6:15:GLU:HG2	32:B6:18:ARG:NH1	2.12	0.64
36:BA:271(K):U:H3'	36:BA:271(L):U:H5'	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:286:C:H2'	36:BA:287:C:C6	2.33	0.64
36:BA:1771:C:C1'	36:BA:1786:A:H8	2.09	0.64
36:BA:1952:A:C6	47:BO:22:ILE:HD12	2.33	0.64
38:BC:30:LYS:HE2	38:BC:180:PHE:O	1.96	0.64
41:BF:18:ARG:NH1	41:BF:196:LEU:HD22	2.12	0.64
42:BG:15:VAL:O	42:BG:15:VAL:HG12	1.96	0.64
50:BR:117:VAL:HG22	50:BR:118:GLU:H	1.62	0.64
58:BZ:119:GLU:HG3	58:BZ:122:ARG:NH1	2.13	0.64
3:CC:14:ILE:CG1	3:CC:15:THR:N	2.61	0.64
6:CF:1:MET:HA	6:CF:68:PRO:HA	1.80	0.64
13:CM:10:PRO:HB2	13:CM:18:ALA:HB1	1.80	0.64
13:CM:108:ARG:HH11	13:CM:108:ARG:HG3	1.61	0.64
15:CO:82:ILE:HG23	15:CO:83:GLU:N	2.11	0.64
25:CZ:200:TRP:CD2	25:CZ:203:LEU:HD12	2.32	0.64
25:CZ:321:TYR:C	25:CZ:321:TYR:CD1	2.71	0.64
34:D8:54:GLU:O	34:D8:58:ILE:HG12	1.97	0.64
36:DA:25:U:C5'	55:DW:79:GLY:HA2	2.28	0.64
36:DA:64:A:C4	56:DX:66:LEU:HD12	2.33	0.64
37:DB:91:C:OP1	49:DQ:16:ARG:HG3	1.98	0.64
41:DF:160:ASN:ND2	41:DF:162:LEU:HD13	2.12	0.64
42:DG:72:ARG:HB2	42:DG:87:PRO:HD2	1.80	0.64
48:DP:23:PRO:HD2	48:DP:33:ARG:HE	1.63	0.64
48:DP:29:LYS:H	48:DP:29:LYS:CD	2.09	0.64
52:DT:30:VAL:O	52:DT:31:SER:HB3	1.96	0.64
54:DV:58:VAL:HB	54:DV:98:GLU:HG2	1.80	0.64
56:DX:12:VAL:HB	56:DX:17:ALA:CB	2.28	0.64
56:DX:44:GLU:HG3	56:DX:50:LYS:HA	1.79	0.64
1:AA:848:C:O2'	1:AA:849:C:H5'	1.98	0.64
1:AA:975:A:H5'	1:AA:975:A:C8	2.32	0.64
13:AM:23:TYR:HB3	13:AM:67:GLU:CB	2.26	0.64
16:AP:67:THR:HG22	16:AP:68:ASP:N	2.13	0.64
19:AS:67:VAL:HG12	19:AS:68:GLY:H	1.62	0.64
32:B6:18:ARG:HG3	32:B6:19:ARG:H	1.62	0.64
36:BA:270:A:O2'	36:BA:271:A:H5'	1.98	0.64
36:BA:335:C:H2'	36:BA:336:C:H6	1.63	0.64
36:BA:2133:G:C2	36:BA:2157:G:O6	2.51	0.64
36:BA:2314:C:O2'	36:BA:2315:G:H5'	1.98	0.64
36:BA:2631:G:N2	40:BE:61:ARG:NH1	2.46	0.64
38:BC:10:LEU:CD1	38:BC:32:LEU:HA	2.26	0.64
52:BT:65:LYS:HG3	52:BT:66:VAL:N	2.13	0.64
54:BV:21:ARG:O	54:BV:22:VAL:HG13	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:11:PRO:HA	56:BX:28:PHE:CB	2.28	0.64
56:BX:36:LYS:HB3	56:BX:56:THR:HG21	1.80	0.64
57:BY:81:LYS:HD3	57:BY:97:ARG:O	1.98	0.64
1:CA:197:A:H4'	1:CA:198:G:O5'	1.98	0.64
1:CA:827:U:H2'	1:CA:870:U:O4	1.98	0.64
1:CA:1075:C:OP1	2:CB:179:LYS:HE2	1.98	0.64
1:CA:1217:C:P	14:CN:9:LYS:HZ2	2.21	0.64
4:CD:25:ARG:C	4:CD:27:TYR:H	1.99	0.64
9:CI:11:LYS:O	9:CI:12:GLU:HB2	1.98	0.64
9:CI:86:VAL:CG2	9:CI:93:ARG:HG2	2.28	0.64
10:CJ:34:VAL:HG13	10:CJ:73:ASP:O	1.97	0.64
17:CQ:59:ILE:CG2	17:CQ:71:PHE:HB3	2.27	0.64
22:CW:59:U:H5'	22:CW:60:U:H5	1.61	0.64
24:CY:29:G:H1	24:CY:41:C:H42	1.45	0.64
31:D5:20:ARG:HA	31:D5:23:HIS:ND1	2.13	0.64
36:DA:8:A:H2'	36:DA:9:U:C6	2.33	0.64
36:DA:654(E):G:H22	36:DA:654(Q):C:H1'	1.61	0.64
36:DA:1717:G:C3'	36:DA:1718:G:H5"	2.28	0.64
39:DD:62:TYR:HA	39:DD:87:ASN:HD21	1.62	0.64
41:DF:170:LEU:HB2	41:DF:173:VAL:HB	1.80	0.64
42:DG:7:LEU:HA	42:DG:10:LYS:HB2	1.79	0.64
46:DN:34:LEU:HD13	46:DN:34:LEU:O	1.97	0.64
50:DR:96:ARG:HH12	50:DR:117:VAL:HG11	1.62	0.64
52:DT:5:ALA:HA	52:DT:8:LYS:HE2	1.80	0.64
52:DT:50:ILE:HG23	52:DT:99:LEU:HD12	1.80	0.64
56:DX:27:THR:HG22	56:DX:80:ILE:CB	2.28	0.64
1:AA:201:C:H42	1:AA:216:G:H1	1.46	0.64
3:AC:155:GLY:HA3	3:AC:196:LEU:HD13	1.78	0.64
4:AD:3:ARG:HH12	4:AD:118:ARG:HD3	1.63	0.64
25:AZ:68:VAL:O	25:AZ:69:GLU:CG	2.46	0.64
29:B3:17:LYS:HE3	36:BA:969:U:OP1	1.98	0.64
34:B8:13:ARG:NH2	36:BA:250:G:OP2	2.31	0.64
36:BA:225:A:O2'	36:BA:257:A:H4'	1.97	0.64
37:BB:65:C:O2'	37:BB:66:A:H5'	1.97	0.64
42:BG:37:VAL:HG22	42:BG:159:VAL:HA	1.78	0.64
42:BG:40:ASN:HA	42:BG:91:ARG:HA	1.80	0.64
46:BN:21:LYS:HE3	46:BN:25:ARG:HB3	1.79	0.64
1:CA:973:G:C1'	10:CJ:55:LYS:CE	2.76	0.64
1:CA:1288:A:H2'	1:CA:1289:A:H8	1.63	0.64
4:CD:23:GLY:O	4:CD:27:TYR:HB2	1.98	0.64
6:CF:9:VAL:HA	6:CF:59:TYR:O	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CY:68:C:H2'	24:CY:69:C:C6	2.30	0.64
32:D6:11:LEU:HD21	32:D6:26:ASN:HD22	1.62	0.64
36:DA:234:C:H2'	36:DA:235:U:H6	1.63	0.64
36:DA:753:C:H2'	36:DA:754:C:C6	2.33	0.64
36:DA:1103:A:H5'	36:DA:1104:C:OP2	1.98	0.64
38:DC:3:HIS:HB3	38:DC:7:TYR:HD2	1.63	0.64
40:DE:45:THR:O	40:DE:46:ALA:HB2	1.98	0.64
42:DG:36:LYS:HG2	42:DG:160:VAL:HB	1.80	0.64
51:DS:15:ARG:NH1	51:DS:18:ILE:HD11	2.12	0.64
1:AA:194:C:C2'	1:AA:195:A:H5"	2.27	0.63
1:AA:542:G:H2'	1:AA:543:C:H6	1.63	0.63
7:AG:41:ARG:HG2	7:AG:41:ARG:HH11	1.63	0.63
7:AG:41:ARG:HG2	7:AG:41:ARG:NH1	2.12	0.63
12:AL:38:THR:O	12:AL:39:VAL:HG23	1.98	0.63
25:AZ:198:LYS:NZ	25:AZ:198:LYS:C	2.51	0.63
25:AZ:272:MET:CB	25:AZ:277:LEU:HD23	2.21	0.63
27:B1:78:LYS:HE2	27:B1:78:LYS:HA	1.79	0.63
28:B2:32:LEU:O	28:B2:53:LEU:HD13	1.98	0.63
29:B3:11:SER:HB2	36:BA:988:A:O5'	1.98	0.63
36:BA:623:G:H2'	36:BA:624:C:C6	2.33	0.63
36:BA:2128:C:O2'	36:BA:2129:C:P	2.56	0.63
36:BA:2189:U:C3'	36:BA:2190:G:H4'	2.27	0.63
42:BG:55:LYS:HG3	42:BG:58:GLN:NE2	2.12	0.63
48:BP:16:ARG:HB2	48:BP:16:ARG:HH11	1.58	0.63
58:BZ:118:GLN:HG2	58:BZ:120:ILE:HD13	1.81	0.63
3:CC:61:ALA:N	3:CC:63:ASN:OD1	2.30	0.63
4:CD:12:CYS:HA	4:CD:19:LEU:HD13	1.78	0.63
4:CD:57:ARG:HB3	4:CD:206:PHE:HB2	1.81	0.63
6:CF:87:ARG:HH11	6:CF:87:ARG:HG2	1.63	0.63
13:CM:4:ILE:HD13	13:CM:56:LEU:HD12	1.81	0.63
13:CM:49:THR:O	13:CM:53:VAL:HG23	1.97	0.63
25:CZ:193:ASN:OD1	25:CZ:195:TRP:CB	2.46	0.63
25:CZ:324:LYS:HG2	25:CZ:365:GLY:HA2	1.79	0.63
27:D1:39:LYS:HB3	27:D1:39:LYS:HZ3	1.61	0.63
32:D6:5:VAL:N	32:D6:9:LEU:H	1.95	0.63
36:DA:2753:A:O2'	36:DA:2754:U:H5'	1.98	0.63
38:DC:53:ARG:HB3	38:DC:53:ARG:NH1	2.13	0.63
38:DC:63:SER:OG	38:DC:160:ARG:HB2	1.97	0.63
42:DG:96:ARG:N	42:DG:99:MET:HB3	2.13	0.63
46:DN:91:LEU:CD2	46:DN:98:VAL:HG21	2.28	0.63
49:DQ:35:VAL:CG1	49:DQ:130:LYS:HB3	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:43:ASN:HB2	57:DY:64:GLU:HA	1.80	0.63
57:DY:96:ILE:HG13	57:DY:99:CYS:CB	2.17	0.63
58:DZ:28:MET:HE1	58:DZ:59:LEU:HD13	1.79	0.63
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.15	0.63
1:AA:1030(A):G:H2'	1:AA:1030(A):G:N3	2.13	0.63
2:AB:168:THR:HG23	2:AB:192:SER:HA	1.79	0.63
13:AM:15:VAL:HG23	13:AM:34:LEU:HD11	1.79	0.63
20:AT:45:GLN:HE21	20:AT:45:GLN:CA	2.11	0.63
29:B3:19:GLN:NE2	29:B3:52:HIS:CE1	2.65	0.63
36:BA:2248:C:H2'	36:BA:2249:U:H5'	1.79	0.63
36:BA:2886:G:H2'	36:BA:2887:U:C6	2.32	0.63
38:BC:106:GLY:O	38:BC:107:TRP:HB3	1.99	0.63
41:BF:104:LYS:O	41:BF:108:LYS:HG2	1.98	0.63
46:BN:58:ASP:O	46:BN:60:ILE:N	2.31	0.63
48:BP:82:GLY:HA2	48:BP:113:LYS:HB3	1.80	0.63
48:BP:122:PRO:HB3	48:BP:141:ALA:CB	2.28	0.63
51:BS:74:ALA:HB1	51:BS:103:GLU:HG2	1.79	0.63
58:BZ:51:ALA:CB	58:BZ:57:ILE:HD11	2.28	0.63
1:CA:8:A:N6	4:CD:208:SER:HB2	2.10	0.63
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.32	0.63
1:CA:402:G:O2'	1:CA:403:C:H5'	1.96	0.63
1:CA:677:U:H3	1:CA:713:G:H22	1.44	0.63
12:CL:20:LYS:HD2	12:CL:20:LYS:H	1.62	0.63
24:CY:76:A:C2	25:CZ:270:VAL:C	2.71	0.63
25:CZ:242:ILE:CG2	25:CZ:282:ALA:HA	2.27	0.63
36:DA:484:C:H2'	36:DA:485:C:C6	2.33	0.63
36:DA:880:G:H22	36:DA:897:C:N4	1.97	0.63
36:DA:2099:U:H2'	36:DA:2100:G:C8	2.33	0.63
39:DD:75:ILE:CG2	39:DD:99:ASP:HB2	2.26	0.63
39:DD:102:LYS:C	39:DD:103:ARG:HG2	2.19	0.63
40:DE:116:VAL:CG2	40:DE:117:MET:N	2.52	0.63
41:DF:33:LEU:O	41:DF:37:VAL:HG23	1.97	0.63
48:DP:75:ILE:HD12	48:DP:75:ILE:H	1.63	0.63
51:DS:103:GLU:N	51:DS:103:GLU:OE1	2.28	0.63
52:DT:80:SER:CB	52:DT:81:PRO:HD3	2.27	0.63
1:AA:373:A:O2'	1:AA:374:A:H5'	1.98	0.63
1:AA:1325:C:H5"	21:AU:15:ARG:NH2	2.13	0.63
10:AJ:49:VAL:HG22	14:AN:41:ARG:HB2	1.81	0.63
20:AT:75:ASN:HA	20:AT:78:ALA:HB3	1.79	0.63
25:AZ:231:ILE:HD13	25:AZ:237:VAL:HB	1.80	0.63
34:B8:61:LEU:N	34:B8:63:PRO:HD2	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:467:G:O2'	36:BA:468:G:H5'	1.97	0.63
36:BA:2853:C:H2'	36:BA:2854:G:C8	2.33	0.63
40:BE:116:VAL:HG21	40:BE:122:PHE:CD2	2.33	0.63
42:BG:16:ARG:N	42:BG:17:PRO:HD2	2.12	0.63
42:BG:77:ILE:H	42:BG:77:ILE:CD1	2.11	0.63
51:BS:50:SER:O	51:BS:51:ALA:HB2	1.99	0.63
57:BY:28:LYS:HG2	57:BY:39:VAL:HG13	1.80	0.63
1:CA:973:G:H1'	10:CJ:55:LYS:NZ	2.12	0.63
1:CA:1216:G:O2'	1:CA:1217:C:H5'	1.99	0.63
1:CA:1321:C:H5"	1:CA:1322:C:C5'	2.26	0.63
2:CB:45:GLN:O	2:CB:49:GLU:HG3	1.97	0.63
2:CB:168:THR:HG23	2:CB:192:SER:HA	1.80	0.63
2:CB:193:ASP:O	2:CB:193:ASP:OD1	2.14	0.63
6:CF:27:GLN:O	6:CF:31:GLU:HB2	1.98	0.63
25:CZ:64:ASN:N	25:CZ:64:ASN:ND2	2.44	0.63
36:DA:89:G:H3'	36:DA:90:U:C5'	2.28	0.63
36:DA:720:C:H2'	36:DA:721:C:H6	1.63	0.63
36:DA:986:C:O2'	36:DA:987:G:H5'	1.99	0.63
36:DA:1542:A:H5'	36:DA:1543:C:OP2	1.98	0.63
36:DA:2656:U:N3	36:DA:2665:A:H2	1.95	0.63
38:DC:49:ILE:HB	38:DC:56:GLN:HB3	1.81	0.63
39:DD:133:LEU:HD13	39:DD:173:VAL:HG11	1.80	0.63
39:DD:134:ARG:HG3	39:DD:187:GLY:C	2.19	0.63
42:DG:51:ARG:HD3	42:DG:53:LEU:CD2	2.28	0.63
47:DO:35:VAL:HG22	47:DO:64:ARG:H	1.63	0.63
47:DO:78:ARG:HH11	47:DO:78:ARG:HB2	1.63	0.63
50:DR:116:LEU:O	50:DR:117:VAL:HG12	1.98	0.63
1:AA:858:G:C8	1:AA:869:G:O6	2.52	0.63
2:AB:94:ASN:ND2	2:AB:94:ASN:H	1.96	0.63
4:AD:17:VAL:HG11	4:AD:197:PRO:HB2	1.80	0.63
5:AE:147:ASP:OD1	5:AE:147:ASP:N	2.30	0.63
7:AG:61:VAL:O	7:AG:64:GLN:HB3	1.98	0.63
36:BA:237:C:O2'	36:BA:238:C:H5'	1.99	0.63
36:BA:266:G:H2'	36:BA:267:C:C5'	2.19	0.63
36:BA:428:A:H3'	36:BA:429:A:H8	1.62	0.63
36:BA:813:U:H2'	36:BA:814:C:C6	2.33	0.63
36:BA:1573:G:H2'	36:BA:1574:C:H5'	1.80	0.63
36:BA:2312:U:H2'	36:BA:2313:C:C5'	2.27	0.63
43:BH:76:VAL:O	43:BH:79:VAL:HG22	1.97	0.63
43:BH:91:GLY:HA3	43:BH:94:TYR:CD2	2.34	0.63
46:BN:99:LEU:O	46:BN:103:VAL:HG23	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:15:ARG:HH11	51:BS:15:ARG:CB	2.12	0.63
52:BT:32:TYR:HB3	52:BT:81:PRO:HB2	1.81	0.63
1:CA:167:G:O2'	1:CA:168:G:H5'	1.99	0.63
1:CA:959:A:H2'	1:CA:960:U:H4'	1.80	0.63
1:CA:1065:U:C5	1:CA:1190:G:H1'	2.34	0.63
1:CA:1142:G:H2'	1:CA:1143:G:O4'	1.98	0.63
1:CA:1179:A:H2'	1:CA:1180:A:C8	2.34	0.63
1:CA:1439:C:OP1	20:CT:38:LYS:HD2	1.98	0.63
4:CD:105:VAL:HG21	4:CD:126:ILE:HG12	1.80	0.63
4:CD:129:ASN:HD21	4:CD:145:GLU:N	1.96	0.63
20:CT:52:ALA:O	20:CT:55:ILE:HD13	1.99	0.63
20:CT:71:THR:HG22	20:CT:72:LEU:HD23	1.80	0.63
27:D1:84:GLY:C	27:D1:86:SER:H	2.02	0.63
36:DA:270:A:O2'	36:DA:271:A:H5'	1.98	0.63
36:DA:414:C:O2'	36:DA:415:A:H5'	1.98	0.63
36:DA:1858:G:O2'	36:DA:1884:A:N6	2.31	0.63
38:DC:34:THR:HG22	38:DC:35:ALA:N	2.12	0.63
43:DH:163:TYR:N	43:DH:163:TYR:CD1	2.67	0.63
54:DV:39:LEU:CD1	54:DV:51:VAL:HA	2.28	0.63
1:AA:1330:U:H3'	1:AA:1331:G:O4'	1.98	0.63
2:AB:97:TRP:CZ2	2:AB:102:LEU:HD12	2.34	0.63
8:AH:114:THR:HG21	8:AH:129:VAL:HG23	1.81	0.63
13:AM:79:LYS:O	13:AM:82:MET:HG2	1.97	0.63
25:AZ:13:ASN:CB	25:AZ:78:SER:HB2	2.28	0.63
25:AZ:29:ALA:O	25:AZ:33:TYR:HE2	1.81	0.63
26:B0:38:VAL:CG2	26:B0:59:LEU:HD12	2.29	0.63
32:B6:42:TRP:HA	32:B6:42:TRP:HE3	1.63	0.63
34:B8:21:LYS:HD3	34:B8:48:PHE:CE2	2.34	0.63
36:BA:1858:G:H2'	36:BA:1883:G:H22	1.63	0.63
36:BA:2853:C:H2'	36:BA:2854:G:H8	1.63	0.63
36:BA:2887:U:H2'	36:BA:2888:C:H6	1.64	0.63
48:BP:57:THR:OG1	48:BP:59:LEU:HB2	1.97	0.63
1:CA:328:C:H2'	1:CA:328:C:O2	1.96	0.63
1:CA:636:U:H2'	1:CA:637:G:C8	2.34	0.63
1:CA:738:C:H5"	6:CF:69:GLU:HB2	1.80	0.63
10:CJ:6:ILE:HG12	10:CJ:72:VAL:O	1.99	0.63
14:CN:13:THR:N	14:CN:14:PRO:CD	2.62	0.63
36:DA:1061:U:H4'	36:DA:1070:A:C1'	2.27	0.63
36:DA:1419:A:O2'	36:DA:1420:U:H5"	1.99	0.63
42:DG:60:LEU:HA	42:DG:63:ILE:HD11	1.81	0.63
49:DQ:35:VAL:HG12	49:DQ:130:LYS:O	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:980:C:H2'	1:AA:981:U:H5'	1.80	0.63
19:AS:6:LYS:N	19:AS:6:LYS:HD3	2.12	0.63
20:AT:20:LEU:O	20:AT:23:ARG:HB3	1.99	0.63
22:AV:19:G:C5	22:AV:57:G:N2	2.67	0.63
22:AW:59:U:H5'	22:AW:60:U:C5	2.34	0.63
32:B6:8:LYS:O	32:B6:26:ASN:O	2.17	0.63
36:BA:752:A:H4'	36:BA:753:C:O5'	1.99	0.63
36:BA:2591:C:H2'	36:BA:2592:G:C8	2.34	0.63
41:BF:33:LEU:O	41:BF:37:VAL:HG23	1.99	0.63
41:BF:148:LEU:HD23	41:BF:191:ARG:NH1	2.13	0.63
41:BF:183:VAL:O	41:BF:187:VAL:HG23	1.97	0.63
42:BG:16:ARG:HH11	42:BG:16:ARG:HG3	1.63	0.63
51:BS:67:ARG:NH2	51:BS:100:ALA:HB3	2.13	0.63
52:BT:30:VAL:O	52:BT:31:SER:HB3	1.97	0.63
1:CA:341:C:O2'	1:CA:342:C:H5'	1.99	0.63
1:CA:1007:C:O2'	1:CA:1008:C:H5'	1.99	0.63
1:CA:1190:G:H5"	3:CC:3:ASN:HD22	1.63	0.63
24:CY:75:C:C5	25:CZ:231:ILE:HA	2.32	0.63
25:CZ:277:LEU:HD12	25:CZ:279:GLU:N	2.13	0.63
34:D8:28:GLY:O	34:D8:32:LEU:HG	1.98	0.63
34:D8:32:LEU:CB	34:D8:36:LYS:NZ	2.61	0.63
36:DA:884:C:H2'	36:DA:885:C:H5'	1.81	0.63
36:DA:1187:G:H5"	54:DV:81:TYR:CE2	2.34	0.63
36:DA:1224:C:H2'	36:DA:1224:C:O2	1.98	0.63
36:DA:2361:A:H2'	36:DA:2362:G:H8	1.64	0.63
39:DD:26:LYS:O	39:DD:27:THR:HG22	1.98	0.63
41:DF:169:ASN:ND2	41:DF:169:ASN:O	2.32	0.63
46:DN:2:LYS:HZ1	54:DV:12:TYR:HB3	1.63	0.63
48:DP:23:PRO:HA	48:DP:29:LYS:O	1.97	0.63
53:DU:115:ALA:C	53:DU:117:GLN:H	2.01	0.63
1:AA:1271:G:H2'	1:AA:1272:G:C5'	2.20	0.63
11:AK:54:ARG:O	11:AK:57:THR:CG2	2.47	0.63
13:AM:96:LEU:HB3	13:AM:97:PRO:HD2	1.80	0.63
22:AW:65:G:O3'	32:B6:28:ARG:NH2	2.31	0.63
28:B2:59:ARG:NH2	28:B2:60:LEU:HD12	2.13	0.63
30:B4:5:ILE:O	42:BG:67:LYS:HD2	1.98	0.63
34:B8:47:LYS:C	34:B8:48:PHE:HD1	2.02	0.63
36:BA:761:A:C8	36:BA:761:A:H3'	2.33	0.63
36:BA:842:G:O2'	36:BA:843:G:H5'	1.98	0.63
36:BA:2110:G:N1	36:BA:2178:C:H5	1.95	0.63
39:BD:125:ILE:HG22	39:BD:125:ILE:O	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1239:A:H4'	1:CA:1240:U:O5'	1.99	0.63
10:CJ:48:THR:HG23	10:CJ:62:HIS:CD2	2.33	0.63
21:CU:6:ARG:H	21:CU:6:ARG:HE	1.46	0.63
34:D8:32:LEU:HD13	36:DA:2392:A:OP1	1.98	0.63
36:DA:62:C:H42	36:DA:93:G:H1	1.47	0.63
36:DA:1472:A:C2'	36:DA:1473:G:H5'	2.29	0.63
47:DO:71:ARG:HH12	47:DO:104:ARG:HG2	1.64	0.63
48:DP:39:LYS:CD	48:DP:40:SER:H	2.12	0.63
54:DV:17:GLY:HA2	54:DV:96:ILE:O	1.99	0.63
58:DZ:123:ASP:O	58:DZ:124:ILE:HG12	1.98	0.63
2:AB:14:GLY:O	2:AB:15:VAL:HG13	1.98	0.63
4:AD:86:LYS:HA	4:AD:86:LYS:HE3	1.81	0.63
9:AI:9:ARG:HG2	9:AI:14:VAL:HG13	1.81	0.63
11:AK:27:ASN:HD22	11:AK:28:THR:N	1.95	0.63
12:AL:42:THR:HG23	12:AL:52:LEU:HD12	1.80	0.63
25:AZ:150:VAL:HG13	25:AZ:151:GLU:N	2.14	0.63
36:BA:30:G:O2'	36:BA:31:C:H5'	1.98	0.63
36:BA:594:U:H2'	36:BA:595:C:C6	2.33	0.63
36:BA:1019:U:O2'	36:BA:1021:A:H2	1.81	0.63
36:BA:1782:C:H1'	36:BA:2609:U:C5'	2.28	0.63
36:BA:1902:C:C1'	39:BD:244:ARG:HG3	2.27	0.63
37:BB:73:A:C2	58:BZ:34:ASN:ND2	2.67	0.63
52:BT:59:THR:OG1	52:BT:78:LEU:HD12	1.99	0.63
52:BT:100:TYR:HB3	52:BT:103:ARG:HE	1.63	0.63
58:BZ:40:ASP:OD1	58:BZ:42:VAL:HG12	1.99	0.63
2:CB:8:LYS:NZ	2:CB:217:ARG:NH1	2.47	0.63
3:CC:64:VAL:HG12	3:CC:66:VAL:HG23	1.81	0.63
5:CE:81:GLU:OE2	5:CE:90:VAL:HG22	1.99	0.63
6:CF:26:ILE:O	6:CF:29:ALA:HB3	1.98	0.63
7:CG:92:SER:O	7:CG:96:GLN:HG3	1.99	0.63
12:CL:24:VAL:HG11	12:CL:27:LEU:HD22	1.81	0.63
24:CY:76:A:C2	25:CZ:270:VAL:CA	2.81	0.63
27:D1:44:PRO:HG2	27:D1:46:LEU:HD22	1.81	0.63
36:DA:380:U:H2'	36:DA:381:G:C8	2.33	0.63
36:DA:1411:C:H2'	36:DA:1412:A:C8	2.33	0.63
36:DA:1803:A:C3'	39:DD:259:THR:HG21	2.28	0.63
36:DA:2294:C:O2	36:DA:2294:C:H2'	1.99	0.63
39:DD:118:VAL:HG13	39:DD:123:ALA:CB	2.29	0.63
47:DO:28:SER:O	47:DO:29:ASN:HB3	1.99	0.63
48:DP:83:VAL:HG13	48:DP:114:ILE:HD12	1.81	0.63
48:DP:101:VAL:HG23	48:DP:102:ARG:N	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DW:56:ALA:C	55:DW:57:ASN:HD22	2.01	0.63
55:DW:82:LEU:HD12	55:DW:82:LEU:N	2.13	0.63
58:DZ:29:TYR:HA	58:DZ:34:ASN:HB3	1.81	0.63
1:AA:683:G:H21	11:AK:38:ASN:ND2	1.96	0.63
1:AA:979:C:H3'	1:AA:980:C:H5"	1.75	0.63
4:AD:14:ARG:HD2	4:AD:59:ARG:NH1	2.14	0.63
4:AD:107:ARG:NH2	4:AD:194:LEU:HD12	2.00	0.63
7:AG:58:PRO:HG2	7:AG:59:LEU:H	1.63	0.63
25:AZ:126:VAL:HB	25:AZ:128:VAL:HG23	1.79	0.63
36:BA:774:A:H2	36:BA:787:U:HO2'	1.44	0.63
37:BB:111:G:O2'	37:BB:112:U:H5'	1.99	0.63
46:BN:46:VAL:HG13	46:BN:48:MET:HG3	1.80	0.63
48:BP:38:GLN:HG3	48:BP:39:LYS:N	2.13	0.63
51:BS:13:ARG:HG3	51:BS:14:VAL:H	1.63	0.63
52:BT:37:GLY:O	52:BT:38:ASN:HB3	1.98	0.63
54:BV:31:ALA:O	54:BV:60:GLU:HG3	1.99	0.63
16:CP:58:TYR:O	16:CP:62:VAL:HG23	1.99	0.63
28:D2:38:GLN:OE1	28:D2:44:LEU:HD13	1.98	0.63
36:DA:143:G:H1'	56:DX:37:THR:HG21	1.80	0.63
36:DA:222:A:H5"	36:DA:421:U:OP1	1.99	0.63
36:DA:753:C:H2'	36:DA:754:C:H6	1.64	0.63
36:DA:984:A:H5"	36:DA:985:C:C5	2.29	0.63
39:DD:148:GLU:O	39:DD:151:LYS:HB2	1.99	0.63
41:DF:84:VAL:CG1	41:DF:85:GLY:H	2.11	0.63
47:DO:63:VAL:O	47:DO:64:ARG:CB	2.46	0.63
48:DP:85:LEU:HD23	48:DP:86:LYS:N	2.14	0.63
1:AA:545:C:H5"	4:AD:72:GLU:HG2	1.79	0.62
1:AA:858:G:H8	1:AA:858:G:C5'	2.12	0.62
1:AA:979:C:C3'	1:AA:980:C:C5'	2.77	0.62
3:AC:118:GLN:O	3:AC:122:GLU:HG2	1.99	0.62
3:AC:137:ALA:O	3:AC:141:VAL:HG23	1.98	0.62
4:AD:173:TRP:HB3	4:AD:187:ARG:NH2	2.13	0.62
12:AL:6:THR:HG23	12:AL:9:GLN:HE21	1.63	0.62
25:AZ:101:GLY:HA3	25:AZ:210:ILE:HD12	1.81	0.62
25:AZ:198:LYS:C	25:AZ:198:LYS:HZ2	2.01	0.62
28:B2:34:GLU:HA	28:B2:37:PHE:CB	2.28	0.62
32:B6:15:GLU:OE2	32:B6:18:ARG:NH2	2.33	0.62
36:BA:363:G:H2'	36:BA:363(A):A:H8	1.64	0.62
36:BA:916:G:C2'	36:BA:917:A:H5"	2.29	0.62
36:BA:1103:A:H5"	36:BA:1104:C:H5	1.62	0.62
36:BA:1485:G:H1'	36:BA:1505:C:N4	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2019:A:H4'	53:BU:34:LYS:HD2	1.80	0.62
36:BA:2543:G:H2'	36:BA:2544:G:C8	2.34	0.62
39:BD:68:LYS:HB2	39:BD:70:TRP:CZ2	2.34	0.62
46:BN:96:GLU:CD	46:BN:96:GLU:H	2.02	0.62
48:BP:115:LEU:N	48:BP:115:LEU:HD23	2.13	0.62
52:BT:109:GLU:HA	52:BT:112:ARG:NE	2.14	0.62
54:BV:19:LYS:NZ	54:BV:20:LEU:H	1.96	0.62
57:BY:50:ARG:HG3	57:BY:56:PRO:HA	1.80	0.62
57:BY:87:LYS:O	57:BY:88:LYS:HB2	1.99	0.62
58:BZ:10:ARG:HD3	58:BZ:37:VAL:C	2.19	0.62
58:BZ:103:ARG:HG3	58:BZ:138:GLU:HG2	1.79	0.62
1:CA:626:U:H2'	1:CA:627:G:C8	2.33	0.62
1:CA:853:G:O2'	1:CA:854:G:H5'	1.99	0.62
1:CA:1170:A:H2'	1:CA:1171:G:O4'	1.99	0.62
6:CF:75:LEU:O	6:CF:79:LEU:HG	1.99	0.62
15:CO:17:ARG:HD3	15:CO:26:GLU:OE2	1.99	0.62
17:CQ:58:GLU:HG3	17:CQ:75:ARG:HG2	1.81	0.62
22:CW:55:U:H3'	22:CW:56:C:H5"	1.80	0.62
25:CZ:68:VAL:O	25:CZ:69:GLU:CB	2.46	0.62
32:D6:27:LYS:HD2	32:D6:30:THR:OG1	1.99	0.62
34:D8:21:LYS:HZ3	34:D8:48:PHE:HE2	1.47	0.62
35:D9:14:CYS:SG	59:D9:101:ZN:ZN	1.88	0.62
36:DA:1076:C:O2	45:DK:89:UNK:HA	1.99	0.62
36:DA:1144:G:H2'	36:DA:1145:C:C6	2.34	0.62
36:DA:1578:U:C2'	36:DA:1579:A:H5"	2.28	0.62
39:DD:206:LEU:HD12	39:DD:211:ARG:HG2	1.81	0.62
40:DE:77:ILE:HG22	40:DE:78:LEU:HD12	1.80	0.62
49:DQ:51:ARG:O	49:DQ:54:MET:HB3	1.99	0.62
56:DX:36:LYS:NZ	56:DX:55:ASN:HA	2.14	0.62
4:AD:150:GLU:N	4:AD:150:GLU:OE1	2.29	0.62
6:AF:10:LEU:HD13	6:AF:59:TYR:HD2	1.64	0.62
25:AZ:277:LEU:HD12	25:AZ:279:GLU:N	2.13	0.62
28:B2:32:LEU:HA	28:B2:53:LEU:CD2	2.29	0.62
29:B3:11:SER:HB2	36:BA:988:A:P	2.39	0.62
29:B3:38:GLU:HB3	29:B3:40:THR:HG23	1.82	0.62
31:B5:50:GLY:CA	31:B5:56:LYS:HE2	2.28	0.62
36:BA:1087:G:H8	36:BA:1088:A:H4'	1.63	0.62
36:BA:1689:A:H62	36:BA:1698:A:H2	1.47	0.62
37:BB:30:C:H1'	37:BB:57:A:H61	1.64	0.62
39:BD:35:LYS:HG2	39:BD:63:ARG:HG2	1.81	0.62
40:BE:95:ILE:HD13	40:BE:95:ILE:H	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:107:ARG:HD3	52:BT:36:GLU:CG	2.26	0.62
52:BT:25:GLY:CA	52:BT:92:GLY:HA2	2.30	0.62
53:BU:82:GLY:C	53:BU:84:LYS:H	2.02	0.62
1:CA:45:U:H2'	1:CA:46:G:H8	1.63	0.62
1:CA:235:C:H5'	17:CQ:70:ARG:HG2	1.81	0.62
1:CA:1111:A:H2'	1:CA:1112:C:C6	2.34	0.62
3:CC:53:ALA:HB2	3:CC:115:LEU:HG	1.81	0.62
5:CE:99:GLY:O	5:CE:117:ASP:HA	1.99	0.62
10:CJ:4:ILE:HB	10:CJ:74:ILE:CG1	2.29	0.62
15:CO:82:ILE:HD11	15:CO:88:ARG:N	2.14	0.62
22:CW:11:C:H2'	22:CW:12:U:C6	2.34	0.62
36:DA:335:C:H2'	36:DA:336:C:C6	2.33	0.62
36:DA:1058:G:C2'	36:DA:1059:G:H5"	2.29	0.62
36:DA:2712:U:H1'	36:DA:2712(A):A:N7	2.14	0.62
36:DA:2712:U:O2'	36:DA:2712(A):A:H3'	1.99	0.62
38:DC:74:VAL:HG23	38:DC:157:LYS:HE2	1.81	0.62
41:DF:185:ASP:HA	41:DF:188:ARG:HD3	1.80	0.62
43:DH:13:LYS:HE2	43:DH:13:LYS:HA	1.81	0.62
48:DP:58:THR:C	48:DP:61:ARG:HE	2.02	0.62
49:DQ:67:ARG:HH11	49:DQ:67:ARG:HB3	1.63	0.62
58:DZ:153:SER:HB2	58:DZ:167:PRO:HG2	1.80	0.62
1:AA:201:C:C2'	1:AA:202:U:H5"	2.28	0.62
1:AA:266:G:C5'	1:AA:267:C:C5	2.83	0.62
1:AA:436:C:H2'	1:AA:437:U:C6	2.34	0.62
2:AB:95:GLN:OE1	2:AB:95:GLN:HA	1.98	0.62
4:AD:4:TYR:O	4:AD:5:ILE:HB	2.00	0.62
4:AD:18:LYS:HE2	4:AD:20:TYR:CE2	2.34	0.62
13:AM:9:ILE:HD12	13:AM:9:ILE:N	2.14	0.62
25:AZ:136:ASN:OD1	60:AZ:501:GDP:O6	2.17	0.62
34:B8:31:HIS:O	34:B8:32:LEU:C	2.36	0.62
36:BA:708:C:N4	36:BA:723:G:H1	1.95	0.62
36:BA:1717:G:H3'	36:BA:1718:G:H5"	1.81	0.62
36:BA:2081:C:H2'	36:BA:2082:A:H8	1.64	0.62
39:BD:248:SER:HB2	39:BD:249:PRO:HD2	1.81	0.62
42:BG:51:ARG:HA	42:BG:51:ARG:NE	2.10	0.62
43:BH:33:LEU:HD21	43:BH:136:ILE:CG2	2.28	0.62
47:BO:64:ARG:CZ	52:BT:70:VAL:HG21	2.28	0.62
48:BP:85:LEU:HA	48:BP:88:LEU:CB	2.28	0.62
51:BS:12:PHE:HD1	51:BS:12:PHE:C	2.01	0.62
51:BS:12:PHE:C	51:BS:12:PHE:CD1	2.73	0.62
52:BT:96:ARG:HB2	52:BT:96:ARG:CZ	2.27	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:5:VAL:HG21	54:BV:35:LEU:HG	1.81	0.62
55:BW:65:LEU:HD23	55:BW:68:ARG:CZ	2.29	0.62
2:CB:97:TRP:CH2	2:CB:176:GLU:CD	2.68	0.62
16:CP:26:ARG:HG2	16:CP:26:ARG:NH1	2.12	0.62
20:CT:100:ILE:HG22	20:CT:102:GLY:H	1.64	0.62
25:CZ:90:LYS:HD2	25:CZ:90:LYS:H	1.64	0.62
30:D4:10:VAL:CG2	30:D4:11:PRO:HD2	2.29	0.62
32:D6:18:ARG:HH11	32:D6:18:ARG:CG	2.12	0.62
33:D7:7:PRO:HG2	36:DA:1309:G:H4'	1.82	0.62
36:DA:613:G:H5'	36:DA:613:G:H8	1.64	0.62
36:DA:1038:C:C3'	36:DA:1039:G:H5"	2.28	0.62
42:DG:116:ASP:O	42:DG:117:PHE:HB3	1.97	0.62
46:DN:12:ARG:NH2	46:DN:135:PRO:HG2	2.14	0.62
54:DV:19:LYS:HZ1	54:DV:22:VAL:HG13	1.64	0.62
2:AB:188:ALA:O	2:AB:202:PRO:HA	1.99	0.62
4:AD:59:ARG:HE	4:AD:59:ARG:CA	2.12	0.62
6:AF:33:TYR:O	6:AF:35:ALA:N	2.32	0.62
8:AH:85:ARG:HG3	8:AH:85:ARG:NH1	2.14	0.62
9:AI:52:ALA:HB1	9:AI:95:LYS:HD2	1.81	0.62
13:AM:10:PRO:HB2	13:AM:18:ALA:CB	2.29	0.62
14:AN:57:ARG:HH11	14:AN:57:ARG:HB3	1.64	0.62
36:BA:1681:G:O2'	36:BA:1762:A:C2'	2.45	0.62
39:BD:68:LYS:O	39:BD:68:LYS:HG2	1.99	0.62
43:BH:44:VAL:O	43:BH:46:GLU:HG2	2.00	0.62
43:BH:153:LYS:HD3	43:BH:153:LYS:N	2.03	0.62
58:BZ:96:VAL:HG13	58:BZ:97:GLU:H	1.64	0.62
1:CA:1158:C:H2'	1:CA:1158:C:O2	1.98	0.62
1:CA:1431:C:H2'	1:CA:1432:G:O4'	1.99	0.62
4:CD:67:ILE:O	4:CD:67:ILE:CG2	2.48	0.62
9:CI:19:LEU:HD21	9:CI:59:PHE:HD2	1.65	0.62
10:CJ:38:ILE:HD12	10:CJ:71:LEU:H	1.64	0.62
11:CK:17:GLY:O	11:CK:80:VAL:HA	1.98	0.62
16:CP:25:ARG:HH11	16:CP:25:ARG:HG3	1.63	0.62
19:CS:28:LYS:C	19:CS:29:ARG:HD2	2.20	0.62
19:CS:62:ILE:HA	19:CS:66:MET:HE1	1.80	0.62
25:CZ:13:ASN:CB	25:CZ:78:SER:HB2	2.29	0.62
25:CZ:16:THR:HG23	25:CZ:79:HIS:CE1	2.35	0.62
25:CZ:265:THR:HG22	25:CZ:266:VAL:H	1.62	0.62
30:D4:14:ILE:HD12	30:D4:14:ILE:N	2.14	0.62
31:D5:57:VAL:O	31:D5:58:LEU:HD12	1.98	0.62
34:D8:34:TRP:HA	36:DA:2420:C:OP1	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:247:G:H4'	36:DA:386:G:C5	2.35	0.62
36:DA:419:C:H2'	36:DA:420:C:C6	2.34	0.62
36:DA:657:U:H2'	36:DA:658:C:H6	1.65	0.62
40:DE:38:THR:HG23	40:DE:39:PRO:HD2	1.81	0.62
40:DE:117:MET:HE3	40:DE:136:ARG:HA	1.80	0.62
48:DP:97:PRO:O	48:DP:98:GLU:CB	2.47	0.62
51:DS:74:ALA:HB1	51:DS:103:GLU:HG2	1.80	0.62
57:DY:88:LYS:O	57:DY:89:PHE:HB2	1.98	0.62
1:AA:96:U:H2'	1:AA:97:G:C8	2.34	0.62
1:AA:376:G:H5"	16:AP:5:ARG:CB	2.30	0.62
1:AA:1120:G:H2'	1:AA:1121:U:H6	1.62	0.62
3:AC:173:VAL:HG12	3:AC:173:VAL:O	1.98	0.62
25:AZ:20:VAL:HG23	25:AZ:21:ASP:H	1.64	0.62
26:B0:38:VAL:HG11	26:B0:45:PHE:CD2	2.35	0.62
36:BA:271(H):G:H1	36:BA:271(P):C:N4	1.97	0.62
36:BA:926:A:H5'	36:BA:926:A:H8	1.64	0.62
36:BA:1817:G:H2'	36:BA:1818:U:H5'	1.80	0.62
36:BA:2195:C:O2'	36:BA:2196:C:H5'	2.00	0.62
38:BC:104:LEU:HD13	38:BC:105:ASP:N	2.14	0.62
51:BS:15:ARG:HH11	51:BS:15:ARG:HB2	1.63	0.62
54:BV:19:LYS:HG3	54:BV:20:LEU:N	2.14	0.62
1:CA:353:A:H8	1:CA:353:A:H5'	1.64	0.62
1:CA:382:A:H2'	1:CA:383:A:C8	2.34	0.62
1:CA:992:U:H4'	1:CA:993:G:O5'	2.00	0.62
2:CB:28:PHE:CD1	2:CB:190:THR:HA	2.35	0.62
3:CC:82:GLU:O	3:CC:85:ARG:HB2	1.99	0.62
4:CD:2:GLY:O	4:CD:3:ARG:HD3	2.00	0.62
17:CQ:9:VAL:HG11	17:CQ:84:LEU:HD12	1.81	0.62
20:CT:26:ASN:ND2	20:CT:26:ASN:H	1.98	0.62
25:CZ:29:ALA:O	25:CZ:33:TYR:CE2	2.51	0.62
39:DD:158:ALA:HB3	39:DD:161:THR:HG21	1.82	0.62
40:DE:24:THR:HG22	40:DE:184:VAL:CG2	2.29	0.62
42:DG:77:ILE:HD13	42:DG:77:ILE:N	2.12	0.62
42:DG:152:LEU:HD23	42:DG:152:LEU:N	2.14	0.62
46:DN:45:ASN:H	46:DN:45:ASN:HD22	1.47	0.62
47:DO:87:ILE:HG22	47:DO:88:ASN:O	1.99	0.62
52:DT:92:GLY:CA	52:DT:120:ARG:HH21	2.13	0.62
53:DU:24:TYR:HB2	53:DU:29:SER:HB3	1.80	0.62
55:DW:22:ASP:HA	55:DW:25:ARG:NH1	2.13	0.62
58:DZ:29:TYR:HB3	58:DZ:34:ASN:CB	2.28	0.62
1:AA:711:G:O2'	1:AA:712:A:H5'	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1007:C:O2'	1:AA:1008:C:H5'	2.00	0.62
2:AB:77:ALA:O	2:AB:81:VAL:HG23	1.98	0.62
13:AM:55:ARG:O	13:AM:58:GLU:HB2	1.99	0.62
26:B0:10:THR:HG22	26:B0:12:ASN:H	1.63	0.62
32:B6:10:LEU:HD22	32:B6:10:LEU:N	2.07	0.62
35:B9:1:MET:HB2	35:B9:34:GLN:OE1	1.99	0.62
36:BA:139(A):G:N2	56:BX:44:GLU:OE1	2.29	0.62
36:BA:1085:A:H4'	36:BA:1105:U:H4'	1.80	0.62
36:BA:1653:G:O6	50:BR:11:ASN:HB2	1.98	0.62
36:BA:2206:G:H21	36:BA:2207:G:H4'	1.64	0.62
40:BE:75:VAL:O	40:BE:77:ILE:N	2.32	0.62
40:BE:154:LYS:O	40:BE:156:MET:HG3	2.00	0.62
40:BE:195:LEU:O	40:BE:196:VAL:HG22	2.00	0.62
41:BF:60:SER:O	41:BF:77:ASP:HB2	2.00	0.62
42:BG:30:GLU:OE2	42:BG:32:PRO:CD	2.48	0.62
43:BH:19:VAL:HG12	43:BH:20:ALA:N	2.14	0.62
43:BH:54:ARG:HB2	43:BH:55:PRO:HD2	1.80	0.62
47:BO:105:GLU:O	47:BO:108:GLU:HG2	1.99	0.62
52:BT:89:VAL:CG1	52:BT:91:ARG:HE	2.13	0.62
57:BY:9:LYS:NZ	57:BY:10:GLY:H	1.97	0.62
1:CA:542:G:H2'	1:CA:543:C:H6	1.64	0.62
2:CB:120:ALA:C	2:CB:122:PHE:H	2.03	0.62
2:CB:130:ARG:HH21	2:CB:134:GLU:HG3	1.64	0.62
32:D6:16:CYS:O	32:D6:17:LYS:HE3	1.98	0.62
36:DA:1260:G:H2'	36:DA:1261:C:C6	2.34	0.62
36:DA:1879:C:H2'	36:DA:1880:C:H5"	1.81	0.62
36:DA:2228:G:OP1	39:DD:261:LYS:HE3	1.98	0.62
46:DN:7:LYS:HE3	46:DN:7:LYS:N	2.13	0.62
47:DO:47:ILE:HG23	47:DO:48:PRO:HD2	1.80	0.62
51:DS:17:ARG:HA	51:DS:20:ARG:NH1	2.13	0.62
58:DZ:76:LEU:HD23	58:DZ:83:PRO:HA	1.81	0.62
9:AI:105:ASP:OD1	9:AI:107:ARG:HD3	2.00	0.62
13:AM:54:VAL:O	13:AM:58:GLU:HG2	1.99	0.62
25:AZ:14:VAL:O	25:AZ:79:HIS:HA	1.99	0.62
25:AZ:64:ASN:N	25:AZ:64:ASN:ND2	2.44	0.62
31:B5:6:VAL:HG22	36:BA:2015:A:N3	2.14	0.62
32:B6:21:TYR:OH	36:BA:2399:G:H2'	1.99	0.62
36:BA:361:G:H2'	36:BA:362:U:H4'	1.81	0.62
36:BA:832:G:O2'	48:BP:52:GLU:HB3	1.99	0.62
36:BA:1018:C:H2'	36:BA:1019:U:H6	1.63	0.62
36:BA:2023:G:H4'	36:BA:2617:C:O3'	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2138:C:H2'	36:BA:2139:C:C6	2.35	0.62
40:BE:47:VAL:HG23	40:BE:84:PHE:HB3	1.82	0.62
42:BG:173:LEU:O	42:BG:176:LEU:HB3	2.00	0.62
46:BN:3:THR:HG22	46:BN:4:TYR:N	2.14	0.62
49:BQ:12:GLN:HG2	49:BQ:73:PRO:HD2	1.81	0.62
51:BS:92:TYR:CG	51:BS:93:LYS:N	2.66	0.62
55:BW:10:VAL:HG21	55:BW:103:ILE:HG13	1.82	0.62
1:CA:269:C:H2'	1:CA:270:A:C8	2.34	0.62
1:CA:537:G:H2'	1:CA:538:G:C8	2.34	0.62
1:CA:1255:G:OP1	3:CC:26:LYS:HE2	1.99	0.62
2:CB:12:GLU:HG3	2:CB:44:LEU:HD23	1.82	0.62
10:CJ:24:VAL:CG2	10:CJ:37:PRO:HG3	2.28	0.62
10:CJ:39:PRO:HA	10:CJ:70:ARG:NH1	2.14	0.62
36:DA:296:C:H42	36:DA:343:C:N4	1.98	0.62
36:DA:470:A:H2'	36:DA:471:A:C8	2.35	0.62
36:DA:832:G:OP1	48:DP:40:SER:HB3	1.99	0.62
36:DA:1652:A:C2'	36:DA:1653:G:H5'	2.29	0.62
57:DY:42:VAL:HG21	57:DY:67:LEU:HD13	1.80	0.62
58:DZ:77:ASP:O	58:DZ:78:LYS:HB2	1.99	0.62
1:AA:45:U:H2'	1:AA:46:G:H8	1.65	0.62
1:AA:176:C:H2'	1:AA:177:C:C6	2.35	0.62
1:AA:1286:A:H2	21:AU:18:TYR:OH	1.80	0.62
3:AC:14:ILE:CG1	3:AC:15:THR:N	2.62	0.62
10:AJ:32:ALA:HB2	10:AJ:76:ASN:HB2	1.81	0.62
11:AK:99:GLN:HG2	11:AK:105:VAL:HG21	1.81	0.62
26:B0:10:THR:HG22	26:B0:12:ASN:N	2.15	0.62
36:BA:1800:C:H5"	39:BD:147:LEU:CD2	2.30	0.62
36:BA:1991:U:H2'	36:BA:1992:G:H5"	1.80	0.62
36:BA:2201:C:O2'	36:BA:2202:C:H5'	2.00	0.62
42:BG:27:ASN:C	42:BG:29:TRP:H	2.03	0.62
42:BG:51:ARG:HD3	42:BG:53:LEU:HD21	1.82	0.62
46:BN:23:LEU:HB2	46:BN:60:ILE:HG21	1.80	0.62
48:BP:24:GLY:CA	48:BP:33:ARG:NH1	2.62	0.62
48:BP:112:LEU:HD13	48:BP:112:LEU:O	2.00	0.62
51:BS:39:ILE:HG22	51:BS:39:ILE:O	1.99	0.62
1:CA:41:G:H2'	1:CA:42:G:H8	1.63	0.62
1:CA:148:G:H2'	1:CA:149:A:H8	1.64	0.62
1:CA:452:A:HO2'	1:CA:453:A:H8	1.47	0.62
1:CA:603:U:H2'	1:CA:604:G:C8	2.34	0.62
1:CA:1241:G:H2'	1:CA:1242:C:H6	1.65	0.62
2:CB:18:GLY:O	2:CB:19:HIS:HB2	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:65:ALA:O	3:CC:100:ALA:O	2.17	0.62
6:CF:43:LEU:H	6:CF:43:LEU:CD2	2.09	0.62
9:CI:65:VAL:HG21	9:CI:73:GLN:HB3	1.82	0.62
12:CL:75:HIS:HB3	12:CL:102:ARG:HH12	1.65	0.62
13:CM:86:CYS:HA	19:CS:73:GLU:O	1.98	0.62
22:CV:35:A:N1	23:CX:20:U:O2	2.33	0.62
30:D4:14:ILE:HG13	30:D4:31:ILE:CB	2.29	0.62
36:DA:195:A:H5"	36:DA:196:A:OP2	2.00	0.62
36:DA:819:A:OP2	36:DA:1187:G:N2	2.28	0.62
36:DA:852:G:O2'	36:DA:853:G:H5'	2.00	0.62
39:DD:213:ARG:HD2	39:DD:217:ARG:O	2.00	0.62
42:DG:6:ALA:O	42:DG:10:LYS:HD3	1.99	0.62
43:DH:85:LYS:HZ3	43:DH:132:ARG:CA	2.10	0.62
46:DN:70:LYS:HG2	46:DN:87:LEU:HD23	1.80	0.62
47:DO:101:PRO:HD2	52:DT:70:VAL:CG2	2.29	0.62
51:DS:65:VAL:O	51:DS:69:VAL:HG12	1.99	0.62
52:DT:16:ARG:HD2	52:DT:18:ASP:OD1	1.99	0.62
53:DU:13:LYS:HD3	53:DU:13:LYS:N	2.14	0.62
58:DZ:144:LEU:HG	58:DZ:150:LEU:HD22	1.81	0.62
1:AA:756:C:H2'	1:AA:757:U:O4'	2.00	0.62
1:AA:1323:G:O2'	1:AA:1324:A:H5'	2.00	0.62
2:AB:12:GLU:HG3	2:AB:44:LEU:HD23	1.82	0.62
34:B8:23:VAL:O	34:B8:46:ARG:NH1	2.33	0.62
36:BA:122:G:H1	36:BA:129:C:H42	1.47	0.62
36:BA:862:G:H2'	36:BA:863:A:O4'	1.98	0.62
36:BA:1570:A:H2'	36:BA:1571:A:C8	2.34	0.62
36:BA:2777:G:H5"	36:BA:2778:A:H5'	1.82	0.62
38:BC:10:LEU:HA	38:BC:13:LYS:CE	2.30	0.62
39:BD:32:SER:O	39:BD:36:PRO:CG	2.48	0.62
46:BN:73:THR:HG21	46:BN:82:LEU:HD11	1.81	0.62
52:BT:65:LYS:NZ	52:BT:66:VAL:H	1.97	0.62
52:BT:75:ILE:HD12	52:BT:75:ILE:N	2.14	0.62
53:BU:9:VAL:O	53:BU:13:LYS:HE2	2.00	0.62
55:BW:59:VAL:HG12	55:BW:59:VAL:O	1.99	0.62
1:CA:664:G:H22	1:CA:741:G:H1	1.48	0.62
3:CC:76:VAL:HG21	3:CC:103:VAL:CG1	2.29	0.62
22:CW:75:C:H5"	27:D1:30:VAL:HG11	1.82	0.62
29:D3:6:VAL:HB	29:D3:54:VAL:HG11	1.81	0.62
34:D8:33:ASN:CA	34:D8:36:LYS:HD2	2.30	0.62
34:D8:62:LEU:HD13	36:DA:242:G:C5'	2.16	0.62
36:DA:236:C:H2'	36:DA:237:C:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:710:G:H2'	36:DA:711:G:H8	1.64	0.62
36:DA:1151:G:H5"	53:DU:81:HIS:NE2	2.14	0.62
36:DA:1168:G:H2'	36:DA:1169:G:C8	2.34	0.62
36:DA:1653:G:O6	50:DR:11:ASN:HB2	1.99	0.62
36:DA:1983:C:O2'	36:DA:1984:G:H5'	1.99	0.62
38:DC:113:VAL:HG12	38:DC:138:PRO:HG3	1.82	0.62
39:DD:35:LYS:HG2	39:DD:63:ARG:CA	2.29	0.62
40:DE:57:LYS:HA	40:DE:57:LYS:CE	2.15	0.62
46:DN:2:LYS:HZ3	54:DV:12:TYR:HA	1.64	0.62
47:DO:63:VAL:HB	47:DO:102:VAL:HG12	1.81	0.62
48:DP:41:ARG:HD3	48:DP:45:LEU:HD23	1.82	0.62
50:DR:44:LEU:HD13	50:DR:44:LEU:O	2.00	0.62
54:DV:18:LEU:HD23	54:DV:19:LYS:H	1.65	0.62
55:DW:4:LYS:HA	55:DW:106:ILE:HG22	1.82	0.62
57:DY:42:VAL:HG21	57:DY:67:LEU:HD12	1.79	0.62
1:AA:346:G:H2'	1:AA:346:G:N3	2.14	0.62
1:AA:1411:C:O2'	1:AA:1412:C:H5'	1.99	0.62
1:AA:1525:G:O2'	1:AA:1526:G:H5'	2.00	0.62
3:AC:13:GLY:H	14:AN:57:ARG:HD2	1.65	0.62
4:AD:18:LYS:HG3	4:AD:31:CYS:SG	2.39	0.62
4:AD:100:ARG:NH2	4:AD:118:ARG:HH12	1.90	0.62
5:AE:11:ILE:HD11	5:AE:33:VAL:CG2	2.30	0.62
10:AJ:38:ILE:HD12	10:AJ:38:ILE:O	1.99	0.62
13:AM:23:TYR:HE1	13:AM:70:LEU:HD13	1.62	0.62
19:AS:40:ILE:CG2	19:AS:62:ILE:HD11	2.22	0.62
23:AX:11:U:H2'	23:AX:11:U:O2	1.99	0.62
24:AY:68:C:H2'	24:AY:69:C:C6	2.30	0.62
25:AZ:265:THR:CG2	25:AZ:266:VAL:H	2.12	0.62
30:B4:31:ILE:HG22	30:B4:33:VAL:HG23	1.82	0.62
36:BA:484:C:H2'	36:BA:485:C:C6	2.35	0.62
36:BA:1049:C:H2'	36:BA:1050:A:C8	2.34	0.62
36:BA:2110:G:H22	36:BA:2178:C:H5	1.45	0.62
37:BB:45:A:H1'	42:BG:95:ARG:NH2	2.15	0.62
48:BP:97:PRO:O	48:BP:98:GLU:CB	2.48	0.62
53:BU:90:VAL:HG21	54:BV:47:VAL:CG2	2.29	0.62
1:CA:947:G:H2'	1:CA:948:C:H6	1.64	0.62
7:CG:109:ASN:HD22	7:CG:109:ASN:N	1.98	0.62
10:CJ:90:LEU:H	10:CJ:91:PRO:CD	2.12	0.62
11:CK:59:TYR:O	11:CK:62:GLN:HB3	2.00	0.62
16:CP:67:THR:HG22	16:CP:68:ASP:N	2.15	0.62
18:CR:36:ASN:HB2	18:CR:38:GLU:HG2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:29:ALA:O	25:CZ:33:TYR:HE2	1.83	0.62
31:D5:57:VAL:HG12	31:D5:58:LEU:H	1.65	0.62
31:D5:57:VAL:HG12	31:D5:58:LEU:N	2.15	0.62
36:DA:331:A:H1'	36:DA:332:A:OP1	1.99	0.62
36:DA:654(C):G:H2'	36:DA:654(D):G:H5'	1.81	0.62
36:DA:729:G:C5	39:DD:208:LYS:HB2	2.35	0.62
36:DA:2111:C:H1'	36:DA:2118:U:C4'	2.30	0.62
36:DA:2206:G:H3'	36:DA:2206:G:N3	2.15	0.62
39:DD:132:PRO:HG3	39:DD:190:TYR:CZ	2.34	0.62
46:DN:108:PRO:O	46:DN:109:LYS:HG3	1.99	0.62
46:DN:111:PRO:HA	46:DN:114:ARG:HH12	1.63	0.62
55:DW:48:ALA:O	55:DW:50:VAL:N	2.33	0.62
2:AB:189:ASP:HB3	2:AB:203:GLY:O	1.99	0.61
4:AD:59:ARG:NH2	4:AD:62:GLN:HG3	2.14	0.61
6:AF:4:TYR:HE1	6:AF:92:LYS:HD2	1.63	0.61
6:AF:87:ARG:HH11	6:AF:87:ARG:CG	2.11	0.61
27:B1:71:TYR:O	27:B1:74:VAL:HB	1.99	0.61
36:BA:57:C:O2'	36:BA:58:G:H5'	1.99	0.61
36:BA:201:C:O2'	36:BA:202:U:H5'	1.99	0.61
36:BA:1067:A:H3'	36:BA:1068:G:H5"	1.81	0.61
36:BA:1087:G:O2'	36:BA:1089:G:H5'	2.00	0.61
36:BA:2884:U:C2'	36:BA:2885:C:H5'	2.29	0.61
39:BD:71:ASP:CB	39:BD:103:ARG:HH22	2.08	0.61
40:BE:11:MET:HB2	40:BE:23:VAL:O	2.00	0.61
40:BE:188:VAL:HG23	40:BE:189:PRO:HD2	1.82	0.61
46:BN:39:ARG:C	46:BN:41:ASP:H	2.02	0.61
48:BP:35:HIS:C	48:BP:36:LYS:HG2	2.21	0.61
52:BT:80:SER:HB3	52:BT:81:PRO:HD3	1.82	0.61
52:BT:82:LEU:O	52:BT:84:GLN:N	2.33	0.61
52:BT:85:LYS:NZ	52:BT:85:LYS:CB	2.63	0.61
55:BW:95:ILE:O	55:BW:95:ILE:HG13	2.00	0.61
2:CB:107:THR:O	2:CB:110:GLN:HG3	2.00	0.61
4:CD:150:GLU:CD	4:CD:151:LYS:N	2.54	0.61
6:CF:30:LEU:O	6:CF:35:ALA:HB3	2.00	0.61
19:CS:6:LYS:C	19:CS:7:LYS:HD3	2.20	0.61
19:CS:44:MET:N	19:CS:44:MET:SD	2.73	0.61
22:CW:38:A:H2'	22:CW:39:U:C5'	2.29	0.61
25:CZ:139:ASP:CG	25:CZ:177:LEU:HD11	2.21	0.61
28:D2:68:ARG:HH12	28:D2:72:ALA:HB1	1.64	0.61
36:DA:709:U:H2'	36:DA:710:G:H8	1.64	0.61
36:DA:848:G:N3	36:DA:933:A:H1'	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1354:A:H2'	36:DA:1355:G:O4'	2.00	0.61
36:DA:1357:U:H2'	36:DA:1358:G:O4'	2.00	0.61
36:DA:1442:G:H1	36:DA:1549:C:H42	1.48	0.61
40:DE:14:ILE:HB	52:DT:14:TYR:CE2	2.36	0.61
40:DE:116:VAL:HG21	40:DE:122:PHE:CD2	2.35	0.61
46:DN:12:ARG:O	46:DN:14:VAL:HG23	1.99	0.61
46:DN:15:LEU:HD13	46:DN:16:ILE:N	2.15	0.61
47:DO:104:ARG:NE	52:DT:33:LYS:HD2	2.14	0.61
51:DS:54:LEU:CD1	51:DS:58:LEU:H	2.13	0.61
52:DT:85:LYS:NZ	52:DT:85:LYS:CB	2.63	0.61
57:DY:31:LEU:HD23	57:DY:36:ALA:O	2.00	0.61
57:DY:56:PRO:O	57:DY:57:GLN:C	2.37	0.61
58:DZ:20:ARG:HB3	58:DZ:20:ARG:NH1	2.14	0.61
3:AC:5:ILE:HG12	3:AC:10:PHE:HB2	1.82	0.61
9:AI:9:ARG:CG	9:AI:14:VAL:HG13	2.30	0.61
22:AW:57:G:C2'	22:AW:58:A:H5'	2.29	0.61
25:AZ:68:VAL:CA	25:AZ:69:GLU:N	2.60	0.61
25:AZ:176:LEU:HD13	25:AZ:176:LEU:C	2.21	0.61
25:AZ:198:LYS:NZ	25:AZ:201:GLU:CG	2.61	0.61
36:BA:2219:G:O2'	36:BA:2220:G:H5'	1.99	0.61
38:BC:6:ARG:HH11	38:BC:34:THR:HB	1.65	0.61
38:BC:152:ILE:O	38:BC:155:GLU:HG2	2.00	0.61
41:BF:64:ILE:HG22	41:BF:76:GLY:O	2.00	0.61
53:BU:90:VAL:O	53:BU:92:ARG:N	2.33	0.61
1:CA:946:A:H2'	1:CA:947:G:H8	1.65	0.61
4:CD:201:GLN:HA	4:CD:204:ILE:HD12	1.80	0.61
7:CG:76:ARG:HH11	7:CG:76:ARG:HG2	1.64	0.61
17:CQ:67:LYS:O	17:CQ:68:ARG:CB	2.48	0.61
20:CT:36:LEU:HD12	20:CT:59:ALA:HB2	1.82	0.61
34:D8:21:LYS:HD3	34:D8:48:PHE:CZ	2.34	0.61
36:DA:786:C:C2'	36:DA:787:U:H5'	2.30	0.61
36:DA:2779:U:H1'	36:DA:2781:A:C5	2.35	0.61
38:DC:123:VAL:HG21	38:DC:127:LEU:HD22	1.83	0.61
39:DD:71:ASP:CB	39:DD:103:ARG:HH22	2.12	0.61
43:DH:94:TYR:CD1	43:DH:107:VAL:HA	2.34	0.61
13:AM:4:ILE:HD13	13:AM:56:LEU:HD12	1.82	0.61
25:AZ:27:LEU:HD11	25:AZ:31:LEU:HD21	1.82	0.61
25:AZ:193:ASN:OD1	25:AZ:195:TRP:N	2.33	0.61
35:B9:10:ILE:H	35:B9:10:ILE:CD1	2.10	0.61
36:BA:271(A):A:H5'	36:BA:271(B):C:OP2	1.99	0.61
36:BA:773:U:H4'	39:BD:47:GLY:HA3	1.80	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:832:G:OP1	48:BP:40:SER:HB3	1.99	0.61
36:BA:848:G:N3	36:BA:933:A:H1'	2.16	0.61
36:BA:1543:C:C3'	36:BA:1544:A:H5"	2.26	0.61
36:BA:2130:U:OP1	38:BC:5:LYS:HG3	2.00	0.61
36:BA:2572:A:N7	40:BE:144:ARG:HD2	2.15	0.61
41:BF:132:VAL:HG22	41:BF:133:ASN:N	2.15	0.61
41:BF:185:ASP:HA	41:BF:188:ARG:HG2	1.81	0.61
42:BG:71:THR:HB	42:BG:89:GLY:HA3	1.82	0.61
50:BR:117:VAL:HG22	50:BR:118:GLU:N	2.16	0.61
54:BV:18:LEU:CG	54:BV:19:LYS:H	2.10	0.61
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.83	0.61
1:CA:1432:G:OP1	52:DT:107:ASP:HB2	2.01	0.61
6:CF:91:VAL:CG1	6:CF:92:LYS:N	2.63	0.61
7:CG:73:MET:HG2	7:CG:90:GLU:HA	1.82	0.61
8:CH:20:TYR:CE1	8:CH:78:GLN:NE2	2.68	0.61
10:CJ:6:ILE:O	10:CJ:6:ILE:HG13	1.98	0.61
16:CP:67:THR:H	16:CP:70:ALA:CB	2.05	0.61
25:CZ:14:VAL:O	25:CZ:79:HIS:HA	2.00	0.61
36:DA:862:G:H2'	36:DA:863:A:O4'	2.00	0.61
36:DA:1094:U:H2'	36:DA:1096:A:OP2	2.00	0.61
36:DA:1301:A:O2'	36:DA:1302:A:C2'	2.43	0.61
36:DA:1771:C:C1'	36:DA:1786:A:H8	2.13	0.61
38:DC:61:THR:HB	38:DC:161:ILE:O	2.00	0.61
39:DD:37:LEU:O	39:DD:38:LYS:O	2.18	0.61
40:DE:30:PRO:HD3	40:DE:180:ASN:ND2	2.15	0.61
47:DO:8:LEU:HB2	47:DO:82:ASN:O	2.00	0.61
48:DP:35:HIS:O	48:DP:36:LYS:CG	2.39	0.61
54:DV:13:ARG:HH11	54:DV:13:ARG:HG3	1.65	0.61
57:DY:90:LEU:HD23	57:DY:90:LEU:H	1.66	0.61
58:DZ:85:HIS:CE1	58:DZ:87:ASP:OD1	2.53	0.61
58:DZ:122:ARG:HH11	58:DZ:122:ARG:HG2	1.66	0.61
1:AA:328:C:H4'	1:AA:329:A:H5'	1.82	0.61
1:AA:1132:C:O2'	1:AA:1133:G:H5'	1.99	0.61
1:AA:1186:G:C3'	1:AA:1187:G:H5"	2.29	0.61
7:AG:50:ILE:O	7:AG:54:THR:HG22	2.01	0.61
25:AZ:318:ALA:HB2	25:AZ:400:VAL:HA	1.83	0.61
25:AZ:321:TYR:C	25:AZ:321:TYR:CD1	2.73	0.61
31:B5:51:TYR:N	31:B5:56:LYS:HE3	2.15	0.61
36:BA:27:G:N2	36:BA:512:G:C2'	2.62	0.61
36:BA:49:A:H5"	36:BA:51:G:O4'	2.00	0.61
36:BA:524:U:H4'	36:BA:555:U:H4'	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1151:G:H2'	36:BA:1152:C:C6	2.35	0.61
36:BA:1354:A:H2'	36:BA:1355:G:O4'	2.01	0.61
36:BA:2463:C:O2'	36:BA:2464:C:H5'	2.00	0.61
39:BD:30:GLU:HB2	39:BD:35:LYS:NZ	2.15	0.61
39:BD:35:LYS:HD2	39:BD:36:PRO:CA	2.31	0.61
39:BD:176:ARG:HH11	39:BD:176:ARG:HG2	1.65	0.61
43:BH:41:MET:SD	43:BH:53:GLU:O	2.58	0.61
51:BS:58:LEU:HG	51:BS:59:LYS:H	1.65	0.61
51:BS:69:VAL:HG13	51:BS:99:LYS:HD3	1.82	0.61
51:BS:85:VAL:HG23	51:BS:106:ARG:HD3	1.82	0.61
53:BU:115:ALA:C	53:BU:117:GLN:N	2.53	0.61
2:CB:101:MET:HA	2:CB:108:ILE:HG13	1.81	0.61
4:CD:88:VAL:HG13	5:CE:97:GLY:CA	2.29	0.61
15:CO:56:LEU:O	15:CO:60:VAL:HG23	1.99	0.61
18:CR:32:ARG:HA	18:CR:69:THR:HG21	1.83	0.61
29:D3:35:ARG:HH11	29:D3:35:ARG:CB	2.08	0.61
33:D7:24:THR:HG23	33:D7:27:GLY:H	1.64	0.61
36:DA:1051:G:H2'	36:DA:1052:C:C4	2.34	0.61
36:DA:1268:A:H2'	36:DA:1269:A:O4'	2.00	0.61
43:DH:43:VAL:HG12	43:DH:46:GLU:OE2	2.00	0.61
43:DH:158:HIS:CE1	43:DH:169:VAL:HG12	2.36	0.61
46:DN:30:ILE:O	46:DN:34:LEU:HB2	2.00	0.61
53:DU:95:LEU:O	53:DU:98:LEU:HG	1.99	0.61
57:DY:14:LEU:HD12	57:DY:15:VAL:H	1.65	0.61
58:DZ:82:ARG:NH1	58:DZ:84:GLU:HA	2.14	0.61
58:DZ:144:LEU:HD11	58:DZ:150:LEU:HB3	1.81	0.61
58:DZ:150:LEU:H	58:DZ:150:LEU:HD23	1.65	0.61
1:AA:197:A:H4'	1:AA:198:G:O5'	2.01	0.61
1:AA:657:G:O2'	1:AA:658:G:H5'	1.99	0.61
1:AA:683:G:H21	11:AK:38:ASN:HD22	1.49	0.61
12:AL:114:LYS:N	12:AL:114:LYS:HD2	2.16	0.61
22:AW:43:C:H2'	22:AW:44:G:C1'	2.31	0.61
36:BA:611:C:H2'	36:BA:612:C:C6	2.36	0.61
36:BA:888:C:H2'	36:BA:889:C:C4'	2.31	0.61
36:BA:2014:A:H2'	36:BA:2015:A:C8	2.35	0.61
46:BN:70:LYS:HE2	46:BN:72:TYR:CZ	2.36	0.61
50:BR:2:ARG:CD	50:BR:5:LYS:HE2	2.30	0.61
54:BV:13:ARG:HG3	54:BV:13:ARG:HH11	1.64	0.61
3:CC:113:ALA:HB2	3:CC:183:ASP:HB3	1.80	0.61
3:CC:120:VAL:HB	3:CC:198:VAL:HG11	1.82	0.61
4:CD:145:GLU:O	4:CD:145:GLU:OE1	2.18	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:28:PHE:O	5:CE:47:LYS:HA	2.01	0.61
9:CI:95:LYS:O	9:CI:96:LEU:HD12	2.00	0.61
12:CL:79:GLU:O	12:CL:80:HIS:CB	2.47	0.61
24:CY:77:TRP:HB2	25:CZ:285:ASN:HB3	1.80	0.61
25:CZ:27:LEU:O	25:CZ:31:LEU:HG	2.00	0.61
25:CZ:121:LEU:HG	25:CZ:125:GLN:HE21	1.65	0.61
25:CZ:136:ASN:ND2	60:CZ:501:GDP:N7	2.39	0.61
30:D4:27:THR:HG23	42:DG:143:GLU:OE2	2.01	0.61
31:D5:57:VAL:C	31:D5:58:LEU:HD12	2.21	0.61
32:D6:30:THR:HG22	32:D6:31:PRO:HD2	1.81	0.61
36:DA:72:U:O2'	36:DA:73:A:H5'	2.01	0.61
36:DA:1493:C:H2'	36:DA:1493:C:O2	2.01	0.61
36:DA:2883:A:H3'	36:DA:2884:U:H5'	1.82	0.61
41:DF:123:LEU:HD12	41:DF:124:LEU:H	1.65	0.61
48:DP:16:ARG:HD3	48:DP:18:ARG:H	1.66	0.61
48:DP:77:ARG:HH11	48:DP:77:ARG:HG2	1.66	0.61
48:DP:81:GLN:HE22	48:DP:106:LEU:HA	1.65	0.61
48:DP:96:THR:HG22	48:DP:126:VAL:CG2	2.30	0.61
50:DR:18:LEU:HD11	50:DR:22:ARG:CZ	2.30	0.61
52:DT:62:THR:CG2	52:DT:75:ILE:HG13	2.29	0.61
56:DX:42:ALA:O	56:DX:43:VAL:HG23	2.00	0.61
57:DY:95:LYS:HE3	57:DY:100:ALA:HB2	1.81	0.61
58:DZ:151:HIS:HA	58:DZ:171:ILE:HG12	1.82	0.61
1:AA:57:G:H2'	1:AA:58:C:C6	2.35	0.61
1:AA:538:G:P	12:AL:115:LYS:HB2	2.40	0.61
1:AA:828:A:H2'	1:AA:829:G:O4'	2.00	0.61
1:AA:1048:G:OP1	14:AN:4:LYS:HB2	2.00	0.61
19:AS:53:ASN:ND2	19:AS:53:ASN:C	2.53	0.61
20:AT:26:ASN:H	20:AT:26:ASN:HD22	1.46	0.61
24:AY:29:G:H1	24:AY:41:C:H42	1.46	0.61
26:B0:77:ARG:NH2	36:BA:857:C:H5'	2.16	0.61
27:B1:36:GLY:O	27:B1:38:SER:N	2.34	0.61
36:BA:852:G:O2'	36:BA:853:G:H5'	2.01	0.61
36:BA:1720:U:H2'	36:BA:1721:G:H5"	1.82	0.61
41:BF:24:LEU:HD12	41:BF:118:ALA:HB1	1.82	0.61
42:BG:57:ALA:C	42:BG:59:GLU:H	2.02	0.61
42:BG:102:PHE:O	42:BG:102:PHE:CD1	2.53	0.61
50:BR:111:LEU:HD12	50:BR:111:LEU:H	1.64	0.61
54:BV:51:VAL:HG12	54:BV:52:VAL:N	2.10	0.61
57:BY:97:ARG:HH21	57:BY:98:VAL:HB	1.66	0.61
2:CB:44:LEU:HA	2:CB:47:THR:CB	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:155:LEU:HD21	2:CB:159:PRO:HG3	1.83	0.61
6:CF:76:ALA:O	6:CF:80:ARG:HG3	2.00	0.61
25:CZ:138:VAL:HG21	25:CZ:173:GLY:H	1.65	0.61
32:D6:8:LYS:HD2	32:D6:27:LYS:HG2	1.83	0.61
32:D6:30:THR:O	32:D6:31:PRO:C	2.37	0.61
36:DA:1142(A):A:H5'	36:DA:1142(A):A:H8	1.65	0.61
36:DA:2176:A:H4'	38:DC:213:TYR:CD1	2.36	0.61
36:DA:2248:C:C2'	36:DA:2249:U:H5'	2.31	0.61
38:DC:10:LEU:CD1	38:DC:32:LEU:HA	2.29	0.61
38:DC:107:TRP:CH2	38:DC:109:ASP:HA	2.35	0.61
39:DD:35:LYS:HA	39:DD:64:ILE:H	1.64	0.61
40:DE:163:GLU:O	40:DE:165:VAL:HG23	2.01	0.61
48:DP:82:GLY:HA2	48:DP:113:LYS:HB3	1.82	0.61
49:DQ:132:VAL:HG11	58:DZ:81:ARG:HD2	1.81	0.61
52:DT:47:GLY:HA3	52:DT:63:VAL:HG12	1.82	0.61
1:AA:458:C:H2'	1:AA:460:G:C8	2.36	0.61
4:AD:43:HIS:O	4:AD:45:GLN:N	2.29	0.61
6:AF:97:PHE:HD1	18:AR:31:LEU:HD21	1.65	0.61
15:AO:11:VAL:HG21	15:AO:34:LEU:HD22	1.83	0.61
17:AQ:12:SER:HB3	17:AQ:20:THR:CB	2.30	0.61
19:AS:28:LYS:C	19:AS:29:ARG:HD2	2.21	0.61
22:AV:69:G:H8	22:AV:69:G:H5'	1.64	0.61
25:AZ:16:THR:HG23	25:AZ:79:HIS:CE1	2.35	0.61
28:B2:35:LEU:O	28:B2:39:ALA:HB3	2.00	0.61
33:B7:34:ARG:HB2	33:B7:42:LEU:HD22	1.83	0.61
35:B9:19:ARG:O	35:B9:20:HIS:HB2	2.00	0.61
36:BA:15:G:O2'	36:BA:16:G:H5'	2.00	0.61
36:BA:873:G:H2'	36:BA:874:G:H8	1.65	0.61
36:BA:2869:G:H2'	36:BA:2870:C:C6	2.35	0.61
38:BC:43:VAL:HG23	38:BC:175:VAL:HG21	1.83	0.61
39:BD:210:GLY:O	39:BD:211:ARG:CB	2.45	0.61
42:BG:165:THR:HB	42:BG:167:GLU:OE1	2.00	0.61
55:BW:5:ALA:HB2	55:BW:54:ALA:HB2	1.83	0.61
57:BY:28:LYS:HB2	57:BY:37:VAL:HB	1.82	0.61
1:CA:1030(A):G:H2'	1:CA:1030(A):G:N3	2.14	0.61
1:CA:1219:U:OP1	14:CN:19:ARG:NH2	2.33	0.61
1:CA:1244:C:H2'	1:CA:1245:A:C8	2.35	0.61
1:CA:1318:A:H4'	19:CS:10:PHE:CZ	2.36	0.61
2:CB:165:VAL:O	2:CB:165:VAL:HG23	1.99	0.61
4:CD:103:ASN:OD1	4:CD:114:ARG:NE	2.34	0.61
12:CL:114:LYS:N	12:CL:114:LYS:HD2	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CW:55:U:H2'	22:CW:56:C:H5"	1.82	0.61
28:D2:32:LEU:HB2	28:D2:53:LEU:HD22	1.83	0.61
36:DA:443:A:H1'	36:DA:1201:C:O4'	2.00	0.61
36:DA:2146:C:H4'	36:DA:2147:G:C5	2.36	0.61
36:DA:2166:G:H2'	36:DA:2167:U:C6	2.35	0.61
36:DA:2647:U:H2'	36:DA:2648:C:C6	2.36	0.61
39:DD:71:ASP:HB3	39:DD:103:ARG:NH2	2.15	0.61
43:DH:28:GLY:HA3	43:DH:79:VAL:HB	1.82	0.61
46:DN:23:LEU:HB2	46:DN:60:ILE:HG21	1.83	0.61
48:DP:112:LEU:HD13	48:DP:112:LEU:O	2.01	0.61
51:DS:29:PHE:CE1	51:DS:31:SER:HB2	2.36	0.61
52:DT:32:TYR:N	52:DT:32:TYR:HD1	1.97	0.61
58:DZ:180:VAL:CG2	58:DZ:181:GLU:H	2.03	0.61
4:AD:98:GLU:CB	4:AD:189:PRO:HG3	2.31	0.61
5:AE:76:ILE:HG13	5:AE:142:LEU:CD1	2.31	0.61
10:AJ:55:LYS:HE3	10:AJ:55:LYS:H	1.65	0.61
13:AM:87:TYR:HE1	19:AS:81:ARG:NH2	1.99	0.61
20:AT:16:HIS:O	20:AT:19:SER:HB3	2.01	0.61
25:AZ:172:ARG:N	25:AZ:172:ARG:HD2	2.16	0.61
30:B4:5:ILE:O	30:B4:5:ILE:HG12	2.01	0.61
32:B6:5:VAL:HG12	32:B6:5:VAL:O	2.01	0.61
34:B8:23:VAL:CG1	34:B8:46:ARG:HB3	2.31	0.61
36:BA:1721:G:C6	36:BA:1739:U:H5'	2.36	0.61
39:BD:75:ILE:HG21	39:BD:99:ASP:HB2	1.83	0.61
40:BE:3:GLY:HA3	40:BE:81:ILE:HD12	1.83	0.61
49:BQ:56:ARG:CG	49:BQ:56:ARG:NH1	2.63	0.61
53:BU:61:TRP:HB3	53:BU:93:LYS:O	2.01	0.61
54:BV:39:LEU:HD12	54:BV:51:VAL:HA	1.83	0.61
55:BW:36:LEU:HD12	55:BW:48:ALA:HA	1.83	0.61
56:BX:29:TRP:CZ3	56:BX:78:LYS:HB3	2.35	0.61
58:BZ:27:VAL:HG22	58:BZ:28:MET:H	1.66	0.61
1:CA:686:U:O4	1:CA:703:G:H1'	2.01	0.61
1:CA:1065:U:C4	1:CA:1190:G:H1'	2.36	0.61
1:CA:1220:G:H2'	1:CA:1221:G:C8	2.36	0.61
14:CN:3:ARG:HG2	14:CN:3:ARG:O	2.01	0.61
17:CQ:78:GLU:OE2	17:CQ:81:ARG:HD3	2.01	0.61
25:CZ:241:ARG:HH11	25:CZ:241:ARG:HB3	1.64	0.61
36:DA:139:G:H1	36:DA:142(A):C:H42	1.47	0.61
36:DA:200:U:C2'	36:DA:201:C:H5'	2.30	0.61
36:DA:1495:A:N3	36:DA:1496:A:H2	1.98	0.61
36:DA:2641:G:P	46:DN:74:ARG:HH21	2.23	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:134:ARG:HD3	39:DD:188:GLU:OE2	2.00	0.61
39:DD:201:HIS:C	39:DD:203:ASN:H	2.04	0.61
48:DP:58:THR:O	48:DP:61:ARG:NE	2.26	0.61
49:DQ:133:ARG:NH1	49:DQ:133:ARG:HB2	2.16	0.61
51:DS:30:ARG:HD2	51:DS:35:ILE:HB	1.83	0.61
1:AA:878:G:H5'	8:AH:89:PRO:HG2	1.83	0.61
2:AB:97:TRP:HH2	2:AB:176:GLU:OE1	1.84	0.61
3:AC:16:ARG:HB2	3:AC:16:ARG:NH1	2.15	0.61
3:AC:52:LEU:HD11	3:AC:55:VAL:HG23	1.83	0.61
22:AW:19:G:H5'	22:AW:20:U:C5	2.36	0.61
28:B2:57:ILE:CG2	28:B2:61:LEU:HG	2.28	0.61
28:B2:59:ARG:O	28:B2:63:VAL:HG23	1.99	0.61
32:B6:5:VAL:HG11	36:BA:2283:C:H5'	1.82	0.61
36:BA:1223:G:H8	36:BA:1223:G:H5'	1.66	0.61
36:BA:2712:U:O2'	36:BA:2713:A:H5'	2.01	0.61
41:BF:123:LEU:HD12	41:BF:124:LEU:H	1.66	0.61
42:BG:173:LEU:HB3	42:BG:178:PHE:CD2	2.35	0.61
47:BO:35:VAL:HG23	47:BO:65:THR:HG23	1.81	0.61
48:BP:84:ASN:HA	48:BP:116:GLY:HA3	1.83	0.61
57:BY:54:LYS:O	57:BY:55:TYR:HB2	2.00	0.61
58:BZ:130:PRO:HA	58:BZ:133:ILE:CD1	2.15	0.61
1:CA:59:A:C5'	1:CA:60:A:H5"	2.30	0.61
1:CA:1086:U:C2'	1:CA:1087:G:H5'	2.30	0.61
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.36	0.61
2:CB:115:LEU:C	2:CB:117:GLU:H	2.04	0.61
13:CM:2:ALA:O	13:CM:4:ILE:HG13	2.01	0.61
22:CV:76:A:H3'	36:DA:2585:U:N3	2.15	0.61
24:CY:77:TRP:O	25:CZ:273:HIS:CA	2.49	0.61
25:CZ:8:THR:CG2	25:CZ:9:LYS:H	2.13	0.61
25:CZ:178:ALA:O	25:CZ:196:VAL:CG2	2.49	0.61
25:CZ:198:LYS:NZ	25:CZ:198:LYS:O	2.33	0.61
30:D4:14:ILE:HD12	30:D4:14:ILE:H	1.63	0.61
30:D4:30:GLU:C	30:D4:31:ILE:HD12	2.21	0.61
36:DA:391:G:O2'	36:DA:392:C:H5'	2.01	0.61
36:DA:1141:U:H2'	46:DN:63:THR:HG21	1.83	0.61
36:DA:2712:U:OP1	36:DA:2714:G:H4'	2.01	0.61
40:DE:47:VAL:HG23	40:DE:84:PHE:O	2.01	0.61
42:DG:178:PHE:HB3	42:DG:180:PHE:HE1	1.65	0.61
52:DT:65:LYS:NZ	52:DT:66:VAL:H	1.99	0.61
1:AA:67:C:H2'	1:AA:68:G:C8	2.35	0.61
7:AG:145:ALA:O	7:AG:147:ALA:N	2.32	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B7:43:THR:HG23	33:B7:44:PRO:HD2	1.83	0.61
36:BA:2741:A:H2'	36:BA:2742:C:O4'	2.01	0.61
38:BC:47:LEU:HD12	38:BC:47:LEU:N	2.15	0.61
38:BC:53:ARG:HB3	38:BC:53:ARG:HH11	1.64	0.61
52:BT:42:ILE:O	52:BT:42:ILE:HG13	2.01	0.61
55:BW:107:LEU:HD12	55:BW:107:LEU:N	2.14	0.61
58:BZ:98:MET:O	58:BZ:125:LEU:HD12	2.00	0.61
3:CC:22:TRP:CZ2	14:CN:54:PRO:HG2	2.35	0.61
3:CC:94:LEU:O	3:CC:95:THR:HB	1.99	0.61
3:CC:134:ILE:HG21	3:CC:167:TRP:O	1.99	0.61
5:CE:68:GLU:O	5:CE:68:GLU:HG3	2.01	0.61
10:CJ:61:GLU:OE2	14:CN:49:HIS:HE1	1.83	0.61
20:CT:55:ILE:HD13	20:CT:55:ILE:H	1.66	0.61
24:CY:76:A:OP2	25:CZ:274:ARG:HD2	2.00	0.61
25:CZ:150:VAL:HG13	25:CZ:151:GLU:N	2.15	0.61
25:CZ:193:ASN:OD1	25:CZ:195:TRP:N	2.34	0.61
31:D5:6:VAL:HG13	36:DA:2016:U:H1'	1.83	0.61
31:D5:31:VAL:HG23	36:DA:2886:G:O2'	2.01	0.61
32:D6:35:GLU:HB3	32:D6:51:GLU:HB2	1.81	0.61
36:DA:201:C:C2'	36:DA:202:U:H5'	2.31	0.61
36:DA:389:G:H1	48:DP:71:VAL:HG12	1.65	0.61
36:DA:1400:G:H2'	36:DA:1401:G:H8	1.66	0.61
36:DA:1516:C:C2'	36:DA:1517:G:C5'	2.77	0.61
36:DA:2463:C:O2'	36:DA:2464:C:H5'	2.01	0.61
36:DA:2886:G:H2'	36:DA:2887:U:C6	2.35	0.61
39:DD:34:VAL:O	39:DD:36:PRO:HD2	2.00	0.61
41:DF:126:VAL:HG21	41:DF:129:PHE:CZ	2.36	0.61
54:DV:49:THR:HB	54:DV:50:PRO:HD2	1.82	0.61
58:DZ:9:TYR:HE1	58:DZ:35:ARG:HG3	1.66	0.61
58:DZ:157:LEU:HD11	58:DZ:163:LEU:HD22	1.81	0.61
1:AA:954:G:H21	1:AA:1227:A:N6	1.99	0.60
2:AB:142:LEU:O	2:AB:142:LEU:HD23	2.00	0.60
22:AW:44:G:H2'	22:AW:44:G:N3	2.16	0.60
22:AW:56:C:O4'	38:BC:132:GLY:HA3	2.01	0.60
32:B6:53:LYS:HD3	32:B6:53:LYS:H	1.65	0.60
36:BA:528:A:H2	36:BA:2043:C:O5'	1.84	0.60
36:BA:549:G:O2'	36:BA:551:G:H5'	2.01	0.60
36:BA:582:G:H2'	36:BA:583:G:C8	2.36	0.60
36:BA:1023:U:H2'	36:BA:1024:G:H5'	1.82	0.60
36:BA:1469:A:H2'	36:BA:1470:G:C8	2.36	0.60
36:BA:1542:A:H5'	36:BA:1543:C:OP2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1771:C:C1'	36:BA:1786:A:C8	2.84	0.60
36:BA:2369:A:O2'	36:BA:2370:G:H5'	2.01	0.60
43:BH:15:VAL:HG12	43:BH:28:GLY:HA2	1.83	0.60
47:BO:114:ILE:HD12	47:BO:114:ILE:N	2.16	0.60
48:BP:105:LEU:H	48:BP:105:LEU:CD1	2.08	0.60
49:BQ:18:LYS:HB3	49:BQ:98:LYS:NZ	2.16	0.60
50:BR:72:ASP:HB3	50:BR:75:LEU:HB3	1.83	0.60
1:CA:9:G:H5"	5:CE:122:GLU:OE1	2.01	0.60
1:CA:202:U:H4'	1:CA:203:U:OP2	2.00	0.60
1:CA:1086:U:H5	1:CA:1099:G:H22	1.48	0.60
3:CC:172:ARG:O	3:CC:173:VAL:HG23	2.01	0.60
4:CD:16:GLY:HA2	4:CD:33:MET:HE1	1.83	0.60
5:CE:76:ILE:HG12	5:CE:77:PRO:CD	2.30	0.60
10:CJ:40:LEU:HB2	10:CJ:69:ASN:CB	2.30	0.60
10:CJ:83:GLU:OE1	10:CJ:84:GLN:HG3	2.00	0.60
11:CK:80:VAL:HG23	11:CK:105:VAL:HG12	1.83	0.60
18:CR:56:THR:C	18:CR:58:LEU:H	2.03	0.60
22:CW:76:A:P	36:DA:2432:A:H4'	2.40	0.60
25:CZ:258:LEU:HD12	25:CZ:299:GLU:CG	2.31	0.60
26:D0:20:ARG:HH11	26:D0:20:ARG:CG	2.13	0.60
26:D0:77:ARG:HH22	36:DA:858:U:P	2.23	0.60
30:D4:16:CYS:SG	30:D4:17:GLY:N	2.74	0.60
31:D5:33:CYS:HB3	31:D5:36:CYS:O	2.01	0.60
36:DA:519:U:H2'	36:DA:520:G:H8	1.65	0.60
36:DA:2364:C:H2'	36:DA:2365:G:O4'	2.01	0.60
36:DA:2801(A):A:C4'	36:DA:2802:G:H5'	2.29	0.60
39:DD:259:THR:O	39:DD:260:ARG:O	2.18	0.60
40:DE:183:LEU:HD12	40:DE:183:LEU:N	2.16	0.60
48:DP:16:ARG:HB2	48:DP:16:ARG:HH11	1.62	0.60
3:AC:70:VAL:HG12	3:AC:72:LYS:N	2.14	0.60
18:AR:52:PRO:O	18:AR:56:THR:HG23	2.01	0.60
26:B0:73:GLY:O	26:B0:75:LEU:N	2.34	0.60
34:B8:62:LEU:HD13	36:BA:242:G:C5'	2.18	0.60
36:BA:470:A:OP1	41:BF:59:TYR:HE1	1.84	0.60
36:BA:2303:G:O2'	42:BG:132:ASN:HB2	2.00	0.60
36:BA:2619:C:O2'	36:BA:2620:C:H5'	2.01	0.60
43:BH:12:PRO:HB2	43:BH:15:VAL:HG22	1.84	0.60
43:BH:46:GLU:O	43:BH:47:GLU:C	2.39	0.60
48:BP:106:LEU:HD21	48:BP:112:LEU:HB2	1.83	0.60
52:BT:29:ARG:HG2	52:BT:86:ILE:HG22	1.83	0.60
1:CA:542:G:OP1	4:CD:10:ARG:NH2	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:972:C:O2	10:CJ:55:LYS:HG2	2.01	0.60
2:CB:121:LEU:O	2:CB:121:LEU:HD23	2.01	0.60
10:CJ:65:LEU:HD22	14:CN:56:VAL:HG22	1.83	0.60
18:CR:56:THR:O	18:CR:58:LEU:N	2.33	0.60
20:CT:23:ARG:HH11	20:CT:23:ARG:HG2	1.66	0.60
20:CT:71:THR:C	20:CT:72:LEU:HD23	2.21	0.60
22:CV:46:G:H3'	22:CV:47:U:C5'	2.31	0.60
26:D0:46:LYS:HE3	26:D0:76:GLY:HA3	1.84	0.60
29:D3:6:VAL:HG12	29:D3:56:VAL:HG22	1.83	0.60
29:D3:43:ILE:HD11	36:DA:927:G:O2'	2.01	0.60
33:D7:43:THR:HG23	33:D7:44:PRO:CD	2.31	0.60
36:DA:118:A:H1'	36:DA:178:G:O4'	2.01	0.60
36:DA:1012:U:C4	46:DN:28:THR:HG21	2.36	0.60
36:DA:1092:C:H42	36:DA:1100:C:H42	1.47	0.60
37:DB:68:C:H2'	37:DB:69:G:O4'	2.02	0.60
43:DH:149:ARG:HA	43:DH:162:ILE:CD1	2.31	0.60
48:DP:99:LEU:O	48:DP:99:LEU:HD23	2.02	0.60
51:DS:17:ARG:C	51:DS:19:LYS:H	2.03	0.60
1:AA:451:A:N6	1:AA:480:U:H2'	2.16	0.60
1:AA:1125:U:H5"	1:AA:1126:U:O4	2.02	0.60
32:B6:7:ILE:HB	32:B6:27:LYS:HZ3	1.66	0.60
36:BA:89:G:H3'	36:BA:90:U:C5'	2.32	0.60
36:BA:296:C:O2'	36:BA:297:C:H5'	2.01	0.60
36:BA:956:G:OP2	49:BQ:14:ARG:NH2	2.33	0.60
36:BA:1081:U:H5'	45:BK:122:UNK:O	2.00	0.60
36:BA:1802:A:H2'	36:BA:1803:A:C8	2.36	0.60
36:BA:2693:A:H2'	36:BA:2694:G:C8	2.37	0.60
41:BF:31:HIS:ND1	48:BP:13:ASN:HB2	2.16	0.60
43:BH:156:ALA:C	43:BH:158:HIS:H	2.03	0.60
48:BP:50:ARG:HG2	48:BP:50:ARG:NH1	2.16	0.60
51:BS:67:ARG:HH22	51:BS:100:ALA:HB3	1.66	0.60
51:BS:99:LYS:HB3	51:BS:99:LYS:HZ3	1.65	0.60
54:BV:66:ARG:NE	54:BV:88:ARG:HD2	2.16	0.60
1:CA:656:C:H4'	15:CO:62:GLN:NE2	2.16	0.60
1:CA:959:A:H2'	1:CA:960:U:C4'	2.31	0.60
1:CA:1244:C:H2'	1:CA:1245:A:H8	1.65	0.60
1:CA:1282:C:O2'	1:CA:1283:G:H5'	2.01	0.60
1:CA:1298:C:H2'	7:CG:114:ARG:NH1	2.17	0.60
3:CC:46:GLU:O	3:CC:47:LEU:CB	2.49	0.60
3:CC:50:ALA:HB1	3:CC:70:VAL:HG11	1.83	0.60
3:CC:107:GLN:H	3:CC:107:GLN:NE2	1.98	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:13:ARG:O	4:CD:15:GLU:N	2.33	0.60
25:CZ:143:ASP:HB3	25:CZ:146:LEU:CB	2.31	0.60
25:CZ:172:ARG:N	25:CZ:172:ARG:HD2	2.16	0.60
26:D0:40:GLN:NE2	26:D0:43:THR:HA	2.01	0.60
32:D6:13:CYS:HA	32:D6:50:ARG:O	2.01	0.60
32:D6:15:GLU:OE2	32:D6:41:PRO:HG3	2.01	0.60
36:DA:18:C:O3'	53:DU:23:GLY:HA2	2.00	0.60
36:DA:259:G:N2	36:DA:621:A:H8	1.94	0.60
36:DA:534:U:H5'	53:DU:42:ALA:HB1	1.82	0.60
36:DA:769:G:O2'	36:DA:770:G:H5'	2.00	0.60
36:DA:1067:A:H3'	36:DA:1068:G:H5"	1.82	0.60
36:DA:1658:C:OP1	40:DE:132:HIS:CE1	2.54	0.60
36:DA:1803:A:H4'	39:DD:259:THR:CG2	2.28	0.60
36:DA:1847:A:H3'	36:DA:1848:A:H5'	1.83	0.60
36:DA:2636:U:H4'	40:DE:80:GLU:OE1	2.01	0.60
36:DA:2713:A:OP1	50:DR:14:SER:HB2	2.01	0.60
37:DB:106:G:O2'	37:DB:107:G:H5'	2.01	0.60
39:DD:211:ARG:O	39:DD:215:LEU:HG	2.01	0.60
43:DH:33:LEU:HD11	43:DH:78:GLY:O	2.00	0.60
46:DN:30:ILE:HG21	46:DN:120:LEU:HD21	1.82	0.60
47:DO:4:PRO:O	47:DO:5:GLN:HB2	2.00	0.60
47:DO:63:VAL:O	47:DO:64:ARG:HG2	2.01	0.60
48:DP:46:LYS:HG2	48:DP:52:GLU:OE2	2.01	0.60
53:DU:76:TYR:O	53:DU:80:ILE:HG12	2.02	0.60
4:AD:122:ARG:HH11	4:AD:122:ARG:HA	1.65	0.60
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.37	0.60
22:AW:37:A:H3'	22:AW:38:A:H8	1.66	0.60
25:AZ:5:PHE:HB3	25:AZ:276:THR:O	2.01	0.60
27:B1:24:ALA:HB2	27:B1:32:LYS:HE3	1.81	0.60
29:B3:22:ALA:HB2	29:B3:49:LYS:HD3	1.82	0.60
32:B6:44:ARG:O	32:B6:45:LYS:HD3	2.01	0.60
36:BA:331:A:H1'	36:BA:332:A:OP1	2.00	0.60
36:BA:1494:A:H3'	36:BA:1494:A:N3	2.15	0.60
36:BA:2025:C:H2'	36:BA:2026:C:H6	1.66	0.60
36:BA:2154:G:H2'	36:BA:2155:G:H8	1.67	0.60
42:BG:7:LEU:HA	42:BG:10:LYS:CD	2.30	0.60
49:BQ:109:VAL:HG12	49:BQ:110:THR:N	2.16	0.60
51:BS:66:ALA:HB1	51:BS:99:LYS:HG2	1.83	0.60
51:BS:97:ARG:NH2	51:BS:98:VAL:CA	2.63	0.60
1:CA:599:C:H4'	8:CH:130:GLY:C	2.22	0.60
1:CA:896:C:O2'	1:CA:897:C:H5'	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:81:GLU:CD	5:CE:90:VAL:HG22	2.22	0.60
8:CH:6:ILE:H	8:CH:6:ILE:CD1	2.14	0.60
8:CH:85:ARG:NH1	8:CH:134:ILE:HG23	2.16	0.60
9:CI:53:VAL:HG22	9:CI:95:LYS:NZ	2.15	0.60
12:CL:24:VAL:CG1	12:CL:27:LEU:HD13	2.31	0.60
22:CW:20:U:O2'	22:CW:21:A:H4'	2.00	0.60
25:CZ:7:ARG:NH1	25:CZ:281:ILE:CG1	2.56	0.60
36:DA:1049:C:H2'	36:DA:1050:A:H8	1.65	0.60
36:DA:1717:G:C2'	36:DA:1718:G:H5"	2.32	0.60
36:DA:1817:G:C2'	36:DA:1818:U:H5'	2.31	0.60
36:DA:1952:A:C5	47:DO:22:ILE:HD12	2.36	0.60
36:DA:2377:A:O2'	36:DA:2378:A:H5'	2.00	0.60
36:DA:2389:G:H5"	36:DA:2390:U:O4'	2.01	0.60
38:DC:50:ASP:OD2	38:DC:52:ARG:HB2	2.01	0.60
40:DE:30:PRO:HD3	40:DE:180:ASN:CG	2.22	0.60
42:DG:18:GLU:HA	42:DG:18:GLU:OE1	2.01	0.60
42:DG:96:ARG:H	42:DG:99:MET:HE1	1.65	0.60
51:DS:15:ARG:HB2	51:DS:15:ARG:HH11	1.66	0.60
51:DS:54:LEU:HD13	51:DS:58:LEU:H	1.65	0.60
58:DZ:99:TYR:HD2	58:DZ:123:ASP:HB3	1.66	0.60
1:AA:135:C:H2'	1:AA:136:C:H5'	1.83	0.60
8:AH:120:THR:OG1	8:AH:123:GLU:HG3	2.01	0.60
16:AP:34:GLU:HG2	16:AP:35:LYS:N	2.17	0.60
25:AZ:268:THR:HG22	25:AZ:289:LEU:O	2.01	0.60
28:B2:16:LEU:HD23	28:B2:17:SER:H	1.64	0.60
28:B2:53:LEU:O	28:B2:56:GLN:HB2	2.00	0.60
35:B9:29:ASN:N	35:B9:29:ASN:HD22	1.99	0.60
36:BA:729:G:N7	39:BD:208:LYS:HB2	2.16	0.60
36:BA:962:G:C2'	36:BA:963:U:H5'	2.32	0.60
36:BA:1409:C:H2'	36:BA:1410:G:H8	1.66	0.60
36:BA:2648:C:H2'	36:BA:2649:U:C6	2.36	0.60
37:BB:25:A:H2'	37:BB:25:A:N3	2.15	0.60
48:BP:101:VAL:HG23	48:BP:102:ARG:H	1.66	0.60
48:BP:107:LYS:HG3	48:BP:107:LYS:O	2.02	0.60
51:BS:106:ARG:HH12	51:BS:107:GLU:C	2.05	0.60
55:BW:62:HIS:O	55:BW:64:MET:HG3	2.01	0.60
57:BY:8:LYS:HB3	57:BY:28:LYS:NZ	2.16	0.60
1:CA:62:U:O2'	1:CA:63:C:H5"	2.02	0.60
1:CA:807:A:H2'	1:CA:808:C:C6	2.36	0.60
1:CA:1296:C:H4'	1:CA:1302:U:C5	2.36	0.60
1:CA:1521:G:H2'	1:CA:1522:U:C6	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:127:ASN:ND2	5:CE:130:ASN:H	1.99	0.60
9:CI:40:LEU:HD11	9:CI:70:LYS:HG2	1.84	0.60
12:CL:120:TYR:O	12:CL:122:THR:HG22	2.02	0.60
22:CV:66:U:H2'	22:CV:67:C:C6	2.36	0.60
25:CZ:5:PHE:C	25:CZ:5:PHE:CD1	2.75	0.60
25:CZ:318:ALA:HB2	25:CZ:400:VAL:HA	1.83	0.60
25:CZ:345:ARG:HH11	25:CZ:345:ARG:HG2	1.65	0.60
26:D0:36:ILE:HG13	36:DA:2354:G:O2'	2.01	0.60
32:D6:11:LEU:HD23	32:D6:26:ASN:H	1.67	0.60
32:D6:30:THR:O	32:D6:32:ASN:HB2	2.01	0.60
36:DA:979:G:H3'	36:DA:980:A:C5'	2.32	0.60
36:DA:2028:U:H2'	36:DA:2029:G:C8	2.36	0.60
41:DF:175:THR:O	41:DF:176:LEU:HB2	2.00	0.60
42:DG:133:LEU:HD21	42:DG:157:ILE:HB	1.82	0.60
43:DH:84:SER:O	43:DH:85:LYS:HE3	2.01	0.60
47:DO:23:ARG:HG3	47:DO:24:VAL:N	2.17	0.60
52:DT:75:ILE:HD12	52:DT:75:ILE:N	2.16	0.60
58:DZ:165:VAL:HG11	58:DZ:169:GLU:HB2	1.82	0.60
1:AA:266:G:H5'	1:AA:267:C:H5	1.64	0.60
1:AA:475:G:O2'	1:AA:476:G:H5'	2.01	0.60
1:AA:1126:U:OP2	1:AA:1281:U:O2	2.19	0.60
1:AA:1277:C:O2'	1:AA:1279:A:H8	1.84	0.60
4:AD:67:ILE:HG22	4:AD:68:TYR:CD1	2.35	0.60
14:AN:22:THR:CB	14:AN:33:VAL:HG21	2.30	0.60
19:AS:21:GLU:HG3	19:AS:21:GLU:O	2.01	0.60
25:AZ:324:LYS:HG2	25:AZ:365:GLY:HA2	1.81	0.60
29:B3:17:LYS:HG2	36:BA:969:U:OP1	2.02	0.60
32:B6:25:LYS:O	32:B6:25:LYS:HG3	2.00	0.60
36:BA:195:A:H5"	36:BA:196:A:OP2	2.01	0.60
36:BA:815:C:H2'	36:BA:816:C:H6	1.67	0.60
36:BA:910:A:H62	49:BQ:12:GLN:HA	1.66	0.60
37:BB:73:A:C2'	37:BB:74:U:H5'	2.31	0.60
38:BC:78:ALA:O	38:BC:79:LYS:HB2	2.00	0.60
41:BF:167:ALA:HB1	41:BF:173:VAL:HG11	1.84	0.60
46:BN:90:MET:CE	46:BN:90:MET:HA	2.31	0.60
53:BU:61:TRP:CD2	53:BU:94:ASN:HA	2.36	0.60
1:CA:1270:C:H2'	1:CA:1271:G:C8	2.37	0.60
2:CB:168:THR:HG21	2:CB:192:SER:HA	1.84	0.60
4:CD:106:TYR:CE2	4:CD:113:SER:HA	2.37	0.60
9:CI:53:VAL:O	9:CI:54:ASP:HB2	2.02	0.60
13:CM:120:LYS:HA	13:CM:120:LYS:CE	2.29	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:107:SER:OG	25:CZ:137:LYS:HD2	2.01	0.60
25:CZ:198:LYS:NZ	25:CZ:201:GLU:CG	2.60	0.60
28:D2:35:LEU:HB3	28:D2:50:ILE:HG13	1.83	0.60
35:D9:29:ASN:HD22	35:D9:29:ASN:H	1.50	0.60
36:DA:332:A:H4'	36:DA:333:G:OP1	2.00	0.60
36:DA:1131:G:OP1	46:DN:80:GLY:N	2.28	0.60
36:DA:1708:C:O2'	36:DA:1709:U:H5'	2.01	0.60
36:DA:2264:C:H2'	36:DA:2265:U:C6	2.36	0.60
38:DC:4:GLY:O	38:DC:8:ARG:HG3	2.01	0.60
38:DC:100:ILE:CD1	38:DC:123:VAL:HG23	2.32	0.60
39:DD:24:ILE:HD13	39:DD:25:THR:N	2.17	0.60
40:DE:108:SER:O	40:DE:162:ALA:HA	2.02	0.60
40:DE:110:GLY:HA2	40:DE:161:GLY:HA3	1.82	0.60
43:DH:54:ARG:HB2	43:DH:55:PRO:HD2	1.84	0.60
46:DN:55:VAL:HG22	46:DN:56:ASN:H	1.66	0.60
48:DP:50:ARG:HH11	48:DP:50:ARG:HG2	1.65	0.60
49:DQ:110:THR:HG23	49:DQ:113:GLN:OE1	2.01	0.60
54:DV:35:LEU:O	54:DV:37:VAL:N	2.33	0.60
54:DV:82:ARG:HG2	54:DV:82:ARG:HH11	1.67	0.60
1:AA:149:A:H2'	1:AA:150:C:C6	2.37	0.60
1:AA:176:C:H2'	1:AA:177:C:H6	1.66	0.60
1:AA:371:G:C1'	1:AA:482:A:H1'	2.32	0.60
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.36	0.60
1:AA:1492:A:OP1	12:AL:47:LYS:HB2	2.02	0.60
8:AH:86:ILE:HD11	8:AH:136:GLU:HG2	1.83	0.60
9:AI:52:ALA:HB3	9:AI:95:LYS:HZ2	1.67	0.60
9:AI:53:VAL:HG22	9:AI:95:LYS:HD3	1.82	0.60
10:AJ:54:PHE:CZ	10:AJ:55:LYS:HD2	2.37	0.60
10:AJ:75:ILE:HG13	10:AJ:76:ASN:N	2.17	0.60
16:AP:46:PRO:O	16:AP:47:ASP:HB2	2.02	0.60
17:AQ:41:LYS:HE3	17:AQ:88:TYR:OH	2.02	0.60
19:AS:45:VAL:C	19:AS:47:HIS:H	2.04	0.60
22:AW:5:G:H2'	22:AW:6:G:O4'	2.02	0.60
25:AZ:8:THR:CG2	25:AZ:9:LYS:H	2.13	0.60
32:B6:14:THR:HB	32:B6:52:VAL:CG2	2.32	0.60
36:BA:300:A:H2'	36:BA:334:C:O2'	2.02	0.60
36:BA:802:A:H2'	36:BA:803:U:C6	2.36	0.60
36:BA:1049:C:O2	36:BA:1113:U:H4'	2.01	0.60
36:BA:1114:G:H2'	36:BA:1115:G:C8	2.37	0.60
36:BA:1215:G:O2'	36:BA:1216:G:H5'	2.02	0.60
36:BA:1379:A:H4'	36:BA:1379:A:OP2	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2162:G:O2'	36:BA:2163:C:H5'	2.01	0.60
36:BA:2698:U:H2'	36:BA:2699:C:C6	2.37	0.60
39:BD:239:ARG:HG2	39:BD:239:ARG:NH1	2.13	0.60
51:BS:40:ILE:HD11	51:BS:42:ASP:OD1	2.01	0.60
51:BS:61:ASN:O	51:BS:65:VAL:HG23	2.01	0.60
55:BW:4:LYS:HA	55:BW:106:ILE:HG22	1.83	0.60
56:BX:12:VAL:CG2	56:BX:13:LEU:H	1.98	0.60
1:CA:66:G:H4'	1:CA:173:U:C5	2.36	0.60
1:CA:97:G:H2'	1:CA:98:G:O4'	2.02	0.60
1:CA:345:C:O5'	52:DT:41:ARG:NH2	2.34	0.60
19:CS:11:VAL:HA	19:CS:38:SER:HB2	1.83	0.60
25:CZ:206:ILE:HG23	25:CZ:210:ILE:HG21	1.83	0.60
25:CZ:258:LEU:HD13	25:CZ:299:GLU:OE2	2.00	0.60
29:D3:35:ARG:HB2	29:D3:35:ARG:NH1	2.09	0.60
36:DA:648:G:H2'	36:DA:649:G:H8	1.67	0.60
36:DA:673:C:P	41:DF:81:PRO:HG3	2.41	0.60
36:DA:2320:A:N3	36:DA:2320:A:H2'	2.16	0.60
38:DC:123:VAL:CG2	38:DC:127:LEU:HD23	2.28	0.60
42:DG:61:ALA:C	42:DG:62:LEU:HD12	2.22	0.60
43:DH:37:VAL:HG12	43:DH:38:SER:N	2.17	0.60
49:DQ:18:LYS:HA	49:DQ:18:LYS:CE	2.32	0.60
55:DW:68:ARG:O	55:DW:109:GLU:HA	2.02	0.60
1:AA:1463:C:C5'	52:BT:115:ARG:HH12	2.14	0.60
2:AB:120:ALA:C	2:AB:122:PHE:H	2.05	0.60
3:AC:11:ARG:HH11	3:AC:11:ARG:CG	2.14	0.60
6:AF:91:VAL:HG11	18:AR:72:ARG:NH1	2.17	0.60
7:AG:7:ALA:O	7:AG:8:GLU:HB2	2.01	0.60
13:AM:77:ASN:O	13:AM:81:LEU:HD22	2.02	0.60
31:B5:16:ARG:HH11	31:B5:16:ARG:HG2	1.67	0.60
32:B6:17:LYS:O	32:B6:18:ARG:HB3	2.01	0.60
36:BA:213:A:O2'	36:BA:214:G:H5'	2.02	0.60
36:BA:389:G:N1	48:BP:71:VAL:HG12	2.16	0.60
36:BA:654(E):G:H22	36:BA:654(Q):C:H1'	1.67	0.60
36:BA:761:A:C8	36:BA:761:A:C3'	2.85	0.60
36:BA:863:A:O2'	36:BA:864:G:H5'	2.02	0.60
36:BA:2188:C:H2'	36:BA:2189:U:C5	2.37	0.60
39:BD:69:ARG:HD3	39:BD:130:ALA:HB3	1.84	0.60
42:BG:167:GLU:CD	42:BG:167:GLU:H	2.04	0.60
43:BH:16:SER:HB2	43:BH:27:LYS:CB	2.31	0.60
57:BY:13:VAL:O	57:BY:24:VAL:HG13	2.02	0.60
58:BZ:108:PRO:HA	58:BZ:141:VAL:HG12	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:308:C:H2'	1:CA:309:G:H8	1.66	0.60
4:CD:120:LEU:HB3	4:CD:126:ILE:HD11	1.84	0.60
24:CY:51:G:H1	24:CY:63:C:H42	1.49	0.60
25:CZ:23:GLY:HA3	25:CZ:105:VAL:CG1	2.31	0.60
25:CZ:312:PRO:O	25:CZ:313:HIS:ND1	2.34	0.60
27:D1:49:VAL:CG1	27:D1:60:PHE:HB2	2.31	0.60
31:D5:7:PRO:HA	36:DA:2615:U:C2	2.36	0.60
32:D6:7:ILE:CG2	32:D6:27:LYS:HZ3	2.14	0.60
34:D8:17:THR:OG1	34:D8:18:ALA:N	2.34	0.60
36:DA:139:G:C6	36:DA:140:G:H2'	2.37	0.60
36:DA:200:U:H2'	36:DA:201:C:C5'	2.30	0.60
36:DA:2291:U:H2'	36:DA:2292:C:C6	2.36	0.60
36:DA:2853:C:H2'	36:DA:2854:G:C8	2.34	0.60
40:DE:36:ARG:NH2	40:DE:88:GLY:N	2.50	0.60
41:DF:100:THR:HG22	41:DF:100:THR:O	2.02	0.60
50:DR:2:ARG:HD3	50:DR:5:LYS:CE	2.31	0.60
57:DY:50:ARG:HG3	57:DY:56:PRO:HA	1.83	0.60
1:AA:80:G:H2'	1:AA:81:U:C6	2.37	0.60
1:AA:538:G:OP2	12:AL:115:LYS:HB2	2.02	0.60
1:AA:1006:C:H2'	1:AA:1007:C:H6	1.67	0.60
1:AA:1423:G:H5'	47:BO:49:ARG:HH22	1.66	0.60
4:AD:108:LEU:O	4:AD:110:PHE:CD1	2.55	0.60
5:AE:10:MET:SD	5:AE:13:ILE:HD11	2.42	0.60
5:AE:81:GLU:OE1	5:AE:90:VAL:HG22	2.01	0.60
19:AS:16:LEU:C	19:AS:18:LYS:N	2.55	0.60
29:B3:30:ARG:HH21	36:BA:1159:U:P	2.25	0.60
36:BA:234:C:H2'	36:BA:235:U:H6	1.67	0.60
38:BC:103:ILE:HA	38:BC:107:TRP:HB2	1.84	0.60
41:BF:84:VAL:O	41:BF:86:GLY:N	2.34	0.60
42:BG:52:ILE:C	42:BG:54:GLU:H	2.05	0.60
42:BG:64:THR:HG23	42:BG:66:GLN:H	1.65	0.60
43:BH:155:SER:O	43:BH:157:TYR:N	2.29	0.60
49:BQ:137:TYR:CE2	58:BZ:81:ARG:NH2	2.70	0.60
52:BT:82:LEU:HD12	52:BT:82:LEU:N	2.17	0.60
53:BU:91:ASP:O	53:BU:92:ARG:HB3	2.01	0.60
55:BW:36:LEU:CD1	55:BW:48:ALA:HA	2.32	0.60
58:BZ:128:VAL:HG22	58:BZ:129:SER:N	2.17	0.60
3:CC:95:THR:HG23	3:CC:97:LYS:HD2	1.84	0.60
4:CD:132:ARG:HD2	4:CD:132:ARG:C	2.22	0.60
4:CD:170:VAL:CG1	4:CD:174:LEU:HB2	2.31	0.60
10:CJ:61:GLU:HG3	14:CN:58:LYS:NZ	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:10:PRO:CB	13:CM:18:ALA:HB1	2.30	0.60
15:CO:43:LEU:HD11	15:CO:53:HIS:HA	1.84	0.60
22:CV:44:G:H3'	22:CV:45:U:H5'	1.83	0.60
25:CZ:204:ASP:O	25:CZ:208:GLU:HG2	2.02	0.60
36:DA:587:C:C4	48:DP:33:ARG:HG2	2.37	0.60
36:DA:1019:U:O2'	36:DA:1021:A:H2	1.83	0.60
36:DA:1409:C:O2'	36:DA:1410:G:H5'	2.02	0.60
36:DA:2138:C:H2'	36:DA:2139:C:H6	1.65	0.60
36:DA:2722:G:H2'	36:DA:2723:C:C6	2.37	0.60
36:DA:2728:U:O2'	36:DA:2729:G:H5'	2.02	0.60
38:DC:73:ARG:O	38:DC:111:ASP:HB2	2.02	0.60
40:DE:90:THR:HG22	40:DE:91:VAL:N	2.16	0.60
41:DF:185:ASP:HA	41:DF:188:ARG:CD	2.32	0.60
42:DG:56:ALA:HB2	42:DG:153:ARG:HH21	1.66	0.60
42:DG:136:ARG:O	42:DG:154:GLY:HA2	2.01	0.60
47:DO:64:ARG:NH2	47:DO:100:GLY:HA3	2.16	0.60
48:DP:85:LEU:HA	48:DP:88:LEU:CB	2.31	0.60
49:DQ:141:GLN:NE2	58:DZ:72:ARG:HD3	2.17	0.60
52:DT:41:ARG:HH11	52:DT:41:ARG:HG2	1.67	0.60
54:DV:19:LYS:HG2	54:DV:94:LEU:HB2	1.82	0.60
55:DW:9:TYR:H	55:DW:102:HIS:CD2	2.19	0.60
55:DW:25:ARG:HH11	55:DW:25:ARG:HB3	1.65	0.60
56:DX:8:ILE:HD12	56:DX:8:ILE:N	2.17	0.60
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.37	0.60
11:AK:67:ASP:OD1	11:AK:71:LYS:HE3	2.02	0.60
20:AT:22:ARG:O	20:AT:26:ASN:ND2	2.35	0.60
36:BA:1316:U:H2'	36:BA:1317:A:H8	1.66	0.60
36:BA:2009:G:H1'	50:BR:107:ASP:O	2.02	0.60
36:BA:2722:G:O2'	50:BR:5:LYS:HB2	2.00	0.60
38:BC:47:LEU:CD1	38:BC:171:ILE:HG22	2.31	0.60
40:BE:55:ASN:CG	40:BE:75:VAL:HG22	2.21	0.60
42:BG:63:ILE:HG22	42:BG:143:GLU:HB2	1.83	0.60
43:BH:44:VAL:CG1	43:BH:45:VAL:H	2.05	0.60
43:BH:105:LEU:HD23	43:BH:105:LEU:H	1.66	0.60
48:BP:31:ALA:C	48:BP:33:ARG:H	2.05	0.60
49:BQ:18:LYS:HA	49:BQ:18:LYS:HZ3	1.64	0.60
51:BS:89:ARG:HH11	51:BS:92:TYR:HA	1.66	0.60
1:CA:22:G:H2'	1:CA:23:C:H6	1.67	0.60
1:CA:1048:G:OP1	14:CN:4:LYS:HB2	2.02	0.60
1:CA:1271:G:H5'	1:CA:1314:C:H5"	1.84	0.60
1:CA:1392:G:N2	1:CA:1502:A:H8	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:16:LEU:HD12	10:CJ:70:ARG:HE	1.66	0.60
13:CM:9:ILE:H	13:CM:9:ILE:HD12	1.67	0.60
19:CS:16:LEU:H	19:CS:16:LEU:CD1	2.14	0.60
22:CV:69:G:H5'	22:CV:69:G:H8	1.67	0.60
35:D9:14:CYS:SG	35:D9:27:CYS:CB	2.89	0.60
36:DA:240:G:H3'	36:DA:241:A:C5'	2.31	0.60
36:DA:987:G:H2'	36:DA:988:A:O4'	2.01	0.60
36:DA:1958:C:O2'	36:DA:1959:G:H5'	2.02	0.60
42:DG:107:LEU:HD22	42:DG:177:GLY:O	2.02	0.60
46:DN:126:PRO:O	46:DN:127:ASP:CB	2.50	0.60
47:DO:104:ARG:NE	52:DT:33:LYS:HZ2	1.96	0.60
51:DS:99:LYS:HB3	51:DS:99:LYS:HZ1	1.60	0.60
54:DV:3:ALA:HB3	54:DV:14:VAL:HG23	1.83	0.60
55:DW:6:ILE:HA	55:DW:104:THR:HA	1.84	0.60
56:DX:36:LYS:HE2	56:DX:54:VAL:O	2.02	0.60
57:DY:7:VAL:HB	57:DY:8:LYS:CE	2.32	0.60
58:DZ:70:LEU:H	58:DZ:70:LEU:HD12	1.67	0.60
1:AA:160:A:H1'	1:AA:344:A:N7	2.17	0.59
1:AA:559:A:OP1	5:AE:126:ARG:NH2	2.35	0.59
1:AA:860:A:H2'	1:AA:861:G:O4'	2.01	0.59
12:AL:6:THR:H	12:AL:9:GLN:NE2	1.92	0.59
13:AM:88:ARG:HG2	13:AM:88:ARG:NH1	2.11	0.59
28:B2:35:LEU:O	28:B2:35:LEU:HD22	2.02	0.59
31:B5:3:LYS:HB2	36:BA:747:U:C5	2.37	0.59
36:BA:93:G:H2'	36:BA:94:C:C6	2.37	0.59
36:BA:335:C:H2'	36:BA:336:C:C6	2.37	0.59
36:BA:1748:G:H8	36:BA:1748:G:H5'	1.66	0.59
36:BA:1882:C:H5'	36:BA:1883:G:OP2	2.02	0.59
50:BR:2:ARG:O	50:BR:2:ARG:NH1	2.35	0.59
50:BR:63:ARG:HA	50:BR:80:PHE:CZ	2.37	0.59
53:BU:95:LEU:HD12	54:BV:11:GLN:HE21	1.67	0.59
56:BX:28:PHE:CD1	56:BX:28:PHE:N	2.67	0.59
56:BX:49:VAL:HA	56:BX:87:GLN:HE22	1.67	0.59
57:BY:31:LEU:HD23	57:BY:36:ALA:O	2.01	0.59
1:CA:603:U:H2'	1:CA:604:G:H8	1.67	0.59
1:CA:1429:C:H4'	36:DA:1703:G:O2'	2.02	0.59
2:CB:239:VAL:O	2:CB:240:GLN:HB3	2.00	0.59
12:CL:80:HIS:CD2	24:CY:68:C:H4'	2.36	0.59
12:CL:80:HIS:CD2	24:CY:68:C:HO2'	2.19	0.59
23:CX:11:U:O2	23:CX:11:U:H2'	2.00	0.59
36:DA:336:C:H4'	57:DY:7:VAL:HG21	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:782:A:N1	39:DD:226:MET:HE1	2.16	0.59
36:DA:1223:G:H5'	36:DA:1223:G:H8	1.67	0.59
36:DA:2262:U:H2'	36:DA:2263:C:H6	1.67	0.59
36:DA:2659:G:C2'	36:DA:2660:A:H5"	2.32	0.59
39:DD:134:ARG:HG3	39:DD:187:GLY:O	2.02	0.59
47:DO:20:MET:CE	47:DO:44:LYS:HE3	2.31	0.59
50:DR:11:ASN:O	50:DR:12:ARG:HG3	2.01	0.59
1:AA:585:G:H2'	1:AA:586:C:H6	1.68	0.59
1:AA:948:C:O2'	1:AA:949:A:H5'	2.02	0.59
1:AA:1319:A:H5'	1:AA:1320:C:OP1	2.03	0.59
5:AE:152:ARG:O	8:AH:64:LYS:NZ	2.35	0.59
6:AF:99:ALA:O	6:AF:100:ASN:HB2	2.02	0.59
8:AH:10:LEU:HD22	8:AH:83:ILE:HG12	1.83	0.59
20:AT:26:ASN:O	20:AT:30:LYS:HB2	2.02	0.59
25:AZ:242:ILE:CB	25:AZ:282:ALA:HA	2.32	0.59
25:AZ:290:LEU:HB2	25:AZ:293:VAL:HG21	1.83	0.59
29:B3:56:VAL:CG1	29:B3:57:GLU:N	2.65	0.59
36:BA:142:A:H1'	36:BA:1408:C:O4'	2.01	0.59
36:BA:833:U:H2'	36:BA:834:C:C6	2.37	0.59
36:BA:1042:G:H1	36:BA:1113:U:H3	1.50	0.59
36:BA:1139:G:H5"	46:BN:70:LYS:NZ	2.17	0.59
36:BA:1448:G:H21	36:BA:1528(A):A:H2	1.48	0.59
36:BA:1682:G:H2'	36:BA:1683:C:C6	2.36	0.59
36:BA:2001:A:H4'	36:BA:2689:U:H2'	1.85	0.59
36:BA:2128:C:H42	36:BA:2160:G:H1	1.50	0.59
36:BA:2378:A:N1	51:BS:19:LYS:HE3	2.18	0.59
37:BB:7:G:O5'	51:BS:29:PHE:CE2	2.53	0.59
37:BB:21:G:H2'	37:BB:22:U:H5'	1.83	0.59
41:BF:10:PRO:HD2	41:BF:13:SER:O	2.02	0.59
43:BH:30:LYS:HB2	43:BH:79:VAL:HA	1.83	0.59
43:BH:52:VAL:HG11	43:BH:69:ARG:HB2	1.83	0.59
43:BH:54:ARG:HH11	43:BH:54:ARG:HG2	1.65	0.59
48:BP:85:LEU:HA	48:BP:88:LEU:HB2	1.84	0.59
48:BP:91:PHE:N	48:BP:91:PHE:CD1	2.71	0.59
52:BT:82:LEU:O	52:BT:83:ILE:C	2.41	0.59
1:CA:942:G:H21	9:CI:124:GLN:HE22	1.49	0.59
4:CD:38:TYR:HB2	4:CD:44:GLY:O	2.02	0.59
11:CK:67:ASP:O	11:CK:71:LYS:HG3	2.02	0.59
17:CQ:27:PHE:CE1	17:CQ:36:ILE:HD11	2.36	0.59
22:CW:52:G:H2'	22:CW:52:G:N3	2.15	0.59
27:D1:60:PHE:CE1	27:D1:91:LYS:HG3	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1538:G:H2'	36:DA:1539:G:H8	1.67	0.59
38:DC:120:MET:HA	38:DC:123:VAL:CG1	2.29	0.59
39:DD:27:THR:CG2	39:DD:83:GLU:HG2	2.31	0.59
39:DD:43:ARG:HB2	39:DD:54:ARG:CB	2.32	0.59
39:DD:218:ARG:HG3	39:DD:218:ARG:NH1	2.06	0.59
42:DG:72:ARG:HD3	42:DG:86:MET:HA	1.85	0.59
49:DQ:134:ARG:HA	49:DQ:137:TYR:CD2	2.37	0.59
51:DS:42:ASP:O	51:DS:43:GLU:CB	2.50	0.59
1:AA:275:G:OP1	17:AQ:14:LYS:HD2	2.02	0.59
1:AA:961:U:O2'	1:AA:962:C:O5'	2.21	0.59
1:AA:1239:A:H62	1:AA:1299:A:N6	1.99	0.59
8:AH:4:ASP:CG	8:AH:85:ARG:HE	2.06	0.59
10:AJ:40:LEU:HB2	10:AJ:69:ASN:HB2	1.84	0.59
22:AV:68:C:C2'	22:AV:69:G:C5'	2.75	0.59
22:AW:72:C:C3'	22:AW:73:A:H5"	2.33	0.59
25:AZ:198:LYS:NZ	25:AZ:201:GLU:HG3	2.14	0.59
25:AZ:328:GLY:O	25:AZ:393:ARG:HD3	2.02	0.59
27:B1:53:VAL:O	27:B1:54:ALA:HB3	2.03	0.59
36:BA:197:A:H5'	36:BA:197:A:H8	1.66	0.59
36:BA:1484:G:C3'	36:BA:1485:G:H5"	2.31	0.59
36:BA:1799:G:OP1	39:BD:260:ARG:HD2	2.02	0.59
41:BF:175:THR:OG1	41:BF:176:LEU:N	2.35	0.59
42:BG:31:VAL:HG22	42:BG:31:VAL:O	2.00	0.59
42:BG:85:GLY:C	42:BG:87:PRO:HD3	2.22	0.59
42:BG:97:ASP:H	42:BG:100:TRP:HD1	1.49	0.59
43:BH:12:PRO:HD3	43:BH:48:GLY:HA2	1.84	0.59
43:BH:76:VAL:C	43:BH:78:GLY:H	2.05	0.59
43:BH:98:LEU:HD12	43:BH:102:ALA:O	2.02	0.59
47:BO:104:ARG:CZ	52:BT:33:LYS:HD2	2.32	0.59
49:BQ:27:VAL:H	49:BQ:137:TYR:HD2	1.50	0.59
56:BX:36:LYS:HB3	56:BX:56:THR:CG2	2.32	0.59
1:CA:339:C:OP2	47:DO:97:ARG:NH1	2.35	0.59
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.17	0.59
1:CA:1521:G:H2'	1:CA:1522:U:H6	1.66	0.59
2:CB:141:GLU:O	2:CB:145:LEU:HB2	2.01	0.59
3:CC:147:LYS:HB2	3:CC:203:PHE:CD2	2.37	0.59
4:CD:96:LEU:H	4:CD:96:LEU:HD12	1.67	0.59
20:CT:92:LEU:C	20:CT:94:ALA:H	2.04	0.59
24:CY:68:C:HO2'	24:CY:69:C:H5'	1.67	0.59
25:CZ:341:GLN:NE2	25:CZ:389:ARG:O	2.36	0.59
26:D0:36:ILE:HD11	36:DA:2355:C:C5'	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:38:GLN:O	28:D2:41:ILE:HG12	2.03	0.59
36:DA:786:C:O2'	36:DA:787:U:H5'	2.01	0.59
36:DA:990:A:C6	36:DA:1186:G:H1'	2.37	0.59
36:DA:1436:G:H3'	36:DA:1437:C:H5"	1.83	0.59
36:DA:1970:A:H5"	36:DA:1971:A:OP1	2.02	0.59
36:DA:2307:G:H3'	36:DA:2307:G:N3	2.17	0.59
36:DA:2415:G:H2'	36:DA:2416:C:H6	1.67	0.59
39:DD:76:PRO:HG2	39:DD:98:VAL:HG21	1.84	0.59
48:DP:112:LEU:HD22	48:DP:113:LYS:N	2.18	0.59
49:DQ:14:ARG:HG2	49:DQ:41:TRP:HH2	1.67	0.59
57:DY:90:LEU:O	57:DY:91:GLU:HG2	2.03	0.59
1:AA:625:G:H2'	1:AA:626:U:C6	2.36	0.59
1:AA:673:G:H2'	1:AA:674:G:C8	2.38	0.59
1:AA:1442(B):A:H3'	1:AA:1442(B):A:P	2.42	0.59
11:AK:57:THR:HG23	11:AK:60:ALA:HB2	1.84	0.59
22:AV:4:C:C3'	22:AV:5:G:H5"	2.33	0.59
24:AY:51:G:H1	24:AY:63:C:H42	1.48	0.59
25:AZ:299:GLU:N	25:AZ:302:GLN:OE1	2.31	0.59
28:B2:35:LEU:HA	28:B2:39:ALA:HB3	1.83	0.59
31:B5:25:LEU:HD12	55:BW:19:LEU:O	2.02	0.59
36:BA:2307:G:H21	36:BA:2308:G:C5'	1.94	0.59
36:BA:2579:C:O2'	40:BE:131:ALA:CB	2.49	0.59
37:BB:16:G:HO2'	37:BB:17:C:H6	1.49	0.59
39:BD:27:THR:CG2	39:BD:83:GLU:HG2	2.31	0.59
39:BD:35:LYS:HB2	39:BD:104:TYR:HE2	1.68	0.59
41:BF:53:THR:HG23	41:BF:55:GLY:H	1.67	0.59
42:BG:73:ALA:H	42:BG:87:PRO:CD	2.16	0.59
43:BH:83:TYR:HB3	43:BH:135:GLY:H	1.67	0.59
48:BP:41:ARG:CD	48:BP:45:LEU:HD23	2.27	0.59
50:BR:60:LEU:O	50:BR:63:ARG:HB3	2.03	0.59
58:BZ:96:VAL:HG22	58:BZ:97:GLU:N	2.17	0.59
1:CA:828:A:H2'	1:CA:829:G:O4'	2.02	0.59
4:CD:15:GLU:HG2	4:CD:63:LYS:HG3	1.85	0.59
4:CD:58:LEU:HD23	4:CD:62:GLN:HG2	1.85	0.59
7:CG:15:ASP:HB3	7:CG:20:ASP:N	2.18	0.59
8:CH:53:VAL:HG23	8:CH:58:TYR:HB2	1.84	0.59
9:CI:99:LEU:HD22	9:CI:99:LEU:N	2.18	0.59
10:CJ:61:GLU:CG	14:CN:58:LYS:HE2	2.29	0.59
25:CZ:5:PHE:HB3	25:CZ:276:THR:O	2.02	0.59
25:CZ:84:GLY:O	25:CZ:85:HIS:HB3	2.02	0.59
25:CZ:222:LEU:HG	25:CZ:303:VAL:HG11	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:25:VAL:HG22	28:D2:60:LEU:HB3	1.84	0.59
34:D8:36:LYS:O	34:D8:37:SER:O	2.20	0.59
36:DA:64:A:C5	56:DX:66:LEU:HD12	2.37	0.59
36:DA:141:A:C8	36:DA:1408:C:O2'	2.54	0.59
36:DA:527:C:N4	36:DA:2779:U:H5"	2.17	0.59
36:DA:848:G:O6	36:DA:928:G:H2'	2.02	0.59
36:DA:2008:C:H2'	36:DA:2009:G:H8	1.68	0.59
36:DA:2360:A:C2	36:DA:2361:A:H1'	2.35	0.59
37:DB:56:G:H5'	42:DG:27:ASN:HD21	1.66	0.59
42:DG:16:ARG:O	42:DG:20:ILE:HG13	2.02	0.59
42:DG:96:ARG:H	42:DG:99:MET:CE	2.15	0.59
43:DH:76:VAL:C	43:DH:78:GLY:H	2.05	0.59
46:DN:58:ASP:C	46:DN:60:ILE:N	2.55	0.59
49:DQ:3:MET:HB2	49:DQ:4:PRO:HD2	1.82	0.59
54:DV:55:ALA:HA	54:DV:101:GLY:OXT	2.01	0.59
55:DW:37:ARG:HG3	55:DW:37:ARG:NH1	2.18	0.59
57:DY:75:ILE:HG23	57:DY:76:CYS:N	2.18	0.59
1:AA:66:G:N2	1:AA:172:A:H2	1.99	0.59
1:AA:187:C:H2'	1:AA:188:C:C6	2.37	0.59
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.84	0.59
1:AA:1321:C:H5"	1:AA:1322:C:C5'	2.31	0.59
4:AD:15:GLU:OE2	4:AD:66:ARG:HD2	2.03	0.59
10:AJ:32:ALA:HB2	10:AJ:76:ASN:O	2.03	0.59
11:AK:81:ASP:OD1	11:AK:106:LYS:HB2	2.02	0.59
13:AM:34:LEU:HD13	13:AM:41:PRO:HA	1.84	0.59
16:AP:22:THR:HG22	16:AP:32:TYR:CB	2.33	0.59
36:BA:323:G:H2'	41:BF:169:ASN:ND2	2.17	0.59
36:BA:2121:G:N1	36:BA:2176:A:C2	2.70	0.59
36:BA:2127:G:H4'	38:BC:37:PHE:CD1	2.37	0.59
40:BE:69:LYS:HE3	40:BE:88:GLY:O	2.03	0.59
43:BH:12:PRO:HB2	43:BH:15:VAL:CG2	2.32	0.59
58:BZ:109:ALA:C	58:BZ:111:VAL:H	2.05	0.59
1:CA:1367:C:H5'	10:CJ:60:ARG:NH2	2.18	0.59
2:CB:29:ALA:HA	2:CB:32:ILE:CG2	2.32	0.59
15:CO:39:LEU:HD13	15:CO:56:LEU:CB	2.26	0.59
16:CP:22:THR:HG22	16:CP:32:TYR:HB2	1.84	0.59
16:CP:25:ARG:O	16:CP:26:ARG:O	2.21	0.59
20:CT:32:ALA:O	20:CT:36:LEU:HB2	2.02	0.59
22:CW:48:C:H2'	22:CW:59:U:H1'	1.83	0.59
24:CY:76:A:OP2	25:CZ:274:ARG:HB3	2.02	0.59
25:CZ:231:ILE:HD12	25:CZ:231:ILE:N	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:58:ALA:HB1	36:DA:76:C:H4'	1.84	0.59
36:DA:382:G:H1	36:DA:392:C:H42	1.50	0.59
36:DA:578:A:H5'	36:DA:1254:A:OP1	2.01	0.59
36:DA:845:G:HO2'	36:DA:846:C:H5	1.48	0.59
36:DA:1013:C:H2'	36:DA:1014:U:C6	2.37	0.59
36:DA:1301:A:H2'	36:DA:1302:A:H3'	1.85	0.59
36:DA:1436:G:C2'	36:DA:1437:C:H5"	2.33	0.59
36:DA:1453:U:H5'	50:DR:63:ARG:NE	2.18	0.59
36:DA:1757:U:O4	36:DA:1762:A:C2	2.56	0.59
36:DA:1810:A:H2'	36:DA:1811:G:O4'	2.02	0.59
41:DF:192:LEU:HD23	41:DF:192:LEU:C	2.22	0.59
43:DH:156:ALA:C	43:DH:158:HIS:H	2.04	0.59
48:DP:47:ASP:HB3	48:DP:48:PRO:C	2.23	0.59
48:DP:91:PHE:N	48:DP:91:PHE:CD1	2.70	0.59
51:DS:92:TYR:CD1	51:DS:93:LYS:N	2.70	0.59
3:AC:83:ARG:C	3:AC:85:ARG:H	2.06	0.59
4:AD:98:GLU:HG2	4:AD:189:PRO:HG3	1.84	0.59
4:AD:141:ARG:HB3	4:AD:142:PRO:CD	2.32	0.59
14:AN:57:ARG:HG3	14:AN:58:LYS:H	1.67	0.59
20:AT:48:LYS:O	20:AT:52:ALA:HB2	2.03	0.59
22:AV:68:C:H2'	22:AV:69:G:H5'	1.83	0.59
25:AZ:143:ASP:HB3	25:AZ:146:LEU:CB	2.32	0.59
36:BA:272(C):G:H1	36:BA:365:C:H42	1.51	0.59
36:BA:512:G:O2'	36:BA:513:A:H8	1.86	0.59
36:BA:877:U:O2'	36:BA:878:A:H5"	2.02	0.59
36:BA:1222:C:H2'	36:BA:1223:G:H5'	1.84	0.59
36:BA:2036:C:H5'	36:BA:2036:C:C6	2.31	0.59
36:BA:2579:C:O2'	36:BA:2580:U:H5'	2.02	0.59
39:BD:35:LYS:O	39:BD:36:PRO:C	2.41	0.59
39:BD:134:ARG:HG3	39:BD:187:GLY:C	2.22	0.59
40:BE:203:LYS:O	40:BE:203:LYS:HD2	2.02	0.59
41:BF:125:LEU:HA	41:BF:194:MET:O	2.02	0.59
42:BG:52:ILE:CG1	42:BG:53:LEU:H	1.89	0.59
47:BO:98:VAL:O	47:BO:98:VAL:HG13	2.03	0.59
51:BS:30:ARG:HH22	51:BS:62:LYS:HD3	1.67	0.59
57:BY:28:LYS:CB	57:BY:37:VAL:HB	2.33	0.59
1:CA:383:A:H2'	1:CA:384:G:H5'	1.84	0.59
1:CA:1003:G:H2'	1:CA:1004:A:C4'	2.29	0.59
2:CB:30:ARG:HB2	2:CB:30:ARG:HH11	1.67	0.59
2:CB:185:ILE:HG12	2:CB:199:TYR:HB2	1.84	0.59
2:CB:212:GLN:HE22	2:CB:216:SER:HB2	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:8:VAL:C	4:CD:10:ARG:H	2.05	0.59
8:CH:134:ILE:O	8:CH:135:CYS:HB3	2.03	0.59
17:CQ:92:ARG:O	17:CQ:95:TYR:HB2	2.03	0.59
19:CS:47:HIS:O	19:CS:62:ILE:HG22	2.02	0.59
23:CX:20:U:H2'	23:CX:21:C:C6	2.38	0.59
24:CY:2:G:H4'	25:CZ:88:TYR:CE1	2.38	0.59
25:CZ:356:PRO:HD3	25:CZ:370:PHE:HB3	1.84	0.59
35:D9:19:ARG:O	35:D9:20:HIS:HB2	2.03	0.59
36:DA:310:A:OP1	57:DY:17:SER:O	2.21	0.59
36:DA:631:A:H5"	48:DP:65:ARG:HD3	1.83	0.59
36:DA:1771:C:C1'	36:DA:1786:A:C8	2.86	0.59
36:DA:1952:A:C6	47:DO:22:ILE:HD12	2.38	0.59
36:DA:2203:U:O2'	39:DD:151:LYS:HG3	2.02	0.59
39:DD:85:ASP:OD2	39:DD:88:ARG:HD2	2.03	0.59
41:DF:101:LEU:HD12	41:DF:102:PRO:CD	2.27	0.59
47:DO:64:ARG:HG2	47:DO:83:ALA:HB3	1.84	0.59
1:AA:368:U:C4	25:AZ:234:ARG:HD3	2.36	0.59
1:AA:437:U:H3	1:AA:495:A:H62	1.50	0.59
1:AA:1503:A:H1'	23:AX:15:A:N6	2.18	0.59
7:AG:152:ALA:O	7:AG:155:ARG:HB2	2.02	0.59
13:AM:5:ALA:CB	13:AM:66:LEU:HD23	2.32	0.59
13:AM:6:GLY:O	13:AM:8:GLU:N	2.31	0.59
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.85	0.59
16:AP:52:ASP:OD1	16:AP:53:VAL:N	2.34	0.59
25:AZ:198:LYS:NZ	25:AZ:198:LYS:O	2.34	0.59
32:B6:9:LEU:HD22	32:B6:10:LEU:N	2.18	0.59
36:BA:2760:C:H2'	36:BA:2761:G:H5"	1.84	0.59
43:BH:44:VAL:O	43:BH:46:GLU:N	2.35	0.59
52:BT:90:GLN:C	52:BT:92:GLY:N	2.53	0.59
54:BV:35:LEU:C	54:BV:37:VAL:H	2.05	0.59
1:CA:33:A:OP2	1:CA:398:C:H5'	2.02	0.59
1:CA:545:C:H5"	4:CD:72:GLU:HG2	1.83	0.59
2:CB:42:ILE:CD1	2:CB:202:PRO:HB2	2.32	0.59
2:CB:52:GLU:O	2:CB:56:ARG:HG3	2.03	0.59
6:CF:99:ALA:O	6:CF:100:ASN:HB2	2.01	0.59
11:CK:80:VAL:HG22	11:CK:103:LEU:CD1	2.33	0.59
18:CR:84:LYS:HD3	18:CR:84:LYS:N	2.17	0.59
22:CW:39:U:H5'	22:CW:39:U:O2	2.02	0.59
24:CY:41:C:H6	24:CY:41:C:C5'	2.14	0.59
25:CZ:20:VAL:CG2	36:DA:2661:G:H5"	2.32	0.59
25:CZ:242:ILE:HB	25:CZ:282:ALA:HA	1.82	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:313:HIS:HB2	25:CZ:380:LEU:HD12	1.84	0.59
32:D6:30:THR:CG2	32:D6:31:PRO:HD2	2.33	0.59
36:DA:196:A:OP2	48:DP:51:PHE:HE2	1.85	0.59
36:DA:335:C:H2'	36:DA:336:C:H6	1.67	0.59
36:DA:1709:U:H2'	36:DA:1710:C:C6	2.38	0.59
36:DA:1720:U:C3'	36:DA:1721:G:H5"	2.32	0.59
36:DA:2771:C:H2'	36:DA:2772:C:H6	1.68	0.59
36:DA:2840:C:H5"	50:DR:53:HIS:CD2	2.37	0.59
38:DC:137:LEU:HD13	38:DC:138:PRO:O	2.03	0.59
46:DN:15:LEU:HD12	46:DN:136:GLU:HG2	1.82	0.59
54:DV:49:THR:HB	54:DV:50:PRO:CD	2.33	0.59
56:DX:43:VAL:HA	56:DX:46:ALA:HB3	1.85	0.59
1:AA:963:G:H21	10:AJ:55:LYS:CD	2.15	0.59
3:AC:188:LEU:HD13	3:AC:195:VAL:CG1	2.33	0.59
6:AF:43:LEU:HD22	6:AF:43:LEU:H	1.66	0.59
7:AG:18:TYR:HB3	7:AG:59:LEU:HD13	1.85	0.59
22:AV:61:C:H5'	22:AV:62:C:OP2	2.02	0.59
25:AZ:191:GLY:H	25:AZ:197:ASP:CG	2.06	0.59
25:AZ:234:ARG:O	25:AZ:289:LEU:HD11	2.03	0.59
28:B2:17:SER:O	28:B2:19:VAL:N	2.36	0.59
28:B2:31:GLU:HA	28:B2:34:GLU:OE1	2.03	0.59
33:B7:12:ARG:NH2	36:BA:465:G:OP1	2.36	0.59
36:BA:308:G:O2'	57:BY:19:LYS:HE3	2.02	0.59
36:BA:1434:A:O2'	36:BA:1435:G:H5'	2.02	0.59
36:BA:1645:G:OP1	36:BA:1646:C:H5'	2.03	0.59
36:BA:2019:A:C4'	53:BU:34:LYS:HD2	2.32	0.59
36:BA:2866:U:H2'	36:BA:2866:U:O2	2.03	0.59
41:BF:150:GLY:HA2	41:BF:172:TRP:CE3	2.37	0.59
48:BP:23:PRO:HB2	48:BP:33:ARG:CD	2.33	0.59
48:BP:23:PRO:C	48:BP:33:ARG:CZ	2.71	0.59
50:BR:59:ASP:H	50:BR:62:ALA:HB3	1.67	0.59
51:BS:106:ARG:HH11	51:BS:106:ARG:CG	2.16	0.59
1:CA:189(K):U:H2'	1:CA:189(L):G:H8	1.68	0.59
1:CA:522:C:H41	12:CL:53:ARG:HH22	1.49	0.59
1:CA:992:U:H2'	1:CA:992:U:O2	2.02	0.59
1:CA:1030(D):A:H62	1:CA:1031:G:H21	1.50	0.59
1:CA:1225:A:H2'	1:CA:1226:C:C5	2.37	0.59
10:CJ:55:LYS:N	10:CJ:55:LYS:CE	2.59	0.59
11:CK:127:LYS:O	11:CK:129:SER:N	2.34	0.59
34:D8:23:VAL:HG12	34:D8:46:ARG:HB3	1.83	0.59
36:DA:691:C:O2'	36:DA:692:C:H5'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1024:G:H3'	36:DA:1025:G:C5'	2.31	0.59
36:DA:1252:G:N3	53:DU:33:ARG:HD2	2.17	0.59
36:DA:2185:C:C2'	36:DA:2186:G:C5'	2.80	0.59
36:DA:2222:G:O2'	36:DA:2223:G:H5'	2.03	0.59
40:DE:111:ARG:HD3	40:DE:160:TYR:CD2	2.38	0.59
42:DG:51:ARG:HH11	42:DG:53:LEU:CD1	2.03	0.59
46:DN:4:TYR:N	46:DN:4:TYR:CD1	2.70	0.59
51:DS:51:ALA:CB	51:DS:73:LEU:HB2	2.33	0.59
57:DY:13:VAL:HG21	57:DY:72:VAL:HB	1.84	0.59
1:AA:1129:C:HO2'	1:AA:1131:G:H8	1.51	0.59
1:AA:1316:G:H4'	14:AN:18:VAL:CG1	2.32	0.59
2:AB:15:VAL:H	2:AB:16:HIS:HD1	1.51	0.59
13:AM:3:ARG:NH1	42:BG:113:ARG:HD3	2.17	0.59
14:AN:24:CYS:SG	14:AN:39:LEU:HA	2.42	0.59
16:AP:1:MET:HG3	16:AP:65:GLN:HG2	1.83	0.59
18:AR:85:LEU:HD12	18:AR:86:VAL:H	1.68	0.59
22:AV:76:A:H3'	36:BA:2585:U:H3	1.68	0.59
25:AZ:27:LEU:O	25:AZ:31:LEU:HG	2.02	0.59
25:AZ:226:GLU:O	25:AZ:300:ARG:CD	2.50	0.59
36:BA:765:G:H2'	36:BA:766:C:H6	1.68	0.59
36:BA:2115:G:C2	36:BA:2117:A:N7	2.71	0.59
36:BA:2133:G:H4'	36:BA:2133:G:OP1	2.02	0.59
36:BA:2206:G:H21	36:BA:2207:G:C5'	2.16	0.59
38:BC:26:ALA:O	38:BC:29:VAL:HG22	2.03	0.59
41:BF:29:ASN:ND2	41:BF:32:LEU:H	2.00	0.59
42:BG:30:GLU:CD	42:BG:32:PRO:HD3	2.23	0.59
42:BG:60:LEU:HD23	42:BG:63:ILE:HD11	1.85	0.59
46:BN:107:LEU:HB3	46:BN:108:PRO:HD2	1.84	0.59
48:BP:96:THR:HG22	48:BP:126:VAL:HG21	1.84	0.59
48:BP:122:PRO:HA	48:BP:141:ALA:O	2.03	0.59
55:BW:37:ARG:HG3	55:BW:37:ARG:HH11	1.68	0.59
58:BZ:94:GLU:HB3	58:BZ:95:PRO:HD2	1.84	0.59
58:BZ:100:VAL:CG1	58:BZ:137:ILE:HG12	2.32	0.59
1:CA:22:G:H2'	1:CA:23:C:C6	2.37	0.59
1:CA:471:G:H21	16:CP:82:GLN:NE2	2.00	0.59
1:CA:725:G:O2'	1:CA:726:C:H5'	2.03	0.59
1:CA:955:U:H1'	1:CA:1227:A:N6	2.18	0.59
1:CA:1137:C:H4'	1:CA:1138:G:N2	2.18	0.59
6:CF:37:VAL:HG12	6:CF:38:GLU:O	2.03	0.59
24:CY:2:G:H4'	25:CZ:88:TYR:CD1	2.38	0.59
26:D0:36:ILE:CD1	26:D0:36:ILE:O	2.51	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D1:86:SER:HA	27:D1:89:GLU:CD	2.23	0.59
28:D2:54:LYS:HE2	36:DA:73:A:OP2	2.02	0.59
36:DA:2111:C:H1'	36:DA:2118:U:O4'	2.02	0.59
36:DA:2283:C:H2'	36:DA:2284:C:O4'	2.02	0.59
40:DE:28:ALA:O	40:DE:29:GLY:C	2.42	0.59
40:DE:79:ARG:HH11	40:DE:79:ARG:HG2	1.68	0.59
48:DP:57:THR:OG1	48:DP:59:LEU:HB2	2.03	0.59
49:DQ:134:ARG:CZ	58:DZ:122:ARG:HH21	2.16	0.59
50:DR:111:LEU:N	50:DR:111:LEU:HD12	2.18	0.59
51:DS:97:ARG:NH2	51:DS:98:VAL:HA	2.18	0.59
53:DU:61:TRP:CH2	53:DU:94:ASN:HB2	2.38	0.59
55:DW:5:ALA:CB	55:DW:54:ALA:HB2	2.31	0.59
58:DZ:29:TYR:CA	58:DZ:34:ASN:HB3	2.33	0.59
1:AA:390:C:H4'	16:AP:28:ARG:HH21	1.68	0.59
4:AD:18:LYS:HE3	4:AD:31:CYS:HB2	1.80	0.59
14:AN:31:ARG:HG3	14:AN:31:ARG:HH11	1.68	0.59
22:AV:3:C:H5'	22:AV:3:C:H6	1.68	0.59
25:AZ:258:LEU:HD13	25:AZ:299:GLU:OE2	2.03	0.59
25:AZ:356:PRO:HD3	25:AZ:370:PHE:HB3	1.85	0.59
28:B2:20:GLU:O	28:B2:21:LEU:C	2.42	0.59
28:B2:50:ILE:O	28:B2:53:LEU:HB2	2.03	0.59
34:B8:17:THR:OG1	34:B8:18:ALA:N	2.35	0.59
34:B8:49:VAL:HB	34:B8:53:PRO:HD3	1.83	0.59
36:BA:86:C:OP1	57:BY:32:PRO:HD2	2.03	0.59
36:BA:118:A:OP2	36:BA:119:A:H5"	2.02	0.59
36:BA:176:G:O2'	36:BA:177:G:H5'	2.03	0.59
36:BA:519:U:H2'	36:BA:520:G:H8	1.68	0.59
36:BA:1358:G:O2'	36:BA:1359:A:H5"	2.02	0.59
36:BA:1805:U:O2	39:BD:50:THR:HB	2.03	0.59
36:BA:1902:C:O2'	39:BD:244:ARG:HB2	2.02	0.59
36:BA:2023:G:H5'	36:BA:2617:C:H4'	1.85	0.59
36:BA:2025:C:H2'	36:BA:2026:C:C6	2.38	0.59
39:BD:238:GLY:O	39:BD:239:ARG:O	2.21	0.59
39:BD:259:THR:HG22	39:BD:260:ARG:N	2.18	0.59
41:BF:132:VAL:HG13	41:BF:133:ASN:N	2.18	0.59
42:BG:53:LEU:C	42:BG:55:LYS:N	2.56	0.59
46:BN:96:GLU:O	46:BN:100:GLU:HG3	2.03	0.59
1:CA:573:A:H5'	1:CA:573:A:C8	2.33	0.59
1:CA:755:G:OP2	15:CO:65:ARG:HD2	2.03	0.59
1:CA:955:U:O2'	1:CA:956:U:H5'	2.03	0.59
1:CA:1504:G:OP1	1:CA:1507:A:H4'	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:9:LYS:HB2	5:CE:112:LEU:HD11	1.83	0.59
7:CG:66:VAL:O	7:CG:69:VAL:HG12	2.03	0.59
13:CM:25:ILE:CD1	13:CM:60:VAL:HG11	2.29	0.59
13:CM:66:LEU:O	13:CM:70:LEU:HB2	2.02	0.59
17:CQ:56:VAL:HG23	17:CQ:81:ARG:HG3	1.84	0.59
25:CZ:194:GLU:O	25:CZ:198:LYS:HB2	2.03	0.59
25:CZ:265:THR:CG2	25:CZ:266:VAL:N	2.66	0.59
25:CZ:340:PRO:HD2	25:CZ:351:GLY:O	2.03	0.59
36:DA:1523:U:H2'	36:DA:1524:G:H8	1.67	0.59
36:DA:1831:G:H2'	36:DA:1832:C:C6	2.38	0.59
39:DD:130:ALA:C	39:DD:131:LEU:HD12	2.23	0.59
40:DE:61:ARG:HB3	40:DE:62:PRO:CD	2.30	0.59
51:DS:89:ARG:CG	51:DS:92:TYR:HB3	2.33	0.59
1:AA:404:U:C5'	4:AD:122:ARG:HD3	2.32	0.58
1:AA:878:G:C5'	8:AH:89:PRO:HG2	2.33	0.58
1:AA:973:G:C1'	10:AJ:55:LYS:NZ	2.51	0.58
1:AA:1229:A:OP2	13:AM:114:ARG:NH1	2.35	0.58
1:AA:1463:C:H5'	52:BT:115:ARG:HH12	1.67	0.58
3:AC:19:GLU:O	3:AC:56:ASP:HA	2.03	0.58
5:AE:82:VAL:HG21	5:AE:138:ALA:CA	2.33	0.58
15:AO:36:ILE:HG23	15:AO:56:LEU:HD11	1.85	0.58
20:AT:92:LEU:O	20:AT:94:ALA:N	2.35	0.58
26:B0:42:GLY:HA3	36:BA:2331:G:O4'	2.03	0.58
36:BA:202:U:O2'	36:BA:203:C:H5'	2.02	0.58
36:BA:645:C:H5'	36:BA:646:A:OP1	2.02	0.58
36:BA:675:A:OP1	41:BF:63:LYS:HE2	2.03	0.58
36:BA:882:G:H2'	36:BA:883:G:C8	2.37	0.58
36:BA:886:C:H2'	36:BA:887:A:H4'	1.84	0.58
36:BA:950:G:H2'	36:BA:951:C:C6	2.38	0.58
36:BA:2446:G:C2'	36:BA:2447:G:H5"	2.31	0.58
39:BD:61:LEU:O	39:BD:63:ARG:NH1	2.35	0.58
41:BF:148:LEU:HD23	41:BF:191:ARG:HH11	1.67	0.58
49:BQ:18:LYS:HB3	49:BQ:98:LYS:HZ3	1.67	0.58
50:BR:45:ARG:HG3	50:BR:46:GLY:H	1.67	0.58
54:BV:47:VAL:O	54:BV:49:THR:O	2.20	0.58
54:BV:52:VAL:CG1	54:BV:55:ALA:HB3	2.33	0.58
58:BZ:5:LEU:HD11	58:BZ:44:PHE:HA	1.85	0.58
1:CA:8:A:N6	4:CD:205:GLU:O	2.36	0.58
1:CA:179:A:H2'	1:CA:180:U:H6	1.67	0.58
1:CA:1017:G:H2'	1:CA:1018:C:C6	2.38	0.58
4:CD:30:LYS:C	4:CD:32:ALA:N	2.53	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:135:THR:O	5:CE:138:ALA:HB3	2.03	0.58
8:CH:114:THR:HG22	8:CH:130:GLY:C	2.23	0.58
10:CJ:57:LYS:NZ	10:CJ:60:ARG:NH2	2.50	0.58
25:CZ:226:GLU:O	25:CZ:300:ARG:CD	2.51	0.58
27:D1:62:VAL:CG1	27:D1:67:ILE:HG23	2.33	0.58
30:D4:9:LEU:CD1	30:D4:10:VAL:H	2.09	0.58
36:DA:64:A:H2'	36:DA:65:C:O4'	2.03	0.58
36:DA:272(H):C:C2'	36:DA:272(I):U:H5"	2.33	0.58
36:DA:943:U:OP2	48:DP:38:GLN:CD	2.41	0.58
36:DA:1210:A:H5'	36:DA:1210:A:C8	2.37	0.58
36:DA:1286:A:H2'	36:DA:1288:U:OP2	2.03	0.58
36:DA:1885:A:H5'	36:DA:1885:A:H8	1.67	0.58
36:DA:2134:A:H61	36:DA:2157:G:C2'	2.16	0.58
36:DA:2538:C:H2'	36:DA:2539:C:H6	1.68	0.58
39:DD:35:LYS:HB3	39:DD:36:PRO:CD	2.33	0.58
39:DD:72:LYS:HZ2	39:DD:101:GLU:HB3	1.68	0.58
41:DF:161:GLU:HG2	41:DF:164:ARG:NH2	2.17	0.58
42:DG:36:LYS:HD3	42:DG:160:VAL:HG21	1.85	0.58
46:DN:1:MET:C	46:DN:2:LYS:HD2	2.24	0.58
46:DN:9:VAL:HG12	46:DN:10:GLU:N	2.18	0.58
46:DN:32:THR:C	46:DN:34:LEU:H	2.07	0.58
48:DP:23:PRO:CB	48:DP:33:ARG:HG3	2.31	0.58
50:DR:72:ASP:O	50:DR:76:VAL:HG23	2.03	0.58
52:DT:33:LYS:HZ3	52:DT:74:ARG:HH22	1.51	0.58
55:DW:11:ARG:NH2	55:DW:98:LYS:HB3	2.18	0.58
58:DZ:14:LYS:O	58:DZ:18:LEU:HD13	2.03	0.58
1:AA:17:U:H2'	1:AA:18:C:C6	2.38	0.58
1:AA:105:G:H2'	1:AA:106:C:C6	2.38	0.58
1:AA:369:C:OP2	1:AA:388:G:N2	2.36	0.58
9:AI:99:LEU:O	9:AI:101:PHE:N	2.35	0.58
10:AJ:32:ALA:CB	10:AJ:76:ASN:O	2.52	0.58
18:AR:36:ASN:HB2	18:AR:38:GLU:HG2	1.85	0.58
22:AV:59:U:O2'	22:AV:60:U:H6	1.84	0.58
22:AW:67:C:H2'	22:AW:68:C:C6	2.38	0.58
25:AZ:194:GLU:O	25:AZ:198:LYS:HB2	2.02	0.58
30:B4:7:PRO:O	30:B4:8:LYS:CB	2.50	0.58
31:B5:51:TYR:H	31:B5:56:LYS:HE3	1.68	0.58
33:B7:5:TRP:NE1	33:B7:7:PRO:HB3	2.17	0.58
34:B8:52:LYS:H	34:B8:53:PRO:HD2	1.68	0.58
36:BA:231:C:O2'	36:BA:232:G:H5'	2.03	0.58
36:BA:1598:C:H5'	56:BX:36:LYS:HD3	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2389:G:H5”	36:BA:2390:U:H5’	1.85	0.58
36:BA:2712(A):A:H5”	36:BA:2713:A:OP2	2.02	0.58
42:BG:150:ASP:O	42:BG:151:ALA:HB2	2.02	0.58
46:BN:15:LEU:HD12	46:BN:136:GLU:HG2	1.84	0.58
48:BP:147:LEU:O	48:BP:148:LEU:HB2	2.03	0.58
49:BQ:79:LEU:HD23	49:BQ:80:GLU:H	1.68	0.58
1:CA:50:A:N6	1:CA:361:G:H4’	2.17	0.58
1:CA:1162:C:H2’	1:CA:1163:C:H6	1.67	0.58
1:CA:1352:C:H2’	1:CA:1353:G:H8	1.59	0.58
24:CY:64:U:O2’	25:CZ:390:GLU:HA	2.03	0.58
24:CY:76:A:C2	25:CZ:271:GLU:N	2.71	0.58
32:D6:12:GLU:HA	32:D6:23:THR:CG2	2.28	0.58
36:DA:363(F):A:O2’	36:DA:364:C:H5	1.86	0.58
36:DA:1386:C:H2’	36:DA:1387:C:H6	1.68	0.58
36:DA:1516:C:H2’	36:DA:1517:G:H5’	1.84	0.58
36:DA:1991:U:H2’	36:DA:1992:G:H5”	1.86	0.58
36:DA:2199:A:H3’	36:DA:2200:C:C6	2.37	0.58
37:DB:7:G:C3’	37:DB:8:U:H5”	2.33	0.58
37:DB:96:U:H2’	37:DB:97:G:C8	2.37	0.58
37:DB:114:C:H4’	51:DS:46:VAL:HG13	1.85	0.58
38:DC:100:ILE:HG22	38:DC:100:ILE:O	2.03	0.58
40:DE:171:GLU:OE1	40:DE:185:LYS:HE3	2.03	0.58
41:DF:126:VAL:HG11	41:DF:142:TRP:HH2	1.67	0.58
42:DG:52:ILE:C	42:DG:54:GLU:H	2.07	0.58
46:DN:3:THR:C	46:DN:4:TYR:CG	2.76	0.58
51:DS:13:ARG:CG	51:DS:14:VAL:N	2.65	0.58
52:DT:33:LYS:HZ3	52:DT:74:ARG:NH2	2.01	0.58
52:DT:82:LEU:O	52:DT:84:GLN:N	2.37	0.58
53:DU:92:ARG:CD	53:DU:94:ASN:HB3	2.24	0.58
1:AA:296:U:O2’	1:AA:297:G:H5’	2.03	0.58
1:AA:519:C:H2’	1:AA:520:A:O4’	2.02	0.58
1:AA:1327:C:O2’	1:AA:1328:C:H5’	2.04	0.58
3:AC:38:ARG:NH1	3:AC:38:ARG:HB3	2.19	0.58
25:AZ:9:LYS:HE3	25:AZ:74:LYS:C	2.23	0.58
25:AZ:20:VAL:CG1	25:AZ:115:GLN:HE22	2.15	0.58
27:B1:94:LEU:HD12	27:B1:94:LEU:N	2.18	0.58
30:B4:12:ALA:HB1	30:B4:29:PRO:O	2.04	0.58
36:BA:181:A:H5’	36:BA:181:A:C8	2.34	0.58
36:BA:1338:G:H2’	36:BA:1338:G:N3	2.18	0.58
38:BC:175:VAL:CG1	38:BC:188:ASN:HB3	2.33	0.58
38:BC:215:THR:OG1	38:BC:216:THR:N	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:43:ARG:HD3	39:BD:44:ASN:ND2	2.19	0.58
43:BH:163:TYR:N	43:BH:163:TYR:HD1	2.01	0.58
52:BT:80:SER:CB	52:BT:81:PRO:HD3	2.33	0.58
1:CA:355:C:H4'	1:CA:388:G:O2'	2.04	0.58
1:CA:1354:C:H2'	1:CA:1355:G:C8	2.32	0.58
2:CB:60:ASP:O	2:CB:64:ARG:HG2	2.03	0.58
3:CC:40:ARG:HG3	3:CC:40:ARG:NH1	2.18	0.58
7:CG:153:HIS:CE1	11:CK:58:PRO:HD2	2.39	0.58
19:CS:58:VAL:O	19:CS:58:VAL:HG13	2.03	0.58
25:CZ:231:ILE:HD13	25:CZ:237:VAL:HB	1.86	0.58
28:D2:10:LEU:O	28:D2:14:ARG:HB2	2.03	0.58
36:DA:1328:G:H2'	36:DA:1330:C:C5	2.38	0.58
36:DA:1843:C:H5'	39:DD:253:GLN:NE2	2.18	0.58
40:DE:167:VAL:HG22	40:DE:170:LEU:HD11	1.85	0.58
42:DG:111:LEU:N	42:DG:112:PRO:HD2	2.19	0.58
48:DP:83:VAL:HG11	48:DP:112:LEU:HD21	1.84	0.58
50:DR:117:VAL:HG22	50:DR:118:GLU:N	2.18	0.58
51:DS:67:ARG:HH21	51:DS:100:ALA:H	1.49	0.58
57:DY:43:ASN:CB	57:DY:64:GLU:HA	2.32	0.58
57:DY:54:LYS:O	57:DY:55:TYR:HB2	2.03	0.58
57:DY:75:ILE:O	57:DY:76:CYS:HB2	2.02	0.58
58:DZ:125:LEU:CD2	58:DZ:164:ALA:HB3	2.26	0.58
1:AA:39:G:O2'	1:AA:40:C:H5'	2.03	0.58
1:AA:254:G:H21	17:AQ:16:GLN:NE2	2.01	0.58
1:AA:1116:C:H2'	1:AA:1117:G:C5'	2.32	0.58
3:AC:7:PRO:HG2	3:AC:184:TYR:HB2	1.85	0.58
8:AH:125:ARG:HG3	8:AH:125:ARG:HH11	1.67	0.58
9:AI:26:VAL:HG13	9:AI:61:ALA:HB3	1.85	0.58
18:AR:55:ARG:HG3	18:AR:55:ARG:HH11	1.66	0.58
22:AW:58:A:H2'	22:AW:60:U:OP2	2.03	0.58
25:AZ:258:LEU:HD12	25:AZ:299:GLU:CG	2.33	0.58
25:AZ:331:HIS:CD2	25:AZ:331:HIS:H	2.21	0.58
31:B5:36:CYS:O	31:B5:38:ALA:N	2.36	0.58
34:B8:8:LYS:HE3	36:BA:245:G:O6	2.03	0.58
36:BA:500:G:N2	36:BA:502:A:H3'	2.18	0.58
36:BA:765:G:H2'	36:BA:766:C:C6	2.38	0.58
36:BA:796:C:H2'	36:BA:797:C:C6	2.39	0.58
36:BA:1349:A:N6	36:BA:1598:C:H42	2.00	0.58
36:BA:1523:U:H2'	36:BA:1524:G:C8	2.33	0.58
36:BA:1654:A:OP1	50:BR:3:HIS:N	2.36	0.58
40:BE:104:VAL:HG22	40:BE:198:VAL:HG22	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:117:MET:HE3	40:BE:136:ARG:HA	1.84	0.58
43:BH:146:ALA:O	43:BH:149:ARG:HB3	2.03	0.58
46:BN:12:ARG:NH2	46:BN:135:PRO:HG2	2.18	0.58
49:BQ:101:ARG:HG3	49:BQ:101:ARG:HH11	1.69	0.58
52:BT:93:ARG:CZ	52:BT:95:ARG:HD3	2.33	0.58
1:CA:367:U:H5"	1:CA:394:G:H21	1.67	0.58
1:CA:927:G:OP2	1:CA:927:G:H4'	2.04	0.58
1:CA:975:A:H8	1:CA:975:A:H5'	1.67	0.58
1:CA:1256:A:H2	1:CA:1277:C:H2'	1.68	0.58
5:CE:147:ASP:CB	5:CE:150:ARG:HH12	2.13	0.58
11:CK:48:ILE:HD11	11:CK:67:ASP:HB2	1.86	0.58
13:CM:121:LYS:O	13:CM:122:LYS:HD3	2.03	0.58
36:DA:569:U:O4	36:DA:570:G:C6	2.56	0.58
36:DA:1824:G:O2'	36:DA:1825:A:H5'	2.03	0.58
36:DA:2818:G:O2'	36:DA:2837:G:H5'	2.03	0.58
41:DF:164:ARG:HG2	41:DF:164:ARG:NH1	2.16	0.58
44:DJ:26:UNK:HA	44:DJ:83:UNK:O	2.03	0.58
46:DN:55:VAL:HG22	46:DN:56:ASN:N	2.19	0.58
54:DV:21:ARG:O	54:DV:22:VAL:HG13	2.02	0.58
55:DW:36:LEU:HD12	55:DW:48:ALA:HA	1.86	0.58
58:DZ:144:LEU:HD21	58:DZ:150:LEU:HD13	1.86	0.58
1:AA:66:G:H21	1:AA:172:A:H2	1.52	0.58
1:AA:201:C:H2'	1:AA:202:U:H5"	1.85	0.58
4:AD:138:TYR:HD1	4:AD:138:TYR:C	2.06	0.58
13:AM:97:PRO:CA	13:AM:110:ARG:HD3	2.32	0.58
22:AV:44:G:H2'	22:AV:45:U:H5'	1.84	0.58
24:AY:56:C:N1	36:BA:1067:A:C2	2.71	0.58
25:AZ:121:LEU:HG	25:AZ:125:GLN:HE21	1.67	0.58
25:AZ:206:ILE:HG23	25:AZ:210:ILE:HG21	1.85	0.58
25:AZ:340:PRO:HD2	25:AZ:351:GLY:O	2.03	0.58
32:B6:5:VAL:O	32:B6:6:ARG:HB2	2.03	0.58
36:BA:99:U:H4'	36:BA:102:G:H1'	1.86	0.58
36:BA:469:G:C2'	36:BA:470:A:H5"	2.34	0.58
36:BA:2069:G:O2'	36:BA:2070:G:H5'	2.02	0.58
36:BA:2787:C:O2	40:BE:61:ARG:HD2	2.02	0.58
40:BE:57:LYS:O	40:BE:58:ARG:HG3	2.03	0.58
46:BN:32:THR:HG22	46:BN:37:LYS:HD3	1.85	0.58
49:BQ:141:GLN:CD	58:BZ:72:ARG:NE	2.56	0.58
50:BR:27:SER:O	50:BR:30:THR:HB	2.03	0.58
1:CA:243:A:C2	1:CA:246:A:C8	2.92	0.58
1:CA:895:G:H2'	1:CA:896:C:C6	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1320:C:H2'	1:CA:1321:C:O4'	2.03	0.58
2:CB:28:PHE:O	2:CB:32:ILE:HG22	2.04	0.58
2:CB:96:ARG:HD3	2:CB:148:TYR:HE1	1.67	0.58
3:CC:124:ILE:HG12	3:CC:130:VAL:HG22	1.86	0.58
4:CD:10:ARG:HG2	4:CD:10:ARG:NH1	2.18	0.58
9:CI:52:ALA:HB3	9:CI:95:LYS:HZ2	1.68	0.58
18:CR:85:LEU:HD12	18:CR:86:VAL:N	2.19	0.58
24:CY:2:G:C4'	25:CZ:88:TYR:CE1	2.86	0.58
25:CZ:12:VAL:HG13	25:CZ:100:ASP:OD2	2.03	0.58
25:CZ:114:PRO:HB2	36:DA:2660:A:O2'	2.02	0.58
36:DA:407:G:H2'	36:DA:408:G:H8	1.68	0.58
36:DA:1757:U:O4	36:DA:1762:A:H2	1.86	0.58
36:DA:2750:A:H5"	36:DA:2751:G:OP2	2.04	0.58
40:DE:120:TRP:CD1	40:DE:155:LYS:HB3	2.38	0.58
40:DE:132:HIS:ND1	40:DE:132:HIS:O	2.36	0.58
46:DN:56:ASN:HA	46:DN:125:GLY:C	2.24	0.58
48:DP:24:GLY:CA	48:DP:33:ARG:NH1	2.67	0.58
48:DP:102:ARG:HH11	48:DP:102:ARG:CB	2.16	0.58
50:DR:53:HIS:HB2	50:DR:94:TYR:HE2	1.68	0.58
57:DY:17:SER:CB	57:DY:71:LYS:HE2	2.33	0.58
1:AA:580:U:H2'	1:AA:581:G:O4'	2.03	0.58
1:AA:681:C:O2'	1:AA:682:G:H5'	2.04	0.58
3:AC:21:ARG:NH2	3:AC:56:ASP:OD1	2.37	0.58
4:AD:25:ARG:O	4:AD:27:TYR:N	2.35	0.58
10:AJ:78:ASN:HA	10:AJ:79:ARG:NH1	2.17	0.58
13:AM:2:ALA:O	13:AM:4:ILE:HG13	2.04	0.58
36:BA:108:U:H2'	36:BA:109:G:H8	1.68	0.58
36:BA:139(A):G:H22	56:BX:44:GLU:CD	2.06	0.58
36:BA:581:C:H2'	36:BA:582:G:H8	1.67	0.58
36:BA:1658:C:H2'	36:BA:1659:U:H6	1.68	0.58
36:BA:1803:A:O3'	39:BD:259:THR:CG2	2.51	0.58
40:BE:79:ARG:HH11	40:BE:79:ARG:HG2	1.69	0.58
43:BH:83:TYR:CB	43:BH:135:GLY:H	2.16	0.58
48:BP:29:LYS:H	48:BP:29:LYS:CD	2.17	0.58
49:BQ:141:GLN:N	58:BZ:53:ILE:HD12	2.18	0.58
50:BR:101:ALA:O	50:BR:102:GLU:HB2	2.04	0.58
58:BZ:77:ASP:O	58:BZ:79:ARG:N	2.36	0.58
1:CA:22:G:H4'	1:CA:885:G:C8	2.39	0.58
1:CA:62:U:H2'	1:CA:63:C:H5'	1.85	0.58
4:CD:103:ASN:OD1	4:CD:114:ARG:CZ	2.51	0.58
10:CJ:33:GLN:HB2	10:CJ:75:ILE:CD1	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CV:34:G:O6	23:CX:21:C:N3	2.36	0.58
25:CZ:268:THR:HG22	25:CZ:289:LEU:O	2.04	0.58
28:D2:7:ARG:C	28:D2:9:GLN:H	2.06	0.58
28:D2:53:LEU:O	28:D2:53:LEU:HD23	2.04	0.58
32:D6:42:TRP:HA	32:D6:42:TRP:HE3	1.68	0.58
36:DA:703:U:H2'	36:DA:704:G:O4'	2.03	0.58
36:DA:1005:C:H2'	36:DA:1006:C:H6	1.69	0.58
36:DA:1385:G:H4'	36:DA:1386:C:OP1	2.03	0.58
36:DA:2133:G:C2	36:DA:2157:G:O6	2.57	0.58
36:DA:2762:G:H2'	36:DA:2763:G:O4'	2.04	0.58
42:DG:52:ILE:HB	42:DG:54:GLU:CD	2.23	0.58
46:DN:21:LYS:HD3	46:DN:22:THR:H	1.67	0.58
53:DU:27:LEU:O	53:DU:34:LYS:HB2	2.04	0.58
57:DY:9:LYS:HB2	57:DY:9:LYS:HZ2	1.69	0.58
58:DZ:6:LYS:HG3	58:DZ:60:GLU:CG	2.34	0.58
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.36	0.58
1:AA:1030(A):G:H1'	1:AA:1031:G:H1	1.69	0.58
1:AA:1239:A:H62	1:AA:1299:A:H62	1.52	0.58
7:AG:45:ASP:O	7:AG:49:ILE:HG12	2.03	0.58
14:AN:23:ARG:HD2	14:AN:28:GLY:O	2.03	0.58
19:AS:53:ASN:ND2	19:AS:55:LYS:H	2.00	0.58
22:AW:76:A:O2'	36:BA:2394:C:N3	2.29	0.58
25:AZ:113:MET:HB3	25:AZ:114:PRO:CD	2.33	0.58
28:B2:18:PRO:HG2	28:B2:72:ALA:OXT	2.03	0.58
28:B2:46:GLN:O	28:B2:50:ILE:HD13	2.03	0.58
32:B6:22:ALA:HB2	32:B6:39:TYR:CZ	2.38	0.58
36:BA:587:C:C4	48:BP:33:ARG:HG2	2.38	0.58
36:BA:848:G:C4	36:BA:933:A:H8	2.21	0.58
36:BA:969:U:H2'	36:BA:970:C:C6	2.39	0.58
36:BA:1427:A:H4'	36:BA:1428:C:O5'	2.03	0.58
36:BA:2185:C:C2'	36:BA:2186:G:C5'	2.77	0.58
36:BA:2396:G:O2'	36:BA:2397:G:H5'	2.03	0.58
42:BG:80:PHE:O	42:BG:81:LYS:O	2.21	0.58
42:BG:104:GLU:O	42:BG:108:ASN:HB2	2.04	0.58
43:BH:15:VAL:HG12	43:BH:29:PRO:HD3	1.85	0.58
43:BH:85:LYS:HZ1	43:BH:86:GLU:HA	1.68	0.58
49:BQ:32:TYR:O	49:BQ:105:GLU:HB2	2.03	0.58
49:BQ:141:GLN:HE22	58:BZ:72:ARG:HA	1.66	0.58
1:CA:150:C:C2'	1:CA:151:A:H5"	2.30	0.58
1:CA:242:C:H2'	1:CA:243:A:H5'	1.85	0.58
1:CA:1038:C:O5'	1:CA:1038:C:H6	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1299:A:H5"	1:CA:1299:A:N3	2.19	0.58
2:CB:51:LEU:HD22	2:CB:55:PHE:CE2	2.39	0.58
2:CB:114:ARG:CZ	2:CB:118:LEU:HD21	2.33	0.58
4:CD:65:ARG:HB2	4:CD:75:PHE:CE1	2.39	0.58
4:CD:83:SER:HA	4:CD:89:THR:HG23	1.85	0.58
4:CD:95:GLY:HA3	4:CD:188:LEU:HD11	1.84	0.58
8:CH:116:LYS:HD3	8:CH:127:LEU:HD12	1.84	0.58
10:CJ:78:ASN:HB2	10:CJ:81:THR:HG23	1.85	0.58
19:CS:16:LEU:HA	19:CS:19:VAL:HB	1.84	0.58
24:CY:56:C:C5	36:DA:1067:A:H2	2.19	0.58
24:CY:65:C:H4'	25:CZ:341:GLN:CD	2.23	0.58
25:CZ:265:THR:CG2	25:CZ:266:VAL:H	2.15	0.58
32:D6:11:LEU:HD12	32:D6:51:GLU:HG3	1.86	0.58
36:DA:37:C:H2'	36:DA:38:A:C8	2.38	0.58
36:DA:267:C:H2'	36:DA:268:C:C6	2.39	0.58
36:DA:970:C:H2'	36:DA:971:C:H6	1.68	0.58
36:DA:2808:U:H5'	36:DA:2891:G:O6	2.03	0.58
40:DE:36:ARG:HH11	40:DE:36:ARG:HG2	1.68	0.58
40:DE:117:MET:HE1	40:DE:136:ARG:HG2	1.84	0.58
41:DF:39:TRP:CH2	41:DF:106:ARG:HD2	2.39	0.58
41:DF:122:LYS:HB3	41:DF:191:ARG:HA	1.85	0.58
42:DG:47:LYS:HE3	42:DG:81:LYS:HG3	1.85	0.58
47:DO:63:VAL:O	47:DO:64:ARG:HB3	2.03	0.58
57:DY:43:ASN:C	57:DY:44:ILE:HD12	2.24	0.58
58:DZ:128:VAL:HG22	58:DZ:129:SER:N	2.18	0.58
1:AA:992:U:H4'	1:AA:993:G:O5'	2.03	0.58
1:AA:1260:C:OP1	1:AA:1284:C:H4'	2.03	0.58
4:AD:20:TYR:CD2	4:AD:26:CYS:O	2.54	0.58
11:AK:22:HIS:HB3	11:AK:29:ILE:HG13	1.85	0.58
13:AM:83:ASP:C	13:AM:85:GLY:H	2.07	0.58
16:AP:52:ASP:OD2	16:AP:55:ARG:HG3	2.03	0.58
22:AV:65:G:O2'	22:AV:66:U:H5'	2.03	0.58
22:AW:64:A:H2'	22:AW:65:G:H8	1.68	0.58
25:AZ:230:THR:HG23	25:AZ:230:THR:O	2.03	0.58
32:B6:31:PRO:O	32:B6:32:ASN:OD1	2.21	0.58
36:BA:1188:U:O2'	36:BA:1189:A:H5'	2.03	0.58
36:BA:1473:G:C2	36:BA:1474:C:H1'	2.39	0.58
36:BA:1480:G:H2'	36:BA:1481:U:C5'	2.30	0.58
36:BA:1740:G:H4'	36:BA:1741:A:OP1	2.02	0.58
36:BA:1803:A:C3'	39:BD:259:THR:HG21	2.34	0.58
39:BD:96:HIS:CE1	39:BD:102:LYS:HE2	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:133:ASN:N	41:BF:133:ASN:HD22	2.00	0.58
46:BN:14:VAL:HG11	46:BN:137:LYS:HD2	1.85	0.58
46:BN:129:PRO:O	46:BN:130:HIS:HB3	2.02	0.58
1:CA:356:A:H2'	1:CA:357:G:H8	1.68	0.58
1:CA:609:A:H2'	1:CA:610:G:H5'	1.84	0.58
1:CA:1030:C:H2'	1:CA:1030(A):G:H5'	1.84	0.58
7:CG:15:ASP:HB3	7:CG:19:GLY:N	2.18	0.58
10:CJ:7:LYS:HB3	10:CJ:97:GLU:HB2	1.85	0.58
10:CJ:82:ILE:HG22	10:CJ:82:ILE:O	2.03	0.58
11:CK:27:ASN:ND2	11:CK:55:LYS:HB3	2.19	0.58
13:CM:54:VAL:HA	13:CM:57:ARG:NH1	2.19	0.58
24:CY:43:G:H5'	24:CY:44:G:OP2	2.02	0.58
34:D8:12:LYS:HD3	48:DP:68:GLN:HG2	1.86	0.58
34:D8:17:THR:CG2	34:D8:21:LYS:HB2	2.32	0.58
36:DA:636:G:H2'	48:DP:115:LEU:CD1	2.33	0.58
36:DA:832:G:O2'	48:DP:52:GLU:HB3	2.04	0.58
36:DA:1497:U:H5'	36:DA:1498:C:H5	1.69	0.58
36:DA:2308:G:N7	36:DA:2310:A:H5'	2.19	0.58
39:DD:161:THR:O	39:DD:196:VAL:HG23	2.03	0.58
42:DG:86:MET:N	42:DG:87:PRO:CD	2.66	0.58
42:DG:141:PHE:O	42:DG:144:ILE:HG22	2.04	0.58
43:DH:46:GLU:OE1	43:DH:50:VAL:HG21	2.03	0.58
50:DR:75:LEU:HD13	50:DR:75:LEU:O	2.04	0.58
52:DT:28:VAL:CB	52:DT:88:ILE:HG12	2.29	0.58
56:DX:35:THR:HG22	56:DX:38:GLU:H	1.67	0.58
1:AA:1050:G:O2'	1:AA:1051:C:P	2.62	0.58
1:AA:1068:G:N7	1:AA:1094:G:H2'	2.18	0.58
1:AA:1303:C:H2'	1:AA:1304:G:H5'	1.84	0.58
9:AI:43:ALA:C	9:AI:45:ALA:H	2.07	0.58
22:AW:59:U:C2'	22:AW:60:U:H5'	2.34	0.58
25:AZ:318:ALA:CB	25:AZ:400:VAL:HA	2.34	0.58
30:B4:22:ILE:HG21	42:BG:108:ASN:HD22	1.69	0.58
36:BA:1005:C:H2'	36:BA:1006:C:H6	1.69	0.58
37:BB:31:C:H4'	42:BG:29:TRP:HZ2	1.68	0.58
39:BD:28:GLU:H	39:BD:29:PRO:HD2	1.67	0.58
39:BD:62:TYR:CE1	39:BD:64:ILE:HA	2.38	0.58
40:BE:197:ILE:O	40:BE:197:ILE:CG1	2.52	0.58
48:BP:84:ASN:ND2	48:BP:116:GLY:HA2	2.19	0.58
49:BQ:136:ALA:C	49:BQ:138:ASP:H	2.06	0.58
52:BT:108:ARG:HA	52:BT:111:ARG:CZ	2.34	0.58
1:CA:290:C:O2'	1:CA:291:C:H5'	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:666:G:H5'	1:CA:726:C:H1'	1.85	0.58
3:CC:58:GLU:HB2	3:CC:65:ALA:CB	2.32	0.58
6:CF:72:VAL:HG23	6:CF:90:VAL:HG21	1.85	0.58
10:CJ:8:LEU:HD11	10:CJ:96:ILE:HG22	1.86	0.58
15:CO:24:SER:O	15:CO:28:GLN:HG3	2.04	0.58
17:CQ:94:ASN:O	17:CQ:96:GLU:N	2.37	0.58
19:CS:43:GLU:O	19:CS:45:VAL:N	2.29	0.58
22:CW:40:C:H2'	22:CW:41:C:C6	2.39	0.58
22:CW:43:C:H2'	22:CW:44:G:H1'	1.86	0.58
25:CZ:68:VAL:CA	25:CZ:68:VAL:O	2.50	0.58
25:CZ:318:ALA:CB	25:CZ:400:VAL:HA	2.33	0.58
31:D5:2:ALA:HA	36:DA:2015:A:C1'	2.31	0.58
34:D8:57:ARG:C	34:D8:59:LYS:H	2.07	0.58
36:DA:15:G:O2'	36:DA:16:G:H5'	2.03	0.58
36:DA:693:C:O2'	36:DA:694:U:H5'	2.04	0.58
36:DA:1010:A:H1'	36:DA:1153:C:C1'	2.34	0.58
36:DA:1260:G:H2'	36:DA:1261:C:H6	1.68	0.58
36:DA:1409:C:H2'	36:DA:1410:G:C8	2.39	0.58
42:DG:144:ILE:O	42:DG:144:ILE:HG23	2.04	0.58
43:DH:46:GLU:OE1	43:DH:50:VAL:HG11	2.04	0.58
48:DP:102:ARG:HB3	48:DP:102:ARG:NH1	2.19	0.58
52:DT:26:ASP:HB3	52:DT:89:VAL:O	2.04	0.58
53:DU:24:TYR:HB3	53:DU:28:ARG:CB	2.33	0.58
54:DV:28:GLU:HB3	54:DV:29:PRO:HD2	1.85	0.58
55:DW:88:ARG:NH1	55:DW:94:ASP:OD2	2.37	0.58
57:DY:38:ILE:CB	57:DY:66:PRO:HG3	2.24	0.58
57:DY:82:PRO:O	57:DY:83:THR:HB	2.03	0.58
1:AA:686:U:H2'	1:AA:687:A:C8	2.38	0.58
1:AA:1143:G:H2'	1:AA:1144:G:C8	2.39	0.58
1:AA:1325:C:P	21:AU:15:ARG:NH2	2.75	0.58
4:AD:22:LYS:HB2	4:AD:26:CYS:HB2	1.86	0.58
12:AL:79:GLU:O	12:AL:80:HIS:CB	2.52	0.58
26:B0:36:ILE:CD1	36:BA:2355:C:H5'	2.30	0.58
36:BA:84:A:C5'	57:BY:9:LYS:HB3	2.30	0.58
36:BA:479:A:O2'	36:BA:481:G:H5'	2.04	0.58
36:BA:603:A:H1'	36:BA:604:G:OP2	2.03	0.58
36:BA:623:G:H2'	36:BA:624:C:H6	1.68	0.58
36:BA:1199:U:H2'	36:BA:1200:C:C6	2.39	0.58
36:BA:1488:G:H1	36:BA:1501:C:H42	1.50	0.58
36:BA:2133:G:OP1	36:BA:2133:G:C4'	2.52	0.58
36:BA:2659:G:H2'	36:BA:2660:A:H5"	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2852:G:H2'	36:BA:2853:C:H6	1.69	0.58
40:BE:111:ARG:HH11	40:BE:111:ARG:HG2	1.69	0.58
43:BH:158:HIS:CE1	43:BH:169:VAL:HG12	2.39	0.58
47:BO:53:LYS:HD2	47:BO:53:LYS:N	2.18	0.58
49:BQ:54:MET:HB3	49:BQ:64:ILE:HD11	1.86	0.58
50:BR:26:LYS:HE2	50:BR:71:GLN:H	1.69	0.58
52:BT:31:SER:HB2	52:BT:32:TYR:CD1	2.39	0.58
1:CA:63:C:H2'	1:CA:64:G:C5'	2.25	0.58
1:CA:382:A:H2'	1:CA:383:A:H8	1.67	0.58
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.38	0.58
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.39	0.58
3:CC:111:LEU:HD21	3:CC:144:SER:O	2.04	0.58
9:CI:17:VAL:HG11	9:CI:81:ILE:HD13	1.86	0.58
10:CJ:4:ILE:HB	10:CJ:74:ILE:HG13	1.86	0.58
22:CW:44:G:H3'	22:CW:45:U:C5	2.39	0.58
25:CZ:9:LYS:HE3	25:CZ:74:LYS:C	2.25	0.58
32:D6:53:LYS:O	32:D6:54:ILE:OXT	2.22	0.58
36:DA:654(U):A:H2'	36:DA:654(V):A:C8	2.39	0.58
36:DA:1198:U:H2'	36:DA:1199:U:C6	2.39	0.58
38:DC:74:VAL:CG2	38:DC:157:LYS:HE2	2.34	0.58
39:DD:201:HIS:O	39:DD:203:ASN:N	2.36	0.58
46:DN:30:ILE:CG2	46:DN:120:LEU:HD21	2.33	0.58
49:DQ:51:ARG:HH11	49:DQ:51:ARG:CB	1.99	0.58
50:DR:55:ALA:HB2	50:DR:79:LEU:CD1	2.33	0.58
1:AA:377:G:H2'	1:AA:378:G:C8	2.39	0.57
1:AA:858:G:C5	1:AA:869:G:N7	2.72	0.57
1:AA:977:A:N6	1:AA:1224:G:O5'	2.36	0.57
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.04	0.57
1:AA:1306:A:H61	1:AA:1331:G:H1'	1.69	0.57
6:AF:47:ARG:HB2	6:AF:47:ARG:NH1	2.19	0.57
17:AQ:75:ARG:HH11	17:AQ:75:ARG:HG3	1.68	0.57
25:AZ:19:HIS:ND1	25:AZ:20:VAL:HG22	2.18	0.57
32:B6:20:ASN:ND2	32:B6:21:TYR:H	2.02	0.57
36:BA:482:A:H4'	57:BY:47:LYS:HG3	1.86	0.57
36:BA:1203:G:H3'	36:BA:1204:A:H5"	1.86	0.57
36:BA:1542:A:C8	36:BA:1544:A:H5'	2.39	0.57
36:BA:1654:A:OP1	50:BR:2:ARG:HA	2.04	0.57
36:BA:2241:A:H2'	36:BA:2242:G:C8	2.39	0.57
36:BA:2303:G:H21	42:BG:132:ASN:ND2	2.02	0.57
36:BA:2852:G:H2'	36:BA:2853:C:C6	2.39	0.57
39:BD:181:GLU:HB2	39:BD:273:ARG:O	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BG:137:GLU:O	42:BG:138:GLN:HB3	2.03	0.57
48:BP:23:PRO:HD2	48:BP:33:ARG:NE	2.18	0.57
48:BP:131:SER:OG	48:BP:134:ALA:HB3	2.03	0.57
50:BR:103:ARG:HG3	55:BW:40:ASN:CG	2.24	0.57
52:BT:28:VAL:O	52:BT:28:VAL:HG12	2.04	0.57
54:BV:72:VAL:HG23	54:BV:85:LYS:HB3	1.85	0.57
1:CA:184:G:C4'	1:CA:224:C:H4'	2.34	0.57
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.52	0.57
2:CB:69:LEU:O	2:CB:163:PHE:N	2.35	0.57
2:CB:130:ARG:NH2	2:CB:134:GLU:HG3	2.18	0.57
4:CD:88:VAL:O	4:CD:92:VAL:HG23	2.03	0.57
32:D6:16:CYS:O	32:D6:17:LYS:HG2	2.04	0.57
33:D7:1:MET:HG3	33:D7:3:ARG:NH1	2.15	0.57
34:D8:30:ARG:NH2	36:DA:2419:U:O4	2.37	0.57
34:D8:61:LEU:HD12	34:D8:61:LEU:N	2.07	0.57
36:DA:93:G:H2'	36:DA:94:C:C6	2.38	0.57
36:DA:845:G:O2'	36:DA:846:C:H5	1.87	0.57
36:DA:1301:A:H4'	36:DA:1302:A:OP1	2.04	0.57
39:DD:35:LYS:HG3	39:DD:63:ARG:HD3	1.86	0.57
41:DF:63:LYS:HE2	41:DF:75:HIS:O	2.04	0.57
44:DJ:35:UNK:C	44:DJ:37:UNK:N	2.64	0.57
49:DQ:112:GLU:HG2	49:DQ:113:GLN:N	2.19	0.57
50:DR:52:ILE:HB	50:DR:94:TYR:HD2	1.68	0.57
50:DR:103:ARG:HB3	50:DR:108:GLY:HA2	1.86	0.57
51:DS:92:TYR:CG	51:DS:93:LYS:N	2.72	0.57
56:DX:44:GLU:OE2	56:DX:50:LYS:HG3	2.03	0.57
58:DZ:151:HIS:CB	58:DZ:170:THR:HA	2.27	0.57
1:AA:495:A:H61	4:AD:119:GLN:NE2	2.01	0.57
2:AB:113:HIS:HA	2:AB:116:GLU:HG2	1.85	0.57
2:AB:148:TYR:C	2:AB:149:LEU:HD23	2.24	0.57
4:AD:62:GLN:HA	4:AD:62:GLN:NE2	2.18	0.57
5:AE:40:ARG:HH11	5:AE:40:ARG:HG2	1.69	0.57
11:AK:29:ILE:HD12	11:AK:29:ILE:C	2.24	0.57
11:AK:48:ILE:HD11	11:AK:67:ASP:HB2	1.86	0.57
13:AM:23:TYR:O	13:AM:23:TYR:CD1	2.57	0.57
18:AR:26:LEU:HD13	18:AR:39:VAL:HG13	1.86	0.57
19:AS:16:LEU:HA	19:AS:19:VAL:HB	1.86	0.57
25:AZ:86:ALA:C	25:AZ:88:TYR:H	2.08	0.57
29:B3:22:ALA:HB1	29:B3:46:ASN:HD21	1.67	0.57
29:B3:43:ILE:HD11	36:BA:927:G:O2'	2.03	0.57
32:B6:9:LEU:HD13	32:B6:9:LEU:O	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:35:GLU:HA	32:B6:35:GLU:OE1	2.04	0.57
34:B8:30:ARG:NH1	36:BA:2419:U:O4	2.37	0.57
36:BA:1786:A:H2	36:BA:2606:C:H1'	1.68	0.57
36:BA:1930:G:N2	36:BA:1968:G:H2'	2.20	0.57
36:BA:2174:C:C2'	36:BA:2175:C:H5'	2.34	0.57
36:BA:2824:C:H2'	36:BA:2825:C:O4'	2.03	0.57
37:BB:91:C:OP1	49:BQ:16:ARG:HG2	2.04	0.57
39:BD:69:ARG:HH11	39:BD:130:ALA:HB2	1.69	0.57
40:BE:36:ARG:HH22	40:BE:88:GLY:N	2.01	0.57
42:BG:95:ARG:O	42:BG:96:ARG:O	2.22	0.57
1:CA:291:C:O2'	1:CA:292:G:H5'	2.04	0.57
1:CA:723:U:O2'	1:CA:724:G:H5'	2.04	0.57
1:CA:975:A:H5'	1:CA:975:A:C8	2.40	0.57
1:CA:1240:U:OP1	7:CG:116:ALA:HB2	2.04	0.57
1:CA:1308:U:H5"	13:CM:98:VAL:HG23	1.87	0.57
1:CA:1316:G:H4'	14:CN:18:VAL:CG1	2.33	0.57
2:CB:84:GLU:HB3	2:CB:219:VAL:HG21	1.86	0.57
5:CE:33:VAL:HG22	5:CE:43:LEU:HD13	1.85	0.57
7:CG:78:ARG:HG3	7:CG:78:ARG:O	2.04	0.57
8:CH:112:LEU:HD23	8:CH:112:LEU:N	2.19	0.57
24:CY:74:C:O2	25:CZ:295:ARG:NH2	2.36	0.57
25:CZ:315:LYS:O	25:CZ:403:ILE:HG23	2.04	0.57
36:DA:271:A:H2	36:DA:366:C:H1'	1.69	0.57
36:DA:1453:U:H5'	50:DR:63:ARG:CZ	2.33	0.57
36:DA:2186:G:H2'	36:DA:2187:G:C8	2.38	0.57
37:DB:7:G:C2'	37:DB:8:U:H5"	2.34	0.57
46:DN:23:LEU:CD1	46:DN:98:VAL:HG12	2.34	0.57
52:DT:74:ARG:HD2	52:DT:76:PHE:CE1	2.38	0.57
53:DU:88:ILE:HG22	54:DV:47:VAL:O	2.05	0.57
1:AA:737:A:OP1	6:AF:92:LYS:HB2	2.04	0.57
3:AC:16:ARG:HB2	3:AC:16:ARG:HH11	1.69	0.57
13:AM:108:ARG:HG3	13:AM:108:ARG:HH11	1.70	0.57
16:AP:38:TYR:CZ	16:AP:50:LYS:HB3	2.39	0.57
25:AZ:277:LEU:HD11	25:AZ:279:GLU:O	2.03	0.57
27:B1:76:ARG:NH2	27:B1:95:LEU:HB2	2.19	0.57
30:B4:42:PHE:CG	30:B4:42:PHE:O	2.57	0.57
31:B5:43:HIS:HE1	36:BA:2884:U:OP2	1.87	0.57
32:B6:25:LYS:HE2	34:B8:34:TRP:NE1	2.08	0.57
36:BA:110:G:O2'	36:BA:111:A:H5'	2.04	0.57
36:BA:380:U:H2'	36:BA:381:G:H8	1.69	0.57
36:BA:470:A:OP1	41:BF:59:TYR:CE1	2.57	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:35:LYS:HA	39:BD:63:ARG:HA	1.87	0.57
39:BD:176:ARG:CZ	39:BD:176:ARG:HB3	2.33	0.57
40:BE:30:PRO:HD3	40:BE:180:ASN:OD1	2.04	0.57
41:BF:7:TYR:HB3	41:BF:16:GLY:O	2.03	0.57
41:BF:34:TRP:HB2	48:BP:10:PRO:HB2	1.87	0.57
43:BH:159:GLU:HG3	43:BH:160:LYS:HG2	1.87	0.57
46:BN:9:VAL:HG12	46:BN:10:GLU:H	1.68	0.57
46:BN:55:VAL:HG22	46:BN:56:ASN:N	2.19	0.57
51:BS:93:LYS:O	51:BS:95:HIS:N	2.37	0.57
54:BV:38:LEU:HD23	54:BV:39:LEU:N	2.18	0.57
57:BY:77:PRO:O	57:BY:78:ALA:HB2	2.04	0.57
58:BZ:108:PRO:HB3	58:BZ:141:VAL:CG1	2.34	0.57
1:CA:666:G:O2'	1:CA:667:G:H5'	2.04	0.57
1:CA:1268:A:H1'	1:CA:1326:C:O2'	2.04	0.57
1:CA:1282:C:C2'	1:CA:1283:G:H5'	2.34	0.57
3:CC:33:LEU:C	3:CC:33:LEU:HD13	2.25	0.57
10:CJ:64:GLU:HG2	14:CN:59:ALA:HA	1.87	0.57
10:CJ:81:THR:C	10:CJ:83:GLU:H	2.08	0.57
22:CW:73:A:C3'	22:CW:74:C:H5"	2.34	0.57
23:CX:26:A:H3'	23:CX:27:A:O4'	2.04	0.57
29:D3:45:GLY:C	29:D3:47:VAL:N	2.57	0.57
36:DA:223:A:N7	36:DA:422:A:H1'	2.20	0.57
36:DA:529:A:H4'	36:DA:530:G:O5'	2.03	0.57
36:DA:979:G:H3'	36:DA:980:A:H5"	1.87	0.57
36:DA:1582:C:H2'	36:DA:1583:A:H8	1.69	0.57
36:DA:1590:U:H2'	36:DA:1591:G:C8	2.39	0.57
36:DA:1879:C:C2'	36:DA:1880:C:H5"	2.33	0.57
36:DA:2292:C:H2'	36:DA:2293:C:C6	2.39	0.57
36:DA:2770:G:H5'	36:DA:2771:C:OP2	2.04	0.57
37:DB:66:A:C2	37:DB:109:C:C2	2.93	0.57
38:DC:171:ILE:HD13	38:DC:196:LEU:HD21	1.86	0.57
42:DG:39:ILE:CG2	42:DG:157:ILE:HG23	2.32	0.57
42:DG:83:ARG:HB2	42:DG:84:LYS:HD2	1.86	0.57
46:DN:129:PRO:O	46:DN:130:HIS:HB3	2.03	0.57
47:DO:98:VAL:HG12	47:DO:117:LEU:HB3	1.86	0.57
49:DQ:12:GLN:HE21	49:DQ:72:LYS:HG3	1.69	0.57
51:DS:15:ARG:HH11	51:DS:15:ARG:CB	2.18	0.57
51:DS:36:TYR:O	51:DS:37:ALA:HB2	2.04	0.57
52:DT:27:THR:O	52:DT:28:VAL:CB	2.53	0.57
56:DX:36:LYS:HZ3	56:DX:55:ASN:HA	1.70	0.57
1:AA:260:G:H2'	1:AA:261:U:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1039:C:C6	1:AA:1040:U:C5	2.88	0.57
2:AB:80:ILE:N	2:AB:80:ILE:HD12	2.19	0.57
9:AI:46:ALA:HB2	9:AI:74:ILE:HG23	1.85	0.57
13:AM:86:CYS:HA	19:AS:73:GLU:O	2.04	0.57
19:AS:16:LEU:O	19:AS:19:VAL:N	2.37	0.57
24:AY:61:C:O2'	24:AY:62:U:H5"	2.04	0.57
25:AZ:204:ASP:O	25:AZ:208:GLU:HG2	2.04	0.57
26:B0:36:ILE:H	26:B0:36:ILE:HD12	1.69	0.57
28:B2:34:GLU:CA	28:B2:37:PHE:HB2	2.30	0.57
28:B2:47:ASN:HA	28:B2:50:ILE:CB	2.33	0.57
28:B2:59:ARG:HD3	28:B2:59:ARG:N	2.19	0.57
36:BA:880:G:H22	36:BA:897:C:N4	2.02	0.57
36:BA:893:C:H2'	36:BA:894:C:H6	1.69	0.57
36:BA:2562:U:C2'	36:BA:2563:U:H5'	2.35	0.57
39:BD:231:HIS:ND1	39:BD:232:PRO:HD2	2.20	0.57
43:BH:158:HIS:HE1	43:BH:169:VAL:HG12	1.68	0.57
52:BT:80:SER:CB	52:BT:81:PRO:CD	2.81	0.57
52:BT:100:TYR:HD2	52:BT:103:ARG:HH21	1.53	0.57
1:CA:411:A:N6	1:CA:413:G:H21	2.01	0.57
1:CA:504:C:H2'	1:CA:511:C:H5	1.69	0.57
1:CA:1186:G:H2'	1:CA:1187:G:H5"	1.86	0.57
10:CJ:49:VAL:HG22	14:CN:41:ARG:CG	2.33	0.57
25:CZ:258:LEU:HD12	25:CZ:299:GLU:HG3	1.86	0.57
26:D0:42:GLY:HA3	36:DA:2331:G:C4'	2.33	0.57
28:D2:65:ASN:HD21	36:DA:112:U:C5'	2.15	0.57
31:D5:16:ARG:HD2	31:D5:20:ARG:NH2	2.18	0.57
36:DA:143:G:C1'	56:DX:37:THR:HG21	2.34	0.57
36:DA:530:G:C5	36:DA:2022:U:H5"	2.39	0.57
36:DA:1689:A:N6	36:DA:1698:A:H2	2.01	0.57
36:DA:2143:C:O2'	36:DA:2144:U:H5'	2.03	0.57
36:DA:2505:G:O2'	36:DA:2506:U:H6	1.87	0.57
36:DA:2695:C:H2'	36:DA:2696:U:C6	2.40	0.57
38:DC:78:ALA:HB1	38:DC:82:LYS:HB2	1.86	0.57
42:DG:102:PHE:CE1	42:DG:106:LEU:HD22	2.40	0.57
43:DH:85:LYS:NZ	43:DH:86:GLU:HA	2.19	0.57
47:DO:108:GLU:N	47:DO:108:GLU:OE1	2.36	0.57
58:DZ:67:LEU:HD12	58:DZ:67:LEU:N	2.19	0.57
1:AA:260:G:H2'	1:AA:261:U:H6	1.69	0.57
1:AA:413:G:O6	4:AD:35:ARG:HD3	2.04	0.57
1:AA:1187:G:H8	1:AA:1187:G:H5'	1.70	0.57
4:AD:100:ARG:HG2	4:AD:103:ASN:H	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:97:PHE:O	18:AR:31:LEU:HD23	2.04	0.57
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.18	0.57
9:AI:118:LYS:O	9:AI:119:ALA:CB	2.53	0.57
11:AK:26:ASN:O	11:AK:27:ASN:HB2	2.03	0.57
25:AZ:331:HIS:H	25:AZ:331:HIS:HD2	1.52	0.57
26:B0:23:VAL:HG22	26:B0:38:VAL:CG1	2.32	0.57
36:BA:21:A:O2'	36:BA:22:C:H5'	2.05	0.57
36:BA:141:A:C8	36:BA:1408:C:O2'	2.58	0.57
36:BA:201:C:H1'	36:BA:250:G:O6	2.05	0.57
36:BA:583:G:OP2	53:BU:10:ARG:HD2	2.04	0.57
36:BA:1098:A:H2'	36:BA:1099:G:H5'	1.87	0.57
36:BA:1249:U:C4'	53:BU:4:ALA:HB3	2.34	0.57
36:BA:1337:G:H2'	36:BA:1338:G:C8	2.39	0.57
36:BA:2713:A:OP1	50:BR:14:SER:HB3	2.04	0.57
40:BE:61:ARG:HB3	40:BE:62:PRO:CD	2.33	0.57
48:BP:64:LYS:O	48:BP:65:ARG:C	2.43	0.57
51:BS:30:ARG:HH22	51:BS:62:LYS:CD	2.17	0.57
52:BT:128:GLU:CD	52:BT:129:ARG:N	2.58	0.57
54:BV:34:GLU:O	54:BV:36:PRO:HD3	2.03	0.57
58:BZ:152:ALA:CB	58:BZ:167:PRO:HB2	2.34	0.57
1:CA:56:U:H2'	1:CA:57:G:C8	2.40	0.57
1:CA:156:G:O2'	1:CA:157:G:H5'	2.04	0.57
1:CA:373:A:O2'	1:CA:374:A:H5'	2.04	0.57
1:CA:648:A:H2'	1:CA:649:G:C8	2.39	0.57
1:CA:961:U:O2'	1:CA:962:C:O5'	2.22	0.57
6:CF:47:ARG:NH1	6:CF:47:ARG:HB2	2.19	0.57
13:CM:97:PRO:CA	13:CM:110:ARG:HD3	2.34	0.57
20:CT:29:LYS:O	20:CT:33:ILE:HG13	2.05	0.57
26:D0:30:VAL:HG23	26:D0:30:VAL:O	2.04	0.57
27:D1:11:ARG:NH2	36:DA:1365:A:O2'	2.37	0.57
32:D6:15:GLU:OE1	32:D6:18:ARG:NE	2.36	0.57
32:D6:17:LYS:CB	32:D6:18:ARG:NH1	2.67	0.57
34:D8:50:LEU:C	34:D8:53:PRO:HD2	2.25	0.57
36:DA:20:C:O2'	36:DA:21:A:H5'	2.04	0.57
36:DA:84:A:H5'	57:DY:9:LYS:CB	2.34	0.57
36:DA:272:G:H1	36:DA:404:C:H42	1.51	0.57
36:DA:382:G:C2'	36:DA:383:U:H5'	2.34	0.57
36:DA:492:A:H2'	36:DA:493:G:O4'	2.04	0.57
36:DA:836:G:H2'	36:DA:837:C:C6	2.39	0.57
36:DA:2078:C:H2'	36:DA:2079:U:H6	1.70	0.57
36:DA:2201:C:O2'	36:DA:2202:C:H5'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2392:A:H2	36:DA:2424:C:N4	1.96	0.57
36:DA:2734:A:H62	36:DA:2770:G:H21	1.53	0.57
42:DG:77:ILE:H	42:DG:77:ILE:CD1	2.12	0.57
43:DH:18:GLU:HB2	43:DH:25:LYS:HB2	1.85	0.57
43:DH:97:ARG:O	43:DH:99:VAL:HG23	2.03	0.57
43:DH:143:GLN:HA	43:DH:143:GLN:NE2	2.19	0.57
43:DH:163:TYR:N	43:DH:163:TYR:HD1	2.03	0.57
47:DO:80:ASP:OD2	52:DT:71:GLY:HA3	2.05	0.57
51:DS:89:ARG:O	51:DS:92:TYR:HB3	2.05	0.57
53:DU:85:LYS:HD3	53:DU:117:GLN:HE22	1.69	0.57
55:DW:84:ARG:HB2	55:DW:96:ILE:CG2	2.34	0.57
1:AA:83:U:HO2'	1:AA:84:U:H5	1.52	0.57
9:AI:43:ALA:O	9:AI:45:ALA:N	2.38	0.57
25:AZ:90:LYS:HD2	25:AZ:90:LYS:H	1.68	0.57
31:B5:25:LEU:HD13	55:BW:23:LEU:HD22	1.84	0.57
32:B6:11:LEU:O	32:B6:23:THR:HB	2.04	0.57
36:BA:28:A:H61	36:BA:512:G:H1'	1.69	0.57
36:BA:2784:C:H2'	36:BA:2785:C:C6	2.39	0.57
39:BD:28:GLU:H	39:BD:29:PRO:CD	2.17	0.57
47:BO:17:ARG:O	47:BO:18:LYS:HG3	2.05	0.57
50:BR:99:LYS:HD2	50:BR:99:LYS:N	2.01	0.57
51:BS:13:ARG:O	51:BS:15:ARG:HG3	2.05	0.57
56:BX:53:LYS:HG3	56:BX:55:ASN:HD21	1.69	0.57
1:CA:186:C:O4'	20:CT:81:LYS:HE2	2.05	0.57
1:CA:1132:C:O2'	1:CA:1133:G:H5'	2.03	0.57
1:CA:1310:G:O2'	1:CA:1311:G:H5'	2.05	0.57
1:CA:1429:C:H2'	1:CA:1430:C:O2	2.04	0.57
10:CJ:32:ALA:HB2	10:CJ:76:ASN:HB2	1.86	0.57
11:CK:54:ARG:O	11:CK:57:THR:CG2	2.52	0.57
22:CV:75:C:H2'	22:CV:76:A:O4'	2.04	0.57
26:D0:38:VAL:HG21	26:D0:59:LEU:HD12	1.87	0.57
30:D4:8:LYS:O	30:D4:9:LEU:CB	2.48	0.57
31:D5:50:GLY:HA3	31:D5:56:LYS:HE2	1.87	0.57
36:DA:514:A:O2'	36:DA:515:A:H5'	2.03	0.57
36:DA:1141:U:H5	46:DN:64:GLY:H	1.53	0.57
36:DA:1614:A:N1	55:DW:91:GLY:HA2	2.20	0.57
36:DA:2506:U:H5'	36:DA:2506:U:C6	2.39	0.57
36:DA:2700:C:O2'	36:DA:2701:C:H5'	2.05	0.57
39:DD:62:TYR:CE2	39:DD:64:ILE:HA	2.39	0.57
39:DD:146:GLU:OE1	39:DD:190:TYR:HB2	2.04	0.57
41:DF:57:VAL:HG21	41:DF:87:GLY:HA2	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:133:ASN:N	41:DF:133:ASN:HD22	2.03	0.57
42:DG:80:PHE:O	42:DG:81:LYS:HB2	2.02	0.57
51:DS:58:LEU:HD23	51:DS:65:VAL:HG13	1.87	0.57
56:DX:51:VAL:HG13	56:DX:81:VAL:HB	1.86	0.57
57:DY:81:LYS:HD2	57:DY:96:ILE:HD12	1.85	0.57
1:AA:220:G:C2'	1:AA:221:C:H5'	2.35	0.57
1:AA:513:C:H42	1:AA:538:G:H1	1.52	0.57
1:AA:1442(B):A:H2'	1:AA:1442(B):A:N3	2.19	0.57
8:AH:9:MET:O	8:AH:13:ILE:HG12	2.04	0.57
9:AI:126:SER:O	9:AI:128:ARG:HD2	2.05	0.57
18:AR:40:LEU:O	18:AR:42:ARG:N	2.37	0.57
19:AS:6:LYS:C	19:AS:7:LYS:HD3	2.25	0.57
19:AS:49:ILE:HD11	19:AS:62:ILE:HB	1.86	0.57
20:AT:104:LEU:C	20:AT:104:LEU:HD23	2.25	0.57
25:AZ:136:ASN:ND2	60:AZ:501:GDP:N7	2.45	0.57
28:B2:16:LEU:HD23	28:B2:17:SER:N	2.20	0.57
36:BA:1495:A:N3	36:BA:1496:A:C2	2.73	0.57
36:BA:1771:C:H1'	36:BA:1786:A:H8	1.62	0.57
36:BA:2051:A:H5'	36:BA:2578:G:O4'	2.04	0.57
50:BR:28:LEU:O	50:BR:30:THR:N	2.36	0.57
50:BR:49:ASP:OD1	50:BR:95:THR:HG22	2.04	0.57
50:BR:52:ILE:O	50:BR:55:ALA:N	2.37	0.57
53:BU:24:TYR:HB3	53:BU:28:ARG:HB2	1.86	0.57
57:BY:81:LYS:HD2	57:BY:96:ILE:HD12	1.86	0.57
1:CA:933:G:OP2	7:CG:3:ARG:HB3	2.05	0.57
1:CA:1226:C:C5	13:CM:104:ARG:HB2	2.40	0.57
1:CA:1385:G:C2'	1:CA:1386:G:H5'	2.34	0.57
1:CA:1385:G:O2'	1:CA:1386:G:H5'	2.05	0.57
4:CD:170:VAL:HG12	4:CD:174:LEU:HB2	1.85	0.57
13:CM:87:TYR:HE1	19:CS:81:ARG:HH22	1.50	0.57
28:D2:53:LEU:O	28:D2:57:ILE:HG12	2.04	0.57
35:D9:29:ASN:HD21	35:D9:32:HIS:CE1	2.22	0.57
36:DA:92:A:H2'	36:DA:92:A:N3	2.20	0.57
36:DA:1658:C:OP1	40:DE:132:HIS:ND1	2.37	0.57
37:DB:49:C:H2'	37:DB:50:G:C8	2.39	0.57
39:DD:35:LYS:HD3	39:DD:61:LEU:HB3	1.86	0.57
40:DE:68:ALA:HB3	40:DE:69:LYS:NZ	2.19	0.57
42:DG:45:GLU:HB2	42:DG:53:LEU:CG	2.29	0.57
42:DG:119:GLY:O	42:DG:181:ARG:HB2	2.02	0.57
52:DT:22:PHE:HE2	52:DT:85:LYS:NZ	2.03	0.57
54:DV:2:PHE:H	54:DV:42:GLY:CA	2.17	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:77:ASP:HB3	58:DZ:80:ARG:O	2.04	0.57
1:AA:265:G:C2'	1:AA:266:G:H5"	2.31	0.57
1:AA:977:A:N3	1:AA:977:A:C2'	2.66	0.57
1:AA:1053:G:O6	1:AA:1199:U:H2'	2.04	0.57
1:AA:1442(B):A:O2'	1:AA:1443:G:C8	2.58	0.57
12:AL:20:LYS:H	12:AL:20:LYS:CD	2.16	0.57
24:AY:43:G:H5'	24:AY:44:G:OP2	2.04	0.57
24:AY:56:C:N1	36:BA:1067:A:H2	2.02	0.57
25:AZ:9:LYS:HE3	25:AZ:74:LYS:CA	2.35	0.57
26:B0:36:ILE:HD12	26:B0:36:ILE:N	2.19	0.57
28:B2:22:GLU:HA	28:B2:64:LEU:HD21	1.86	0.57
28:B2:35:LEU:CG	28:B2:50:ILE:HG13	2.35	0.57
28:B2:62:THR:O	28:B2:66:GLU:HG3	2.04	0.57
34:B8:26:LYS:NZ	34:B8:47:LYS:HD2	2.20	0.57
34:B8:50:LEU:C	34:B8:52:LYS:N	2.57	0.57
36:BA:436:C:H2'	36:BA:437:G:H8	1.70	0.57
36:BA:634:C:H2'	36:BA:635:C:C6	2.40	0.57
36:BA:1224:C:O2	36:BA:1224:C:C2'	2.52	0.57
36:BA:1652:A:H2'	36:BA:1653:G:H5'	1.86	0.57
36:BA:2159:G:H2'	36:BA:2160:G:C5'	2.34	0.57
36:BA:2740:A:H2'	36:BA:2741:A:C8	2.40	0.57
46:BN:62:VAL:CG2	46:BN:66:LYS:HD2	2.34	0.57
48:BP:38:GLN:O	48:BP:39:LYS:HB2	2.04	0.57
48:BP:77:ARG:HH11	48:BP:77:ARG:HG2	1.70	0.57
48:BP:113:LYS:O	48:BP:114:ILE:HB	2.05	0.57
49:BQ:29:PHE:CB	49:BQ:105:GLU:OE2	2.51	0.57
50:BR:21:TYR:HB3	50:BR:47:PHE:CE2	2.40	0.57
1:CA:271:C:H2'	1:CA:272:C:C6	2.40	0.57
6:CF:19:LEU:HD11	6:CF:59:TYR:CZ	2.40	0.57
17:CQ:59:ILE:HG23	17:CQ:71:PHE:HB3	1.86	0.57
22:CW:59:U:H3'	22:CW:60:U:H6	1.69	0.57
24:CY:74:C:C2	25:CZ:295:ARG:NH2	2.71	0.57
36:DA:569:U:C4	36:DA:570:G:C6	2.93	0.57
36:DA:631:A:C5'	48:DP:65:ARG:HD3	2.35	0.57
36:DA:893:C:H2'	36:DA:894:C:C6	2.40	0.57
36:DA:2219:G:O2'	36:DA:2220:G:H5'	2.04	0.57
38:DC:114:VAL:HG12	38:DC:144:THR:CA	2.35	0.57
38:DC:123:VAL:HG22	38:DC:127:LEU:CB	2.35	0.57
38:DC:131:LEU:HD22	38:DC:136:LEU:HB2	1.87	0.57
39:DD:30:GLU:OE1	39:DD:63:ARG:NE	2.37	0.57
40:DE:50:GLY:CA	40:DE:78:LEU:HB3	2.32	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:29:TRP:C	42:DG:31:VAL:H	2.07	0.57
42:DG:141:PHE:HB3	42:DG:142:PRO:CD	2.32	0.57
51:DS:39:ILE:HD11	51:DS:73:LEU:HD21	1.86	0.57
57:DY:77:PRO:O	57:DY:78:ALA:HB2	2.05	0.57
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.70	0.57
2:AB:61:LEU:HD11	2:AB:160:ASP:HB3	1.87	0.57
4:AD:25:ARG:C	4:AD:27:TYR:N	2.58	0.57
4:AD:100:ARG:HG3	4:AD:102:ASP:OD1	2.05	0.57
4:AD:114:ARG:HG3	4:AD:114:ARG:NH1	2.10	0.57
7:AG:69:VAL:HG13	7:AG:100:ALA:HA	1.86	0.57
16:AP:22:THR:HG22	16:AP:32:TYR:HB2	1.86	0.57
19:AS:16:LEU:H	19:AS:16:LEU:CD1	2.14	0.57
22:AV:72:C:C2'	22:AV:73:A:H5"	2.35	0.57
32:B6:26:ASN:OD1	32:B6:26:ASN:C	2.43	0.57
32:B6:28:ARG:HG2	32:B6:28:ARG:NH1	2.20	0.57
33:B7:24:THR:HG23	33:B7:27:GLY:H	1.69	0.57
36:BA:363:G:H2'	36:BA:363(A):A:C8	2.40	0.57
36:BA:533:G:H5'	53:BU:24:TYR:CE1	2.40	0.57
36:BA:832:G:N3	48:BP:53:GLY:HA2	2.20	0.57
36:BA:833:U:H5"	48:BP:48:PRO:HB3	1.87	0.57
36:BA:2052:G:H4'	40:BE:143:ASN:O	2.05	0.57
36:BA:2249:U:H4'	36:BA:2275:C:C5	2.40	0.57
36:BA:2491:U:H4'	36:BA:2570:G:OP1	2.04	0.57
38:BC:119:VAL:HG22	38:BC:119:VAL:O	2.05	0.57
42:BG:98:ARG:HG2	42:BG:98:ARG:NH1	2.20	0.57
49:BQ:135:ASP:O	49:BQ:138:ASP:OD2	2.23	0.57
52:BT:38:ASN:C	52:BT:38:ASN:ND2	2.57	0.57
52:BT:62:THR:CG2	52:BT:75:ILE:HG13	2.35	0.57
54:BV:19:LYS:HE2	54:BV:19:LYS:HA	1.87	0.57
58:BZ:97:GLU:HA	58:BZ:127:LYS:HA	1.85	0.57
3:CC:35:GLU:HG3	3:CC:95:THR:OG1	2.04	0.57
4:CD:65:ARG:HB2	4:CD:75:PHE:CD1	2.40	0.57
4:CD:129:ASN:ND2	4:CD:145:GLU:H	2.03	0.57
4:CD:189:PRO:CB	4:CD:194:LEU:HD21	2.27	0.57
16:CP:8:ARG:C	16:CP:9:PHE:HD1	2.08	0.57
20:CT:56:MET:HG3	20:CT:88:VAL:HG21	1.85	0.57
25:CZ:19:HIS:CE1	36:DA:2661:G:P	2.96	0.57
29:D3:9:VAL:HG11	29:D3:55:ARG:HD3	1.87	0.57
32:D6:44:ARG:CA	32:D6:45:LYS:HE3	2.34	0.57
34:D8:15:LYS:HD2	34:D8:16:ILE:H	1.70	0.57
36:DA:856:C:H2'	36:DA:857:C:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1058:G:H1'	36:DA:1082:U:C4	2.40	0.57
41:DF:167:ALA:CB	41:DF:173:VAL:HG11	2.33	0.57
48:DP:122:PRO:HA	48:DP:141:ALA:O	2.05	0.57
50:DR:52:ILE:HD13	50:DR:79:LEU:HD21	1.86	0.57
52:DT:90:GLN:C	52:DT:92:GLY:N	2.57	0.57
54:DV:99:ILE:HD13	54:DV:99:ILE:N	2.12	0.57
57:DY:44:ILE:HD12	57:DY:44:ILE:N	2.19	0.57
1:AA:1054:C:N4	24:AY:34:C:C2	2.73	0.57
1:AA:1283:G:O2'	1:AA:1284:C:P	2.63	0.57
9:AI:19:LEU:CD2	9:AI:59:PHE:HD2	2.17	0.57
9:AI:97:LYS:HB3	9:AI:98:PRO:HD3	1.86	0.57
13:AM:13:LYS:HA	13:AM:44:ARG:NH1	2.20	0.57
25:AZ:107:SER:OG	25:AZ:137:LYS:HD2	2.04	0.57
25:AZ:191:GLY:CA	25:AZ:197:ASP:OD2	2.53	0.57
31:B5:19:ARG:HG3	36:BA:2046:G:H5'	1.87	0.57
34:B8:12:LYS:HE2	36:BA:247:G:O6	2.05	0.57
35:B9:29:ASN:HD22	35:B9:29:ASN:H	1.51	0.57
36:BA:127:A:H5"	36:BA:128:C:O4'	2.04	0.57
36:BA:189:G:H2'	36:BA:205:G:H22	1.70	0.57
36:BA:1069:A:H1'	36:BA:1070:A:OP2	2.04	0.57
36:BA:1245:G:H5"	41:BF:34:TRP:HZ2	1.69	0.57
36:BA:1525:G:O2'	36:BA:1526:G:H5'	2.05	0.57
36:BA:1655:A:O2'	40:BE:115:GLY:HA3	2.04	0.57
36:BA:2182:G:O2'	36:BA:2183:C:H5'	2.05	0.57
36:BA:2415:G:H4'	48:BP:66:GLY:CA	2.35	0.57
36:BA:2750:A:H5"	36:BA:2751:G:OP2	2.04	0.57
37:BB:49:C:H2'	37:BB:50:G:C8	2.40	0.57
39:BD:35:LYS:HB3	39:BD:36:PRO:CD	2.34	0.57
40:BE:93:VAL:O	40:BE:95:ILE:N	2.38	0.57
41:BF:84:VAL:C	41:BF:86:GLY:N	2.59	0.57
50:BR:7:GLY:O	50:BR:8:ARG:CZ	2.53	0.57
50:BR:96:ARG:HH11	50:BR:96:ARG:HG2	1.68	0.57
52:BT:96:ARG:HB2	52:BT:96:ARG:HH11	1.65	0.57
1:CA:501:C:H2'	1:CA:502:G:H8	1.68	0.57
1:CA:1002:G:H2'	1:CA:1003:G:O4'	2.05	0.57
1:CA:1525:G:O2'	1:CA:1526:G:H5'	2.05	0.57
2:CB:77:ALA:O	2:CB:81:VAL:HG23	2.03	0.57
3:CC:76:VAL:CG2	3:CC:103:VAL:HG11	2.34	0.57
4:CD:126:ILE:HG22	4:CD:127:THR:N	2.20	0.57
4:CD:133:VAL:HG12	4:CD:135:LEU:H	1.70	0.57
6:CF:91:VAL:CG1	6:CF:92:LYS:H	2.17	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:20:ASP:HB3	7:CG:23:VAL:CG2	2.34	0.57
8:CH:1:MET:O	8:CH:2:LEU:O	2.23	0.57
27:D1:86:SER:HB3	27:D1:89:GLU:OE1	2.05	0.57
28:D2:68:ARG:NH1	28:D2:72:ALA:HB1	2.20	0.57
34:D8:57:ARG:O	34:D8:59:LYS:N	2.37	0.57
36:DA:303:U:H2'	36:DA:304:G:C8	2.40	0.57
36:DA:973:A:O4'	36:DA:1188:U:C6	2.58	0.57
36:DA:1678:G:H22	36:DA:1989:G:H22	1.51	0.57
36:DA:1799:G:C8	39:DD:181:GLU:OE1	2.58	0.57
36:DA:2118:U:H5'	36:DA:2147:G:H21	1.70	0.57
36:DA:2722:G:O2'	50:DR:5:LYS:HB2	2.05	0.57
43:DH:94:TYR:HA	43:DH:106:THR:O	2.05	0.57
51:DS:67:ARG:NH2	51:DS:100:ALA:N	2.52	0.57
55:DW:36:LEU:HD23	55:DW:36:LEU:N	2.18	0.57
58:DZ:75:ASN:N	58:DZ:75:ASN:HD22	2.03	0.57
10:AJ:89:ASP:O	10:AJ:90:LEU:CB	2.52	0.56
12:AL:42:THR:CG2	12:AL:52:LEU:HD12	2.35	0.56
13:AM:34:LEU:CD1	13:AM:41:PRO:HA	2.34	0.56
14:AN:12:ARG:HB3	14:AN:14:PRO:HD2	1.87	0.56
25:AZ:24:LYS:O	25:AZ:26:THR:N	2.33	0.56
34:B8:63:PRO:O	34:B8:64:TYR:O	2.23	0.56
36:BA:92:A:N3	36:BA:92:A:H2'	2.20	0.56
36:BA:580:C:H2'	36:BA:581:C:H6	1.69	0.56
36:BA:1210:A:H5'	36:BA:1210:A:H8	1.69	0.56
36:BA:1322:A:H2'	36:BA:1323:U:C6	2.40	0.56
37:BB:112:U:H2'	37:BB:113:G:H8	1.69	0.56
37:BB:114:C:H2'	37:BB:115:G:C8	2.40	0.56
38:BC:59:ARG:HH21	38:BC:142:ALA:HB2	1.70	0.56
42:BG:30:GLU:OE2	42:BG:32:PRO:HD3	2.05	0.56
43:BH:153:LYS:H	43:BH:153:LYS:CD	1.99	0.56
46:BN:115:ARG:HA	46:BN:118:LYS:HZ3	1.70	0.56
47:BO:9:GLU:HG3	47:BO:10:VAL:N	2.20	0.56
48:BP:38:GLN:CG	48:BP:39:LYS:H	2.12	0.56
49:BQ:112:GLU:HG2	49:BQ:113:GLN:N	2.20	0.56
53:BU:90:VAL:HG21	54:BV:47:VAL:HG21	1.87	0.56
57:BY:56:PRO:O	57:BY:57:GLN:C	2.42	0.56
57:BY:73:ARG:HA	57:BY:73:ARG:HE	1.70	0.56
1:CA:1430:C:H2'	1:CA:1431:C:O2	2.05	0.56
3:CC:70:VAL:HG12	3:CC:72:LYS:N	2.19	0.56
4:CD:86:LYS:HE3	4:CD:86:LYS:HA	1.87	0.56
6:CF:13:ASN:O	6:CF:14:LEU:HD22	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:45:PRO:HB3	12:CL:92:ASP:HB3	1.87	0.56
16:CP:17:TYR:HE1	16:CP:41:PRO:HG3	1.67	0.56
19:CS:53:ASN:HD22	19:CS:53:ASN:C	2.08	0.56
20:CT:104:LEU:HD23	20:CT:104:LEU:C	2.26	0.56
24:CY:41:C:H5'	24:CY:41:C:C6	2.35	0.56
24:CY:77:TRP:O	25:CZ:273:HIS:HA	2.05	0.56
27:D1:49:VAL:HG12	27:D1:60:PHE:O	2.05	0.56
27:D1:62:VAL:HG22	27:D1:63:ALA:O	2.05	0.56
30:D4:14:ILE:H	30:D4:14:ILE:CD1	2.18	0.56
31:D5:36:CYS:O	31:D5:38:ALA:N	2.38	0.56
36:DA:141:A:H8	36:DA:1408:C:HO2'	1.50	0.56
36:DA:143(A):C:H4'	56:DX:38:GLU:OE2	2.04	0.56
36:DA:583:G:C5	36:DA:584:C:C5	2.92	0.56
36:DA:752:A:O2'	36:DA:753:C:OP2	2.22	0.56
36:DA:1092:C:H2'	36:DA:1093:G:H5'	1.86	0.56
36:DA:1120:G:H2'	36:DA:1121:C:C6	2.39	0.56
36:DA:2185:C:C2'	36:DA:2186:G:H5'	2.29	0.56
36:DA:2341:G:H2'	36:DA:2342:C:C6	2.40	0.56
36:DA:2681:C:H2'	36:DA:2681:C:O2	2.05	0.56
37:DB:65:C:O2'	37:DB:66:A:H5'	2.05	0.56
38:DC:123:VAL:HG21	38:DC:127:LEU:CD2	2.33	0.56
41:DF:40:GLN:NE2	41:DF:182:ASN:HB2	2.17	0.56
48:DP:114:ILE:HG21	48:DP:130:PHE:CE2	2.40	0.56
49:DQ:133:ARG:HH11	49:DQ:133:ARG:HB2	1.69	0.56
50:DR:23:ASN:N	50:DR:23:ASN:HD22	2.01	0.56
50:DR:87:TYR:O	50:DR:89:ASP:N	2.38	0.56
51:DS:95:HIS:CG	51:DS:96:GLY:N	2.72	0.56
52:DT:33:LYS:NZ	52:DT:74:ARG:NH2	2.52	0.56
52:DT:94:ALA:C	52:DT:96:ARG:H	2.07	0.56
54:DV:35:LEU:C	54:DV:37:VAL:H	2.07	0.56
56:DX:12:VAL:CG2	56:DX:13:LEU:H	2.14	0.56
1:AA:115:G:H1'	1:AA:116:A:N7	2.21	0.56
1:AA:822:C:O2'	1:AA:823:G:H5'	2.05	0.56
7:AG:69:VAL:O	7:AG:138:LYS:HG3	2.05	0.56
9:AI:4:TYR:CG	9:AI:88:TYR:HB2	2.40	0.56
10:AJ:29:ARG:O	10:AJ:30:SER:HB3	2.05	0.56
14:AN:6:LEU:HB3	14:AN:23:ARG:NH2	2.20	0.56
14:AN:40:CYS:SG	14:AN:42:ILE:HB	2.44	0.56
20:AT:30:LYS:HG3	20:AT:34:LYS:HE3	1.87	0.56
24:AY:41:C:H6	24:AY:41:C:C5'	2.16	0.56
34:B8:51:ALA:N	34:B8:53:PRO:HD2	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:271(K):U:H3'	36:BA:271(L):U:C5'	2.35	0.56
36:BA:1038:C:C2'	36:BA:1039:G:H5"	2.35	0.56
36:BA:1166:C:H2'	36:BA:1167:U:C6	2.40	0.56
36:BA:1640:C:H3'	36:BA:1641:A:H8	1.70	0.56
36:BA:1847:A:H3'	36:BA:1848:A:H5'	1.87	0.56
36:BA:2721:A:H2'	36:BA:2722:G:O4'	2.05	0.56
44:BJ:25:UNK:HA	44:BJ:116:UNK:HA	1.88	0.56
52:BT:106:SER:O	52:BT:107:ASP:HB3	2.05	0.56
57:BY:7:VAL:HB	57:BY:8:LYS:CE	2.36	0.56
1:CA:1250:A:C4'	9:CI:68:GLY:H	2.14	0.56
1:CA:1321:C:C3'	1:CA:1322:C:H5"	2.35	0.56
2:CB:151:GLY:O	2:CB:153:ARG:N	2.37	0.56
5:CE:101:ILE:O	5:CE:120:THR:HB	2.05	0.56
7:CG:7:ALA:O	7:CG:8:GLU:HB2	2.04	0.56
9:CI:48:GLU:N	9:CI:49:PRO:CD	2.67	0.56
15:CO:32:LEU:HD13	15:CO:63:ARG:HB2	1.88	0.56
16:CP:71:ARG:HB2	16:CP:71:ARG:HH11	1.70	0.56
18:CR:53:ARG:HG3	18:CR:63:GLN:NE2	2.20	0.56
25:CZ:86:ALA:C	25:CZ:88:TYR:H	2.07	0.56
25:CZ:221:PHE:HE1	25:CZ:242:ILE:HD12	1.70	0.56
27:D1:70:VAL:HG13	27:D1:71:TYR:N	2.20	0.56
28:D2:51:ARG:HH11	28:D2:55:ARG:NH2	2.03	0.56
34:D8:6:THR:HG21	36:DA:243:U:OP1	2.04	0.56
34:D8:56:GLU:O	34:D8:57:ARG:C	2.44	0.56
36:DA:18:C:H5"	53:DU:24:TYR:O	2.05	0.56
36:DA:225:A:O2'	36:DA:226:G:H5'	2.05	0.56
36:DA:310:A:P	57:DY:18:GLY:HA2	2.45	0.56
36:DA:654(C):G:C2'	36:DA:654(D):G:H5'	2.35	0.56
36:DA:1320:C:C5	36:DA:1329:U:H5"	2.40	0.56
36:DA:1386:C:H2'	36:DA:1387:C:C6	2.40	0.56
36:DA:1429:G:O2'	36:DA:1430:C:H5'	2.03	0.56
36:DA:1482:G:H2'	36:DA:1484:G:H8	1.70	0.56
36:DA:1841:U:H2'	36:DA:1842:G:H8	1.69	0.56
36:DA:1948:G:O2'	36:DA:1949:G:H5'	2.04	0.56
36:DA:2684:U:O2'	47:DO:68:GLU:HG3	2.05	0.56
36:DA:2836:U:H2'	36:DA:2837:G:C8	2.40	0.56
42:DG:64:THR:OG1	42:DG:94:LEU:HD11	2.06	0.56
44:DJ:70:UNK:O	44:DJ:71:UNK:C	2.53	0.56
46:DN:30:ILE:HG23	46:DN:52:VAL:HG11	1.87	0.56
48:DP:58:THR:O	48:DP:58:THR:CG2	2.53	0.56
54:DV:38:LEU:HD23	54:DV:39:LEU:N	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:8:LYS:HD2	57:DY:8:LYS:N	2.20	0.56
1:AA:607:A:O2'	1:AA:608:A:H5'	2.06	0.56
2:AB:8:LYS:O	2:AB:10:LEU:N	2.38	0.56
2:AB:229:VAL:CG1	2:AB:230:VAL:N	2.67	0.56
2:AB:233:SER:O	2:AB:235:SER:N	2.38	0.56
3:AC:14:ILE:CG1	3:AC:15:THR:H	2.18	0.56
6:AF:40:VAL:O	6:AF:40:VAL:HG13	2.05	0.56
16:AP:8:ARG:C	16:AP:9:PHE:HD1	2.08	0.56
16:AP:50:LYS:HD3	16:AP:51:VAL:N	2.21	0.56
21:AU:10:ARG:O	21:AU:11:GLY:C	2.42	0.56
22:AV:44:G:C2'	22:AV:45:U:H5'	2.36	0.56
27:B1:40:ARG:NH2	36:BA:2232:U:OP2	2.38	0.56
34:B8:48:PHE:C	34:B8:49:VAL:HG22	2.25	0.56
34:B8:54:GLU:O	34:B8:58:ILE:HG12	2.05	0.56
36:BA:16:G:O2'	36:BA:17:G:H5'	2.06	0.56
36:BA:176:G:H3'	36:BA:177:G:N2	2.20	0.56
36:BA:271(R):G:O2'	36:BA:271(S):G:H5'	2.05	0.56
36:BA:303:U:H2'	36:BA:304:G:H8	1.68	0.56
36:BA:338:G:N2	36:BA:339:U:H1'	2.20	0.56
36:BA:474:G:C6	36:BA:510:C:N4	2.73	0.56
36:BA:481:G:H1'	36:BA:506:G:H21	1.70	0.56
36:BA:1222:C:H2'	36:BA:1223:G:C5'	2.35	0.56
36:BA:1469:A:O2'	36:BA:1470:G:H5'	2.04	0.56
36:BA:1839:G:H8	36:BA:1839:G:H5'	1.68	0.56
36:BA:1946:U:H2'	36:BA:1947:C:H6	1.70	0.56
38:BC:73:ARG:HG3	38:BC:73:ARG:HH11	1.71	0.56
39:BD:132:PRO:HD2	39:BD:135:PHE:HD2	1.70	0.56
39:BD:147:LEU:HD13	39:BD:155:LEU:HD11	1.87	0.56
39:BD:218:ARG:HG3	39:BD:218:ARG:HH11	1.70	0.56
39:BD:267:SER:C	39:BD:269:PHE:N	2.46	0.56
40:BE:182:LEU:C	40:BE:183:LEU:HD12	2.26	0.56
42:BG:28:VAL:O	42:BG:28:VAL:HG12	2.05	0.56
43:BH:41:MET:O	43:BH:42:ARG:CB	2.53	0.56
48:BP:112:LEU:H	48:BP:128:HIS:CD2	2.23	0.56
51:BS:57:LYS:HD2	51:BS:57:LYS:C	2.25	0.56
52:BT:92:GLY:O	52:BT:94:ALA:N	2.37	0.56
57:BY:29:GLU:N	57:BY:29:GLU:OE1	2.35	0.56
1:CA:79:G:H21	1:CA:91:C:N4	2.03	0.56
1:CA:160:A:H2'	1:CA:161:A:O4'	2.04	0.56
1:CA:392:G:H2'	1:CA:393:A:H8	1.70	0.56
1:CA:452:A:O2'	1:CA:453:A:H8	1.89	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:521:G:H4'	12:CL:73:GLU:HG3	1.86	0.56
1:CA:646:U:H2'	1:CA:647:C:C6	2.41	0.56
1:CA:825:G:O2'	1:CA:826:C:H5'	2.06	0.56
1:CA:858:G:C5	1:CA:869:G:N7	2.73	0.56
1:CA:1086:U:H2'	1:CA:1087:G:C5'	2.35	0.56
1:CA:1151:A:H5'	10:CJ:41:PRO:HA	1.86	0.56
2:CB:87:ARG:O	2:CB:87:ARG:HD2	2.04	0.56
2:CB:96:ARG:HD3	2:CB:148:TYR:CE1	2.40	0.56
2:CB:190:THR:O	2:CB:191:ASP:HB3	2.04	0.56
3:CC:113:ALA:HB3	3:CC:114:PRO:CD	2.33	0.56
5:CE:110:LEU:CD1	5:CE:118:ILE:HD13	2.33	0.56
8:CH:86:ILE:HG12	8:CH:135:CYS:HA	1.85	0.56
9:CI:17:VAL:CG1	9:CI:81:ILE:HD13	2.35	0.56
9:CI:19:LEU:HD21	9:CI:59:PHE:CB	2.34	0.56
10:CJ:90:LEU:H	10:CJ:91:PRO:HD3	1.70	0.56
12:CL:8:ASN:HD22	17:CQ:34:LYS:HZ1	1.52	0.56
12:CL:8:ASN:HD22	17:CQ:34:LYS:HZ3	1.54	0.56
12:CL:25:PRO:O	12:CL:26:ALA:HB2	2.06	0.56
12:CL:122:THR:HG23	12:CL:122:THR:O	2.04	0.56
13:CM:116:THR:O	13:CM:117:VAL:C	2.42	0.56
15:CO:25:THR:O	15:CO:29:VAL:HG23	2.05	0.56
25:CZ:26:THR:HG21	60:CZ:501:GDP:H8	1.69	0.56
25:CZ:68:VAL:O	25:CZ:69:GLU:HG2	2.05	0.56
25:CZ:131:ILE:O	25:CZ:168:VAL:HG13	2.05	0.56
27:D1:50:ARG:HD3	36:DA:2200:C:OP1	2.05	0.56
28:D2:69:ARG:HB2	28:D2:70:GLN:NE2	2.20	0.56
30:D4:5:ILE:O	30:D4:5:ILE:CG1	2.53	0.56
36:DA:171:G:O2'	36:DA:172:C:H5'	2.05	0.56
36:DA:330:A:HO2'	36:DA:331:A:H8	1.53	0.56
36:DA:445:C:O2'	36:DA:446:G:H5'	2.05	0.56
36:DA:523:C:O2'	36:DA:524:U:H5'	2.05	0.56
36:DA:1480:G:H1	36:DA:1511:C:H42	1.53	0.56
36:DA:1538:G:H2'	36:DA:1539:G:C8	2.41	0.56
36:DA:1784:A:H4'	36:DA:1785:A:O5'	2.04	0.56
36:DA:2138:C:H2'	36:DA:2139:C:C6	2.40	0.56
36:DA:2199:A:H5'	36:DA:2200:C:OP2	2.06	0.56
36:DA:2887:U:H2'	36:DA:2888:C:H6	1.70	0.56
37:DB:77:U:H4'	58:DZ:84:GLU:OE2	2.05	0.56
41:DF:51:THR:CG2	41:DF:92:PRO:HD2	2.35	0.56
41:DF:114:VAL:HG12	41:DF:114:VAL:O	2.05	0.56
43:DH:41:MET:HG3	43:DH:42:ARG:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:42:ARG:HG2	43:DH:43:VAL:N	2.18	0.56
47:DO:24:VAL:HG21	47:DO:30:ALA:O	2.06	0.56
48:DP:62:LEU:H	48:DP:62:LEU:CD2	2.17	0.56
49:DQ:12:GLN:HG2	49:DQ:73:PRO:HD2	1.86	0.56
49:DQ:64:ILE:HG22	49:DQ:65:PHE:N	2.20	0.56
51:DS:106:ARG:HH11	51:DS:106:ARG:CG	2.18	0.56
52:DT:6:LEU:O	52:DT:10:VAL:HG23	2.05	0.56
53:DU:17:ILE:HG23	53:DU:39:LEU:CD1	2.36	0.56
58:DZ:58:VAL:HA	58:DZ:67:LEU:O	2.05	0.56
58:DZ:123:ASP:C	58:DZ:124:ILE:HG12	2.26	0.56
1:AA:626:U:H2'	1:AA:627:G:C8	2.40	0.56
1:AA:1442(B):A:N1	52:BT:118:ARG:NH2	2.53	0.56
2:AB:96:ARG:HH11	2:AB:148:TYR:HE1	1.52	0.56
8:AH:72:PRO:O	8:AH:73:ASP:HB3	2.04	0.56
10:AJ:3:LYS:C	10:AJ:4:ILE:HD12	2.25	0.56
16:AP:43:LYS:HA	16:AP:48:TRP:CG	2.41	0.56
28:B2:55:ARG:HG3	28:B2:55:ARG:NH1	2.21	0.56
31:B5:57:VAL:CG1	31:B5:58:LEU:H	2.13	0.56
36:BA:321:G:H4'	41:BF:165:ARG:O	2.06	0.56
36:BA:1862:G:O2'	36:BA:1863:G:H5'	2.05	0.56
40:BE:38:THR:C	40:BE:40:GLU:H	2.09	0.56
46:BN:47:ALA:HB2	46:BN:112:LEU:CD1	2.34	0.56
51:BS:30:ARG:HD3	51:BS:97:ARG:HG2	1.88	0.56
51:BS:35:ILE:H	51:BS:53:SER:HB2	1.69	0.56
52:BT:81:PRO:C	52:BT:82:LEU:HD12	2.26	0.56
56:BX:10:ALA:O	56:BX:28:PHE:HB2	2.05	0.56
57:BY:29:GLU:HB2	57:BY:38:ILE:CG2	2.35	0.56
58:BZ:109:ALA:N	58:BZ:142:SER:HA	2.20	0.56
1:CA:430:A:OP2	4:CD:22:LYS:HE2	2.06	0.56
1:CA:1015:A:H2'	1:CA:1016:A:C8	2.40	0.56
2:CB:234:PRO:O	2:CB:235:SER:O	2.23	0.56
4:CD:126:ILE:CG2	4:CD:127:THR:N	2.69	0.56
7:CG:14:PRO:HG3	7:CG:21:VAL:CG1	2.36	0.56
8:CH:91:ARG:HG3	17:CQ:34:LYS:H	1.69	0.56
11:CK:126:ARG:C	11:CK:128:ALA:H	2.08	0.56
18:CR:51:LEU:HD22	18:CR:52:PRO:HD2	1.87	0.56
22:CV:68:C:H2'	22:CV:69:G:C5'	2.33	0.56
25:CZ:36:ALA:HA	25:CZ:39:ASN:O	2.05	0.56
25:CZ:101:GLY:HA3	25:CZ:210:ILE:CD1	2.35	0.56
25:CZ:133:VAL:CG2	25:CZ:168:VAL:HG11	2.28	0.56
25:CZ:221:PHE:CE2	25:CZ:247:VAL:HG11	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:271(F):C:H2'	36:DA:271(G):C:O4'	2.04	0.56
36:DA:1247:A:OP2	48:DP:18:ARG:NH2	2.38	0.56
36:DA:2297:C:C2'	36:DA:2298:A:H5'	2.35	0.56
42:DG:71:THR:HG22	42:DG:71:THR:O	2.06	0.56
48:DP:107:LYS:O	48:DP:108:LYS:HB2	2.05	0.56
51:DS:12:PHE:C	51:DS:12:PHE:CD1	2.79	0.56
51:DS:67:ARG:HH21	51:DS:100:ALA:N	2.04	0.56
58:DZ:10:ARG:NE	58:DZ:36:LYS:HB2	2.17	0.56
1:AA:384:G:H2'	1:AA:385:C:C6	2.40	0.56
1:AA:1039:C:H2'	1:AA:1040:U:C5	2.41	0.56
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.06	0.56
3:AC:38:ARG:HH11	3:AC:38:ARG:CB	2.18	0.56
21:AU:2:GLY:O	21:AU:4:GLY:N	2.38	0.56
30:B4:5:ILE:O	30:B4:5:ILE:CG1	2.54	0.56
32:B6:12:GLU:HA	32:B6:23:THR:CB	2.35	0.56
34:B8:62:LEU:N	34:B8:63:PRO:HD2	2.20	0.56
36:BA:84:A:H2	36:BA:98:G:N3	2.03	0.56
36:BA:729:G:OP2	39:BD:13:ARG:NH1	2.38	0.56
36:BA:850:C:O2'	36:BA:851:U:H5'	2.06	0.56
36:BA:1162:G:H4'	54:BV:24:LYS:HB3	1.87	0.56
36:BA:1246:A:OP1	48:BP:16:ARG:NH2	2.38	0.56
36:BA:1417:C:O2'	36:BA:1418:G:H5'	2.05	0.56
36:BA:2295:C:H2'	36:BA:2296:U:H6	1.71	0.56
36:BA:2455:G:H2'	36:BA:2456:C:C6	2.41	0.56
39:BD:37:LEU:O	39:BD:38:LYS:O	2.24	0.56
42:BG:82:LEU:HD12	42:BG:87:PRO:HA	1.86	0.56
42:BG:110:ALA:O	42:BG:111:LEU:C	2.44	0.56
42:BG:113:ARG:HA	42:BG:113:ARG:HE	1.71	0.56
43:BH:136:ILE:H	43:BH:136:ILE:CD1	2.17	0.56
47:BO:34:THR:HG23	47:BO:35:VAL:N	2.20	0.56
49:BQ:54:MET:HB3	49:BQ:64:ILE:CD1	2.35	0.56
49:BQ:141:GLN:C	58:BZ:53:ILE:HB	2.25	0.56
50:BR:59:ASP:O	50:BR:61:HIS:N	2.38	0.56
52:BT:98:LYS:HB3	52:BT:100:TYR:CE1	2.40	0.56
54:BV:8:GLY:C	54:BV:10:LYS:H	2.09	0.56
55:BW:12:ILE:HD13	55:BW:17:VAL:HG22	1.86	0.56
1:CA:112:G:H4'	1:CA:389:A:H4'	1.87	0.56
1:CA:1221:G:OP1	1:CA:1321:C:N3	2.38	0.56
1:CA:1418:A:H2	36:DA:1948:G:N3	2.03	0.56
2:CB:111:ARG:HE	2:CB:145:LEU:HD21	1.70	0.56
3:CC:21:ARG:NH2	3:CC:56:ASP:OD1	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:107:GLN:CD	3:CC:107:GLN:N	2.58	0.56
4:CD:36:ARG:N	4:CD:37:PRO:HD3	2.20	0.56
10:CJ:96:ILE:H	10:CJ:96:ILE:CD1	2.16	0.56
11:CK:89:ALA:O	11:CK:91:ARG:N	2.39	0.56
13:CM:36:LYS:HD2	13:CM:59:TYR:OH	2.06	0.56
25:CZ:20:VAL:CG1	25:CZ:115:GLN:HE22	2.18	0.56
26:D0:11:ARG:O	26:D0:14:ARG:NH2	2.38	0.56
30:D4:5:ILE:HD13	30:D4:5:ILE:H	1.70	0.56
36:DA:208:C:H2'	36:DA:209:C:C6	2.40	0.56
36:DA:769:G:H4'	36:DA:1379:A:N1	2.21	0.56
36:DA:1751:C:H2'	36:DA:1752:C:C6	2.41	0.56
36:DA:2523:G:H2'	36:DA:2524:G:H5"	1.87	0.56
38:DC:30:LYS:HD3	38:DC:185:LEU:CD1	2.35	0.56
39:DD:229:VAL:HG13	39:DD:230:ASP:N	2.20	0.56
40:DE:52:LEU:HB3	40:DE:76:ARG:H	1.70	0.56
41:DF:69:HIS:CD2	41:DF:69:HIS:N	2.74	0.56
43:DH:12:PRO:N	43:DH:48:GLY:HA2	2.21	0.56
47:DO:71:ARG:NH2	47:DO:122:LEU:O	2.36	0.56
48:DP:40:SER:O	48:DP:41:ARG:CD	2.53	0.56
48:DP:97:PRO:O	48:DP:98:GLU:HB3	2.05	0.56
50:DR:63:ARG:HA	50:DR:80:PHE:CE2	2.41	0.56
58:DZ:152:ALA:C	58:DZ:154:ASP:H	2.07	0.56
1:AA:1314:C:O5'	1:AA:1314:C:O2	2.23	0.56
2:AB:8:LYS:NZ	2:AB:217:ARG:NH1	2.53	0.56
2:AB:109:SER:O	2:AB:111:ARG:N	2.39	0.56
3:AC:3:ASN:O	3:AC:4:LYS:CB	2.51	0.56
12:AL:117:ARG:HB3	12:AL:122:THR:HG23	1.86	0.56
23:AX:26:A:H3'	23:AX:27:A:O4'	2.05	0.56
25:AZ:131:ILE:O	25:AZ:168:VAL:HG13	2.05	0.56
25:AZ:174:SER:HB2	25:AZ:177:LEU:HD12	1.87	0.56
31:B5:6:VAL:HG13	36:BA:2016:U:H1'	1.88	0.56
32:B6:9:LEU:HD13	32:B6:9:LEU:C	2.25	0.56
36:BA:271(E):U:H2'	36:BA:271(F):C:C6	2.41	0.56
36:BA:1007:C:OP1	46:BN:37:LYS:HE3	2.05	0.56
36:BA:1887:C:C3'	36:BA:1888:G:H5"	2.36	0.56
39:BD:14:ARG:HD3	39:BD:15:PHE:CZ	2.40	0.56
49:BQ:27:VAL:HG23	49:BQ:137:TYR:CE2	2.40	0.56
50:BR:55:ALA:HB2	50:BR:79:LEU:CD1	2.35	0.56
51:BS:41:ASP:OD2	51:BS:44:LYS:HB2	2.05	0.56
1:CA:358:U:H1'	25:CZ:233:GLY:HA2	1.86	0.56
1:CA:393:A:C2'	1:CA:394:G:H5'	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:644:G:H2'	1:CA:645:C:H6	1.71	0.56
1:CA:1325:C:H5"	21:CU:15:ARG:HH21	1.71	0.56
2:CB:178:ARG:NH1	8:CH:71:GLY:O	2.39	0.56
6:CF:30:LEU:HD23	6:CF:75:LEU:HD11	1.88	0.56
11:CK:126:ARG:HG2	11:CK:126:ARG:O	2.05	0.56
12:CL:80:HIS:HD2	24:CY:68:C:C4'	2.18	0.56
13:CM:73:GLU:O	13:CM:76:ALA:N	2.39	0.56
21:CU:5:ASP:O	21:CU:11:GLY:HA3	2.06	0.56
21:CU:6:ARG:HD3	21:CU:15:ARG:HH11	1.68	0.56
25:CZ:270:VAL:CG1	25:CZ:286:VAL:HG21	2.29	0.56
26:D0:26:TYR:HA	26:D0:69:PHE:HE1	1.70	0.56
26:D0:27:GLU:CD	26:D0:27:GLU:H	2.09	0.56
27:D1:65:SER:O	27:D1:66:HIS:CB	2.54	0.56
28:D2:62:THR:O	28:D2:65:ASN:HB2	2.06	0.56
29:D3:17:LYS:HG2	36:DA:969:U:OP1	2.06	0.56
36:DA:107:C:H2'	36:DA:108:U:H6	1.71	0.56
36:DA:793:A:OP2	36:DA:2072:G:H5'	2.05	0.56
36:DA:1290:C:H2'	36:DA:1291:C:H6	1.70	0.56
36:DA:1314:C:H5'	36:DA:1314:C:C6	2.40	0.56
36:DA:1813:G:H1'	39:DD:50:THR:OG1	2.06	0.56
36:DA:2153:G:H2'	36:DA:2154:G:H8	1.71	0.56
36:DA:2315:G:H21	42:DG:128:ARG:HE	1.53	0.56
38:DC:49:ILE:HD12	38:DC:49:ILE:O	2.05	0.56
38:DC:159:GLY:O	38:DC:160:ARG:O	2.23	0.56
40:DE:73:GLU:HG3	40:DE:74:PRO:HD2	1.86	0.56
40:DE:107:THR:O	40:DE:190:GLY:HA2	2.05	0.56
41:DF:84:VAL:C	41:DF:86:GLY:N	2.59	0.56
41:DF:157:VAL:O	41:DF:157:VAL:HG23	2.05	0.56
42:DG:49:ASP:CG	42:DG:50:ALA:H	2.08	0.56
43:DH:102:ALA:HB2	43:DH:116:GLU:OE1	2.04	0.56
46:DN:86:PRO:HG2	46:DN:89:LYS:HG2	1.88	0.56
49:DQ:60:ARG:HA	58:DZ:178:GLU:O	2.05	0.56
52:DT:91:ARG:HG2	52:DT:116:ALA:HA	1.87	0.56
53:DU:69:CYS:HB2	53:DU:74:LEU:HD11	1.87	0.56
55:DW:5:ALA:HB2	55:DW:54:ALA:CB	2.33	0.56
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.40	0.56
1:AA:266:G:H5"	1:AA:267:C:H5	1.71	0.56
2:AB:45:GLN:HA	2:AB:45:GLN:HE21	1.69	0.56
10:AJ:78:ASN:C	10:AJ:79:ARG:HH11	2.07	0.56
25:AZ:26:THR:HG21	60:AZ:501:GDP:H8	1.69	0.56
25:AZ:176:LEU:HD22	25:AZ:179:LEU:HB3	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:49:LYS:HG3	26:B0:80:HIS:HD1	1.70	0.56
32:B6:53:LYS:HG2	32:B6:54:ILE:N	2.16	0.56
36:BA:548:A:H2'	36:BA:549:G:H5'	1.88	0.56
36:BA:2110:G:N2	36:BA:2178:C:H5	2.03	0.56
36:BA:2199:A:H3'	36:BA:2200:C:H6	1.70	0.56
36:BA:2460:U:H4'	49:BQ:79:LEU:HD11	1.88	0.56
36:BA:2777:G:H5"	36:BA:2778:A:C5'	2.35	0.56
39:BD:65:ILE:H	39:BD:65:ILE:CD1	2.14	0.56
40:BE:93:VAL:C	40:BE:95:ILE:H	2.09	0.56
43:BH:12:PRO:N	43:BH:48:GLY:HA2	2.21	0.56
46:BN:70:LYS:HE2	46:BN:72:TYR:OH	2.06	0.56
53:BU:79:PHE:HE2	53:BU:110:VAL:HG22	1.69	0.56
53:BU:92:ARG:HD2	53:BU:95:LEU:HG	1.87	0.56
54:BV:58:VAL:HB	54:BV:98:GLU:HG2	1.88	0.56
55:BW:65:LEU:HD23	55:BW:68:ARG:CD	2.36	0.56
56:BX:55:ASN:N	56:BX:55:ASN:HD22	2.04	0.56
58:BZ:145:GLU:OE1	58:BZ:145:GLU:HA	2.05	0.56
1:CA:397:A:N7	1:CA:547:A:O2'	2.38	0.56
1:CA:957:U:O2	1:CA:959:A:H8	1.89	0.56
1:CA:1246:C:O2'	1:CA:1247:U:H5'	2.05	0.56
2:CB:235:SER:O	2:CB:236:TYR:C	2.44	0.56
5:CE:36:ASP:OD1	5:CE:38:GLN:N	2.37	0.56
7:CG:140:ASP:HA	7:CG:143:ARG:HH12	1.69	0.56
11:CK:84:VAL:HG11	11:CK:95:ILE:HD11	1.87	0.56
19:CS:35:SER:C	19:CS:37:ARG:H	2.09	0.56
20:CT:63:ILE:HG22	20:CT:64:ASP:N	2.21	0.56
20:CT:82:SER:O	20:CT:86:ARG:HB2	2.05	0.56
24:CY:56:C:N1	36:DA:1067:A:C2	2.74	0.56
25:CZ:23:GLY:CA	25:CZ:105:VAL:HG11	2.32	0.56
30:D4:31:ILE:CG2	30:D4:33:VAL:HG23	2.35	0.56
36:DA:691:C:O4'	39:DD:43:ARG:NH1	2.39	0.56
36:DA:2556:C:H2'	36:DA:2557:G:O4'	2.06	0.56
38:DC:53:ARG:HH12	38:DC:55:ASP:CG	2.09	0.56
39:DD:99:ASP:OD1	39:DD:99:ASP:C	2.44	0.56
39:DD:118:VAL:HG13	39:DD:123:ALA:HB2	1.87	0.56
40:DE:63:LEU:O	40:DE:63:LEU:HD23	2.06	0.56
40:DE:105:THR:O	40:DE:196:VAL:HA	2.06	0.56
41:DF:175:THR:OG1	41:DF:176:LEU:N	2.37	0.56
43:DH:136:ILE:H	43:DH:136:ILE:CD1	2.16	0.56
46:DN:132:ALA:O	46:DN:133:GLN:CB	2.53	0.56
56:DX:35:THR:CG2	56:DX:37:THR:HB	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:646:U:H2'	1:AA:647:C:C6	2.40	0.56
2:AB:32:ILE:HG12	2:AB:32:ILE:O	2.03	0.56
4:AD:100:ARG:O	4:AD:103:ASN:HB3	2.06	0.56
13:AM:116:THR:O	13:AM:116:THR:CG2	2.54	0.56
20:AT:50:GLU:OE2	20:AT:100:ILE:HD11	2.06	0.56
24:AY:58:A:O2'	24:AY:59:G:H5"	2.05	0.56
25:AZ:325:LYS:O	25:AZ:328:GLY:N	2.39	0.56
32:B6:15:GLU:O	32:B6:17:LYS:N	2.38	0.56
32:B6:53:LYS:O	32:B6:54:ILE:C	2.44	0.56
36:BA:1411:C:H2'	36:BA:1412:A:H8	1.70	0.56
36:BA:1567:A:H5'	39:BD:58:HIS:CD2	2.41	0.56
36:BA:1614:A:H62	55:BW:93:ALA:HB2	1.71	0.56
36:BA:2187:G:C3'	36:BA:2188:C:H5'	2.35	0.56
37:BB:73:A:N1	58:BZ:34:ASN:ND2	2.54	0.56
38:BC:8:ARG:O	38:BC:12:GLU:HG2	2.06	0.56
52:BT:98:LYS:HB3	52:BT:100:TYR:HE1	1.71	0.56
1:CA:950:U:H2'	1:CA:951:G:C8	2.41	0.56
1:CA:955:U:H1'	1:CA:1227:A:H62	1.71	0.56
5:CE:12:LEU:CD1	5:CE:31:LEU:HB2	2.36	0.56
6:CF:60:PHE:CE2	18:CR:78:LEU:HD21	2.41	0.56
9:CI:4:TYR:HD2	9:CI:85:LEU:HA	1.70	0.56
9:CI:126:SER:O	9:CI:127:LYS:HB3	2.06	0.56
13:CM:9:ILE:HD12	13:CM:9:ILE:N	2.21	0.56
25:CZ:17:ILE:HG13	25:CZ:104:LEU:HA	1.88	0.56
25:CZ:290:LEU:HB2	25:CZ:293:VAL:HG21	1.88	0.56
28:D2:59:ARG:O	28:D2:63:VAL:HG23	2.06	0.56
36:DA:139:G:H2'	36:DA:139(A):G:H5"	1.87	0.56
36:DA:1472:A:O2'	36:DA:1473:G:H5'	2.06	0.56
36:DA:1720:U:H2'	36:DA:1721:G:C4'	2.35	0.56
36:DA:2019:A:H4'	53:DU:34:LYS:HD2	1.87	0.56
36:DA:2128:C:O2'	36:DA:2129:C:P	2.64	0.56
36:DA:2880:C:H1'	50:DR:92:GLY:O	2.06	0.56
37:DB:17:C:H2'	37:DB:18:G:O4'	2.06	0.56
39:DD:108:PRO:HB3	39:DD:143:HIS:CE1	2.41	0.56
43:DH:124:GLU:O	43:DH:131:VAL:HG13	2.06	0.56
50:DR:104:ARG:HG2	50:DR:104:ARG:O	2.05	0.56
52:DT:56:GLY:O	52:DT:59:THR:HG23	2.06	0.56
52:DT:65:LYS:HG3	52:DT:66:VAL:N	2.21	0.56
56:DX:68:ARG:O	56:DX:68:ARG:HD3	2.05	0.56
58:DZ:12:GLY:O	58:DZ:13:GLU:HG3	2.06	0.56
1:AA:701:C:OP1	1:AA:703:G:H5'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:714:G:H2'	1:AA:715:A:C8	2.41	0.56
2:AB:142:LEU:HD23	2:AB:142:LEU:C	2.26	0.56
2:AB:200:ILE:HD12	2:AB:200:ILE:N	2.20	0.56
25:AZ:341:GLN:NE2	25:AZ:389:ARG:O	2.39	0.56
28:B2:6:VAL:HG13	28:B2:7:ARG:N	2.20	0.56
28:B2:53:LEU:HA	28:B2:56:GLN:CG	2.36	0.56
32:B6:15:GLU:CD	32:B6:18:ARG:NE	2.58	0.56
36:BA:1754:C:OP1	52:BT:96:ARG:NH1	2.35	0.56
36:BA:2174:C:H2'	36:BA:2175:C:H5'	1.87	0.56
36:BA:2712:U:OP1	36:BA:2714:G:H4'	2.05	0.56
38:BC:4:GLY:O	38:BC:8:ARG:HG3	2.06	0.56
38:BC:53:ARG:HH11	38:BC:53:ARG:CB	2.18	0.56
38:BC:83:ILE:HG22	38:BC:83:ILE:O	2.06	0.56
40:BE:120:TRP:CD1	40:BE:155:LYS:HB3	2.41	0.56
42:BG:138:GLN:HB3	42:BG:153:ARG:O	2.06	0.56
46:BN:28:THR:HG23	46:BN:29:LYS:N	2.20	0.56
49:BQ:6:ARG:O	49:BQ:7:MET:HG3	2.05	0.56
1:CA:59:A:H1'	1:CA:354:G:N2	2.21	0.56
1:CA:370:C:O2'	1:CA:371:G:H5'	2.06	0.56
1:CA:1125:U:H1'	10:CJ:5:ARG:CZ	2.36	0.56
4:CD:174:LEU:HA	4:CD:184:LYS:O	2.06	0.56
15:CO:82:ILE:CG2	15:CO:83:GLU:N	2.68	0.56
27:D1:4:VAL:HG23	27:D1:10:LYS:O	2.05	0.56
34:D8:42:ARG:NH2	36:DA:2382:G:H21	2.04	0.56
36:DA:244:A:O3'	48:DP:74:GLU:HB2	2.05	0.56
36:DA:611:C:H2'	36:DA:612:C:H6	1.71	0.56
36:DA:1208:C:O2	36:DA:1208:C:H2'	2.06	0.56
36:DA:2162:G:O2'	36:DA:2163:C:H5'	2.06	0.56
39:DD:229:VAL:CG1	39:DD:230:ASP:N	2.68	0.56
43:DH:65:HIS:O	43:DH:67:LEU:N	2.36	0.56
43:DH:143:GLN:CA	43:DH:143:GLN:NE2	2.69	0.56
46:DN:6:PRO:HG3	46:DN:41:ASP:OD1	2.06	0.56
54:DV:62:LEU:HD21	54:DV:95:LEU:CB	2.24	0.56
57:DY:95:LYS:HE3	57:DY:100:ALA:CB	2.35	0.56
1:AA:67:C:H2'	1:AA:68:G:H8	1.71	0.56
1:AA:72:C:H2'	1:AA:73:G:H8	1.70	0.56
1:AA:975:A:H4'	1:AA:976:G:C5'	2.34	0.56
2:AB:61:LEU:HD11	2:AB:160:ASP:CB	2.36	0.56
2:AB:229:VAL:O	2:AB:230:VAL:HG13	2.06	0.56
10:AJ:54:PHE:C	10:AJ:55:LYS:HE3	2.26	0.56
20:AT:100:ILE:C	20:AT:102:GLY:H	2.08	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:72:C:H2'	22:AV:73:A:H5"	1.88	0.56
22:AW:43:C:H2'	22:AW:44:G:H1'	1.88	0.56
25:AZ:363:MET:HB3	25:AZ:364:PRO:CD	2.36	0.56
28:B2:29:LYS:CG	28:B2:32:LEU:HD13	2.25	0.56
30:B4:20:ASN:ND2	30:B4:21:VAL:N	2.50	0.56
36:BA:189:G:H2'	36:BA:205:G:N2	2.20	0.56
36:BA:643:A:O2'	36:BA:644:A:H5'	2.06	0.56
36:BA:1149:G:H2'	36:BA:1150:C:C6	2.41	0.56
36:BA:2348:U:O2'	36:BA:2349:G:H5'	2.06	0.56
36:BA:2376:A:H2'	36:BA:2377:A:O4'	2.06	0.56
36:BA:2758:A:C2	36:BA:2759:G:H1'	2.41	0.56
50:BR:4:LEU:O	50:BR:5:LYS:HD3	2.05	0.56
50:BR:24:GLN:HB2	50:BR:44:LEU:HD21	1.87	0.56
53:BU:79:PHE:O	53:BU:83:LEU:HD13	2.06	0.56
1:CA:77:G:N3	1:CA:77:G:H2'	2.21	0.56
1:CA:261:U:O2	1:CA:263:A:C8	2.59	0.56
1:CA:1031:G:H2'	1:CA:1032:G:O4'	2.05	0.56
1:CA:1060:C:H5'	14:CN:45:ARG:HH22	1.71	0.56
1:CA:1362:C:O2'	1:CA:1363:C:H5"	2.06	0.56
3:CC:32:LEU:HD22	3:CC:59:ARG:CD	2.36	0.56
3:CC:35:GLU:O	3:CC:39:ILE:HG13	2.06	0.56
7:CG:9:VAL:HG22	7:CG:94:ARG:NH1	2.21	0.56
10:CJ:86:MET:O	10:CJ:87:THR:HG23	2.06	0.56
30:D4:37:SER:OG	42:DG:108:ASN:HB3	2.06	0.56
34:D8:14:VAL:CG2	34:D8:24:ALA:HB2	2.31	0.56
36:DA:402:A:O2'	36:DA:403:U:H5'	2.06	0.56
36:DA:422:A:C2	36:DA:423:A:C4	2.94	0.56
36:DA:548:A:C2'	36:DA:549:G:H5'	2.34	0.56
36:DA:1101:U:H2'	36:DA:1102:C:C6	2.41	0.56
36:DA:1598:C:H5'	56:DX:36:LYS:CG	2.33	0.56
36:DA:1649:G:H2'	36:DA:1650:G:H8	1.70	0.56
36:DA:2032:G:H21	40:DE:146:THR:HG23	1.70	0.56
36:DA:2189:U:H3'	36:DA:2190:G:H5"	1.87	0.56
36:DA:2376:A:O2'	36:DA:2377:A:H5'	2.06	0.56
36:DA:2402:C:H2'	36:DA:2403:C:H5'	1.88	0.56
36:DA:2505:G:HO2'	36:DA:2506:U:H6	1.54	0.56
39:DD:108:PRO:HG2	39:DD:111:LEU:HB2	1.87	0.56
42:DG:54:GLU:OE1	42:DG:55:LYS:N	2.39	0.56
42:DG:135:LEU:HB2	42:DG:155:MET:CG	2.36	0.56
47:DO:121:VAL:O	47:DO:122:LEU:HD23	2.05	0.56
48:DP:24:GLY:HA3	48:DP:33:ARG:NH1	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DU:95:LEU:C	53:DU:97:ASP:H	2.09	0.56
58:DZ:60:GLU:HA	58:DZ:60:GLU:OE1	2.06	0.56
1:AA:355:C:H4'	1:AA:388:G:O2'	2.06	0.55
1:AA:356:A:H2'	1:AA:357:G:H8	1.72	0.55
6:AF:26:ILE:O	6:AF:29:ALA:HB3	2.06	0.55
7:AG:150:ALA:HB2	11:AK:50:TYR:OH	2.06	0.55
9:AI:53:VAL:O	9:AI:53:VAL:HG23	2.06	0.55
9:AI:126:SER:O	9:AI:127:LYS:HB3	2.06	0.55
14:AN:13:THR:O	14:AN:14:PRO:O	2.22	0.55
25:AZ:314:THR:O	25:AZ:373:GLU:HA	2.06	0.55
29:B3:54:VAL:HG12	29:B3:55:ARG:N	2.20	0.55
30:B4:22:ILE:HD12	30:B4:22:ILE:N	2.20	0.55
31:B5:2:ALA:HB3	36:BA:747:U:N1	2.21	0.55
34:B8:26:LYS:CE	34:B8:47:LYS:HD2	2.36	0.55
36:BA:196:A:OP2	48:BP:51:PHE:HE2	1.89	0.55
36:BA:815:C:H2'	36:BA:816:C:C6	2.41	0.55
36:BA:1022:G:N2	36:BA:1142(A):A:C2	2.73	0.55
36:BA:1116:C:O2'	36:BA:1117:G:H5'	2.06	0.55
36:BA:1287:A:OP1	50:BR:104:ARG:HG2	2.05	0.55
36:BA:1510:G:O2'	36:BA:1511:C:H5'	2.06	0.55
36:BA:2177:C:H2'	36:BA:2178:C:O2	2.06	0.55
36:BA:2360:A:O2'	36:BA:2361:A:O4'	2.20	0.55
36:BA:2626:C:O2'	36:BA:2627:G:H5'	2.06	0.55
39:BD:43:ARG:HB2	39:BD:54:ARG:CB	2.33	0.55
41:BF:187:VAL:HG12	48:BP:7:ARG:HA	1.87	0.55
43:BH:94:TYR:CD1	43:BH:107:VAL:HA	2.38	0.55
51:BS:29:PHE:HD1	51:BS:30:ARG:N	2.03	0.55
57:BY:86:ARG:HG2	57:BY:87:LYS:N	2.21	0.55
1:CA:926:G:O3'	23:CX:16:A:H2	1.89	0.55
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.42	0.55
2:CB:80:ILE:H	2:CB:80:ILE:HD12	1.71	0.55
11:CK:85:ARG:HG2	11:CK:111:ASP:O	2.05	0.55
20:CT:45:GLN:HE21	20:CT:45:GLN:N	2.03	0.55
22:CV:16:U:H5'	22:CV:17:C:OP1	2.07	0.55
22:CV:63:G:H2'	22:CV:64:A:C8	2.41	0.55
25:CZ:113:MET:HB3	25:CZ:114:PRO:CD	2.35	0.55
34:D8:50:LEU:HD12	34:D8:51:ALA:H	1.71	0.55
36:DA:250:G:H2'	36:DA:251:A:H8	1.65	0.55
36:DA:2807:G:H3'	36:DA:2808:U:H5"	1.88	0.55
38:DC:140:PRO:CA	38:DC:145:VAL:HB	2.35	0.55
40:DE:50:GLY:HA3	40:DE:74:PRO:HG3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:51:ARG:HD3	42:DG:53:LEU:HD21	1.86	0.55
48:DP:122:PRO:HG3	48:DP:141:ALA:HB3	1.88	0.55
49:DQ:135:ASP:O	49:DQ:138:ASP:OD2	2.24	0.55
52:DT:45:PHE:CE2	52:DT:74:ARG:HG3	2.41	0.55
56:DX:12:VAL:HG12	56:DX:27:THR:OG1	2.06	0.55
22:AV:43:C:H5'	22:AV:44:G:OP2	2.06	0.55
25:AZ:315:LYS:O	25:AZ:403:ILE:HG23	2.06	0.55
28:B2:32:LEU:HD23	28:B2:32:LEU:C	2.26	0.55
32:B6:7:ILE:HG23	32:B6:29:ASN:HD22	1.70	0.55
34:B8:52:LYS:N	34:B8:53:PRO:CD	2.69	0.55
36:BA:64:A:C5	56:BX:66:LEU:HD12	2.42	0.55
36:BA:150:C:O2'	36:BA:151:C:H5'	2.06	0.55
36:BA:466:A:C2'	36:BA:467:G:H5'	2.36	0.55
36:BA:654(N):G:N7	36:BA:654(O):G:C4	2.75	0.55
36:BA:1058:G:H1'	36:BA:1082:U:O4	2.05	0.55
36:BA:2248:C:C2'	36:BA:2249:U:H5'	2.36	0.55
36:BA:2768:C:H5"	46:BN:83:LYS:NZ	2.21	0.55
39:BD:93:ALA:HB3	39:BD:105:ILE:HG22	1.87	0.55
40:BE:65:GLY:HA2	40:BE:70:ALA:HB1	1.87	0.55
43:BH:41:MET:HG3	43:BH:42:ARG:N	2.20	0.55
46:BN:67:LEU:HD23	46:BN:87:LEU:HD12	1.88	0.55
48:BP:146:VAL:HG13	48:BP:147:LEU:N	2.20	0.55
49:BQ:140:ALA:HB3	58:BZ:53:ILE:CD1	2.37	0.55
49:BQ:141:GLN:HE21	58:BZ:72:ARG:HA	1.70	0.55
50:BR:11:ASN:O	50:BR:12:ARG:HG3	2.07	0.55
1:CA:685:G:N2	1:CA:686:U:N3	2.55	0.55
1:CA:1127:G:H1'	1:CA:1147:C:H42	1.71	0.55
1:CA:1176:A:H2'	1:CA:1177:G:C8	2.42	0.55
1:CA:1314:C:OP2	19:CS:6:LYS:HG3	2.06	0.55
1:CA:1318:A:H4'	19:CS:10:PHE:CE1	2.42	0.55
6:CF:61:LEU:HD13	6:CF:63:TYR:OH	2.06	0.55
9:CI:52:ALA:HB1	9:CI:95:LYS:HD2	1.88	0.55
9:CI:95:LYS:HG3	9:CI:96:LEU:CD1	2.36	0.55
16:CP:8:ARG:HB3	16:CP:28:ARG:NH1	2.21	0.55
19:CS:51:VAL:O	19:CS:57:HIS:HA	2.07	0.55
32:D6:11:LEU:HD23	32:D6:26:ASN:N	2.20	0.55
32:D6:11:LEU:HD21	32:D6:26:ASN:ND2	2.20	0.55
32:D6:22:ALA:CB	32:D6:39:TYR:CZ	2.90	0.55
32:D6:44:ARG:C	32:D6:45:LYS:HE3	2.26	0.55
36:DA:36:G:H2'	36:DA:37:C:H6	1.71	0.55
36:DA:194:G:H2'	36:DA:195:A:O4'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:833:U:H5"	48:DP:48:PRO:HB2	1.87	0.55
36:DA:1019:U:HO2'	36:DA:1021:A:H2	1.49	0.55
36:DA:1201:C:H6	36:DA:1201:C:O5'	1.88	0.55
36:DA:1486:A:H2'	36:DA:1487:G:H8	1.71	0.55
36:DA:2078:C:H2'	36:DA:2079:U:C6	2.40	0.55
36:DA:2176:A:H8	36:DA:2176:A:H5"	1.71	0.55
36:DA:2186:G:H2'	36:DA:2187:G:N9	2.21	0.55
36:DA:2397:G:N2	36:DA:2420:C:H1'	2.22	0.55
40:DE:34:VAL:O	40:DE:35:GLN:CB	2.54	0.55
55:DW:7:ALA:HB2	55:DW:50:VAL:HG23	1.87	0.55
57:DY:81:LYS:HD3	57:DY:97:ARG:O	2.05	0.55
58:DZ:69:THR:HB	58:DZ:89:PHE:O	2.06	0.55
1:AA:635:G:O2'	1:AA:636:U:H5'	2.06	0.55
1:AA:838:G:C6	1:AA:840:C:H1'	2.41	0.55
3:AC:55:VAL:HG12	3:AC:55:VAL:O	2.05	0.55
4:AD:61:LYS:CA	4:AD:203:VAL:HG13	2.34	0.55
13:AM:3:ARG:NH2	13:AM:7:VAL:HG13	2.21	0.55
25:AZ:184:ARG:HG3	25:AZ:185:ASN:HD22	1.71	0.55
28:B2:41:ILE:HG13	28:B2:42:GLY:N	2.17	0.55
30:B4:9:LEU:CD1	30:B4:10:VAL:H	2.19	0.55
33:B7:21:ARG:HH11	33:B7:21:ARG:HG2	1.71	0.55
36:BA:260:G:H1'	36:BA:621:A:H1'	1.88	0.55
36:BA:654(E):G:N2	36:BA:654(Q):C:C1'	2.64	0.55
37:BB:7:G:H2'	37:BB:8:U:C5'	2.36	0.55
38:BC:86:ALA:HB1	38:BC:153:ILE:HD12	1.88	0.55
38:BC:123:VAL:O	38:BC:127:LEU:HB3	2.05	0.55
39:BD:44:ASN:OD1	39:BD:44:ASN:N	2.37	0.55
39:BD:62:TYR:HE1	39:BD:64:ILE:HA	1.70	0.55
40:BE:30:PRO:HD3	40:BE:180:ASN:ND2	2.21	0.55
41:BF:54:ARG:NH2	41:BF:77:ASP:OD1	2.40	0.55
41:BF:67:GLN:O	41:BF:67:GLN:HG3	2.06	0.55
44:BJ:85:UNK:CG	44:BJ:86:UNK:H	2.20	0.55
46:BN:57:ALA:HB3	46:BN:124:ALA:HA	1.88	0.55
49:BQ:76:LYS:HB3	49:BQ:91:GLU:CG	2.37	0.55
56:BX:12:VAL:O	56:BX:13:LEU:HB2	2.04	0.55
1:CA:538:G:O2'	1:CA:539:A:H5'	2.06	0.55
1:CA:1120:G:H2'	1:CA:1121:U:C6	2.42	0.55
6:CF:35:ALA:O	6:CF:36:ARG:CB	2.55	0.55
11:CK:44:SER:H	11:CK:47:VAL:CG2	2.20	0.55
16:CP:1:MET:HG3	16:CP:65:GLN:CG	2.32	0.55
22:CW:55:U:C2'	22:CW:56:C:H5"	2.35	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CY:28:C:H2'	24:CY:29:G:C8	2.39	0.55
25:CZ:24:LYS:O	25:CZ:26:THR:N	2.35	0.55
25:CZ:331:HIS:CD2	25:CZ:331:HIS:H	2.24	0.55
25:CZ:363:MET:HB3	25:CZ:364:PRO:CD	2.36	0.55
33:D7:5:TRP:O	36:DA:1612:C:H4'	2.06	0.55
34:D8:62:LEU:N	34:D8:63:PRO:HD2	2.21	0.55
35:D9:9:ARG:HD2	35:D9:16:VAL:CG2	2.36	0.55
36:DA:113:G:H5'	36:DA:114:U:OP1	2.05	0.55
36:DA:137:C:O2	36:DA:137:C:H2'	2.06	0.55
36:DA:271(K):U:H3'	36:DA:271(L):U:H5'	1.88	0.55
36:DA:321:G:O2'	36:DA:340:A:N3	2.36	0.55
36:DA:1469:A:H2'	36:DA:1470:G:C8	2.42	0.55
36:DA:2050:C:H1'	40:DE:156:MET:HE2	1.87	0.55
38:DC:10:LEU:HD13	38:DC:13:LYS:HZ2	1.71	0.55
39:DD:211:ARG:HA	39:DD:214:TRP:CE3	2.41	0.55
46:DN:66:LYS:O	46:DN:70:LYS:HB3	2.07	0.55
47:DO:105:GLU:OE1	47:DO:105:GLU:N	2.39	0.55
50:DR:52:ILE:HB	50:DR:94:TYR:CD2	2.41	0.55
57:DY:14:LEU:HA	57:DY:24:VAL:HG22	1.89	0.55
57:DY:28:LYS:HG2	57:DY:39:VAL:CG2	2.22	0.55
1:AA:150:C:C2'	1:AA:151:A:H5"	2.34	0.55
1:AA:222:U:H2'	1:AA:223:U:C6	2.41	0.55
1:AA:821:G:H2'	1:AA:822:C:H6	1.70	0.55
6:AF:11:ASN:HB3	6:AF:14:LEU:CD2	2.34	0.55
11:AK:17:GLY:O	11:AK:80:VAL:HA	2.07	0.55
17:AQ:75:ARG:HG3	17:AQ:75:ARG:NH1	2.19	0.55
22:AW:19:G:C5'	22:AW:20:U:H5	2.20	0.55
27:B1:52:ARG:O	27:B1:53:VAL:O	2.24	0.55
33:B7:43:THR:HG23	33:B7:44:PRO:CD	2.35	0.55
36:BA:482:A:H1'	36:BA:498:G:N2	2.21	0.55
36:BA:1024:G:C3'	36:BA:1025:G:H5"	2.30	0.55
36:BA:2184:G:H2'	36:BA:2185:C:C1'	2.37	0.55
36:BA:2360:A:O2'	36:BA:2361:A:P	2.65	0.55
36:BA:2807:G:C3'	36:BA:2808:U:H5"	2.36	0.55
36:BA:2869:G:H2'	36:BA:2870:C:H6	1.70	0.55
37:BB:3:C:N4	37:BB:118:G:H1	2.05	0.55
38:BC:151:GLU:HA	38:BC:154:ARG:HG2	1.87	0.55
39:BD:35:LYS:HD3	39:BD:61:LEU:HB3	1.88	0.55
41:BF:120:GLU:HB3	41:BF:122:LYS:HD3	1.88	0.55
48:BP:23:PRO:CD	48:BP:33:ARG:HE	2.16	0.55
50:BR:99:LYS:CD	50:BR:99:LYS:N	2.65	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:74:ALA:HB2	51:BS:101:LEU:HD13	1.88	0.55
53:BU:85:LYS:CD	53:BU:117:GLN:HE22	2.11	0.55
54:BV:24:LYS:HG3	54:BV:90:PRO:HB2	1.89	0.55
55:BW:88:ARG:HG3	55:BW:94:ASP:OD2	2.05	0.55
57:BY:95:LYS:CG	57:BY:100:ALA:HA	2.35	0.55
58:BZ:114:GLY:CA	58:BZ:146:ILE:HG21	2.35	0.55
58:BZ:166:SER:HB2	58:BZ:168:GLU:N	2.20	0.55
1:CA:178:C:O2'	1:CA:179:A:H5'	2.06	0.55
1:CA:403:C:O2'	1:CA:404:U:H5'	2.06	0.55
1:CA:665:A:H2'	1:CA:732:C:O2	2.06	0.55
3:CC:14:ILE:HG13	3:CC:15:THR:N	2.22	0.55
5:CE:17:ALA:HB2	5:CE:26:PHE:HD1	1.71	0.55
12:CL:41:ARG:CG	12:CL:42:THR:N	2.69	0.55
16:CP:64:ALA:O	16:CP:66:PRO:HD3	2.07	0.55
22:CV:1:G:C6	22:CV:73:A:N7	2.75	0.55
25:CZ:143:ASP:CG	25:CZ:146:LEU:HB2	2.27	0.55
32:D6:5:VAL:HG12	32:D6:5:VAL:O	2.05	0.55
32:D6:22:ALA:HB2	32:D6:39:TYR:CZ	2.41	0.55
34:D8:32:LEU:CB	34:D8:36:LYS:HZ2	2.19	0.55
35:D9:37:GLY:HA2	36:DA:1125:G:C5'	2.37	0.55
36:DA:185:U:C2	36:DA:212:G:N2	2.74	0.55
36:DA:300:A:H2'	36:DA:334:C:O2'	2.06	0.55
36:DA:491:G:O2'	36:DA:492:A:H5'	2.06	0.55
36:DA:611:C:O5'	36:DA:611:C:H6	1.89	0.55
36:DA:761:A:C8	36:DA:761:A:H3'	2.41	0.55
36:DA:2590:A:O2'	36:DA:2591:C:H5'	2.07	0.55
37:DB:30:C:H2'	37:DB:31:C:O4'	2.06	0.55
46:DN:11:PRO:HB2	46:DN:13:TRP:CD1	2.41	0.55
52:DT:32:TYR:CD2	52:DT:81:PRO:HG2	2.41	0.55
52:DT:37:GLY:O	52:DT:38:ASN:HB3	2.07	0.55
53:DU:57:PHE:O	53:DU:58:ARG:C	2.45	0.55
53:DU:82:GLY:C	53:DU:84:LYS:N	2.59	0.55
1:AA:226:G:O2'	1:AA:227:G:H5'	2.07	0.55
1:AA:626:U:H2'	1:AA:627:G:H8	1.70	0.55
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.06	0.55
4:AD:9:CYS:HA	4:AD:12:CYS:SG	2.46	0.55
18:AR:71:LYS:O	18:AR:75:ILE:HG13	2.07	0.55
25:AZ:36:ALA:HA	25:AZ:39:ASN:O	2.07	0.55
29:B3:22:ALA:HB1	29:B3:46:ASN:ND2	2.22	0.55
34:B8:3:LYS:HG2	34:B8:4:MET:H	1.72	0.55
36:BA:118:A:H1'	36:BA:178:G:O4'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:633:A:H2'	36:BA:634:C:H5'	1.88	0.55
36:BA:886:C:H2'	36:BA:887:A:C4'	2.37	0.55
36:BA:1362:C:O2'	36:BA:1363:C:H5'	2.06	0.55
36:BA:2178:C:O2	36:BA:2178:C:O4'	2.25	0.55
36:BA:2406:U:N3	48:BP:72:PRO:HB2	2.21	0.55
36:BA:2657:A:C2'	36:BA:2658:C:H5'	2.32	0.55
36:BA:2807:G:C2'	36:BA:2808:U:H5"	2.36	0.55
36:BA:2839:G:H5'	50:BR:46:GLY:HA2	1.88	0.55
39:BD:34:VAL:HG23	39:BD:35:LYS:N	2.21	0.55
39:BD:35:LYS:HG2	39:BD:63:ARG:CA	2.35	0.55
40:BE:101:ARG:CB	40:BE:201:THR:HG21	2.37	0.55
43:BH:12:PRO:CD	43:BH:48:GLY:HA2	2.36	0.55
46:BN:58:ASP:C	46:BN:60:ILE:N	2.60	0.55
48:BP:48:PRO:O	48:BP:49:ARG:C	2.45	0.55
48:BP:92:GLU:HG2	48:BP:121:LYS:NZ	2.22	0.55
52:BT:35:LYS:CE	52:BT:41:ARG:HG3	2.37	0.55
1:CA:1280:A:C8	10:CJ:41:PRO:HD3	2.41	0.55
2:CB:8:LYS:O	2:CB:10:LEU:N	2.39	0.55
3:CC:110:ASN:O	3:CC:111:LEU:HD23	2.06	0.55
4:CD:36:ARG:C	4:CD:38:TYR:H	2.09	0.55
5:CE:64:ARG:HH11	5:CE:64:ARG:CG	2.18	0.55
10:CJ:38:ILE:O	10:CJ:70:ARG:HA	2.07	0.55
13:CM:77:ASN:O	13:CM:80:ARG:HB3	2.06	0.55
13:CM:108:ARG:HG3	13:CM:108:ARG:NH1	2.20	0.55
22:CV:59:U:O2'	22:CV:60:U:O4'	2.24	0.55
25:CZ:215:ARG:HB3	25:CZ:282:ALA:CB	2.32	0.55
30:D4:9:LEU:HD13	30:D4:10:VAL:N	2.11	0.55
33:D7:29:LYS:NZ	33:D7:29:LYS:CB	2.69	0.55
34:D8:50:LEU:O	34:D8:51:ALA:HB3	2.07	0.55
36:DA:133:C:O2'	36:DA:134:C:H5'	2.06	0.55
36:DA:576:U:O2'	36:DA:577:G:H5'	2.06	0.55
36:DA:1111:A:H2'	36:DA:1111:A:N3	2.21	0.55
36:DA:2160:G:H5'	36:DA:2160:G:C8	2.40	0.55
36:DA:2392:A:H8	48:DP:60:MET:HG2	1.72	0.55
43:DH:67:LEU:O	43:DH:71:LEU:HB2	2.07	0.55
43:DH:156:ALA:C	43:DH:158:HIS:N	2.60	0.55
48:DP:71:VAL:HG12	48:DP:72:PRO:HD3	1.88	0.55
50:DR:82:GLU:O	50:DR:86:ARG:HD3	2.07	0.55
56:DX:3:THR:HA	56:DX:6:ASP:OD2	2.07	0.55
1:AA:677:U:H3	1:AA:713:G:H22	1.54	0.55
1:AA:953:G:H5'	1:AA:965:A:H61	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1119:C:O2'	1:AA:1120:G:H5'	2.07	0.55
2:AB:234:PRO:O	2:AB:235:SER:O	2.24	0.55
4:AD:31:CYS:O	4:AD:32:ALA:CB	2.54	0.55
10:AJ:9:ARG:HA	10:AJ:68:HIS:O	2.06	0.55
20:AT:47:GLY:O	20:AT:49:ALA:N	2.37	0.55
25:AZ:174:SER:CB	25:AZ:177:LEU:HD12	2.37	0.55
26:B0:45:PHE:O	26:B0:59:LEU:HD11	2.07	0.55
28:B2:7:ARG:HA	28:B2:10:LEU:CD1	2.34	0.55
29:B3:29:ARG:HB2	29:B3:29:ARG:HH11	1.72	0.55
36:BA:72:U:O2'	36:BA:73:A:H5'	2.06	0.55
36:BA:143:G:H1'	56:BX:37:THR:CG2	2.37	0.55
36:BA:856:C:H4'	36:BA:857:C:OP1	2.06	0.55
36:BA:944:G:H5'	36:BA:945:A:O5'	2.07	0.55
37:BB:31:C:H4'	42:BG:29:TRP:CZ2	2.40	0.55
37:BB:68:C:O2'	37:BB:69:G:H5'	2.06	0.55
38:BC:82:LYS:O	38:BC:84:LYS:N	2.37	0.55
39:BD:273:ARG:HH11	39:BD:273:ARG:HG2	1.71	0.55
40:BE:8:LYS:HD3	40:BE:191:PRO:O	2.07	0.55
40:BE:59:VAL:HG23	40:BE:63:LEU:HA	1.89	0.55
41:BF:132:VAL:HG13	41:BF:133:ASN:HD22	1.71	0.55
41:BF:188:ARG:HA	48:BP:7:ARG:HD3	1.88	0.55
45:BK:95:UNK:C	45:BK:97:UNK:H	2.20	0.55
58:BZ:62:PRO:C	58:BZ:64:GLY:H	2.10	0.55
1:CA:556:C:O2'	1:CA:557:G:H5'	2.07	0.55
1:CA:939:G:H2'	1:CA:940:C:C6	2.41	0.55
2:CB:87:ARG:NH1	2:CB:220:ASP:OD1	2.40	0.55
15:CO:39:LEU:CD1	15:CO:56:LEU:HB2	2.27	0.55
17:CQ:59:ILE:HA	17:CQ:72:ARG:O	2.07	0.55
22:CW:14:A:C2'	22:CW:15:G:H5'	2.37	0.55
24:CY:77:TRP:CD2	25:CZ:67:HIS:HB2	2.40	0.55
25:CZ:9:LYS:HE3	25:CZ:74:LYS:CA	2.37	0.55
25:CZ:20:VAL:HG23	25:CZ:21:ASP:N	2.20	0.55
25:CZ:94:THR:HG21	25:CZ:300:ARG:NH2	2.21	0.55
26:D0:7:LEU:HD13	49:DQ:85:LYS:CG	2.29	0.55
36:DA:1023:U:C2'	36:DA:1024:G:H5'	2.37	0.55
36:DA:1540:U:H3'	36:DA:1541:G:H3'	1.87	0.55
36:DA:1754:C:OP1	52:DT:96:ARG:NH1	2.39	0.55
36:DA:2485:G:H5"	49:DQ:46:GLN:NE2	2.19	0.55
36:DA:2672:G:H3'	36:DA:2673:G:H5"	1.89	0.55
36:DA:2884:U:H2'	36:DA:2885:C:H5'	1.87	0.55
38:DC:147:PHE:C	38:DC:149:ILE:H	2.10	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:210:GLY:O	39:DD:211:ARG:HB3	2.06	0.55
42:DG:133:LEU:HD23	42:DG:133:LEU:N	2.19	0.55
43:DH:19:VAL:CG1	43:DH:20:ALA:H	2.18	0.55
46:DN:90:MET:HA	46:DN:90:MET:HE3	1.89	0.55
46:DN:91:LEU:HD21	46:DN:98:VAL:HG21	1.87	0.55
48:DP:91:PHE:N	48:DP:91:PHE:HD1	2.05	0.55
51:DS:29:PHE:HD1	51:DS:30:ARG:N	2.04	0.55
1:AA:750:G:N3	15:AO:23:GLY:HA3	2.21	0.55
2:AB:167:PRO:HG2	2:AB:192:SER:CB	2.37	0.55
12:AL:53:ARG:HD2	12:AL:53:ARG:N	2.22	0.55
13:AM:87:TYR:CE1	19:AS:81:ARG:NH2	2.74	0.55
16:AP:75:ARG:O	16:AP:78:GLY:N	2.40	0.55
25:AZ:12:VAL:HG21	25:AZ:75:ARG:HH21	1.72	0.55
27:B1:17:SER:OG	27:B1:38:SER:HB3	2.07	0.55
31:B5:33:CYS:SG	31:B5:35:GLU:HB2	2.46	0.55
36:BA:1880:C:H5'	36:BA:1880:C:H6	1.71	0.55
36:BA:2673:G:H8	36:BA:2673:G:H5'	1.71	0.55
36:BA:2893:G:H5'	36:BA:2894:G:H5'	1.89	0.55
46:BN:58:ASP:OD2	46:BN:59:LYS:HG2	2.07	0.55
58:BZ:37:VAL:HG23	58:BZ:38:TYR:N	2.21	0.55
1:CA:328:C:O2	1:CA:328:C:C2'	2.55	0.55
1:CA:359:U:H2'	1:CA:360:A:C8	2.42	0.55
1:CA:1057:G:H2'	1:CA:1058:G:O4'	2.07	0.55
1:CA:1324:A:H4'	1:CA:1362:C:H4'	1.89	0.55
2:CB:30:ARG:CB	2:CB:30:ARG:NH1	2.70	0.55
4:CD:58:LEU:HD23	4:CD:58:LEU:O	2.06	0.55
4:CD:147:ALA:HA	4:CD:181:MET:O	2.07	0.55
6:CF:14:LEU:HD12	6:CF:18:GLN:HB2	1.89	0.55
8:CH:38:ILE:HD11	8:CH:118:VAL:O	2.07	0.55
8:CH:114:THR:HG22	8:CH:130:GLY:O	2.06	0.55
15:CO:82:ILE:HD11	15:CO:88:ARG:H	1.71	0.55
36:DA:409:C:O2'	36:DA:410:G:H5'	2.06	0.55
36:DA:583:G:C4	36:DA:584:C:C5	2.95	0.55
36:DA:760:G:C2'	36:DA:761:A:H5'	2.37	0.55
36:DA:886:C:C2'	36:DA:887:A:H4'	2.36	0.55
36:DA:2009:G:O2'	36:DA:2010:G:H5'	2.06	0.55
36:DA:2014:A:H2'	36:DA:2015:A:C8	2.41	0.55
36:DA:2464:C:O2'	36:DA:2465:C:P	2.65	0.55
37:DB:31:C:H4'	42:DG:29:TRP:CH2	2.42	0.55
40:DE:52:LEU:CB	40:DE:75:VAL:HB	2.36	0.55
40:DE:55:ASN:O	40:DE:56:PRO:C	2.45	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:34:LEU:HD13	46:DN:34:LEU:C	2.27	0.55
49:DQ:56:ARG:HH11	49:DQ:56:ARG:CG	2.19	0.55
50:DR:42:LYS:O	50:DR:45:ARG:HG2	2.06	0.55
52:DT:91:ARG:O	52:DT:93:ARG:N	2.40	0.55
53:DU:80:ILE:HG22	53:DU:80:ILE:O	2.07	0.55
53:DU:93:LYS:O	53:DU:96:ALA:HB3	2.07	0.55
55:DW:84:ARG:HB2	55:DW:96:ILE:HG23	1.89	0.55
56:DX:53:LYS:HG3	56:DX:55:ASN:ND2	2.16	0.55
57:DY:14:LEU:HB3	57:DY:73:ARG:HB2	1.88	0.55
1:AA:111:G:H8	1:AA:111:G:O5'	1.88	0.55
1:AA:476:G:H2'	1:AA:477:A:C8	2.42	0.55
1:AA:1367:C:H5'	10:AJ:60:ARG:NH2	2.22	0.55
2:AB:223:ILE:HG22	2:AB:228:GLY:O	2.06	0.55
9:AI:95:LYS:O	9:AI:96:LEU:HD12	2.06	0.55
10:AJ:27:ALA:HB3	10:AJ:34:VAL:HG21	1.89	0.55
13:AM:116:THR:O	13:AM:118:ALA:N	2.39	0.55
16:AP:20:VAL:HG23	16:AP:34:GLU:O	2.06	0.55
22:AV:2:C:H2'	22:AV:3:C:C5'	2.36	0.55
25:AZ:17:ILE:HG13	25:AZ:104:LEU:HA	1.88	0.55
27:B1:76:ARG:NH1	27:B1:95:LEU:HB2	2.22	0.55
32:B6:15:GLU:OE1	32:B6:18:ARG:CD	2.55	0.55
36:BA:271(U):G:H2'	36:BA:271(V):G:H8	1.71	0.55
36:BA:1411:C:H2'	36:BA:1412:A:C8	2.40	0.55
36:BA:1688:U:H1'	36:BA:1701:A:C6	2.42	0.55
36:BA:1826:G:C4'	39:BD:242:ARG:HH21	2.15	0.55
36:BA:2320:A:H2'	36:BA:2320:A:N3	2.20	0.55
36:BA:2394:C:OP1	48:BP:63:PRO:HD2	2.07	0.55
37:BB:42:C:H4'	42:BG:67:LYS:HG2	1.89	0.55
39:BD:259:THR:O	39:BD:260:ARG:C	2.44	0.55
44:BJ:70:UNK:O	44:BJ:71:UNK:C	2.54	0.55
47:BO:24:VAL:O	47:BO:24:VAL:HG23	2.06	0.55
52:BT:50:ILE:O	52:BT:99:LEU:HD12	2.06	0.55
57:BY:81:LYS:O	57:BY:82:PRO:O	2.25	0.55
1:CA:176:C:H2'	1:CA:177:C:C6	2.39	0.55
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.69	0.55
3:CC:142:MET:O	3:CC:144:SER:N	2.40	0.55
9:CI:16:ARG:CB	9:CI:64:THR:HB	2.33	0.55
14:CN:24:CYS:HB2	14:CN:40:CYS:HB3	1.89	0.55
19:CS:6:LYS:HB2	19:CS:7:LYS:HD3	1.87	0.55
22:CV:12:U:H3	22:CV:23:A:H61	1.55	0.55
22:CW:76:A:O2'	36:DA:2394:C:N3	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D1:51:VAL:O	27:D1:57:GLU:HG3	2.07	0.55
32:D6:11:LEU:HD11	32:D6:51:GLU:HG3	1.87	0.55
32:D6:15:GLU:HG2	32:D6:18:ARG:NH1	2.22	0.55
34:D8:7:HIS:O	34:D8:9:GLY:N	2.40	0.55
36:DA:141:A:H8	36:DA:1408:C:O2'	1.89	0.55
36:DA:1166:C:H2'	36:DA:1167:U:C6	2.42	0.55
36:DA:1591:G:H2'	36:DA:1592:C:H5'	1.89	0.55
36:DA:1889:A:O2'	36:DA:2087:G:H5'	2.07	0.55
36:DA:2801:A:H5"	36:DA:2802:G:N7	2.22	0.55
39:DD:32:SER:O	39:DD:36:PRO:CG	2.55	0.55
40:DE:103:ASP:OD1	40:DE:201:THR:HA	2.07	0.55
42:DG:67:LYS:H	42:DG:67:LYS:CD	2.11	0.55
49:DQ:55:VAL:CG2	49:DQ:56:ARG:N	2.70	0.55
51:DS:89:ARG:CB	51:DS:92:TYR:HB3	2.36	0.55
52:DT:89:VAL:HG11	52:DT:91:ARG:NE	2.09	0.55
52:DT:90:GLN:C	52:DT:92:GLY:H	2.09	0.55
53:DU:76:TYR:CE1	53:DU:80:ILE:HG13	2.42	0.55
54:DV:35:LEU:HD23	54:DV:57:VAL:CG1	2.34	0.55
57:DY:76:CYS:HB3	57:DY:77:PRO:HD2	1.89	0.55
58:DZ:153:SER:HB2	58:DZ:167:PRO:CG	2.36	0.55
1:AA:145:G:C2	1:AA:146:G:H1'	2.42	0.55
1:AA:201:C:H3'	1:AA:202:U:C5'	2.34	0.55
1:AA:585:G:H2'	1:AA:586:C:C6	2.42	0.55
1:AA:713:G:H2'	1:AA:714:G:C8	2.42	0.55
1:AA:862:C:O2'	1:AA:863:U:H5'	2.07	0.55
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.42	0.55
1:AA:1441:G:H21	1:AA:1460:A:H62	1.55	0.55
9:AI:89:ASN:O	9:AI:91:ASP:N	2.40	0.55
10:AJ:32:ALA:CB	10:AJ:76:ASN:HB2	2.35	0.55
19:AS:31:ILE:HG23	19:AS:49:ILE:HA	1.88	0.55
34:B8:36:LYS:O	34:B8:37:SER:O	2.25	0.55
36:BA:1602:U:H3'	36:BA:1603:A:H5"	1.88	0.55
36:BA:2092:U:H5	36:BA:2226:C:OP2	1.90	0.55
36:BA:2306:C:H5	36:BA:2307:G:O2'	1.87	0.55
36:BA:2412:A:C2'	36:BA:2413:G:H5'	2.37	0.55
42:BG:146:TYR:C	42:BG:148:MET:H	2.10	0.55
43:BH:80:SER:O	43:BH:81:GLU:HB2	2.07	0.55
48:BP:23:PRO:HD2	48:BP:33:ARG:HH21	1.72	0.55
48:BP:62:LEU:HD23	48:BP:62:LEU:N	2.13	0.55
49:BQ:51:ARG:O	49:BQ:55:VAL:HG13	2.07	0.55
51:BS:16:ASN:OD1	51:BS:17:ARG:N	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:39:ILE:CD1	51:BS:73:LEU:HD21	2.30	0.55
53:BU:50:ARG:NH1	54:BV:72:VAL:HG12	2.22	0.55
54:BV:35:LEU:HD23	54:BV:57:VAL:HG13	1.89	0.55
57:BY:75:ILE:O	57:BY:76:CYS:HB2	2.06	0.55
1:CA:613:C:H2'	1:CA:614:A:H8	1.71	0.55
1:CA:626:U:H2'	1:CA:627:G:H8	1.72	0.55
3:CC:70:VAL:HG12	3:CC:72:LYS:H	1.71	0.55
3:CC:77:ILE:C	3:CC:83:ARG:HB3	2.27	0.55
7:CG:102:ARG:O	7:CG:106:GLN:HG3	2.06	0.55
9:CI:52:ALA:HB3	9:CI:95:LYS:CE	2.36	0.55
9:CI:63:ILE:HD11	9:CI:81:ILE:HD11	1.88	0.55
10:CJ:3:LYS:C	10:CJ:4:ILE:HD12	2.28	0.55
16:CP:75:ARG:O	16:CP:77:ALA:N	2.40	0.55
22:CV:57:G:H2'	22:CV:58:A:H5'	1.88	0.55
24:CY:76:A:OP1	25:CZ:274:ARG:CD	2.52	0.55
25:CZ:342:PHE:N	25:CZ:342:PHE:CD1	2.73	0.55
29:D3:45:GLY:O	29:D3:47:VAL:N	2.39	0.55
31:D5:31:VAL:CG2	36:DA:2886:G:H1'	2.35	0.55
34:D8:25:MET:HG3	48:DP:64:LYS:HB2	1.88	0.55
36:DA:186:G:H2'	36:DA:187:G:C8	2.41	0.55
36:DA:554:U:H2'	36:DA:555:U:C6	2.42	0.55
36:DA:582:G:H2'	36:DA:583:G:C8	2.41	0.55
36:DA:587:C:C5	48:DP:33:ARG:HG2	2.42	0.55
36:DA:1115:G:H2'	36:DA:1116:C:O4'	2.07	0.55
36:DA:1578:U:H2'	36:DA:1579:A:C5'	2.37	0.55
38:DC:90:GLY:O	38:DC:153:ILE:HG21	2.07	0.55
38:DC:200:LYS:HE3	38:DC:208:PHE:HB2	1.88	0.55
50:DR:78:LYS:O	50:DR:82:GLU:HB2	2.06	0.55
53:DU:95:LEU:HD11	54:DV:11:GLN:HG3	1.88	0.55
1:AA:961:U:O2'	1:AA:962:C:P	2.64	0.55
1:AA:1314:C:H5	1:AA:1323:G:N1	1.95	0.55
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.06	0.55
9:AI:19:LEU:CD2	9:AI:59:PHE:CD2	2.89	0.55
10:AJ:48:THR:HG23	10:AJ:62:HIS:CD2	2.42	0.55
24:AY:76:A:C8	25:AZ:231:ILE:HG12	2.42	0.55
27:B1:30:VAL:O	27:B1:31:GLY:O	2.25	0.55
30:B4:28:LYS:HA	30:B4:28:LYS:HE3	1.89	0.55
31:B5:41:PRO:O	31:B5:44:THR:OG1	2.24	0.55
36:BA:353:G:H2'	36:BA:353:G:N3	2.21	0.55
36:BA:958:U:H5"	49:BQ:14:ARG:CD	2.37	0.55
36:BA:1023:U:H5'	36:BA:1023:U:H6	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1292:U:H2'	36:BA:1293:C:C6	2.42	0.55
36:BA:1351:C:O2'	36:BA:1571:A:H1'	2.07	0.55
36:BA:1721:G:H8	36:BA:1741:A:H62	1.54	0.55
36:BA:2528:U:O2'	36:BA:2529:G:H3'	2.07	0.55
38:BC:49:ILE:HD12	38:BC:49:ILE:O	2.07	0.55
40:BE:44:TYR:O	40:BE:45:THR:CB	2.55	0.55
48:BP:16:ARG:HD3	48:BP:16:ARG:C	2.27	0.55
48:BP:79:ARG:HG3	48:BP:110:TYR:CD2	2.42	0.55
49:BQ:141:GLN:OXT	58:BZ:99:TYR:HD2	1.90	0.55
55:BW:79:GLY:HA3	55:BW:100:THR:HG23	1.88	0.55
57:BY:6:HIS:CE1	57:BY:30:VAL:HG11	2.41	0.55
1:CA:410:G:H21	1:CA:432:A:H62	1.55	0.55
1:CA:445:G:H2'	1:CA:446:G:H8	1.72	0.55
1:CA:537:G:H2'	1:CA:538:G:H8	1.72	0.55
1:CA:972:C:O3'	10:CJ:57:LYS:HG2	2.07	0.55
1:CA:1220:G:O2'	1:CA:1221:G:H5'	2.07	0.55
2:CB:124:SER:OG	2:CB:125:PRO:HD2	2.06	0.55
5:CE:12:LEU:O	5:CE:12:LEU:HD13	2.07	0.55
7:CG:58:PRO:HG2	7:CG:59:LEU:H	1.72	0.55
8:CH:30:ARG:HB2	8:CH:30:ARG:HH11	1.72	0.55
11:CK:103:LEU:HD13	11:CK:104:GLN:N	2.22	0.55
12:CL:80:HIS:HD2	24:CY:68:C:C3'	2.19	0.55
19:CS:5:LEU:C	19:CS:6:LYS:HD3	2.27	0.55
25:CZ:189:ARG:CG	25:CZ:190:ARG:N	2.55	0.55
25:CZ:299:GLU:N	25:CZ:302:GLN:OE1	2.35	0.55
26:D0:23:VAL:HG22	26:D0:38:VAL:CG1	2.36	0.55
27:D1:85:LEU:O	27:D1:87:PRO:HD3	2.06	0.55
36:DA:1591:G:C2'	36:DA:1592:C:H5'	2.38	0.55
36:DA:1786:A:H2	36:DA:2606:C:H1'	1.71	0.55
36:DA:2249:U:H4'	36:DA:2275:C:C5	2.41	0.55
36:DA:2345:G:N3	36:DA:2381:C:H2'	2.21	0.55
36:DA:2847:U:O2	36:DA:2847:U:H2'	2.06	0.55
40:DE:33:VAL:HG12	40:DE:90:THR:HA	1.88	0.55
43:DH:44:VAL:HG12	43:DH:45:VAL:N	2.22	0.55
48:DP:7:ARG:O	48:DP:10:PRO:HD3	2.07	0.55
54:DV:35:LEU:N	54:DV:35:LEU:HD22	2.22	0.55
58:DZ:113:ALA:HB3	58:DZ:146:ILE:HD13	1.87	0.55
58:DZ:122:ARG:HG2	58:DZ:122:ARG:NH1	2.20	0.55
1:AA:250:A:H4'	1:AA:251:G:O5'	2.07	0.54
1:AA:678:U:H2'	1:AA:679:C:C6	2.42	0.54
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.59	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:79:ARG:CB	7:AG:84:ASN:HD22	2.19	0.54
10:AJ:96:ILE:H	10:AJ:96:ILE:HD13	1.72	0.54
12:AL:84:LEU:HD23	12:AL:84:LEU:C	2.27	0.54
12:AL:85:ILE:CG2	12:AL:98:TYR:HB3	2.37	0.54
15:AO:64:ARG:HH11	15:AO:64:ARG:HG3	1.71	0.54
25:AZ:178:ALA:O	25:AZ:196:VAL:CG2	2.55	0.54
25:AZ:221:PHE:CE2	25:AZ:247:VAL:HG11	2.42	0.54
28:B2:3:LEU:O	28:B2:7:ARG:NE	2.41	0.54
31:B5:56:LYS:O	31:B5:57:VAL:C	2.46	0.54
33:B7:43:THR:CG2	33:B7:44:PRO:N	2.70	0.54
35:B9:11:CYS:SG	35:B9:12:ASP:N	2.80	0.54
36:BA:481:G:H2'	36:BA:507:A:N1	2.23	0.54
36:BA:607:U:H3	36:BA:621:A:H2	1.49	0.54
36:BA:704:G:H1'	36:BA:726:G:N2	2.22	0.54
36:BA:1006:C:C2	36:BA:1138:G:N2	2.76	0.54
36:BA:1092:C:H2'	36:BA:1093:G:H5'	1.87	0.54
36:BA:1539:G:C3'	36:BA:1540:U:H5'	2.38	0.54
37:BB:56:G:H4'	37:BB:57:A:O5'	2.07	0.54
38:BC:50:ASP:OD2	38:BC:52:ARG:HB2	2.07	0.54
40:BE:14:ILE:HD11	40:BE:173:VAL:HG11	1.89	0.54
43:BH:124:GLU:CG	43:BH:132:ARG:HG3	2.37	0.54
51:BS:95:HIS:CG	51:BS:96:GLY:N	2.75	0.54
54:BV:38:LEU:O	54:BV:52:VAL:HG12	2.06	0.54
58:BZ:115:GLY:HA3	58:BZ:174:VAL:HG12	1.89	0.54
1:CA:337:C:H2'	1:CA:338:A:C8	2.41	0.54
1:CA:376:G:H4'	16:CP:5:ARG:NH1	2.22	0.54
1:CA:458:C:H2'	1:CA:460:G:C8	2.41	0.54
1:CA:665:A:H1'	1:CA:733:A:O4'	2.07	0.54
5:CE:76:ILE:HD11	5:CE:142:LEU:HD21	1.86	0.54
6:CF:91:VAL:HG12	6:CF:92:LYS:H	1.72	0.54
12:CL:27:LEU:HA	12:CL:33:ARG:HD2	1.89	0.54
14:CN:59:ALA:O	14:CN:60:SER:CB	2.54	0.54
16:CP:20:VAL:CG2	16:CP:21:VAL:N	2.70	0.54
19:CS:11:VAL:CG2	19:CS:38:SER:HB2	2.34	0.54
22:CW:75:C:OP1	27:D1:30:VAL:HG21	2.07	0.54
25:CZ:19:HIS:ND1	25:CZ:20:VAL:HG22	2.22	0.54
25:CZ:272:MET:HG3	25:CZ:273:HIS:HD2	1.71	0.54
27:D1:87:PRO:HG2	27:D1:88:LYS:N	2.16	0.54
36:DA:389:G:N1	48:DP:71:VAL:HG12	2.22	0.54
36:DA:498:G:O2'	36:DA:499:U:H5'	2.07	0.54
36:DA:999:U:H5"	36:DA:1154:G:O6	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1049:C:H2'	36:DA:1050:A:C8	2.42	0.54
36:DA:2340:G:H2'	36:DA:2341:G:H8	1.72	0.54
36:DA:2619:C:O2'	36:DA:2620:C:H5'	2.07	0.54
38:DC:99:ILE:C	38:DC:101:GLN:H	2.11	0.54
38:DC:123:VAL:HG22	38:DC:127:LEU:HB3	1.89	0.54
39:DD:45:ASN:CG	39:DD:46:GLN:N	2.60	0.54
39:DD:61:LEU:O	39:DD:63:ARG:NH1	2.39	0.54
40:DE:116:VAL:HG22	40:DE:122:PHE:HB2	1.89	0.54
43:DH:15:VAL:HG12	43:DH:29:PRO:HD3	1.89	0.54
43:DH:85:LYS:HG2	43:DH:86:GLU:N	2.20	0.54
49:DQ:12:GLN:NE2	49:DQ:72:LYS:HG3	2.22	0.54
52:DT:55:ASN:ND2	52:DT:58:ASN:HB2	2.18	0.54
54:DV:72:VAL:HG23	54:DV:72:VAL:O	2.07	0.54
57:DY:81:LYS:HD2	57:DY:96:ILE:CG1	2.37	0.54
58:DZ:132:ASN:O	58:DZ:133:ILE:HD13	2.07	0.54
1:AA:313:A:H2'	1:AA:314:C:C6	2.42	0.54
1:AA:356:A:C2	1:AA:368:U:O2	2.58	0.54
1:AA:499:A:H4'	1:AA:500:G:H5'	1.89	0.54
1:AA:975:A:N6	1:AA:1367:C:O4'	2.39	0.54
1:AA:983:A:H5'	1:AA:984:C:OP2	2.07	0.54
5:AE:12:LEU:HD12	5:AE:31:LEU:HB2	1.88	0.54
17:AQ:58:GLU:CG	17:AQ:75:ARG:HG2	2.35	0.54
20:AT:82:SER:O	20:AT:86:ARG:HB2	2.05	0.54
34:B8:34:TRP:O	34:B8:35:GLN:HB2	2.05	0.54
36:BA:90:U:H2'	36:BA:90:U:O2	2.06	0.54
36:BA:703:U:C2'	36:BA:704:G:H5'	2.37	0.54
36:BA:1171:G:H3'	36:BA:1173:G:O4'	2.07	0.54
36:BA:1270:C:H5"	36:BA:1271:G:H5'	1.89	0.54
36:BA:1528:A:N1	36:BA:1542:A:H2	2.04	0.54
37:BB:40:U:H3'	37:BB:41:U:C5'	2.35	0.54
37:BB:65:C:C2'	37:BB:66:A:H5'	2.37	0.54
40:BE:77:ILE:CG2	40:BE:78:LEU:H	2.11	0.54
41:BF:53:THR:HG23	41:BF:55:GLY:N	2.23	0.54
43:BH:74:ASN:OD1	43:BH:138:LYS:HD3	2.07	0.54
48:BP:147:LEU:O	48:BP:148:LEU:CB	2.54	0.54
52:BT:28:VAL:CG2	52:BT:47:GLY:O	2.56	0.54
54:BV:64:HIS:ND1	54:BV:92:THR:HG22	2.22	0.54
1:CA:90:U:H5"	1:CA:91:C:O4'	2.07	0.54
1:CA:145:G:C2	1:CA:146:G:H1'	2.41	0.54
1:CA:609:A:C2'	1:CA:610:G:H5'	2.37	0.54
1:CA:706:A:N7	1:CA:707:C:H5	2.05	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:47:LEU:O	3:CC:47:LEU:HG	2.07	0.54
5:CE:76:ILE:HG12	5:CE:77:PRO:N	2.21	0.54
9:CI:110:GLU:OE2	9:CI:113:LYS:NZ	2.39	0.54
10:CJ:8:LEU:HB2	10:CJ:70:ARG:O	2.07	0.54
16:CP:53:VAL:HG23	16:CP:54:GLU:N	2.23	0.54
24:CY:4:G:C3'	24:CY:5:G:H5"	2.37	0.54
36:DA:197:A:H5'	36:DA:197:A:C8	2.40	0.54
36:DA:2153:G:H2'	36:DA:2154:G:C8	2.42	0.54
48:DP:23:PRO:C	48:DP:33:ARG:CZ	2.76	0.54
50:DR:87:TYR:O	50:DR:90:ARG:N	2.39	0.54
58:DZ:24:LEU:HD12	58:DZ:41:LEU:HD23	1.88	0.54
1:AA:6:G:O2'	1:AA:7:G:H5"	2.08	0.54
1:AA:443:C:H2'	1:AA:444:C:C6	2.41	0.54
1:AA:1125:U:C6	1:AA:1125:U:H3'	2.42	0.54
2:AB:168:THR:CG2	2:AB:192:SER:HA	2.37	0.54
3:AC:134:ILE:CG2	3:AC:168:ALA:HB3	2.36	0.54
5:AE:127:ASN:ND2	5:AE:130:ASN:H	2.04	0.54
12:AL:41:ARG:CG	12:AL:42:THR:N	2.70	0.54
12:AL:42:THR:CG2	12:AL:42:THR:O	2.56	0.54
17:AQ:40:LYS:HD3	17:AQ:42:TYR:CZ	2.43	0.54
18:AR:40:LEU:C	18:AR:42:ARG:H	2.10	0.54
24:AY:56:C:C6	36:BA:1067:A:C2	2.88	0.54
31:B5:6:VAL:CG1	36:BA:2016:U:H1'	2.37	0.54
36:BA:214:G:H1'	36:BA:216:A:O2'	2.07	0.54
36:BA:221:A:O2'	36:BA:222:A:OP2	2.23	0.54
36:BA:271(F):C:H2'	36:BA:271(G):C:O4'	2.08	0.54
36:BA:1114:G:H2'	36:BA:1115:G:H8	1.72	0.54
36:BA:1429:G:H2'	36:BA:1430:C:C6	2.42	0.54
36:BA:1652:A:C2'	36:BA:1653:G:H5'	2.37	0.54
36:BA:1720:U:H2'	36:BA:1721:G:C5'	2.37	0.54
36:BA:1819:A:H5"	39:BD:161:THR:HG21	1.88	0.54
36:BA:2012:G:C4'	55:BW:96:ILE:HD11	2.14	0.54
39:BD:70:TRP:O	39:BD:72:LYS:N	2.41	0.54
41:BF:123:LEU:HD13	41:BF:192:LEU:HD22	1.89	0.54
42:BG:91:ARG:HD2	42:BG:91:ARG:C	2.27	0.54
45:BK:109:UNK:C	45:BK:111:UNK:H	2.19	0.54
46:BN:18:ALA:HB1	46:BN:21:LYS:HB3	1.89	0.54
50:BR:84:ALA:HB3	50:BR:85:PRO:CD	2.31	0.54
1:CA:436:C:H2'	1:CA:437:U:C6	2.43	0.54
1:CA:1006:C:H2'	1:CA:1007:C:H6	1.72	0.54
1:CA:1303:C:H2'	1:CA:1303:C:O2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.90	0.54
9:CI:118:LYS:O	9:CI:119:ALA:HB3	2.07	0.54
12:CL:75:HIS:HD2	12:CL:77:LEU:HB2	1.73	0.54
36:DA:296:C:N4	36:DA:343:C:H42	2.05	0.54
36:DA:832:G:N3	48:DP:53:GLY:HA2	2.23	0.54
36:DA:1141:U:H4'	36:DA:1142(A):A:C8	2.43	0.54
36:DA:1825:A:O4'	39:DD:254:THR:HG21	2.08	0.54
36:DA:2155:G:H3'	36:DA:2156:G:H8	1.72	0.54
36:DA:2555:U:C2'	36:DA:2556:C:H5'	2.36	0.54
36:DA:2777:G:C4'	36:DA:2778:A:H5'	2.37	0.54
39:DD:147:LEU:HD13	39:DD:155:LEU:CD1	2.37	0.54
42:DG:77:ILE:HG12	42:DG:77:ILE:O	2.07	0.54
42:DG:173:LEU:HD13	42:DG:178:PHE:CD2	2.43	0.54
46:DN:28:THR:O	46:DN:31:ALA:HB3	2.07	0.54
52:DT:81:PRO:C	52:DT:82:LEU:HD12	2.27	0.54
53:DU:109:LEU:O	53:DU:113:ALA:HB2	2.07	0.54
54:DV:25:LEU:H	54:DV:92:THR:CG2	2.20	0.54
55:DW:79:GLY:H	55:DW:100:THR:HG23	1.72	0.54
57:DY:8:LYS:HE2	57:DY:72:VAL:HG23	1.89	0.54
57:DY:44:ILE:CG2	57:DY:45:VAL:H	2.20	0.54
58:DZ:101:PRO:HG2	58:DZ:135:GLU:O	2.07	0.54
58:DZ:150:LEU:HD21	58:DZ:172:ALA:HB3	1.89	0.54
2:AB:126:GLU:HA	2:AB:129:GLU:OE2	2.07	0.54
3:AC:35:GLU:O	3:AC:39:ILE:HG13	2.08	0.54
3:AC:140:ARG:O	3:AC:144:SER:HB2	2.07	0.54
6:AF:98:LEU:HD12	6:AF:98:LEU:N	2.23	0.54
7:AG:102:ARG:HG2	7:AG:106:GLN:NE2	2.22	0.54
20:AT:65:LYS:O	20:AT:68:LYS:HB2	2.07	0.54
26:B0:7:LEU:HD21	49:BQ:81:VAL:CG2	2.37	0.54
29:B3:31:LEU:O	29:B3:33:GLN:N	2.40	0.54
29:B3:31:LEU:C	29:B3:33:GLN:H	2.11	0.54
36:BA:884:C:C2'	36:BA:885:C:H5'	2.37	0.54
36:BA:1144:G:H2'	36:BA:1145:C:C6	2.42	0.54
36:BA:1412:A:O2'	36:BA:1413:G:H5'	2.07	0.54
36:BA:1416:G:H1'	36:BA:1417:C:C6	2.43	0.54
36:BA:1503:U:O2'	36:BA:1504:C:H5'	2.07	0.54
38:BC:123:VAL:HG21	38:BC:127:LEU:CD2	2.37	0.54
42:BG:76:SER:OG	42:BG:83:ARG:HB3	2.08	0.54
48:BP:46:LYS:HG2	48:BP:52:GLU:OE2	2.06	0.54
49:BQ:79:LEU:HD23	49:BQ:80:GLU:N	2.22	0.54
49:BQ:103:MET:C	49:BQ:104:PHE:HD1	2.10	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:17:ARG:HH21	51:BS:90:GLY:H	1.54	0.54
53:BU:82:GLY:O	53:BU:84:LYS:N	2.41	0.54
1:CA:17:U:H2'	1:CA:18:C:C6	2.43	0.54
1:CA:826:C:H2'	1:CA:827:U:C6	2.42	0.54
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.07	0.54
1:CA:1030(D):A:H2'	1:CA:1031:G:H5'	1.90	0.54
1:CA:1097:C:O2'	1:CA:1098:C:H5'	2.07	0.54
1:CA:1208:C:H2'	1:CA:1209:C:H6	1.73	0.54
4:CD:190:ASP:OD2	4:CD:192:GLU:HB2	2.06	0.54
6:CF:69:GLU:CD	6:CF:69:GLU:H	2.10	0.54
11:CK:18:ARG:HH21	11:CK:37:GLY:N	2.06	0.54
14:CN:32:SER:O	14:CN:40:CYS:HA	2.08	0.54
22:CW:38:A:H2'	22:CW:39:U:C4'	2.37	0.54
34:D8:56:GLU:O	34:D8:59:LYS:N	2.41	0.54
36:DA:90:U:O2	36:DA:90:U:C2'	2.55	0.54
36:DA:363(F):A:O2'	36:DA:364:C:C5	2.60	0.54
36:DA:954:G:N3	36:DA:2274:A:H2	2.05	0.54
36:DA:954:G:N3	36:DA:2274:A:C2	2.75	0.54
36:DA:1462:C:H4'	36:DA:2703:C:H5'	1.89	0.54
36:DA:2069:G:O2'	36:DA:2070:G:H5'	2.08	0.54
36:DA:2127:G:H4'	38:DC:37:PHE:CE1	2.43	0.54
36:DA:2293:C:H2'	36:DA:2294:C:H6	1.72	0.54
36:DA:2475:C:H42	36:DA:2529:G:H22	1.56	0.54
38:DC:43:VAL:HG23	38:DC:175:VAL:HG21	1.87	0.54
38:DC:64:LEU:HD13	38:DC:188:ASN:ND2	2.23	0.54
40:DE:6:GLY:O	40:DE:195:LEU:O	2.25	0.54
40:DE:48:GLN:NE2	40:DE:78:LEU:HD22	2.21	0.54
41:DF:132:VAL:HG22	41:DF:133:ASN:N	2.23	0.54
43:DH:44:VAL:HG12	43:DH:45:VAL:H	1.72	0.54
49:DQ:17:LEU:HB3	49:DQ:39:PRO:HB3	1.89	0.54
54:DV:8:GLY:CA	54:DV:23:GLU:HG3	2.30	0.54
4:AD:162:LEU:HD11	4:AD:178:VAL:O	2.08	0.54
6:AF:9:VAL:HA	6:AF:59:TYR:O	2.07	0.54
9:AI:114:TYR:HE1	10:AJ:59:SER:HA	1.72	0.54
13:AM:22:ILE:CD1	13:AM:25:ILE:HD12	2.34	0.54
19:AS:62:ILE:HA	19:AS:66:MET:HE1	1.89	0.54
20:AT:42:GLN:C	20:AT:45:GLN:HE22	2.11	0.54
22:AW:19:G:H5'	22:AW:20:U:H5	1.72	0.54
22:AW:57:G:H2'	22:AW:58:A:H5'	1.90	0.54
24:AY:28:C:H2'	24:AY:29:G:C8	2.39	0.54
33:B7:4:THR:CG2	36:BA:788:A:H1'	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:62:LEU:N	34:B8:63:PRO:CD	2.69	0.54
36:BA:873:G:H2'	36:BA:874:G:C8	2.43	0.54
36:BA:908:C:O2'	36:BA:909:A:H5'	2.06	0.54
39:BD:229:VAL:HG13	39:BD:230:ASP:N	2.23	0.54
40:BE:199:ARG:HG2	40:BE:200:GLU:OE1	2.07	0.54
42:BG:159:VAL:O	42:BG:159:VAL:HG13	2.08	0.54
47:BO:80:ASP:OD2	52:BT:71:GLY:HA3	2.08	0.54
48:BP:62:LEU:H	48:BP:62:LEU:CD2	2.16	0.54
50:BR:101:ALA:O	50:BR:102:GLU:CB	2.55	0.54
52:BT:106:SER:O	52:BT:107:ASP:CB	2.54	0.54
58:BZ:58:VAL:HA	58:BZ:67:LEU:O	2.07	0.54
1:CA:323:U:H2'	1:CA:324:G:O4'	2.08	0.54
1:CA:390:C:H4'	16:CP:28:ARG:NH2	2.22	0.54
1:CA:663:A:O2'	1:CA:664:G:H5'	2.07	0.54
1:CA:980:C:H5'	1:CA:980:C:H6	1.73	0.54
1:CA:1234:C:H2'	1:CA:1235:U:C6	2.42	0.54
1:CA:1295:G:O2'	1:CA:1296:C:H5'	2.08	0.54
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.07	0.54
7:CG:27:ILE:O	7:CG:30:ILE:HB	2.07	0.54
9:CI:43:ALA:HA	9:CI:74:ILE:HG21	1.90	0.54
10:CJ:50:ILE:HG12	14:CN:41:ARG:NE	2.23	0.54
13:CM:11:ARG:HG2	13:CM:12:ASN:N	2.21	0.54
14:CN:59:ALA:O	14:CN:60:SER:HB2	2.07	0.54
15:CO:17:ARG:HH11	15:CO:17:ARG:HG3	1.71	0.54
15:CO:39:LEU:HB3	15:CO:56:LEU:HD13	1.90	0.54
15:CO:82:ILE:HD13	15:CO:87:ILE:H	1.73	0.54
25:CZ:118:GLU:OE2	61:CZ:502:KIR:C5	2.56	0.54
25:CZ:230:THR:O	25:CZ:230:THR:HG23	2.07	0.54
26:D0:12:ASN:O	26:D0:14:ARG:N	2.35	0.54
34:D8:15:LYS:HG2	48:DP:65:ARG:NH2	2.23	0.54
36:DA:2319:G:H4'	36:DA:2320:A:OP1	2.07	0.54
36:DA:2457:U:C2'	36:DA:2458:G:H5'	2.38	0.54
38:DC:120:MET:CA	38:DC:123:VAL:HG12	2.32	0.54
40:DE:13:ARG:HD2	40:DE:20:ALA:HB1	1.89	0.54
43:DH:85:LYS:HZ1	43:DH:86:GLU:HA	1.72	0.54
46:DN:18:ALA:CB	46:DN:26:LEU:HD22	2.38	0.54
49:DQ:27:VAL:HG21	49:DQ:133:ARG:O	2.08	0.54
49:DQ:66:ILE:O	49:DQ:66:ILE:HG13	2.07	0.54
51:DS:89:ARG:HH11	51:DS:92:TYR:HA	1.68	0.54
51:DS:89:ARG:HB3	51:DS:92:TYR:HB3	1.89	0.54
53:DU:92:ARG:HH11	53:DU:95:LEU:HG	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DV:19:LYS:HG2	54:DV:94:LEU:C	2.28	0.54
57:DY:50:ARG:NE	57:DY:55:TYR:O	2.41	0.54
58:DZ:108:PRO:HA	58:DZ:141:VAL:CG1	2.38	0.54
1:AA:62:U:H2'	1:AA:63:C:H5'	1.88	0.54
1:AA:585:G:H4'	12:AL:8:ASN:HD21	1.72	0.54
1:AA:662:G:O2'	1:AA:836:G:H5"	2.08	0.54
1:AA:973:G:C1'	10:AJ:55:LYS:HE2	2.36	0.54
2:AB:30:ARG:HB2	2:AB:30:ARG:NH1	2.22	0.54
2:AB:167:PRO:HG2	2:AB:192:SER:OG	2.08	0.54
5:AE:7:GLU:HB3	5:AE:112:LEU:HD22	1.89	0.54
5:AE:31:LEU:HD22	5:AE:43:LEU:HD11	1.90	0.54
7:AG:15:ASP:CB	7:AG:20:ASP:H	2.19	0.54
10:AJ:32:ALA:H	10:AJ:78:ASN:HD21	1.56	0.54
17:AQ:57:VAL:HA	17:AQ:77:VAL:HG23	1.88	0.54
18:AR:26:LEU:CD1	18:AR:39:VAL:HG13	2.37	0.54
25:AZ:242:ILE:HG21	25:AZ:282:ALA:HA	1.90	0.54
27:B1:89:GLU:O	27:B1:93:GLU:HG2	2.08	0.54
33:B7:5:TRP:CD1	33:B7:7:PRO:HD3	2.41	0.54
33:B7:29:LYS:NZ	33:B7:29:LYS:CB	2.71	0.54
34:B8:59:LYS:HD3	48:BP:50:ARG:HB3	1.89	0.54
36:BA:573:G:O2'	36:BA:574:C:H3'	2.07	0.54
36:BA:1190:G:OP1	48:BP:32:THR:OG1	2.26	0.54
36:BA:1221:C:O2	36:BA:1221:C:H2'	2.06	0.54
36:BA:1233:C:H2'	36:BA:1234:U:H6	1.73	0.54
36:BA:1301:A:HO2'	36:BA:1302:A:P	2.31	0.54
36:BA:2107:C:H1'	36:BA:2182:G:H22	1.73	0.54
36:BA:2472:G:H5'	36:BA:2473:U:C5'	2.36	0.54
37:BB:87:G:N2	37:BB:89:G:H3'	2.22	0.54
39:BD:226:MET:HB3	39:BD:230:ASP:HB2	1.89	0.54
42:BG:171:ALA:O	42:BG:175:LEU:HG	2.08	0.54
47:BO:7:TYR:CE1	47:BO:20:MET:HB2	2.43	0.54
48:BP:7:ARG:HB3	48:BP:8:PRO:HD3	1.90	0.54
54:BV:52:VAL:HG11	54:BV:55:ALA:HB3	1.90	0.54
1:CA:111:G:H1	1:CA:330:C:H41	1.52	0.54
1:CA:639:G:O2'	1:CA:640:A:H5'	2.08	0.54
1:CA:766:A:H2'	1:CA:767:A:H5'	1.88	0.54
1:CA:770:C:O2'	1:CA:771:G:H5'	2.07	0.54
1:CA:980:C:H2'	1:CA:981:U:H5'	1.90	0.54
1:CA:1030:C:C5	1:CA:1030(A):G:H8	2.26	0.54
2:CB:48:MET:HA	2:CB:51:LEU:HB2	1.90	0.54
9:CI:43:ALA:O	9:CI:45:ALA:N	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:114:TYR:H	9:CI:114:TYR:HD1	1.56	0.54
17:CQ:76:LEU:HD12	17:CQ:77:VAL:N	2.16	0.54
22:CW:53:G:O2'	22:CW:54:U:H5'	2.08	0.54
24:CY:71:C:O2'	24:CY:72:U:H5'	2.08	0.54
27:D1:88:LYS:HG2	27:D1:92:LYS:HZ2	1.71	0.54
29:D3:42:ALA:HA	36:DA:852:G:O4'	2.06	0.54
36:DA:479:A:H4'	36:DA:480:A:OP1	2.08	0.54
36:DA:992:C:O3'	54:DV:72:VAL:HG11	2.07	0.54
36:DA:1092:C:C2'	36:DA:1093:G:H5'	2.37	0.54
36:DA:1208:C:C4	36:DA:1209:G:N7	2.76	0.54
36:DA:2099:U:H2'	36:DA:2100:G:H8	1.72	0.54
36:DA:2334:G:N3	51:DS:18:ILE:HD13	2.22	0.54
36:DA:2414:G:H21	48:DP:67:MET:CE	2.20	0.54
36:DA:2617:C:O2'	36:DA:2618:G:H5'	2.07	0.54
36:DA:2779:U:H1'	36:DA:2781:A:C6	2.41	0.54
36:DA:2873:A:H4'	50:DR:8:ARG:HH12	1.73	0.54
39:DD:65:ILE:HD11	39:DD:67:PHE:CE2	2.43	0.54
39:DD:133:LEU:HD13	39:DD:173:VAL:CG1	2.38	0.54
39:DD:218:ARG:CG	39:DD:218:ARG:NH1	2.67	0.54
40:DE:100:GLU:O	40:DE:172:VAL:HG23	2.08	0.54
48:DP:24:GLY:O	48:DP:25:SER:HB3	2.08	0.54
48:DP:126:VAL:HA	48:DP:145:PRO:CB	2.36	0.54
48:DP:135:LEU:HD13	48:DP:135:LEU:O	2.07	0.54
49:DQ:101:ARG:HG3	49:DQ:101:ARG:NH1	2.18	0.54
49:DQ:140:ALA:HB1	58:DZ:99:TYR:CE1	2.43	0.54
55:DW:9:TYR:H	55:DW:102:HIS:HD2	1.56	0.54
57:DY:55:TYR:O	57:DY:56:PRO:O	2.26	0.54
1:AA:972:C:O3'	10:AJ:57:LYS:HG2	2.08	0.54
1:AA:1157:A:H1'	1:AA:1181:G:N2	2.23	0.54
1:AA:1326:C:OP1	21:AU:12:LYS:NZ	2.31	0.54
2:AB:18:GLY:N	2:AB:42:ILE:HG22	2.15	0.54
2:AB:229:VAL:CG1	2:AB:230:VAL:H	2.20	0.54
4:AD:36:ARG:O	4:AD:38:TYR:N	2.41	0.54
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.08	0.54
8:AH:7:ALA:HB2	8:AH:85:ARG:CD	2.34	0.54
9:AI:19:LEU:HD21	9:AI:59:PHE:CB	2.30	0.54
12:AL:77:LEU:HD21	12:AL:107:ALA:HA	1.88	0.54
27:B1:90:ILE:HG22	27:B1:90:ILE:O	2.06	0.54
32:B6:11:LEU:C	32:B6:12:GLU:HG2	2.28	0.54
36:BA:130:C:O3'	36:BA:1349:A:H1'	2.08	0.54
36:BA:389:G:O6	48:BP:70:GLN:HG3	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:521:G:H2'	36:BA:522:G:H8	1.73	0.54
36:BA:524:U:H2'	36:BA:525:U:C6	2.43	0.54
36:BA:970:C:H2'	36:BA:971:C:C6	2.42	0.54
37:BB:96:U:H2'	37:BB:97:G:C8	2.42	0.54
38:BC:214:VAL:CG2	38:BC:224:ILE:HG21	2.38	0.54
40:BE:186:GLY:O	40:BE:187:ALA:HB3	2.08	0.54
52:BT:33:LYS:HE3	52:BT:43:GLN:HE22	1.72	0.54
53:BU:95:LEU:CD1	54:BV:11:GLN:HG3	2.38	0.54
1:CA:59:A:H5'	1:CA:60:A:H5"	1.90	0.54
1:CA:839:U:H2'	1:CA:839:U:O2	2.07	0.54
1:CA:1347:G:C6	9:CI:107:ARG:NH2	2.75	0.54
6:CF:97:PHE:O	18:CR:31:LEU:HD23	2.08	0.54
10:CJ:65:LEU:HD13	14:CN:55:GLY:O	2.07	0.54
14:CN:50:LYS:HD3	14:CN:52:GLN:NE2	2.23	0.54
22:CV:68:C:O2'	22:CV:69:G:H5"	2.08	0.54
23:CX:20:U:O2'	23:CX:21:C:H5'	2.08	0.54
25:CZ:191:GLY:CA	25:CZ:197:ASP:OD2	2.55	0.54
25:CZ:298:VAL:HA	25:CZ:302:GLN:OE1	2.08	0.54
26:D0:36:ILE:HD12	26:D0:36:ILE:N	2.22	0.54
28:D2:6:VAL:HB	28:D2:7:ARG:HE	1.71	0.54
28:D2:7:ARG:HH11	28:D2:7:ARG:HG2	1.72	0.54
30:D4:28:LYS:O	30:D4:31:ILE:HD11	2.08	0.54
30:D4:30:GLU:O	30:D4:31:ILE:HD12	2.08	0.54
35:D9:29:ASN:HD22	35:D9:29:ASN:N	2.04	0.54
36:DA:562:U:C4	36:DA:2036:C:O4'	2.60	0.54
36:DA:836:G:H2'	36:DA:837:C:H6	1.73	0.54
36:DA:1534:U:H2'	36:DA:1535:A:O4'	2.08	0.54
36:DA:2087:G:O2'	36:DA:2088:G:H5'	2.08	0.54
36:DA:2352:A:H2'	36:DA:2353:G:H5'	1.90	0.54
36:DA:2422:A:H4'	36:DA:2423:U:OP1	2.07	0.54
38:DC:61:THR:HG22	38:DC:162:GLU:HA	1.90	0.54
42:DG:85:GLY:C	42:DG:87:PRO:CD	2.76	0.54
43:DH:158:HIS:HE1	43:DH:169:VAL:HG12	1.72	0.54
48:DP:88:LEU:HD11	48:DP:95:VAL:HG11	1.89	0.54
49:DQ:39:PRO:O	49:DQ:40:ALA:HB2	2.08	0.54
49:DQ:135:ASP:N	49:DQ:137:TYR:HD2	2.01	0.54
50:DR:59:ASP:O	50:DR:60:LEU:HB3	2.07	0.54
51:DS:39:ILE:HG22	51:DS:39:ILE:O	2.06	0.54
51:DS:73:LEU:HD23	51:DS:73:LEU:C	2.27	0.54
51:DS:77:ALA:O	51:DS:78:LEU:C	2.46	0.54
52:DT:100:TYR:HB3	52:DT:103:ARG:NE	2.14	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DU:90:VAL:CG2	54:DV:47:VAL:HG21	2.36	0.54
53:DU:110:VAL:O	53:DU:113:ALA:HB3	2.06	0.54
58:DZ:23:LYS:O	58:DZ:24:LEU:CB	2.53	0.54
58:DZ:104:PHE:HA	58:DZ:139:VAL:HG23	1.90	0.54
1:AA:397:A:N7	1:AA:547:A:O2'	2.35	0.54
1:AA:1104:G:O5'	2:AB:111:ARG:CD	2.56	0.54
1:AA:1277:C:O2'	1:AA:1279:A:C8	2.58	0.54
2:AB:155:LEU:HD21	2:AB:159:PRO:HG3	1.89	0.54
10:AJ:62:HIS:HB2	14:AN:59:ALA:HB3	1.89	0.54
11:AK:61:ALA:HB2	11:AK:90:GLY:HA3	1.89	0.54
12:AL:80:HIS:HD2	24:AY:68:C:O3'	1.90	0.54
13:AM:108:ARG:N	13:AM:108:ARG:HD2	2.20	0.54
28:B2:23:LYS:HE2	28:B2:26:ARG:HH11	1.71	0.54
28:B2:25:VAL:CG2	28:B2:57:ILE:HG21	2.38	0.54
36:BA:266:G:C3'	36:BA:267:C:H5"	2.38	0.54
36:BA:389:G:H1	48:BP:71:VAL:HG12	1.71	0.54
36:BA:745:G:C2'	36:BA:746:A:H5'	2.38	0.54
36:BA:1786:A:C2	36:BA:2606:C:H1'	2.42	0.54
37:BB:67:G:HO2'	37:BB:68:C:H6	1.55	0.54
38:BC:82:LYS:C	38:BC:84:LYS:H	2.10	0.54
40:BE:165:VAL:O	40:BE:189:PRO:HG3	2.07	0.54
41:BF:160:ASN:C	41:BF:160:ASN:HD22	2.11	0.54
42:BG:15:VAL:O	42:BG:15:VAL:CG1	2.56	0.54
47:BO:12:ASP:HB3	47:BO:85:VAL:HG13	1.90	0.54
48:BP:10:PRO:O	48:BP:11:GLY:O	2.26	0.54
48:BP:140:ALA:O	48:BP:141:ALA:HB3	2.07	0.54
50:BR:14:SER:HA	50:BR:17:ARG:NH1	2.22	0.54
52:BT:29:ARG:CB	52:BT:85:LYS:HA	2.35	0.54
52:BT:128:GLU:CD	52:BT:129:ARG:H	2.11	0.54
57:BY:75:ILE:HG13	57:BY:76:CYS:H	1.71	0.54
58:BZ:70:LEU:HD23	58:BZ:70:LEU:N	2.23	0.54
1:CA:434:U:H2'	1:CA:435:C:C6	2.42	0.54
1:CA:924:C:H5'	1:CA:1399:C:OP2	2.08	0.54
1:CA:1131:G:H2'	1:CA:1132:C:C5	2.43	0.54
4:CD:65:ARG:C	4:CD:67:ILE:H	2.11	0.54
6:CF:33:TYR:HB2	6:CF:75:LEU:HD13	1.89	0.54
11:CK:84:VAL:HG21	11:CK:91:ARG:HD3	1.90	0.54
16:CP:43:LYS:O	16:CP:45:THR:HG22	2.07	0.54
18:CR:19:LYS:HG3	18:CR:20:ALA:N	2.22	0.54
25:CZ:198:LYS:C	25:CZ:198:LYS:HZ2	2.07	0.54
27:D1:30:VAL:HG23	27:D1:31:GLY:N	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D5:47:PRO:O	31:D5:57:VAL:HG21	2.08	0.54
34:D8:26:LYS:NZ	34:D8:47:LYS:HD2	2.23	0.54
36:DA:1029:A:H2'	36:DA:1030:G:O4'	2.08	0.54
36:DA:1887:C:C3'	36:DA:1888:G:H5"	2.38	0.54
36:DA:2107:C:H1'	36:DA:2182:G:H22	1.73	0.54
40:DE:44:TYR:O	40:DE:45:THR:CB	2.56	0.54
41:DF:39:TRP:CZ2	41:DF:106:ARG:HD2	2.43	0.54
41:DF:64:ILE:HG22	41:DF:76:GLY:O	2.08	0.54
42:DG:128:ARG:O	42:DG:130:ASN:N	2.41	0.54
46:DN:12:ARG:CZ	46:DN:135:PRO:HG2	2.38	0.54
48:DP:71:VAL:CG1	48:DP:72:PRO:HD3	2.38	0.54
48:DP:105:LEU:HD12	48:DP:105:LEU:N	2.22	0.54
1:AA:755:G:OP2	15:AO:65:ARG:HD2	2.08	0.54
1:AA:1158:C:C2'	1:AA:1158:C:O2	2.56	0.54
2:AB:235:SER:O	2:AB:237:ALA:N	2.41	0.54
8:AH:4:ASP:OD2	8:AH:89:PRO:HD3	2.08	0.54
9:AI:40:LEU:CD1	9:AI:70:LYS:HG2	2.36	0.54
15:AO:24:SER:HB2	15:AO:27:VAL:HG23	1.90	0.54
24:AY:71:C:O2'	24:AY:72:U:H5'	2.08	0.54
25:AZ:143:ASP:HB3	25:AZ:146:LEU:HB2	1.89	0.54
25:AZ:270:VAL:HG13	25:AZ:286:VAL:CG2	2.27	0.54
36:BA:67:U:H2'	36:BA:68:G:O4'	2.07	0.54
36:BA:201:C:C2'	36:BA:202:U:H5'	2.38	0.54
36:BA:272(H):C:C3'	36:BA:272(I):U:H5"	2.38	0.54
36:BA:521:G:H2'	36:BA:522:G:C8	2.43	0.54
36:BA:631:A:OP1	48:BP:64:LYS:HE2	2.07	0.54
36:BA:1462:C:H4'	36:BA:2703:C:O4'	2.07	0.54
36:BA:1494:A:H2'	36:BA:1495:A:H5"	1.89	0.54
36:BA:1598:C:H5'	56:BX:36:LYS:CD	2.37	0.54
36:BA:2133:G:C5	36:BA:2157:G:N1	2.76	0.54
36:BA:2307:G:H3'	36:BA:2307:G:N3	2.23	0.54
38:BC:214:VAL:HG23	38:BC:224:ILE:CG2	2.38	0.54
39:BD:91:ARG:HH11	39:BD:91:ARG:HG2	1.72	0.54
48:BP:79:ARG:HB3	48:BP:79:ARG:NH1	2.23	0.54
53:BU:92:ARG:CZ	54:BV:11:GLN:O	2.56	0.54
54:BV:72:VAL:HG22	54:BV:85:LYS:O	2.08	0.54
58:BZ:102:LEU:HD21	58:BZ:124:ILE:CD1	2.35	0.54
1:CA:659:U:O2'	1:CA:660:G:H5'	2.08	0.54
1:CA:1118:C:H1'	1:CA:1179:A:C4	2.42	0.54
2:CB:165:VAL:O	2:CB:165:VAL:CG2	2.56	0.54
9:CI:108:VAL:HG12	9:CI:109:VAL:H	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:8:ARG:HB3	16:CP:28:ARG:HH12	1.72	0.54
18:CR:53:ARG:HG3	18:CR:63:GLN:HE21	1.72	0.54
22:CV:34:G:C6	23:CX:21:C:N3	2.75	0.54
24:CY:61:C:O2'	24:CY:62:U:H5"	2.08	0.54
24:CY:76:A:N3	25:CZ:287:GLY:O	2.41	0.54
25:CZ:325:LYS:O	25:CZ:328:GLY:N	2.41	0.54
26:D0:37:LEU:N	26:D0:59:LEU:O	2.33	0.54
27:D1:88:LYS:HG2	27:D1:92:LYS:NZ	2.23	0.54
36:DA:588:U:H2'	36:DA:589:C:C6	2.42	0.54
36:DA:1039:G:H1	36:DA:1116:C:H42	1.56	0.54
36:DA:1224:C:O2	36:DA:1224:C:C2'	2.56	0.54
36:DA:1523:U:H2'	36:DA:1524:G:C8	2.42	0.54
36:DA:1542:A:C8	36:DA:1544:A:H5'	2.43	0.54
36:DA:2195:C:O2'	36:DA:2196:C:H5'	2.07	0.54
36:DA:2363:C:O2'	36:DA:2364:C:H5'	2.08	0.54
36:DA:2377:A:H4'	51:DS:107:GLU:O	2.08	0.54
36:DA:2492:U:O2'	36:DA:2493:U:H5'	2.07	0.54
36:DA:2776:A:H4'	36:DA:2777:G:H5"	1.89	0.54
38:DC:72:VAL:HG23	38:DC:111:ASP:HB3	1.90	0.54
39:DD:152:GLY:O	39:DD:154:LYS:HG3	2.07	0.54
40:DE:1:MET:HG3	40:DE:83:ASP:HB2	1.88	0.54
43:DH:157:TYR:O	43:DH:158:HIS:CD2	2.61	0.54
46:DN:46:VAL:HG11	46:DN:48:MET:HG3	1.89	0.54
54:DV:19:LYS:HB3	54:DV:94:LEU:O	2.08	0.54
54:DV:34:GLU:O	54:DV:36:PRO:CD	2.55	0.54
55:DW:12:ILE:HB	55:DW:42:ARG:HH12	1.72	0.54
1:AA:192:U:H4'	20:AT:103:GLY:N	2.23	0.54
1:AA:476:G:H2'	1:AA:477:A:H8	1.73	0.54
1:AA:534:U:H5'	1:AA:534:U:C6	2.42	0.54
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.42	0.54
2:AB:115:LEU:O	2:AB:119:GLU:HB2	2.08	0.54
4:AD:8:VAL:O	4:AD:10:ARG:N	2.36	0.54
4:AD:170:VAL:HG12	4:AD:171:GLY:N	2.23	0.54
5:AE:100:VAL:HG23	5:AE:100:VAL:O	2.07	0.54
8:AH:116:LYS:HD2	8:AH:129:VAL:HG11	1.89	0.54
12:AL:41:ARG:HG3	12:AL:42:THR:H	1.73	0.54
19:AS:16:LEU:C	19:AS:18:LYS:H	2.11	0.54
25:AZ:9:LYS:CE	25:AZ:74:LYS:C	2.77	0.54
25:AZ:39:ASN:HA	25:AZ:41:ASN:H	1.73	0.54
25:AZ:134:PHE:CZ	25:AZ:199:ILE:HD11	2.43	0.54
28:B2:41:ILE:HD11	28:B2:44:LEU:HD13	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B5:57:VAL:C	31:B5:58:LEU:HD12	2.28	0.54
36:BA:767:U:O2'	36:BA:768:G:H5'	2.08	0.54
36:BA:1528:A:O2'	36:BA:1528(A):A:H5'	2.07	0.54
36:BA:1582:C:H2'	36:BA:1583:A:H8	1.73	0.54
36:BA:2575:C:H2'	36:BA:2578:G:O6	2.07	0.54
36:BA:2657:A:H2'	36:BA:2658:C:C5'	2.33	0.54
38:BC:40:THR:HG23	38:BC:176:GLY:O	2.08	0.54
39:BD:131:LEU:HD12	39:BD:131:LEU:N	2.22	0.54
40:BE:111:ARG:HD3	40:BE:160:TYR:CD2	2.43	0.54
42:BG:107:LEU:HD12	42:BG:178:PHE:CD1	2.42	0.54
47:BO:8:LEU:HD22	47:BO:19:ILE:HG13	1.90	0.54
51:BS:40:ILE:HG13	51:BS:41:ASP:N	2.22	0.54
52:BT:23:ARG:O	52:BT:25:GLY:N	2.41	0.54
58:BZ:151:HIS:HB2	58:BZ:170:THR:HA	1.90	0.54
1:CA:139:G:O2'	1:CA:140:A:H5'	2.07	0.54
1:CA:972:C:H4'	10:CJ:57:LYS:HB2	1.89	0.54
1:CA:1003:G:N2	1:CA:1039:C:H42	2.05	0.54
1:CA:1258:G:H2'	1:CA:1259:C:H6	1.72	0.54
3:CC:23:TYR:CD1	3:CC:24:ALA:N	2.76	0.54
3:CC:134:ILE:CG2	3:CC:168:ALA:HB3	2.36	0.54
10:CJ:43:ARG:HG3	10:CJ:43:ARG:NH1	2.21	0.54
10:CJ:47:PHE:HB2	10:CJ:63:PHE:HB2	1.89	0.54
19:CS:63:THR:CG2	19:CS:65:ASN:HB3	2.37	0.54
20:CT:94:ALA:O	20:CT:95:ALA:HB3	2.08	0.54
22:CV:18:G:H1'	22:CV:58:A:C2	2.43	0.54
25:CZ:118:GLU:OE2	61:CZ:502:KIR:H51	2.07	0.54
25:CZ:159:ASN:C	25:CZ:161:TYR:N	2.62	0.54
28:D2:47:ASN:HD22	36:DA:95:G:H1'	1.73	0.54
31:D5:49:CYS:SG	31:D5:50:GLY:N	2.76	0.54
34:D8:8:LYS:HD3	34:D8:11:LYS:HD3	1.90	0.54
34:D8:42:ARG:HH22	36:DA:2382:G:H21	1.53	0.54
36:DA:1163:G:O2'	36:DA:1164:G:H5'	2.08	0.54
36:DA:1684:C:O2'	36:DA:1685:C:H5'	2.08	0.54
37:DB:96:U:H2'	37:DB:97:G:H8	1.71	0.54
39:DD:13:ARG:NH1	39:DD:16:MET:SD	2.81	0.54
40:DE:28:ALA:HB1	40:DE:93:VAL:HG22	1.90	0.54
40:DE:59:VAL:HG23	40:DE:63:LEU:HA	1.90	0.54
42:DG:68:PRO:HG3	42:DG:92:VAL:HB	1.90	0.54
42:DG:103:LEU:HD21	42:DG:178:PHE:CE1	2.43	0.54
43:DH:41:MET:O	43:DH:42:ARG:CB	2.56	0.54
48:DP:47:ASP:OD2	48:DP:50:ARG:NH1	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:18:LEU:HD11	50:DR:22:ARG:NE	2.23	0.54
53:DU:59:ARG:HH11	53:DU:59:ARG:CG	2.13	0.54
1:AA:973:G:O3'	14:AN:41:ARG:NH1	2.41	0.53
1:AA:1296:C:H4'	1:AA:1302:U:C5	2.43	0.53
1:AA:1320:C:H42	19:AS:36:ARG:HG3	1.73	0.53
1:AA:1415:G:O2'	1:AA:1416:G:H5'	2.08	0.53
7:AG:113:GLU:O	7:AG:119:ARG:HD3	2.08	0.53
9:AI:99:LEU:HD22	9:AI:99:LEU:H	1.72	0.53
10:AJ:6:ILE:CG1	10:AJ:72:VAL:HB	2.38	0.53
10:AJ:54:PHE:CA	10:AJ:55:LYS:HE3	2.38	0.53
11:AK:105:VAL:O	11:AK:105:VAL:HG23	2.08	0.53
13:AM:57:ARG:O	13:AM:61:GLU:HB3	2.08	0.53
17:AQ:4:LYS:CE	17:AQ:6:LEU:HD21	2.37	0.53
22:AV:50:U:O2'	22:AV:51:U:H5'	2.08	0.53
22:AV:59:U:O2'	22:AV:60:U:O5'	2.26	0.53
25:AZ:84:GLY:O	25:AZ:85:HIS:HB3	2.06	0.53
26:B0:20:ARG:HD3	36:BA:2356:C:O3'	2.08	0.53
28:B2:3:LEU:HG	28:B2:7:ARG:NH2	2.22	0.53
28:B2:41:ILE:HD11	28:B2:44:LEU:CD1	2.38	0.53
35:B9:29:ASN:HD21	35:B9:32:HIS:CE1	2.24	0.53
36:BA:58:G:N3	36:BA:73:A:H2	2.06	0.53
36:BA:263:C:O2'	36:BA:429:A:N3	2.40	0.53
36:BA:271(V):G:O2'	36:BA:271(W):G:H5'	2.08	0.53
36:BA:492:A:H2'	36:BA:493:G:O4'	2.07	0.53
36:BA:1265:A:OP1	36:BA:1265:A:H8	1.90	0.53
36:BA:1504:C:O2'	36:BA:1505:C:C5'	2.56	0.53
36:BA:1885:A:H8	36:BA:1885:A:H5'	1.73	0.53
36:BA:2063:C:O2	36:BA:2450:A:N1	2.41	0.53
36:BA:2312:U:C3'	42:BG:71:THR:HG21	2.37	0.53
36:BA:2596:U:H2'	36:BA:2597:G:O4'	2.09	0.53
43:BH:158:HIS:O	43:BH:159:GLU:HB2	2.07	0.53
47:BO:87:ILE:HG23	47:BO:91:LEU:HA	1.89	0.53
56:BX:57:LEU:HD23	56:BX:57:LEU:N	2.23	0.53
58:BZ:19:ARG:NH1	58:BZ:84:GLU:O	2.41	0.53
1:CA:115:G:H1'	1:CA:116:A:N7	2.23	0.53
1:CA:673:G:H5"	6:CF:87:ARG:NH1	2.23	0.53
1:CA:1123:A:H2	1:CA:1150:U:H3	1.53	0.53
4:CD:200:GLU:O	4:CD:204:ILE:HG13	2.07	0.53
9:CI:127:LYS:O	9:CI:128:ARG:O	2.26	0.53
13:CM:35:GLU:C	13:CM:37:THR:N	2.61	0.53
17:CQ:40:LYS:HD3	17:CQ:42:TYR:CZ	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CW:40:C:H2'	22:CW:41:C:H6	1.72	0.53
30:D4:7:PRO:O	30:D4:8:LYS:HB3	2.08	0.53
35:D9:9:ARG:HD2	35:D9:16:VAL:HG22	1.89	0.53
36:DA:1013:C:H2'	36:DA:1014:U:H6	1.73	0.53
36:DA:1363:C:H2'	36:DA:1364:G:H8	1.73	0.53
36:DA:1827:C:C2'	36:DA:1828:G:H5'	2.38	0.53
39:DD:35:LYS:HD2	39:DD:36:PRO:CA	2.36	0.53
40:DE:57:LYS:O	40:DE:58:ARG:HG3	2.08	0.53
40:DE:197:ILE:HG12	40:DE:197:ILE:O	2.08	0.53
41:DF:160:ASN:OD1	41:DF:163:VAL:HG23	2.08	0.53
41:DF:169:ASN:C	41:DF:169:ASN:HD22	2.10	0.53
42:DG:73:ALA:CB	42:DG:87:PRO:HG3	2.30	0.53
42:DG:164:GLU:HB2	42:DG:168:GLU:OE2	2.08	0.53
46:DN:90:MET:HA	46:DN:90:MET:CE	2.38	0.53
51:DS:50:SER:O	51:DS:51:ALA:HB2	2.08	0.53
53:DU:58:ARG:O	53:DU:62:ILE:HG13	2.07	0.53
1:AA:220:G:H2'	1:AA:221:C:H5'	1.89	0.53
1:AA:542:G:H5'	4:AD:41:GLY:CA	2.39	0.53
1:AA:792:A:H4'	1:AA:793:U:O5'	2.08	0.53
1:AA:1125:U:O5'	1:AA:1125:U:C2	2.61	0.53
19:AS:23:ASN:C	19:AS:25:LYS:H	2.11	0.53
25:AZ:317:GLU:O	25:AZ:401:THR:HB	2.09	0.53
31:B5:6:VAL:HG13	31:B5:7:PRO:HD2	1.89	0.53
36:BA:17:G:H4'	53:BU:25:TRP:CH2	2.42	0.53
36:BA:36:G:O2'	36:BA:37:C:H5'	2.07	0.53
36:BA:80:G:O2'	36:BA:81:G:H5'	2.09	0.53
36:BA:272(C):G:H2'	36:BA:272(D):G:H8	1.73	0.53
36:BA:742:G:H2'	36:BA:743:G:H8	1.73	0.53
36:BA:818:G:C2'	36:BA:819:A:H5"	2.39	0.53
36:BA:833:U:H5"	48:BP:48:PRO:CB	2.38	0.53
36:BA:941:A:H4'	48:BP:35:HIS:CE1	2.43	0.53
36:BA:1213:A:H2'	36:BA:1214:A:C8	2.43	0.53
36:BA:1314:C:H5'	36:BA:1314:C:C6	2.35	0.53
36:BA:1499:C:O2'	36:BA:1500:G:H5'	2.08	0.53
36:BA:2199:A:H5"	36:BA:2200:C:H5	1.73	0.53
36:BA:2206:G:H3'	36:BA:2206:G:N3	2.23	0.53
36:BA:2306:C:H4'	42:BG:136:ARG:HH22	1.73	0.53
36:BA:2334:G:N3	51:BS:18:ILE:HD13	2.24	0.53
36:BA:2852:G:O2'	36:BA:2853:C:H5'	2.08	0.53
40:BE:183:LEU:HD21	52:BT:11:GLU:HG2	1.90	0.53
46:BN:133:GLN:HG2	46:BN:135:PRO:CD	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:23:ARG:HG3	47:BO:24:VAL:N	2.21	0.53
48:BP:59:LEU:HA	48:BP:61:ARG:CZ	2.38	0.53
49:BQ:109:VAL:HG12	49:BQ:113:GLN:HB2	1.90	0.53
51:BS:64:GLU:O	51:BS:68:GLN:HG3	2.08	0.53
56:BX:55:ASN:HB2	56:BX:80:ILE:CG2	2.38	0.53
1:CA:223:U:H2'	1:CA:224:C:H6	1.73	0.53
1:CA:346:G:H2'	1:CA:346:G:N3	2.23	0.53
1:CA:865:A:H2	1:CA:918:A:H4'	1.73	0.53
1:CA:950:U:H2'	1:CA:951:G:H8	1.73	0.53
1:CA:1004:A:H2'	1:CA:1005:A:H5'	1.90	0.53
1:CA:1155:G:H2'	1:CA:1156:G:C8	2.44	0.53
1:CA:1227:A:C2	1:CA:1228:C:C1'	2.91	0.53
2:CB:80:ILE:HD12	2:CB:80:ILE:N	2.22	0.53
4:CD:18:LYS:CB	4:CD:33:MET:HG2	2.38	0.53
4:CD:85:LYS:HZ2	4:CD:92:VAL:HG13	1.73	0.53
5:CE:6:PHE:HB2	5:CE:34:VAL:HG13	1.91	0.53
5:CE:107:ARG:HD3	5:CE:111:GLU:OE2	2.09	0.53
11:CK:99:GLN:C	11:CK:101:SER:H	2.12	0.53
13:CM:13:LYS:HA	13:CM:44:ARG:NH1	2.24	0.53
20:CT:73:HIS:CB	20:CT:74:LYS:HD3	2.39	0.53
22:CV:1:G:H1'	26:D0:5:LYS:NZ	2.24	0.53
29:D3:29:ARG:HB2	29:D3:29:ARG:NH1	2.24	0.53
31:D5:6:VAL:HG13	31:D5:7:PRO:HD2	1.91	0.53
35:D9:34:GLN:O	35:D9:35:ARG:HB2	2.06	0.53
36:DA:108:U:H2'	36:DA:109:G:C8	2.43	0.53
36:DA:664:C:O2'	36:DA:665:C:H5'	2.07	0.53
36:DA:753:C:O2'	36:DA:754:C:H5'	2.08	0.53
36:DA:1087:G:H8	36:DA:1088:A:H4'	1.71	0.53
36:DA:2168:G:N2	36:DA:2170:A:H3'	2.23	0.53
37:DB:16:G:O2'	37:DB:17:C:H6	1.91	0.53
38:DC:40:THR:HA	38:DC:177:LYS:HD2	1.89	0.53
39:DD:32:SER:O	39:DD:36:PRO:HG3	2.08	0.53
39:DD:101:GLU:OE2	39:DD:103:ARG:HD3	2.08	0.53
40:DE:52:LEU:CG	40:DE:75:VAL:HB	2.38	0.53
42:DG:123:ASN:ND2	42:DG:123:ASN:N	2.34	0.53
43:DH:54:ARG:HG2	43:DH:54:ARG:NH1	2.16	0.53
43:DH:84:SER:O	43:DH:85:LYS:HB3	2.09	0.53
48:DP:112:LEU:H	48:DP:128:HIS:HD2	1.55	0.53
55:DW:25:ARG:NH1	55:DW:25:ARG:CB	2.71	0.53
57:DY:44:ILE:CG2	57:DY:45:VAL:N	2.71	0.53
58:DZ:127:LYS:O	58:DZ:127:LYS:HG3	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:191:G:H1'	20:AT:105:SER:HA	1.91	0.53
1:AA:338:A:H2'	1:AA:339:C:C6	2.44	0.53
2:AB:8:LYS:NZ	2:AB:217:ARG:HH12	2.06	0.53
4:AD:74:GLN:O	4:AD:77:ASN:HB3	2.09	0.53
4:AD:135:LEU:N	4:AD:135:LEU:HD13	2.24	0.53
8:AH:26:VAL:HG13	8:AH:59:LEU:HB2	1.90	0.53
10:AJ:29:ARG:HH11	10:AJ:29:ARG:HG2	1.73	0.53
19:AS:16:LEU:O	19:AS:18:LYS:N	2.41	0.53
19:AS:58:VAL:O	19:AS:58:VAL:HG13	2.09	0.53
20:AT:55:ILE:HD13	20:AT:55:ILE:N	2.18	0.53
25:AZ:34:VAL:HG21	25:AZ:199:ILE:HG22	1.90	0.53
27:B1:75:GLU:O	27:B1:78:LYS:HG2	2.08	0.53
29:B3:26:LEU:O	29:B3:28:LEU:HG	2.09	0.53
36:BA:291:C:H2'	36:BA:292:C:C6	2.43	0.53
36:BA:729:G:C8	39:BD:208:LYS:HD2	2.43	0.53
36:BA:1251:C:OP1	53:BU:10:ARG:HG3	2.09	0.53
36:BA:1272:A:C2	36:BA:1618:A:C2	2.96	0.53
36:BA:2189:U:H2'	36:BA:2190:G:C4'	2.34	0.53
36:BA:2864:G:H2'	36:BA:2865:U:C6	2.42	0.53
37:BB:56:G:O2'	37:BB:57:A:OP2	2.25	0.53
39:BD:209:ALA:C	39:BD:210:GLY:O	2.45	0.53
40:BE:52:LEU:HD13	52:BT:1:MET:CE	2.38	0.53
58:BZ:59:LEU:O	58:BZ:66:SER:HA	2.07	0.53
1:CA:99:U:H2'	1:CA:100:C:C6	2.42	0.53
1:CA:392:G:H2'	1:CA:393:A:C8	2.43	0.53
1:CA:640:A:O2'	8:CH:115:SER:HB2	2.08	0.53
1:CA:648:A:H2'	1:CA:649:G:H8	1.74	0.53
1:CA:1200:C:H4'	1:CA:1201:A:H5"	1.91	0.53
1:CA:1308:U:H5"	13:CM:98:VAL:HG21	1.90	0.53
2:CB:87:ARG:NH1	2:CB:223:ILE:HD11	2.18	0.53
15:CO:82:ILE:CG2	15:CO:83:GLU:H	2.21	0.53
22:CW:39:U:C5'	22:CW:39:U:O2	2.56	0.53
28:D2:35:LEU:O	28:D2:38:GLN:N	2.41	0.53
32:D6:5:VAL:HB	32:D6:8:LYS:CB	2.38	0.53
32:D6:7:ILE:HB	32:D6:27:LYS:HZ1	1.74	0.53
32:D6:42:TRP:O	32:D6:45:LYS:HE2	2.08	0.53
34:D8:26:LYS:CE	34:D8:47:LYS:HD2	2.37	0.53
36:DA:1296:G:H1	36:DA:1644:C:H42	1.57	0.53
36:DA:2133:G:C5	36:DA:2157:G:N1	2.77	0.53
38:DC:41:VAL:HG21	38:DC:185:LEU:HD22	1.90	0.53
38:DC:118:ASP:O	38:DC:119:VAL:HB	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:43:ARG:CZ	39:DD:44:ASN:ND2	2.71	0.53
40:DE:120:TRP:CG	40:DE:155:LYS:HB3	2.43	0.53
42:DG:101:ILE:O	42:DG:104:GLU:HB3	2.08	0.53
46:DN:58:ASP:O	46:DN:60:ILE:HG13	2.07	0.53
1:AA:412:A:H5'	1:AA:413:G:OP1	2.08	0.53
1:AA:545:C:OP1	4:AD:61:LYS:NZ	2.41	0.53
1:AA:1143:G:H2'	1:AA:1144:G:H8	1.72	0.53
2:AB:127:ILE:HG22	2:AB:128:GLU:N	2.22	0.53
8:AH:86:ILE:HG12	8:AH:135:CYS:HA	1.90	0.53
9:AI:53:VAL:HG22	9:AI:95:LYS:CD	2.37	0.53
9:AI:57:GLY:O	9:AI:58:HIS:HB2	2.09	0.53
11:AK:84:VAL:HG11	11:AK:95:ILE:HD11	1.90	0.53
19:AS:11:VAL:HA	19:AS:38:SER:HB2	1.89	0.53
25:AZ:196:VAL:CG1	25:AZ:196:VAL:O	2.57	0.53
27:B1:83:GLU:HG3	27:B1:84:GLY:N	2.23	0.53
36:BA:970:C:H2'	36:BA:971:C:H6	1.73	0.53
36:BA:1190:G:H5'	48:BP:35:HIS:N	2.23	0.53
36:BA:1541:G:O3'	36:BA:1541:G:OP2	2.26	0.53
36:BA:2087:G:C2'	36:BA:2088:G:H5'	2.38	0.53
39:BD:134:ARG:HG3	39:BD:187:GLY:O	2.08	0.53
40:BE:101:ARG:HB2	40:BE:201:THR:HG21	1.90	0.53
41:BF:114:VAL:O	41:BF:114:VAL:HG12	2.08	0.53
43:BH:67:LEU:O	43:BH:71:LEU:HB2	2.07	0.53
48:BP:107:LYS:O	48:BP:108:LYS:HB2	2.09	0.53
49:BQ:46:GLN:NE2	49:BQ:126:PRO:HD3	2.23	0.53
55:BW:82:LEU:H	55:BW:82:LEU:CD1	2.20	0.53
1:CA:368:U:P	25:CZ:291:ARG:HH11	2.31	0.53
1:CA:446:G:H2'	1:CA:447:G:H5'	1.90	0.53
1:CA:602:A:O2'	1:CA:603:U:H5'	2.07	0.53
1:CA:924:C:H2'	1:CA:925:G:H8	1.73	0.53
1:CA:945:G:H2'	1:CA:945:G:N3	2.23	0.53
1:CA:1125:U:C1'	10:CJ:5:ARG:NH2	2.68	0.53
1:CA:1235:U:O3'	21:CU:3:LYS:HB2	2.08	0.53
2:CB:71:VAL:HG13	2:CB:93:VAL:HG13	1.90	0.53
13:CM:113:PRO:O	13:CM:114:ARG:CB	2.57	0.53
19:CS:16:LEU:C	19:CS:18:LYS:H	2.10	0.53
25:CZ:242:ILE:CB	25:CZ:282:ALA:HA	2.38	0.53
36:DA:252:G:OP2	48:DP:50:ARG:NH2	2.32	0.53
36:DA:1580:A:OP2	36:DA:1580:A:H8	1.91	0.53
36:DA:1681:G:O2'	36:DA:1762:A:H2'	2.07	0.53
36:DA:1906:G:O2'	36:DA:1907:G:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2115:G:N3	36:DA:2117:A:N7	2.55	0.53
36:DA:2316:C:H1'	42:DG:128:ARG:NH1	2.23	0.53
36:DA:2758:A:C2	36:DA:2759:G:H1'	2.44	0.53
39:DD:44:ASN:HB2	39:DD:48:ARG:O	2.09	0.53
41:DF:24:LEU:HD12	41:DF:118:ALA:HB1	1.89	0.53
42:DG:83:ARG:HD3	42:DG:84:LYS:HZ1	1.73	0.53
47:DO:64:ARG:NH1	47:DO:83:ALA:HB2	2.22	0.53
48:DP:5:ASP:OD1	48:DP:6:LEU:HD23	2.08	0.53
48:DP:64:LYS:O	48:DP:65:ARG:C	2.47	0.53
48:DP:77:ARG:CG	48:DP:78:PRO:HD2	2.38	0.53
49:DQ:140:ALA:HB1	58:DZ:99:TYR:CE2	2.44	0.53
50:DR:67:LEU:CD1	50:DR:76:VAL:HG21	2.37	0.53
51:DS:17:ARG:O	51:DS:20:ARG:HG2	2.08	0.53
54:DV:77:ALA:O	54:DV:79:VAL:N	2.42	0.53
58:DZ:113:ALA:HB1	58:DZ:146:ILE:HD13	1.88	0.53
1:AA:148:G:H2'	1:AA:149:A:H8	1.72	0.53
1:AA:370:C:O2'	1:AA:371:G:H5'	2.09	0.53
1:AA:858:G:C6	1:AA:869:G:C8	2.96	0.53
1:AA:980:C:H6	1:AA:980:C:C5'	2.11	0.53
2:AB:109:SER:C	2:AB:111:ARG:H	2.12	0.53
2:AB:155:LEU:HD13	2:AB:157:ARG:O	2.09	0.53
3:AC:16:ARG:HH11	3:AC:16:ARG:CB	2.22	0.53
7:AG:102:ARG:HG2	7:AG:106:GLN:HE21	1.74	0.53
9:AI:128:ARG:HG2	9:AI:128:ARG:OXT	2.08	0.53
13:AM:52:GLU:O	13:AM:55:ARG:HB3	2.09	0.53
25:AZ:9:LYS:HE3	25:AZ:73:ALA:C	2.29	0.53
26:B0:36:ILE:HG13	36:BA:2354:G:O2'	2.08	0.53
27:B1:94:LEU:H	27:B1:94:LEU:CD1	2.22	0.53
30:B4:30:GLU:O	30:B4:31:ILE:HD12	2.08	0.53
32:B6:22:ALA:CB	32:B6:39:TYR:CZ	2.91	0.53
36:BA:310:A:P	57:BY:18:GLY:HA2	2.47	0.53
36:BA:562:U:C4	36:BA:2036:C:O4'	2.61	0.53
36:BA:610:G:N2	36:BA:619:G:H1'	2.23	0.53
36:BA:1427:A:O2'	36:BA:1428:C:OP2	2.26	0.53
38:BC:171:ILE:CD1	38:BC:196:LEU:HD21	2.37	0.53
39:BD:70:TRP:O	39:BD:71:ASP:C	2.46	0.53
39:BD:142:VAL:HG23	39:BD:193:VAL:CA	2.37	0.53
41:BF:65:TRP:CZ3	41:BF:73:ALA:O	2.55	0.53
43:BH:125:VAL:N	43:BH:126:PRO:CD	2.72	0.53
48:BP:23:PRO:HB2	48:BP:33:ARG:CG	2.38	0.53
54:BV:99:ILE:H	54:BV:99:ILE:CD1	2.05	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:585:G:H4'	12:CL:8:ASN:HD21	1.73	0.53
1:CA:614:A:O2'	1:CA:615:C:H5'	2.08	0.53
1:CA:745:C:O2'	1:CA:746:A:H5'	2.07	0.53
1:CA:1145:C:O2'	1:CA:1146:A:H8	1.91	0.53
1:CA:1277:C:O2'	1:CA:1279:A:H8	1.90	0.53
1:CA:1303:C:H2'	1:CA:1304:G:H5'	1.88	0.53
8:CH:35:ILE:HG22	8:CH:39:LEU:CD2	2.38	0.53
10:CJ:56:HIS:O	10:CJ:58:ASP:O	2.27	0.53
10:CJ:88:LEU:O	10:CJ:88:LEU:HG	2.09	0.53
14:CN:57:ARG:HB2	14:CN:57:ARG:HH11	1.72	0.53
17:CQ:43:LEU:HD11	17:CQ:68:ARG:NH1	2.24	0.53
22:CV:68:C:C2'	22:CV:69:G:C5'	2.86	0.53
22:CV:68:C:C2'	22:CV:69:G:H5'	2.37	0.53
25:CZ:325:LYS:HG2	25:CZ:326:GLU:N	2.24	0.53
29:D3:38:GLU:CB	29:D3:40:THR:HG23	2.35	0.53
33:D7:34:ARG:HB2	33:D7:42:LEU:HD23	1.90	0.53
34:D8:15:LYS:HG2	48:DP:65:ARG:HH21	1.73	0.53
34:D8:62:LEU:N	34:D8:63:PRO:CD	2.72	0.53
36:DA:118:A:H5'	36:DA:119:A:H8	1.73	0.53
36:DA:438:G:H2'	36:DA:440:G:H8	1.73	0.53
36:DA:523:C:C2'	36:DA:524:U:H5'	2.38	0.53
36:DA:598:G:H5'	48:DP:15:ARG:CB	2.39	0.53
36:DA:927:G:H3'	36:DA:928:G:H8	1.73	0.53
36:DA:2019:A:O4'	53:DU:34:LYS:HD2	2.08	0.53
36:DA:2553:G:H2'	36:DA:2554:U:C4'	2.38	0.53
39:DD:131:LEU:HD12	39:DD:131:LEU:N	2.23	0.53
40:DE:146:THR:HA	40:DE:147:PRO:C	2.29	0.53
1:AA:145:G:N3	1:AA:146:G:H1'	2.24	0.53
1:AA:189(H):G:HO2'	1:AA:189(I):G:H8	1.47	0.53
1:AA:748:C:H4'	1:AA:749:C:O5'	2.09	0.53
4:AD:114:ARG:HH11	4:AD:114:ARG:CG	2.12	0.53
4:AD:152:SER:O	4:AD:155:LEU:N	2.35	0.53
20:AT:22:ARG:HG3	20:AT:22:ARG:HH11	1.72	0.53
22:AW:67:C:H2'	22:AW:68:C:H6	1.72	0.53
22:AW:68:C:H2'	22:AW:69:G:C8	2.38	0.53
31:B5:3:LYS:HA	31:B5:3:LYS:CE	2.25	0.53
32:B6:15:GLU:O	32:B6:15:GLU:CG	2.56	0.53
36:BA:774:A:H2	36:BA:787:U:O2'	1.91	0.53
36:BA:826:U:H4'	48:BP:55:ARG:HB3	1.90	0.53
36:BA:863:A:H61	36:BA:913:U:H3	1.56	0.53
36:BA:1120:G:H2'	36:BA:1121:C:H6	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:132:PRO:HG3	39:BD:190:TYR:CE1	2.44	0.53
39:BD:144:ALA:HB3	39:BD:192:THR:CG2	2.38	0.53
40:BE:117:MET:HA	40:BE:122:PHE:H	1.73	0.53
41:BF:3:GLU:O	41:BF:19:GLU:HG3	2.09	0.53
42:BG:71:THR:CG2	42:BG:72:ARG:N	2.70	0.53
43:BH:98:LEU:HB3	43:BH:125:VAL:CG2	2.38	0.53
46:BN:132:ALA:O	46:BN:133:GLN:CB	2.56	0.53
1:CA:444:C:H2'	1:CA:445:G:H8	1.74	0.53
1:CA:683:G:H3'	1:CA:684:A:H8	1.72	0.53
2:CB:40:HIS:C	2:CB:41:ILE:HD12	2.28	0.53
4:CD:22:LYS:HB2	4:CD:26:CYS:HB2	1.91	0.53
4:CD:53:ASP:HB3	4:CD:57:ARG:HH12	1.73	0.53
4:CD:122:ARG:O	4:CD:122:ARG:HG3	2.09	0.53
4:CD:138:TYR:CD1	4:CD:139:ARG:N	2.77	0.53
4:CD:163:GLU:O	4:CD:166:LYS:HG2	2.09	0.53
6:CF:72:VAL:HG22	6:CF:72:VAL:O	2.08	0.53
8:CH:55:GLY:O	8:CH:56:LYS:HD3	2.08	0.53
13:CM:5:ALA:CB	13:CM:66:LEU:HD23	2.38	0.53
14:CN:49:HIS:C	14:CN:51:GLY:H	2.11	0.53
19:CS:51:VAL:HG12	19:CS:52:TYR:N	2.22	0.53
21:CU:23:PRO:O	21:CU:24:ARG:HB2	2.08	0.53
25:CZ:39:ASN:HA	25:CZ:41:ASN:H	1.74	0.53
25:CZ:176:LEU:C	25:CZ:176:LEU:HD13	2.29	0.53
25:CZ:331:HIS:H	25:CZ:331:HIS:HD2	1.56	0.53
27:D1:23:LYS:HE2	27:D1:28:GLY:HA3	1.90	0.53
27:D1:87:PRO:CG	27:D1:88:LYS:N	2.72	0.53
36:DA:519:U:H2'	36:DA:520:G:C8	2.44	0.53
36:DA:1573:G:H2'	36:DA:1574:C:H5'	1.91	0.53
36:DA:2084:C:H2'	36:DA:2085:C:H6	1.73	0.53
36:DA:2208:A:H1'	36:DA:2219:G:C5	2.43	0.53
36:DA:2360:A:HO2'	36:DA:2361:A:H8	1.57	0.53
36:DA:2376:A:H2'	36:DA:2377:A:O4'	2.09	0.53
36:DA:2523:G:H2'	36:DA:2524:G:C5'	2.38	0.53
37:DB:34:U:H5"	37:DB:35:U:OP1	2.09	0.53
37:DB:73:A:C4	37:DB:105:A:C2	2.97	0.53
39:DD:134:ARG:HG3	39:DD:187:GLY:CA	2.39	0.53
40:DE:132:HIS:HA	40:DE:135:HIS:CE1	2.44	0.53
42:DG:76:SER:HB2	42:DG:84:LYS:N	2.24	0.53
48:DP:17:LYS:C	48:DP:19:VAL:H	2.11	0.53
49:DQ:18:LYS:HA	49:DQ:18:LYS:HZ1	1.70	0.53
52:DT:8:LYS:HA	52:DT:11:GLU:OE1	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DX:27:THR:HG22	56:DX:80:ILE:CG1	2.38	0.53
57:DY:87:LYS:O	57:DY:88:LYS:HB2	2.07	0.53
1:AA:333:G:O2'	1:AA:334:C:H5'	2.09	0.53
1:AA:633:G:H5'	1:AA:634:C:OP2	2.09	0.53
1:AA:1321:C:OP2	1:AA:1322:C:H2'	2.09	0.53
1:AA:1328:C:O2'	1:AA:1329:A:H5'	2.08	0.53
10:AJ:78:ASN:HB2	10:AJ:81:THR:HG23	1.91	0.53
13:AM:11:ARG:HE	13:AM:12:ASN:HD21	1.55	0.53
15:AO:45:VAL:HG12	15:AO:46:HIS:CD2	2.44	0.53
23:AX:12:A:H8	23:AX:12:A:O5'	1.92	0.53
25:AZ:94:THR:HG21	25:AZ:300:ARG:NH2	2.24	0.53
28:B2:53:LEU:HD23	28:B2:56:GLN:HG3	1.91	0.53
29:B3:56:VAL:HG12	29:B3:57:GLU:N	2.23	0.53
35:B9:10:ILE:HD12	35:B9:10:ILE:N	2.15	0.53
36:BA:363(A):A:C2	36:BA:363(B):G:C8	2.97	0.53
36:BA:470:A:H2'	36:BA:471:A:C8	2.44	0.53
36:BA:520:G:H2'	36:BA:521:G:C8	2.44	0.53
36:BA:618:C:H2'	36:BA:619:G:O4'	2.09	0.53
36:BA:652:C:O2'	36:BA:653:A:O5'	2.26	0.53
36:BA:676:A:H2	36:BA:802:A:H61	1.50	0.53
36:BA:806:C:C5	48:BP:39:LYS:HE2	2.42	0.53
36:BA:1614:A:N7	55:BW:93:ALA:HB2	2.23	0.53
36:BA:1677:A:H2'	36:BA:1678:G:C8	2.43	0.53
36:BA:1813:G:H1'	39:BD:50:THR:OG1	2.09	0.53
36:BA:2681:C:H5	36:BA:2725:A:H62	1.57	0.53
36:BA:2884:U:H2'	36:BA:2885:C:C5'	2.35	0.53
39:BD:16:MET:CE	39:BD:208:LYS:HG2	2.39	0.53
39:BD:79:VAL:HG23	39:BD:115:GLN:O	2.09	0.53
40:BE:34:VAL:O	40:BE:35:GLN:CB	2.56	0.53
43:BH:89:ILE:O	43:BH:89:ILE:HG13	2.09	0.53
52:BT:96:ARG:HG2	52:BT:98:LYS:O	2.09	0.53
52:BT:134:GLU:O	52:BT:135:ALA:HB3	2.09	0.53
53:BU:79:PHE:CE2	53:BU:110:VAL:HG22	2.43	0.53
55:BW:29:LEU:HA	55:BW:32:ALA:HB3	1.90	0.53
55:BW:32:ALA:O	55:BW:36:LEU:HG	2.09	0.53
1:CA:64:G:H4'	1:CA:66:G:OP1	2.09	0.53
1:CA:542:G:P	4:CD:10:ARG:NH2	2.82	0.53
1:CA:633:G:H5'	1:CA:634:C:OP2	2.09	0.53
1:CA:1113:C:H2'	1:CA:1114:C:C6	2.43	0.53
1:CA:1149:C:O2'	1:CA:1150:U:H5'	2.09	0.53
3:CC:25:GLY:C	3:CC:27:LYS:H	2.12	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:10:ARG:HB3	9:CI:72:GLY:O	2.09	0.53
12:CL:69:TYR:HB2	12:CL:96:VAL:HG11	1.89	0.53
19:CS:13:ASP:C	19:CS:15:LEU:N	2.61	0.53
19:CS:13:ASP:O	19:CS:15:LEU:N	2.41	0.53
19:CS:29:ARG:HB3	19:CS:48:THR:H	1.74	0.53
22:CV:59:U:O2'	22:CV:60:U:O5'	2.27	0.53
24:CY:74:C:O2'	25:CZ:229:PHE:CE2	2.50	0.53
25:CZ:93:ILE:HD11	25:CZ:389:ARG:HH11	1.72	0.53
25:CZ:191:GLY:H	25:CZ:197:ASP:CG	2.09	0.53
25:CZ:251:ASP:O	25:CZ:267:VAL:HG12	2.09	0.53
28:D2:51:ARG:HB3	36:DA:61:G:OP1	2.09	0.53
36:DA:271(E):U:H2'	36:DA:271(F):C:C6	2.43	0.53
36:DA:437:G:H2'	36:DA:438:G:C8	2.44	0.53
36:DA:2261:C:O2'	36:DA:2262:U:H5'	2.08	0.53
36:DA:2399:G:N2	36:DA:2418:A:H1'	2.24	0.53
38:DC:47:LEU:HD11	38:DC:171:ILE:HG22	1.90	0.53
39:DD:144:ALA:HB3	39:DD:192:THR:CG2	2.39	0.53
42:DG:176:LEU:O	42:DG:176:LEU:HD23	2.08	0.53
57:DY:29:GLU:HB2	57:DY:38:ILE:CG2	2.38	0.53
1:AA:80:G:H2'	1:AA:81:U:H6	1.73	0.53
1:AA:455:C:H42	1:AA:476:G:H1	1.56	0.53
1:AA:1001:A:N3	1:AA:1001:A:H2'	2.23	0.53
1:AA:1152:A:O2'	1:AA:1153:C:H5'	2.09	0.53
1:AA:1301:U:H3'	1:AA:1302:U:H5"	1.90	0.53
2:AB:47:THR:HG22	2:AB:47:THR:O	2.08	0.53
3:AC:20:SER:CB	3:AC:40:ARG:HH22	2.17	0.53
14:AN:21:TYR:N	14:AN:21:TYR:CD1	2.75	0.53
19:AS:49:ILE:HD12	19:AS:49:ILE:N	2.16	0.53
25:AZ:129:PRO:HB2	25:AZ:130:TYR:CD1	2.44	0.53
25:AZ:325:LYS:HG2	25:AZ:326:GLU:N	2.23	0.53
26:B0:33:ALA:O	36:BA:2353:G:H1'	2.09	0.53
31:B5:39:MET:HG3	55:BW:34:ASN:OD1	2.09	0.53
32:B6:30:THR:HG23	32:B6:31:PRO:HD2	1.88	0.53
36:BA:89:G:H3'	36:BA:90:U:H5'	1.91	0.53
36:BA:118:A:N3	36:BA:178:G:H1'	2.24	0.53
36:BA:751:A:H5'	55:BW:90:ARG:HA	1.91	0.53
36:BA:1322:A:H2'	36:BA:1323:U:H6	1.74	0.53
36:BA:2360:A:C2	36:BA:2361:A:H1'	2.44	0.53
37:BB:86:G:O2'	37:BB:87:G:H5'	2.09	0.53
41:BF:162:LEU:O	41:BF:165:ARG:HB2	2.09	0.53
43:BH:139:GLN:C	43:BH:141:VAL:H	2.12	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:115:LEU:HG	48:BP:116:GLY:N	2.17	0.53
57:BY:9:LYS:HZ1	57:BY:10:GLY:H	1.56	0.53
57:BY:88:LYS:O	57:BY:89:PHE:HB2	2.08	0.53
1:CA:403:C:O3'	4:CD:122:ARG:HD3	2.09	0.53
1:CA:538:G:OP1	12:CL:115:LYS:HB2	2.09	0.53
4:CD:21:LEU:HD21	4:CD:67:ILE:HA	1.91	0.53
10:CJ:49:VAL:O	10:CJ:60:ARG:HB3	2.09	0.53
22:CV:59:U:H2'	22:CV:60:U:C5	2.44	0.53
29:D3:26:LEU:O	29:D3:28:LEU:N	2.42	0.53
34:D8:30:ARG:NE	34:D8:30:ARG:HA	2.24	0.53
34:D8:32:LEU:HD22	36:DA:2392:A:OP1	2.09	0.53
35:D9:14:CYS:SG	35:D9:27:CYS:SG	3.06	0.53
36:DA:322:A:OP2	41:DF:169:ASN:HB2	2.08	0.53
36:DA:676:A:H8	36:DA:2069:G:H21	1.57	0.53
36:DA:720:C:H2'	36:DA:721:C:C6	2.41	0.53
36:DA:1315:C:O2'	36:DA:1316:U:H5'	2.09	0.53
36:DA:1820:U:O2	39:DD:201:HIS:HB3	2.08	0.53
36:DA:2010:G:H5"	55:DW:42:ARG:HB2	1.89	0.53
36:DA:2050:C:H1'	40:DE:156:MET:CE	2.38	0.53
36:DA:2262:U:H4'	36:DA:2328:A:H2	1.74	0.53
36:DA:2360:A:O2'	36:DA:2361:A:P	2.67	0.53
36:DA:2845:G:H2'	36:DA:2846:G:C8	2.39	0.53
38:DC:10:LEU:HA	38:DC:13:LYS:CE	2.38	0.53
42:DG:52:ILE:HG12	42:DG:53:LEU:N	2.24	0.53
42:DG:82:LEU:HD13	42:DG:87:PRO:HB2	1.90	0.53
43:DH:125:VAL:O	43:DH:125:VAL:HG12	2.09	0.53
48:DP:16:ARG:CZ	48:DP:16:ARG:HB2	2.38	0.53
49:DQ:67:ARG:HB2	49:DQ:103:MET:O	2.09	0.53
51:DS:87:PHE:N	51:DS:106:ARG:HD2	2.24	0.53
53:DU:57:PHE:O	53:DU:59:ARG:N	2.42	0.53
53:DU:115:ALA:C	53:DU:117:GLN:N	2.61	0.53
54:DV:89:GLN:OE1	54:DV:89:GLN:HA	2.08	0.53
55:DW:25:ARG:HH11	55:DW:25:ARG:CB	2.21	0.53
56:DX:50:LYS:N	56:DX:87:GLN:HE22	2.00	0.53
57:DY:86:ARG:HH22	57:DY:95:LYS:HZ3	1.55	0.53
1:AA:57:G:H2'	1:AA:58:C:H6	1.74	0.53
1:AA:972:C:O2	10:AJ:55:LYS:HG2	2.09	0.53
1:AA:1256:A:H1'	1:AA:1258:G:C6	2.42	0.53
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.44	0.53
1:AA:1503:A:N6	23:AX:16:A:H5'	2.24	0.53
2:AB:56:ARG:HG2	2:AB:56:ARG:NH1	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:109:SER:C	2:AB:111:ARG:N	2.59	0.53
9:AI:6:GLY:N	9:AI:84:ALA:HB2	2.24	0.53
13:AM:11:ARG:HA	13:AM:45:VAL:CB	2.31	0.53
16:AP:9:PHE:CE2	16:AP:18:ARG:CZ	2.91	0.53
28:B2:29:LYS:CD	28:B2:32:LEU:HD22	2.39	0.53
28:B2:43:GLN:O	28:B2:45:SER:N	2.37	0.53
28:B2:46:GLN:C	28:B2:50:ILE:HB	2.28	0.53
36:BA:236:C:H2'	36:BA:237:C:C6	2.44	0.53
36:BA:387:U:H1'	36:BA:388:G:OP2	2.09	0.53
36:BA:1241:A:H2'	36:BA:1242:A:O4'	2.09	0.53
36:BA:1331:A:O2'	36:BA:1332:G:H5"	2.09	0.53
36:BA:1582:C:H2'	36:BA:1583:A:C8	2.44	0.53
36:BA:1678:G:N2	36:BA:1989:G:N2	2.56	0.53
38:BC:82:LYS:HG3	38:BC:116:THR:HG21	1.90	0.53
40:BE:116:VAL:HG22	40:BE:117:MET:N	2.23	0.53
41:BF:32:LEU:HD21	41:BF:105:VAL:HG13	1.90	0.53
41:BF:192:LEU:C	41:BF:192:LEU:HD23	2.29	0.53
42:BG:30:GLU:OE1	42:BG:30:GLU:N	2.35	0.53
43:BH:52:VAL:HG21	43:BH:69:ARG:CG	2.33	0.53
46:BN:3:THR:CG2	46:BN:5:VAL:HG23	2.39	0.53
50:BR:87:TYR:CD1	50:BR:90:ARG:HD2	2.40	0.53
51:BS:36:TYR:O	51:BS:37:ALA:HB2	2.08	0.53
55:BW:82:LEU:N	55:BW:82:LEU:CD1	2.72	0.53
56:BX:8:ILE:N	56:BX:8:ILE:HD12	2.24	0.53
57:BY:28:LYS:CG	57:BY:39:VAL:HG13	2.39	0.53
58:BZ:81:ARG:CZ	58:BZ:81:ARG:HB2	2.38	0.53
1:CA:201:C:H42	1:CA:216:G:H1	1.56	0.53
1:CA:613:C:O2	1:CA:628:G:C2	2.62	0.53
4:CD:8:VAL:C	4:CD:10:ARG:N	2.61	0.53
4:CD:133:VAL:HG11	4:CD:138:TYR:HD2	1.74	0.53
5:CE:36:ASP:OD2	5:CE:40:ARG:HB2	2.09	0.53
10:CJ:100:THR:HG22	10:CJ:100:THR:O	2.09	0.53
13:CM:96:LEU:C	13:CM:110:ARG:HE	2.12	0.53
19:CS:16:LEU:C	19:CS:18:LYS:N	2.62	0.53
25:CZ:134:PHE:CZ	25:CZ:199:ILE:HD11	2.44	0.53
25:CZ:255:ILE:HD13	25:CZ:298:VAL:HG22	1.91	0.53
32:D6:20:ASN:C	32:D6:21:TYR:CG	2.82	0.53
36:DA:270:A:N1	36:DA:366:C:O2'	2.42	0.53
36:DA:309:G:H1'	36:DA:329:G:O2'	2.08	0.53
36:DA:467:G:O2'	36:DA:468:G:H5'	2.09	0.53
36:DA:658:C:H2'	36:DA:659:C:C6	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:729:G:C8	39:DD:208:LYS:HD2	2.44	0.53
36:DA:880:G:N2	36:DA:897:C:H42	2.06	0.53
36:DA:984:A:C5'	36:DA:985:C:H5	2.18	0.53
36:DA:1398:C:O2'	36:DA:1399:C:H5'	2.09	0.53
36:DA:1534:U:O2'	36:DA:1535:A:H5'	2.09	0.53
36:DA:1678:G:N2	36:DA:1989:G:H22	2.07	0.53
36:DA:1930:G:N2	36:DA:1968:G:H2'	2.24	0.53
36:DA:2842:G:O2'	36:DA:2843:G:H5'	2.08	0.53
37:DB:65:C:C2'	37:DB:66:A:H5'	2.39	0.53
39:DD:209:ALA:C	39:DD:210:GLY:O	2.47	0.53
40:DE:137:HIS:CB	40:DE:138:PRO:HD2	2.37	0.53
42:DG:38:VAL:HG22	42:DG:93:THR:HG23	1.90	0.53
44:DJ:30:UNK:O	44:DJ:31:UNK:CB	2.57	0.53
48:DP:38:GLN:HG3	48:DP:39:LYS:N	2.23	0.53
48:DP:97:PRO:HD3	48:DP:126:VAL:O	2.08	0.53
50:DR:111:LEU:HD12	50:DR:111:LEU:H	1.71	0.53
53:DU:47:TYR:CE1	54:DV:74:LYS:NZ	2.77	0.53
1:AA:337:C:H2'	1:AA:338:A:H8	1.74	0.53
1:AA:666:G:H5'	1:AA:726:C:H1'	1.91	0.53
1:AA:1004:A:H2'	1:AA:1005:A:H5'	1.91	0.53
1:AA:1118:C:H2'	1:AA:1119:C:C6	2.44	0.53
2:AB:113:HIS:C	2:AB:115:LEU:H	2.12	0.53
5:AE:64:ARG:HH11	5:AE:64:ARG:CG	2.20	0.53
10:AJ:94:VAL:HG12	10:AJ:95:GLU:N	2.24	0.53
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.43	0.53
13:AM:80:ARG:HH12	19:AS:67:VAL:HG21	1.74	0.53
16:AP:45:THR:HG23	16:AP:45:THR:O	2.10	0.53
17:AQ:59:ILE:HG23	17:AQ:71:PHE:HB3	1.91	0.53
25:AZ:8:THR:HG22	25:AZ:9:LYS:H	1.73	0.53
25:AZ:143:ASP:CG	25:AZ:146:LEU:HB2	2.30	0.53
25:AZ:258:LEU:HD12	25:AZ:299:GLU:HG3	1.91	0.53
25:AZ:327:GLU:OE1	61:AZ:502:KIR:H433	2.09	0.53
28:B2:29:LYS:HB3	28:B2:33:MET:HG3	1.90	0.53
36:BA:654(N):G:H2'	36:BA:654(O):G:O4'	2.09	0.53
36:BA:2807:G:H3'	36:BA:2808:U:H5"	1.91	0.53
40:BE:86:PRO:O	40:BE:87:GLU:HB3	2.09	0.53
42:BG:51:ARG:HB3	42:BG:53:LEU:CD2	2.38	0.53
42:BG:107:LEU:HB2	42:BG:111:LEU:HD12	1.90	0.53
51:BS:74:ALA:HB2	51:BS:101:LEU:HD22	1.91	0.53
52:BT:27:THR:OG1	52:BT:28:VAL:N	2.42	0.53
54:BV:53:GLU:O	54:BV:55:ALA:N	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:29:GLU:HB2	57:BY:38:ILE:HG23	1.91	0.53
1:CA:865:A:C2	1:CA:918:A:H4'	2.43	0.53
1:CA:1127:G:H1	1:CA:1145:C:N4	2.07	0.53
1:CA:1186:G:C2'	1:CA:1187:G:H5"	2.39	0.53
2:CB:137:ARG:O	2:CB:141:GLU:HB2	2.09	0.53
2:CB:204:ASN:ND2	2:CB:207:ALA:H	2.07	0.53
4:CD:150:GLU:O	4:CD:153:ARG:HB2	2.09	0.53
6:CF:21:LEU:C	6:CF:21:LEU:HD13	2.28	0.53
8:CH:10:LEU:HD22	8:CH:83:ILE:HG12	1.90	0.53
9:CI:114:TYR:HE2	10:CJ:60:ARG:N	2.00	0.53
15:CO:6:GLU:O	15:CO:9:GLN:HB2	2.09	0.53
34:D8:14:VAL:O	34:D8:14:VAL:HG13	2.09	0.53
34:D8:61:LEU:N	34:D8:63:PRO:HD2	2.24	0.53
36:DA:656:G:H2'	36:DA:657:U:C6	2.44	0.53
36:DA:893:C:H2'	36:DA:894:C:H6	1.72	0.53
36:DA:1509(A):A:H2'	36:DA:1509(B):A:C8	2.43	0.53
36:DA:1518:U:H2'	36:DA:1519:G:O4'	2.09	0.53
36:DA:2189:U:H2'	36:DA:2190:G:C4'	2.35	0.53
39:DD:58:HIS:CD2	39:DD:59:LYS:N	2.77	0.53
39:DD:83:GLU:HB2	39:DD:92:ILE:HD11	1.91	0.53
39:DD:186:HIS:CD2	39:DD:188:GLU:HB2	2.44	0.53
42:DG:34:LEU:HD12	42:DG:34:LEU:O	2.09	0.53
43:DH:70:THR:HG22	43:DH:74:ASN:ND2	2.23	0.53
48:DP:90:ARG:O	48:DP:90:ARG:HD2	2.08	0.53
49:DQ:73:PRO:HG3	49:DQ:93:TYR:HE1	1.72	0.53
50:DR:18:LEU:C	50:DR:18:LEU:HD13	2.29	0.53
58:DZ:8:TYR:O	58:DZ:9:TYR:C	2.47	0.53
1:AA:21:G:H2'	1:AA:22:G:C8	2.45	0.52
1:AA:178:C:O2'	1:AA:179:A:H5'	2.09	0.52
2:AB:10:LEU:O	2:AB:13:ALA:N	2.42	0.52
2:AB:190:THR:O	2:AB:191:ASP:HB2	2.09	0.52
3:AC:22:TRP:CE2	14:AN:54:PRO:HG2	2.44	0.52
3:AC:84:ILE:HG12	3:AC:84:ILE:O	2.09	0.52
10:AJ:6:ILE:HG12	10:AJ:72:VAL:O	2.09	0.52
12:AL:80:HIS:NE2	24:AY:69:C:C5'	2.71	0.52
25:AZ:159:ASN:C	25:AZ:161:TYR:H	2.12	0.52
25:AZ:299:GLU:O	25:AZ:302:GLN:HG2	2.08	0.52
26:B0:36:ILE:HD12	26:B0:36:ILE:O	2.09	0.52
26:B0:37:LEU:N	26:B0:59:LEU:O	2.40	0.52
27:B1:41:ARG:NH2	36:BA:1365:A:H5"	2.24	0.52
28:B2:38:GLN:C	28:B2:40:SER:H	2.13	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:48:HIS:HA	36:BA:95:G:O2'	2.08	0.52
32:B6:15:GLU:CD	32:B6:18:ARG:NH2	2.62	0.52
36:BA:182:A:H2	36:BA:433:C:O2	1.92	0.52
36:BA:523:C:C2'	36:BA:524:U:H5'	2.38	0.52
36:BA:644:A:C2	36:BA:2369:A:H1'	2.44	0.52
36:BA:818:G:N7	36:BA:1187:G:C6	2.77	0.52
36:BA:819:A:OP2	36:BA:1187:G:N2	2.35	0.52
36:BA:1327:C:H2'	36:BA:1328:G:O4'	2.08	0.52
36:BA:1368:G:O2'	36:BA:1369:G:H5'	2.09	0.52
36:BA:1902:C:OP1	39:BD:242:ARG:HD3	2.09	0.52
36:BA:2257:U:O2'	36:BA:2258:C:H5'	2.09	0.52
36:BA:2412:A:H2'	36:BA:2413:G:H5'	1.91	0.52
48:BP:16:ARG:HH11	48:BP:16:ARG:CB	2.20	0.52
51:BS:34:HIS:CD2	51:BS:54:LEU:HB2	2.44	0.52
54:BV:91:TYR:H	54:BV:91:TYR:HD1	1.57	0.52
57:BY:2:ARG:N	57:BY:4:LYS:HZ2	2.07	0.52
57:BY:31:LEU:HD23	57:BY:36:ALA:C	2.30	0.52
1:CA:490:G:H2'	1:CA:491:G:C8	2.44	0.52
1:CA:940:C:H2'	1:CA:941:G:C8	2.44	0.52
1:CA:1255:G:P	3:CC:26:LYS:HE2	2.48	0.52
2:CB:42:ILE:HD12	2:CB:202:PRO:HB2	1.91	0.52
4:CD:78:LEU:HD23	4:CD:78:LEU:O	2.08	0.52
4:CD:120:LEU:HB3	4:CD:126:ILE:CD1	2.39	0.52
6:CF:62:TRP:C	6:CF:63:TYR:CD1	2.82	0.52
7:CG:145:ALA:C	7:CG:147:ALA:H	2.13	0.52
9:CI:97:LYS:N	9:CI:98:PRO:CD	2.73	0.52
13:CM:19:LEU:HD11	13:CM:56:LEU:HD11	1.91	0.52
16:CP:20:VAL:HG21	16:CP:32:TYR:CG	2.44	0.52
25:CZ:299:GLU:O	25:CZ:302:GLN:HG2	2.09	0.52
25:CZ:340:PRO:HG2	25:CZ:342:PHE:CE1	2.44	0.52
28:D2:10:LEU:O	28:D2:10:LEU:HD23	2.09	0.52
31:D5:4:HIS:CB	31:D5:5:PRO:CD	2.77	0.52
36:DA:57:C:O2'	36:DA:58:G:H5'	2.09	0.52
36:DA:271(C):C:H2'	36:DA:271(D):G:H8	1.72	0.52
36:DA:496:G:H1'	55:DW:61:ASN:ND2	2.24	0.52
36:DA:628:G:C3'	36:DA:629:G:H5"	2.39	0.52
36:DA:1991:U:C2'	36:DA:1992:G:H5"	2.39	0.52
36:DA:2111:C:H1'	36:DA:2118:U:H4'	1.90	0.52
36:DA:2377:A:H4'	51:DS:108:GLY:HA2	1.91	0.52
36:DA:2694:G:O2'	36:DA:2695:C:H5'	2.09	0.52
36:DA:2695:C:H2'	36:DA:2696:U:H6	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:53:THR:HG22	41:DF:56:GLU:CD	2.29	0.52
41:DF:115:ALA:C	41:DF:117:ARG:H	2.13	0.52
42:DG:84:LYS:HD2	42:DG:84:LYS:N	2.23	0.52
46:DN:38:HIS:O	53:DU:67:ALA:HB1	2.09	0.52
49:DQ:47:ILE:O	49:DQ:50:ALA:HB3	2.09	0.52
52:DT:83:ILE:CG1	52:DT:84:GLN:H	2.17	0.52
1:AA:404:U:H2'	1:AA:405:U:C6	2.44	0.52
1:AA:718:G:O6	18:AR:74:ARG:NH1	2.42	0.52
1:AA:1377:A:H2'	7:AG:7:ALA:HB2	1.91	0.52
3:AC:142:MET:C	3:AC:144:SER:H	2.12	0.52
4:AD:194:LEU:HB3	4:AD:196:LEU:HD13	1.90	0.52
12:AL:90:VAL:HG12	12:AL:90:VAL:O	2.08	0.52
13:AM:13:LYS:HA	13:AM:44:ARG:HH11	1.72	0.52
24:AY:41:C:H5'	24:AY:41:C:C6	2.37	0.52
25:AZ:65:THR:CA	25:AZ:83:PRO:HD3	2.40	0.52
32:B6:7:ILE:CB	32:B6:27:LYS:NZ	2.70	0.52
32:B6:16:CYS:O	32:B6:17:LYS:HG2	2.09	0.52
32:B6:36:LEU:HD12	32:B6:50:ARG:HH12	1.73	0.52
36:BA:389:G:H22	48:BP:72:PRO:HG3	1.74	0.52
36:BA:729:G:C5	39:BD:208:LYS:HB2	2.45	0.52
36:BA:1400:G:H2'	36:BA:1401:G:C8	2.44	0.52
36:BA:2282:G:H5"	36:BA:2283:C:O4'	2.10	0.52
37:BB:87:G:H2'	37:BB:88:C:H5"	1.92	0.52
38:BC:72:VAL:HG13	38:BC:157:LYS:HD3	1.91	0.52
38:BC:87:GLU:HG2	38:BC:94:VAL:CG1	2.35	0.52
38:BC:107:TRP:HE1	38:BC:110:PHE:HE2	1.54	0.52
39:BD:130:ALA:HB2	39:BD:192:THR:HB	1.90	0.52
47:BO:63:VAL:O	47:BO:64:ARG:CB	2.44	0.52
48:BP:9:ASN:H	48:BP:10:PRO:CD	2.22	0.52
48:BP:34:GLY:O	48:BP:35:HIS:CB	2.43	0.52
48:BP:83:VAL:HG23	48:BP:105:LEU:HD22	1.91	0.52
50:BR:4:LEU:HD13	50:BR:7:GLY:CA	2.39	0.52
51:BS:90:GLY:C	51:BS:92:TYR:N	2.63	0.52
52:BT:109:GLU:HG2	52:BT:112:ARG:NH2	2.24	0.52
53:BU:13:LYS:HD3	53:BU:13:LYS:H	1.74	0.52
54:BV:99:ILE:HD13	54:BV:99:ILE:N	2.10	0.52
57:BY:24:VAL:HG12	57:BY:25:GLY:N	2.23	0.52
57:BY:59:GLY:O	57:BY:60:PHE:HB2	2.08	0.52
1:CA:978:A:C5	1:CA:1319:A:C2	2.96	0.52
1:CA:1187:G:H5'	1:CA:1187:G:H8	1.75	0.52
1:CA:1320:C:H5'	1:CA:1320:C:H6	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:69:LEU:HD22	2:CB:70:PHE:N	2.24	0.52
2:CB:126:GLU:HA	2:CB:129:GLU:OE2	2.08	0.52
5:CE:90:VAL:C	5:CE:91:LEU:HD12	2.29	0.52
6:CF:62:TRP:CD1	18:CR:35:ARG:CZ	2.92	0.52
8:CH:39:LEU:HD11	8:CH:137:VAL:HG21	1.90	0.52
10:CJ:38:ILE:CD1	10:CJ:71:LEU:HB3	2.38	0.52
12:CL:111:LYS:O	12:CL:112:ASP:HB2	2.09	0.52
12:CL:122:THR:O	12:CL:123:LYS:O	2.26	0.52
13:CM:37:THR:O	13:CM:39:ILE:HG13	2.09	0.52
17:CQ:58:GLU:HB2	17:CQ:74:LEU:HB3	1.91	0.52
24:CY:25:C:H6	24:CY:25:C:O5'	1.92	0.52
25:CZ:143:ASP:HB3	25:CZ:146:LEU:HB2	1.91	0.52
36:DA:295:G:N2	36:DA:344:G:H1'	2.24	0.52
36:DA:904:C:H2'	36:DA:905:U:C6	2.44	0.52
36:DA:996:A:H4'	53:DU:92:ARG:HE	1.73	0.52
36:DA:1101:U:H2'	36:DA:1102:C:H6	1.74	0.52
36:DA:1331:A:HO2'	36:DA:1332:G:H8	1.58	0.52
36:DA:2081:C:H2'	36:DA:2082:A:H8	1.73	0.52
36:DA:2543:G:H2'	36:DA:2544:G:O4'	2.09	0.52
36:DA:2808:U:O2'	36:DA:2809:A:H5'	2.08	0.52
39:DD:16:MET:CE	39:DD:208:LYS:HG2	2.38	0.52
40:DE:59:VAL:HG13	40:DE:60:ASN:N	2.21	0.52
48:DP:9:ASN:H	48:DP:10:PRO:CD	2.23	0.52
50:DR:55:ALA:HB2	50:DR:79:LEU:HD11	1.90	0.52
52:DT:19:LEU:HD13	52:DT:78:LEU:HD22	1.91	0.52
52:DT:90:GLN:HG3	52:DT:124:ASP:OD2	2.09	0.52
53:DU:69:CYS:HB2	53:DU:74:LEU:CD1	2.39	0.52
55:DW:26:GLY:H	55:DW:71:VAL:HB	1.74	0.52
1:AA:390:C:H4'	16:AP:28:ARG:NH2	2.24	0.52
1:AA:1129:C:O3'	1:AA:1131:G:OP2	2.27	0.52
1:AA:1255:G:H3'	1:AA:1279:A:N6	2.25	0.52
18:AR:74:ARG:HB3	18:AR:81:PHE:CE1	2.44	0.52
19:AS:32:LYS:HG2	19:AS:32:LYS:O	2.08	0.52
25:AZ:28:THR:HG23	25:AZ:79:HIS:ND1	2.25	0.52
31:B5:31:VAL:HG21	36:BA:2885:C:O2	2.10	0.52
33:B7:10:ARG:O	33:B7:14:LYS:HG2	2.10	0.52
35:B9:10:ILE:O	35:B9:11:CYS:CB	2.57	0.52
36:BA:643:A:H2'	36:BA:644:A:H5'	1.90	0.52
36:BA:1101:U:H2'	36:BA:1102:C:H6	1.74	0.52
36:BA:2166:G:H2'	36:BA:2167:U:C6	2.43	0.52
36:BA:2186:G:H2'	36:BA:2187:G:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2364:C:O2'	36:BA:2365:G:H5'	2.08	0.52
36:BA:2654:A:H62	36:BA:2667:C:N4	2.07	0.52
39:BD:92:ILE:HD13	39:BD:92:ILE:H	1.74	0.52
41:BF:5:ALA:HB1	41:BF:125:LEU:HD21	1.91	0.52
42:BG:22:ARG:HD3	42:BG:23:PHE:CE1	2.43	0.52
42:BG:41:GLN:HB3	42:BG:43:LEU:HD13	1.91	0.52
46:BN:94:HIS:N	46:BN:95:PRO:CD	2.72	0.52
49:BQ:38:GLU:OE2	49:BQ:128:LYS:HG3	2.10	0.52
49:BQ:116:GLU:O	49:BQ:120:ILE:HG12	2.10	0.52
52:BT:39:ARG:HD2	52:BT:39:ARG:N	2.22	0.52
53:BU:91:ASP:OD1	53:BU:96:ALA:HB2	2.10	0.52
58:BZ:98:MET:HG3	58:BZ:99:TYR:N	2.24	0.52
58:BZ:155:LEU:HD23	58:BZ:155:LEU:N	2.24	0.52
1:CA:59:A:H5"	1:CA:60:A:H5"	1.90	0.52
1:CA:227:G:H2'	1:CA:228:A:O4'	2.09	0.52
1:CA:347:G:N2	1:CA:348:G:H1'	2.24	0.52
1:CA:980:C:C5'	1:CA:980:C:H6	2.22	0.52
1:CA:1171:G:H2'	1:CA:1172:C:C6	2.44	0.52
1:CA:1239:A:C4	1:CA:1298:C:N4	2.77	0.52
1:CA:1312:G:H2'	1:CA:1313:U:H6	1.75	0.52
2:CB:190:THR:O	2:CB:191:ASP:CB	2.57	0.52
3:CC:11:ARG:O	3:CC:13:GLY:N	2.42	0.52
10:CJ:94:VAL:HG12	10:CJ:95:GLU:N	2.24	0.52
25:CZ:281:ILE:HD12	25:CZ:284:ASP:OD1	2.10	0.52
28:D2:68:ARG:HA	28:D2:72:ALA:CB	2.38	0.52
29:D3:15:TYR:O	29:D3:20:LYS:HE3	2.09	0.52
30:D4:37:SER:C	30:D4:39:CYS:N	2.63	0.52
36:DA:90:U:O2	36:DA:90:U:H2'	2.07	0.52
36:DA:553:G:O2'	36:DA:554:U:H5'	2.09	0.52
36:DA:600:G:H2'	36:DA:601:C:C6	2.44	0.52
36:DA:839:U:O2'	36:DA:1191:G:H1'	2.10	0.52
36:DA:845:G:OP2	36:DA:845:G:H8	1.92	0.52
36:DA:1222:C:H2'	36:DA:1223:G:H5'	1.91	0.52
37:DB:90:A:O2'	49:DQ:17:LEU:HD12	2.09	0.52
39:DD:265:PRO:O	39:DD:267:SER:N	2.42	0.52
48:DP:83:VAL:HG23	48:DP:105:LEU:HD22	1.90	0.52
49:DQ:137:TYR:CE1	58:DZ:81:ARG:NH2	2.78	0.52
51:DS:27:SER:HA	51:DS:88:ASP:HB3	1.91	0.52
51:DS:67:ARG:NH2	51:DS:98:VAL:HG12	2.24	0.52
52:DT:2:ASN:C	52:DT:4:GLY:H	2.13	0.52
54:DV:38:LEU:HD23	54:DV:38:LEU:C	2.29	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:89:PHE:HE2	58:DZ:96:VAL:CG2	2.22	0.52
1:AA:9:G:OP2	5:AE:121:LYS:NZ	2.39	0.52
1:AA:274:A:O2'	1:AA:275:G:H8	1.92	0.52
1:AA:782:A:H2'	1:AA:783:C:H5'	1.90	0.52
2:AB:92:TYR:CD1	2:AB:94:ASN:ND2	2.77	0.52
3:AC:50:ALA:O	3:AC:70:VAL:HG13	2.10	0.52
4:AD:86:LYS:HE3	4:AD:86:LYS:CA	2.38	0.52
4:AD:190:ASP:OD1	4:AD:191:ARG:N	2.42	0.52
7:AG:15:ASP:HB3	7:AG:19:GLY:N	2.25	0.52
24:AY:54:5MU:H5"	24:AY:55:PSU:OP2	2.09	0.52
25:AZ:118:GLU:OE2	61:AZ:502:KIR:H51	2.09	0.52
25:AZ:224:PRO:HA	25:AZ:303:VAL:HG13	1.91	0.52
25:AZ:345:ARG:HG2	25:AZ:345:ARG:NH1	2.24	0.52
27:B1:6:GLU:HG2	27:B1:61:ARG:O	2.09	0.52
27:B1:62:VAL:HG22	27:B1:63:ALA:N	2.24	0.52
36:BA:17:G:H2'	36:BA:18:C:C6	2.45	0.52
36:BA:1540:U:H3'	36:BA:1541:G:H3'	1.90	0.52
37:BB:13:A:O2'	37:BB:14:U:H3'	2.10	0.52
38:BC:214:VAL:HG23	38:BC:224:ILE:HG21	1.91	0.52
40:BE:98:PRO:HD3	40:BE:175:VAL:CG1	2.38	0.52
41:BF:21:ALA:C	41:BF:23:ASP:H	2.13	0.52
42:BG:133:LEU:HD11	42:BG:157:ILE:HD12	1.90	0.52
43:BH:97:ARG:O	43:BH:99:VAL:HG23	2.09	0.52
49:BQ:26:TYR:HB2	49:BQ:137:TYR:HD2	1.74	0.52
50:BR:98:LEU:O	50:BR:113:LEU:N	2.42	0.52
1:CA:1321:C:C5'	1:CA:1322:C:H5"	2.34	0.52
1:CA:1322:C:H6	1:CA:1322:C:OP1	1.92	0.52
1:CA:1508:G:O2'	1:CA:1509:C:H5'	2.10	0.52
19:CS:67:VAL:HG12	19:CS:68:GLY:N	2.24	0.52
22:CV:76:A:C2	36:DA:2450:A:N3	2.77	0.52
25:CZ:19:HIS:CE1	25:CZ:20:VAL:HG22	2.44	0.52
25:CZ:159:ASN:C	25:CZ:161:TYR:H	2.11	0.52
25:CZ:220:PRO:O	25:CZ:221:PHE:HB2	2.09	0.52
25:CZ:317:GLU:O	25:CZ:401:THR:HB	2.09	0.52
36:DA:134:C:H2'	36:DA:135:G:H8	1.74	0.52
36:DA:710:G:H2'	36:DA:711:G:C8	2.44	0.52
36:DA:833:U:H5"	48:DP:48:PRO:CB	2.40	0.52
36:DA:1318:C:H3'	36:DA:1319:G:H5"	1.92	0.52
36:DA:1771:C:HO2'	36:DA:1786:A:H8	1.57	0.52
36:DA:1882:C:H2'	36:DA:1882:C:O2	2.10	0.52
36:DA:2295:C:H2'	36:DA:2296:U:C6	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2892:A:H62	36:DA:2893:G:N2	2.07	0.52
37:DB:31:C:H4'	42:DG:29:TRP:HH2	1.75	0.52
39:DD:200:ASP:O	39:DD:203:ASN:HB2	2.09	0.52
39:DD:226:MET:HB3	39:DD:230:ASP:HB2	1.91	0.52
42:DG:7:LEU:N	42:DG:10:LYS:HD3	2.25	0.52
46:DN:132:ALA:O	46:DN:133:GLN:HB2	2.08	0.52
49:DQ:76:LYS:HB3	49:DQ:91:GLU:CG	2.39	0.52
50:DR:78:LYS:O	50:DR:83:ILE:HG12	2.10	0.52
51:DS:54:LEU:HD21	51:DS:58:LEU:O	2.09	0.52
52:DT:80:SER:HB3	52:DT:81:PRO:CD	2.31	0.52
1:AA:1228:C:H2'	1:AA:1229:A:H8	1.75	0.52
2:AB:105:PHE:O	2:AB:106:LYS:C	2.48	0.52
2:AB:141:GLU:O	2:AB:145:LEU:HB2	2.08	0.52
4:AD:55:ALA:O	4:AD:59:ARG:HG2	2.08	0.52
6:AF:55:ASP:OD1	6:AF:56:PRO:HD2	2.10	0.52
9:AI:52:ALA:CB	9:AI:95:LYS:HD2	2.39	0.52
10:AJ:54:PHE:CE1	10:AJ:55:LYS:NZ	2.76	0.52
22:AV:53:G:O2'	22:AV:54:U:H5'	2.09	0.52
24:AY:65:C:C5'	25:AZ:341:GLN:HG2	2.39	0.52
25:AZ:95:GLY:O	25:AZ:99:MET:HE2	2.10	0.52
25:AZ:255:ILE:HD13	25:AZ:298:VAL:HG22	1.92	0.52
25:AZ:313:HIS:HB2	25:AZ:380:LEU:HD12	1.91	0.52
26:B0:43:THR:N	36:BA:2331:G:H4'	2.21	0.52
27:B1:35:THR:O	27:B1:35:THR:OG1	2.28	0.52
28:B2:42:GLY:C	28:B2:43:GLN:HG3	2.30	0.52
33:B7:4:THR:HG21	36:BA:788:A:H1'	1.90	0.52
36:BA:581:C:H2'	36:BA:582:G:C8	2.43	0.52
36:BA:718:A:H2'	36:BA:719:C:O4'	2.10	0.52
36:BA:832:G:H21	48:BP:53:GLY:CA	2.22	0.52
36:BA:1051:G:H2'	36:BA:1052:C:C5	2.44	0.52
36:BA:1416:G:H1'	36:BA:1417:C:C5	2.45	0.52
36:BA:1748:G:H5'	36:BA:1748:G:C8	2.45	0.52
36:BA:2123:G:O2'	36:BA:2124:G:H5'	2.08	0.52
39:BD:28:GLU:N	39:BD:29:PRO:CD	2.72	0.52
40:BE:36:ARG:NH2	40:BE:88:GLY:CA	2.71	0.52
42:BG:18:GLU:HA	42:BG:18:GLU:OE1	2.08	0.52
50:BR:67:LEU:CD1	50:BR:76:VAL:HG21	2.38	0.52
51:BS:30:ARG:NH1	51:BS:31:SER:O	2.42	0.52
55:BW:64:MET:HE1	55:BW:108:GLY:HA2	1.91	0.52
58:BZ:28:MET:HE1	58:BZ:59:LEU:HD13	1.91	0.52
1:CA:161:A:H2'	1:CA:162:A:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:358:U:O3'	25:CZ:235:GLY:CA	2.55	0.52
1:CA:633:G:H3'	1:CA:634:C:C6	2.44	0.52
1:CA:986:A:H2'	1:CA:987:G:C8	2.44	0.52
3:CC:14:ILE:HG13	3:CC:15:THR:H	1.73	0.52
4:CD:19:LEU:HD12	4:CD:19:LEU:N	2.24	0.52
4:CD:138:TYR:HD1	4:CD:138:TYR:C	2.12	0.52
23:CX:13:A:H8	23:CX:13:A:O5'	1.93	0.52
25:CZ:67:HIS:CD2	25:CZ:67:HIS:H	2.28	0.52
25:CZ:161:TYR:OH	61:CZ:502:KIR:H413	2.10	0.52
25:CZ:288:VAL:HG12	25:CZ:290:LEU:CD2	2.32	0.52
26:D0:52:GLY:O	26:D0:59:LEU:HA	2.10	0.52
31:D5:50:GLY:CA	31:D5:56:LYS:HE2	2.40	0.52
32:D6:20:ASN:ND2	32:D6:21:TYR:N	2.55	0.52
36:DA:648:G:H2'	36:DA:649:G:C8	2.45	0.52
36:DA:990:A:N6	36:DA:1186:G:H1'	2.25	0.52
36:DA:1165:U:H2'	36:DA:1166:C:C6	2.45	0.52
36:DA:1825:A:OP1	39:DD:249:PRO:HD3	2.09	0.52
36:DA:2001:A:H2'	36:DA:2002:G:C8	2.44	0.52
36:DA:2552:U:C2	36:DA:2554:U:H5'	2.44	0.52
40:DE:101:ARG:HB2	40:DE:201:THR:HG21	1.91	0.52
41:DF:125:LEU:HD12	41:DF:196:LEU:CD2	2.40	0.52
47:DO:120:GLU:OE1	47:DO:122:LEU:HD21	2.08	0.52
48:DP:58:THR:O	48:DP:61:ARG:HG3	2.08	0.52
48:DP:84:ASN:HB3	48:DP:86:LYS:HB3	1.91	0.52
51:DS:97:ARG:NH2	51:DS:98:VAL:CA	2.73	0.52
52:DT:23:ARG:HB2	52:DT:24:PRO:HD2	1.91	0.52
54:DV:18:LEU:CD2	54:DV:19:LYS:H	2.22	0.52
55:DW:10:VAL:HG21	55:DW:103:ILE:HG13	1.92	0.52
1:AA:242:C:H2'	1:AA:243:A:H5'	1.92	0.52
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.44	0.52
2:AB:21:ARG:HB3	2:AB:39:ILE:HG12	1.92	0.52
4:AD:127:THR:HG22	4:AD:128:VAL:N	2.24	0.52
12:AL:58:VAL:HG12	12:AL:60:LEU:HD22	1.91	0.52
14:AN:27:CYS:SG	14:AN:40:CYS:SG	3.07	0.52
16:AP:57:ARG:NE	16:AP:79:VAL:O	2.43	0.52
25:AZ:331:HIS:CD2	25:AZ:331:HIS:N	2.77	0.52
25:AZ:378:VAL:HG23	25:AZ:380:LEU:HD21	1.92	0.52
28:B2:24:LEU:HB2	28:B2:64:LEU:CD1	2.39	0.52
36:BA:139:G:C6	36:BA:140:G:H2'	2.45	0.52
36:BA:669:G:H2'	36:BA:669:G:N3	2.24	0.52
36:BA:676:A:H8	36:BA:2069:G:N2	1.95	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:782:A:H5'	36:BA:783:A:C2	2.45	0.52
36:BA:942:G:O2'	36:BA:943:U:H5'	2.10	0.52
36:BA:1720:U:C3'	36:BA:1721:G:H5"	2.38	0.52
36:BA:2206:G:H21	36:BA:2207:G:C4'	2.23	0.52
38:BC:100:ILE:HD13	38:BC:126:LYS:O	2.09	0.52
40:BE:48:GLN:C	40:BE:49:LEU:HD22	2.29	0.52
40:BE:55:ASN:O	40:BE:56:PRO:C	2.48	0.52
42:BG:150:ASP:OD1	42:BG:150:ASP:N	2.40	0.52
43:BH:89:ILE:HD11	43:BH:128:PRO:O	2.10	0.52
46:BN:46:VAL:O	46:BN:47:ALA:CB	2.57	0.52
47:BO:105:GLU:OE1	47:BO:105:GLU:N	2.40	0.52
48:BP:50:ARG:CZ	48:BP:51:PHE:HE1	2.22	0.52
52:BT:2:ASN:HB2	52:BT:7:ILE:CD1	2.38	0.52
53:BU:59:ARG:NH1	53:BU:59:ARG:CG	2.73	0.52
55:BW:14:PRO:HG2	55:BW:78:GLU:HG3	1.91	0.52
1:CA:149:A:H2'	1:CA:150:C:C6	2.45	0.52
1:CA:294:U:H2'	1:CA:295:C:H6	1.74	0.52
1:CA:679:C:O2'	1:CA:680:C:H5'	2.10	0.52
2:CB:57:PHE:CE2	2:CB:185:ILE:HD11	2.41	0.52
2:CB:139:LYS:C	2:CB:141:GLU:H	2.12	0.52
2:CB:219:VAL:O	2:CB:223:ILE:HG13	2.09	0.52
3:CC:83:ARG:O	3:CC:87:LEU:HG	2.08	0.52
5:CE:76:ILE:HD13	5:CE:78:HIS:O	2.10	0.52
11:CK:33:THR:HB	11:CK:38:ASN:O	2.09	0.52
13:CM:78:ILE:HA	13:CM:81:LEU:HD23	1.91	0.52
17:CQ:3:LYS:HB3	17:CQ:61:GLU:HB3	1.91	0.52
19:CS:31:ILE:CG2	19:CS:49:ILE:HG23	2.39	0.52
25:CZ:361:MET:HE2	25:CZ:363:MET:HG3	1.92	0.52
32:D6:7:ILE:CB	32:D6:27:LYS:NZ	2.72	0.52
32:D6:17:LYS:HA	32:D6:17:LYS:CE	2.37	0.52
36:DA:1287:A:H8	50:DR:104:ARG:HD3	1.73	0.52
36:DA:1582:C:H2'	36:DA:1583:A:C8	2.45	0.52
36:DA:1821:A:H2'	36:DA:1822:G:H8	1.74	0.52
36:DA:2547:U:H2'	36:DA:2548:G:C8	2.45	0.52
38:DC:104:LEU:HD13	38:DC:105:ASP:N	2.24	0.52
48:DP:16:ARG:HD3	48:DP:18:ARG:N	2.25	0.52
48:DP:50:ARG:NH2	48:DP:51:PHE:HE1	2.07	0.52
48:DP:115:LEU:O	48:DP:134:ALA:HB1	2.09	0.52
48:DP:147:LEU:O	48:DP:148:LEU:HB2	2.09	0.52
50:DR:60:LEU:O	50:DR:63:ARG:HB3	2.10	0.52
54:DV:20:LEU:O	54:DV:22:VAL:HG22	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:6:HIS:CD2	57:DY:6:HIS:H	2.27	0.52
58:DZ:165:VAL:HG12	58:DZ:166:SER:N	2.24	0.52
1:AA:430:A:OP2	4:AD:22:LYS:HE2	2.10	0.52
1:AA:1442(B):A:H5'	52:BT:122:ASP:OD1	2.10	0.52
5:AE:145:LYS:HG3	5:AE:149:GLU:OE2	2.10	0.52
19:AS:8:GLY:O	19:AS:9:VAL:C	2.48	0.52
22:AV:24:G:C6	22:AV:25:C:C4	2.97	0.52
23:AX:22:U:O2'	23:AX:23:G:H5'	2.10	0.52
24:AY:25:C:O5'	24:AY:25:C:H6	1.92	0.52
25:AZ:108:ALA:HB3	25:AZ:137:LYS:O	2.09	0.52
28:B2:29:LYS:C	28:B2:31:GLU:H	2.13	0.52
36:BA:389:G:C6	48:BP:71:VAL:HG12	2.45	0.52
36:BA:1313:U:H2'	36:BA:1610:A:C2	2.44	0.52
36:BA:2111:C:H1'	36:BA:2118:U:O4'	2.10	0.52
36:BA:2875:C:C4'	52:BT:5:ALA:HB2	2.30	0.52
37:BB:54:G:H2'	37:BB:55:U:H6	1.75	0.52
42:BG:5:VAL:HG12	42:BG:6:ALA:H	1.75	0.52
47:BO:19:ILE:HG22	47:BO:43:VAL:CA	2.30	0.52
52:BT:94:ALA:C	52:BT:96:ARG:H	2.14	0.52
53:BU:83:LEU:HA	53:BU:88:ILE:HG13	1.92	0.52
54:BV:23:GLU:O	54:BV:91:TYR:HA	2.10	0.52
55:BW:28:SER:O	55:BW:70:TYR:HA	2.08	0.52
55:BW:64:MET:HG2	55:BW:109:GLU:OE2	2.10	0.52
55:BW:69:LEU:HA	55:BW:108:GLY:O	2.10	0.52
56:BX:35:THR:O	56:BX:39:ILE:HG12	2.09	0.52
57:BY:31:LEU:HB2	57:BY:32:PRO:HA	1.91	0.52
57:BY:46:LYS:HB3	57:BY:62:GLU:HG2	1.91	0.52
58:BZ:98:MET:O	58:BZ:125:LEU:HA	2.08	0.52
1:CA:175:C:O2'	1:CA:176:C:H5'	2.10	0.52
1:CA:201:C:C2'	1:CA:202:U:H5"	2.39	0.52
1:CA:858:G:OP2	1:CA:858:G:C8	2.62	0.52
1:CA:1275:A:O2'	1:CA:1276:G:H5'	2.09	0.52
1:CA:1278:U:H5"	1:CA:1279:A:O4'	2.10	0.52
3:CC:130:VAL:CG1	3:CC:134:ILE:HD11	2.40	0.52
7:CG:45:ASP:N	7:CG:45:ASP:OD1	2.42	0.52
19:CS:40:ILE:HG21	19:CS:62:ILE:HD11	1.92	0.52
22:CW:45:U:O2'	22:CW:46:G:H5'	2.09	0.52
25:CZ:195:TRP:C	25:CZ:197:ASP:H	2.13	0.52
25:CZ:263:ARG:HH11	25:CZ:263:ARG:HG3	1.75	0.52
29:D3:7:LYS:HE3	29:D3:32:GLN:O	2.10	0.52
33:D7:10:ARG:NH1	36:DA:771:G:OP1	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:225:A:O2'	36:DA:257:A:H4'	2.08	0.52
36:DA:1670:C:O2	40:DE:129:HIS:HE1	1.91	0.52
36:DA:2178:C:O4'	36:DA:2178:C:O2	2.27	0.52
36:DA:2465:C:O2'	36:DA:2466:C:H5'	2.10	0.52
36:DA:2579:C:O2'	40:DE:131:ALA:CB	2.52	0.52
37:DB:68:C:H2'	37:DB:69:G:H8	1.74	0.52
39:DD:241:PRO:C	39:DD:242:ARG:HD2	2.30	0.52
47:DO:104:ARG:HB3	47:DO:122:LEU:OXT	2.10	0.52
50:DR:34:ILE:HG22	50:DR:36:THR:HG23	1.91	0.52
55:DW:44:ALA:O	55:DW:46:PHE:N	2.42	0.52
56:DX:33:LYS:HE2	56:DX:33:LYS:HA	1.91	0.52
1:AA:445:G:H2'	1:AA:446:G:H8	1.74	0.52
1:AA:955:U:O2'	1:AA:956:U:H5'	2.10	0.52
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.08	0.52
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.45	0.52
3:AC:43:LEU:O	3:AC:47:LEU:HB3	2.09	0.52
10:AJ:6:ILE:HG22	10:AJ:98:ILE:CD1	2.37	0.52
11:AK:57:THR:HG23	11:AK:60:ALA:CB	2.40	0.52
22:AW:74:C:O2'	22:AW:75:C:H5'	2.09	0.52
23:AX:11:U:H3'	23:AX:12:A:N7	2.24	0.52
25:AZ:93:ILE:HD11	25:AZ:389:ARG:HH11	1.73	0.52
25:AZ:159:ASN:C	25:AZ:161:TYR:N	2.62	0.52
25:AZ:316:PHE:N	25:AZ:316:PHE:CD1	2.77	0.52
26:B0:36:ILE:HG12	36:BA:2355:C:C4'	2.39	0.52
27:B1:34:THR:HG22	27:B1:35:THR:N	2.25	0.52
28:B2:17:SER:C	28:B2:19:VAL:N	2.63	0.52
28:B2:33:MET:O	28:B2:37:PHE:HB2	2.10	0.52
28:B2:66:GLU:OE2	28:B2:67:LYS:HB2	2.09	0.52
30:B4:10:VAL:CG2	30:B4:11:PRO:HD2	2.38	0.52
31:B5:3:LYS:HB2	36:BA:747:U:H5	1.73	0.52
36:BA:301:G:H5'	36:BA:334:C:O2'	2.10	0.52
36:BA:533:G:HO2'	53:BU:45:TYR:HD2	1.56	0.52
36:BA:558:G:H1'	46:BN:45:ASN:HB3	1.92	0.52
36:BA:637:A:OP2	48:BP:115:LEU:HB2	2.10	0.52
36:BA:654(E):G:H2'	36:BA:654(F):C:H5'	1.92	0.52
36:BA:1098:A:C2'	36:BA:1099:G:H5'	2.40	0.52
36:BA:1558:A:H1'	36:BA:1559:G:OP2	2.09	0.52
36:BA:1790:C:H2'	36:BA:1791:A:C5	2.45	0.52
36:BA:2801(A):A:H5'	36:BA:2802:G:C8	2.44	0.52
37:BB:92:C:O2'	37:BB:93:G:H5'	2.09	0.52
39:BD:34:VAL:HG23	39:BD:35:LYS:H	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:45:ASN:ND2	39:BD:50:THR:HG21	2.25	0.52
40:BE:167:VAL:O	40:BE:170:LEU:HD13	2.09	0.52
41:BF:164:ARG:O	41:BF:166:ALA:N	2.42	0.52
42:BG:72:ARG:CA	42:BG:87:PRO:HD2	2.39	0.52
48:BP:115:LEU:O	48:BP:134:ALA:HB1	2.09	0.52
48:BP:144:GLU:N	48:BP:145:PRO:HD3	2.24	0.52
51:BS:13:ARG:HG3	51:BS:14:VAL:N	2.23	0.52
51:BS:58:LEU:O	51:BS:59:LYS:O	2.26	0.52
52:BT:30:VAL:HA	52:BT:44:ASP:HA	1.92	0.52
52:BT:91:ARG:C	52:BT:93:ARG:H	2.13	0.52
54:BV:53:GLU:C	54:BV:55:ALA:H	2.12	0.52
56:BX:43:VAL:HA	56:BX:46:ALA:HB3	1.91	0.52
58:BZ:86:VAL:CG1	58:BZ:87:ASP:H	2.19	0.52
58:BZ:152:ALA:CA	58:BZ:167:PRO:HB2	2.40	0.52
1:CA:37:U:O2'	1:CA:38:G:H5'	2.10	0.52
1:CA:746:A:O2'	1:CA:747:C:H5'	2.10	0.52
1:CA:1067:A:N1	1:CA:1108:G:O2'	2.36	0.52
1:CA:1312:G:O2'	1:CA:1313:U:H5'	2.10	0.52
1:CA:1316:G:H4'	14:CN:18:VAL:HG13	1.91	0.52
1:CA:1319:A:H5'	1:CA:1320:C:OP1	2.09	0.52
2:CB:118:LEU:HD22	2:CB:138:LEU:HD22	1.90	0.52
2:CB:219:VAL:O	2:CB:222:ILE:HG12	2.10	0.52
4:CD:10:ARG:NH1	4:CD:40:PRO:HG3	2.24	0.52
10:CJ:81:THR:O	10:CJ:83:GLU:N	2.43	0.52
12:CL:55:VAL:CG2	12:CL:67:THR:HG22	2.40	0.52
25:CZ:135:MET:HE2	25:CZ:138:VAL:HG22	1.92	0.52
27:D1:45:ASN:C	27:D1:45:ASN:HD22	2.13	0.52
29:D3:26:LEU:O	29:D3:27:GLY:C	2.47	0.52
34:D8:62:LEU:HB3	36:DA:242:G:H5'	1.92	0.52
36:DA:1142(A):A:H5'	36:DA:1142(A):A:C8	2.45	0.52
36:DA:1627:G:C2	36:DA:1628:G:C8	2.97	0.52
36:DA:1688:U:H5'	36:DA:1689:A:OP1	2.10	0.52
36:DA:1847:A:H3'	36:DA:1848:A:C5'	2.39	0.52
36:DA:2815:C:H2'	36:DA:2816:C:H6	1.73	0.52
36:DA:2824:C:H2'	36:DA:2825:C:O4'	2.09	0.52
37:DB:17:C:H2'	37:DB:18:G:C8	2.44	0.52
43:DH:126:PRO:O	43:DH:127:GLU:CB	2.58	0.52
46:DN:14:VAL:HG13	46:DN:137:LYS:HG3	1.92	0.52
48:DP:147:LEU:O	48:DP:148:LEU:CB	2.57	0.52
49:DQ:78:PRO:O	49:DQ:81:VAL:HG12	2.08	0.52
51:DS:12:PHE:HD1	51:DS:13:ARG:N	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:30:ARG:NH2	51:DS:62:LYS:HB3	2.25	0.52
52:DT:67:SER:O	52:DT:68:TYR:C	2.47	0.52
53:DU:57:PHE:C	53:DU:59:ARG:N	2.62	0.52
58:DZ:40:ASP:OD1	58:DZ:42:VAL:N	2.42	0.52
1:AA:546:G:P	4:AD:72:GLU:HB3	2.50	0.52
1:AA:1271:G:C3'	1:AA:1272:G:H5"	2.40	0.52
4:AD:163:GLU:C	4:AD:165:MET:H	2.12	0.52
5:AE:12:LEU:HD13	5:AE:31:LEU:HB2	1.92	0.52
9:AI:84:ALA:O	9:AI:85:LEU:HB3	2.09	0.52
15:AO:32:LEU:O	15:AO:35:ARG:N	2.43	0.52
18:AR:36:ASN:HB2	18:AR:38:GLU:CG	2.40	0.52
22:AV:5:G:H8	22:AV:5:G:C5'	2.12	0.52
25:AZ:126:VAL:HG12	25:AZ:126:VAL:O	2.10	0.52
25:AZ:315:LYS:HA	25:AZ:372:VAL:O	2.09	0.52
35:B9:25:VAL:HB	35:B9:34:GLN:HB3	1.91	0.52
36:BA:510:C:H2'	36:BA:511:U:O4'	2.10	0.52
36:BA:1404:C:O2'	36:BA:1405:U:H5'	2.10	0.52
36:BA:1720:U:C2'	36:BA:1721:G:H5"	2.40	0.52
37:BB:81:G:H2'	37:BB:82:G:H5'	1.91	0.52
39:BD:231:HIS:CG	39:BD:232:PRO:HD2	2.45	0.52
42:BG:107:LEU:HD12	42:BG:178:PHE:CE1	2.45	0.52
49:BQ:63:LYS:HE2	58:BZ:118:GLN:NE2	2.24	0.52
58:BZ:141:VAL:O	58:BZ:142:SER:CB	2.58	0.52
1:CA:814:A:H2'	1:CA:816:A:H5"	1.92	0.52
1:CA:1211:U:H1'	1:CA:1213:A:C2	2.45	0.52
2:CB:8:LYS:CE	2:CB:217:ARG:HH22	2.22	0.52
4:CD:65:ARG:HD3	4:CD:75:PHE:CG	2.45	0.52
8:CH:37:ARG:O	8:CH:40:ALA:HB3	2.09	0.52
13:CM:14:ARG:HB3	13:CM:16:ASP:OD1	2.09	0.52
13:CM:20:THR:C	13:CM:22:ILE:H	2.12	0.52
15:CO:30:ALA:HB2	15:CO:85:LEU:HD11	1.91	0.52
22:CV:46:G:H3'	22:CV:47:U:H5"	1.91	0.52
25:CZ:9:LYS:HE3	25:CZ:73:ALA:C	2.30	0.52
35:D9:27:CYS:SG	35:D9:28:GLU:N	2.78	0.52
36:DA:389:G:H1	48:DP:72:PRO:HD3	1.75	0.52
36:DA:815:C:H2'	36:DA:816:C:C6	2.45	0.52
36:DA:940:G:H2'	36:DA:941:A:C4'	2.40	0.52
36:DA:1252:G:N2	53:DU:33:ARG:HB3	2.25	0.52
36:DA:2262:U:H4'	36:DA:2328:A:C2	2.44	0.52
41:DF:6:VAL:HG12	41:DF:7:TYR:H	1.73	0.52
41:DF:123:LEU:O	41:DF:124:LEU:HB2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:43:LEU:HB3	42:DG:45:GLU:HG2	1.92	0.52
42:DG:109:VAL:C	42:DG:112:PRO:HD2	2.30	0.52
43:DH:51:ARG:HG3	43:DH:52:VAL:N	2.25	0.52
48:DP:144:GLU:N	48:DP:145:PRO:HD3	2.25	0.52
50:DR:103:ARG:HG3	55:DW:40:ASN:CG	2.30	0.52
52:DT:28:VAL:HG22	52:DT:46:GLU:C	2.30	0.52
53:DU:21:ALA:HB1	53:DU:24:TYR:CD2	2.44	0.52
57:DY:59:GLY:O	57:DY:60:PHE:HB2	2.10	0.52
58:DZ:48:PHE:CE2	58:DZ:74:VAL:HG21	2.45	0.52
1:AA:335:C:H2'	1:AA:336:C:C6	2.45	0.52
1:AA:681:C:C2'	1:AA:682:G:H5'	2.40	0.52
2:AB:92:TYR:CE1	2:AB:94:ASN:ND2	2.73	0.52
4:AD:79:PHE:HA	4:AD:93:PHE:CD1	2.45	0.52
5:AE:102:ALA:HB1	5:AE:106:PRO:HG2	1.91	0.52
8:AH:97:VAL:HG21	8:AH:128:GLY:C	2.31	0.52
17:AQ:52:LYS:HD2	17:AQ:52:LYS:H	1.74	0.52
19:AS:53:ASN:HD22	19:AS:55:LYS:H	1.58	0.52
34:B8:33:ASN:HA	34:B8:36:LYS:HD2	1.91	0.52
36:BA:302:C:H2'	36:BA:303:U:C6	2.45	0.52
36:BA:1009:A:H1'	53:BU:59:ARG:NH1	2.25	0.52
36:BA:1469:A:H2'	36:BA:1470:G:O4'	2.10	0.52
36:BA:1666:G:C2'	36:BA:1667:G:H5'	2.40	0.52
36:BA:1817:G:C2'	36:BA:1818:U:H5'	2.40	0.52
36:BA:2128:C:N4	36:BA:2160:G:H1	2.07	0.52
36:BA:2543:G:H2'	36:BA:2544:G:H8	1.74	0.52
38:BC:139:ASN:N	38:BC:144:THR:OG1	2.41	0.52
41:BF:110:LEU:HD13	41:BF:110:LEU:O	2.10	0.52
41:BF:133:ASN:H	41:BF:133:ASN:HD22	1.57	0.52
43:BH:156:ALA:C	43:BH:158:HIS:N	2.63	0.52
46:BN:6:PRO:HG3	46:BN:41:ASP:OD1	2.10	0.52
48:BP:41:ARG:HB3	48:BP:41:ARG:NH1	2.20	0.52
52:BT:129:ARG:NE	52:BT:131:ALA:HB3	2.26	0.52
56:BX:30:VAL:HG23	56:BX:31:HIS:N	2.23	0.52
1:CA:20:U:H2'	1:CA:21:G:O4'	2.10	0.52
1:CA:386:C:C2'	1:CA:387:U:H5'	2.40	0.52
1:CA:598:U:H4'	8:CH:94:TYR:CD2	2.45	0.52
1:CA:706:A:O2'	11:CK:29:ILE:HD11	2.10	0.52
1:CA:796:C:O2'	1:CA:797:C:H5'	2.09	0.52
1:CA:1188:A:H2'	1:CA:1189:C:H5'	1.92	0.52
1:CA:1495:U:H2'	1:CA:1496:C:H6	1.75	0.52
3:CC:87:LEU:O	3:CC:91:LEU:HG	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:42:ILE:HG22	14:CN:43:CYS:N	2.25	0.52
25:CZ:9:LYS:CE	25:CZ:74:LYS:C	2.78	0.52
25:CZ:313:HIS:O	25:CZ:380:LEU:CD1	2.58	0.52
25:CZ:338:TYR:O	25:CZ:340:PRO:HD3	2.09	0.52
26:D0:36:ILE:O	26:D0:36:ILE:HD12	2.09	0.52
30:D4:20:ASN:HD22	30:D4:21:VAL:N	2.07	0.52
35:D9:15:LYS:NZ	35:D9:15:LYS:HB3	2.25	0.52
36:DA:122:G:H1	36:DA:129:C:N4	2.07	0.52
36:DA:271(R):G:O2'	36:DA:271(S):G:H5'	2.09	0.52
36:DA:839:U:H2'	36:DA:840:C:C6	2.45	0.52
36:DA:888:C:H2'	36:DA:889:C:C4'	2.38	0.52
36:DA:1472:A:H2'	36:DA:1473:G:H5'	1.90	0.52
36:DA:1798:U:C5'	39:DD:259:THR:HB	2.40	0.52
36:DA:1858:G:H2'	36:DA:1883:G:H22	1.75	0.52
36:DA:2136:C:H2'	36:DA:2137:C:H6	1.75	0.52
36:DA:2200:C:H42	36:DA:2223:G:H1	1.58	0.52
36:DA:2854:G:H2'	36:DA:2855:C:C6	2.45	0.52
38:DC:77:ILE:HD13	38:DC:95:GLY:HA3	1.91	0.52
42:DG:29:TRP:O	42:DG:31:VAL:N	2.40	0.52
42:DG:136:ARG:HG3	42:DG:137:GLU:H	1.74	0.52
47:DO:78:ARG:CB	47:DO:78:ARG:NH1	2.72	0.52
56:DX:26:TYR:CD2	56:DX:92:LEU:HD12	2.45	0.52
58:DZ:109:ALA:O	58:DZ:111:VAL:HG23	2.10	0.52
1:AA:59:A:N6	1:AA:331:G:H1'	2.25	0.51
1:AA:332:G:H2'	1:AA:333:G:H8	1.75	0.51
1:AA:490:G:H2'	1:AA:491:G:C8	2.45	0.51
1:AA:1128:C:O2'	1:AA:1130:A:N7	2.39	0.51
2:AB:44:LEU:HA	2:AB:47:THR:HB	1.91	0.51
2:AB:47:THR:HG23	2:AB:202:PRO:O	2.10	0.51
12:AL:55:VAL:HG21	12:AL:67:THR:HG22	1.93	0.51
12:AL:109:GLY:HA3	12:AL:122:THR:H	1.75	0.51
20:AT:41:ILE:O	20:AT:45:GLN:NE2	2.44	0.51
25:AZ:195:TRP:O	25:AZ:198:LYS:N	2.43	0.51
25:AZ:199:ILE:O	25:AZ:203:LEU:HG	2.10	0.51
27:B1:76:ARG:CZ	27:B1:95:LEU:HB2	2.40	0.51
33:B7:34:ARG:HH11	33:B7:34:ARG:HG3	1.75	0.51
36:BA:257:A:C2'	36:BA:258:G:H5'	2.40	0.51
36:BA:363(F):A:O2'	36:BA:364:C:C5	2.63	0.51
36:BA:747:U:O2	36:BA:2014:A:H1'	2.11	0.51
36:BA:768:G:H2'	36:BA:769:G:H8	1.75	0.51
36:BA:1038:C:C3'	36:BA:1039:G:H5"	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1628:G:O2'	36:BA:1629:U:H5'	2.10	0.51
36:BA:1788:C:C2'	36:BA:1789:A:H5'	2.40	0.51
36:BA:1803:A:H4'	39:BD:259:THR:HG22	1.92	0.51
36:BA:2116:G:N7	36:BA:2117:A:C4	2.78	0.51
38:BC:151:GLU:HA	38:BC:154:ARG:HD2	1.92	0.51
51:BS:52:SER:CB	51:BS:55:ALA:HB3	2.40	0.51
52:BT:28:VAL:O	52:BT:29:ARG:CB	2.56	0.51
53:BU:10:ARG:O	53:BU:12:ARG:N	2.43	0.51
54:BV:66:ARG:CZ	54:BV:88:ARG:HD2	2.40	0.51
55:BW:27:LYS:O	55:BW:28:SER:O	2.28	0.51
57:BY:38:ILE:CB	57:BY:66:PRO:HG3	2.27	0.51
1:CA:189(C):C:H2'	1:CA:189(D):C:O4'	2.10	0.51
1:CA:1123:A:H2'	1:CA:1124:G:C8	2.45	0.51
1:CA:1218:C:H2'	1:CA:1219:U:C5	2.45	0.51
2:CB:114:ARG:O	2:CB:118:LEU:HG	2.10	0.51
10:CJ:54:PHE:HA	10:CJ:55:LYS:HZ2	1.75	0.51
25:CZ:129:PRO:HB2	25:CZ:130:TYR:CD1	2.45	0.51
34:D8:16:ILE:O	34:D8:16:ILE:HG23	2.08	0.51
36:DA:664:C:H4'	36:DA:940:G:O3'	2.09	0.51
36:DA:1278:A:H5"	50:DR:36:THR:HG22	1.91	0.51
36:DA:1609:A:H4'	36:DA:1617:C:OP1	2.10	0.51
37:DB:55:U:H2'	37:DB:56:G:C8	2.44	0.51
38:DC:25:ALA:O	38:DC:29:VAL:HG13	2.10	0.51
40:DE:44:TYR:O	40:DE:45:THR:HB	2.10	0.51
42:DG:83:ARG:CB	42:DG:84:LYS:HD2	2.40	0.51
48:DP:101:VAL:HG23	48:DP:102:ARG:H	1.73	0.51
52:DT:31:SER:CB	52:DT:32:TYR:CD1	2.93	0.51
52:DT:78:LEU:C	52:DT:79:HIS:ND1	2.64	0.51
58:DZ:94:GLU:HB3	58:DZ:95:PRO:CD	2.39	0.51
1:AA:491:G:O2'	1:AA:492:G:H5'	2.10	0.51
1:AA:647:C:O2'	1:AA:648:A:H5'	2.09	0.51
1:AA:1039:C:H2'	1:AA:1040:U:C6	2.44	0.51
1:AA:1323:G:H2'	1:AA:1324:A:H8	1.73	0.51
2:AB:213:LEU:O	2:AB:213:LEU:HD23	2.11	0.51
20:AT:25:ARG:HH11	20:AT:25:ARG:HG3	1.75	0.51
20:AT:82:SER:O	20:AT:84:LEU:N	2.37	0.51
22:AW:70:G:H2'	22:AW:71:G:C8	2.45	0.51
36:BA:445:C:O3'	53:BU:3:ARG:HD3	2.10	0.51
36:BA:483:A:C2	36:BA:484:C:H1'	2.44	0.51
36:BA:632:A:H2'	36:BA:633:A:C8	2.45	0.51
36:BA:654(C):G:H2'	36:BA:654(D):G:H5'	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1409:C:H2'	36:BA:1410:G:C8	2.44	0.51
36:BA:1539:G:N3	36:BA:1540:U:H4'	2.24	0.51
36:BA:1658:C:OP1	40:BE:135:HIS:HE1	1.94	0.51
36:BA:2128:C:O2'	36:BA:2129:C:O5'	2.27	0.51
36:BA:2319:G:H4'	36:BA:2320:A:OP1	2.09	0.51
36:BA:2464:C:O2'	36:BA:2465:C:O5'	2.28	0.51
38:BC:82:LYS:HA	38:BC:82:LYS:HE2	1.91	0.51
42:BG:52:ILE:O	42:BG:54:GLU:OE2	2.28	0.51
50:BR:97:VAL:HA	50:BR:113:LEU:O	2.11	0.51
51:BS:83:LYS:CG	51:BS:105:ALA:HB3	2.37	0.51
52:BT:31:SER:HG	52:BT:32:TYR:HE1	1.58	0.51
54:BV:74:LYS:HB2	54:BV:83:ARG:HB2	1.92	0.51
56:BX:55:ASN:N	56:BX:55:ASN:ND2	2.58	0.51
57:BY:6:HIS:HB3	57:BY:35:TYR:CE1	2.41	0.51
58:BZ:79:ARG:O	58:BZ:80:ARG:HB2	2.10	0.51
1:CA:160:A:H1'	1:CA:344:A:N7	2.26	0.51
1:CA:359:U:P	25:CZ:235:GLY:HA2	2.50	0.51
1:CA:625:G:H2'	1:CA:626:U:H6	1.74	0.51
1:CA:1277:C:H2'	1:CA:1278:U:H5'	1.92	0.51
3:CC:167:TRP:O	3:CC:168:ALA:HB3	2.10	0.51
6:CF:3:ARG:HD3	6:CF:64:GLN:NE2	2.26	0.51
9:CI:11:LYS:HG3	9:CI:108:VAL:HG13	1.90	0.51
13:CM:80:ARG:HG2	13:CM:80:ARG:O	2.10	0.51
14:CN:24:CYS:N	14:CN:33:VAL:HG11	2.24	0.51
27:D1:84:GLY:O	27:D1:86:SER:N	2.43	0.51
31:D5:43:HIS:HE1	36:DA:2884:U:P	2.34	0.51
32:D6:19:ARG:HD3	32:D6:20:ASN:H	1.74	0.51
34:D8:37:SER:HB2	36:DA:2383:G:OP2	2.10	0.51
36:DA:706:A:H2'	36:DA:707:G:O4'	2.10	0.51
36:DA:1602:U:H3'	36:DA:1603:A:H5"	1.91	0.51
36:DA:1657:C:O2'	36:DA:1658:C:H5'	2.10	0.51
36:DA:1718:G:H2'	36:DA:1719:G:H8	1.76	0.51
36:DA:2415:G:H4'	48:DP:66:GLY:CA	2.39	0.51
36:DA:2469:A:H2'	36:DA:2470:G:H5'	1.92	0.51
36:DA:2692:C:O2	36:DA:2847:U:O2'	2.27	0.51
36:DA:2880:C:C2	36:DA:2881:C:C5	2.98	0.51
36:DA:2886:G:O2'	36:DA:2887:U:H5'	2.11	0.51
43:DH:147:ASN:O	43:DH:151:ILE:HG12	2.10	0.51
50:DR:7:GLY:O	50:DR:8:ARG:CZ	2.58	0.51
52:DT:85:LYS:O	52:DT:86:ILE:C	2.49	0.51
54:DV:18:LEU:CG	54:DV:19:LYS:H	2.23	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DX:49:VAL:HG12	56:DX:87:GLN:HE21	1.75	0.51
57:DY:13:VAL:CG2	57:DY:73:ARG:H	2.22	0.51
57:DY:28:LYS:HB2	57:DY:37:VAL:HB	1.91	0.51
1:AA:376:G:H4'	16:AP:5:ARG:HH11	1.76	0.51
1:AA:994:A:N7	1:AA:1216:G:H4'	2.25	0.51
1:AA:1030(D):A:H62	1:AA:1031:G:H21	1.57	0.51
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.11	0.51
1:AA:1434:A:H2'	1:AA:1435:G:O4'	2.10	0.51
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.14	0.51
3:AC:112:SER:HB3	3:AC:115:LEU:HB2	1.93	0.51
12:AL:25:PRO:O	12:AL:26:ALA:CB	2.58	0.51
12:AL:126:LYS:HE2	12:AL:127:GLU:HB2	1.91	0.51
20:AT:81:LYS:O	20:AT:84:LEU:HB3	2.11	0.51
25:AZ:12:VAL:HG13	25:AZ:100:ASP:OD2	2.10	0.51
32:B6:15:GLU:OE1	32:B6:18:ARG:CG	2.57	0.51
34:B8:32:LEU:HD13	36:BA:2392:A:OP1	2.10	0.51
36:BA:310:A:OP1	57:BY:17:SER:O	2.28	0.51
36:BA:1980:G:O2'	36:BA:1982:C:OP2	2.22	0.51
36:BA:2523:G:C2'	36:BA:2524:G:H5"	2.40	0.51
37:BB:7:G:H2'	37:BB:8:U:H5'	1.92	0.51
39:BD:63:ARG:CG	39:BD:63:ARG:NH1	2.62	0.51
39:BD:97:TYR:C	39:BD:99:ASP:H	2.12	0.51
40:BE:103:ASP:OD2	40:BE:201:THR:HA	2.09	0.51
42:BG:6:ALA:O	42:BG:10:LYS:HG3	2.10	0.51
46:BN:55:VAL:HG22	46:BN:56:ASN:H	1.73	0.51
46:BN:86:PRO:HG2	46:BN:89:LYS:HG2	1.91	0.51
48:BP:40:SER:C	48:BP:41:ARG:HG2	2.31	0.51
48:BP:125:VAL:HG11	48:BP:138:LEU:HD21	1.93	0.51
48:BP:147:LEU:CG	48:BP:148:LEU:N	2.72	0.51
55:BW:44:ALA:O	55:BW:46:PHE:N	2.43	0.51
56:BX:3:THR:HA	56:BX:6:ASP:OD2	2.10	0.51
56:BX:49:VAL:HA	56:BX:87:GLN:NE2	2.24	0.51
57:BY:77:PRO:O	57:BY:78:ALA:CB	2.58	0.51
58:BZ:150:LEU:HG	58:BZ:171:ILE:HD11	1.91	0.51
1:CA:358:U:H1'	25:CZ:233:GLY:CA	2.40	0.51
1:CA:474:G:H2'	1:CA:475:G:H8	1.75	0.51
1:CA:774:G:O2'	1:CA:775:G:H5'	2.10	0.51
2:CB:121:LEU:HG	2:CB:126:GLU:HB2	1.90	0.51
4:CD:138:TYR:CD1	4:CD:138:TYR:C	2.83	0.51
6:CF:40:VAL:O	6:CF:40:VAL:HG13	2.10	0.51
16:CP:21:VAL:O	16:CP:21:VAL:HG13	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:37:VAL:HG23	18:CR:41:LYS:HB2	1.92	0.51
21:CU:6:ARG:HE	21:CU:6:ARG:N	2.08	0.51
22:CV:4:C:C2'	22:CV:5:G:H5"	2.40	0.51
23:CX:11:U:H3'	23:CX:12:A:N7	2.25	0.51
24:CY:40:C:H2'	24:CY:41:C:C5'	2.31	0.51
24:CY:54:5MU:H5"	24:CY:55:PSU:OP2	2.10	0.51
24:CY:58:A:O2'	24:CY:59:G:H5"	2.11	0.51
25:CZ:68:VAL:O	25:CZ:273:HIS:CE1	2.64	0.51
36:DA:562:U:O4	36:DA:2036:C:H1'	2.10	0.51
36:DA:991:C:H2'	36:DA:992:C:H6	1.75	0.51
36:DA:1484:G:C3'	36:DA:1485:G:H5"	2.39	0.51
36:DA:1509(A):A:H2'	36:DA:1509(B):A:H8	1.76	0.51
36:DA:1525:G:O2'	36:DA:1526:G:H5'	2.09	0.51
36:DA:2289:G:H8	36:DA:2289:G:O5'	1.94	0.51
36:DA:2485:G:O2'	36:DA:2486:G:H5'	2.10	0.51
36:DA:2726:U:H6	47:DO:67:LYS:HZ3	1.56	0.51
36:DA:2810:A:H2'	36:DA:2811:G:O4'	2.10	0.51
37:DB:67:G:HO2'	37:DB:68:C:H6	1.55	0.51
37:DB:68:C:O2'	37:DB:69:G:H5'	2.10	0.51
38:DC:6:ARG:HH11	38:DC:6:ARG:HG2	1.75	0.51
42:DG:11:TYR:HA	42:DG:15:VAL:HG23	1.90	0.51
42:DG:152:LEU:HD23	42:DG:152:LEU:H	1.76	0.51
47:DO:71:ARG:NH1	47:DO:104:ARG:HG2	2.25	0.51
48:DP:38:GLN:CG	48:DP:39:LYS:H	2.21	0.51
49:DQ:29:PHE:CB	49:DQ:105:GLU:OE2	2.57	0.51
1:AA:375:U:C2	1:AA:376:G:C8	2.98	0.51
1:AA:377:G:H2'	1:AA:378:G:H8	1.74	0.51
1:AA:532:A:H2	1:AA:1206:G:H21	1.59	0.51
1:AA:1129:C:OP1	1:AA:1130:A:C5'	2.58	0.51
4:AD:8:VAL:C	4:AD:10:ARG:N	2.64	0.51
10:AJ:42:THR:HG22	10:AJ:43:ARG:N	2.25	0.51
14:AN:57:ARG:HG3	14:AN:58:LYS:N	2.26	0.51
20:AT:22:ARG:HG3	20:AT:22:ARG:NH1	2.24	0.51
22:AW:70:G:H2'	22:AW:71:G:H8	1.75	0.51
24:AY:4:G:C3'	24:AY:5:G:H5"	2.40	0.51
25:AZ:5:PHE:HD1	25:AZ:5:PHE:O	1.93	0.51
25:AZ:310:ILE:CD1	25:AZ:381:GLU:HB3	2.41	0.51
25:AZ:381:GLU:O	25:AZ:382:GLU:HB3	2.10	0.51
26:B0:3:HIS:CD2	36:BA:2602:A:H2	2.28	0.51
27:B1:62:VAL:HG13	27:B1:63:ALA:O	2.11	0.51
28:B2:12:GLU:HG2	28:B2:12:GLU:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:28:ARG:HG2	32:B6:28:ARG:HH11	1.75	0.51
36:BA:864:G:N2	36:BA:913:U:C2	2.78	0.51
36:BA:950:G:H2'	36:BA:951:C:H6	1.75	0.51
36:BA:1517:G:H8	36:BA:1517:G:C5'	2.22	0.51
36:BA:1827:C:H2'	36:BA:1828:G:H5'	1.92	0.51
36:BA:2107:C:H1'	36:BA:2182:G:N2	2.26	0.51
36:BA:2389:G:H5"	36:BA:2390:U:O4'	2.11	0.51
36:BA:2691:C:H2'	36:BA:2692:C:H6	1.76	0.51
36:BA:2771:C:H2'	36:BA:2772:C:C6	2.45	0.51
41:BF:126:VAL:HG21	41:BF:129:PHE:CZ	2.44	0.51
43:BH:103:LEU:HD22	43:BH:123:PHE:HD2	1.76	0.51
46:BN:3:THR:C	46:BN:4:TYR:CG	2.83	0.51
48:BP:33:ARG:O	48:BP:34:GLY:C	2.49	0.51
49:BQ:61:GLY:O	49:BQ:62:GLY:O	2.29	0.51
50:BR:96:ARG:HH12	50:BR:117:VAL:HG11	1.75	0.51
51:BS:74:ALA:O	51:BS:77:ALA:HB3	2.10	0.51
54:BV:20:LEU:O	54:BV:22:VAL:HG22	2.11	0.51
55:BW:47:VAL:O	55:BW:47:VAL:HG12	2.09	0.51
56:BX:10:ALA:HB1	56:BX:11:PRO:CD	2.40	0.51
1:CA:201:C:H3'	1:CA:202:U:C5'	2.35	0.51
1:CA:245:C:O2'	1:CA:246:A:P	2.68	0.51
1:CA:633:G:H3'	1:CA:634:C:H6	1.75	0.51
1:CA:992:U:H1'	1:CA:993:G:C2	2.45	0.51
1:CA:1485:U:O2'	1:CA:1486:G:H5'	2.11	0.51
3:CC:45:LYS:HG2	3:CC:46:GLU:N	2.25	0.51
3:CC:142:MET:C	3:CC:144:SER:N	2.62	0.51
4:CD:28:SER:CB	4:CD:29:PRO:CD	2.81	0.51
4:CD:53:ASP:HB3	4:CD:57:ARG:NH1	2.24	0.51
4:CD:182:LYS:O	4:CD:183:GLY:O	2.27	0.51
16:CP:25:ARG:HG3	16:CP:25:ARG:NH1	2.25	0.51
19:CS:31:ILE:HG23	19:CS:31:ILE:O	2.10	0.51
24:CY:2:G:O4'	25:CZ:88:TYR:CE1	2.63	0.51
36:DA:61:G:H1	36:DA:94:C:N4	1.97	0.51
36:DA:267:C:H2'	36:DA:268:C:H6	1.74	0.51
36:DA:391:G:H2'	36:DA:392:C:O4'	2.11	0.51
36:DA:654(A):G:H1	36:DA:654(S):G:H22	1.58	0.51
36:DA:880:G:H2'	36:DA:881:G:H8	1.75	0.51
36:DA:1063:G:N2	45:DK:89:UNK:N	2.59	0.51
36:DA:1465:G:H5'	36:DA:1528:A:H1'	1.92	0.51
36:DA:1747:G:H2'	36:DA:1747(A):G:H8	1.75	0.51
36:DA:2552:U:H2'	36:DA:2554:U:H5"	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2623:G:H4'	36:DA:2825:C:O2	2.10	0.51
38:DC:153:ILE:HG22	38:DC:153:ILE:O	2.10	0.51
39:DD:43:ARG:NE	39:DD:49:ILE:HG22	2.18	0.51
39:DD:206:LEU:HD12	39:DD:211:ARG:CG	2.40	0.51
40:DE:33:VAL:HG21	40:DE:36:ARG:HE	1.76	0.51
42:DG:16:ARG:N	42:DG:17:PRO:HD2	2.25	0.51
50:DR:63:ARG:HA	50:DR:80:PHE:HZ	1.74	0.51
52:DT:50:ILE:HD11	52:DT:64:ARG:CB	2.29	0.51
52:DT:92:GLY:O	52:DT:94:ALA:N	2.43	0.51
52:DT:107:ASP:O	52:DT:110:ILE:HB	2.10	0.51
56:DX:51:VAL:HG12	56:DX:52:VAL:H	1.74	0.51
1:AA:191:G:C4	20:AT:105:SER:HB2	2.46	0.51
1:AA:376:G:O3'	16:AP:5:ARG:NH1	2.43	0.51
1:AA:637:G:O2'	1:AA:638:G:H5'	2.10	0.51
1:AA:697:U:H2'	1:AA:698:G:H5'	1.91	0.51
1:AA:1305:G:P	21:AU:2:GLY:N	2.84	0.51
2:AB:7:VAL:HG12	2:AB:217:ARG:HH21	1.76	0.51
2:AB:28:PHE:CD2	2:AB:190:THR:HA	2.46	0.51
2:AB:84:GLU:OE1	2:AB:216:SER:HA	2.11	0.51
3:AC:175:LEU:HD23	3:AC:182:ILE:CD1	2.40	0.51
5:AE:20:GLN:NE2	5:AE:25:ARG:NH2	2.59	0.51
5:AE:40:ARG:HG2	5:AE:40:ARG:NH1	2.26	0.51
8:AH:112:LEU:N	8:AH:112:LEU:CD2	2.66	0.51
9:AI:68:GLY:O	9:AI:69:GLY:O	2.28	0.51
18:AR:44:LEU:CD2	18:AR:80:PRO:HD2	2.40	0.51
25:AZ:20:VAL:HG23	25:AZ:21:ASP:N	2.25	0.51
25:AZ:156:ASP:O	25:AZ:160:GLN:HG3	2.11	0.51
25:AZ:179:LEU:HD12	25:AZ:182:MET:HB2	1.93	0.51
26:B0:50:ASN:ND2	26:B0:63:VAL:HG21	2.25	0.51
36:BA:753:C:O2'	36:BA:754:C:H5'	2.11	0.51
36:BA:1761:C:H3'	36:BA:1762:A:H8	1.74	0.51
36:BA:1932:A:H2'	36:BA:1933:G:O4'	2.10	0.51
36:BA:2206:G:N2	36:BA:2207:G:H4'	2.25	0.51
36:BA:2309:A:H2'	36:BA:2310:A:H5'	1.92	0.51
39:BD:97:TYR:O	39:BD:99:ASP:N	2.44	0.51
40:BE:188:VAL:CG2	40:BE:189:PRO:HD2	2.40	0.51
41:BF:64:ILE:HD11	41:BF:65:TRP:CZ2	2.45	0.51
42:BG:56:ALA:HA	42:BG:59:GLU:OE1	2.10	0.51
43:BH:41:MET:O	43:BH:42:ARG:HB3	2.10	0.51
46:BN:72:TYR:CD2	46:BN:90:MET:HG3	2.45	0.51
51:BS:22:GLY:O	51:BS:23:ARG:O	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:85:VAL:C	51:BS:106:ARG:HG3	2.31	0.51
51:BS:106:ARG:HB3	51:BS:106:ARG:CZ	2.39	0.51
58:BZ:30:ASN:C	58:BZ:30:ASN:ND2	2.63	0.51
1:CA:148:G:H1	1:CA:174:C:N4	2.08	0.51
1:CA:267:C:OP2	17:CQ:67:LYS:HD2	2.11	0.51
1:CA:706:A:N7	1:CA:707:C:C5	2.78	0.51
1:CA:1117:G:H5'	1:CA:1117:G:C8	2.43	0.51
1:CA:1123:A:O3'	10:CJ:36:GLY:HA3	2.11	0.51
2:CB:55:PHE:HD1	2:CB:58:ILE:HD12	1.76	0.51
2:CB:109:SER:C	2:CB:111:ARG:N	2.63	0.51
2:CB:169:LYS:O	2:CB:169:LYS:HD3	2.11	0.51
3:CC:47:LEU:CD1	3:CC:76:VAL:HG12	2.40	0.51
3:CC:47:LEU:HD11	3:CC:76:VAL:HG12	1.92	0.51
7:CG:18:TYR:OH	7:CG:58:PRO:HG3	2.11	0.51
8:CH:68:ARG:HH11	8:CH:68:ARG:HG2	1.75	0.51
8:CH:135:CYS:O	8:CH:135:CYS:SG	2.69	0.51
10:CJ:71:LEU:HD12	10:CJ:72:VAL:H	1.72	0.51
10:CJ:89:ASP:HB3	10:CJ:91:PRO:HD3	1.93	0.51
13:CM:15:VAL:HG12	13:CM:45:VAL:HG22	1.91	0.51
19:CS:32:LYS:O	19:CS:33:THR:HB	2.10	0.51
24:CY:15:A:H3'	24:CY:16:H2U:H5"	1.91	0.51
25:CZ:34:VAL:HG21	25:CZ:199:ILE:HG21	1.92	0.51
27:D1:86:SER:CB	27:D1:90:ILE:HD11	2.41	0.51
34:D8:61:LEU:CD2	36:DA:593:G:H4'	2.40	0.51
36:DA:17:G:H2'	36:DA:18:C:C6	2.45	0.51
36:DA:848:G:N9	36:DA:933:A:H8	2.09	0.51
36:DA:1051:G:H2'	36:DA:1052:C:C5	2.46	0.51
36:DA:1126:A:H4'	36:DA:1127:A:H5"	1.92	0.51
36:DA:1237:A:O3'	36:DA:1238:G:O4'	2.29	0.51
36:DA:1331:A:O2'	36:DA:1332:G:H8	1.92	0.51
36:DA:1771:C:O2'	36:DA:1786:A:H8	1.94	0.51
36:DA:1952:A:C2	47:DO:22:ILE:HG23	2.45	0.51
36:DA:2292:C:H2'	36:DA:2293:C:H6	1.74	0.51
36:DA:2626:C:O2'	36:DA:2627:G:H5'	2.11	0.51
39:DD:183:ARG:HD2	39:DD:269:PHE:O	2.10	0.51
40:DE:28:ALA:CB	40:DE:93:VAL:HG22	2.40	0.51
42:DG:46:ALA:HB2	42:DG:88:ILE:HG13	1.91	0.51
43:DH:41:MET:O	43:DH:42:ARG:HB3	2.09	0.51
47:DO:66:LYS:H	47:DO:82:ASN:HD21	1.57	0.51
52:DT:28:VAL:CG2	52:DT:47:GLY:O	2.59	0.51
55:DW:12:ILE:HD12	55:DW:42:ARG:NH1	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:169:GLU:O	58:DZ:170:THR:C	2.47	0.51
1:AA:226:G:C2'	1:AA:227:G:H5'	2.41	0.51
1:AA:392:G:H2'	1:AA:393:A:C8	2.46	0.51
1:AA:946:A:H2'	1:AA:947:G:C8	2.46	0.51
1:AA:1222:G:O2'	1:AA:1223:C:H5'	2.10	0.51
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.26	0.51
1:AA:1378:C:OP1	7:AG:7:ALA:HB3	2.10	0.51
4:AD:138:TYR:CD1	4:AD:138:TYR:C	2.78	0.51
4:AD:174:LEU:HD21	4:AD:185:PHE:HD1	1.75	0.51
17:AQ:67:LYS:O	17:AQ:68:ARG:CB	2.51	0.51
19:AS:10:PHE:C	19:AS:10:PHE:CD1	2.83	0.51
20:AT:53:LEU:H	20:AT:53:LEU:HD12	1.75	0.51
25:AZ:184:ARG:HG3	25:AZ:185:ASN:ND2	2.25	0.51
25:AZ:313:HIS:O	25:AZ:380:LEU:CD1	2.58	0.51
26:B0:38:VAL:HG21	26:B0:59:LEU:HD12	1.91	0.51
34:B8:21:LYS:HZ2	34:B8:48:PHE:HE2	1.59	0.51
36:BA:378:C:O2'	36:BA:379:G:H5'	2.11	0.51
36:BA:817:C:O2'	36:BA:839:U:H5"	2.10	0.51
36:BA:1210:A:H4'	36:BA:1211:U:O5'	2.10	0.51
36:BA:1232:G:H2'	36:BA:1233:C:C6	2.46	0.51
36:BA:1839:G:H5'	36:BA:1839:G:C8	2.45	0.51
39:BD:10:THR:C	39:BD:11:PRO:O	2.48	0.51
39:BD:10:THR:O	39:BD:11:PRO:O	2.29	0.51
39:BD:17:THR:O	39:BD:211:ARG:NH2	2.44	0.51
39:BD:30:GLU:CG	39:BD:63:ARG:HE	2.22	0.51
39:BD:35:LYS:CD	39:BD:36:PRO:N	2.61	0.51
41:BF:89:VAL:HG12	41:BF:90:PHE:CD2	2.46	0.51
42:BG:45:GLU:CG	42:BG:53:LEU:HG	2.36	0.51
42:BG:176:LEU:O	42:BG:176:LEU:HD23	2.10	0.51
46:BN:2:LYS:HZ3	54:BV:12:TYR:HA	1.76	0.51
49:BQ:81:VAL:HG22	49:BQ:82:ARG:N	2.26	0.51
49:BQ:97:VAL:HG21	49:BQ:103:MET:CE	2.40	0.51
50:BR:96:ARG:NH1	50:BR:117:VAL:CG2	2.70	0.51
51:BS:53:SER:C	51:BS:55:ALA:H	2.14	0.51
58:BZ:96:VAL:CG1	58:BZ:97:GLU:N	2.67	0.51
1:CA:99:U:H2'	1:CA:100:C:C5	2.46	0.51
1:CA:580:U:H2'	1:CA:581:G:O4'	2.10	0.51
1:CA:675:A:H1'	11:CK:116:HIS:ND1	2.26	0.51
1:CA:953:G:C5'	1:CA:965:A:H61	2.24	0.51
1:CA:1126:U:H5	1:CA:1127:G:C6	2.28	0.51
2:CB:17:PHE:CB	2:CB:44:LEU:HD11	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:167:PRO:HG2	2:CB:192:SER:HB3	1.92	0.51
7:CG:13:GLN:C	7:CG:13:GLN:HE21	2.14	0.51
7:CG:21:VAL:HG23	7:CG:22:LEU:N	2.26	0.51
8:CH:119:LEU:HD23	8:CH:119:LEU:N	2.22	0.51
9:CI:9:ARG:CG	9:CI:14:VAL:HG13	2.41	0.51
10:CJ:96:ILE:HD13	10:CJ:96:ILE:N	2.15	0.51
20:CT:45:GLN:HE21	20:CT:46:GLU:H	1.58	0.51
31:D5:6:VAL:CG1	36:DA:2016:U:H1'	2.39	0.51
36:DA:67:U:H2'	36:DA:68:G:O4'	2.11	0.51
36:DA:1005:C:H2'	36:DA:1006:C:C6	2.46	0.51
36:DA:1144:G:H2'	36:DA:1145:C:H6	1.73	0.51
36:DA:1278:A:O2'	36:DA:1279:G:H5'	2.10	0.51
36:DA:1607:C:H4'	36:DA:1608:A:O5'	2.11	0.51
36:DA:2028:U:H2'	36:DA:2029:G:H8	1.76	0.51
36:DA:2358:G:H2'	36:DA:2359:C:H6	1.75	0.51
36:DA:2647:U:H2'	36:DA:2648:C:H6	1.75	0.51
36:DA:2747:G:C2	36:DA:2756:U:H5	2.28	0.51
36:DA:2864:G:O2'	36:DA:2865:U:H5'	2.11	0.51
39:DD:83:GLU:OE1	39:DD:104:TYR:OH	2.28	0.51
40:DE:52:LEU:HD23	40:DE:75:VAL:CB	2.39	0.51
40:DE:181:LEU:HD21	52:DT:7:ILE:HG22	1.92	0.51
41:DF:38:ARG:O	41:DF:42:ALA:N	2.43	0.51
43:DH:76:VAL:C	43:DH:78:GLY:N	2.64	0.51
46:DN:3:THR:CG2	46:DN:5:VAL:HG23	2.40	0.51
51:DS:56:LEU:O	51:DS:57:LYS:O	2.29	0.51
1:AA:66:G:H4'	1:AA:173:U:C5	2.45	0.51
3:AC:22:TRP:CZ2	14:AN:54:PRO:HG2	2.46	0.51
3:AC:95:THR:O	3:AC:97:LYS:N	2.44	0.51
4:AD:23:GLY:O	4:AD:27:TYR:HB2	2.11	0.51
4:AD:150:GLU:CD	4:AD:151:LYS:N	2.64	0.51
8:AH:117:GLY:O	8:AH:119:LEU:HD23	2.11	0.51
9:AI:47:LEU:C	9:AI:47:LEU:HD12	2.31	0.51
13:AM:118:ALA:HB3	22:AV:29:G:C5'	2.39	0.51
20:AT:84:LEU:C	20:AT:86:ARG:H	2.14	0.51
23:AX:11:U:H2'	23:AX:12:A:OP1	2.10	0.51
26:B0:11:ARG:O	26:B0:12:ASN:ND2	2.43	0.51
32:B6:15:GLU:OE2	32:B6:41:PRO:CG	2.58	0.51
33:B7:5:TRP:HE1	33:B7:7:PRO:HB3	1.74	0.51
36:BA:153:C:H2'	36:BA:154:G:C8	2.45	0.51
36:BA:582:G:H2'	36:BA:583:G:H8	1.74	0.51
36:BA:621:A:H2'	36:BA:622:G:C5'	2.36	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:821:A:H5”	36:BA:822:U:C6	2.46	0.51
36:BA:1380:G:H21	36:BA:1570:A:H2	1.57	0.51
36:BA:2075:U:H4’	36:BA:2596:U:O2	2.11	0.51
36:BA:2580:U:H4’	40:BE:131:ALA:N	2.25	0.51
36:BA:2649:U:H2’	36:BA:2650:U:C6	2.46	0.51
38:BC:65:PRO:HB2	38:BC:66:HIS:CD2	2.46	0.51
39:BD:35:LYS:HD2	39:BD:36:PRO:CD	2.39	0.51
46:BN:38:HIS:O	53:BU:67:ALA:HB1	2.10	0.51
46:BN:108:PRO:HG2	46:BN:113:GLY:HA3	1.93	0.51
48:BP:45:LEU:CD1	48:BP:46:LYS:N	2.67	0.51
48:BP:124:LYS:HD3	48:BP:143:GLY:CA	2.30	0.51
49:BQ:17:LEU:HD13	49:BQ:39:PRO:HB2	1.93	0.51
49:BQ:60:ARG:NH1	49:BQ:60:ARG:CB	2.74	0.51
49:BQ:63:LYS:HD2	58:BZ:175:VAL:HG21	1.93	0.51
50:BR:29:LEU:N	50:BR:29:LEU:CD1	2.73	0.51
53:BU:3:ARG:NH1	53:BU:5:LYS:HB2	2.25	0.51
4:CD:145:GLU:HB3	4:CD:183:GLY:O	2.10	0.51
16:CP:47:ASP:O	16:CP:49:LEU:N	2.42	0.51
20:CT:30:LYS:HG3	20:CT:34:LYS:HE3	1.93	0.51
24:CY:1:A:H61	24:CY:72:U:H3	1.58	0.51
25:CZ:34:VAL:HG21	25:CZ:199:ILE:HG22	1.92	0.51
25:CZ:216:ASP:OD1	25:CZ:244:ARG:HB2	2.11	0.51
25:CZ:299:GLU:O	25:CZ:302:GLN:CG	2.59	0.51
30:D4:20:ASN:HD22	30:D4:20:ASN:C	2.14	0.51
34:D8:15:LYS:CG	48:DP:65:ARG:HH21	2.24	0.51
36:DA:389:G:C6	48:DP:70:GLN:HG3	2.45	0.51
36:DA:669:G:N3	36:DA:669:G:H2’	2.26	0.51
36:DA:1345:C:H2’	36:DA:1346:G:H8	1.75	0.51
36:DA:1378:A:O2’	36:DA:1379:A:O5’	2.26	0.51
36:DA:1841:U:H2’	36:DA:1842:G:C8	2.46	0.51
36:DA:2184:G:H2’	36:DA:2185:C:C1’	2.40	0.51
36:DA:2330:G:O2’	36:DA:2331:G:H5’	2.11	0.51
36:DA:2580:U:O3’	40:DE:130:GLY:HA3	2.11	0.51
36:DA:2591:C:H2’	36:DA:2592:G:H8	1.74	0.51
42:DG:97:ASP:O	42:DG:101:ILE:HG13	2.10	0.51
43:DH:70:THR:HG22	43:DH:74:ASN:HD21	1.76	0.51
46:DN:112:LEU:O	46:DN:115:ARG:HB3	2.11	0.51
46:DN:134:ARG:N	46:DN:135:PRO:HD3	2.26	0.51
48:DP:16:ARG:CZ	48:DP:18:ARG:CG	2.81	0.51
48:DP:50:ARG:HG2	48:DP:50:ARG:NH1	2.25	0.51
50:DR:36:THR:O	50:DR:111:LEU:HA	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:87:PHE:CG	51:DS:88:ASP:N	2.78	0.51
51:DS:104:GLY:O	51:DS:106:ARG:N	2.38	0.51
53:DU:61:TRP:O	53:DU:65:ILE:HG13	2.11	0.51
54:DV:82:ARG:HG2	54:DV:82:ARG:NH1	2.26	0.51
55:DW:13:SER:HA	55:DW:99:ARG:HB2	1.93	0.51
55:DW:73:ALA:O	55:DW:106:ILE:HG12	2.10	0.51
57:DY:81:LYS:HZ2	57:DY:99:CYS:HB2	1.72	0.51
1:AA:1054:C:N3	24:AY:34:C:H1'	2.26	0.51
1:AA:1278:U:H5"	1:AA:1279:A:O4'	2.11	0.51
2:AB:187:LEU:HD13	2:AB:205:ASP:HB3	1.93	0.51
4:AD:107:ARG:HH21	4:AD:194:LEU:CD1	2.04	0.51
5:AE:45:PHE:CD2	5:AE:47:LYS:HD2	2.46	0.51
9:AI:79:LEU:HD22	9:AI:101:PHE:O	2.10	0.51
10:AJ:54:PHE:CD1	10:AJ:55:LYS:CE	2.94	0.51
12:AL:81:SER:HB3	12:AL:106:ASP:HB3	1.91	0.51
13:AM:19:LEU:HD22	13:AM:19:LEU:H	1.76	0.51
17:AQ:26:GLN:NE2	17:AQ:37:LYS:HE2	2.10	0.51
17:AQ:44:ALA:HB2	17:AQ:59:ILE:HD12	1.92	0.51
19:AS:40:ILE:HD13	19:AS:62:ILE:CD1	2.40	0.51
25:AZ:19:HIS:CE1	25:AZ:20:VAL:HG22	2.46	0.51
26:B0:53:MET:HA	26:B0:58:THR:O	2.10	0.51
28:B2:21:LEU:HA	28:B2:24:LEU:HD12	1.92	0.51
34:B8:22:VAL:HB	34:B8:53:PRO:CB	2.41	0.51
36:BA:32:C:OP1	36:BA:1238:G:H5'	2.11	0.51
36:BA:105:C:O2'	57:BY:2:ARG:HG3	2.10	0.51
36:BA:520:G:H2'	36:BA:521:G:H8	1.76	0.51
36:BA:650:C:H3'	36:BA:651:G:C5'	2.34	0.51
36:BA:1120:G:H2'	36:BA:1121:C:C6	2.45	0.51
36:BA:1331:A:HO2'	36:BA:1332:G:H8	1.59	0.51
36:BA:1335:U:H2'	36:BA:1336:A:C8	2.46	0.51
36:BA:1373:A:O2'	36:BA:1374:G:H5'	2.11	0.51
36:BA:2485:G:O2'	36:BA:2486:G:H5'	2.10	0.51
36:BA:2704:C:H2'	36:BA:2705:A:C8	2.44	0.51
38:BC:116:THR:HG22	38:BC:147:PHE:HA	1.93	0.51
39:BD:43:ARG:NH1	39:BD:44:ASN:HD21	2.07	0.51
41:BF:34:TRP:CE3	48:BP:12:ALA:HA	2.46	0.51
42:BG:77:ILE:CD1	42:BG:77:ILE:N	2.74	0.51
43:BH:139:GLN:HG3	43:BH:140:LYS:N	2.26	0.51
46:BN:134:ARG:N	46:BN:135:PRO:HD3	2.26	0.51
47:BO:114:ILE:H	47:BO:114:ILE:CD1	2.23	0.51
51:BS:51:ALA:CB	51:BS:73:LEU:HB2	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BU:115:ALA:O	53:BU:117:GLN:N	2.44	0.51
58:BZ:40:ASP:HB3	58:BZ:43:GLU:HG3	1.91	0.51
1:CA:266:G:O2'	1:CA:267:C:OP2	2.28	0.51
1:CA:675:A:H1'	11:CK:116:HIS:CE1	2.46	0.51
1:CA:978:A:C8	1:CA:1319:A:C2	2.98	0.51
1:CA:1111:A:H2'	1:CA:1112:C:H6	1.73	0.51
1:CA:1158:C:O2'	1:CA:1159:U:H4'	2.11	0.51
1:CA:1392:G:H21	1:CA:1502:A:H8	1.57	0.51
2:CB:80:ILE:H	2:CB:80:ILE:CD1	2.24	0.51
4:CD:64:LEU:HD21	4:CD:93:PHE:HE2	1.76	0.51
4:CD:106:TYR:HE2	4:CD:113:SER:HA	1.75	0.51
10:CJ:50:ILE:HD11	14:CN:41:ARG:HD2	1.92	0.51
22:CV:4:C:H2'	22:CV:5:G:H5"	1.93	0.51
25:CZ:8:THR:HG22	25:CZ:9:LYS:H	1.75	0.51
26:D0:27:GLU:HA	26:D0:67:VAL:O	2.11	0.51
27:D1:84:GLY:C	27:D1:86:SER:N	2.63	0.51
31:D5:16:ARG:HD2	31:D5:20:ARG:HH22	1.76	0.51
33:D7:21:ARG:HB3	33:D7:27:GLY:O	2.11	0.51
35:D9:7:VAL:CG2	35:D9:34:GLN:HG2	2.36	0.51
36:DA:156:U:H2'	36:DA:157:U:O4'	2.10	0.51
36:DA:803:U:O2'	36:DA:804:A:H5'	2.11	0.51
36:DA:925:C:C3'	36:DA:926:A:H5"	2.40	0.51
36:DA:1036:G:O2'	36:DA:1037:G:H5'	2.11	0.51
36:DA:1469:A:O2'	36:DA:1470:G:H5'	2.11	0.51
36:DA:2352:A:C2'	36:DA:2353:G:H5'	2.40	0.51
36:DA:2801:A:O2'	36:DA:2895:U:H5'	2.11	0.51
38:DC:155:GLU:O	38:DC:160:ARG:HB2	2.11	0.51
40:DE:34:VAL:O	40:DE:34:VAL:HG22	2.11	0.51
46:DN:1:MET:C	46:DN:1:MET:SD	2.89	0.51
46:DN:46:VAL:O	46:DN:47:ALA:CB	2.58	0.51
48:DP:124:LYS:CD	48:DP:143:GLY:HA3	2.33	0.51
54:DV:39:LEU:HA	54:DV:47:VAL:HG11	1.93	0.51
55:DW:70:TYR:O	55:DW:107:LEU:HB3	2.10	0.51
56:DX:16:LYS:HG2	56:DX:16:LYS:O	2.11	0.51
57:DY:2:ARG:N	57:DY:4:LYS:HG2	2.25	0.51
57:DY:91:GLU:O	57:DY:92:ASN:HB2	2.11	0.51
1:AA:37:U:OP1	12:AL:124:LYS:HB3	2.10	0.51
1:AA:1125:U:C6	1:AA:1125:U:C3'	2.94	0.51
4:AD:2:GLY:O	4:AD:4:TYR:N	2.44	0.51
4:AD:70:ILE:HD12	4:AD:97:LEU:HD21	1.92	0.51
4:AD:106:TYR:HB2	4:AD:117:ALA:HB2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:19:LEU:CD2	9:AI:59:PHE:HB3	2.34	0.51
10:AJ:6:ILE:HG13	10:AJ:72:VAL:HB	1.92	0.51
10:AJ:20:ALA:C	10:AJ:22:LYS:H	2.13	0.51
17:AQ:45:HIS:CB	17:AQ:65:ILE:HD12	2.41	0.51
20:AT:100:ILE:HD12	20:AT:100:ILE:N	2.26	0.51
22:AV:76:A:H3'	36:BA:2585:U:C2	2.45	0.51
26:B0:50:ASN:HD22	26:B0:63:VAL:HG22	1.75	0.51
31:B5:46:CYS:SG	31:B5:48:GLU:O	2.69	0.51
32:B6:14:THR:O	32:B6:49:HIS:HA	2.10	0.51
36:BA:57:C:C2'	36:BA:58:G:H5'	2.40	0.51
36:BA:148:C:H5'	36:BA:149:A:OP2	2.10	0.51
36:BA:151:C:H42	36:BA:175:G:H1	1.59	0.51
36:BA:886:C:O2	36:BA:887:A:H1'	2.11	0.51
36:BA:907:U:OP1	49:BQ:24:GLY:N	2.35	0.51
36:BA:1057:A:H2'	36:BA:1058:G:H8	1.75	0.51
36:BA:1144:G:H2'	36:BA:1145:C:H6	1.74	0.51
36:BA:1262:A:P	55:BW:99:ARG:HH12	2.33	0.51
36:BA:1373:A:H2'	36:BA:1374:G:O4'	2.11	0.51
39:BD:148:GLU:HB2	39:BD:151:LYS:HD2	1.93	0.51
40:BE:32:PRO:O	40:BE:33:VAL:C	2.47	0.51
41:BF:176:LEU:HG	41:BF:177:ALA:H	1.75	0.51
42:BG:103:LEU:HA	42:BG:106:LEU:HB3	1.93	0.51
42:BG:148:MET:O	42:BG:149:VAL:HG13	2.10	0.51
48:BP:55:ARG:O	48:BP:57:THR:N	2.39	0.51
48:BP:89:ALA:HB1	48:BP:121:LYS:HD2	1.92	0.51
50:BR:24:GLN:HB2	50:BR:44:LEU:CD2	2.41	0.51
51:BS:84:GLN:HA	51:BS:106:ARG:HA	1.91	0.51
51:BS:89:ARG:CG	51:BS:92:TYR:HB3	2.40	0.51
57:BY:33:LYS:C	57:BY:35:TYR:H	2.14	0.51
1:CA:954:G:H4'	13:CM:120:LYS:HD2	1.93	0.51
1:CA:1190:G:H3'	3:CC:3:ASN:HD22	1.69	0.51
1:CA:1305:G:C3'	21:CU:6:ARG:HH22	2.24	0.51
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.45	0.51
1:CA:1424:C:H2'	1:CA:1425:U:O4'	2.11	0.51
2:CB:69:LEU:O	2:CB:162:ILE:HA	2.11	0.51
4:CD:31:CYS:C	4:CD:33:MET:H	2.14	0.51
5:CE:92:LYS:HB3	5:CE:119:LEU:HB2	1.93	0.51
9:CI:30:GLY:O	9:CI:31:GLN:HB2	2.11	0.51
11:CK:48:ILE:HD11	11:CK:67:ASP:CB	2.40	0.51
12:CL:120:TYR:O	12:CL:122:THR:N	2.44	0.51
13:CM:7:VAL:CG2	42:DG:115:ARG:HG3	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:11:ARG:HA	13:CM:45:VAL:CB	2.39	0.51
15:CO:81:LEU:O	15:CO:81:LEU:HD12	2.11	0.51
17:CQ:9:VAL:HG12	17:CQ:56:VAL:HG22	1.92	0.51
20:CT:40:ALA:HB2	20:CT:55:ILE:HG12	1.92	0.51
24:CY:60:U:H5"	24:CY:61:C:C5	2.46	0.51
25:CZ:134:PHE:HB2	25:CZ:202:LEU:HD13	1.93	0.51
25:CZ:139:ASP:HB2	25:CZ:174:SER:HB2	1.92	0.51
34:D8:13:ARG:CB	48:DP:63:PRO:HA	2.41	0.51
36:DA:41:C:H42	36:DA:437:G:H1	1.58	0.51
36:DA:383:U:C2'	36:DA:385:C:H5	2.23	0.51
36:DA:1164:G:H1	36:DA:1185:C:H42	1.58	0.51
36:DA:1473:G:H2'	36:DA:1474:C:O4'	2.10	0.51
36:DA:1748:G:H5'	36:DA:1748:G:H8	1.76	0.51
36:DA:2039:C:H2'	36:DA:2040:C:H6	1.76	0.51
39:DD:22:SER:HA	39:DD:25:THR:OG1	2.11	0.51
39:DD:62:TYR:HA	39:DD:87:ASN:ND2	2.25	0.51
39:DD:142:VAL:HG23	39:DD:193:VAL:HA	1.92	0.51
39:DD:158:ALA:HB3	39:DD:161:THR:CG2	2.41	0.51
39:DD:265:PRO:HG2	39:DD:266:SER:H	1.75	0.51
42:DG:111:LEU:N	42:DG:112:PRO:CD	2.74	0.51
42:DG:178:PHE:HB3	42:DG:180:PHE:CE1	2.45	0.51
48:DP:47:ASP:OD2	48:DP:50:ARG:HG2	2.10	0.51
49:DQ:6:ARG:O	49:DQ:7:MET:HG3	2.10	0.51
53:DU:9:VAL:O	53:DU:12:ARG:N	2.43	0.51
54:DV:45:THR:HG22	54:DV:45:THR:O	2.11	0.51
1:AA:189(A):C:H2'	1:AA:189(B):C:C6	2.46	0.51
1:AA:375:U:OP1	16:AP:69:THR:HG21	2.10	0.51
1:AA:956:U:O2'	1:AA:957:U:H5'	2.11	0.51
1:AA:1272:G:H5'	1:AA:1272:G:H8	1.75	0.51
1:AA:1330:U:H5'	1:AA:1331:G:OP2	2.11	0.51
4:AD:110:PHE:N	4:AD:110:PHE:HD1	2.09	0.51
8:AH:125:ARG:HG3	8:AH:125:ARG:NH1	2.24	0.51
10:AJ:48:THR:OG1	10:AJ:62:HIS:HD2	1.93	0.51
14:AN:12:ARG:HH11	14:AN:14:PRO:HG2	1.76	0.51
25:AZ:263:ARG:HH11	25:AZ:263:ARG:HG3	1.76	0.51
25:AZ:272:MET:HG3	25:AZ:273:HIS:HD2	1.76	0.51
25:AZ:340:PRO:HG2	25:AZ:342:PHE:CE1	2.46	0.51
36:BA:61:G:H1	36:BA:94:C:N4	2.07	0.51
36:BA:257:A:H2'	36:BA:258:G:H5'	1.93	0.51
36:BA:363(F):A:O2'	36:BA:364:C:H5	1.94	0.51
36:BA:428:A:H3'	36:BA:429:A:C8	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1141:U:H2'	46:BN:63:THR:HG21	1.93	0.51
36:BA:1464:C:O2'	36:BA:1528:A:H8	1.85	0.51
36:BA:1963:U:H2'	36:BA:1963:U:O2	2.10	0.51
36:BA:2206:G:H21	36:BA:2207:G:H5'	1.73	0.51
36:BA:2341:G:H2'	36:BA:2342:C:C6	2.46	0.51
36:BA:2801:A:O2'	36:BA:2895:U:H5'	2.11	0.51
36:BA:2808:U:O2'	36:BA:2809:A:H5'	2.11	0.51
36:BA:2867:G:OP2	52:BT:119:LYS:NZ	2.44	0.51
47:BO:63:VAL:HG12	47:BO:106:LEU:HD21	1.93	0.51
58:BZ:67:LEU:HD23	58:BZ:90:VAL:HG11	1.93	0.51
1:CA:575:G:H4'	1:CA:576:G:O5'	2.10	0.51
1:CA:723:U:O2	1:CA:723:U:C2'	2.59	0.51
1:CA:1044:A:H2'	1:CA:1045:C:O5'	2.11	0.51
2:CB:86:GLU:C	2:CB:88:ALA:H	2.14	0.51
3:CC:131:ARG:HD2	3:CC:166:GLU:OE2	2.11	0.51
12:CL:86:ARG:HG3	12:CL:86:ARG:HH11	1.76	0.51
12:CL:91:LYS:NZ	12:CL:91:LYS:HB3	2.25	0.51
16:CP:5:ARG:HH11	16:CP:5:ARG:HG3	1.75	0.51
19:CS:6:LYS:HD3	19:CS:6:LYS:N	2.26	0.51
21:CU:3:LYS:HD3	21:CU:14:TRP:NE1	2.26	0.51
21:CU:9:ARG:HH12	21:CU:22:ARG:HA	1.76	0.51
25:CZ:195:TRP:O	25:CZ:198:LYS:N	2.44	0.51
36:DA:564:C:H2'	36:DA:565:C:H6	1.76	0.51
36:DA:736:C:H2'	36:DA:737:C:H6	1.76	0.51
36:DA:1258:C:C2	36:DA:1259:G:C8	2.99	0.51
36:DA:1798:U:H5"	39:DD:260:ARG:H	1.76	0.51
36:DA:1854:A:N6	36:DA:1888:G:C8	2.64	0.51
36:DA:2243:U:O2	36:DA:2434:A:C2	2.64	0.51
36:DA:2762:G:H2'	36:DA:2763:G:C5'	2.41	0.51
38:DC:73:ARG:H	38:DC:111:ASP:CG	2.14	0.51
38:DC:83:ILE:HG22	38:DC:83:ILE:O	2.11	0.51
39:DD:241:PRO:O	39:DD:242:ARG:HB2	2.11	0.51
40:DE:111:ARG:HB2	40:DE:160:TYR:O	2.10	0.51
42:DG:109:VAL:O	42:DG:112:PRO:HG2	2.10	0.51
46:DN:134:ARG:O	46:DN:136:GLU:N	2.43	0.51
48:DP:17:LYS:C	48:DP:19:VAL:N	2.64	0.51
51:DS:30:ARG:HD3	51:DS:97:ARG:HG2	1.93	0.51
57:DY:61:ILE:HG22	57:DY:62:GLU:N	2.26	0.51
58:DZ:82:ARG:NH1	58:DZ:83:PRO:O	2.44	0.51
1:AA:328:C:O2	1:AA:328:C:H2'	2.11	0.50
1:AA:344:A:O2'	1:AA:345:C:OP1	2.23	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:782:A:C2'	1:AA:783:C:H5'	2.41	0.50
1:AA:784:C:H4'	36:BA:1837:C:OP1	2.11	0.50
1:AA:933:G:OP2	7:AG:3:ARG:HB3	2.11	0.50
1:AA:1123:A:O3'	10:AJ:36:GLY:HA3	2.11	0.50
1:AA:1283:G:O2'	1:AA:1284:C:OP2	2.23	0.50
2:AB:115:LEU:HB2	2:AB:145:LEU:CD1	2.41	0.50
14:AN:29:ARG:HH11	14:AN:29:ARG:HG3	1.75	0.50
17:AQ:16:GLN:O	17:AQ:17:LYS:HB2	2.11	0.50
25:AZ:118:GLU:OE2	61:AZ:502:KIR:C5	2.59	0.50
25:AZ:299:GLU:O	25:AZ:302:GLN:CG	2.59	0.50
26:B0:53:MET:CG	26:B0:57:PHE:HA	2.41	0.50
28:B2:21:LEU:O	28:B2:24:LEU:HG	2.11	0.50
36:BA:145:G:H2'	36:BA:146:G:H5"	1.93	0.50
36:BA:1124:C:H2'	36:BA:1125:G:O4'	2.10	0.50
36:BA:1308:A:N6	36:BA:1608:A:H61	2.09	0.50
36:BA:1465:G:H5'	36:BA:1528:A:H1'	1.93	0.50
36:BA:1539:G:C6	36:BA:1540:U:H1'	2.46	0.50
36:BA:1750:G:H2'	36:BA:1751:C:C6	2.45	0.50
36:BA:2553:G:H3'	36:BA:2554:U:H5"	1.91	0.50
36:BA:2754:U:H2'	36:BA:2756:U:OP1	2.12	0.50
38:BC:70:LYS:HG3	38:BC:71:GLN:N	2.26	0.50
39:BD:227:ASN:HB3	39:BD:228:PRO:HD2	1.94	0.50
39:BD:229:VAL:HG13	39:BD:230:ASP:H	1.74	0.50
41:BF:160:ASN:C	41:BF:160:ASN:ND2	2.63	0.50
49:BQ:73:PRO:HG3	49:BQ:93:TYR:HE2	1.76	0.50
53:BU:82:GLY:C	53:BU:84:LYS:N	2.65	0.50
54:BV:3:ALA:HB3	54:BV:14:VAL:HG23	1.93	0.50
54:BV:51:VAL:CG1	54:BV:52:VAL:H	2.15	0.50
57:BY:81:LYS:HD2	57:BY:96:ILE:CG1	2.41	0.50
58:BZ:135:GLU:HB3	58:BZ:136:PHE:CD1	2.47	0.50
1:CA:148:G:H2'	1:CA:149:A:C8	2.44	0.50
1:CA:1150:U:O2	10:CJ:39:PRO:HG2	2.11	0.50
1:CA:1208:C:O2'	1:CA:1209:C:H5'	2.11	0.50
1:CA:1408:A:O2'	1:CA:1409:C:H5'	2.11	0.50
4:CD:109:GLY:HA3	4:CD:165:MET:SD	2.50	0.50
5:CE:10:MET:SD	5:CE:13:ILE:HD11	2.50	0.50
6:CF:72:VAL:CG2	6:CF:90:VAL:HG21	2.40	0.50
9:CI:28:VAL:HG21	9:CI:33:PHE:HD1	1.76	0.50
15:CO:26:GLU:OE2	15:CO:77:ARG:NH1	2.21	0.50
19:CS:45:VAL:HG11	19:CS:64:GLU:HA	1.92	0.50
22:CV:1:G:H1'	26:D0:5:LYS:HZ1	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:176:LEU:HD22	25:CZ:179:LEU:HB3	1.93	0.50
27:D1:21:ARG:HD2	36:DA:2080:G:OP1	2.12	0.50
34:D8:32:LEU:HB3	34:D8:36:LYS:NZ	2.26	0.50
36:DA:723:G:C6	36:DA:724:U:C4	3.00	0.50
36:DA:986:C:C2'	36:DA:987:G:H5'	2.41	0.50
36:DA:1331:A:O2'	36:DA:1332:G:H5"	2.10	0.50
36:DA:1389:G:H2'	36:DA:1390:U:C6	2.46	0.50
36:DA:2185:C:H2'	36:DA:2186:G:H5"	1.92	0.50
36:DA:2361:A:H2'	36:DA:2362:G:C8	2.46	0.50
36:DA:2758:A:N6	43:DH:67:LEU:HD11	2.26	0.50
40:DE:30:PRO:O	40:DE:32:PRO:HD3	2.11	0.50
42:DG:5:VAL:HB	42:DG:8:LYS:HB2	1.92	0.50
42:DG:107:LEU:HD21	42:DG:178:PHE:CE1	2.44	0.50
49:DQ:141:GLN:HE21	49:DQ:141:GLN:CA	2.25	0.50
50:DR:83:ILE:HG22	50:DR:87:TYR:HE2	1.76	0.50
58:DZ:28:MET:CE	58:DZ:59:LEU:HD13	2.40	0.50
1:AA:77:G:H2'	1:AA:77:G:N3	2.26	0.50
1:AA:417:C:O2'	1:AA:418:C:H5'	2.11	0.50
1:AA:544:G:OP1	4:AD:59:ARG:NH2	2.45	0.50
1:AA:560:U:H4'	1:AA:561:U:O5'	2.12	0.50
1:AA:865:A:H5'	1:AA:1078:U:O4	2.12	0.50
1:AA:1065:U:C5	1:AA:1190:G:H1'	2.46	0.50
1:AA:1118:C:OP1	9:AI:104:ARG:NH1	2.43	0.50
1:AA:1418:A:H2	36:BA:1948:G:N3	2.09	0.50
4:AD:33:MET:O	4:AD:35:ARG:N	2.43	0.50
13:AM:2:ALA:O	13:AM:3:ARG:C	2.49	0.50
20:AT:64:ASP:OD1	20:AT:81:LYS:HD2	2.11	0.50
25:AZ:133:VAL:CG2	25:AZ:168:VAL:HG11	2.39	0.50
25:AZ:221:PHE:HE1	25:AZ:242:ILE:HD12	1.76	0.50
29:B3:18:ASP:O	29:B3:21:ALA:HB3	2.09	0.50
31:B5:16:ARG:NH1	31:B5:17:ASP:OD1	2.44	0.50
34:B8:48:PHE:C	34:B8:49:VAL:CG2	2.79	0.50
36:BA:295:G:N2	36:BA:344:G:H1'	2.26	0.50
36:BA:684:G:C4	36:BA:794:G:N2	2.79	0.50
36:BA:742:G:O2'	36:BA:743:G:H5'	2.11	0.50
36:BA:1131:G:OP1	46:BN:80:GLY:N	2.37	0.50
36:BA:1151:G:H5"	53:BU:81:HIS:CE1	2.46	0.50
36:BA:1488:G:C2	36:BA:1489:U:O2	2.64	0.50
36:BA:1596:A:O2'	36:BA:1597:A:H5'	2.11	0.50
36:BA:2157:G:C8	36:BA:2157:G:H3'	2.46	0.50
36:BA:2553:G:H2'	36:BA:2554:U:C4'	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2579:C:C2'	36:BA:2580:U:H5'	2.42	0.50
39:BD:176:ARG:HH11	39:BD:176:ARG:CG	2.25	0.50
39:BD:273:ARG:O	39:BD:274:ARG:HB3	2.11	0.50
40:BE:184:VAL:C	40:BE:186:GLY:H	2.15	0.50
41:BF:53:THR:HG22	41:BF:56:GLU:HG3	1.93	0.50
46:BN:17:ASP:OD1	46:BN:56:ASN:HB3	2.11	0.50
48:BP:23:PRO:O	48:BP:30:THR:HA	2.11	0.50
48:BP:24:GLY:N	48:BP:33:ARG:CZ	2.73	0.50
49:BQ:51:ARG:HH11	49:BQ:51:ARG:CG	2.24	0.50
50:BR:20:LEU:HD21	50:BR:40:LYS:HD3	1.93	0.50
50:BR:104:ARG:O	50:BR:106:GLY:N	2.44	0.50
52:BT:92:GLY:HA3	52:BT:120:ARG:HH21	1.74	0.50
53:BU:8:VAL:CG1	53:BU:12:ARG:NE	2.75	0.50
56:BX:65:ARG:HD3	56:BX:70:LEU:CD2	2.41	0.50
57:BY:23:ARG:HH11	57:BY:23:ARG:HG2	1.76	0.50
57:BY:40:GLU:HA	57:BY:40:GLU:OE1	2.10	0.50
58:BZ:35:ARG:O	58:BZ:37:VAL:HG12	2.10	0.50
58:BZ:76:LEU:HD22	58:BZ:82:ARG:O	2.11	0.50
1:CA:63:C:C2'	1:CA:64:G:C5'	2.88	0.50
1:CA:664:G:P	18:CR:64:ARG:HH21	2.35	0.50
1:CA:952:U:O2'	1:CA:953:G:H5'	2.12	0.50
4:CD:55:ALA:O	4:CD:59:ARG:HG2	2.11	0.50
5:CE:80:ILE:HG22	5:CE:91:LEU:HB2	1.92	0.50
7:CG:118:VAL:HG23	7:CG:119:ARG:N	2.26	0.50
12:CL:20:LYS:HD2	12:CL:20:LYS:N	2.26	0.50
17:CQ:91:ARG:HG3	17:CQ:91:ARG:HH11	1.76	0.50
19:CS:50:ALA:HA	19:CS:59:PRO:HA	1.93	0.50
22:CW:9:A:H2	22:CW:44:G:C6	2.29	0.50
31:D5:57:VAL:CG1	31:D5:58:LEU:H	2.24	0.50
32:D6:15:GLU:OE2	32:D6:18:ARG:NH2	2.44	0.50
36:DA:61:G:H8	36:DA:61:G:O5'	1.94	0.50
36:DA:660:G:H2'	36:DA:661:C:C6	2.46	0.50
36:DA:752:A:H4'	36:DA:753:C:O5'	2.12	0.50
36:DA:884:C:C2'	36:DA:885:C:H5'	2.40	0.50
36:DA:1085:A:H4'	36:DA:1105:U:H4'	1.93	0.50
36:DA:1349:A:N6	36:DA:1598:C:H42	2.09	0.50
36:DA:1651:G:H2'	36:DA:1652:A:O4'	2.10	0.50
36:DA:2187:G:C3'	36:DA:2188:C:H5'	2.41	0.50
36:DA:2472:G:H2'	36:DA:2475:C:H42	1.77	0.50
36:DA:2741:A:H2'	36:DA:2742:C:O4'	2.11	0.50
37:DB:53:A:N3	37:DB:53:A:H2'	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:38:THR:HG22	40:DE:40:GLU:N	2.24	0.50
40:DE:47:VAL:HG21	40:DE:86:PRO:HD3	1.92	0.50
40:DE:120:TRP:CE3	40:DE:155:LYS:HD3	2.46	0.50
41:DF:84:VAL:HG13	41:DF:85:GLY:H	1.74	0.50
41:DF:107:LYS:O	41:DF:110:LEU:N	2.41	0.50
41:DF:152:GLU:OE1	41:DF:191:ARG:HD2	2.11	0.50
43:DH:144:VAL:O	43:DH:148:ILE:HG12	2.12	0.50
48:DP:7:ARG:HB3	48:DP:8:PRO:HD3	1.93	0.50
48:DP:140:ALA:O	48:DP:141:ALA:HB3	2.11	0.50
49:DQ:61:GLY:O	49:DQ:62:GLY:O	2.29	0.50
1:AA:19:C:H2'	1:AA:20:U:H6	1.76	0.50
1:AA:652:U:C2	1:AA:752:G:N2	2.79	0.50
1:AA:674:G:H4'	18:AR:81:PHE:CD2	2.46	0.50
1:AA:1123:A:O2'	10:AJ:38:ILE:HG22	2.11	0.50
1:AA:1310:G:O2'	1:AA:1311:G:H5'	2.12	0.50
6:AF:37:VAL:HG12	6:AF:38:GLU:O	2.11	0.50
7:AG:7:ALA:O	7:AG:8:GLU:CB	2.60	0.50
7:AG:78:ARG:O	7:AG:78:ARG:CG	2.60	0.50
22:AW:11:C:H2'	22:AW:12:U:H6	1.77	0.50
25:AZ:115:GLN:HA	25:AZ:118:GLU:HB2	1.93	0.50
29:B3:52:HIS:H	29:B3:52:HIS:CD2	2.30	0.50
36:BA:90:U:O2	36:BA:90:U:C2'	2.59	0.50
36:BA:275:G:H2'	36:BA:275:G:N3	2.26	0.50
36:BA:319:C:H2'	36:BA:320:A:H8	1.76	0.50
36:BA:594:U:H2'	36:BA:595:C:H6	1.73	0.50
36:BA:661:C:H4'	48:BP:16:ARG:HH12	1.76	0.50
36:BA:821:A:H5"	36:BA:822:U:H6	1.76	0.50
36:BA:949:C:H2'	36:BA:950:G:H8	1.77	0.50
36:BA:1040:C:H2'	36:BA:1041:G:C8	2.46	0.50
36:BA:1264:G:H3'	36:BA:1265:A:H5"	1.93	0.50
36:BA:1450:G:O2'	36:BA:1450(A):C:H5'	2.12	0.50
36:BA:1466:G:H2'	36:BA:1547:C:N4	2.26	0.50
36:BA:1790:C:H5"	36:BA:1791:A:OP1	2.10	0.50
36:BA:2317:C:H2'	36:BA:2318:G:C5'	2.32	0.50
36:BA:2688:U:H5	36:BA:2720:U:OP2	1.93	0.50
39:BD:11:PRO:O	39:BD:12:SER:C	2.46	0.50
39:BD:241:PRO:O	39:BD:243:GLY:N	2.45	0.50
41:BF:4:VAL:HG13	41:BF:19:GLU:OE1	2.11	0.50
41:BF:195:ASP:OD2	41:BF:197:ASP:HB2	2.12	0.50
42:BG:56:ALA:O	42:BG:59:GLU:HG2	2.12	0.50
46:BN:9:VAL:HG12	46:BN:10:GLU:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:16:ARG:HB2	48:BP:16:ARG:CZ	2.40	0.50
57:BY:27:VAL:HG12	57:BY:29:GLU:OE1	2.12	0.50
57:BY:62:GLU:N	57:BY:62:GLU:OE1	2.44	0.50
58:BZ:9:TYR:CZ	58:BZ:35:ARG:HG3	2.47	0.50
58:BZ:104:PHE:CD2	58:BZ:139:VAL:HG21	2.46	0.50
1:CA:189(E):U:O2'	1:CA:189(F):U:H5'	2.12	0.50
1:CA:198:G:O2'	1:CA:199:G:H8	1.93	0.50
1:CA:381:C:H2'	1:CA:382:A:O4'	2.12	0.50
1:CA:411:A:H62	1:CA:413:G:N2	2.06	0.50
1:CA:1010:G:O2'	1:CA:1011:G:H5'	2.12	0.50
1:CA:1375:A:H2'	1:CA:1376:U:C6	2.46	0.50
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.46	0.50
4:CD:12:CYS:O	4:CD:33:MET:HE2	2.11	0.50
6:CF:94:GLN:OE1	18:CR:32:ARG:HD2	2.12	0.50
8:CH:64:LYS:HG2	8:CH:79:VAL:HG21	1.92	0.50
14:CN:7:ILE:CG1	14:CN:8:GLU:N	2.72	0.50
20:CT:78:ALA:O	20:CT:81:LYS:HB2	2.12	0.50
22:CV:73:A:H5'	22:CV:74:C:H5'	1.93	0.50
25:CZ:24:LYS:C	25:CZ:26:THR:H	2.14	0.50
25:CZ:378:VAL:HG23	25:CZ:380:LEU:HD21	1.94	0.50
31:D5:50:GLY:HA3	31:D5:56:LYS:CE	2.41	0.50
32:D6:43:CYS:O	32:D6:44:ARG:HB2	2.11	0.50
33:D7:43:THR:CG2	33:D7:44:PRO:N	2.75	0.50
34:D8:33:ASN:CG	34:D8:34:TRP:N	2.65	0.50
36:DA:414:C:H1'	36:DA:1864:U:O2'	2.12	0.50
36:DA:1018:C:H2'	36:DA:1019:U:C6	2.44	0.50
36:DA:2033:A:O2'	36:DA:2034:U:P	2.69	0.50
36:DA:2287:A:C2	36:DA:2346:A:N1	2.79	0.50
36:DA:2857:G:N2	36:DA:2859:G:H3'	2.26	0.50
37:DB:93:G:H2'	37:DB:94:C:C6	2.43	0.50
38:DC:74:VAL:HG11	38:DC:153:ILE:HD13	1.92	0.50
38:DC:151:GLU:HA	38:DC:154:ARG:CD	2.40	0.50
39:DD:210:GLY:C	39:DD:212:SER:H	2.12	0.50
40:DE:182:LEU:C	40:DE:183:LEU:HD12	2.31	0.50
43:DH:54:ARG:HH11	43:DH:54:ARG:CG	2.16	0.50
46:DN:47:ALA:HB2	46:DN:112:LEU:HD11	1.92	0.50
48:DP:96:THR:HG22	48:DP:126:VAL:HG21	1.93	0.50
49:DQ:60:ARG:HB3	49:DQ:60:ARG:NH1	2.26	0.50
54:DV:3:ALA:HB3	54:DV:14:VAL:CG2	2.41	0.50
57:DY:3:VAL:O	57:DY:3:VAL:HG12	2.10	0.50
58:DZ:122:ARG:HH11	58:DZ:122:ARG:H	1.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:321:A:C2	1:AA:333:G:C2	2.98	0.50
1:AA:402:G:O2'	1:AA:403:C:H5'	2.11	0.50
1:AA:407:G:HO2'	4:AD:116:GLN:HG3	1.77	0.50
1:AA:1132:C:N4	1:AA:1133:G:N1	2.60	0.50
1:AA:1366:C:O2'	10:AJ:60:ARG:NH2	2.40	0.50
2:AB:165:VAL:O	2:AB:165:VAL:CG2	2.59	0.50
2:AB:194:PRO:O	2:AB:195:ASP:C	2.50	0.50
4:AD:109:GLY:HA3	4:AD:165:MET:CE	2.41	0.50
4:AD:157:LEU:HD12	4:AD:157:LEU:N	2.27	0.50
6:AF:4:TYR:CE1	6:AF:92:LYS:HD2	2.45	0.50
18:AR:36:ASN:OD1	18:AR:39:VAL:HB	2.10	0.50
22:AV:50:U:H2'	22:AV:51:U:O4'	2.10	0.50
25:AZ:195:TRP:C	25:AZ:197:ASP:H	2.14	0.50
25:AZ:342:PHE:N	25:AZ:342:PHE:CD1	2.79	0.50
28:B2:19:VAL:O	28:B2:20:GLU:C	2.49	0.50
36:BA:930:U:H4'	36:BA:931:G:O5'	2.12	0.50
36:BA:1259:G:H2'	36:BA:1260:G:C8	2.47	0.50
36:BA:1481:U:H2'	36:BA:1482:G:H4'	1.93	0.50
36:BA:2428:G:H21	48:BP:60:MET:CE	2.24	0.50
36:BA:2554:U:H2'	36:BA:2555:U:C6	2.46	0.50
39:BD:26:LYS:O	39:BD:27:THR:CB	2.59	0.50
39:BD:72:LYS:NZ	39:BD:99:ASP:OD2	2.41	0.50
43:BH:18:GLU:CB	43:BH:25:LYS:HB2	2.33	0.50
49:BQ:35:VAL:HG12	49:BQ:130:LYS:O	2.10	0.50
49:BQ:69:PHE:CD1	49:BQ:69:PHE:C	2.85	0.50
50:BR:45:ARG:HD3	50:BR:97:VAL:HG21	1.94	0.50
50:BR:118:GLU:OXT	50:BR:118:GLU:HG3	2.12	0.50
51:BS:13:ARG:CG	51:BS:14:VAL:H	2.24	0.50
51:BS:91:PRO:O	51:BS:92:TYR:O	2.29	0.50
54:BV:49:THR:O	54:BV:50:PRO:C	2.48	0.50
55:BW:9:TYR:H	55:BW:102:HIS:HD2	1.60	0.50
57:BY:28:LYS:O	57:BY:29:GLU:C	2.48	0.50
1:CA:848:C:O2'	1:CA:849:C:H5'	2.12	0.50
1:CA:945:G:N1	1:CA:1337:G:C2	2.79	0.50
1:CA:1202:G:O2'	1:CA:1203:C:H5'	2.11	0.50
4:CD:56:VAL:HG12	4:CD:202:LEU:HD13	1.94	0.50
4:CD:61:LYS:HE3	4:CD:72:GLU:OE1	2.11	0.50
13:CM:11:ARG:HG2	13:CM:12:ASN:HD22	1.74	0.50
13:CM:74:VAL:O	13:CM:77:ASN:HB2	2.11	0.50
18:CR:47:THR:HG21	18:CR:49:LYS:HZ1	1.76	0.50
22:CV:76:A:H2	36:DA:2450:A:N3	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CW:35:A:H2'	22:CW:36:A:C8	2.40	0.50
24:CY:65:C:C4'	25:CZ:341:GLN:CD	2.80	0.50
26:D0:26:TYR:CD1	26:D0:26:TYR:N	2.80	0.50
31:D5:46:CYS:SG	31:D5:48:GLU:O	2.70	0.50
32:D6:17:LYS:HB2	32:D6:18:ARG:NH1	2.13	0.50
36:DA:80:G:O2'	36:DA:81:G:H5'	2.11	0.50
36:DA:121:G:C5'	36:DA:149:A:H5'	2.42	0.50
36:DA:363(E):U:H2'	36:DA:363(F):A:C1'	2.42	0.50
36:DA:970:C:H2'	36:DA:971:C:C6	2.46	0.50
36:DA:1935:G:H1'	36:DA:1964:G:N2	2.26	0.50
36:DA:2650:U:O2'	36:DA:2651:C:H5'	2.12	0.50
36:DA:2790:A:H2'	36:DA:2790:A:N3	2.26	0.50
39:DD:11:PRO:O	39:DD:12:SER:C	2.48	0.50
39:DD:95:LEU:HD11	39:DD:105:ILE:CG2	2.41	0.50
39:DD:127:VAL:HA	39:DD:193:VAL:HG13	1.91	0.50
40:DE:39:PRO:HA	40:DE:43:GLY:HA2	1.93	0.50
41:DF:6:VAL:HG12	41:DF:7:TYR:N	2.26	0.50
41:DF:156:LEU:HD22	41:DF:167:ALA:HB2	1.94	0.50
41:DF:160:ASN:HD21	41:DF:162:LEU:CD1	2.25	0.50
53:DU:88:ILE:O	53:DU:88:ILE:HG13	2.11	0.50
54:DV:17:GLY:O	54:DV:18:LEU:HB3	2.11	0.50
55:DW:62:HIS:O	55:DW:64:MET:HG3	2.12	0.50
56:DX:49:VAL:HB	56:DX:83:VAL:HG13	1.94	0.50
1:AA:189(J):G:O2'	1:AA:189(K):U:H5'	2.12	0.50
1:AA:628:G:O2'	1:AA:629:G:H5'	2.11	0.50
1:AA:950:U:H2'	1:AA:951:G:C8	2.46	0.50
9:AI:4:TYR:CE2	9:AI:88:TYR:O	2.64	0.50
24:AY:1:A:H61	24:AY:72:U:H3	1.59	0.50
24:AY:60:U:H5"	24:AY:61:C:C5	2.46	0.50
25:AZ:143:ASP:OD2	25:AZ:146:LEU:HD23	2.10	0.50
36:BA:259:G:N2	36:BA:621:A:C8	2.65	0.50
36:BA:654(A):G:H2'	36:BA:654(B):C:H5'	1.94	0.50
36:BA:1142(A):A:H8	36:BA:1142(A):A:H5'	1.75	0.50
36:BA:1591:G:H2'	36:BA:1592:C:H5'	1.94	0.50
36:BA:2159:G:O2'	36:BA:2160:G:H5"	2.10	0.50
36:BA:2415:G:H4'	48:BP:66:GLY:O	2.10	0.50
36:BA:2646:C:OP2	36:BA:2732:G:O2'	2.29	0.50
38:BC:100:ILE:CD1	38:BC:127:LEU:HB2	2.41	0.50
41:BF:4:VAL:HG11	41:BF:17:ARG:NE	2.26	0.50
46:BN:34:LEU:HD11	46:BN:116:LEU:O	2.11	0.50
48:BP:65:ARG:HB3	48:BP:68:GLN:HE22	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:29:LEU:N	50:BR:29:LEU:HD12	2.25	0.50
53:BU:27:LEU:C	53:BU:29:SER:H	2.15	0.50
1:CA:113:G:H2'	1:CA:114:U:C6	2.46	0.50
1:CA:274:A:O2'	1:CA:275:G:H8	1.94	0.50
1:CA:659:U:H2'	1:CA:660:G:H8	1.77	0.50
1:CA:948:C:O2'	1:CA:949:A:H5'	2.11	0.50
1:CA:1040:U:O2'	1:CA:1041:A:H5'	2.10	0.50
2:CB:97:TRP:CH2	2:CB:176:GLU:OE2	2.64	0.50
3:CC:10:PHE:CE2	3:CC:178:LEU:HD13	2.47	0.50
5:CE:33:VAL:HG11	5:CE:109:ILE:HA	1.93	0.50
11:CK:44:SER:O	11:CK:48:ILE:HG12	2.11	0.50
11:CK:126:ARG:C	11:CK:128:ALA:N	2.64	0.50
13:CM:106:ASN:O	13:CM:107:ALA:HB3	2.12	0.50
16:CP:19:ILE:HD11	16:CP:73:LEU:HD12	1.93	0.50
21:CU:13:ILE:O	21:CU:16:GLY:N	2.37	0.50
25:CZ:16:THR:HB	25:CZ:24:LYS:HB3	1.93	0.50
26:D0:36:ILE:HG12	36:DA:2355:C:O4'	2.11	0.50
26:D0:53:MET:HA	26:D0:58:THR:O	2.11	0.50
27:D1:21:ARG:HD2	27:D1:35:THR:HG21	1.94	0.50
27:D1:67:ILE:H	27:D1:68:PRO:HD2	1.74	0.50
31:D5:2:ALA:HB3	36:DA:747:U:C1'	2.41	0.50
32:D6:18:ARG:HG3	32:D6:19:ARG:N	2.27	0.50
34:D8:23:VAL:HG22	34:D8:48:PHE:CE1	2.46	0.50
36:DA:139:G:HO2'	36:DA:139(A):G:N2	2.09	0.50
36:DA:654(P):C:H2'	36:DA:654(Q):C:O4'	2.11	0.50
36:DA:723:G:H2'	36:DA:724:U:C6	2.46	0.50
36:DA:1020:A:N1	36:DA:1141:U:H1'	2.27	0.50
36:DA:1107:G:H5"	44:DJ:59:UNK:CB	2.41	0.50
36:DA:1603:A:H2'	36:DA:1604:C:O4'	2.11	0.50
36:DA:1835:G:H5'	36:DA:1836:C:OP2	2.12	0.50
36:DA:2188:C:H2'	36:DA:2189:U:C6	2.46	0.50
36:DA:2378:A:OP1	51:DS:107:GLU:HG2	2.11	0.50
38:DC:53:ARG:HB3	38:DC:53:ARG:HH11	1.76	0.50
38:DC:75:LEU:HD12	38:DC:93:TYR:O	2.12	0.50
38:DC:155:GLU:OE1	38:DC:160:ARG:HD3	2.12	0.50
39:DD:176:ARG:HH11	39:DD:176:ARG:CG	2.23	0.50
39:DD:183:ARG:HD2	39:DD:184:LYS:N	2.25	0.50
40:DE:86:PRO:O	40:DE:87:GLU:HB3	2.11	0.50
40:DE:179:GLU:HG3	40:DE:179:GLU:O	2.11	0.50
41:DF:65:TRP:HB3	41:DF:66:PRO:CD	2.41	0.50
46:DN:91:LEU:HD23	46:DN:98:VAL:HG21	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DO:87:ILE:HG22	47:DO:88:ASN:N	2.26	0.50
48:DP:84:ASN:C	48:DP:86:LYS:H	2.13	0.50
52:DT:50:ILE:CG2	52:DT:99:LEU:HD12	2.42	0.50
53:DU:65:ILE:HG12	53:DU:96:ALA:HB1	1.94	0.50
56:DX:31:HIS:ND1	56:DX:32:PRO:HD2	2.27	0.50
58:DZ:40:ASP:HB3	58:DZ:43:GLU:HG2	1.94	0.50
1:AA:161:A:H2'	1:AA:162:A:C8	2.47	0.50
1:AA:190:U:O5'	1:AA:190:U:H6	1.94	0.50
1:AA:319:G:O2'	1:AA:320:C:H5'	2.11	0.50
1:AA:1367:C:N3	1:AA:1368:G:C8	2.79	0.50
1:AA:1520:G:O2'	1:AA:1521:G:H5'	2.12	0.50
4:AD:68:TYR:CD2	4:AD:97:LEU:HD22	2.47	0.50
6:AF:24:GLU:C	6:AF:26:ILE:N	2.64	0.50
9:AI:4:TYR:CZ	9:AI:88:TYR:HB3	2.47	0.50
9:AI:55:ALA:HB3	9:AI:95:LYS:NZ	2.26	0.50
16:AP:26:ARG:HH11	16:AP:26:ARG:HG2	1.76	0.50
22:AW:22:G:H2'	22:AW:23:A:H8	1.77	0.50
22:AW:59:U:H2'	22:AW:60:U:C5'	2.42	0.50
27:B1:65:SER:O	27:B1:68:PRO:HD2	2.11	0.50
27:B1:74:VAL:O	27:B1:77:ALA:HB3	2.10	0.50
28:B2:46:GLN:HB3	28:B2:48:HIS:CE1	2.47	0.50
29:B3:22:ALA:CA	29:B3:46:ASN:HD21	2.25	0.50
29:B3:29:ARG:HH22	36:BA:1183:G:H4'	1.75	0.50
31:B5:44:THR:HG22	50:BR:99:LYS:O	2.11	0.50
36:BA:563:G:C4	36:BA:2018:G:C2	2.99	0.50
36:BA:580:C:O2'	36:BA:581:C:H5'	2.12	0.50
36:BA:610:G:H22	36:BA:619:G:H1'	1.75	0.50
36:BA:690:G:H2'	36:BA:691:C:C6	2.47	0.50
36:BA:1657:C:O2'	36:BA:1658:C:H5'	2.11	0.50
36:BA:1666:G:H2'	36:BA:1667:G:H5'	1.93	0.50
36:BA:1683:C:H2'	36:BA:1684:C:C6	2.47	0.50
36:BA:2241:A:O2'	36:BA:2242:G:H5'	2.12	0.50
36:BA:2854:G:H1	36:BA:2863:C:H42	1.60	0.50
39:BD:4:LYS:HZ3	39:BD:21:PHE:H	1.59	0.50
46:BN:75:TYR:CE2	46:BN:77:GLY:HA2	2.46	0.50
48:BP:97:PRO:HD3	48:BP:126:VAL:O	2.10	0.50
48:BP:114:ILE:O	48:BP:114:ILE:HG23	2.12	0.50
50:BR:29:LEU:O	50:BR:75:LEU:HD21	2.12	0.50
51:BS:90:GLY:O	51:BS:92:TYR:N	2.45	0.50
52:BT:23:ARG:HA	52:BT:52:ILE:HD11	1.93	0.50
54:BV:38:LEU:C	54:BV:39:LEU:HD13	2.32	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:7:VAL:HG21	56:BX:42:ALA:CB	2.41	0.50
57:BY:6:HIS:CD2	57:BY:6:HIS:H	2.29	0.50
1:CA:123:C:O2'	1:CA:124:G:H5'	2.11	0.50
1:CA:189(J):G:C2'	1:CA:189(K):U:H5'	2.42	0.50
1:CA:314:C:O2'	1:CA:315:A:H5'	2.11	0.50
1:CA:324:G:OP1	20:CT:70:SER:HB2	2.11	0.50
1:CA:858:G:C5'	1:CA:858:G:C8	2.91	0.50
1:CA:953:G:H5'	1:CA:965:A:H61	1.76	0.50
1:CA:1053:G:O6	1:CA:1199:U:H2'	2.11	0.50
1:CA:1370:G:C2	1:CA:1371:G:C8	2.99	0.50
2:CB:8:LYS:HD3	2:CB:217:ARG:NH2	2.27	0.50
2:CB:144:ARG:O	2:CB:144:ARG:HG3	2.10	0.50
2:CB:178:ARG:NH2	2:CB:198:ASP:OD1	2.45	0.50
3:CC:9:GLY:HA2	3:CC:12:LEU:HD12	1.94	0.50
7:CG:15:ASP:CB	7:CG:20:ASP:H	2.21	0.50
11:CK:21:ILE:HG12	11:CK:30:VAL:HG12	1.92	0.50
11:CK:34:ASP:O	11:CK:36:ASP:N	2.44	0.50
15:CO:49:ASP:OD1	15:CO:49:ASP:C	2.50	0.50
22:CW:59:U:H3'	22:CW:60:U:C6	2.45	0.50
25:CZ:115:GLN:HA	25:CZ:118:GLU:HB2	1.94	0.50
25:CZ:234:ARG:HB3	25:CZ:289:LEU:CD2	2.42	0.50
25:CZ:314:THR:O	25:CZ:373:GLU:HA	2.12	0.50
26:D0:49:LYS:HB2	26:D0:80:HIS:HB3	1.92	0.50
32:D6:15:GLU:CD	32:D6:18:ARG:NH2	2.64	0.50
36:DA:16:G:O2'	36:DA:17:G:H5'	2.12	0.50
36:DA:185:U:H2'	36:DA:186:G:C8	2.46	0.50
36:DA:445:C:O3'	53:DU:3:ARG:HD3	2.11	0.50
36:DA:465:G:H2'	36:DA:466:A:C8	2.47	0.50
36:DA:632:A:H2'	36:DA:633:A:C8	2.46	0.50
36:DA:990:A:OP2	36:DA:991:C:OP2	2.30	0.50
36:DA:1045:A:H1'	36:DA:1047:G:C2	2.47	0.50
36:DA:1299:G:N2	36:DA:1640:C:H5"	2.25	0.50
36:DA:1356:G:H1	36:DA:1375:C:H42	1.58	0.50
36:DA:1862:G:O2'	36:DA:1863:G:H5'	2.12	0.50
36:DA:2756:U:H1'	36:DA:2757:A:C5'	2.36	0.50
36:DA:2781:A:H5'	36:DA:2782:G:C5'	2.33	0.50
37:DB:37:C:H2'	37:DB:38:C:H5'	1.94	0.50
39:DD:210:GLY:O	39:DD:212:SER:N	2.35	0.50
42:DG:51:ARG:HB3	42:DG:53:LEU:HD21	1.92	0.50
49:DQ:47:ILE:CD1	49:DQ:70:PRO:HD3	2.42	0.50
51:DS:53:SER:C	51:DS:55:ALA:H	2.13	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DU:9:VAL:HG23	53:DU:10:ARG:H	1.77	0.50
54:DV:19:LYS:NZ	54:DV:22:VAL:HG13	2.26	0.50
58:DZ:85:HIS:HE1	58:DZ:87:ASP:OD1	1.92	0.50
58:DZ:102:LEU:HD21	58:DZ:124:ILE:HD13	1.94	0.50
1:AA:486:U:O2'	1:AA:487:A:H5'	2.12	0.50
1:AA:940:C:O2'	1:AA:941:G:H5'	2.11	0.50
4:AD:60:GLU:HA	4:AD:60:GLU:OE1	2.12	0.50
4:AD:108:LEU:CD1	4:AD:176:LEU:HD13	2.27	0.50
4:AD:109:GLY:O	4:AD:111:ALA:N	2.45	0.50
7:AG:47:CYS:O	7:AG:50:ILE:HB	2.10	0.50
14:AN:21:TYR:HE2	14:AN:23:ARG:NH2	2.10	0.50
20:AT:41:ILE:C	20:AT:43:LEU:H	2.15	0.50
20:AT:53:LEU:HD12	20:AT:53:LEU:N	2.26	0.50
22:AW:16:U:O4	22:AW:60:U:C4	2.65	0.50
25:AZ:9:LYS:HE3	25:AZ:74:LYS:N	2.27	0.50
28:B2:35:LEU:HG	28:B2:50:ILE:HG13	1.94	0.50
33:B7:33:ARG:NH1	36:BA:467:G:OP1	2.44	0.50
36:BA:466:A:H2'	36:BA:467:G:H5'	1.91	0.50
36:BA:483:A:H3'	36:BA:484:C:C6	2.47	0.50
36:BA:588:U:H1'	41:BF:90:PHE:HB3	1.93	0.50
36:BA:704:G:N3	36:BA:726:G:C2	2.80	0.50
36:BA:744:G:O2'	36:BA:745:G:H5'	2.11	0.50
36:BA:811:U:H6	48:BP:24:GLY:O	1.94	0.50
36:BA:1187:G:HO2'	36:BA:1188:U:H6	1.58	0.50
36:BA:1278:A:OP1	50:BR:36:THR:HA	2.12	0.50
36:BA:1766:U:O2'	36:BA:1767:C:H5'	2.12	0.50
36:BA:2692:C:O2	36:BA:2847:U:O2'	2.29	0.50
36:BA:2728:U:H2'	36:BA:2729:G:H8	1.76	0.50
36:BA:2790:A:H2'	36:BA:2790:A:N3	2.27	0.50
39:BD:58:HIS:HD2	39:BD:59:LYS:O	1.94	0.50
39:BD:259:THR:O	39:BD:260:ARG:O	2.30	0.50
40:BE:117:MET:HE3	40:BE:136:ARG:CA	2.42	0.50
42:BG:137:GLU:O	42:BG:153:ARG:O	2.30	0.50
46:BN:23:LEU:HB2	46:BN:60:ILE:CG2	2.42	0.50
51:BS:42:ASP:C	51:BS:44:LYS:H	2.15	0.50
52:BT:109:GLU:HA	52:BT:112:ARG:CZ	2.42	0.50
53:BU:27:LEU:C	53:BU:29:SER:N	2.65	0.50
53:BU:61:TRP:CH2	53:BU:94:ASN:HB2	2.47	0.50
53:BU:65:ILE:HG12	53:BU:96:ALA:HB1	1.93	0.50
57:BY:2:ARG:C	57:BY:4:LYS:H	2.15	0.50
57:BY:28:LYS:CB	57:BY:39:VAL:HG22	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:57:G:H2'	1:CA:58:C:C6	2.47	0.50
1:CA:62:U:C2'	1:CA:63:C:H5"	2.42	0.50
1:CA:266:G:H5"	1:CA:267:C:C5	2.47	0.50
1:CA:658:G:C4	1:CA:659:U:C5	2.99	0.50
1:CA:695:A:H2'	1:CA:696:A:C8	2.46	0.50
1:CA:918:A:H2'	1:CA:919:A:H8	1.76	0.50
1:CA:1003:G:H21	1:CA:1039:C:H42	1.58	0.50
2:CB:42:ILE:HD11	2:CB:202:PRO:HB2	1.94	0.50
2:CB:74:LYS:HZ2	2:CB:76:GLN:HE22	1.60	0.50
2:CB:189:ASP:OD1	2:CB:189:ASP:C	2.50	0.50
3:CC:68:VAL:HG12	3:CC:68:VAL:O	2.12	0.50
3:CC:82:GLU:N	3:CC:82:GLU:OE1	2.44	0.50
4:CD:68:TYR:CE2	4:CD:97:LEU:HD22	2.46	0.50
4:CD:78:LEU:HD23	4:CD:78:LEU:C	2.33	0.50
4:CD:128:VAL:HG22	4:CD:146:ILE:HD12	1.92	0.50
9:CI:7:THR:HG22	9:CI:8:GLY:N	2.27	0.50
10:CJ:57:LYS:HZ2	10:CJ:60:ARG:NH2	2.10	0.50
16:CP:74:LEU:O	16:CP:79:VAL:HG23	2.11	0.50
19:CS:11:VAL:HA	19:CS:38:SER:CB	2.41	0.50
20:CT:14:LYS:O	20:CT:18:GLN:HG3	2.12	0.50
25:CZ:65:THR:CA	25:CZ:83:PRO:HD3	2.39	0.50
25:CZ:281:ILE:CD1	25:CZ:284:ASP:OD1	2.60	0.50
25:CZ:315:LYS:HA	25:CZ:372:VAL:O	2.12	0.50
31:D5:25:LEU:HD12	55:DW:19:LEU:O	2.12	0.50
36:DA:638:G:N2	36:DA:651:G:H1'	2.27	0.50
36:DA:1210:A:H4'	36:DA:1211:U:O5'	2.12	0.50
36:DA:1431:U:H2'	36:DA:1432:C:C6	2.46	0.50
36:DA:1670:C:O2	40:DE:129:HIS:CE1	2.65	0.50
36:DA:1767:C:O5'	36:DA:1767:C:H6	1.95	0.50
36:DA:2134:A:O2'	36:DA:2135:A:H5'	2.11	0.50
37:DB:86:G:O2'	37:DB:87:G:H5'	2.11	0.50
38:DC:44:HIS:O	38:DC:212:VAL:HA	2.11	0.50
38:DC:47:LEU:N	38:DC:47:LEU:CD1	2.75	0.50
40:DE:186:GLY:O	40:DE:187:ALA:HB3	2.12	0.50
43:DH:124:GLU:CG	43:DH:132:ARG:HG3	2.42	0.50
46:DN:48:MET:HE3	46:DN:48:MET:H	1.75	0.50
51:DS:51:ALA:HB3	51:DS:73:LEU:HB2	1.91	0.50
53:DU:83:LEU:H	53:DU:83:LEU:HD12	1.75	0.50
1:AA:111:G:O6	1:AA:330:C:H5	1.93	0.50
1:AA:520:A:N1	1:AA:536:C:H1'	2.26	0.50
1:AA:1029:C:H4'	1:AA:1033:G:H22	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1227:A:C2	1:AA:1228:C:H1'	2.47	0.50
2:AB:30:ARG:NH1	2:AB:30:ARG:CB	2.75	0.50
6:AF:87:ARG:CG	6:AF:87:ARG:NH1	2.69	0.50
7:AG:145:ALA:O	7:AG:146:GLU:CB	2.59	0.50
8:AH:91:ARG:O	8:AH:91:ARG:HG2	2.10	0.50
28:B2:57:ILE:O	28:B2:61:LEU:HB2	2.12	0.50
30:B4:25:TYR:O	30:B4:26:SER:HB3	2.12	0.50
36:BA:57:C:H2'	36:BA:58:G:O4'	2.11	0.50
36:BA:62:C:H42	36:BA:93:G:H1	1.60	0.50
36:BA:319:C:H2'	36:BA:320:A:C8	2.47	0.50
36:BA:1243:G:H2'	36:BA:1244:G:O4'	2.12	0.50
36:BA:1335:U:H2'	36:BA:1336:A:H8	1.76	0.50
36:BA:1932:A:H61	36:BA:1968:G:H1'	1.77	0.50
38:BC:49:ILE:HB	38:BC:56:GLN:HB3	1.93	0.50
38:BC:190:ARG:O	38:BC:194:ARG:HG3	2.12	0.50
39:BD:28:GLU:N	39:BD:29:PRO:HD2	2.26	0.50
40:BE:1:MET:HG2	40:BE:83:ASP:HB2	1.94	0.50
40:BE:202:LYS:N	40:BE:202:LYS:HD2	2.27	0.50
48:BP:85:LEU:HA	48:BP:88:LEU:HB3	1.92	0.50
52:BT:19:LEU:HD13	52:BT:78:LEU:HD22	1.93	0.50
54:BV:35:LEU:O	54:BV:37:VAL:N	2.41	0.50
55:BW:68:ARG:O	55:BW:109:GLU:HA	2.12	0.50
56:BX:14:SER:HB3	56:BX:17:ALA:HB2	1.94	0.50
56:BX:84:ALA:HB1	56:BX:85:PRO:HD2	1.94	0.50
1:CA:52:G:O2'	1:CA:53:A:H5'	2.12	0.50
1:CA:143:A:H2	1:CA:220:G:H1	1.58	0.50
1:CA:585:G:H4'	12:CL:8:ASN:ND2	2.26	0.50
1:CA:1325:C:C5'	21:CU:15:ARG:HH21	2.24	0.50
2:CB:8:LYS:HB2	2:CB:9:GLU:OE1	2.12	0.50
3:CC:118:GLN:O	3:CC:122:GLU:HG2	2.11	0.50
4:CD:12:CYS:HA	4:CD:19:LEU:CD1	2.42	0.50
5:CE:20:GLN:HE21	5:CE:25:ARG:CZ	2.24	0.50
5:CE:78:HIS:CG	8:CH:104:ARG:HG3	2.47	0.50
10:CJ:38:ILE:HD12	10:CJ:38:ILE:O	2.11	0.50
20:CT:36:LEU:HG	20:CT:62:LEU:CD1	2.41	0.50
22:CV:26:A:H8	22:CV:26:A:O5'	1.95	0.50
25:CZ:336:SER:HB3	25:CZ:355:LEU:HG	1.93	0.50
32:D6:18:ARG:HH22	32:D6:47:THR:CG2	2.25	0.50
33:D7:47:ARG:O	33:D7:48:LYS:HB3	2.11	0.50
36:DA:2367:G:O2'	36:DA:2368:C:H5'	2.12	0.50
36:DA:2632:A:O2'	40:DE:61:ARG:NH2	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:20:TYR:HE2	38:DC:28:LEU:HD12	1.76	0.50
38:DC:50:ASP:OD2	38:DC:53:ARG:HG3	2.12	0.50
38:DC:100:ILE:O	38:DC:104:LEU:HB2	2.12	0.50
39:DD:48:ARG:NH1	39:DD:48:ARG:HG3	2.27	0.50
39:DD:259:THR:O	39:DD:260:ARG:C	2.50	0.50
40:DE:101:ARG:CZ	40:DE:171:GLU:HB2	2.42	0.50
41:DF:157:VAL:HG23	41:DF:194:MET:HG3	1.93	0.50
42:DG:114:ILE:C	42:DG:116:ASP:H	2.14	0.50
48:DP:112:LEU:HD13	48:DP:112:LEU:C	2.32	0.50
56:DX:12:VAL:O	56:DX:13:LEU:HB2	2.12	0.50
58:DZ:58:VAL:HG12	58:DZ:68:PRO:CA	2.41	0.50
1:AA:157:G:H2'	1:AA:158:G:H8	1.77	0.50
1:AA:355:C:H2'	1:AA:356:A:H8	1.77	0.50
1:AA:625:G:H2'	1:AA:626:U:H6	1.77	0.50
1:AA:737:A:H2'	1:AA:738:C:C6	2.47	0.50
1:AA:1531:A:H8	1:AA:1531:A:C5'	2.23	0.50
3:AC:167:TRP:O	3:AC:168:ALA:CB	2.60	0.50
4:AD:13:ARG:HA	4:AD:33:MET:SD	2.52	0.50
6:AF:10:LEU:HD11	6:AF:61:LEU:CD1	2.41	0.50
6:AF:43:LEU:HD21	18:AR:35:ARG:NH1	2.27	0.50
8:AH:36:LEU:HD13	8:AH:61:VAL:HG22	1.93	0.50
25:AZ:298:VAL:HA	25:AZ:302:GLN:OE1	2.12	0.50
26:B0:36:ILE:CD1	26:B0:36:ILE:O	2.60	0.50
27:B1:50:ARG:HG2	27:B1:59:THR:HG22	1.94	0.50
28:B2:3:LEU:HD22	36:BA:98:G:C5'	2.42	0.50
31:B5:36:CYS:C	31:B5:38:ALA:N	2.66	0.50
33:B7:34:ARG:HB2	33:B7:42:LEU:HD23	1.94	0.50
36:BA:8:A:H2'	36:BA:9:U:C6	2.47	0.50
36:BA:29:U:O4'	53:BU:11:ARG:NH2	2.45	0.50
36:BA:34:C:H5'	36:BA:35:G:OP2	2.12	0.50
36:BA:299:A:N1	36:BA:322:A:O2'	2.43	0.50
36:BA:523:C:O2'	36:BA:524:U:H5'	2.12	0.50
36:BA:779:U:O2'	36:BA:780:G:H5'	2.11	0.50
36:BA:1111:A:H2'	36:BA:1111:A:N3	2.26	0.50
36:BA:1500:G:H21	39:BD:100:GLY:HA3	1.77	0.50
36:BA:1851:U:H2'	36:BA:1852:C:O4'	2.11	0.50
36:BA:1907:G:H2'	36:BA:1908:C:C6	2.47	0.50
36:BA:2145:C:H5"	36:BA:2146:C:OP2	2.12	0.50
36:BA:2300:G:H2'	36:BA:2301:C:H6	1.77	0.50
36:BA:2386:C:H2'	36:BA:2387:U:C6	2.47	0.50
39:BD:183:ARG:HD2	39:BD:184:LYS:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:123:LEU:CD1	41:BF:192:LEU:HD22	2.41	0.50
41:BF:154:VAL:HG12	41:BF:155:LEU:N	2.27	0.50
43:BH:16:SER:HB2	43:BH:27:LYS:CG	2.42	0.50
48:BP:114:ILE:HD13	48:BP:125:VAL:HG21	1.93	0.50
48:BP:146:VAL:O	48:BP:147:LEU:O	2.29	0.50
52:BT:16:ARG:O	52:BT:17:THR:HB	2.12	0.50
52:BT:83:ILE:CG1	52:BT:84:GLN:N	2.74	0.50
52:BT:95:ARG:HH11	52:BT:95:ARG:CB	2.22	0.50
57:BY:13:VAL:HG11	57:BY:28:LYS:CD	2.42	0.50
1:CA:437:U:C2'	1:CA:438:G:H5'	2.41	0.50
1:CA:451:A:N6	1:CA:480:U:H2'	2.27	0.50
1:CA:899:C:H2'	1:CA:900:A:C8	2.47	0.50
1:CA:1095:U:P	1:CA:1108:G:H1	2.35	0.50
1:CA:1111:A:O2'	1:CA:1112:C:H5'	2.12	0.50
1:CA:1113:C:H2'	1:CA:1114:C:H6	1.77	0.50
2:CB:134:GLU:C	2:CB:136:VAL:N	2.65	0.50
2:CB:188:ALA:O	2:CB:202:PRO:HA	2.12	0.50
6:CF:38:GLU:O	6:CF:39:LYS:O	2.30	0.50
13:CM:4:ILE:HG22	13:CM:5:ALA:N	2.25	0.50
15:CO:17:ARG:NH1	15:CO:77:ARG:NH1	2.59	0.50
19:CS:63:THR:HG23	19:CS:65:ASN:HB3	1.92	0.50
22:CW:31:A:N1	22:CW:39:U:O4	2.45	0.50
24:CY:64:U:H1'	25:CZ:391:GLY:N	2.26	0.50
25:CZ:19:HIS:O	25:CZ:22:HIS:HB2	2.12	0.50
25:CZ:137:LYS:HA	60:CZ:501:GDP:N1	2.27	0.50
25:CZ:175:ALA:O	25:CZ:178:ALA:HB3	2.12	0.50
25:CZ:339:ARG:HH21	25:CZ:350:THR:HG21	1.77	0.50
31:D5:45:VAL:HG22	31:D5:51:TYR:HB2	1.94	0.50
31:D5:56:LYS:O	31:D5:57:VAL:C	2.50	0.50
34:D8:21:LYS:NZ	34:D8:48:PHE:HE2	2.10	0.50
36:DA:271(Q):G:H1'	36:DA:271(R):G:C8	2.46	0.50
36:DA:392:C:H5"	36:DA:409:C:H5"	1.94	0.50
36:DA:469:G:C2'	36:DA:470:A:H5"	2.42	0.50
36:DA:661:C:H5"	48:DP:18:ARG:HH11	1.75	0.50
36:DA:674:G:H2'	36:DA:804:A:H61	1.76	0.50
36:DA:729:G:N7	39:DD:208:LYS:HB2	2.27	0.50
36:DA:756:C:C2'	36:DA:757:U:H5'	2.42	0.50
36:DA:860:U:C5	36:DA:917:A:N7	2.80	0.50
36:DA:1001:A:H2'	36:DA:1002:G:O4'	2.12	0.50
36:DA:1241:A:H2'	36:DA:1242:A:O4'	2.12	0.50
36:DA:2282:G:OP1	36:DA:2283:C:H1'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2341:G:H2'	36:DA:2342:C:H6	1.77	0.50
36:DA:2439:A:N7	36:DA:2586:C:H4'	2.26	0.50
36:DA:2574:G:H2'	36:DA:2575:C:O4'	2.12	0.50
38:DC:37:PHE:H	38:DC:37:PHE:HD1	1.59	0.50
39:DD:70:TRP:CD1	39:DD:71:ASP:N	2.80	0.50
40:DE:107:THR:O	40:DE:190:GLY:CA	2.60	0.50
41:DF:39:TRP:CD1	41:DF:101:LEU:HB2	2.47	0.50
41:DF:97:TYR:HD1	41:DF:97:TYR:H	1.58	0.50
41:DF:160:ASN:ND2	41:DF:162:LEU:HB2	2.25	0.50
46:DN:56:ASN:HA	46:DN:125:GLY:CA	2.42	0.50
48:DP:16:ARG:HD3	48:DP:16:ARG:C	2.32	0.50
49:DQ:17:LEU:HD13	49:DQ:39:PRO:CB	2.40	0.50
58:DZ:5:LEU:O	58:DZ:59:LEU:HA	2.11	0.50
1:AA:61:G:H2'	1:AA:62:U:O4'	2.11	0.49
1:AA:324:G:OP1	20:AT:70:SER:HB2	2.12	0.49
1:AA:346:G:O2'	1:AA:347:G:P	2.70	0.49
1:AA:399:G:H2'	1:AA:400:C:C6	2.47	0.49
1:AA:424:G:O2'	1:AA:425:G:H5'	2.12	0.49
1:AA:538:G:OP2	12:AL:115:LYS:CB	2.60	0.49
1:AA:865:A:H2	1:AA:918:A:H4'	1.77	0.49
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.47	0.49
2:AB:94:ASN:HD22	2:AB:94:ASN:H	1.53	0.49
3:AC:68:VAL:CG1	3:AC:70:VAL:HG23	2.42	0.49
4:AD:58:LEU:HD22	4:AD:62:GLN:HG2	1.94	0.49
4:AD:70:ILE:HG22	4:AD:71:SER:O	2.12	0.49
4:AD:147:ALA:HA	4:AD:181:MET:O	2.12	0.49
11:AK:29:ILE:HD12	11:AK:30:VAL:N	2.26	0.49
13:AM:33:ALA:HB1	13:AM:59:TYR:HD2	1.77	0.49
16:AP:14:ASN:N	16:AP:15:PRO:HD3	2.27	0.49
25:AZ:16:THR:HB	25:AZ:24:LYS:HB3	1.94	0.49
28:B2:6:VAL:O	28:B2:9:GLN:N	2.45	0.49
28:B2:35:LEU:HA	28:B2:39:ALA:HB2	1.92	0.49
32:B6:27:LYS:HG2	36:BA:2285:C:OP2	2.12	0.49
36:BA:194:G:H2'	36:BA:195:A:O4'	2.12	0.49
36:BA:616:G:N2	36:BA:618:C:H1'	2.26	0.49
36:BA:797:C:OP1	41:BF:62:ARG:HB2	2.12	0.49
36:BA:802:A:C5	36:BA:803:U:C4	3.00	0.49
36:BA:994:C:OP1	53:BU:53:ARG:NH2	2.45	0.49
36:BA:1005:C:H2'	36:BA:1006:C:C6	2.47	0.49
36:BA:1092:C:H42	36:BA:1100:C:H42	1.58	0.49
36:BA:1256:G:H21	41:BF:82:ILE:HB	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1314:C:C2	36:BA:1339:G:N2	2.80	0.49
36:BA:1921:G:O2'	36:BA:1922:G:H5'	2.11	0.49
38:BC:87:GLU:CG	38:BC:94:VAL:HG11	2.37	0.49
40:BE:107:THR:O	40:BE:190:GLY:CA	2.59	0.49
41:BF:150:GLY:HA2	41:BF:172:TRP:CD2	2.47	0.49
42:BG:64:THR:OG1	42:BG:94:LEU:HD11	2.12	0.49
43:BH:18:GLU:HB2	43:BH:25:LYS:CB	2.35	0.49
43:BH:23:ARG:O	43:BH:24:VAL:HG23	2.11	0.49
43:BH:37:VAL:CG1	43:BH:38:SER:N	2.75	0.49
43:BH:141:VAL:O	43:BH:145:ALA:N	2.43	0.49
48:BP:57:THR:OG1	48:BP:58:THR:N	2.44	0.49
50:BR:111:LEU:N	50:BR:111:LEU:CD1	2.71	0.49
57:BY:28:LYS:HG2	57:BY:39:VAL:CG2	2.42	0.49
1:CA:202:U:H5'	1:CA:203:U:H5	1.77	0.49
1:CA:614:A:H2'	1:CA:615:C:H6	1.76	0.49
1:CA:738:C:OP1	6:CF:92:LYS:HE3	2.12	0.49
2:CB:61:LEU:HD11	2:CB:160:ASP:CB	2.42	0.49
2:CB:74:LYS:NZ	2:CB:74:LYS:HB3	2.27	0.49
7:CG:38:LEU:O	7:CG:41:ARG:HB2	2.11	0.49
8:CH:5:PRO:O	8:CH:8:ASP:HB3	2.12	0.49
12:CL:18:VAL:HG23	12:CL:19:ARG:H	1.77	0.49
16:CP:6:LEU:HD11	16:CP:19:ILE:HD13	1.94	0.49
16:CP:14:ASN:N	16:CP:15:PRO:HD3	2.27	0.49
16:CP:75:ARG:C	16:CP:77:ALA:H	2.16	0.49
17:CQ:76:LEU:CD1	17:CQ:77:VAL:H	2.18	0.49
19:CS:29:ARG:HG3	19:CS:47:HIS:ND1	2.27	0.49
20:CT:73:HIS:HB3	20:CT:74:LYS:HD3	1.94	0.49
22:CW:27:G:H2'	22:CW:28:G:H8	1.77	0.49
25:CZ:143:ASP:OD2	25:CZ:146:LEU:HD23	2.12	0.49
25:CZ:156:ASP:O	25:CZ:160:GLN:HG3	2.12	0.49
28:D2:58:ALA:CB	36:DA:76:C:H4'	2.41	0.49
34:D8:32:LEU:HB3	34:D8:36:LYS:HZ1	1.77	0.49
34:D8:50:LEU:C	34:D8:52:LYS:N	2.63	0.49
36:DA:64:A:H2'	36:DA:65:C:H6	1.77	0.49
36:DA:139(A):G:H22	56:DX:44:GLU:CD	2.14	0.49
36:DA:445:C:O2	36:DA:449:A:H2	1.94	0.49
36:DA:761:A:H8	36:DA:761:A:H3'	1.77	0.49
36:DA:761:A:C8	36:DA:761:A:C3'	2.95	0.49
36:DA:1764:G:C6	36:DA:1989:G:C2	3.00	0.49
36:DA:2193:G:H8	36:DA:2193:G:H5'	1.77	0.49
36:DA:2758:A:C5	43:DH:67:LEU:HD21	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2807:G:C3'	36:DA:2808:U:H5"	2.41	0.49
41:DF:97:TYR:N	41:DF:97:TYR:CD1	2.80	0.49
41:DF:125:LEU:HA	41:DF:194:MET:O	2.11	0.49
41:DF:187:VAL:HB	48:DP:7:ARG:NH1	2.17	0.49
47:DO:64:ARG:HD3	47:DO:79:PHE:CD2	2.47	0.49
47:DO:78:ARG:NH1	47:DO:78:ARG:HB3	2.27	0.49
47:DO:114:ILE:H	47:DO:114:ILE:CD1	2.21	0.49
49:DQ:6:ARG:O	49:DQ:7:MET:CG	2.60	0.49
50:DR:12:ARG:HD3	50:DR:16:HIS:CE1	2.47	0.49
55:DW:6:ILE:HG23	55:DW:104:THR:HG22	1.93	0.49
57:DY:6:HIS:CD2	57:DY:6:HIS:N	2.79	0.49
1:AA:29:G:O2'	1:AA:30:U:H5'	2.11	0.49
1:AA:448:A:H2'	1:AA:449:C:H6	1.77	0.49
1:AA:1095:U:P	1:AA:1108:G:H1	2.35	0.49
1:AA:1277:C:C2'	1:AA:1278:U:H5'	2.42	0.49
1:AA:1421:G:O2'	1:AA:1422:G:H5'	2.12	0.49
1:AA:1531:A:H5"	1:AA:1531:A:C8	2.44	0.49
5:AE:88:LYS:HB3	5:AE:123:LEU:HB2	1.94	0.49
6:AF:16:GLN:HG2	6:AF:17:SER:N	2.26	0.49
6:AF:53:ALA:O	6:AF:54:LYS:HB2	2.12	0.49
18:AR:30:ASP:C	18:AR:32:ARG:H	2.15	0.49
25:AZ:68:VAL:O	25:AZ:273:HIS:ND1	2.46	0.49
25:AZ:108:ALA:HB2	25:AZ:135:MET:HE3	1.94	0.49
25:AZ:132:VAL:HG21	25:AZ:206:ILE:HG12	1.93	0.49
30:B4:14:ILE:HG13	30:B4:31:ILE:HB	1.94	0.49
36:BA:171:G:O2'	36:BA:172:C:H5'	2.12	0.49
36:BA:759:G:O4'	36:BA:1981:A:C2	2.65	0.49
36:BA:1081:U:H4'	45:BK:123:UNK:HA	1.94	0.49
39:BD:263:ARG:HH11	39:BD:263:ARG:HB3	1.77	0.49
40:BE:24:THR:HG21	40:BE:188:VAL:HG12	1.93	0.49
51:BS:54:LEU:HD21	51:BS:58:LEU:O	2.12	0.49
52:BT:23:ARG:HA	52:BT:52:ILE:CD1	2.42	0.49
54:BV:81:TYR:CD1	54:BV:81:TYR:O	2.65	0.49
57:BY:10:GLY:C	57:BY:27:VAL:HG22	2.32	0.49
58:BZ:108:PRO:C	58:BZ:110:GLY:N	2.66	0.49
58:BZ:127:LYS:O	58:BZ:127:LYS:HG3	2.12	0.49
1:CA:160:A:H1'	1:CA:344:A:C5	2.47	0.49
1:CA:1101:A:H4'	1:CA:1102:A:O5'	2.11	0.49
6:CF:22:GLU:HA	6:CF:22:GLU:OE1	2.11	0.49
6:CF:35:ALA:O	6:CF:36:ARG:HB3	2.11	0.49
12:CL:117:ARG:O	12:CL:119:LYS:O	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:15:VAL:CG1	13:CM:48:LEU:HD11	2.35	0.49
22:CV:3:C:H5'	36:DA:2255:G:O2'	2.12	0.49
25:CZ:68:VAL:O	25:CZ:69:GLU:CG	2.60	0.49
27:D1:86:SER:CB	27:D1:89:GLU:HB2	2.41	0.49
31:D5:25:LEU:HD22	31:D5:26:THR:H	1.76	0.49
32:D6:19:ARG:HB3	36:DA:2400:G:H4'	1.94	0.49
32:D6:27:LYS:HG3	36:DA:2285:C:OP2	2.12	0.49
33:D7:34:ARG:HH11	33:D7:34:ARG:CG	2.16	0.49
36:DA:64:A:H2'	36:DA:65:C:C6	2.47	0.49
36:DA:195:A:H61	36:DA:198:C:H3'	1.76	0.49
36:DA:271(K):U:H3'	36:DA:271(L):U:C5'	2.41	0.49
36:DA:415:A:N1	36:DA:2409:G:C6	2.79	0.49
36:DA:901:A:H5'	36:DA:902:C:OP2	2.12	0.49
36:DA:957:A:N1	36:DA:2458:G:H4'	2.27	0.49
36:DA:1263:U:C4	36:DA:1264:G:C6	3.00	0.49
36:DA:1573:G:C2'	36:DA:1574:C:H5'	2.41	0.49
36:DA:1599:C:H2'	36:DA:1600:C:C6	2.41	0.49
36:DA:1789:A:H2'	36:DA:1790:C:C6	2.47	0.49
36:DA:2023:G:H5'	36:DA:2617:C:H4'	1.94	0.49
36:DA:2182:G:O2'	36:DA:2183:C:H5'	2.12	0.49
37:DB:111:G:O2'	37:DB:112:U:H5'	2.13	0.49
38:DC:6:ARG:HG2	38:DC:6:ARG:NH1	2.27	0.49
40:DE:52:LEU:HG	40:DE:75:VAL:CG2	2.43	0.49
41:DF:3:GLU:O	41:DF:19:GLU:HG3	2.12	0.49
47:DO:17:ARG:O	47:DO:18:LYS:HG3	2.12	0.49
48:DP:33:ARG:O	48:DP:34:GLY:C	2.50	0.49
49:DQ:43:THR:OG1	49:DQ:45:GLN:HG2	2.11	0.49
51:DS:20:ARG:HA	51:DS:20:ARG:NE	2.27	0.49
52:DT:27:THR:HG23	52:DT:28:VAL:H	1.77	0.49
52:DT:46:GLU:O	52:DT:65:LYS:HD2	2.12	0.49
58:DZ:166:SER:N	58:DZ:167:PRO:HA	2.22	0.49
1:AA:779:C:O2'	11:AK:120:ARG:HD3	2.12	0.49
3:AC:23:TYR:CD1	3:AC:24:ALA:N	2.80	0.49
8:AH:10:LEU:HD22	8:AH:83:ILE:CG1	2.41	0.49
8:AH:119:LEU:HD12	8:AH:123:GLU:CB	2.39	0.49
11:AK:84:VAL:HG21	11:AK:91:ARG:HD3	1.93	0.49
11:AK:126:ARG:CG	11:AK:126:ARG:O	2.58	0.49
15:AO:39:LEU:O	15:AO:39:LEU:HD23	2.11	0.49
22:AV:2:C:H2'	22:AV:3:C:H5'	1.94	0.49
22:AW:58:A:N6	22:AW:61:C:C2	2.80	0.49
23:AX:11:U:C2'	23:AX:12:A:OP1	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:67:HIS:H	25:AZ:67:HIS:CD2	2.29	0.49
25:AZ:267:VAL:HG23	25:AZ:288:VAL:CG1	2.38	0.49
28:B2:29:LYS:C	28:B2:33:MET:HG3	2.31	0.49
30:B4:18:CYS:SG	30:B4:19:GLY:N	2.85	0.49
34:B8:39:LYS:HG2	34:B8:43:GLN:OE1	2.12	0.49
36:BA:71:A:C2	56:BX:31:HIS:HE1	2.29	0.49
36:BA:122:G:H1	36:BA:129:C:N4	2.08	0.49
36:BA:534:U:H2'	36:BA:535:C:C6	2.48	0.49
36:BA:1076:C:O2	45:BK:89:UNK:HA	2.13	0.49
36:BA:1305:C:O2'	36:BA:1306:C:H5'	2.12	0.49
36:BA:1598:C:C5'	56:BX:36:LYS:HD3	2.43	0.49
36:BA:1608:A:H1'	36:BA:1610:A:OP2	2.12	0.49
36:BA:1632:A:C5	36:BA:1633:G:C6	3.00	0.49
36:BA:1885:A:H2'	36:BA:1886:C:O4'	2.12	0.49
36:BA:2330:G:H2'	36:BA:2331:G:O4'	2.12	0.49
36:BA:2854:G:H2'	36:BA:2855:C:C6	2.48	0.49
37:BB:13:A:H5'	37:BB:13:A:H8	1.76	0.49
37:BB:29:A:H2'	37:BB:30:C:C6	2.47	0.49
38:BC:36:LYS:O	38:BC:37:PHE:O	2.29	0.49
41:BF:185:ASP:HA	41:BF:188:ARG:CG	2.42	0.49
42:BG:146:TYR:O	42:BG:148:MET:N	2.44	0.49
46:BN:17:ASP:HB2	46:BN:55:VAL:CG1	2.41	0.49
48:BP:46:LYS:CB	48:BP:52:GLU:HG2	2.42	0.49
48:BP:75:ILE:H	48:BP:75:ILE:CD1	2.17	0.49
49:BQ:1:MET:HE1	49:BQ:44:ALA:O	2.13	0.49
49:BQ:60:ARG:CB	49:BQ:60:ARG:HH11	2.25	0.49
49:BQ:120:ILE:O	49:BQ:123:HIS:HB2	2.12	0.49
57:BY:79:CYS:SG	57:BY:80:GLY:N	2.86	0.49
58:BZ:40:ASP:HB3	58:BZ:43:GLU:HG2	1.93	0.49
58:BZ:116:VAL:O	58:BZ:117:LEU:HB3	2.11	0.49
1:CA:981:U:H2'	1:CA:982:U:C5	2.47	0.49
1:CA:1002:G:O2'	1:CA:1003:G:H5'	2.13	0.49
1:CA:1014:A:H5'	19:CS:14:HIS:CD2	2.47	0.49
1:CA:1442(A):G:H3'	1:CA:1442(B):A:C5'	2.40	0.49
1:CA:1452:C:H4'	1:CA:1456:G:N2	2.27	0.49
2:CB:75:LYS:HA	2:CB:78:GLN:NE2	2.27	0.49
3:CC:32:LEU:HD22	3:CC:59:ARG:CZ	2.41	0.49
4:CD:31:CYS:O	4:CD:32:ALA:HB3	2.13	0.49
7:CG:137:LYS:O	7:CG:140:ASP:HB3	2.13	0.49
8:CH:4:ASP:OD2	8:CH:89:PRO:HD3	2.12	0.49
9:CI:29:ASN:N	9:CI:63:ILE:O	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CV:5:G:O2'	22:CV:6:G:H5'	2.12	0.49
22:CV:21:A:H2'	22:CV:22:G:H5"	1.93	0.49
22:CV:59:U:C2'	22:CV:60:U:C6	2.95	0.49
25:CZ:179:LEU:HD12	25:CZ:182:MET:HB2	1.95	0.49
25:CZ:271:GLU:HG2	25:CZ:276:THR:CA	2.38	0.49
28:D2:55:ARG:O	28:D2:58:ALA:HB3	2.12	0.49
34:D8:12:LYS:HE3	36:DA:249:C:O2	2.11	0.49
34:D8:32:LEU:CB	34:D8:36:LYS:HZ1	2.25	0.49
36:DA:143:G:H1'	56:DX:37:THR:CG2	2.42	0.49
36:DA:302:C:H2'	36:DA:303:U:H6	1.70	0.49
36:DA:821:A:H5"	36:DA:822:U:C6	2.48	0.49
36:DA:916:G:C2'	36:DA:917:A:H5"	2.43	0.49
36:DA:1166:C:H2'	36:DA:1167:U:H6	1.78	0.49
36:DA:1306:C:H2'	36:DA:1307:A:H8	1.77	0.49
36:DA:1858:G:H2'	36:DA:1883:G:N2	2.27	0.49
36:DA:1947:C:C2'	36:DA:1948:G:H5"	2.42	0.49
36:DA:2297:C:O2'	36:DA:2298:A:H5'	2.12	0.49
38:DC:132:GLY:N	38:DC:133:PRO:CD	2.73	0.49
39:DD:222:ARG:O	39:DD:223:GLY:C	2.49	0.49
40:DE:101:ARG:HD3	40:DE:171:GLU:HA	1.93	0.49
41:DF:63:LYS:HG2	41:DF:65:TRP:O	2.12	0.49
41:DF:110:LEU:HD13	41:DF:110:LEU:C	2.32	0.49
42:DG:66:GLN:OE1	42:DG:94:LEU:HD23	2.12	0.49
49:DQ:67:ARG:NE	49:DQ:105:GLU:OE1	2.46	0.49
55:DW:14:PRO:HG2	55:DW:78:GLU:CG	2.43	0.49
57:DY:15:VAL:HB	57:DY:20:TYR:O	2.12	0.49
1:AA:66:G:N2	1:AA:172:A:C2	2.79	0.49
1:AA:148:G:H1	1:AA:174:C:H42	1.59	0.49
1:AA:355:C:H2'	1:AA:356:A:C8	2.48	0.49
1:AA:386:C:C2'	1:AA:387:U:H5'	2.42	0.49
2:AB:97:TRP:CH2	2:AB:176:GLU:CD	2.85	0.49
3:AC:52:LEU:HD11	3:AC:55:VAL:CG2	2.42	0.49
4:AD:110:PHE:CD1	4:AD:110:PHE:N	2.79	0.49
7:AG:22:LEU:O	7:AG:22:LEU:HD23	2.13	0.49
7:AG:71:PRO:HD3	7:AG:103:TRP:CZ3	2.48	0.49
11:AK:61:ALA:O	11:AK:64:ALA:HB3	2.13	0.49
30:B4:27:THR:HG23	42:BG:143:GLU:OE1	2.12	0.49
34:B8:62:LEU:HB3	36:BA:242:G:H5'	1.94	0.49
35:B9:30:PRO:HB2	36:BA:2527:C:H5'	1.94	0.49
36:BA:1150:C:O2'	36:BA:1151:G:H5'	2.13	0.49
36:BA:1252:G:OP2	53:BU:14:HIS:HE1	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1720:U:H3'	36:BA:1721:G:H5"	1.94	0.49
36:BA:2131:G:C1'	36:BA:2133:G:H21	2.01	0.49
36:BA:2485:G:C5'	49:BQ:46:GLN:HE21	2.15	0.49
36:BA:2562:U:H2'	36:BA:2563:U:H5'	1.94	0.49
36:BA:2801:A:H5"	36:BA:2802:G:N7	2.27	0.49
40:BE:70:ALA:O	40:BE:71:GLY:C	2.50	0.49
41:BF:84:VAL:CG1	41:BF:85:GLY:N	2.75	0.49
42:BG:72:ARG:HA	42:BG:87:PRO:CD	2.40	0.49
47:BO:4:PRO:O	47:BO:5:GLN:HB2	2.11	0.49
48:BP:35:HIS:O	48:BP:36:LYS:O	2.30	0.49
53:BU:11:ARG:HG2	53:BU:11:ARG:O	2.12	0.49
56:BX:89:ILE:CG2	56:BX:92:LEU:HG	2.43	0.49
58:BZ:41:LEU:HG	58:BZ:82:ARG:NH2	2.27	0.49
1:CA:756:C:H2'	1:CA:757:U:O4'	2.13	0.49
1:CA:802:A:H2'	1:CA:803:G:O4'	2.12	0.49
1:CA:1349:A:O2'	1:CA:1350:A:H5'	2.11	0.49
1:CA:1417:G:C6	1:CA:1482:G:C6	3.00	0.49
1:CA:1432:G:OP1	52:DT:108:ARG:HG2	2.13	0.49
2:CB:31:TYR:O	2:CB:42:ILE:HG13	2.12	0.49
3:CC:5:ILE:HG13	3:CC:10:PHE:HB2	1.95	0.49
3:CC:29:TYR:OH	14:CN:54:PRO:O	2.30	0.49
4:CD:114:ARG:HG3	4:CD:114:ARG:HH11	1.78	0.49
5:CE:51:VAL:O	5:CE:55:VAL:HG23	2.13	0.49
5:CE:64:ARG:CZ	5:CE:64:ARG:HB2	2.42	0.49
7:CG:65:ALA:HB1	7:CG:127:ALA:CB	2.41	0.49
7:CG:70:LYS:O	7:CG:138:LYS:HE3	2.12	0.49
9:CI:10:ARG:HE	9:CI:105:ASP:HB3	1.76	0.49
20:CT:12:ALA:O	20:CT:15:ARG:N	2.36	0.49
25:CZ:19:HIS:O	25:CZ:20:VAL:C	2.50	0.49
25:CZ:108:ALA:HB3	25:CZ:137:LYS:O	2.11	0.49
25:CZ:277:LEU:HD11	25:CZ:279:GLU:O	2.13	0.49
25:CZ:316:PHE:N	25:CZ:316:PHE:CD1	2.81	0.49
31:D5:30:LEU:HA	31:D5:42:PRO:HD3	1.93	0.49
35:D9:37:GLY:HA2	36:DA:1125:G:H5"	1.95	0.49
36:DA:481:G:C2'	36:DA:482:A:OP2	2.61	0.49
36:DA:756:C:O2'	36:DA:757:U:H5'	2.12	0.49
36:DA:1498:C:H2'	36:DA:1499:C:H6	1.77	0.49
36:DA:2256:G:N2	36:DA:2275:C:C4	2.80	0.49
36:DA:2262:U:O2'	36:DA:2263:C:H5'	2.12	0.49
36:DA:2832:U:C2	36:DA:2834:G:N2	2.80	0.49
38:DC:68:LEU:HD11	38:DC:161:ILE:HG23	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:119:VAL:HG22	38:DC:119:VAL:O	2.11	0.49
39:DD:268:ARG:NH1	39:DD:268:ARG:HB3	2.28	0.49
40:DE:43:GLY:O	40:DE:44:TYR:HB3	2.12	0.49
41:DF:132:VAL:HG13	41:DF:133:ASN:HD22	1.76	0.49
42:DG:73:ALA:N	42:DG:87:PRO:CG	2.73	0.49
43:DH:80:SER:O	43:DH:81:GLU:HB2	2.12	0.49
51:DS:36:TYR:N	51:DS:36:TYR:HD1	2.06	0.49
53:DU:59:ARG:NH1	53:DU:59:ARG:CG	2.72	0.49
55:DW:88:ARG:HG3	55:DW:94:ASP:OD2	2.12	0.49
56:DX:50:LYS:H	56:DX:87:GLN:NE2	2.01	0.49
58:DZ:126:VAL:HB	58:DZ:161:VAL:HG13	1.95	0.49
1:AA:36:C:H2'	1:AA:37:U:O4'	2.12	0.49
1:AA:392:G:H2'	1:AA:393:A:H8	1.77	0.49
1:AA:424:G:H2'	1:AA:425:G:H8	1.76	0.49
1:AA:1126:U:C5	1:AA:1127:G:C5	3.01	0.49
3:AC:58:GLU:HB2	3:AC:65:ALA:CB	2.37	0.49
3:AC:139:GLN:HG3	3:AC:143:GLU:OE2	2.12	0.49
4:AD:36:ARG:C	4:AD:38:TYR:N	2.66	0.49
8:AH:53:VAL:HG23	8:AH:58:TYR:HB2	1.93	0.49
12:AL:86:ARG:O	12:AL:87:GLY:O	2.29	0.49
12:AL:91:LYS:HB3	12:AL:91:LYS:HZ2	1.76	0.49
16:AP:9:PHE:HE2	16:AP:18:ARG:CZ	2.25	0.49
19:AS:17:GLU:O	19:AS:21:GLU:HG2	2.12	0.49
20:AT:94:ALA:O	20:AT:95:ALA:HB3	2.12	0.49
22:AW:25:C:H2'	22:AW:26:A:H8	1.77	0.49
25:AZ:139:ASP:HB2	25:AZ:174:SER:HB2	1.94	0.49
25:AZ:281:ILE:HD12	25:AZ:284:ASP:OD1	2.12	0.49
34:B8:23:VAL:HG13	34:B8:46:ARG:HB3	1.95	0.49
36:BA:745:G:H2'	36:BA:746:A:H5'	1.93	0.49
36:BA:1402:C:O2'	36:BA:1403:C:H5'	2.12	0.49
36:BA:1718:G:H2'	36:BA:1719:G:H8	1.78	0.49
36:BA:2153:G:H2'	36:BA:2154:G:C8	2.45	0.49
37:BB:78:A:H2'	37:BB:79:C:O4'	2.13	0.49
37:BB:111:G:C2'	37:BB:112:U:H5'	2.42	0.49
39:BD:37:LEU:HD12	39:BD:64:ILE:HG22	1.93	0.49
40:BE:78:LEU:HD12	40:BE:78:LEU:N	2.28	0.49
41:BF:17:ARG:HH11	41:BF:17:ARG:HG3	1.77	0.49
42:BG:5:VAL:HG13	42:BG:101:ILE:HG12	1.94	0.49
42:BG:173:LEU:HD22	42:BG:178:PHE:CE2	2.47	0.49
43:BH:143:GLN:HE21	43:BH:143:GLN:CA	2.24	0.49
46:BN:42:TRP:N	53:BU:64:ARG:NH1	2.59	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:46:VAL:HG13	46:BN:47:ALA:N	2.28	0.49
46:BN:90:MET:HE2	46:BN:94:HIS:HB2	1.94	0.49
49:BQ:134:ARG:C	49:BQ:135:ASP:OD1	2.51	0.49
50:BR:103:ARG:HB3	50:BR:108:GLY:HA2	1.94	0.49
53:BU:69:CYS:O	53:BU:74:LEU:O	2.31	0.49
53:BU:80:ILE:O	53:BU:84:LYS:HB2	2.13	0.49
55:BW:65:LEU:HD23	55:BW:68:ARG:NE	2.26	0.49
57:BY:28:LYS:CG	57:BY:39:VAL:HG22	2.40	0.49
57:BY:88:LYS:O	57:BY:90:LEU:HD23	2.12	0.49
58:BZ:112:ARG:O	58:BZ:113:ALA:O	2.31	0.49
1:CA:499:A:H4'	1:CA:500:G:H5'	1.93	0.49
1:CA:555:C:H2'	1:CA:556:C:C6	2.47	0.49
1:CA:975:A:C4'	1:CA:976:G:H5"	2.34	0.49
1:CA:1050:G:O2'	1:CA:1051:C:P	2.71	0.49
1:CA:1189:C:O3'	3:CC:5:ILE:HD12	2.11	0.49
4:CD:21:LEU:O	4:CD:115:ARG:HG3	2.13	0.49
4:CD:98:GLU:O	4:CD:100:ARG:N	2.45	0.49
9:CI:19:LEU:CD2	9:CI:59:PHE:HD2	2.26	0.49
12:CL:18:VAL:O	12:CL:19:ARG:HB3	2.12	0.49
13:CM:16:ASP:OD1	13:CM:16:ASP:N	2.44	0.49
14:CN:14:PRO:O	14:CN:15:LYS:O	2.30	0.49
14:CN:57:ARG:HH11	14:CN:57:ARG:CB	2.24	0.49
18:CR:56:THR:C	18:CR:58:LEU:N	2.64	0.49
22:CW:39:U:C2'	22:CW:40:C:H5'	2.41	0.49
24:CY:49:G:O2'	24:CY:50:G:H5'	2.12	0.49
24:CY:52:A:O3'	25:CZ:330:ARG:NH2	2.37	0.49
32:D6:17:LYS:O	32:D6:18:ARG:HB3	2.12	0.49
34:D8:27:THR:HG22	48:DP:62:LEU:CD2	2.42	0.49
36:DA:260:G:C6	36:DA:261:G:C5	3.00	0.49
36:DA:760:G:H2'	36:DA:761:A:H5'	1.94	0.49
36:DA:997:G:O2'	36:DA:998:C:H5'	2.12	0.49
36:DA:2338:G:O2'	36:DA:2339:G:H5'	2.13	0.49
37:DB:75:G:H21	58:DZ:85:HIS:CE1	2.30	0.49
37:DB:75:G:O2'	58:DZ:10:ARG:NH2	2.45	0.49
39:DD:79:VAL:HG21	39:DD:111:LEU:HD11	1.92	0.49
40:DE:103:ASP:CG	40:DE:201:THR:HA	2.32	0.49
43:DH:52:VAL:HG21	43:DH:69:ARG:CG	2.33	0.49
46:DN:10:GLU:HG3	46:DN:11:PRO:HD2	1.95	0.49
46:DN:76:SER:HG	46:DN:78:TYR:HD1	1.60	0.49
46:DN:94:HIS:N	46:DN:95:PRO:CD	2.74	0.49
47:DO:4:PRO:O	47:DO:5:GLN:CB	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:68:GLN:O	51:DS:72:ALA:N	2.45	0.49
1:AA:186:C:H2'	1:AA:187:C:C6	2.48	0.49
1:AA:585:G:H4'	12:AL:8:ASN:ND2	2.28	0.49
1:AA:650:G:O2'	1:AA:651:C:H5'	2.12	0.49
1:AA:1286:A:O2'	1:AA:1287:A:H5"	2.13	0.49
2:AB:31:TYR:O	2:AB:42:ILE:HG13	2.12	0.49
15:AO:17:ARG:HG3	15:AO:17:ARG:NH1	2.24	0.49
17:AQ:66:SER:OG	17:AQ:69:LYS:HB2	2.12	0.49
20:AT:71:THR:C	20:AT:72:LEU:HD23	2.33	0.49
25:AZ:63:ILE:N	25:AZ:83:PRO:HB3	2.27	0.49
25:AZ:341:GLN:NE2	25:AZ:341:GLN:N	2.61	0.49
29:B3:17:LYS:HA	29:B3:17:LYS:CE	2.41	0.49
34:B8:4:MET:O	34:B8:62:LEU:HD12	2.13	0.49
34:B8:5:LYS:HG2	36:BA:242:G:C8	2.48	0.49
35:B9:10:ILE:O	35:B9:11:CYS:HB3	2.11	0.49
36:BA:566:U:O4	54:BV:78:LYS:HE3	2.13	0.49
36:BA:686:G:N2	36:BA:788:A:H61	2.11	0.49
36:BA:887:A:H2'	36:BA:887:A:N3	2.26	0.49
36:BA:1165:U:H2'	36:BA:1166:C:C6	2.48	0.49
36:BA:1184:G:O2'	36:BA:1185:C:H5'	2.12	0.49
36:BA:1338:G:N2	36:BA:1339:G:C4	2.81	0.49
36:BA:1411:C:N4	36:BA:1412:A:H62	2.11	0.49
36:BA:1910:G:O2'	36:BA:1911:U:H5'	2.11	0.49
36:BA:2008:C:H2'	36:BA:2009:G:H8	1.77	0.49
36:BA:2043:C:C2	36:BA:2044:C:C5	3.00	0.49
36:BA:2773:C:H5"	40:BE:164:ARG:HG2	1.95	0.49
39:BD:147:LEU:HD13	39:BD:155:LEU:CD1	2.42	0.49
49:BQ:110:THR:HG23	49:BQ:113:GLN:OE1	2.13	0.49
54:BV:47:VAL:O	54:BV:48:GLY:C	2.50	0.49
54:BV:81:TYR:C	54:BV:82:ARG:HD2	2.32	0.49
57:BY:13:VAL:HG23	57:BY:73:ARG:H	1.77	0.49
1:CA:229:U:O2'	1:CA:230:G:H5'	2.12	0.49
1:CA:1186:G:H3'	1:CA:1187:G:H5"	1.93	0.49
2:CB:204:ASN:ND2	2:CB:207:ALA:N	2.61	0.49
4:CD:78:LEU:HD21	4:CD:96:LEU:HB2	1.93	0.49
5:CE:36:ASP:OD1	5:CE:36:ASP:C	2.50	0.49
10:CJ:4:ILE:CD1	10:CJ:74:ILE:HG13	2.36	0.49
13:CM:96:LEU:HB3	13:CM:97:PRO:HD2	1.93	0.49
18:CR:37:VAL:HA	18:CR:40:LEU:HB2	1.95	0.49
18:CR:47:THR:HG21	18:CR:49:LYS:HZ2	1.77	0.49
34:D8:33:ASN:HA	34:D8:36:LYS:CD	2.40	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:221:A:H4'	36:DA:222:A:O5'	2.13	0.49
36:DA:631:A:H4'	48:DP:65:ARG:HA	1.95	0.49
36:DA:963:U:H2'	36:DA:964:C:C6	2.48	0.49
36:DA:1260:G:O2'	36:DA:1261:C:H5'	2.12	0.49
36:DA:1652:A:O2'	36:DA:1653:G:H5'	2.12	0.49
36:DA:1853:A:H2'	36:DA:1854:A:O4'	2.12	0.49
36:DA:2257:U:O2'	36:DA:2258:C:H5'	2.12	0.49
36:DA:2553:G:H2'	36:DA:2554:U:H4'	1.94	0.49
39:DD:77:ALA:CB	39:DD:97:TYR:HA	2.43	0.49
39:DD:80:ALA:O	39:DD:81:ALA:HB2	2.13	0.49
48:DP:23:PRO:HB2	48:DP:33:ARG:NE	2.26	0.49
48:DP:45:LEU:HD13	48:DP:46:LYS:N	2.26	0.49
48:DP:108:LYS:O	48:DP:110:TYR:N	2.39	0.49
52:DT:106:SER:O	52:DT:107:ASP:HB3	2.11	0.49
57:DY:9:LYS:O	57:DY:28:LYS:CE	2.60	0.49
1:AA:100:C:H2'	1:AA:101:A:C8	2.48	0.49
1:AA:448:A:H2'	1:AA:449:C:C6	2.48	0.49
1:AA:495:A:N6	4:AD:119:GLN:HE22	2.06	0.49
1:AA:841:U:H3'	1:AA:848:C:O4'	2.12	0.49
1:AA:1038:C:H6	1:AA:1038:C:O5'	1.94	0.49
1:AA:1333:A:H2'	1:AA:1334:G:H5'	1.95	0.49
1:AA:1333:A:C2'	1:AA:1334:G:H5'	2.43	0.49
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.48	0.49
7:AG:115:ARG:HB2	7:AG:118:VAL:HG13	1.94	0.49
8:AH:17:THR:CG2	8:AH:63:LEU:HD12	2.43	0.49
10:AJ:35:SER:O	10:AJ:36:GLY:O	2.30	0.49
10:AJ:63:PHE:HZ	14:AN:45:ARG:HG3	1.78	0.49
13:AM:67:GLU:CD	13:AM:67:GLU:C	2.71	0.49
15:AO:36:ILE:HG23	15:AO:56:LEU:CD1	2.43	0.49
17:AQ:18:THR:CG2	17:AQ:69:LYS:HD2	2.41	0.49
19:AS:45:VAL:O	19:AS:47:HIS:N	2.45	0.49
20:AT:61:SER:C	20:AT:65:LYS:HG3	2.32	0.49
25:AZ:220:PRO:O	25:AZ:221:PHE:HB2	2.12	0.49
28:B2:36:ARG:NE	56:BX:9:LEU:O	2.46	0.49
36:BA:6:A:O2'	46:BN:130:HIS:HB2	2.13	0.49
36:BA:389:G:H22	48:BP:72:PRO:CG	2.26	0.49
36:BA:655:A:C4'	36:BA:656:G:H5'	2.38	0.49
36:BA:1196:C:H2'	36:BA:1197:G:H8	1.77	0.49
36:BA:1788:C:O2'	36:BA:1789:A:H5'	2.11	0.49
36:BA:2092:U:C5	36:BA:2226:C:OP2	2.65	0.49
36:BA:2174:C:O2'	36:BA:2175:C:H5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2264:C:C5	36:BA:2265:U:C5	3.01	0.49
36:BA:2290:G:H2'	36:BA:2291:U:O4'	2.12	0.49
36:BA:2739:U:O2'	36:BA:2740:A:H5'	2.13	0.49
40:BE:38:THR:HG22	40:BE:40:GLU:N	2.24	0.49
41:BF:63:LYS:HA	41:BF:76:GLY:O	2.12	0.49
43:BH:98:LEU:HD11	43:BH:100:GLY:O	2.13	0.49
46:BN:56:ASN:ND2	46:BN:125:GLY:O	2.45	0.49
48:BP:101:VAL:HG12	48:BP:106:LEU:HB3	1.95	0.49
56:BX:61:GLY:HA3	56:BX:73:ARG:O	2.11	0.49
1:CA:487:A:H2'	1:CA:488:C:O4'	2.12	0.49
1:CA:607:A:O2'	1:CA:608:A:H5'	2.13	0.49
1:CA:1001:A:H2'	1:CA:1001:A:N3	2.27	0.49
1:CA:1442(B):A:OP1	1:CA:1442(B):A:H4'	2.12	0.49
4:CD:102:ASP:O	4:CD:117:ALA:HB1	2.12	0.49
10:CJ:6:ILE:HG22	10:CJ:98:ILE:HD12	1.94	0.49
10:CJ:62:HIS:N	14:CN:58:LYS:HZ3	2.11	0.49
15:CO:35:ARG:CZ	15:CO:59:MET:HE2	2.43	0.49
16:CP:14:ASN:OD1	16:CP:16:HIS:CE1	2.66	0.49
19:CS:36:ARG:HB2	19:CS:72:GLY:HA3	1.94	0.49
20:CT:9:ASN:O	20:CT:10:LEU:HD13	2.13	0.49
22:CW:37:A:H3'	22:CW:38:A:C8	2.48	0.49
23:CX:12:A:H8	23:CX:12:A:O5'	1.95	0.49
25:CZ:68:VAL:O	25:CZ:273:HIS:ND1	2.46	0.49
25:CZ:131:ILE:HD11	25:CZ:163:PHE:CZ	2.47	0.49
25:CZ:349:VAL:HG21	25:CZ:374:LEU:HD13	1.94	0.49
25:CZ:354:GLN:O	25:CZ:370:PHE:HB2	2.13	0.49
25:CZ:359:VAL:C	25:CZ:361:MET:H	2.15	0.49
25:CZ:359:VAL:HG12	25:CZ:359:VAL:O	2.13	0.49
28:D2:7:ARG:HA	28:D2:10:LEU:CB	2.42	0.49
28:D2:51:ARG:NH1	28:D2:55:ARG:NH2	2.61	0.49
32:D6:30:THR:O	32:D6:32:ASN:N	2.46	0.49
34:D8:13:ARG:HD3	48:DP:61:ARG:O	2.13	0.49
34:D8:41:ILE:HG23	34:D8:42:ARG:H	1.77	0.49
36:DA:89:G:H3'	36:DA:90:U:H5'	1.93	0.49
36:DA:634:C:H2'	36:DA:635:C:H6	1.73	0.49
36:DA:1092:C:H42	36:DA:1100:C:N4	2.11	0.49
36:DA:1902:C:H4'	39:DD:244:ARG:HA	1.93	0.49
38:DC:64:LEU:HD13	38:DC:188:ASN:HD22	1.78	0.49
38:DC:100:ILE:HD11	38:DC:127:LEU:HD22	1.95	0.49
38:DC:106:GLY:O	38:DC:107:TRP:HB3	2.13	0.49
38:DC:192:PHE:O	38:DC:195:ALA:HB3	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:30:GLU:HB2	39:DD:35:LYS:HE3	1.94	0.49
39:DD:35:LYS:HD2	39:DD:36:PRO:CD	2.41	0.49
41:DF:83:PHE:HD1	41:DF:84:VAL:N	2.11	0.49
42:DG:37:VAL:HG12	42:DG:37:VAL:O	2.13	0.49
42:DG:106:LEU:O	42:DG:106:LEU:HG	2.12	0.49
42:DG:137:GLU:HB3	42:DG:140:ILE:HG23	1.95	0.49
42:DG:145:THR:HG22	42:DG:147:ASP:OD1	2.13	0.49
48:DP:101:VAL:C	48:DP:103:ALA:H	2.16	0.49
48:DP:115:LEU:HD23	48:DP:115:LEU:N	2.27	0.49
49:DQ:76:LYS:HB3	49:DQ:91:GLU:HG3	1.95	0.49
51:DS:89:ARG:HG2	51:DS:92:TYR:HA	1.95	0.49
54:DV:31:ALA:O	54:DV:60:GLU:HG3	2.12	0.49
58:DZ:129:SER:HB2	58:DZ:131:ARG:HD3	1.94	0.49
1:AA:443:C:H2'	1:AA:444:C:H6	1.78	0.49
1:AA:443:C:N4	1:AA:491:G:H1	2.11	0.49
1:AA:972:C:H4'	10:AJ:57:LYS:HG3	1.95	0.49
1:AA:1030(D):A:H2'	1:AA:1031:G:H5'	1.95	0.49
2:AB:239:VAL:O	2:AB:240:GLN:HB3	2.13	0.49
5:AE:11:ILE:HD11	5:AE:33:VAL:HG21	1.95	0.49
11:AK:27:ASN:HD21	11:AK:45:GLY:H	1.61	0.49
13:AM:15:VAL:O	13:AM:16:ASP:C	2.51	0.49
15:AO:39:LEU:CD2	15:AO:43:LEU:HG	2.42	0.49
15:AO:87:ILE:O	15:AO:89:GLY:N	2.46	0.49
20:AT:89:ARG:HD2	20:AT:104:LEU:CD1	2.38	0.49
34:B8:47:LYS:O	34:B8:48:PHE:HD1	1.95	0.49
36:BA:64:A:O2'	36:BA:65:C:H5'	2.13	0.49
36:BA:220:G:H2'	36:BA:427:U:O4	2.12	0.49
36:BA:848:G:O6	36:BA:928:G:H2'	2.13	0.49
36:BA:916:G:H2'	36:BA:917:A:H5"	1.94	0.49
36:BA:1191:G:OP1	48:BP:35:HIS:ND1	2.45	0.49
36:BA:1899:G:O2'	36:BA:1900:A:H5"	2.11	0.49
36:BA:2147:G:H2'	36:BA:2148:G:O5'	2.13	0.49
36:BA:2401:U:H2'	36:BA:2402:C:H5"	1.94	0.49
36:BA:2428:G:H21	48:BP:60:MET:HE2	1.76	0.49
36:BA:2512:C:H2'	36:BA:2513:G:O4'	2.12	0.49
37:BB:117:G:H5"	51:BS:55:ALA:O	2.13	0.49
40:BE:63:LEU:HD23	40:BE:63:LEU:C	2.33	0.49
41:BF:40:GLN:HE22	41:BF:183:VAL:H	1.58	0.49
41:BF:160:ASN:OD1	41:BF:163:VAL:HG23	2.13	0.49
46:BN:73:THR:CG2	46:BN:82:LEU:HD11	2.42	0.49
51:BS:85:VAL:HG22	51:BS:106:ARG:HB2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BW:51:LEU:HD23	55:BW:52:GLU:N	2.28	0.49
57:BY:44:ILE:HG22	57:BY:45:VAL:N	2.27	0.49
58:BZ:33:LEU:CD2	58:BZ:90:VAL:HG21	2.36	0.49
1:CA:349:A:O2'	1:CA:350:G:H5'	2.13	0.49
1:CA:583:A:H2'	1:CA:584:G:O4'	2.13	0.49
1:CA:1223:C:H3'	1:CA:1224:G:H5"	1.93	0.49
1:CA:1260:C:OP1	1:CA:1284:C:H4'	2.12	0.49
1:CA:1269:A:C2	1:CA:1313:U:O4'	2.66	0.49
4:CD:70:ILE:HD11	4:CD:100:ARG:HD2	1.93	0.49
7:CG:50:ILE:HD12	7:CG:125:MET:HG3	1.95	0.49
9:CI:16:ARG:O	9:CI:63:ILE:HA	2.13	0.49
13:CM:15:VAL:HA	13:CM:18:ALA:HB3	1.95	0.49
16:CP:21:VAL:O	16:CP:33:ILE:HB	2.13	0.49
17:CQ:59:ILE:HG22	17:CQ:71:PHE:HD2	1.75	0.49
22:CW:75:C:C5'	27:D1:30:VAL:HG11	2.43	0.49
25:CZ:196:VAL:CG1	25:CZ:196:VAL:O	2.61	0.49
27:D1:64:ALA:O	27:D1:66:HIS:N	2.45	0.49
34:D8:41:ILE:HD12	36:DA:2419:U:OP1	2.12	0.49
36:DA:377:C:O2'	36:DA:378:C:H5'	2.13	0.49
36:DA:382:G:H2'	36:DA:383:U:H5'	1.95	0.49
36:DA:390:A:H4'	36:DA:391:G:H5'	1.95	0.49
36:DA:654(E):G:H22	36:DA:654(Q):C:C1'	2.26	0.49
36:DA:2137:C:H2'	36:DA:2138:C:C6	2.48	0.49
36:DA:2139:C:O2'	36:DA:2140:C:H5'	2.12	0.49
36:DA:2348:U:O2'	36:DA:2349:G:H5'	2.12	0.49
37:DB:22:U:H2'	37:DB:23:G:C8	2.47	0.49
37:DB:67:G:O2'	37:DB:68:C:O5'	2.31	0.49
41:DF:178:PRO:HG2	41:DF:179:GLU:OE1	2.12	0.49
42:DG:133:LEU:HD11	42:DG:157:ILE:HD12	1.95	0.49
2:AB:8:LYS:HD3	2:AB:217:ARG:NH2	2.27	0.49
2:AB:11:LEU:HB3	2:AB:213:LEU:HD11	1.94	0.49
2:AB:235:SER:O	2:AB:236:TYR:C	2.51	0.49
3:AC:70:VAL:CG1	3:AC:72:LYS:H	2.22	0.49
4:AD:174:LEU:HD23	4:AD:185:PHE:HA	1.95	0.49
11:AK:18:ARG:HH21	11:AK:37:GLY:N	2.10	0.49
22:AW:53:G:H1	22:AW:61:C:H42	1.60	0.49
25:AZ:5:PHE:CD1	25:AZ:5:PHE:O	2.65	0.49
25:AZ:9:LYS:HG3	25:AZ:10:PRO:HD2	1.95	0.49
25:AZ:19:HIS:O	25:AZ:20:VAL:C	2.50	0.49
25:AZ:34:VAL:HG21	25:AZ:199:ILE:HG21	1.94	0.49
28:B2:29:LYS:HG2	28:B2:32:LEU:HD22	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:9:U:O4	36:BA:2629:A:C8	2.66	0.49
36:BA:328:U:H4'	57:BY:68:HIS:NE2	2.28	0.49
36:BA:1169:G:H2'	36:BA:1170:G:O4'	2.13	0.49
36:BA:2189:U:H3'	36:BA:2190:G:H5"	1.95	0.49
36:BA:2360:A:O2'	36:BA:2361:A:C5'	2.61	0.49
36:BA:2758:A:C5	43:BH:67:LEU:HD21	2.48	0.49
42:BG:52:ILE:HA	42:BG:54:GLU:OE2	2.13	0.49
46:BN:43:THR:O	46:BN:46:VAL:HG12	2.13	0.49
46:BN:120:LEU:HD12	46:BN:122:VAL:HG23	1.94	0.49
47:BO:104:ARG:O	47:BO:106:LEU:N	2.46	0.49
48:BP:146:VAL:HG22	48:BP:147:LEU:N	2.18	0.49
50:BR:103:ARG:HG3	55:BW:40:ASN:OD1	2.11	0.49
56:BX:8:ILE:HG22	56:BX:8:ILE:O	2.11	0.49
58:BZ:72:ARG:CG	58:BZ:89:PHE:HB2	2.43	0.49
1:CA:784:C:H4'	36:DA:1837:C:OP1	2.13	0.49
1:CA:818:G:O2'	1:CA:819:A:H5'	2.12	0.49
1:CA:1342:C:O2'	9:CI:124:GLN:HG3	2.12	0.49
3:CC:83:ARG:O	3:CC:86:VAL:HG22	2.13	0.49
4:CD:125:HIS:O	4:CD:149:ALA:N	2.33	0.49
5:CE:121:LYS:HG3	5:CE:122:GLU:N	2.28	0.49
7:CG:118:VAL:CG2	7:CG:119:ARG:N	2.76	0.49
17:CQ:52:LYS:H	17:CQ:52:LYS:CD	2.26	0.49
20:CT:27:LYS:O	20:CT:27:LYS:HD3	2.13	0.49
20:CT:50:GLU:N	20:CT:99:LEU:HD12	2.27	0.49
22:CW:55:U:H3'	22:CW:56:C:C5'	2.42	0.49
24:CY:27:C:H2'	24:CY:28:C:H6	1.78	0.49
25:CZ:5:PHE:HD1	25:CZ:5:PHE:O	1.96	0.49
25:CZ:9:LYS:HG3	25:CZ:10:PRO:HD2	1.95	0.49
25:CZ:27:LEU:CG	25:CZ:31:LEU:HD11	2.37	0.49
25:CZ:120:ILE:HD13	25:CZ:158:LEU:HD23	1.94	0.49
25:CZ:224:PRO:HA	25:CZ:303:VAL:HG13	1.93	0.49
25:CZ:327:GLU:OE1	61:CZ:502:KIR:H433	2.12	0.49
26:D0:38:VAL:CG2	26:D0:59:LEU:HD12	2.43	0.49
27:D1:40:ARG:NH2	27:D1:42:GLN:HG2	2.27	0.49
27:D1:50:ARG:HG2	27:D1:59:THR:CG2	2.38	0.49
34:D8:61:LEU:N	34:D8:61:LEU:CD1	2.73	0.49
36:DA:64:A:H5'	56:DX:64:LYS:HD3	1.95	0.49
36:DA:827:U:H5'	36:DA:828:U:O5'	2.13	0.49
36:DA:962:G:O2'	36:DA:963:U:H5'	2.12	0.49
36:DA:996:A:C4'	53:DU:92:ARG:HG3	2.19	0.49
36:DA:1651:G:OP1	50:DR:40:LYS:NZ	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1782:C:H1'	36:DA:2609:U:C5'	2.42	0.49
36:DA:2297:C:H2'	36:DA:2298:A:H5'	1.94	0.49
36:DA:2444:G:OP2	41:DF:68:LYS:NZ	2.46	0.49
36:DA:2793:G:H22	36:DA:2804:C:H1'	1.78	0.49
37:DB:76:G:H5'	58:DZ:10:ARG:HH12	1.78	0.49
38:DC:100:ILE:HD11	38:DC:123:VAL:CG2	2.40	0.49
39:DD:43:ARG:CZ	39:DD:44:ASN:HD21	2.26	0.49
39:DD:69:ARG:NH1	39:DD:130:ALA:HB2	2.15	0.49
39:DD:131:LEU:HB2	39:DD:136:ILE:HD11	1.93	0.49
40:DE:70:ALA:O	40:DE:71:GLY:C	2.51	0.49
42:DG:87:PRO:O	42:DG:88:ILE:HD13	2.13	0.49
46:DN:9:VAL:HG12	46:DN:10:GLU:H	1.78	0.49
48:DP:7:ARG:HB3	48:DP:8:PRO:CD	2.43	0.49
56:DX:12:VAL:O	56:DX:13:LEU:CB	2.60	0.49
56:DX:20:GLY:O	56:DX:23:GLU:O	2.30	0.49
1:AA:308:C:H2'	1:AA:309:G:C8	2.48	0.49
1:AA:443:C:H42	1:AA:491:G:H1	1.59	0.49
1:AA:1127:G:O2'	1:AA:1128:C:H5'	2.13	0.49
1:AA:1429:C:H2'	1:AA:1430:C:C6	2.48	0.49
3:AC:10:PHE:CZ	3:AC:178:LEU:HD11	2.47	0.49
6:AF:9:VAL:HG22	6:AF:60:PHE:CE2	2.48	0.49
7:AG:41:ARG:HH11	7:AG:41:ARG:CG	2.26	0.49
11:AK:44:SER:H	11:AK:47:VAL:HG22	1.78	0.49
12:AL:90:VAL:HG12	12:AL:93:LEU:H	1.77	0.49
13:AM:11:ARG:HG2	13:AM:12:ASN:HD22	1.78	0.49
25:AZ:68:VAL:CA	25:AZ:68:VAL:O	2.56	0.49
25:AZ:150:VAL:CG1	25:AZ:151:GLU:N	2.76	0.49
25:AZ:349:VAL:HG21	25:AZ:374:LEU:HD13	1.95	0.49
26:B0:41:ARG:O	26:B0:42:GLY:C	2.50	0.49
26:B0:51:VAL:HG21	26:B0:79:VAL:O	2.13	0.49
28:B2:29:LYS:CG	28:B2:32:LEU:HD22	2.43	0.49
28:B2:38:GLN:O	28:B2:40:SER:N	2.45	0.49
30:B4:25:TYR:HB2	42:BG:101:ILE:HD13	1.93	0.49
36:BA:272(D):G:H1	36:BA:364:C:H42	1.61	0.49
36:BA:1216:G:H2'	36:BA:1217:C:H6	1.76	0.49
36:BA:1614:A:H62	55:BW:93:ALA:CA	2.25	0.49
36:BA:2402:C:H2'	36:BA:2403:C:H5'	1.94	0.49
39:BD:27:THR:CG2	39:BD:27:THR:O	2.60	0.49
39:BD:31:LYS:NZ	39:BD:33:LEU:HB2	2.28	0.49
40:BE:47:VAL:O	40:BE:80:GLU:HA	2.13	0.49
40:BE:92:THR:O	40:BE:95:ILE:HD11	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:116:VAL:O	40:BE:117:MET:CB	2.60	0.49
42:BG:83:ARG:O	42:BG:85:GLY:N	2.46	0.49
42:BG:95:ARG:O	42:BG:96:ARG:C	2.52	0.49
49:BQ:18:LYS:HA	49:BQ:18:LYS:HZ2	1.75	0.49
49:BQ:35:VAL:HG13	49:BQ:130:LYS:HB3	1.94	0.49
52:BT:29:ARG:CD	52:BT:30:VAL:H	2.26	0.49
53:BU:9:VAL:HG23	53:BU:10:ARG:H	1.76	0.49
57:BY:27:VAL:HG12	57:BY:28:LYS:N	2.28	0.49
58:BZ:126:VAL:O	58:BZ:126:VAL:HG23	2.12	0.49
1:CA:36:C:H5"	12:CL:123:LYS:HA	1.94	0.49
1:CA:36:C:O2'	1:CA:501:C:OP1	2.30	0.49
1:CA:90:U:P	1:CA:91:C:H5'	2.53	0.49
1:CA:192:U:H5'	20:CT:102:GLY:HA2	1.94	0.49
1:CA:591:U:H2'	1:CA:592:G:H8	1.78	0.49
1:CA:718:G:C8	11:CK:116:HIS:HB3	2.48	0.49
1:CA:757:U:H2'	1:CA:758:G:O4'	2.13	0.49
1:CA:782:A:H2'	1:CA:783:C:H5'	1.94	0.49
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.48	0.49
1:CA:1089:G:O2'	1:CA:1090:U:H5'	2.13	0.49
1:CA:1269:A:H2	1:CA:1312:G:N3	2.11	0.49
3:CC:60:ALA:H	3:CC:63:ASN:HD21	1.61	0.49
4:CD:129:ASN:N	4:CD:129:ASN:ND2	2.60	0.49
5:CE:49:PRO:O	5:CE:50:GLU:HG3	2.13	0.49
11:CK:120:ARG:HG3	11:CK:126:ARG:HD2	1.95	0.49
12:CL:88:GLY:O	12:CL:99:HIS:ND1	2.45	0.49
17:CQ:58:GLU:CB	17:CQ:74:LEU:HB3	2.43	0.49
22:CV:59:U:O2'	22:CV:60:U:C5'	2.61	0.49
22:CW:68:C:H2'	22:CW:69:G:C8	2.48	0.49
25:CZ:313:HIS:O	25:CZ:380:LEU:HD11	2.13	0.49
25:CZ:322:VAL:O	25:CZ:323:LEU:O	2.31	0.49
26:D0:25:ARG:CD	26:D0:29:GLN:HE22	2.26	0.49
27:D1:25:LYS:C	27:D1:27:GLU:H	2.15	0.49
28:D2:35:LEU:HB3	28:D2:50:ILE:CG1	2.42	0.49
30:D4:25:TYR:O	30:D4:26:SER:HB3	2.12	0.49
30:D4:27:THR:O	30:D4:28:LYS:HB3	2.12	0.49
36:DA:121:G:C4'	36:DA:149:A:H5'	2.43	0.49
36:DA:158:U:H3'	36:DA:158:U:O2	2.13	0.49
36:DA:253:C:H2'	36:DA:254:G:O4'	2.12	0.49
36:DA:438:G:H2'	36:DA:440:G:C8	2.47	0.49
36:DA:516:C:O2'	36:DA:517:C:H5'	2.13	0.49
36:DA:654(M):C:H2'	36:DA:654(N):G:N7	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:824:A:H1'	36:DA:2358:G:N7	2.28	0.49
36:DA:1141:U:H6	46:DN:63:THR:HB	1.77	0.49
36:DA:1310:G:C2'	36:DA:1311:G:H5'	2.42	0.49
36:DA:1711:C:O2'	36:DA:1712:C:H5'	2.13	0.49
36:DA:2366:A:H2'	36:DA:2367:G:H5'	1.94	0.49
37:DB:33:G:H2'	37:DB:34:U:O4'	2.12	0.49
38:DC:214:VAL:HG21	38:DC:224:ILE:HD13	1.94	0.49
40:DE:101:ARG:CB	40:DE:201:THR:HG21	2.43	0.49
42:DG:33:ARG:HH11	42:DG:162:THR:HG21	1.77	0.49
46:DN:2:LYS:NZ	54:DV:12:TYR:HA	2.27	0.49
47:DO:35:VAL:HG23	47:DO:64:ARG:H	1.76	0.49
48:DP:144:GLU:HG2	48:DP:144:GLU:O	2.11	0.49
53:DU:14:HIS:C	53:DU:16:LYS:H	2.15	0.49
54:DV:19:LYS:HG3	54:DV:20:LEU:N	2.28	0.49
57:DY:30:VAL:HG12	57:DY:31:LEU:N	2.27	0.49
57:DY:39:VAL:O	57:DY:40:GLU:HG2	2.12	0.49
58:DZ:166:SER:HB2	58:DZ:167:PRO:C	2.29	0.49
1:AA:1371:G:H4'	9:AI:69:GLY:H	1.76	0.48
2:AB:44:LEU:HA	2:AB:47:THR:CB	2.43	0.48
3:AC:9:GLY:HA2	3:AC:12:LEU:HD12	1.94	0.48
3:AC:120:VAL:O	3:AC:121:ALA:C	2.50	0.48
9:AI:53:VAL:O	9:AI:54:ASP:HB2	2.12	0.48
12:AL:83:VAL:HG11	12:AL:100:ILE:HD13	1.94	0.48
13:AM:36:LYS:HD2	13:AM:59:TYR:OH	2.13	0.48
18:AR:32:ARG:CA	18:AR:69:THR:HG21	2.40	0.48
24:AY:15:A:H3'	24:AY:16:H2U:H5"	1.95	0.48
27:B1:17:SER:OG	27:B1:18:ILE:N	2.45	0.48
33:B7:39:ARG:HD3	36:BA:458:G:O2'	2.13	0.48
36:BA:480:A:H2	36:BA:499:U:O2	1.95	0.48
36:BA:1201:C:H2'	36:BA:1202:C:C6	2.48	0.48
36:BA:1286:A:H2'	36:BA:1288:U:OP2	2.13	0.48
36:BA:2547:U:H2'	36:BA:2548:G:C8	2.48	0.48
37:BB:91:C:OP1	49:BQ:16:ARG:CG	2.60	0.48
38:BC:27:ARG:NH2	38:BC:182:PRO:HG2	2.28	0.48
39:BD:92:ILE:H	39:BD:92:ILE:CD1	2.26	0.48
40:BE:34:VAL:O	40:BE:34:VAL:HG22	2.13	0.48
40:BE:81:ILE:HG22	40:BE:81:ILE:O	2.12	0.48
40:BE:116:VAL:CG2	40:BE:120:TRP:HB2	2.37	0.48
40:BE:117:MET:HE1	40:BE:136:ARG:HG2	1.94	0.48
41:BF:6:VAL:HB	41:BF:124:LEU:HD13	1.95	0.48
42:BG:105:LYS:O	42:BG:109:VAL:HG23	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:42:TRP:H	53:BU:64:ARG:NH1	2.11	0.48
47:BO:66:LYS:H	47:BO:82:ASN:HD21	1.58	0.48
47:BO:104:ARG:C	47:BO:106:LEU:N	2.64	0.48
48:BP:25:SER:OG	48:BP:30:THR:HG21	2.13	0.48
50:BR:82:GLU:O	50:BR:86:ARG:HD3	2.13	0.48
52:BT:26:ASP:OD1	52:BT:26:ASP:C	2.51	0.48
52:BT:35:LYS:HE2	52:BT:41:ARG:HG3	1.94	0.48
53:BU:6:THR:O	53:BU:9:VAL:CG2	2.60	0.48
53:BU:65:ILE:HD11	53:BU:93:LYS:HA	1.95	0.48
54:BV:25:LEU:N	54:BV:92:THR:HG21	2.19	0.48
58:BZ:70:LEU:N	58:BZ:70:LEU:CD2	2.76	0.48
1:CA:80:G:C2'	1:CA:81:U:H5'	2.42	0.48
1:CA:255:G:H5'	17:CQ:16:GLN:O	2.13	0.48
1:CA:412:A:H5'	1:CA:413:G:OP1	2.12	0.48
1:CA:697:U:H2'	1:CA:698:G:H5'	1.93	0.48
1:CA:1188:A:C2'	1:CA:1189:C:H5'	2.43	0.48
3:CC:32:LEU:HD22	3:CC:59:ARG:HD3	1.94	0.48
6:CF:47:ARG:HB2	6:CF:47:ARG:CZ	2.43	0.48
10:CJ:89:ASP:O	10:CJ:90:LEU:CB	2.58	0.48
12:CL:60:LEU:HD23	12:CL:66:VAL:HG22	1.94	0.48
13:CM:6:GLY:O	13:CM:8:GLU:N	2.43	0.48
22:CV:59:U:O2'	22:CV:60:U:C6	2.65	0.48
24:CY:40:C:C3'	24:CY:41:C:H5"	2.43	0.48
25:CZ:171:ILE:HD12	25:CZ:171:ILE:N	2.28	0.48
25:CZ:325:LYS:C	25:CZ:327:GLU:N	2.56	0.48
26:D0:30:VAL:HA	26:D0:65:GLY:O	2.13	0.48
33:D7:25:PRO:O	33:D7:29:LYS:HG2	2.13	0.48
34:D8:4:MET:HB2	36:DA:592:G:O2'	2.12	0.48
34:D8:48:PHE:O	34:D8:49:VAL:HG22	2.13	0.48
36:DA:410:G:OP1	36:DA:411:G:H5'	2.13	0.48
36:DA:515:A:C8	36:DA:516:C:C6	3.01	0.48
36:DA:877:U:O2'	36:DA:878:A:H5"	2.13	0.48
36:DA:1480:G:C2	36:DA:1481:U:O2	2.66	0.48
36:DA:2189:U:H3'	36:DA:2190:G:C5'	2.43	0.48
36:DA:2736:G:O2'	36:DA:2737:G:H5'	2.12	0.48
36:DA:2754:U:H2'	36:DA:2756:U:OP1	2.13	0.48
39:DD:30:GLU:HB2	39:DD:35:LYS:NZ	2.28	0.48
41:DF:165:ARG:HH11	41:DF:165:ARG:HG3	1.77	0.48
41:DF:202:PHE:C	41:DF:202:PHE:CD1	2.86	0.48
42:DG:77:ILE:N	42:DG:77:ILE:CD1	2.75	0.48
42:DG:167:GLU:CD	42:DG:167:GLU:H	2.15	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:35:ARG:O	46:DN:48:MET:HE1	2.12	0.48
46:DN:57:ALA:C	46:DN:58:ASP:OD1	2.50	0.48
48:DP:77:ARG:HG3	48:DP:78:PRO:HD2	1.94	0.48
48:DP:102:ARG:CB	48:DP:102:ARG:NH1	2.76	0.48
48:DP:146:VAL:HG13	48:DP:147:LEU:N	2.27	0.48
1:AA:155:C:H2'	1:AA:156:G:H8	1.78	0.48
1:AA:256:U:H3	1:AA:270:A:H61	1.61	0.48
1:AA:263:A:OP2	20:AT:79:ARG:NH1	2.47	0.48
1:AA:884:U:H4'	1:AA:885:G:H5"	1.94	0.48
1:AA:1432:G:P	52:BT:107:ASP:HB2	2.52	0.48
4:AD:64:LEU:HD22	4:AD:198:VAL:HG11	1.95	0.48
4:AD:187:ARG:HG2	4:AD:188:LEU:N	2.28	0.48
12:AL:7:ILE:O	12:AL:11:VAL:HG23	2.12	0.48
12:AL:86:ARG:HB3	12:AL:101:VAL:HG23	1.96	0.48
13:AM:83:ASP:C	13:AM:85:GLY:N	2.66	0.48
13:AM:97:PRO:HB2	13:AM:101:GLN:NE2	2.28	0.48
17:AQ:63:ARG:O	17:AQ:64:PRO:C	2.49	0.48
22:AV:47:U:H3'	22:AV:48:C:C5'	2.43	0.48
25:AZ:137:LYS:HA	60:AZ:501:GDP:N1	2.28	0.48
25:AZ:143:ASP:CB	25:AZ:146:LEU:HB2	2.43	0.48
27:B1:80:LEU:O	27:B1:82:LEU:HG	2.13	0.48
28:B2:7:ARG:HA	28:B2:10:LEU:CG	2.43	0.48
34:B8:50:LEU:O	34:B8:51:ALA:CB	2.61	0.48
35:B9:27:CYS:SG	35:B9:28:GLU:N	2.85	0.48
36:BA:248:G:H5"	36:BA:386:G:N2	2.27	0.48
36:BA:327:G:O2'	36:BA:328:U:H5'	2.13	0.48
36:BA:654(U):A:H2'	36:BA:654(V):A:C8	2.49	0.48
36:BA:738:G:H3'	36:BA:739:G:C8	2.48	0.48
36:BA:1270:C:C5'	36:BA:1271:G:H5"	2.32	0.48
36:BA:1536:C:H2'	36:BA:1537:G:C4'	2.38	0.48
36:BA:1668:A:H1'	36:BA:1670:C:C5	2.48	0.48
36:BA:2153:G:O2'	36:BA:2154:G:H5'	2.13	0.48
36:BA:2392:A:H1'	48:BP:60:MET:HB3	1.95	0.48
36:BA:2631:G:H21	40:BE:61:ARG:HH12	1.58	0.48
36:BA:2749:A:H1'	43:BH:63:SER:OG	2.13	0.48
40:BE:26:ILE:HD11	40:BE:182:LEU:HD23	1.93	0.48
40:BE:107:THR:HA	40:BE:163:GLU:O	2.13	0.48
43:BH:157:TYR:O	43:BH:158:HIS:CD2	2.66	0.48
46:BN:91:LEU:CD2	46:BN:98:VAL:HG21	2.43	0.48
48:BP:84:ASN:C	48:BP:86:LYS:N	2.66	0.48
53:BU:26:GLY:O	53:BU:30:LYS:HE2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:194:C:H5”	20:CT:65:LYS:HG2	1.95	0.48
1:CA:346:G:N3	1:CA:346:G:C2’	2.75	0.48
1:CA:602:A:C2	1:CA:637:G:C2	3.01	0.48
1:CA:1004:A:H5”	1:CA:1025:U:C2	2.48	0.48
2:CB:133:LYS:O	2:CB:136:VAL:HB	2.13	0.48
7:CG:152:ALA:O	7:CG:155:ARG:HB2	2.13	0.48
13:CM:77:ASN:O	13:CM:81:LEU:CD2	2.61	0.48
16:CP:47:ASP:C	16:CP:49:LEU:H	2.17	0.48
19:CS:13:ASP:C	19:CS:15:LEU:H	2.15	0.48
20:CT:14:LYS:HA	20:CT:17:ARG:HH21	1.78	0.48
26:D0:25:ARG:HD2	26:D0:29:GLN:HE21	1.75	0.48
27:D1:86:SER:OG	27:D1:90:ILE:HD11	2.13	0.48
32:D6:8:LYS:O	32:D6:9:LEU:CB	2.55	0.48
33:D7:21:ARG:HH11	33:D7:21:ARG:HG2	1.78	0.48
34:D8:33:ASN:CG	34:D8:34:TRP:H	2.16	0.48
36:DA:203:C:C3’	36:DA:204:A:H5”	2.40	0.48
36:DA:321:G:O4’	41:DF:165:ARG:HD2	2.13	0.48
36:DA:359:A:C2	36:DA:360:G:H1’	2.47	0.48
36:DA:468:G:H2’	36:DA:469:G:O4’	2.13	0.48
36:DA:614(A):U:H4’	36:DA:614(B):G:C5’	2.39	0.48
36:DA:754:C:O4’	36:DA:1618:A:H2	1.95	0.48
36:DA:996:A:O2’	36:DA:997:G:H5’	2.13	0.48
36:DA:1363:C:H2’	36:DA:1364:G:C8	2.48	0.48
36:DA:2124:G:H5’	38:DC:174:PRO:HD3	1.93	0.48
36:DA:2511:U:O2’	40:DE:139:GLY:HA3	2.13	0.48
39:DD:85:ASP:HB2	39:DD:92:ILE:HG23	1.95	0.48
42:DG:63:ILE:HG23	42:DG:143:GLU:HB2	1.94	0.48
42:DG:87:PRO:O	42:DG:88:ILE:HG12	2.13	0.48
43:DH:88:LEU:HD22	43:DH:88:LEU:N	2.29	0.48
46:DN:2:LYS:NZ	54:DV:12:TYR:HB3	2.28	0.48
46:DN:23:LEU:HD23	46:DN:23:LEU:C	2.34	0.48
47:DO:63:VAL:O	47:DO:64:ARG:CG	2.62	0.48
48:DP:106:LEU:HD21	48:DP:112:LEU:HB2	1.94	0.48
51:DS:28:VAL:HB	51:DS:89:ARG:HB2	1.96	0.48
51:DS:34:HIS:CB	51:DS:36:TYR:HE1	2.25	0.48
52:DT:38:ASN:C	52:DT:38:ASN:ND2	2.56	0.48
53:DU:51:LYS:HA	53:DU:54:LYS:HE2	1.95	0.48
57:DY:8:LYS:HB3	57:DY:28:LYS:HZ2	1.77	0.48
57:DY:29:GLU:N	57:DY:29:GLU:OE1	2.46	0.48
1:AA:79:G:H21	1:AA:91:C:N4	2.11	0.48
1:AA:603:U:H2’	1:AA:604:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1367:C:OP2	9:AI:112:LYS:NZ	2.47	0.48
1:AA:1413:A:C2	1:AA:1488:G:C2	3.01	0.48
2:AB:113:HIS:C	2:AB:115:LEU:N	2.65	0.48
3:AC:188:LEU:HD22	3:AC:195:VAL:HG12	1.95	0.48
9:AI:22:GLY:HA3	9:AI:60:ASP:OD2	2.13	0.48
11:AK:127:LYS:O	11:AK:129:SER:N	2.46	0.48
12:AL:85:ILE:HG23	12:AL:98:TYR:HB3	1.93	0.48
16:AP:39:TYR:HA	16:AP:48:TRP:O	2.12	0.48
25:AZ:101:GLY:HA3	25:AZ:210:ILE:CD1	2.42	0.48
26:B0:27:GLU:OE1	26:B0:27:GLU:N	2.46	0.48
28:B2:25:VAL:HG13	28:B2:57:ILE:CD1	2.43	0.48
28:B2:47:ASN:N	28:B2:50:ILE:HB	2.29	0.48
36:BA:247:G:C8	36:BA:249:C:C6	3.00	0.48
36:BA:1095:A:H2'	36:BA:1096:A:H8	1.79	0.48
36:BA:1124:C:O2'	36:BA:1125:G:H5'	2.12	0.48
36:BA:1307:A:H2'	36:BA:1307:A:N3	2.29	0.48
36:BA:1480:G:H1	36:BA:1511:C:N4	2.01	0.48
36:BA:2836:U:C4	36:BA:2883:A:N6	2.81	0.48
37:BB:82:G:O2'	37:BB:83:G:H5'	2.13	0.48
38:BC:138:PRO:HA	38:BC:144:THR:OG1	2.13	0.48
39:BD:97:TYR:C	39:BD:99:ASP:N	2.64	0.48
40:BE:116:VAL:O	40:BE:117:MET:HB2	2.13	0.48
41:BF:178:PRO:HB3	41:BF:198:ALA:CB	2.43	0.48
42:BG:63:ILE:CG2	42:BG:143:GLU:HB2	2.42	0.48
50:BR:92:GLY:HA2	50:BR:94:TYR:CZ	2.47	0.48
51:BS:20:ARG:HA	51:BS:20:ARG:NE	2.28	0.48
52:BT:28:VAL:HG13	52:BT:46:GLU:CA	2.29	0.48
54:BV:5:VAL:CG2	54:BV:35:LEU:HG	2.43	0.48
57:BY:43:ASN:CB	57:BY:64:GLU:HA	2.44	0.48
1:CA:51:A:N7	1:CA:114:U:O2'	2.46	0.48
1:CA:62:U:C2'	1:CA:63:C:C5'	2.92	0.48
1:CA:119:A:H4'	1:CA:120:A:O5'	2.12	0.48
1:CA:155:C:H2'	1:CA:156:G:H8	1.77	0.48
1:CA:1129:C:HO2'	1:CA:1131:G:H8	1.53	0.48
1:CA:1132:C:N4	1:CA:1133:G:N1	2.61	0.48
1:CA:1195:C:H2'	1:CA:1197:G:O4'	2.12	0.48
1:CA:1250:A:H2'	1:CA:1251:A:C8	2.48	0.48
1:CA:1490:C:O2'	1:CA:1491:G:H5'	2.12	0.48
2:CB:74:LYS:O	2:CB:78:GLN:HG3	2.13	0.48
3:CC:119:ARG:O	3:CC:122:GLU:HB2	2.13	0.48
4:CD:101:LEU:HD23	4:CD:135:LEU:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:127:THR:HG23	4:CD:131:ARG:O	2.13	0.48
6:CF:62:TRP:CD1	18:CR:35:ARG:NH1	2.82	0.48
7:CG:7:ALA:O	7:CG:8:GLU:CB	2.61	0.48
8:CH:68:ARG:HG2	8:CH:68:ARG:NH1	2.29	0.48
10:CJ:61:GLU:OE1	14:CN:45:ARG:HD2	2.13	0.48
11:CK:95:ILE:O	11:CK:99:GLN:HG3	2.12	0.48
12:CL:38:THR:O	12:CL:39:VAL:CG2	2.56	0.48
22:CV:1:G:N3	22:CV:1:G:H2'	2.28	0.48
25:CZ:28:THR:HG23	25:CZ:79:HIS:ND1	2.28	0.48
25:CZ:268:THR:CG2	25:CZ:289:LEU:HG	2.43	0.48
28:D2:3:LEU:N	36:DA:98:G:OP1	2.46	0.48
28:D2:30:ARG:O	28:D2:34:GLU:HB2	2.14	0.48
36:DA:106:C:H2'	36:DA:107:C:H6	1.77	0.48
36:DA:1115:G:H2'	36:DA:1116:C:H5"	1.96	0.48
36:DA:1857:G:C6	36:DA:1858:G:C2	3.02	0.48
36:DA:2305:A:C3'	36:DA:2306:C:H5"	2.33	0.48
36:DA:2317:C:H2'	36:DA:2318:G:C5'	2.30	0.48
36:DA:2339:G:O2'	36:DA:2340:G:H5'	2.13	0.48
36:DA:2579:C:HO2'	40:DE:131:ALA:HB2	1.76	0.48
39:DD:65:ILE:H	39:DD:65:ILE:CD1	2.25	0.48
41:DF:78:ILE:O	41:DF:80:ALA:N	2.46	0.48
42:DG:53:LEU:N	42:DG:53:LEU:HD22	2.28	0.48
42:DG:61:ALA:O	42:DG:62:LEU:HD12	2.12	0.48
42:DG:96:ARG:O	42:DG:98:ARG:N	2.47	0.48
47:DO:98:VAL:CG1	47:DO:117:LEU:HB3	2.43	0.48
48:DP:16:ARG:HH11	48:DP:16:ARG:CB	2.25	0.48
48:DP:24:GLY:HA3	48:DP:33:ARG:HH12	1.78	0.48
48:DP:114:ILE:HG22	48:DP:129:ALA:O	2.13	0.48
51:DS:30:ARG:HH22	51:DS:62:LYS:HD3	1.78	0.48
51:DS:35:ILE:HD11	51:DS:99:LYS:HD3	1.95	0.48
52:DT:29:ARG:CG	52:DT:85:LYS:HA	2.43	0.48
52:DT:60:THR:HG22	52:DT:77:PRO:HA	1.94	0.48
52:DT:108:ARG:HA	52:DT:111:ARG:HG2	1.95	0.48
56:DX:65:ARG:HG2	56:DX:66:LEU:N	2.28	0.48
57:DY:75:ILE:HG13	57:DY:76:CYS:H	1.77	0.48
1:AA:321:A:O2'	1:AA:322:C:H5'	2.13	0.48
1:AA:865:A:C2	1:AA:918:A:H4'	2.48	0.48
2:AB:57:PHE:CE2	2:AB:185:ILE:HD11	2.48	0.48
2:AB:190:THR:O	2:AB:190:THR:OG1	2.30	0.48
4:AD:15:GLU:HG2	4:AD:63:LYS:HA	1.96	0.48
7:AG:92:SER:HB2	7:AG:93:PRO:HD2	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:3:GLN:HG2	9:AI:3:GLN:O	2.13	0.48
9:AI:118:LYS:HD2	9:AI:121:ARG:HB2	1.95	0.48
10:AJ:20:ALA:O	10:AJ:24:VAL:HG23	2.13	0.48
11:AK:34:ASP:OD1	11:AK:34:ASP:C	2.52	0.48
25:AZ:227:ASP:OD1	25:AZ:228:VAL:N	2.44	0.48
34:B8:30:ARG:NH2	36:BA:2419:U:O4	2.47	0.48
36:BA:636:G:H4'	36:BA:638:G:O3'	2.13	0.48
36:BA:642:G:H21	36:BA:646:A:H2	1.61	0.48
36:BA:654(C):G:C2'	36:BA:654(D):G:H5'	2.44	0.48
36:BA:1053:C:H2'	36:BA:1054:A:H8	1.74	0.48
36:BA:1952:A:C5	47:BO:22:ILE:HD12	2.49	0.48
36:BA:2061:G:H5"	36:BA:2503:A:C2	2.49	0.48
36:BA:2537:U:H2'	36:BA:2538:C:C6	2.49	0.48
39:BD:79:VAL:HG11	39:BD:111:LEU:HD13	1.94	0.48
39:BD:91:ARG:O	39:BD:107:ALA:HB3	2.13	0.48
39:BD:213:ARG:HD2	39:BD:217:ARG:O	2.14	0.48
43:BH:37:VAL:CG1	43:BH:38:SER:H	2.26	0.48
46:BN:2:LYS:NZ	54:BV:12:TYR:HB3	2.28	0.48
48:BP:47:ASP:CB	48:BP:48:PRO:HA	2.29	0.48
48:BP:130:PHE:CD2	48:BP:135:LEU:HD23	2.48	0.48
51:BS:29:PHE:HD1	51:BS:29:PHE:C	2.16	0.48
51:BS:29:PHE:C	51:BS:29:PHE:CD1	2.87	0.48
52:BT:30:VAL:CG2	52:BT:84:GLN:HG3	2.44	0.48
54:BV:19:LYS:HB3	54:BV:94:LEU:O	2.14	0.48
54:BV:72:VAL:CG2	54:BV:85:LYS:HB3	2.43	0.48
1:CA:26:A:H2'	1:CA:27:G:H5'	1.95	0.48
1:CA:310:G:H2'	1:CA:311:C:H6	1.79	0.48
1:CA:968:A:H8	1:CA:968:A:O5'	1.96	0.48
1:CA:1030:C:H5	1:CA:1030(A):G:C8	2.32	0.48
1:CA:1217:C:OP1	14:CN:9:LYS:NZ	2.44	0.48
1:CA:1237:C:H4'	1:CA:1334:G:N2	2.28	0.48
1:CA:1492:A:OP1	12:CL:47:LYS:N	2.46	0.48
1:CA:1507:A:C8	1:CA:1530:G:N2	2.81	0.48
2:CB:61:LEU:HA	2:CB:64:ARG:CZ	2.44	0.48
4:CD:29:PRO:C	4:CD:30:LYS:HG2	2.33	0.48
4:CD:194:LEU:HB3	4:CD:196:LEU:CD1	2.43	0.48
6:CF:15:ASP:O	6:CF:17:SER:N	2.47	0.48
10:CJ:40:LEU:HB2	10:CJ:69:ASN:HB3	1.94	0.48
12:CL:60:LEU:HD11	12:CL:85:ILE:HG12	1.94	0.48
19:CS:17:GLU:O	19:CS:21:GLU:HG2	2.14	0.48
19:CS:33:THR:CG2	19:CS:49:ILE:HG22	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:53:ASN:ND2	19:CS:53:ASN:H	2.10	0.48
22:CV:57:G:C2'	22:CV:58:A:H5'	2.43	0.48
22:CW:31:A:C2'	22:CW:32:U:H5'	2.42	0.48
24:CY:63:C:O2	25:CZ:391:GLY:HA2	2.14	0.48
25:CZ:378:VAL:O	25:CZ:380:LEU:HG	2.12	0.48
29:D3:54:VAL:HG12	29:D3:55:ARG:N	2.29	0.48
31:D5:2:ALA:HB3	36:DA:747:U:C2	2.49	0.48
31:D5:43:HIS:HD2	36:DA:2815:C:O2'	1.95	0.48
34:D8:30:ARG:HA	34:D8:30:ARG:HE	1.78	0.48
36:DA:271(V):G:H2'	36:DA:271(W):G:O4'	2.13	0.48
36:DA:338:G:N2	36:DA:339:U:H1'	2.28	0.48
36:DA:723:G:H2'	36:DA:724:U:H6	1.78	0.48
36:DA:769:G:H5'	36:DA:1379:A:N6	2.28	0.48
36:DA:1425:G:H2'	36:DA:1426:G:O4'	2.14	0.48
36:DA:1536:C:H2'	36:DA:1537:G:C4'	2.40	0.48
36:DA:1671:U:HO2'	36:DA:1673:U:H5	1.61	0.48
36:DA:2230:G:O2'	36:DA:2231:C:H5'	2.14	0.48
36:DA:2231:C:H2'	36:DA:2232:U:O4'	2.13	0.48
36:DA:2242:G:H2'	36:DA:2243:U:O5'	2.12	0.48
36:DA:2367:G:H2'	36:DA:2368:C:C6	2.49	0.48
36:DA:2617:C:C2'	36:DA:2618:G:H5'	2.44	0.48
39:DD:44:ASN:OD1	39:DD:44:ASN:N	2.46	0.48
39:DD:148:GLU:HB2	39:DD:151:LYS:HD2	1.94	0.48
39:DD:227:ASN:HB3	39:DD:228:PRO:HD2	1.93	0.48
40:DE:164:ARG:HG3	40:DE:164:ARG:HH11	1.77	0.48
42:DG:47:LYS:HE3	42:DG:81:LYS:CB	2.43	0.48
42:DG:51:ARG:NH2	42:DG:52:ILE:CD1	2.76	0.48
42:DG:124:SER:HB3	42:DG:131:TYR:CE1	2.48	0.48
48:DP:146:VAL:HG22	48:DP:147:LEU:N	2.20	0.48
50:DR:61:HIS:NE2	50:DR:65:LEU:HD22	2.29	0.48
50:DR:87:TYR:HD1	50:DR:90:ARG:HD2	1.78	0.48
57:DY:79:CYS:C	57:DY:81:LYS:H	2.17	0.48
1:AA:319:G:C2'	1:AA:320:C:H5'	2.44	0.48
1:AA:345:C:H5'	52:BT:41:ARG:HE	1.78	0.48
1:AA:355:C:N4	1:AA:356:A:H62	2.11	0.48
1:AA:397:A:H3'	1:AA:397:A:N3	2.29	0.48
1:AA:686:U:O2'	11:AK:42:TRP:NE1	2.47	0.48
1:AA:977:A:C8	1:AA:1223:C:C4	3.01	0.48
1:AA:1126:U:C5	1:AA:1127:G:C6	3.01	0.48
4:AD:152:SER:O	4:AD:154:ASN:N	2.45	0.48
13:AM:73:GLU:O	13:AM:76:ALA:HB3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:82:ILE:HD11	15:AO:88:ARG:H	1.76	0.48
18:AR:73:ALA:HB3	18:AR:79:LEU:HD12	1.95	0.48
18:AR:85:LEU:HD12	18:AR:86:VAL:N	2.27	0.48
25:AZ:107:SER:HA	25:AZ:136:ASN:O	2.14	0.48
25:AZ:359:VAL:HG12	25:AZ:359:VAL:O	2.13	0.48
25:AZ:400:VAL:HG12	25:AZ:401:THR:N	2.27	0.48
30:B4:14:ILE:HD12	30:B4:14:ILE:N	2.28	0.48
31:B5:52:TYR:N	31:B5:52:TYR:HD1	2.11	0.48
34:B8:33:ASN:CA	34:B8:36:LYS:HD2	2.43	0.48
36:BA:748:G:C8	55:BW:89:ALA:HB1	2.48	0.48
36:BA:1054:A:N3	36:BA:1054:A:H2'	2.26	0.48
36:BA:1191:G:H2'	36:BA:1192:G:O4'	2.14	0.48
36:BA:1196:C:H2'	36:BA:1197:G:C8	2.48	0.48
36:BA:1361:G:O2'	36:BA:1362:C:H5'	2.14	0.48
36:BA:2327:A:H2'	36:BA:2328:A:C8	2.48	0.48
39:BD:155:LEU:HD23	39:BD:177:LEU:HD21	1.94	0.48
41:BF:82:ILE:HG13	41:BF:83:PHE:N	2.26	0.48
42:BG:57:ALA:C	42:BG:59:GLU:N	2.66	0.48
49:BQ:63:LYS:HE2	58:BZ:118:GLN:HE22	1.79	0.48
50:BR:103:ARG:O	50:BR:104:ARG:HB2	2.14	0.48
51:BS:34:HIS:HB2	51:BS:36:TYR:CE1	2.36	0.48
51:BS:69:VAL:CG1	51:BS:99:LYS:HD3	2.44	0.48
52:BT:2:ASN:C	52:BT:4:GLY:H	2.17	0.48
52:BT:65:LYS:HZ1	52:BT:66:VAL:H	1.61	0.48
54:BV:17:GLY:O	54:BV:18:LEU:HB3	2.12	0.48
55:BW:9:TYR:H	55:BW:102:HIS:CD2	2.31	0.48
56:BX:82:GLN:O	56:BX:82:GLN:HG3	2.14	0.48
1:CA:62:U:H2'	1:CA:63:C:C5'	2.44	0.48
1:CA:256:U:H2'	1:CA:257:G:C8	2.48	0.48
1:CA:376:G:O3'	16:CP:5:ARG:NH1	2.46	0.48
1:CA:706:A:C5	1:CA:707:C:C5	3.01	0.48
1:CA:774:G:OP1	39:DD:202:LYS:NZ	2.44	0.48
1:CA:1125:U:O4	10:CJ:38:ILE:HG21	2.13	0.48
1:CA:1155:G:H2'	1:CA:1156:G:H8	1.78	0.48
1:CA:1368:G:O2'	1:CA:1369:C:H5'	2.13	0.48
1:CA:1428:A:H2'	1:CA:1429:C:C6	2.49	0.48
4:CD:62:GLN:O	4:CD:63:LYS:C	2.52	0.48
4:CD:159:ARG:HG3	4:CD:159:ARG:HH11	1.78	0.48
7:CG:72:ARG:N	7:CG:142:GLU:OE2	2.37	0.48
9:CI:108:VAL:HG12	9:CI:109:VAL:N	2.29	0.48
12:CL:51:ALA:O	12:CL:52:LEU:HD22	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:36:ILE:HD12	17:CQ:38:ARG:NH2	2.29	0.48
25:CZ:9:LYS:HE3	25:CZ:74:LYS:N	2.28	0.48
25:CZ:132:VAL:HG21	25:CZ:206:ILE:HG12	1.96	0.48
28:D2:24:LEU:HD23	28:D2:25:VAL:N	2.29	0.48
28:D2:47:ASN:O	28:D2:49:LYS:N	2.47	0.48
34:D8:31:HIS:O	34:D8:32:LEU:C	2.51	0.48
36:DA:580:C:OP2	53:DU:33:ARG:NH2	2.46	0.48
36:DA:1022:G:N2	36:DA:1142(A):A:C2	2.80	0.48
36:DA:1040:C:H2'	36:DA:1041:G:C8	2.47	0.48
36:DA:1366:A:H2'	36:DA:1367:A:O4'	2.11	0.48
36:DA:1493:C:C5	36:DA:2206:G:O2'	2.67	0.48
36:DA:2001:A:H4'	36:DA:2689:U:H2'	1.95	0.48
36:DA:2247:A:O2'	36:DA:2248:C:H5'	2.13	0.48
36:DA:2295:C:C2	36:DA:2296:U:C5	3.01	0.48
36:DA:2430:A:C8	36:DA:2431:U:H5	2.31	0.48
36:DA:2661:G:H2'	36:DA:2662:A:C8	2.48	0.48
37:DB:17:C:H2'	37:DB:18:G:H8	1.78	0.48
39:DD:35:LYS:NZ	39:DD:35:LYS:HB3	2.29	0.48
40:DE:116:VAL:CG2	40:DE:122:PHE:HB2	2.44	0.48
42:DG:120:LEU:HB2	42:DG:179:PRO:O	2.14	0.48
43:DH:23:ARG:O	43:DH:24:VAL:HG23	2.13	0.48
48:DP:31:ALA:C	48:DP:33:ARG:N	2.66	0.48
51:DS:106:ARG:HH12	51:DS:108:GLY:HA3	1.78	0.48
56:DX:14:SER:H	56:DX:17:ALA:HB3	1.79	0.48
1:AA:55:A:C2	1:AA:56:U:H1'	2.49	0.48
1:AA:394:G:O2'	1:AA:395:C:H5'	2.14	0.48
1:AA:1210:C:C2	1:AA:1211:U:O2	2.66	0.48
9:AI:95:LYS:HG3	9:AI:96:LEU:CD1	2.42	0.48
10:AJ:89:ASP:HB3	10:AJ:91:PRO:HD3	1.96	0.48
10:AJ:90:LEU:H	10:AJ:91:PRO:CD	2.27	0.48
11:AK:124:LYS:HD2	11:AK:125:PHE:CE2	2.48	0.48
12:AL:53:ARG:HB3	12:AL:93:LEU:HD11	1.95	0.48
13:AM:108:ARG:HG3	13:AM:108:ARG:NH1	2.29	0.48
16:AP:15:PRO:O	16:AP:16:HIS:O	2.31	0.48
25:AZ:134:PHE:HB2	25:AZ:202:LEU:HD13	1.95	0.48
25:AZ:198:LYS:O	25:AZ:198:LYS:CD	2.61	0.48
31:B5:52:TYR:N	31:B5:52:TYR:CD1	2.81	0.48
34:B8:12:LYS:HD3	48:BP:68:GLN:HG2	1.95	0.48
36:BA:250:G:H2'	36:BA:251:A:C8	2.49	0.48
36:BA:271(L):U:C5'	36:BA:271(M):G:H5'	2.29	0.48
36:BA:271(U):G:H2'	36:BA:271(V):G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:431:U:O2'	36:BA:432:A:H5'	2.14	0.48
36:BA:519:U:H2'	36:BA:520:G:C8	2.48	0.48
36:BA:1047:G:H2'	36:BA:1110:G:N2	2.23	0.48
36:BA:1462:C:O2'	36:BA:1463:C:H5'	2.14	0.48
36:BA:1526:G:H2'	36:BA:1527:G:O4'	2.13	0.48
36:BA:1799:G:N3	36:BA:1800:C:H5	2.11	0.48
36:BA:2006:C:O2'	36:BA:2823:A:N3	2.46	0.48
36:BA:2399:G:O6	36:BA:2417:C:N3	2.46	0.48
36:BA:2472:G:H3'	36:BA:2475:C:N4	2.29	0.48
38:BC:42:GLU:HG3	38:BC:215:THR:HG23	1.95	0.48
38:BC:114:VAL:HG12	38:BC:144:THR:HA	1.95	0.48
39:BD:30:GLU:CD	39:BD:63:ARG:HE	2.17	0.48
39:BD:80:ALA:HB2	39:BD:96:HIS:CD2	2.49	0.48
41:BF:28:ILE:CD1	41:BF:28:ILE:H	2.27	0.48
41:BF:164:ARG:HH11	41:BF:164:ARG:HG2	1.77	0.48
42:BG:30:GLU:HG2	42:BG:32:PRO:HD3	1.94	0.48
43:BH:70:THR:O	43:BH:74:ASN:ND2	2.45	0.48
43:BH:89:ILE:CG1	43:BH:129:THR:HA	2.43	0.48
57:BY:13:VAL:CG1	57:BY:28:LYS:HD3	2.42	0.48
58:BZ:122:ARG:HH11	58:BZ:122:ARG:HG2	1.79	0.48
1:CA:176:C:H4'	1:CA:1447:A:H2	1.78	0.48
1:CA:548:G:H2'	1:CA:549:C:H6	1.78	0.48
1:CA:708:C:O2'	1:CA:709:G:H5'	2.14	0.48
1:CA:1476:G:H2'	1:CA:1477:C:C6	2.48	0.48
2:CB:8:LYS:C	2:CB:10:LEU:H	2.16	0.48
2:CB:93:VAL:HG13	2:CB:93:VAL:O	2.13	0.48
2:CB:115:LEU:O	2:CB:119:GLU:HB2	2.13	0.48
4:CD:11:LEU:HD13	4:CD:66:ARG:CD	2.43	0.48
7:CG:81:GLY:C	7:CG:83:ALA:H	2.15	0.48
10:CJ:4:ILE:HD13	10:CJ:74:ILE:O	2.13	0.48
10:CJ:32:ALA:HB1	10:CJ:75:ILE:HG13	1.95	0.48
10:CJ:33:GLN:HB2	10:CJ:75:ILE:HG12	1.95	0.48
11:CK:61:ALA:CB	11:CK:90:GLY:HA3	2.43	0.48
16:CP:4:ILE:HB	16:CP:66:PRO:HA	1.95	0.48
22:CW:30:G:H2'	22:CW:31:A:H8	1.77	0.48
25:CZ:199:ILE:O	25:CZ:203:LEU:HG	2.13	0.48
26:D0:33:ALA:O	36:DA:2353:G:H1'	2.14	0.48
27:D1:90:ILE:O	27:D1:94:LEU:HD13	2.13	0.48
31:D5:4:HIS:O	36:DA:2056:G:N2	2.43	0.48
36:DA:35:G:O2'	36:DA:36:G:H5'	2.13	0.48
36:DA:565:C:O2'	36:DA:566:U:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:638:G:C6	36:DA:639:U:N3	2.81	0.48
36:DA:644:A:C2	36:DA:2369:A:H1'	2.39	0.48
36:DA:653:A:H2'	36:DA:653:A:N3	2.29	0.48
36:DA:851:U:O2'	36:DA:852:G:H5'	2.12	0.48
36:DA:880:G:H1	36:DA:897:C:H42	1.61	0.48
36:DA:1184:G:O2'	36:DA:1185:C:H5'	2.14	0.48
36:DA:1197:G:H5'	36:DA:1227:G:O2'	2.14	0.48
36:DA:1638:C:H4'	36:DA:2710:C:O2	2.13	0.48
36:DA:1681:G:O2'	36:DA:1762:A:C2'	2.62	0.48
36:DA:1782:C:H6	36:DA:1782:C:O5'	1.95	0.48
36:DA:1827:C:H2'	36:DA:1828:G:H5'	1.95	0.48
36:DA:2769:C:H2'	36:DA:2770:G:O4'	2.13	0.48
36:DA:2801(A):A:H5'	36:DA:2802:G:C8	2.48	0.48
39:DD:134:ARG:CZ	39:DD:134:ARG:HB3	2.44	0.48
41:DF:31:HIS:ND1	48:DP:13:ASN:HB2	2.28	0.48
44:DJ:48:UNK:O	44:DJ:49:UNK:CB	2.61	0.48
47:DO:71:ARG:HH21	47:DO:77:ILE:HG21	1.77	0.48
48:DP:84:ASN:C	48:DP:86:LYS:N	2.66	0.48
49:DQ:20:ALA:O	49:DQ:99:PRO:O	2.31	0.48
51:DS:12:PHE:C	51:DS:12:PHE:HD1	2.17	0.48
52:DT:14:TYR:N	52:DT:14:TYR:CD1	2.79	0.48
52:DT:28:VAL:O	52:DT:29:ARG:CB	2.54	0.48
57:DY:9:LYS:O	57:DY:28:LYS:NZ	2.44	0.48
1:AA:345:C:O5'	52:BT:41:ARG:NH2	2.47	0.48
1:AA:371:G:N2	1:AA:373:A:N6	2.62	0.48
1:AA:434:U:H2'	1:AA:435:C:H6	1.77	0.48
1:AA:1137:C:H4'	1:AA:1138:G:C2	2.49	0.48
1:AA:1269:A:H2	1:AA:1312:G:N3	2.11	0.48
1:AA:1275:A:O2'	1:AA:1276:G:H5'	2.14	0.48
2:AB:134:GLU:C	2:AB:136:VAL:N	2.66	0.48
3:AC:34:LEU:HG	14:AN:25:VAL:HG11	1.94	0.48
3:AC:46:GLU:O	3:AC:47:LEU:CB	2.57	0.48
4:AD:98:GLU:CG	4:AD:189:PRO:HG3	2.43	0.48
9:AI:33:PHE:C	9:AI:35:GLU:H	2.17	0.48
11:AK:30:VAL:HG23	11:AK:30:VAL:O	2.13	0.48
21:AU:9:ARG:O	21:AU:12:LYS:HB2	2.13	0.48
25:AZ:14:VAL:O	25:AZ:79:HIS:HD2	1.96	0.48
25:AZ:19:HIS:O	25:AZ:22:HIS:HB2	2.13	0.48
25:AZ:290:LEU:HB2	25:AZ:293:VAL:CG2	2.43	0.48
25:AZ:354:GLN:O	25:AZ:370:PHE:HB2	2.14	0.48
28:B2:35:LEU:HD13	28:B2:35:LEU:C	2.34	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:20:ASN:C	32:B6:21:TYR:CG	2.87	0.48
34:B8:52:LYS:H	34:B8:53:PRO:CD	2.26	0.48
36:BA:247:G:H4'	36:BA:386:G:C5	2.49	0.48
36:BA:902:C:H2'	36:BA:903:C:C6	2.49	0.48
36:BA:916:G:O2'	36:BA:917:A:H5"	2.14	0.48
36:BA:953:A:OP2	49:BQ:16:ARG:NE	2.46	0.48
36:BA:958:U:H5"	49:BQ:14:ARG:HD3	1.96	0.48
36:BA:1019:U:C2'	36:BA:1021:A:H2	2.26	0.48
36:BA:1217:C:N3	36:BA:1218:C:C5	2.81	0.48
36:BA:1717:G:H2'	36:BA:1718:G:H5"	1.95	0.48
36:BA:2199:A:H3'	36:BA:2200:C:C6	2.48	0.48
38:BC:78:ALA:HB3	38:BC:83:ILE:HG12	1.95	0.48
40:BE:27:LEU:HD22	52:BT:1:MET:N	2.28	0.48
40:BE:101:ARG:CZ	40:BE:171:GLU:HB2	2.43	0.48
42:BG:16:ARG:HG3	42:BG:16:ARG:NH1	2.28	0.48
42:BG:86:MET:HG2	42:BG:86:MET:O	2.14	0.48
44:BJ:97:UNK:HA	44:BJ:132:UNK:HA	1.95	0.48
46:BN:1:MET:C	46:BN:2:LYS:HD2	2.34	0.48
47:BO:111:PHE:HB3	47:BO:114:ILE:HD13	1.95	0.48
48:BP:88:LEU:HD11	48:BP:95:VAL:HG11	1.96	0.48
49:BQ:132:VAL:HG11	58:BZ:81:ARG:HD3	1.95	0.48
51:BS:15:ARG:O	51:BS:18:ILE:HG13	2.13	0.48
52:BT:14:TYR:N	52:BT:14:TYR:CD1	2.81	0.48
57:BY:46:LYS:CG	57:BY:47:LYS:H	2.21	0.48
58:BZ:57:ILE:N	58:BZ:69:THR:O	2.41	0.48
1:CA:266:G:C5'	1:CA:267:C:C5	2.96	0.48
1:CA:383:A:C2'	1:CA:384:G:H5'	2.44	0.48
1:CA:436:C:H4'	4:CD:157:LEU:HD11	1.95	0.48
1:CA:711:G:H2'	1:CA:712:A:C8	2.48	0.48
1:CA:1119:C:O2'	1:CA:1120:G:H5'	2.13	0.48
1:CA:1346:A:N1	1:CA:1374:A:H5"	2.29	0.48
1:CA:1431:C:O2	1:CA:1431:C:O4'	2.32	0.48
2:CB:25:ASN:HB2	2:CB:191:ASP:O	2.14	0.48
8:CH:72:PRO:O	8:CH:73:ASP:HB3	2.14	0.48
14:CN:23:ARG:HH11	14:CN:30:ALA:HB2	1.77	0.48
18:CR:40:LEU:O	18:CR:42:ARG:N	2.47	0.48
19:CS:45:VAL:HA	19:CS:62:ILE:HG23	1.95	0.48
20:CT:77:ALA:O	20:CT:80:ARG:HB2	2.14	0.48
24:CY:3:G:OP1	25:CZ:87:ASP:HB3	2.14	0.48
25:CZ:95:GLY:O	25:CZ:99:MET:HE2	2.13	0.48
25:CZ:381:GLU:O	25:CZ:382:GLU:HB3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:31:PRO:O	32:D6:32:ASN:OD1	2.32	0.48
36:DA:118:A:H5'	36:DA:119:A:C8	2.48	0.48
36:DA:140:G:H1'	36:DA:141:A:C2	2.37	0.48
36:DA:363(E):U:H2'	36:DA:363(F):A:H1'	1.95	0.48
36:DA:764:A:N3	39:DD:213:ARG:NH1	2.62	0.48
36:DA:1109:C:C2'	36:DA:1110:G:H5'	2.44	0.48
36:DA:1835:G:C5'	36:DA:1836:C:OP2	2.61	0.48
36:DA:2446:G:H2'	36:DA:2447:G:H5"	1.95	0.48
40:DE:48:GLN:HE21	40:DE:78:LEU:HD22	1.78	0.48
41:DF:187:VAL:HG12	48:DP:7:ARG:HD2	1.95	0.48
42:DG:63:ILE:N	42:DG:143:GLU:HG3	2.28	0.48
42:DG:142:PRO:HG2	42:DG:143:GLU:HG2	1.96	0.48
44:DJ:14:UNK:C	44:DJ:16:UNK:N	2.75	0.48
46:DN:55:VAL:HG22	46:DN:126:PRO:HA	1.96	0.48
46:DN:57:ALA:O	46:DN:58:ASP:O	2.32	0.48
48:DP:85:LEU:CA	48:DP:88:LEU:HB3	2.42	0.48
52:DT:11:GLU:CD	52:DT:11:GLU:H	2.17	0.48
52:DT:22:PHE:HE2	52:DT:85:LYS:HZ1	1.52	0.48
52:DT:128:GLU:O	52:DT:129:ARG:C	2.52	0.48
53:DU:93:LYS:HD2	53:DU:93:LYS:H	1.79	0.48
54:DV:99:ILE:H	54:DV:99:ILE:CD1	2.11	0.48
58:DZ:150:LEU:H	58:DZ:150:LEU:CD2	2.27	0.48
1:AA:489:C:O2'	1:AA:490:G:H5'	2.14	0.48
1:AA:673:G:H5"	6:AF:87:ARG:NH1	2.29	0.48
1:AA:990:C:H2'	1:AA:991:U:O4'	2.14	0.48
3:AC:77:ILE:O	3:AC:83:ARG:HB3	2.13	0.48
3:AC:83:ARG:O	3:AC:85:ARG:N	2.46	0.48
7:AG:28:ASN:OD1	7:AG:36:LYS:HE2	2.14	0.48
8:AH:4:ASP:HB3	8:AH:7:ALA:HB3	1.96	0.48
25:AZ:359:VAL:C	25:AZ:361:MET:H	2.17	0.48
27:B1:67:ILE:N	27:B1:68:PRO:HD2	2.27	0.48
28:B2:60:LEU:O	28:B2:60:LEU:HD23	2.14	0.48
36:BA:443:A:H1'	36:BA:1201:C:O4'	2.14	0.48
36:BA:606:U:H4'	36:BA:658:C:H4'	1.94	0.48
36:BA:611:C:O5'	36:BA:611:C:H6	1.97	0.48
36:BA:1337:G:H2'	36:BA:1338:G:O4'	2.14	0.48
36:BA:2050:C:H1'	40:BE:156:MET:CE	2.44	0.48
36:BA:2845:G:O2'	36:BA:2846:G:H5'	2.14	0.48
42:BG:13:GLU:O	42:BG:14:GLU:HB3	2.13	0.48
42:BG:77:ILE:HG12	42:BG:77:ILE:O	2.14	0.48
46:BN:15:LEU:HD13	46:BN:16:ILE:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:115:VAL:HG13	47:BO:121:VAL:HG21	1.96	0.48
50:BR:10:LEU:O	50:BR:11:ASN:HB2	2.13	0.48
50:BR:84:ALA:CB	50:BR:85:PRO:HD3	2.30	0.48
51:BS:92:TYR:O	51:BS:93:LYS:CB	2.61	0.48
51:BS:106:ARG:CG	51:BS:106:ARG:NH1	2.75	0.48
52:BT:107:ASP:OD2	52:BT:109:GLU:HG3	2.13	0.48
53:BU:95:LEU:HD11	54:BV:11:GLN:O	2.13	0.48
56:BX:59:VAL:HG12	56:BX:59:VAL:O	2.13	0.48
57:BY:17:SER:OG	57:BY:18:GLY:N	2.45	0.48
57:BY:31:LEU:N	57:BY:31:LEU:HD22	2.29	0.48
1:CA:197:A:C5	1:CA:221:C:H4'	2.49	0.48
1:CA:1147:C:HO2'	9:CI:5:TYR:HH	1.62	0.48
1:CA:1327:C:O2'	1:CA:1328:C:H5'	2.14	0.48
1:CA:1392:G:N2	1:CA:1502:A:C8	2.81	0.48
1:CA:1401:G:C2	1:CA:1402:C:H1'	2.49	0.48
4:CD:176:LEU:HA	4:CD:183:GLY:HA2	1.96	0.48
6:CF:4:TYR:OH	6:CF:69:GLU:HA	2.13	0.48
9:CI:4:TYR:CG	9:CI:88:TYR:HB2	2.48	0.48
10:CJ:7:LYS:CB	10:CJ:97:GLU:HB2	2.43	0.48
10:CJ:40:LEU:HD12	10:CJ:69:ASN:HB3	1.95	0.48
13:CM:97:PRO:HA	13:CM:110:ARG:CD	2.41	0.48
19:CS:16:LEU:O	19:CS:18:LYS:N	2.47	0.48
26:D0:43:THR:N	36:DA:2331:G:H4'	2.19	0.48
27:D1:69:LYS:O	27:D1:73:LEU:HD13	2.12	0.48
30:D4:15:ILE:HD13	30:D4:21:VAL:HG13	1.95	0.48
31:D5:36:CYS:SG	31:D5:48:GLU:O	2.72	0.48
34:D8:26:LYS:HD3	34:D8:47:LYS:HD3	1.95	0.48
36:DA:588:U:H2'	36:DA:589:C:H6	1.79	0.48
36:DA:827:U:H2'	36:DA:2068:U:C2	2.48	0.48
36:DA:850:C:O2'	36:DA:851:U:H5'	2.13	0.48
36:DA:896:A:N6	58:DZ:113:ALA:HA	2.29	0.48
36:DA:1058:G:C3'	36:DA:1059:G:H5"	2.44	0.48
36:DA:1142(A):A:OP2	36:DA:1142(A):A:H3'	2.13	0.48
36:DA:1190:G:H5'	48:DP:35:HIS:N	2.29	0.48
36:DA:1438:U:H6	36:DA:1438:U:O5'	1.96	0.48
36:DA:1569:A:O2'	39:DD:38:LYS:HE2	2.13	0.48
36:DA:1767:C:O2'	36:DA:1768:U:H5'	2.14	0.48
36:DA:2526:G:H5'	36:DA:2742:C:O2'	2.14	0.48
39:DD:33:LEU:HD13	39:DD:102:LYS:HB2	1.95	0.48
39:DD:68:LYS:HG2	39:DD:68:LYS:O	2.13	0.48
39:DD:246:PRO:HB2	39:DD:254:THR:HG22	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:149:ARG:CA	43:DH:162:ILE:HD11	2.40	0.48
44:DJ:93:UNK:O	44:DJ:96:UNK:CB	2.62	0.48
49:DQ:21:THR:OG1	49:DQ:99:PRO:O	2.32	0.48
49:DQ:134:ARG:NE	58:DZ:122:ARG:HH21	2.12	0.48
50:DR:20:LEU:HD21	50:DR:40:LYS:HD3	1.95	0.48
51:DS:54:LEU:HD13	51:DS:58:LEU:N	2.28	0.48
52:DT:92:GLY:CA	52:DT:120:ARG:NH2	2.71	0.48
52:DT:134:GLU:O	52:DT:135:ALA:HB3	2.13	0.48
57:DY:56:PRO:O	57:DY:58:GLY:N	2.47	0.48
57:DY:77:PRO:O	57:DY:78:ALA:CB	2.61	0.48
1:AA:9:G:C5'	5:AE:122:GLU:OE1	2.54	0.48
1:AA:368:U:C5	25:AZ:234:ARG:NE	2.82	0.48
1:AA:720:C:H2'	1:AA:721:G:C8	2.49	0.48
1:AA:902:G:H2'	1:AA:903:G:H8	1.79	0.48
1:AA:977:A:O2'	1:AA:978:A:H5'	2.13	0.48
1:AA:1485:U:O2'	1:AA:1486:G:H5'	2.14	0.48
5:AE:33:VAL:HG21	5:AE:109:ILE:HG12	1.95	0.48
7:AG:58:PRO:C	7:AG:60:LYS:H	2.17	0.48
9:AI:89:ASN:H	9:AI:90:PRO:CD	2.26	0.48
16:AP:21:VAL:HG22	16:AP:21:VAL:O	2.14	0.48
17:AQ:76:LEU:HD12	17:AQ:77:VAL:N	2.25	0.48
22:AV:29:G:N2	22:AV:30:G:H1'	2.29	0.48
22:AW:61:C:O2'	22:AW:62:C:H6	1.95	0.48
24:AY:40:C:H2'	24:AY:41:C:C5'	2.33	0.48
24:AY:49:G:O2'	24:AY:50:G:H5'	2.14	0.48
25:AZ:24:LYS:C	25:AZ:26:THR:H	2.15	0.48
25:AZ:39:ASN:HA	25:AZ:41:ASN:N	2.28	0.48
25:AZ:378:VAL:O	25:AZ:380:LEU:HG	2.14	0.48
27:B1:76:ARG:HH12	27:B1:95:LEU:CD2	2.21	0.48
29:B3:22:ALA:HA	29:B3:46:ASN:HD21	1.78	0.48
34:B8:4:MET:HB2	36:BA:592:G:O2'	2.14	0.48
36:BA:483:A:H3'	36:BA:484:C:H6	1.79	0.48
36:BA:590:A:H2'	36:BA:591:C:C6	2.47	0.48
36:BA:1594:G:H2'	36:BA:1595:G:O4'	2.14	0.48
36:BA:1899:G:H22	36:BA:1902:C:N4	2.10	0.48
36:BA:2092:U:H4'	36:BA:2093:G:C5'	2.30	0.48
36:BA:2107:C:C1'	36:BA:2182:G:H22	2.27	0.48
36:BA:2389:G:C5'	36:BA:2390:U:H5'	2.44	0.48
36:BA:2576:G:H8	36:BA:2581:G:O6	1.97	0.48
36:BA:2656:U:N3	36:BA:2665:A:H2	2.11	0.48
36:BA:2677:G:H2'	36:BA:2678:C:H6	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BC:195:ALA:O	38:BC:196:LEU:C	2.52	0.48
40:BE:45:THR:O	40:BE:46:ALA:HB2	2.14	0.48
43:BH:58:GLU:O	43:BH:62:LYS:HB2	2.13	0.48
47:BO:4:PRO:O	47:BO:5:GLN:CB	2.60	0.48
47:BO:71:ARG:NH2	47:BO:122:LEU:O	2.46	0.48
48:BP:47:ASP:HB3	48:BP:48:PRO:C	2.34	0.48
48:BP:105:LEU:O	48:BP:106:LEU:HB2	2.14	0.48
52:BT:24:PRO:HD3	52:BT:52:ILE:CD1	2.44	0.48
53:BU:15:LYS:O	53:BU:19:LYS:HG3	2.14	0.48
55:BW:3:ALA:O	55:BW:107:LEU:HD12	2.13	0.48
1:CA:173:U:H5"	1:CA:197:A:O4'	2.13	0.48
1:CA:375:U:OP1	16:CP:69:THR:HG21	2.14	0.48
1:CA:437:U:H2'	1:CA:438:G:H5'	1.96	0.48
1:CA:978:A:N7	1:CA:1319:A:C2	2.81	0.48
1:CA:1086:U:C5	1:CA:1099:G:N2	2.82	0.48
2:CB:212:GLN:NE2	2:CB:216:SER:HB2	2.28	0.48
4:CD:194:LEU:HD22	4:CD:194:LEU:N	2.28	0.48
6:CF:38:GLU:O	6:CF:39:LYS:C	2.51	0.48
12:CL:80:HIS:CD2	24:CY:68:C:O3'	2.67	0.48
22:CW:64:A:H2'	22:CW:65:G:C8	2.42	0.48
24:CY:25:C:H4'	36:DA:1914:C:O2'	2.14	0.48
25:CZ:265:THR:HG23	25:CZ:291:ARG:O	2.14	0.48
26:D0:25:ARG:HD2	26:D0:29:GLN:HE22	1.77	0.48
26:D0:40:GLN:HE22	26:D0:43:THR:CA	2.07	0.48
28:D2:68:ARG:O	28:D2:69:ARG:HG2	2.14	0.48
29:D3:35:ARG:HD3	29:D3:37:LEU:HD11	1.94	0.48
34:D8:13:ARG:HA	48:DP:63:PRO:HA	1.96	0.48
34:D8:52:LYS:N	34:D8:53:PRO:CD	2.75	0.48
35:D9:16:VAL:HG11	36:DA:1032:A:O3'	2.14	0.48
36:DA:106:C:H2'	36:DA:107:C:C6	2.49	0.48
36:DA:391:G:H5'	36:DA:412:A:H4'	1.94	0.48
36:DA:480:A:H3'	36:DA:481:G:H5"	1.96	0.48
36:DA:515:A:C8	36:DA:516:C:C5	3.01	0.48
36:DA:747:U:C4	36:DA:2613:U:C5	3.02	0.48
36:DA:1019:U:C2'	36:DA:1021:A:H2	2.27	0.48
36:DA:1231:G:H2'	36:DA:1232:G:C8	2.49	0.48
36:DA:1290:C:H2'	36:DA:1291:C:C6	2.48	0.48
36:DA:1639:U:H4'	36:DA:2699:C:H4'	1.94	0.48
36:DA:1655:A:H1'	40:DE:113:PHE:CE1	2.49	0.48
36:DA:2189:U:C3'	36:DA:2190:G:H4'	2.42	0.48
37:DB:37:C:C2'	37:DB:38:C:H5'	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:45:THR:O	40:DE:46:ALA:CB	2.62	0.48
41:DF:27:GLU:OE1	41:DF:27:GLU:HA	2.14	0.48
41:DF:131:GLY:O	41:DF:138:GLU:HB3	2.14	0.48
41:DF:133:ASN:H	41:DF:133:ASN:HD22	1.60	0.48
42:DG:10:LYS:O	42:DG:15:VAL:HG23	2.13	0.48
42:DG:52:ILE:HB	42:DG:54:GLU:CG	2.43	0.48
43:DH:54:ARG:NH1	43:DH:62:LYS:HG3	2.29	0.48
48:DP:77:ARG:HG3	48:DP:78:PRO:CD	2.44	0.48
52:DT:32:TYR:O	52:DT:33:LYS:HB2	2.14	0.48
53:DU:83:LEU:H	53:DU:83:LEU:CD1	2.26	0.48
53:DU:83:LEU:HA	53:DU:88:ILE:CG1	2.44	0.48
55:DW:12:ILE:HD12	55:DW:42:ARG:HH11	1.78	0.48
58:DZ:30:ASN:HD21	58:DZ:32:HIS:HB2	1.78	0.48
1:AA:1015:A:H4'	14:AN:15:LYS:NZ	2.29	0.48
1:AA:1044:A:H2'	1:AA:1045:C:O5'	2.13	0.48
1:AA:1126:U:H5	1:AA:1127:G:C6	2.32	0.48
1:AA:1131:G:H2'	1:AA:1132:C:C5	2.49	0.48
1:AA:1255:G:H3'	1:AA:1279:A:H61	1.78	0.48
2:AB:119:GLU:HA	2:AB:119:GLU:OE1	2.14	0.48
5:AE:105:VAL:HB	5:AE:106:PRO:CD	2.44	0.48
15:AO:39:LEU:HD23	15:AO:43:LEU:HG	1.95	0.48
23:AX:13:A:O5'	23:AX:13:A:H8	1.96	0.48
25:AZ:21:ASP:O	25:AZ:21:ASP:OD1	2.31	0.48
25:AZ:161:TYR:OH	61:AZ:502:KIR:H413	2.14	0.48
25:AZ:322:VAL:O	25:AZ:323:LEU:O	2.32	0.48
28:B2:35:LEU:HD11	36:BA:61:G:O2'	2.14	0.48
28:B2:50:ILE:HG22	28:B2:51:ARG:N	2.29	0.48
36:BA:409:C:O2'	36:BA:410:G:H5'	2.14	0.48
36:BA:2192:G:H2'	36:BA:2193:G:C5'	2.44	0.48
39:BD:24:ILE:HD13	39:BD:24:ILE:C	2.34	0.48
40:BE:52:LEU:HD23	40:BE:75:VAL:HB	1.96	0.48
41:BF:157:VAL:HG22	41:BF:193:VAL:O	2.14	0.48
42:BG:56:ALA:O	42:BG:60:LEU:HB2	2.14	0.48
42:BG:172:LEU:HD23	42:BG:172:LEU:C	2.34	0.48
43:BH:139:GLN:NE2	43:BH:140:LYS:HA	2.28	0.48
48:BP:12:ALA:O	48:BP:13:ASN:O	2.32	0.48
50:BR:72:ASP:OD2	50:BR:75:LEU:HB2	2.14	0.48
52:BT:13:ARG:HH22	52:BT:15:VAL:HG11	1.79	0.48
56:BX:12:VAL:CB	56:BX:17:ALA:HB1	2.39	0.48
4:CD:79:PHE:CD2	4:CD:207:TYR:HD2	2.32	0.48
4:CD:156:GLU:H	4:CD:156:GLU:HG3	1.39	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:117:HIS:CD2	9:CI:123:PRO:HA	2.49	0.48
11:CK:43:SER:OG	11:CK:47:VAL:HG21	2.14	0.48
11:CK:58:PRO:HB2	11:CK:93:GLN:HG3	1.95	0.48
22:CW:59:U:C2'	22:CW:60:U:H5'	2.40	0.48
24:CY:56:C:C5	36:DA:1067:A:C2	3.00	0.48
25:CZ:88:TYR:O	25:CZ:92:MET:HB2	2.14	0.48
25:CZ:331:HIS:CD2	25:CZ:331:HIS:N	2.81	0.48
25:CZ:345:ARG:HG2	25:CZ:345:ARG:NH1	2.28	0.48
27:D1:44:PRO:HG2	27:D1:46:LEU:CD2	2.44	0.48
28:D2:33:MET:SD	56:DX:5:TYR:HB3	2.54	0.48
30:D4:22:ILE:HD12	30:D4:22:ILE:N	2.07	0.48
36:DA:438:G:O2'	36:DA:440:G:H5'	2.13	0.48
36:DA:1338:G:H2'	36:DA:1338:G:N3	2.29	0.48
36:DA:2073:C:H2'	36:DA:2074:U:H6	1.78	0.48
36:DA:2145:C:H5"	36:DA:2146:C:OP2	2.14	0.48
36:DA:2150:U:H2'	36:DA:2151:G:C8	2.48	0.48
36:DA:2378:A:N7	36:DA:2379:G:H1'	2.29	0.48
36:DA:2682:U:H5'	36:DA:2682:U:H6	1.79	0.48
37:DB:21:G:H2'	37:DB:22:U:H5'	1.96	0.48
38:DC:113:VAL:HG12	38:DC:138:PRO:CG	2.42	0.48
38:DC:156:ILE:HD11	38:DC:160:ARG:NH2	2.29	0.48
39:DD:58:HIS:CD2	39:DD:59:LYS:H	2.32	0.48
40:DE:7:VAL:HG23	40:DE:194:GLY:O	2.14	0.48
42:DG:51:ARG:NH1	42:DG:53:LEU:H	2.12	0.48
46:DN:12:ARG:O	46:DN:12:ARG:HG3	2.13	0.48
46:DN:108:PRO:HG2	46:DN:113:GLY:HA3	1.95	0.48
51:DS:35:ILE:O	51:DS:35:ILE:HG12	2.13	0.48
51:DS:53:SER:O	51:DS:55:ALA:N	2.40	0.48
53:DU:80:ILE:O	53:DU:84:LYS:HB2	2.14	0.48
56:DX:30:VAL:HG23	56:DX:31:HIS:O	2.13	0.48
58:DZ:28:MET:HA	58:DZ:88:PHE:O	2.13	0.48
58:DZ:185:GLU:HG2	58:DZ:186:GLU:N	2.29	0.48
1:AA:192:U:H2'	1:AA:193:C:C6	2.43	0.47
1:AA:416:G:O2'	1:AA:417:C:H5'	2.14	0.47
1:AA:449:C:O2	16:AP:42:ARG:HD2	2.14	0.47
5:AE:102:ALA:CB	5:AE:120:THR:HG21	2.44	0.47
9:AI:99:LEU:O	9:AI:100:GLY:C	2.52	0.47
10:AJ:90:LEU:H	10:AJ:91:PRO:HD3	1.79	0.47
12:AL:86:ARG:NH2	12:AL:99:HIS:CD2	2.82	0.47
13:AM:11:ARG:NE	13:AM:12:ASN:HD21	2.12	0.47
13:AM:81:LEU:HD22	13:AM:81:LEU:H	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AW:4:C:H2'	22:AW:5:G:H8	1.78	0.47
24:AY:27:C:H2'	24:AY:28:C:H6	1.79	0.47
25:AZ:38:GLU:HG3	25:AZ:39:ASN:OD1	2.13	0.47
25:AZ:268:THR:CG2	25:AZ:289:LEU:HG	2.44	0.47
27:B1:81:LYS:O	27:B1:82:LEU:HD23	2.13	0.47
29:B3:35:ARG:HH11	29:B3:35:ARG:CB	2.13	0.47
34:B8:14:VAL:HG21	34:B8:22:VAL:CG1	2.43	0.47
36:BA:30:G:H2'	36:BA:31:C:C6	2.48	0.47
36:BA:958:U:O4	49:BQ:17:LEU:HG	2.14	0.47
36:BA:1019:U:H2'	36:BA:1021:A:C2	2.48	0.47
36:BA:1432:C:H2'	36:BA:1433:U:O4'	2.14	0.47
36:BA:1568:G:OP2	39:BD:63:ARG:NH2	2.47	0.47
36:BA:2102:U:C5	36:BA:2103:C:N3	2.82	0.47
36:BA:2334:G:C5'	51:BS:13:ARG:HD3	2.42	0.47
36:BA:2472:G:C5'	36:BA:2473:U:H5"	2.40	0.47
36:BA:2523:G:H2'	36:BA:2524:G:C5'	2.44	0.47
36:BA:2869:G:O2'	50:BR:61:HIS:HE1	1.97	0.47
38:BC:74:VAL:HG12	38:BC:75:LEU:N	2.29	0.47
38:BC:132:GLY:N	38:BC:133:PRO:CD	2.76	0.47
39:BD:32:SER:OG	39:BD:36:PRO:HG3	2.14	0.47
40:BE:22:PRO:O	40:BE:185:LYS:O	2.31	0.47
40:BE:87:GLU:HG3	40:BE:88:GLY:N	2.28	0.47
41:BF:28:ILE:H	41:BF:28:ILE:HD13	1.79	0.47
42:BG:7:LEU:HD22	42:BG:100:TRP:CZ3	2.49	0.47
46:BN:9:VAL:HG13	46:BN:39:ARG:NH2	2.29	0.47
48:BP:7:ARG:HB3	48:BP:8:PRO:CD	2.44	0.47
51:BS:16:ASN:O	51:BS:18:ILE:N	2.47	0.47
1:CA:262:A:H4'	20:CT:74:LYS:HG3	1.96	0.47
1:CA:282:A:C6	1:CA:283:C:C2	3.02	0.47
1:CA:358:U:H4'	25:CZ:234:ARG:CA	2.44	0.47
1:CA:686:U:H2'	1:CA:687:A:H8	1.79	0.47
1:CA:692:U:O4	11:CK:52:GLY:O	2.31	0.47
1:CA:1032:G:H2'	1:CA:1033:G:C8	2.49	0.47
1:CA:1217:C:OP1	14:CN:9:LYS:HE3	2.14	0.47
2:CB:30:ARG:NE	2:CB:31:TYR:CE1	2.81	0.47
3:CC:71:ALA:HA	3:CC:106:VAL:HB	1.96	0.47
9:CI:26:VAL:HG13	9:CI:61:ALA:HB3	1.94	0.47
10:CJ:38:ILE:HG13	10:CJ:71:LEU:O	2.14	0.47
15:CO:69:TYR:O	15:CO:72:ARG:HB3	2.14	0.47
15:CO:79:ARG:O	15:CO:82:ILE:HG22	2.14	0.47
18:CR:31:LEU:O	18:CR:69:THR:HG21	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CV:59:U:O2'	22:CV:60:U:H6	1.97	0.47
22:CW:34:G:N1	23:CX:18:G:C6	2.73	0.47
25:CZ:299:GLU:O	25:CZ:300:ARG:O	2.31	0.47
29:D3:9:VAL:HG11	29:D3:55:ARG:HB2	1.96	0.47
34:D8:6:THR:CG2	36:DA:243:U:OP1	2.62	0.47
36:DA:142:A:H5'	36:DA:142(A):C:OP2	2.14	0.47
36:DA:272(B):G:H2'	36:DA:272(C):G:H8	1.79	0.47
36:DA:336:C:O3'	57:DY:7:VAL:HG22	2.14	0.47
36:DA:990:A:C5	36:DA:1186:G:H1'	2.49	0.47
36:DA:1292:U:O2'	36:DA:1293:C:H5'	2.14	0.47
36:DA:2113:U:H2'	36:DA:2114:A:C8	2.40	0.47
36:DA:2873:A:O4'	50:DR:8:ARG:NH2	2.47	0.47
36:DA:2876:G:OP1	52:DT:4:GLY:HA3	2.14	0.47
38:DC:199:HIS:O	38:DC:201:PRO:HD3	2.14	0.47
41:DF:200:GLU:O	41:DF:204:ASN:ND2	2.46	0.47
42:DG:62:LEU:HB3	42:DG:143:GLU:HB3	1.96	0.47
45:DK:30:UNK:O	45:DK:31:UNK:C	2.62	0.47
46:DN:21:LYS:HD2	46:DN:26:LEU:HB2	1.96	0.47
48:DP:48:PRO:O	48:DP:49:ARG:C	2.52	0.47
49:DQ:139:GLU:OE1	49:DQ:139:GLU:CA	2.62	0.47
52:DT:24:PRO:HD3	52:DT:52:ILE:HD12	1.96	0.47
54:DV:39:LEU:HA	54:DV:47:VAL:CG1	2.44	0.47
58:DZ:124:ILE:O	58:DZ:124:ILE:HG13	2.14	0.47
1:AA:197:A:N6	1:AA:221:C:C5'	2.77	0.47
1:AA:1145:C:O2'	1:AA:1146:A:O5'	2.27	0.47
2:AB:169:LYS:HD3	2:AB:169:LYS:O	2.13	0.47
3:AC:77:ILE:C	3:AC:83:ARG:HB3	2.34	0.47
4:AD:120:LEU:HB3	4:AD:126:ILE:HD11	1.95	0.47
4:AD:159:ARG:HH11	4:AD:159:ARG:HG3	1.77	0.47
5:AE:20:GLN:NE2	5:AE:25:ARG:CZ	2.77	0.47
5:AE:45:PHE:CE1	5:AE:129:ILE:HD11	2.49	0.47
6:AF:77:ARG:HH11	6:AF:77:ARG:HG2	1.80	0.47
12:AL:24:VAL:CG1	12:AL:27:LEU:HD13	2.41	0.47
16:AP:45:THR:O	16:AP:47:ASP:N	2.47	0.47
19:AS:22:LEU:HD11	19:AS:28:LYS:O	2.14	0.47
20:AT:45:GLN:HB2	20:AT:91:LEU:HD22	1.97	0.47
25:AZ:171:ILE:HD12	25:AZ:171:ILE:N	2.29	0.47
25:AZ:231:ILE:HD12	25:AZ:231:ILE:N	2.29	0.47
27:B1:34:THR:CG2	27:B1:35:THR:N	2.77	0.47
27:B1:81:LYS:HZ1	36:BA:156:U:H4'	1.80	0.47
31:B5:57:VAL:O	31:B5:58:LEU:HD12	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:208:C:H2'	36:BA:209:C:C6	2.48	0.47
36:BA:330:A:O2'	36:BA:331:A:C8	2.61	0.47
36:BA:654(H):G:C3'	36:BA:654(I):C:H5'	2.45	0.47
36:BA:703:U:H2'	36:BA:704:G:H5'	1.95	0.47
36:BA:1473:G:N3	36:BA:1474:C:H1'	2.29	0.47
36:BA:1754:C:OP2	52:BT:113:LYS:HE2	2.14	0.47
36:BA:2103:C:H2'	36:BA:2186:G:N2	2.29	0.47
36:BA:2133:G:C4	36:BA:2157:G:N1	2.82	0.47
36:BA:2842:G:O2'	36:BA:2843:G:H5'	2.13	0.47
37:BB:105:A:OP1	58:BZ:72:ARG:NH1	2.47	0.47
38:BC:120:MET:HA	38:BC:123:VAL:CG1	2.35	0.47
43:BH:139:GLN:C	43:BH:141:VAL:N	2.67	0.47
44:BJ:11:UNK:C	44:BJ:13:UNK:N	2.76	0.47
46:BN:22:THR:HA	46:BN:61:ARG:O	2.13	0.47
48:BP:93:GLY:O	48:BP:123:LEU:HD12	2.14	0.47
50:BR:63:ARG:HA	50:BR:80:PHE:CE2	2.49	0.47
54:BV:62:LEU:CD2	54:BV:62:LEU:N	2.76	0.47
1:CA:609:A:H2'	1:CA:610:G:C5'	2.43	0.47
1:CA:764:C:H2'	1:CA:765:G:O4'	2.14	0.47
1:CA:972:C:OP2	10:CJ:57:LYS:HG3	2.14	0.47
1:CA:1241:G:H2'	1:CA:1242:C:C5	2.48	0.47
4:CD:185:PHE:CZ	4:CD:188:LEU:HA	2.50	0.47
6:CF:67:MET:HB2	6:CF:68:PRO:HD2	1.95	0.47
9:CI:9:ARG:HG2	9:CI:14:VAL:HG13	1.96	0.47
13:CM:84:ILE:HG21	19:CS:60:VAL:CG2	2.37	0.47
17:CQ:63:ARG:O	17:CQ:65:ILE:HG13	2.13	0.47
20:CT:41:ILE:HA	20:CT:44:ALA:HB3	1.96	0.47
25:CZ:39:ASN:HA	25:CZ:41:ASN:N	2.28	0.47
32:D6:5:VAL:HB	32:D6:8:LYS:HB2	1.96	0.47
36:DA:214:G:H1'	36:DA:216:A:O2'	2.14	0.47
36:DA:221:A:C8	36:DA:266:G:C6	3.02	0.47
36:DA:291:C:H2'	36:DA:292:C:H6	1.79	0.47
36:DA:382:G:H1	36:DA:392:C:N4	2.11	0.47
36:DA:448:U:H1'	41:DF:84:VAL:CG2	2.44	0.47
36:DA:645:C:H5'	36:DA:646:A:OP1	2.14	0.47
36:DA:729:G:H5'	36:DA:730:C:H5"	1.97	0.47
36:DA:1141:U:C6	46:DN:63:THR:HB	2.49	0.47
36:DA:1503:U:H2'	36:DA:1504:C:C6	2.49	0.47
36:DA:1780:A:H8	36:DA:1780:A:H5'	1.78	0.47
36:DA:2399:G:H22	36:DA:2418:A:H1'	1.78	0.47
36:DA:2457:U:H2'	36:DA:2458:G:H5'	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2692:C:H1'	36:DA:2847:U:O2'	2.14	0.47
36:DA:2851:A:H2'	36:DA:2852:G:H8	1.79	0.47
36:DA:2889:C:H2'	36:DA:2891:G:O4'	2.14	0.47
39:DD:49:ILE:HG13	39:DD:49:ILE:O	2.14	0.47
40:DE:47:VAL:HG21	40:DE:86:PRO:CD	2.45	0.47
41:DF:5:ALA:HB3	41:DF:18:ARG:O	2.14	0.47
46:DN:96:GLU:CD	46:DN:96:GLU:H	2.16	0.47
48:DP:114:ILE:CG2	48:DP:130:PHE:CD2	2.97	0.47
50:DR:12:ARG:O	50:DR:17:ARG:NH2	2.43	0.47
53:DU:34:LYS:HA	53:DU:34:LYS:CE	2.42	0.47
56:DX:44:GLU:HB2	56:DX:51:VAL:HG23	1.96	0.47
58:DZ:48:PHE:O	58:DZ:52:SER:N	2.47	0.47
58:DZ:122:ARG:HD3	58:DZ:122:ARG:N	2.29	0.47
1:AA:778:G:O2'	11:AK:119:CYS:HB3	2.14	0.47
1:AA:1456:G:C2	1:AA:1457:G:H1'	2.48	0.47
1:AA:1503:A:H62	23:AX:16:A:H5'	1.79	0.47
3:AC:13:GLY:HA3	14:AN:57:ARG:HE	1.79	0.47
9:AI:88:TYR:O	9:AI:89:ASN:CB	2.60	0.47
12:AL:20:LYS:HD2	12:AL:20:LYS:N	2.26	0.47
13:AM:40:ASN:O	13:AM:43:THR:OG1	2.31	0.47
16:AP:18:ARG:HG3	16:AP:35:LYS:HE2	1.97	0.47
18:AR:67:ALA:O	18:AR:71:LYS:HG3	2.13	0.47
23:AX:20:U:O2'	23:AX:21:C:H5'	2.14	0.47
26:B0:42:GLY:O	26:B0:57:PHE:CG	2.67	0.47
27:B1:29:GLY:O	27:B1:30:VAL:O	2.31	0.47
36:BA:651:G:O2'	36:BA:652:C:H5'	2.14	0.47
36:BA:1682:G:H5'	36:BA:1762:A:HO2'	1.78	0.47
36:BA:1805:U:C2	36:BA:1813:G:N2	2.82	0.47
36:BA:1809:A:H2'	36:BA:1810:A:C8	2.49	0.47
36:BA:2101:G:H1	36:BA:2189:U:H3	1.63	0.47
36:BA:2728:U:H2'	36:BA:2729:G:C8	2.49	0.47
40:BE:11:MET:CB	40:BE:24:THR:HA	2.44	0.47
40:BE:144:ARG:HB3	40:BE:145:LYS:H	1.48	0.47
41:BF:7:TYR:HD1	41:BF:125:LEU:O	1.98	0.47
41:BF:125:LEU:N	41:BF:125:LEU:CD2	2.77	0.47
41:BF:125:LEU:HD12	41:BF:196:LEU:CD2	2.44	0.47
41:BF:147:GLY:O	41:BF:191:ARG:NH1	2.47	0.47
42:BG:10:LYS:O	42:BG:14:GLU:HG3	2.14	0.47
45:BK:5:UNK:O	45:BK:6:UNK:C	2.63	0.47
46:BN:1:MET:HE1	46:BN:3:THR:OG1	2.12	0.47
46:BN:90:MET:CE	46:BN:94:HIS:HB2	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:20:MET:HE3	47:BO:44:LYS:HE3	1.96	0.47
48:BP:79:ARG:HB3	48:BP:79:ARG:HH11	1.78	0.47
53:BU:85:LYS:HD3	53:BU:117:GLN:NE2	2.11	0.47
53:BU:111:GLU:OE1	53:BU:111:GLU:HA	2.14	0.47
56:BX:14:SER:H	56:BX:17:ALA:HB3	1.79	0.47
1:CA:332:G:H2'	1:CA:333:G:H8	1.79	0.47
1:CA:1323:G:O2'	1:CA:1324:A:H5'	2.13	0.47
2:CB:12:GLU:C	2:CB:14:GLY:N	2.67	0.47
2:CB:61:LEU:HD11	2:CB:160:ASP:HB2	1.96	0.47
3:CC:11:ARG:HH11	3:CC:11:ARG:HG2	1.77	0.47
3:CC:32:LEU:O	3:CC:35:GLU:N	2.48	0.47
4:CD:49:ARG:O	4:CD:51:PRO:CD	2.62	0.47
4:CD:127:THR:HB	4:CD:147:ALA:O	2.14	0.47
5:CE:93:PRO:HD2	8:CH:105:ARG:NH1	2.29	0.47
9:CI:53:VAL:O	9:CI:53:VAL:HG23	2.14	0.47
11:CK:57:THR:OG1	11:CK:58:PRO:HD2	2.13	0.47
20:CT:59:ALA:HA	20:CT:62:LEU:HD12	1.95	0.47
20:CT:61:SER:C	20:CT:65:LYS:HG3	2.35	0.47
25:CZ:4:GLU:HA	25:CZ:276:THR:HB	1.96	0.47
25:CZ:356:PRO:HG2	25:CZ:369:THR:O	2.14	0.47
25:CZ:388:ILE:N	25:CZ:396:GLY:O	2.46	0.47
26:D0:40:GLN:HE21	26:D0:57:PHE:HB3	1.79	0.47
26:D0:69:PHE:O	26:D0:70:GLN:HB2	2.15	0.47
32:D6:15:GLU:OE1	32:D6:18:ARG:CG	2.62	0.47
36:DA:41:C:N4	36:DA:437:G:H1	2.13	0.47
36:DA:309:G:O2'	36:DA:329:G:H2'	2.14	0.47
36:DA:527:C:O5'	36:DA:2779:U:H5	1.97	0.47
36:DA:639:U:H2'	36:DA:640:C:C5	2.49	0.47
36:DA:654(E):G:H2'	36:DA:654(F):C:H5'	1.96	0.47
36:DA:811:U:O2'	36:DA:812:C:H5'	2.15	0.47
36:DA:820:A:O2'	36:DA:821:A:H5'	2.15	0.47
36:DA:1530:C:H2'	36:DA:1531:C:C6	2.48	0.47
36:DA:1602:U:C3'	36:DA:1603:A:C5'	2.86	0.47
36:DA:2469:A:H2'	36:DA:2470:G:C5'	2.45	0.47
36:DA:2469:A:H61	36:DA:2481:G:H1'	1.79	0.47
38:DC:103:ILE:HA	38:DC:107:TRP:HB2	1.95	0.47
39:DD:35:LYS:CB	39:DD:63:ARG:HA	2.43	0.47
39:DD:160:GLY:HA2	39:DD:197:GLY:H	1.79	0.47
40:DE:93:VAL:C	40:DE:95:ILE:H	2.18	0.47
42:DG:70:VAL:O	42:DG:71:THR:HB	2.14	0.47
42:DG:83:ARG:O	42:DG:85:GLY:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:121:ASN:HB3	42:DG:124:SER:HB2	1.95	0.47
43:DH:124:GLU:HB2	43:DH:132:ARG:HG2	1.95	0.47
48:DP:6:LEU:HG	48:DP:9:ASN:HB3	1.95	0.47
48:DP:9:ASN:N	48:DP:10:PRO:CD	2.77	0.47
48:DP:71:VAL:N	48:DP:72:PRO:CD	2.77	0.47
49:DQ:133:ARG:HG2	49:DQ:134:ARG:N	2.29	0.47
51:DS:84:GLN:HA	51:DS:106:ARG:HA	1.96	0.47
51:DS:89:ARG:HH11	51:DS:89:ARG:CG	2.26	0.47
55:DW:73:ALA:HB3	55:DW:106:ILE:HD11	1.95	0.47
58:DZ:152:ALA:O	58:DZ:155:LEU:CD2	2.62	0.47
1:AA:1015:A:H2'	1:AA:1016:A:H8	1.76	0.47
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.49	0.47
3:AC:6:HIS:CD2	3:AC:8:ILE:HB	2.48	0.47
6:AF:33:TYR:HE2	6:AF:78:GLU:HG2	1.78	0.47
8:AH:121:ASP:O	8:AH:125:ARG:HB2	2.13	0.47
13:AM:11:ARG:CG	13:AM:12:ASN:N	2.77	0.47
20:AT:57:ARG:HH11	20:AT:102:GLY:HA3	1.77	0.47
20:AT:89:ARG:CD	20:AT:104:LEU:HD11	2.37	0.47
21:AU:24:ARG:O	21:AU:25:LYS:HB2	2.14	0.47
22:AV:2:C:H2'	22:AV:3:C:H5"	1.97	0.47
27:B1:8:SER:HB3	27:B1:66:HIS:CD2	2.49	0.47
29:B3:7:LYS:O	29:B3:54:VAL:HG13	2.15	0.47
36:BA:156:U:O2'	36:BA:157:U:H5'	2.14	0.47
36:BA:272(J):C:H2'	36:BA:274:G:C5'	2.43	0.47
36:BA:570:G:H2'	36:BA:2030:A:N7	2.30	0.47
36:BA:1058:G:C3'	36:BA:1059:G:H5"	2.43	0.47
36:BA:1133:U:O4	36:BA:2026:C:H1'	2.14	0.47
36:BA:1170:G:H1	36:BA:1179:C:H42	1.60	0.47
36:BA:2139:C:O2'	36:BA:2140:C:H5'	2.14	0.47
36:BA:2179:C:O2'	36:BA:2180:U:C6	2.63	0.47
36:BA:2189:U:H3'	36:BA:2190:G:C5'	2.45	0.47
36:BA:2305:A:C3'	36:BA:2306:C:H5"	2.38	0.47
36:BA:2360:A:O2'	36:BA:2361:A:O5'	2.33	0.47
36:BA:2378:A:C2	51:BS:19:LYS:HE3	2.49	0.47
36:BA:2736:G:O2'	36:BA:2737:G:H5'	2.14	0.47
38:BC:62:VAL:O	38:BC:160:ARG:HA	2.13	0.47
43:BH:139:GLN:HE21	43:BH:140:LYS:HA	1.78	0.47
46:BN:115:ARG:HA	46:BN:118:LYS:HZ2	1.75	0.47
50:BR:61:HIS:CD2	50:BR:61:HIS:C	2.87	0.47
52:BT:93:ARG:NH2	52:BT:95:ARG:HD3	2.29	0.47
54:BV:38:LEU:O	54:BV:39:LEU:HD13	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:47:VAL:O	54:BV:49:THR:N	2.48	0.47
57:BY:8:LYS:HD2	57:BY:8:LYS:N	2.29	0.47
57:BY:56:PRO:O	57:BY:58:GLY:N	2.48	0.47
58:BZ:117:LEU:HA	58:BZ:174:VAL:HA	1.96	0.47
58:BZ:150:LEU:HD23	58:BZ:150:LEU:H	1.79	0.47
1:CA:66:G:N2	1:CA:172:A:C2	2.83	0.47
1:CA:176:C:O2'	1:CA:177:C:H5'	2.14	0.47
1:CA:386:C:O2'	1:CA:387:U:H5'	2.14	0.47
1:CA:417:C:O2'	1:CA:418:C:H5'	2.14	0.47
1:CA:475:G:O2'	1:CA:476:G:H5'	2.14	0.47
1:CA:685:G:N2	1:CA:686:U:H3	2.13	0.47
1:CA:686:U:H2'	1:CA:687:A:C8	2.49	0.47
1:CA:782:A:C2'	1:CA:783:C:H5'	2.45	0.47
1:CA:858:G:H5"	1:CA:858:G:C8	2.42	0.47
1:CA:1360:A:O2'	1:CA:1361:G:H5'	2.14	0.47
1:CA:1440:C:H42	1:CA:1461:G:H1	1.62	0.47
1:CA:1499:A:H1'	1:CA:1520:G:H5'	1.97	0.47
2:CB:39:ILE:HG22	2:CB:40:HIS:N	2.29	0.47
2:CB:239:VAL:O	2:CB:240:GLN:CB	2.63	0.47
3:CC:191:THR:C	3:CC:193:TYR:H	2.17	0.47
4:CD:110:PHE:O	4:CD:161:ASN:HB3	2.14	0.47
5:CE:71:LEU:HD11	5:CE:113:ALA:O	2.14	0.47
12:CL:32:PHE:CD1	12:CL:84:LEU:HD21	2.49	0.47
13:CM:73:GLU:O	13:CM:74:VAL:C	2.53	0.47
15:CO:26:GLU:HA	15:CO:81:LEU:CD2	2.44	0.47
16:CP:53:VAL:HG23	16:CP:54:GLU:H	1.77	0.47
17:CQ:65:ILE:HB	17:CQ:69:LYS:HB3	1.97	0.47
18:CR:59:SER:N	18:CR:62:GLU:OE1	2.48	0.47
21:CU:5:ASP:HB3	21:CU:8:THR:OG1	2.14	0.47
22:CW:7:A:C5	22:CW:49:C:H5	2.32	0.47
25:CZ:136:ASN:ND2	60:CZ:501:GDP:C5	2.81	0.47
25:CZ:400:VAL:HG12	25:CZ:401:THR:N	2.29	0.47
31:D5:42:PRO:O	31:D5:43:HIS:HB2	2.15	0.47
36:DA:99:U:C4'	36:DA:102:G:H1'	2.40	0.47
36:DA:272(B):G:H2'	36:DA:272(C):G:C8	2.49	0.47
36:DA:611:C:H2'	36:DA:612:C:C6	2.50	0.47
36:DA:1192:G:C2'	36:DA:1193:G:H5'	2.45	0.47
36:DA:1314:C:H5'	36:DA:1314:C:H6	1.79	0.47
36:DA:1496:A:C8	36:DA:1498:C:N3	2.82	0.47
36:DA:1541:G:H3'	36:DA:1541:G:OP2	2.14	0.47
36:DA:1754:C:P	52:DT:96:ARG:HH12	2.37	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1946:U:H2'	36:DA:1947:C:C6	2.49	0.47
36:DA:2093:G:C6	36:DA:2225:A:C8	3.02	0.47
36:DA:2125:G:H4'	38:DC:37:PHE:HE2	1.79	0.47
36:DA:2761:G:C2'	36:DA:2762:G:C5'	2.89	0.47
36:DA:2855:C:O2'	36:DA:2856:C:H5'	2.14	0.47
37:DB:75:G:O2'	58:DZ:27:VAL:HG23	2.14	0.47
41:DF:78:ILE:C	41:DF:80:ALA:H	2.17	0.47
41:DF:165:ARG:HG3	41:DF:165:ARG:NH1	2.29	0.47
46:DN:40:PRO:HB3	53:DU:68:ALA:HB2	1.95	0.47
46:DN:90:MET:CE	46:DN:94:HIS:HB2	2.45	0.47
55:DW:107:LEU:HD12	55:DW:107:LEU:H	1.77	0.47
57:DY:17:SER:HB2	57:DY:71:LYS:HE2	1.96	0.47
57:DY:78:ALA:CB	57:DY:81:LYS:HE3	2.44	0.47
1:AA:63:C:C2'	1:AA:64:G:H5'	2.42	0.47
1:AA:160:A:O2'	1:AA:161:A:H5'	2.15	0.47
1:AA:1126:U:H5	1:AA:1127:G:C5	2.32	0.47
1:AA:1310:G:H2'	1:AA:1311:G:C8	2.49	0.47
1:AA:1321:C:C3'	1:AA:1322:C:H5"	2.42	0.47
1:AA:1421:G:H2'	1:AA:1422:G:O4'	2.13	0.47
3:AC:65:ALA:O	3:AC:100:ALA:O	2.33	0.47
4:AD:114:ARG:NH1	4:AD:114:ARG:CG	2.75	0.47
12:AL:43:VAL:HG22	12:AL:55:VAL:CG1	2.44	0.47
12:AL:47:LYS:HD3	23:AX:24:A:OP1	2.14	0.47
12:AL:84:LEU:HB2	12:AL:105:TYR:CE2	2.50	0.47
16:AP:40:ASP:N	16:AP:48:TRP:O	2.45	0.47
16:AP:53:VAL:HG23	16:AP:54:GLU:N	2.27	0.47
17:AQ:52:LYS:H	17:AQ:52:LYS:CD	2.26	0.47
20:AT:100:ILE:HG22	20:AT:102:GLY:N	2.24	0.47
32:B6:7:ILE:HG22	32:B6:27:LYS:HZ2	1.79	0.47
36:BA:893:C:H2'	36:BA:894:C:C6	2.48	0.47
36:BA:1351:C:H2'	36:BA:1352:U:O4'	2.15	0.47
36:BA:2491:U:C5'	36:BA:2570:G:H5"	2.32	0.47
38:BC:192:PHE:O	38:BC:192:PHE:CG	2.66	0.47
39:BD:257:LEU:HD23	39:BD:257:LEU:C	2.35	0.47
40:BE:144:ARG:O	40:BE:148:GLY:HA2	2.14	0.47
41:BF:10:PRO:HG2	41:BF:13:SER:OG	2.15	0.47
41:BF:25:PRO:HD3	41:BF:118:ALA:HB3	1.97	0.47
41:BF:112:MET:O	41:BF:115:ALA:HB3	2.14	0.47
44:BJ:56:UNK:HA	44:BJ:83:UNK:HA	1.95	0.47
48:BP:23:PRO:HB2	48:BP:33:ARG:NE	2.28	0.47
51:BS:99:LYS:HB3	51:BS:99:LYS:HZ2	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BU:92:ARG:O	53:BU:94:ASN:N	2.47	0.47
55:BW:43:GLY:O	55:BW:47:VAL:HB	2.14	0.47
55:BW:70:TYR:HD1	55:BW:108:GLY:O	1.98	0.47
56:BX:10:ALA:O	56:BX:28:PHE:CB	2.62	0.47
57:BY:9:LYS:HB2	57:BY:9:LYS:NZ	2.21	0.47
1:CA:198:G:C6	1:CA:220:G:C2	3.03	0.47
1:CA:254:G:OP1	17:CQ:67:LYS:O	2.32	0.47
1:CA:1054:C:N4	24:CY:34:C:N1	2.62	0.47
1:CA:1348:U:H4'	9:CI:120:ARG:HD2	1.96	0.47
1:CA:1397:C:OP2	5:CE:24:ARG:NH2	2.47	0.47
1:CA:1431:C:O2	1:CA:1431:C:O5'	2.32	0.47
4:CD:163:GLU:C	4:CD:165:MET:H	2.18	0.47
4:CD:173:TRP:CD1	4:CD:174:LEU:HG	2.50	0.47
5:CE:144:THR:N	5:CE:147:ASP:OD1	2.48	0.47
15:CO:48:LYS:HA	15:CO:48:LYS:HD3	1.72	0.47
16:CP:5:ARG:HB2	16:CP:6:LEU:H	1.57	0.47
16:CP:52:ASP:OD2	16:CP:55:ARG:HG3	2.15	0.47
25:CZ:21:ASP:OD1	25:CZ:21:ASP:O	2.33	0.47
25:CZ:143:ASP:CB	25:CZ:146:LEU:HB2	2.43	0.47
26:D0:27:GLU:OE2	36:DA:856:C:H1'	2.15	0.47
30:D4:29:PRO:O	30:D4:31:ILE:HD13	2.13	0.47
32:D6:9:LEU:HD13	32:D6:10:LEU:O	2.15	0.47
36:DA:269:U:H2'	36:DA:269:U:O2	2.14	0.47
36:DA:382:G:O2'	36:DA:383:U:H5'	2.15	0.47
36:DA:452:G:N3	36:DA:457:A:H2	2.13	0.47
36:DA:479:A:N1	36:DA:506:G:N2	2.62	0.47
36:DA:1323:U:P	55:DW:84:ARG:HE	2.37	0.47
36:DA:1436:G:H1'	36:DA:1477:A:O2'	2.14	0.47
36:DA:1649:G:C6	36:DA:2009:G:C6	3.02	0.47
36:DA:2373:G:H2'	36:DA:2374:C:H6	1.76	0.47
37:DB:34:U:H2'	37:DB:44:G:O6	2.15	0.47
38:DC:180:PHE:N	38:DC:180:PHE:CD1	2.82	0.47
38:DC:195:ALA:O	38:DC:198:ALA:HB3	2.14	0.47
39:DD:27:THR:HG23	39:DD:27:THR:O	2.14	0.47
40:DE:52:LEU:CD2	40:DE:75:VAL:HB	2.42	0.47
47:DO:49:ARG:HB2	47:DO:50:GLY:H	1.49	0.47
48:DP:114:ILE:O	48:DP:114:ILE:HG23	2.15	0.47
48:DP:127:ALA:HB3	48:DP:130:PHE:CZ	2.49	0.47
49:DQ:22:LYS:HG2	49:DQ:22:LYS:O	2.13	0.47
50:DR:27:SER:O	50:DR:30:THR:HB	2.15	0.47
50:DR:75:LEU:HD13	50:DR:75:LEU:C	2.35	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:91:ARG:C	52:DT:93:ARG:H	2.18	0.47
53:DU:92:ARG:NH1	53:DU:94:ASN:ND2	2.61	0.47
55:DW:4:LYS:HD3	55:DW:6:ILE:HD11	1.95	0.47
1:AA:371:G:H21	1:AA:373:A:N6	2.13	0.47
1:AA:537:G:H2'	1:AA:538:G:C8	2.49	0.47
1:AA:602:A:H2'	1:AA:603:U:C6	2.49	0.47
2:AB:60:ASP:O	2:AB:61:LEU:C	2.53	0.47
2:AB:126:GLU:HA	2:AB:129:GLU:CG	2.44	0.47
2:AB:213:LEU:HD23	2:AB:213:LEU:C	2.35	0.47
4:AD:129:ASN:H	4:AD:129:ASN:HD22	1.62	0.47
7:AG:57:GLU:HB2	7:AG:60:LYS:HB3	1.97	0.47
13:AM:84:ILE:HB	19:AS:74:PHE:CD1	2.48	0.47
18:AR:40:LEU:C	18:AR:42:ARG:N	2.67	0.47
22:AW:43:C:H3'	22:AW:44:G:H8	1.79	0.47
25:AZ:164:PRO:O	25:AZ:166:ASP:N	2.48	0.47
25:AZ:361:MET:HE2	25:AZ:363:MET:HG3	1.96	0.47
36:BA:363(F):A:HO2'	36:BA:364:C:H5	1.59	0.47
36:BA:536:A:H4'	53:BU:57:PHE:CZ	2.49	0.47
36:BA:733:G:C8	36:BA:761:A:N1	2.82	0.47
36:BA:1779:U:C5	36:BA:1784:A:N7	2.73	0.47
36:BA:2056:G:H2'	36:BA:2056:G:N3	2.28	0.47
36:BA:2100:G:H2'	36:BA:2101:G:H8	1.74	0.47
36:BA:2110:G:N2	36:BA:2178:C:C5	2.76	0.47
36:BA:2110:G:C2	36:BA:2178:C:H5	2.32	0.47
36:BA:2121:G:H2'	36:BA:2122:U:O4'	2.14	0.47
36:BA:2485:G:H5"	49:BQ:46:GLN:NE2	2.15	0.47
38:BC:68:LEU:HD11	38:BC:161:ILE:CG2	2.38	0.47
40:BE:197:ILE:HD11	40:BE:199:ARG:NH2	2.27	0.47
43:BH:52:VAL:HB	43:BH:69:ARG:HD2	1.95	0.47
43:BH:126:PRO:O	43:BH:127:GLU:CG	2.63	0.47
46:BN:3:THR:CG2	46:BN:4:TYR:H	2.26	0.47
53:BU:32:PHE:CB	53:BU:36:ARG:HH12	2.26	0.47
58:BZ:26:GLY:HA2	58:BZ:85:HIS:CD2	2.49	0.47
1:CA:336:C:O2'	1:CA:337:C:H5'	2.14	0.47
1:CA:744:C:H2'	1:CA:745:C:H6	1.79	0.47
1:CA:1344:C:O2'	1:CA:1345:U:H5'	2.14	0.47
2:CB:71:VAL:HG13	2:CB:93:VAL:CG1	2.45	0.47
3:CC:25:GLY:C	3:CC:27:LYS:N	2.68	0.47
3:CC:44:GLU:O	3:CC:45:LYS:O	2.32	0.47
4:CD:12:CYS:CA	4:CD:19:LEU:HD13	2.44	0.47
4:CD:127:THR:HA	4:CD:132:ARG:HA	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:110:ALA:O	8:CH:112:LEU:HD23	2.14	0.47
12:CL:109:GLY:HA3	12:CL:122:THR:H	1.78	0.47
13:CM:44:ARG:HB2	13:CM:47:ASP:OD1	2.14	0.47
19:CS:6:LYS:HG2	19:CS:7:LYS:HE3	1.97	0.47
20:CT:50:GLU:HG3	20:CT:100:ILE:HD11	1.94	0.47
20:CT:84:LEU:C	20:CT:86:ARG:H	2.18	0.47
24:CY:51:G:H5"	25:CZ:337:GLY:O	2.14	0.47
25:CZ:150:VAL:CG1	25:CZ:151:GLU:N	2.77	0.47
26:D0:53:MET:HA	26:D0:59:LEU:HD23	1.97	0.47
31:D5:43:HIS:HE1	36:DA:2883:A:O3'	1.96	0.47
36:DA:563:G:N2	36:DA:564:C:C2	2.83	0.47
36:DA:1069:A:H1'	36:DA:1070:A:P	2.54	0.47
36:DA:1417:C:H2'	36:DA:1418:G:O4'	2.15	0.47
36:DA:1543:C:C3'	36:DA:1544:A:C5'	2.89	0.47
37:DB:3:C:N4	37:DB:118:G:H1	2.07	0.47
37:DB:28:C:O2'	37:DB:29:A:H5'	2.14	0.47
39:DD:112:GLN:HB2	39:DD:115:GLN:HE21	1.80	0.47
39:DD:162:SER:O	39:DD:178:PRO:HG3	2.14	0.47
40:DE:36:ARG:HG2	40:DE:36:ARG:NH1	2.27	0.47
40:DE:116:VAL:CG2	40:DE:122:PHE:CG	2.96	0.47
48:DP:113:LYS:O	48:DP:114:ILE:HB	2.14	0.47
50:DR:2:ARG:O	50:DR:2:ARG:NH1	2.47	0.47
53:DU:91:ASP:O	53:DU:92:ARG:HB3	2.14	0.47
53:DU:92:ARG:O	53:DU:93:LYS:C	2.52	0.47
54:DV:100:ARG:O	54:DV:101:GLY:OXT	2.32	0.47
56:DX:51:VAL:HG12	56:DX:52:VAL:N	2.29	0.47
1:AA:59:A:H3'	1:AA:331:G:N2	2.19	0.47
1:AA:186:C:O4'	20:AT:81:LYS:HE2	2.14	0.47
1:AA:189(D):C:O2	1:AA:189(H):G:C6	2.68	0.47
1:AA:189(H):G:O2'	1:AA:189(I):G:O5'	2.32	0.47
1:AA:676:A:H2'	1:AA:677:U:H6	1.79	0.47
1:AA:739:C:O2'	15:AO:42:HIS:ND1	2.41	0.47
1:AA:765:G:C6	1:AA:812:C:C2	3.03	0.47
1:AA:1282:C:O2'	1:AA:1283:G:H5'	2.14	0.47
1:AA:1299:A:H5"	1:AA:1299:A:N3	2.30	0.47
1:AA:1320:C:N4	19:AS:36:ARG:HG3	2.30	0.47
1:AA:1503:A:C4	23:AX:15:A:C6	3.03	0.47
2:AB:36:ARG:O	2:AB:37:ASN:HB2	2.15	0.47
2:AB:80:ILE:HD12	2:AB:80:ILE:H	1.78	0.47
2:AB:200:ILE:HG22	2:AB:201:ILE:N	2.30	0.47
3:AC:47:LEU:HD11	3:AC:76:VAL:HB	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:100:ARG:CG	4:AD:102:ASP:OD1	2.63	0.47
5:AE:12:LEU:HD13	5:AE:12:LEU:O	2.15	0.47
7:AG:20:ASP:OD1	7:AG:22:LEU:N	2.47	0.47
7:AG:26:PHE:CD1	7:AG:101:LEU:HD22	2.49	0.47
10:AJ:6:ILE:HD11	10:AJ:72:VAL:HB	1.97	0.47
11:AK:79:SER:OG	11:AK:106:LYS:HD2	2.15	0.47
11:AK:126:ARG:HG2	11:AK:126:ARG:NH1	2.30	0.47
12:AL:75:HIS:HA	12:AL:102:ARG:HH12	1.80	0.47
14:AN:12:ARG:C	14:AN:14:PRO:HD2	2.33	0.47
15:AO:18:PHE:O	15:AO:21:ASP:HB3	2.15	0.47
16:AP:75:ARG:HH11	16:AP:75:ARG:HG3	1.80	0.47
17:AQ:47:PRO:HG2	17:AQ:48:GLU:H	1.80	0.47
19:AS:25:LYS:HB3	19:AS:27:GLU:OE1	2.14	0.47
20:AT:92:LEU:C	20:AT:94:ALA:N	2.63	0.47
21:AU:6:ARG:CD	21:AU:15:ARG:HH11	2.22	0.47
22:AV:59:U:O2'	22:AV:60:U:O4'	2.33	0.47
22:AW:37:A:H2'	22:AW:38:A:O4'	2.14	0.47
22:AW:59:U:C6	22:AW:60:U:C6	3.02	0.47
24:AY:40:C:C3'	24:AY:41:C:H5"	2.44	0.47
25:AZ:131:ILE:HD11	25:AZ:163:PHE:CZ	2.50	0.47
25:AZ:251:ASP:O	25:AZ:267:VAL:HG12	2.15	0.47
25:AZ:349:VAL:HG21	25:AZ:374:LEU:HD22	1.96	0.47
25:AZ:397:ALA:CB	61:AZ:502:KIR:O27	2.61	0.47
28:B2:22:GLU:O	28:B2:64:LEU:HD11	2.15	0.47
28:B2:23:LYS:HA	28:B2:26:ARG:HB2	1.96	0.47
30:B4:9:LEU:HD13	30:B4:10:VAL:H	1.79	0.47
32:B6:14:THR:HG23	32:B6:16:CYS:H	1.79	0.47
36:BA:11:G:H2'	36:BA:12:U:H6	1.79	0.47
36:BA:390:A:H4'	36:BA:391:G:H5'	1.96	0.47
36:BA:611:C:H2'	36:BA:612:C:H6	1.76	0.47
36:BA:654(P):C:H2'	36:BA:654(Q):C:O4'	2.15	0.47
36:BA:666:G:H4'	48:BP:49:ARG:HH21	1.79	0.47
36:BA:833:U:H2'	36:BA:834:C:H6	1.78	0.47
36:BA:948:G:O2'	36:BA:949:C:H5'	2.15	0.47
36:BA:1092:C:C2'	36:BA:1093:G:H5'	2.45	0.47
36:BA:1249:U:H4'	53:BU:4:ALA:HB3	1.97	0.47
36:BA:1401:G:C6	36:BA:1402:C:N3	2.82	0.47
36:BA:1833:U:O2'	36:BA:1969:A:N1	2.43	0.47
36:BA:2264:C:H2'	36:BA:2265:U:H6	1.80	0.47
36:BA:2591:C:H2'	36:BA:2592:G:H8	1.76	0.47
36:BA:2777:G:C5'	36:BA:2778:A:H5'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:146:GLU:OE1	39:BD:190:TYR:HB2	2.15	0.47
39:BD:158:ALA:HB3	39:BD:161:THR:HG21	1.96	0.47
42:BG:8:LYS:O	42:BG:11:TYR:HB3	2.14	0.47
42:BG:16:ARG:N	42:BG:17:PRO:CD	2.78	0.47
43:BH:85:LYS:HD3	43:BH:133:VAL:HB	1.96	0.47
44:BJ:85:UNK:HG3	44:BJ:86:UNK:N	2.27	0.47
46:BN:56:ASN:C	46:BN:57:ALA:O	2.53	0.47
47:BO:1:MET:CG	47:BO:67:LYS:HG2	2.40	0.47
48:BP:84:ASN:HA	48:BP:116:GLY:CA	2.44	0.47
49:BQ:140:ALA:HB1	58:BZ:99:TYR:CZ	2.49	0.47
49:BQ:141:GLN:HG2	58:BZ:72:ARG:NH2	2.30	0.47
50:BR:66:VAL:C	50:BR:68:ARG:H	2.18	0.47
52:BT:29:ARG:CD	52:BT:30:VAL:HG13	2.44	0.47
52:BT:129:ARG:HG3	52:BT:129:ARG:O	2.14	0.47
55:BW:92:ARG:O	55:BW:93:ALA:O	2.32	0.47
57:BY:22:GLY:O	57:BY:23:ARG:O	2.32	0.47
57:BY:44:ILE:HD12	57:BY:44:ILE:N	2.29	0.47
1:CA:127:G:N2	17:CQ:61:GLU:OE2	2.47	0.47
1:CA:272:C:O2'	1:CA:273:A:H5'	2.15	0.47
1:CA:542:G:O2'	1:CA:543:C:H5'	2.14	0.47
1:CA:599:C:O2'	1:CA:600:C:H5'	2.15	0.47
1:CA:792:A:H4'	1:CA:793:U:O5'	2.14	0.47
1:CA:913:A:H4'	1:CA:914:A:H4'	1.96	0.47
1:CA:945:G:C2	1:CA:946:A:C8	3.03	0.47
1:CA:955:U:H2'	1:CA:956:U:H6	1.79	0.47
1:CA:1030:C:H5	1:CA:1030(A):G:H8	1.62	0.47
1:CA:1039:C:H6	1:CA:1040:U:H5	1.63	0.47
1:CA:1054:C:H2'	1:CA:1054:C:O2	2.14	0.47
1:CA:1112:C:O2'	3:CC:179:ARG:HB3	2.14	0.47
1:CA:1152:A:O2'	1:CA:1153:C:H5'	2.15	0.47
1:CA:1272:G:H2'	1:CA:1273:G:O4'	2.15	0.47
3:CC:52:LEU:HD13	3:CC:68:VAL:HG13	1.97	0.47
3:CC:130:VAL:HG12	3:CC:134:ILE:HD11	1.97	0.47
4:CD:202:LEU:HD23	4:CD:202:LEU:HA	1.71	0.47
6:CF:96:PRO:HB3	18:CR:30:ASP:CG	2.35	0.47
7:CG:18:TYR:HB3	7:CG:59:LEU:HD13	1.97	0.47
7:CG:23:VAL:O	7:CG:27:ILE:HG13	2.14	0.47
7:CG:26:PHE:HE1	7:CG:104:LEU:HB3	1.79	0.47
12:CL:17:LYS:HD3	12:CL:18:VAL:H	1.79	0.47
13:CM:88:ARG:HG2	13:CM:88:ARG:NH1	2.19	0.47
16:CP:5:ARG:NH1	16:CP:5:ARG:HG3	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:6:LEU:HD11	16:CP:19:ILE:CD1	2.45	0.47
16:CP:71:ARG:HA	16:CP:74:LEU:HD12	1.95	0.47
18:CR:36:ASN:OD1	18:CR:36:ASN:O	2.31	0.47
20:CT:53:LEU:HD22	20:CT:100:ILE:O	2.15	0.47
20:CT:100:ILE:HD12	20:CT:100:ILE:N	2.30	0.47
22:CV:35:A:N1	23:CX:20:U:C2	2.82	0.47
22:CW:37:A:H3'	22:CW:38:A:H8	1.78	0.47
22:CW:71:G:H2'	22:CW:71:G:N3	2.29	0.47
23:CX:11:U:H2'	23:CX:12:A:OP1	2.13	0.47
25:CZ:126:VAL:HG12	25:CZ:126:VAL:O	2.15	0.47
25:CZ:199:ILE:CG2	25:CZ:199:ILE:O	2.63	0.47
25:CZ:241:ARG:HB2	25:CZ:285:ASN:HD21	1.79	0.47
27:D1:43:TYR:HB2	36:DA:2230:G:O3'	2.15	0.47
28:D2:68:ARG:CB	28:D2:68:ARG:NH1	2.76	0.47
30:D4:40:HIS:CG	30:D4:41:PRO:HA	2.49	0.47
31:D5:3:LYS:O	31:D5:4:HIS:O	2.32	0.47
31:D5:43:HIS:HE1	36:DA:2884:U:OP2	1.98	0.47
34:D8:25:MET:HG2	48:DP:64:LYS:HB2	1.95	0.47
36:DA:35:G:H2'	36:DA:36:G:H8	1.78	0.47
36:DA:84:A:O3'	36:DA:85:G:O4'	2.33	0.47
36:DA:223:A:C5	36:DA:422:A:C8	3.03	0.47
36:DA:271(H):G:H1	36:DA:271(P):C:N4	2.12	0.47
36:DA:298:G:H5'	36:DA:299:A:OP1	2.14	0.47
36:DA:360:G:H2'	36:DA:361:G:H8	1.79	0.47
36:DA:407:G:H2'	36:DA:408:G:C8	2.49	0.47
36:DA:535:C:O2'	36:DA:536:A:H5'	2.14	0.47
36:DA:559:G:N2	53:DU:49:HIS:CE1	2.83	0.47
36:DA:593:G:H1	36:DA:664:C:N4	2.09	0.47
36:DA:603:A:C2	36:DA:604:G:H1'	2.50	0.47
36:DA:847:U:OP2	36:DA:928:G:O6	2.32	0.47
36:DA:1322:A:H2'	36:DA:1323:U:C6	2.50	0.47
36:DA:1394:U:H4'	36:DA:1603:A:H4'	1.97	0.47
36:DA:1773:A:C2'	36:DA:1774:C:H5'	2.44	0.47
36:DA:1821:A:H2'	36:DA:1822:G:C8	2.49	0.47
36:DA:2000:G:O2'	36:DA:2001:A:H5'	2.14	0.47
36:DA:2083:G:H2'	36:DA:2084:C:C6	2.50	0.47
36:DA:2127:G:H4'	38:DC:37:PHE:CD1	2.49	0.47
36:DA:2200:C:N4	36:DA:2223:G:H1	2.13	0.47
36:DA:2229:C:O2'	36:DA:2230:G:H5'	2.14	0.47
36:DA:2314:C:H2'	36:DA:2315:G:H8	1.78	0.47
37:DB:65:C:N4	37:DB:109:C:H2'	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DB:82:G:O2'	37:DB:83:G:H5'	2.15	0.47
38:DC:87:GLU:HG2	38:DC:94:VAL:CG2	2.41	0.47
39:DD:70:TRP:O	39:DD:71:ASP:C	2.53	0.47
39:DD:181:GLU:HG3	39:DD:272:ALA:O	2.15	0.47
39:DD:211:ARG:HA	39:DD:214:TRP:CD2	2.49	0.47
40:DE:6:GLY:HA2	40:DE:27:LEU:O	2.15	0.47
40:DE:149:ARG:NH1	40:DE:149:ARG:HG3	2.29	0.47
41:DF:22:ALA:O	41:DF:26:ALA:HB2	2.15	0.47
41:DF:202:PHE:CE1	41:DF:206:ILE:HG13	2.50	0.47
42:DG:7:LEU:HD11	42:DG:104:GLU:HA	1.96	0.47
42:DG:51:ARG:NH2	42:DG:52:ILE:HD13	2.30	0.47
46:DN:10:GLU:CG	46:DN:11:PRO:HD2	2.45	0.47
47:DO:64:ARG:O	47:DO:64:ARG:HG3	2.13	0.47
48:DP:126:VAL:HG22	48:DP:145:PRO:CG	2.42	0.47
52:DT:27:THR:OG1	52:DT:28:VAL:N	2.46	0.47
52:DT:94:ALA:C	52:DT:96:ARG:N	2.68	0.47
52:DT:106:SER:O	52:DT:107:ASP:CB	2.62	0.47
54:DV:81:TYR:CD1	54:DV:81:TYR:O	2.68	0.47
55:DW:25:ARG:NH1	55:DW:25:ARG:HB2	2.30	0.47
56:DX:89:ILE:O	56:DX:93:GLU:HG3	2.14	0.47
57:DY:46:LYS:HG2	57:DY:47:LYS:N	2.30	0.47
58:DZ:91:LEU:HD21	58:DZ:96:VAL:HG11	1.96	0.47
1:AA:367:U:C5'	1:AA:394:G:H21	2.25	0.47
1:AA:495:A:O2'	1:AA:496:A:P	2.73	0.47
1:AA:980:C:C2'	1:AA:981:U:H5'	2.45	0.47
1:AA:1147:C:O2	9:AI:16:ARG:CZ	2.63	0.47
1:AA:1325:C:OP1	21:AU:15:ARG:NH2	2.48	0.47
1:AA:1512:U:H2'	1:AA:1513:A:C8	2.49	0.47
2:AB:8:LYS:HE2	2:AB:217:ARG:HH22	1.79	0.47
6:AF:10:LEU:HD11	6:AF:61:LEU:HD11	1.96	0.47
16:AP:44:THR:O	16:AP:45:THR:HB	2.14	0.47
28:B2:29:LYS:O	28:B2:33:MET:N	2.37	0.47
32:B6:15:GLU:CG	32:B6:18:ARG:CZ	2.93	0.47
32:B6:35:GLU:HB3	32:B6:51:GLU:HB2	1.94	0.47
34:B8:17:THR:HG23	34:B8:21:LYS:HB2	1.95	0.47
36:BA:238:C:C4	36:BA:239:U:C5	3.03	0.47
36:BA:657:U:H2'	36:BA:658:C:C6	2.50	0.47
36:BA:860:U:H1'	36:BA:2268:A:H5'	1.97	0.47
36:BA:888:C:C2'	36:BA:889:C:H4'	2.39	0.47
36:BA:1638:C:H2'	36:BA:1639:U:O4'	2.14	0.47
36:BA:2157:G:C8	36:BA:2157:G:C3'	2.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2526:G:H5'	36:BA:2742:C:O2'	2.15	0.47
36:BA:2807:G:H1	36:BA:2893:G:H1	1.62	0.47
36:BA:2843:G:N2	36:BA:2875:C:C2	2.82	0.47
39:BD:43:ARG:NH1	39:BD:49:ILE:HG23	2.29	0.47
40:BE:38:THR:HG23	40:BE:39:PRO:HD2	1.95	0.47
41:BF:10:PRO:CG	41:BF:13:SER:OG	2.62	0.47
47:BO:28:SER:O	47:BO:29:ASN:HB3	2.14	0.47
48:BP:85:LEU:CD2	48:BP:85:LEU:H	2.28	0.47
48:BP:101:VAL:HA	48:BP:105:LEU:O	2.15	0.47
49:BQ:12:GLN:NE2	49:BQ:72:LYS:HG3	2.29	0.47
49:BQ:109:VAL:CG1	49:BQ:113:GLN:HB2	2.45	0.47
53:BU:90:VAL:CG2	54:BV:47:VAL:HG21	2.43	0.47
1:CA:67:C:H2'	1:CA:68:G:H8	1.79	0.47
1:CA:96:U:H2'	1:CA:97:G:C8	2.50	0.47
1:CA:877:C:OP1	8:CH:88:LYS:NZ	2.47	0.47
1:CA:1296:C:H4'	1:CA:1302:U:C4	2.50	0.47
1:CA:1349:A:OP1	9:CI:118:LYS:O	2.33	0.47
4:CD:52:SER:O	4:CD:53:ASP:C	2.54	0.47
4:CD:85:LYS:HZ3	4:CD:92:VAL:HG13	1.79	0.47
4:CD:89:THR:O	4:CD:90:GLY:C	2.53	0.47
4:CD:112:VAL:HG12	4:CD:116:GLN:OE1	2.14	0.47
6:CF:82:ARG:HB2	6:CF:85:VAL:CG2	2.44	0.47
8:CH:83:ILE:HG13	8:CH:137:VAL:HG22	1.97	0.47
10:CJ:54:PHE:CZ	10:CJ:55:LYS:HD2	2.49	0.47
17:CQ:11:VAL:HG23	17:CQ:20:THR:HB	1.95	0.47
18:CR:42:ARG:HG3	18:CR:42:ARG:NH1	2.29	0.47
22:CV:44:G:H2'	22:CV:45:U:C5'	2.39	0.47
25:CZ:14:VAL:O	25:CZ:79:HIS:HD2	1.97	0.47
25:CZ:198:LYS:O	25:CZ:198:LYS:CD	2.62	0.47
26:D0:23:VAL:HG22	26:D0:38:VAL:HG12	1.97	0.47
26:D0:27:GLU:CD	36:DA:856:C:H1'	2.35	0.47
27:D1:34:THR:CG2	27:D1:37:ILE:HG23	2.44	0.47
27:D1:53:VAL:O	27:D1:54:ALA:HB3	2.14	0.47
30:D4:31:ILE:HG22	30:D4:31:ILE:O	2.15	0.47
33:D7:18:PHE:CE2	36:DA:117:G:H4'	2.50	0.47
36:DA:11:G:N2	36:DA:2627:G:H5"	2.23	0.47
36:DA:1019:U:H2'	36:DA:1021:A:C2	2.50	0.47
36:DA:1638:C:O2'	36:DA:1639:U:H5'	2.15	0.47
36:DA:1798:U:H5'	39:DD:259:THR:HB	1.97	0.47
36:DA:1984:G:O2'	36:DA:1985:G:H5'	2.15	0.47
36:DA:2157:G:H3'	36:DA:2157:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2389:G:H5”	36:DA:2390:U:H5’	1.97	0.47
37:DB:44:G:H1’	37:DB:47:C:N4	2.30	0.47
38:DC:196:LEU:O	38:DC:198:ALA:N	2.48	0.47
39:DD:28:GLU:N	39:DD:29:PRO:HD2	2.25	0.47
39:DD:34:VAL:O	39:DD:36:PRO:CD	2.63	0.47
39:DD:73:VAL:HG13	39:DD:120:GLY:HA2	1.97	0.47
40:DE:16:ARG:HD3	40:DE:21:VAL:HG11	1.97	0.47
40:DE:69:LYS:HE3	40:DE:88:GLY:O	2.15	0.47
40:DE:120:TRP:CE3	40:DE:120:TRP:HA	2.49	0.47
48:DP:52:GLU:OE1	48:DP:52:GLU:CA	2.60	0.47
49:DQ:47:ILE:HD12	49:DQ:70:PRO:HD3	1.96	0.47
49:DQ:97:VAL:HG21	49:DQ:103:MET:HE2	1.97	0.47
49:DQ:103:MET:CE	49:DQ:127:ILE:HD11	2.45	0.47
52:DT:28:VAL:HG13	52:DT:46:GLU:CA	2.23	0.47
52:DT:52:ILE:HG23	52:DT:61:PHE:HB3	1.97	0.47
53:DU:61:TRP:CZ3	53:DU:94:ASN:HB2	2.50	0.47
54:DV:19:LYS:HG2	54:DV:94:LEU:CA	2.45	0.47
55:DW:24:ILE:CG2	55:DW:36:LEU:HD21	2.43	0.47
57:DY:31:LEU:HB2	57:DY:32:PRO:CA	2.43	0.47
1:AA:345:C:H5’	52:BT:41:ARG:NE	2.29	0.47
1:AA:490:G:H2’	1:AA:491:G:H8	1.79	0.47
1:AA:542:G:H5’	4:AD:41:GLY:HA2	1.96	0.47
1:AA:1139:G:H4’	1:AA:1140:C:O5’	2.15	0.47
1:AA:1310:G:H2’	1:AA:1311:G:H8	1.79	0.47
2:AB:97:TRP:HZ3	2:AB:176:GLU:OE2	1.98	0.47
3:AC:82:GLU:H	3:AC:82:GLU:CD	2.16	0.47
4:AD:8:VAL:C	4:AD:10:ARG:H	2.17	0.47
4:AD:64:LEU:O	4:AD:67:ILE:HB	2.15	0.47
5:AE:145:LYS:HA	8:AH:107:LEU:HD22	1.97	0.47
19:AS:62:ILE:HD12	19:AS:66:MET:CE	2.44	0.47
20:AT:26:ASN:HD22	20:AT:26:ASN:N	2.08	0.47
20:AT:43:LEU:HD22	20:AT:48:LYS:HG3	1.97	0.47
24:AY:67:G:H2’	24:AY:68:C:C6	2.50	0.47
25:AZ:338:TYR:O	25:AZ:353:VAL:HG23	2.15	0.47
28:B2:18:PRO:HG2	28:B2:72:ALA:C	2.35	0.47
28:B2:25:VAL:O	28:B2:29:LYS:N	2.47	0.47
28:B2:29:LYS:C	28:B2:31:GLU:N	2.68	0.47
30:B4:25:TYR:HB2	42:BG:101:ILE:HG21	1.96	0.47
31:B5:43:HIS:CD2	36:BA:2815:C:O2’	2.64	0.47
35:B9:24:TYR:O	35:B9:25:VAL:HG23	2.15	0.47
36:BA:909:A:H2’	36:BA:912:C:C5	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1137:G:O2'	36:BA:1138:G:H5'	2.15	0.47
36:BA:1614:A:N6	55:BW:93:ALA:H	2.13	0.47
36:BA:1903:G:OP2	39:BD:241:PRO:HB2	2.15	0.47
36:BA:2295:C:O2'	36:BA:2296:U:H5'	2.15	0.47
38:BC:107:TRP:CZ2	38:BC:109:ASP:HA	2.49	0.47
41:BF:57:VAL:HG21	41:BF:87:GLY:HA2	1.96	0.47
41:BF:160:ASN:ND2	41:BF:162:LEU:HB2	2.28	0.47
42:BG:27:ASN:O	42:BG:29:TRP:N	2.44	0.47
42:BG:71:THR:HG23	42:BG:72:ARG:N	2.29	0.47
42:BG:120:LEU:HB2	42:BG:179:PRO:O	2.15	0.47
46:BN:10:GLU:HG3	46:BN:11:PRO:HD2	1.97	0.47
48:BP:97:PRO:O	48:BP:98:GLU:HB2	2.14	0.47
50:BR:105:ARG:H	50:BR:105:ARG:HD2	1.79	0.47
52:BT:83:ILE:HG13	52:BT:84:GLN:N	2.29	0.47
53:BU:80:ILE:O	53:BU:80:ILE:HG22	2.15	0.47
54:BV:17:GLY:HA2	54:BV:96:ILE:O	2.14	0.47
58:BZ:100:VAL:HG23	58:BZ:126:VAL:CG2	2.44	0.47
1:CA:189(I):G:O2'	1:CA:189(J):G:H5'	2.14	0.47
1:CA:201:C:H2'	1:CA:202:U:H5"	1.97	0.47
1:CA:719:C:OP2	1:CA:720:C:N4	2.39	0.47
1:CA:908:A:H2'	1:CA:909:A:C8	2.49	0.47
1:CA:1151:A:O4'	10:CJ:39:PRO:HB2	2.14	0.47
1:CA:1304:G:C6	1:CA:1305:G:C6	3.03	0.47
1:CA:1431:C:C2'	1:CA:1432:G:H5'	2.45	0.47
1:CA:1445:C:H2'	1:CA:1446:U:O4'	2.15	0.47
2:CB:164:VAL:HG12	2:CB:165:VAL:N	2.29	0.47
3:CC:35:GLU:OE1	3:CC:95:THR:HG23	2.15	0.47
3:CC:70:VAL:CG1	3:CC:72:LYS:H	2.28	0.47
4:CD:12:CYS:SG	4:CD:19:LEU:O	2.73	0.47
4:CD:70:ILE:HG23	4:CD:74:GLN:HB2	1.96	0.47
6:CF:14:LEU:CD1	6:CF:18:GLN:HB2	2.45	0.47
6:CF:21:LEU:HD13	6:CF:21:LEU:O	2.15	0.47
7:CG:57:GLU:HB2	7:CG:60:LYS:CB	2.45	0.47
13:CM:7:VAL:HG21	42:DG:115:ARG:HG3	1.97	0.47
22:CV:76:A:H3'	36:DA:2585:U:H3	1.80	0.47
25:CZ:100:ASP:OD1	25:CZ:215:ARG:NH2	2.47	0.47
34:D8:33:ASN:HD22	36:DA:2419:U:H5"	1.77	0.47
34:D8:56:GLU:N	34:D8:56:GLU:OE1	2.48	0.47
36:DA:78:A:H2'	36:DA:79:G:H8	1.79	0.47
36:DA:523:C:H5"	36:DA:540:C:O2'	2.15	0.47
36:DA:534:U:H2'	36:DA:535:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2107:C:C1'	36:DA:2182:G:H22	2.28	0.47
36:DA:2196:C:H2'	36:DA:2197:U:C6	2.50	0.47
36:DA:2356:C:O2'	36:DA:2357:U:H5'	2.15	0.47
36:DA:2360:A:O2'	36:DA:2361:A:O5'	2.32	0.47
36:DA:2377:A:H2'	36:DA:2378:A:C8	2.49	0.47
36:DA:2651:C:O2'	36:DA:2652:C:H5'	2.15	0.47
37:DB:43:C:H3'	37:DB:44:G:C5'	2.44	0.47
38:DC:99:ILE:C	38:DC:101:GLN:N	2.68	0.47
39:DD:3:VAL:CG1	39:DD:17:THR:HB	2.44	0.47
42:DG:52:ILE:O	42:DG:54:GLU:N	2.39	0.47
42:DG:59:GLU:OE1	42:DG:138:GLN:NE2	2.46	0.47
42:DG:103:LEU:O	42:DG:103:LEU:HD23	2.14	0.47
42:DG:111:LEU:CD1	42:DG:179:PRO:HD2	2.45	0.47
43:DH:118:PRO:CG	43:DH:121:ILE:HD12	2.41	0.47
48:DP:24:GLY:O	48:DP:25:SER:CB	2.62	0.47
48:DP:83:VAL:HG23	48:DP:105:LEU:CD2	2.45	0.47
48:DP:112:LEU:H	48:DP:128:HIS:CD2	2.32	0.47
49:DQ:21:THR:CG2	49:DQ:23:GLY:O	2.63	0.47
49:DQ:21:THR:O	49:DQ:22:LYS:HB3	2.14	0.47
52:DT:72:VAL:HG12	52:DT:73:GLU:N	2.30	0.47
55:DW:47:VAL:HG12	55:DW:47:VAL:O	2.15	0.47
1:AA:269:C:H2'	1:AA:270:A:H8	1.80	0.47
1:AA:342:C:O2'	1:AA:343:U:H5'	2.15	0.47
1:AA:513:C:N4	1:AA:538:G:H1	2.13	0.47
1:AA:620:C:O2'	1:AA:621:A:H5'	2.15	0.47
1:AA:1152:A:C2'	1:AA:1153:C:H5'	2.44	0.47
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.50	0.47
1:AA:1492:A:H1'	23:AX:23:G:O2'	2.15	0.47
4:AD:13:ARG:HD2	4:AD:38:TYR:O	2.15	0.47
4:AD:34:GLU:O	4:AD:35:ARG:HB2	2.14	0.47
4:AD:52:SER:O	4:AD:56:VAL:HG23	2.14	0.47
12:AL:113:ARG:C	12:AL:114:LYS:HD2	2.36	0.47
18:AR:45:SER:O	18:AR:48:GLY:N	2.42	0.47
19:AS:78:ARG:HB2	19:AS:81:ARG:NH1	2.29	0.47
20:AT:58:LYS:O	20:AT:61:SER:HB3	2.14	0.47
25:AZ:285:ASN:HD22	25:AZ:285:ASN:HA	1.58	0.47
30:B4:22:ILE:H	30:B4:22:ILE:CD1	2.12	0.47
30:B4:37:SER:O	30:B4:38:LYS:HB3	2.14	0.47
32:B6:18:ARG:CG	32:B6:19:ARG:N	2.69	0.47
36:BA:442:G:H4'	41:BF:46:ARG:HB2	1.95	0.47
36:BA:1091:G:C6	36:BA:1092:C:N4	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1403:C:H5”	36:BA:1471:A:C1’	2.42	0.47
36:BA:1493:C:O2	36:BA:1493:C:C2’	2.62	0.47
36:BA:1504:C:O2’	36:BA:1505:C:H5’	2.15	0.47
36:BA:1644:C:O2	36:BA:1644:C:H2’	2.15	0.47
36:BA:1847:A:H3’	36:BA:1848:A:C5’	2.44	0.47
36:BA:1999:C:H4’	36:BA:2723:C:O2	2.14	0.47
36:BA:2373:G:H2’	36:BA:2374:C:C6	2.50	0.47
37:BB:87:G:C2’	37:BB:88:C:H5”	2.45	0.47
39:BD:35:LYS:HB3	39:BD:36:PRO:HD2	1.96	0.47
40:BE:36:ARG:NH2	40:BE:88:GLY:N	2.63	0.47
42:BG:41:GLN:O	42:BG:43:LEU:N	2.48	0.47
43:BH:76:VAL:C	43:BH:78:GLY:N	2.68	0.47
43:BH:157:TYR:O	43:BH:158:HIS:CG	2.68	0.47
51:BS:89:ARG:NH1	51:BS:89:ARG:CG	2.73	0.47
53:BU:92:ARG:NH1	53:BU:94:ASN:HD22	2.13	0.47
56:BX:65:ARG:HD3	56:BX:70:LEU:HD21	1.97	0.47
57:BY:7:VAL:C	57:BY:8:LYS:HD2	2.34	0.47
58:BZ:14:LYS:O	58:BZ:18:LEU:HD22	2.16	0.47
58:BZ:177:PRO:O	58:BZ:178:GLU:CB	2.50	0.47
1:CA:490:G:H2’	1:CA:491:G:H8	1.79	0.47
1:CA:718:G:C1’	11:CK:116:HIS:HA	2.45	0.47
1:CA:1069:C:C2’	1:CA:1070:U:O5’	2.63	0.47
1:CA:1279:A:O2’	1:CA:1281:U:OP2	2.30	0.47
1:CA:1317:C:C2	14:CN:16:PHE:CE1	3.03	0.47
1:CA:1437:C:N4	1:CA:1464:G:H1	2.11	0.47
2:CB:124:SER:OG	2:CB:126:GLU:HG3	2.14	0.47
7:CG:57:GLU:HB3	7:CG:58:PRO:HD2	1.96	0.47
7:CG:118:VAL:O	7:CG:121:ALA:HB3	2.15	0.47
10:CJ:86:MET:O	10:CJ:86:MET:HG2	2.14	0.47
15:CO:8:LYS:O	15:CO:12:ILE:HG13	2.14	0.47
16:CP:34:GLU:HG2	16:CP:35:LYS:N	2.29	0.47
19:CS:58:VAL:HG11	19:CS:75:ALA:CB	2.45	0.47
24:CY:73:G:O2’	25:CZ:64:ASN:OD1	2.30	0.47
32:D6:15:GLU:OE2	32:D6:41:PRO:CG	2.63	0.47
32:D6:33:LYS:HA	32:D6:33:LYS:CE	2.43	0.47
34:D8:37:SER:O	34:D8:41:ILE:HG22	2.15	0.47
36:DA:28:A:H2	53:DU:11:ARG:HH22	1.62	0.47
36:DA:82:G:H8	36:DA:82:G:OP2	1.97	0.47
36:DA:118:A:C8	36:DA:119:A:C8	3.03	0.47
36:DA:275:G:H2’	36:DA:275:G:N3	2.29	0.47
36:DA:604:G:O2’	36:DA:605:C:H5’	2.16	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:943:U:OP2	48:DP:38:GLN:NE2	2.48	0.47
36:DA:1054:A:O2'	36:DA:1055:G:H5'	2.15	0.47
36:DA:1070:A:H5'	36:DA:1072:C:OP2	2.15	0.47
36:DA:1133:U:O2	36:DA:1137:G:H5"	2.14	0.47
36:DA:1337:G:H2'	36:DA:1338:G:O4'	2.14	0.47
36:DA:1480:G:H2'	36:DA:1481:U:C5'	2.34	0.47
36:DA:1619:G:O5'	36:DA:1619:G:C8	2.68	0.47
36:DA:1622:G:C2	36:DA:1623:G:C8	3.03	0.47
36:DA:1775:U:H2'	36:DA:1776:G:H5'	1.96	0.47
36:DA:1782:C:H1'	36:DA:2609:U:H5'	1.95	0.47
36:DA:1844:C:O2'	36:DA:1845:G:H5'	2.15	0.47
36:DA:1890:A:H2'	36:DA:1891:G:H5'	1.97	0.47
36:DA:1916:A:H2'	36:DA:1917:U:O4'	2.15	0.47
36:DA:2128:C:O2'	36:DA:2129:C:O5'	2.26	0.47
36:DA:2201:C:H2'	36:DA:2202:C:C6	2.50	0.47
37:DB:52:A:H62	51:DS:33:LYS:HG2	1.79	0.47
37:DB:65:C:H41	37:DB:109:C:H2'	1.79	0.47
38:DC:68:LEU:HD11	38:DC:161:ILE:CG2	2.45	0.47
38:DC:96:GLY:N	38:DC:99:ILE:HD11	2.19	0.47
39:DD:265:PRO:HG2	39:DD:266:SER:N	2.30	0.47
40:DE:77:ILE:CG2	40:DE:78:LEU:N	2.69	0.47
40:DE:184:VAL:O	40:DE:186:GLY:N	2.46	0.47
44:DJ:70:UNK:O	44:DJ:71:UNK:O	2.33	0.47
44:DJ:74:UNK:O	44:DJ:76:UNK:N	2.49	0.47
46:DN:11:PRO:O	46:DN:13:TRP:N	2.48	0.47
46:DN:45:ASN:HD22	46:DN:45:ASN:N	2.12	0.47
48:DP:115:LEU:O	48:DP:116:GLY:O	2.33	0.47
51:DS:22:GLY:O	51:DS:23:ARG:O	2.33	0.47
53:DU:13:LYS:H	53:DU:13:LYS:CD	2.22	0.47
57:DY:8:LYS:CB	57:DY:28:LYS:HZ2	2.28	0.47
57:DY:81:LYS:HD2	57:DY:96:ILE:CD1	2.45	0.47
1:AA:158:G:O2'	1:AA:159:G:H5'	2.15	0.46
1:AA:310:G:H5"	16:AP:31:LYS:HB2	1.96	0.46
1:AA:383:A:H2'	1:AA:384:G:H5'	1.97	0.46
1:AA:1068:G:N2	1:AA:1191:A:N3	2.60	0.46
1:AA:1153:C:O2'	1:AA:1154:G:H5"	2.15	0.46
4:AD:11:LEU:N	4:AD:11:LEU:HD23	2.30	0.46
4:AD:160:GLN:H	4:AD:160:GLN:HG3	1.47	0.46
7:AG:126:ASP:O	7:AG:127:ALA:C	2.54	0.46
9:AI:83:ARG:HA	9:AI:86:VAL:CG1	2.46	0.46
10:AJ:54:PHE:CD1	10:AJ:55:LYS:HE3	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:52:ALA:C	20:AT:54:LYS:H	2.18	0.46
24:AY:56:C:H1'	36:BA:1067:A:N3	2.30	0.46
25:AZ:11:HIS:HE1	25:AZ:78:SER:OG	1.98	0.46
25:AZ:196:VAL:O	25:AZ:196:VAL:HG12	2.14	0.46
25:AZ:199:ILE:CG2	25:AZ:199:ILE:O	2.62	0.46
26:B0:10:THR:HG22	26:B0:11:ARG:N	2.31	0.46
31:B5:2:ALA:HB2	36:BA:2014:A:O2'	2.14	0.46
31:B5:27:PRO:HG3	55:BW:23:LEU:HD11	1.97	0.46
35:B9:7:VAL:HG13	35:B9:34:GLN:CG	2.45	0.46
35:B9:7:VAL:HG21	35:B9:36:GLN:H	1.80	0.46
36:BA:158:U:H3'	36:BA:158:U:O2	2.15	0.46
36:BA:191:A:H2'	36:BA:192:C:C6	2.50	0.46
36:BA:244:A:H4'	48:BP:74:GLU:HB2	1.97	0.46
36:BA:465:G:H2'	36:BA:466:A:C8	2.51	0.46
36:BA:945:A:N3	36:BA:945:A:C5'	2.76	0.46
36:BA:1010:A:H1'	36:BA:1153:C:H1'	1.96	0.46
36:BA:2106:G:O2'	36:BA:2107:C:H5'	2.15	0.46
36:BA:2156:G:H5"	36:BA:2157:G:OP2	2.14	0.46
36:BA:2469:A:C2'	36:BA:2470:G:H5'	2.40	0.46
36:BA:2492:U:H2'	36:BA:2493:U:H6	1.79	0.46
39:BD:85:ASP:HB2	39:BD:92:ILE:CG2	2.43	0.46
41:BF:185:ASP:HA	41:BF:188:ARG:CD	2.45	0.46
42:BG:51:ARG:HD3	42:BG:53:LEU:CD2	2.45	0.46
42:BG:55:LYS:HG3	42:BG:58:GLN:CD	2.35	0.46
43:BH:16:SER:CB	43:BH:27:LYS:HB2	2.38	0.46
43:BH:59:ARG:O	43:BH:60:ARG:C	2.53	0.46
45:BK:23:UNK:C	45:BK:25:UNK:N	2.79	0.46
46:BN:39:ARG:C	46:BN:41:ASP:N	2.68	0.46
50:BR:52:ILE:O	50:BR:55:ALA:HB3	2.15	0.46
51:BS:50:SER:O	51:BS:51:ALA:CB	2.60	0.46
51:BS:89:ARG:CB	51:BS:92:TYR:HB3	2.45	0.46
53:BU:45:TYR:O	53:BU:49:HIS:CG	2.68	0.46
55:BW:14:PRO:O	55:BW:18:ARG:HB2	2.15	0.46
57:BY:30:VAL:HG12	57:BY:31:LEU:N	2.30	0.46
58:BZ:139:VAL:HG23	58:BZ:140:ASP:N	2.31	0.46
1:CA:533:A:C2	1:CA:536:C:C5	3.03	0.46
1:CA:959:A:C2'	1:CA:960:U:H4'	2.44	0.46
1:CA:1148:U:C2'	1:CA:1149:C:H5'	2.45	0.46
1:CA:1190:G:C3'	3:CC:3:ASN:ND2	2.70	0.46
1:CA:1278:U:O5'	1:CA:1278:U:H6	1.98	0.46
2:CB:44:LEU:HD12	2:CB:44:LEU:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:148:VAL:HG12	4:CD:149:ALA:O	2.15	0.46
5:CE:20:GLN:OE1	5:CE:21:ALA:N	2.47	0.46
5:CE:127:ASN:HD21	5:CE:129:ILE:HB	1.81	0.46
7:CG:23:VAL:HG13	7:CG:43:PHE:CZ	2.50	0.46
7:CG:41:ARG:O	7:CG:45:ASP:OD1	2.33	0.46
9:CI:28:VAL:O	9:CI:29:ASN:C	2.53	0.46
13:CM:70:LEU:O	13:CM:73:GLU:HB3	2.14	0.46
15:CO:79:ARG:C	15:CO:82:ILE:HG22	2.36	0.46
16:CP:71:ARG:HB2	16:CP:71:ARG:NH1	2.30	0.46
18:CR:51:LEU:CD2	18:CR:52:PRO:HD2	2.45	0.46
25:CZ:195:TRP:O	25:CZ:198:LYS:HB3	2.14	0.46
26:D0:10:THR:HG22	26:D0:12:ASN:N	2.26	0.46
28:D2:35:LEU:O	28:D2:36:ARG:C	2.53	0.46
32:D6:16:CYS:SG	32:D6:48:VAL:CG2	3.01	0.46
34:D8:34:TRP:O	34:D8:35:GLN:HB2	2.14	0.46
35:D9:16:VAL:HG21	36:DA:1033:U:OP1	2.15	0.46
36:DA:272(H):C:C3'	36:DA:272(I):U:H5"	2.45	0.46
36:DA:657:U:C2	36:DA:658:C:C5	3.04	0.46
36:DA:803:U:C2'	36:DA:804:A:H5'	2.45	0.46
36:DA:892:G:H2'	36:DA:893:C:C6	2.50	0.46
36:DA:1163:G:H4'	54:DV:90:PRO:HG2	1.97	0.46
36:DA:1190:G:H5'	48:DP:35:HIS:H	1.79	0.46
36:DA:1649:G:N1	36:DA:2009:G:C6	2.84	0.46
36:DA:2036:C:H6	36:DA:2036:C:C5'	2.22	0.46
36:DA:2131:G:O4'	36:DA:2133:G:N3	2.47	0.46
36:DA:2464:C:O2'	36:DA:2465:C:O5'	2.33	0.46
36:DA:2722:G:H2'	36:DA:2723:C:H6	1.79	0.46
38:DC:26:ALA:O	38:DC:29:VAL:HG22	2.15	0.46
42:DG:11:TYR:HA	42:DG:15:VAL:HG21	1.98	0.46
42:DG:146:TYR:O	42:DG:149:VAL:HG22	2.15	0.46
45:DK:5:UNK:O	45:DK:6:UNK:C	2.63	0.46
48:DP:39:LYS:CD	48:DP:40:SER:N	2.78	0.46
51:DS:52:SER:O	51:DS:56:LEU:HB3	2.16	0.46
56:DX:41:ASN:O	56:DX:45:THR:HG23	2.16	0.46
57:DY:38:ILE:HB	57:DY:66:PRO:CG	2.25	0.46
58:DZ:28:MET:HE3	58:DZ:37:VAL:HG11	1.96	0.46
1:AA:269:C:H2'	1:AA:270:A:C8	2.50	0.46
1:AA:368:U:H3'	1:AA:369:C:C5'	2.45	0.46
1:AA:745:C:H2'	1:AA:746:A:C8	2.50	0.46
1:AA:1086:U:H2'	1:AA:1087:G:C5'	2.38	0.46
1:AA:1114:C:O2'	1:AA:1115:C:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1242:C:H2'	1:AA:1243:C:C6	2.50	0.46
2:AB:12:GLU:HG3	2:AB:44:LEU:CD2	2.44	0.46
2:AB:42:ILE:HD11	2:AB:202:PRO:HB2	1.96	0.46
2:AB:102:LEU:HD23	2:AB:158:LEU:HD22	1.96	0.46
4:AD:11:LEU:HD13	4:AD:66:ARG:CD	2.44	0.46
4:AD:61:LYS:HA	4:AD:203:VAL:CG1	2.42	0.46
5:AE:57:LYS:HG2	5:AE:61:TYR:CE2	2.50	0.46
7:AG:65:ALA:HB1	7:AG:127:ALA:CB	2.43	0.46
9:AI:83:ARG:HA	9:AI:86:VAL:HG12	1.97	0.46
15:AO:71:GLN:O	15:AO:71:GLN:HG2	2.14	0.46
25:AZ:13:ASN:HB2	25:AZ:78:SER:O	2.15	0.46
25:AZ:338:TYR:O	25:AZ:340:PRO:HD3	2.14	0.46
26:B0:41:ARG:HD3	26:B0:41:ARG:HA	1.69	0.46
26:B0:42:GLY:HA3	36:BA:2331:G:C4'	2.45	0.46
29:B3:42:ALA:O	29:B3:43:ILE:C	2.53	0.46
34:B8:3:LYS:HG2	34:B8:4:MET:N	2.29	0.46
36:BA:431:U:O5'	36:BA:431:U:H6	1.98	0.46
36:BA:590:A:OP1	41:BF:95:ARG:NH1	2.48	0.46
36:BA:639:U:H2'	36:BA:640:C:C6	2.50	0.46
36:BA:1108:U:H3'	36:BA:1109:C:H6	1.78	0.46
36:BA:1216:G:O2'	36:BA:1217:C:H5'	2.15	0.46
36:BA:1417:C:H2'	36:BA:1418:G:O4'	2.15	0.46
36:BA:1642:G:H2'	36:BA:1643:G:H8	1.81	0.46
36:BA:1761:C:H3'	36:BA:1762:A:C8	2.49	0.46
36:BA:2657:A:N3	36:BA:2657:A:H5'	2.29	0.46
36:BA:2695:C:H2'	36:BA:2696:U:C6	2.51	0.46
39:BD:35:LYS:HG3	39:BD:63:ARG:CG	2.45	0.46
40:BE:176:ILE:HG22	40:BE:176:ILE:O	2.15	0.46
41:BF:65:TRP:HB3	41:BF:66:PRO:CD	2.46	0.46
41:BF:164:ARG:NH1	41:BF:176:LEU:O	2.48	0.46
46:BN:4:TYR:O	46:BN:5:VAL:C	2.54	0.46
50:BR:4:LEU:HD13	50:BR:7:GLY:N	2.29	0.46
51:BS:97:ARG:C	51:BS:97:ARG:NE	2.69	0.46
51:BS:101:LEU:O	51:BS:101:LEU:CD1	2.56	0.46
55:BW:59:VAL:O	55:BW:60:ASN:HB2	2.15	0.46
57:BY:43:ASN:C	57:BY:44:ILE:HD12	2.34	0.46
1:CA:189:G:O2'	1:CA:189(A):C:H5'	2.15	0.46
1:CA:222:U:H2'	1:CA:223:U:C6	2.50	0.46
1:CA:1096:C:O2'	1:CA:1097:C:H5'	2.14	0.46
1:CA:1137:C:H4'	1:CA:1138:G:C2	2.49	0.46
1:CA:1349:A:H2'	1:CA:1350:A:H8	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:125:PRO:O	2:CB:129:GLU:HG3	2.14	0.46
4:CD:95:GLY:O	4:CD:96:LEU:C	2.52	0.46
4:CD:154:ASN:O	4:CD:159:ARG:NH2	2.48	0.46
5:CE:57:LYS:O	5:CE:60:TYR:HB3	2.15	0.46
6:CF:91:VAL:HG11	18:CR:72:ARG:NH1	2.30	0.46
9:CI:92:TYR:CD2	9:CI:95:LYS:HE2	2.50	0.46
10:CJ:63:PHE:HE2	14:CN:45:ARG:HA	1.79	0.46
11:CK:38:ASN:N	11:CK:38:ASN:HD22	2.13	0.46
11:CK:60:ALA:O	11:CK:61:ALA:C	2.53	0.46
20:CT:52:ALA:C	20:CT:54:LYS:H	2.19	0.46
22:CV:17:C:H2'	22:CV:18:G:H5"	1.97	0.46
25:CZ:11:HIS:HE1	25:CZ:78:SER:OG	1.98	0.46
25:CZ:231:ILE:N	25:CZ:231:ILE:CD1	2.79	0.46
32:D6:19:ARG:O	32:D6:20:ASN:O	2.33	0.46
35:D9:10:ILE:O	35:D9:11:CYS:CB	2.63	0.46
36:DA:612:C:C3'	36:DA:613:G:H5"	2.42	0.46
36:DA:849:A:H8	36:DA:849:A:O5'	1.98	0.46
36:DA:1142:U:H5"	36:DA:1142(A):A:C8	2.51	0.46
36:DA:1269:A:H2'	36:DA:1270:C:C6	2.50	0.46
36:DA:1747(A):G:O2'	36:DA:1748:G:H5"	2.14	0.46
36:DA:2051:A:H5'	36:DA:2578:G:O4'	2.15	0.46
36:DA:2122:U:H2'	36:DA:2123:G:C8	2.51	0.46
36:DA:2545:G:N3	36:DA:2565:A:H2	2.13	0.46
38:DC:214:VAL:CG2	38:DC:224:ILE:HD13	2.46	0.46
39:DD:201:HIS:C	39:DD:203:ASN:N	2.66	0.46
42:DG:68:PRO:CB	42:DG:92:VAL:HB	2.45	0.46
42:DG:142:PRO:HG2	42:DG:143:GLU:H	1.80	0.46
42:DG:170:ARG:HH11	42:DG:170:ARG:HG2	1.80	0.46
48:DP:131:SER:HG	48:DP:134:ALA:HB3	1.77	0.46
56:DX:51:VAL:CG1	56:DX:81:VAL:HB	2.45	0.46
58:DZ:4:ARG:HD2	58:DZ:60:GLU:OE2	2.16	0.46
1:AA:411:A:H62	1:AA:413:G:N2	2.13	0.46
1:AA:1029:C:H4'	1:AA:1033:G:N2	2.30	0.46
1:AA:1129:C:O2'	1:AA:1131:G:H8	1.97	0.46
1:AA:1170:A:H2'	1:AA:1171:G:O4'	2.15	0.46
1:AA:1475:G:OP1	36:BA:1689:A:H1'	2.15	0.46
3:AC:5:ILE:HD13	3:AC:5:ILE:O	2.15	0.46
4:AD:145:GLU:C	4:AD:146:ILE:HD13	2.35	0.46
4:AD:148:VAL:HG23	4:AD:181:MET:HB3	1.96	0.46
7:AG:37:ASN:ND2	9:AI:40:LEU:HA	2.26	0.46
16:AP:53:VAL:O	16:AP:55:ARG:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:25:LYS:O	19:AS:27:GLU:OE1	2.33	0.46
19:AS:40:ILE:HG21	19:AS:62:ILE:CD1	2.27	0.46
22:AV:75:C:H2'	22:AV:76:A:O4'	2.15	0.46
25:AZ:195:TRP:O	25:AZ:198:LYS:HB3	2.15	0.46
36:BA:79:G:H2'	36:BA:80:G:H8	1.81	0.46
36:BA:1201:C:O5'	36:BA:1201:C:H6	1.98	0.46
36:BA:1517:G:H2'	36:BA:1518:U:O4'	2.15	0.46
36:BA:2009:G:O2'	36:BA:2010:G:H5'	2.15	0.46
36:BA:2025:C:OP1	40:BE:149:ARG:HD3	2.16	0.46
36:BA:2492:U:O2'	36:BA:2493:U:H5'	2.15	0.46
36:BA:2506:U:H5'	36:BA:2506:U:C6	2.50	0.46
36:BA:2552:U:C2	36:BA:2554:U:H5'	2.51	0.46
36:BA:2577:A:H5"	36:BA:2578:G:H5'	1.97	0.46
36:BA:2784:C:O2'	36:BA:2785:C:H5'	2.15	0.46
36:BA:2809:A:H2'	36:BA:2810:A:C8	2.51	0.46
36:BA:2865:U:H3'	36:BA:2866:U:O2	2.14	0.46
37:BB:8:U:H5'	37:BB:8:U:H6	1.80	0.46
37:BB:8:U:O2'	51:BS:25:ARG:NH2	2.48	0.46
39:BD:197:GLY:O	39:BD:198:ASN:HB3	2.16	0.46
40:BE:9:VAL:HG12	40:BE:25:VAL:HB	1.96	0.46
40:BE:50:GLY:HA3	40:BE:74:PRO:HG3	1.96	0.46
40:BE:198:VAL:HG12	40:BE:199:ARG:N	2.30	0.46
41:BF:165:ARG:HG3	41:BF:165:ARG:HH11	1.80	0.46
42:BG:47:LYS:HA	42:BG:81:LYS:HD2	1.97	0.46
43:BH:70:THR:HG22	43:BH:74:ASN:ND2	2.30	0.46
46:BN:120:LEU:CD1	46:BN:122:VAL:HG23	2.45	0.46
48:BP:91:PHE:N	48:BP:91:PHE:HD1	2.13	0.46
54:BV:35:LEU:HD23	54:BV:57:VAL:CG1	2.44	0.46
57:BY:3:VAL:HG12	57:BY:3:VAL:O	2.15	0.46
58:BZ:54:HIS:HB3	58:BZ:101:PRO:HD3	1.97	0.46
58:BZ:132:ASN:C	58:BZ:134:PRO:HD3	2.36	0.46
1:CA:161:A:H2	1:CA:347:G:H21	1.63	0.46
1:CA:645:C:H2'	1:CA:646:U:C6	2.51	0.46
1:CA:1157:A:O2'	1:CA:1158:C:OP2	2.32	0.46
1:CA:1221:G:O2'	1:CA:1222:G:H5'	2.15	0.46
1:CA:1301:U:H3'	1:CA:1302:U:H5"	1.97	0.46
1:CA:1314:C:O2	1:CA:1314:C:O4'	2.33	0.46
1:CA:1473:A:O2'	1:CA:1474:G:H5'	2.15	0.46
2:CB:157:ARG:HG3	2:CB:157:ARG:HH11	1.80	0.46
3:CC:7:PRO:HG2	3:CC:184:TYR:HB2	1.96	0.46
4:CD:128:VAL:O	4:CD:129:ASN:C	2.53	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:23:VAL:HG13	7:CG:43:PHE:CE2	2.51	0.46
8:CH:88:LYS:HB3	8:CH:89:PRO:HD2	1.97	0.46
15:CO:9:GLN:O	15:CO:10:LYS:C	2.53	0.46
16:CP:60:LEU:HD23	16:CP:64:ALA:O	2.14	0.46
16:CP:82:GLN:O	16:CP:83:GLU:HB2	2.15	0.46
19:CS:37:ARG:H	19:CS:37:ARG:HG3	1.52	0.46
22:CW:52:G:N2	22:CW:53:G:H1'	2.30	0.46
25:CZ:271:GLU:O	25:CZ:286:VAL:HG23	2.16	0.46
26:D0:2:ALA:HB1	36:DA:2602:A:H61	1.80	0.46
27:D1:44:PRO:O	27:D1:46:LEU:N	2.43	0.46
27:D1:68:PRO:O	27:D1:71:TYR:N	2.48	0.46
27:D1:72:GLU:O	27:D1:75:GLU:HB3	2.15	0.46
36:DA:302:C:O2'	36:DA:303:U:H5'	2.14	0.46
36:DA:310:A:OP1	57:DY:18:GLY:HA2	2.14	0.46
36:DA:661:C:O3'	48:DP:18:ARG:HD2	2.15	0.46
36:DA:978:G:C2	36:DA:986:C:N3	2.83	0.46
36:DA:1058:G:N2	36:DA:1081:U:H3	2.13	0.46
36:DA:1070:A:H2'	36:DA:1097:U:OP1	2.14	0.46
36:DA:1440:G:O2'	36:DA:1441:G:H5'	2.15	0.46
36:DA:1484:G:H2'	36:DA:1485:G:C5'	2.32	0.46
36:DA:2110:G:O2'	36:DA:2120:G:H5'	2.15	0.46
36:DA:2303:G:O2'	42:DG:132:ASN:HB2	2.16	0.46
36:DA:2430:A:H8	36:DA:2431:U:H5	1.63	0.46
36:DA:2563:U:H4'	47:DO:28:SER:HA	1.97	0.46
36:DA:2645:G:H8	36:DA:2645:G:OP2	1.98	0.46
36:DA:2678:C:H2'	36:DA:2679:A:O4'	2.15	0.46
37:DB:98:G:C2'	37:DB:99:G:H5'	2.46	0.46
43:DH:92:ILE:HG22	43:DH:92:ILE:O	2.15	0.46
49:DQ:65:PHE:HD2	49:DQ:105:GLU:O	1.98	0.46
49:DQ:139:GLU:OE1	49:DQ:139:GLU:N	2.48	0.46
56:DX:57:LEU:N	56:DX:57:LEU:HD23	2.31	0.46
1:AA:309:G:H1'	1:AA:608:A:C2	2.50	0.46
1:AA:540:G:H2'	1:AA:541:G:O4'	2.16	0.46
1:AA:973:G:H1'	10:AJ:55:LYS:HZ1	1.66	0.46
1:AA:1176:A:H2'	1:AA:1177:G:C8	2.50	0.46
1:AA:1431:C:C2'	1:AA:1432:G:H5'	2.45	0.46
2:AB:130:ARG:O	2:AB:131:PRO:O	2.34	0.46
3:AC:77:ILE:HG22	3:AC:78:GLY:O	2.16	0.46
3:AC:107:GLN:CD	3:AC:107:GLN:N	2.67	0.46
6:AF:75:LEU:O	6:AF:78:GLU:HB3	2.15	0.46
12:AL:32:PHE:HB3	12:AL:84:LEU:CD2	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:81:SER:HB3	12:AL:106:ASP:CB	2.45	0.46
19:AS:20:LEU:O	19:AS:22:LEU:N	2.46	0.46
25:AZ:139:ASP:CB	25:AZ:177:LEU:HD11	2.46	0.46
29:B3:40:THR:OG1	29:B3:43:ILE:HG12	2.14	0.46
31:B5:44:THR:HB	50:BR:101:ALA:HB2	1.97	0.46
34:B8:32:LEU:HG	34:B8:36:LYS:NZ	2.30	0.46
35:B9:1:MET:SD	36:BA:2478:A:OP2	2.73	0.46
36:BA:140:G:C1'	36:BA:141:A:H2	2.16	0.46
36:BA:391:G:H1'	36:BA:411:G:O4'	2.15	0.46
36:BA:445:C:H2'	36:BA:446:G:C8	2.51	0.46
36:BA:483:A:H2'	36:BA:484:C:O4'	2.16	0.46
36:BA:576:U:H2'	36:BA:577:G:C8	2.49	0.46
36:BA:949:C:H2'	36:BA:950:G:C8	2.50	0.46
36:BA:978:G:C2	36:BA:986:C:N3	2.84	0.46
36:BA:1469:A:H2'	36:BA:1470:G:H8	1.79	0.46
36:BA:1751:C:H2'	36:BA:1752:C:C6	2.50	0.46
36:BA:1880:C:H6	36:BA:1880:C:C5'	2.28	0.46
36:BA:2419:U:H2'	36:BA:2420:C:H6	1.80	0.46
36:BA:2762:G:H2'	36:BA:2763:G:H5'	1.97	0.46
39:BD:44:ASN:HB2	39:BD:48:ARG:O	2.15	0.46
41:BF:122:LYS:HB3	41:BF:191:ARG:HA	1.98	0.46
41:BF:196:LEU:O	41:BF:200:GLU:HB2	2.15	0.46
48:BP:57:THR:OG1	48:BP:59:LEU:N	2.49	0.46
48:BP:83:VAL:HG23	48:BP:105:LEU:CD2	2.46	0.46
49:BQ:110:THR:OG1	49:BQ:112:GLU:HG2	2.16	0.46
50:BR:42:LYS:O	50:BR:45:ARG:HG2	2.16	0.46
52:BT:89:VAL:HG12	52:BT:91:ARG:CG	2.37	0.46
53:BU:27:LEU:O	53:BU:29:SER:N	2.48	0.46
53:BU:59:ARG:O	53:BU:60:LEU:C	2.53	0.46
54:BV:34:GLU:CG	54:BV:56:SER:HB2	2.45	0.46
55:BW:47:VAL:HG22	55:BW:103:ILE:HG21	1.97	0.46
55:BW:51:LEU:C	55:BW:53:SER:H	2.18	0.46
58:BZ:96:VAL:HG12	58:BZ:128:VAL:O	2.14	0.46
1:CA:656:C:H2'	1:CA:657:G:H8	1.80	0.46
1:CA:789:U:H2'	1:CA:791:G:OP2	2.16	0.46
1:CA:1060:C:O2'	1:CA:1061:G:H5'	2.16	0.46
2:CB:31:TYR:HD2	2:CB:202:PRO:HG3	1.81	0.46
2:CB:74:LYS:HB2	2:CB:77:ALA:HB3	1.97	0.46
2:CB:120:ALA:O	2:CB:122:PHE:N	2.49	0.46
2:CB:155:LEU:CD2	2:CB:159:PRO:HG3	2.45	0.46
4:CD:4:TYR:O	4:CD:5:ILE:HB	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:65:ARG:HD3	4:CD:75:PHE:CB	2.46	0.46
4:CD:73:ARG:O	4:CD:77:ASN:HB2	2.15	0.46
6:CF:28:ARG:HG3	6:CF:28:ARG:HH11	1.79	0.46
10:CJ:38:ILE:CD1	10:CJ:71:LEU:H	2.27	0.46
17:CQ:77:VAL:O	17:CQ:78:GLU:HB2	2.15	0.46
18:CR:59:SER:OG	18:CR:62:GLU:HG3	2.13	0.46
19:CS:11:VAL:O	19:CS:11:VAL:HG13	2.15	0.46
20:CT:61:SER:OG	20:CT:65:LYS:HD2	2.16	0.46
20:CT:84:LEU:O	20:CT:88:VAL:HG23	2.15	0.46
22:CW:13:C:O2	22:CW:13:C:C2'	2.62	0.46
25:CZ:132:VAL:HG12	25:CZ:202:LEU:HD11	1.97	0.46
25:CZ:234:ARG:HB3	25:CZ:289:LEU:HD21	1.97	0.46
27:D1:69:LYS:O	27:D1:69:LYS:HD3	2.16	0.46
30:D4:33:VAL:CG1	30:D4:34:GLU:N	2.78	0.46
32:D6:7:ILE:CB	32:D6:27:LYS:HZ3	2.27	0.46
36:DA:206:U:O2	36:DA:206:U:H2'	2.15	0.46
36:DA:386:G:P	36:DA:388:G:H22	2.39	0.46
36:DA:605:C:H1'	36:DA:657:U:O2'	2.16	0.46
36:DA:790:C:O2'	36:DA:791:C:OP1	2.29	0.46
36:DA:917:A:H2'	36:DA:918:A:O4'	2.15	0.46
36:DA:1057:A:H2'	36:DA:1058:G:C8	2.43	0.46
36:DA:2084:C:H2'	36:DA:2085:C:C6	2.51	0.46
36:DA:2472:G:H5"	36:DA:2473:U:H5"	1.97	0.46
37:DB:22:U:H2'	37:DB:23:G:H8	1.80	0.46
38:DC:137:LEU:HD22	38:DC:138:PRO:HD2	1.97	0.46
39:DD:186:HIS:HD2	39:DD:188:GLU:HB2	1.79	0.46
40:DE:14:ILE:HB	52:DT:14:TYR:CZ	2.50	0.46
40:DE:16:ARG:CD	40:DE:21:VAL:HG11	2.45	0.46
41:DF:164:ARG:NH1	41:DF:176:LEU:O	2.48	0.46
46:DN:129:PRO:O	46:DN:130:HIS:CB	2.63	0.46
47:DO:104:ARG:NH2	52:DT:33:LYS:HD2	2.29	0.46
50:DR:4:LEU:O	50:DR:5:LYS:HD3	2.15	0.46
51:DS:49:VAL:O	51:DS:50:SER:HB3	2.15	0.46
54:DV:49:THR:CB	54:DV:50:PRO:CD	2.93	0.46
57:DY:31:LEU:N	57:DY:31:LEU:HD22	2.29	0.46
57:DY:38:ILE:HD13	57:DY:66:PRO:CD	2.45	0.46
1:AA:62:U:O2'	1:AA:63:C:H5"	2.16	0.46
1:AA:1005:A:H2'	1:AA:1006:C:H5'	1.97	0.46
2:AB:116:GLU:HA	2:AB:119:GLU:HB2	1.98	0.46
2:AB:139:LYS:C	2:AB:141:GLU:H	2.18	0.46
4:AD:14:ARG:HD2	4:AD:59:ARG:HH12	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:1:MET:O	8:AH:2:LEU:O	2.33	0.46
8:AH:127:LEU:N	8:AH:127:LEU:CD2	2.78	0.46
9:AI:83:ARG:C	9:AI:86:VAL:HG12	2.36	0.46
11:AK:103:LEU:HD13	11:AK:104:GLN:H	1.81	0.46
16:AP:42:ARG:O	16:AP:44:THR:HG23	2.15	0.46
18:AR:42:ARG:HH11	18:AR:42:ARG:HG3	1.81	0.46
24:AY:65:C:H5'	25:AZ:341:GLN:HG2	1.97	0.46
25:AZ:120:ILE:HD13	25:AZ:158:LEU:HD23	1.98	0.46
25:AZ:226:GLU:OE1	25:AZ:240:GLY:HA2	2.15	0.46
29:B3:30:ARG:NH2	36:BA:1159:U:OP1	2.48	0.46
29:B3:35:ARG:HB2	29:B3:35:ARG:NH1	2.15	0.46
33:B7:24:THR:O	33:B7:28:ARG:HG3	2.16	0.46
36:BA:476:G:H4'	36:BA:502:A:N1	2.30	0.46
36:BA:654(T):C:O2'	36:BA:654(U):A:O4'	2.30	0.46
36:BA:768:G:H2'	36:BA:769:G:C8	2.50	0.46
36:BA:813:U:O2'	36:BA:1225:G:H1'	2.15	0.46
36:BA:1275:A:N1	36:BA:1295:C:O2'	2.46	0.46
36:BA:1453:U:H5'	50:BR:63:ARG:NE	2.29	0.46
36:BA:1490:A:H5'	36:BA:1491:G:OP2	2.16	0.46
36:BA:1502:C:H2'	36:BA:1502:C:O2	2.16	0.46
36:BA:2291:U:O2'	36:BA:2374:C:H1'	2.14	0.46
36:BA:2495:G:H5"	49:BQ:82:ARG:HB3	1.97	0.46
41:BF:126:VAL:HG11	41:BF:142:TRP:CH2	2.32	0.46
42:BG:27:ASN:C	42:BG:29:TRP:N	2.69	0.46
43:BH:126:PRO:O	43:BH:127:GLU:CB	2.63	0.46
48:BP:31:ALA:C	48:BP:33:ARG:N	2.65	0.46
48:BP:84:ASN:C	48:BP:86:LYS:H	2.19	0.46
57:BY:91:GLU:HB3	57:BY:92:ASN:H	1.63	0.46
58:BZ:103:ARG:CG	58:BZ:138:GLU:HG2	2.45	0.46
1:CA:622:A:C8	1:CA:623:C:C5	3.03	0.46
1:CA:748:C:H6	1:CA:748:C:OP2	1.98	0.46
1:CA:841:U:H2'	1:CA:848:C:O4'	2.16	0.46
1:CA:945:G:C6	1:CA:1337:G:C4	3.04	0.46
1:CA:1286:A:O2'	1:CA:1287:A:H4'	2.16	0.46
1:CA:1333:A:H2'	1:CA:1334:G:H5'	1.98	0.46
1:CA:1359:C:OP2	14:CN:22:THR:HG21	2.16	0.46
3:CC:36:ASP:OD2	3:CC:57:ILE:HG21	2.16	0.46
4:CD:108:LEU:HD21	4:CD:183:GLY:HA3	1.97	0.46
5:CE:41:VAL:O	5:CE:67:VAL:HG12	2.14	0.46
8:CH:10:LEU:HD23	8:CH:83:ILE:HD11	1.98	0.46
9:CI:6:GLY:O	9:CI:80:GLY:HA2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:108:ILE:HG21	18:CR:88:LYS:OXT	2.15	0.46
11:CK:115:PRO:C	11:CK:117:ASN:H	2.19	0.46
14:CN:22:THR:O	14:CN:23:ARG:CB	2.64	0.46
17:CQ:33:GLY:O	17:CQ:34:LYS:O	2.34	0.46
22:CW:39:U:OP1	22:CW:39:U:H4'	2.16	0.46
22:CW:64:A:O2'	22:CW:65:G:H5'	2.15	0.46
25:CZ:215:ARG:NH1	25:CZ:283:GLY:HA3	2.31	0.46
31:D5:36:CYS:C	31:D5:38:ALA:N	2.69	0.46
32:D6:53:LYS:NZ	32:D6:54:ILE:HG13	2.30	0.46
36:DA:237:C:N3	36:DA:238:C:C5	2.84	0.46
36:DA:614:U:O4'	36:DA:614:U:O2	2.34	0.46
36:DA:1336:A:H2'	36:DA:1337:G:H8	1.81	0.46
36:DA:1403:C:H5"	36:DA:1471:A:C1'	2.43	0.46
36:DA:1827:C:O2'	36:DA:1828:G:H5'	2.16	0.46
36:DA:1847:A:H2'	36:DA:1847:A:N3	2.30	0.46
36:DA:2162:G:O2'	36:DA:2173:A:N6	2.48	0.46
36:DA:2295:C:O2'	36:DA:2296:U:H5'	2.16	0.46
36:DA:2414:G:H21	48:DP:67:MET:HE1	1.81	0.46
36:DA:2510:C:C4	36:DA:2511:U:C4	3.04	0.46
36:DA:2645:G:C3'	36:DA:2646:C:H5'	2.43	0.46
38:DC:36:LYS:O	38:DC:37:PHE:O	2.34	0.46
39:DD:133:LEU:HD12	39:DD:189:CYS:HB2	1.97	0.46
39:DD:172:TYR:CG	39:DD:184:LYS:HE2	2.50	0.46
42:DG:91:ARG:HD2	42:DG:91:ARG:C	2.35	0.46
46:DN:12:ARG:HH21	46:DN:133:GLN:CD	2.18	0.46
47:DO:1:MET:HG3	47:DO:67:LYS:HG2	1.97	0.46
49:DQ:132:VAL:HG11	58:DZ:81:ARG:CD	2.46	0.46
49:DQ:134:ARG:C	49:DQ:135:ASP:OD1	2.53	0.46
52:DT:111:ARG:HH11	52:DT:111:ARG:HB3	1.81	0.46
1:AA:97:G:H2'	1:AA:98:G:O4'	2.15	0.46
1:AA:341:C:O2	1:AA:349:A:C2	2.68	0.46
1:AA:571:U:O5'	1:AA:571:U:H6	1.99	0.46
1:AA:1028:C:H2'	1:AA:1029:C:O4'	2.15	0.46
1:AA:1444:C:O2'	1:AA:1445:C:H5'	2.15	0.46
3:AC:73:PRO:HD3	3:AC:105:GLU:HG3	1.98	0.46
4:AD:102:ASP:O	4:AD:105:VAL:HB	2.15	0.46
10:AJ:56:HIS:O	10:AJ:58:ASP:O	2.33	0.46
16:AP:50:LYS:HD3	16:AP:50:LYS:C	2.36	0.46
19:AS:49:ILE:O	19:AS:60:VAL:HG12	2.16	0.46
20:AT:78:ALA:O	20:AT:81:LYS:HB2	2.16	0.46
23:AX:14:A:H2'	23:AX:15:A:O5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:88:TYR:O	25:AZ:92:MET:HB2	2.15	0.46
27:B1:16:ASN:O	27:B1:17:SER:CB	2.59	0.46
33:B7:21:ARG:HG2	33:B7:21:ARG:NH1	2.30	0.46
36:BA:407:G:H2'	36:BA:408:G:H8	1.79	0.46
36:BA:585:G:H2'	36:BA:1251:C:N4	2.27	0.46
36:BA:696:G:O2'	36:BA:697:C:H5'	2.15	0.46
36:BA:731:C:H2'	36:BA:732:C:H6	1.80	0.46
36:BA:918:A:H5"	37:BB:98:G:O2'	2.16	0.46
36:BA:1001:A:H2'	36:BA:1002:G:O4'	2.15	0.46
36:BA:1231:G:H2'	36:BA:1232:G:C8	2.51	0.46
36:BA:1568:G:P	39:BD:63:ARG:HH22	2.38	0.46
36:BA:1709:U:H2'	36:BA:1710:C:C6	2.51	0.46
36:BA:1914:C:O4'	36:BA:1914:C:O2	2.32	0.46
36:BA:2131:G:H5"	36:BA:2132:U:O5'	2.15	0.46
39:BD:91:ARG:HG2	39:BD:91:ARG:NH1	2.31	0.46
39:BD:120:GLY:O	39:BD:131:LEU:HG	2.14	0.46
39:BD:142:VAL:HG23	39:BD:193:VAL:N	2.31	0.46
39:BD:238:GLY:O	39:BD:239:ARG:C	2.53	0.46
40:BE:4:ILE:HD12	40:BE:92:THR:O	2.16	0.46
40:BE:36:ARG:HH11	40:BE:36:ARG:HG2	1.80	0.46
43:BH:162:ILE:O	43:BH:162:ILE:HG13	2.15	0.46
46:BN:129:PRO:O	46:BN:130:HIS:CB	2.63	0.46
51:BS:19:LYS:O	51:BS:20:ARG:NH2	2.49	0.46
52:BT:16:ARG:HD2	52:BT:18:ASP:OD1	2.16	0.46
54:BV:39:LEU:N	54:BV:39:LEU:HD22	2.31	0.46
58:BZ:10:ARG:HD3	58:BZ:37:VAL:O	2.16	0.46
58:BZ:42:VAL:HG13	58:BZ:43:GLU:N	2.30	0.46
1:CA:259:G:C4	1:CA:260:G:C8	3.04	0.46
1:CA:310:G:H2'	1:CA:311:C:C6	2.51	0.46
1:CA:644:G:H2'	1:CA:645:C:C6	2.51	0.46
1:CA:1309:G:N2	1:CA:1329:A:H1'	2.31	0.46
4:CD:2:GLY:C	4:CD:3:ARG:HD3	2.35	0.46
4:CD:95:GLY:HA3	4:CD:188:LEU:HD21	1.97	0.46
4:CD:126:ILE:HD12	4:CD:126:ILE:N	2.30	0.46
4:CD:165:MET:HE3	4:CD:176:LEU:CD2	2.46	0.46
9:CI:114:TYR:N	9:CI:114:TYR:CD1	2.84	0.46
15:CO:27:VAL:O	15:CO:31:LEU:HB2	2.15	0.46
22:CV:4:C:H3'	22:CV:5:G:C5'	2.42	0.46
22:CW:9:A:C8	22:CW:46:G:N2	2.83	0.46
25:CZ:69:GLU:HG2	25:CZ:273:HIS:ND1	2.30	0.46
25:CZ:242:ILE:HG21	25:CZ:282:ALA:HA	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D0:43:THR:HG22	36:DA:2331:G:O2'	2.15	0.46
32:D6:15:GLU:HA	32:D6:49:HIS:ND1	2.30	0.46
35:D9:18:ARG:O	35:D9:19:ARG:HB3	2.16	0.46
36:DA:9:U:O2'	36:DA:10:G:P	2.74	0.46
36:DA:579:G:O2'	36:DA:2019:A:OP1	2.26	0.46
36:DA:652:C:O2'	36:DA:653:A:O5'	2.33	0.46
36:DA:706:A:C2	36:DA:707:G:H1'	2.50	0.46
36:DA:750:A:C2	36:DA:753:C:C6	3.04	0.46
36:DA:915:C:H2'	36:DA:916:G:H8	1.80	0.46
36:DA:1750:G:O2'	36:DA:1751:C:H5'	2.16	0.46
36:DA:1798:U:C2'	36:DA:1799:G:O5'	2.63	0.46
36:DA:1890:A:H8	36:DA:1890:A:O5'	1.98	0.46
36:DA:2481:G:C2'	36:DA:2482:G:OP2	2.63	0.46
36:DA:2494:G:O2'	49:DQ:80:GLU:HA	2.16	0.46
36:DA:2712:U:O2	36:DA:2712:U:H5"	2.16	0.46
36:DA:2811:G:H8	36:DA:2811:G:OP2	1.98	0.46
37:DB:98:G:O2'	37:DB:99:G:H5'	2.15	0.46
38:DC:82:LYS:HE2	38:DC:82:LYS:HA	1.98	0.46
42:DG:103:LEU:HD21	42:DG:178:PHE:HE1	1.78	0.46
42:DG:125:PHE:CB	42:DG:130:ASN:O	2.62	0.46
44:DJ:80:UNK:O	44:DJ:81:UNK:C	2.63	0.46
51:DS:19:LYS:O	51:DS:20:ARG:NE	2.49	0.46
52:DT:26:ASP:OD1	52:DT:26:ASP:C	2.54	0.46
53:DU:9:VAL:O	53:DU:10:ARG:C	2.54	0.46
57:DY:95:LYS:HE3	57:DY:100:ALA:CA	2.46	0.46
58:DZ:28:MET:O	58:DZ:28:MET:HG3	2.15	0.46
1:AA:59:A:C5'	1:AA:60:A:H5"	2.45	0.46
1:AA:149:A:H2'	1:AA:150:C:H6	1.78	0.46
1:AA:344:A:HO2'	1:AA:345:C:P	2.37	0.46
1:AA:686:U:HO2'	11:AK:42:TRP:HE1	1.63	0.46
1:AA:858:G:N1	1:AA:869:G:C8	2.84	0.46
1:AA:1137:C:O2'	1:AA:1138:G:N2	2.49	0.46
1:AA:1510:U:H2'	1:AA:1511:G:H8	1.79	0.46
2:AB:149:LEU:O	2:AB:150:SER:C	2.54	0.46
2:AB:236:TYR:O	2:AB:237:ALA:C	2.54	0.46
3:AC:14:ILE:HG12	3:AC:15:THR:H	1.77	0.46
12:AL:90:VAL:HG23	12:AL:99:HIS:HE1	1.80	0.46
12:AL:119:LYS:O	12:AL:120:TYR:HD2	1.99	0.46
14:AN:57:ARG:CG	14:AN:58:LYS:N	2.79	0.46
15:AO:21:ASP:CG	15:AO:24:SER:HG	2.19	0.46
16:AP:20:VAL:HG22	16:AP:21:VAL:N	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:56:C:H6	24:AY:56:C:OP1	1.99	0.46
25:AZ:175:ALA:O	25:AZ:178:ALA:HB3	2.15	0.46
32:B6:52:VAL:HG12	32:B6:53:LYS:N	2.30	0.46
36:BA:479:A:N3	36:BA:481:G:H5"	2.31	0.46
36:BA:568:U:OP1	36:BA:945:A:N6	2.48	0.46
36:BA:604:G:O2'	36:BA:605:C:H5'	2.16	0.46
36:BA:664:C:H4'	36:BA:940:G:O3'	2.15	0.46
36:BA:763:G:C4	36:BA:765:G:C8	3.04	0.46
36:BA:880:G:N2	36:BA:897:C:H42	2.11	0.46
36:BA:968:G:H2'	36:BA:969:U:C6	2.50	0.46
36:BA:1085:A:H4'	36:BA:1105:U:C4'	2.45	0.46
36:BA:1198:U:H2'	36:BA:1199:U:H6	1.79	0.46
36:BA:1268:A:H2'	36:BA:1269:A:O4'	2.15	0.46
36:BA:1278:A:O2'	36:BA:1279:G:H5'	2.16	0.46
36:BA:1462:C:H4'	36:BA:2703:C:H5'	1.97	0.46
36:BA:1472:A:O2'	36:BA:1473:G:H5'	2.16	0.46
36:BA:2262:U:H2'	36:BA:2263:C:C6	2.45	0.46
36:BA:2348:U:C2'	36:BA:2349:G:H5'	2.45	0.46
36:BA:2555:U:C2'	36:BA:2556:C:H5'	2.45	0.46
39:BD:30:GLU:HB2	39:BD:35:LYS:HE3	1.98	0.46
39:BD:102:LYS:C	39:BD:103:ARG:HG2	2.36	0.46
42:BG:30:GLU:CG	42:BG:32:PRO:HD3	2.46	0.46
49:BQ:79:LEU:HD22	49:BQ:80:GLU:HG3	1.98	0.46
54:BV:77:ALA:O	54:BV:79:VAL:N	2.47	0.46
58:BZ:62:PRO:C	58:BZ:64:GLY:N	2.69	0.46
58:BZ:128:VAL:HG22	58:BZ:129:SER:H	1.80	0.46
58:BZ:162:GLU:O	58:BZ:163:LEU:O	2.33	0.46
1:CA:501:C:H2'	1:CA:502:G:C8	2.50	0.46
1:CA:548:G:H2'	1:CA:549:C:C6	2.51	0.46
1:CA:551:U:H2'	1:CA:552:U:C6	2.51	0.46
1:CA:1004:A:H2'	1:CA:1037:C:O2	2.16	0.46
1:CA:1105:A:O2'	1:CA:1106:G:H5'	2.15	0.46
1:CA:1466:C:H2'	1:CA:1467:G:O4'	2.16	0.46
4:CD:6:GLY:O	4:CD:8:VAL:HG13	2.15	0.46
4:CD:108:LEU:HD11	4:CD:176:LEU:HB2	1.98	0.46
8:CH:10:LEU:CD2	8:CH:83:ILE:HD11	2.46	0.46
8:CH:37:ARG:HA	8:CH:48:TYR:HE2	1.81	0.46
10:CJ:78:ASN:HB2	10:CJ:81:THR:CG2	2.45	0.46
13:CM:101:GLN:N	13:CM:101:GLN:NE2	2.50	0.46
15:CO:18:PHE:CE1	15:CO:21:ASP:HB2	2.51	0.46
22:CV:12:U:H4'	36:DA:1908:C:O2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CV:62:C:O2'	22:CV:63:G:H5'	2.16	0.46
22:CW:26:A:N6	22:CW:44:G:H1	2.00	0.46
22:CW:31:A:O2'	22:CW:32:U:H5'	2.16	0.46
22:CW:34:G:N2	23:CX:18:G:O6	2.48	0.46
24:CY:67:G:H2'	24:CY:68:C:C6	2.50	0.46
25:CZ:164:PRO:O	25:CZ:166:ASP:N	2.49	0.46
27:D1:13:ILE:O	27:D1:13:ILE:HG23	2.14	0.46
27:D1:87:PRO:HD2	27:D1:89:GLU:OE2	2.16	0.46
30:D4:22:ILE:H	30:D4:22:ILE:CD1	2.01	0.46
32:D6:9:LEU:HD22	32:D6:10:LEU:N	2.30	0.46
34:D8:7:HIS:C	34:D8:9:GLY:H	2.19	0.46
36:DA:67:U:O2'	36:DA:68:G:H5'	2.16	0.46
36:DA:331:A:C1'	36:DA:332:A:OP1	2.64	0.46
36:DA:443:A:H3'	41:DF:45:ARG:NH1	2.31	0.46
36:DA:500:G:H22	36:DA:502:A:H3'	1.76	0.46
36:DA:580:C:P	53:DU:33:ARG:HH21	2.39	0.46
36:DA:751:A:C5'	55:DW:90:ARG:HA	2.41	0.46
36:DA:1264:G:C6	36:DA:1265:A:N6	2.84	0.46
36:DA:1721:G:C2	36:DA:1739:U:OP2	2.69	0.46
36:DA:1999:C:H5"	36:DA:2723:C:O2'	2.16	0.46
36:DA:2223:G:C2'	36:DA:2224:G:H5'	2.45	0.46
36:DA:2242:G:C2'	36:DA:2243:U:O5'	2.64	0.46
36:DA:2429:G:OP2	36:DA:2430:A:OP2	2.34	0.46
36:DA:2781:A:H8	36:DA:2781:A:OP2	1.98	0.46
37:DB:81:G:H2'	37:DB:82:G:H5'	1.98	0.46
39:DD:210:GLY:C	39:DD:212:SER:N	2.67	0.46
40:DE:12:THR:OG1	40:DE:13:ARG:N	2.49	0.46
40:DE:52:LEU:HD12	40:DE:53:PRO:HD2	1.97	0.46
40:DE:101:ARG:HA	40:DE:170:LEU:O	2.15	0.46
41:DF:36:VAL:HG22	41:DF:101:LEU:HD21	1.97	0.46
42:DG:34:LEU:HA	42:DG:161:THR:HA	1.98	0.46
42:DG:133:LEU:HD21	42:DG:157:ILE:HD12	1.98	0.46
43:DH:15:VAL:HB	43:DH:27:LYS:O	2.16	0.46
48:DP:84:ASN:ND2	48:DP:116:GLY:CA	2.77	0.46
50:DR:54:LEU:O	50:DR:57:ARG:HG2	2.15	0.46
50:DR:107:ASP:OD1	50:DR:107:ASP:C	2.54	0.46
52:DT:5:ALA:O	52:DT:8:LYS:N	2.48	0.46
52:DT:12:SER:O	52:DT:13:ARG:NH2	2.49	0.46
57:DY:33:LYS:C	57:DY:35:TYR:H	2.19	0.46
58:DZ:104:PHE:CD1	58:DZ:139:VAL:HG21	2.51	0.46
1:AA:428:G:O2'	1:AA:429:U:P	2.73	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:920:U:H2'	1:AA:921:U:C6	2.51	0.46
1:AA:1086:U:H5	1:AA:1099:G:H22	1.64	0.46
1:AA:1113:C:C1'	3:AC:178:LEU:HD23	2.46	0.46
2:AB:32:ILE:HD12	2:AB:40:HIS:CD2	2.50	0.46
6:AF:28:ARG:HH11	6:AF:28:ARG:HG3	1.80	0.46
7:AG:69:VAL:O	7:AG:138:LYS:HB2	2.15	0.46
12:AL:111:LYS:O	12:AL:112:ASP:HB2	2.15	0.46
12:AL:119:LYS:O	12:AL:120:TYR:HB2	2.16	0.46
13:AM:88:ARG:NH1	13:AM:88:ARG:CG	2.77	0.46
18:AR:53:ARG:CG	18:AR:63:GLN:HE21	2.23	0.46
20:AT:84:LEU:C	20:AT:86:ARG:N	2.69	0.46
25:AZ:100:ASP:OD1	25:AZ:215:ARG:NH2	2.49	0.46
25:AZ:313:HIS:O	25:AZ:380:LEU:HD11	2.16	0.46
29:B3:42:ALA:O	29:B3:45:GLY:N	2.49	0.46
30:B4:31:ILE:HG22	30:B4:31:ILE:O	2.15	0.46
32:B6:15:GLU:CB	32:B6:20:ASN:HB3	2.42	0.46
34:B8:17:THR:OG1	36:BA:651:G:OP1	2.34	0.46
36:BA:143:G:H1'	56:BX:37:THR:HG22	1.98	0.46
36:BA:272(C):G:H1	36:BA:365:C:N4	2.12	0.46
36:BA:626:U:C2	48:BP:105:LEU:HG	2.48	0.46
36:BA:2402:C:OP1	36:BA:2402:C:O4'	2.33	0.46
36:BA:2406:U:C2	48:BP:72:PRO:HB2	2.50	0.46
36:BA:2820:A:O2'	36:BA:2821:A:OP1	2.32	0.46
37:BB:13:A:H2'	37:BB:14:U:H5"	1.97	0.46
37:BB:90:A:O2'	49:BQ:17:LEU:HD12	2.16	0.46
38:BC:151:GLU:HA	38:BC:154:ARG:CG	2.46	0.46
39:BD:158:ALA:HB3	39:BD:161:THR:CG2	2.46	0.46
40:BE:63:LEU:O	40:BE:64:LYS:C	2.54	0.46
43:BH:59:ARG:O	43:BH:62:LYS:HB3	2.15	0.46
46:BN:23:LEU:CD2	46:BN:24:GLY:N	2.78	0.46
48:BP:84:ASN:HB3	48:BP:86:LYS:HB3	1.97	0.46
49:BQ:119:ARG:O	49:BQ:123:HIS:HD2	1.99	0.46
52:BT:29:ARG:HD3	52:BT:29:ARG:HA	1.68	0.46
55:BW:5:ALA:HB2	55:BW:54:ALA:CB	2.46	0.46
55:BW:13:SER:HA	55:BW:99:ARG:HB2	1.97	0.46
55:BW:70:TYR:O	55:BW:107:LEU:HB3	2.16	0.46
58:BZ:18:LEU:O	58:BZ:21:ALA:HB3	2.16	0.46
1:CA:35:G:H2'	1:CA:36:C:H6	1.77	0.46
1:CA:134:A:H61	16:CP:25:ARG:HH12	1.64	0.46
1:CA:354:G:H2'	1:CA:354:G:N3	2.30	0.46
1:CA:375:U:C2	1:CA:376:G:C8	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:643:C:H4'	8:CH:31:PHE:CE2	2.51	0.46
1:CA:708:C:OP1	11:CK:85:ARG:NH2	2.41	0.46
1:CA:1030:C:N4	1:CA:1032:G:N3	2.64	0.46
1:CA:1325:C:P	21:CU:15:ARG:HH21	2.39	0.46
2:CB:105:PHE:CD1	2:CB:152:PHE:HZ	2.33	0.46
2:CB:204:ASN:HD22	2:CB:207:ALA:H	1.62	0.46
2:CB:236:TYR:CD2	2:CB:239:VAL:HG21	2.50	0.46
5:CE:91:LEU:HD12	5:CE:91:LEU:N	2.30	0.46
6:CF:8:ILE:HG23	6:CF:85:VAL:HG13	1.97	0.46
9:CI:11:LYS:O	9:CI:12:GLU:CB	2.63	0.46
12:CL:8:ASN:O	12:CL:12:ARG:HG3	2.16	0.46
13:CM:108:ARG:N	13:CM:108:ARG:HD2	2.31	0.46
16:CP:20:VAL:HG21	16:CP:32:TYR:HB2	1.97	0.46
25:CZ:221:PHE:CZ	25:CZ:247:VAL:HG11	2.50	0.46
25:CZ:309:SER:O	25:CZ:310:ILE:CG2	2.56	0.46
25:CZ:357:PRO:C	25:CZ:359:VAL:H	2.19	0.46
31:D5:27:PRO:HG3	55:DW:23:LEU:HD11	1.97	0.46
32:D6:44:ARG:HB3	32:D6:46:HIS:CE1	2.51	0.46
34:D8:27:THR:HG22	48:DP:62:LEU:HD22	1.97	0.46
36:DA:234:C:O2'	36:DA:235:U:H5'	2.15	0.46
36:DA:271(C):C:O2'	36:DA:271(D):G:H5'	2.15	0.46
36:DA:743:G:O2'	36:DA:1659:U:OP1	2.26	0.46
36:DA:863:A:H61	36:DA:913:U:H3	1.64	0.46
36:DA:1058:G:C2	36:DA:1059:G:C8	3.04	0.46
36:DA:1199:U:H2'	36:DA:1200:C:C6	2.50	0.46
36:DA:1596:A:O2'	36:DA:1597:A:H5'	2.16	0.46
36:DA:2239:G:H5'	39:DD:251:GLY:HA3	1.96	0.46
36:DA:2305:A:C4	42:DG:154:GLY:HA3	2.51	0.46
36:DA:2720:U:H3'	36:DA:2721:A:H8	1.81	0.46
38:DC:196:LEU:C	38:DC:198:ALA:N	2.69	0.46
39:DD:165:ILE:HA	39:DD:175:LEU:HD23	1.97	0.46
39:DD:183:ARG:CD	39:DD:269:PHE:O	2.64	0.46
47:DO:75:SER:HB3	52:DT:32:TYR:OH	2.16	0.46
48:DP:57:THR:OG1	48:DP:59:LEU:CB	2.63	0.46
54:DV:15:GLU:HB3	54:DV:16:PRO:HD2	1.93	0.46
58:DZ:48:PHE:CE1	58:DZ:52:SER:HA	2.50	0.46
1:AA:106:C:HO2'	1:AA:107:G:H5'	1.81	0.46
1:AA:141:A:H1'	1:AA:182:U:C2	2.50	0.46
1:AA:245:C:O2'	1:AA:246:A:P	2.74	0.46
1:AA:538:G:H2'	1:AA:539:A:C8	2.51	0.46
4:AD:12:CYS:HA	4:AD:19:LEU:CD1	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:33:TYR:HB2	6:AF:75:LEU:HD13	1.96	0.46
9:AI:6:GLY:HA3	9:AI:84:ALA:HB2	1.98	0.46
11:AK:58:PRO:HB2	11:AK:93:GLN:HG3	1.98	0.46
13:AM:15:VAL:O	13:AM:18:ALA:N	2.49	0.46
16:AP:8:ARG:HB3	16:AP:28:ARG:NH1	2.30	0.46
17:AQ:78:GLU:OE1	17:AQ:81:ARG:HD3	2.15	0.46
22:AW:8:U:O2'	22:AW:9:A:C5'	2.64	0.46
25:AZ:343:TYR:CE2	25:AZ:348:ASP:HB3	2.51	0.46
27:B1:29:GLY:HA3	36:BA:2396:G:O2'	2.16	0.46
27:B1:77:ALA:O	27:B1:78:LYS:C	2.54	0.46
29:B3:26:LEU:O	29:B3:28:LEU:N	2.49	0.46
34:B8:21:LYS:NZ	34:B8:48:PHE:HE2	2.13	0.46
34:B8:56:GLU:O	34:B8:57:ARG:C	2.55	0.46
36:BA:363(A):A:N3	36:BA:363(A):A:H2'	2.31	0.46
36:BA:478:A:N1	36:BA:500:G:H4'	2.31	0.46
36:BA:688:U:H5'	36:BA:1780:A:C2	2.51	0.46
36:BA:848:G:N9	36:BA:933:A:H8	2.14	0.46
36:BA:1289:C:O2'	36:BA:1330:C:H4'	2.16	0.46
36:BA:1308:A:N1	36:BA:1611:C:H1'	2.30	0.46
36:BA:1794:U:H1'	36:BA:1900:A:C2	2.51	0.46
36:BA:2032:G:OP2	36:BA:2454:G:O2'	2.34	0.46
36:BA:2055:C:H5'	36:BA:2056:G:O5'	2.15	0.46
36:BA:2186:G:H2'	36:BA:2187:G:N9	2.31	0.46
36:BA:2206:G:N2	36:BA:2207:G:C4'	2.79	0.46
36:BA:2653:U:O2'	43:BH:110:SER:HB2	2.15	0.46
36:BA:2781:A:H5"	36:BA:2782:G:H5'	1.93	0.46
38:BC:159:GLY:O	38:BC:160:ARG:O	2.33	0.46
40:BE:26:ILE:HD12	40:BE:198:VAL:HG21	1.98	0.46
47:BO:61:VAL:O	47:BO:84:ALA:HA	2.16	0.46
49:BQ:43:THR:HG22	49:BQ:94:VAL:CG1	2.40	0.46
49:BQ:136:ALA:O	49:BQ:138:ASP:N	2.41	0.46
49:BQ:140:ALA:HB3	58:BZ:53:ILE:HD12	1.97	0.46
51:BS:17:ARG:NH2	51:BS:90:GLY:H	2.13	0.46
52:BT:31:SER:HB2	52:BT:32:TYR:CE1	2.51	0.46
53:BU:95:LEU:C	53:BU:97:ASP:H	2.19	0.46
54:BV:39:LEU:HA	54:BV:47:VAL:CG1	2.46	0.46
54:BV:58:VAL:O	54:BV:97:LYS:HB2	2.15	0.46
56:BX:41:ASN:HD22	56:BX:41:ASN:N	2.14	0.46
58:BZ:72:ARG:HG2	58:BZ:89:PHE:HB2	1.98	0.46
1:CA:737:A:OP1	6:CF:92:LYS:HB2	2.15	0.46
1:CA:865:A:O2'	1:CA:866:C:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:955:U:O5'	1:CA:955:U:H6	1.98	0.46
1:CA:1107:C:C4	1:CA:1108:G:C8	3.04	0.46
2:CB:7:VAL:O	2:CB:11:LEU:HB2	2.16	0.46
2:CB:94:ASN:N	2:CB:94:ASN:ND2	2.34	0.46
2:CB:222:ILE:O	2:CB:223:ILE:C	2.54	0.46
3:CC:175:LEU:HD23	3:CC:182:ILE:HD13	1.98	0.46
4:CD:19:LEU:HD23	4:CD:67:ILE:HG13	1.98	0.46
8:CH:20:TYR:CZ	8:CH:78:GLN:NE2	2.84	0.46
20:CT:45:GLN:CB	20:CT:91:LEU:HD22	2.46	0.46
25:CZ:12:VAL:HG21	25:CZ:75:ARG:HH21	1.81	0.46
25:CZ:13:ASN:HB2	25:CZ:78:SER:O	2.16	0.46
25:CZ:192:GLU:O	25:CZ:193:ASN:O	2.34	0.46
31:D5:2:ALA:N	36:DA:747:U:C4	2.84	0.46
34:D8:17:THR:CG2	34:D8:21:LYS:O	2.64	0.46
35:D9:10:ILE:O	35:D9:14:CYS:SG	2.74	0.46
36:DA:363(A):A:H2'	36:DA:363(A):A:N3	2.30	0.46
36:DA:482:A:N6	36:DA:506:G:C8	2.84	0.46
36:DA:696:G:O2'	36:DA:697:C:H5'	2.16	0.46
36:DA:944:G:H5'	36:DA:945:A:O5'	2.16	0.46
36:DA:1063:G:H22	45:DK:89:UNK:HA	1.81	0.46
36:DA:1191:G:OP1	48:DP:35:HIS:ND1	2.48	0.46
36:DA:1245:G:OP1	48:DP:16:ARG:NE	2.49	0.46
36:DA:1264:G:H2'	36:DA:1265:A:C8	2.51	0.46
36:DA:1424:G:H2'	36:DA:1425:G:O4'	2.16	0.46
36:DA:2018:G:H2'	36:DA:2019:A:C8	2.50	0.46
37:DB:7:G:C3'	37:DB:8:U:C5'	2.94	0.46
40:DE:134:ILE:HG22	40:DE:137:HIS:CE1	2.50	0.46
41:DF:122:LYS:HD2	41:DF:122:LYS:N	2.30	0.46
41:DF:167:ALA:O	41:DF:170:LEU:HB2	2.16	0.46
42:DG:93:THR:O	42:DG:94:LEU:HD23	2.16	0.46
43:DH:54:ARG:NH1	43:DH:54:ARG:CG	2.74	0.46
43:DH:149:ARG:O	43:DH:151:ILE:N	2.48	0.46
46:DN:43:THR:HB	46:DN:46:VAL:HG12	1.95	0.46
46:DN:65:LYS:HD2	46:DN:65:LYS:H	1.81	0.46
48:DP:62:LEU:HD23	48:DP:62:LEU:N	2.19	0.46
49:DQ:38:GLU:OE2	49:DQ:128:LYS:HG3	2.15	0.46
52:DT:29:ARG:HG3	52:DT:30:VAL:HG22	1.97	0.46
52:DT:29:ARG:CD	52:DT:30:VAL:HG13	2.45	0.46
53:DU:85:LYS:CD	53:DU:117:GLN:HE22	2.28	0.46
53:DU:101:ARG:HH11	53:DU:101:ARG:HG3	1.81	0.46
54:DV:52:VAL:CG1	54:DV:55:ALA:HB3	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:189(H):G:H8	1:AA:189(H):G:O5'	1.99	0.46
1:AA:455:C:N4	1:AA:476:G:H1	2.14	0.46
1:AA:995:C:O2'	1:AA:996:A:H8	1.99	0.46
1:AA:1187:G:H5'	1:AA:1187:G:C8	2.51	0.46
2:AB:236:TYR:O	2:AB:238:LEU:N	2.49	0.46
9:AI:4:TYR:HB2	9:AI:19:LEU:HB3	1.97	0.46
14:AN:31:ARG:HG3	14:AN:31:ARG:NH1	2.30	0.46
17:AQ:9:VAL:HG11	17:AQ:84:LEU:HD12	1.97	0.46
18:AR:29:PHE:N	18:AR:29:PHE:CD1	2.84	0.46
22:AW:65:G:C4'	32:B6:28:ARG:NH2	2.77	0.46
25:AZ:356:PRO:HG2	25:AZ:369:THR:O	2.15	0.46
28:B2:20:GLU:HG3	28:B2:21:LEU:N	2.31	0.46
30:B4:5:ILE:H	30:B4:5:ILE:HD13	1.81	0.46
30:B4:26:SER:CB	42:BG:143:GLU:OE2	2.64	0.46
31:B5:2:ALA:N	36:BA:747:U:C4	2.84	0.46
36:BA:64:A:H2'	36:BA:65:C:O4'	2.16	0.46
36:BA:271(Q):G:H1'	36:BA:271(R):G:C8	2.50	0.46
36:BA:575:A:OP2	36:BA:2499:C:O2'	2.34	0.46
36:BA:610:G:H2'	36:BA:611:C:C6	2.51	0.46
36:BA:640:C:H2'	36:BA:641:C:C6	2.50	0.46
36:BA:782:A:N1	39:BD:226:MET:CE	2.79	0.46
36:BA:1069:A:H1'	36:BA:1070:A:P	2.56	0.46
36:BA:1139:G:H5'	46:BN:23:LEU:HD21	1.98	0.46
36:BA:1526:G:O2'	36:BA:1527:G:H5'	2.16	0.46
36:BA:2050:C:H2'	36:BA:2051:A:O4'	2.15	0.46
36:BA:2515:C:H2'	36:BA:2516:G:H8	1.81	0.46
36:BA:2523:G:H2'	36:BA:2524:G:H5'	1.97	0.46
36:BA:2772:C:H2'	36:BA:2773:C:H6	1.81	0.46
37:BB:7:G:H2'	37:BB:8:U:H5"	1.98	0.46
41:BF:6:VAL:CG1	41:BF:7:TYR:N	2.79	0.46
41:BF:21:ALA:HB3	41:BF:23:ASP:OD2	2.16	0.46
41:BF:64:ILE:HG12	41:BF:65:TRP:CD1	2.51	0.46
46:BN:51:PHE:CZ	46:BN:119:ARG:HD2	2.51	0.46
50:BR:78:LYS:O	50:BR:82:GLU:HB2	2.15	0.46
51:BS:56:LEU:O	51:BS:57:LYS:O	2.34	0.46
53:BU:21:ALA:HA	53:BU:24:TYR:CE2	2.51	0.46
57:BY:28:LYS:HG2	57:BY:39:VAL:CG1	2.46	0.46
57:BY:80:GLY:O	57:BY:81:LYS:C	2.53	0.46
1:CA:68:G:H5'	1:CA:171:A:H1'	1.97	0.46
1:CA:617:G:H1	1:CA:623:C:N4	2.07	0.46
1:CA:825:G:N2	8:CH:11:THR:HG21	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:836:G:C6	1:CA:851:G:C6	3.04	0.46
1:CA:878:G:C5'	8:CH:89:PRO:HG2	2.46	0.46
1:CA:1119:C:H2'	1:CA:1120:G:H8	1.81	0.46
1:CA:1151:A:O2'	1:CA:1152:A:O5'	2.32	0.46
1:CA:1363:C:H5'	1:CA:1363(A):A:O5'	2.15	0.46
4:CD:11:LEU:O	4:CD:13:ARG:O	2.34	0.46
4:CD:194:LEU:HD22	4:CD:194:LEU:H	1.81	0.46
8:CH:29:SER:OG	8:CH:32:LYS:HB2	2.16	0.46
9:CI:16:ARG:HH11	9:CI:16:ARG:HG3	1.80	0.46
10:CJ:18:ALA:O	10:CJ:22:LYS:HB2	2.15	0.46
10:CJ:40:LEU:HB2	10:CJ:69:ASN:HB2	1.97	0.46
10:CJ:49:VAL:HG21	14:CN:41:ARG:O	2.16	0.46
17:CQ:88:TYR:OH	17:CQ:92:ARG:CZ	2.63	0.46
18:CR:58:LEU:HD11	18:CR:66:LEU:HD22	1.99	0.46
21:CU:6:ARG:HD3	21:CU:15:ARG:HH12	1.68	0.46
25:CZ:63:ILE:N	25:CZ:83:PRO:HB3	2.31	0.46
25:CZ:236:THR:O	25:CZ:289:LEU:HD12	2.16	0.46
26:D0:26:TYR:HA	26:D0:69:PHE:CE1	2.48	0.46
30:D4:28:LYS:O	30:D4:31:ILE:CD1	2.64	0.46
33:D7:19:ARG:HG3	36:DA:126:A:O5'	2.16	0.46
36:DA:24:G:O2'	55:DW:77:ASP:HB3	2.16	0.46
36:DA:67:U:H2'	36:DA:68:G:C8	2.51	0.46
36:DA:352:G:H1'	36:DA:354:G:N7	2.31	0.46
36:DA:820:A:H4'	36:DA:836:G:N2	2.31	0.46
36:DA:996:A:H4'	53:DU:92:ARG:NE	2.31	0.46
36:DA:1047:G:C2'	36:DA:1110:G:H21	2.26	0.46
36:DA:1087:G:H2'	36:DA:1088:A:H4'	1.98	0.46
36:DA:1499:C:O2'	36:DA:1500:G:H5'	2.16	0.46
36:DA:2120:G:O2'	36:DA:2121:G:H5'	2.16	0.46
36:DA:2186:G:H2'	36:DA:2187:G:C4	2.51	0.46
36:DA:2236:C:H2'	36:DA:2237:G:O4'	2.16	0.46
36:DA:2449:U:H4'	36:DA:2450:A:OP1	2.16	0.46
36:DA:2684:U:O5'	36:DA:2684:U:H6	1.99	0.46
37:DB:29:A:C2	37:DB:56:G:C2	3.04	0.46
42:DG:34:LEU:HD12	42:DG:99:MET:HE3	1.97	0.46
42:DG:55:LYS:C	42:DG:57:ALA:N	2.69	0.46
42:DG:172:LEU:O	42:DG:176:LEU:HB2	2.16	0.46
43:DH:23:ARG:O	43:DH:24:VAL:CG2	2.64	0.46
48:DP:59:LEU:CA	48:DP:61:ARG:NE	2.69	0.46
48:DP:147:LEU:HG	48:DP:148:LEU:N	2.17	0.46
51:DS:17:ARG:C	51:DS:19:LYS:N	2.67	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:34:HIS:HB2	51:DS:36:TYR:CE1	2.48	0.46
52:DT:39:ARG:H	52:DT:39:ARG:HD2	1.80	0.46
54:DV:3:ALA:O	54:DV:14:VAL:HG22	2.15	0.46
1:AA:613:C:H2'	1:AA:614:A:H8	1.79	0.45
1:AA:723:U:O2'	1:AA:724:G:H5'	2.15	0.45
1:AA:1095:U:H2'	1:AA:1096:C:O4'	2.16	0.45
4:AD:165:MET:HE3	4:AD:176:LEU:CD2	2.46	0.45
6:AF:30:LEU:O	6:AF:35:ALA:CB	2.56	0.45
7:AG:43:PHE:O	7:AG:46:ALA:HB3	2.16	0.45
14:AN:19:ARG:O	14:AN:20:ALA:C	2.53	0.45
15:AO:69:TYR:CZ	15:AO:73:GLU:HG3	2.51	0.45
24:AY:76:A:C2	25:AZ:271:GLU:HG3	2.51	0.45
25:AZ:132:VAL:HG12	25:AZ:202:LEU:HD11	1.99	0.45
25:AZ:350:THR:HG22	25:AZ:351:GLY:N	2.31	0.45
27:B1:79:GLY:O	27:B1:80:LEU:CB	2.64	0.45
28:B2:62:THR:O	28:B2:65:ASN:N	2.49	0.45
31:B5:36:CYS:SG	31:B5:46:CYS:SG	3.08	0.45
34:B8:30:ARG:HA	34:B8:30:ARG:NE	2.32	0.45
34:B8:37:SER:O	34:B8:38:GLY:C	2.54	0.45
34:B8:55:ALA:HB1	48:BP:49:ARG:O	2.16	0.45
35:B9:8:LYS:HZ1	36:BA:1032:A:P	2.39	0.45
36:BA:750:A:C2	36:BA:753:C:C6	3.03	0.45
36:BA:814:C:H1'	36:BA:1225:G:N2	2.31	0.45
36:BA:1208:C:C4	36:BA:1209:G:N7	2.84	0.45
36:BA:1434:A:C2'	36:BA:1435:G:H5'	2.45	0.45
36:BA:1682:G:H5'	36:BA:1762:A:O2'	2.17	0.45
36:BA:1692:U:O2'	36:BA:1693:U:H2'	2.16	0.45
36:BA:1712:C:O2'	36:BA:1713:U:H5'	2.16	0.45
36:BA:2069:G:C2'	36:BA:2070:G:H5'	2.46	0.45
36:BA:2531:A:H2	36:BA:2658:C:O2	1.99	0.45
36:BA:2777:G:C4'	36:BA:2778:A:H5'	2.45	0.45
38:BC:120:MET:HE2	38:BC:123:VAL:HG11	1.98	0.45
38:BC:147:PHE:C	38:BC:149:ILE:H	2.18	0.45
39:BD:246:PRO:HG3	39:BD:255:LYS:HG3	1.97	0.45
42:BG:5:VAL:CG1	42:BG:101:ILE:HG12	2.46	0.45
42:BG:72:ARG:NE	42:BG:86:MET:HA	2.31	0.45
42:BG:170:ARG:O	42:BG:174:GLU:HB2	2.16	0.45
43:BH:83:TYR:O	43:BH:84:SER:O	2.34	0.45
46:BN:25:ARG:O	46:BN:28:THR:HG22	2.16	0.45
46:BN:58:ASP:O	46:BN:59:LYS:HB2	2.15	0.45
47:BO:14:THR:HG21	47:BO:86:ILE:HD13	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:104:PHE:N	49:BQ:104:PHE:CD1	2.84	0.45
51:BS:77:ALA:O	51:BS:78:LEU:C	2.54	0.45
52:BT:12:SER:O	52:BT:13:ARG:NH2	2.49	0.45
54:BV:47:VAL:HB	54:BV:51:VAL:O	2.15	0.45
58:BZ:14:LYS:O	58:BZ:17:ALA:HB3	2.15	0.45
1:CA:44:G:H2'	1:CA:45:U:O4'	2.16	0.45
1:CA:221:C:H2'	1:CA:222:U:H6	1.81	0.45
1:CA:346:G:O2'	1:CA:347:G:P	2.73	0.45
1:CA:353:A:H2'	1:CA:354:G:OP2	2.16	0.45
1:CA:532:A:H2	1:CA:1206:G:H21	1.63	0.45
1:CA:1495:U:H2'	1:CA:1496:C:C6	2.51	0.45
2:CB:22:LYS:HE2	2:CB:22:LYS:CA	2.41	0.45
2:CB:58:ILE:O	2:CB:61:LEU:HB3	2.17	0.45
2:CB:62:ALA:O	2:CB:64:ARG:N	2.49	0.45
2:CB:109:SER:O	2:CB:111:ARG:N	2.49	0.45
2:CB:165:VAL:O	2:CB:166:ASP:HB3	2.16	0.45
3:CC:134:ILE:O	3:CC:138:VAL:HG12	2.16	0.45
7:CG:58:PRO:C	7:CG:60:LYS:H	2.18	0.45
8:CH:46:LYS:HD2	8:CH:63:LEU:O	2.15	0.45
9:CI:97:LYS:HB3	9:CI:98:PRO:HD3	1.98	0.45
13:CM:87:TYR:HE1	19:CS:81:ARG:NH2	2.13	0.45
13:CM:116:THR:O	13:CM:118:ALA:N	2.49	0.45
20:CT:93:GLU:N	20:CT:93:GLU:OE1	2.48	0.45
25:CZ:5:PHE:CD1	25:CZ:277:LEU:HD22	2.52	0.45
25:CZ:28:THR:C	25:CZ:30:ALA:H	2.19	0.45
27:D1:3:LYS:O	27:D1:46:LEU:HD21	2.15	0.45
33:D7:47:ARG:HD3	36:DA:1311:G:N7	2.31	0.45
36:DA:148:C:H5'	36:DA:149:A:OP2	2.16	0.45
36:DA:223:A:N7	36:DA:422:A:C1'	2.79	0.45
36:DA:903:C:O2'	36:DA:904:C:H5'	2.16	0.45
36:DA:914:C:C2'	36:DA:915:C:H5'	2.45	0.45
36:DA:2157:G:H3'	36:DA:2157:G:H8	1.81	0.45
36:DA:2241:A:O2'	36:DA:2242:G:H5'	2.16	0.45
36:DA:2287:A:H2	36:DA:2346:A:N1	2.14	0.45
36:DA:2306:C:H5	36:DA:2307:G:HO2'	1.63	0.45
36:DA:2330:G:C2'	36:DA:2331:G:H5'	2.45	0.45
36:DA:2590:A:H5"	39:DD:239:ARG:HE	1.80	0.45
37:DB:7:G:H4'	51:DS:29:PHE:CE2	2.51	0.45
38:DC:37:PHE:CD1	38:DC:37:PHE:N	2.84	0.45
38:DC:38:ASP:O	38:DC:177:LYS:HE3	2.16	0.45
38:DC:53:ARG:HH11	38:DC:53:ARG:CB	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:71:ASP:CG	39:DD:103:ARG:HH22	2.19	0.45
39:DD:147:LEU:HD21	39:DD:183:ARG:HH22	1.82	0.45
40:DE:69:LYS:O	40:DE:70:ALA:C	2.55	0.45
42:DG:52:ILE:HB	42:DG:54:GLU:HG3	1.98	0.45
48:DP:6:LEU:HD21	48:DP:9:ASN:HD22	1.80	0.45
48:DP:106:LEU:HD11	48:DP:112:LEU:HD23	1.98	0.45
48:DP:107:LYS:O	48:DP:107:LYS:HG3	2.15	0.45
52:DT:89:VAL:HG21	52:DT:91:ARG:NH2	2.20	0.45
53:DU:14:HIS:O	53:DU:18:LEU:HD23	2.15	0.45
58:DZ:61:LEU:HD11	58:DZ:67:LEU:HD13	1.98	0.45
58:DZ:62:PRO:C	58:DZ:64:GLY:H	2.18	0.45
1:AA:404:U:H5'	4:AD:122:ARG:HD3	1.97	0.45
1:AA:511:C:C2	1:AA:512:U:C5	3.04	0.45
1:AA:692:U:OP1	11:AK:124:LYS:HE2	2.17	0.45
1:AA:1468:A:H2'	1:AA:1469:G:O4'	2.15	0.45
2:AB:97:TRP:HZ2	2:AB:102:LEU:CD1	2.23	0.45
3:AC:38:ARG:NH1	3:AC:38:ARG:CB	2.79	0.45
3:AC:95:THR:CG2	3:AC:97:LYS:HD2	2.46	0.45
4:AD:159:ARG:HG3	4:AD:159:ARG:NH1	2.31	0.45
9:AI:47:LEU:C	9:AI:49:PRO:HD2	2.36	0.45
13:AM:25:ILE:CD1	13:AM:60:VAL:HG11	2.46	0.45
13:AM:32:GLU:OE1	13:AM:33:ALA:N	2.48	0.45
13:AM:84:ILE:O	13:AM:84:ILE:HG22	2.16	0.45
22:AW:65:G:H4'	32:B6:28:ARG:HH22	1.79	0.45
26:B0:38:VAL:HG11	26:B0:45:PHE:HD2	1.80	0.45
29:B3:18:ASP:O	29:B3:21:ALA:N	2.49	0.45
33:B7:24:THR:HG23	33:B7:27:GLY:N	2.31	0.45
34:B8:56:GLU:O	34:B8:58:ILE:N	2.49	0.45
36:BA:88:G:N3	36:BA:88:G:H2'	2.31	0.45
36:BA:229:A:N3	36:BA:229:A:H2'	2.30	0.45
36:BA:360:G:H2'	36:BA:361:G:H8	1.80	0.45
36:BA:769:G:H4'	36:BA:1379:A:N1	2.31	0.45
36:BA:1304:C:O2'	36:BA:1305:C:H5'	2.15	0.45
36:BA:1532:C:O2'	36:BA:1533:G:H5'	2.16	0.45
36:BA:1639:U:H4'	36:BA:2699:C:H4'	1.98	0.45
36:BA:1702:G:H2'	36:BA:1703:G:O4'	2.16	0.45
36:BA:1717:G:C2'	36:BA:1718:G:H5"	2.45	0.45
36:BA:1799:G:H5"	36:BA:1819:A:N6	2.31	0.45
36:BA:1991:U:C2'	36:BA:1992:G:H5"	2.45	0.45
36:BA:2347:C:H2'	36:BA:2348:U:H6	1.81	0.45
36:BA:2475:C:H42	36:BA:2529:G:H22	1.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2651:C:O2'	36:BA:2652:C:H5'	2.17	0.45
36:BA:2859:G:H2'	36:BA:2860:A:C8	2.51	0.45
38:BC:129:ARG:O	38:BC:130:ILE:HG13	2.15	0.45
41:BF:53:THR:HG22	41:BF:56:GLU:CG	2.47	0.45
42:BG:7:LEU:HD21	42:BG:176:LEU:CD2	2.24	0.45
42:BG:84:LYS:HD2	42:BG:84:LYS:H	1.81	0.45
43:BH:139:GLN:HE21	43:BH:140:LYS:CA	2.29	0.45
48:BP:126:VAL:HA	48:BP:145:PRO:CB	2.43	0.45
49:BQ:70:PRO:HA	49:BQ:95:ALA:HB2	1.99	0.45
49:BQ:109:VAL:HG12	49:BQ:110:THR:H	1.81	0.45
53:BU:32:PHE:O	53:BU:35:ALA:HB3	2.16	0.45
1:CA:386:C:H2'	1:CA:387:U:H5'	1.99	0.45
1:CA:501:C:O3'	12:CL:118:SER:HB2	2.17	0.45
1:CA:990:C:C4	1:CA:1216:G:N1	2.84	0.45
1:CA:1120:G:H2'	1:CA:1121:U:H6	1.81	0.45
2:CB:16:HIS:HB3	2:CB:210:SER:CB	2.46	0.45
3:CC:34:LEU:O	3:CC:38:ARG:HG2	2.16	0.45
4:CD:106:TYR:C	4:CD:108:LEU:H	2.19	0.45
8:CH:25:ASP:C	8:CH:26:VAL:HG12	2.37	0.45
10:CJ:57:LYS:HZ3	10:CJ:60:ARG:NH2	2.14	0.45
12:CL:83:VAL:HG12	12:CL:107:ALA:HB2	1.98	0.45
12:CL:113:ARG:HH11	12:CL:113:ARG:HG3	1.82	0.45
19:CS:11:VAL:CG2	19:CS:16:LEU:HD11	2.46	0.45
35:D9:34:GLN:HG3	35:D9:35:ARG:N	2.28	0.45
36:DA:271(F):C:O2'	36:DA:271(G):C:H5'	2.16	0.45
36:DA:280:C:H3'	36:DA:281:G:C8	2.51	0.45
36:DA:320:A:C4	41:DF:136:THR:HG21	2.51	0.45
36:DA:321:G:H4'	41:DF:165:ARG:O	2.15	0.45
36:DA:413:C:H42	36:DA:2410:G:H1	1.64	0.45
36:DA:1019:U:H3	36:DA:1142(A):A:N6	2.14	0.45
36:DA:1040:C:H2'	36:DA:1041:G:O4'	2.16	0.45
36:DA:1051:G:C4	36:DA:1052:C:N4	2.84	0.45
36:DA:1242:A:N1	48:DP:8:PRO:HG3	2.31	0.45
36:DA:1389:G:H2'	36:DA:1390:U:H6	1.82	0.45
36:DA:1465:G:N3	36:DA:1545:A:H2	2.14	0.45
36:DA:1619:G:O5'	36:DA:1619:G:H8	1.99	0.45
36:DA:1678:G:N2	36:DA:1989:G:N2	2.65	0.45
36:DA:2188:C:H2'	36:DA:2189:U:C5	2.50	0.45
36:DA:2285:C:H2'	36:DA:2286:A:H5'	1.99	0.45
36:DA:2359:C:C2	36:DA:2360:A:C8	3.04	0.45
36:DA:2756:U:O2'	36:DA:2757:A:OP2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:180:PHE:N	38:DC:180:PHE:HD1	2.13	0.45
40:DE:84:PHE:HD1	40:DE:85:ASN:H	1.62	0.45
40:DE:116:VAL:C	40:DE:118:LYS:H	2.19	0.45
40:DE:202:LYS:HD2	40:DE:202:LYS:N	2.31	0.45
42:DG:7:LEU:O	42:DG:10:LYS:HB2	2.16	0.45
43:DH:19:VAL:CG1	43:DH:20:ALA:N	2.74	0.45
43:DH:157:TYR:O	43:DH:158:HIS:CG	2.69	0.45
51:DS:49:VAL:CG1	51:DS:50:SER:H	2.01	0.45
57:DY:8:LYS:HB3	57:DY:28:LYS:HZ3	1.79	0.45
58:DZ:28:MET:CE	58:DZ:37:VAL:HG11	2.46	0.45
58:DZ:128:VAL:HG23	58:DZ:160:GLY:O	2.16	0.45
1:AA:128:G:O2'	17:AQ:3:LYS:HE2	2.17	0.45
1:AA:498:U:HO2'	1:AA:499:A:P	2.38	0.45
1:AA:582:U:OP1	15:AO:68:ARG:NH2	2.49	0.45
1:AA:1060:C:O2'	1:AA:1061:G:H5'	2.15	0.45
2:AB:167:PRO:HG2	2:AB:192:SER:HB3	1.98	0.45
4:AD:158:ILE:O	4:AD:162:LEU:HB2	2.17	0.45
4:AD:173:TRP:CE2	4:AD:189:PRO:HB3	2.51	0.45
10:AJ:4:ILE:CD1	10:AJ:74:ILE:HG13	2.35	0.45
11:AK:126:ARG:C	11:AK:128:ALA:N	2.70	0.45
12:AL:59:ARG:NH1	12:AL:59:ARG:HG3	2.31	0.45
13:AM:97:PRO:HA	13:AM:110:ARG:CD	2.37	0.45
15:AO:21:ASP:CG	15:AO:24:SER:OG	2.54	0.45
16:AP:32:TYR:O	16:AP:32:TYR:HD1	1.99	0.45
17:AQ:59:ILE:HG22	17:AQ:71:PHE:CD2	2.52	0.45
25:AZ:216:ASP:OD1	25:AZ:244:ARG:HB2	2.16	0.45
27:B1:75:GLU:C	27:B1:77:ALA:N	2.69	0.45
29:B3:29:ARG:NH2	36:BA:1183:G:H4'	2.31	0.45
32:B6:12:GLU:CA	32:B6:23:THR:HG22	2.40	0.45
36:BA:76:C:O2'	36:BA:77:C:H5'	2.15	0.45
36:BA:263:C:H2'	36:BA:264:C:O4'	2.16	0.45
36:BA:265:A:H4'	36:BA:266:G:O5'	2.17	0.45
36:BA:272(J):C:H2'	36:BA:274:G:H5"	1.99	0.45
36:BA:363(E):U:H2'	36:BA:363(F):A:H1'	1.98	0.45
36:BA:413:C:N4	36:BA:2410:G:H1	2.05	0.45
36:BA:523:C:H2'	36:BA:524:U:H5'	1.98	0.45
36:BA:1019:U:C2'	36:BA:1021:A:C2	2.99	0.45
36:BA:1108:U:H3'	36:BA:1109:C:C6	2.52	0.45
36:BA:1204:A:N1	36:BA:1241:A:N1	2.64	0.45
36:BA:1215:G:C2'	36:BA:1216:G:H5'	2.46	0.45
36:BA:1573:G:C2'	36:BA:1574:C:H5'	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2174:C:H1'	38:BC:217:THR:O	2.16	0.45
36:BA:2682:U:H5'	36:BA:2682:U:H6	1.80	0.45
36:BA:2832:U:C2	36:BA:2834:G:N2	2.85	0.45
36:BA:2886:G:O2'	36:BA:2887:U:H5'	2.17	0.45
37:BB:53:A:H2'	37:BB:53:A:N3	2.31	0.45
37:BB:61:G:O2'	37:BB:62:C:H5'	2.15	0.45
39:BD:30:GLU:HB2	39:BD:35:LYS:CE	2.46	0.45
40:BE:73:GLU:HG3	40:BE:74:PRO:HD2	1.98	0.45
40:BE:117:MET:CE	40:BE:136:ARG:HG2	2.47	0.45
42:BG:99:MET:O	42:BG:100:TRP:C	2.53	0.45
43:BH:146:ALA:O	43:BH:149:ARG:N	2.49	0.45
47:BO:11:ALA:HB3	47:BO:85:VAL:HG22	1.97	0.45
49:BQ:55:VAL:HG22	49:BQ:56:ARG:N	2.30	0.45
49:BQ:97:VAL:HG21	49:BQ:103:MET:HE3	1.98	0.45
49:BQ:112:GLU:CG	49:BQ:113:GLN:N	2.79	0.45
52:BT:61:PHE:CE1	52:BT:76:PHE:HB2	2.51	0.45
53:BU:37:GLU:O	53:BU:38:THR:C	2.55	0.45
54:BV:18:LEU:HG	54:BV:19:LYS:N	2.23	0.45
54:BV:19:LYS:HG2	54:BV:94:LEU:C	2.37	0.45
55:BW:36:LEU:N	55:BW:36:LEU:HD23	2.31	0.45
55:BW:66:GLU:O	55:BW:68:ARG:N	2.40	0.45
56:BX:41:ASN:C	56:BX:43:VAL:H	2.18	0.45
56:BX:51:VAL:HG12	56:BX:52:VAL:N	2.32	0.45
58:BZ:15:PRO:HA	58:BZ:18:LEU:HD23	1.98	0.45
58:BZ:45:ASP:O	58:BZ:47:VAL:N	2.50	0.45
1:CA:55:A:N1	25:CZ:234:ARG:HD3	2.32	0.45
1:CA:263:A:OP2	20:CT:79:ARG:NH1	2.49	0.45
1:CA:526:C:OP2	12:CL:91:LYS:HE3	2.17	0.45
1:CA:1125:U:C4	10:CJ:38:ILE:HG12	2.51	0.45
1:CA:1309:G:O2'	1:CA:1310:G:H5'	2.15	0.45
1:CA:1324:A:C4'	1:CA:1362:C:H4'	2.46	0.45
1:CA:1333:A:C2'	1:CA:1334:G:H5'	2.47	0.45
1:CA:1445:C:O2'	1:CA:1446:U:H5'	2.16	0.45
2:CB:82:ARG:O	2:CB:86:GLU:HG3	2.16	0.45
4:CD:62:GLN:HA	4:CD:62:GLN:NE2	2.31	0.45
4:CD:159:ARG:HG3	4:CD:159:ARG:NH1	2.31	0.45
7:CG:150:ALA:HB2	11:CK:50:TYR:OH	2.16	0.45
10:CJ:81:THR:C	10:CJ:83:GLU:N	2.69	0.45
12:CL:33:ARG:HD3	12:CL:62:SER:OG	2.17	0.45
13:CM:79:LYS:O	13:CM:82:MET:HG2	2.16	0.45
15:CO:35:ARG:CZ	15:CO:59:MET:CE	2.93	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CW:29:G:O2'	22:CW:30:G:H5'	2.16	0.45
23:CX:11:U:C2'	23:CX:12:A:OP1	2.64	0.45
25:CZ:158:LEU:HB2	25:CZ:165:GLY:HA3	1.99	0.45
25:CZ:163:PHE:C	25:CZ:165:GLY:H	2.20	0.45
25:CZ:241:ARG:HB2	25:CZ:285:ASN:ND2	2.32	0.45
25:CZ:251:ASP:H	25:CZ:267:VAL:CG1	2.30	0.45
25:CZ:378:VAL:CG2	25:CZ:380:LEU:HD21	2.46	0.45
26:D0:16:SER:HB2	36:DA:2262:U:H5	1.82	0.45
27:D1:8:SER:OG	27:D1:10:LYS:HG3	2.16	0.45
33:D7:24:THR:HG23	33:D7:27:GLY:N	2.30	0.45
34:D8:33:ASN:HD22	36:DA:2419:U:C5'	2.29	0.45
36:DA:42:G:H2'	36:DA:43:A:C8	2.52	0.45
36:DA:83:G:H22	36:DA:102:G:H2'	1.76	0.45
36:DA:573:G:O2'	36:DA:574:C:H3'	2.16	0.45
36:DA:596:G:H2'	36:DA:597:U:O4'	2.16	0.45
36:DA:754:C:H4'	36:DA:1272:A:N1	2.31	0.45
36:DA:1098:A:H2'	36:DA:1099:G:H5'	1.98	0.45
36:DA:1296:G:O2'	36:DA:1297:C:H5'	2.17	0.45
36:DA:1539:G:C3'	36:DA:1540:U:H5'	2.46	0.45
36:DA:2392:A:C8	48:DP:60:MET:HG2	2.50	0.45
36:DA:2557:G:H2'	36:DA:2558:C:C6	2.52	0.45
36:DA:2632:A:H1'	40:DE:61:ARG:NH2	2.32	0.45
36:DA:2847:U:H5'	52:DT:97:ALA:HB3	1.96	0.45
39:DD:210:GLY:O	39:DD:211:ARG:CB	2.63	0.45
40:DE:105:THR:HG22	40:DE:106:GLY:N	2.32	0.45
40:DE:132:HIS:CG	40:DE:135:HIS:CE1	3.04	0.45
40:DE:203:LYS:HD2	40:DE:203:LYS:C	2.37	0.45
41:DF:196:LEU:O	41:DF:200:GLU:HB2	2.17	0.45
42:DG:87:PRO:C	42:DG:88:ILE:HG12	2.36	0.45
44:DJ:35:UNK:O	44:DJ:37:UNK:N	2.50	0.45
46:DN:67:LEU:HA	46:DN:87:LEU:HB3	1.98	0.45
51:DS:106:ARG:CG	51:DS:106:ARG:NH1	2.80	0.45
52:DT:38:ASN:CG	52:DT:40:THR:OG1	2.54	0.45
52:DT:41:ARG:HG2	52:DT:41:ARG:NH1	2.31	0.45
52:DT:47:GLY:HA3	52:DT:63:VAL:CG1	2.44	0.45
52:DT:86:ILE:O	52:DT:86:ILE:HG23	2.17	0.45
54:DV:47:VAL:O	54:DV:48:GLY:C	2.55	0.45
55:DW:25:ARG:NH2	55:DW:74:ALA:O	2.49	0.45
1:AA:135:C:C2'	1:AA:136:C:H5'	2.47	0.45
1:AA:266:G:O2'	1:AA:267:C:OP2	2.23	0.45
1:AA:358:U:H2'	1:AA:359:U:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:538:G:H2'	1:AA:539:A:H8	1.82	0.45
1:AA:567:G:H2'	1:AA:568:G:O4'	2.17	0.45
1:AA:969:A:H2'	1:AA:970:C:H5'	1.98	0.45
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.15	0.45
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.30	0.45
1:AA:1512:U:H3	1:AA:1523:G:H1	1.62	0.45
2:AB:166:ASP:O	2:AB:168:THR:N	2.49	0.45
3:AC:44:GLU:O	3:AC:45:LYS:O	2.34	0.45
3:AC:126:ARG:HH11	3:AC:126:ARG:HG2	1.80	0.45
3:AC:190:ARG:HH11	3:AC:190:ARG:HG3	1.81	0.45
4:AD:19:LEU:HD23	4:AD:67:ILE:HG13	1.98	0.45
5:AE:11:ILE:HD11	5:AE:33:VAL:HG23	1.98	0.45
5:AE:96:PRO:HA	5:AE:117:ASP:OD2	2.15	0.45
7:AG:122:HIS:O	7:AG:123:GLU:C	2.54	0.45
15:AO:82:ILE:HG12	15:AO:87:ILE:HB	1.99	0.45
19:AS:15:LEU:O	19:AS:19:VAL:HG23	2.16	0.45
20:AT:55:ILE:O	20:AT:58:LYS:N	2.49	0.45
22:AW:18:G:N1	22:AW:55:U:H1'	2.16	0.45
25:AZ:9:LYS:HE2	25:AZ:75:ARG:N	2.31	0.45
25:AZ:19:HIS:O	25:AZ:20:VAL:O	2.35	0.45
25:AZ:357:PRO:C	25:AZ:359:VAL:H	2.19	0.45
26:B0:27:GLU:CB	26:B0:68:GLU:HA	2.47	0.45
28:B2:6:VAL:HG22	28:B2:10:LEU:HD21	1.98	0.45
32:B6:33:LYS:O	32:B6:34:LEU:CB	2.65	0.45
36:BA:593:G:C6	36:BA:594:U:C4	3.05	0.45
36:BA:628:G:C3'	36:BA:629:G:H5"	2.46	0.45
36:BA:738:G:H1'	36:BA:759:G:N2	2.31	0.45
36:BA:1279:G:H4'	50:BR:31:HIS:HD2	1.79	0.45
36:BA:1299:G:N2	36:BA:1640:C:C6	2.85	0.45
36:BA:1858:G:H2'	36:BA:1883:G:N2	2.30	0.45
36:BA:2129:C:OP1	38:BC:6:ARG:HB3	2.17	0.45
36:BA:2241:A:H2'	36:BA:2242:G:H8	1.82	0.45
36:BA:2633:G:H5'	36:BA:2811:G:O2'	2.16	0.45
36:BA:2728:U:O2'	36:BA:2729:G:H5'	2.15	0.45
36:BA:2779:U:H1'	36:BA:2781:A:C4	2.51	0.45
38:BC:131:LEU:HD22	38:BC:136:LEU:HB2	1.99	0.45
38:BC:161:ILE:H	38:BC:161:ILE:HD12	1.82	0.45
41:BF:188:ARG:CA	48:BP:7:ARG:HD3	2.45	0.45
48:BP:51:PHE:HD2	48:BP:52:GLU:OE2	2.00	0.45
54:BV:3:ALA:O	54:BV:14:VAL:HG22	2.17	0.45
57:BY:13:VAL:CG2	57:BY:72:VAL:HB	2.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:81:LYS:HE2	57:BY:97:ARG:CZ	2.46	0.45
58:BZ:60:GLU:O	58:BZ:61:LEU:HB2	2.17	0.45
58:BZ:145:GLU:HG3	58:BZ:146:ILE:H	1.82	0.45
58:BZ:152:ALA:HB1	58:BZ:167:PRO:CB	2.44	0.45
1:CA:538:G:OP2	12:CL:115:LYS:HB2	2.17	0.45
1:CA:766:A:C2'	1:CA:767:A:H5'	2.46	0.45
1:CA:864:A:C2	1:CA:917:G:N3	2.85	0.45
1:CA:979:C:C3'	1:CA:980:C:C5'	2.86	0.45
1:CA:986:A:H2'	1:CA:987:G:H8	1.80	0.45
1:CA:1012:U:C2'	1:CA:1013:G:H5'	2.46	0.45
1:CA:1096:C:H5"	2:CB:137:ARG:HH21	1.81	0.45
1:CA:1117:G:O3'	9:CI:104:ARG:HD2	2.16	0.45
1:CA:1350:A:C6	1:CA:1351:U:C4	3.04	0.45
2:CB:95:GLN:OE1	2:CB:95:GLN:HA	2.17	0.45
3:CC:5:ILE:CG1	3:CC:10:PHE:HB2	2.46	0.45
3:CC:5:ILE:O	3:CC:6:HIS:C	2.54	0.45
3:CC:81:GLY:O	3:CC:85:ARG:HD3	2.17	0.45
5:CE:76:ILE:CG1	5:CE:142:LEU:HD13	2.35	0.45
8:CH:10:LEU:HD22	8:CH:83:ILE:CG1	2.47	0.45
8:CH:85:ARG:HG3	8:CH:85:ARG:HH11	1.82	0.45
8:CH:87:SER:OG	8:CH:92:ARG:HA	2.16	0.45
9:CI:89:ASN:C	9:CI:91:ASP:H	2.20	0.45
9:CI:99:LEU:HB2	9:CI:101:PHE:CE2	2.52	0.45
13:CM:40:ASN:O	13:CM:43:THR:OG1	2.33	0.45
13:CM:116:THR:O	13:CM:116:THR:HG22	2.16	0.45
15:CO:39:LEU:HD22	15:CO:43:LEU:HG	1.98	0.45
18:CR:26:LEU:HD13	18:CR:39:VAL:HG13	1.98	0.45
24:CY:56:C:C1'	36:DA:1067:A:N3	2.79	0.45
25:CZ:340:PRO:O	25:CZ:350:THR:HA	2.17	0.45
36:DA:31:C:H2'	36:DA:32:C:O4'	2.17	0.45
36:DA:260:G:H1'	36:DA:621:A:H1'	1.99	0.45
36:DA:370:G:H5"	36:DA:423:A:N6	2.32	0.45
36:DA:687:C:H2'	36:DA:688:U:O4'	2.15	0.45
36:DA:1539:G:N3	36:DA:1540:U:H4'	2.31	0.45
39:DD:83:GLU:HB2	39:DD:92:ILE:CD1	2.46	0.45
40:DE:81:ILE:O	40:DE:82:ARG:HB3	2.16	0.45
40:DE:95:ILE:HD13	40:DE:95:ILE:H	1.78	0.45
41:DF:157:VAL:CG2	41:DF:194:MET:HG3	2.47	0.45
42:DG:46:ALA:HB2	42:DG:88:ILE:HG12	1.97	0.45
42:DG:56:ALA:HB2	42:DG:153:ARG:NH2	2.31	0.45
42:DG:135:LEU:HD22	42:DG:140:ILE:CD1	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DG:135:LEU:CD1	42:DG:140:ILE:HD11	2.40	0.45
51:DS:91:PRO:O	51:DS:92:TYR:O	2.33	0.45
57:DY:13:VAL:CG2	57:DY:14:LEU:N	2.80	0.45
1:AA:141:A:H1'	1:AA:182:U:O2	2.16	0.45
1:AA:598:U:H4'	8:AH:94:TYR:CD2	2.51	0.45
1:AA:736:C:H2'	1:AA:737:A:C8	2.51	0.45
1:AA:770:C:O2'	1:AA:771:G:H5'	2.17	0.45
1:AA:1097:C:O2'	1:AA:1098:C:H5'	2.16	0.45
1:AA:1213:A:N7	1:AA:1215:G:C5	2.84	0.45
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.52	0.45
1:AA:1431:C:O2'	1:AA:1432:G:H5'	2.17	0.45
2:AB:44:LEU:HA	2:AB:47:THR:OG1	2.17	0.45
3:AC:114:PRO:O	3:AC:118:GLN:HB2	2.17	0.45
4:AD:175:SER:O	4:AD:176:LEU:HB2	2.17	0.45
7:AG:20:ASP:CB	7:AG:23:VAL:HG23	2.37	0.45
13:AM:64:TRP:O	13:AM:66:LEU:HD13	2.16	0.45
16:AP:2:VAL:O	16:AP:2:VAL:HG13	2.17	0.45
17:AQ:5:VAL:O	17:AQ:6:LEU:HD23	2.17	0.45
31:B5:36:CYS:C	31:B5:38:ALA:H	2.18	0.45
31:B5:48:GLU:O	31:B5:49:CYS:CB	2.64	0.45
36:BA:206:U:H2'	36:BA:206:U:O2	2.17	0.45
36:BA:449:A:H4'	53:BU:3:ARG:NH2	2.26	0.45
36:BA:777:A:C2	36:BA:778:G:C4	3.05	0.45
36:BA:845:G:HO2'	36:BA:846:C:H5	1.61	0.45
36:BA:1028:A:N3	36:BA:2486:G:O2'	2.42	0.45
36:BA:1142(A):A:H5'	36:BA:1142(A):A:C8	2.51	0.45
36:BA:1493:C:C4	36:BA:2206:G:O2'	2.70	0.45
36:BA:1683:C:H2'	36:BA:1684:C:H6	1.81	0.45
36:BA:1720:U:H2'	36:BA:1721:G:C4'	2.47	0.45
36:BA:1885:A:H2'	36:BA:1886:C:H5'	1.99	0.45
36:BA:2469:A:H2'	36:BA:2470:G:C5'	2.42	0.45
39:BD:101:GLU:HG2	39:BD:102:LYS:N	2.32	0.45
43:BH:80:SER:O	43:BH:81:GLU:CB	2.64	0.45
43:BH:98:LEU:O	43:BH:98:LEU:HG	2.17	0.45
47:BO:119:PRO:HB2	52:BT:68:TYR:CD2	2.51	0.45
48:BP:71:VAL:N	48:BP:72:PRO:CD	2.79	0.45
52:BT:30:VAL:O	52:BT:31:SER:CB	2.63	0.45
52:BT:31:SER:OG	52:BT:32:TYR:CE1	2.69	0.45
53:BU:66:ASN:ND2	53:BU:76:TYR:HB2	2.32	0.45
53:BU:93:LYS:HD2	53:BU:93:LYS:H	1.82	0.45
54:BV:29:PRO:HA	54:BV:61:VAL:CG2	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:52:SER:O	57:BY:54:LYS:N	2.50	0.45
58:BZ:108:PRO:C	58:BZ:110:GLY:H	2.20	0.45
58:BZ:136:PHE:CD1	58:BZ:136:PHE:N	2.79	0.45
1:CA:198:G:O2'	1:CA:199:G:O5'	2.31	0.45
1:CA:265:G:C2'	1:CA:266:G:H5"	2.40	0.45
1:CA:321:A:C2	1:CA:333:G:C2	3.04	0.45
1:CA:415:A:H2'	1:CA:416:G:C8	2.51	0.45
1:CA:748:C:OP2	1:CA:748:C:C6	2.69	0.45
1:CA:1229:A:OP2	13:CM:114:ARG:HD3	2.17	0.45
1:CA:1286:A:O2'	1:CA:1287:A:C5'	2.64	0.45
1:CA:1499:A:C1'	1:CA:1520:G:H5'	2.47	0.45
2:CB:54:THR:HG22	2:CB:55:PHE:CD1	2.52	0.45
4:CD:15:GLU:CG	4:CD:63:LYS:HG3	2.47	0.45
4:CD:150:GLU:CG	4:CD:151:LYS:N	2.79	0.45
5:CE:9:LYS:CB	5:CE:112:LEU:HD11	2.47	0.45
5:CE:82:VAL:CG2	5:CE:138:ALA:HA	2.45	0.45
5:CE:143:ARG:NH1	8:CH:77:GLU:OE1	2.50	0.45
6:CF:63:TYR:O	6:CF:65:VAL:HG13	2.17	0.45
9:CI:19:LEU:CD2	9:CI:59:PHE:CD2	2.97	0.45
11:CK:79:SER:OG	11:CK:104:GLN:HB3	2.17	0.45
13:CM:96:LEU:HD22	13:CM:97:PRO:HD2	1.99	0.45
13:CM:109:THR:HG22	13:CM:110:ARG:N	2.31	0.45
22:CV:24:G:C6	22:CV:25:C:C4	3.05	0.45
25:CZ:5:PHE:CD1	25:CZ:5:PHE:O	2.69	0.45
25:CZ:19:HIS:O	25:CZ:20:VAL:O	2.34	0.45
27:D1:23:LYS:CE	27:D1:28:GLY:HA3	2.46	0.45
29:D3:29:ARG:HH11	29:D3:29:ARG:CB	2.27	0.45
29:D3:29:ARG:NH1	36:DA:1184:G:OP1	2.49	0.45
30:D4:14:ILE:N	30:D4:14:ILE:CD1	2.79	0.45
33:D7:33:ARG:NH1	36:DA:467:G:OP1	2.49	0.45
36:DA:207:A:H2'	36:DA:208:C:O4'	2.15	0.45
36:DA:286:C:H2'	36:DA:287:C:C6	2.52	0.45
36:DA:513:A:H1'	53:DU:11:ARG:HH12	1.82	0.45
36:DA:553:G:C2'	36:DA:554:U:H5'	2.46	0.45
36:DA:578:A:C8	36:DA:2018:G:H5'	2.51	0.45
36:DA:875:G:H4'	58:DZ:170:THR:HG23	1.96	0.45
36:DA:896:A:C8	58:DZ:146:ILE:HD12	2.51	0.45
36:DA:1418:G:H8	36:DA:1418:G:O5'	2.00	0.45
36:DA:1572:A:O2'	36:DA:1573:G:H5'	2.17	0.45
36:DA:1765:C:O2'	36:DA:1766:U:H5'	2.16	0.45
36:DA:2360:A:O2'	36:DA:2361:A:H8	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2537:U:H2'	36:DA:2538:C:C6	2.51	0.45
37:DB:42:C:O2'	37:DB:43:C:P	2.75	0.45
38:DC:64:LEU:HB3	38:DC:188:ASN:ND2	2.32	0.45
39:DD:171:ASP:O	39:DD:187:GLY:HA3	2.17	0.45
42:DG:154:GLY:O	42:DG:155:MET:HB3	2.16	0.45
46:DN:32:THR:O	46:DN:34:LEU:N	2.50	0.45
49:DQ:5:ARG:NH1	49:DQ:6:ARG:HD3	2.31	0.45
51:DS:85:VAL:HG23	51:DS:86:ALA:N	2.32	0.45
53:DU:101:ARG:HG3	53:DU:101:ARG:NH1	2.30	0.45
58:DZ:3:TYR:O	58:DZ:58:VAL:HG22	2.17	0.45
58:DZ:60:GLU:O	58:DZ:61:LEU:CB	2.64	0.45
1:AA:43:C:OP1	16:AP:12:LYS:HD2	2.17	0.45
1:AA:429:U:H1'	1:AA:430:A:H5"	1.99	0.45
1:AA:457:C:H2'	1:AA:458:C:H6	1.81	0.45
1:AA:503:C:H2'	1:AA:504:C:C6	2.51	0.45
1:AA:528:C:H2'	1:AA:529:G:H5'	1.99	0.45
1:AA:1217:C:C2'	1:AA:1218:C:H5'	2.47	0.45
5:AE:11:ILE:CD1	5:AE:33:VAL:HG23	2.46	0.45
5:AE:110:LEU:HD13	5:AE:118:ILE:HG21	1.99	0.45
11:AK:126:ARG:HG2	11:AK:126:ARG:HH11	1.80	0.45
12:AL:59:ARG:HG3	12:AL:59:ARG:HH11	1.81	0.45
13:AM:29:ARG:O	13:AM:30:ALA:C	2.52	0.45
14:AN:27:CYS:HG	59:AN:101:ZN:ZN	1.30	0.45
19:AS:67:VAL:CG1	19:AS:68:GLY:N	2.75	0.45
20:AT:100:ILE:CD1	20:AT:100:ILE:H	2.30	0.45
22:AV:39:U:H2'	22:AV:40:C:C6	2.51	0.45
25:AZ:7:ARG:HH12	25:AZ:281:ILE:CD1	2.28	0.45
25:AZ:251:ASP:H	25:AZ:267:VAL:CG1	2.30	0.45
27:B1:8:SER:OG	27:B1:10:LYS:HG3	2.17	0.45
27:B1:40:ARG:HG2	27:B1:40:ARG:HH11	1.82	0.45
27:B1:76:ARG:HH22	27:B1:95:LEU:HB2	1.82	0.45
28:B2:16:LEU:O	28:B2:17:SER:C	2.55	0.45
28:B2:66:GLU:OE1	28:B2:67:LYS:HG3	2.16	0.45
32:B6:7:ILE:CG2	32:B6:27:LYS:NZ	2.79	0.45
32:B6:25:LYS:O	36:BA:2286:A:N1	2.50	0.45
36:BA:39:C:O2'	36:BA:40:C:H5'	2.16	0.45
36:BA:83:G:H22	36:BA:102:G:H2'	1.78	0.45
36:BA:455:C:N3	36:BA:472:A:H2'	2.31	0.45
36:BA:806:C:H5	48:BP:39:LYS:HE2	1.81	0.45
36:BA:848:G:H5'	36:BA:848:G:H8	1.80	0.45
36:BA:1196:C:O4'	36:BA:1226:A:C2	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1259:G:H2'	36:BA:1260:G:H8	1.80	0.45
36:BA:1374:G:H2'	36:BA:1375:C:C6	2.52	0.45
36:BA:1434:A:H61	36:BA:1558:A:N6	2.14	0.45
36:BA:1536:C:C4	36:BA:1537:G:H1'	2.51	0.45
36:BA:1709:U:O2'	36:BA:1710:C:H5'	2.17	0.45
36:BA:1854:A:N6	36:BA:1888:G:H8	2.04	0.45
36:BA:2110:G:H1	36:BA:2178:C:H41	1.64	0.45
36:BA:2136:C:H2'	36:BA:2137:C:H6	1.81	0.45
36:BA:2206:G:C2	36:BA:2207:G:H5'	2.51	0.45
36:BA:2262:U:O2'	36:BA:2263:C:H5'	2.16	0.45
36:BA:2312:U:O3'	42:BG:71:THR:HG21	2.17	0.45
36:BA:2393:A:H5'	48:BP:62:LEU:HB3	1.98	0.45
36:BA:2715:C:O2'	36:BA:2716:U:H5'	2.16	0.45
36:BA:2777:G:H4'	36:BA:2778:A:H5'	1.99	0.45
38:BC:118:ASP:O	38:BC:119:VAL:HB	2.16	0.45
42:BG:106:LEU:O	42:BG:106:LEU:HD23	2.16	0.45
42:BG:106:LEU:O	42:BG:110:ALA:HB3	2.17	0.45
46:BN:45:ASN:H	46:BN:45:ASN:ND2	2.08	0.45
47:BO:12:ASP:C	47:BO:14:THR:H	2.18	0.45
48:BP:96:THR:HG22	48:BP:126:VAL:HB	1.99	0.45
49:BQ:48:GLU:O	49:BQ:49:ALA:C	2.55	0.45
51:BS:54:LEU:HD13	51:BS:58:LEU:H	1.82	0.45
52:BT:98:LYS:N	52:BT:98:LYS:HD2	2.31	0.45
53:BU:95:LEU:HD12	54:BV:11:GLN:HG3	1.99	0.45
56:BX:27:THR:HG22	56:BX:80:ILE:CB	2.41	0.45
56:BX:57:LEU:HG	56:BX:78:LYS:HG2	1.99	0.45
57:BY:38:ILE:HB	57:BY:66:PRO:CG	2.27	0.45
58:BZ:151:HIS:O	58:BZ:152:ALA:O	2.34	0.45
2:CB:17:PHE:HB2	2:CB:44:LEU:HD11	1.99	0.45
2:CB:44:LEU:HA	2:CB:47:THR:OG1	2.17	0.45
4:CD:17:VAL:HG11	4:CD:197:PRO:HB2	1.99	0.45
4:CD:43:HIS:O	4:CD:45:GLN:HG2	2.17	0.45
5:CE:20:GLN:HE21	5:CE:25:ARG:NH1	2.14	0.45
6:CF:87:ARG:HG2	6:CF:87:ARG:NH1	2.29	0.45
25:CZ:222:LEU:O	25:CZ:243:GLU:HB2	2.17	0.45
25:CZ:349:VAL:HG21	25:CZ:374:LEU:HD22	1.99	0.45
28:D2:2:LYS:N	36:DA:98:G:P	2.90	0.45
30:D4:43:TYR:CG	30:D4:44:THR:N	2.82	0.45
34:D8:56:GLU:O	34:D8:58:ILE:N	2.50	0.45
36:DA:13:A:C2	36:DA:14:A:N6	2.84	0.45
36:DA:139:G:O6	36:DA:140:G:H2'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:553:G:H2'	36:DA:554:U:O4'	2.17	0.45
36:DA:616:G:N2	36:DA:618:C:H1'	2.32	0.45
36:DA:736:C:H2'	36:DA:737:C:C6	2.51	0.45
36:DA:1141:U:H2'	46:DN:63:THR:CG2	2.46	0.45
36:DA:1190:G:OP1	48:DP:32:THR:OG1	2.35	0.45
36:DA:1324:G:H4'	36:DA:1616:A:C2	2.51	0.45
36:DA:1539:G:C2	36:DA:1540:U:H4'	2.51	0.45
36:DA:1624:G:C5	36:DA:1625:C:C5	3.05	0.45
36:DA:1691:C:O2'	36:DA:1692:U:H5'	2.16	0.45
36:DA:1842:G:H2'	36:DA:1843:C:C6	2.51	0.45
36:DA:2199:A:H5"	36:DA:2200:C:H5	1.81	0.45
36:DA:2282:G:H5"	36:DA:2283:C:O4'	2.16	0.45
36:DA:2562:U:H4'	47:DO:25:LEU:HD21	1.97	0.45
36:DA:2748:A:H2'	36:DA:2749:A:C8	2.51	0.45
40:DE:132:HIS:ND1	40:DE:135:HIS:HE1	2.15	0.45
41:DF:185:ASP:CA	41:DF:188:ARG:HG2	2.46	0.45
42:DG:86:MET:HG2	42:DG:86:MET:O	2.15	0.45
42:DG:166:ASP:O	42:DG:167:GLU:C	2.55	0.45
43:DH:83:TYR:HB2	43:DH:134:SER:HA	1.98	0.45
44:DJ:36:UNK:O	44:DJ:40:UNK:N	2.49	0.45
46:DN:128:HIS:O	46:DN:128:HIS:CG	2.70	0.45
48:DP:138:LEU:HD12	48:DP:138:LEU:N	2.32	0.45
50:DR:33:ARG:HD3	50:DR:113:LEU:HD21	1.99	0.45
50:DR:55:ALA:O	50:DR:58:GLY:N	2.47	0.45
52:DT:30:VAL:HG12	52:DT:44:ASP:CG	2.37	0.45
56:DX:28:PHE:CD1	56:DX:28:PHE:N	2.71	0.45
57:DY:22:GLY:O	57:DY:23:ARG:O	2.34	0.45
57:DY:95:LYS:HE3	57:DY:100:ALA:HA	1.99	0.45
1:AA:40:C:H2'	1:AA:41:G:H8	1.82	0.45
1:AA:72:C:H2'	1:AA:73:G:C8	2.50	0.45
1:AA:191:G:H2'	1:AA:192:U:C6	2.50	0.45
1:AA:198:G:O2'	1:AA:199:G:P	2.75	0.45
1:AA:202:U:O3'	1:AA:203:U:H6	1.99	0.45
1:AA:386:C:O2'	1:AA:387:U:H5'	2.17	0.45
1:AA:542:G:H2'	1:AA:543:C:C6	2.48	0.45
1:AA:624:C:O3'	16:AP:10:GLY:HA2	2.17	0.45
1:AA:826:C:H2'	1:AA:827:U:H6	1.82	0.45
2:AB:8:LYS:HZ3	2:AB:217:ARG:NH1	2.14	0.45
2:AB:21:ARG:HB3	2:AB:39:ILE:HA	1.99	0.45
2:AB:73:THR:HG22	2:AB:94:ASN:O	2.17	0.45
2:AB:107:THR:O	2:AB:110:GLN:HG3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:34:LEU:O	3:AC:34:LEU:HD23	2.17	0.45
4:AD:145:GLU:HA	4:AD:183:GLY:O	2.17	0.45
15:AO:80:ALA:O	15:AO:84:LYS:HG3	2.17	0.45
16:AP:20:VAL:CG2	16:AP:21:VAL:N	2.79	0.45
20:AT:43:LEU:N	20:AT:45:GLN:HE22	2.14	0.45
24:AY:75:C:C5	25:AZ:232:THR:OG1	2.68	0.45
25:AZ:4:GLU:HA	25:AZ:276:THR:HB	1.97	0.45
25:AZ:13:ASN:HA	25:AZ:78:SER:H	1.81	0.45
25:AZ:316:PHE:HD2	25:AZ:400:VAL:HG13	1.81	0.45
36:BA:70:G:O4'	36:BA:73:A:H1'	2.16	0.45
36:BA:271(F):C:C2'	36:BA:271(G):C:H5'	2.46	0.45
36:BA:832:G:H21	48:BP:53:GLY:HA3	1.81	0.45
36:BA:848:G:C2	36:BA:933:A:H1'	2.51	0.45
36:BA:1090:U:H2'	36:BA:1091:G:O4'	2.16	0.45
36:BA:1192:G:O2'	36:BA:1193:G:H5'	2.17	0.45
38:BC:74:VAL:CG2	38:BC:157:LYS:HE2	2.47	0.45
38:BC:120:MET:HE2	38:BC:123:VAL:CG1	2.46	0.45
41:BF:25:PRO:CG	41:BF:119:ARG:HB2	2.45	0.45
41:BF:110:LEU:HD13	41:BF:110:LEU:C	2.37	0.45
41:BF:165:ARG:HG3	41:BF:165:ARG:NH1	2.32	0.45
42:BG:139:LEU:HA	42:BG:144:ILE:CG2	2.46	0.45
43:BH:54:ARG:CB	43:BH:55:PRO:HD2	2.47	0.45
46:BN:38:HIS:C	53:BU:67:ALA:HB1	2.37	0.45
49:BQ:24:GLY:HA3	49:BQ:101:ARG:NH1	2.32	0.45
50:BR:107:ASP:OD1	50:BR:107:ASP:C	2.55	0.45
52:BT:24:PRO:HD3	52:BT:52:ILE:CG1	2.44	0.45
55:BW:12:ILE:HD12	55:BW:42:ARG:HH11	1.81	0.45
55:BW:37:ARG:HG3	55:BW:37:ARG:NH1	2.30	0.45
56:BX:63:LYS:HE3	56:BX:63:LYS:HB2	1.83	0.45
57:BY:49:VAL:O	57:BY:50:ARG:HG2	2.17	0.45
58:BZ:104:PHE:HD2	58:BZ:139:VAL:HG21	1.81	0.45
58:BZ:178:GLU:OE1	58:BZ:178:GLU:O	2.35	0.45
1:CA:506:G:H2'	1:CA:507:C:C6	2.52	0.45
1:CA:794:A:C5	1:CA:795:C:C4	3.04	0.45
1:CA:884:U:H4'	1:CA:885:G:H5"	1.98	0.45
1:CA:1101:A:C4	2:CB:99:GLY:HA3	2.52	0.45
1:CA:1326:C:OP1	21:CU:12:LYS:NZ	2.50	0.45
1:CA:1458:G:OP1	20:CT:35:THR:OG1	2.28	0.45
2:CB:74:LYS:NZ	2:CB:76:GLN:HE22	2.13	0.45
2:CB:169:LYS:HD3	2:CB:169:LYS:C	2.36	0.45
3:CC:167:TRP:HB3	3:CC:168:ALA:H	1.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:6:GLY:O	4:CD:7:PRO:C	2.55	0.45
4:CD:165:MET:HE3	4:CD:176:LEU:HD22	1.97	0.45
6:CF:72:VAL:O	6:CF:72:VAL:CG2	2.64	0.45
7:CG:57:GLU:O	7:CG:60:LYS:HB3	2.17	0.45
8:CH:38:ILE:HG21	8:CH:120:THR:HG22	1.99	0.45
10:CJ:90:LEU:N	10:CJ:91:PRO:CD	2.80	0.45
25:CZ:162:GLU:HA	25:CZ:162:GLU:OE1	2.17	0.45
25:CZ:193:ASN:C	25:CZ:195:TRP:H	2.20	0.45
26:D0:7:LEU:HD22	49:DQ:85:LYS:HB2	1.99	0.45
28:D2:3:LEU:HA	28:D2:6:VAL:CG2	2.47	0.45
32:D6:10:LEU:N	32:D6:10:LEU:CD2	2.71	0.45
32:D6:27:LYS:HB3	32:D6:30:THR:CB	2.34	0.45
34:D8:37:SER:O	34:D8:39:LYS:N	2.49	0.45
34:D8:48:PHE:HB3	34:D8:49:VAL:H	1.63	0.45
36:DA:29:U:H5"	53:DU:7:GLY:HA2	1.99	0.45
36:DA:80:G:H1'	36:DA:346:A:C6	2.51	0.45
36:DA:271(C):C:H2'	36:DA:271(D):G:C8	2.50	0.45
36:DA:350:U:C2'	36:DA:351:G:H5'	2.47	0.45
36:DA:534:U:H5'	53:DU:42:ALA:CB	2.46	0.45
36:DA:585:G:C2'	36:DA:1251:C:H42	2.24	0.45
36:DA:769:G:C2'	36:DA:770:G:H5'	2.47	0.45
36:DA:796:C:H2'	36:DA:797:C:H6	1.80	0.45
36:DA:1472:A:H2'	36:DA:1473:G:C5'	2.47	0.45
36:DA:1683:C:H2'	36:DA:1684:C:C6	2.52	0.45
36:DA:2416:C:C2	36:DA:2417:C:C5	3.04	0.45
36:DA:2648:C:H2'	36:DA:2649:U:C6	2.52	0.45
36:DA:2811:G:C2'	36:DA:2812:G:H5'	2.47	0.45
37:DB:50:G:OP2	51:DS:62:LYS:HB2	2.17	0.45
37:DB:76:G:O3'	58:DZ:19:ARG:NH2	2.50	0.45
40:DE:29:GLY:O	40:DE:30:PRO:C	2.55	0.45
41:DF:104:LYS:O	41:DF:108:LYS:HG2	2.16	0.45
41:DF:202:PHE:O	41:DF:206:ILE:HG12	2.16	0.45
44:DJ:95:UNK:O	44:DJ:99:UNK:N	2.50	0.45
44:DJ:97:UNK:HA	44:DJ:131:UNK:O	2.17	0.45
46:DN:1:MET:HE1	46:DN:2:LYS:C	2.37	0.45
1:AA:195:A:H2'	1:AA:196:A:C8	2.52	0.45
1:AA:255:G:OP1	17:AQ:69:LYS:NZ	2.50	0.45
1:AA:403:C:O2'	1:AA:404:U:H5'	2.17	0.45
1:AA:1226:C:C5	13:AM:104:ARG:HB2	2.51	0.45
2:AB:95:GLN:NE2	2:AB:96:ARG:NH1	2.64	0.45
4:AD:17:VAL:O	4:AD:18:LYS:C	2.54	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:64:LEU:HB2	4:AD:198:VAL:HG11	1.98	0.45
4:AD:129:ASN:HD21	4:AD:144:ASP:CA	2.24	0.45
8:AH:97:VAL:HG21	8:AH:128:GLY:HA2	1.98	0.45
10:AJ:50:ILE:H	10:AJ:50:ILE:CD1	2.21	0.45
10:AJ:61:GLU:HG3	14:AN:58:LYS:HE2	1.99	0.45
11:AK:126:ARG:C	11:AK:128:ALA:H	2.18	0.45
15:AO:82:ILE:O	15:AO:82:ILE:HD13	2.16	0.45
20:AT:9:ASN:O	20:AT:10:LEU:HD13	2.17	0.45
22:AV:59:U:O2'	22:AV:60:U:C5'	2.65	0.45
22:AV:72:C:H3'	22:AV:73:A:C5'	2.38	0.45
25:AZ:65:THR:N	25:AZ:83:PRO:HD3	2.32	0.45
25:AZ:163:PHE:C	25:AZ:165:GLY:H	2.19	0.45
25:AZ:199:ILE:O	25:AZ:199:ILE:HG23	2.17	0.45
25:AZ:241:ARG:HB2	25:AZ:285:ASN:HD21	1.81	0.45
25:AZ:347:THR:HG23	25:AZ:348:ASP:N	2.32	0.45
27:B1:11:ARG:HB2	27:B1:12:PRO:HD2	1.99	0.45
31:B5:25:LEU:HB3	31:B5:26:THR:H	1.55	0.45
32:B6:17:LYS:CB	32:B6:18:ARG:NH1	2.79	0.45
34:B8:48:PHE:HB3	34:B8:49:VAL:H	1.50	0.45
36:BA:18:C:H5"	53:BU:24:TYR:O	2.17	0.45
36:BA:82:G:H5'	36:BA:296:C:H5"	1.99	0.45
36:BA:140:G:N2	36:BA:1596:A:H4'	2.32	0.45
36:BA:231:C:C2	36:BA:232:G:C8	3.05	0.45
36:BA:271(F):C:O2'	36:BA:271(G):C:H5'	2.16	0.45
36:BA:272(C):G:H2'	36:BA:272(D):G:C8	2.51	0.45
36:BA:298:G:H5'	36:BA:299:A:P	2.57	0.45
36:BA:469:G:H2'	36:BA:470:A:H5"	1.99	0.45
36:BA:479:A:H4'	36:BA:480:A:H5'	1.99	0.45
36:BA:511:U:H5"	36:BA:512:G:OP2	2.17	0.45
36:BA:580:C:H2'	36:BA:581:C:C6	2.51	0.45
36:BA:782:A:N1	39:BD:226:MET:HE2	2.32	0.45
36:BA:962:G:H2'	36:BA:963:U:H5'	1.97	0.45
36:BA:1289:C:N3	36:BA:1290:C:C5	2.85	0.45
36:BA:2050:C:H1'	40:BE:156:MET:HE1	1.99	0.45
36:BA:2206:G:N2	36:BA:2207:G:C5'	2.75	0.45
36:BA:2762:G:H2'	36:BA:2763:G:C5'	2.47	0.45
36:BA:2816:C:O2	36:BA:2883:A:O2'	2.35	0.45
36:BA:2848:G:H8	52:BT:97:ALA:HB2	1.82	0.45
37:BB:68:C:H2'	37:BB:69:G:H8	1.82	0.45
38:BC:75:LEU:HD12	38:BC:93:TYR:O	2.17	0.45
38:BC:107:TRP:NE1	38:BC:110:PHE:CE2	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:45:ASN:CG	39:BD:46:GLN:N	2.65	0.45
39:BD:49:ILE:H	39:BD:49:ILE:HG12	1.63	0.45
41:BF:53:THR:O	41:BF:57:VAL:HG23	2.17	0.45
41:BF:133:ASN:HB2	41:BF:138:GLU:OE1	2.17	0.45
42:BG:55:LYS:HA	42:BG:58:GLN:HG2	1.99	0.45
43:BH:89:ILE:HG13	43:BH:129:THR:HA	1.99	0.45
46:BN:2:LYS:CE	54:BV:13:ARG:HB3	2.47	0.45
48:BP:123:LEU:O	48:BP:143:GLY:N	2.49	0.45
53:BU:16:LYS:O	53:BU:20:LEU:HD23	2.17	0.45
53:BU:92:ARG:HB3	54:BV:11:GLN:NE2	2.32	0.45
58:BZ:29:TYR:OH	58:BZ:87:ASP:OD2	2.28	0.45
58:BZ:63:ASP:C	58:BZ:65:GLN:H	2.19	0.45
58:BZ:141:VAL:O	58:BZ:142:SER:HB3	2.17	0.45
1:CA:8:A:N7	4:CD:208:SER:CB	2.80	0.45
1:CA:25:C:O2'	1:CA:26:A:H5'	2.17	0.45
1:CA:83:U:HO2'	1:CA:84:U:H5	1.63	0.45
1:CA:265:G:H2'	1:CA:267:C:H5	1.82	0.45
1:CA:811:C:H4'	1:CA:900:A:N6	2.32	0.45
1:CA:1069:C:H2'	1:CA:1070:U:O5'	2.17	0.45
3:CC:69:HIS:HA	3:CC:104:GLN:O	2.17	0.45
3:CC:75:VAL:O	3:CC:83:ARG:HG2	2.16	0.45
4:CD:29:PRO:O	4:CD:30:LYS:CB	2.63	0.45
4:CD:95:GLY:O	4:CD:98:GLU:N	2.50	0.45
14:CN:8:GLU:C	14:CN:10:ALA:N	2.70	0.45
21:CU:12:LYS:HB2	21:CU:22:ARG:HD3	1.98	0.45
23:CX:14:A:H2'	23:CX:15:A:O5'	2.16	0.45
25:CZ:316:PHE:HD2	25:CZ:400:VAL:HG13	1.81	0.45
27:D1:45:ASN:ND2	27:D1:45:ASN:O	2.49	0.45
27:D1:86:SER:HB2	27:D1:90:ILE:CD1	2.47	0.45
28:D2:52:ASP:C	28:D2:54:LYS:N	2.67	0.45
32:D6:11:LEU:CD2	32:D6:26:ASN:H	2.28	0.45
33:D7:24:THR:OG1	33:D7:25:PRO:HD2	2.17	0.45
36:DA:38:A:H2'	36:DA:39:C:C6	2.51	0.45
36:DA:221:A:O2'	36:DA:222:A:OP2	2.33	0.45
36:DA:548:A:H2'	36:DA:549:G:C5'	2.45	0.45
36:DA:1038:C:C3'	36:DA:1039:G:C5'	2.95	0.45
36:DA:1277:G:O2'	50:DR:24:GLN:HG2	2.16	0.45
36:DA:1422:G:H1'	36:DA:1496:A:N6	2.31	0.45
36:DA:1568:G:H4'	39:DD:59:LYS:HB3	1.99	0.45
36:DA:2819:G:H1	36:DA:2827:C:H42	1.65	0.45
37:DB:67:G:O2'	37:DB:68:C:H6	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DC:155:GLU:O	38:DC:160:ARG:CB	2.65	0.45
42:DG:47:LYS:HE3	42:DG:81:LYS:CG	2.47	0.45
43:DH:37:VAL:HG12	43:DH:38:SER:H	1.79	0.45
46:DN:18:ALA:HB2	46:DN:26:LEU:HD22	1.98	0.45
47:DO:113:LYS:HA	47:DO:116:SER:OG	2.17	0.45
47:DO:119:PRO:HB2	52:DT:68:TYR:CD2	2.52	0.45
48:DP:40:SER:O	48:DP:41:ARG:HD2	2.17	0.45
49:DQ:27:VAL:HG12	49:DQ:28:ALA:N	2.32	0.45
49:DQ:35:VAL:HA	49:DQ:101:ARG:O	2.16	0.45
49:DQ:56:ARG:CG	49:DQ:56:ARG:NH1	2.79	0.45
51:DS:78:LEU:HD11	51:DS:103:GLU:HB2	1.98	0.45
51:DS:97:ARG:NE	51:DS:97:ARG:C	2.70	0.45
53:DU:92:ARG:O	53:DU:95:LEU:N	2.50	0.45
54:DV:2:PHE:CE2	54:DV:13:ARG:NH1	2.84	0.45
54:DV:34:GLU:CG	54:DV:56:SER:HB2	2.46	0.45
54:DV:62:LEU:HD22	54:DV:62:LEU:N	2.31	0.45
57:DY:46:LYS:HG2	57:DY:47:LYS:H	1.81	0.45
58:DZ:130:PRO:HA	58:DZ:133:ILE:HD11	1.97	0.45
58:DZ:157:LEU:HD22	58:DZ:161:VAL:CG1	2.47	0.45
1:AA:8:A:C6	4:AD:209:ARG:HB3	2.52	0.45
1:AA:160:A:H2'	1:AA:161:A:O4'	2.17	0.45
1:AA:1012:U:C2'	1:AA:1013:G:H5'	2.46	0.45
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.52	0.45
3:AC:51:GLY:O	3:AC:70:VAL:HA	2.16	0.45
4:AD:100:ARG:O	4:AD:101:LEU:C	2.56	0.45
5:AE:64:ARG:CZ	5:AE:64:ARG:HB2	2.47	0.45
7:AG:63:LYS:O	7:AG:63:LYS:HG3	2.16	0.45
18:AR:45:SER:HB3	18:AR:51:LEU:HD23	1.94	0.45
22:AV:14:A:C2'	22:AV:15:G:H5'	2.47	0.45
22:AV:28:G:H2'	22:AV:29:G:H8	1.82	0.45
25:AZ:299:GLU:O	25:AZ:300:ARG:O	2.34	0.45
26:B0:27:GLU:CD	36:BA:856:C:H1'	2.37	0.45
28:B2:33:MET:O	28:B2:37:PHE:N	2.50	0.45
33:B7:32:LYS:HE2	36:BA:180:G:OP2	2.16	0.45
36:BA:414:C:H2'	36:BA:415:A:C8	2.51	0.45
36:BA:487:C:O2	55:BW:53:SER:OG	2.35	0.45
36:BA:1285:G:C6	36:BA:1329:U:C5	3.05	0.45
36:BA:1472:A:C2'	36:BA:1473:G:H5'	2.46	0.45
36:BA:1856:G:H2'	36:BA:1857:G:O4'	2.15	0.45
36:BA:1858:G:O2'	36:BA:1884:A:N6	2.49	0.45
36:BA:2774:C:H2'	36:BA:2775:A:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BB:7:G:H4'	51:BS:29:PHE:CE2	2.52	0.45
37:BB:68:C:H2'	37:BB:69:G:O4'	2.16	0.45
38:BC:76:ALA:HB2	38:BC:153:ILE:HD11	1.99	0.45
39:BD:196:VAL:HG12	39:BD:196:VAL:O	2.16	0.45
39:BD:206:LEU:HG	39:BD:211:ARG:HG2	1.98	0.45
41:BF:2:LYS:O	41:BF:25:PRO:HG2	2.17	0.45
41:BF:17:ARG:HG3	41:BF:17:ARG:NH1	2.32	0.45
46:BN:1:MET:C	46:BN:1:MET:SD	2.95	0.45
46:BN:63:THR:OG1	46:BN:66:LYS:NZ	2.50	0.45
47:BO:73:ASP:O	47:BO:73:ASP:OD1	2.35	0.45
50:BR:2:ARG:O	50:BR:2:ARG:CD	2.59	0.45
50:BR:21:TYR:OH	50:BR:43:GLU:HG2	2.16	0.45
50:BR:53:HIS:HB2	50:BR:94:TYR:HE2	1.82	0.45
52:BT:10:VAL:C	52:BT:12:SER:N	2.71	0.45
57:BY:14:LEU:HD12	57:BY:15:VAL:N	2.29	0.45
1:CA:172:A:H5'	1:CA:173:U:OP2	2.17	0.45
1:CA:267:C:P	17:CQ:67:LYS:HB2	2.57	0.45
1:CA:520:A:N1	1:CA:536:C:H1'	2.32	0.45
1:CA:827:U:C2	1:CA:870:U:O4	2.70	0.45
1:CA:1044:A:C2'	1:CA:1045:C:O5'	2.65	0.45
1:CA:1187:G:O2'	1:CA:1188:A:H5'	2.17	0.45
1:CA:1271:G:C3'	1:CA:1272:G:H5"	2.42	0.45
2:CB:97:TRP:CZ2	2:CB:173:ALA:HA	2.52	0.45
2:CB:110:GLN:OE1	2:CB:111:ARG:HG2	2.17	0.45
2:CB:154:LEU:O	2:CB:156:LYS:HG3	2.16	0.45
2:CB:160:ASP:O	2:CB:161:ALA:HB2	2.17	0.45
3:CC:3:ASN:O	3:CC:4:LYS:HB2	2.17	0.45
3:CC:16:ARG:HD3	3:CC:17:ASP:H	1.82	0.45
3:CC:166:GLU:HA	3:CC:166:GLU:OE1	2.16	0.45
4:CD:18:LYS:HE3	4:CD:31:CYS:HB3	1.97	0.45
6:CF:10:LEU:CD1	6:CF:59:TYR:HB3	2.47	0.45
8:CH:53:VAL:HB	8:CH:58:TYR:CD1	2.52	0.45
10:CJ:57:LYS:NZ	10:CJ:60:ARG:HH22	2.14	0.45
11:CK:69:ALA:O	11:CK:72:ALA:N	2.47	0.45
13:CM:108:ARG:HH11	13:CM:108:ARG:CG	2.28	0.45
20:CT:86:ARG:O	20:CT:90:GLN:HG3	2.16	0.45
22:CV:50:U:C2	22:CV:65:G:C2	3.04	0.45
26:D0:16:SER:CB	36:DA:2262:U:H5	2.30	0.45
27:D1:86:SER:HB2	27:D1:90:ILE:HD11	1.98	0.45
35:D9:23:VAL:HG21	36:DA:1032:A:H1'	1.97	0.45
36:DA:25:U:H5'	55:DW:79:GLY:HA2	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:266:G:C3'	36:DA:267:C:H5"	2.46	0.45
36:DA:571:A:C8	36:DA:2030:A:N6	2.85	0.45
36:DA:878:A:H2'	36:DA:879:G:O4'	2.17	0.45
36:DA:1034:G:H2'	36:DA:1035:U:O4'	2.17	0.45
36:DA:1196:C:H2'	36:DA:1197:G:H8	1.82	0.45
36:DA:1790:C:H2'	36:DA:1791:A:C5	2.52	0.45
36:DA:1958:C:C2'	36:DA:1959:G:H5'	2.47	0.45
36:DA:1971:A:C8	39:DD:241:PRO:HB3	2.52	0.45
36:DA:2315:G:H21	42:DG:128:ARG:NE	2.15	0.45
38:DC:99:ILE:O	38:DC:99:ILE:HG22	2.17	0.45
38:DC:118:ASP:O	38:DC:119:VAL:CB	2.65	0.45
41:DF:154:VAL:HG12	41:DF:155:LEU:N	2.32	0.45
42:DG:56:ALA:CB	42:DG:153:ARG:HH21	2.29	0.45
47:DO:47:ILE:HG23	47:DO:48:PRO:CD	2.46	0.45
47:DO:63:VAL:HB	47:DO:102:VAL:CG1	2.46	0.45
48:DP:97:PRO:HA	48:DP:100:LEU:HB3	1.99	0.45
49:DQ:35:VAL:HG11	49:DQ:130:LYS:HE2	1.98	0.45
49:DQ:37:LEU:C	49:DQ:38:GLU:HG3	2.38	0.45
50:DR:10:LEU:O	50:DR:11:ASN:HB2	2.16	0.45
56:DX:64:LYS:HG2	56:DX:65:ARG:N	2.32	0.45
57:DY:46:LYS:O	57:DY:60:PHE:O	2.35	0.45
1:AA:63:C:H2'	1:AA:64:G:C5'	2.39	0.45
1:AA:190:U:H2'	1:AA:191:G:H8	1.82	0.45
1:AA:279:A:OP2	17:AQ:95:TYR:OH	2.20	0.45
1:AA:457:C:H2'	1:AA:458:C:C6	2.51	0.45
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.98	0.45
2:AB:200:ILE:H	2:AB:200:ILE:CD1	2.28	0.45
4:AD:137:SER:O	4:AD:138:TYR:C	2.55	0.45
7:AG:15:ASP:HB2	7:AG:20:ASP:H	1.81	0.45
8:AH:83:ILE:O	8:AH:83:ILE:CG2	2.62	0.45
10:AJ:54:PHE:CD2	10:AJ:55:LYS:HD2	2.51	0.45
16:AP:43:LYS:HA	16:AP:48:TRP:CB	2.46	0.45
24:AY:75:C:H5	25:AZ:232:THR:OG1	1.98	0.45
25:AZ:281:ILE:CD1	25:AZ:284:ASP:OD1	2.65	0.45
27:B1:46:LEU:CD2	27:B1:63:ALA:HA	2.44	0.45
31:B5:7:PRO:HG2	36:BA:2016:U:O2	2.17	0.45
32:B6:26:ASN:OD1	32:B6:27:LYS:N	2.50	0.45
36:BA:176:G:C2'	36:BA:177:G:H5'	2.47	0.45
36:BA:322:A:H5'	36:BA:340:A:H1'	1.98	0.45
36:BA:608:A:H2'	36:BA:609:A:C8	2.52	0.45
36:BA:897:C:O2	36:BA:897:C:H2'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1363:C:H2'	36:BA:1364:G:H8	1.81	0.45
36:BA:1757:U:O4	36:BA:1762:A:C2	2.70	0.45
36:BA:1957:C:H2'	36:BA:1958:C:C6	2.52	0.45
36:BA:2156:G:H2'	36:BA:2157:G:H1'	1.99	0.45
36:BA:2590:A:OP2	39:BD:238:GLY:HA2	2.16	0.45
37:BB:17:C:H2'	37:BB:18:G:C8	2.52	0.45
42:BG:61:ALA:HA	42:BG:66:GLN:O	2.17	0.45
46:BN:109:LYS:HE3	46:BN:109:LYS:HB2	1.80	0.45
50:BR:18:LEU:HD13	50:BR:18:LEU:C	2.36	0.45
51:BS:11:LYS:N	51:BS:11:LYS:HD2	2.32	0.45
53:BU:48:ALA:O	53:BU:52:ARG:HG3	2.16	0.45
53:BU:61:TRP:CZ3	53:BU:94:ASN:HB2	2.52	0.45
55:BW:40:ASN:O	55:BW:41:LYS:HG2	2.16	0.45
56:BX:8:ILE:HD11	56:BX:42:ALA:O	2.17	0.45
58:BZ:114:GLY:O	58:BZ:146:ILE:HB	2.17	0.45
1:CA:112:G:OP2	16:CP:27:LYS:HE2	2.16	0.45
1:CA:402:G:C5	1:CA:403:C:C5	3.04	0.45
1:CA:458:C:H2'	1:CA:460:G:H8	1.82	0.45
1:CA:601:C:O2'	1:CA:602:A:H5'	2.17	0.45
1:CA:781:A:H4'	1:CA:1522:U:O2'	2.17	0.45
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.80	0.45
1:CA:1262:C:H2'	1:CA:1263:C:C6	2.52	0.45
2:CB:100:GLY:N	2:CB:176:GLU:OE2	2.41	0.45
3:CC:48:TYR:C	3:CC:50:ALA:H	2.20	0.45
4:CD:17:VAL:HG21	4:CD:63:LYS:NZ	2.31	0.45
4:CD:45:GLN:O	4:CD:46:LYS:HG2	2.17	0.45
7:CG:58:PRO:O	7:CG:60:LYS:N	2.50	0.45
8:CH:28:ALA:CB	8:CH:59:LEU:HG	2.47	0.45
16:CP:4:ILE:CG1	16:CP:64:ALA:HB1	2.46	0.45
16:CP:9:PHE:HE2	16:CP:18:ARG:CZ	2.30	0.45
16:CP:39:TYR:CE1	16:CP:41:PRO:HA	2.51	0.45
25:CZ:13:ASN:HA	25:CZ:78:SER:H	1.81	0.45
25:CZ:137:LYS:HA	60:CZ:501:GDP:HN1	1.82	0.45
25:CZ:258:LEU:O	25:CZ:259:ALA:O	2.35	0.45
26:D0:42:GLY:O	26:D0:57:PHE:CG	2.70	0.45
32:D6:5:VAL:N	32:D6:8:LYS:HB3	2.32	0.45
36:DA:150:C:H2'	36:DA:151:C:C6	2.52	0.45
36:DA:285:C:O2'	36:DA:286:C:H5'	2.16	0.45
36:DA:582:G:OP1	53:DU:14:HIS:HD2	1.99	0.45
36:DA:633:A:O5'	36:DA:633:A:H8	2.00	0.45
36:DA:692:C:H2'	36:DA:693:C:H6	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:834:C:H1'	36:DA:2358:G:N3	2.32	0.45
36:DA:1054:A:H2'	36:DA:1054:A:N3	2.31	0.45
36:DA:1107:G:H4'	44:DJ:81:UNK:HA	1.99	0.45
36:DA:1264:G:C2'	36:DA:1265:A:OP1	2.65	0.45
36:DA:1361:G:O2'	36:DA:1362:C:H5'	2.17	0.45
36:DA:1395:A:O2'	36:DA:1397:U:C5	2.67	0.45
36:DA:1442:G:H1	36:DA:1549:C:N4	2.13	0.45
36:DA:1495:A:H2'	36:DA:1496:A:C2	2.52	0.45
36:DA:1649:G:O2'	36:DA:1650:G:H5'	2.17	0.45
36:DA:2415:G:H4'	48:DP:66:GLY:O	2.17	0.45
36:DA:2629:A:H2'	36:DA:2629:A:N3	2.31	0.45
36:DA:2792:G:H2'	36:DA:2792:G:N3	2.32	0.45
38:DC:64:LEU:HA	38:DC:65:PRO:HD3	1.84	0.45
39:DD:35:LYS:CD	39:DD:36:PRO:N	2.65	0.45
39:DD:245:PRO:O	39:DD:246:PRO:C	2.55	0.45
42:DG:57:ALA:HA	42:DG:90:LEU:CD2	2.47	0.45
43:DH:80:SER:O	43:DH:81:GLU:CB	2.64	0.45
43:DH:89:ILE:HD12	43:DH:95:ARG:HA	1.99	0.45
48:DP:105:LEU:O	48:DP:106:LEU:HB2	2.16	0.45
54:DV:53:GLU:C	54:DV:55:ALA:H	2.20	0.45
55:DW:14:PRO:O	55:DW:18:ARG:HB2	2.16	0.45
1:AA:174:C:O5'	1:AA:174:C:H6	2.00	0.44
1:AA:308:C:H2'	1:AA:309:G:H8	1.81	0.44
1:AA:328:C:O2	1:AA:328:C:C2'	2.63	0.44
1:AA:473:G:H2'	1:AA:474:G:H8	1.82	0.44
1:AA:922:G:N3	1:AA:1398:A:H2	2.16	0.44
2:AB:106:LYS:O	2:AB:109:SER:HB2	2.17	0.44
3:AC:36:ASP:O	3:AC:39:ILE:HB	2.17	0.44
4:AD:12:CYS:HA	4:AD:19:LEU:HD13	1.99	0.44
4:AD:61:LYS:HE2	4:AD:62:GLN:NE2	2.32	0.44
6:AF:79:LEU:HD23	6:AF:79:LEU:N	2.32	0.44
8:AH:54:ASP:O	8:AH:54:ASP:CG	2.55	0.44
17:AQ:83:ASP:OD1	17:AQ:83:ASP:N	2.50	0.44
19:AS:45:VAL:C	19:AS:47:HIS:N	2.69	0.44
20:AT:26:ASN:ND2	20:AT:26:ASN:N	2.53	0.44
20:AT:44:ALA:CB	20:AT:88:VAL:HG13	2.47	0.44
22:AW:6:G:N2	22:AW:68:C:N4	2.66	0.44
22:AW:59:U:H3'	22:AW:60:U:C6	2.51	0.44
26:B0:16:SER:OG	36:BA:2261:C:H3'	2.17	0.44
29:B3:15:TYR:HD2	29:B3:19:GLN:HE22	1.64	0.44
29:B3:31:LEU:C	29:B3:33:GLN:N	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:9:U:O4	36:BA:2629:A:H8	2.00	0.44
36:BA:30:G:C5	36:BA:31:C:C4	3.05	0.44
36:BA:752:A:O2'	36:BA:753:C:OP2	2.32	0.44
36:BA:919:G:H2'	36:BA:920:G:O4'	2.16	0.44
36:BA:962:G:O2'	36:BA:963:U:H5'	2.17	0.44
36:BA:1386:C:H2'	36:BA:1387:C:H6	1.83	0.44
36:BA:1591:G:C2'	36:BA:1592:C:H5'	2.47	0.44
36:BA:1857:G:C6	36:BA:1858:G:C2	3.05	0.44
36:BA:1926:U:O2	36:BA:1928:A:C8	2.71	0.44
36:BA:2515:C:H2'	36:BA:2516:G:C8	2.51	0.44
36:BA:2523:G:O2'	36:BA:2524:G:H5"	2.17	0.44
36:BA:2847:U:H5'	52:BT:97:ALA:HB3	1.99	0.44
36:BA:2888:C:H2'	36:BA:2889:C:H6	1.82	0.44
39:BD:20:ASP:OD1	39:BD:20:ASP:C	2.56	0.44
40:BE:26:ILE:CD1	40:BE:182:LEU:HD23	2.47	0.44
41:BF:3:GLU:HB2	41:BF:24:LEU:HD23	1.99	0.44
46:BN:32:THR:C	46:BN:34:LEU:H	2.20	0.44
46:BN:48:MET:H	46:BN:48:MET:CE	2.22	0.44
46:BN:57:ALA:O	46:BN:58:ASP:O	2.34	0.44
48:BP:108:LYS:C	48:BP:110:TYR:H	2.20	0.44
52:BT:34:VAL:O	52:BT:34:VAL:HG12	2.16	0.44
53:BU:65:ILE:HG12	53:BU:96:ALA:CB	2.48	0.44
57:BY:2:ARG:HH11	57:BY:2:ARG:HG2	1.82	0.44
57:BY:2:ARG:CD	57:BY:3:VAL:HG23	2.43	0.44
57:BY:6:HIS:HE1	57:BY:30:VAL:CG1	2.30	0.44
58:BZ:133:ILE:HG22	58:BZ:133:ILE:O	2.17	0.44
1:CA:294:U:H2'	1:CA:295:C:C6	2.52	0.44
1:CA:1030(D):A:C2'	1:CA:1031:G:H5'	2.47	0.44
2:CB:233:SER:O	2:CB:235:SER:N	2.50	0.44
3:CC:65:ALA:O	3:CC:66:VAL:HB	2.18	0.44
4:CD:61:LYS:O	4:CD:62:GLN:C	2.55	0.44
5:CE:76:ILE:CG1	5:CE:77:PRO:HD2	2.47	0.44
5:CE:84:PHE:HB3	5:CE:134:ALA:HB2	1.98	0.44
6:CF:12:PRO:HA	6:CF:45:LEU:HD11	1.99	0.44
7:CG:78:ARG:NH1	7:CG:80:VAL:HG21	2.32	0.44
10:CJ:96:ILE:CD1	10:CJ:96:ILE:N	2.75	0.44
11:CK:21:ILE:HD13	11:CK:94:ALA:HB3	1.99	0.44
13:CM:60:VAL:HG12	13:CM:66:LEU:HD21	1.98	0.44
15:CO:2:PRO:O	15:CO:3:ILE:C	2.53	0.44
17:CQ:85:VAL:O	17:CQ:89:LEU:HG	2.17	0.44
19:CS:16:LEU:N	19:CS:16:LEU:CD1	2.77	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:36:ARG:HB2	19:CS:72:GLY:CA	2.47	0.44
20:CT:66:ALA:O	20:CT:71:THR:HB	2.16	0.44
20:CT:90:GLN:C	20:CT:93:GLU:OE1	2.55	0.44
24:CY:54:5MU:OP2	24:CY:54:5MU:H71	2.17	0.44
25:CZ:38:GLU:HG3	25:CZ:39:ASN:OD1	2.16	0.44
25:CZ:236:THR:HB	25:CZ:293:VAL:HG23	1.99	0.44
25:CZ:347:THR:HG23	25:CZ:348:ASP:N	2.32	0.44
25:CZ:355:LEU:CD1	25:CZ:360:GLU:HA	2.46	0.44
28:D2:16:LEU:O	28:D2:67:LYS:NZ	2.43	0.44
30:D4:14:ILE:HG23	30:D4:31:ILE:HG22	1.99	0.44
31:D5:43:HIS:CD2	36:DA:2815:C:O2'	2.69	0.44
32:D6:9:LEU:HD13	32:D6:9:LEU:C	2.37	0.44
34:D8:8:LYS:HA	34:D8:11:LYS:HB3	1.99	0.44
36:DA:195:A:OP1	48:DP:46:LYS:HE2	2.17	0.44
36:DA:238:C:C2	36:DA:239:U:C6	3.05	0.44
36:DA:650:C:H3'	36:DA:651:G:C5'	2.37	0.44
36:DA:953:A:O2'	36:DA:954:G:H5'	2.17	0.44
36:DA:1227:G:C2'	36:DA:1228:G:H5'	2.47	0.44
36:DA:1344:G:O2'	36:DA:1385:G:H2'	2.17	0.44
36:DA:1528(A):A:N6	36:DA:1541:G:C2	2.86	0.44
36:DA:1747:G:H2'	36:DA:1747(A):G:C8	2.51	0.44
36:DA:2068:U:N3	36:DA:2430:A:C2	2.67	0.44
36:DA:2331:G:N2	36:DA:2385:C:C4	2.86	0.44
36:DA:2486:G:H2'	36:DA:2487:G:O5'	2.17	0.44
37:DB:63:G:C2	37:DB:64:C:C2	3.05	0.44
38:DC:41:VAL:HG21	38:DC:185:LEU:CD2	2.46	0.44
38:DC:225:ASN:HA	38:DC:226:PRO:HD2	1.84	0.44
42:DG:54:GLU:H	42:DG:54:GLU:HG3	1.63	0.44
42:DG:166:ASP:O	42:DG:169:ALA:N	2.49	0.44
43:DH:37:VAL:HG11	43:DH:68:THR:HG21	1.98	0.44
44:DJ:62:UNK:C	44:DJ:64:UNK:N	2.80	0.44
44:DJ:128:UNK:C	44:DJ:130:UNK:N	2.77	0.44
48:DP:135:LEU:C	48:DP:137:LYS:N	2.69	0.44
50:DR:74:LYS:NZ	50:DR:77:ARG:NH1	2.64	0.44
51:DS:13:ARG:O	51:DS:14:VAL:HB	2.18	0.44
53:DU:56:ASP:O	53:DU:59:ARG:HB2	2.18	0.44
53:DU:92:ARG:HB3	54:DV:11:GLN:NE2	2.31	0.44
54:DV:19:LYS:CE	54:DV:20:LEU:H	2.29	0.44
55:DW:4:LYS:HG2	55:DW:5:ALA:N	2.28	0.44
58:DZ:6:LYS:CD	58:DZ:60:GLU:HG3	2.46	0.44
1:AA:267:C:H2'	1:AA:268:C:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:311:C:HO2'	1:AA:312:C:H5'	1.82	0.44
1:AA:427:U:OP1	4:AD:13:ARG:NH2	2.48	0.44
1:AA:782:A:H2'	1:AA:783:C:C5'	2.46	0.44
1:AA:858:G:O2'	1:AA:859:A:H5"	2.16	0.44
1:AA:961:U:O2'	1:AA:962:C:C6	2.57	0.44
1:AA:995:C:O2'	1:AA:996:A:P	2.75	0.44
1:AA:1242:C:H2'	1:AA:1243:C:H6	1.82	0.44
3:AC:6:HIS:HD2	3:AC:8:ILE:HB	1.79	0.44
4:AD:128:VAL:O	4:AD:129:ASN:C	2.54	0.44
6:AF:19:LEU:HD11	6:AF:59:TYR:CE2	2.52	0.44
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.81	0.44
9:AI:53:VAL:HG13	9:AI:95:LYS:HD2	1.99	0.44
9:AI:75:ASP:O	9:AI:78:LYS:HB3	2.16	0.44
18:AR:66:LEU:O	18:AR:67:ALA:C	2.56	0.44
20:AT:54:LYS:O	20:AT:57:ARG:HB3	2.17	0.44
21:AU:9:ARG:NH1	21:AU:22:ARG:HA	2.32	0.44
23:AX:20:U:H2'	23:AX:21:C:C6	2.51	0.44
24:AY:54:5MU:OP2	24:AY:54:5MU:H71	2.18	0.44
25:AZ:23:GLY:O	25:AZ:24:LYS:O	2.35	0.44
25:AZ:361:MET:HE1	25:AZ:363:MET:SD	2.58	0.44
27:B1:3:LYS:N	27:B1:46:LEU:HD12	2.32	0.44
36:BA:190:A:H5"	36:BA:204:A:N1	2.32	0.44
36:BA:527:C:C4	36:BA:2779:U:H5"	2.52	0.44
36:BA:910:A:H2'	36:BA:911:A:C8	2.52	0.44
36:BA:1040:C:H2'	36:BA:1041:G:H8	1.81	0.44
36:BA:2492:U:H2'	36:BA:2493:U:C6	2.51	0.44
36:BA:2760:C:C2'	36:BA:2761:G:H5"	2.47	0.44
38:BC:167:LYS:O	38:BC:167:LYS:HD2	2.17	0.44
39:BD:35:LYS:HA	39:BD:64:ILE:H	1.82	0.44
39:BD:37:LEU:HD12	39:BD:64:ILE:CG2	2.48	0.44
39:BD:176:ARG:CG	39:BD:176:ARG:NH1	2.79	0.44
40:BE:44:TYR:O	40:BE:45:THR:HB	2.16	0.44
41:BF:24:LEU:N	41:BF:24:LEU:HD22	2.33	0.44
43:BH:23:ARG:O	43:BH:24:VAL:CG2	2.64	0.44
43:BH:156:ALA:HB3	43:BH:159:GLU:HB3	1.98	0.44
43:BH:162:ILE:O	43:BH:162:ILE:CG1	2.65	0.44
1:CA:42:G:C6	1:CA:43:C:N4	2.85	0.44
1:CA:198:G:HO2'	1:CA:199:G:P	2.40	0.44
1:CA:591:U:H2'	1:CA:592:G:C8	2.53	0.44
1:CA:958:A:C6	1:CA:959:A:N1	2.85	0.44
1:CA:1126:U:C5	1:CA:1127:G:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1236:A:H2'	1:CA:1237:C:C6	2.52	0.44
1:CA:1367:C:H4'	10:CJ:48:THR:HG21	1.98	0.44
2:CB:40:HIS:O	2:CB:41:ILE:HD12	2.18	0.44
2:CB:61:LEU:HD23	2:CB:68:ILE:HD11	1.98	0.44
2:CB:178:ARG:O	8:CH:71:GLY:HA2	2.18	0.44
3:CC:177:THR:CG2	3:CC:179:ARG:HG3	2.47	0.44
4:CD:127:THR:O	4:CD:147:ALA:N	2.45	0.44
6:CF:9:VAL:HG12	6:CF:86:ARG:CG	2.45	0.44
7:CG:22:LEU:HD22	7:CG:62:PHE:CE2	2.52	0.44
8:CH:72:PRO:O	8:CH:73:ASP:CB	2.65	0.44
10:CJ:62:HIS:H	14:CN:58:LYS:HZ3	1.63	0.44
11:CK:69:ALA:O	11:CK:70:LYS:C	2.55	0.44
13:CM:23:TYR:CE1	13:CM:70:LEU:HD13	2.52	0.44
14:CN:8:GLU:C	14:CN:10:ALA:H	2.19	0.44
20:CT:23:ARG:HD3	20:CT:24:LEU:HD22	1.99	0.44
20:CT:26:ASN:H	20:CT:26:ASN:HD22	1.62	0.44
25:CZ:178:ALA:O	25:CZ:196:VAL:HG23	2.17	0.44
25:CZ:199:ILE:HD12	25:CZ:199:ILE:HA	1.61	0.44
25:CZ:227:ASP:OD1	25:CZ:228:VAL:N	2.50	0.44
25:CZ:281:ILE:H	25:CZ:281:ILE:HG13	1.70	0.44
25:CZ:310:ILE:CD1	25:CZ:381:GLU:HB3	2.47	0.44
27:D1:58:ILE:HG12	27:D1:59:THR:N	2.32	0.44
29:D3:42:ALA:O	29:D3:43:ILE:C	2.55	0.44
36:DA:272(D):G:O2'	36:DA:272(E):G:H5'	2.17	0.44
36:DA:712:G:O2'	36:DA:713:G:H5'	2.17	0.44
36:DA:940:G:H2'	36:DA:941:A:O4'	2.17	0.44
36:DA:1069:A:C1'	36:DA:1070:A:OP2	2.63	0.44
36:DA:1221(A):C:H2'	36:DA:1222:C:C5	2.51	0.44
36:DA:1299:G:H4'	36:DA:1301:A:C4	2.53	0.44
36:DA:1341:U:H5'	56:DX:57:LEU:HB3	1.99	0.44
36:DA:1350:C:C2	36:DA:1382:G:N2	2.85	0.44
36:DA:1486:A:H2'	36:DA:1487:G:C8	2.52	0.44
36:DA:1541:G:O2'	36:DA:1542:A:P	2.76	0.44
36:DA:1569:A:O2'	39:DD:38:LYS:HG3	2.18	0.44
36:DA:1973:G:H2'	36:DA:1974:C:C6	2.53	0.44
36:DA:2491:U:C5'	36:DA:2570:G:H5"	2.37	0.44
36:DA:2777:G:H4'	36:DA:2778:A:H5'	1.98	0.44
37:DB:32:C:C4	37:DB:33:G:N7	2.85	0.44
38:DC:190:ARG:NH2	38:DC:228:SER:O	2.46	0.44
39:DD:50:THR:O	39:DD:51:VAL:HG23	2.17	0.44
40:DE:21:VAL:HG23	40:DE:21:VAL:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:38:THR:C	40:DE:40:GLU:H	2.21	0.44
40:DE:171:GLU:O	40:DE:184:VAL:HA	2.17	0.44
41:DF:6:VAL:HB	41:DF:124:LEU:HD13	1.99	0.44
42:DG:130:ASN:OD1	42:DG:161:THR:N	2.48	0.44
46:DN:28:THR:HG23	46:DN:29:LYS:N	2.32	0.44
48:DP:101:VAL:CG2	48:DP:102:ARG:N	2.80	0.44
48:DP:125:VAL:O	48:DP:125:VAL:HG13	2.17	0.44
51:DS:49:VAL:CG1	51:DS:50:SER:N	2.71	0.44
52:DT:14:TYR:N	52:DT:14:TYR:HD1	2.14	0.44
52:DT:109:GLU:O	52:DT:112:ARG:HG2	2.17	0.44
54:DV:39:LEU:CD1	54:DV:47:VAL:HG11	2.45	0.44
55:DW:62:HIS:O	55:DW:63:ASP:C	2.54	0.44
57:DY:2:ARG:CD	57:DY:3:VAL:HG23	2.41	0.44
57:DY:7:VAL:HB	57:DY:8:LYS:NZ	2.32	0.44
57:DY:76:CYS:CB	57:DY:77:PRO:HD2	2.47	0.44
58:DZ:6:LYS:HG3	58:DZ:60:GLU:HG3	1.98	0.44
58:DZ:75:ASN:N	58:DZ:75:ASN:ND2	2.65	0.44
58:DZ:128:VAL:CG2	58:DZ:129:SER:N	2.80	0.44
1:AA:40:C:H2'	1:AA:41:G:C8	2.53	0.44
1:AA:318:G:H2'	1:AA:319:G:C8	2.52	0.44
1:AA:921:U:O2	5:AE:19:MET:HB2	2.17	0.44
1:AA:1320:C:H5"	19:AS:70:LYS:HG3	1.99	0.44
1:AA:1442(A):G:N2	52:BT:119:LYS:HA	2.32	0.44
2:AB:21:ARG:HB2	2:AB:38:GLY:O	2.17	0.44
2:AB:121:LEU:HG	2:AB:126:GLU:OE1	2.18	0.44
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.98	0.44
6:AF:22:GLU:HA	6:AF:25:ILE:HG22	1.99	0.44
7:AG:59:LEU:O	7:AG:59:LEU:HD23	2.17	0.44
8:AH:127:LEU:N	8:AH:127:LEU:HD22	2.32	0.44
10:AJ:5:ARG:HG2	10:AJ:73:ASP:OD1	2.17	0.44
14:AN:29:ARG:NH1	14:AN:31:ARG:O	2.50	0.44
16:AP:1:MET:HG3	16:AP:65:GLN:CG	2.47	0.44
20:AT:20:LEU:O	20:AT:24:LEU:CD2	2.63	0.44
20:AT:55:ILE:H	20:AT:55:ILE:CD1	2.19	0.44
22:AV:1:G:C4	22:AV:2:C:C5	3.05	0.44
22:AV:61:C:O2	22:AV:61:C:H2'	2.17	0.44
22:AW:1:G:H2'	22:AW:1:G:N3	2.32	0.44
22:AW:38:A:C6	22:AW:39:U:C4	3.06	0.44
25:AZ:176:LEU:HD13	25:AZ:176:LEU:O	2.18	0.44
25:AZ:344:PHE:O	25:AZ:346:THR:N	2.50	0.44
32:B6:18:ARG:HE	32:B6:43:CYS:HB3	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B6:19:ARG:HB3	36:BA:2400:G:H4'	1.98	0.44
32:B6:33:LYS:O	32:B6:34:LEU:HB2	2.17	0.44
36:BA:92:A:OP2	57:BY:33:LYS:HE2	2.17	0.44
36:BA:856:C:H2'	36:BA:857:C:C6	2.52	0.44
36:BA:877:U:C2'	36:BA:878:A:H5"	2.48	0.44
36:BA:990:A:C6	36:BA:1186:G:H1'	2.52	0.44
36:BA:1534:U:O2'	36:BA:1535:A:H5'	2.17	0.44
36:BA:1541:G:C8	36:BA:1542:A:C2	3.06	0.44
36:BA:1695:G:H2'	36:BA:1696:G:O4'	2.17	0.44
36:BA:2491:U:O2'	36:BA:2492:U:H5'	2.18	0.44
36:BA:2641:G:P	46:BN:74:ARG:HH21	2.41	0.44
37:BB:67:G:O2'	37:BB:68:C:H6	2.00	0.44
38:BC:123:VAL:HG22	38:BC:127:LEU:CB	2.48	0.44
40:BE:11:MET:HB3	40:BE:24:THR:HA	1.99	0.44
40:BE:197:ILE:CD1	40:BE:199:ARG:HH21	2.26	0.44
42:BG:38:VAL:HG22	42:BG:93:THR:HG23	1.99	0.44
46:BN:10:GLU:CG	46:BN:11:PRO:HD2	2.48	0.44
47:BO:12:ASP:CG	47:BO:85:VAL:HG13	2.38	0.44
47:BO:104:ARG:C	47:BO:106:LEU:H	2.20	0.44
48:BP:59:LEU:N	48:BP:61:ARG:HE	2.14	0.44
52:BT:23:ARG:CG	52:BT:120:ARG:NH1	2.77	0.44
55:BW:20:VAL:HG21	55:BW:43:GLY:O	2.17	0.44
58:BZ:157:LEU:HD11	58:BZ:163:LEU:HD22	1.99	0.44
1:CA:264:U:H4'	17:CQ:63:ARG:HD3	1.99	0.44
1:CA:308:C:H2'	1:CA:309:G:C8	2.48	0.44
1:CA:597:G:H2'	1:CA:598:U:H5'	1.99	0.44
1:CA:1372:U:H2'	1:CA:1373:G:O4'	2.17	0.44
3:CC:11:ARG:NH2	3:CC:182:ILE:HD12	2.32	0.44
4:CD:96:LEU:H	4:CD:96:LEU:CD1	2.30	0.44
4:CD:98:GLU:HG2	4:CD:194:LEU:HD11	2.00	0.44
6:CF:37:VAL:HG12	6:CF:38:GLU:N	2.32	0.44
7:CG:26:PHE:CE2	7:CG:30:ILE:HD11	2.51	0.44
7:CG:78:ARG:O	7:CG:78:ARG:CG	2.65	0.44
10:CJ:7:LYS:O	10:CJ:8:LEU:HD12	2.17	0.44
13:CM:82:MET:O	13:CM:83:ASP:O	2.35	0.44
13:CM:87:TYR:CE1	19:CS:81:ARG:NH2	2.85	0.44
14:CN:6:LEU:HD13	14:CN:23:ARG:NH2	2.26	0.44
24:CY:18:G:H1'	24:CY:58:A:C2	2.52	0.44
26:D0:82:ARG:HA	26:D0:83:PRO:HD3	1.85	0.44
30:D4:25:TYR:N	30:D4:25:TYR:CD1	2.85	0.44
34:D8:61:LEU:C	34:D8:63:PRO:HD2	2.37	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:271(F):C:C2'	36:DA:271(G):C:H5'	2.47	0.44
36:DA:359:A:H2'	36:DA:360:G:O4'	2.17	0.44
36:DA:366:C:H5'	36:DA:370:G:H5'	1.98	0.44
36:DA:995:C:O2	46:DN:4:TYR:OH	2.35	0.44
36:DA:1717:G:H3'	36:DA:1718:G:H5"	1.99	0.44
36:DA:1815:A:C8	36:DA:1817:G:C4	3.06	0.44
36:DA:1885:A:H2'	36:DA:1886:C:H5'	1.98	0.44
36:DA:2033:A:HO2'	36:DA:2034:U:P	2.41	0.44
36:DA:2110:G:H5"	36:DA:2145:C:N4	2.32	0.44
36:DA:2200:C:H5'	36:DA:2201:C:OP2	2.18	0.44
36:DA:2399:G:O6	36:DA:2417:C:N3	2.49	0.44
36:DA:2762:G:H5'	36:DA:2762:G:C8	2.45	0.44
39:DD:29:PRO:O	39:DD:30:GLU:C	2.56	0.44
39:DD:30:GLU:HB2	39:DD:35:LYS:CE	2.47	0.44
39:DD:267:SER:C	39:DD:269:PHE:N	2.62	0.44
40:DE:36:ARG:NH2	40:DE:88:GLY:HA2	2.32	0.44
41:DF:87:GLY:O	41:DF:88:VAL:HB	2.17	0.44
41:DF:164:ARG:NH1	41:DF:164:ARG:CG	2.81	0.44
42:DG:149:VAL:O	42:DG:149:VAL:HG23	2.16	0.44
43:DH:139:GLN:NE2	43:DH:140:LYS:HA	2.32	0.44
45:DK:119:UNK:N	45:DK:123:UNK:CB	2.80	0.44
46:DN:96:GLU:OE1	46:DN:96:GLU:N	2.49	0.44
49:DQ:10:ARG:O	49:DQ:73:PRO:HG2	2.17	0.44
51:DS:29:PHE:C	51:DS:29:PHE:CD1	2.91	0.44
52:DT:38:ASN:OD1	52:DT:40:THR:OG1	2.34	0.44
55:DW:36:LEU:HD23	55:DW:36:LEU:H	1.81	0.44
57:DY:31:LEU:CB	57:DY:32:PRO:HA	2.45	0.44
1:AA:35:G:H2'	1:AA:36:C:C6	2.52	0.44
1:AA:274:A:H4'	1:AA:275:G:O5'	2.17	0.44
1:AA:858:G:C5	1:AA:869:G:C5	3.05	0.44
1:AA:1379:G:O2'	1:AA:1380:U:H5'	2.17	0.44
2:AB:72:GLY:HA2	2:AB:165:VAL:HG22	1.99	0.44
13:AM:56:LEU:O	13:AM:59:TYR:N	2.51	0.44
19:AS:50:ALA:HA	19:AS:59:PRO:HA	1.99	0.44
23:AX:14:A:C2'	23:AX:15:A:O5'	2.66	0.44
25:AZ:34:VAL:CG1	25:AZ:200:TRP:CZ2	3.01	0.44
25:AZ:221:PHE:O	25:AZ:222:LEU:HB2	2.17	0.44
28:B2:3:LEU:HD22	36:BA:98:G:H5'	1.98	0.44
29:B3:19:GLN:HE22	29:B3:52:HIS:CE1	2.19	0.44
32:B6:14:THR:C	32:B6:16:CYS:H	2.21	0.44
36:BA:359:A:C2	36:BA:360:G:H1'	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:691:C:O2'	36:BA:692:C:H5'	2.16	0.44
36:BA:845:G:O2'	36:BA:846:C:H5	2.01	0.44
36:BA:958:U:H5"	49:BQ:14:ARG:HD2	1.99	0.44
36:BA:1037:G:H2'	36:BA:1038:C:C6	2.52	0.44
36:BA:1138:G:H2'	36:BA:1139:G:O4'	2.17	0.44
36:BA:1187:G:H5"	54:BV:81:TYR:CE2	2.51	0.44
36:BA:2441:C:H4'	36:BA:2441:C:OP1	2.17	0.44
36:BA:2505:G:O2'	36:BA:2506:U:H6	2.01	0.44
36:BA:2578:G:C5	40:BE:140:SER:HB2	2.53	0.44
36:BA:2659:G:C2'	36:BA:2660:A:H5"	2.46	0.44
36:BA:2668:G:C2'	36:BA:2669:G:H5'	2.47	0.44
38:BC:163:PHE:CD2	38:BC:171:ILE:HD11	2.52	0.44
39:BD:33:LEU:HD23	39:BD:33:LEU:C	2.38	0.44
41:BF:147:GLY:C	41:BF:191:ARG:HH12	2.20	0.44
42:BG:73:ALA:N	42:BG:87:PRO:HG3	2.32	0.44
42:BG:172:LEU:C	42:BG:172:LEU:CD2	2.86	0.44
46:BN:24:GLY:C	46:BN:26:LEU:N	2.68	0.44
46:BN:45:ASN:HD22	46:BN:45:ASN:N	2.01	0.44
47:BO:44:LYS:O	47:BO:45:GLU:HB2	2.18	0.44
48:BP:85:LEU:CD2	48:BP:85:LEU:N	2.81	0.44
48:BP:121:LYS:O	48:BP:123:LEU:HD23	2.17	0.44
49:BQ:60:ARG:HB3	49:BQ:60:ARG:CZ	2.48	0.44
53:BU:92:ARG:HH11	53:BU:95:LEU:HG	1.82	0.44
54:BV:45:THR:HG22	54:BV:45:THR:O	2.17	0.44
55:BW:22:ASP:HA	55:BW:25:ARG:NH1	2.24	0.44
56:BX:31:HIS:ND1	56:BX:32:PRO:HD2	2.33	0.44
57:BY:75:ILE:CG2	57:BY:76:CYS:N	2.78	0.44
58:BZ:122:ARG:HH11	58:BZ:122:ARG:CG	2.31	0.44
1:CA:69:G:H2'	1:CA:70:G:H8	1.82	0.44
1:CA:858:G:C6	1:CA:869:G:C8	3.05	0.44
1:CA:1055:A:C6	1:CA:1206:G:C5	3.05	0.44
1:CA:1131:G:H2'	1:CA:1132:C:C6	2.52	0.44
1:CA:1226:C:N4	13:CM:104:ARG:HD2	2.33	0.44
1:CA:1423:G:H5'	47:DO:49:ARG:HH22	1.82	0.44
2:CB:120:ALA:C	2:CB:122:PHE:N	2.70	0.44
2:CB:219:VAL:HA	2:CB:222:ILE:HG12	1.99	0.44
4:CD:11:LEU:O	4:CD:12:CYS:C	2.55	0.44
4:CD:196:LEU:C	4:CD:198:VAL:H	2.20	0.44
11:CK:17:GLY:HA3	11:CK:77:MET:CE	2.46	0.44
12:CL:121:GLY:O	12:CL:122:THR:C	2.56	0.44
16:CP:39:TYR:C	16:CP:39:TYR:CD1	2.89	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:78:ARG:HB2	19:CS:81:ARG:NH1	2.33	0.44
20:CT:92:LEU:C	20:CT:94:ALA:N	2.70	0.44
25:CZ:9:LYS:HE2	25:CZ:75:ARG:N	2.32	0.44
25:CZ:135:MET:HB3	25:CZ:172:ARG:HG3	1.99	0.44
25:CZ:325:LYS:CG	25:CZ:326:GLU:N	2.79	0.44
27:D1:62:VAL:CG2	27:D1:67:ILE:HA	2.47	0.44
27:D1:68:PRO:O	27:D1:70:VAL:N	2.51	0.44
32:D6:53:LYS:O	32:D6:54:ILE:C	2.55	0.44
34:D8:22:VAL:HB	34:D8:53:PRO:CB	2.47	0.44
36:DA:363(A):A:C2	36:DA:363(B):G:C8	3.05	0.44
36:DA:635:C:O2'	36:DA:639:U:H5"	2.17	0.44
36:DA:654(L):G:H2'	36:DA:654(M):C:H4'	1.99	0.44
36:DA:1120:G:H2'	36:DA:1121:C:H6	1.82	0.44
36:DA:1356:G:C2	36:DA:1357:U:C2	3.06	0.44
36:DA:1438:U:H2'	36:DA:1439:A:H8	1.82	0.44
36:DA:1466:G:H2'	36:DA:1547:C:N4	2.32	0.44
36:DA:1469:A:H2'	36:DA:1470:G:H8	1.82	0.44
36:DA:1759:A:H5'	36:DA:2715:C:H1'	1.98	0.44
36:DA:1948:G:C2'	36:DA:1949:G:H5'	2.48	0.44
36:DA:2148:G:O2'	36:DA:2149:G:H5'	2.18	0.44
36:DA:2631:G:N2	40:DE:61:ARG:NH1	2.65	0.44
37:DB:14:U:H3'	37:DB:15:A:C5'	2.47	0.44
38:DC:10:LEU:HD12	38:DC:32:LEU:CA	2.40	0.44
39:DD:28:GLU:H	39:DD:29:PRO:CD	2.25	0.44
39:DD:257:LEU:C	39:DD:257:LEU:HD23	2.38	0.44
40:DE:61:ARG:CB	40:DE:62:PRO:CD	2.92	0.44
40:DE:87:GLU:HG3	40:DE:88:GLY:N	2.33	0.44
40:DE:137:HIS:HB3	40:DE:138:PRO:CD	2.44	0.44
41:DF:105:VAL:HG12	41:DF:105:VAL:O	2.17	0.44
41:DF:107:LYS:O	41:DF:108:LYS:C	2.56	0.44
41:DF:160:ASN:ND2	41:DF:162:LEU:H	2.15	0.44
46:DN:115:ARG:O	46:DN:118:LYS:HB2	2.16	0.44
48:DP:39:LYS:O	48:DP:40:SER:CB	2.66	0.44
49:DQ:18:LYS:CE	49:DQ:18:LYS:CA	2.96	0.44
49:DQ:26:TYR:HB2	49:DQ:137:TYR:HD1	1.81	0.44
49:DQ:141:GLN:HE21	49:DQ:141:GLN:HA	1.81	0.44
50:DR:48:VAL:HG13	50:DR:49:ASP:N	2.32	0.44
52:DT:22:PHE:CD1	52:DT:22:PHE:C	2.91	0.44
52:DT:33:LYS:HD3	52:DT:33:LYS:HA	1.83	0.44
55:DW:51:LEU:C	55:DW:53:SER:H	2.21	0.44
55:DW:69:LEU:HA	55:DW:108:GLY:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:13:VAL:HG11	57:DY:28:LYS:HD3	2.00	0.44
58:DZ:19:ARG:NH1	58:DZ:84:GLU:O	2.44	0.44
1:AA:170:U:H2'	1:AA:171:A:H8	1.82	0.44
1:AA:414:A:C5	1:AA:431:A:C2	3.05	0.44
1:AA:671:G:N2	1:AA:736:C:C2	2.85	0.44
1:AA:879:C:O2'	1:AA:880:C:H5'	2.18	0.44
1:AA:1029:C:O2'	1:AA:1030:C:C5	2.67	0.44
1:AA:1189:C:H5"	3:AC:5:ILE:HG13	1.99	0.44
1:AA:1216:G:H5"	14:AN:5:ALA:HB2	2.00	0.44
2:AB:8:LYS:CD	2:AB:217:ARG:NH2	2.79	0.44
2:AB:15:VAL:H	2:AB:16:HIS:CE1	2.34	0.44
4:AD:105:VAL:O	4:AD:110:PHE:HB2	2.17	0.44
6:AF:36:ARG:NH1	6:AF:66:GLU:OE2	2.50	0.44
9:AI:19:LEU:HD21	9:AI:59:PHE:CG	2.50	0.44
12:AL:119:LYS:O	12:AL:120:TYR:CD2	2.71	0.44
12:AL:122:THR:O	12:AL:122:THR:CG2	2.63	0.44
18:AR:51:LEU:HD13	18:AR:55:ARG:HB3	1.98	0.44
19:AS:42:PRO:O	19:AS:44:MET:SD	2.76	0.44
25:AZ:137:LYS:HA	60:AZ:501:GDP:HN1	1.82	0.44
25:AZ:355:LEU:CD1	25:AZ:360:GLU:HA	2.48	0.44
28:B2:37:PHE:HB3	28:B2:38:GLN:H	1.54	0.44
34:B8:61:LEU:C	34:B8:63:PRO:HD2	2.37	0.44
36:BA:42:G:H2'	36:BA:43:A:C8	2.53	0.44
36:BA:145:G:H2'	36:BA:146:G:O4'	2.17	0.44
36:BA:328:U:H4'	57:BY:68:HIS:CD2	2.52	0.44
36:BA:673:C:P	41:BF:81:PRO:HG3	2.57	0.44
36:BA:1464:C:O2'	36:BA:1528:A:C8	2.62	0.44
36:BA:1688:U:H5'	36:BA:1689:A:OP1	2.17	0.44
36:BA:2672:G:C3'	36:BA:2673:G:H5"	2.47	0.44
37:BB:29:A:OP2	51:BS:32:LEU:HD12	2.18	0.44
37:BB:87:G:C2	37:BB:89:G:H5"	2.52	0.44
39:BD:43:ARG:HD3	39:BD:44:ASN:CG	2.38	0.44
39:BD:165:ILE:HA	39:BD:175:LEU:HD23	1.99	0.44
41:BF:177:ALA:HB1	41:BF:178:PRO:HD2	1.99	0.44
46:BN:2:LYS:HE3	54:BV:13:ARG:HB3	2.00	0.44
48:BP:46:LYS:HG2	48:BP:52:GLU:HG2	1.98	0.44
49:BQ:55:VAL:CG2	49:BQ:56:ARG:N	2.80	0.44
51:BS:101:LEU:HD12	51:BS:103:GLU:O	2.16	0.44
52:BT:67:SER:O	52:BT:68:TYR:C	2.56	0.44
53:BU:6:THR:HG21	53:BU:10:ARG:NH2	2.33	0.44
53:BU:92:ARG:NH1	54:BV:11:GLN:O	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:21:ARG:C	54:BV:22:VAL:HG22	2.37	0.44
55:BW:65:LEU:HD23	55:BW:68:ARG:NH1	2.33	0.44
57:BY:81:LYS:HD2	57:BY:96:ILE:CD1	2.48	0.44
1:CA:123:C:OP1	1:CA:312:C:H5'	2.17	0.44
1:CA:157:G:H2'	1:CA:158:G:H8	1.81	0.44
1:CA:189(C):C:C2'	1:CA:189(D):C:H5'	2.48	0.44
1:CA:285:G:O2'	1:CA:286:G:H5'	2.17	0.44
1:CA:359:U:H2'	1:CA:360:A:H8	1.82	0.44
1:CA:476:G:H2'	1:CA:477:A:H8	1.83	0.44
1:CA:538:G:H2'	1:CA:539:A:C8	2.52	0.44
1:CA:605:U:O2'	1:CA:606:G:H5'	2.17	0.44
1:CA:658:G:O2'	1:CA:659:U:H5'	2.17	0.44
1:CA:693:G:H21	22:CW:37:A:H2	1.65	0.44
1:CA:961:U:O2'	1:CA:962:C:P	2.75	0.44
1:CA:1010:G:H2'	1:CA:1011:G:H8	1.82	0.44
1:CA:1430:C:O2	1:CA:1430:C:O4'	2.35	0.44
2:CB:30:ARG:HB3	2:CB:30:ARG:CZ	2.47	0.44
2:CB:54:THR:HG22	2:CB:55:PHE:N	2.33	0.44
2:CB:124:SER:C	2:CB:126:GLU:H	2.21	0.44
4:CD:17:VAL:O	4:CD:18:LYS:O	2.36	0.44
5:CE:86:ALA:O	5:CE:125:SER:N	2.50	0.44
9:CI:77:ILE:C	9:CI:79:LEU:N	2.71	0.44
11:CK:33:THR:HG22	11:CK:39:PRO:CA	2.41	0.44
13:CM:33:ALA:HB1	13:CM:59:TYR:HD2	1.82	0.44
16:CP:9:PHE:CE2	16:CP:18:ARG:CZ	3.01	0.44
17:CQ:7:THR:HG22	17:CQ:8:GLY:N	2.33	0.44
24:CY:63:C:O2'	25:CZ:391:GLY:C	2.56	0.44
24:CY:76:A:C2	25:CZ:287:GLY:O	2.70	0.44
25:CZ:86:ALA:O	25:CZ:87:ASP:HB2	2.18	0.44
25:CZ:94:THR:HG21	25:CZ:300:ARG:CZ	2.47	0.44
25:CZ:136:ASN:ND2	60:CZ:501:GDP:C6	2.84	0.44
25:CZ:199:ILE:O	25:CZ:199:ILE:HG23	2.18	0.44
28:D2:7:ARG:HA	28:D2:10:LEU:HB2	2.00	0.44
31:D5:29:THR:CG2	36:DA:2814:C:O2'	2.64	0.44
32:D6:11:LEU:HB2	32:D6:24:GLU:C	2.37	0.44
34:D8:33:ASN:N	34:D8:36:LYS:HD2	2.32	0.44
36:DA:327:G:H2'	36:DA:328:U:H6	1.83	0.44
36:DA:813:U:O2'	36:DA:814:C:H5'	2.17	0.44
36:DA:1047:G:H2'	36:DA:1110:G:N2	2.25	0.44
36:DA:1800:C:H5"	39:DD:147:LEU:CD2	2.48	0.44
36:DA:2110:G:H5"	36:DA:2145:C:H42	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2278:A:H2'	36:DA:2279:G:O5'	2.17	0.44
36:DA:2361:A:C4	36:DA:2362:G:C8	3.05	0.44
38:DC:10:LEU:HA	38:DC:13:LYS:HE3	1.99	0.44
38:DC:75:LEU:HB3	38:DC:112:ALA:O	2.17	0.44
39:DD:52:ARG:HB3	39:DD:53:PHE:CE2	2.53	0.44
40:DE:4:ILE:CG2	40:DE:96:PHE:HE2	2.31	0.44
40:DE:68:ALA:HB3	40:DE:69:LYS:HZ3	1.82	0.44
41:DF:121:GLY:C	41:DF:123:LEU:H	2.21	0.44
42:DG:17:PRO:O	42:DG:21:ARG:HB2	2.17	0.44
42:DG:139:LEU:HA	42:DG:144:ILE:CG1	2.39	0.44
44:DJ:96:UNK:HA	44:DJ:99:UNK:CB	2.47	0.44
48:DP:147:LEU:CG	48:DP:148:LEU:N	2.78	0.44
56:DX:63:LYS:HB2	56:DX:63:LYS:HE3	1.77	0.44
57:DY:46:LYS:HB3	57:DY:62:GLU:HG2	1.99	0.44
1:AA:41:G:H2'	1:AA:42:G:C8	2.53	0.44
1:AA:276:G:O2'	17:AQ:68:ARG:NH1	2.51	0.44
1:AA:316:G:H2'	1:AA:317:G:H8	1.82	0.44
1:AA:602:A:H2'	1:AA:603:U:H6	1.82	0.44
1:AA:603:U:H2'	1:AA:604:G:H8	1.82	0.44
1:AA:687:A:H4'	11:AK:47:VAL:CG1	2.46	0.44
1:AA:889:A:H4'	1:AA:890:G:OP1	2.18	0.44
1:AA:1153:C:O2'	1:AA:1154:G:C5'	2.65	0.44
1:AA:1286:A:O2'	1:AA:1287:A:C5'	2.66	0.44
3:AC:13:GLY:HA3	14:AN:57:ARG:NE	2.33	0.44
3:AC:108:ASN:ND2	3:AC:144:SER:OG	2.51	0.44
3:AC:132:ARG:O	3:AC:136:GLN:HG3	2.18	0.44
4:AD:98:GLU:HB3	4:AD:189:PRO:HG3	2.00	0.44
4:AD:141:ARG:O	4:AD:185:PHE:HD2	2.00	0.44
10:AJ:32:ALA:HB2	10:AJ:76:ASN:CB	2.46	0.44
10:AJ:35:SER:N	10:AJ:73:ASP:O	2.45	0.44
20:AT:90:GLN:HA	20:AT:93:GLU:CD	2.38	0.44
20:AT:93:GLU:N	20:AT:93:GLU:OE1	2.51	0.44
21:AU:9:ARG:NH1	21:AU:23:PRO:HD2	2.16	0.44
29:B3:46:ASN:ND2	29:B3:46:ASN:O	2.51	0.44
32:B6:37:ARG:O	32:B6:48:VAL:O	2.35	0.44
32:B6:40:CYS:SG	32:B6:45:LYS:HB3	2.58	0.44
34:B8:13:ARG:HD2	48:BP:61:ARG:HD3	1.99	0.44
34:B8:50:LEU:CA	34:B8:53:PRO:CD	2.96	0.44
36:BA:185:U:H4'	36:BA:218:A:H4'	1.99	0.44
36:BA:286:C:H2'	36:BA:287:C:H6	1.80	0.44
36:BA:304:G:O2'	36:BA:305:U:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:363(A):A:H2	36:BA:363(B):G:C8	2.35	0.44
36:BA:596:G:H2'	36:BA:597:U:O4'	2.17	0.44
36:BA:654(E):G:C2'	36:BA:654(F):C:H5'	2.48	0.44
36:BA:1344:G:H5'	36:BA:1384:A:C6	2.52	0.44
36:BA:2074:U:C2	36:BA:2436:G:N2	2.86	0.44
36:BA:2547:U:H2'	36:BA:2548:G:H8	1.83	0.44
36:BA:2735:G:H2'	36:BA:2736:G:H8	1.82	0.44
37:BB:42:C:O2'	37:BB:43:C:P	2.76	0.44
39:BD:112:GLN:O	39:BD:115:GLN:HB2	2.18	0.44
40:BE:8:LYS:HB2	40:BE:196:VAL:HG11	1.98	0.44
40:BE:59:VAL:HG13	40:BE:60:ASN:N	2.27	0.44
42:BG:82:LEU:CD1	42:BG:87:PRO:HA	2.47	0.44
46:BN:23:LEU:HD23	46:BN:23:LEU:C	2.37	0.44
50:BR:72:ASP:HB3	50:BR:75:LEU:CB	2.46	0.44
52:BT:105:LEU:O	52:BT:106:SER:C	2.56	0.44
52:BT:114:LEU:HD23	52:BT:114:LEU:HA	1.81	0.44
54:BV:18:LEU:CG	54:BV:19:LYS:N	2.80	0.44
54:BV:53:GLU:C	54:BV:55:ALA:N	2.71	0.44
57:BY:81:LYS:HZ2	57:BY:99:CYS:CB	2.29	0.44
57:BY:81:LYS:HD2	57:BY:96:ILE:HB	2.00	0.44
58:BZ:15:PRO:HA	58:BZ:18:LEU:CD2	2.48	0.44
58:BZ:27:VAL:HG22	58:BZ:28:MET:N	2.29	0.44
1:CA:241:C:O2'	1:CA:242:C:H5'	2.17	0.44
1:CA:826:C:H2'	1:CA:827:U:H6	1.81	0.44
2:CB:36:ARG:HG3	2:CB:37:ASN:N	2.32	0.44
2:CB:109:SER:C	2:CB:111:ARG:H	2.20	0.44
2:CB:109:SER:O	2:CB:112:VAL:N	2.50	0.44
3:CC:141:VAL:O	3:CC:141:VAL:HG12	2.18	0.44
4:CD:98:GLU:C	4:CD:100:ARG:N	2.70	0.44
5:CE:145:LYS:HA	8:CH:107:LEU:HD22	1.98	0.44
7:CG:88:PRO:HG3	7:CG:148:ASN:O	2.17	0.44
8:CH:85:ARG:HA	8:CH:135:CYS:HB3	1.99	0.44
10:CJ:54:PHE:HA	10:CJ:55:LYS:NZ	2.33	0.44
13:CM:13:LYS:O	13:CM:45:VAL:HG23	2.17	0.44
13:CM:108:ARG:NH2	13:CM:114:ARG:HA	2.31	0.44
13:CM:113:PRO:O	13:CM:114:ARG:HB3	2.18	0.44
14:CN:4:LYS:O	14:CN:5:ALA:C	2.55	0.44
15:CO:70:LEU:C	15:CO:72:ARG:H	2.21	0.44
16:CP:14:ASN:OD1	16:CP:16:HIS:HE1	2.01	0.44
17:CQ:48:GLU:O	17:CQ:49:GLU:C	2.56	0.44
18:CR:59:SER:O	18:CR:60:ALA:C	2.56	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:45:VAL:HG11	19:CS:64:GLU:CA	2.47	0.44
20:CT:49:ALA:HA	20:CT:92:LEU:HD21	1.99	0.44
20:CT:94:ALA:O	20:CT:95:ALA:CB	2.66	0.44
22:CW:16:U:H5'	22:CW:17:C:OP2	2.18	0.44
25:CZ:27:LEU:HG	25:CZ:31:LEU:CD1	2.39	0.44
25:CZ:270:VAL:HG12	25:CZ:277:LEU:HB3	1.99	0.44
27:D1:75:GLU:O	27:D1:78:LYS:HG2	2.18	0.44
28:D2:32:LEU:HA	28:D2:53:LEU:HD13	1.98	0.44
31:D5:4:HIS:C	36:DA:2056:G:H22	2.20	0.44
31:D5:24:ALA:O	31:D5:25:LEU:CB	2.56	0.44
31:D5:36:CYS:C	31:D5:38:ALA:H	2.21	0.44
32:D6:26:ASN:HA	36:DA:2286:A:C2	2.41	0.44
32:D6:48:VAL:O	32:D6:49:HIS:O	2.35	0.44
33:D7:19:ARG:HH11	33:D7:19:ARG:HG2	1.81	0.44
36:DA:531:C:C5	36:DA:2035:G:C4	3.06	0.44
36:DA:916:G:H2'	36:DA:917:A:H5"	1.99	0.44
36:DA:1188:U:C2'	36:DA:1189:A:H5'	2.48	0.44
36:DA:1191:G:H2'	36:DA:1192:G:O4'	2.17	0.44
36:DA:1322:A:H2'	36:DA:1323:U:H6	1.81	0.44
36:DA:2367:G:H2'	36:DA:2368:C:H6	1.82	0.44
37:DB:13:A:O2'	37:DB:15:A:H5'	2.17	0.44
39:DD:79:VAL:O	39:DD:113:VAL:HG13	2.18	0.44
40:DE:84:PHE:CD1	40:DE:85:ASN:N	2.86	0.44
40:DE:90:THR:CG2	40:DE:91:VAL:N	2.79	0.44
40:DE:101:ARG:HB2	40:DE:201:THR:CG2	2.47	0.44
40:DE:147:PRO:HB2	40:DE:149:ARG:HG2	1.99	0.44
41:DF:53:THR:HG22	41:DF:56:GLU:HG3	1.99	0.44
41:DF:82:ILE:O	41:DF:83:PHE:O	2.35	0.44
41:DF:150:GLY:HA2	41:DF:172:TRP:CD2	2.53	0.44
48:DP:122:PRO:HB3	48:DP:141:ALA:CB	2.41	0.44
49:DQ:52:VAL:O	49:DQ:53:ALA:C	2.55	0.44
49:DQ:59:ARG:O	49:DQ:60:ARG:HB2	2.16	0.44
56:DX:25:LYS:HA	56:DX:81:VAL:O	2.18	0.44
1:AA:166:G:O2'	1:AA:167:G:H5'	2.18	0.44
1:AA:193:C:O2'	1:AA:194:C:H5'	2.18	0.44
1:AA:411:A:N6	1:AA:413:G:H21	2.16	0.44
1:AA:620:C:H2'	1:AA:621:A:O4'	2.18	0.44
1:AA:650:G:C2'	1:AA:651:C:H5'	2.48	0.44
1:AA:1118:C:H2'	1:AA:1119:C:H6	1.80	0.44
2:AB:8:LYS:CE	2:AB:217:ARG:HH12	2.31	0.44
3:AC:151:VAL:HA	3:AC:199:LYS:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:167:TRP:O	3:AC:168:ALA:HB3	2.17	0.44
4:AD:104:VAL:HG21	4:AD:140:VAL:HG21	2.00	0.44
5:AE:45:PHE:CZ	5:AE:129:ILE:HD11	2.53	0.44
7:AG:50:ILE:HD12	7:AG:125:MET:HG3	1.99	0.44
14:AN:42:ILE:HD13	14:AN:42:ILE:HA	1.83	0.44
16:AP:26:ARG:HG2	16:AP:26:ARG:NH1	2.33	0.44
19:AS:63:THR:HG22	19:AS:66:MET:SD	2.58	0.44
25:AZ:28:THR:C	25:AZ:30:ALA:H	2.20	0.44
25:AZ:339:ARG:HH21	25:AZ:350:THR:HG21	1.81	0.44
25:AZ:355:LEU:HD13	25:AZ:359:VAL:O	2.17	0.44
28:B2:6:VAL:HG13	28:B2:7:ARG:H	1.81	0.44
36:BA:224:G:N2	36:BA:225:A:H1'	2.32	0.44
36:BA:331:A:C1'	36:BA:332:A:OP1	2.66	0.44
36:BA:415:A:N1	36:BA:2409:G:C6	2.86	0.44
36:BA:1231:G:H2'	36:BA:1232:G:H8	1.81	0.44
36:BA:1275:A:N6	36:BA:1296:G:H4'	2.32	0.44
36:BA:1436:G:H3'	36:BA:1437:C:H5"	1.98	0.44
36:BA:1526:G:C6	36:BA:1527:G:C2	3.05	0.44
36:BA:2847:U:C5'	52:BT:97:ALA:HB3	2.48	0.44
38:BC:10:LEU:HD12	38:BC:32:LEU:HA	1.96	0.44
38:BC:99:ILE:C	38:BC:101:GLN:N	2.69	0.44
42:BG:32:PRO:HA	42:BG:162:THR:HG1	1.82	0.44
43:BH:84:SER:O	43:BH:85:LYS:HE3	2.17	0.44
43:BH:123:PHE:N	43:BH:123:PHE:CD1	2.86	0.44
44:BJ:74:UNK:O	44:BJ:75:UNK:C	2.66	0.44
46:BN:29:LYS:O	46:BN:33:LEU:HD13	2.17	0.44
48:BP:101:VAL:CG2	48:BP:102:ARG:N	2.80	0.44
52:BT:6:LEU:O	52:BT:6:LEU:HD23	2.17	0.44
52:BT:31:SER:CB	52:BT:32:TYR:CD1	3.01	0.44
52:BT:62:THR:HA	52:BT:74:ARG:O	2.18	0.44
58:BZ:119:GLU:C	58:BZ:121:HIS:H	2.20	0.44
1:CA:61:G:H2'	1:CA:62:U:O4'	2.18	0.44
1:CA:499:A:H4'	1:CA:500:G:OP1	2.18	0.44
1:CA:936:C:H2'	1:CA:937:A:C8	2.52	0.44
1:CA:1187:G:H5'	1:CA:1187:G:C8	2.52	0.44
1:CA:1370:G:O2'	1:CA:1371:G:H5'	2.18	0.44
2:CB:200:ILE:H	2:CB:200:ILE:CD1	2.15	0.44
2:CB:238:LEU:O	2:CB:239:VAL:C	2.55	0.44
3:CC:112:SER:O	3:CC:113:ALA:C	2.56	0.44
3:CC:139:GLN:HG3	3:CC:143:GLU:OE2	2.18	0.44
3:CC:179:ARG:HD2	3:CC:207:VAL:H	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:148:VAL:HG12	4:CD:149:ALA:N	2.31	0.44
5:CE:12:LEU:C	5:CE:12:LEU:HD22	2.37	0.44
8:CH:16:ALA:HB1	8:CH:21:LYS:HB2	1.99	0.44
9:CI:8:GLY:O	9:CI:76:ALA:HB1	2.17	0.44
10:CJ:32:ALA:CB	10:CJ:76:ASN:HB2	2.48	0.44
11:CK:65:ALA:HB1	11:CK:98:LEU:CD2	2.47	0.44
13:CM:2:ALA:HB3	13:CM:9:ILE:HG23	2.00	0.44
18:CR:55:ARG:HH11	18:CR:55:ARG:HG3	1.81	0.44
19:CS:11:VAL:HG21	19:CS:16:LEU:HD11	2.00	0.44
20:CT:75:ASN:O	20:CT:79:ARG:CB	2.66	0.44
25:CZ:161:TYR:HA	61:CZ:502:KIR:O15	2.18	0.44
34:D8:43:GLN:C	34:D8:44:LYS:HD2	2.38	0.44
36:DA:602:G:N1	36:DA:654(U):A:N7	2.65	0.44
36:DA:751:A:C6	36:DA:789:A:C5	3.05	0.44
36:DA:2253:G:H2'	36:DA:2254:C:O4'	2.17	0.44
36:DA:2406:U:H4'	36:DA:2407:G:H5"	1.99	0.44
36:DA:2530:A:H2'	36:DA:2531:A:H5"	2.00	0.44
36:DA:2703:C:O2'	36:DA:2704:C:H5'	2.16	0.44
37:DB:27:C:H5'	37:DB:28:C:OP2	2.18	0.44
38:DC:64:LEU:HB3	38:DC:188:ASN:CG	2.38	0.44
40:DE:65:GLY:O	40:DE:66:HIS:C	2.56	0.44
42:DG:52:ILE:O	42:DG:54:GLU:HG3	2.18	0.44
43:DH:51:ARG:CG	43:DH:52:VAL:H	2.30	0.44
48:DP:47:ASP:CB	48:DP:51:PHE:HB2	2.30	0.44
49:DQ:67:ARG:HB2	49:DQ:102:VAL:O	2.18	0.44
49:DQ:109:VAL:HG12	49:DQ:110:THR:N	2.33	0.44
52:DT:78:LEU:HB3	52:DT:79:HIS:CE1	2.53	0.44
53:DU:9:VAL:CA	53:DU:13:LYS:HE2	2.48	0.44
54:DV:37:VAL:O	54:DV:38:LEU:HB2	2.17	0.44
56:DX:7:VAL:C	56:DX:8:ILE:HD12	2.38	0.44
56:DX:27:THR:HG22	56:DX:80:ILE:HG13	1.99	0.44
57:DY:81:LYS:HB3	57:DY:96:ILE:HD12	2.00	0.44
58:DZ:53:ILE:HG22	58:DZ:71:VAL:HB	1.99	0.44
58:DZ:90:VAL:O	58:DZ:90:VAL:HG12	2.18	0.44
58:DZ:168:GLU:CA	58:DZ:168:GLU:OE1	2.66	0.44
58:DZ:182:LYS:O	58:DZ:183:LEU:HD23	2.18	0.44
1:AA:632:A:H2'	1:AA:633:G:O4'	2.18	0.44
1:AA:674:G:OP1	6:AF:87:ARG:NH2	2.50	0.44
1:AA:826:C:C2	1:AA:827:U:C5	3.06	0.44
1:AA:902:G:H2'	1:AA:903:G:C8	2.52	0.44
1:AA:1256:A:H2	1:AA:1277:C:H2'	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1298:C:H2'	7:AG:114:ARG:NH1	2.32	0.44
1:AA:1303:C:C2'	1:AA:1304:G:H5'	2.46	0.44
1:AA:1397:C:H4'	23:AX:26:A:C2	2.53	0.44
1:AA:1514:C:O2'	1:AA:1515:C:H5'	2.18	0.44
2:AB:42:ILE:CD1	2:AB:202:PRO:HB2	2.48	0.44
2:AB:51:LEU:HD22	2:AB:55:PHE:CE2	2.52	0.44
3:AC:83:ARG:C	3:AC:85:ARG:N	2.68	0.44
3:AC:178:LEU:C	3:AC:180:ALA:H	2.21	0.44
9:AI:85:LEU:C	9:AI:85:LEU:HD12	2.38	0.44
12:AL:25:PRO:O	12:AL:25:PRO:HG2	2.18	0.44
13:AM:15:VAL:HG13	13:AM:43:THR:O	2.17	0.44
25:AZ:34:VAL:CG1	25:AZ:200:TRP:CE2	3.01	0.44
25:AZ:158:LEU:HB2	25:AZ:165:GLY:HA3	1.98	0.44
25:AZ:193:ASN:C	25:AZ:195:TRP:H	2.20	0.44
28:B2:70:GLN:O	28:B2:71:ASN:HB2	2.16	0.44
31:B5:42:PRO:HB2	36:BA:2815:C:O2'	2.18	0.44
32:B6:30:THR:HG22	32:B6:31:PRO:CD	2.46	0.44
34:B8:48:PHE:N	34:B8:48:PHE:CD1	2.85	0.44
36:BA:143:G:C1'	56:BX:37:THR:HG21	2.48	0.44
36:BA:197:A:N6	36:BA:2430:A:H2'	2.33	0.44
36:BA:271(H):G:H1	36:BA:271(P):C:H42	1.65	0.44
36:BA:333:G:N2	36:BA:334:C:H1'	2.33	0.44
36:BA:614:U:C2'	36:BA:614(A):U:H5'	2.48	0.44
36:BA:1055:G:N2	36:BA:1105:U:C2	2.86	0.44
36:BA:1614:A:N6	55:BW:93:ALA:N	2.66	0.44
36:BA:2179:C:H4'	36:BA:2180:U:C4	2.51	0.44
36:BA:2191:G:H3'	36:BA:2192:G:H8	1.82	0.44
36:BA:2287:A:N1	36:BA:2346:A:C2	2.86	0.44
36:BA:2553:G:H2'	36:BA:2554:U:H4'	1.99	0.44
37:BB:8:U:O2'	51:BS:40:ILE:HD13	2.18	0.44
40:BE:14:ILE:HG13	40:BE:21:VAL:CG2	2.48	0.44
42:BG:134:GLY:C	42:BG:135:LEU:HD12	2.39	0.44
44:BJ:125:UNK:O	44:BJ:126:UNK:C	2.65	0.44
46:BN:56:ASN:HA	46:BN:125:GLY:C	2.38	0.44
48:BP:46:LYS:HB3	48:BP:52:GLU:HG2	2.00	0.44
49:BQ:75:THR:HA	49:BQ:89:ASN:O	2.18	0.44
52:BT:32:TYR:N	52:BT:32:TYR:HD1	2.10	0.44
54:BV:62:LEU:N	54:BV:62:LEU:HD22	2.32	0.44
56:BX:5:TYR:HA	56:BX:8:ILE:HD13	1.99	0.44
57:BY:83:THR:HA	57:BY:96:ILE:HG22	1.99	0.44
58:BZ:102:LEU:HD23	58:BZ:137:ILE:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:110:GLY:CA	58:BZ:113:ALA:HB3	2.39	0.44
2:CB:229:VAL:HG12	2:CB:230:VAL:N	2.33	0.44
4:CD:131:ARG:HD3	4:CD:131:ARG:H	1.83	0.44
10:CJ:23:ILE:O	10:CJ:23:ILE:CG2	2.66	0.44
10:CJ:65:LEU:HD13	14:CN:55:GLY:C	2.37	0.44
11:CK:127:LYS:HD3	11:CK:127:LYS:HA	1.85	0.44
12:CL:53:ARG:N	12:CL:53:ARG:HD2	2.31	0.44
22:CW:65:G:O2'	32:D6:28:ARG:NH2	2.51	0.44
24:CY:2:G:C4'	25:CZ:88:TYR:CD1	3.01	0.44
26:D0:60:PHE:N	26:D0:60:PHE:CD1	2.85	0.44
31:D5:41:PRO:HD3	55:DW:38:TYR:CZ	2.52	0.44
31:D5:52:TYR:N	31:D5:52:TYR:CD1	2.86	0.44
34:D8:33:ASN:HD21	36:DA:2419:U:H5"	1.79	0.44
36:DA:531:C:N3	36:DA:563:G:C8	2.86	0.44
36:DA:623:G:H2'	36:DA:624:C:C6	2.52	0.44
36:DA:734:A:O2'	36:DA:1635:G:H5'	2.17	0.44
36:DA:1471:A:H2'	36:DA:1472:A:H8	1.82	0.44
36:DA:1946:U:H2'	36:DA:1947:C:H6	1.82	0.44
36:DA:2443:C:H2'	36:DA:2444:G:H8	1.82	0.44
36:DA:2606:C:O2'	36:DA:2607:G:H5'	2.17	0.44
36:DA:2851:A:H2'	36:DA:2852:G:C8	2.53	0.44
39:DD:30:GLU:CB	39:DD:35:LYS:HE3	2.47	0.44
40:DE:60:ASN:O	40:DE:61:ARG:C	2.56	0.44
45:DK:95:UNK:C	45:DK:97:UNK:H	2.30	0.44
46:DN:34:LEU:C	46:DN:34:LEU:CD1	2.86	0.44
48:DP:24:GLY:N	48:DP:33:ARG:CZ	2.81	0.44
48:DP:100:LEU:O	48:DP:103:ALA:HB3	2.18	0.44
57:DY:37:VAL:HG22	57:DY:69:ALA:HB2	2.00	0.44
1:AA:689:C:P	11:AK:46:GLY:HA3	2.58	0.44
1:AA:1012:U:O2'	1:AA:1013:G:H5'	2.17	0.44
3:AC:94:LEU:O	3:AC:95:THR:CB	2.57	0.44
7:AG:14:PRO:HG3	7:AG:21:VAL:HG12	1.99	0.44
7:AG:144:MET:C	7:AG:145:ALA:O	2.49	0.44
10:AJ:9:ARG:HG2	10:AJ:69:ASN:OD1	2.18	0.44
15:AO:74:ASP:O	15:AO:76:GLU:N	2.51	0.44
16:AP:51:VAL:HG12	16:AP:52:ASP:N	2.32	0.44
20:AT:50:GLU:C	20:AT:52:ALA:H	2.20	0.44
22:AV:53:G:H1	22:AV:61:C:H42	1.66	0.44
25:AZ:185:ASN:O	25:AZ:185:ASN:OD1	2.34	0.44
25:AZ:257:GLY:HA3	25:AZ:302:GLN:HB3	2.00	0.44
26:B0:27:GLU:OE2	36:BA:856:C:H4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B1:45:ASN:C	27:B1:45:ASN:HD22	2.21	0.44
28:B2:35:LEU:HB2	28:B2:50:ILE:HG13	2.00	0.44
31:B5:40:LYS:NZ	31:B5:44:THR:O	2.41	0.44
32:B6:36:LEU:HD12	32:B6:50:ARG:NH1	2.32	0.44
33:B7:10:ARG:HH12	33:B7:14:LYS:NZ	2.16	0.44
34:B8:42:ARG:HH22	36:BA:2382:G:H21	1.64	0.44
35:B9:35:ARG:O	35:B9:36:GLN:C	2.57	0.44
36:BA:195:A:C8	36:BA:197:A:OP1	2.71	0.44
36:BA:1038:C:H3'	36:BA:1039:G:C5'	2.47	0.44
36:BA:1101:U:H2'	36:BA:1102:C:C6	2.53	0.44
36:BA:1206:G:C6	36:BA:1207:C:C4	3.06	0.44
36:BA:1747:G:H2'	36:BA:1747(A):G:H8	1.83	0.44
36:BA:2192:G:H2'	36:BA:2193:G:H5'	1.99	0.44
36:BA:2208:A:H1'	36:BA:2219:G:C5	2.53	0.44
36:BA:2305:A:O2'	42:BG:136:ARG:HG3	2.18	0.44
36:BA:2334:G:N3	51:BS:18:ILE:CD1	2.81	0.44
39:BD:10:THR:HG23	39:BD:13:ARG:CB	2.48	0.44
39:BD:72:LYS:HZ3	39:BD:99:ASP:CG	2.21	0.44
48:BP:114:ILE:HG21	48:BP:130:PHE:CE2	2.52	0.44
51:BS:89:ARG:HB3	51:BS:92:TYR:HB3	2.00	0.44
52:BT:26:ASP:HB3	52:BT:89:VAL:O	2.18	0.44
52:BT:45:PHE:CE2	52:BT:74:ARG:HG3	2.53	0.44
52:BT:86:ILE:O	52:BT:86:ILE:HG23	2.18	0.44
52:BT:106:SER:O	52:BT:107:ASP:OD1	2.36	0.44
54:BV:66:ARG:NH2	54:BV:88:ARG:HD2	2.33	0.44
56:BX:89:ILE:HG22	56:BX:92:LEU:HG	2.00	0.44
1:CA:160:A:O2'	1:CA:161:A:H5'	2.18	0.44
1:CA:375:U:H3	1:CA:389:A:H61	1.65	0.44
1:CA:532:A:N6	1:CA:1206:G:O2'	2.51	0.44
1:CA:860:A:H2'	1:CA:861:G:O4'	2.18	0.44
1:CA:1190:G:H3'	3:CC:3:ASN:HD21	1.78	0.44
1:CA:1256:A:C2	1:CA:1277:C:H2'	2.49	0.44
2:CB:12:GLU:C	2:CB:14:GLY:H	2.21	0.44
2:CB:193:ASP:OD1	2:CB:193:ASP:C	2.57	0.44
3:CC:192:THR:O	3:CC:192:THR:CG2	2.65	0.44
4:CD:36:ARG:O	4:CD:38:TYR:N	2.50	0.44
4:CD:74:GLN:O	4:CD:77:ASN:HB3	2.17	0.44
5:CE:19:MET:SD	5:CE:24:ARG:HB3	2.58	0.44
8:CH:14:ARG:HD3	8:CH:18:ARG:NH1	2.33	0.44
9:CI:85:LEU:C	9:CI:85:LEU:HD12	2.38	0.44
12:CL:18:VAL:HG23	12:CL:19:ARG:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:59:TYR:O	13:CM:63:THR:OG1	2.36	0.44
16:CP:15:PRO:HB2	16:CP:41:PRO:CG	2.48	0.44
17:CQ:45:HIS:HB2	17:CQ:65:ILE:HD13	2.00	0.44
17:CQ:66:SER:O	17:CQ:70:ARG:NH1	2.51	0.44
25:CZ:185:ASN:OD1	25:CZ:185:ASN:O	2.35	0.44
25:CZ:198:LYS:HZ2	25:CZ:201:GLU:HB2	1.83	0.44
25:CZ:303:VAL:HG21	25:CZ:345:ARG:NH1	2.33	0.44
26:D0:34:GLY:O	26:D0:35:ASN:C	2.57	0.44
27:D1:41:ARG:HH22	36:DA:1365:A:C5'	2.18	0.44
27:D1:60:PHE:CD1	27:D1:91:LYS:HE3	2.53	0.44
28:D2:7:ARG:HA	28:D2:10:LEU:HB3	2.00	0.44
28:D2:48:HIS:CD2	28:D2:49:LYS:N	2.80	0.44
30:D4:12:ALA:HB1	30:D4:29:PRO:O	2.17	0.44
30:D4:20:ASN:C	30:D4:20:ASN:ND2	2.71	0.44
31:D5:41:PRO:HD3	55:DW:38:TYR:CE1	2.53	0.44
32:D6:7:ILE:CG2	32:D6:27:LYS:NZ	2.81	0.44
32:D6:20:ASN:CG	32:D6:21:TYR:N	2.71	0.44
36:DA:480:A:H2	36:DA:499:U:O2	2.00	0.44
36:DA:763:G:O2'	36:DA:764:A:H3'	2.18	0.44
36:DA:885:C:H2'	36:DA:886:C:H5"	2.00	0.44
36:DA:1341:U:H4'	56:DX:56:THR:O	2.17	0.44
36:DA:1510:G:O2'	36:DA:1511:C:H5'	2.17	0.44
36:DA:1528(A):A:H2'	36:DA:1529:G:O4'	2.17	0.44
36:DA:1996:C:H5	47:DO:32:TYR:OH	2.00	0.44
36:DA:2308:G:O2'	36:DA:2309:A:C8	2.69	0.44
36:DA:2312:U:OP1	42:DG:73:ALA:HA	2.18	0.44
36:DA:2320:A:C2	36:DA:2333:A:C8	3.06	0.44
36:DA:2594:C:O2'	36:DA:2595:G:H5'	2.16	0.44
36:DA:2770:G:C5'	36:DA:2771:C:OP2	2.65	0.44
36:DA:2869:G:H2'	36:DA:2870:C:C6	2.53	0.44
38:DC:30:LYS:HD3	38:DC:185:LEU:HD11	2.00	0.44
39:DD:52:ARG:NH1	39:DD:249:PRO:HG3	2.32	0.44
40:DE:116:VAL:O	40:DE:117:MET:CB	2.59	0.44
42:DG:87:PRO:O	42:DG:88:ILE:CD1	2.66	0.44
48:DP:9:ASN:H	48:DP:10:PRO:HD3	1.82	0.44
51:DS:11:LYS:HG2	51:DS:11:LYS:O	2.17	0.44
56:DX:6:ASP:O	56:DX:9:LEU:HD23	2.18	0.44
56:DX:36:LYS:HE3	56:DX:56:THR:HG23	1.98	0.44
56:DX:41:ASN:C	56:DX:43:VAL:H	2.21	0.44
56:DX:65:ARG:CG	56:DX:66:LEU:N	2.81	0.44
58:DZ:27:VAL:CG1	58:DZ:28:MET:N	2.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:166:G:H2'	1:AA:167:G:H8	1.83	0.43
1:AA:383:A:C2'	1:AA:384:G:H5'	2.48	0.43
1:AA:1333:A:H2'	1:AA:1334:G:C5'	2.47	0.43
1:AA:1397:C:H4'	23:AX:26:A:N1	2.33	0.43
2:AB:9:GLU:HB3	2:AB:48:MET:CE	2.48	0.43
3:AC:156:ARG:HB3	3:AC:160:ALA:O	2.17	0.43
3:AC:190:ARG:HG3	3:AC:190:ARG:NH1	2.33	0.43
4:AD:98:GLU:O	4:AD:103:ASN:ND2	2.45	0.43
5:AE:20:GLN:OE1	5:AE:22:GLY:N	2.39	0.43
6:AF:10:LEU:HD13	6:AF:59:TYR:CD2	2.50	0.43
6:AF:35:ALA:O	6:AF:36:ARG:CB	2.62	0.43
8:AH:6:ILE:HD12	8:AH:6:ILE:N	2.33	0.43
12:AL:90:VAL:HG23	12:AL:99:HIS:CE1	2.53	0.43
15:AO:64:ARG:HG2	15:AO:64:ARG:O	2.18	0.43
22:AV:67:C:H2'	22:AV:68:C:C6	2.53	0.43
28:B2:22:GLU:C	28:B2:24:LEU:H	2.21	0.43
28:B2:39:ALA:O	28:B2:45:SER:HB3	2.18	0.43
32:B6:27:LYS:O	32:B6:27:LYS:HD2	2.18	0.43
36:BA:51:G:N3	36:BA:119:A:C2	2.86	0.43
36:BA:116:C:O2'	36:BA:117:G:H5'	2.18	0.43
36:BA:356:G:N2	36:BA:357:A:H1'	2.32	0.43
36:BA:584:C:OP2	53:BU:10:ARG:NH2	2.50	0.43
36:BA:633:A:C2'	36:BA:634:C:H5'	2.48	0.43
36:BA:1103:A:H3'	36:BA:1104:C:H6	1.83	0.43
36:BA:1428:C:N4	36:BA:1570:A:OP2	2.43	0.43
36:BA:1885:A:C2'	36:BA:1886:C:H5'	2.48	0.43
36:BA:1958:C:O2'	36:BA:1959:G:H5'	2.18	0.43
36:BA:2785:C:O2'	40:BE:64:LYS:NZ	2.45	0.43
39:BD:61:LEU:HD12	39:BD:61:LEU:HA	1.72	0.43
49:BQ:2:LEU:O	49:BQ:2:LEU:HG	2.17	0.43
51:BS:15:ARG:CB	51:BS:15:ARG:NH1	2.79	0.43
51:BS:106:ARG:HG2	51:BS:106:ARG:O	2.18	0.43
52:BT:27:THR:HG23	52:BT:28:VAL:N	2.33	0.43
53:BU:21:ALA:O	53:BU:29:SER:HB3	2.18	0.43
56:BX:40:LYS:CG	56:BX:41:ASN:N	2.80	0.43
58:BZ:103:ARG:HE	58:BZ:138:GLU:HG3	1.83	0.43
1:CA:67:C:OP1	1:CA:199:G:H5"	2.17	0.43
1:CA:256:U:H2'	1:CA:257:G:H8	1.81	0.43
1:CA:368:U:OP2	25:CZ:291:ARG:CD	2.56	0.43
1:CA:429:U:H1'	1:CA:430:A:H5"	2.00	0.43
1:CA:821:G:O2'	1:CA:822:C:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:963:G:N2	10:CJ:55:LYS:HG2	2.33	0.43
1:CA:1442(B):A:C8	52:DT:118:ARG:NH1	2.86	0.43
6:CF:10:LEU:HD12	6:CF:59:TYR:HB3	2.00	0.43
6:CF:69:GLU:O	6:CF:71:ARG:N	2.51	0.43
7:CG:57:GLU:HB2	7:CG:60:LYS:HB2	1.99	0.43
11:CK:16:SER:O	11:CK:35:PRO:HD3	2.17	0.43
14:CN:32:SER:HB3	14:CN:41:ARG:HB3	2.00	0.43
16:CP:20:VAL:HG22	16:CP:21:VAL:N	2.31	0.43
19:CS:58:VAL:HG11	19:CS:75:ALA:HB1	2.00	0.43
27:D1:63:ALA:O	27:D1:64:ALA:O	2.36	0.43
29:D3:31:LEU:C	29:D3:33:GLN:H	2.21	0.43
31:D5:47:PRO:HG3	55:DW:37:ARG:NH2	2.33	0.43
32:D6:11:LEU:C	32:D6:12:GLU:HG2	2.35	0.43
34:D8:17:THR:HG22	34:D8:21:LYS:O	2.18	0.43
36:DA:29:U:OP1	53:DU:5:LYS:HE2	2.17	0.43
36:DA:145:G:C3'	36:DA:146:G:H5"	2.48	0.43
36:DA:306:U:H2'	36:DA:307:G:O4'	2.17	0.43
36:DA:829:A:N7	36:DA:2248:C:H5'	2.33	0.43
36:DA:1430:C:H2'	36:DA:1431:U:C6	2.53	0.43
36:DA:1528:A:H2'	36:DA:1528(A):A:C8	2.52	0.43
36:DA:1782:C:O2'	36:DA:2609:U:H5"	2.18	0.43
36:DA:1792:G:H5"	39:DD:205:VAL:HG13	2.00	0.43
36:DA:2039:C:H2'	36:DA:2040:C:C6	2.53	0.43
36:DA:2102:U:C5	36:DA:2103:C:N3	2.86	0.43
36:DA:2136:C:H2'	36:DA:2137:C:C6	2.51	0.43
36:DA:2176:A:C3'	36:DA:2177:C:H5"	2.42	0.43
36:DA:2253:G:O2'	36:DA:2254:C:H5'	2.18	0.43
36:DA:2289:G:O5'	36:DA:2289:G:C8	2.70	0.43
36:DA:2687:U:C4	36:DA:2688:U:C5	3.05	0.43
36:DA:2781:A:H5"	36:DA:2782:G:H5'	1.94	0.43
36:DA:2880:C:N3	36:DA:2881:C:C5	2.86	0.43
39:DD:97:TYR:O	39:DD:98:VAL:C	2.55	0.43
39:DD:238:GLY:O	39:DD:239:ARG:C	2.56	0.43
40:DE:36:ARG:HH22	40:DE:87:GLU:H	1.66	0.43
40:DE:149:ARG:HG3	40:DE:149:ARG:HH11	1.83	0.43
40:DE:183:LEU:N	40:DE:183:LEU:CD1	2.81	0.43
40:DE:184:VAL:C	40:DE:186:GLY:H	2.21	0.43
41:DF:78:ILE:HG12	41:DF:83:PHE:CE2	2.53	0.43
41:DF:133:ASN:N	41:DF:133:ASN:ND2	2.65	0.43
48:DP:57:THR:OG1	48:DP:58:THR:N	2.51	0.43
48:DP:101:VAL:HG12	48:DP:106:LEU:CB	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:108:LYS:N	48:DP:108:LYS:HD2	2.33	0.43
52:DT:82:LEU:HD12	52:DT:82:LEU:N	2.33	0.43
53:DU:78:THR:O	53:DU:81:HIS:HB3	2.19	0.43
1:AA:79:G:HO2'	1:AA:80:G:C5'	2.31	0.43
1:AA:189(E):U:O2'	1:AA:189(F):U:H5'	2.18	0.43
1:AA:191:G:N3	20:AT:105:SER:HB2	2.34	0.43
1:AA:250:A:H8	1:AA:250:A:O5'	2.01	0.43
1:AA:495:A:O2'	1:AA:496:A:O5'	2.28	0.43
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.99	0.43
2:AB:74:LYS:NZ	2:AB:74:LYS:HB3	2.33	0.43
3:AC:34:LEU:HD22	3:AC:38:ARG:NE	2.33	0.43
3:AC:92:ALA:O	3:AC:96:GLY:HA2	2.18	0.43
3:AC:95:THR:HG23	3:AC:97:LYS:HD2	2.00	0.43
13:AM:35:GLU:C	13:AM:37:THR:H	2.21	0.43
16:AP:2:VAL:O	16:AP:64:ALA:HA	2.18	0.43
25:AZ:64:ASN:O	25:AZ:65:THR:C	2.57	0.43
25:AZ:226:GLU:O	25:AZ:300:ARG:HD2	2.16	0.43
25:AZ:401:THR:O	25:AZ:402:LYS:C	2.57	0.43
29:B3:14:GLY:HA2	36:BA:969:U:O3'	2.18	0.43
29:B3:26:LEU:HD11	29:B3:47:VAL:HG22	1.99	0.43
36:BA:18:C:O3'	53:BU:23:GLY:HA2	2.18	0.43
36:BA:55:G:H2'	36:BA:56:A:H8	1.82	0.43
36:BA:218:A:H2'	36:BA:219:G:O4'	2.18	0.43
36:BA:656:G:H2'	36:BA:657:U:C6	2.51	0.43
36:BA:782:A:O2'	39:BD:225:ALA:HB1	2.17	0.43
36:BA:839:U:H2'	36:BA:840:C:C6	2.53	0.43
36:BA:957:A:N1	36:BA:2458:G:H4'	2.34	0.43
36:BA:1257:C:H2'	36:BA:1258:C:C6	2.53	0.43
36:BA:1353:A:H2'	36:BA:1354:A:C8	2.53	0.43
36:BA:1400:G:H2'	36:BA:1401:G:H8	1.80	0.43
36:BA:1821:A:OP1	39:BD:201:HIS:NE2	2.48	0.43
36:BA:2019:A:H2'	36:BA:2020:A:O5'	2.18	0.43
36:BA:2201:C:HO2'	36:BA:2202:C:H5'	1.83	0.43
36:BA:2850:A:C2	36:BA:2851:A:C4	3.06	0.43
36:BA:2893:G:H5'	36:BA:2894:G:C5'	2.48	0.43
37:BB:73:A:H2'	37:BB:74:U:C5'	2.44	0.43
38:BC:57:ASN:HD22	38:BC:57:ASN:HA	1.50	0.43
38:BC:78:ALA:HB1	38:BC:82:LYS:HB2	1.99	0.43
39:BD:3:VAL:HG13	39:BD:17:THR:HB	1.97	0.43
39:BD:30:GLU:HG3	39:BD:63:ARG:CZ	2.45	0.43
39:BD:69:ARG:NH1	39:BD:128:GLY:O	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:106:ILE:HD11	39:BD:196:VAL:HG22	2.00	0.43
39:BD:257:LEU:C	39:BD:257:LEU:CD2	2.86	0.43
39:BD:258:LYS:HE2	39:BD:273:ARG:HE	1.83	0.43
39:BD:263:ARG:CB	39:BD:263:ARG:NH1	2.81	0.43
42:BG:40:ASN:HB2	42:BG:91:ARG:HB2	2.00	0.43
42:BG:98:ARG:HH11	42:BG:98:ARG:CG	2.27	0.43
46:BN:131:GLN:HE22	46:BN:134:ARG:HG2	1.82	0.43
47:BO:86:ILE:HG21	47:BO:94:ARG:HE	1.82	0.43
48:BP:9:ASN:N	48:BP:10:PRO:CD	2.81	0.43
48:BP:23:PRO:C	48:BP:33:ARG:NE	2.71	0.43
52:BT:30:VAL:HG21	52:BT:84:GLN:HG3	1.99	0.43
55:BW:29:LEU:CD1	55:BW:51:LEU:HD21	2.47	0.43
57:BY:38:ILE:HG23	57:BY:38:ILE:O	2.18	0.43
1:CA:40:C:H2'	1:CA:41:G:H8	1.82	0.43
1:CA:448:A:H2'	1:CA:449:C:C6	2.53	0.43
2:CB:235:SER:O	2:CB:237:ALA:N	2.51	0.43
3:CC:34:LEU:O	3:CC:34:LEU:HD23	2.18	0.43
5:CE:100:VAL:O	5:CE:101:ILE:HD13	2.17	0.43
5:CE:144:THR:O	5:CE:147:ASP:OD1	2.36	0.43
8:CH:119:LEU:O	8:CH:120:THR:O	2.36	0.43
9:CI:65:VAL:HG21	9:CI:73:GLN:CG	2.48	0.43
10:CJ:51:ARG:H	10:CJ:51:ARG:HG3	1.58	0.43
12:CL:6:THR:H	12:CL:9:GLN:HE21	1.65	0.43
13:CM:34:LEU:HD13	13:CM:41:PRO:HA	2.00	0.43
19:CS:11:VAL:CA	19:CS:38:SER:HB2	2.48	0.43
20:CT:50:GLU:HB2	20:CT:99:LEU:CD1	2.48	0.43
20:CT:66:ALA:HB1	20:CT:71:THR:HG21	2.00	0.43
21:CU:10:ARG:O	21:CU:11:GLY:C	2.57	0.43
24:CY:29:G:H1	24:CY:41:C:N4	2.15	0.43
25:CZ:357:PRO:O	25:CZ:359:VAL:HG23	2.18	0.43
27:D1:44:PRO:HA	36:DA:396:G:O3'	2.18	0.43
34:D8:30:ARG:CZ	36:DA:2419:U:O4	2.66	0.43
36:DA:42:G:H3'	36:DA:43:A:C8	2.54	0.43
36:DA:48:G:N2	36:DA:177:G:N2	2.66	0.43
36:DA:598:G:H5'	48:DP:15:ARG:HB3	2.01	0.43
36:DA:1337:G:H2'	36:DA:1338:G:C1'	2.47	0.43
36:DA:1828:G:O6	39:DD:222:ARG:HD3	2.18	0.43
36:DA:2094:G:H1'	36:DA:2198:A:N6	2.33	0.43
36:DA:2095:C:H2'	36:DA:2096:U:C6	2.53	0.43
36:DA:2199:A:C2	36:DA:2200:C:H1'	2.53	0.43
36:DA:2366:A:C2'	36:DA:2367:G:H5'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2393:A:H2'	36:DA:2394:C:H6	1.83	0.43
36:DA:2492:U:H2'	36:DA:2493:U:C6	2.53	0.43
36:DA:2698:U:H2'	36:DA:2699:C:C6	2.53	0.43
36:DA:2807:G:H2'	36:DA:2808:U:H5"	1.99	0.43
37:DB:7:G:H3'	37:DB:8:U:C5'	2.48	0.43
37:DB:94:C:O2'	37:DB:95:C:H5'	2.18	0.43
39:DD:52:ARG:HB3	39:DD:53:PHE:CD2	2.53	0.43
39:DD:79:VAL:HG21	39:DD:111:LEU:CD1	2.48	0.43
40:DE:39:PRO:HA	40:DE:43:GLY:CA	2.48	0.43
40:DE:126:PRO:C	40:DE:128:SER:N	2.71	0.43
41:DF:153:SER:OG	41:DF:190:GLU:HG3	2.18	0.43
41:DF:160:ASN:HD21	41:DF:162:LEU:CB	2.28	0.43
42:DG:6:ALA:HB1	42:DG:10:LYS:NZ	2.33	0.43
42:DG:18:GLU:HG2	42:DG:175:LEU:HD13	2.00	0.43
42:DG:49:ASP:CG	42:DG:50:ALA:N	2.69	0.43
43:DH:115:VAL:O	43:DH:117:PRO:HD3	2.17	0.43
45:DK:23:UNK:C	45:DK:25:UNK:N	2.80	0.43
46:DN:42:TRP:N	53:DU:64:ARG:NH1	2.66	0.43
49:DQ:11:LYS:HD3	49:DQ:87:LYS:HD3	2.01	0.43
50:DR:79:LEU:HA	50:DR:83:ILE:HG12	2.00	0.43
50:DR:94:TYR:N	50:DR:94:TYR:CD1	2.84	0.43
51:DS:103:GLU:H	51:DS:103:GLU:CD	2.16	0.43
53:DU:14:HIS:C	53:DU:16:LYS:N	2.71	0.43
53:DU:38:THR:O	53:DU:41:ALA:HB3	2.17	0.43
55:DW:14:PRO:HG2	55:DW:78:GLU:HB2	2.00	0.43
55:DW:75:TYR:N	55:DW:75:TYR:CD1	2.86	0.43
58:DZ:16:SER:O	58:DZ:19:ARG:N	2.51	0.43
1:AA:106:C:O2'	1:AA:107:G:H5'	2.17	0.43
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.17	0.43
1:AA:201:C:C3'	1:AA:202:U:C5'	2.87	0.43
1:AA:241:C:O2'	1:AA:242:C:H5'	2.18	0.43
1:AA:407:G:H4'	4:AD:115:ARG:O	2.18	0.43
1:AA:445:G:O2'	1:AA:446:G:H5'	2.19	0.43
1:AA:593:G:O2'	1:AA:594:G:H5'	2.18	0.43
1:AA:995:C:HO2'	1:AA:996:A:P	2.41	0.43
4:AD:17:VAL:O	4:AD:18:LYS:O	2.36	0.43
4:AD:63:LYS:O	4:AD:67:ILE:HD12	2.19	0.43
7:AG:126:ASP:O	7:AG:129:GLU:N	2.46	0.43
7:AG:156:TRP:O	7:AG:156:TRP:CG	2.69	0.43
9:AI:81:ILE:HG22	9:AI:81:ILE:O	2.18	0.43
12:AL:43:VAL:HG22	12:AL:55:VAL:HG12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:53:LEU:HD23	17:AQ:82:MET:SD	2.57	0.43
22:AW:24:G:H2'	22:AW:25:C:O4'	2.18	0.43
22:AW:48:C:P	22:AW:48:C:H6	2.41	0.43
25:AZ:138:VAL:CG2	25:AZ:173:GLY:H	2.28	0.43
25:AZ:255:ILE:CG2	25:AZ:302:GLN:NE2	2.81	0.43
26:B0:20:ARG:HH12	36:BA:2271:G:H4'	1.84	0.43
26:B0:26:TYR:CD1	26:B0:26:TYR:N	2.87	0.43
27:B1:19:GLN:HB2	27:B1:35:THR:O	2.18	0.43
28:B2:53:LEU:HA	28:B2:56:GLN:HG3	2.00	0.43
33:B7:19:ARG:HG2	33:B7:19:ARG:NH1	2.33	0.43
34:B8:32:LEU:HB2	34:B8:36:LYS:HZ2	1.82	0.43
36:BA:323:G:C8	41:BF:171:PRO:HG3	2.53	0.43
36:BA:539:G:C5	36:BA:540:C:C5	3.06	0.43
36:BA:654(H):G:H2'	36:BA:654(I):C:H5'	1.99	0.43
36:BA:654(V):A:OP2	36:BA:655:A:H3'	2.18	0.43
36:BA:832:G:P	48:BP:40:SER:HB3	2.58	0.43
36:BA:1240:U:O2'	36:BA:1241:A:H5'	2.18	0.43
36:BA:1448:G:N2	36:BA:1528(A):A:H2	2.16	0.43
36:BA:1658:C:C2	36:BA:1659:U:C5	3.06	0.43
36:BA:1923:U:H2'	36:BA:1924:C:C6	2.54	0.43
36:BA:2176:A:H5"	36:BA:2176:A:H8	1.82	0.43
36:BA:2584:U:O2	36:BA:2584:U:O4'	2.36	0.43
36:BA:2762:G:C2'	36:BA:2763:G:H5'	2.49	0.43
37:BB:43:C:H3'	37:BB:44:G:C5'	2.48	0.43
39:BD:75:ILE:HD13	39:BD:75:ILE:H	1.83	0.43
39:BD:89:SER:HB2	39:BD:159:ALA:HB2	2.00	0.43
39:BD:176:ARG:CZ	39:BD:176:ARG:CB	2.95	0.43
42:BG:85:GLY:C	42:BG:87:PRO:CD	2.86	0.43
48:BP:96:THR:HG22	48:BP:126:VAL:CB	2.49	0.43
49:BQ:51:ARG:CG	49:BQ:51:ARG:NH1	2.79	0.43
51:BS:14:VAL:HG12	51:BS:15:ARG:H	1.80	0.43
53:BU:44:ASN:HD21	54:BV:75:PHE:HB3	1.83	0.43
53:BU:95:LEU:HD11	54:BV:11:GLN:HG3	1.99	0.43
53:BU:101:ARG:HG3	53:BU:101:ARG:HH11	1.83	0.43
55:BW:13:SER:HA	55:BW:14:PRO:HD3	1.92	0.43
57:BY:96:ILE:HG13	57:BY:99:CYS:CB	2.38	0.43
1:CA:8:A:H5'	5:CE:120:THR:O	2.19	0.43
1:CA:192:U:O3'	20:CT:57:ARG:HD2	2.18	0.43
1:CA:509:A:H5'	4:CD:54:TYR:HD2	1.82	0.43
1:CA:694:A:H2'	1:CA:695:A:O4'	2.18	0.43
1:CA:1089:G:HO2'	1:CA:1170:A:H2	1.62	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.17	0.43
1:CA:1353:G:C2	1:CA:1354:C:C5	3.06	0.43
1:CA:1368:G:C5'	9:CI:112:LYS:O	2.65	0.43
1:CA:1402:C:O2	1:CA:1500:A:N1	2.51	0.43
1:CA:1514:C:O2'	1:CA:1515:C:H5'	2.18	0.43
2:CB:158:LEU:HA	2:CB:159:PRO:HD3	1.78	0.43
3:CC:43:LEU:HD13	3:CC:68:VAL:CG2	2.48	0.43
4:CD:6:GLY:O	4:CD:8:VAL:N	2.51	0.43
7:CG:58:PRO:C	7:CG:60:LYS:N	2.70	0.43
14:CN:49:HIS:C	14:CN:51:GLY:N	2.70	0.43
16:CP:60:LEU:HD21	16:CP:66:PRO:CG	2.48	0.43
19:CS:33:THR:HG21	19:CS:49:ILE:HG22	1.99	0.43
20:CT:55:ILE:HD13	20:CT:55:ILE:N	2.30	0.43
25:CZ:65:THR:N	25:CZ:83:PRO:HD3	2.33	0.43
25:CZ:125:GLN:HG2	61:CZ:502:KIR:C22	2.48	0.43
25:CZ:338:TYR:O	25:CZ:353:VAL:HG23	2.18	0.43
25:CZ:343:TYR:CE2	25:CZ:348:ASP:HB3	2.53	0.43
28:D2:38:GLN:HB3	28:D2:44:LEU:HD22	1.99	0.43
30:D4:26:SER:OG	30:D4:27:THR:N	2.50	0.43
31:D5:44:THR:HB	50:DR:101:ALA:HB2	2.00	0.43
35:D9:24:TYR:HB3	35:D9:25:VAL:H	1.72	0.43
36:DA:229:A:H2'	36:DA:229:A:N3	2.33	0.43
36:DA:260:G:C6	36:DA:261:G:N7	2.86	0.43
36:DA:637:A:C6	36:DA:652:C:H4'	2.53	0.43
36:DA:655:A:H4'	36:DA:656:G:C5'	2.33	0.43
36:DA:674:G:H1'	41:DF:74:ARG:HE	1.83	0.43
36:DA:918:A:N3	37:DB:80:U:O2'	2.39	0.43
36:DA:927:G:H3'	36:DA:928:G:C8	2.52	0.43
36:DA:980:A:C6	36:DA:981:A:N1	2.86	0.43
36:DA:1257:C:C2	36:DA:1258:C:C5	3.06	0.43
36:DA:1471:A:H2'	36:DA:1472:A:C8	2.53	0.43
36:DA:1525:G:H2'	36:DA:1526:G:H8	1.83	0.43
36:DA:2006:C:O5'	36:DA:2006:C:H6	2.01	0.43
36:DA:2106:G:O2'	36:DA:2107:C:H5'	2.18	0.43
36:DA:2197:U:H1'	36:DA:2198:A:C8	2.52	0.43
36:DA:2206:G:C2	36:DA:2207:G:H5'	2.53	0.43
36:DA:2294:C:O2	36:DA:2294:C:C2'	2.66	0.43
36:DA:2335:A:O2'	36:DA:2336:A:H5"	2.18	0.43
36:DA:2415:G:H4'	48:DP:66:GLY:HA3	1.99	0.43
36:DA:2428:G:H5"	36:DA:2429:G:O5'	2.19	0.43
36:DA:2475:C:N4	36:DA:2529:G:H22	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2777:G:H5”	36:DA:2778:A:H5”	1.97	0.43
36:DA:2782:G:N2	36:DA:2783:G:H1’	2.33	0.43
37:DB:8:U:O3’	51:DS:25:ARG:NH2	2.50	0.43
39:DD:134:ARG:HG3	39:DD:187:GLY:HA3	2.00	0.43
39:DD:186:HIS:CD2	39:DD:188:GLU:H	2.36	0.43
39:DD:212:SER:O	39:DD:217:ARG:HB2	2.17	0.43
40:DE:38:THR:HB	40:DE:41:LYS:HG2	2.01	0.43
42:DG:91:ARG:HD2	42:DG:92:VAL:CA	2.48	0.43
43:DH:139:GLN:CD	43:DH:139:GLN:C	2.77	0.43
47:DO:101:PRO:HD2	52:DT:70:VAL:HG21	1.99	0.43
49:DQ:67:ARG:HD2	49:DQ:105:GLU:CG	2.47	0.43
53:DU:8:VAL:CG1	53:DU:12:ARG:NE	2.81	0.43
57:DY:50:ARG:HA	57:DY:50:ARG:HD3	1.63	0.43
58:DZ:14:LYS:HE3	58:DZ:17:ALA:CB	2.49	0.43
58:DZ:151:HIS:HD2	58:DZ:170:THR:HG23	1.83	0.43
1:AA:114:U:H2’	1:AA:115:G:C8	2.53	0.43
1:AA:1443:G:H5’	1:AA:1444:C:OP2	2.18	0.43
6:AF:86:ARG:H	6:AF:86:ARG:HG2	1.42	0.43
9:AI:4:TYR:HD2	9:AI:85:LEU:HA	1.83	0.43
10:AJ:78:ASN:CA	10:AJ:79:ARG:HH11	2.32	0.43
12:AL:38:THR:O	12:AL:39:VAL:CG2	2.66	0.43
12:AL:119:LYS:O	12:AL:120:TYR:CB	2.66	0.43
17:AQ:48:GLU:O	17:AQ:49:GLU:C	2.56	0.43
22:AV:51:U:H2’	22:AV:52:G:C8	2.53	0.43
25:AZ:23:GLY:HA3	25:AZ:105:VAL:CG1	2.44	0.43
25:AZ:199:ILE:HA	25:AZ:199:ILE:HD12	1.61	0.43
25:AZ:322:VAL:HG13	25:AZ:395:VAL:O	2.18	0.43
25:AZ:325:LYS:CG	25:AZ:326:GLU:N	2.79	0.43
28:B2:47:ASN:HB3	36:BA:95:G:H1’	1.99	0.43
29:B3:21:ALA:O	29:B3:22:ALA:C	2.56	0.43
36:BA:473:G:H5”	36:BA:508:G:N2	2.33	0.43
36:BA:1168:G:C2	36:BA:1182:A:C2	3.07	0.43
36:BA:1337:G:H2’	36:BA:1338:G:C1’	2.48	0.43
36:BA:1357:U:H2’	36:BA:1358:G:O4’	2.17	0.43
36:BA:1517:G:C8	36:BA:1517:G:C5’	2.99	0.43
36:BA:1757:U:O4	36:BA:1762:A:H2	2.01	0.43
36:BA:2147:G:H2’	36:BA:2148:G:O4’	2.18	0.43
36:BA:2392:A:H8	48:BP:60:MET:HA	1.83	0.43
36:BA:2850:A:H2’	36:BA:2851:A:O4’	2.18	0.43
38:BC:139:ASN:H	38:BC:144:THR:HG1	1.62	0.43
38:BC:151:GLU:CA	38:BC:154:ARG:HG2	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:93:VAL:C	40:BE:95:ILE:N	2.70	0.43
41:BF:122:LYS:NZ	41:BF:152:GLU:OE2	2.48	0.43
41:BF:178:PRO:HB3	41:BF:198:ALA:HB1	1.99	0.43
42:BG:34:LEU:HD23	42:BG:161:THR:CG2	2.47	0.43
42:BG:106:LEU:HD23	42:BG:106:LEU:C	2.38	0.43
43:BH:127:GLU:HB2	43:BH:130:ARG:HB2	2.01	0.43
45:BK:30:UNK:O	45:BK:31:UNK:C	2.66	0.43
46:BN:74:ARG:NH1	46:BN:85:ILE:HD11	2.34	0.43
49:BQ:136:ALA:C	49:BQ:138:ASP:N	2.71	0.43
53:BU:83:LEU:HD12	53:BU:83:LEU:N	2.33	0.43
54:BV:91:TYR:N	54:BV:91:TYR:CD1	2.86	0.43
56:BX:12:VAL:CG2	56:BX:13:LEU:N	2.67	0.43
56:BX:35:THR:O	56:BX:38:GLU:HB2	2.18	0.43
1:CA:123:C:H5"	1:CA:311:C:O2'	2.18	0.43
1:CA:140:A:H2'	1:CA:141:A:C8	2.54	0.43
1:CA:189(D):C:O2	1:CA:189(H):G:C6	2.71	0.43
1:CA:521:G:O2'	1:CA:522:C:H5'	2.18	0.43
1:CA:556:C:C2'	1:CA:557:G:H5'	2.48	0.43
1:CA:915:A:H2'	1:CA:916:G:O5'	2.17	0.43
1:CA:992:U:O2	1:CA:992:U:C2'	2.67	0.43
1:CA:1010:G:H2'	1:CA:1011:G:C8	2.54	0.43
1:CA:1055:A:O2'	3:CC:156:ARG:HD2	2.18	0.43
1:CA:1288:A:O2'	1:CA:1289:A:H5'	2.19	0.43
1:CA:1296:C:C5	1:CA:1297:C:N3	2.86	0.43
2:CB:8:LYS:HZ3	2:CB:217:ARG:NH1	2.15	0.43
2:CB:201:ILE:HG22	2:CB:201:ILE:O	2.18	0.43
3:CC:16:ARG:NH1	3:CC:16:ARG:HB2	2.33	0.43
4:CD:29:PRO:O	4:CD:30:LYS:HB3	2.17	0.43
5:CE:15:ARG:HD2	5:CE:26:PHE:CG	2.54	0.43
7:CG:36:LYS:O	7:CG:37:ASN:C	2.55	0.43
11:CK:47:VAL:HG23	11:CK:48:ILE:N	2.33	0.43
11:CK:59:TYR:CE2	11:CK:63:LEU:HD11	2.53	0.43
12:CL:98:TYR:CD1	12:CL:98:TYR:N	2.86	0.43
15:CO:70:LEU:C	15:CO:72:ARG:N	2.71	0.43
19:CS:63:THR:HG22	19:CS:66:MET:CG	2.48	0.43
25:CZ:98:GLN:OE1	25:CZ:226:GLU:OE2	2.36	0.43
25:CZ:389:ARG:HG2	25:CZ:394:THR:HA	2.01	0.43
30:D4:19:GLY:O	30:D4:21:VAL:HG23	2.19	0.43
32:D6:11:LEU:O	32:D6:23:THR:HB	2.17	0.43
32:D6:44:ARG:CG	32:D6:46:HIS:HE1	2.32	0.43
33:D7:10:ARG:HH11	33:D7:10:ARG:CG	2.20	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D8:22:VAL:HB	34:D8:53:PRO:HB3	2.00	0.43
34:D8:57:ARG:C	34:D8:59:LYS:N	2.72	0.43
36:DA:299:A:N1	36:DA:322:A:O2'	2.40	0.43
36:DA:320:A:C5	41:DF:136:THR:HG21	2.53	0.43
36:DA:813:U:O2'	36:DA:1225:G:H1'	2.18	0.43
36:DA:874:G:H2'	36:DA:875:G:H8	1.82	0.43
36:DA:910:A:N7	49:DQ:13:GLN:HG3	2.33	0.43
36:DA:1196:C:H2'	36:DA:1197:G:C8	2.53	0.43
36:DA:1206:G:H2'	36:DA:1207:C:H5'	2.00	0.43
36:DA:1217:C:N3	36:DA:1218:C:C5	2.86	0.43
36:DA:1468:C:H2'	36:DA:1469:A:H8	1.83	0.43
36:DA:1766:U:O2'	36:DA:1767:C:H5'	2.19	0.43
36:DA:1882:C:H5'	36:DA:1883:G:OP2	2.18	0.43
36:DA:1915:U:H3'	36:DA:1916:A:H8	1.83	0.43
38:DC:44:HIS:CE1	38:DC:172:HIS:HB3	2.53	0.43
38:DC:46:LYS:NZ	38:DC:168:THR:O	2.52	0.43
41:DF:85:GLY:O	41:DF:86:GLY:O	2.36	0.43
42:DG:145:THR:HB	42:DG:148:MET:HB3	2.01	0.43
43:DH:157:TYR:O	43:DH:158:HIS:CB	2.67	0.43
48:DP:25:SER:OG	48:DP:30:THR:HG21	2.17	0.43
50:DR:103:ARG:HG3	55:DW:40:ASN:OD1	2.18	0.43
51:DS:67:ARG:HH22	51:DS:100:ALA:CB	2.25	0.43
51:DS:97:ARG:HH21	51:DS:98:VAL:HA	1.83	0.43
53:DU:90:VAL:HB	53:DU:91:ASP:H	1.52	0.43
57:DY:13:VAL:HG22	57:DY:14:LEU:N	2.32	0.43
1:AA:189(E):U:O2'	1:AA:189(F):U:C5'	2.66	0.43
1:AA:373:A:H61	1:AA:391:G:H1'	1.82	0.43
1:AA:963:G:H21	10:AJ:55:LYS:HD3	1.82	0.43
1:AA:1189:C:OP1	10:AJ:51:ARG:NH2	2.43	0.43
1:AA:1296:C:H4'	1:AA:1302:U:C4	2.53	0.43
1:AA:1347:G:C6	9:AI:107:ARG:NH2	2.86	0.43
2:AB:124:SER:OG	2:AB:126:GLU:HG3	2.18	0.43
3:AC:13:GLY:N	14:AN:57:ARG:HD2	2.31	0.43
4:AD:24:GLU:O	4:AD:27:TYR:CB	2.67	0.43
11:AK:43:SER:HA	11:AK:47:VAL:HG21	2.01	0.43
11:AK:48:ILE:HD13	11:AK:48:ILE:HA	1.75	0.43
12:AL:113:ARG:HH11	12:AL:113:ARG:HG3	1.83	0.43
16:AP:5:ARG:C	16:AP:6:LEU:HD12	2.39	0.43
16:AP:33:ILE:O	16:AP:34:GLU:HB2	2.19	0.43
22:AW:11:C:H2'	22:AW:12:U:C6	2.54	0.43
25:AZ:338:TYR:OH	25:AZ:390:GLU:HB3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:70:GLN:NE2	26:B0:80:HIS:NE2	2.65	0.43
28:B2:51:ARG:HG3	28:B2:52:ASP:N	2.34	0.43
32:B6:19:ARG:O	32:B6:20:ASN:O	2.37	0.43
33:B7:19:ARG:HG2	33:B7:19:ARG:HH11	1.82	0.43
34:B8:23:VAL:HA	34:B8:47:LYS:O	2.17	0.43
34:B8:37:SER:HB2	36:BA:2383:G:OP2	2.17	0.43
34:B8:58:ILE:HG22	34:B8:58:ILE:O	2.19	0.43
36:BA:648:G:O2'	36:BA:649:G:H5'	2.18	0.43
36:BA:1060:U:H1'	36:BA:1061:U:P	2.58	0.43
36:BA:1103:A:H5"	36:BA:1104:C:C5	2.50	0.43
36:BA:1308:A:H61	36:BA:1608:A:H61	1.65	0.43
36:BA:1812:A:O2'	39:BD:45:ASN:HB2	2.18	0.43
36:BA:1889:A:O2'	36:BA:2087:G:H5'	2.19	0.43
36:BA:2821:A:OP2	50:BR:5:LYS:NZ	2.51	0.43
37:BB:58:A:H2'	37:BB:59:A:O4'	2.19	0.43
39:BD:167:GLY:O	39:BD:173:VAL:HG23	2.18	0.43
40:BE:111:ARG:HH11	40:BE:111:ARG:CG	2.32	0.43
40:BE:129:HIS:HB3	40:BE:130:GLY:H	1.68	0.43
41:BF:28:ILE:HD13	41:BF:28:ILE:N	2.33	0.43
41:BF:199:TRP:O	41:BF:202:PHE:HB3	2.17	0.43
42:BG:4:ASP:OD1	42:BG:5:VAL:N	2.51	0.43
42:BG:131:TYR:O	42:BG:158:ALA:O	2.37	0.43
43:BH:70:THR:HG22	43:BH:74:ASN:HD21	1.84	0.43
48:BP:114:ILE:HG21	48:BP:130:PHE:CD2	2.54	0.43
50:BR:96:ARG:HH11	50:BR:117:VAL:CB	2.31	0.43
51:BS:83:LYS:HE2	51:BS:83:LYS:HB3	1.81	0.43
54:BV:15:GLU:O	54:BV:96:ILE:HG21	2.18	0.43
55:BW:40:ASN:C	55:BW:41:LYS:HG2	2.38	0.43
58:BZ:70:LEU:H	58:BZ:70:LEU:CD2	2.29	0.43
58:BZ:100:VAL:CG1	58:BZ:135:GLU:O	2.67	0.43
1:CA:19:C:O2'	1:CA:20:U:H5'	2.18	0.43
1:CA:542:G:H5'	4:CD:41:GLY:HA3	2.01	0.43
1:CA:623:C:C4	1:CA:624:C:C4	3.06	0.43
1:CA:659:U:H2'	1:CA:660:G:C8	2.51	0.43
1:CA:739:C:O2'	15:CO:42:HIS:ND1	2.43	0.43
1:CA:1145:C:O2'	1:CA:1146:A:O5'	2.35	0.43
1:CA:1425:U:H2'	1:CA:1426:C:C6	2.53	0.43
2:CB:23:ARG:HD2	2:CB:23:ARG:HA	1.79	0.43
2:CB:115:LEU:C	2:CB:117:GLU:N	2.71	0.43
4:CD:78:LEU:HD21	4:CD:96:LEU:CB	2.48	0.43
4:CD:119:GLN:O	4:CD:119:GLN:HG3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:177:ASP:O	4:CD:181:MET:N	2.51	0.43
5:CE:81:GLU:OE1	5:CE:81:GLU:HA	2.18	0.43
6:CF:10:LEU:HD11	6:CF:61:LEU:HD11	1.99	0.43
7:CG:26:PHE:CE1	7:CG:104:LEU:HD23	2.54	0.43
8:CH:30:ARG:HH11	8:CH:30:ARG:CB	2.30	0.43
22:CW:44:G:P	22:CW:44:G:O4'	2.76	0.43
25:CZ:344:PHE:O	25:CZ:346:THR:N	2.51	0.43
31:D5:23:HIS:O	31:D5:24:ALA:C	2.56	0.43
33:D7:34:ARG:CG	33:D7:34:ARG:NH1	2.78	0.43
35:D9:25:VAL:O	35:D9:25:VAL:HG12	2.17	0.43
36:DA:34:C:H5'	36:DA:35:G:OP2	2.19	0.43
36:DA:265:A:C2	36:DA:428:A:C2	3.06	0.43
36:DA:527:C:O5'	36:DA:2779:U:C5	2.70	0.43
36:DA:630:G:HO2'	36:DA:632:A:H62	1.67	0.43
36:DA:807:U:O2'	36:DA:808:G:H5'	2.18	0.43
36:DA:1114:G:H2'	36:DA:1115:G:C8	2.53	0.43
36:DA:1429:G:H2'	36:DA:1430:C:H6	1.82	0.43
36:DA:1429:G:H2'	36:DA:1430:C:C6	2.54	0.43
36:DA:1448:G:HO2'	36:DA:1528(A):A:N6	2.16	0.43
36:DA:1561:G:O2'	36:DA:1562:A:H5'	2.19	0.43
36:DA:1691:C:C2'	36:DA:1692:U:H5'	2.48	0.43
36:DA:1812:A:C1'	39:DD:46:GLN:HE22	2.31	0.43
36:DA:2122:U:H2'	36:DA:2123:G:H8	1.82	0.43
36:DA:2163:C:H2'	36:DA:2164:C:H5'	2.01	0.43
36:DA:2207:G:O2'	36:DA:2208:A:H5"	2.18	0.43
36:DA:2747:G:C2	36:DA:2756:U:C5	3.07	0.43
39:DD:97:TYR:O	39:DD:99:ASP:N	2.52	0.43
41:DF:183:VAL:O	41:DF:187:VAL:HG23	2.18	0.43
42:DG:114:ILE:O	42:DG:114:ILE:HG12	2.18	0.43
42:DG:145:THR:O	42:DG:148:MET:N	2.47	0.43
43:DH:24:VAL:O	43:DH:24:VAL:HG12	2.17	0.43
43:DH:30:LYS:HZ2	43:DH:83:TYR:HE2	1.66	0.43
46:DN:28:THR:CG2	46:DN:29:LYS:N	2.81	0.43
46:DN:31:ALA:O	46:DN:34:LEU:HB3	2.19	0.43
47:DO:28:SER:O	47:DO:29:ASN:CB	2.65	0.43
48:DP:135:LEU:C	48:DP:137:LYS:H	2.20	0.43
49:DQ:76:LYS:CB	49:DQ:91:GLU:HG3	2.48	0.43
53:DU:16:LYS:HE3	53:DU:16:LYS:HB2	1.83	0.43
53:DU:92:ARG:C	53:DU:94:ASN:N	2.68	0.43
54:DV:24:LYS:HG3	54:DV:90:PRO:HB2	2.00	0.43
56:DX:37:THR:O	56:DX:38:GLU:C	2.56	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:10:ARG:N	58:DZ:37:VAL:HA	2.22	0.43
1:AA:106:C:O2	1:AA:379:C:H4'	2.19	0.43
1:AA:187:C:O2'	20:AT:89:ARG:HD3	2.19	0.43
1:AA:368:U:H3'	1:AA:369:C:H5'	2.00	0.43
1:AA:391:G:H2'	1:AA:392:G:O4'	2.19	0.43
1:AA:1032:G:H2'	1:AA:1033:G:C8	2.53	0.43
5:AE:7:GLU:HG2	5:AE:112:LEU:CD2	2.49	0.43
11:AK:103:LEU:HD13	11:AK:104:GLN:N	2.32	0.43
12:AL:69:TYR:O	12:AL:71:PRO:HD3	2.18	0.43
15:AO:32:LEU:HD12	15:AO:63:ARG:CB	2.48	0.43
16:AP:14:ASN:OD1	16:AP:16:HIS:HE1	2.02	0.43
16:AP:46:PRO:O	16:AP:47:ASP:CB	2.66	0.43
17:AQ:45:HIS:NE2	17:AQ:47:PRO:HD3	2.33	0.43
18:AR:36:ASN:OD1	18:AR:36:ASN:O	2.37	0.43
20:AT:41:ILE:C	20:AT:43:LEU:N	2.72	0.43
22:AW:40:C:H2'	22:AW:41:C:C6	2.53	0.43
25:AZ:5:PHE:CD1	25:AZ:277:LEU:HD22	2.54	0.43
25:AZ:215:ARG:HB3	25:AZ:282:ALA:CB	2.41	0.43
26:B0:62:LEU:HD23	26:B0:62:LEU:HA	1.80	0.43
28:B2:44:LEU:N	28:B2:44:LEU:HD12	2.33	0.43
29:B3:44:ARG:O	29:B3:48:GLU:HG2	2.19	0.43
31:B5:8:LYS:HE3	36:BA:2055:C:OP1	2.19	0.43
36:BA:373:U:H2'	36:BA:374:A:H8	1.83	0.43
36:BA:524:U:H5"	36:BA:539:G:N2	2.33	0.43
36:BA:666:G:H4'	48:BP:49:ARG:CZ	2.47	0.43
36:BA:811:U:O2'	36:BA:812:C:C5'	2.66	0.43
36:BA:814:C:H1'	36:BA:1225:G:H21	1.84	0.43
36:BA:894:C:O2'	36:BA:895:U:H5'	2.18	0.43
36:BA:1308:A:H2'	36:BA:1309:G:O4'	2.18	0.43
36:BA:1578:U:H2'	36:BA:1579:A:C5'	2.43	0.43
36:BA:1956:U:H2'	36:BA:1957:C:H5'	2.00	0.43
36:BA:2008:C:H2'	36:BA:2009:G:C8	2.53	0.43
36:BA:2111:C:H1'	36:BA:2118:U:C4'	2.48	0.43
36:BA:2295:C:H2'	36:BA:2296:U:C6	2.53	0.43
36:BA:2645:G:H8	36:BA:2645:G:OP2	2.01	0.43
37:BB:5:C:O2'	37:BB:6:C:H5'	2.18	0.43
37:BB:73:A:C4	37:BB:105:A:C2	3.06	0.43
40:BE:132:HIS:ND1	40:BE:135:HIS:CE1	2.86	0.43
42:BG:72:ARG:HG2	42:BG:87:PRO:HD2	1.99	0.43
42:BG:174:GLU:O	42:BG:176:LEU:N	2.48	0.43
50:BR:96:ARG:NH1	50:BR:117:VAL:CG1	2.79	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:99:LYS:NZ	51:BS:99:LYS:CB	2.77	0.43
52:BT:53:ARG:O	52:BT:59:THR:HA	2.18	0.43
52:BT:120:ARG:O	52:BT:124:ASP:OD2	2.37	0.43
54:BV:19:LYS:NZ	54:BV:22:VAL:HG13	2.33	0.43
54:BV:61:VAL:HG22	54:BV:61:VAL:O	2.17	0.43
55:BW:1:MET:SD	55:BW:64:MET:HG3	2.58	0.43
56:BX:35:THR:HG22	56:BX:38:GLU:H	1.83	0.43
57:BY:40:GLU:HA	57:BY:64:GLU:OE2	2.19	0.43
57:BY:91:GLU:O	57:BY:92:ASN:HB2	2.19	0.43
58:BZ:133:ILE:O	58:BZ:134:PRO:C	2.57	0.43
1:CA:131:C:H2'	1:CA:132:C:C6	2.52	0.43
1:CA:320:C:H2'	1:CA:321:A:O4'	2.18	0.43
1:CA:344:A:O2'	1:CA:345:C:OP1	2.32	0.43
1:CA:719:C:O2'	18:CR:49:LYS:HB3	2.19	0.43
1:CA:1149:C:H2'	1:CA:1150:U:H6	1.77	0.43
1:CA:1281:U:H4'	1:CA:1282:C:OP2	2.18	0.43
1:CA:1287:A:C8	1:CA:1288:A:N7	2.86	0.43
1:CA:1309:G:OP1	13:CM:92:HIS:HE1	2.01	0.43
2:CB:29:ALA:O	2:CB:32:ILE:HG23	2.18	0.43
2:CB:213:LEU:O	2:CB:216:SER:HB3	2.18	0.43
3:CC:76:VAL:O	3:CC:83:ARG:HG3	2.18	0.43
4:CD:133:VAL:HG11	4:CD:138:TYR:CD2	2.52	0.43
7:CG:76:ARG:HG2	7:CG:76:ARG:NH1	2.33	0.43
9:CI:63:ILE:HG21	9:CI:77:ILE:CD1	2.49	0.43
11:CK:65:ALA:O	11:CK:68:ALA:HB3	2.18	0.43
16:CP:58:TYR:C	16:CP:58:TYR:CD1	2.92	0.43
22:CW:8:U:OP2	22:CW:8:U:C6	2.71	0.43
24:CY:46:7MG:O2'	24:CY:47:U:H5"	2.17	0.43
24:CY:65:C:C4'	25:CZ:341:GLN:CG	2.72	0.43
25:CZ:64:ASN:H	25:CZ:83:PRO:CG	2.25	0.43
25:CZ:104:LEU:CD2	25:CZ:120:ILE:HD11	2.49	0.43
25:CZ:221:PHE:CD2	25:CZ:305:ALA:HA	2.54	0.43
25:CZ:231:ILE:HD13	25:CZ:237:VAL:CG2	2.48	0.43
25:CZ:397:ALA:CB	61:CZ:502:KIR:O27	2.61	0.43
27:D1:78:LYS:HG2	27:D1:78:LYS:H	1.63	0.43
29:D3:35:ARG:HG2	29:D3:37:LEU:HG	1.99	0.43
32:D6:11:LEU:HD23	32:D6:25:LYS:CA	2.39	0.43
32:D6:21:TYR:N	32:D6:21:TYR:CD1	2.87	0.43
34:D8:13:ARG:CA	48:DP:63:PRO:HA	2.49	0.43
36:DA:176:G:C2'	36:DA:177:G:H5'	2.48	0.43
36:DA:272(D):G:C2	36:DA:272(E):G:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:437:G:H2'	36:DA:438:G:H8	1.83	0.43
36:DA:477:A:H2'	36:DA:478:A:C8	2.53	0.43
36:DA:547:A:H2'	36:DA:548:A:C8	2.54	0.43
36:DA:1389:G:H2'	36:DA:1390:U:O4'	2.18	0.43
36:DA:1655:A:H1'	40:DE:113:PHE:CD1	2.53	0.43
36:DA:1899:G:O2'	36:DA:1900:A:H5"	2.17	0.43
36:DA:2155:G:H3'	36:DA:2156:G:C8	2.52	0.43
36:DA:2262:U:H2'	36:DA:2263:C:C6	2.49	0.43
36:DA:2567:G:H2'	36:DA:2568:C:C6	2.54	0.43
36:DA:2692:C:H2'	36:DA:2693:A:C8	2.53	0.43
38:DC:19:VAL:HG12	38:DC:225:ASN:HB2	1.99	0.43
38:DC:151:GLU:HA	38:DC:154:ARG:CG	2.48	0.43
39:DD:35:LYS:HA	39:DD:63:ARG:HA	2.00	0.43
41:DF:119:ARG:HH11	41:DF:119:ARG:HG2	1.84	0.43
42:DG:7:LEU:CA	42:DG:10:LYS:HD3	2.49	0.43
46:DN:1:MET:SD	46:DN:2:LYS:N	2.91	0.43
46:DN:36:GLY:O	46:DN:42:TRP:CE3	2.71	0.43
48:DP:121:LYS:HA	48:DP:122:PRO:HD3	1.82	0.43
49:DQ:64:ILE:CG2	49:DQ:65:PHE:N	2.82	0.43
50:DR:9:LYS:HD2	50:DR:43:GLU:OE1	2.19	0.43
52:DT:23:ARG:HG2	52:DT:120:ARG:NH1	2.33	0.43
52:DT:96:ARG:HG2	52:DT:98:LYS:O	2.18	0.43
52:DT:129:ARG:HG3	52:DT:129:ARG:HH11	1.84	0.43
58:DZ:14:LYS:HE3	58:DZ:17:ALA:HB2	2.00	0.43
1:AA:99:U:H2'	1:AA:100:C:C6	2.53	0.43
1:AA:126:G:H2'	1:AA:127:G:O4'	2.18	0.43
1:AA:156:G:O2'	1:AA:157:G:H5'	2.19	0.43
1:AA:950:U:H2'	1:AA:951:G:H8	1.84	0.43
1:AA:1054:C:O2	1:AA:1054:C:H2'	2.18	0.43
2:AB:8:LYS:H	2:AB:8:LYS:HG2	1.69	0.43
2:AB:97:TRP:CZ3	2:AB:176:GLU:OE2	2.72	0.43
3:AC:110:ASN:O	3:AC:111:LEU:HD23	2.19	0.43
4:AD:106:TYR:HE1	4:AD:112:VAL:O	2.01	0.43
5:AE:82:VAL:CG2	5:AE:138:ALA:HA	2.46	0.43
6:AF:62:TRP:CD1	18:AR:35:ARG:CZ	3.02	0.43
7:AG:57:GLU:HB3	7:AG:58:PRO:HD2	2.00	0.43
9:AI:44:VAL:O	9:AI:44:VAL:HG23	2.18	0.43
13:AM:54:VAL:HA	13:AM:57:ARG:HH11	1.76	0.43
13:AM:66:LEU:O	13:AM:70:LEU:HB2	2.18	0.43
22:AV:5:G:C8	22:AV:5:G:C5'	2.94	0.43
22:AW:54:U:H2'	22:AW:55:U:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AZ:317:GLU:HA	25:AZ:370:PHE:O	2.18	0.43
25:AZ:336:SER:OG	25:AZ:354:GLN:HA	2.19	0.43
28:B2:35:LEU:HD23	28:B2:50:ILE:HG13	1.99	0.43
32:B6:18:ARG:CG	32:B6:19:ARG:H	2.22	0.43
36:BA:12:U:O2	36:BA:2626:C:O3'	2.36	0.43
36:BA:182:A:H2'	36:BA:183:C:O4'	2.19	0.43
36:BA:201:C:H2'	36:BA:202:U:H5'	2.01	0.43
36:BA:301:G:H3'	36:BA:335:C:OP2	2.18	0.43
36:BA:319:C:H2'	36:BA:320:A:O4'	2.19	0.43
36:BA:481:G:C2'	36:BA:482:A:OP2	2.66	0.43
36:BA:942:G:C2'	36:BA:943:U:H5'	2.49	0.43
36:BA:1477:A:C2	36:BA:1515:G:C2	3.07	0.43
36:BA:1534:U:H2'	36:BA:1535:A:O4'	2.18	0.43
36:BA:1827:C:H2'	36:BA:1828:G:C5'	2.49	0.43
36:BA:2479:G:OP1	36:BA:2537:U:H1'	2.19	0.43
37:BB:65:C:H41	37:BB:109:C:H2'	1.84	0.43
38:BC:72:VAL:HG11	38:BC:156:ILE:O	2.18	0.43
38:BC:73:ARG:H	38:BC:111:ASP:CG	2.22	0.43
39:BD:95:LEU:HD12	39:BD:95:LEU:N	2.34	0.43
39:BD:264:LYS:HG2	39:BD:266:SER:HB3	2.00	0.43
41:BF:135:LYS:O	41:BF:138:GLU:HB2	2.18	0.43
42:BG:8:LYS:O	42:BG:11:TYR:N	2.44	0.43
42:BG:114:ILE:O	42:BG:114:ILE:HG23	2.19	0.43
42:BG:172:LEU:CD2	42:BG:176:LEU:HD12	2.49	0.43
46:BN:66:LYS:O	46:BN:70:LYS:HB3	2.19	0.43
47:BO:19:ILE:HB	47:BO:41:ALA:HB1	2.00	0.43
48:BP:113:LYS:O	48:BP:114:ILE:CB	2.66	0.43
51:BS:67:ARG:O	51:BS:71:ARG:HD3	2.19	0.43
52:BT:22:PHE:HE2	52:BT:85:LYS:NZ	2.16	0.43
52:BT:94:ALA:O	52:BT:96:ARG:N	2.51	0.43
54:BV:35:LEU:H	54:BV:35:LEU:HD22	1.84	0.43
54:BV:58:VAL:HB	54:BV:98:GLU:CG	2.49	0.43
54:BV:97:LYS:HD3	54:BV:97:LYS:HA	1.90	0.43
58:BZ:86:VAL:CG1	58:BZ:87:ASP:N	2.76	0.43
1:CA:131:C:H2'	1:CA:132:C:H6	1.82	0.43
1:CA:547:A:O2'	1:CA:548:G:OP2	2.37	0.43
1:CA:692:U:O2	1:CA:694:A:C8	2.71	0.43
1:CA:864:A:H2	1:CA:917:G:N3	2.16	0.43
1:CA:1050:G:HO2'	1:CA:1051:C:H6	1.65	0.43
1:CA:1115:C:H2'	1:CA:1116:C:H6	1.82	0.43
1:CA:1288:A:C2	1:CA:1289:A:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:14:ILE:HG12	3:CC:15:THR:N	2.34	0.43
3:CC:73:PRO:O	3:CC:74:GLY:C	2.56	0.43
3:CC:167:TRP:O	3:CC:168:ALA:CB	2.67	0.43
4:CD:16:GLY:C	4:CD:33:MET:HE3	2.38	0.43
5:CE:147:ASP:HA	5:CE:150:ARG:NH1	2.33	0.43
9:CI:40:LEU:C	9:CI:42:ARG:N	2.72	0.43
10:CJ:54:PHE:C	10:CJ:55:LYS:CE	2.68	0.43
13:CM:16:ASP:HB2	13:CM:31:LYS:CE	2.49	0.43
16:CP:75:ARG:HG3	16:CP:75:ARG:HH11	1.83	0.43
24:CY:56:C:OP1	24:CY:56:C:H6	2.01	0.43
27:D1:25:LYS:HB2	36:DA:388:G:H5'	2.01	0.43
28:D2:3:LEU:O	28:D2:3:LEU:HD12	2.19	0.43
28:D2:31:GLU:HB3	28:D2:53:LEU:HD11	2.00	0.43
34:D8:16:ILE:HD12	34:D8:57:ARG:HG2	1.99	0.43
36:DA:445:C:H2'	36:DA:446:G:O4'	2.17	0.43
36:DA:695:G:N2	36:DA:696:G:H1'	2.32	0.43
36:DA:996:A:C4'	53:DU:92:ARG:HE	2.32	0.43
36:DA:1378:A:HO2'	36:DA:1379:A:C5'	2.31	0.43
36:DA:1411:C:N4	36:DA:1412:A:H62	2.16	0.43
36:DA:1541:G:H3'	36:DA:1541:G:P	2.59	0.43
36:DA:1797:C:C2'	36:DA:1798:U:H5'	2.49	0.43
36:DA:1817:G:OP1	39:DD:88:ARG:NH2	2.52	0.43
36:DA:1890:A:C2'	36:DA:1891:G:H5'	2.48	0.43
36:DA:1961:C:C2'	36:DA:1962:C:H5'	2.48	0.43
36:DA:2133:G:O2'	36:DA:2158:A:N6	2.51	0.43
36:DA:2203:U:H1'	39:DD:151:LYS:HE3	2.00	0.43
36:DA:2206:G:N2	36:DA:2207:G:H5'	2.34	0.43
36:DA:2264:C:H2'	36:DA:2265:U:O4'	2.19	0.43
36:DA:2340:G:H2'	36:DA:2341:G:C8	2.53	0.43
36:DA:2446:G:C2	36:DA:2501:C:C5	3.07	0.43
36:DA:2776:A:H4'	36:DA:2777:G:C5'	2.49	0.43
37:DB:10:C:O2'	37:DB:11:C:H5'	2.19	0.43
38:DC:15:ASP:HA	38:DC:16:PRO:HD2	1.88	0.43
39:DD:58:HIS:HD2	39:DD:59:LYS:O	2.01	0.43
39:DD:127:VAL:O	39:DD:127:VAL:HG13	2.19	0.43
41:DF:4:VAL:HG11	41:DF:17:ARG:HE	1.84	0.43
42:DG:130:ASN:OD1	42:DG:160:VAL:HG13	2.19	0.43
46:DN:57:ALA:O	46:DN:58:ASP:C	2.55	0.43
48:DP:17:LYS:HG2	48:DP:17:LYS:O	2.19	0.43
50:DR:14:SER:HA	50:DR:17:ARG:NH1	2.34	0.43
50:DR:74:LYS:NZ	50:DR:74:LYS:HB2	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DW:34:ASN:HD22	55:DW:34:ASN:HA	1.63	0.43
56:DX:40:LYS:O	56:DX:44:GLU:N	2.52	0.43
57:DY:2:ARG:C	57:DY:4:LYS:H	2.22	0.43
57:DY:9:LYS:NZ	57:DY:10:GLY:H	2.17	0.43
57:DY:47:LYS:O	57:DY:48:ALA:HB2	2.19	0.43
1:AA:177:C:O2	1:AA:177:C:H2'	2.18	0.43
1:AA:477:A:O2'	1:AA:479:C:H5'	2.18	0.43
1:AA:955:U:H1'	1:AA:1227:A:N6	2.33	0.43
1:AA:1040:U:O2'	1:AA:1041:A:H5'	2.18	0.43
1:AA:1396:A:O4'	1:AA:1398:A:H1'	2.18	0.43
2:AB:93:VAL:O	2:AB:93:VAL:HG13	2.18	0.43
2:AB:119:GLU:O	2:AB:122:PHE:HB3	2.18	0.43
3:AC:99:VAL:O	3:AC:99:VAL:HG23	2.19	0.43
4:AD:120:LEU:HD13	4:AD:126:ILE:HD11	2.00	0.43
10:AJ:30:SER:OG	10:AJ:81:THR:HG22	2.19	0.43
10:AJ:92:THR:HG23	10:AJ:93:GLY:N	2.29	0.43
11:AK:76:GLY:O	11:AK:78:GLN:HG3	2.19	0.43
19:AS:36:ARG:NH1	19:AS:53:ASN:HA	2.33	0.43
20:AT:33:ILE:HG13	20:AT:33:ILE:H	1.61	0.43
22:AW:33:U:O5'	22:AW:33:U:H6	2.00	0.43
23:AX:12:A:H8	23:AX:12:A:P	2.42	0.43
27:B1:91:LYS:HG3	27:B1:92:LYS:N	2.33	0.43
28:B2:6:VAL:C	28:B2:8:LYS:H	2.21	0.43
32:B6:7:ILE:CG2	32:B6:29:ASN:HD22	2.31	0.43
32:B6:19:ARG:HB2	32:B6:20:ASN:H	1.48	0.43
32:B6:41:PRO:HG2	32:B6:44:ARG:O	2.19	0.43
36:BA:139:G:O6	36:BA:140:G:H2'	2.18	0.43
36:BA:370:G:H5"	36:BA:423:A:N6	2.34	0.43
36:BA:443:A:H2'	41:BF:45:ARG:NH2	2.34	0.43
36:BA:491:G:O2'	36:BA:492:A:H5'	2.18	0.43
36:BA:512:G:C2'	36:BA:513:A:OP2	2.67	0.43
36:BA:654:A:H3'	36:BA:654:A:P	2.58	0.43
36:BA:1094:U:H2'	36:BA:1096:A:OP2	2.19	0.43
36:BA:1374:G:H2'	36:BA:1375:C:H6	1.83	0.43
36:BA:1495:A:H2'	36:BA:1496:A:C2	2.53	0.43
36:BA:1529:G:C2	36:BA:1530:C:C2	3.07	0.43
36:BA:2240:C:O2'	36:BA:2241:A:H5'	2.18	0.43
36:BA:2262:U:H4'	36:BA:2328:A:C2	2.54	0.43
36:BA:2795:G:H2'	36:BA:2796:U:H5'	2.01	0.43
37:BB:55:U:H1'	42:BG:29:TRP:CD1	2.54	0.43
39:BD:6:PHE:HE2	39:BD:13:ARG:HH21	1.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:46:GLN:HA	39:BD:46:GLN:OE1	2.19	0.43
39:BD:231:HIS:ND1	39:BD:232:PRO:CD	2.80	0.43
40:BE:38:THR:C	40:BE:40:GLU:N	2.72	0.43
40:BE:59:VAL:O	40:BE:60:ASN:CG	2.57	0.43
41:BF:6:VAL:CG1	41:BF:7:TYR:H	2.26	0.43
41:BF:113:ALA:C	41:BF:115:ALA:H	2.22	0.43
42:BG:102:PHE:O	42:BG:103:LEU:CB	2.62	0.43
43:BH:125:VAL:HG12	43:BH:125:VAL:O	2.19	0.43
47:BO:21:CYS:O	47:BO:22:ILE:HD13	2.19	0.43
52:BT:25:GLY:O	52:BT:49:VAL:HG12	2.18	0.43
52:BT:30:VAL:HG21	52:BT:83:ILE:HG12	2.01	0.43
54:BV:55:ALA:HA	54:BV:101:GLY:OXT	2.19	0.43
56:BX:41:ASN:O	56:BX:43:VAL:N	2.47	0.43
56:BX:44:GLU:HG3	56:BX:50:LYS:HA	2.01	0.43
1:CA:8:A:N7	4:CD:208:SER:HB2	2.34	0.43
1:CA:251:G:H4'	1:CA:252:U:O5'	2.18	0.43
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.50	0.43
1:CA:952:U:C5	13:CM:104:ARG:NH2	2.87	0.43
1:CA:973:G:H1'	10:CJ:55:LYS:CD	2.48	0.43
1:CA:1256:A:C2	1:CA:1277:C:C2	3.07	0.43
1:CA:1282:C:H2'	1:CA:1283:G:H5'	2.01	0.43
1:CA:1442:G:O6	1:CA:1442(B):A:C2	2.71	0.43
3:CC:23:TYR:CG	3:CC:24:ALA:N	2.86	0.43
4:CD:18:LYS:HA	4:CD:33:MET:HE2	1.99	0.43
5:CE:80:ILE:HG12	5:CE:81:GLU:N	2.33	0.43
6:CF:19:LEU:HD21	6:CF:59:TYR:CE2	2.54	0.43
9:CI:40:LEU:C	9:CI:42:ARG:H	2.21	0.43
11:CK:105:VAL:HG23	11:CK:105:VAL:O	2.18	0.43
15:CO:39:LEU:O	15:CO:42:HIS:HB3	2.19	0.43
19:CS:29:ARG:O	19:CS:30:LEU:C	2.57	0.43
22:CW:8:U:O2'	22:CW:9:A:H5"	2.19	0.43
22:CW:24:G:H2'	22:CW:25:C:C6	2.54	0.43
25:CZ:226:GLU:OE1	25:CZ:240:GLY:HA2	2.18	0.43
26:D0:3:HIS:CD2	36:DA:2602:A:H2	2.37	0.43
28:D2:28:LYS:O	28:D2:31:GLU:HB2	2.19	0.43
29:D3:31:LEU:HD12	36:DA:1157:G:O2'	2.18	0.43
33:D7:47:ARG:NH1	36:DA:1311:G:H2'	2.33	0.43
34:D8:33:ASN:ND2	36:DA:2419:U:OP1	2.52	0.43
35:D9:29:ASN:O	35:D9:29:ASN:ND2	2.52	0.43
36:DA:89:G:OP2	36:DA:90:U:H2'	2.18	0.43
36:DA:324:A:H2'	36:DA:325:G:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:324:A:N6	36:DA:338:G:O2'	2.52	0.43
36:DA:758:C:O2'	36:DA:1981:A:N3	2.44	0.43
36:DA:1019:U:C2'	36:DA:1021:A:C2	3.02	0.43
36:DA:1104:C:H2'	36:DA:1105:U:C6	2.54	0.43
36:DA:1137:G:O2'	36:DA:1138:G:H5'	2.18	0.43
36:DA:1138:G:H2'	36:DA:1139:G:O4'	2.19	0.43
36:DA:1257:C:O2'	41:DF:83:PHE:HA	2.18	0.43
36:DA:1336:A:H2'	36:DA:1337:G:C8	2.54	0.43
36:DA:2128:C:H42	36:DA:2160:G:H1	1.67	0.43
36:DA:2257:U:H2'	36:DA:2258:C:C6	2.54	0.43
36:DA:2370:G:H2'	36:DA:2371:G:C8	2.54	0.43
36:DA:2848:G:H8	52:DT:97:ALA:HB2	1.84	0.43
37:DB:73:A:C2'	37:DB:74:U:H5'	2.49	0.43
38:DC:119:VAL:HG13	38:DC:120:MET:HE2	1.97	0.43
39:DD:245:PRO:O	39:DD:245:PRO:HD2	2.18	0.43
40:DE:55:ASN:HD22	40:DE:55:ASN:HA	1.66	0.43
41:DF:176:LEU:CG	41:DF:177:ALA:H	2.18	0.43
42:DG:60:LEU:C	42:DG:62:LEU:H	2.20	0.43
42:DG:128:ARG:O	42:DG:129:GLY:C	2.57	0.43
42:DG:139:LEU:HB3	42:DG:144:ILE:HG12	1.99	0.43
43:DH:54:ARG:CB	43:DH:55:PRO:HD2	2.47	0.43
45:DK:66:UNK:C	45:DK:68:UNK:N	2.81	0.43
46:DN:42:TRP:H	53:DU:64:ARG:NH1	2.16	0.43
48:DP:12:ALA:O	48:DP:13:ASN:O	2.36	0.43
48:DP:77:ARG:HH11	48:DP:77:ARG:CG	2.32	0.43
48:DP:100:LEU:O	48:DP:100:LEU:HD13	2.19	0.43
49:DQ:60:ARG:HG3	58:DZ:180:VAL:HG21	2.00	0.43
51:DS:89:ARG:HG2	51:DS:92:TYR:CA	2.49	0.43
52:DT:30:VAL:HA	52:DT:43:GLN:O	2.18	0.43
52:DT:65:LYS:HZ2	52:DT:66:VAL:H	1.65	0.43
53:DU:83:LEU:HD12	53:DU:83:LEU:N	2.33	0.43
57:DY:95:LYS:CG	57:DY:100:ALA:HA	2.35	0.43
58:DZ:137:ILE:HG23	58:DZ:158:PRO:HD3	2.01	0.43
1:AA:173:U:H5"	1:AA:197:A:O4'	2.19	0.43
1:AA:174:C:O2'	1:AA:175:C:H5'	2.18	0.43
1:AA:495:A:H1'	1:AA:496:A:C8	2.53	0.43
1:AA:501:C:OP1	12:AL:117:ARG:NH2	2.51	0.43
1:AA:918:A:H2'	1:AA:919:A:O4'	2.18	0.43
1:AA:1153:C:O2'	1:AA:1154:G:P	2.77	0.43
1:AA:1503:A:C1'	23:AX:15:A:N6	2.82	0.43
2:AB:121:LEU:HG	2:AB:126:GLU:CB	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:34:GLU:O	4:AD:35:ARG:CB	2.66	0.43
17:AQ:52:LYS:HD2	17:AQ:55:ASP:CG	2.39	0.43
20:AT:52:ALA:C	20:AT:54:LYS:N	2.72	0.43
25:AZ:265:THR:HG23	25:AZ:291:ARG:O	2.19	0.43
27:B1:21:ARG:HH11	27:B1:21:ARG:HG3	1.82	0.43
27:B1:52:ARG:O	27:B1:53:VAL:C	2.57	0.43
28:B2:6:VAL:C	28:B2:8:LYS:N	2.71	0.43
32:B6:14:THR:HB	32:B6:52:VAL:HG21	2.01	0.43
34:B8:33:ASN:OD1	34:B8:36:LYS:HG3	2.19	0.43
35:B9:1:MET:CG	35:B9:31:LYS:O	2.63	0.43
36:BA:29:U:H5"	53:BU:7:GLY:HA2	2.00	0.43
36:BA:1109:C:C2'	36:BA:1110:G:H5'	2.48	0.43
36:BA:1386:C:H2'	36:BA:1387:C:C6	2.53	0.43
36:BA:1448:G:H5'	36:BA:1449:A:OP1	2.19	0.43
36:BA:1600:C:C2'	36:BA:1601:G:H5'	2.49	0.43
36:BA:2242:G:H2'	36:BA:2243:U:O5'	2.18	0.43
36:BA:2287:A:C2	36:BA:2346:A:C2	3.07	0.43
36:BA:2720:U:O2	36:BA:2720:U:C2'	2.66	0.43
36:BA:2745:C:C4	36:BA:2746:U:C4	3.07	0.43
36:BA:2776:A:H4'	36:BA:2777:G:H5"	2.01	0.43
39:BD:206:LEU:HD12	39:BD:206:LEU:HA	1.76	0.43
39:BD:220:HIS:CD2	39:BD:220:HIS:C	2.92	0.43
41:BF:157:VAL:HG23	41:BF:157:VAL:O	2.19	0.43
46:BN:34:LEU:HD13	46:BN:34:LEU:O	2.19	0.43
46:BN:133:GLN:C	46:BN:135:PRO:HD3	2.39	0.43
48:BP:39:LYS:HD3	48:BP:40:SER:N	2.27	0.43
48:BP:90:ARG:O	48:BP:90:ARG:HD2	2.19	0.43
48:BP:107:LYS:HB2	48:BP:107:LYS:HE3	1.81	0.43
49:BQ:12:GLN:HE21	49:BQ:72:LYS:HG3	1.84	0.43
49:BQ:70:PRO:CA	49:BQ:95:ALA:HB2	2.49	0.43
51:BS:34:HIS:NE2	51:BS:54:LEU:HB2	2.34	0.43
52:BT:29:ARG:NH2	52:BT:46:GLU:OE2	2.52	0.43
53:BU:88:ILE:O	53:BU:90:VAL:N	2.43	0.43
57:BY:11:ASP:N	57:BY:27:VAL:HG22	2.34	0.43
57:BY:47:LYS:O	57:BY:48:ALA:HB2	2.19	0.43
58:BZ:95:PRO:HG2	58:BZ:95:PRO:O	2.19	0.43
1:CA:55:A:C6	1:CA:56:U:C2	3.06	0.43
1:CA:71:C:H2'	1:CA:72:C:C6	2.54	0.43
1:CA:347:G:H21	1:CA:348:G:H1'	1.83	0.43
1:CA:356:A:H2	1:CA:368:U:O2	2.01	0.43
1:CA:445:G:H2'	1:CA:446:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:596:C:O2'	1:CA:597:G:H5'	2.19	0.43
1:CA:739:C:HO2'	15:CO:42:HIS:CE1	2.34	0.43
1:CA:769:G:O2'	1:CA:770:C:H5'	2.18	0.43
1:CA:1006:C:N4	1:CA:1024:G:H21	2.17	0.43
1:CA:1222:G:O2'	1:CA:1223:C:H5'	2.19	0.43
1:CA:1352:C:C2'	1:CA:1353:G:C8	2.83	0.43
1:CA:1430:C:O2	1:CA:1430:C:O5'	2.37	0.43
2:CB:187:LEU:HD23	2:CB:201:ILE:O	2.19	0.43
4:CD:9:CYS:HB3	4:CD:32:ALA:CB	2.49	0.43
13:CM:54:VAL:HA	13:CM:57:ARG:HH12	1.83	0.43
16:CP:34:GLU:HG2	16:CP:35:LYS:O	2.19	0.43
19:CS:63:THR:HG22	19:CS:66:MET:HG2	2.01	0.43
19:CS:70:LYS:HA	19:CS:70:LYS:HD3	1.82	0.43
22:CV:2:C:H5"	26:D0:8:GLY:HA2	2.00	0.43
22:CV:45:U:H2'	22:CV:45:U:OP2	2.19	0.43
23:CX:20:U:H2'	23:CX:21:C:H6	1.82	0.43
25:CZ:64:ASN:CA	25:CZ:83:PRO:HG2	2.45	0.43
25:CZ:131:ILE:HD11	25:CZ:163:PHE:CE2	2.53	0.43
25:CZ:257:GLY:HA3	25:CZ:302:GLN:HB3	2.01	0.43
25:CZ:263:ARG:HG3	25:CZ:263:ARG:NH1	2.33	0.43
27:D1:89:GLU:O	27:D1:93:GLU:HB2	2.18	0.43
30:D4:13:ARG:O	30:D4:13:ARG:HG3	2.19	0.43
33:D7:5:TRP:NE1	33:D7:7:PRO:HB3	2.34	0.43
34:D8:50:LEU:CA	34:D8:53:PRO:HD2	2.49	0.43
36:DA:149:A:O2'	36:DA:150:C:H5'	2.19	0.43
36:DA:373:U:C2	36:DA:374:A:C8	3.07	0.43
36:DA:802:A:C5	36:DA:803:U:C4	3.05	0.43
36:DA:813:U:H2'	36:DA:814:C:C6	2.53	0.43
36:DA:983:A:H2'	36:DA:984:A:C8	2.53	0.43
36:DA:1142(A):A:C4	36:DA:1144:G:N7	2.87	0.43
36:DA:1327:C:H2'	36:DA:1328:G:O4'	2.19	0.43
36:DA:1385:G:H1'	36:DA:1386:C:C6	2.54	0.43
36:DA:1605:C:H2'	36:DA:1606:G:O4'	2.19	0.43
36:DA:2101:G:C3'	36:DA:2102:U:H5"	2.46	0.43
36:DA:2624:G:O2'	36:DA:2625:G:H5'	2.19	0.43
36:DA:2692:C:H2'	36:DA:2693:A:H8	1.84	0.43
39:DD:5:LYS:C	39:DD:6:PHE:CD1	2.92	0.43
39:DD:35:LYS:CA	39:DD:63:ARG:HA	2.49	0.43
39:DD:126:GLN:O	39:DD:193:VAL:CG1	2.67	0.43
40:DE:47:VAL:O	40:DE:80:GLU:HA	2.19	0.43
40:DE:51:PHE:O	40:DE:53:PRO:HD3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:117:MET:HE1	40:DE:136:ARG:HA	1.99	0.43
40:DE:144:ARG:O	40:DE:148:GLY:HA2	2.19	0.43
40:DE:201:THR:OG1	40:DE:202:LYS:N	2.52	0.43
42:DG:137:GLU:O	42:DG:140:ILE:HG23	2.19	0.43
43:DH:41:MET:SD	43:DH:53:GLU:O	2.77	0.43
47:DO:86:ILE:HG22	47:DO:94:ARG:HG3	2.01	0.43
48:DP:88:LEU:HD12	48:DP:91:PHE:CE1	2.53	0.43
50:DR:23:ASN:N	50:DR:23:ASN:ND2	2.67	0.43
51:DS:57:LYS:O	51:DS:58:LEU:HB2	2.18	0.43
51:DS:97:ARG:O	51:DS:99:LYS:N	2.51	0.43
56:DX:37:THR:HG22	56:DX:38:GLU:N	2.33	0.43
1:AA:368:U:C4	25:AZ:234:ARG:CD	3.02	0.43
1:AA:587:G:C6	1:AA:755:G:C6	3.07	0.43
1:AA:598:U:H2'	1:AA:599:C:C6	2.54	0.43
1:AA:865:A:H2'	1:AA:866:C:C6	2.54	0.43
1:AA:1158:C:O2	1:AA:1158:C:H2'	2.18	0.43
1:AA:1257:U:H2'	1:AA:1258:G:OP2	2.18	0.43
4:AD:101:LEU:HB2	4:AD:138:TYR:HB3	2.00	0.43
6:AF:48:LEU:HD13	6:AF:52:ILE:HD12	2.01	0.43
8:AH:114:THR:HG21	8:AH:129:VAL:CG2	2.46	0.43
12:AL:42:THR:O	12:AL:42:THR:HG22	2.19	0.43
12:AL:126:LYS:HD2	12:AL:126:LYS:HA	1.73	0.43
15:AO:21:ASP:OD2	15:AO:24:SER:OG	2.34	0.43
24:AY:19:G:C8	24:AY:57:G:N2	2.86	0.43
25:AZ:258:LEU:O	25:AZ:259:ALA:O	2.37	0.43
25:AZ:378:VAL:CG2	25:AZ:380:LEU:HD21	2.49	0.43
28:B2:25:VAL:HG12	28:B2:29:LYS:HG3	2.00	0.43
29:B3:49:LYS:HG2	29:B3:49:LYS:O	2.19	0.43
31:B5:41:PRO:O	31:B5:42:PRO:O	2.37	0.43
34:B8:6:THR:HG21	34:B8:63:PRO:HD3	1.98	0.43
34:B8:30:ARG:CZ	36:BA:2419:U:O4	2.67	0.43
34:B8:32:LEU:CB	34:B8:36:LYS:NZ	2.82	0.43
34:B8:33:ASN:OD1	34:B8:34:TRP:N	2.51	0.43
36:BA:137:C:O2	36:BA:137:C:H2'	2.18	0.43
36:BA:271(H):G:N1	36:BA:271(P):C:N4	2.64	0.43
36:BA:333:G:H2'	36:BA:333:G:N3	2.33	0.43
36:BA:654(M):C:H2'	36:BA:654(N):G:N7	2.33	0.43
36:BA:734:A:O2'	36:BA:1635:G:H5'	2.19	0.43
36:BA:809:G:O4'	36:BA:1254:A:H1'	2.19	0.43
36:BA:876:C:H2'	36:BA:877:U:O4'	2.19	0.43
36:BA:1060:U:H1'	36:BA:1061:U:OP2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1242:A:C5'	36:BA:1243:G:OP2	2.65	0.43
36:BA:2104:G:H3'	36:BA:2104:G:N3	2.34	0.43
36:BA:2111:C:C2	36:BA:2147:G:N2	2.82	0.43
36:BA:2187:G:C3'	36:BA:2188:C:C5'	2.97	0.43
36:BA:2264:C:H2'	36:BA:2265:U:O4'	2.18	0.43
36:BA:2552:U:O2	36:BA:2554:U:H5'	2.19	0.43
36:BA:2793:G:H22	36:BA:2804:C:H1'	1.83	0.43
36:BA:2812:G:N2	36:BA:2889:C:C2	2.87	0.43
36:BA:2822:G:H5"	40:BE:159:HIS:CD2	2.54	0.43
37:BB:101:G:H2'	37:BB:102:A:O4'	2.19	0.43
38:BC:74:VAL:HG23	38:BC:157:LYS:HE2	2.00	0.43
40:BE:7:VAL:O	40:BE:7:VAL:HG13	2.18	0.43
40:BE:115:GLY:O	40:BE:116:VAL:O	2.36	0.43
41:BF:164:ARG:HG2	41:BF:164:ARG:NH1	2.34	0.43
43:BH:16:SER:CB	43:BH:27:LYS:HD3	2.49	0.43
46:BN:57:ALA:O	46:BN:58:ASP:C	2.57	0.43
46:BN:87:LEU:O	46:BN:88:GLU:C	2.58	0.43
46:BN:128:HIS:O	46:BN:128:HIS:CG	2.69	0.43
47:BO:12:ASP:CB	47:BO:85:VAL:HG13	2.49	0.43
48:BP:23:PRO:O	48:BP:33:ARG:CD	2.64	0.43
48:BP:51:PHE:HB3	48:BP:52:GLU:H	1.54	0.43
49:BQ:141:GLN:CD	58:BZ:72:ARG:HE	2.20	0.43
50:BR:96:ARG:HH11	50:BR:117:VAL:HG11	1.80	0.43
51:BS:47:THR:C	51:BS:48:LEU:HD12	2.39	0.43
51:BS:59:LYS:CG	51:BS:60:GLY:N	2.70	0.43
53:BU:46:ALA:O	53:BU:49:HIS:N	2.52	0.43
55:BW:12:ILE:HG23	55:BW:17:VAL:HG21	2.00	0.43
58:BZ:28:MET:HA	58:BZ:88:PHE:O	2.19	0.43
58:BZ:137:ILE:CD1	58:BZ:158:PRO:HG2	2.49	0.43
1:CA:357:G:O2'	1:CA:358:U:H5'	2.18	0.43
1:CA:472:A:O3'	16:CP:81:ARG:HA	2.19	0.43
1:CA:599:C:H2'	1:CA:600:C:C6	2.53	0.43
1:CA:719:C:H3'	1:CA:720:C:C6	2.53	0.43
1:CA:1014:A:C2	1:CA:1219:U:H1'	2.54	0.43
1:CA:1014:A:H2'	1:CA:1015:A:C8	2.54	0.43
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.84	0.43
1:CA:1073:U:O2'	1:CA:1074:G:H5'	2.19	0.43
2:CB:132:LYS:HG3	2:CB:135:GLN:OE1	2.19	0.43
2:CB:145:LEU:CD1	2:CB:149:LEU:HD12	2.49	0.43
2:CB:149:LEU:HD23	2:CB:149:LEU:HA	1.80	0.43
4:CD:14:ARG:HA	4:CD:39:PRO:HG3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:117:ALA:O	4:CD:121:VAL:HG23	2.18	0.43
4:CD:170:VAL:HG11	4:CD:174:LEU:HB2	2.00	0.43
6:CF:62:TRP:O	6:CF:63:TYR:CG	2.72	0.43
13:CM:22:ILE:HB	13:CM:25:ILE:HB	1.99	0.43
13:CM:64:TRP:CD1	13:CM:64:TRP:N	2.86	0.43
14:CN:3:ARG:O	14:CN:3:ARG:CG	2.66	0.43
14:CN:7:ILE:CG1	14:CN:8:GLU:H	2.30	0.43
16:CP:62:VAL:HG12	16:CP:62:VAL:O	2.18	0.43
18:CR:88:LYS:HD3	18:CR:88:LYS:C	2.38	0.43
19:CS:8:GLY:O	19:CS:9:VAL:C	2.58	0.43
22:CV:56:C:O5'	22:CV:56:C:H6	2.01	0.43
22:CV:63:G:H2'	22:CV:64:A:H8	1.81	0.43
25:CZ:317:GLU:CG	25:CZ:404:LEU:HD21	2.43	0.43
26:D0:47:PRO:O	26:D0:78:TYR:HB3	2.18	0.43
31:D5:16:ARG:NH1	31:D5:17:ASP:OD1	2.52	0.43
33:D7:3:ARG:HH11	33:D7:3:ARG:HG2	1.83	0.43
36:DA:195:A:C8	36:DA:197:A:OP1	2.71	0.43
36:DA:271(U):G:H2'	36:DA:271(V):G:H8	1.84	0.43
36:DA:272(J):C:H42	36:DA:363:G:H1	1.67	0.43
36:DA:527:C:H4'	36:DA:528:A:O4'	2.19	0.43
36:DA:583:G:H2'	36:DA:584:C:H6	1.83	0.43
36:DA:593:G:O2'	36:DA:594:U:H5'	2.19	0.43
36:DA:815:C:C2	36:DA:816:C:C5	3.07	0.43
36:DA:2010:G:C5	36:DA:2011:U:C5	3.07	0.43
36:DA:2351:G:O2'	36:DA:2352:A:H8	2.00	0.43
36:DA:2726:U:H6	47:DO:67:LYS:NZ	2.15	0.43
36:DA:2870:C:H2'	36:DA:2871:C:O4'	2.18	0.43
41:DF:108:LYS:HG2	41:DF:108:LYS:H	1.65	0.43
43:DH:28:GLY:HA3	43:DH:79:VAL:CB	2.47	0.43
43:DH:105:LEU:HD23	43:DH:105:LEU:N	2.32	0.43
43:DH:123:PHE:N	43:DH:123:PHE:CD1	2.86	0.43
48:DP:84:ASN:CG	48:DP:116:GLY:HA2	2.39	0.43
51:DS:78:LEU:HD11	51:DS:103:GLU:CB	2.49	0.43
54:DV:61:VAL:HG22	54:DV:61:VAL:O	2.19	0.43
56:DX:45:THR:OG1	56:DX:46:ALA:N	2.52	0.43
56:DX:65:ARG:HG2	56:DX:65:ARG:HH11	1.84	0.43
58:DZ:40:ASP:HB3	58:DZ:43:GLU:CG	2.48	0.43
58:DZ:107:THR:O	58:DZ:108:PRO:C	2.58	0.43
1:AA:187:C:C2	1:AA:188:C:C5	3.07	0.42
1:AA:407:G:O2'	4:AD:116:GLN:CG	2.61	0.42
1:AA:1235:U:O3'	21:AU:3:LYS:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1347:G:C5	9:AI:107:ARG:NH2	2.87	0.42
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.86	0.42
4:AD:7:PRO:HB2	4:AD:10:ARG:HD2	2.01	0.42
5:AE:38:GLN:HA	5:AE:38:GLN:OE1	2.19	0.42
6:AF:52:ILE:O	6:AF:53:ALA:HB3	2.19	0.42
7:AG:9:VAL:CG2	7:AG:94:ARG:HD3	2.45	0.42
12:AL:127:GLU:O	12:AL:128:ALA:C	2.58	0.42
13:AM:111:LYS:O	13:AM:112:GLY:O	2.36	0.42
13:AM:116:THR:O	13:AM:117:VAL:C	2.55	0.42
17:AQ:49:GLU:HA	17:AQ:49:GLU:OE1	2.19	0.42
25:AZ:96:ALA:O	25:AZ:99:MET:HG2	2.19	0.42
25:AZ:136:ASN:ND2	60:AZ:501:GDP:C6	2.86	0.42
25:AZ:146:LEU:O	25:AZ:150:VAL:N	2.48	0.42
27:B1:44:PRO:HA	36:BA:396:G:O3'	2.19	0.42
28:B2:29:LYS:O	28:B2:31:GLU:N	2.52	0.42
28:B2:35:LEU:CA	28:B2:39:ALA:HB3	2.47	0.42
29:B3:44:ARG:O	29:B3:47:VAL:HB	2.19	0.42
31:B5:52:TYR:CD1	31:B5:52:TYR:O	2.72	0.42
34:B8:42:ARG:NH2	36:BA:2382:G:H21	2.17	0.42
34:B8:50:LEU:C	34:B8:53:PRO:HD2	2.40	0.42
35:B9:19:ARG:C	35:B9:21:GLY:H	2.22	0.42
36:BA:644:A:H2	36:BA:2369:A:H1'	1.84	0.42
36:BA:1142(A):A:H4'	46:BN:25:ARG:HH22	1.83	0.42
36:BA:1222:C:C2'	36:BA:1223:G:C5'	2.97	0.42
36:BA:1541:G:O2'	36:BA:1542:A:C5'	2.67	0.42
36:BA:2160:G:H8	36:BA:2160:G:C5'	2.19	0.42
36:BA:2468:G:N2	36:BA:2481:G:O2'	2.52	0.42
36:BA:2810:A:H2'	36:BA:2811:G:O4'	2.19	0.42
37:BB:7:G:C2'	37:BB:8:U:C5'	2.97	0.42
37:BB:7:G:C2'	37:BB:8:U:H5"	2.49	0.42
37:BB:16:G:N2	37:BB:69:G:H1'	2.34	0.42
40:BE:38:THR:HB	40:BE:41:LYS:CG	2.48	0.42
40:BE:120:TRP:CG	40:BE:155:LYS:HB3	2.54	0.42
43:BH:30:LYS:NZ	43:BH:83:TYR:HE2	2.17	0.42
44:BJ:30:UNK:O	44:BJ:31:UNK:CB	2.67	0.42
49:BQ:33:GLY:HA2	49:BQ:105:GLU:HA	2.00	0.42
49:BQ:66:ILE:O	49:BQ:66:ILE:HG13	2.19	0.42
49:BQ:139:GLU:CA	49:BQ:139:GLU:OE1	2.66	0.42
50:BR:100:LEU:HD11	50:BR:113:LEU:HD13	2.01	0.42
51:BS:106:ARG:HH12	51:BS:108:GLY:CA	2.32	0.42
52:BT:93:ARG:O	52:BT:114:LEU:HD23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:95:LYS:NZ	57:BY:100:ALA:HB2	2.34	0.42
58:BZ:115:GLY:CA	58:BZ:177:PRO:HD3	2.49	0.42
1:CA:16:A:C2	1:CA:920:U:O2	2.72	0.42
1:CA:986:A:C6	1:CA:987:G:C6	3.06	0.42
1:CA:1018:C:H2'	1:CA:1019:C:C6	2.54	0.42
1:CA:1216:G:H2'	1:CA:1217:C:H6	1.84	0.42
1:CA:1309:G:N1	1:CA:1329:A:C4	2.87	0.42
1:CA:1442(B):A:C8	52:DT:118:ARG:CZ	3.02	0.42
2:CB:30:ARG:NH1	2:CB:30:ARG:HB3	2.33	0.42
2:CB:134:GLU:O	2:CB:138:LEU:HB2	2.19	0.42
6:CF:1:MET:HG2	6:CF:68:PRO:N	2.34	0.42
6:CF:98:LEU:HD12	6:CF:98:LEU:N	2.29	0.42
7:CG:119:ARG:O	7:CG:120:ILE:C	2.57	0.42
8:CH:97:VAL:HG22	8:CH:97:VAL:O	2.18	0.42
11:CK:21:ILE:HD13	11:CK:94:ALA:CB	2.49	0.42
11:CK:77:MET:HE3	11:CK:80:VAL:HG12	2.00	0.42
20:CT:74:LYS:HD3	20:CT:74:LYS:N	2.34	0.42
25:CZ:181:GLN:O	25:CZ:182:MET:HG2	2.19	0.42
25:CZ:255:ILE:CG2	25:CZ:302:GLN:NE2	2.80	0.42
25:CZ:270:VAL:HG13	25:CZ:286:VAL:CG2	2.33	0.42
25:CZ:338:TYR:OH	25:CZ:390:GLU:HB3	2.19	0.42
28:D2:11:GLU:HA	28:D2:14:ARG:CB	2.44	0.42
28:D2:35:LEU:O	28:D2:39:ALA:N	2.48	0.42
32:D6:33:LYS:O	32:D6:34:LEU:CB	2.67	0.42
34:D8:40:GLU:O	34:D8:44:LYS:HE3	2.20	0.42
36:DA:271(H):G:H1'	36:DA:271(I):G:H8	1.81	0.42
36:DA:272(J):C:H2'	36:DA:274:G:C5'	2.49	0.42
36:DA:327:G:N2	36:DA:328:U:H1'	2.34	0.42
36:DA:336:C:C4'	57:DY:7:VAL:HG21	2.49	0.42
36:DA:469:G:H2'	36:DA:470:A:H5"	2.01	0.42
36:DA:758:C:O2	36:DA:1981:A:H2	2.02	0.42
36:DA:1038:C:H3'	36:DA:1039:G:C5'	2.49	0.42
36:DA:1139:G:C5'	46:DN:70:LYS:HZ3	2.19	0.42
36:DA:1166:C:C2	36:DA:1184:G:C2	3.07	0.42
36:DA:1252:G:OP2	53:DU:14:HIS:CE1	2.68	0.42
36:DA:1438:U:O2'	36:DA:1439:A:H5'	2.19	0.42
36:DA:1466:G:H2'	36:DA:1547:C:C4	2.54	0.42
36:DA:1655:A:C8	36:DA:1656:C:C5	3.07	0.42
36:DA:1945:G:O2'	36:DA:1946:U:H5'	2.19	0.42
36:DA:2179:C:H4'	36:DA:2180:U:C4	2.52	0.42
36:DA:2599:G:O2'	36:DA:2600:A:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DF:43:LYS:HA	41:DF:98:SER:HB3	2.01	0.42
42:DG:114:ILE:O	42:DG:114:ILE:HG23	2.19	0.42
44:DJ:49:UNK:O	44:DJ:51:UNK:N	2.52	0.42
44:DJ:74:UNK:C	44:DJ:76:UNK:N	2.81	0.42
48:DP:7:ARG:HA	48:DP:7:ARG:HD2	1.79	0.42
48:DP:115:LEU:HG	48:DP:116:GLY:H	1.84	0.42
51:DS:19:LYS:O	51:DS:20:ARG:NH2	2.52	0.42
52:DT:28:VAL:O	52:DT:28:VAL:HG12	2.19	0.42
52:DT:30:VAL:HG12	52:DT:44:ASP:OD2	2.18	0.42
53:DU:8:VAL:HG12	53:DU:9:VAL:N	2.33	0.42
53:DU:92:ARG:CZ	53:DU:94:ASN:HD22	2.32	0.42
53:DU:107:ALA:O	53:DU:110:VAL:HB	2.19	0.42
54:DV:4:ILE:HG22	54:DV:4:ILE:O	2.19	0.42
54:DV:82:ARG:N	54:DV:82:ARG:HD2	2.33	0.42
56:DX:54:VAL:HG13	56:DX:81:VAL:HG12	2.00	0.42
57:DY:94:LYS:O	57:DY:101:LYS:HA	2.19	0.42
58:DZ:123:ASP:O	58:DZ:124:ILE:CG2	2.61	0.42
1:AA:66:G:H4'	1:AA:173:U:C4	2.54	0.42
1:AA:123:C:C4	1:AA:124:G:N7	2.87	0.42
1:AA:186:C:H2'	1:AA:187:C:H6	1.84	0.42
1:AA:779:C:H2'	1:AA:780:A:O4'	2.19	0.42
1:AA:903:G:H2'	1:AA:904:C:C6	2.55	0.42
3:AC:76:VAL:CG2	3:AC:103:VAL:HG21	2.49	0.42
4:AD:8:VAL:HG23	4:AD:9:CYS:N	2.34	0.42
4:AD:107:ARG:HH11	4:AD:107:ARG:HG2	1.84	0.42
5:AE:7:GLU:O	5:AE:8:GLU:HB3	2.18	0.42
7:AG:91:VAL:CG2	7:AG:95:ARG:HB3	2.48	0.42
7:AG:95:ARG:HH11	7:AG:95:ARG:HG3	1.82	0.42
8:AH:26:VAL:HG12	8:AH:59:LEU:O	2.19	0.42
9:AI:41:VAL:O	9:AI:41:VAL:HG12	2.20	0.42
12:AL:24:VAL:HG11	12:AL:27:LEU:CD2	2.41	0.42
15:AO:66:LEU:HD12	15:AO:66:LEU:HA	1.81	0.42
16:AP:66:PRO:HB2	16:AP:71:ARG:HB2	2.01	0.42
25:AZ:64:ASN:CA	25:AZ:83:PRO:HG2	2.48	0.42
25:AZ:236:THR:O	25:AZ:289:LEU:HD12	2.19	0.42
28:B2:3:LEU:CD2	36:BA:98:G:H5"	2.49	0.42
29:B3:21:ALA:O	29:B3:24:LYS:N	2.53	0.42
30:B4:14:ILE:O	30:B4:21:VAL:HG13	2.19	0.42
30:B4:46:GLN:NE2	30:B4:47:GLN:H	2.16	0.42
31:B5:47:PRO:HG3	55:BW:37:ARG:HH21	1.84	0.42
34:B8:22:VAL:HB	34:B8:53:PRO:HB2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:322:A:H3'	41:BF:169:ASN:OD1	2.19	0.42
36:BA:919:G:N2	36:BA:2269:A:OP2	2.52	0.42
36:BA:1052:C:O2'	36:BA:1053:C:P	2.78	0.42
36:BA:1378:A:H4'	36:BA:1379:A:O5'	2.19	0.42
36:BA:1389:G:H2'	36:BA:1390:U:O4'	2.19	0.42
36:BA:1478:G:N2	36:BA:1514:U:C2	2.86	0.42
36:BA:1530:C:H6	36:BA:1530:C:O5'	2.01	0.42
36:BA:1747(A):G:O2'	36:BA:1748:G:H5"	2.17	0.42
36:BA:1767:C:O2'	36:BA:1768:U:H5'	2.19	0.42
36:BA:2239:G:H5'	39:BD:251:GLY:HA3	2.00	0.42
36:BA:2642:G:O2'	36:BA:2643:G:H5'	2.19	0.42
36:BA:2689:U:H5"	36:BA:2690:C:H5'	2.00	0.42
36:BA:2724:C:OP1	40:BE:111:ARG:NH1	2.51	0.42
37:BB:44:G:H1'	37:BB:47:C:N4	2.35	0.42
38:BC:10:LEU:HA	38:BC:13:LYS:HE2	2.00	0.42
38:BC:106:GLY:O	38:BC:107:TRP:CB	2.66	0.42
39:BD:35:LYS:CB	39:BD:36:PRO:CD	2.97	0.42
40:BE:57:LYS:C	40:BE:58:ARG:HG3	2.39	0.42
41:BF:82:ILE:O	41:BF:83:PHE:O	2.37	0.42
42:BG:42:GLY:O	42:BG:43:LEU:HB2	2.19	0.42
46:BN:134:ARG:O	46:BN:136:GLU:N	2.52	0.42
48:BP:139:LYS:HG2	48:BP:139:LYS:O	2.19	0.42
51:BS:89:ARG:HG3	51:BS:92:TYR:HB3	2.00	0.42
52:BT:65:LYS:NZ	52:BT:66:VAL:N	2.65	0.42
55:BW:10:VAL:HG23	55:BW:101:SER:O	2.18	0.42
1:CA:247:G:OP2	17:CQ:100:LYS:N	2.42	0.42
1:CA:534:U:H5'	1:CA:534:U:C6	2.45	0.42
1:CA:838:G:C6	1:CA:840:C:H1'	2.54	0.42
1:CA:1054:C:O2	1:CA:1054:C:C2'	2.67	0.42
1:CA:1240:U:OP1	7:CG:119:ARG:NH2	2.52	0.42
3:CC:70:VAL:O	3:CC:105:GLU:HA	2.19	0.42
3:CC:151:VAL:HA	3:CC:199:LYS:O	2.19	0.42
4:CD:12:CYS:O	4:CD:33:MET:CE	2.66	0.42
4:CD:98:GLU:C	4:CD:100:ARG:H	2.23	0.42
5:CE:72:GLN:O	5:CE:74:GLY:N	2.51	0.42
12:CL:24:VAL:CG1	12:CL:27:LEU:HD22	2.48	0.42
15:CO:31:LEU:HD12	15:CO:31:LEU:HA	1.87	0.42
19:CS:29:ARG:O	19:CS:31:ILE:N	2.53	0.42
27:D1:18:ILE:HA	27:D1:36:GLY:O	2.19	0.42
28:D2:35:LEU:HB3	28:D2:50:ILE:CD1	2.49	0.42
31:D5:29:THR:HG21	36:DA:2814:C:HO2'	1.80	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:15:GLU:CD	32:D6:18:ARG:NE	2.73	0.42
32:D6:22:ALA:HB1	32:D6:39:TYR:CZ	2.54	0.42
34:D8:14:VAL:HG21	34:D8:22:VAL:CG1	2.49	0.42
36:DA:322:A:H5'	36:DA:340:A:H1'	2.01	0.42
36:DA:648:G:O2'	36:DA:649:G:H5'	2.18	0.42
36:DA:853:G:H1	36:DA:924:C:H42	1.66	0.42
36:DA:1164:G:C6	36:DA:1165:U:C4	3.07	0.42
36:DA:1242:A:C5'	36:DA:1243:G:OP2	2.63	0.42
36:DA:1322:A:OP1	55:DW:11:ARG:HG3	2.19	0.42
36:DA:1341:U:H4'	56:DX:57:LEU:HB3	2.00	0.42
36:DA:1352:U:C2'	36:DA:1353:A:H5'	2.49	0.42
36:DA:1498:C:H2'	36:DA:1499:C:C6	2.53	0.42
36:DA:1517:G:O2'	36:DA:1518:U:H5'	2.19	0.42
36:DA:1706:U:O2	36:DA:1757:U:H5'	2.18	0.42
36:DA:1751:C:H2'	36:DA:1752:C:H6	1.80	0.42
36:DA:1855:G:O2'	36:DA:1856:G:H5'	2.19	0.42
36:DA:2110:G:C2	36:DA:2178:C:H5	2.35	0.42
36:DA:2393:A:C5	36:DA:2394:C:C5	3.07	0.42
36:DA:2735:G:H2'	36:DA:2736:G:H8	1.84	0.42
36:DA:2762:G:O2'	36:DA:2763:G:H5'	2.19	0.42
37:DB:40:U:H3'	37:DB:41:U:H5"	2.01	0.42
38:DC:29:VAL:HG23	38:DC:30:LYS:N	2.35	0.42
38:DC:131:LEU:HD13	38:DC:136:LEU:HB3	2.01	0.42
39:DD:93:ALA:HB3	39:DD:105:ILE:CG2	2.49	0.42
40:DE:129:HIS:HB3	40:DE:130:GLY:H	1.67	0.42
41:DF:199:TRP:O	41:DF:202:PHE:HB3	2.20	0.42
42:DG:55:LYS:C	42:DG:57:ALA:H	2.21	0.42
42:DG:116:ASP:O	42:DG:117:PHE:CB	2.67	0.42
46:DN:51:PHE:CE1	46:DN:119:ARG:HD2	2.54	0.42
48:DP:77:ARG:HG3	48:DP:78:PRO:N	2.35	0.42
48:DP:101:VAL:HG12	48:DP:106:LEU:HB2	2.00	0.42
48:DP:113:LYS:HG2	48:DP:114:ILE:H	1.84	0.42
49:DQ:21:THR:CG2	49:DQ:101:ARG:HD2	2.49	0.42
49:DQ:134:ARG:NE	58:DZ:122:ARG:NH2	2.67	0.42
50:DR:4:LEU:HD13	50:DR:7:GLY:CA	2.49	0.42
50:DR:79:LEU:HD13	50:DR:79:LEU:O	2.18	0.42
51:DS:98:VAL:HG12	51:DS:100:ALA:H	1.83	0.42
53:DU:34:LYS:HE2	53:DU:37:GLU:OE1	2.20	0.42
54:DV:74:LYS:HB2	54:DV:83:ARG:HB2	2.00	0.42
58:DZ:60:GLU:O	58:DZ:61:LEU:HB2	2.19	0.42
1:AA:502:G:OP1	12:AL:118:SER:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1030(D):A:C2'	1:AA:1031:G:H5'	2.48	0.42
2:AB:25:ASN:HB2	2:AB:191:ASP:O	2.19	0.42
2:AB:39:ILE:HG22	2:AB:41:ILE:HD12	2.01	0.42
2:AB:100:GLY:O	2:AB:104:ASN:HB3	2.19	0.42
2:AB:120:ALA:C	2:AB:122:PHE:N	2.72	0.42
5:AE:64:ARG:CG	5:AE:64:ARG:NH1	2.82	0.42
6:AF:60:PHE:HE2	18:AR:76:LEU:HD12	1.85	0.42
10:AJ:4:ILE:HD11	10:AJ:77:PRO:HB3	2.01	0.42
10:AJ:8:LEU:O	10:AJ:69:ASN:HA	2.20	0.42
13:AM:23:TYR:CD1	13:AM:23:TYR:C	2.93	0.42
13:AM:115:LYS:N	13:AM:115:LYS:HD3	2.34	0.42
15:AO:79:ARG:HA	15:AO:82:ILE:HG22	2.02	0.42
16:AP:25:ARG:HH11	16:AP:25:ARG:CG	2.31	0.42
16:AP:32:TYR:O	16:AP:32:TYR:CD1	2.72	0.42
18:AR:73:ALA:CB	18:AR:79:LEU:HD12	2.50	0.42
20:AT:23:ARG:HD3	20:AT:24:LEU:HD22	2.01	0.42
20:AT:90:GLN:HA	20:AT:93:GLU:OE1	2.19	0.42
22:AW:8:U:H5'	22:AW:49:C:OP2	2.19	0.42
24:AY:46:7MG:O2'	24:AY:47:U:H5"	2.19	0.42
27:B1:50:ARG:HG2	27:B1:59:THR:CG2	2.49	0.42
30:B4:8:LYS:O	30:B4:9:LEU:CB	2.49	0.42
36:BA:143:G:H1'	56:BX:37:THR:HG21	2.01	0.42
36:BA:414:C:O2'	36:BA:415:A:H5'	2.19	0.42
36:BA:425:G:O2'	36:BA:426:C:H5'	2.20	0.42
36:BA:1165:U:H2'	36:BA:1166:C:H6	1.83	0.42
36:BA:1349:A:N6	36:BA:1598:C:N4	2.66	0.42
36:BA:1509(B):A:H2'	36:BA:1510:G:O4'	2.18	0.42
36:BA:1614:A:H62	55:BW:93:ALA:N	2.17	0.42
36:BA:1649:G:O2'	36:BA:1650:G:H5'	2.19	0.42
36:BA:1668:A:N7	36:BA:1674:G:C6	2.87	0.42
36:BA:1858:G:HO2'	36:BA:1859:A:H8	1.65	0.42
36:BA:2133:G:C8	36:BA:2157:G:N2	2.87	0.42
36:BA:2469:A:O2'	49:BQ:56:ARG:CD	2.63	0.42
36:BA:2720:U:H5'	36:BA:2721:A:OP2	2.19	0.42
36:BA:2801(A):A:C3'	36:BA:2802:G:H5'	2.49	0.42
36:BA:2848:G:C8	52:BT:97:ALA:HB2	2.54	0.42
37:BB:7:G:C3'	37:BB:8:U:C5'	2.97	0.42
38:BC:87:GLU:CG	38:BC:94:VAL:HG21	2.48	0.42
38:BC:116:THR:O	38:BC:118:ASP:N	2.52	0.42
39:BD:34:VAL:CG2	39:BD:35:LYS:H	2.30	0.42
40:BE:26:ILE:HD12	40:BE:198:VAL:CG2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:47:VAL:CG2	40:BE:84:PHE:O	2.67	0.42
41:BF:185:ASP:HA	41:BF:188:ARG:HD3	2.02	0.42
42:BG:72:ARG:HE	42:BG:86:MET:HA	1.84	0.42
42:BG:137:GLU:O	42:BG:138:GLN:CB	2.67	0.42
47:BO:63:VAL:O	47:BO:63:VAL:CG2	2.66	0.42
47:BO:73:ASP:OD1	47:BO:73:ASP:C	2.57	0.42
48:BP:90:ARG:HE	48:BP:90:ARG:HB3	1.72	0.42
48:BP:97:PRO:HA	48:BP:100:LEU:CB	2.50	0.42
49:BQ:27:VAL:HG23	49:BQ:137:TYR:CD2	2.53	0.42
49:BQ:130:LYS:HB3	49:BQ:130:LYS:HE2	1.79	0.42
52:BT:7:ILE:O	52:BT:10:VAL:HB	2.18	0.42
52:BT:27:THR:O	52:BT:88:ILE:HG12	2.19	0.42
52:BT:89:VAL:CG1	52:BT:91:ARG:CG	2.96	0.42
57:BY:61:ILE:HG22	57:BY:62:GLU:N	2.35	0.42
57:BY:80:GLY:O	57:BY:81:LYS:O	2.36	0.42
1:CA:107:G:N7	20:CT:15:ARG:NH2	2.53	0.42
1:CA:710:G:O2'	1:CA:711:G:H5'	2.19	0.42
1:CA:772:U:C4	1:CA:773:G:N7	2.88	0.42
1:CA:790:A:C6	1:CA:791:G:C6	3.07	0.42
1:CA:1215:G:H2'	1:CA:1215:G:N3	2.34	0.42
1:CA:1245:A:C2	1:CA:1293:G:C2	3.07	0.42
1:CA:1314:C:C5	1:CA:1315:U:C4	3.07	0.42
1:CA:1495:U:O2'	1:CA:1496:C:H5'	2.20	0.42
5:CE:152:ARG:NH2	8:CH:107:LEU:O	2.47	0.42
9:CI:43:ALA:C	9:CI:45:ALA:H	2.20	0.42
11:CK:29:ILE:C	11:CK:29:ILE:HD12	2.40	0.42
18:CR:32:ARG:O	18:CR:32:ARG:HG3	2.20	0.42
22:CV:53:G:H2'	22:CV:54:U:H6	1.85	0.42
26:D0:43:THR:HG21	36:DA:2336:A:H61	1.84	0.42
27:D1:33:LYS:O	27:D1:34:THR:C	2.57	0.42
28:D2:3:LEU:HA	28:D2:6:VAL:HG23	2.00	0.42
28:D2:58:ALA:HB1	36:DA:76:C:C4'	2.49	0.42
31:D5:34:PRO:O	31:D5:35:GLU:HG2	2.19	0.42
34:D8:61:LEU:HD23	36:DA:593:G:O2'	2.19	0.42
36:DA:110:G:O2'	36:DA:111:A:H5'	2.19	0.42
36:DA:238:C:C4	36:DA:239:U:C5	3.07	0.42
36:DA:271(D):G:O2'	36:DA:271(E):U:H5'	2.18	0.42
36:DA:685:A:C8	36:DA:773:U:C4	3.07	0.42
36:DA:910:A:C6	36:DA:911:A:C6	3.08	0.42
36:DA:1171:G:H3'	36:DA:1173:G:O4'	2.19	0.42
36:DA:2526:G:H5'	36:DA:2742:C:HO2'	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2639:A:H2'	36:DA:2640:G:O4'	2.18	0.42
36:DA:2867:G:OP2	52:DT:119:LYS:NZ	2.51	0.42
39:DD:5:LYS:C	39:DD:6:PHE:HD1	2.23	0.42
40:DE:34:VAL:O	40:DE:35:GLN:HB2	2.19	0.42
40:DE:167:VAL:O	40:DE:167:VAL:HG13	2.18	0.42
41:DF:3:GLU:HB2	41:DF:24:LEU:HD23	2.01	0.42
43:DH:148:ILE:O	43:DH:162:ILE:HD11	2.20	0.42
47:DO:34:THR:O	47:DO:35:VAL:C	2.57	0.42
47:DO:111:PHE:O	47:DO:115:VAL:HG23	2.19	0.42
51:DS:80:LEU:O	51:DS:80:LEU:HD23	2.20	0.42
52:DT:10:VAL:C	52:DT:12:SER:N	2.71	0.42
54:DV:18:LEU:O	54:DV:19:LYS:O	2.37	0.42
54:DV:19:LYS:NZ	54:DV:20:LEU:N	2.52	0.42
54:DV:52:VAL:HG22	54:DV:52:VAL:O	2.19	0.42
56:DX:10:ALA:HB1	56:DX:11:PRO:HD2	2.00	0.42
1:AA:160:A:H1'	1:AA:344:A:C5	2.54	0.42
1:AA:382:A:H2'	1:AA:383:A:C8	2.54	0.42
1:AA:648:A:H2'	1:AA:649:G:H8	1.84	0.42
1:AA:1037:C:H2'	1:AA:1038:C:O4'	2.20	0.42
1:AA:1216:G:O2'	1:AA:1217:C:H5'	2.20	0.42
1:AA:1250:A:C4'	9:AI:68:GLY:H	1.94	0.42
1:AA:1256:A:C2	1:AA:1277:C:H2'	2.55	0.42
1:AA:1426:C:H2'	1:AA:1427:U:C6	2.55	0.42
4:AD:4:TYR:O	4:AD:5:ILE:CB	2.67	0.42
4:AD:11:LEU:O	4:AD:12:CYS:C	2.56	0.42
5:AE:41:VAL:O	5:AE:67:VAL:HG12	2.19	0.42
8:AH:44:PHE:HB3	8:AH:80:ILE:HG12	2.01	0.42
8:AH:112:LEU:HD21	8:AH:121:ASP:HA	2.01	0.42
10:AJ:19:SER:HA	10:AJ:22:LYS:CB	2.49	0.42
12:AL:80:HIS:CD2	24:AY:68:C:O2'	2.72	0.42
12:AL:117:ARG:O	12:AL:119:LYS:O	2.37	0.42
16:AP:9:PHE:CE2	16:AP:18:ARG:NE	2.87	0.42
18:AR:55:ARG:HG3	18:AR:55:ARG:NH1	2.33	0.42
19:AS:51:VAL:O	19:AS:57:HIS:HA	2.19	0.42
20:AT:50:GLU:HG3	20:AT:100:ILE:CD1	2.49	0.42
20:AT:53:LEU:O	20:AT:57:ARG:HB2	2.19	0.42
23:AX:20:U:H2'	23:AX:21:C:H6	1.84	0.42
25:AZ:131:ILE:HD11	25:AZ:163:PHE:CE2	2.55	0.42
25:AZ:210:ILE:O	25:AZ:210:ILE:HG23	2.18	0.42
28:B2:26:ARG:HB3	56:BX:5:TYR:CE1	2.55	0.42
36:BA:172:C:H2'	36:BA:173:G:O4'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:196:A:OP2	48:BP:51:PHE:CE2	2.71	0.42
36:BA:271(F):C:C2	36:BA:271(S):G:N2	2.88	0.42
36:BA:638:G:N2	36:BA:651:G:H1'	2.33	0.42
36:BA:643:A:H2'	36:BA:644:A:C5'	2.49	0.42
36:BA:654(E):G:H22	36:BA:654(Q):C:C1'	2.28	0.42
36:BA:847:U:H2'	36:BA:848:G:H5"	2.01	0.42
36:BA:858:U:O2	36:BA:2268:A:H2'	2.19	0.42
36:BA:1222:C:C2'	36:BA:1223:G:H5"	2.49	0.42
36:BA:1315:C:C2'	36:BA:1316:U:H5'	2.50	0.42
36:BA:1448:G:O2'	36:BA:1528:A:N6	2.52	0.42
36:BA:1516:C:O2'	36:BA:1517:G:H5"	2.19	0.42
36:BA:1544:A:O2'	36:BA:1545:A:H5'	2.19	0.42
36:BA:1632:A:H2'	36:BA:1633:G:C8	2.55	0.42
36:BA:1800:C:H5"	39:BD:147:LEU:HD21	1.98	0.42
36:BA:2321:G:H2'	36:BA:2321:G:N3	2.34	0.42
36:BA:2810:A:H1'	40:BE:61:ARG:NH1	2.34	0.42
37:BB:66:A:HO2'	37:BB:67:G:P	2.42	0.42
37:BB:106:G:O2'	37:BB:107:G:H5'	2.19	0.42
41:BF:143:ALA:CB	41:BF:148:LEU:HB2	2.39	0.42
42:BG:52:ILE:C	42:BG:54:GLU:N	2.71	0.42
48:BP:77:ARG:CD	48:BP:78:PRO:HD2	2.40	0.42
51:BS:17:ARG:HA	51:BS:20:ARG:NH1	2.34	0.42
51:BS:74:ALA:CB	51:BS:101:LEU:HD13	2.48	0.42
52:BT:111:ARG:HH11	52:BT:111:ARG:CB	2.23	0.42
53:BU:51:LYS:O	53:BU:55:ARG:HG3	2.18	0.42
57:BY:81:LYS:NZ	57:BY:98:VAL:O	2.52	0.42
58:BZ:135:GLU:HB3	58:BZ:136:PHE:H	1.59	0.42
1:CA:389:A:N3	1:CA:389:A:H2'	2.35	0.42
1:CA:416:G:C5	1:CA:417:C:C4	3.08	0.42
1:CA:689:C:O5'	1:CA:689:C:H6	2.02	0.42
1:CA:722:A:HO2'	1:CA:724:G:H8	1.66	0.42
1:CA:977:A:O2'	1:CA:978:A:O5'	2.38	0.42
1:CA:1311:G:C2	1:CA:1327:C:N3	2.88	0.42
2:CB:30:ARG:NE	2:CB:31:TYR:HE1	2.17	0.42
4:CD:176:LEU:HA	4:CD:183:GLY:CA	2.49	0.42
5:CE:87:SER:HB3	5:CE:131:ILE:HD13	2.01	0.42
8:CH:35:ILE:O	8:CH:36:LEU:C	2.57	0.42
11:CK:61:ALA:HB2	11:CK:90:GLY:HA3	2.00	0.42
16:CP:20:VAL:HG21	16:CP:32:TYR:CB	2.49	0.42
17:CQ:57:VAL:HG23	17:CQ:58:GLU:N	2.33	0.42
20:CT:74:LYS:HB2	20:CT:75:ASN:H	1.65	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CW:58:A:N7	22:CW:61:C:N4	2.67	0.42
31:D5:30:LEU:HB3	31:D5:40:LYS:O	2.19	0.42
33:D7:21:ARG:HG2	33:D7:21:ARG:NH1	2.34	0.42
35:D9:11:CYS:SG	35:D9:14:CYS:SG	3.16	0.42
36:DA:136:G:C2	36:DA:137:C:C6	3.07	0.42
36:DA:220:G:N1	36:DA:427:U:H2'	2.34	0.42
36:DA:389:G:C6	48:DP:71:VAL:HG12	2.53	0.42
36:DA:494:G:O2'	55:DW:5:ALA:O	2.34	0.42
36:DA:613:G:H5'	36:DA:613:G:C8	2.49	0.42
36:DA:637:A:N1	36:DA:652:C:H5'	2.34	0.42
36:DA:852:G:H2'	36:DA:853:G:H8	1.84	0.42
36:DA:1011:G:O2'	36:DA:1013:C:H5"	2.19	0.42
36:DA:1240:U:O2'	36:DA:1241:A:H5'	2.19	0.42
36:DA:1289:C:O2	36:DA:1289:C:H2'	2.17	0.42
36:DA:1494:A:N3	36:DA:1494:A:C3'	2.79	0.42
36:DA:1639:U:C2'	36:DA:1640:C:O5'	2.67	0.42
36:DA:1792:G:H2'	36:DA:1793:C:C6	2.55	0.42
36:DA:2414:G:H21	48:DP:67:MET:HE2	1.85	0.42
36:DA:2893:G:H5'	36:DA:2894:G:H5'	2.00	0.42
39:DD:43:ARG:NH2	39:DD:49:ILE:CG2	2.77	0.42
39:DD:63:ARG:O	39:DD:65:ILE:HG23	2.20	0.42
39:DD:95:LEU:CD1	39:DD:105:ILE:HG22	2.45	0.42
40:DE:31:CYS:O	40:DE:90:THR:HG23	2.19	0.42
41:DF:122:LYS:HB3	41:DF:191:ARG:HG3	2.02	0.42
41:DF:179:GLU:OE1	41:DF:179:GLU:N	2.53	0.42
42:DG:114:ILE:C	42:DG:116:ASP:N	2.72	0.42
43:DH:72:ILE:O	43:DH:75:ALA:N	2.50	0.42
43:DH:88:LEU:HD23	43:DH:164:TYR:O	2.20	0.42
44:DJ:96:UNK:C	44:DJ:98:UNK:N	2.78	0.42
46:DN:22:THR:HG22	46:DN:61:ARG:NH1	2.35	0.42
49:DQ:14:ARG:HG2	49:DQ:41:TRP:CH2	2.52	0.42
53:DU:37:GLU:O	53:DU:40:PHE:N	2.51	0.42
54:DV:91:TYR:H	54:DV:91:TYR:HD1	1.67	0.42
55:DW:85:VAL:CG1	55:DW:86:LEU:N	2.82	0.42
57:DY:38:ILE:HD13	57:DY:66:PRO:HD3	2.01	0.42
57:DY:64:GLU:O	57:DY:65:ALA:HB2	2.19	0.42
58:DZ:48:PHE:CD1	58:DZ:52:SER:HA	2.55	0.42
1:AA:19:C:H2'	1:AA:20:U:C6	2.54	0.42
1:AA:189(E):U:OP2	1:AA:189(E):U:H6	2.03	0.42
1:AA:277:C:O2'	1:AA:278:G:H5'	2.20	0.42
1:AA:423:G:C2'	1:AA:424:G:H5'	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:671:G:H2'	1:AA:672:U:O4'	2.20	0.42
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.19	0.42
2:AB:69:LEU:HB2	2:AB:159:PRO:CG	2.49	0.42
2:AB:71:VAL:HG12	2:AB:170:GLU:HG2	2.00	0.42
3:AC:20:SER:HB2	3:AC:40:ARG:NH2	2.24	0.42
3:AC:82:GLU:OE1	3:AC:82:GLU:N	2.45	0.42
8:AH:104:ARG:NH2	8:AH:138:TRP:CH2	2.87	0.42
25:AZ:38:GLU:HG3	25:AZ:39:ASN:CG	2.39	0.42
25:AZ:221:PHE:CZ	25:AZ:247:VAL:HG11	2.54	0.42
26:B0:7:LEU:CD2	49:BQ:81:VAL:CG2	2.97	0.42
26:B0:43:THR:O	26:B0:43:THR:CG2	2.65	0.42
28:B2:26:ARG:O	28:B2:29:LYS:HB2	2.19	0.42
29:B3:26:LEU:O	29:B3:27:GLY:C	2.57	0.42
31:B5:23:HIS:O	31:B5:24:ALA:C	2.57	0.42
32:B6:44:ARG:O	32:B6:45:LYS:CD	2.67	0.42
33:B7:10:ARG:NH1	33:B7:14:LYS:HZ2	2.17	0.42
34:B8:37:SER:O	34:B8:39:LYS:N	2.53	0.42
34:B8:61:LEU:N	34:B8:61:LEU:CD1	2.80	0.42
36:BA:142(A):C:O2'	36:BA:143:G:H5'	2.19	0.42
36:BA:231:C:C2	36:BA:232:G:H8	2.38	0.42
36:BA:417:C:C4	36:BA:418:G:N7	2.87	0.42
36:BA:616:G:OP1	41:BF:107:LYS:NZ	2.52	0.42
36:BA:977:G:O2'	36:BA:978:G:H5'	2.20	0.42
36:BA:1210:A:O2'	36:BA:1211:U:OP2	2.33	0.42
36:BA:2174:C:H1'	38:BC:218:MET:HA	2.01	0.42
36:BA:2202:C:H2'	36:BA:2203:U:O4'	2.19	0.42
36:BA:2319:G:O4'	36:BA:2319:G:OP2	2.38	0.42
36:BA:2415:G:C6	36:BA:2416:C:C4	3.08	0.42
36:BA:2692:C:C2	36:BA:2693:A:C8	3.07	0.42
36:BA:2892:A:H62	36:BA:2893:G:N2	2.16	0.42
38:BC:73:ARG:HG3	38:BC:73:ARG:NH1	2.32	0.42
38:BC:74:VAL:HG22	38:BC:156:ILE:HG21	2.01	0.42
39:BD:75:ILE:HG21	39:BD:99:ASP:CB	2.49	0.42
40:BE:50:GLY:CA	40:BE:78:LEU:HB3	2.34	0.42
40:BE:181:LEU:HD21	52:BT:7:ILE:HG22	2.01	0.42
40:BE:184:VAL:C	40:BE:186:GLY:N	2.73	0.42
42:BG:11:TYR:CZ	42:BG:33:ARG:HB3	2.54	0.42
42:BG:39:ILE:O	42:BG:39:ILE:HG13	2.20	0.42
42:BG:43:LEU:HD11	42:BG:153:ARG:CD	2.45	0.42
42:BG:150:ASP:O	42:BG:151:ALA:CB	2.67	0.42
43:BH:157:TYR:O	43:BH:157:TYR:CD1	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BJ:25:UNK:HA	44:BJ:116:UNK:CB	2.50	0.42
52:BT:105:LEU:HD22	52:BT:109:GLU:CD	2.39	0.42
58:BZ:8:TYR:O	58:BZ:37:VAL:HA	2.19	0.42
1:CA:373:A:C2	1:CA:374:A:C8	3.07	0.42
1:CA:852:G:C6	1:CA:853:G:N7	2.88	0.42
1:CA:877:C:O2'	1:CA:878:G:H5'	2.20	0.42
1:CA:1151:A:C5'	10:CJ:41:PRO:HA	2.48	0.42
1:CA:1330:U:H5'	1:CA:1331:G:OP2	2.19	0.42
2:CB:30:ARG:HB2	2:CB:30:ARG:NH1	2.29	0.42
8:CH:119:LEU:C	8:CH:120:THR:O	2.57	0.42
11:CK:107:SER:C	11:CK:108:ILE:HD12	2.40	0.42
13:CM:87:TYR:CZ	13:CM:91:ARG:HD3	2.54	0.42
14:CN:23:ARG:HD2	14:CN:28:GLY:O	2.20	0.42
20:CT:100:ILE:HG22	20:CT:102:GLY:N	2.30	0.42
22:CV:68:C:C2'	22:CV:69:G:H5"	2.49	0.42
25:CZ:96:ALA:O	25:CZ:99:MET:HG2	2.18	0.42
25:CZ:125:GLN:HG2	61:CZ:502:KIR:H423	2.02	0.42
25:CZ:267:VAL:O	25:CZ:267:VAL:HG13	2.20	0.42
26:D0:43:THR:HG22	36:DA:2331:G:O3'	2.20	0.42
27:D1:86:SER:O	27:D1:90:ILE:CG1	2.68	0.42
30:D4:9:LEU:CD1	30:D4:10:VAL:N	2.78	0.42
30:D4:9:LEU:O	30:D4:10:VAL:HB	2.18	0.42
31:D5:3:LYS:HG3	31:D5:4:HIS:N	2.35	0.42
31:D5:33:CYS:SG	31:D5:36:CYS:SG	3.13	0.42
34:D8:23:VAL:HG22	34:D8:48:PHE:HE1	1.84	0.42
36:DA:225:A:H2'	36:DA:226:G:O4'	2.19	0.42
36:DA:387:U:O5'	36:DA:387:U:H6	2.01	0.42
36:DA:582:G:H2'	36:DA:583:G:H8	1.83	0.42
36:DA:605:C:O2'	36:DA:606:U:H5'	2.18	0.42
36:DA:708:C:N4	36:DA:723:G:H1	2.14	0.42
36:DA:748:G:C8	55:DW:89:ALA:HB1	2.54	0.42
36:DA:815:C:H2'	36:DA:816:C:H6	1.84	0.42
36:DA:880:G:H2'	36:DA:881:G:C8	2.54	0.42
36:DA:954:G:H4'	49:DQ:13:GLN:NE2	2.34	0.42
36:DA:1103:A:H5"	36:DA:1104:C:C5	2.55	0.42
36:DA:1221:C:H2'	36:DA:1221(A):C:C6	2.55	0.42
36:DA:1304:C:H2'	36:DA:1305:C:C6	2.49	0.42
36:DA:1528(A):A:H3'	36:DA:1529:G:H8	1.85	0.42
36:DA:2517:C:C2	36:DA:2542:A:N1	2.88	0.42
36:DA:2529:G:OP2	36:DA:2530:A:H8	2.02	0.42
36:DA:2656:U:C2'	36:DA:2657:A:H5"	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DE:126:PRO:O	40:DE:135:HIS:HD2	2.01	0.42
41:DF:97:TYR:HD1	41:DF:97:TYR:N	2.16	0.42
42:DG:56:ALA:HA	42:DG:59:GLU:OE2	2.19	0.42
43:DH:30:LYS:NZ	43:DH:83:TYR:HE2	2.18	0.42
47:DO:78:ARG:CG	47:DO:79:PHE:N	2.78	0.42
48:DP:94:GLU:HG2	48:DP:96:THR:HG23	2.01	0.42
49:DQ:60:ARG:HH11	49:DQ:60:ARG:CB	2.32	0.42
50:DR:33:ARG:O	50:DR:34:ILE:HD13	2.20	0.42
50:DR:57:ARG:O	50:DR:58:GLY:C	2.57	0.42
51:DS:93:LYS:HD2	51:DS:93:LYS:HA	1.69	0.42
52:DT:19:LEU:HA	52:DT:20:PRO:HD3	1.83	0.42
52:DT:76:PHE:HA	52:DT:77:PRO:HD3	1.76	0.42
52:DT:95:ARG:NH1	52:DT:95:ARG:HB3	2.33	0.42
53:DU:8:VAL:O	53:DU:9:VAL:C	2.57	0.42
56:DX:12:VAL:HG12	56:DX:27:THR:O	2.20	0.42
56:DX:49:VAL:CG1	56:DX:87:GLN:HE21	2.33	0.42
1:AA:63:C:H5'	1:AA:63:C:H6	1.85	0.42
1:AA:177:C:O2'	1:AA:178:C:H5'	2.19	0.42
1:AA:243:A:C2	1:AA:246:A:C8	3.08	0.42
1:AA:275:G:P	17:AQ:14:LYS:HD2	2.59	0.42
1:AA:329:A:C5	1:AA:332:G:C6	3.08	0.42
1:AA:756:C:O2'	1:AA:757:U:H5'	2.18	0.42
1:AA:837:G:O2'	1:AA:838:G:H5'	2.19	0.42
1:AA:858:G:N7	1:AA:869:G:O6	2.52	0.42
1:AA:985:C:C2	1:AA:1221:G:N2	2.87	0.42
1:AA:992:U:H1'	1:AA:993:G:C2	2.54	0.42
1:AA:1050:G:O2'	1:AA:1051:C:OP2	2.38	0.42
2:AB:8:LYS:HE2	2:AB:217:ARG:HH12	1.85	0.42
9:AI:56:LEU:HB3	9:AI:57:GLY:H	1.60	0.42
10:AJ:86:MET:O	10:AJ:87:THR:HG23	2.20	0.42
16:AP:80:PHE:O	16:AP:82:GLN:N	2.53	0.42
25:AZ:155:ARG:NH1	25:AZ:155:ARG:HG2	2.34	0.42
25:AZ:388:ILE:N	25:AZ:396:GLY:O	2.53	0.42
26:B0:50:ASN:HD22	26:B0:63:VAL:CG1	2.33	0.42
34:B8:4:MET:O	34:B8:62:LEU:CD1	2.67	0.42
36:BA:154:G:C6	36:BA:173:G:N1	2.88	0.42
36:BA:271(D):G:O2'	36:BA:271(E):U:H5'	2.20	0.42
36:BA:718:A:H3'	36:BA:719:C:H6	1.85	0.42
36:BA:1263:U:C4	36:BA:1264:G:C6	3.07	0.42
38:BC:90:GLY:O	38:BC:153:ILE:HG21	2.19	0.42
39:BD:109:ASP:HB2	39:BD:197:GLY:CA	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BE:3:GLY:O	40:BE:4:ILE:HB	2.19	0.42
40:BE:7:VAL:O	40:BE:8:LYS:C	2.58	0.42
41:BF:63:LYS:O	41:BF:64:ILE:C	2.57	0.42
43:BH:85:LYS:NZ	43:BH:86:GLU:CA	2.82	0.42
46:BN:91:LEU:HD21	46:BN:98:VAL:HG21	2.00	0.42
48:BP:77:ARG:CZ	48:BP:77:ARG:HB2	2.49	0.42
48:BP:79:ARG:HG3	48:BP:110:TYR:HD2	1.83	0.42
49:BQ:141:GLN:HE21	49:BQ:141:GLN:HA	1.85	0.42
53:BU:37:GLU:O	53:BU:40:PHE:N	2.52	0.42
53:BU:53:ARG:O	53:BU:56:ASP:HB2	2.20	0.42
1:CA:51:A:H4'	1:CA:52:G:H5"	2.01	0.42
1:CA:59:A:H2'	1:CA:59:A:N3	2.33	0.42
1:CA:150:C:H6	1:CA:150:C:O5'	2.02	0.42
1:CA:189(H):G:O2'	1:CA:189(I):G:O5'	2.35	0.42
1:CA:383:A:H2'	1:CA:384:G:C5'	2.48	0.42
1:CA:460:G:N2	1:CA:471:G:OP2	2.53	0.42
1:CA:841:U:C2'	1:CA:848:C:O4'	2.68	0.42
1:CA:1117:G:O2'	9:CI:104:ARG:HD2	2.20	0.42
1:CA:1217:C:P	14:CN:9:LYS:NZ	2.91	0.42
1:CA:1299:A:N3	1:CA:1299:A:H2'	2.34	0.42
1:CA:1405:G:H21	1:CA:1518:A:H1'	1.84	0.42
2:CB:18:GLY:H	2:CB:42:ILE:CG2	2.32	0.42
7:CG:79:ARG:HA	7:CG:84:ASN:HA	2.01	0.42
9:CI:4:TYR:CE2	9:CI:88:TYR:HB2	2.55	0.42
10:CJ:31:GLY:O	10:CJ:32:ALA:O	2.38	0.42
10:CJ:49:VAL:HG13	10:CJ:50:ILE:N	2.33	0.42
16:CP:46:PRO:O	16:CP:47:ASP:HB2	2.19	0.42
16:CP:75:ARG:O	16:CP:78:GLY:N	2.49	0.42
17:CQ:94:ASN:C	17:CQ:96:GLU:H	2.23	0.42
18:CR:32:ARG:CA	18:CR:69:THR:HG21	2.47	0.42
24:CY:52:A:C2	24:CY:63:C:N3	2.88	0.42
25:CZ:86:ALA:O	25:CZ:88:TYR:N	2.52	0.42
25:CZ:94:THR:O	25:CZ:98:GLN:HG2	2.20	0.42
25:CZ:108:ALA:HB2	25:CZ:135:MET:HE2	2.00	0.42
25:CZ:192:GLU:H	25:CZ:192:GLU:HG3	1.55	0.42
25:CZ:196:VAL:O	25:CZ:196:VAL:HG12	2.19	0.42
26:D0:7:LEU:CD1	49:DQ:85:LYS:HG3	2.31	0.42
26:D0:24:LYS:HG3	36:DA:2355:C:H4'	2.00	0.42
27:D1:18:ILE:HD11	27:D1:20:ARG:NH1	2.33	0.42
27:D1:39:LYS:HB3	27:D1:39:LYS:HZ2	1.82	0.42
27:D1:60:PHE:HE1	27:D1:91:LYS:HG3	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:28:LYS:HA	28:D2:28:LYS:HD3	1.86	0.42
32:D6:26:ASN:CA	36:DA:2286:A:H2	2.28	0.42
36:DA:432:A:O2'	36:DA:433:C:H5'	2.19	0.42
36:DA:608:A:H2'	36:DA:609:A:H8	1.77	0.42
36:DA:733:G:C8	36:DA:761:A:N1	2.88	0.42
36:DA:876:C:H2'	36:DA:877:U:O4'	2.20	0.42
36:DA:915:C:H2'	36:DA:916:G:C8	2.54	0.42
36:DA:1060:U:H1'	36:DA:1061:U:OP2	2.20	0.42
36:DA:1063:G:N2	45:DK:89:UNK:HA	2.34	0.42
36:DA:1217:C:C4	36:DA:1218:C:C5	3.08	0.42
36:DA:1506:C:O2	36:DA:1506:C:H2'	2.20	0.42
36:DA:1649:G:H2'	36:DA:1650:G:C8	2.54	0.42
36:DA:1675:C:O2	40:DE:129:HIS:HA	2.19	0.42
36:DA:2027:G:N2	36:DA:2037:G:C4	2.88	0.42
36:DA:2230:G:C5	36:DA:2231:C:C5	3.07	0.42
36:DA:2360:A:O2'	36:DA:2361:A:C5'	2.67	0.42
36:DA:2660:A:OP1	36:DA:2660:A:H8	2.02	0.42
39:DD:176:ARG:CG	39:DD:176:ARG:NH1	2.81	0.42
40:DE:65:GLY:O	40:DE:70:ALA:HB2	2.20	0.42
41:DF:62:ARG:HH11	41:DF:62:ARG:HG2	1.84	0.42
41:DF:176:LEU:HG	41:DF:177:ALA:N	2.22	0.42
42:DG:11:TYR:HD1	42:DG:15:VAL:HB	1.84	0.42
42:DG:31:VAL:O	42:DG:31:VAL:HG13	2.19	0.42
42:DG:177:GLY:O	42:DG:179:PRO:HD3	2.19	0.42
43:DH:12:PRO:HB2	43:DH:15:VAL:HG22	2.01	0.42
43:DH:125:VAL:N	43:DH:126:PRO:CD	2.83	0.42
50:DR:33:ARG:HG2	50:DR:113:LEU:HD11	2.02	0.42
57:DY:63:LYS:HB3	57:DY:64:GLU:H	1.51	0.42
58:DZ:40:ASP:OD1	58:DZ:40:ASP:C	2.58	0.42
58:DZ:94:GLU:O	58:DZ:130:PRO:HD3	2.20	0.42
58:DZ:120:ILE:HG13	58:DZ:170:THR:HB	2.01	0.42
1:AA:123:C:OP1	1:AA:311:C:O2'	2.38	0.42
1:AA:1063:C:H2'	1:AA:1064:G:C8	2.55	0.42
1:AA:1282:C:C2'	1:AA:1283:G:H5'	2.49	0.42
1:AA:1337:G:H5"	1:AA:1338:G:OP1	2.19	0.42
10:AJ:4:ILE:N	10:AJ:4:ILE:CD1	2.69	0.42
10:AJ:4:ILE:HB	10:AJ:74:ILE:CG1	2.50	0.42
11:AK:13:GLN:HG2	11:AK:75:TYR:O	2.19	0.42
14:AN:9:LYS:O	14:AN:9:LYS:HG2	2.19	0.42
15:AO:18:PHE:CD1	15:AO:18:PHE:C	2.92	0.42
15:AO:24:SER:O	15:AO:25:THR:C	2.56	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:43:LYS:HA	16:AP:48:TRP:CD1	2.54	0.42
22:AW:8:U:O2'	22:AW:9:A:H5'	2.19	0.42
24:AY:27:C:H2'	24:AY:28:C:C6	2.55	0.42
25:AZ:145:GLU:HG2	25:AZ:145:GLU:O	2.20	0.42
25:AZ:355:LEU:HA	25:AZ:356:PRO:HD3	1.88	0.42
26:B0:34:GLY:O	26:B0:35:ASN:C	2.58	0.42
28:B2:26:ARG:C	28:B2:28:LYS:H	2.22	0.42
29:B3:54:VAL:CG1	29:B3:55:ARG:N	2.82	0.42
30:B4:37:SER:O	30:B4:38:LYS:CB	2.68	0.42
32:B6:15:GLU:O	32:B6:16:CYS:C	2.58	0.42
32:B6:27:LYS:CD	32:B6:30:THR:OG1	2.68	0.42
36:BA:78:A:H2'	36:BA:79:G:H8	1.83	0.42
36:BA:649:G:C6	36:BA:650:C:C4	3.07	0.42
36:BA:2154:G:H2'	36:BA:2155:G:C8	2.49	0.42
36:BA:2341:G:H2'	36:BA:2342:C:H6	1.83	0.42
36:BA:2578:G:H2'	36:BA:2579:C:C6	2.54	0.42
36:BA:2692:C:H1'	36:BA:2847:U:O2'	2.20	0.42
36:BA:2779:U:H1'	36:BA:2781:A:C6	2.53	0.42
37:BB:54:G:O2'	37:BB:55:U:H5'	2.19	0.42
38:BC:181:PRO:HG2	38:BC:184:LYS:HG2	2.00	0.42
39:BD:4:LYS:HZ2	39:BD:20:ASP:HA	1.83	0.42
39:BD:213:ARG:HD2	39:BD:213:ARG:HA	1.90	0.42
39:BD:273:ARG:O	39:BD:274:ARG:CB	2.68	0.42
40:BE:145:LYS:NZ	40:BE:145:LYS:HB3	2.35	0.42
43:BH:54:ARG:HH11	43:BH:54:ARG:CG	2.32	0.42
46:BN:46:VAL:HG13	46:BN:47:ALA:H	1.84	0.42
47:BO:49:ARG:HB2	47:BO:50:GLY:H	1.64	0.42
49:BQ:75:THR:HG23	49:BQ:88:GLY:C	2.40	0.42
53:BU:15:LYS:HA	53:BU:18:LEU:HB2	2.00	0.42
56:BX:21:PHE:N	56:BX:21:PHE:CD1	2.87	0.42
57:BY:2:ARG:HG2	57:BY:2:ARG:NH1	2.34	0.42
57:BY:28:LYS:HB3	57:BY:37:VAL:HB	2.02	0.42
57:BY:79:CYS:C	57:BY:81:LYS:H	2.23	0.42
58:BZ:4:ARG:CG	58:BZ:58:VAL:HB	2.33	0.42
1:CA:51:A:H4'	1:CA:52:G:C5'	2.49	0.42
1:CA:66:G:N2	1:CA:172:A:H2	2.18	0.42
1:CA:282:A:H3'	1:CA:283:C:H6	1.85	0.42
1:CA:475:G:H2'	1:CA:476:G:H8	1.84	0.42
1:CA:501:C:H1'	1:CA:549:C:H1'	2.02	0.42
1:CA:582:U:OP1	15:CO:68:ARG:NH2	2.52	0.42
1:CA:1175:G:O2'	1:CA:1176:A:H5'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:62:GLN:HA	4:CD:62:GLN:HE21	1.84	0.42
4:CD:80:GLU:O	4:CD:83:SER:HB2	2.20	0.42
4:CD:122:ARG:NH1	4:CD:134:ASP:HB2	2.34	0.42
15:CO:14:GLU:HA	15:CO:14:GLU:OE1	2.19	0.42
17:CQ:20:THR:HG23	17:CQ:43:LEU:CD2	2.50	0.42
19:CS:16:LEU:HA	19:CS:19:VAL:CB	2.50	0.42
22:CW:43:C:C3'	22:CW:44:G:O4'	2.68	0.42
25:CZ:138:VAL:CG2	25:CZ:173:GLY:H	2.31	0.42
25:CZ:178:ALA:HA	25:CZ:196:VAL:HG23	2.01	0.42
25:CZ:317:GLU:HA	25:CZ:370:PHE:O	2.19	0.42
26:D0:36:ILE:HG12	36:DA:2355:C:C4'	2.49	0.42
27:D1:26:ARG:O	27:D1:26:ARG:HD2	2.19	0.42
28:D2:32:LEU:HD23	28:D2:32:LEU:C	2.40	0.42
32:D6:15:GLU:CG	32:D6:18:ARG:CZ	2.97	0.42
32:D6:27:LYS:CD	32:D6:30:THR:OG1	2.68	0.42
36:DA:139(A):G:H3'	36:DA:140:G:H8	1.82	0.42
36:DA:271(V):G:O2'	36:DA:271(W):G:H5'	2.20	0.42
36:DA:745:G:C2'	36:DA:746:A:H5'	2.49	0.42
36:DA:766:C:H6	36:DA:766:C:O5'	2.03	0.42
36:DA:1060:U:H1'	36:DA:1061:U:P	2.58	0.42
36:DA:1468:C:H2'	36:DA:1469:A:C8	2.54	0.42
36:DA:1503:U:O2'	36:DA:1504:C:H5'	2.19	0.42
36:DA:1947:C:H2'	36:DA:1948:G:H5"	2.02	0.42
36:DA:2007:C:H2'	36:DA:2008:C:C6	2.55	0.42
36:DA:2072:G:C6	36:DA:2073:C:C4	3.08	0.42
36:DA:2157:G:C8	36:DA:2157:G:C3'	3.02	0.42
36:DA:2199:A:C8	36:DA:2225:A:C6	3.08	0.42
36:DA:2403:C:OP2	36:DA:2404:C:OP2	2.38	0.42
36:DA:2852:G:H2'	36:DA:2853:C:C6	2.54	0.42
38:DC:14:VAL:HG21	38:DC:32:LEU:HD11	2.01	0.42
39:DD:3:VAL:HG23	39:DD:200:ASP:OD1	2.18	0.42
39:DD:6:PHE:CE2	39:DD:13:ARG:NH2	2.88	0.42
39:DD:73:VAL:HA	39:DD:119:ALA:O	2.20	0.42
39:DD:172:TYR:CD1	39:DD:186:HIS:HA	2.55	0.42
41:DF:101:LEU:O	41:DF:106:ARG:HD3	2.19	0.42
42:DG:125:PHE:HB2	42:DG:126:ASP:H	1.62	0.42
42:DG:146:TYR:CG	42:DG:147:ASP:N	2.88	0.42
48:DP:108:LYS:C	48:DP:110:TYR:H	2.21	0.42
50:DR:99:LYS:CD	50:DR:99:LYS:N	2.67	0.42
50:DR:104:ARG:O	50:DR:105:ARG:C	2.56	0.42
54:DV:13:ARG:HG3	54:DV:13:ARG:NH1	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:137:ILE:HD12	58:DZ:158:PRO:CD	2.49	0.42
58:DZ:149:SER:OG	58:DZ:173:ALA:HA	2.19	0.42
1:AA:155:C:H2'	1:AA:156:G:C8	2.55	0.42
1:AA:252:U:C4	1:AA:253:U:O4	2.73	0.42
1:AA:304:U:O2'	1:AA:305:G:H5'	2.20	0.42
1:AA:987:G:H2'	1:AA:988:G:H8	1.84	0.42
1:AA:1354:C:H2'	1:AA:1355:G:H8	1.84	0.42
2:AB:115:LEU:HD11	2:AB:146:GLN:HB3	2.01	0.42
2:AB:149:LEU:O	2:AB:153:ARG:HB2	2.20	0.42
2:AB:209:ARG:NH1	2:AB:239:VAL:HG11	2.35	0.42
4:AD:127:THR:CG2	4:AD:128:VAL:N	2.83	0.42
10:AJ:42:THR:HG23	10:AJ:67:THR:O	2.20	0.42
17:AQ:26:GLN:HA	17:AQ:36:ILE:O	2.20	0.42
19:AS:41:VAL:HA	19:AS:42:PRO:HD3	1.97	0.42
25:AZ:69:GLU:HG2	25:AZ:273:HIS:ND1	2.35	0.42
25:AZ:200:TRP:CE3	25:AZ:203:LEU:CD1	2.93	0.42
25:AZ:354:GLN:HB2	25:AZ:371:THR:HB	2.02	0.42
28:B2:12:GLU:HA	28:B2:15:LYS:HE3	2.01	0.42
28:B2:22:GLU:N	28:B2:64:LEU:HD21	2.34	0.42
31:B5:27:PRO:HG3	55:BW:23:LEU:CD1	2.49	0.42
34:B8:12:LYS:CE	36:BA:247:G:O6	2.67	0.42
36:BA:18:C:O2'	36:BA:554:U:OP1	2.37	0.42
36:BA:237:C:H2'	36:BA:238:C:H6	1.85	0.42
36:BA:284:U:H6	36:BA:284:U:O5'	2.02	0.42
36:BA:359:A:H2'	36:BA:360:G:O4'	2.20	0.42
36:BA:1085:A:C4'	36:BA:1105:U:H4'	2.49	0.42
36:BA:1259:G:O2'	36:BA:1260:G:H5'	2.20	0.42
36:BA:1614:A:H62	55:BW:93:ALA:CB	2.31	0.42
36:BA:1993:U:C5'	40:BE:128:SER:HB3	2.50	0.42
36:BA:2358:G:O2'	36:BA:2359:C:H5'	2.20	0.42
36:BA:2447:G:H1	36:BA:2451:A:H62	1.68	0.42
36:BA:2742:C:O2'	36:BA:2743:C:H5'	2.19	0.42
37:BB:15:A:H1'	37:BB:110:G:C5	2.55	0.42
37:BB:28:C:O2'	37:BB:29:A:H5'	2.19	0.42
39:BD:34:VAL:O	39:BD:36:PRO:CD	2.67	0.42
40:BE:65:GLY:HA2	40:BE:70:ALA:CB	2.49	0.42
41:BF:170:LEU:HB2	41:BF:173:VAL:HB	2.01	0.42
42:BG:73:ALA:H	42:BG:87:PRO:HD3	1.84	0.42
42:BG:122:PRO:HG2	42:BG:123:ASN:N	2.35	0.42
43:BH:45:VAL:HG12	43:BH:45:VAL:O	2.19	0.42
43:BH:51:ARG:HG3	43:BH:52:VAL:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:38:VAL:CB	50:BR:39:PRO:HD3	2.42	0.42
50:BR:60:LEU:O	50:BR:64:ARG:N	2.38	0.42
52:BT:29:ARG:HD2	52:BT:30:VAL:HG13	2.02	0.42
55:BW:62:HIS:O	55:BW:63:ASP:C	2.57	0.42
56:BX:33:LYS:HE2	56:BX:33:LYS:HA	2.01	0.42
57:BY:73:ARG:HE	57:BY:73:ARG:CA	2.31	0.42
57:BY:81:LYS:HG3	57:BY:97:ARG:HD3	2.02	0.42
58:BZ:162:GLU:O	58:BZ:162:GLU:HG3	2.19	0.42
1:CA:274:A:H4'	1:CA:275:G:O5'	2.19	0.42
1:CA:451:A:H61	1:CA:480:U:H2'	1.83	0.42
1:CA:1313:U:OP2	19:CS:6:LYS:HA	2.18	0.42
3:CC:68:VAL:CG1	3:CC:70:VAL:HG23	2.49	0.42
4:CD:107:ARG:NH1	4:CD:114:ARG:HH21	2.18	0.42
5:CE:72:GLN:C	5:CE:74:GLY:N	2.72	0.42
5:CE:107:ARG:O	5:CE:108:ALA:C	2.58	0.42
6:CF:78:GLU:C	6:CF:80:ARG:H	2.23	0.42
12:CL:20:LYS:H	12:CL:20:LYS:CD	2.31	0.42
12:CL:32:PHE:HB3	12:CL:84:LEU:HD21	2.01	0.42
12:CL:97:ARG:C	12:CL:98:TYR:CD1	2.93	0.42
13:CM:49:THR:HG22	13:CM:51:ALA:N	2.18	0.42
15:CO:57:LEU:HD23	15:CO:57:LEU:HA	1.63	0.42
17:CQ:13:ASP:OD1	17:CQ:13:ASP:N	2.51	0.42
17:CQ:20:THR:HG23	17:CQ:43:LEU:HD23	2.01	0.42
17:CQ:58:GLU:O	17:CQ:59:ILE:HD13	2.19	0.42
18:CR:70:ILE:O	18:CR:73:ALA:N	2.52	0.42
20:CT:41:ILE:C	20:CT:43:LEU:H	2.23	0.42
20:CT:72:LEU:O	20:CT:76:ALA:HB3	2.20	0.42
25:CZ:135:MET:CE	25:CZ:138:VAL:HG22	2.50	0.42
27:D1:21:ARG:HH11	27:D1:21:ARG:HB2	1.83	0.42
29:D3:36:VAL:O	29:D3:36:VAL:HG23	2.20	0.42
32:D6:33:LYS:HE2	32:D6:33:LYS:CA	2.45	0.42
36:DA:226:G:O2'	36:DA:227:A:C8	2.71	0.42
36:DA:821:A:H5"	36:DA:822:U:H6	1.85	0.42
36:DA:827:U:H2'	36:DA:2068:U:O2	2.20	0.42
36:DA:2174:C:O2'	36:DA:2175:C:H5'	2.20	0.42
36:DA:2380:C:O2'	36:DA:2381:C:H5'	2.20	0.42
36:DA:2547:U:H2'	36:DA:2548:G:H8	1.84	0.42
36:DA:2659:G:C3'	36:DA:2660:A:H5"	2.50	0.42
37:DB:21:G:H2'	37:DB:22:U:C5'	2.50	0.42
37:DB:114:C:O2'	51:DS:46:VAL:HG13	2.19	0.42
38:DC:84:LYS:HA	38:DC:87:GLU:OE1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:35:LYS:CE	39:DD:36:PRO:HD3	2.49	0.42
39:DD:97:TYR:C	39:DD:99:ASP:N	2.72	0.42
40:DE:5:LEU:HD11	40:DE:49:LEU:O	2.20	0.42
40:DE:16:ARG:HH12	40:DE:171:GLU:CD	2.23	0.42
40:DE:56:PRO:O	40:DE:57:LYS:HD2	2.19	0.42
40:DE:176:ILE:HG22	40:DE:179:GLU:H	1.85	0.42
41:DF:116:ASP:OD2	48:DP:5:ASP:N	2.53	0.42
43:DH:16:SER:HB2	43:DH:27:LYS:CB	2.42	0.42
46:DN:3:THR:CG2	46:DN:4:TYR:N	2.70	0.42
50:DR:87:TYR:O	50:DR:88:ARG:C	2.58	0.42
51:DS:15:ARG:NH1	51:DS:15:ARG:CB	2.82	0.42
52:DT:23:ARG:HG2	52:DT:120:ARG:HH12	1.85	0.42
57:DY:29:GLU:HB2	57:DY:38:ILE:HG23	2.01	0.42
58:DZ:152:ALA:HB3	58:DZ:168:GLU:HA	2.02	0.42
1:AA:135:C:O2	16:AP:1:MET:N	2.48	0.42
1:AA:501:C:O2'	1:AA:502:G:H5'	2.20	0.42
1:AA:902:G:O2'	1:AA:903:G:H5'	2.19	0.42
1:AA:1036:G:H5'	1:AA:1037:C:OP2	2.19	0.42
1:AA:1202:G:O2'	1:AA:1203:C:H5'	2.19	0.42
1:AA:1299:A:C6	1:AA:1301:U:C2	3.08	0.42
2:AB:164:VAL:HG12	2:AB:165:VAL:N	2.35	0.42
2:AB:194:PRO:O	2:AB:197:VAL:N	2.53	0.42
3:AC:78:GLY:HA3	3:AC:83:ARG:CB	2.50	0.42
4:AD:190:ASP:HB3	4:AD:193:ASP:OD2	2.19	0.42
5:AE:28:PHE:O	5:AE:47:LYS:HA	2.20	0.42
10:AJ:38:ILE:HD12	10:AJ:38:ILE:C	2.39	0.42
10:AJ:46:ARG:HH11	10:AJ:46:ARG:CG	2.33	0.42
11:AK:108:ILE:HG21	18:AR:88:LYS:OXT	2.20	0.42
12:AL:31:PRO:HB2	12:AL:32:PHE:CD2	2.55	0.42
12:AL:34:ARG:O	12:AL:60:LEU:HD13	2.19	0.42
13:AM:78:ILE:HA	13:AM:81:LEU:HD23	2.01	0.42
16:AP:60:LEU:HD23	16:AP:60:LEU:HA	1.75	0.42
16:AP:67:THR:CG2	16:AP:68:ASP:H	2.27	0.42
20:AT:100:ILE:C	20:AT:102:GLY:N	2.73	0.42
21:AU:2:GLY:C	21:AU:4:GLY:N	2.73	0.42
25:AZ:100:ASP:O	25:AZ:129:PRO:HG2	2.19	0.42
25:AZ:214:VAL:O	25:AZ:214:VAL:HG13	2.20	0.42
25:AZ:267:VAL:O	25:AZ:267:VAL:HG13	2.19	0.42
27:B1:65:SER:C	27:B1:67:ILE:H	2.23	0.42
27:B1:81:LYS:HE2	36:BA:155:U:C5	2.55	0.42
30:B4:4:GLY:N	30:B4:6:HIS:CE1	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:7:G:H4'	46:BN:13:TRP:CZ2	2.54	0.42
36:BA:636:G:H2'	48:BP:115:LEU:HD12	2.02	0.42
36:BA:984:A:H5"	36:BA:985:C:C5	2.44	0.42
36:BA:1051:G:C4	36:BA:1052:C:N4	2.88	0.42
36:BA:1141:U:C6	46:BN:63:THR:HB	2.55	0.42
36:BA:1628:G:H2'	36:BA:1629:U:C6	2.54	0.42
36:BA:1747(A):G:C3'	36:BA:1748:G:H5"	2.49	0.42
36:BA:1855:G:O2'	36:BA:1856:G:H5'	2.20	0.42
36:BA:2134:A:H1'	36:BA:2159:G:N3	2.35	0.42
36:BA:2263:C:O2'	36:BA:2264:C:H5'	2.20	0.42
36:BA:2282:G:H4'	36:BA:2283:C:O5'	2.19	0.42
36:BA:2360:A:O2'	36:BA:2361:A:H8	2.03	0.42
36:BA:2464:C:O2'	36:BA:2465:C:P	2.77	0.42
36:BA:2678:C:C2	36:BA:2679:A:C8	3.08	0.42
36:BA:2847:U:H5"	52:BT:97:ALA:CB	2.50	0.42
37:BB:22:U:H2'	37:BB:23:G:C8	2.55	0.42
39:BD:65:ILE:CD1	39:BD:65:ILE:N	2.79	0.42
40:BE:6:GLY:C	40:BE:196:VAL:HG22	2.40	0.42
40:BE:27:LEU:HD22	52:BT:1:MET:H3	1.85	0.42
40:BE:34:VAL:HG13	40:BE:34:VAL:O	2.20	0.42
41:BF:41:LEU:O	41:BF:44:ARG:HG2	2.20	0.42
41:BF:60:SER:OG	41:BF:61:GLY:N	2.53	0.42
42:BG:66:GLN:OE1	42:BG:98:ARG:HD2	2.20	0.42
47:BO:113:LYS:HA	47:BO:116:SER:OG	2.20	0.42
49:BQ:18:LYS:CB	49:BQ:98:LYS:NZ	2.82	0.42
52:BT:76:PHE:HA	52:BT:77:PRO:HD3	1.89	0.42
52:BT:96:ARG:HH11	52:BT:96:ARG:CB	2.30	0.42
53:BU:47:TYR:CE1	54:BV:74:LYS:NZ	2.88	0.42
54:BV:91:TYR:HD1	54:BV:91:TYR:N	2.18	0.42
55:BW:17:VAL:C	55:BW:19:LEU:N	2.73	0.42
56:BX:27:THR:HA	56:BX:79:ALA:O	2.20	0.42
56:BX:41:ASN:O	56:BX:45:THR:HG23	2.20	0.42
58:BZ:79:ARG:O	58:BZ:80:ARG:CB	2.68	0.42
1:CA:22:G:O2'	1:CA:913:A:N1	2.49	0.42
1:CA:117:G:C2'	1:CA:118:U:H5'	2.50	0.42
1:CA:473:G:OP1	16:CP:81:ARG:HB2	2.20	0.42
1:CA:511:C:C2	1:CA:512:U:C5	3.07	0.42
1:CA:878:G:H5'	8:CH:89:PRO:HG2	2.01	0.42
1:CA:1126:U:OP2	1:CA:1281:U:C2	2.72	0.42
1:CA:1129:C:O2'	1:CA:1131:G:C8	2.67	0.42
1:CA:1158:C:C5	1:CA:1160:G:H1'	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1200:C:O2'	1:CA:1201:A:P	2.78	0.42
1:CA:1348:U:H2'	1:CA:1349:A:H8	1.85	0.42
2:CB:17:PHE:O	2:CB:18:GLY:O	2.37	0.42
3:CC:52:LEU:HD11	3:CC:55:VAL:HG23	2.00	0.42
5:CE:12:LEU:CD1	5:CE:31:LEU:CB	2.97	0.42
5:CE:17:ALA:HB2	5:CE:26:PHE:CD1	2.52	0.42
8:CH:11:THR:O	8:CH:12:ARG:C	2.58	0.42
9:CI:47:LEU:C	9:CI:49:PRO:HD2	2.39	0.42
9:CI:52:ALA:CB	9:CI:95:LYS:HD2	2.50	0.42
11:CK:66:LEU:HD23	11:CK:66:LEU:HA	1.85	0.42
11:CK:80:VAL:N	11:CK:104:GLN:O	2.48	0.42
12:CL:119:LYS:O	12:CL:120:TYR:HB2	2.19	0.42
13:CM:96:LEU:CB	13:CM:97:PRO:HD2	2.49	0.42
16:CP:18:ARG:CG	16:CP:35:LYS:HE2	2.49	0.42
19:CS:49:ILE:H	19:CS:49:ILE:HD12	1.84	0.42
22:CV:53:G:O2'	22:CV:54:U:H5'	2.19	0.42
24:CY:76:A:OP1	25:CZ:274:ARG:NH1	2.50	0.42
25:CZ:217:VAL:HG11	25:CZ:281:ILE:HG22	2.02	0.42
26:D0:23:VAL:HG11	26:D0:69:PHE:HZ	1.85	0.42
26:D0:36:ILE:HD12	26:D0:36:ILE:H	1.85	0.42
26:D0:56:ASP:OD1	26:D0:58:THR:OG1	2.30	0.42
27:D1:29:GLY:HA3	36:DA:2396:G:O2'	2.20	0.42
27:D1:82:LEU:HD11	27:D1:90:ILE:CD1	2.49	0.42
31:D5:2:ALA:N	36:DA:747:U:N3	2.68	0.42
35:D9:7:VAL:HG13	35:D9:34:GLN:HG2	2.01	0.42
36:DA:194:G:C6	36:DA:195:A:C5	3.07	0.42
36:DA:600:G:O2'	41:DF:105:VAL:HG22	2.20	0.42
36:DA:733:G:N7	36:DA:761:A:N1	2.68	0.42
36:DA:1048:A:N6	36:DA:1111:A:C8	2.88	0.42
36:DA:1623:G:C2	36:DA:1624:G:C8	3.08	0.42
36:DA:1641:A:H2'	36:DA:1642:G:O4'	2.20	0.42
36:DA:1644:C:O2	36:DA:1644:C:H2'	2.19	0.42
36:DA:1759:A:H4'	36:DA:2715:C:O4'	2.20	0.42
36:DA:2048:G:H2'	36:DA:2049:G:O5'	2.20	0.42
36:DA:2058:A:N6	36:DA:2059:A:N6	2.68	0.42
36:DA:2266:A:H1'	36:DA:2272:U:O4	2.20	0.42
36:DA:2680:C:OP1	40:DE:109:LYS:HG3	2.20	0.42
36:DA:2810:A:O2'	40:DE:61:ARG:CZ	2.68	0.42
38:DC:45:ALA:HB3	38:DC:171:ILE:HG22	2.02	0.42
38:DC:139:ASN:H	38:DC:144:THR:HG1	1.64	0.42
38:DC:196:LEU:O	38:DC:199:HIS:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DD:72:LYS:HZ1	39:DD:101:GLU:HB3	1.84	0.42
39:DD:79:VAL:CG2	39:DD:111:LEU:HD11	2.50	0.42
39:DD:273:ARG:O	39:DD:274:ARG:HB3	2.20	0.42
40:DE:33:VAL:CG1	40:DE:69:LYS:HD2	2.47	0.42
40:DE:128:SER:O	40:DE:129:HIS:HB2	2.20	0.42
40:DE:164:ARG:HG3	40:DE:164:ARG:NH1	2.34	0.42
41:DF:25:PRO:CG	41:DF:119:ARG:HB2	2.49	0.42
41:DF:187:VAL:CG1	48:DP:7:ARG:HA	2.47	0.42
42:DG:81:LYS:O	42:DG:82:LEU:O	2.38	0.42
43:DH:85:LYS:NZ	43:DH:85:LYS:C	2.73	0.42
43:DH:169:VAL:HG22	43:DH:170:ARG:N	2.35	0.42
46:DN:4:TYR:O	46:DN:5:VAL:C	2.59	0.42
47:DO:102:VAL:HB	47:DO:106:LEU:HD12	2.02	0.42
49:DQ:55:VAL:HG22	49:DQ:56:ARG:N	2.35	0.42
57:DY:68:HIS:CE1	57:DY:70:SER:HB2	2.55	0.42
1:AA:199:G:O2'	1:AA:200:G:H5'	2.20	0.42
1:AA:404:U:H5"	4:AD:122:ARG:HD3	2.00	0.42
1:AA:1031:G:H2'	1:AA:1032:G:O4'	2.20	0.42
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.19	0.42
2:AB:15:VAL:N	2:AB:16:HIS:CE1	2.87	0.42
4:AD:126:ILE:HD12	4:AD:126:ILE:N	2.35	0.42
5:AE:45:PHE:CE2	5:AE:47:LYS:HD2	2.55	0.42
9:AI:43:ALA:C	9:AI:45:ALA:N	2.73	0.42
10:AJ:90:LEU:N	10:AJ:91:PRO:CD	2.83	0.42
11:AK:103:LEU:CD1	11:AK:104:GLN:N	2.83	0.42
16:AP:22:THR:HG22	16:AP:32:TYR:HB3	2.02	0.42
18:AR:31:LEU:HD23	18:AR:31:LEU:N	2.35	0.42
19:AS:32:LYS:HZ2	19:AS:32:LYS:HB3	1.85	0.42
19:AS:63:THR:HG23	19:AS:66:MET:HG2	2.01	0.42
25:AZ:7:ARG:NH1	25:AZ:281:ILE:CD1	2.82	0.42
25:AZ:116:THR:O	25:AZ:120:ILE:HG13	2.19	0.42
25:AZ:234:ARG:HB3	25:AZ:289:LEU:CD2	2.49	0.42
25:AZ:309:SER:O	25:AZ:310:ILE:CG2	2.58	0.42
25:AZ:363:MET:O	25:AZ:366:ASP:HB2	2.20	0.42
30:B4:22:ILE:HG21	42:BG:108:ASN:ND2	2.34	0.42
31:B5:30:LEU:HB3	31:B5:40:LYS:O	2.20	0.42
35:B9:29:ASN:ND2	35:B9:29:ASN:O	2.53	0.42
36:BA:385:C:O2	48:BP:71:VAL:HG21	2.19	0.42
36:BA:703:U:O2'	36:BA:704:G:H5'	2.20	0.42
36:BA:927:G:H3'	36:BA:928:G:H8	1.84	0.42
36:BA:968:G:H2'	36:BA:969:U:H6	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1221:C:O2	36:BA:1221:C:C2'	2.68	0.42
36:BA:1409:C:O2'	36:BA:1410:G:H5'	2.20	0.42
36:BA:1652:A:N7	36:BA:1653:G:C6	2.88	0.42
36:BA:2174:C:H2'	36:BA:2175:C:C5'	2.50	0.42
36:BA:2189:U:H5'	36:BA:2190:G:OP2	2.19	0.42
36:BA:2242:G:C2'	36:BA:2243:U:O5'	2.68	0.42
36:BA:2517:C:C2	36:BA:2542:A:N6	2.88	0.42
36:BA:2624:G:O2'	36:BA:2625:G:H5'	2.20	0.42
37:BB:7:G:N3	51:BS:38:GLN:NE2	2.63	0.42
37:BB:52:A:O2'	37:BB:53:A:C8	2.73	0.42
37:BB:114:C:H4'	51:BS:46:VAL:HG13	2.02	0.42
40:BE:52:LEU:HD23	40:BE:75:VAL:CG1	2.50	0.42
41:BF:201:VAL:O	41:BF:202:PHE:C	2.58	0.42
42:BG:8:LYS:O	42:BG:9:ARG:C	2.57	0.42
43:BH:141:VAL:O	43:BH:145:ALA:HB2	2.19	0.42
45:BK:88:UNK:O	45:BK:89:UNK:CB	2.68	0.42
47:BO:43:VAL:HG23	47:BO:56:ASP:O	2.20	0.42
47:BO:61:VAL:HG12	47:BO:87:ILE:HD11	2.02	0.42
47:BO:80:ASP:OD2	52:BT:71:GLY:CA	2.68	0.42
48:BP:113:LYS:HG2	48:BP:114:ILE:N	2.30	0.42
48:BP:125:VAL:O	48:BP:125:VAL:HG13	2.19	0.42
49:BQ:97:VAL:O	49:BQ:97:VAL:HG23	2.19	0.42
50:BR:22:ARG:HG2	50:BR:69:ASP:HB3	2.02	0.42
50:BR:28:LEU:HD12	50:BR:28:LEU:HA	1.94	0.42
52:BT:74:ARG:C	52:BT:75:ILE:HD12	2.39	0.42
52:BT:128:GLU:O	52:BT:129:ARG:C	2.58	0.42
53:BU:6:THR:HG21	53:BU:10:ARG:CZ	2.49	0.42
53:BU:35:ALA:O	53:BU:36:ARG:C	2.57	0.42
54:BV:66:ARG:HE	54:BV:88:ARG:HD2	1.81	0.42
58:BZ:5:LEU:HD23	58:BZ:6:LYS:N	2.35	0.42
1:CA:438:G:H4'	4:CD:123:HIS:CE1	2.55	0.42
1:CA:474:G:H2'	1:CA:475:G:C8	2.55	0.42
1:CA:956:U:H2'	1:CA:957:U:O4'	2.20	0.42
1:CA:963:G:H21	10:CJ:55:LYS:HG2	1.85	0.42
1:CA:966:G:H2'	1:CA:967:C:C6	2.55	0.42
1:CA:1308:U:OP2	13:CM:99:ARG:HG3	2.20	0.42
1:CA:1343:G:O2'	9:CI:121:ARG:HA	2.20	0.42
1:CA:1377:A:O3'	1:CA:1378:C:H6	2.03	0.42
3:CC:43:LEU:HD13	3:CC:68:VAL:HG21	2.01	0.42
4:CD:109:GLY:HA3	4:CD:165:MET:CE	2.50	0.42
5:CE:64:ARG:HG2	5:CE:64:ARG:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:22:GLU:HA	6:CF:25:ILE:HG22	2.01	0.42
13:CM:3:ARG:HE	13:CM:7:VAL:HA	1.84	0.42
13:CM:10:PRO:CG	13:CM:18:ALA:HB1	2.50	0.42
15:CO:6:GLU:HG2	15:CO:7:GLU:H	1.85	0.42
24:CY:19:G:C8	24:CY:57:G:N2	2.88	0.42
34:D8:61:LEU:H	34:D8:61:LEU:CD1	2.02	0.42
35:D9:15:LYS:HB3	35:D9:15:LYS:HZ2	1.85	0.42
35:D9:19:ARG:C	35:D9:21:GLY:H	2.23	0.42
36:DA:29:U:O2'	36:DA:30:G:H5'	2.20	0.42
36:DA:36:G:H2'	36:DA:37:C:C6	2.53	0.42
36:DA:178:G:C6	36:DA:179:G:N7	2.88	0.42
36:DA:303:U:H2'	36:DA:304:G:H8	1.82	0.42
36:DA:327:G:O2'	36:DA:328:U:H5'	2.20	0.42
36:DA:860:U:H1'	36:DA:2268:A:H5'	2.02	0.42
36:DA:863:A:H2'	36:DA:864:G:C8	2.54	0.42
36:DA:1149:G:H2'	36:DA:1150:C:C6	2.54	0.42
36:DA:1525:G:H2'	36:DA:1526:G:C8	2.54	0.42
36:DA:1720:U:H2'	36:DA:1721:G:O4'	2.19	0.42
36:DA:2010:G:O2'	36:DA:2011:U:H5'	2.20	0.42
36:DA:2129:C:OP1	38:DC:6:ARG:HB3	2.19	0.42
36:DA:2207:G:C2'	36:DA:2208:A:H5"	2.50	0.42
36:DA:2403:C:O2	36:DA:2403:C:H2'	2.20	0.42
36:DA:2443:C:O2'	36:DA:2444:G:H5'	2.19	0.42
36:DA:2486:G:C2'	36:DA:2487:G:O5'	2.67	0.42
36:DA:2811:G:O2'	36:DA:2812:G:H5'	2.20	0.42
37:DB:97:G:C2	37:DB:98:G:C8	3.08	0.42
39:DD:257:LEU:HD23	39:DD:258:LYS:N	2.35	0.42
40:DE:59:VAL:O	40:DE:60:ASN:CG	2.59	0.42
40:DE:64:LYS:HG2	40:DE:64:LYS:O	2.19	0.42
40:DE:68:ALA:HB3	40:DE:69:LYS:HZ1	1.84	0.42
41:DF:53:THR:O	41:DF:57:VAL:HG23	2.20	0.42
41:DF:143:ALA:O	41:DF:146:ALA:HB3	2.19	0.42
42:DG:112:PRO:O	42:DG:114:ILE:HG22	2.20	0.42
43:DH:106:THR:HG22	43:DH:112:PRO:HB3	2.02	0.42
43:DH:154:PRO:O	43:DH:155:SER:OG	2.23	0.42
54:DV:64:HIS:CE1	54:DV:92:THR:HB	2.55	0.42
55:DW:37:ARG:NH1	55:DW:37:ARG:CG	2.83	0.42
55:DW:53:SER:O	55:DW:56:ALA:HB3	2.19	0.42
56:DX:36:LYS:HE3	56:DX:36:LYS:HB2	1.81	0.42
57:DY:38:ILE:HG23	57:DY:38:ILE:O	2.19	0.42
58:DZ:23:LYS:HD3	58:DZ:38:TYR:CE1	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:101:A:C2	1:AA:102:G:C8	3.07	0.41
1:AA:177:C:OP1	20:AT:65:LYS:NZ	2.48	0.41
1:AA:184:G:C4'	1:AA:224:C:H4'	2.50	0.41
1:AA:425:G:O2'	1:AA:426:G:H5'	2.20	0.41
1:AA:748:C:H1'	1:AA:749:C:H5	1.85	0.41
1:AA:835:U:O2'	1:AA:836:G:H5'	2.20	0.41
1:AA:858:G:H8	1:AA:858:G:O5'	2.02	0.41
1:AA:878:G:H5"	8:AH:89:PRO:HG2	2.01	0.41
1:AA:977:A:O2'	1:AA:978:A:C5'	2.68	0.41
3:AC:87:LEU:O	3:AC:91:LEU:HG	2.18	0.41
7:AG:132:GLY:O	7:AG:136:LYS:HG2	2.19	0.41
8:AH:38:ILE:CG2	8:AH:120:THR:HG22	2.50	0.41
12:AL:91:LYS:HB3	12:AL:91:LYS:HZ3	1.80	0.41
13:AM:56:LEU:O	13:AM:57:ARG:C	2.58	0.41
15:AO:11:VAL:O	15:AO:15:PHE:HD1	2.02	0.41
17:AQ:45:HIS:HB2	17:AQ:65:ILE:HD12	2.02	0.41
21:AU:9:ARG:HH12	21:AU:23:PRO:CD	2.18	0.41
25:AZ:169:PRO:O	25:AZ:171:ILE:HD12	2.20	0.41
25:AZ:192:GLU:O	25:AZ:193:ASN:O	2.39	0.41
28:B2:3:LEU:HB3	36:BA:98:G:OP1	2.19	0.41
28:B2:29:LYS:HB3	28:B2:33:MET:CG	2.50	0.41
28:B2:48:HIS:N	36:BA:95:G:H4'	2.35	0.41
28:B2:52:ASP:OD1	28:B2:52:ASP:N	2.52	0.41
32:B6:9:LEU:HD13	32:B6:11:LEU:HD22	2.02	0.41
32:B6:18:ARG:HD2	32:B6:19:ARG:HD2	2.02	0.41
36:BA:445:C:H4'	53:BU:3:ARG:HD2	2.02	0.41
36:BA:547:A:H2'	36:BA:548:A:C8	2.54	0.41
36:BA:556:G:H2'	36:BA:557:U:C6	2.55	0.41
36:BA:733:G:N7	36:BA:761:A:N1	2.67	0.41
36:BA:917:A:O2'	36:BA:918:A:H5'	2.20	0.41
36:BA:975(A):G:H1'	36:BA:990:A:C2	2.55	0.41
36:BA:1351:C:C6	36:BA:1381:G:C2	3.08	0.41
36:BA:1363:C:H2'	36:BA:1364:G:C8	2.55	0.41
36:BA:1493:C:C5	36:BA:2206:G:O2'	2.72	0.41
36:BA:1510:G:H2'	36:BA:1511:C:C6	2.55	0.41
36:BA:2168:G:N2	36:BA:2170:A:H3'	2.35	0.41
36:BA:2282:G:OP1	36:BA:2283:C:H1'	2.20	0.41
37:BB:34:U:OP1	42:BG:3:LEU:HD13	2.20	0.41
38:BC:77:ILE:HB	38:BC:115:ALA:HB2	2.02	0.41
39:BD:27:THR:O	39:BD:27:THR:HG23	2.19	0.41
40:BE:101:ARG:HB3	40:BE:201:THR:HG21	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BF:123:LEU:HD12	41:BF:124:LEU:N	2.33	0.41
42:BG:114:ILE:O	42:BG:115:ARG:C	2.58	0.41
46:BN:85:ILE:HG22	46:BN:89:LYS:HB2	2.02	0.41
50:BR:44:LEU:HD13	50:BR:44:LEU:O	2.20	0.41
51:BS:13:ARG:CG	51:BS:14:VAL:N	2.82	0.41
51:BS:73:LEU:HD23	51:BS:73:LEU:C	2.40	0.41
52:BT:38:ASN:ND2	52:BT:38:ASN:O	2.28	0.41
55:BW:107:LEU:N	55:BW:107:LEU:CD1	2.81	0.41
58:BZ:5:LEU:HD23	58:BZ:6:LYS:H	1.84	0.41
58:BZ:30:ASN:ND2	58:BZ:33:LEU:HB3	2.34	0.41
58:BZ:103:ARG:NH1	58:BZ:136:PHE:HB2	2.35	0.41
1:CA:55:A:C2	1:CA:56:U:H1'	2.55	0.41
1:CA:105:G:H2'	1:CA:106:C:H6	1.83	0.41
1:CA:428:G:O2'	1:CA:429:U:P	2.78	0.41
1:CA:471:G:H21	16:CP:82:GLN:HE22	1.65	0.41
1:CA:644:G:C4	1:CA:645:C:C6	3.07	0.41
1:CA:675:A:H2'	1:CA:676:A:O4'	2.20	0.41
1:CA:990:C:C6	1:CA:1216:G:N2	2.88	0.41
1:CA:1055:A:H2'	1:CA:1056:U:O5'	2.20	0.41
1:CA:1198:G:H2'	1:CA:1199:U:C6	2.54	0.41
1:CA:1230:C:H2'	1:CA:1231:G:H8	1.85	0.41
1:CA:1266:G:H2'	1:CA:1268:A:OP2	2.20	0.41
1:CA:1283:G:O2'	1:CA:1284:C:P	2.77	0.41
1:CA:1370:G:C2	1:CA:1371:G:N7	2.88	0.41
1:CA:1529:G:H4'	1:CA:1530:G:OP2	2.19	0.41
2:CB:8:LYS:HB2	2:CB:9:GLU:H	1.57	0.41
2:CB:61:LEU:O	2:CB:64:ARG:HG2	2.20	0.41
3:CC:64:VAL:HG12	3:CC:66:VAL:CG2	2.48	0.41
3:CC:203:PHE:C	3:CC:203:PHE:CD1	2.93	0.41
4:CD:59:ARG:CA	4:CD:59:ARG:NE	2.75	0.41
4:CD:95:GLY:CA	4:CD:188:LEU:HD21	2.50	0.41
4:CD:190:ASP:O	4:CD:191:ARG:C	2.58	0.41
5:CE:133:TYR:C	5:CE:135:THR:H	2.24	0.41
6:CF:45:LEU:O	6:CF:46:ARG:HG3	2.20	0.41
9:CI:16:ARG:HG3	9:CI:16:ARG:NH1	2.35	0.41
10:CJ:35:SER:HB3	10:CJ:73:ASP:HB2	2.02	0.41
12:CL:44:THR:HA	12:CL:45:PRO:HD3	1.79	0.41
17:CQ:91:ARG:HH11	17:CQ:91:ARG:CG	2.32	0.41
18:CR:85:LEU:HD12	18:CR:86:VAL:H	1.83	0.41
19:CS:40:ILE:HG13	19:CS:69:HIS:O	2.20	0.41
21:CU:18:TYR:HA	21:CU:22:ARG:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CW:35:A:C2	23:CX:17:U:O4	2.73	0.41
25:CZ:310:ILE:HD13	25:CZ:310:ILE:HA	1.88	0.41
27:D1:45:ASN:C	27:D1:45:ASN:ND2	2.73	0.41
27:D1:70:VAL:CG1	27:D1:71:TYR:N	2.82	0.41
28:D2:48:HIS:HD2	28:D2:49:LYS:H	1.61	0.41
29:D3:15:TYR:HB3	29:D3:16:PRO:HD2	2.02	0.41
32:D6:7:ILE:HG22	32:D6:7:ILE:O	2.20	0.41
32:D6:45:LYS:HB2	36:DA:2371:G:H4'	2.00	0.41
33:D7:32:LYS:O	33:D7:36:GLN:HB2	2.20	0.41
34:D8:48:PHE:C	34:D8:49:VAL:CG2	2.88	0.41
36:DA:560:C:O2	53:DU:49:HIS:CE1	2.72	0.41
36:DA:678:C:H2'	36:DA:679:C:C6	2.54	0.41
36:DA:690:G:H2'	36:DA:691:C:C6	2.56	0.41
36:DA:782:A:N1	39:DD:226:MET:CE	2.81	0.41
36:DA:1309:G:O2'	36:DA:1310:G:H5'	2.20	0.41
36:DA:1651:G:C2	36:DA:2007:C:C2	3.07	0.41
36:DA:1826:G:C3'	39:DD:242:ARG:HH21	2.31	0.41
36:DA:1827:C:H2'	36:DA:1828:G:C5'	2.50	0.41
36:DA:2038:G:C6	36:DA:2039:C:C4	3.08	0.41
36:DA:2059:A:O3'	41:DF:69:HIS:HA	2.20	0.41
36:DA:2160:G:H8	36:DA:2160:G:C5'	2.29	0.41
36:DA:2694:G:C2'	36:DA:2695:C:H5'	2.50	0.41
38:DC:72:VAL:O	38:DC:72:VAL:HG13	2.19	0.41
40:DE:36:ARG:NH2	40:DE:88:GLY:CA	2.82	0.41
40:DE:38:THR:CG2	40:DE:39:PRO:HD2	2.48	0.41
42:DG:176:LEU:HD23	42:DG:176:LEU:C	2.40	0.41
43:DH:94:TYR:CD1	43:DH:107:VAL:CA	3.02	0.41
46:DN:42:TRP:CZ2	46:DN:44:PRO:HA	2.54	0.41
47:DO:71:ARG:NH1	47:DO:105:GLU:OE1	2.53	0.41
50:DR:14:SER:HA	50:DR:17:ARG:HH12	1.84	0.41
50:DR:61:HIS:CD2	50:DR:61:HIS:C	2.93	0.41
50:DR:104:ARG:O	50:DR:106:GLY:N	2.53	0.41
52:DT:120:ARG:HA	52:DT:123:GLN:HG2	2.02	0.41
54:DV:22:VAL:HG23	54:DV:92:THR:O	2.19	0.41
56:DX:10:ALA:O	56:DX:28:PHE:CB	2.68	0.41
1:AA:617:G:H1	1:AA:623:C:H42	1.67	0.41
1:AA:825:G:N2	8:AH:11:THR:HG21	2.35	0.41
1:AA:833:U:H2'	1:AA:834:C:C6	2.54	0.41
1:AA:1027:C:O2	1:AA:1035:A:N1	2.53	0.41
1:AA:1200:C:O2'	1:AA:1201:A:OP2	2.32	0.41
1:AA:1257:U:C2'	1:AA:1258:G:OP2	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:59:ARG:O	4:AD:63:LYS:HB2	2.20	0.41
4:AD:165:MET:HE3	4:AD:176:LEU:HD21	2.02	0.41
8:AH:85:ARG:NH1	8:AH:85:ARG:CG	2.82	0.41
8:AH:114:THR:OG1	8:AH:119:LEU:HD21	2.20	0.41
10:AJ:7:LYS:HE3	10:AJ:40:LEU:CD1	2.51	0.41
13:AM:36:LYS:HD2	13:AM:59:TYR:CZ	2.55	0.41
14:AN:59:ALA:HB1	14:AN:61:TRP:HZ3	1.84	0.41
20:AT:50:GLU:HG3	20:AT:100:ILE:HD11	2.01	0.41
22:AV:5:G:H2'	22:AV:6:G:O4'	2.20	0.41
22:AW:39:U:O2'	22:AW:40:C:H5'	2.20	0.41
25:AZ:181:GLN:OE1	25:AZ:193:ASN:HB2	2.20	0.41
28:B2:3:LEU:HG	28:B2:7:ARG:NH1	2.31	0.41
28:B2:34:GLU:C	28:B2:37:PHE:H	2.23	0.41
34:B8:47:LYS:C	34:B8:48:PHE:CD1	2.88	0.41
36:BA:191:A:H2'	36:BA:192:C:H6	1.86	0.41
36:BA:327:G:H2'	36:BA:328:U:H6	1.84	0.41
36:BA:514:A:O2'	36:BA:515:A:H5'	2.20	0.41
36:BA:740:U:O2'	36:BA:741:G:H5'	2.19	0.41
36:BA:998:C:H2'	36:BA:999:U:O5'	2.19	0.41
36:BA:1038:C:C3'	36:BA:1039:G:C5'	2.97	0.41
36:BA:1173:G:H3'	36:BA:1174:A:C5'	2.49	0.41
36:BA:1258:C:H2'	36:BA:1259:G:C8	2.55	0.41
36:BA:1274:A:N3	36:BA:1297:C:H1'	2.34	0.41
36:BA:1568:G:H4'	39:BD:59:LYS:HB3	2.01	0.41
36:BA:2131:G:H4'	36:BA:2132:U:O5'	2.19	0.41
36:BA:2152:G:O2'	36:BA:2153:G:H5'	2.20	0.41
36:BA:2249:U:H4'	36:BA:2275:C:H5	1.82	0.41
40:BE:81:ILE:O	40:BE:82:ARG:O	2.38	0.41
40:BE:117:MET:HE3	40:BE:136:ARG:CB	2.50	0.41
41:BF:8:GLN:OE1	41:BF:146:ALA:HA	2.20	0.41
41:BF:132:VAL:CG1	41:BF:133:ASN:H	2.20	0.41
41:BF:188:ARG:HA	48:BP:7:ARG:CD	2.50	0.41
42:BG:107:LEU:HD23	42:BG:107:LEU:C	2.41	0.41
43:BH:83:TYR:HB2	43:BH:134:SER:HA	2.02	0.41
45:BK:95:UNK:C	45:BK:97:UNK:N	2.83	0.41
48:BP:65:ARG:O	48:BP:68:GLN:OE1	2.38	0.41
50:BR:104:ARG:O	50:BR:105:ARG:C	2.58	0.41
52:BT:29:ARG:HD3	52:BT:30:VAL:N	2.30	0.41
52:BT:33:LYS:HD3	52:BT:33:LYS:HA	1.91	0.41
53:BU:24:TYR:HB3	53:BU:28:ARG:CB	2.49	0.41
53:BU:61:TRP:O	53:BU:65:ILE:HG13	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:18:LEU:H	58:BZ:18:LEU:CD2	2.17	0.41
58:BZ:37:VAL:CG2	58:BZ:38:TYR:N	2.82	0.41
58:BZ:65:GLN:O	58:BZ:67:LEU:HD12	2.19	0.41
1:CA:266:G:H5"	1:CA:267:C:H5	1.84	0.41
1:CA:551:U:H2'	1:CA:552:U:H6	1.85	0.41
1:CA:831:U:H2'	1:CA:832:C:C6	2.55	0.41
1:CA:1015:A:C6	1:CA:1016:A:C6	3.09	0.41
1:CA:1047:G:O3'	14:CN:4:LYS:HB2	2.20	0.41
1:CA:1350:A:C5	1:CA:1351:U:C5	3.08	0.41
1:CA:1371:G:C6	1:CA:1372:U:C4	3.07	0.41
1:CA:1371:G:O2'	1:CA:1372:U:H5'	2.20	0.41
1:CA:1378:C:OP1	7:CG:7:ALA:HB3	2.20	0.41
2:CB:28:PHE:CD1	2:CB:28:PHE:O	2.73	0.41
2:CB:116:GLU:HA	2:CB:119:GLU:HB2	2.01	0.41
3:CC:139:GLN:O	3:CC:142:MET:HB2	2.21	0.41
4:CD:25:ARG:C	4:CD:27:TYR:N	2.70	0.41
4:CD:85:LYS:HZ3	4:CD:92:VAL:HG22	1.85	0.41
4:CD:190:ASP:HB3	4:CD:193:ASP:OD2	2.20	0.41
5:CE:78:HIS:O	5:CE:93:PRO:HG3	2.21	0.41
9:CI:106:ALA:O	9:CI:108:VAL:HG23	2.20	0.41
10:CJ:4:ILE:HG22	10:CJ:6:ILE:CG2	2.50	0.41
10:CJ:44:VAL:HG13	10:CJ:66:ARG:HE	1.85	0.41
10:CJ:50:ILE:HG22	10:CJ:60:ARG:HD3	2.02	0.41
13:CM:64:TRP:O	13:CM:66:LEU:CD1	2.63	0.41
15:CO:40:SER:O	15:CO:44:LYS:HG3	2.21	0.41
18:CR:36:ASN:OD1	18:CR:39:VAL:CB	2.59	0.41
18:CR:42:ARG:HG2	18:CR:42:ARG:O	2.19	0.41
19:CS:16:LEU:HA	19:CS:19:VAL:CG2	2.50	0.41
20:CT:25:ARG:HH11	20:CT:25:ARG:HG3	1.85	0.41
20:CT:56:MET:HE2	20:CT:56:MET:C	2.40	0.41
23:CX:20:U:C2	23:CX:21:C:C5	3.08	0.41
23:CX:24:A:N6	23:CX:25:A:C6	2.89	0.41
24:CY:76:A:C5	25:CZ:271:GLU:CD	2.94	0.41
25:CZ:145:GLU:HG2	25:CZ:145:GLU:O	2.19	0.41
25:CZ:161:TYR:CA	61:CZ:502:KIR:O15	2.68	0.41
26:D0:37:LEU:CD1	26:D0:51:VAL:HG22	2.49	0.41
26:D0:51:VAL:CG2	26:D0:79:VAL:O	2.65	0.41
31:D5:3:LYS:HG3	31:D5:4:HIS:H	1.85	0.41
32:D6:18:ARG:HH22	32:D6:47:THR:HG23	1.84	0.41
32:D6:53:LYS:HD3	32:D6:53:LYS:N	2.30	0.41
33:D7:39:ARG:HD3	36:DA:458:G:O2'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:67:U:H2'	36:DA:68:G:H8	1.85	0.41
36:DA:105:C:H2'	36:DA:106:C:C6	2.55	0.41
36:DA:481:G:H1'	36:DA:506:G:N2	2.35	0.41
36:DA:566:U:H2'	36:DA:567:A:O4'	2.20	0.41
36:DA:609:A:H2'	36:DA:610:G:O4'	2.20	0.41
36:DA:676:A:C8	36:DA:2443:C:H1'	2.55	0.41
36:DA:1058:G:H1'	36:DA:1082:U:N3	2.34	0.41
36:DA:1184:G:C6	36:DA:1185:C:C4	3.08	0.41
36:DA:1345:C:O2'	36:DA:1346:G:H5'	2.20	0.41
36:DA:1835:G:H2'	36:DA:1835:G:N3	2.35	0.41
36:DA:2223:G:H2'	36:DA:2224:G:H5'	2.02	0.41
36:DA:2249:U:H4'	36:DA:2275:C:H5	1.82	0.41
36:DA:2688:U:H5	36:DA:2720:U:OP2	2.03	0.41
36:DA:2711:A:OP1	36:DA:2712(A):A:P	2.79	0.41
36:DA:2779:U:O2	36:DA:2781:A:C2	2.73	0.41
38:DC:87:GLU:HG2	38:DC:94:VAL:CG1	2.48	0.41
39:DD:46:GLN:N	39:DD:46:GLN:OE1	2.53	0.41
39:DD:125:ILE:O	39:DD:125:ILE:CG2	2.62	0.41
40:DE:36:ARG:HH22	40:DE:88:GLY:N	2.17	0.41
40:DE:134:ILE:CD1	40:DE:134:ILE:O	2.68	0.41
41:DF:24:LEU:O	41:DF:26:ALA:N	2.53	0.41
41:DF:65:TRP:HB3	41:DF:66:PRO:HD2	2.02	0.41
42:DG:32:PRO:HB3	42:DG:163:ALA:HA	2.01	0.41
42:DG:79:ASN:O	42:DG:80:PHE:CD2	2.73	0.41
42:DG:87:PRO:O	42:DG:88:ILE:CG1	2.68	0.41
42:DG:181:ARG:O	42:DG:182:LYS:OXT	2.38	0.41
47:DO:98:VAL:O	47:DO:98:VAL:HG13	2.20	0.41
50:DR:10:LEU:O	50:DR:11:ASN:CB	2.67	0.41
52:DT:83:ILE:CG1	52:DT:84:GLN:N	2.67	0.41
53:DU:98:LEU:C	53:DU:100:VAL:H	2.23	0.41
56:DX:27:THR:HA	56:DX:79:ALA:O	2.19	0.41
58:DZ:108:PRO:HA	58:DZ:141:VAL:HG12	2.02	0.41
1:AA:186:C:H5'	20:AT:78:ALA:HB1	2.02	0.41
1:AA:197:A:C5	1:AA:221:C:H4'	2.55	0.41
1:AA:374:A:H2'	1:AA:375:U:H6	1.84	0.41
1:AA:815:A:H4'	1:AA:817:C:C5	2.55	0.41
1:AA:1016:A:OP1	14:AN:15:LYS:HE3	2.20	0.41
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.56	0.41
4:AD:68:TYR:CE1	4:AD:97:LEU:HD13	2.54	0.41
5:AE:102:ALA:HA	5:AE:120:THR:HG22	2.01	0.41
6:AF:91:VAL:CG1	6:AF:92:LYS:N	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:146:GLU:O	7:AG:149:ARG:HB2	2.19	0.41
8:AH:10:LEU:CD2	8:AH:83:ILE:HD11	2.51	0.41
14:AN:28:GLY:O	14:AN:29:ARG:C	2.59	0.41
15:AO:8:LYS:O	15:AO:11:VAL:HB	2.21	0.41
16:AP:43:LYS:HA	16:AP:48:TRP:HB3	2.02	0.41
25:AZ:135:MET:HB3	25:AZ:172:ARG:HG3	2.01	0.41
26:B0:36:ILE:HG12	36:BA:2355:C:H4'	2.02	0.41
27:B1:94:LEU:O	27:B1:95:LEU:C	2.59	0.41
28:B2:46:GLN:O	28:B2:50:ILE:HB	2.20	0.41
36:BA:391:G:O2'	36:BA:392:C:H5'	2.21	0.41
36:BA:782:A:C6	39:BD:226:MET:HE3	2.55	0.41
36:BA:1337:G:C4	36:BA:1338:G:C8	3.08	0.41
36:BA:1379:A:OP2	36:BA:1379:A:C4'	2.68	0.41
36:BA:1528:A:H2'	36:BA:1528(A):A:C8	2.55	0.41
36:BA:1577:C:H2'	36:BA:1578:U:O4'	2.20	0.41
36:BA:1809:A:C6	36:BA:1810:A:C6	3.08	0.41
36:BA:2623:G:H4'	36:BA:2825:C:O2	2.20	0.41
37:BB:66:A:C2'	37:BB:67:G:OP2	2.68	0.41
39:BD:4:LYS:CD	39:BD:18:VAL:HG12	2.42	0.41
39:BD:14:ARG:HG3	39:BD:15:PHE:N	2.35	0.41
39:BD:211:ARG:HA	39:BD:214:TRP:CE3	2.55	0.41
40:BE:7:VAL:HG12	40:BE:27:LEU:CB	2.46	0.41
40:BE:28:ALA:HB3	40:BE:93:VAL:HG22	2.02	0.41
40:BE:119:ARG:HG3	40:BE:160:TYR:CD1	2.56	0.41
43:BH:19:VAL:CG1	43:BH:20:ALA:H	2.29	0.41
47:BO:35:VAL:CG1	47:BO:105:GLU:HB2	2.50	0.41
47:BO:66:LYS:HA	47:BO:79:PHE:O	2.19	0.41
48:BP:85:LEU:H	48:BP:85:LEU:HD22	1.85	0.41
49:BQ:134:ARG:CZ	58:BZ:122:ARG:HE	2.33	0.41
53:BU:52:ARG:O	53:BU:56:ASP:N	2.52	0.41
55:BW:10:VAL:HG12	55:BW:10:VAL:O	2.21	0.41
57:BY:27:VAL:HG12	57:BY:29:GLU:N	2.31	0.41
58:BZ:8:TYR:CD1	58:BZ:8:TYR:N	2.88	0.41
58:BZ:17:ALA:O	58:BZ:20:ARG:HG2	2.21	0.41
1:CA:40:C:H2'	1:CA:41:G:C8	2.55	0.41
1:CA:271:C:H2'	1:CA:272:C:H6	1.85	0.41
1:CA:356:A:C2	1:CA:368:U:O2	2.72	0.41
1:CA:391:G:C6	1:CA:392:G:C5	3.08	0.41
1:CA:718:G:H1'	11:CK:116:HIS:HA	2.01	0.41
1:CA:987:G:H2'	1:CA:988:G:H8	1.85	0.41
1:CA:1048:G:P	14:CN:4:LYS:HB2	2.60	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1287:A:H2'	1:CA:1288:A:H8	1.80	0.41
1:CA:1350:A:H2'	1:CA:1351:U:C6	2.55	0.41
2:CB:9:GLU:HB3	2:CB:48:MET:CE	2.51	0.41
3:CC:51:GLY:O	3:CC:115:LEU:HD21	2.20	0.41
6:CF:35:ALA:O	6:CF:66:GLU:O	2.38	0.41
9:CI:4:TYR:CD2	9:CI:85:LEU:HA	2.51	0.41
10:CJ:96:ILE:O	10:CJ:96:ILE:HG12	2.19	0.41
11:CK:44:SER:H	11:CK:47:VAL:HG22	1.85	0.41
15:CO:87:ILE:O	15:CO:89:GLY:N	2.53	0.41
16:CP:1:MET:SD	16:CP:3:LYS:HG3	2.60	0.41
22:CW:56:C:O2'	22:CW:57:G:H8	1.98	0.41
25:CZ:20:VAL:CG2	25:CZ:21:ASP:H	2.25	0.41
26:D0:42:GLY:HA3	36:DA:2331:G:C1'	2.50	0.41
28:D2:24:LEU:HD23	28:D2:24:LEU:C	2.40	0.41
31:D5:19:ARG:NH1	36:DA:1265:A:H3'	2.36	0.41
32:D6:15:GLU:OE2	32:D6:41:PRO:CB	2.69	0.41
32:D6:19:ARG:HD3	32:D6:20:ASN:N	2.34	0.41
36:DA:55:G:H2'	36:DA:56:A:H8	1.85	0.41
36:DA:80:G:H1'	36:DA:346:A:N6	2.36	0.41
36:DA:184:C:H2'	36:DA:185:U:H6	1.76	0.41
36:DA:235:U:H2'	36:DA:236:C:H6	1.85	0.41
36:DA:649:G:C2	36:DA:650:C:C2	3.08	0.41
36:DA:1209:G:N2	36:DA:1210:A:N6	2.58	0.41
36:DA:1341:U:C4'	56:DX:57:LEU:HB3	2.50	0.41
36:DA:1514:U:H2'	36:DA:1515:G:H8	1.85	0.41
36:DA:1798:U:H5"	39:DD:259:THR:HB	2.01	0.41
36:DA:1805:U:O2	39:DD:50:THR:HB	2.21	0.41
36:DA:1826:G:H2'	36:DA:1827:C:H6	1.85	0.41
36:DA:1845:G:O2'	36:DA:1846:G:H5'	2.21	0.41
36:DA:2128:C:H1'	36:DA:2129:C:H5'	2.03	0.41
36:DA:2191:G:H3'	36:DA:2192:G:H8	1.84	0.41
36:DA:2287:A:N1	36:DA:2346:A:C2	2.88	0.41
36:DA:2407:G:N2	36:DA:2408:U:C2	2.88	0.41
36:DA:2847:U:OP1	52:DT:98:LYS:HE2	2.21	0.41
37:DB:71:C:O2'	37:DB:72:G:H5'	2.19	0.41
38:DC:20:TYR:CE2	38:DC:28:LEU:CD1	2.99	0.41
39:DD:70:TRP:HA	39:DD:73:VAL:HG22	2.01	0.41
40:DE:52:LEU:O	40:DE:53:PRO:O	2.37	0.41
41:DF:9:ILE:H	41:DF:9:ILE:HG13	1.57	0.41
41:DF:33:LEU:O	41:DF:34:TRP:C	2.58	0.41
41:DF:52:LYS:O	41:DF:87:GLY:O	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DH:16:SER:HB2	43:DH:27:LYS:HD3	2.02	0.41
43:DH:65:HIS:C	43:DH:67:LEU:H	2.20	0.41
46:DN:7:LYS:O	46:DN:8:GLN:C	2.58	0.41
47:DO:54:GLU:C	47:DO:56:ASP:H	2.23	0.41
47:DO:86:ILE:HG22	47:DO:94:ARG:HB2	2.02	0.41
48:DP:5:ASP:O	48:DP:6:LEU:C	2.57	0.41
50:DR:95:THR:OG1	50:DR:96:ARG:N	2.53	0.41
51:DS:57:LYS:C	51:DS:57:LYS:HD2	2.40	0.41
51:DS:61:ASN:O	51:DS:65:VAL:CG2	2.65	0.41
52:DT:110:ILE:C	52:DT:112:ARG:H	2.24	0.41
53:DU:62:ILE:HG23	53:DU:76:TYR:CE2	2.55	0.41
57:DY:10:GLY:C	57:DY:27:VAL:HG22	2.41	0.41
57:DY:62:GLU:N	57:DY:62:GLU:OE1	2.53	0.41
57:DY:94:LYS:O	57:DY:94:LYS:HG3	2.20	0.41
1:AA:346:G:N3	1:AA:346:G:C2'	2.81	0.41
1:AA:382:A:H2'	1:AA:383:A:H8	1.85	0.41
1:AA:411:A:OP1	4:AD:30:LYS:NZ	2.53	0.41
1:AA:694:A:H2'	1:AA:695:A:O4'	2.20	0.41
1:AA:1157:A:H1'	1:AA:1181:G:C2	2.55	0.41
1:AA:1191:A:H2'	1:AA:1192:C:C6	2.55	0.41
1:AA:1305:G:H5'	21:AU:4:GLY:HA3	2.02	0.41
1:AA:1357:A:N6	1:AA:1363(A):A:C2	2.88	0.41
1:AA:1511:G:C5	1:AA:1512:U:C5	3.08	0.41
1:AA:1525:G:C4	1:AA:1526:G:C8	3.09	0.41
2:AB:39:ILE:HG22	2:AB:41:ILE:CD1	2.50	0.41
3:AC:94:LEU:O	3:AC:94:LEU:HD12	2.19	0.41
3:AC:130:VAL:HG12	3:AC:134:ILE:HD11	2.03	0.41
4:AD:126:ILE:CG2	4:AD:127:THR:N	2.83	0.41
5:AE:33:VAL:HG22	5:AE:43:LEU:HD13	2.03	0.41
12:AL:32:PHE:CB	12:AL:84:LEU:HD21	2.39	0.41
13:AM:15:VAL:O	13:AM:19:LEU:HD22	2.20	0.41
14:AN:3:ARG:HG2	14:AN:3:ARG:O	2.19	0.41
22:AV:19:G:H4'	22:AV:20:U:OP2	2.20	0.41
22:AV:39:U:H2'	22:AV:40:C:H6	1.86	0.41
24:AY:18:G:H1'	24:AY:58:A:C2	2.55	0.41
25:AZ:7:ARG:NH1	25:AZ:281:ILE:HD11	2.35	0.41
25:AZ:155:ARG:HG2	25:AZ:155:ARG:HH11	1.85	0.41
25:AZ:316:PHE:N	25:AZ:316:PHE:HD1	2.17	0.41
32:B6:11:LEU:HD13	32:B6:11:LEU:HA	1.89	0.41
36:BA:78:A:O2'	36:BA:79:G:H5'	2.19	0.41
36:BA:139:G:C2'	36:BA:139(A):G:H5"	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:1070:A:H5'	36:BA:1072:C:OP2	2.19	0.41
36:BA:1341:U:H4'	56:BX:56:THR:O	2.19	0.41
36:BA:1497:U:H5'	36:BA:1498:C:H5	1.85	0.41
36:BA:1528:A:O2'	36:BA:1528(A):A:C5'	2.68	0.41
36:BA:1547:C:O2'	36:BA:1548:C:H5'	2.20	0.41
36:BA:2116:G:N7	36:BA:2117:A:C2	2.88	0.41
36:BA:2130:U:H6	36:BA:2130:U:H5"	1.85	0.41
36:BA:2538:C:O2'	36:BA:2539:C:H5'	2.21	0.41
36:BA:2884:U:C6	36:BA:2885:C:C6	3.08	0.41
36:BA:2889:C:O2	36:BA:2889:C:H2'	2.19	0.41
37:BB:50:G:OP2	51:BS:62:LYS:HB2	2.20	0.41
37:BB:60:C:O2'	37:BB:61:G:H5'	2.21	0.41
37:BB:67:G:O2'	37:BB:68:C:O5'	2.38	0.41
38:BC:49:ILE:HD12	38:BC:49:ILE:C	2.40	0.41
38:BC:214:VAL:CG2	38:BC:224:ILE:HD13	2.51	0.41
39:BD:107:ALA:HA	39:BD:108:PRO:HD2	1.90	0.41
39:BD:211:ARG:HA	39:BD:214:TRP:CD2	2.55	0.41
40:BE:27:LEU:C	40:BE:29:GLY:H	2.23	0.41
40:BE:29:GLY:HA2	40:BE:180:ASN:HB3	2.02	0.41
42:BG:20:ILE:O	42:BG:23:PHE:O	2.38	0.41
42:BG:52:ILE:O	42:BG:54:GLU:N	2.52	0.41
42:BG:60:LEU:HD13	42:BG:68:PRO:CG	2.50	0.41
42:BG:115:ARG:NH1	42:BG:137:GLU:OE2	2.53	0.41
42:BG:125:PHE:CD1	42:BG:125:PHE:N	2.82	0.41
42:BG:170:ARG:HG3	42:BG:174:GLU:OE1	2.20	0.41
42:BG:173:LEU:O	42:BG:176:LEU:CB	2.67	0.41
43:BH:16:SER:HB2	43:BH:27:LYS:HD3	2.02	0.41
43:BH:94:TYR:HA	43:BH:106:THR:O	2.20	0.41
47:BO:7:TYR:HE1	47:BO:20:MET:HE3	1.85	0.41
47:BO:20:MET:CE	47:BO:44:LYS:HE3	2.50	0.41
48:BP:23:PRO:CA	48:BP:29:LYS:O	2.60	0.41
52:BT:8:LYS:HA	52:BT:11:GLU:OE1	2.20	0.41
52:BT:62:THR:HG22	52:BT:75:ILE:HG23	2.01	0.41
52:BT:94:ALA:HB1	52:BT:99:LEU:HD23	2.02	0.41
56:BX:40:LYS:O	56:BX:44:GLU:HB2	2.19	0.41
57:BY:9:LYS:O	57:BY:28:LYS:NZ	2.52	0.41
57:BY:24:VAL:CG1	57:BY:25:GLY:N	2.83	0.41
58:BZ:109:ALA:C	58:BZ:111:VAL:N	2.73	0.41
1:CA:376:G:H4'	16:CP:5:ARG:HH11	1.83	0.41
1:CA:403:C:OP1	4:CD:137:SER:HB3	2.20	0.41
1:CA:504:C:H2'	1:CA:511:C:C5	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:609:A:C5	1:CA:610:G:C8	3.08	0.41
1:CA:841:U:H3'	1:CA:848:C:O4'	2.20	0.41
1:CA:1192:C:H5"	3:CC:167:TRP:HZ2	1.86	0.41
1:CA:1227:A:H2'	1:CA:1227:A:N3	2.35	0.41
1:CA:1431:C:H5	1:CA:1469:G:H1	0.77	0.41
2:CB:74:LYS:HB3	2:CB:74:LYS:HZ3	1.84	0.41
2:CB:142:LEU:HD23	2:CB:142:LEU:C	2.41	0.41
4:CD:101:LEU:HB2	4:CD:138:TYR:HB3	2.03	0.41
5:CE:18:ARG:NH1	5:CE:18:ARG:CG	2.78	0.41
7:CG:95:ARG:O	7:CG:99:LEU:HG	2.21	0.41
15:CO:38:ARG:HH11	15:CO:38:ARG:HG2	1.85	0.41
16:CP:2:VAL:HG23	16:CP:22:THR:O	2.20	0.41
25:CZ:325:LYS:HB2	25:CZ:331:HIS:HB3	2.02	0.41
25:CZ:341:GLN:CD	25:CZ:341:GLN:N	2.73	0.41
26:D0:75:LEU:O	26:D0:75:LEU:CD2	2.68	0.41
27:D1:25:LYS:HG3	36:DA:388:G:OP1	2.20	0.41
28:D2:63:VAL:O	28:D2:65:ASN:N	2.54	0.41
32:D6:35:GLU:HA	32:D6:35:GLU:OE1	2.20	0.41
34:D8:14:VAL:O	34:D8:14:VAL:CG1	2.68	0.41
34:D8:63:PRO:O	34:D8:64:TYR:O	2.39	0.41
35:D9:1:MET:CE	35:D9:10:ILE:HG12	2.50	0.41
36:DA:11:G:O2'	36:DA:12:U:H5'	2.20	0.41
36:DA:79:G:H2'	36:DA:80:G:H8	1.84	0.41
36:DA:121:G:H2'	36:DA:122:G:C8	2.55	0.41
36:DA:253:C:O2'	36:DA:254:G:H5'	2.21	0.41
36:DA:255:A:H2'	36:DA:256:A:O4'	2.20	0.41
36:DA:398:G:H2'	36:DA:399:G:O4'	2.20	0.41
36:DA:479:A:HO2'	36:DA:481:G:H8	1.65	0.41
36:DA:580:C:P	53:DU:33:ARG:NH2	2.93	0.41
36:DA:1055:G:C6	36:DA:1056:G:N2	2.89	0.41
36:DA:1364:G:C2	36:DA:1368:G:C5	3.09	0.41
36:DA:1541:G:OP2	36:DA:1541:G:O3'	2.38	0.41
36:DA:1658:C:OP1	40:DE:132:HIS:O	2.38	0.41
36:DA:1777:U:O2'	36:DA:1778:U:H5'	2.21	0.41
36:DA:1785:A:H2	36:DA:2588:G:N3	2.17	0.41
36:DA:2107:C:H1'	36:DA:2182:G:N2	2.34	0.41
36:DA:2243:U:H2'	36:DA:2244:U:C6	2.55	0.41
36:DA:2245:U:H1'	36:DA:2435:A:H5"	2.03	0.41
36:DA:2261:C:O4'	36:DA:2388:A:H1'	2.21	0.41
36:DA:2385:C:O2'	36:DA:2386:C:H5'	2.21	0.41
36:DA:2617:C:C4	36:DA:2618:G:N7	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2864:G:H2'	36:DA:2865:U:O4'	2.20	0.41
38:DC:78:ALA:HA	38:DC:116:THR:H	1.85	0.41
38:DC:90:GLY:O	38:DC:91:ALA:HB2	2.20	0.41
38:DC:100:ILE:O	38:DC:100:ILE:CG2	2.68	0.41
38:DC:127:LEU:C	38:DC:129:ARG:H	2.23	0.41
38:DC:150:GLY:O	38:DC:154:ARG:NH1	2.53	0.41
42:DG:45:GLU:OE1	42:DG:45:GLU:HA	2.19	0.41
42:DG:108:ASN:OD1	42:DG:108:ASN:N	2.53	0.41
42:DG:132:ASN:HA	42:DG:157:ILE:O	2.21	0.41
46:DN:32:THR:C	46:DN:34:LEU:N	2.72	0.41
46:DN:63:THR:O	46:DN:64:GLY:O	2.38	0.41
50:DR:101:ALA:O	50:DR:102:GLU:HB2	2.21	0.41
54:DV:13:ARG:O	54:DV:13:ARG:HG2	2.20	0.41
56:DX:8:ILE:HG12	56:DX:43:VAL:HG23	2.01	0.41
56:DX:11:PRO:O	56:DX:12:VAL:O	2.39	0.41
57:DY:80:GLY:O	57:DY:81:LYS:C	2.58	0.41
58:DZ:30:ASN:HB3	58:DZ:90:VAL:HB	2.02	0.41
58:DZ:70:LEU:HD12	58:DZ:70:LEU:N	2.34	0.41
58:DZ:151:HIS:HB3	58:DZ:170:THR:CA	2.32	0.41
1:AA:405:U:C3'	1:AA:406:G:H5'	2.45	0.41
1:AA:458:C:H3'	1:AA:460:G:H8	1.85	0.41
1:AA:499:A:H4'	1:AA:500:G:OP1	2.20	0.41
1:AA:513:C:O2'	1:AA:514:C:H5'	2.20	0.41
1:AA:723:U:O2	1:AA:723:U:C2'	2.59	0.41
1:AA:963:G:N2	10:AJ:55:LYS:HD3	2.35	0.41
1:AA:1147:C:O2'	9:AI:16:ARG:HD2	2.20	0.41
1:AA:1309:G:OP1	13:AM:92:HIS:HE1	2.03	0.41
1:AA:1500:A:C6	1:AA:1501:C:C4	3.09	0.41
2:AB:189:ASP:OD1	2:AB:189:ASP:C	2.58	0.41
5:AE:10:MET:SD	5:AE:13:ILE:CG1	3.08	0.41
5:AE:31:LEU:HD23	5:AE:31:LEU:HA	1.91	0.41
7:AG:26:PHE:HD1	7:AG:101:LEU:HD22	1.86	0.41
15:AO:52:SER:O	15:AO:55:GLY:N	2.53	0.41
19:AS:49:ILE:CD1	19:AS:62:ILE:HB	2.49	0.41
20:AT:42:GLN:HE21	20:AT:42:GLN:HB2	1.68	0.41
20:AT:44:ALA:HB2	20:AT:88:VAL:HG13	2.02	0.41
20:AT:45:GLN:CB	20:AT:91:LEU:HD22	2.51	0.41
22:AW:59:U:C6	22:AW:60:U:H6	2.39	0.41
23:AX:23:G:C5	24:AY:36:A:C2	3.08	0.41
24:AY:52:A:C2	24:AY:63:C:N3	2.88	0.41
25:AZ:357:PRO:O	25:AZ:359:VAL:HG23	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:77:ARG:HH22	36:BA:857:C:H5'	1.85	0.41
28:B2:25:VAL:HG13	28:B2:57:ILE:HD12	2.03	0.41
32:B6:8:LYS:HA	32:B6:8:LYS:HD2	1.77	0.41
32:B6:36:LEU:O	32:B6:37:ARG:NE	2.54	0.41
35:B9:16:VAL:HG12	35:B9:16:VAL:O	2.20	0.41
35:B9:22:ARG:HB2	35:B9:24:TYR:HE1	1.85	0.41
36:BA:223:A:N7	36:BA:422:A:H1'	2.36	0.41
36:BA:402:A:O2'	36:BA:403:U:H5'	2.20	0.41
36:BA:566:U:H2'	36:BA:567:A:O4'	2.21	0.41
36:BA:744:G:C2'	36:BA:745:G:H5'	2.51	0.41
36:BA:1036:G:O2'	36:BA:1037:G:H5'	2.20	0.41
36:BA:1141:U:O5'	46:BN:63:THR:HG21	2.20	0.41
36:BA:1205:U:C5	41:BF:171:PRO:HA	2.55	0.41
36:BA:1286:A:N6	36:BA:1289:C:N3	2.68	0.41
36:BA:1461:G:O2'	36:BA:1462:C:H5'	2.21	0.41
36:BA:1798:U:H5'	39:BD:259:THR:HB	2.02	0.41
36:BA:1842:G:H2'	36:BA:1843:C:H6	1.83	0.41
36:BA:2415:G:H2'	36:BA:2416:C:H6	1.84	0.41
36:BA:2768:C:O2'	36:BA:2769:C:H5'	2.21	0.41
38:BC:137:LEU:C	38:BC:137:LEU:HD13	2.41	0.41
40:BE:12:THR:O	40:BE:23:VAL:O	2.39	0.41
40:BE:52:LEU:CD2	40:BE:75:VAL:HB	2.50	0.41
41:BF:119:ARG:HG2	41:BF:119:ARG:HH11	1.85	0.41
42:BG:146:TYR:O	42:BG:149:VAL:HG22	2.20	0.41
43:BH:17:VAL:O	43:BH:17:VAL:HG12	2.19	0.41
43:BH:84:SER:HB3	43:BH:85:LYS:H	1.69	0.41
44:BJ:72:UNK:C	44:BJ:74:UNK:N	2.83	0.41
44:BJ:117:UNK:HA	44:BJ:122:UNK:HA	2.02	0.41
50:BR:107:ASP:OD1	50:BR:109:ALA:N	2.53	0.41
53:BU:101:ARG:HG3	53:BU:101:ARG:NH1	2.35	0.41
54:BV:8:GLY:C	54:BV:10:LYS:N	2.73	0.41
54:BV:89:GLN:HA	54:BV:89:GLN:OE1	2.20	0.41
57:BY:81:LYS:HB2	57:BY:81:LYS:HE3	1.87	0.41
57:BY:82:PRO:O	57:BY:83:THR:HB	2.21	0.41
58:BZ:30:ASN:O	58:BZ:31:ARG:C	2.59	0.41
58:BZ:115:GLY:CA	58:BZ:175:VAL:O	2.63	0.41
1:CA:106:C:O2'	1:CA:107:G:H5'	2.20	0.41
1:CA:111:G:H1	1:CA:330:C:N4	2.19	0.41
1:CA:542:G:H2'	1:CA:543:C:C6	2.51	0.41
1:CA:973:G:H1'	10:CJ:55:LYS:HD3	2.03	0.41
1:CA:1261:A:C2'	1:CA:1262:C:H5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1315:U:O2	1:CA:1360:A:H2	2.03	0.41
1:CA:1328:C:O2'	1:CA:1329:A:H5'	2.19	0.41
1:CA:1375:A:C5	1:CA:1376:U:C4	3.08	0.41
1:CA:1463:C:H5'	52:DT:115:ARG:HH12	1.86	0.41
2:CB:32:ILE:HA	2:CB:42:ILE:HA	2.01	0.41
2:CB:39:ILE:CG2	2:CB:40:HIS:N	2.83	0.41
2:CB:119:GLU:O	2:CB:122:PHE:HB3	2.20	0.41
3:CC:18:TRP:HD1	14:CN:51:GLY:O	2.04	0.41
8:CH:42:GLU:HG3	8:CH:109:ILE:HD13	2.00	0.41
8:CH:113:SER:O	8:CH:131:GLY:HA3	2.20	0.41
9:CI:4:TYR:CZ	9:CI:88:TYR:HB3	2.55	0.41
9:CI:10:ARG:HE	9:CI:105:ASP:CB	2.34	0.41
13:CM:104:ARG:O	13:CM:104:ARG:HG3	2.20	0.41
16:CP:5:ARG:NH2	16:CP:24:ALA:O	2.54	0.41
19:CS:78:ARG:HB2	19:CS:81:ARG:HH12	1.86	0.41
20:CT:96:GLY:O	20:CT:97:ALA:HB3	2.20	0.41
24:CY:23:A:H2'	24:CY:24:A:H5'	2.00	0.41
26:D0:41:ARG:HD3	26:D0:41:ARG:HA	1.65	0.41
27:D1:6:GLU:O	27:D1:7:ILE:HG13	2.20	0.41
32:D6:11:LEU:HD11	32:D6:51:GLU:CG	2.50	0.41
36:DA:244:A:H2'	36:DA:245:G:O4'	2.21	0.41
36:DA:288:C:H2'	36:DA:289:A:H8	1.86	0.41
36:DA:332:A:O2'	36:DA:333:G:P	2.78	0.41
36:DA:451:C:N4	36:DA:454:A:H5'	2.36	0.41
36:DA:636:G:H4'	36:DA:638:G:O3'	2.20	0.41
36:DA:654(H):G:C3'	36:DA:654(I):C:H5'	2.51	0.41
36:DA:860:U:O2	36:DA:860:U:O4'	2.38	0.41
36:DA:1800:C:H5"	39:DD:147:LEU:HD22	2.03	0.41
37:DB:52:A:O2'	37:DB:53:A:N7	2.53	0.41
39:DD:63:ARG:NH1	39:DD:63:ARG:CG	2.77	0.41
41:DF:157:VAL:HG12	41:DF:176:LEU:HD23	2.02	0.41
42:DG:45:GLU:O	42:DG:53:LEU:HD21	2.20	0.41
46:DN:56:ASN:H	46:DN:125:GLY:HA3	1.86	0.41
48:DP:98:GLU:HA	48:DP:101:VAL:HG22	2.03	0.41
51:DS:17:ARG:O	51:DS:19:LYS:N	2.54	0.41
52:DT:24:PRO:HD3	52:DT:52:ILE:HD11	2.01	0.41
57:DY:91:GLU:HB3	57:DY:92:ASN:H	1.60	0.41
1:AA:245:C:O2'	1:AA:246:A:O5'	2.38	0.41
1:AA:676:A:H2'	1:AA:677:U:C6	2.56	0.41
1:AA:818:G:O2'	1:AA:819:A:H5'	2.21	0.41
1:AA:827:U:C2	1:AA:870:U:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:945:G:H2'	1:AA:945:G:N3	2.36	0.41
1:AA:1288:A:O2'	1:AA:1289:A:H5'	2.20	0.41
1:AA:1431:C:H2'	1:AA:1432:G:O4'	2.20	0.41
2:AB:7:VAL:O	2:AB:8:LYS:O	2.39	0.41
2:AB:142:LEU:O	2:AB:146:GLN:HG2	2.20	0.41
5:AE:7:GLU:HG2	5:AE:112:LEU:HD21	2.03	0.41
6:AF:34:GLY:O	6:AF:35:ALA:C	2.59	0.41
6:AF:37:VAL:HG12	6:AF:38:GLU:N	2.36	0.41
7:AG:13:GLN:O	7:AG:14:PRO:O	2.38	0.41
7:AG:152:ALA:O	7:AG:155:ARG:N	2.52	0.41
8:AH:119:LEU:HD12	8:AH:124:ALA:N	2.36	0.41
12:AL:27:LEU:O	12:AL:30:ALA:HB3	2.20	0.41
16:AP:42:ARG:O	16:AP:44:THR:N	2.44	0.41
20:AT:100:ILE:N	20:AT:100:ILE:CD1	2.83	0.41
25:AZ:86:ALA:C	25:AZ:88:TYR:N	2.74	0.41
25:AZ:221:PHE:CD2	25:AZ:305:ALA:HA	2.56	0.41
26:B0:27:GLU:HA	26:B0:67:VAL:O	2.20	0.41
36:BA:89:G:OP2	36:BA:90:U:H2'	2.21	0.41
36:BA:363(E):U:H2'	36:BA:363(F):A:C1'	2.51	0.41
36:BA:523:C:H2'	36:BA:524:U:C5'	2.51	0.41
36:BA:768:G:O2'	36:BA:1379:A:N6	2.53	0.41
36:BA:878:A:C8	36:BA:879:G:H1'	2.56	0.41
36:BA:1107:G:H4'	44:BJ:80:UNK:HA	2.01	0.41
36:BA:1109:C:H2'	36:BA:1110:G:H5'	2.01	0.41
36:BA:1577:C:H2'	36:BA:1578:U:C6	2.55	0.41
36:BA:1638:C:O2'	36:BA:1639:U:H5'	2.21	0.41
36:BA:1754:C:O2	36:BA:2717:G:H5'	2.20	0.41
36:BA:1799:G:N3	36:BA:1800:C:C5	2.89	0.41
36:BA:2198:A:H8	36:BA:2198:A:H5'	1.85	0.41
36:BA:2538:C:H2'	36:BA:2539:C:C6	2.55	0.41
36:BA:2630:G:H21	36:BA:2892:A:H1'	1.86	0.41
36:BA:2656:U:H3	36:BA:2665:A:H2	1.66	0.41
36:BA:2680:C:OP1	40:BE:109:LYS:HG3	2.20	0.41
36:BA:2810:A:N3	40:BE:61:ARG:NH2	2.55	0.41
38:BC:22:ILE:HG12	38:BC:224:ILE:HD12	2.02	0.41
38:BC:73:ARG:HB2	38:BC:111:ASP:OD2	2.21	0.41
38:BC:99:ILE:HG22	38:BC:99:ILE:O	2.19	0.41
39:BD:2:ALA:HB3	39:BD:20:ASP:OD2	2.21	0.41
39:BD:75:ILE:HD13	39:BD:75:ILE:N	2.34	0.41
40:BE:94:GLU:OE2	40:BE:177:PRO:HB3	2.20	0.41
42:BG:7:LEU:N	42:BG:10:LYS:HE2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BH:46:GLU:OE1	43:BH:50:VAL:HG11	2.20	0.41
46:BN:73:THR:HG23	46:BN:83:LYS:O	2.20	0.41
46:BN:90:MET:HA	46:BN:90:MET:HE2	2.00	0.41
49:BQ:3:MET:HB2	49:BQ:4:PRO:CD	2.43	0.41
50:BR:29:LEU:CD1	50:BR:29:LEU:H	2.33	0.41
50:BR:79:LEU:HD22	50:BR:79:LEU:O	2.21	0.41
51:BS:11:LYS:HG2	51:BS:11:LYS:O	2.20	0.41
53:BU:39:LEU:O	53:BU:43:GLY:N	2.53	0.41
57:BY:2:ARG:C	57:BY:4:LYS:N	2.74	0.41
57:BY:6:HIS:HE1	57:BY:30:VAL:HG11	1.84	0.41
1:CA:184:G:H4'	1:CA:224:C:H4'	2.02	0.41
1:CA:321:A:H5"	1:CA:328:C:C4	2.55	0.41
1:CA:333:G:H4'	20:CT:16:HIS:CE1	2.56	0.41
1:CA:390:C:C4'	16:CP:28:ARG:HH21	2.28	0.41
1:CA:1199:U:H4'	10:CJ:54:PHE:CE1	2.55	0.41
2:CB:7:VAL:HB	2:CB:217:ARG:HH21	1.86	0.41
2:CB:220:ASP:HA	2:CB:223:ILE:HD12	2.03	0.41
3:CC:35:GLU:CD	3:CC:95:THR:HG23	2.40	0.41
4:CD:158:ILE:O	4:CD:162:LEU:CB	2.65	0.41
7:CG:50:ILE:CD1	7:CG:121:ALA:HB1	2.51	0.41
9:CI:43:ALA:HA	9:CI:74:ILE:HD13	2.02	0.41
9:CI:63:ILE:HG21	9:CI:77:ILE:HD11	2.03	0.41
9:CI:65:VAL:HG21	9:CI:73:GLN:CB	2.49	0.41
12:CL:75:HIS:CB	12:CL:102:ARG:HH12	2.32	0.41
16:CP:26:ARG:HH11	16:CP:26:ARG:CG	2.28	0.41
16:CP:80:PHE:O	16:CP:82:GLN:N	2.54	0.41
20:CT:22:ARG:O	20:CT:26:ASN:ND2	2.53	0.41
22:CW:7:A:C4	22:CW:49:C:H5	2.39	0.41
25:CZ:19:HIS:CE1	36:DA:2661:G:C5'	3.04	0.41
25:CZ:301:GLY:O	25:CZ:302:GLN:C	2.58	0.41
27:D1:35:THR:HG23	36:DA:2080:G:O5'	2.21	0.41
29:D3:29:ARG:CZ	36:DA:1183:G:O3'	2.69	0.41
31:D5:31:VAL:O	31:D5:40:LYS:HG3	2.20	0.41
31:D5:43:HIS:CE1	36:DA:2884:U:OP2	2.73	0.41
33:D7:5:TRP:CZ3	36:DA:464:U:H4'	2.56	0.41
36:DA:94:C:H2'	36:DA:94(A):G:H5'	2.02	0.41
36:DA:587:C:O5'	36:DA:587:C:H6	2.03	0.41
36:DA:1052:C:O2'	36:DA:1053:C:P	2.78	0.41
36:DA:1174:A:OP1	36:DA:1174:A:H3'	2.20	0.41
36:DA:1410:G:O2'	36:DA:1411:C:H5'	2.20	0.41
36:DA:1568:G:H4'	39:DD:59:LYS:HG2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1773:A:H2'	36:DA:1774:C:O4'	2.20	0.41
36:DA:2009:G:H1'	50:DR:107:ASP:O	2.20	0.41
36:DA:2121:G:C2	36:DA:2177:C:O2	2.73	0.41
36:DA:2181:G:N2	36:DA:2182:G:C6	2.89	0.41
36:DA:2240:C:O2'	36:DA:2241:A:H5'	2.20	0.41
36:DA:2253:G:C2'	36:DA:2254:C:H5'	2.50	0.41
36:DA:2402:C:H2'	36:DA:2403:C:C5'	2.51	0.41
36:DA:2414:G:C2	36:DA:2415:G:C8	3.09	0.41
39:DD:9:TYR:CD2	39:DD:10:THR:HG22	2.55	0.41
39:DD:26:LYS:O	39:DD:27:THR:CG2	2.66	0.41
39:DD:35:LYS:HB3	39:DD:36:PRO:HD2	2.00	0.41
39:DD:148:GLU:CB	39:DD:151:LYS:HD2	2.49	0.41
41:DF:23:ASP:OD2	41:DF:203:GLN:NE2	2.53	0.41
41:DF:199:TRP:CH2	41:DF:203:GLN:OE1	2.73	0.41
42:DG:19:LEU:HD13	42:DG:32:PRO:CG	2.46	0.41
42:DG:133:LEU:CD2	42:DG:157:ILE:HB	2.47	0.41
43:DH:124:GLU:HG2	43:DH:132:ARG:HG3	2.03	0.41
43:DH:157:TYR:O	43:DH:157:TYR:CD1	2.74	0.41
45:DK:67:UNK:O	45:DK:69:UNK:N	2.54	0.41
48:DP:16:ARG:O	48:DP:17:LYS:C	2.59	0.41
48:DP:70:GLN:HB3	48:DP:72:PRO:CD	2.43	0.41
51:DS:70:GLY:C	51:DS:101:LEU:HB3	2.41	0.41
54:DV:18:LEU:HG	54:DV:19:LYS:H	1.86	0.41
55:DW:57:ASN:O	55:DW:61:ASN:N	2.44	0.41
55:DW:82:LEU:H	55:DW:82:LEU:CD1	2.29	0.41
56:DX:30:VAL:HG23	56:DX:31:HIS:N	2.33	0.41
58:DZ:81:ARG:O	58:DZ:82:ARG:CB	2.68	0.41
58:DZ:152:ALA:O	58:DZ:155:LEU:HD23	2.20	0.41
1:AA:80:G:C2'	1:AA:81:U:H5'	2.50	0.41
1:AA:227:G:H2'	1:AA:228:A:O4'	2.21	0.41
1:AA:807:A:C5	1:AA:808:C:C4	3.09	0.41
3:AC:48:TYR:C	3:AC:50:ALA:H	2.23	0.41
3:AC:68:VAL:HG13	3:AC:70:VAL:HG23	2.03	0.41
6:AF:2:ARG:HD2	6:AF:69:GLU:HB3	2.02	0.41
9:AI:53:VAL:CG2	9:AI:95:LYS:HD3	2.47	0.41
9:AI:97:LYS:N	9:AI:98:PRO:CD	2.84	0.41
11:AK:59:TYR:CZ	11:AK:63:LEU:HD21	2.56	0.41
13:AM:16:ASP:OD1	13:AM:16:ASP:N	2.54	0.41
13:AM:50:GLU:CD	13:AM:50:GLU:H	2.23	0.41
22:AW:48:C:H6	22:AW:48:C:OP1	2.03	0.41
25:AZ:303:VAL:HG21	25:AZ:345:ARG:NH1	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B0:49:LYS:H	26:B0:49:LYS:HG3	1.62	0.41
27:B1:7:ILE:HG13	27:B1:62:VAL:HG23	2.03	0.41
28:B2:11:GLU:HA	28:B2:14:ARG:HD2	2.03	0.41
30:B4:33:VAL:CG1	30:B4:34:GLU:N	2.83	0.41
32:B6:21:TYR:CD1	32:B6:21:TYR:N	2.89	0.41
36:BA:55:G:H2'	36:BA:56:A:C8	2.55	0.41
36:BA:363(F):A:OP1	36:BA:363(F):A:H4'	2.21	0.41
36:BA:453:C:H4'	36:BA:472:A:N6	2.34	0.41
36:BA:640:C:H2'	36:BA:641:C:H6	1.85	0.41
36:BA:992:C:H2'	36:BA:993:G:C8	2.56	0.41
36:BA:1425:G:H2'	36:BA:1426:G:C8	2.55	0.41
36:BA:1427:A:H1'	36:BA:1428:C:C5	2.56	0.41
36:BA:1902:C:O2'	39:BD:244:ARG:CB	2.67	0.41
36:BA:2646:C:H6	36:BA:2646:C:O5'	2.02	0.41
36:BA:2678:C:H2'	36:BA:2679:A:O4'	2.20	0.41
36:BA:2717:G:O2'	52:BT:96:ARG:HD3	2.20	0.41
36:BA:2770:G:C5'	36:BA:2771:C:OP2	2.68	0.41
36:BA:2825:C:H2'	36:BA:2826:A:H5'	2.03	0.41
36:BA:2852:G:C2	36:BA:2853:C:C2	3.08	0.41
36:BA:2894:G:H2'	36:BA:2894:G:N3	2.36	0.41
38:BC:47:LEU:N	38:BC:47:LEU:CD1	2.82	0.41
38:BC:87:GLU:HG2	38:BC:94:VAL:CG2	2.47	0.41
39:BD:69:ARG:HD3	39:BD:130:ALA:CB	2.50	0.41
39:BD:106:ILE:O	39:BD:106:ILE:HG12	2.20	0.41
39:BD:136:ILE:CG2	39:BD:165:ILE:HD12	2.51	0.41
40:BE:4:ILE:HG12	40:BE:5:LEU:N	2.36	0.41
41:BF:87:GLY:O	41:BF:88:VAL:HB	2.21	0.41
42:BG:34:LEU:HD12	42:BG:100:TRP:CZ3	2.55	0.41
44:BJ:48:UNK:O	44:BJ:49:UNK:CB	2.68	0.41
45:BK:78:UNK:C	45:BK:80:UNK:N	2.82	0.41
46:BN:28:THR:CG2	46:BN:29:LYS:N	2.83	0.41
47:BO:8:LEU:HD22	47:BO:19:ILE:CG1	2.51	0.41
48:BP:124:LYS:CD	48:BP:143:GLY:HA3	2.34	0.41
49:BQ:137:TYR:CE2	58:BZ:81:ARG:CZ	3.04	0.41
49:BQ:141:GLN:HB3	58:BZ:99:TYR:CE2	2.56	0.41
50:BR:38:VAL:CG1	50:BR:42:LYS:HE3	2.50	0.41
53:BU:8:VAL:CG1	53:BU:12:ARG:HE	2.34	0.41
57:BY:41:GLY:O	57:BY:42:VAL:C	2.59	0.41
58:BZ:51:ALA:HB3	58:BZ:57:ILE:HD11	2.02	0.41
58:BZ:117:LEU:O	58:BZ:117:LEU:HG	2.19	0.41
1:CA:59:A:H5'	1:CA:60:A:C5'	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:109:A:O2'	1:CA:110:C:OP1	2.36	0.41
1:CA:135:C:H2'	1:CA:136:C:H5'	2.01	0.41
1:CA:197:A:C6	1:CA:221:C:H4'	2.56	0.41
1:CA:218:C:O2'	1:CA:219:C:H5'	2.20	0.41
1:CA:323:U:O5'	1:CA:323:U:H6	2.04	0.41
1:CA:426:G:O2'	1:CA:427:U:H5'	2.21	0.41
1:CA:473:G:H2'	1:CA:474:G:H8	1.85	0.41
1:CA:575:G:H4'	1:CA:576:G:C5'	2.49	0.41
1:CA:1015:A:H1'	1:CA:1218:C:O2'	2.20	0.41
2:CB:149:LEU:O	2:CB:150:SER:C	2.58	0.41
2:CB:218:ALA:O	2:CB:221:LEU:HB3	2.21	0.41
3:CC:137:ALA:O	3:CC:141:VAL:HG23	2.21	0.41
4:CD:50:ARG:O	4:CD:51:PRO:C	2.59	0.41
4:CD:60:GLU:HG2	4:CD:202:LEU:HB2	2.03	0.41
4:CD:79:PHE:CD2	4:CD:207:TYR:CD2	3.09	0.41
4:CD:127:THR:N	4:CD:147:ALA:O	2.54	0.41
4:CD:180:GLY:O	4:CD:181:MET:C	2.58	0.41
4:CD:185:PHE:HZ	4:CD:188:LEU:HA	1.84	0.41
6:CF:77:ARG:O	6:CF:80:ARG:HB2	2.21	0.41
7:CG:14:PRO:HG3	7:CG:21:VAL:HG13	2.02	0.41
8:CH:34:GLU:O	8:CH:37:ARG:HB3	2.20	0.41
9:CI:8:GLY:HA3	9:CI:76:ALA:O	2.20	0.41
9:CI:77:ILE:O	9:CI:79:LEU:N	2.54	0.41
10:CJ:5:ARG:O	10:CJ:99:LYS:HB2	2.21	0.41
17:CQ:65:ILE:O	17:CQ:65:ILE:HG22	2.20	0.41
17:CQ:75:ARG:HG3	17:CQ:75:ARG:NH1	2.36	0.41
20:CT:41:ILE:C	20:CT:43:LEU:N	2.73	0.41
22:CW:43:C:H5'	22:CW:44:G:P	2.61	0.41
25:CZ:97:ALA:N	25:CZ:126:VAL:HG11	2.36	0.41
25:CZ:188:THR:HG21	25:CZ:196:VAL:HG11	2.03	0.41
26:D0:27:GLU:OE1	36:DA:856:C:C1'	2.69	0.41
26:D0:29:GLN:O	26:D0:67:VAL:HG23	2.21	0.41
31:D5:44:THR:CB	50:DR:101:ALA:HB2	2.51	0.41
32:D6:18:ARG:CG	32:D6:19:ARG:N	2.81	0.41
34:D8:3:LYS:HG2	34:D8:4:MET:N	2.36	0.41
36:DA:62:C:N3	36:DA:93:G:N2	2.67	0.41
36:DA:83:G:H21	36:DA:102:G:H2'	1.83	0.41
36:DA:383:U:H2'	36:DA:385:C:C5	2.45	0.41
36:DA:588:U:H6	36:DA:588:U:O5'	2.03	0.41
36:DA:1019:U:O2'	36:DA:1021:A:C2	2.62	0.41
36:DA:1057:A:O2'	36:DA:1058:G:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:1206:G:C2'	36:DA:1207:C:H5'	2.50	0.41
36:DA:1275:A:O2'	36:DA:1645:G:N3	2.54	0.41
36:DA:1481:U:H2'	36:DA:1482:G:H4'	2.03	0.41
36:DA:1713:U:O2'	36:DA:1714:G:H5'	2.20	0.41
36:DA:1786:A:C2	36:DA:2606:C:H1'	2.53	0.41
36:DA:1826:G:O2'	39:DD:242:ARG:NH2	2.53	0.41
36:DA:1847:A:H4'	36:DA:1848:A:OP2	2.20	0.41
36:DA:2370:G:C6	36:DA:2371:G:C6	3.08	0.41
36:DA:2717:G:O2'	52:DT:96:ARG:HD3	2.21	0.41
36:DA:2760:C:H2'	36:DA:2761:G:H5"	2.02	0.41
39:DD:62:TYR:HE2	39:DD:64:ILE:HA	1.83	0.41
39:DD:72:LYS:HE3	39:DD:101:GLU:OE1	2.20	0.41
40:DE:31:CYS:HA	40:DE:32:PRO:HD3	1.89	0.41
40:DE:115:GLY:O	40:DE:116:VAL:O	2.39	0.41
40:DE:152:LYS:HG2	46:DN:78:TYR:CE1	2.55	0.41
41:DF:32:LEU:HD11	41:DF:105:VAL:HG13	2.02	0.41
47:DO:35:VAL:CG2	47:DO:64:ARG:N	2.77	0.41
48:DP:16:ARG:CD	48:DP:18:ARG:H	2.33	0.41
49:DQ:33:GLY:O	49:DQ:131:ILE:HA	2.20	0.41
52:DT:94:ALA:O	52:DT:96:ARG:N	2.53	0.41
53:DU:61:TRP:CD2	53:DU:94:ASN:HA	2.56	0.41
54:DV:62:LEU:N	54:DV:62:LEU:CD2	2.84	0.41
57:DY:31:LEU:CB	57:DY:32:PRO:CA	2.99	0.41
58:DZ:99:TYR:CD2	58:DZ:123:ASP:HB3	2.51	0.41
1:AA:495:A:C2	1:AA:496:A:C6	3.09	0.41
1:AA:599:C:H4'	8:AH:130:GLY:C	2.41	0.41
1:AA:1054:C:O2	1:AA:1054:C:C2'	2.68	0.41
1:AA:1057:G:H2'	1:AA:1058:G:O4'	2.20	0.41
4:AD:111:ALA:HB3	4:AD:117:ALA:HB2	2.03	0.41
4:AD:163:GLU:C	4:AD:165:MET:N	2.74	0.41
6:AF:38:GLU:O	6:AF:39:LYS:O	2.39	0.41
6:AF:77:ARG:HG2	6:AF:77:ARG:NH1	2.35	0.41
7:AG:79:ARG:HB2	7:AG:84:ASN:HB2	2.02	0.41
7:AG:135:VAL:O	7:AG:139:GLU:HB2	2.20	0.41
16:AP:19:ILE:HG22	16:AP:36:ILE:HD11	2.02	0.41
22:AW:10:G:C6	22:AW:26:A:C2	3.09	0.41
24:AY:47:U:H5"	24:AY:48:U:OP2	2.20	0.41
25:AZ:23:GLY:CA	25:AZ:105:VAL:HG11	2.43	0.41
25:AZ:124:ARG:HB3	61:AZ:502:KIR:H421	2.02	0.41
25:AZ:234:ARG:HG3	25:AZ:234:ARG:HH11	1.86	0.41
25:AZ:263:ARG:HG3	25:AZ:263:ARG:NH1	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B1:20:ARG:HA	27:B1:33:LYS:O	2.21	0.41
28:B2:18:PRO:HB2	28:B2:71:ASN:O	2.21	0.41
28:B2:35:LEU:HD22	28:B2:35:LEU:C	2.40	0.41
30:B4:20:ASN:ND2	30:B4:20:ASN:C	2.74	0.41
31:B5:36:CYS:SG	31:B5:48:GLU:O	2.79	0.41
36:BA:60:G:C6	36:BA:74:A:N6	2.89	0.41
36:BA:385:C:O2	36:BA:390:A:C2	2.74	0.41
36:BA:494:G:O2'	55:BW:5:ALA:O	2.34	0.41
36:BA:798:G:H2'	36:BA:799:G:H8	1.86	0.41
36:BA:1270:C:C5'	36:BA:1271:G:C5'	2.91	0.41
36:BA:1351:C:O2	36:BA:1351:C:O4'	2.38	0.41
36:BA:1688:U:O2	36:BA:1700:A:H8	2.04	0.41
36:BA:1901:A:OP2	36:BA:1901:A:H4'	2.21	0.41
36:BA:2136:C:H2'	36:BA:2137:C:C6	2.56	0.41
36:BA:2277:G:C6	36:BA:2278:A:N7	2.88	0.41
36:BA:2527:C:C4	36:BA:2528:U:C5	3.08	0.41
36:BA:2539:C:O2'	36:BA:2540:C:H5'	2.20	0.41
36:BA:2784:C:H2'	36:BA:2785:C:H6	1.85	0.41
39:BD:233:HIS:NE2	39:BD:246:PRO:HA	2.35	0.41
40:BE:28:ALA:CB	40:BE:93:VAL:HG22	2.51	0.41
41:BF:51:THR:CG2	41:BF:92:PRO:HD2	2.51	0.41
41:BF:171:PRO:C	41:BF:173:VAL:H	2.24	0.41
41:BF:202:PHE:CE1	41:BF:206:ILE:HG13	2.56	0.41
43:BH:157:TYR:O	43:BH:158:HIS:CB	2.69	0.41
45:BK:134:UNK:O	45:BK:135:UNK:CB	2.68	0.41
46:BN:3:THR:CG2	46:BN:4:TYR:N	2.83	0.41
48:BP:84:ASN:CA	48:BP:116:GLY:HA3	2.49	0.41
52:BT:24:PRO:HA	52:BT:49:VAL:HG13	2.02	0.41
55:BW:47:VAL:O	55:BW:47:VAL:CG1	2.69	0.41
55:BW:79:GLY:HA3	55:BW:100:THR:CG2	2.49	0.41
1:CA:128:G:H5'	17:CQ:2:PRO:N	2.36	0.41
1:CA:414:A:O2'	1:CA:415:A:H5'	2.21	0.41
1:CA:538:G:H2'	1:CA:539:A:H8	1.86	0.41
1:CA:957:U:O2	1:CA:959:A:C8	2.72	0.41
1:CA:972:C:OP2	10:CJ:57:LYS:HE3	2.20	0.41
1:CA:1331:G:OP2	13:CM:23:TYR:CD2	2.74	0.41
5:CE:20:GLN:NE2	5:CE:25:ARG:CZ	2.83	0.41
6:CF:8:ILE:CG2	6:CF:85:VAL:HG13	2.50	0.41
10:CJ:47:PHE:N	10:CJ:63:PHE:O	2.51	0.41
11:CK:65:ALA:HB1	11:CK:98:LEU:HD23	2.03	0.41
20:CT:45:GLN:HE21	20:CT:46:GLU:N	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CZ:129:PRO:HB2	25:CZ:130:TYR:CE1	2.56	0.41
27:D1:76:ARG:HB2	36:DA:271(R):G:H5'	2.02	0.41
27:D1:86:SER:O	27:D1:90:ILE:HG12	2.20	0.41
28:D2:31:GLU:O	28:D2:35:LEU:HD23	2.20	0.41
34:D8:15:LYS:HE3	34:D8:16:ILE:O	2.21	0.41
34:D8:52:LYS:O	34:D8:55:ALA:CB	2.61	0.41
36:DA:197:A:N6	36:DA:2430:A:H2'	2.36	0.41
36:DA:237:C:O2'	36:DA:238:C:H5'	2.21	0.41
36:DA:408:G:C5	36:DA:409:C:C5	3.08	0.41
36:DA:532:A:N3	53:DU:28:ARG:NH2	2.69	0.41
36:DA:573:G:N2	36:DA:2029:G:N2	2.69	0.41
36:DA:600:G:H2'	36:DA:601:C:H6	1.85	0.41
36:DA:623:G:H2'	36:DA:624:C:H6	1.85	0.41
36:DA:696:G:C2	36:DA:767:U:O2	2.74	0.41
36:DA:804:A:H2	36:DA:2444:G:H4'	1.85	0.41
36:DA:837:C:N3	36:DA:941:A:N6	2.68	0.41
36:DA:847:U:H2'	36:DA:848:G:H5"	2.03	0.41
36:DA:848:G:C2	36:DA:933:A:H1'	2.55	0.41
36:DA:1098:A:N6	36:DA:1099:G:N2	2.68	0.41
36:DA:1154:G:H8	36:DA:1154:G:O5'	2.04	0.41
36:DA:1203:G:C6	36:DA:1204:A:N6	2.88	0.41
36:DA:1227:G:O2'	36:DA:1228:G:H5'	2.20	0.41
36:DA:1464:C:H2'	36:DA:1465:G:C8	2.55	0.41
36:DA:1488:G:H2'	36:DA:1489:U:O4'	2.21	0.41
36:DA:1850:G:N2	36:DA:1893:C:H1'	2.36	0.41
36:DA:2130:U:OP1	38:DC:5:LYS:HG2	2.20	0.41
36:DA:2435:A:H2'	36:DA:2436:G:O5'	2.21	0.41
39:DD:77:ALA:HB2	39:DD:97:TYR:CG	2.55	0.41
39:DD:158:ALA:O	39:DD:159:ALA:C	2.59	0.41
42:DG:142:PRO:HG2	42:DG:143:GLU:N	2.36	0.41
43:DH:94:TYR:O	43:DH:95:ARG:HB3	2.20	0.41
43:DH:130:ARG:HB3	43:DH:130:ARG:NH1	2.36	0.41
47:DO:8:LEU:HD22	47:DO:8:LEU:O	2.21	0.41
49:DQ:135:ASP:C	49:DQ:137:TYR:H	2.23	0.41
52:DT:62:THR:HG22	52:DT:75:ILE:HG23	2.02	0.41
52:DT:91:ARG:C	52:DT:93:ARG:N	2.74	0.41
56:DX:46:ALA:C	56:DX:47:PHE:CD1	2.94	0.41
1:AA:59:A:H2'	1:AA:59:A:N3	2.36	0.41
1:AA:484:G:H4'	1:AA:485:G:O5'	2.21	0.41
1:AA:707:C:H2'	1:AA:708:C:C6	2.55	0.41
1:AA:724:G:O2'	1:AA:725:G:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:743:U:H2'	1:AA:744:C:C6	2.55	0.41
1:AA:1063:C:N4	1:AA:1064:G:C2	2.89	0.41
1:AA:1162:C:H42	1:AA:1174:G:H1	1.69	0.41
1:AA:1281:U:H4'	1:AA:1282:C:OP2	2.21	0.41
1:AA:1314:C:O2	1:AA:1314:C:O4'	2.38	0.41
1:AA:1366:C:O2'	1:AA:1367:C:H5'	2.21	0.41
1:AA:1411:C:C2'	1:AA:1412:C:H5'	2.50	0.41
1:AA:1458:G:C6	1:AA:1459:C:C4	3.09	0.41
1:AA:1508:G:O2'	1:AA:1509:C:H5'	2.21	0.41
2:AB:61:LEU:HD11	2:AB:160:ASP:HB2	2.02	0.41
2:AB:102:LEU:CD2	2:AB:182:ILE:HD12	2.50	0.41
3:AC:35:GLU:HG3	3:AC:95:THR:OG1	2.21	0.41
3:AC:112:SER:O	3:AC:113:ALA:C	2.58	0.41
3:AC:203:PHE:HZ	3:AC:206:GLU:HG3	1.86	0.41
4:AD:61:LYS:HE2	4:AD:62:GLN:HE21	1.84	0.41
4:AD:100:ARG:NE	4:AD:102:ASP:OD2	2.50	0.41
4:AD:111:ALA:HA	4:AD:116:GLN:OE1	2.21	0.41
4:AD:151:LYS:O	4:AD:151:LYS:HG2	2.20	0.41
4:AD:168:ARG:HD2	4:AD:168:ARG:N	2.36	0.41
5:AE:33:VAL:CG2	5:AE:109:ILE:HG12	2.50	0.41
6:AF:8:ILE:HD13	6:AF:26:ILE:HD13	2.03	0.41
7:AG:32:ARG:NH2	7:AG:109:ASN:OD1	2.53	0.41
7:AG:87:VAL:HG13	7:AG:151:TYR:O	2.20	0.41
9:AI:53:VAL:HG22	9:AI:95:LYS:NZ	2.35	0.41
11:AK:116:HIS:O	11:AK:117:ASN:HB2	2.21	0.41
12:AL:32:PHE:CD1	12:AL:84:LEU:HD21	2.56	0.41
12:AL:55:VAL:CG2	12:AL:67:THR:HG22	2.50	0.41
13:AM:22:ILE:HB	13:AM:25:ILE:HD12	2.02	0.41
13:AM:57:ARG:O	13:AM:61:GLU:CB	2.69	0.41
16:AP:53:VAL:O	16:AP:56:ALA:N	2.53	0.41
17:AQ:12:SER:O	17:AQ:13:ASP:HB3	2.20	0.41
22:AW:24:G:O2'	22:AW:25:C:H5'	2.21	0.41
22:AW:30:G:H2'	22:AW:31:A:H8	1.85	0.41
22:AW:61:C:O2'	22:AW:62:C:C6	2.73	0.41
25:AZ:124:ARG:HD2	25:AZ:124:ARG:HA	1.76	0.41
25:AZ:404:LEU:N	25:AZ:404:LEU:HD22	2.36	0.41
26:B0:27:GLU:OE2	36:BA:856:C:C4'	2.69	0.41
27:B1:6:GLU:HG2	27:B1:6:GLU:H	1.67	0.41
27:B1:29:GLY:O	27:B1:30:VAL:C	2.58	0.41
27:B1:56:GLN:O	27:B1:57:GLU:O	2.39	0.41
28:B2:3:LEU:CA	28:B2:6:VAL:HG12	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B2:38:GLN:C	28:B2:40:SER:N	2.73	0.41
28:B2:64:LEU:O	28:B2:65:ASN:ND2	2.54	0.41
29:B3:21:ALA:O	29:B3:23:LEU:N	2.54	0.41
30:B4:12:ALA:HB1	30:B4:29:PRO:HA	2.01	0.41
30:B4:21:VAL:O	30:B4:21:VAL:HG12	2.21	0.41
32:B6:44:ARG:N	32:B6:44:ARG:HD2	2.35	0.41
33:B7:25:PRO:O	33:B7:29:LYS:HG2	2.20	0.41
33:B7:28:ARG:NH2	36:BA:1368:G:OP1	2.53	0.41
34:B8:56:GLU:O	34:B8:59:LYS:N	2.36	0.41
35:B9:2:LYS:NZ	36:BA:2526:G:O2'	2.45	0.41
35:B9:10:ILE:O	35:B9:32:HIS:CE1	2.73	0.41
36:BA:143:G:O4'	56:BX:37:THR:HG21	2.20	0.41
36:BA:412:A:H2'	36:BA:413:C:H5'	2.03	0.41
36:BA:527:C:N4	36:BA:2779:U:OP1	2.54	0.41
36:BA:654(A):G:C2'	36:BA:654(B):C:H5'	2.50	0.41
36:BA:801:G:O4'	41:BF:54:ARG:HD3	2.21	0.41
36:BA:811:U:O2'	36:BA:812:C:H5"	2.20	0.41
36:BA:848:G:C8	36:BA:928:G:N2	2.89	0.41
36:BA:876:C:C2'	36:BA:877:U:H5'	2.51	0.41
36:BA:880:G:H1	36:BA:897:C:H42	1.67	0.41
36:BA:940:G:H2'	36:BA:941:A:H5"	2.02	0.41
36:BA:1204:A:N1	36:BA:1241:A:C2	2.89	0.41
36:BA:1258:C:H2'	36:BA:1259:G:H8	1.84	0.41
36:BA:1303:G:C6	36:BA:1304:C:C4	3.09	0.41
36:BA:1344:G:H4'	36:BA:1384:A:C6	2.55	0.41
36:BA:1503:U:H2'	36:BA:1504:C:C6	2.56	0.41
36:BA:1817:G:OP1	39:BD:88:ARG:NH2	2.47	0.41
36:BA:2040:C:H2'	36:BA:2041:U:O4'	2.21	0.41
36:BA:2196:C:H2'	36:BA:2197:U:C6	2.55	0.41
36:BA:2199:A:H5'	36:BA:2200:C:OP2	2.21	0.41
36:BA:2578:G:H2'	36:BA:2579:C:H6	1.86	0.41
36:BA:2726:U:H6	47:BO:67:LYS:HZ3	1.68	0.41
36:BA:2750:A:H4'	36:BA:2751:G:OP1	2.21	0.41
36:BA:2762:G:H5'	36:BA:2762:G:C8	2.56	0.41
37:BB:12:C:H4'	37:BB:13:A:OP1	2.21	0.41
37:BB:40:U:O2	37:BB:43:C:H5"	2.21	0.41
39:BD:127:VAL:HA	39:BD:193:VAL:HG22	2.02	0.41
39:BD:136:ILE:HG22	39:BD:165:ILE:HD12	2.03	0.41
39:BD:181:GLU:HG3	39:BD:272:ALA:O	2.21	0.41
39:BD:186:HIS:HD2	39:BD:188:GLU:HB2	1.83	0.41
39:BD:227:ASN:HB3	39:BD:228:PRO:CD	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:245:PRO:O	39:BD:246:PRO:C	2.60	0.41
40:BE:32:PRO:HD2	40:BE:50:GLY:O	2.21	0.41
40:BE:46:ALA:HB2	40:BE:82:ARG:HA	2.02	0.41
40:BE:61:ARG:CB	40:BE:62:PRO:HD3	2.41	0.41
40:BE:92:THR:C	40:BE:95:ILE:HD11	2.41	0.41
40:BE:93:VAL:HG11	40:BE:175:VAL:HG23	2.03	0.41
40:BE:171:GLU:OE1	40:BE:185:LYS:HE3	2.21	0.41
41:BF:179:GLU:HA	41:BF:205:ARG:HH12	1.86	0.41
42:BG:56:ALA:C	42:BG:59:GLU:HG2	2.40	0.41
42:BG:91:ARG:C	42:BG:91:ARG:CD	2.90	0.41
42:BG:173:LEU:HB3	42:BG:178:PHE:CG	2.56	0.41
43:BH:27:LYS:HB3	43:BH:27:LYS:HE2	1.87	0.41
43:BH:72:ILE:O	43:BH:76:VAL:N	2.51	0.41
43:BH:136:ILE:N	43:BH:136:ILE:CD1	2.79	0.41
43:BH:139:GLN:CG	43:BH:140:LYS:N	2.84	0.41
47:BO:14:THR:HG23	47:BO:16:ALA:H	1.86	0.41
48:BP:70:GLN:HB3	48:BP:72:PRO:CD	2.47	0.41
49:BQ:141:GLN:HE21	49:BQ:141:GLN:CA	2.33	0.41
50:BR:18:LEU:CD1	50:BR:22:ARG:CZ	2.94	0.41
52:BT:32:TYR:O	52:BT:33:LYS:CB	2.68	0.41
52:BT:47:GLY:HA3	52:BT:63:VAL:HG12	2.03	0.41
52:BT:105:LEU:HD22	52:BT:109:GLU:OE1	2.21	0.41
53:BU:92:ARG:CD	53:BU:95:LEU:HG	2.51	0.41
55:BW:12:ILE:CD1	55:BW:42:ARG:NH1	2.81	0.41
56:BX:24:GLY:O	56:BX:82:GLN:CA	2.51	0.41
57:BY:13:VAL:HA	57:BY:73:ARG:O	2.21	0.41
58:BZ:75:ASN:HB3	58:BZ:84:GLU:OE1	2.21	0.41
58:BZ:76:LEU:HD23	58:BZ:83:PRO:HA	2.02	0.41
58:BZ:79:ARG:O	58:BZ:79:ARG:HG3	2.21	0.41
58:BZ:116:VAL:O	58:BZ:116:VAL:HG12	2.21	0.41
58:BZ:128:VAL:CG2	58:BZ:129:SER:N	2.84	0.41
1:CA:61:G:OP1	20:CT:10:LEU:HG	2.21	0.41
1:CA:102:G:O2'	1:CA:103:C:H5'	2.21	0.41
1:CA:300:A:H2'	1:CA:301:G:O4'	2.21	0.41
1:CA:413:G:O6	4:CD:35:ARG:HD3	2.21	0.41
1:CA:474:G:C2	1:CA:475:G:C5	3.08	0.41
1:CA:779:C:O2'	1:CA:780:A:H5'	2.21	0.41
1:CA:865:A:H2'	1:CA:866:C:C6	2.56	0.41
1:CA:957:U:C2	1:CA:959:A:OP2	2.74	0.41
1:CA:973:G:O3'	14:CN:41:ARG:NH1	2.54	0.41
1:CA:977:A:C8	1:CA:1223:C:N3	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:984:C:O2'	1:CA:985:C:H5'	2.21	0.41
1:CA:1133:G:N3	1:CA:1142:G:N2	2.67	0.41
1:CA:1158:C:H4'	2:CB:133:LYS:NZ	2.35	0.41
1:CA:1187:G:H2'	1:CA:1188:A:O4'	2.21	0.41
1:CA:1188:A:H2'	1:CA:1189:C:C5'	2.51	0.41
1:CA:1190:G:C3'	3:CC:3:ASN:HD22	2.33	0.41
1:CA:1203:C:H2'	1:CA:1204:A:H8	1.85	0.41
1:CA:1290:G:C6	1:CA:1291:G:C5	3.09	0.41
1:CA:1320:C:H42	19:CS:36:ARG:HG3	1.85	0.41
1:CA:1328:C:OP2	21:CU:7:ARG:HD3	2.21	0.41
2:CB:113:HIS:O	2:CB:117:GLU:HB2	2.19	0.41
2:CB:178:ARG:HH11	2:CB:178:ARG:CG	2.33	0.41
3:CC:34:LEU:O	3:CC:37:GLN:HB2	2.20	0.41
3:CC:35:GLU:O	3:CC:38:ARG:HG3	2.21	0.41
3:CC:51:GLY:O	3:CC:53:ALA:N	2.54	0.41
4:CD:16:GLY:O	4:CD:33:MET:HE3	2.21	0.41
4:CD:65:ARG:C	4:CD:67:ILE:N	2.73	0.41
5:CE:148:VAL:HG21	8:CH:107:LEU:HD13	2.03	0.41
6:CF:29:ALA:O	6:CF:30:LEU:C	2.57	0.41
8:CH:46:LYS:HG3	8:CH:64:LYS:HB2	2.02	0.41
10:CJ:3:LYS:HD2	10:CJ:77:PRO:CD	2.51	0.41
10:CJ:16:LEU:HD11	10:CJ:70:ARG:HB2	2.02	0.41
13:CM:9:ILE:HG21	42:DG:146:TYR:OH	2.21	0.41
13:CM:83:ASP:OD1	13:CM:83:ASP:N	2.53	0.41
17:CQ:52:LYS:CD	17:CQ:52:LYS:N	2.83	0.41
18:CR:31:LEU:HD23	18:CR:31:LEU:N	2.36	0.41
19:CS:15:LEU:HB3	19:CS:16:LEU:HD12	2.02	0.41
19:CS:53:ASN:ND2	19:CS:53:ASN:C	2.73	0.41
20:CT:51:GLU:O	20:CT:55:ILE:HD12	2.21	0.41
20:CT:73:HIS:C	20:CT:74:LYS:HD3	2.41	0.41
22:CV:24:G:O2'	36:DA:1923:U:H5"	2.21	0.41
22:CW:67:C:O2'	22:CW:68:C:H5'	2.21	0.41
25:CZ:22:HIS:NE2	25:CZ:107:SER:HB3	2.36	0.41
25:CZ:272:MET:HE2	25:CZ:284:ASP:OD2	2.20	0.41
26:D0:23:VAL:HG13	26:D0:37:LEU:O	2.21	0.41
26:D0:27:GLU:CD	26:D0:27:GLU:N	2.73	0.41
26:D0:36:ILE:HG22	26:D0:58:THR:CG2	2.50	0.41
28:D2:22:GLU:O	28:D2:26:ARG:HB2	2.20	0.41
28:D2:25:VAL:HG22	28:D2:60:LEU:HD13	2.03	0.41
28:D2:25:VAL:CG2	28:D2:60:LEU:HB3	2.50	0.41
28:D2:35:LEU:HB3	28:D2:50:ILE:HD11	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D2:60:LEU:O	28:D2:63:VAL:HB	2.21	0.41
29:D3:50:VAL:O	29:D3:52:HIS:N	2.54	0.41
30:D4:5:ILE:O	42:DG:67:LYS:HD2	2.21	0.41
31:D5:52:TYR:N	31:D5:52:TYR:HD1	2.18	0.41
32:D6:10:LEU:HD12	34:D8:34:TRP:HB2	2.01	0.41
35:D9:7:VAL:HG12	35:D9:8:LYS:N	2.35	0.41
35:D9:17:ILE:HD13	35:D9:17:ILE:HA	1.95	0.41
36:DA:6:A:O2'	36:DA:7:G:H5'	2.21	0.41
36:DA:32:C:H5'	36:DA:33:U:OP2	2.21	0.41
36:DA:42:G:H3'	36:DA:43:A:H8	1.84	0.41
36:DA:48:G:O3'	36:DA:51:G:H5'	2.21	0.41
36:DA:143:G:H2'	36:DA:143(A):C:C6	2.56	0.41
36:DA:284:U:H6	36:DA:284:U:O5'	2.04	0.41
36:DA:349:G:C2'	36:DA:350:U:H5'	2.51	0.41
36:DA:898:C:H2'	36:DA:899:A:O4'	2.21	0.41
36:DA:910:A:N1	36:DA:2277:G:H1'	2.36	0.41
36:DA:979:G:H2'	36:DA:982:C:H42	1.85	0.41
36:DA:1010:A:N3	36:DA:1153:C:H1'	2.36	0.41
36:DA:1191:G:O2'	36:DA:1192:G:H5'	2.20	0.41
36:DA:1288:U:C2	36:DA:1327:C:O2	2.74	0.41
36:DA:1403:C:H2'	36:DA:1404:C:O4'	2.20	0.41
36:DA:2048:G:C2	36:DA:2621:A:C2	3.09	0.41
36:DA:2202:C:H2'	36:DA:2203:U:O4'	2.20	0.41
36:DA:2477:C:O5'	36:DA:2477:C:H6	2.04	0.41
36:DA:2505:G:H2'	36:DA:2576:G:O6	2.20	0.41
37:DB:5:C:O2'	37:DB:6:C:H5'	2.20	0.41
37:DB:73:A:H2'	37:DB:74:U:H5'	2.03	0.41
38:DC:25:ALA:O	38:DC:29:VAL:HG22	2.21	0.41
38:DC:127:LEU:HD23	38:DC:137:LEU:HD23	2.01	0.41
40:DE:78:LEU:N	40:DE:78:LEU:HD12	2.35	0.41
40:DE:104:VAL:CG1	40:DE:188:VAL:HG21	2.46	0.41
40:DE:126:PRO:C	40:DE:128:SER:H	2.23	0.41
41:DF:139:PHE:HB3	41:DF:166:ALA:HB1	2.03	0.41
41:DF:150:GLY:HA2	41:DF:172:TRP:CE3	2.56	0.41
42:DG:125:PHE:CD1	42:DG:125:PHE:N	2.89	0.41
42:DG:152:LEU:N	42:DG:152:LEU:CD2	2.83	0.41
43:DH:37:VAL:CG1	43:DH:38:SER:N	2.84	0.41
43:DH:98:LEU:HB3	43:DH:125:VAL:HG21	2.02	0.41
43:DH:120:GLY:O	43:DH:135:GLY:HA2	2.21	0.41
46:DN:61:ARG:HB3	46:DN:61:ARG:HH11	1.85	0.41
46:DN:82:LEU:HD12	46:DN:82:LEU:HA	1.76	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:47:ASP:OD2	48:DP:49:ARG:HB2	2.21	0.41
48:DP:85:LEU:HD23	48:DP:85:LEU:C	2.42	0.41
49:DQ:2:LEU:O	49:DQ:2:LEU:HG	2.20	0.41
49:DQ:45:GLN:H	49:DQ:45:GLN:NE2	2.19	0.41
50:DR:52:ILE:O	50:DR:55:ALA:HB3	2.21	0.41
50:DR:96:ARG:NH1	50:DR:117:VAL:CG2	2.82	0.41
51:DS:106:ARG:O	51:DS:107:GLU:CB	2.69	0.41
52:DT:92:GLY:N	52:DT:120:ARG:HH21	2.17	0.41
53:DU:91:ASP:O	53:DU:92:ARG:O	2.39	0.41
56:DX:35:THR:HG21	56:DX:37:THR:HB	2.02	0.41
57:DY:2:ARG:N	57:DY:4:LYS:HZ3	2.18	0.41
57:DY:38:ILE:HD13	57:DY:66:PRO:HG3	2.02	0.41
57:DY:82:PRO:O	57:DY:83:THR:CB	2.69	0.41
58:DZ:9:TYR:CE1	58:DZ:35:ARG:NH1	2.88	0.41
58:DZ:107:THR:O	58:DZ:108:PRO:O	2.39	0.41
58:DZ:158:PRO:HB3	58:DZ:159:PRO:HD2	2.02	0.41
1:AA:346:G:O2'	1:AA:347:G:O5'	2.38	0.41
1:AA:751:U:H1'	15:AO:23:GLY:O	2.20	0.41
1:AA:1152:A:OP1	10:AJ:68:HIS:HD2	2.04	0.41
1:AA:1359:C:OP2	14:AN:35:ARG:NH1	2.49	0.41
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.21	0.41
2:AB:179:LYS:HA	8:AH:72:PRO:HG3	2.01	0.41
4:AD:88:VAL:HG13	5:AE:97:GLY:HA2	2.04	0.41
6:AF:89:MET:HG2	6:AF:91:VAL:HG23	2.02	0.41
9:AI:8:GLY:O	9:AI:76:ALA:HB1	2.21	0.41
14:AN:3:ARG:O	14:AN:3:ARG:CG	2.68	0.41
14:AN:7:ILE:HG13	14:AN:8:GLU:N	2.36	0.41
18:AR:22:VAL:O	18:AR:25:THR:HB	2.20	0.41
18:AR:30:ASP:O	18:AR:32:ARG:N	2.54	0.41
19:AS:37:ARG:H	19:AS:37:ARG:HG3	1.48	0.41
22:AW:24:G:C2	22:AW:25:C:C2	3.09	0.41
24:AY:66:C:H2'	24:AY:67:G:C8	2.56	0.41
25:AZ:86:ALA:O	25:AZ:87:ASP:HB2	2.21	0.41
25:AZ:188:THR:HG21	25:AZ:196:VAL:HG11	2.02	0.41
25:AZ:374:LEU:HD12	25:AZ:378:VAL:HG22	2.03	0.41
31:B5:2:ALA:N	36:BA:2015:A:N3	2.68	0.41
31:B5:41:PRO:HG3	50:BR:101:ALA:HB1	2.01	0.41
34:B8:26:LYS:HZ3	34:B8:47:LYS:HD2	1.85	0.41
35:B9:31:LYS:HE2	36:BA:2478:A:OP1	2.21	0.41
36:BA:270:A:C2'	36:BA:271:A:H5'	2.51	0.41
36:BA:319:C:O2'	36:BA:320:A:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:336:C:C4'	57:BY:7:VAL:HG21	2.47	0.41
36:BA:448:U:H1'	41:BF:84:VAL:CG2	2.51	0.41
36:BA:860:U:O2	36:BA:860:U:O4'	2.38	0.41
36:BA:940:G:H2'	36:BA:941:A:C4'	2.50	0.41
36:BA:1142(A):A:C5	36:BA:1144:G:C5	3.09	0.41
36:BA:1163:G:O2'	36:BA:1164:G:H5'	2.20	0.41
36:BA:1221(A):C:H2'	36:BA:1222:C:H6	1.85	0.41
36:BA:1227:G:C2'	36:BA:1228:G:H5'	2.51	0.41
36:BA:1337:G:H2'	36:BA:1338:G:H8	1.85	0.41
36:BA:1385:G:O2'	36:BA:1396:U:O2	2.34	0.41
36:BA:1429:G:H2'	36:BA:1430:C:H6	1.84	0.41
36:BA:1655:A:O2'	40:BE:115:GLY:CA	2.68	0.41
36:BA:2474:C:H5'	36:BA:2475:C:OP2	2.21	0.41
36:BA:2758:A:C2	36:BA:2759:G:C1'	3.04	0.41
37:BB:53:A:C2	37:BB:54:G:C8	3.09	0.41
37:BB:91:C:O2'	37:BB:92:C:H5'	2.21	0.41
40:BE:36:ARG:CZ	40:BE:88:GLY:HA2	2.51	0.41
41:BF:64:ILE:HD11	41:BF:65:TRP:CE2	2.56	0.41
41:BF:101:LEU:HD12	41:BF:102:PRO:HD2	2.02	0.41
42:BG:49:ASP:O	42:BG:50:ALA:HB3	2.21	0.41
42:BG:57:ALA:O	42:BG:59:GLU:N	2.54	0.41
42:BG:71:THR:H	42:BG:90:LEU:H	1.69	0.41
45:BK:119:UNK:N	45:BK:123:UNK:CB	2.84	0.41
47:BO:34:THR:O	47:BO:35:VAL:C	2.60	0.41
48:BP:5:ASP:O	48:BP:6:LEU:C	2.60	0.41
51:BS:26:LEU:CD2	51:BS:26:LEU:O	2.69	0.41
57:BY:2:ARG:HD3	57:BY:2:ARG:C	2.42	0.41
1:CA:202:U:O3'	1:CA:203:U:H6	2.04	0.41
1:CA:377:G:H2'	1:CA:378:G:C8	2.56	0.41
1:CA:558:G:H2'	1:CA:559:A:H2	1.86	0.41
1:CA:748:C:H1'	1:CA:749:C:H5	1.85	0.41
1:CA:781:A:C3'	1:CA:782:A:H5'	2.51	0.41
1:CA:877:C:O2'	8:CH:3:THR:HB	2.21	0.41
1:CA:926:G:O3'	23:CX:16:A:C2	2.73	0.41
1:CA:1097:C:OP1	2:CB:137:ARG:NH1	2.54	0.41
1:CA:1115:C:H2'	1:CA:1116:C:C6	2.56	0.41
1:CA:1489:G:O2'	1:CA:1490:C:H5'	2.21	0.41
7:CG:24:THR:O	7:CG:27:ILE:HB	2.21	0.41
7:CG:50:ILE:CD1	7:CG:125:MET:SD	3.08	0.41
7:CG:65:ALA:HB2	7:CG:124:LEU:O	2.21	0.41
9:CI:37:PHE:HB3	9:CI:43:ALA:HB2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:33:GLN:H	10:CJ:75:ILE:HD11	1.85	0.41
12:CL:25:PRO:O	12:CL:25:PRO:HG2	2.21	0.41
13:CM:14:ARG:NH2	13:CM:16:ASP:OD2	2.52	0.41
15:CO:26:GLU:OE2	15:CO:77:ARG:CD	2.67	0.41
15:CO:55:GLY:O	15:CO:56:LEU:C	2.58	0.41
16:CP:55:ARG:O	16:CP:58:TYR:N	2.54	0.41
23:CX:14:A:C2'	23:CX:15:A:O5'	2.68	0.41
25:CZ:120:ILE:HD13	25:CZ:158:LEU:CD2	2.50	0.41
27:D1:12:PRO:HB2	27:D1:41:ARG:NH2	2.36	0.41
27:D1:44:PRO:HA	36:DA:397:G:OP1	2.21	0.41
27:D1:68:PRO:C	27:D1:70:VAL:N	2.73	0.41
28:D2:25:VAL:O	28:D2:28:LYS:HB2	2.21	0.41
28:D2:70:GLN:N	28:D2:70:GLN:CD	2.74	0.41
29:D3:37:LEU:O	29:D3:38:GLU:O	2.39	0.41
32:D6:33:LYS:O	32:D6:34:LEU:HB2	2.21	0.41
33:D7:41:ARG:NH1	36:DA:459:U:H5"	2.36	0.41
36:DA:851:U:H2'	36:DA:852:G:H8	1.86	0.41
36:DA:908:C:O2'	36:DA:909:A:H5'	2.21	0.41
36:DA:1291:C:H2'	36:DA:1292:U:C6	2.56	0.41
36:DA:1348:G:C2	36:DA:1599:C:N3	2.89	0.41
36:DA:1412:A:O2'	36:DA:1413:G:H5'	2.20	0.41
36:DA:1495:A:C4	36:DA:1496:A:H2	2.38	0.41
36:DA:1504:C:O2'	36:DA:1505:C:C5'	2.69	0.41
36:DA:2022:U:HO2'	36:DA:2617:C:H5'	1.86	0.41
36:DA:2166:G:H2'	36:DA:2167:U:H6	1.82	0.41
36:DA:2228:G:C6	36:DA:2229:C:C4	3.09	0.41
36:DA:2246:G:H2'	36:DA:2247:A:C8	2.56	0.41
36:DA:2396:G:C2'	36:DA:2397:G:H5'	2.51	0.41
36:DA:2416:C:OP1	48:DP:64:LYS:O	2.39	0.41
36:DA:2778:A:H4'	36:DA:2779:U:OP2	2.21	0.41
38:DC:44:HIS:ND1	38:DC:172:HIS:ND1	2.66	0.41
39:DD:132:PRO:HD2	39:DD:135:PHE:HD2	1.86	0.41
39:DD:172:TYR:HD1	39:DD:185:VAL:C	2.24	0.41
40:DE:24:THR:CG2	40:DE:184:VAL:CG2	2.96	0.41
40:DE:55:ASN:ND2	40:DE:75:VAL:HG22	2.36	0.41
42:DG:10:LYS:HD2	42:DG:10:LYS:N	2.35	0.41
42:DG:60:LEU:HA	42:DG:63:ILE:CD1	2.49	0.41
43:DH:131:VAL:HG12	43:DH:132:ARG:N	2.36	0.41
44:DJ:37:UNK:C	44:DJ:39:UNK:N	2.79	0.41
46:DN:57:ALA:C	46:DN:58:ASP:O	2.58	0.41
48:DP:98:GLU:CA	48:DP:101:VAL:HG22	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:106:ARG:HH12	51:DS:108:GLY:N	2.19	0.41
52:DT:114:LEU:HD23	52:DT:114:LEU:HA	1.89	0.41
53:DU:16:LYS:O	53:DU:20:LEU:CD2	2.65	0.41
55:DW:4:LYS:O	55:DW:54:ALA:HB1	2.21	0.41
58:DZ:65:GLN:HB3	58:DZ:66:SER:H	1.71	0.41
1:AA:157:G:H2'	1:AA:158:G:C8	2.56	0.40
1:AA:234:C:H2'	1:AA:235:C:C6	2.56	0.40
1:AA:278:G:OP2	17:AQ:41:LYS:NZ	2.48	0.40
1:AA:718:G:C4	11:AK:116:HIS:CD2	3.09	0.40
1:AA:963:G:N2	10:AJ:55:LYS:HG2	2.36	0.40
1:AA:1228:C:OP1	13:AM:108:ARG:NH2	2.53	0.40
1:AA:1373:G:H5"	7:AG:36:LYS:HB2	2.03	0.40
1:AA:1410:G:H2'	1:AA:1411:C:C6	2.56	0.40
2:AB:19:HIS:HB2	2:AB:204:ASN:OD1	2.21	0.40
2:AB:61:LEU:HA	2:AB:64:ARG:CZ	2.50	0.40
2:AB:231:GLU:HA	2:AB:232:PRO:HD3	1.75	0.40
4:AD:20:TYR:HA	4:AD:26:CYS:CB	2.49	0.40
4:AD:145:GLU:H	4:AD:145:GLU:HG3	1.58	0.40
5:AE:71:LEU:HD23	5:AE:71:LEU:HA	1.92	0.40
7:AG:106:GLN:O	7:AG:110:GLN:HG3	2.21	0.40
7:AG:145:ALA:C	7:AG:147:ALA:H	2.22	0.40
9:AI:99:LEU:N	9:AI:99:LEU:CD2	2.78	0.40
10:AJ:61:GLU:OE1	14:AN:45:ARG:HD2	2.21	0.40
11:AK:126:ARG:O	11:AK:126:ARG:HG2	2.21	0.40
20:AT:90:GLN:HA	20:AT:93:GLU:OE2	2.21	0.40
22:AW:53:G:O2'	22:AW:54:U:H5'	2.20	0.40
25:AZ:158:LEU:O	25:AZ:163:PHE:HB2	2.21	0.40
27:B1:53:VAL:O	27:B1:54:ALA:CB	2.67	0.40
28:B2:25:VAL:HG22	28:B2:57:ILE:CG2	2.44	0.40
28:B2:62:THR:OG1	36:BA:76:C:H4'	2.20	0.40
30:B4:25:TYR:CD1	30:B4:25:TYR:N	2.89	0.40
36:BA:465:G:C6	36:BA:466:A:N6	2.89	0.40
36:BA:616:G:H2'	36:BA:618:C:O4'	2.21	0.40
36:BA:638:G:C6	36:BA:639:U:N3	2.89	0.40
36:BA:652:C:O2'	36:BA:653:A:P	2.79	0.40
36:BA:809:G:O2'	36:BA:810:U:H5'	2.22	0.40
36:BA:1042:G:H1'	36:BA:1114:G:H22	1.86	0.40
36:BA:1131:G:HO2'	36:BA:1132:A:H8	1.67	0.40
36:BA:1395:A:O2'	36:BA:1397:U:C6	2.74	0.40
36:BA:2147:G:H2'	36:BA:2148:G:C4'	2.51	0.40
36:BA:2474:C:H5"	36:BA:2475:C:C5	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BA:2836:U:H2'	36:BA:2837:G:C8	2.56	0.40
38:BC:99:ILE:C	38:BC:101:GLN:H	2.24	0.40
39:BD:35:LYS:CG	39:BD:63:ARG:CG	2.96	0.40
39:BD:126:GLN:HG3	39:BD:129:ASN:ND2	2.37	0.40
42:BG:146:TYR:C	42:BG:148:MET:N	2.74	0.40
43:BH:163:TYR:HD1	43:BH:163:TYR:H	1.68	0.40
46:BN:47:ALA:O	46:BN:119:ARG:NH2	2.51	0.40
48:BP:114:ILE:HG22	48:BP:129:ALA:O	2.21	0.40
56:BX:12:VAL:HA	56:BX:27:THR:O	2.21	0.40
58:BZ:128:VAL:CG2	58:BZ:132:ASN:O	2.68	0.40
1:CA:189(H):G:O2'	1:CA:189(I):G:C8	2.67	0.40
1:CA:541:G:H2'	1:CA:542:G:H8	1.86	0.40
1:CA:559:A:OP1	5:CE:126:ARG:NH2	2.53	0.40
1:CA:644:G:C5	1:CA:645:C:C5	3.09	0.40
1:CA:650:G:O2'	1:CA:651:C:H5'	2.21	0.40
1:CA:965:A:C2	1:CA:969:A:C2	3.08	0.40
1:CA:973:G:OP1	10:CJ:57:LYS:HE2	2.21	0.40
1:CA:1095:U:H2'	1:CA:1096:C:O4'	2.21	0.40
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.55	0.40
2:CB:42:ILE:HG21	2:CB:203:GLY:HA2	2.03	0.40
2:CB:88:ALA:HB2	2:CB:219:VAL:CG1	2.51	0.40
2:CB:180:LEU:O	2:CB:181:PHE:HB2	2.21	0.40
2:CB:231:GLU:HA	2:CB:232:PRO:HD3	1.84	0.40
3:CC:29:TYR:HE2	10:CJ:65:LEU:CD2	2.32	0.40
4:CD:145:GLU:CB	4:CD:183:GLY:O	2.70	0.40
7:CG:69:VAL:CG1	7:CG:100:ALA:HB1	2.51	0.40
9:CI:5:TYR:CG	9:CI:6:GLY:N	2.89	0.40
10:CJ:5:ARG:HG2	10:CJ:73:ASP:OD1	2.20	0.40
10:CJ:42:THR:HG22	10:CJ:67:THR:O	2.21	0.40
12:CL:25:PRO:O	12:CL:26:ALA:CB	2.69	0.40
14:CN:12:ARG:HB3	14:CN:14:PRO:HD2	2.03	0.40
19:CS:53:ASN:ND2	19:CS:53:ASN:N	2.67	0.40
20:CT:55:ILE:HG12	20:CT:56:MET:N	2.35	0.40
22:CV:56:C:O2	42:DG:78:SER:HB2	2.21	0.40
25:CZ:34:VAL:CG1	25:CZ:200:TRP:CZ2	3.04	0.40
25:CZ:178:ALA:CA	25:CZ:196:VAL:HG23	2.50	0.40
25:CZ:226:GLU:O	25:CZ:300:ARG:HD2	2.19	0.40
26:D0:41:ARG:O	26:D0:42:GLY:O	2.38	0.40
29:D3:13:ILE:HD11	36:DA:989:G:C4	2.55	0.40
31:D5:25:LEU:CD2	31:D5:26:THR:H	2.33	0.40
32:D6:15:GLU:OE1	32:D6:18:ARG:CZ	2.66	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D8:30:ARG:O	34:D8:30:ARG:HD3	2.21	0.40
35:D9:31:LYS:HG2	36:DA:2478:A:H5'	2.02	0.40
36:DA:9:U:O4	36:DA:2629:A:C8	2.73	0.40
36:DA:134:C:H2'	36:DA:135:G:C8	2.55	0.40
36:DA:187:G:C2	36:DA:210:C:O2	2.75	0.40
36:DA:466:A:H2'	36:DA:467:G:H5'	2.03	0.40
36:DA:481:G:OP1	57:DY:47:LYS:NZ	2.54	0.40
36:DA:532:A:C2	53:DU:28:ARG:NH2	2.89	0.40
36:DA:875:G:H4'	58:DZ:170:THR:CG2	2.51	0.40
36:DA:924:C:O2'	36:DA:925:C:H5'	2.22	0.40
36:DA:1895:C:H2'	36:DA:1896:G:O4'	2.21	0.40
36:DA:1998:G:O2'	36:DA:1999:C:H5'	2.20	0.40
36:DA:2127:G:O2'	36:DA:2128:C:H5'	2.20	0.40
36:DA:2300:G:O2'	36:DA:2301:C:H5'	2.21	0.40
36:DA:2377:A:O2'	36:DA:2378:A:C5'	2.68	0.40
36:DA:2869:G:H2'	36:DA:2870:C:O4'	2.22	0.40
37:DB:81:G:O6	37:DB:96:U:O2	2.39	0.40
38:DC:62:VAL:HG13	38:DC:161:ILE:HD11	2.01	0.40
38:DC:125:SER:O	38:DC:126:LYS:HG2	2.21	0.40
38:DC:127:LEU:C	38:DC:129:ARG:N	2.75	0.40
39:DD:133:LEU:C	39:DD:135:PHE:N	2.75	0.40
39:DD:242:ARG:HD2	39:DD:242:ARG:N	2.35	0.40
40:DE:188:VAL:HG22	40:DE:189:PRO:HD2	2.02	0.40
41:DF:113:ALA:HB1	41:DF:186:ILE:CG2	2.38	0.40
42:DG:52:ILE:C	42:DG:54:GLU:N	2.73	0.40
46:DN:63:THR:OG1	46:DN:66:LYS:NZ	2.52	0.40
48:DP:86:LYS:HB2	48:DP:117:GLU:O	2.21	0.40
48:DP:120:ALA:HB3	48:DP:137:LYS:O	2.21	0.40
49:DQ:109:VAL:CG1	49:DQ:113:GLN:OE1	2.69	0.40
52:DT:30:VAL:O	52:DT:31:SER:CB	2.66	0.40
52:DT:117:ASP:O	52:DT:118:ARG:C	2.59	0.40
53:DU:13:LYS:O	53:DU:17:ILE:HD13	2.21	0.40
53:DU:37:GLU:O	53:DU:38:THR:C	2.59	0.40
53:DU:51:LYS:H	53:DU:51:LYS:HG2	1.66	0.40
53:DU:76:TYR:CD1	53:DU:76:TYR:C	2.94	0.40
53:DU:92:ARG:CZ	54:DV:11:GLN:O	2.70	0.40
55:DW:18:ARG:HG3	55:DW:76:VAL:CG1	2.51	0.40
57:DY:77:PRO:HB2	57:DY:99:CYS:SG	2.61	0.40
1:AA:16:A:C2	1:AA:920:U:O2	2.73	0.40
1:AA:192:U:C4'	20:AT:103:GLY:N	2.85	0.40
1:AA:413:G:N2	1:AA:428:G:O2'	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:710:G:OP1	6:AF:54:LYS:HE3	2.21	0.40
1:AA:782:A:H4'	1:AA:1514:C:O2'	2.21	0.40
1:AA:1004:A:C3'	1:AA:1005:A:H5'	2.51	0.40
1:AA:1425:U:H2'	1:AA:1426:C:C6	2.56	0.40
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.22	0.40
1:AA:1503:A:H1'	23:AX:15:A:H61	1.84	0.40
2:AB:24:TRP:CD1	2:AB:24:TRP:N	2.90	0.40
2:AB:151:GLY:O	2:AB:153:ARG:N	2.54	0.40
2:AB:152:PHE:C	2:AB:152:PHE:CD1	2.94	0.40
4:AD:145:GLU:CG	4:AD:184:LYS:HG2	2.50	0.40
11:AK:127:LYS:HA	11:AK:127:LYS:HD3	1.76	0.40
12:AL:119:LYS:C	12:AL:120:TYR:CD2	2.95	0.40
16:AP:14:ASN:OD1	16:AP:16:HIS:CE1	2.74	0.40
22:AV:2:C:C2'	22:AV:3:C:H5"	2.51	0.40
24:AY:51:G:N2	24:AY:64:U:C2	2.90	0.40
25:AZ:135:MET:CE	25:AZ:138:VAL:HG22	2.52	0.40
26:B0:18:ALA:HB2	36:BA:2272:U:OP2	2.21	0.40
29:B3:31:LEU:HD23	29:B3:31:LEU:HA	1.91	0.40
34:B8:6:THR:HG21	36:BA:243:U:OP1	2.21	0.40
35:B9:4:ARG:HE	35:B9:4:ARG:HB3	1.77	0.40
36:BA:221:A:C8	36:BA:266:G:C6	3.10	0.40
36:BA:227:A:H61	36:BA:410:G:H21	1.69	0.40
36:BA:338:G:N2	36:BA:339:U:C1'	2.84	0.40
36:BA:581:C:C2	36:BA:582:G:C8	3.09	0.40
36:BA:1759:A:C5'	36:BA:2715:C:H1'	2.52	0.40
36:BA:1885:A:H2'	36:BA:1886:C:C5'	2.51	0.40
36:BA:2121:G:C2	36:BA:2177:C:O2	2.74	0.40
36:BA:2540:C:H2'	36:BA:2541:A:O4'	2.21	0.40
36:BA:2683:C:OP1	52:BT:53:ARG:NH2	2.54	0.40
38:BC:123:VAL:HG22	38:BC:127:LEU:HB3	2.03	0.40
38:BC:218:MET:HB3	38:BC:218:MET:HE3	1.89	0.40
39:BD:21:PHE:HB3	39:BD:24:ILE:HG23	2.03	0.40
41:BF:152:GLU:O	41:BF:153:SER:C	2.59	0.40
42:BG:172:LEU:HD23	42:BG:176:LEU:HD12	2.02	0.40
43:BH:19:VAL:CG1	43:BH:20:ALA:N	2.83	0.40
46:BN:39:ARG:O	46:BN:41:ASP:N	2.53	0.40
48:BP:9:ASN:H	48:BP:10:PRO:HD3	1.86	0.40
50:BR:45:ARG:HG3	50:BR:46:GLY:N	2.35	0.40
52:BT:13:ARG:NE	52:BT:13:ARG:CA	2.82	0.40
55:BW:18:ARG:NH1	55:BW:76:VAL:HG13	2.36	0.40
55:BW:88:ARG:HG3	55:BW:88:ARG:HH11	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:18:TYR:C	56:BX:20:GLY:N	2.75	0.40
57:BY:38:ILE:HD13	57:BY:66:PRO:HG3	2.03	0.40
1:CA:67:C:H2'	1:CA:68:G:C8	2.57	0.40
1:CA:280:C:O2	17:CQ:38:ARG:HD3	2.22	0.40
1:CA:450:G:H4'	16:CP:41:PRO:O	2.21	0.40
1:CA:509:A:H5'	4:CD:54:TYR:CD2	2.55	0.40
1:CA:577:G:O2'	1:CA:578:C:H5'	2.20	0.40
1:CA:814:A:N7	1:CA:816:A:C4	2.88	0.40
1:CA:1168:A:H2'	1:CA:1169:A:C8	2.56	0.40
1:CA:1202:G:N3	14:CN:42:ILE:HG21	2.36	0.40
1:CA:1507:A:C2	1:CA:1508:G:C4	3.09	0.40
2:CB:187:LEU:CD1	2:CB:205:ASP:HA	2.51	0.40
3:CC:3:ASN:HB2	3:CC:4:LYS:H	1.51	0.40
4:CD:188:LEU:HD23	4:CD:189:PRO:O	2.20	0.40
5:CE:78:HIS:HD2	8:CH:107:LEU:HD12	1.86	0.40
5:CE:88:LYS:HB3	5:CE:123:LEU:HB2	2.04	0.40
7:CG:109:ASN:N	7:CG:109:ASN:ND2	2.67	0.40
8:CH:48:TYR:HA	8:CH:60:ARG:O	2.21	0.40
9:CI:40:LEU:CD1	9:CI:70:LYS:HG2	2.49	0.40
9:CI:126:SER:C	9:CI:128:ARG:HD2	2.40	0.40
10:CJ:20:ALA:O	10:CJ:24:VAL:HG23	2.21	0.40
10:CJ:23:ILE:O	10:CJ:23:ILE:HG22	2.20	0.40
10:CJ:29:ARG:HG2	10:CJ:29:ARG:O	2.22	0.40
10:CJ:35:SER:O	10:CJ:36:GLY:C	2.59	0.40
13:CM:81:LEU:HD12	13:CM:86:CYS:SG	2.61	0.40
19:CS:17:GLU:O	19:CS:17:GLU:HG2	2.21	0.40
20:CT:22:ARG:HG3	20:CT:22:ARG:NH1	2.37	0.40
20:CT:45:GLN:H	20:CT:45:GLN:NE2	2.10	0.40
20:CT:53:LEU:HD12	20:CT:53:LEU:N	2.36	0.40
20:CT:74:LYS:C	20:CT:76:ALA:N	2.74	0.40
22:CV:18:G:O2'	22:CV:57:G:N2	2.55	0.40
23:CX:13:A:H8	23:CX:13:A:P	2.45	0.40
24:CY:6:C:N4	24:CY:67:G:H1	2.14	0.40
24:CY:24:A:C5	24:CY:25:C:C4	3.10	0.40
25:CZ:355:LEU:HD13	25:CZ:359:VAL:O	2.21	0.40
27:D1:78:LYS:HE2	27:D1:78:LYS:HB3	1.85	0.40
28:D2:59:ARG:O	28:D2:60:LEU:C	2.58	0.40
30:D4:10:VAL:CG2	30:D4:11:PRO:CD	2.97	0.40
31:D5:3:LYS:CG	31:D5:4:HIS:H	2.34	0.40
34:D8:7:HIS:C	34:D8:9:GLY:N	2.74	0.40
35:D9:35:ARG:HG2	35:D9:35:ARG:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:26:G:O2'	36:DA:27:G:H5'	2.21	0.40
36:DA:83:G:H5'	57:DY:5:MET:SD	2.61	0.40
36:DA:228:A:C4	36:DA:230:U:H1'	2.57	0.40
36:DA:459:U:H2'	36:DA:460:A:H8	1.85	0.40
36:DA:487:C:C5	36:DA:488:G:N7	2.89	0.40
36:DA:565:C:H2'	36:DA:566:U:H6	1.86	0.40
36:DA:589:C:H2'	36:DA:590:A:H8	1.85	0.40
36:DA:833:U:H6	36:DA:833:U:O5'	2.03	0.40
36:DA:900:A:H3'	36:DA:901:A:H8	1.85	0.40
36:DA:1635:G:H2'	36:DA:1636:C:H6	1.86	0.40
36:DA:1688:U:O2	36:DA:1700:A:H8	2.04	0.40
36:DA:1721:G:N3	36:DA:1721:G:H5'	2.37	0.40
36:DA:1796:U:H2'	36:DA:1797:C:C6	2.56	0.40
36:DA:1971:A:N3	39:DD:241:PRO:HD3	2.35	0.40
36:DA:2038:G:H2'	36:DA:2039:C:O4'	2.21	0.40
36:DA:2358:G:C5	36:DA:2359:C:C5	3.09	0.40
36:DA:2523:G:O2'	36:DA:2524:G:H5"	2.20	0.40
36:DA:2825:C:H2'	36:DA:2826:A:H5'	2.02	0.40
39:DD:213:ARG:O	39:DD:216:GLY:N	2.54	0.40
40:DE:14:ILE:HG12	40:DE:21:VAL:HG23	2.03	0.40
40:DE:71:GLY:O	40:DE:72:VAL:O	2.39	0.40
41:DF:53:THR:HG22	41:DF:56:GLU:CG	2.51	0.40
41:DF:63:LYS:HZ1	41:DF:67:GLN:HA	1.86	0.40
42:DG:173:LEU:HD22	42:DG:178:PHE:CE2	2.56	0.40
47:DO:114:ILE:O	47:DO:118:ALA:N	2.52	0.40
48:DP:146:VAL:O	48:DP:147:LEU:O	2.40	0.40
50:DR:18:LEU:O	50:DR:21:TYR:HB2	2.20	0.40
50:DR:76:VAL:O	50:DR:79:LEU:HB3	2.22	0.40
53:DU:69:CYS:O	53:DU:74:LEU:HD12	2.21	0.40
53:DU:95:LEU:HD13	54:DV:4:ILE:HG23	2.02	0.40
54:DV:19:LYS:HD3	54:DV:22:VAL:HG21	2.04	0.40
54:DV:55:ALA:O	54:DV:56:SER:HB3	2.21	0.40
56:DX:6:ASP:O	56:DX:9:LEU:CD2	2.69	0.40
56:DX:12:VAL:CB	56:DX:17:ALA:HB1	2.47	0.40
57:DY:2:ARG:C	57:DY:4:LYS:N	2.74	0.40
57:DY:52:SER:O	57:DY:54:LYS:N	2.54	0.40
1:AA:718:G:C5	11:AK:116:HIS:HD2	2.39	0.40
1:AA:1190:G:C3'	3:AC:3:ASN:HD22	2.22	0.40
3:AC:23:TYR:CD1	3:AC:23:TYR:C	2.95	0.40
4:AD:129:ASN:HD22	4:AD:129:ASN:N	2.19	0.40
5:AE:36:ASP:OD1	5:AE:38:GLN:N	2.53	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:30:LEU:HB3	6:AF:35:ALA:CB	2.52	0.40
7:AG:145:ALA:O	7:AG:146:GLU:HB2	2.21	0.40
9:AI:31:GLN:HE21	9:AI:31:GLN:HB2	1.67	0.40
13:AM:57:ARG:HG2	13:AM:61:GLU:OE1	2.21	0.40
17:AQ:56:VAL:HG23	17:AQ:81:ARG:HG3	2.03	0.40
18:AR:30:ASP:C	18:AR:32:ARG:N	2.74	0.40
20:AT:63:ILE:HG21	20:AT:81:LYS:HG3	2.03	0.40
22:AV:53:G:H2'	22:AV:54:U:H6	1.87	0.40
24:AY:65:C:O2'	24:AY:66:C:H5'	2.21	0.40
25:AZ:358:GLY:C	25:AZ:360:GLU:H	2.25	0.40
27:B1:21:ARG:HG3	27:B1:21:ARG:NH1	2.37	0.40
28:B2:26:ARG:O	28:B2:29:LYS:N	2.42	0.40
32:B6:53:LYS:HD3	32:B6:53:LYS:N	2.35	0.40
33:B7:7:PRO:HG3	36:BA:1612:C:H5'	2.02	0.40
34:B8:18:ALA:C	34:B8:20:GLY:H	2.25	0.40
36:BA:533:G:H5'	53:BU:24:TYR:CD1	2.57	0.40
36:BA:569:U:C4	36:BA:570:G:C6	3.09	0.40
36:BA:581:C:O2'	36:BA:582:G:H5'	2.21	0.40
36:BA:723:G:H2'	36:BA:724:U:O4'	2.21	0.40
36:BA:1516:C:C3'	36:BA:1517:G:H5"	2.50	0.40
36:BA:2347:C:H2'	36:BA:2348:U:C6	2.55	0.40
37:BB:69:G:N2	37:BB:70:C:H1'	2.37	0.40
39:BD:35:LYS:CA	39:BD:63:ARG:HA	2.50	0.40
41:BF:42:ALA:O	41:BF:44:ARG:N	2.54	0.40
41:BF:65:TRP:CB	41:BF:66:PRO:CD	2.99	0.40
43:BH:24:VAL:O	43:BH:24:VAL:HG12	2.21	0.40
44:BJ:62:UNK:C	44:BJ:64:UNK:N	2.84	0.40
44:BJ:73:UNK:C	44:BJ:75:UNK:N	2.84	0.40
46:BN:36:GLY:HA2	46:BN:38:HIS:CE1	2.56	0.40
46:BN:46:VAL:HG13	46:BN:48:MET:HE3	2.03	0.40
49:BQ:63:LYS:HD2	58:BZ:175:VAL:CG2	2.51	0.40
50:BR:96:ARG:NH1	50:BR:117:VAL:CB	2.85	0.40
51:BS:61:ASN:O	51:BS:65:VAL:CG2	2.67	0.40
51:BS:96:GLY:C	51:BS:98:VAL:H	2.25	0.40
52:BT:85:LYS:CB	52:BT:85:LYS:HZ2	2.34	0.40
53:BU:62:ILE:HG23	53:BU:76:TYR:CE2	2.55	0.40
54:BV:2:PHE:H	54:BV:42:GLY:HA3	1.85	0.40
55:BW:59:VAL:O	55:BW:59:VAL:CG1	2.69	0.40
56:BX:14:SER:HB3	56:BX:17:ALA:CB	2.52	0.40
57:BY:17:SER:CB	57:BY:71:LYS:HE2	2.52	0.40
57:BY:36:ALA:O	57:BY:37:VAL:HG13	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:76:CYS:O	57:BY:77:PRO:C	2.60	0.40
58:BZ:115:GLY:N	58:BZ:177:PRO:HD3	2.37	0.40
1:CA:268:C:O2'	1:CA:269:C:H5'	2.21	0.40
1:CA:489:C:H2'	1:CA:490:G:H8	1.86	0.40
1:CA:545:C:OP1	4:CD:61:LYS:NZ	2.55	0.40
1:CA:697:U:C2'	1:CA:698:G:H5'	2.52	0.40
1:CA:1079:G:H2'	1:CA:1080:A:C8	2.56	0.40
1:CA:1152:A:C6	1:CA:1153:C:C4	3.09	0.40
1:CA:1286:A:O2'	1:CA:1287:A:H5"	2.21	0.40
1:CA:1483:A:H2'	1:CA:1484:C:H5'	2.02	0.40
1:CA:1489:G:H2'	1:CA:1490:C:H6	1.86	0.40
2:CB:92:TYR:CE1	2:CB:151:GLY:HA2	2.56	0.40
2:CB:137:ARG:HD3	2:CB:137:ARG:HA	1.98	0.40
3:CC:6:HIS:NE2	3:CC:184:TYR:CD2	2.89	0.40
3:CC:8:ILE:CD1	3:CC:184:TYR:HB3	2.51	0.40
3:CC:173:VAL:N	3:CC:174:PRO:CD	2.84	0.40
4:CD:140:VAL:CG1	4:CD:144:ASP:HB2	2.51	0.40
5:CE:76:ILE:HG12	5:CE:77:PRO:HD2	1.98	0.40
7:CG:103:TRP:HZ3	7:CG:138:LYS:HB2	1.86	0.40
8:CH:30:ARG:CB	8:CH:30:ARG:NH1	2.84	0.40
13:CM:56:LEU:HD13	13:CM:60:VAL:HG23	2.04	0.40
13:CM:57:ARG:HG2	13:CM:61:GLU:OE1	2.21	0.40
20:CT:100:ILE:C	20:CT:102:GLY:H	2.24	0.40
22:CW:30:G:H2'	22:CW:31:A:C8	2.55	0.40
24:CY:1:A:O2'	25:CZ:91:ASN:CG	2.59	0.40
24:CY:65:C:OP2	25:CZ:90:LYS:CE	2.69	0.40
25:CZ:122:LEU:O	25:CZ:126:VAL:HG23	2.21	0.40
32:D6:19:ARG:H	32:D6:19:ARG:HG3	1.59	0.40
34:D8:26:LYS:HD3	34:D8:47:LYS:CD	2.51	0.40
35:D9:7:VAL:CG1	35:D9:25:VAL:HG21	2.52	0.40
36:DA:60:G:C6	36:DA:74:A:N6	2.90	0.40
36:DA:654(E):G:N2	36:DA:654(Q):C:C1'	2.76	0.40
36:DA:892:G:O5'	36:DA:892:G:H8	2.03	0.40
36:DA:941:A:H4'	48:DP:35:HIS:CE1	2.56	0.40
36:DA:1022:G:O6	46:DN:66:LYS:HE3	2.22	0.40
36:DA:1352:U:O2	36:DA:1570:A:H2	2.05	0.40
36:DA:1445:A:H5'	36:DA:1460:A:H1'	2.04	0.40
36:DA:1568:G:P	39:DD:63:ARG:HH22	2.45	0.40
36:DA:1799:G:H8	39:DD:181:GLU:OE1	2.01	0.40
36:DA:1927:A:C6	36:DA:1928:A:C6	3.09	0.40
36:DA:1999:C:H4'	36:DA:2723:C:O2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DA:2053:G:OP1	40:DE:144:ARG:HD3	2.22	0.40
36:DA:2283:C:C5	36:DA:2389:G:C4	3.10	0.40
36:DA:2481:G:O2'	36:DA:2482:G:P	2.79	0.40
37:DB:107:G:C6	37:DB:108:U:C4	3.09	0.40
38:DC:74:VAL:HG21	38:DC:153:ILE:HG23	2.04	0.40
38:DC:82:LYS:O	38:DC:84:LYS:N	2.46	0.40
39:DD:142:VAL:CG2	39:DD:191:ALA:HB1	2.52	0.40
39:DD:227:ASN:HB3	39:DD:228:PRO:CD	2.52	0.40
40:DE:97:LYS:HA	40:DE:98:PRO:HD3	1.96	0.40
43:DH:15:VAL:CG1	43:DH:29:PRO:HD3	2.51	0.40
43:DH:85:LYS:HZ1	43:DH:85:LYS:C	2.24	0.40
49:DQ:79:LEU:HD23	49:DQ:80:GLU:HG3	1.95	0.40
50:DR:30:THR:HG22	50:DR:31:HIS:CE1	2.56	0.40
54:DV:68:LYS:HD3	54:DV:69:LYS:N	2.32	0.40
55:DW:31:GLU:O	55:DW:35:ILE:HG12	2.20	0.40
1:AA:417:C:C2'	1:AA:418:C:H5'	2.50	0.40
1:AA:598:U:H2'	1:AA:599:C:H6	1.87	0.40
1:AA:991:U:O2	1:AA:991:U:H2'	2.21	0.40
1:AA:1242:C:H6	1:AA:1242:C:O5'	2.05	0.40
1:AA:1529:G:H4'	1:AA:1530:G:OP2	2.21	0.40
4:AD:190:ASP:O	4:AD:194:LEU:HD23	2.21	0.40
6:AF:43:LEU:N	6:AF:43:LEU:HD13	2.36	0.40
6:AF:69:GLU:H	6:AF:69:GLU:CD	2.25	0.40
7:AG:122:HIS:O	7:AG:125:MET:N	2.54	0.40
7:AG:145:ALA:C	7:AG:147:ALA:N	2.75	0.40
10:AJ:6:ILE:CD1	10:AJ:72:VAL:HB	2.51	0.40
12:AL:7:ILE:HG22	12:AL:8:ASN:N	2.36	0.40
12:AL:45:PRO:HB3	12:AL:92:ASP:CB	2.32	0.40
12:AL:77:LEU:HD21	12:AL:107:ALA:CA	2.50	0.40
14:AN:29:ARG:HH11	14:AN:29:ARG:CG	2.34	0.40
14:AN:60:SER:O	14:AN:61:TRP:HB3	2.22	0.40
16:AP:9:PHE:N	16:AP:9:PHE:CD1	2.88	0.40
16:AP:43:LYS:O	16:AP:44:THR:C	2.60	0.40
16:AP:67:THR:CG2	16:AP:68:ASP:N	2.83	0.40
17:AQ:58:GLU:HB2	17:AQ:74:LEU:CB	2.43	0.40
22:AW:39:U:O2	22:AW:39:U:O5'	2.39	0.40
25:AZ:162:GLU:HA	25:AZ:162:GLU:OE1	2.21	0.40
25:AZ:340:PRO:O	25:AZ:350:THR:HA	2.21	0.40
25:AZ:401:THR:O	25:AZ:402:LYS:O	2.40	0.40
26:B0:23:VAL:HA	26:B0:38:VAL:HG13	2.03	0.40
34:B8:15:LYS:HD2	34:B8:16:ILE:H	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B8:61:LEU:H	34:B8:61:LEU:CD1	2.27	0.40
36:BA:145:G:C3'	36:BA:146:G:H5"	2.51	0.40
36:BA:621:A:C2'	36:BA:622:G:H5'	2.39	0.40
36:BA:1182:A:H2'	36:BA:1183:G:H8	1.86	0.40
36:BA:1192:G:C2'	36:BA:1193:G:H5'	2.51	0.40
36:BA:1455:G:H1'	36:BA:2852:G:H4'	2.04	0.40
36:BA:1843:C:H6	36:BA:1843:C:O5'	2.05	0.40
36:BA:2410:G:H2'	36:BA:2411:A:O4'	2.22	0.40
36:BA:2452:C:C4	36:BA:2453:A:C6	3.09	0.40
36:BA:2453:A:H2'	36:BA:2454:G:H8	1.86	0.40
36:BA:2511:U:C4	36:BA:2512:C:C4	3.10	0.40
38:BC:7:TYR:O	38:BC:10:LEU:HB2	2.22	0.40
39:BD:24:ILE:HD13	39:BD:25:THR:CA	2.51	0.40
39:BD:206:LEU:HG	39:BD:211:ARG:CG	2.51	0.40
40:BE:29:GLY:O	40:BE:51:PHE:HE1	2.04	0.40
40:BE:52:LEU:HG	40:BE:75:VAL:CG2	2.52	0.40
41:BF:62:ARG:HH11	41:BF:62:ARG:HG2	1.85	0.40
42:BG:7:LEU:HD23	42:BG:7:LEU:C	2.41	0.40
43:BH:90:LYS:O	43:BH:94:TYR:HD2	2.05	0.40
47:BO:105:GLU:O	47:BO:109:LYS:HG2	2.22	0.40
48:BP:16:ARG:NH1	48:BP:16:ARG:CB	2.72	0.40
49:BQ:67:ARG:HB2	49:BQ:102:VAL:O	2.22	0.40
51:BS:76:LYS:O	51:BS:80:LEU:HD12	2.21	0.40
56:BX:18:TYR:C	56:BX:20:GLY:H	2.25	0.40
58:BZ:28:MET:O	58:BZ:34:ASN:HA	2.20	0.40
58:BZ:61:LEU:HA	58:BZ:62:PRO:HD3	1.90	0.40
1:CA:117:G:H2'	1:CA:118:U:H5'	2.03	0.40
1:CA:234:C:H2'	1:CA:235:C:C6	2.56	0.40
1:CA:368:U:H3'	1:CA:369:C:C5'	2.51	0.40
1:CA:433:C:H2'	1:CA:434:U:C6	2.57	0.40
1:CA:707:C:H2'	1:CA:708:C:C6	2.56	0.40
1:CA:890:G:O2'	1:CA:906:G:O6	2.35	0.40
1:CA:1129:C:O2'	1:CA:1131:G:H8	2.04	0.40
1:CA:1207:G:C6	1:CA:1208:C:C4	3.10	0.40
2:CB:80:ILE:N	2:CB:80:ILE:CD1	2.84	0.40
2:CB:115:LEU:O	2:CB:117:GLU:N	2.54	0.40
2:CB:208:ILE:O	2:CB:209:ARG:C	2.59	0.40
3:CC:136:GLN:O	3:CC:139:GLN:HB3	2.22	0.40
4:CD:110:PHE:N	4:CD:110:PHE:CD1	2.89	0.40
6:CF:5:GLU:OE1	18:CR:34:TYR:OH	2.26	0.40
7:CG:115:ARG:CB	7:CG:118:VAL:HG13	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:23:SER:HA	8:CH:61:VAL:O	2.22	0.40
10:CJ:4:ILE:HG22	10:CJ:6:ILE:HG23	2.04	0.40
14:CN:4:LYS:O	14:CN:6:LEU:N	2.54	0.40
16:CP:15:PRO:HB2	16:CP:41:PRO:HG2	2.03	0.40
17:CQ:52:LYS:HD2	17:CQ:55:ASP:CG	2.42	0.40
19:CS:71:LEU:HD23	19:CS:71:LEU:HA	1.66	0.40
20:CT:10:LEU:O	20:CT:11:SER:C	2.60	0.40
20:CT:61:SER:O	20:CT:62:LEU:C	2.60	0.40
22:CV:59:U:HO2'	22:CV:60:U:H6	1.61	0.40
25:CZ:23:GLY:O	25:CZ:24:LYS:O	2.40	0.40
25:CZ:285:ASN:HD22	25:CZ:285:ASN:HA	1.51	0.40
26:D0:42:GLY:O	26:D0:57:PHE:CD1	2.74	0.40
26:D0:47:PRO:HB2	26:D0:48:GLY:H	1.65	0.40
27:D1:35:THR:HG23	27:D1:35:THR:O	2.20	0.40
34:D8:50:LEU:N	34:D8:53:PRO:HD3	2.37	0.40
36:DA:181:A:H2'	36:DA:182:A:H8	1.84	0.40
36:DA:223:A:C8	36:DA:422:A:O4'	2.74	0.40
36:DA:374:A:H2'	36:DA:375:C:O4'	2.21	0.40
36:DA:654(R):C:H2'	36:DA:654(S):G:C8	2.57	0.40
36:DA:789:A:OP1	36:DA:789:A:H3'	2.21	0.40
36:DA:797:C:OP1	41:DF:62:ARG:HB2	2.22	0.40
36:DA:994:C:OP1	53:DU:53:ARG:NH2	2.54	0.40
36:DA:1635:G:O2'	36:DA:1636:C:H5'	2.22	0.40
36:DA:1708:C:H2'	36:DA:1709:U:H6	1.86	0.40
36:DA:1721:G:N3	36:DA:1721:G:C5'	2.84	0.40
36:DA:2468:G:H5"	49:DQ:120:ILE:HD11	2.02	0.40
36:DA:2553:G:H2'	36:DA:2554:U:O4'	2.21	0.40
36:DA:2570:G:O2'	36:DA:2571:C:H5'	2.21	0.40
36:DA:2738:A:C2	36:DA:2739:U:H1'	2.57	0.40
36:DA:2857:G:N2	36:DA:2860:A:OP2	2.37	0.40
37:DB:17:C:O2'	37:DB:18:G:H5'	2.21	0.40
39:DD:72:LYS:HZ1	39:DD:101:GLU:CB	2.34	0.40
39:DD:94:LEU:HD22	39:DD:95:LEU:N	2.36	0.40
41:DF:62:ARG:HG2	41:DF:62:ARG:NH1	2.36	0.40
42:DG:7:LEU:O	42:DG:8:LYS:C	2.60	0.40
42:DG:67:LYS:HA	42:DG:68:PRO:HD3	1.89	0.40
42:DG:88:ILE:HG22	42:DG:89:GLY:N	2.36	0.40
42:DG:144:ILE:O	42:DG:144:ILE:CG2	2.69	0.40
43:DH:17:VAL:O	43:DH:18:GLU:C	2.60	0.40
43:DH:52:VAL:HG11	43:DH:69:ARG:HB2	2.04	0.40
46:DN:38:HIS:C	53:DU:67:ALA:HB1	2.41	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DO:104:ARG:NH1	52:DT:35:LYS:HB3	2.36	0.40
50:DR:21:TYR:CZ	50:DR:43:GLU:HG2	2.55	0.40
50:DR:54:LEU:HD22	50:DR:62:ALA:HB1	2.02	0.40
51:DS:36:TYR:HA	51:DS:52:SER:HA	2.02	0.40
51:DS:68:GLN:C	51:DS:70:GLY:N	2.74	0.40
54:DV:12:TYR:CD1	54:DV:12:TYR:N	2.89	0.40
57:DY:81:LYS:HD2	57:DY:96:ILE:HB	2.04	0.40
58:DZ:12:GLY:HA2	58:DZ:36:LYS:NZ	2.37	0.40
1:AA:725:G:O2'	1:AA:726:C:H5'	2.22	0.40
1:AA:1005:A:C2'	1:AA:1006:C:H5'	2.51	0.40
1:AA:1397:C:OP2	5:AE:24:ARG:NH2	2.53	0.40
1:AA:1435:G:H2'	1:AA:1436:U:C5	2.57	0.40
1:AA:1490:C:O2'	1:AA:1491:G:H5'	2.21	0.40
4:AD:3:ARG:HH11	4:AD:3:ARG:HG2	1.85	0.40
4:AD:101:LEU:HD23	4:AD:121:VAL:HG11	2.03	0.40
7:AG:71:PRO:HD3	7:AG:103:TRP:HZ3	1.86	0.40
7:AG:101:LEU:HD23	7:AG:101:LEU:HA	1.93	0.40
13:AM:80:ARG:NH2	19:AS:69:HIS:NE2	2.70	0.40
16:AP:17:TYR:HE1	16:AP:41:PRO:HG3	1.86	0.40
18:AR:19:LYS:HG3	18:AR:20:ALA:N	2.37	0.40
20:AT:13:LEU:C	20:AT:15:ARG:N	2.75	0.40
22:AW:59:U:H2'	22:AW:60:U:O4'	2.22	0.40
25:AZ:68:VAL:O	25:AZ:273:HIS:CE1	2.74	0.40
25:AZ:98:GLN:OE1	25:AZ:226:GLU:OE2	2.40	0.40
25:AZ:251:ASP:H	25:AZ:267:VAL:HG12	1.87	0.40
28:B2:49:LYS:O	28:B2:50:ILE:HD12	2.22	0.40
28:B2:56:GLN:O	28:B2:60:LEU:HD13	2.21	0.40
30:B4:5:ILE:H	30:B4:5:ILE:CD1	2.35	0.40
30:B4:20:ASN:HD22	30:B4:20:ASN:C	2.17	0.40
36:BA:9:U:HO2'	36:BA:10:G:P	2.44	0.40
36:BA:197:A:C2'	36:BA:198:C:H5'	2.52	0.40
36:BA:536:A:H5"	53:BU:53:ARG:HD2	2.04	0.40
36:BA:763:G:H3'	36:BA:763:G:C8	2.56	0.40
36:BA:1609:A:H4'	36:BA:1617:C:OP1	2.22	0.40
36:BA:1816:G:C8	39:BD:62:TYR:CZ	3.10	0.40
36:BA:1971:A:O2'	39:BD:239:ARG:HG3	2.22	0.40
36:BA:2022:U:O2'	36:BA:2617:C:H5'	2.22	0.40
36:BA:2790:A:N3	36:BA:2790:A:C2'	2.85	0.40
37:BB:104:U:O2'	37:BB:105:A:H5'	2.21	0.40
38:BC:45:ALA:HA	38:BC:211:SER:O	2.21	0.40
39:BD:30:GLU:HB2	39:BD:35:LYS:HZ1	1.83	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BD:43:ARG:NH1	39:BD:44:ASN:HD22	2.03	0.40
40:BE:7:VAL:CG2	40:BE:193:GLY:HA2	2.52	0.40
40:BE:167:VAL:HG22	40:BE:167:VAL:O	2.22	0.40
41:BF:154:VAL:HA	41:BF:191:ARG:O	2.21	0.40
41:BF:170:LEU:HA	41:BF:171:PRO:HD3	1.98	0.40
42:BG:7:LEU:O	42:BG:8:LYS:C	2.60	0.40
42:BG:29:TRP:C	42:BG:31:VAL:H	2.23	0.40
47:BO:35:VAL:HA	47:BO:62:VAL:O	2.21	0.40
47:BO:87:ILE:HG21	47:BO:91:LEU:HA	1.97	0.40
48:BP:101:VAL:C	48:BP:103:ALA:H	2.24	0.40
48:BP:110:TYR:CD1	48:BP:111:ARG:HG3	2.57	0.40
48:BP:112:LEU:HD22	48:BP:113:LYS:N	2.37	0.40
48:BP:113:LYS:CG	48:BP:114:ILE:H	2.27	0.40
49:BQ:36:ALA:C	49:BQ:37:LEU:HD23	2.42	0.40
49:BQ:74:TYR:O	49:BQ:90:VAL:HA	2.22	0.40
57:BY:13:VAL:HG11	57:BY:28:LYS:CG	2.52	0.40
57:BY:39:VAL:HB	57:BY:40:GLU:H	1.68	0.40
57:BY:96:ILE:HD11	57:BY:99:CYS:SG	2.61	0.40
58:BZ:103:ARG:O	58:BZ:138:GLU:HA	2.22	0.40
1:CA:115:G:H4'	1:CA:116:A:O5'	2.22	0.40
1:CA:443:C:H2'	1:CA:444:C:C6	2.57	0.40
1:CA:524:G:H2'	1:CA:525:C:C6	2.57	0.40
1:CA:705:U:C5	1:CA:706:A:C5	3.09	0.40
1:CA:826:C:C2	1:CA:827:U:C5	3.09	0.40
1:CA:918:A:H2'	1:CA:919:A:O4'	2.21	0.40
1:CA:1202:G:H2'	1:CA:1203:C:O4'	2.21	0.40
1:CA:1483:A:C2'	1:CA:1484:C:H5'	2.52	0.40
3:CC:55:VAL:HG22	3:CC:68:VAL:HG22	2.03	0.40
6:CF:14:LEU:HD13	6:CF:14:LEU:HA	1.84	0.40
6:CF:97:PHE:HD2	18:CR:31:LEU:HD21	1.85	0.40
8:CH:100:ILE:HA	8:CH:101:PRO:HD3	1.80	0.40
11:CK:44:SER:N	11:CK:47:VAL:HG22	2.37	0.40
12:CL:80:HIS:HD2	24:CY:68:C:O3'	2.03	0.40
20:CT:42:GLN:HE21	20:CT:42:GLN:HB2	1.65	0.40
21:CU:18:TYR:CD2	21:CU:22:ARG:HG2	2.57	0.40
24:CY:56:C:H1'	36:DA:1067:A:N3	2.37	0.40
25:CZ:38:GLU:HG3	25:CZ:39:ASN:CG	2.42	0.40
25:CZ:221:PHE:O	25:CZ:222:LEU:HB2	2.22	0.40
25:CZ:277:LEU:HD13	25:CZ:278:GLN:N	2.36	0.40
26:D0:77:ARG:NH2	36:DA:858:U:OP2	2.50	0.40
28:D2:22:GLU:C	28:D2:24:LEU:H	2.24	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D6:5:VAL:HB	32:D6:8:LYS:HB3	2.03	0.40
34:D8:15:LYS:HD2	34:D8:16:ILE:N	2.35	0.40
36:DA:99:U:C6	36:DA:102:G:C2	3.10	0.40
36:DA:201:C:H2'	36:DA:202:U:H5'	2.03	0.40
36:DA:271(D):G:H1	36:DA:271(T):C:N4	2.19	0.40
36:DA:271(Z):C:O2	36:DA:272:G:N7	2.55	0.40
36:DA:322:A:H3'	41:DF:169:ASN:OD1	2.21	0.40
36:DA:363(F):A:HO2'	36:DA:364:C:H5	1.62	0.40
36:DA:527:C:N4	36:DA:2779:U:P	2.95	0.40
36:DA:1242:A:N1	48:DP:8:PRO:CG	2.85	0.40
36:DA:1799:G:OP1	39:DD:260:ARG:HD2	2.22	0.40
36:DA:1824:G:C2'	36:DA:1825:A:H5'	2.51	0.40
36:DA:2199:A:H2'	36:DA:2199:A:N3	2.37	0.40
36:DA:2206:G:N3	36:DA:2206:G:C3'	2.84	0.40
36:DA:2523:G:C2'	36:DA:2524:G:C5'	2.97	0.40
38:DC:150:GLY:C	38:DC:154:ARG:HH11	2.24	0.40
39:DD:257:LEU:C	39:DD:257:LEU:CD2	2.90	0.40
39:DD:265:PRO:C	39:DD:267:SER:N	2.75	0.40
40:DE:9:VAL:HG11	40:DE:25:VAL:HB	2.02	0.40
40:DE:49:LEU:HD22	40:DE:49:LEU:N	2.37	0.40
40:DE:171:GLU:H	40:DE:185:LYS:HB2	1.87	0.40
41:DF:36:VAL:O	41:DF:36:VAL:HG12	2.21	0.40
41:DF:61:GLY:O	41:DF:62:ARG:C	2.60	0.40
42:DG:53:LEU:C	42:DG:55:LYS:N	2.75	0.40
42:DG:63:ILE:HG22	42:DG:141:PHE:HB3	2.03	0.40
42:DG:68:PRO:CG	42:DG:92:VAL:HB	2.51	0.40
44:DJ:57:UNK:O	44:DJ:58:UNK:O	2.40	0.40
46:DN:34:LEU:CD1	46:DN:116:LEU:HD22	2.52	0.40
53:DU:8:VAL:HG13	53:DU:12:ARG:HE	1.85	0.40
57:DY:54:LYS:O	57:DY:55:TYR:CB	2.69	0.40
57:DY:81:LYS:O	57:DY:82:PRO:O	2.39	0.40
58:DZ:61:LEU:C	58:DZ:63:ASP:N	2.75	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries

of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	AB	232/256 (91%)	168 (72%)	35 (15%)	29 (12%)	0 1
2	CB	232/256 (91%)	154 (66%)	50 (22%)	28 (12%)	0 1
3	AC	204/239 (85%)	161 (79%)	29 (14%)	14 (7%)	1 7
3	CC	204/239 (85%)	147 (72%)	40 (20%)	17 (8%)	1 5
4	AD	206/209 (99%)	139 (68%)	44 (21%)	23 (11%)	0 2
4	CD	206/209 (99%)	128 (62%)	44 (21%)	34 (16%)	0 0
5	AE	148/162 (91%)	138 (93%)	8 (5%)	2 (1%)	11 40
5	CE	148/162 (91%)	122 (82%)	25 (17%)	1 (1%)	22 57
6	AF	99/101 (98%)	78 (79%)	15 (15%)	6 (6%)	1 9
6	CF	99/101 (98%)	75 (76%)	13 (13%)	11 (11%)	0 2
7	AG	153/156 (98%)	121 (79%)	20 (13%)	12 (8%)	1 5
7	CG	153/156 (98%)	121 (79%)	24 (16%)	8 (5%)	2 12
8	AH	136/138 (99%)	124 (91%)	8 (6%)	4 (3%)	4 24
8	CH	136/138 (99%)	117 (86%)	12 (9%)	7 (5%)	2 13
9	AI	125/128 (98%)	85 (68%)	26 (21%)	14 (11%)	0 2
9	CI	125/128 (98%)	79 (63%)	31 (25%)	15 (12%)	0 1
10	AJ	96/105 (91%)	72 (75%)	15 (16%)	9 (9%)	0 3
10	CJ	96/105 (91%)	71 (74%)	16 (17%)	9 (9%)	0 3
11	AK	117/129 (91%)	103 (88%)	13 (11%)	1 (1%)	17 52
11	CK	117/129 (91%)	88 (75%)	23 (20%)	6 (5%)	2 13
12	AL	122/132 (92%)	97 (80%)	15 (12%)	10 (8%)	1 5
12	CL	122/132 (92%)	92 (75%)	22 (18%)	8 (7%)	1 7
13	AM	122/126 (97%)	75 (62%)	31 (25%)	16 (13%)	0 1
13	CM	122/126 (97%)	72 (59%)	35 (29%)	15 (12%)	0 1
14	AN	58/61 (95%)	40 (69%)	10 (17%)	8 (14%)	0 1
14	CN	58/61 (95%)	34 (59%)	15 (26%)	9 (16%)	0 0
15	AO	86/89 (97%)	68 (79%)	13 (15%)	5 (6%)	1 10
15	CO	86/89 (97%)	68 (79%)	15 (17%)	3 (4%)	3 20
16	AP	81/88 (92%)	50 (62%)	21 (26%)	10 (12%)	0 1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
16	CP	81/88 (92%)	49 (60%)	22 (27%)	10 (12%)	0 1
17	AQ	97/105 (92%)	84 (87%)	9 (9%)	4 (4%)	3 16
17	CQ	97/105 (92%)	80 (82%)	11 (11%)	6 (6%)	1 9
18	AR	68/88 (77%)	52 (76%)	12 (18%)	4 (6%)	1 10
18	CR	68/88 (77%)	51 (75%)	12 (18%)	5 (7%)	1 6
19	AS	76/93 (82%)	50 (66%)	16 (21%)	10 (13%)	0 1
19	CS	76/93 (82%)	45 (59%)	20 (26%)	11 (14%)	0 1
20	AT	97/106 (92%)	62 (64%)	24 (25%)	11 (11%)	0 2
20	CT	97/106 (92%)	64 (66%)	19 (20%)	14 (14%)	0 1
21	AU	22/27 (82%)	16 (73%)	3 (14%)	3 (14%)	0 1
21	CU	22/27 (82%)	14 (64%)	5 (23%)	3 (14%)	0 1
25	AZ	381/405 (94%)	272 (71%)	66 (17%)	43 (11%)	0 2
25	CZ	381/405 (94%)	270 (71%)	68 (18%)	43 (11%)	0 2
26	B0	82/85 (96%)	65 (79%)	10 (12%)	7 (8%)	1 5
26	D0	82/85 (96%)	62 (76%)	12 (15%)	8 (10%)	0 3
27	B1	91/98 (93%)	58 (64%)	18 (20%)	15 (16%)	0 0
27	D1	91/98 (93%)	64 (70%)	12 (13%)	15 (16%)	0 0
28	B2	69/72 (96%)	34 (49%)	20 (29%)	15 (22%)	0 0
28	D2	69/72 (96%)	44 (64%)	19 (28%)	6 (9%)	1 4
29	B3	57/60 (95%)	42 (74%)	9 (16%)	6 (10%)	0 3
29	D3	57/60 (95%)	39 (68%)	10 (18%)	8 (14%)	0 1
30	B4	42/71 (59%)	25 (60%)	10 (24%)	7 (17%)	0 0
30	D4	42/71 (59%)	17 (40%)	17 (40%)	8 (19%)	0 0
31	B5	57/60 (95%)	40 (70%)	7 (12%)	10 (18%)	0 0
31	D5	57/60 (95%)	40 (70%)	8 (14%)	9 (16%)	0 0
32	B6	48/54 (89%)	20 (42%)	10 (21%)	18 (38%)	0 0
32	D6	48/54 (89%)	20 (42%)	14 (29%)	14 (29%)	0 0
33	B7	46/49 (94%)	44 (96%)	2 (4%)	0	100 100
33	D7	46/49 (94%)	40 (87%)	6 (13%)	0	100 100
34	B8	61/65 (94%)	31 (51%)	18 (30%)	12 (20%)	0 0
34	D8	61/65 (94%)	27 (44%)	19 (31%)	15 (25%)	0 0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
35	B9	35/37 (95%)	19 (54%)	11 (31%)	5 (14%)	0 1
35	D9	35/37 (95%)	17 (49%)	13 (37%)	5 (14%)	0 1
38	BC	226/229 (99%)	176 (78%)	33 (15%)	17 (8%)	1 6
38	DC	226/229 (99%)	170 (75%)	37 (16%)	19 (8%)	1 5
39	BD	273/276 (99%)	199 (73%)	46 (17%)	28 (10%)	0 3
39	DD	273/276 (99%)	197 (72%)	43 (16%)	33 (12%)	0 1
40	BE	202/206 (98%)	125 (62%)	45 (22%)	32 (16%)	0 0
40	DE	202/206 (98%)	129 (64%)	38 (19%)	35 (17%)	0 0
41	BF	205/210 (98%)	145 (71%)	34 (17%)	26 (13%)	0 1
41	DF	205/210 (98%)	129 (63%)	54 (26%)	22 (11%)	0 2
42	BG	179/182 (98%)	110 (62%)	33 (18%)	36 (20%)	0 0
42	DG	179/182 (98%)	99 (55%)	53 (30%)	27 (15%)	0 0
43	BH	157/180 (87%)	97 (62%)	31 (20%)	29 (18%)	0 0
43	DH	157/180 (87%)	99 (63%)	27 (17%)	31 (20%)	0 0
46	BN	136/140 (97%)	91 (67%)	27 (20%)	18 (13%)	0 1
46	DN	136/140 (97%)	89 (65%)	27 (20%)	20 (15%)	0 0
47	BO	120/122 (98%)	97 (81%)	15 (12%)	8 (7%)	1 7
47	DO	120/122 (98%)	97 (81%)	15 (12%)	8 (7%)	1 7
48	BP	144/150 (96%)	77 (54%)	36 (25%)	31 (22%)	0 0
48	DP	144/150 (96%)	78 (54%)	34 (24%)	32 (22%)	0 0
49	BQ	139/141 (99%)	112 (81%)	20 (14%)	7 (5%)	2 13
49	DQ	139/141 (99%)	112 (81%)	17 (12%)	10 (7%)	1 6
50	BR	115/118 (98%)	81 (70%)	15 (13%)	19 (16%)	0 0
50	DR	115/118 (98%)	73 (64%)	27 (24%)	15 (13%)	0 1
51	BS	96/112 (86%)	44 (46%)	29 (30%)	23 (24%)	0 0
51	DS	96/112 (86%)	44 (46%)	22 (23%)	30 (31%)	0 0
52	BT	135/146 (92%)	76 (56%)	28 (21%)	31 (23%)	0 0
52	DT	135/146 (92%)	71 (53%)	35 (26%)	29 (22%)	0 0
53	BU	115/118 (98%)	86 (75%)	20 (17%)	9 (8%)	1 5
53	DU	115/118 (98%)	74 (64%)	34 (30%)	7 (6%)	1 9
54	BV	99/101 (98%)	65 (66%)	21 (21%)	13 (13%)	0 1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
54	DV	99/101 (98%)	67 (68%)	19 (19%)	13 (13%)	0 1
55	BW	111/113 (98%)	78 (70%)	17 (15%)	16 (14%)	0 1
55	DW	111/113 (98%)	72 (65%)	23 (21%)	16 (14%)	0 1
56	BX	90/96 (94%)	63 (70%)	15 (17%)	12 (13%)	0 1
56	DX	90/96 (94%)	58 (64%)	22 (24%)	10 (11%)	0 2
57	BY	98/110 (89%)	43 (44%)	28 (29%)	27 (28%)	0 0
57	DY	98/110 (89%)	43 (44%)	26 (26%)	29 (30%)	0 0
58	BZ	181/206 (88%)	117 (65%)	38 (21%)	26 (14%)	0 1
58	DZ	181/206 (88%)	114 (63%)	42 (23%)	25 (14%)	0 1
All	All	12270/13100 (94%)	8441 (69%)	2326 (19%)	1503 (12%)	0 1

All (1503) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	8	LYS
2	AB	9	GLU
2	AB	15	VAL
2	AB	127	ILE
2	AB	131	PRO
2	AB	190	THR
2	AB	191	ASP
2	AB	195	ASP
2	AB	230	VAL
2	AB	234	PRO
2	AB	235	SER
2	AB	236	TYR
2	AB	238	LEU
3	AC	15	THR
3	AC	45	LYS
3	AC	47	LEU
3	AC	146	ALA
3	AC	180	ALA
3	AC	181	ASN
4	AD	3	ARG
4	AD	14	ARG
4	AD	18	LYS
4	AD	35	ARG
4	AD	181	MET
6	AF	36	ARG

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Mol	Chain	Res	Type
7	AG	7	ALA
7	AG	8	GLU
8	AH	2	LEU
8	AH	83	ILE
9	AI	44	VAL
9	AI	58	HIS
9	AI	69	GLY
9	AI	85	LEU
9	AI	89	ASN
9	AI	100	GLY
10	AJ	30	SER
10	AJ	32	ALA
10	AJ	36	GLY
10	AJ	85	LEU
10	AJ	86	MET
10	AJ	87	THR
10	AJ	90	LEU
12	AL	26	ALA
12	AL	80	HIS
12	AL	122	THR
13	AM	7	VAL
13	AM	11	ARG
13	AM	67	GLU
13	AM	83	ASP
14	AN	3	ARG
14	AN	14	PRO
14	AN	15	LYS
14	AN	16	PHE
14	AN	59	ALA
15	AO	88	ARG
16	AP	16	HIS
16	AP	44	THR
16	AP	45	THR
16	AP	47	ASP
17	AQ	13	ASP
17	AQ	38	ARG
19	AS	9	VAL
19	AS	22	LEU
19	AS	28	LYS
19	AS	44	MET
19	AS	67	VAL
20	AT	11	SER

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Mol	Chain	Res	Type
20	AT	12	ALA
20	AT	74	LYS
20	AT	99	LEU
21	AU	3	LYS
21	AU	23	PRO
21	AU	24	ARG
25	AZ	20	VAL
25	AZ	24	LYS
25	AZ	69	GLU
25	AZ	109	ALA
25	AZ	141	VAL
25	AZ	166	ASP
25	AZ	211	PRO
25	AZ	300	ARG
25	AZ	310	ILE
25	AZ	323	LEU
25	AZ	326	GLU
25	AZ	357	PRO
25	AZ	402	LYS
26	B0	42	GLY
26	B0	47	PRO
27	B1	17	SER
27	B1	30	VAL
27	B1	53	VAL
27	B1	57	GLU
28	B2	21	LEU
28	B2	22	GLU
28	B2	26	ARG
28	B2	41	ILE
29	B3	32	GLN
29	B3	42	ALA
30	B4	8	LYS
30	B4	9	LEU
31	B5	4	HIS
31	B5	24	ALA
31	B5	25	LEU
31	B5	26	THR
31	B5	43	HIS
31	B5	49	CYS
32	B6	16	CYS
32	B6	17	LYS
32	B6	18	ARG

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Mol	Chain	Res	Type
32	B6	20	ASN
32	B6	23	THR
32	B6	28	ARG
32	B6	31	PRO
32	B6	33	LYS
34	B8	33	ASN
34	B8	35	GLN
34	B8	37	SER
34	B8	43	GLN
34	B8	49	VAL
35	B9	11	CYS
38	BC	36	LYS
38	BC	37	PHE
38	BC	79	LYS
38	BC	83	ILE
38	BC	95	GLY
38	BC	119	VAL
38	BC	128	GLY
38	BC	160	ARG
39	BD	25	THR
39	BD	27	THR
39	BD	34	VAL
39	BD	35	LYS
39	BD	71	ASP
39	BD	239	ARG
39	BD	245	PRO
39	BD	260	ARG
40	BE	35	GLN
40	BE	45	THR
40	BE	53	PRO
40	BE	56	PRO
40	BE	66	HIS
40	BE	76	ARG
40	BE	87	GLU
40	BE	94	GLU
40	BE	185	LYS
40	BE	189	PRO
40	BE	195	LEU
41	BF	10	PRO
41	BF	86	GLY
41	BF	175	THR
41	BF	176	LEU

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Mol	Chain	Res	Type
42	BG	14	GLU
42	BG	28	VAL
42	BG	47	LYS
42	BG	81	LYS
42	BG	84	LYS
42	BG	86	MET
42	BG	96	ARG
42	BG	103	LEU
42	BG	115	ARG
42	BG	137	GLU
42	BG	138	GLN
42	BG	147	ASP
42	BG	151	ALA
43	BH	41	MET
43	BH	42	ARG
43	BH	47	GLU
43	BH	55	PRO
43	BH	81	GLU
43	BH	84	SER
43	BH	127	GLU
43	BH	137	ASP
43	BH	138	LYS
43	BH	156	ALA
43	BH	158	HIS
43	BH	159	GLU
46	BN	63	THR
46	BN	64	GLY
46	BN	127	ASP
46	BN	130	HIS
47	BO	29	ASN
47	BO	48	PRO
47	BO	49	ARG
47	BO	98	VAL
48	BP	11	GLY
48	BP	13	ASN
48	BP	35	HIS
48	BP	36	LYS
48	BP	40	SER
48	BP	47	ASP
48	BP	52	GLU
48	BP	56	SER
48	BP	57	THR

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Mol	Chain	Res	Type
48	BP	58	THR
48	BP	65	ARG
48	BP	67	MET
48	BP	98	GLU
48	BP	114	ILE
48	BP	147	LEU
48	BP	148	LEU
49	BQ	2	LEU
50	BR	9	LYS
50	BR	11	ASN
50	BR	12	ARG
50	BR	60	LEU
50	BR	103	ARG
50	BR	104	ARG
50	BR	105	ARG
50	BR	107	ASP
50	BR	117	VAL
51	BS	13	ARG
51	BS	17	ARG
51	BS	23	ARG
51	BS	51	ALA
51	BS	57	LYS
51	BS	59	LYS
51	BS	92	TYR
51	BS	93	LYS
51	BS	94	TYR
51	BS	98	VAL
52	BT	17	THR
52	BT	24	PRO
52	BT	27	THR
52	BT	28	VAL
52	BT	30	VAL
52	BT	32	TYR
52	BT	80	SER
52	BT	83	ILE
52	BT	91	ARG
52	BT	92	GLY
52	BT	93	ARG
52	BT	107	ASP
53	BU	91	ASP
54	BV	18	LEU
54	BV	22	VAL

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Mol	Chain	Res	Type
55	BW	28	SER
55	BW	67	ASP
55	BW	93	ALA
55	BW	110	LYS
56	BX	9	LEU
56	BX	11	PRO
56	BX	12	VAL
56	BX	19	ALA
57	BY	23	ARG
57	BY	26	LYS
57	BY	42	VAL
57	BY	56	PRO
57	BY	57	GLN
57	BY	60	PHE
57	BY	61	ILE
57	BY	63	LYS
57	BY	74	PRO
57	BY	75	ILE
57	BY	77	PRO
57	BY	78	ALA
57	BY	82	PRO
58	BZ	78	LYS
58	BZ	111	VAL
58	BZ	113	ALA
58	BZ	135	GLU
58	BZ	140	ASP
58	BZ	152	ALA
58	BZ	163	LEU
2	CB	8	LYS
2	CB	9	GLU
2	CB	15	VAL
2	CB	127	ILE
2	CB	191	ASP
2	CB	234	PRO
2	CB	235	SER
2	CB	236	TYR
3	CC	12	LEU
3	CC	26	LYS
3	CC	45	LYS
3	CC	52	LEU
3	CC	65	ALA
3	CC	157	ILE

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Mol	Chain	Res	Type
3	CC	180	ALA
3	CC	181	ASN
4	CD	18	LYS
4	CD	30	LYS
4	CD	35	ARG
4	CD	44	GLY
4	CD	110	PHE
4	CD	153	ARG
6	CF	35	ALA
6	CF	36	ARG
6	CF	42	GLU
6	CF	62	TRP
7	CG	7	ALA
7	CG	8	GLU
7	CG	79	ARG
8	CH	2	LEU
8	CH	44	PHE
8	CH	120	THR
9	CI	44	VAL
9	CI	85	LEU
9	CI	89	ASN
9	CI	100	GLY
9	CI	118	LYS
10	CJ	30	SER
10	CJ	32	ALA
10	CJ	75	ILE
10	CJ	87	THR
10	CJ	90	LEU
11	CK	89	ALA
12	CL	26	ALA
12	CL	122	THR
12	CL	123	LYS
13	CM	11	ARG
13	CM	83	ASP
13	CM	117	VAL
14	CN	14	PRO
14	CN	15	LYS
14	CN	22	THR
14	CN	59	ALA
14	CN	60	SER
16	CP	3	LYS
16	CP	15	PRO

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Mol	Chain	Res	Type
16	CP	26	ARG
16	CP	44	THR
16	CP	47	ASP
16	CP	48	TRP
16	CP	76	GLN
17	CQ	34	LYS
17	CQ	38	ARG
17	CQ	95	TYR
19	CS	28	LYS
19	CS	67	VAL
20	CT	12	ALA
20	CT	48	LYS
20	CT	63	ILE
20	CT	74	LYS
20	CT	95	ALA
21	CU	23	PRO
21	CU	24	ARG
25	CZ	20	VAL
25	CZ	24	LYS
25	CZ	69	GLU
25	CZ	109	ALA
25	CZ	130	TYR
25	CZ	141	VAL
25	CZ	166	ASP
25	CZ	211	PRO
25	CZ	300	ARG
25	CZ	310	ILE
25	CZ	323	LEU
25	CZ	326	GLU
25	CZ	357	PRO
25	CZ	402	LYS
26	D0	13	GLY
26	D0	47	PRO
26	D0	70	GLN
27	D1	7	ILE
27	D1	28	GLY
27	D1	45	ASN
27	D1	53	VAL
27	D1	56	GLN
27	D1	64	ALA
27	D1	66	HIS
27	D1	87	PRO

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Mol	Chain	Res	Type
28	D2	44	LEU
28	D2	47	ASN
28	D2	48	HIS
29	D3	29	ARG
29	D3	38	GLU
29	D3	42	ALA
29	D3	43	ILE
30	D4	9	LEU
30	D4	26	SER
31	D5	4	HIS
31	D5	24	ALA
31	D5	25	LEU
32	D6	18	ARG
32	D6	19	ARG
32	D6	20	ASN
32	D6	23	THR
32	D6	28	ARG
32	D6	31	PRO
32	D6	33	LYS
32	D6	49	HIS
34	D8	31	HIS
34	D8	33	ASN
34	D8	34	TRP
34	D8	35	GLN
34	D8	37	SER
34	D8	43	GLN
34	D8	58	ILE
35	D9	11	CYS
35	D9	25	VAL
35	D9	35	ARG
38	DC	36	LYS
38	DC	37	PHE
38	DC	119	VAL
38	DC	128	GLY
38	DC	160	ARG
38	DC	167	LYS
39	DD	13	ARG
39	DD	25	THR
39	DD	27	THR
39	DD	34	VAL
39	DD	35	LYS
39	DD	36	PRO

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Mol	Chain	Res	Type
39	DD	38	LYS
39	DD	58	HIS
39	DD	239	ARG
39	DD	245	PRO
39	DD	260	ARG
39	DD	268	ARG
40	DE	4	ILE
40	DE	35	GLN
40	DE	53	PRO
40	DE	66	HIS
40	DE	71	GLY
40	DE	76	ARG
40	DE	87	GLU
40	DE	116	VAL
40	DE	185	LYS
40	DE	189	PRO
40	DE	195	LEU
41	DF	10	PRO
41	DF	14	PRO
41	DF	86	GLY
41	DF	176	LEU
41	DF	206	ILE
42	DG	49	ASP
42	DG	70	VAL
42	DG	82	LEU
42	DG	84	LYS
42	DG	86	MET
42	DG	115	ARG
42	DG	116	ASP
42	DG	126	ASP
42	DG	129	GLY
43	DH	24	VAL
43	DH	41	MET
43	DH	55	PRO
43	DH	84	SER
43	DH	127	GLU
43	DH	138	LYS
43	DH	155	SER
43	DH	156	ALA
43	DH	158	HIS
43	DH	159	GLU
46	DN	58	ASP

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Mol	Chain	Res	Type
46	DN	63	THR
46	DN	64	GLY
46	DN	108	PRO
46	DN	127	ASP
46	DN	130	HIS
46	DN	133	GLN
47	DO	29	ASN
47	DO	48	PRO
47	DO	49	ARG
47	DO	98	VAL
48	DP	11	GLY
48	DP	13	ASN
48	DP	25	SER
48	DP	34	GLY
48	DP	35	HIS
48	DP	40	SER
48	DP	46	LYS
48	DP	47	ASP
48	DP	52	GLU
48	DP	57	THR
48	DP	58	THR
48	DP	65	ARG
48	DP	67	MET
48	DP	98	GLU
48	DP	114	ILE
48	DP	116	GLY
48	DP	132	LYS
48	DP	147	LEU
48	DP	148	LEU
49	DQ	27	VAL
49	DQ	62	GLY
50	DR	6	SER
50	DR	8	ARG
50	DR	9	LYS
50	DR	11	ASN
50	DR	12	ARG
50	DR	58	GLY
50	DR	88	ARG
50	DR	117	VAL
51	DS	13	ARG
51	DS	23	ARG
51	DS	51	ALA

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Mol	Chain	Res	Type
51	DS	53	SER
51	DS	57	LYS
51	DS	59	LYS
51	DS	87	PHE
51	DS	92	TYR
51	DS	93	LYS
51	DS	94	TYR
51	DS	98	VAL
51	DS	103	GLU
51	DS	107	GLU
52	DT	2	ASN
52	DT	4	GLY
52	DT	24	PRO
52	DT	27	THR
52	DT	30	VAL
52	DT	32	TYR
52	DT	80	SER
52	DT	81	PRO
52	DT	83	ILE
52	DT	91	ARG
52	DT	93	ARG
52	DT	107	ASP
53	DU	9	VAL
53	DU	83	LEU
53	DU	91	ASP
53	DU	93	LYS
54	DV	15	GLU
54	DV	16	PRO
54	DV	19	LYS
55	DW	28	SER
55	DW	29	LEU
55	DW	50	VAL
55	DW	110	LYS
56	DX	12	VAL
56	DX	13	LEU
57	DY	17	SER
57	DY	23	ARG
57	DY	42	VAL
57	DY	56	PRO
57	DY	57	GLN
57	DY	60	PHE
57	DY	61	ILE

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Mol	Chain	Res	Type
57	DY	63	LYS
57	DY	74	PRO
57	DY	75	ILE
57	DY	77	PRO
57	DY	78	ALA
57	DY	82	PRO
57	DY	92	ASN
58	DZ	11	GLU
58	DZ	23	LYS
58	DZ	24	LEU
58	DZ	82	ARG
58	DZ	124	ILE
58	DZ	153	SER
58	DZ	159	PRO
58	DZ	163	LEU
58	DZ	180	VAL
2	AB	18	GLY
2	AB	77	ALA
2	AB	153	ARG
2	AB	216	SER
3	AC	96	GLY
3	AC	168	ALA
4	AD	13	ARG
4	AD	26	CYS
4	AD	30	LYS
4	AD	40	PRO
4	AD	44	GLY
4	AD	110	PHE
4	AD	125	HIS
4	AD	129	ASN
4	AD	153	ARG
4	AD	159	ARG
5	AE	153	LYS
6	AF	34	GLY
6	AF	35	ALA
6	AF	39	LYS
6	AF	40	VAL
7	AG	14	PRO
7	AG	33	ASP
7	AG	42	ILE
9	AI	24	GLY
9	AI	68	GLY

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Mol	Chain	Res	Type
9	AI	90	PRO
9	AI	118	LYS
9	AI	119	ALA
10	AJ	59	SER
12	AL	79	GLU
12	AL	87	GLY
12	AL	123	LYS
13	AM	60	VAL
13	AM	112	GLY
13	AM	116	THR
13	AM	117	VAL
13	AM	124	PRO
15	AO	5	LYS
16	AP	81	ARG
18	AR	41	LYS
19	AS	5	LEU
20	AT	48	LYS
20	AT	93	GLU
20	AT	95	ALA
25	AZ	36	ALA
25	AZ	65	THR
25	AZ	130	TYR
25	AZ	165	GLY
25	AZ	193	ASN
25	AZ	258	LEU
25	AZ	302	GLN
25	AZ	329	GLY
25	AZ	345	ARG
26	B0	74	ARG
26	B0	75	LEU
27	B1	18	ILE
27	B1	31	GLY
27	B1	78	LYS
27	B1	80	LEU
27	B1	94	LEU
28	B2	16	LEU
28	B2	20	GLU
28	B2	38	GLN
28	B2	39	ALA
28	B2	44	LEU
29	B3	27	GLY
29	B3	29	ARG

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Mol	Chain	Res	Type
29	B3	43	ILE
31	B5	35	GLU
31	B5	37	LYS
31	B5	57	VAL
32	B6	19	ARG
32	B6	44	ARG
32	B6	49	HIS
34	B8	31	HIS
34	B8	34	TRP
34	B8	38	GLY
35	B9	17	ILE
35	B9	36	GLN
38	BC	195	ALA
39	BD	3	VAL
39	BD	36	PRO
39	BD	38	LYS
39	BD	42	GLY
39	BD	58	HIS
39	BD	246	PRO
39	BD	267	SER
39	BD	268	ARG
40	BE	4	ILE
40	BE	71	GLY
40	BE	72	VAL
40	BE	77	ILE
40	BE	82	ARG
40	BE	109	LYS
40	BE	116	VAL
41	BF	21	ALA
41	BF	82	ILE
41	BF	85	GLY
41	BF	130	ALA
41	BF	133	ASN
41	BF	165	ARG
42	BG	5	VAL
42	BG	42	GLY
42	BG	52	ILE
42	BG	80	PHE
42	BG	87	PRO
42	BG	89	GLY
42	BG	99	MET
42	BG	124	SER

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Mol	Chain	Res	Type
42	BG	145	THR
42	BG	149	VAL
42	BG	159	VAL
42	BG	176	LEU
43	BH	24	VAL
43	BH	43	VAL
43	BH	45	VAL
43	BH	46	GLU
43	BH	80	SER
43	BH	155	SER
46	BN	23	LEU
46	BN	36	GLY
46	BN	49	GLY
46	BN	57	ALA
46	BN	58	ASP
46	BN	108	PRO
46	BN	109	LYS
46	BN	133	GLN
47	BO	64	ARG
48	BP	9	ASN
48	BP	15	ARG
48	BP	19	VAL
48	BP	25	SER
48	BP	34	GLY
48	BP	116	GLY
48	BP	132	LYS
48	BP	149	GLU
49	BQ	27	VAL
49	BQ	29	PHE
49	BQ	62	GLY
49	BQ	135	ASP
49	BQ	140	ALA
50	BR	8	ARG
50	BR	30	THR
50	BR	58	GLY
50	BR	102	GLU
51	BS	37	ALA
51	BS	78	LEU
51	BS	80	LEU
51	BS	97	ARG
51	BS	103	GLU
52	BT	2	ASN

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Mol	Chain	Res	Type
52	BT	4	GLY
52	BT	33	LYS
52	BT	37	GLY
52	BT	38	ASN
52	BT	66	VAL
52	BT	90	GLN
52	BT	95	ARG
53	BU	11	ARG
53	BU	83	LEU
53	BU	93	LYS
54	BV	40	LEU
54	BV	54	GLY
55	BW	45	TYR
55	BW	50	VAL
55	BW	60	ASN
55	BW	63	ASP
56	BX	42	ALA
56	BX	52	VAL
56	BX	53	LYS
56	BX	93	GLU
57	BY	3	VAL
57	BY	17	SER
57	BY	92	ASN
58	BZ	46	LYS
58	BZ	96	VAL
58	BZ	142	SER
58	BZ	146	ILE
58	BZ	166	SER
58	BZ	168	GLU
58	BZ	178	GLU
2	CB	18	GLY
2	CB	20	GLU
2	CB	63	MET
2	CB	77	ALA
2	CB	93	VAL
2	CB	121	LEU
2	CB	190	THR
2	CB	230	VAL
2	CB	238	LEU
2	CB	239	VAL
3	CC	47	LEU
3	CC	93	LYS

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Mol	Chain	Res	Type
3	CC	130	VAL
3	CC	143	GLU
4	CD	14	ARG
4	CD	16	GLY
4	CD	24	GLU
4	CD	95	GLY
4	CD	166	LYS
4	CD	183	GLY
6	CF	16	GLN
6	CF	34	GLY
6	CF	39	LYS
6	CF	40	VAL
6	CF	70	ASP
7	CG	58	PRO
7	CG	155	ARG
8	CH	83	ILE
9	CI	24	GLY
9	CI	29	ASN
9	CI	40	LEU
10	CJ	59	SER
10	CJ	82	ILE
10	CJ	89	ASP
11	CK	35	PRO
11	CK	90	GLY
12	CL	79	GLU
12	CL	80	HIS
12	CL	121	GLY
13	CM	21	TYR
13	CM	26	GLY
13	CM	114	ARG
14	CN	16	PHE
14	CN	18	VAL
15	CO	88	ARG
17	CQ	68	ARG
18	CR	41	LYS
18	CR	57	GLY
19	CS	5	LEU
19	CS	9	VAL
19	CS	22	LEU
19	CS	30	LEU
20	CT	11	SER
20	CT	84	LEU

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Mol	Chain	Res	Type
21	CU	3	LYS
25	CZ	36	ALA
25	CZ	65	THR
25	CZ	165	GLY
25	CZ	193	ASN
25	CZ	258	LEU
25	CZ	302	GLN
25	CZ	329	GLY
25	CZ	345	ARG
26	D0	32	ARG
26	D0	42	GLY
27	D1	32	LYS
27	D1	65	SER
27	D1	83	GLU
29	D3	27	GLY
29	D3	51	ALA
31	D5	3	LYS
31	D5	37	LYS
31	D5	49	CYS
31	D5	57	VAL
32	D6	17	LYS
32	D6	41	PRO
34	D8	8	LYS
34	D8	42	ARG
34	D8	56	GLU
34	D8	57	ARG
38	DC	83	ILE
38	DC	95	GLY
39	DD	41	GLY
39	DD	42	GLY
39	DD	152	GLY
39	DD	202	LYS
39	DD	236	GLY
39	DD	246	PRO
39	DD	266	SER
39	DD	267	SER
39	DD	274	ARG
40	DE	2	LYS
40	DE	29	GLY
40	DE	41	LYS
40	DE	44	TYR
40	DE	46	ALA

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Mol	Chain	Res	Type
40	DE	54	GLN
40	DE	56	PRO
40	DE	72	VAL
40	DE	75	VAL
40	DE	77	ILE
40	DE	98	PRO
40	DE	196	VAL
41	DF	79	GLY
41	DF	83	PHE
41	DF	85	GLY
41	DF	132	VAL
42	DG	6	ALA
42	DG	30	GLU
42	DG	80	PHE
42	DG	87	PRO
42	DG	96	ARG
42	DG	114	ILE
42	DG	127	GLY
43	DH	42	ARG
43	DH	43	VAL
43	DH	44	VAL
43	DH	81	GLU
46	DN	33	LEU
46	DN	36	GLY
46	DN	57	ALA
46	DN	136	GLU
47	DO	43	VAL
47	DO	64	ARG
48	DP	19	VAL
48	DP	33	ARG
48	DP	39	LYS
48	DP	56	SER
48	DP	122	PRO
49	DQ	2	LEU
49	DQ	29	PHE
49	DQ	135	ASP
50	DR	103	ARG
50	DR	105	ARG
51	DS	49	VAL
51	DS	80	LEU
51	DS	89	ARG
51	DS	105	ALA

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Mol	Chain	Res	Type
52	DT	28	VAL
52	DT	36	GLU
52	DT	37	GLY
52	DT	68	TYR
52	DT	86	ILE
52	DT	92	GLY
52	DT	129	ARG
54	DV	18	LEU
54	DV	22	VAL
54	DV	23	GLU
54	DV	36	PRO
54	DV	53	GLU
54	DV	78	LYS
55	DW	5	ALA
55	DW	6	ILE
55	DW	45	TYR
55	DW	49	LYS
55	DW	60	ASN
55	DW	67	ASP
56	DX	24	GLY
56	DX	43	VAL
56	DX	52	VAL
57	DY	3	VAL
57	DY	26	LYS
57	DY	39	VAL
57	DY	83	THR
58	DZ	9	TYR
58	DZ	32	HIS
58	DZ	142	SER
58	DZ	177	PRO
2	AB	11	LEU
2	AB	121	LEU
2	AB	167	PRO
3	AC	4	LYS
3	AC	84	ILE
4	AD	24	GLU
4	AD	32	ALA
4	AD	34	GLU
6	AF	42	GLU
7	AG	56	GLN
7	AG	58	PRO
12	AL	47	LYS

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Mol	Chain	Res	Type
13	AM	3	ARG
13	AM	65	LYS
13	AM	114	ARG
14	AN	20	ALA
14	AN	22	THR
16	AP	54	GLU
16	AP	76	GLN
18	AR	31	LEU
18	AR	34	TYR
18	AR	58	LEU
19	AS	17	GLU
19	AS	46	GLY
20	AT	84	LEU
25	AZ	144	PRO
25	AZ	209	TYR
25	AZ	220	PRO
25	AZ	221	PHE
25	AZ	325	LYS
25	AZ	364	PRO
27	B1	52	ARG
28	B2	3	LEU
28	B2	43	GLN
28	B2	65	ASN
29	B3	30	ARG
30	B4	26	SER
30	B4	28	LYS
31	B5	42	PRO
32	B6	41	PRO
34	B8	3	LYS
34	B8	32	LEU
38	BC	82	LYS
38	BC	117	PRO
38	BC	127	LEU
38	BC	149	ILE
39	BD	13	ARG
39	BD	144	ALA
39	BD	234	GLY
40	BE	2	LYS
40	BE	30	PRO
40	BE	62	PRO
40	BE	98	PRO
40	BE	131	ALA

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Mol	Chain	Res	Type
40	BE	196	VAL
41	BF	14	PRO
41	BF	24	LEU
41	BF	83	PHE
41	BF	127	GLU
41	BF	140	LEU
41	BF	169	ASN
42	BG	6	ALA
42	BG	46	ALA
42	BG	97	ASP
42	BG	113	ARG
42	BG	174	GLU
43	BH	21	PRO
43	BH	95	ARG
46	BN	13	TRP
46	BN	47	ALA
47	BO	43	VAL
48	BP	17	LYS
48	BP	39	LYS
48	BP	43	GLY
49	BQ	137	TYR
50	BR	28	LEU
50	BR	29	LEU
51	BS	14	VAL
51	BS	89	ARG
51	BS	104	GLY
52	BT	31	SER
52	BT	41	ARG
52	BT	55	ASN
52	BT	68	TYR
52	BT	111	ARG
52	BT	129	ARG
54	BV	16	PRO
54	BV	19	LYS
54	BV	50	PRO
55	BW	5	ALA
55	BW	6	ILE
55	BW	66	GLU
56	BX	13	LEU
57	BY	33	LYS
57	BY	68	HIS
57	BY	81	LYS

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Mol	Chain	Res	Type
58	BZ	81	ARG
58	BZ	139	VAL
58	BZ	151	HIS
2	CB	116	GLU
2	CB	152	PHE
2	CB	216	SER
3	CC	15	THR
3	CC	66	VAL
3	CC	146	ALA
3	CC	168	ALA
4	CD	61	LYS
4	CD	99	SER
4	CD	107	ARG
6	CF	61	LEU
7	CG	15	ASP
9	CI	55	ALA
9	CI	105	ASP
13	CM	7	VAL
13	CM	46	LYS
16	CP	45	THR
18	CR	58	LEU
18	CR	60	ALA
19	CS	33	THR
19	CS	44	MET
20	CT	93	GLU
20	CT	99	LEU
25	CZ	144	PRO
25	CZ	209	TYR
25	CZ	220	PRO
25	CZ	221	PHE
25	CZ	325	LYS
25	CZ	364	PRO
26	D0	75	LEU
27	D1	26	ARG
27	D1	30	VAL
27	D1	85	LEU
28	D2	35	LEU
29	D3	46	ASN
30	D4	8	LYS
31	D5	35	GLU
32	D6	22	ALA
34	D8	49	VAL

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Mol	Chain	Res	Type
35	D9	36	GLN
38	DC	55	ASP
38	DC	82	LYS
38	DC	117	PRO
38	DC	197	GLU
38	DC	217	THR
39	DD	45	ASN
39	DD	71	ASP
39	DD	156	ALA
40	DE	61	ARG
40	DE	62	PRO
40	DE	90	THR
41	DF	24	LEU
41	DF	31	HIS
41	DF	58	ALA
41	DF	82	ILE
41	DF	124	LEU
41	DF	130	ALA
41	DF	168	ARG
42	DG	14	GLU
42	DG	97	ASP
42	DG	120	LEU
42	DG	155	MET
43	DH	14	GLY
43	DH	25	LYS
43	DH	52	VAL
43	DH	95	ARG
43	DH	137	ASP
43	DH	150	ALA
43	DH	152	ARG
43	DH	160	LYS
43	DH	165	ALA
46	DN	4	TYR
46	DN	13	TRP
46	DN	47	ALA
46	DN	59	LYS
46	DN	76	SER
46	DN	109	LYS
46	DN	129	PRO
47	DO	5	GLN
48	DP	9	ASN
48	DP	15	ARG

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Mol	Chain	Res	Type
48	DP	17	LYS
48	DP	31	ALA
49	DQ	21	THR
49	DQ	88	GLY
50	DR	14	SER
50	DR	17	ARG
50	DR	107	ASP
51	DS	14	VAL
51	DS	88	ASP
52	DT	41	ARG
52	DT	46	GLU
52	DT	95	ARG
54	DV	40	LEU
54	DV	54	GLY
55	DW	9	TYR
55	DW	65	LEU
56	DX	46	ALA
56	DX	53	LYS
57	DY	49	VAL
57	DY	79	CYS
57	DY	91	GLU
58	DZ	12	GLY
58	DZ	25	PRO
58	DZ	108	PRO
58	DZ	113	ALA
2	AB	110	GLN
2	AB	237	ALA
3	AC	95	THR
3	AC	157	ILE
4	AD	92	VAL
4	AD	101	LEU
5	AE	8	GLU
7	AG	34	GLY
7	AG	41	ARG
8	AH	91	ARG
15	AO	86	GLY
17	AQ	68	ARG
20	AT	96	GLY
20	AT	97	ALA
25	AZ	25	THR
25	AZ	41	ASN
25	AZ	222	LEU

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Mol	Chain	Res	Type
25	AZ	360	GLU
28	B2	18	PRO
32	B6	6	ARG
32	B6	15	GLU
32	B6	34	LEU
32	B6	36	LEU
34	B8	57	ARG
38	BC	97	GLU
39	BD	11	PRO
39	BD	29	PRO
39	BD	98	VAL
39	BD	230	ASP
39	BD	244	ARG
40	BE	34	VAL
40	BE	46	ALA
40	BE	130	GLY
40	BE	187	ALA
41	BF	22	ALA
41	BF	64	ILE
41	BF	87	GLY
41	BF	171	PRO
42	BG	31	VAL
42	BG	43	LEU
42	BG	58	GLN
42	BG	117	PHE
43	BH	25	LYS
43	BH	52	VAL
43	BH	98	LEU
47	BO	50	GLY
48	BP	6	LEU
48	BP	31	ALA
50	BR	6	SER
51	BS	24	LEU
52	BT	36	GLU
52	BT	86	ILE
54	BV	15	GLU
54	BV	48	GLY
54	BV	53	GLU
55	BW	29	LEU
55	BW	65	LEU
57	BY	49	VAL
57	BY	62	GLU

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Mol	Chain	Res	Type
58	BZ	120	ILE
58	BZ	180	VAL
2	CB	87	ARG
2	CB	95	GLN
2	CB	195	ASP
4	CD	3	ARG
4	CD	37	PRO
4	CD	63	LYS
4	CD	178	VAL
4	CD	187	ARG
7	CG	41	ARG
7	CG	59	LEU
8	CH	135	CYS
9	CI	12	GLU
9	CI	68	GLY
9	CI	70	LYS
9	CI	78	LYS
11	CK	100	ALA
13	CM	30	ALA
13	CM	65	LYS
13	CM	67	GLU
13	CM	112	GLY
13	CM	124	PRO
14	CN	41	ARG
15	CO	86	GLY
17	CQ	13	ASP
20	CT	50	GLU
20	CT	70	SER
20	CT	96	GLY
20	CT	97	ALA
25	CZ	25	THR
25	CZ	41	ASN
25	CZ	360	GLU
26	D0	69	PHE
28	D2	23	LYS
28	D2	64	LEU
29	D3	16	PRO
30	D4	28	LYS
30	D4	43	TYR
32	D6	9	LEU
32	D6	34	LEU
34	D8	11	LYS

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Mol	Chain	Res	Type
34	D8	28	GLY
34	D8	38	GLY
38	DC	79	LYS
38	DC	111	ASP
38	DC	127	LEU
39	DD	244	ARG
39	DD	273	ARG
40	DE	30	PRO
40	DE	45	THR
40	DE	162	ALA
41	DF	11	VAL
41	DF	127	GLU
41	DF	133	ASN
42	DG	61	ALA
42	DG	104	GLU
42	DG	112	PRO
42	DG	117	PHE
43	DH	46	GLU
43	DH	80	SER
48	DP	43	GLY
49	DQ	57	HIS
49	DQ	140	ALA
50	DR	102	GLU
51	DS	22	GLY
51	DS	29	PHE
51	DS	37	ALA
51	DS	43	GLU
51	DS	85	VAL
51	DS	97	ARG
51	DS	102	ALA
52	DT	3	ARG
52	DT	38	ASN
52	DT	55	ASN
52	DT	111	ARG
53	DU	7	GLY
53	DU	10	ARG
54	DV	56	SER
54	DV	68	LYS
55	DW	35	ILE
55	DW	36	LEU
55	DW	93	ALA
2	AB	128	GLU

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Mol	Chain	Res	Type
2	AB	239	VAL
3	AC	49	SER
4	AD	5	ILE
7	AG	59	LEU
7	AG	79	ARG
9	AI	12	GLU
9	AI	34	ASN
12	AL	19	ARG
13	AM	100	GLY
13	AM	120	LYS
25	AZ	40	PRO
25	AZ	68	VAL
25	AZ	196	VAL
25	AZ	382	GLU
27	B1	76	ARG
28	B2	17	SER
30	B4	41	PRO
32	B6	9	LEU
35	B9	10	ILE
35	B9	33	LYS
38	BC	57	ASN
38	BC	207	THR
39	BD	193	VAL
41	BF	43	LYS
41	BF	88	VAL
41	BF	172	TRP
43	BH	76	VAL
46	BN	5	VAL
48	BP	23	PRO
50	BR	14	SER
51	BS	39	ILE
51	BS	49	VAL
52	BT	12	SER
52	BT	46	GLU
52	BT	135	ALA
53	BU	9	VAL
53	BU	92	ARG
53	BU	116	ALA
54	BV	36	PRO
54	BV	44	LYS
55	BW	12	ILE
56	BX	18	TYR

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Mol	Chain	Res	Type
56	BX	43	VAL
57	BY	29	GLU
57	BY	30	VAL
57	BY	39	VAL
57	BY	91	GLU
58	BZ	14	LYS
58	BZ	30	ASN
2	CB	23	ARG
2	CB	161	ALA
2	CB	204	ASN
3	CC	160	ALA
4	CD	5	ILE
4	CD	7	PRO
4	CD	26	CYS
4	CD	28	SER
4	CD	40	PRO
4	CD	50	ARG
4	CD	51	PRO
4	CD	62	GLN
4	CD	129	ASN
4	CD	164	ALA
4	CD	172	PRO
4	CD	181	MET
4	CD	189	PRO
9	CI	90	PRO
11	CK	69	ALA
14	CN	23	ARG
15	CO	3	ILE
16	CP	16	HIS
16	CP	39	TYR
18	CR	31	LEU
19	CS	14	HIS
19	CS	17	GLU
20	CT	13	LEU
25	CZ	68	VAL
25	CZ	196	VAL
25	CZ	349	VAL
25	CZ	382	GLU
26	D0	35	ASN
27	D1	69	LYS
35	D9	30	PRO
38	DC	109	ASP

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Mol	Chain	Res	Type
39	DD	3	VAL
39	DD	28	GLU
39	DD	48	ARG
39	DD	144	ALA
40	DE	82	ARG
41	DF	87	GLY
41	DF	88	VAL
42	DG	113	ARG
42	DG	177	GLY
43	DH	47	GLU
43	DH	79	VAL
46	DN	5	VAL
48	DP	42	SER
49	DQ	80	GLU
51	DS	32	LEU
51	DS	50	SER
51	DS	54	LEU
52	DT	31	SER
56	DX	11	PRO
56	DX	42	ALA
57	DY	53	PRO
57	DY	62	GLU
58	DZ	17	ALA
58	DZ	61	LEU
58	DZ	66	SER
58	DZ	120	ILE
58	DZ	166	SER
2	AB	105	PHE
2	AB	145	LEU
2	AB	232	PRO
4	AD	37	PRO
11	AK	35	PRO
14	AN	23	ARG
16	AP	43	LYS
20	AT	100	ILE
25	AZ	114	PRO
25	AZ	245	GLY
25	AZ	349	VAL
26	B0	73	GLY
27	B1	63	ALA
28	B2	47	ASN
30	B4	10	VAL

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Mol	Chain	Res	Type
39	BD	41	GLY
39	BD	242	ARG
40	BE	61	ARG
41	BF	132	VAL
42	BG	90	LEU
43	BH	44	VAL
43	BH	169	VAL
50	BR	5	LYS
50	BR	84	ALA
53	BU	28	ARG
57	BY	53	PRO
58	BZ	147	GLY
58	BZ	161	VAL
6	CF	79	LEU
11	CK	128	ALA
12	CL	39	VAL
13	CM	120	LYS
25	CZ	40	PRO
31	D5	26	THR
39	DD	98	VAL
39	DD	241	PRO
40	DE	55	ASN
42	DG	176	LEU
43	DH	18	GLU
46	DN	135	PRO
47	DO	35	VAL
50	DR	39	PRO
52	DT	70	VAL
53	DU	90	VAL
57	DY	9	LYS
57	DY	55	TYR
57	DY	65	ALA
58	DZ	20	ARG
8	AH	73	ASP
13	AM	4	ILE
15	AO	87	ILE
17	AQ	64	PRO
19	AS	8	GLY
19	AS	45	VAL
27	B1	84	GLY
43	BH	128	PRO
46	BN	135	PRO

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Mol	Chain	Res	Type
48	BP	37	GLY
51	BS	85	VAL
55	BW	35	ILE
5	CE	70	PRO
8	CH	73	ASP
10	CJ	74	ILE
13	CM	4	ILE
25	CZ	114	PRO
25	CZ	259	ALA
32	D6	52	VAL
40	DE	186	GLY
41	DF	25	PRO
43	DH	76	VAL
51	DS	18	ILE
57	DY	31	LEU
2	AB	130	ARG
3	AC	66	VAL
7	AG	112	PRO
12	AL	39	VAL
12	AL	121	GLY
16	AP	46	PRO
25	AZ	259	ALA
26	B0	83	PRO
27	B1	37	ILE
38	BC	130	ILE
40	BE	190	GLY
41	BF	25	PRO
41	BF	126	VAL
42	BG	179	PRO
43	BH	107	VAL
51	BS	91	PRO
53	BU	90	VAL
54	BV	99	ILE
56	BX	10	ALA
57	BY	31	LEU
58	BZ	158	PRO
2	CB	211	ILE
12	CL	74	GLY
19	CS	45	VAL
25	CZ	245	GLY
30	D4	45	GLY
39	DD	238	GLY

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Mol	Chain	Res	Type
40	DE	52	LEU
57	DY	76	CYS
58	DZ	146	ILE
58	DZ	165	VAL
2	AB	93	VAL
9	AI	21	PRO
10	AJ	77	PRO
16	AP	15	PRO
25	AZ	154	VAL
30	B4	19	GLY
34	B8	28	GLY
39	BD	28	GLU
43	BH	79	VAL
46	BN	40	PRO
46	BN	129	PRO
47	BO	35	VAL
25	CZ	359	VAL
43	DH	107	VAL
48	DP	23	PRO
57	DY	27	VAL
4	AD	183	GLY
25	AZ	34	VAL
25	AZ	359	VAL
26	B0	8	GLY
40	BE	191	PRO
55	BW	80	PRO
58	BZ	165	VAL
25	CZ	154	VAL
25	CZ	340	PRO
30	D4	29	PRO
38	DC	65	PRO
38	DC	130	ILE
40	DE	14	ILE
48	DP	109	GLY
52	DT	66	VAL
55	DW	91	GLY
13	AM	10	PRO
15	AO	12	ILE
27	B1	7	ILE
32	B6	52	VAL
40	BE	33	VAL
58	BZ	61	LEU

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Mol	Chain	Res	Type
4	CD	90	GLY
8	CH	26	VAL
17	CQ	77	VAL
25	CZ	292	GLY
30	D4	19	GLY
40	DE	59	VAL
43	DH	17	VAL
56	DX	85	PRO

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	AB	202/220 (92%)	178 (88%)	24 (12%)	5 20
2	CB	202/220 (92%)	177 (88%)	25 (12%)	4 19
3	AC	160/188 (85%)	142 (89%)	18 (11%)	6 23
3	CC	160/188 (85%)	144 (90%)	16 (10%)	7 28
4	AD	180/181 (99%)	151 (84%)	29 (16%)	2 10
4	CD	180/181 (99%)	153 (85%)	27 (15%)	3 12
5	AE	115/123 (94%)	106 (92%)	9 (8%)	12 40
5	CE	115/123 (94%)	105 (91%)	10 (9%)	10 36
6	AF	90/90 (100%)	79 (88%)	11 (12%)	5 19
6	CF	90/90 (100%)	77 (86%)	13 (14%)	3 14
7	AG	126/127 (99%)	113 (90%)	13 (10%)	7 27
7	CG	126/127 (99%)	116 (92%)	10 (8%)	12 40
8	AH	119/119 (100%)	108 (91%)	11 (9%)	9 33
8	CH	119/119 (100%)	112 (94%)	7 (6%)	19 50
9	AI	98/99 (99%)	89 (91%)	9 (9%)	9 33
9	CI	98/99 (99%)	88 (90%)	10 (10%)	7 27
10	AJ	88/92 (96%)	77 (88%)	11 (12%)	4 18

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
10	CJ	88/92 (96%)	74 (84%)	14 (16%)	2 11
11	AK	90/99 (91%)	77 (86%)	13 (14%)	3 14
11	CK	90/99 (91%)	77 (86%)	13 (14%)	3 14
12	AL	104/109 (95%)	91 (88%)	13 (12%)	4 18
12	CL	104/109 (95%)	93 (89%)	11 (11%)	6 26
13	AM	99/101 (98%)	85 (86%)	14 (14%)	3 15
13	CM	99/101 (98%)	85 (86%)	14 (14%)	3 15
14	AN	49/50 (98%)	42 (86%)	7 (14%)	3 14
14	CN	49/50 (98%)	43 (88%)	6 (12%)	5 19
15	AO	79/80 (99%)	69 (87%)	10 (13%)	4 18
15	CO	79/80 (99%)	69 (87%)	10 (13%)	4 18
16	AP	72/74 (97%)	68 (94%)	4 (6%)	21 52
16	CP	72/74 (97%)	65 (90%)	7 (10%)	8 30
17	AQ	94/97 (97%)	87 (93%)	7 (7%)	13 42
17	CQ	94/97 (97%)	92 (98%)	2 (2%)	53 79
18	AR	61/77 (79%)	54 (88%)	7 (12%)	5 22
18	CR	61/77 (79%)	54 (88%)	7 (12%)	5 22
19	AS	69/80 (86%)	58 (84%)	11 (16%)	2 11
19	CS	69/80 (86%)	54 (78%)	15 (22%)	1 4
20	AT	76/82 (93%)	66 (87%)	10 (13%)	4 17
20	CT	76/82 (93%)	67 (88%)	9 (12%)	5 21
21	AU	19/22 (86%)	17 (90%)	2 (10%)	7 26
21	CU	19/22 (86%)	16 (84%)	3 (16%)	2 11
25	AZ	322/338 (95%)	282 (88%)	40 (12%)	4 19
25	CZ	322/338 (95%)	281 (87%)	41 (13%)	4 18
26	B0	66/67 (98%)	53 (80%)	13 (20%)	1 6
26	D0	66/67 (98%)	55 (83%)	11 (17%)	2 9
27	B1	78/83 (94%)	68 (87%)	10 (13%)	4 18
27	D1	78/83 (94%)	70 (90%)	8 (10%)	7 27
28	B2	66/67 (98%)	55 (83%)	11 (17%)	2 9
28	D2	66/67 (98%)	60 (91%)	6 (9%)	9 33

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
29	B3	51/52 (98%)	44 (86%)	7 (14%)	3 16
29	D3	51/52 (98%)	45 (88%)	6 (12%)	5 21
30	B4	39/63 (62%)	28 (72%)	11 (28%)	0 1
30	D4	39/63 (62%)	29 (74%)	10 (26%)	0 1
31	B5	51/52 (98%)	44 (86%)	7 (14%)	3 16
31	D5	51/52 (98%)	45 (88%)	6 (12%)	5 21
32	B6	49/52 (94%)	32 (65%)	17 (35%)	0 0
32	D6	49/52 (94%)	36 (74%)	13 (26%)	0 1
33	B7	41/42 (98%)	37 (90%)	4 (10%)	8 29
33	D7	41/42 (98%)	35 (85%)	6 (15%)	3 13
34	B8	53/55 (96%)	43 (81%)	10 (19%)	1 6
34	D8	53/55 (96%)	43 (81%)	10 (19%)	1 6
35	B9	34/34 (100%)	28 (82%)	6 (18%)	2 8
35	D9	34/34 (100%)	29 (85%)	5 (15%)	3 13
38	BC	180/181 (99%)	168 (93%)	12 (7%)	16 46
38	DC	180/181 (99%)	165 (92%)	15 (8%)	11 38
39	BD	217/218 (100%)	176 (81%)	41 (19%)	1 6
39	DD	217/218 (100%)	185 (85%)	32 (15%)	3 13
40	BE	165/166 (99%)	137 (83%)	28 (17%)	2 9
40	DE	165/166 (99%)	137 (83%)	28 (17%)	2 9
41	BF	165/166 (99%)	147 (89%)	18 (11%)	6 25
41	DF	165/166 (99%)	152 (92%)	13 (8%)	12 40
42	BG	155/156 (99%)	130 (84%)	25 (16%)	2 10
42	DG	155/156 (99%)	127 (82%)	28 (18%)	1 7
43	BH	132/148 (89%)	122 (92%)	10 (8%)	13 41
43	DH	132/148 (89%)	123 (93%)	9 (7%)	16 45
46	BN	117/119 (98%)	102 (87%)	15 (13%)	4 18
46	DN	117/119 (98%)	99 (85%)	18 (15%)	2 11
47	BO	100/100 (100%)	92 (92%)	8 (8%)	12 40
47	DO	100/100 (100%)	90 (90%)	10 (10%)	7 28
48	BP	112/116 (97%)	89 (80%)	23 (20%)	1 5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
48	DP	112/116 (97%)	92 (82%)	20 (18%)	2 8
49	BQ	111/111 (100%)	94 (85%)	17 (15%)	2 12
49	DQ	111/111 (100%)	97 (87%)	14 (13%)	4 18
50	BR	100/101 (99%)	88 (88%)	12 (12%)	5 20
50	DR	100/101 (99%)	89 (89%)	11 (11%)	6 25
51	BS	77/88 (88%)	65 (84%)	12 (16%)	2 11
51	DS	77/88 (88%)	61 (79%)	16 (21%)	1 5
52	BT	120/127 (94%)	101 (84%)	19 (16%)	2 11
52	DT	120/127 (94%)	102 (85%)	18 (15%)	3 12
53	BU	92/94 (98%)	84 (91%)	8 (9%)	10 36
53	DU	92/94 (98%)	85 (92%)	7 (8%)	13 41
54	BV	82/82 (100%)	69 (84%)	13 (16%)	2 11
54	DV	82/82 (100%)	66 (80%)	16 (20%)	1 6
55	BW	91/92 (99%)	85 (93%)	6 (7%)	16 47
55	DW	91/92 (99%)	85 (93%)	6 (7%)	16 47
56	BX	74/78 (95%)	65 (88%)	9 (12%)	5 19
56	DX	74/78 (95%)	68 (92%)	6 (8%)	11 39
57	BY	84/91 (92%)	72 (86%)	12 (14%)	3 14
57	DY	84/91 (92%)	73 (87%)	11 (13%)	4 17
58	BZ	161/179 (90%)	134 (83%)	27 (17%)	2 9
58	DZ	161/179 (90%)	138 (86%)	23 (14%)	3 14
All	All	10350/10856 (95%)	9014 (87%)	1336 (13%)	4 18

All (1336) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	16	HIS
2	AB	24	TRP
2	AB	32	ILE
2	AB	36	ARG
2	AB	42	ILE
2	AB	45	GLN
2	AB	69	LEU
2	AB	76	GLN

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Mol	Chain	Res	Type
2	AB	94	ASN
2	AB	102	LEU
2	AB	110	GLN
2	AB	119	GLU
2	AB	141	GLU
2	AB	145	LEU
2	AB	155	LEU
2	AB	170	GLU
2	AB	178	ARG
2	AB	187	LEU
2	AB	189	ASP
2	AB	196	LEU
2	AB	208	ILE
2	AB	210	SER
2	AB	222	ILE
3	AC	3	ASN
3	AC	5	ILE
3	AC	11	ARG
3	AC	14	ILE
3	AC	16	ARG
3	AC	26	LYS
3	AC	36	ASP
3	AC	38	ARG
3	AC	46	GLU
3	AC	76	VAL
3	AC	79	ARG
3	AC	107	GLN
3	AC	118	GLN
3	AC	119	ARG
3	AC	131	ARG
3	AC	138	VAL
3	AC	178	LEU
3	AC	179	ARG
4	AD	3	ARG
4	AD	9	CYS
4	AD	15	GLU
4	AD	20	TYR
4	AD	27	TYR
4	AD	33	MET
4	AD	36	ARG
4	AD	58	LEU
4	AD	62	GLN

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Mol	Chain	Res	Type
4	AD	67	ILE
4	AD	78	LEU
4	AD	86	LYS
4	AD	91	SER
4	AD	100	ARG
4	AD	107	ARG
4	AD	114	ARG
4	AD	122	ARG
4	AD	131	ARG
4	AD	132	ARG
4	AD	135	LEU
4	AD	138	TYR
4	AD	145	GLU
4	AD	154	ASN
4	AD	160	GLN
4	AD	181	MET
4	AD	187	ARG
4	AD	190	ASP
4	AD	192	GLU
4	AD	209	ARG
5	AE	8	GLU
5	AE	12	LEU
5	AE	20	GLN
5	AE	31	LEU
5	AE	38	GLN
5	AE	52	PRO
5	AE	116	THR
5	AE	120	THR
5	AE	147	ASP
6	AF	16	GLN
6	AF	25	ILE
6	AF	27	GLN
6	AF	31	GLU
6	AF	32	ASN
6	AF	43	LEU
6	AF	45	LEU
6	AF	79	LEU
6	AF	83	ASP
6	AF	86	ARG
6	AF	98	LEU
7	AG	3	ARG
7	AG	13	GLN

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Mol	Chain	Res	Type
7	AG	38	LEU
7	AG	69	VAL
7	AG	73	MET
7	AG	74	GLU
7	AG	85	TYR
7	AG	104	LEU
7	AG	113	GLU
7	AG	114	ARG
7	AG	118	VAL
7	AG	137	LYS
7	AG	140	ASP
8	AH	1	MET
8	AH	3	THR
8	AH	14	ARG
8	AH	39	LEU
8	AH	49	GLU
8	AH	85	ARG
8	AH	92	ARG
8	AH	102	ARG
8	AH	104	ARG
8	AH	112	LEU
8	AH	119	LEU
9	AI	4	TYR
9	AI	10	ARG
9	AI	79	LEU
9	AI	99	LEU
9	AI	104	ARG
9	AI	118	LYS
9	AI	121	ARG
9	AI	126	SER
9	AI	128	ARG
10	AJ	4	ILE
10	AJ	16	LEU
10	AJ	22	LYS
10	AJ	49	VAL
10	AJ	50	ILE
10	AJ	55	LYS
10	AJ	67	THR
10	AJ	70	ARG
10	AJ	74	ILE
10	AJ	87	THR
10	AJ	96	ILE

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Mol	Chain	Res	Type
11	AK	27	ASN
11	AK	29	ILE
11	AK	36	ASP
11	AK	48	ILE
11	AK	51	LYS
11	AK	57	THR
11	AK	81	ASP
11	AK	84	VAL
11	AK	87	THR
11	AK	96	ARG
11	AK	103	LEU
11	AK	106	LYS
11	AK	117	ASN
12	AL	7	ILE
12	AL	13	LYS
12	AL	20	LYS
12	AL	33	ARG
12	AL	42	THR
12	AL	53	ARG
12	AL	55	VAL
12	AL	78	GLN
12	AL	80	HIS
12	AL	89	ARG
12	AL	99	HIS
12	AL	111	LYS
12	AL	114	LYS
13	AM	7	VAL
13	AM	23	TYR
13	AM	43	THR
13	AM	64	TRP
13	AM	65	LYS
13	AM	67	GLU
13	AM	70	LEU
13	AM	81	LEU
13	AM	88	ARG
13	AM	93	ARG
13	AM	101	GLN
13	AM	108	ARG
13	AM	115	LYS
13	AM	120	LYS
14	AN	3	ARG
14	AN	14	PRO

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Mol	Chain	Res	Type
14	AN	21	TYR
14	AN	22	THR
14	AN	41	ARG
14	AN	57	ARG
14	AN	58	LYS
15	AO	6	GLU
15	AO	21	ASP
15	AO	25	THR
15	AO	33	THR
15	AO	36	ILE
15	AO	38	ARG
15	AO	41	GLU
15	AO	66	LEU
15	AO	82	ILE
15	AO	88	ARG
16	AP	1	MET
16	AP	5	ARG
16	AP	15	PRO
16	AP	69	THR
17	AQ	18	THR
17	AQ	37	LYS
17	AQ	38	ARG
17	AQ	41	LYS
17	AQ	49	GLU
17	AQ	52	LYS
17	AQ	74	LEU
18	AR	29	PHE
18	AR	32	ARG
18	AR	38	GLU
18	AR	44	LEU
18	AR	46	GLU
18	AR	47	THR
18	AR	54	ARG
19	AS	6	LYS
19	AS	7	LYS
19	AS	10	PHE
19	AS	15	LEU
19	AS	27	GLU
19	AS	32	LYS
19	AS	37	ARG
19	AS	44	MET
19	AS	49	ILE

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Mol	Chain	Res	Type
19	AS	53	ASN
19	AS	66	MET
20	AT	10	LEU
20	AT	26	ASN
20	AT	36	LEU
20	AT	45	GLN
20	AT	55	ILE
20	AT	64	ASP
20	AT	74	LYS
20	AT	75	ASN
20	AT	82	SER
20	AT	104	LEU
21	AU	22	ARG
21	AU	24	ARG
25	AZ	4	GLU
25	AZ	5	PHE
25	AZ	7	ARG
25	AZ	9	LYS
25	AZ	21	ASP
25	AZ	22	HIS
25	AZ	39	ASN
25	AZ	63	ILE
25	AZ	64	ASN
25	AZ	69	GLU
25	AZ	100	ASP
25	AZ	114	PRO
25	AZ	146	LEU
25	AZ	163	PHE
25	AZ	166	ASP
25	AZ	174	SER
25	AZ	180	GLU
25	AZ	197	ASP
25	AZ	198	LYS
25	AZ	199	ILE
25	AZ	218	ASP
25	AZ	241	ARG
25	AZ	261	GLU
25	AZ	262	THR
25	AZ	274	ARG
25	AZ	277	LEU
25	AZ	281	ILE
25	AZ	285	ASN

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Mol	Chain	Res	Type
25	AZ	303	VAL
25	AZ	310	ILE
25	AZ	316	PHE
25	AZ	321	TYR
25	AZ	323	LEU
25	AZ	325	LYS
25	AZ	326	GLU
25	AZ	331	HIS
25	AZ	341	GLN
25	AZ	345	ARG
25	AZ	364	PRO
25	AZ	370	PHE
26	B0	3	HIS
26	B0	14	ARG
26	B0	20	ARG
26	B0	26	TYR
26	B0	27	GLU
26	B0	36	ILE
26	B0	38	VAL
26	B0	47	PRO
26	B0	49	LYS
26	B0	56	ASP
26	B0	64	ASP
26	B0	75	LEU
26	B0	84	LEU
27	B1	3	LYS
27	B1	21	ARG
27	B1	30	VAL
27	B1	35	THR
27	B1	40	ARG
27	B1	45	ASN
27	B1	52	ARG
27	B1	59	THR
27	B1	73	LEU
27	B1	76	ARG
28	B2	12	GLU
28	B2	22	GLU
28	B2	32	LEU
28	B2	34	GLU
28	B2	35	LEU
28	B2	51	ARG
28	B2	59	ARG

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Mol	Chain	Res	Type
28	B2	61	LEU
28	B2	65	ASN
28	B2	66	GLU
28	B2	69	ARG
29	B3	8	LEU
29	B3	11	SER
29	B3	18	ASP
29	B3	29	ARG
29	B3	31	LEU
29	B3	35	ARG
29	B3	46	ASN
30	B4	5	ILE
30	B4	6	HIS
30	B4	9	LEU
30	B4	20	ASN
30	B4	22	ILE
30	B4	26	SER
30	B4	27	THR
30	B4	32	TYR
30	B4	34	GLU
30	B4	43	TYR
30	B4	47	GLN
31	B5	3	LYS
31	B5	4	HIS
31	B5	25	LEU
31	B5	48	GLU
31	B5	51	TYR
31	B5	52	TYR
31	B5	56	LYS
32	B6	9	LEU
32	B6	10	LEU
32	B6	14	THR
32	B6	18	ARG
32	B6	19	ARG
32	B6	21	TYR
32	B6	23	THR
32	B6	26	ASN
32	B6	31	PRO
32	B6	33	LYS
32	B6	35	GLU
32	B6	36	LEU
32	B6	37	ARG

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Mol	Chain	Res	Type
32	B6	42	TRP
32	B6	47	THR
32	B6	48	VAL
32	B6	53	LYS
33	B7	4	THR
33	B7	12	ARG
33	B7	36	GLN
33	B7	46	VAL
34	B8	2	PRO
34	B8	17	THR
34	B8	30	ARG
34	B8	32	LEU
34	B8	34	TRP
34	B8	41	ILE
34	B8	44	LYS
34	B8	49	VAL
34	B8	56	GLU
34	B8	61	LEU
35	B9	1	MET
35	B9	2	LYS
35	B9	11	CYS
35	B9	18	ARG
35	B9	28	GLU
35	B9	29	ASN
38	BC	5	LYS
38	BC	11	LEU
38	BC	28	LEU
38	BC	30	LYS
38	BC	55	ASP
38	BC	57	ASN
38	BC	70	LYS
38	BC	154	ARG
38	BC	161	ILE
38	BC	167	LYS
38	BC	211	SER
38	BC	215	THR
39	BD	10	THR
39	BD	14	ARG
39	BD	20	ASP
39	BD	24	ILE
39	BD	26	LYS
39	BD	27	THR

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Mol	Chain	Res	Type
39	BD	28	GLU
39	BD	35	LYS
39	BD	43	ARG
39	BD	44	ASN
39	BD	46	GLN
39	BD	49	ILE
39	BD	61	LEU
39	BD	63	ARG
39	BD	64	ILE
39	BD	65	ILE
39	BD	67	PHE
39	BD	68	LYS
39	BD	71	ASP
39	BD	75	ILE
39	BD	89	SER
39	BD	92	ILE
39	BD	94	LEU
39	BD	99	ASP
39	BD	105	ILE
39	BD	106	ILE
39	BD	111	LEU
39	BD	115	GLN
39	BD	117	VAL
39	BD	157	ARG
39	BD	166	GLN
39	BD	192	THR
39	BD	200	ASP
39	BD	206	LEU
39	BD	212	SER
39	BD	228	PRO
39	BD	239	ARG
39	BD	242	ARG
39	BD	257	LEU
39	BD	260	ARG
39	BD	266	SER
40	BE	18	ASP
40	BE	21	VAL
40	BE	26	ILE
40	BE	36	ARG
40	BE	49	LEU
40	BE	55	ASN
40	BE	56	PRO

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Mol	Chain	Res	Type
40	BE	57	LYS
40	BE	62	PRO
40	BE	67	PHE
40	BE	73	GLU
40	BE	76	ARG
40	BE	78	LEU
40	BE	79	ARG
40	BE	82	ARG
40	BE	94	GLU
40	BE	95	ILE
40	BE	107	THR
40	BE	111	ARG
40	BE	128	SER
40	BE	133	LYS
40	BE	144	ARG
40	BE	145	LYS
40	BE	146	THR
40	BE	168	MET
40	BE	196	VAL
40	BE	202	LYS
40	BE	203	LYS
41	BF	19	GLU
41	BF	28	ILE
41	BF	41	LEU
41	BF	64	ILE
41	BF	65	TRP
41	BF	83	PHE
41	BF	84	VAL
41	BF	96	ASP
41	BF	125	LEU
41	BF	133	ASN
41	BF	135	LYS
41	BF	149	ASP
41	BF	160	ASN
41	BF	164	ARG
41	BF	169	ASN
41	BF	175	THR
41	BF	179	GLU
41	BF	195	ASP
42	BG	16	ARG
42	BG	29	TRP
42	BG	33	ARG

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Mol	Chain	Res	Type
42	BG	40	ASN
42	BG	51	ARG
42	BG	54	GLU
42	BG	60	LEU
42	BG	67	LYS
42	BG	71	THR
42	BG	77	ILE
42	BG	87	PRO
42	BG	91	ARG
42	BG	92	VAL
42	BG	107	LEU
42	BG	109	VAL
42	BG	113	ARG
42	BG	121	ASN
42	BG	124	SER
42	BG	125	PHE
42	BG	139	LEU
42	BG	147	ASP
42	BG	148	MET
42	BG	150	ASP
42	BG	152	LEU
42	BG	181	ARG
43	BH	43	VAL
43	BH	54	ARG
43	BH	65	HIS
43	BH	83	TYR
43	BH	85	LYS
43	BH	105	LEU
43	BH	139	GLN
43	BH	143	GLN
43	BH	153	LYS
43	BH	163	TYR
46	BN	1	MET
46	BN	4	TYR
46	BN	7	LYS
46	BN	10	GLU
46	BN	25	ARG
46	BN	32	THR
46	BN	45	ASN
46	BN	48	MET
46	BN	56	ASN
46	BN	65	LYS

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Mol	Chain	Res	Type
46	BN	87	LEU
46	BN	90	MET
46	BN	120	LEU
46	BN	127	ASP
46	BN	136	GLU
47	BO	8	LEU
47	BO	17	ARG
47	BO	23	ARG
47	BO	34	THR
47	BO	48	PRO
47	BO	65	THR
47	BO	73	ASP
47	BO	78	ARG
48	BP	16	ARG
48	BP	35	HIS
48	BP	39	LYS
48	BP	41	ARG
48	BP	42	SER
48	BP	52	GLU
48	BP	55	ARG
48	BP	58	THR
48	BP	61	ARG
48	BP	70	GLN
48	BP	75	ILE
48	BP	79	ARG
48	BP	85	LEU
48	BP	91	PHE
48	BP	98	GLU
48	BP	100	LEU
48	BP	105	LEU
48	BP	108	LYS
48	BP	110	TYR
48	BP	112	LEU
48	BP	114	ILE
48	BP	115	LEU
48	BP	133	SER
49	BQ	1	MET
49	BQ	18	LYS
49	BQ	29	PHE
49	BQ	42	ILE
49	BQ	45	GLN
49	BQ	51	ARG

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Mol	Chain	Res	Type
49	BQ	54	MET
49	BQ	56	ARG
49	BQ	58	PHE
49	BQ	59	ARG
49	BQ	79	LEU
49	BQ	110	THR
49	BQ	132	VAL
49	BQ	134	ARG
49	BQ	135	ASP
49	BQ	139	GLU
49	BQ	141	GLN
50	BR	2	ARG
50	BR	3	HIS
50	BR	10	LEU
50	BR	36	THR
50	BR	44	LEU
50	BR	54	LEU
50	BR	71	GLN
50	BR	74	LYS
50	BR	96	ARG
50	BR	99	LYS
50	BR	105	ARG
50	BR	111	LEU
51	BS	11	LYS
51	BS	12	PHE
51	BS	15	ARG
51	BS	27	SER
51	BS	29	PHE
51	BS	36	TYR
51	BS	40	ILE
51	BS	67	ARG
51	BS	89	ARG
51	BS	92	TYR
51	BS	97	ARG
51	BS	99	LYS
52	BT	6	LEU
52	BT	15	VAL
52	BT	16	ARG
52	BT	24	PRO
52	BT	29	ARG
52	BT	32	TYR
52	BT	38	ASN

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Mol	Chain	Res	Type
52	BT	39	ARG
52	BT	41	ARG
52	BT	44	ASP
52	BT	48	ILE
52	BT	53	ARG
52	BT	65	LYS
52	BT	83	ILE
52	BT	99	LEU
52	BT	108	ARG
52	BT	111	ARG
52	BT	123	GLN
52	BT	128	GLU
53	BU	11	ARG
53	BU	52	ARG
53	BU	60	LEU
53	BU	66	ASN
53	BU	72	HIS
53	BU	74	LEU
53	BU	92	ARG
53	BU	108	GLU
54	BV	16	PRO
54	BV	18	LEU
54	BV	19	LYS
54	BV	22	VAL
54	BV	39	LEU
54	BV	40	LEU
54	BV	61	VAL
54	BV	62	LEU
54	BV	68	LYS
54	BV	81	TYR
54	BV	82	ARG
54	BV	91	TYR
54	BV	99	ILE
55	BW	11	ARG
55	BW	51	LEU
55	BW	70	TYR
55	BW	82	LEU
55	BW	101	SER
55	BW	107	LEU
56	BX	11	PRO
56	BX	28	PHE
56	BX	35	THR

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Mol	Chain	Res	Type
56	BX	37	THR
56	BX	40	LYS
56	BX	55	ASN
56	BX	68	ARG
56	BX	75	ASP
56	BX	80	ILE
57	BY	2	ARG
57	BY	6	HIS
57	BY	7	VAL
57	BY	9	LYS
57	BY	28	LYS
57	BY	29	GLU
57	BY	32	PRO
57	BY	50	ARG
57	BY	62	GLU
57	BY	73	ARG
57	BY	77	PRO
57	BY	97	ARG
58	BZ	5	LEU
58	BZ	9	TYR
58	BZ	10	ARG
58	BZ	18	LEU
58	BZ	24	LEU
58	BZ	30	ASN
58	BZ	32	HIS
58	BZ	37	VAL
58	BZ	63	ASP
58	BZ	70	LEU
58	BZ	72	ARG
58	BZ	73	GLN
58	BZ	77	ASP
58	BZ	81	ARG
58	BZ	87	ASP
58	BZ	93	ASP
58	BZ	121	HIS
58	BZ	123	ASP
58	BZ	124	ILE
58	BZ	127	LYS
58	BZ	140	ASP
58	BZ	148	ASP
58	BZ	151	HIS
58	BZ	155	LEU

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Mol	Chain	Res	Type
58	BZ	166	SER
58	BZ	175	VAL
58	BZ	178	GLU
2	CB	15	VAL
2	CB	17	PHE
2	CB	24	TRP
2	CB	32	ILE
2	CB	42	ILE
2	CB	51	LEU
2	CB	54	THR
2	CB	69	LEU
2	CB	76	GLN
2	CB	94	ASN
2	CB	110	GLN
2	CB	141	GLU
2	CB	145	LEU
2	CB	154	LEU
2	CB	170	GLU
2	CB	178	ARG
2	CB	187	LEU
2	CB	189	ASP
2	CB	191	ASP
2	CB	193	ASP
2	CB	196	LEU
2	CB	200	ILE
2	CB	208	ILE
2	CB	222	ILE
2	CB	226	ARG
3	CC	3	ASN
3	CC	5	ILE
3	CC	14	ILE
3	CC	16	ARG
3	CC	29	TYR
3	CC	36	ASP
3	CC	46	GLU
3	CC	79	ARG
3	CC	94	LEU
3	CC	104	GLN
3	CC	107	GLN
3	CC	118	GLN
3	CC	119	ARG
3	CC	178	LEU

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Mol	Chain	Res	Type
3	CC	179	ARG
3	CC	195	VAL
4	CD	3	ARG
4	CD	9	CYS
4	CD	15	GLU
4	CD	24	GLU
4	CD	36	ARG
4	CD	49	ARG
4	CD	53	ASP
4	CD	59	ARG
4	CD	60	GLU
4	CD	67	ILE
4	CD	86	LYS
4	CD	89	THR
4	CD	97	LEU
4	CD	98	GLU
4	CD	107	ARG
4	CD	129	ASN
4	CD	131	ARG
4	CD	132	ARG
4	CD	135	LEU
4	CD	138	TYR
4	CD	145	GLU
4	CD	160	GLN
4	CD	163	GLU
4	CD	179	GLU
4	CD	181	MET
4	CD	192	GLU
4	CD	200	GLU
5	CE	12	LEU
5	CE	18	ARG
5	CE	31	LEU
5	CE	38	GLN
5	CE	53	LEU
5	CE	68	GLU
5	CE	76	ILE
5	CE	116	THR
5	CE	120	THR
5	CE	147	ASP
6	CF	10	LEU
6	CF	14	LEU
6	CF	16	GLN

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Mol	Chain	Res	Type
6	CF	25	ILE
6	CF	32	ASN
6	CF	43	LEU
6	CF	45	LEU
6	CF	69	GLU
6	CF	73	ASN
6	CF	79	LEU
6	CF	83	ASP
6	CF	86	ARG
6	CF	98	LEU
7	CG	13	GLN
7	CG	24	THR
7	CG	36	LYS
7	CG	38	LEU
7	CG	45	ASP
7	CG	104	LEU
7	CG	109	ASN
7	CG	113	GLU
7	CG	114	ARG
7	CG	137	LYS
8	CH	1	MET
8	CH	3	THR
8	CH	26	VAL
8	CH	30	ARG
8	CH	102	ARG
8	CH	104	ARG
8	CH	112	LEU
9	CI	4	TYR
9	CI	10	ARG
9	CI	70	LYS
9	CI	79	LEU
9	CI	99	LEU
9	CI	104	ARG
9	CI	114	TYR
9	CI	118	LYS
9	CI	121	ARG
9	CI	128	ARG
10	CJ	4	ILE
10	CJ	8	LEU
10	CJ	22	LYS
10	CJ	42	THR
10	CJ	44	VAL

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Mol	Chain	Res	Type
10	CJ	49	VAL
10	CJ	50	ILE
10	CJ	54	PHE
10	CJ	55	LYS
10	CJ	67	THR
10	CJ	71	LEU
10	CJ	80	LYS
10	CJ	87	THR
10	CJ	96	ILE
11	CK	27	ASN
11	CK	28	THR
11	CK	29	ILE
11	CK	35	PRO
11	CK	36	ASP
11	CK	51	LYS
11	CK	84	VAL
11	CK	87	THR
11	CK	93	GLN
11	CK	103	LEU
11	CK	106	LYS
11	CK	116	HIS
11	CK	117	ASN
12	CL	7	ILE
12	CL	20	LYS
12	CL	33	ARG
12	CL	42	THR
12	CL	53	ARG
12	CL	67	THR
12	CL	80	HIS
12	CL	89	ARG
12	CL	98	TYR
12	CL	111	LYS
12	CL	114	LYS
13	CM	9	ILE
13	CM	16	ASP
13	CM	43	THR
13	CM	64	TRP
13	CM	65	LYS
13	CM	67	GLU
13	CM	69	GLU
13	CM	70	LEU
13	CM	93	ARG

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Mol	Chain	Res	Type
13	CM	101	GLN
13	CM	108	ARG
13	CM	109	THR
13	CM	115	LYS
13	CM	120	LYS
14	CN	6	LEU
14	CN	14	PRO
14	CN	18	VAL
14	CN	41	ARG
14	CN	42	ILE
14	CN	44	LEU
15	CO	13	GLN
15	CO	14	GLU
15	CO	24	SER
15	CO	25	THR
15	CO	26	GLU
15	CO	38	ARG
15	CO	39	LEU
15	CO	41	GLU
15	CO	77	ARG
15	CO	82	ILE
16	CP	1	MET
16	CP	5	ARG
16	CP	20	VAL
16	CP	23	ASP
16	CP	32	TYR
16	CP	55	ARG
16	CP	69	THR
17	CQ	37	LYS
17	CQ	52	LYS
18	CR	28	GLU
18	CR	29	PHE
18	CR	37	VAL
18	CR	38	GLU
18	CR	44	LEU
18	CR	46	GLU
18	CR	76	LEU
19	CS	6	LYS
19	CS	7	LYS
19	CS	10	PHE
19	CS	12	ASP
19	CS	15	LEU

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Mol	Chain	Res	Type
19	CS	27	GLU
19	CS	32	LYS
19	CS	37	ARG
19	CS	42	PRO
19	CS	44	MET
19	CS	49	ILE
19	CS	53	ASN
19	CS	66	MET
19	CS	71	LEU
19	CS	77	THR
20	CT	19	SER
20	CT	26	ASN
20	CT	36	LEU
20	CT	42	GLN
20	CT	45	GLN
20	CT	55	ILE
20	CT	56	MET
20	CT	64	ASP
20	CT	74	LYS
21	CU	6	ARG
21	CU	18	TYR
21	CU	22	ARG
25	CZ	4	GLU
25	CZ	5	PHE
25	CZ	7	ARG
25	CZ	9	LYS
25	CZ	21	ASP
25	CZ	22	HIS
25	CZ	39	ASN
25	CZ	63	ILE
25	CZ	64	ASN
25	CZ	69	GLU
25	CZ	100	ASP
25	CZ	146	LEU
25	CZ	163	PHE
25	CZ	166	ASP
25	CZ	174	SER
25	CZ	180	GLU
25	CZ	192	GLU
25	CZ	197	ASP
25	CZ	198	LYS
25	CZ	199	ILE

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Mol	Chain	Res	Type
25	CZ	218	ASP
25	CZ	241	ARG
25	CZ	261	GLU
25	CZ	262	THR
25	CZ	274	ARG
25	CZ	277	LEU
25	CZ	281	ILE
25	CZ	284	ASP
25	CZ	285	ASN
25	CZ	303	VAL
25	CZ	310	ILE
25	CZ	316	PHE
25	CZ	321	TYR
25	CZ	323	LEU
25	CZ	325	LYS
25	CZ	326	GLU
25	CZ	331	HIS
25	CZ	341	GLN
25	CZ	345	ARG
25	CZ	364	PRO
25	CZ	370	PHE
26	D0	3	HIS
26	D0	14	ARG
26	D0	20	ARG
26	D0	26	TYR
26	D0	27	GLU
26	D0	36	ILE
26	D0	38	VAL
26	D0	60	PHE
26	D0	64	ASP
26	D0	75	LEU
26	D0	84	LEU
27	D1	18	ILE
27	D1	33	LYS
27	D1	35	THR
27	D1	38	SER
27	D1	39	LYS
27	D1	45	ASN
27	D1	46	LEU
27	D1	83	GLU
28	D2	7	ARG
28	D2	44	LEU

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Mol	Chain	Res	Type
28	D2	48	HIS
28	D2	59	ARG
28	D2	66	GLU
28	D2	68	ARG
29	D3	8	LEU
29	D3	18	ASP
29	D3	35	ARG
29	D3	37	LEU
29	D3	38	GLU
29	D3	46	ASN
30	D4	5	ILE
30	D4	6	HIS
30	D4	9	LEU
30	D4	20	ASN
30	D4	22	ILE
30	D4	26	SER
30	D4	27	THR
30	D4	32	TYR
30	D4	34	GLU
30	D4	47	GLN
31	D5	3	LYS
31	D5	4	HIS
31	D5	25	LEU
31	D5	51	TYR
31	D5	52	TYR
31	D5	56	LYS
32	D6	10	LEU
32	D6	18	ARG
32	D6	19	ARG
32	D6	21	TYR
32	D6	31	PRO
32	D6	32	ASN
32	D6	33	LYS
32	D6	37	ARG
32	D6	42	TRP
32	D6	43	CYS
32	D6	45	LYS
32	D6	49	HIS
32	D6	53	LYS
33	D7	12	ARG
33	D7	23	ARG
33	D7	34	ARG

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Mol	Chain	Res	Type
33	D7	36	GLN
33	D7	43	THR
33	D7	46	VAL
34	D8	6	THR
34	D8	17	THR
34	D8	30	ARG
34	D8	32	LEU
34	D8	34	TRP
34	D8	41	ILE
34	D8	44	LYS
34	D8	49	VAL
34	D8	56	GLU
34	D8	61	LEU
35	D9	2	LYS
35	D9	11	CYS
35	D9	28	GLU
35	D9	29	ASN
35	D9	36	GLN
38	DC	11	LEU
38	DC	30	LYS
38	DC	37	PHE
38	DC	55	ASP
38	DC	57	ASN
38	DC	70	LYS
38	DC	71	GLN
38	DC	104	LEU
38	DC	156	ILE
38	DC	165	ASN
38	DC	167	LYS
38	DC	177	LYS
38	DC	180	PHE
38	DC	183	GLU
38	DC	215	THR
39	DD	10	THR
39	DD	24	ILE
39	DD	26	LYS
39	DD	28	GLU
39	DD	35	LYS
39	DD	37	LEU
39	DD	43	ARG
39	DD	44	ASN
39	DD	46	GLN

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Mol	Chain	Res	Type
39	DD	48	ARG
39	DD	61	LEU
39	DD	63	ARG
39	DD	64	ILE
39	DD	65	ILE
39	DD	75	ILE
39	DD	92	ILE
39	DD	94	LEU
39	DD	106	ILE
39	DD	111	LEU
39	DD	126	GLN
39	DD	131	LEU
39	DD	138	VAL
39	DD	162	SER
39	DD	166	GLN
39	DD	192	THR
39	DD	198	ASN
39	DD	206	LEU
39	DD	211	ARG
39	DD	212	SER
39	DD	218	ARG
39	DD	254	THR
39	DD	273	ARG
40	DE	9	VAL
40	DE	17	ASP
40	DE	18	ASP
40	DE	26	ILE
40	DE	36	ARG
40	DE	55	ASN
40	DE	56	PRO
40	DE	57	LYS
40	DE	62	PRO
40	DE	67	PHE
40	DE	73	GLU
40	DE	76	ARG
40	DE	78	LEU
40	DE	79	ARG
40	DE	94	GLU
40	DE	95	ILE
40	DE	107	THR
40	DE	111	ARG
40	DE	121	ASN

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Mol	Chain	Res	Type
40	DE	128	SER
40	DE	133	LYS
40	DE	144	ARG
40	DE	146	THR
40	DE	163	GLU
40	DE	181	LEU
40	DE	197	ILE
40	DE	202	LYS
40	DE	203	LYS
41	DF	19	GLU
41	DF	27	GLU
41	DF	28	ILE
41	DF	41	LEU
41	DF	83	PHE
41	DF	96	ASP
41	DF	97	TYR
41	DF	125	LEU
41	DF	160	ASN
41	DF	164	ARG
41	DF	169	ASN
41	DF	175	THR
41	DF	179	GLU
42	DG	10	LYS
42	DG	21	ARG
42	DG	33	ARG
42	DG	36	LYS
42	DG	43	LEU
42	DG	51	ARG
42	DG	52	ILE
42	DG	54	GLU
42	DG	60	LEU
42	DG	67	LYS
42	DG	77	ILE
42	DG	80	PHE
42	DG	86	MET
42	DG	93	THR
42	DG	97	ASP
42	DG	98	ARG
42	DG	105	LYS
42	DG	108	ASN
42	DG	113	ARG
42	DG	123	ASN

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Mol	Chain	Res	Type
42	DG	125	PHE
42	DG	136	ARG
42	DG	146	TYR
42	DG	150	ASP
42	DG	152	LEU
42	DG	153	ARG
42	DG	156	ASP
42	DG	157	ILE
43	DH	43	VAL
43	DH	54	ARG
43	DH	83	TYR
43	DH	85	LYS
43	DH	136	ILE
43	DH	139	GLN
43	DH	143	GLN
43	DH	153	LYS
43	DH	163	TYR
46	DN	1	MET
46	DN	4	TYR
46	DN	7	LYS
46	DN	10	GLU
46	DN	19	GLU
46	DN	25	ARG
46	DN	45	ASN
46	DN	48	MET
46	DN	56	ASN
46	DN	63	THR
46	DN	65	LYS
46	DN	83	LYS
46	DN	87	LEU
46	DN	90	MET
46	DN	106	MET
46	DN	120	LEU
46	DN	127	ASP
46	DN	136	GLU
47	DO	8	LEU
47	DO	9	GLU
47	DO	10	VAL
47	DO	23	ARG
47	DO	24	VAL
47	DO	47	ILE
47	DO	48	PRO

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Mol	Chain	Res	Type
47	DO	64	ARG
47	DO	78	ARG
47	DO	108	GLU
48	DP	16	ARG
48	DP	35	HIS
48	DP	36	LYS
48	DP	38	GLN
48	DP	41	ARG
48	DP	42	SER
48	DP	45	LEU
48	DP	48	PRO
48	DP	52	GLU
48	DP	55	ARG
48	DP	61	ARG
48	DP	70	GLN
48	DP	85	LEU
48	DP	91	PHE
48	DP	100	LEU
48	DP	108	LYS
48	DP	110	TYR
48	DP	112	LEU
48	DP	115	LEU
48	DP	136	GLU
49	DQ	1	MET
49	DQ	16	ARG
49	DQ	18	LYS
49	DQ	45	GLN
49	DQ	51	ARG
49	DQ	55	VAL
49	DQ	56	ARG
49	DQ	59	ARG
49	DQ	67	ARG
49	DQ	110	THR
49	DQ	134	ARG
49	DQ	135	ASP
49	DQ	139	GLU
49	DQ	141	GLN
50	DR	2	ARG
50	DR	3	HIS
50	DR	4	LEU
50	DR	10	LEU
50	DR	14	SER

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Mol	Chain	Res	Type
50	DR	44	LEU
50	DR	49	ASP
50	DR	71	GLN
50	DR	74	LYS
50	DR	99	LYS
50	DR	111	LEU
51	DS	11	LYS
51	DS	12	PHE
51	DS	15	ARG
51	DS	29	PHE
51	DS	35	ILE
51	DS	36	TYR
51	DS	40	ILE
51	DS	52	SER
51	DS	64	GLU
51	DS	67	ARG
51	DS	73	LEU
51	DS	80	LEU
51	DS	89	ARG
51	DS	92	TYR
51	DS	97	ARG
51	DS	99	LYS
52	DT	6	LEU
52	DT	14	TYR
52	DT	16	ARG
52	DT	24	PRO
52	DT	27	THR
52	DT	29	ARG
52	DT	32	TYR
52	DT	38	ASN
52	DT	39	ARG
52	DT	41	ARG
52	DT	44	ASP
52	DT	48	ILE
52	DT	49	VAL
52	DT	53	ARG
52	DT	82	LEU
52	DT	99	LEU
52	DT	111	ARG
52	DT	128	GLU
53	DU	14	HIS
53	DU	60	LEU

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Mol	Chain	Res	Type
53	DU	66	ASN
53	DU	72	HIS
53	DU	74	LEU
53	DU	92	ARG
53	DU	108	GLU
54	DV	13	ARG
54	DV	18	LEU
54	DV	19	LYS
54	DV	22	VAL
54	DV	33	VAL
54	DV	39	LEU
54	DV	51	VAL
54	DV	61	VAL
54	DV	62	LEU
54	DV	68	LYS
54	DV	79	VAL
54	DV	81	TYR
54	DV	82	ARG
54	DV	89	GLN
54	DV	91	TYR
54	DV	99	ILE
55	DW	11	ARG
55	DW	34	ASN
55	DW	51	LEU
55	DW	70	TYR
55	DW	75	TYR
55	DW	107	LEU
56	DX	11	PRO
56	DX	28	PHE
56	DX	30	VAL
56	DX	37	THR
56	DX	68	ARG
56	DX	75	ASP
57	DY	2	ARG
57	DY	6	HIS
57	DY	7	VAL
57	DY	9	LYS
57	DY	28	LYS
57	DY	32	PRO
57	DY	50	ARG
57	DY	62	GLU
57	DY	73	ARG

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Mol	Chain	Res	Type
57	DY	77	PRO
57	DY	97	ARG
58	DZ	6	LYS
58	DZ	11	GLU
58	DZ	16	SER
58	DZ	20	ARG
58	DZ	24	LEU
58	DZ	37	VAL
58	DZ	38	TYR
58	DZ	40	ASP
58	DZ	41	LEU
58	DZ	63	ASP
58	DZ	70	LEU
58	DZ	86	VAL
58	DZ	90	VAL
58	DZ	105	VAL
58	DZ	122	ARG
58	DZ	125	LEU
58	DZ	127	LYS
58	DZ	136	PHE
58	DZ	148	ASP
58	DZ	151	HIS
58	DZ	159	PRO
58	DZ	168	GLU
58	DZ	170	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (314) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	40	HIS
2	AB	45	GLN
2	AB	78	GLN
2	AB	94	ASN
2	AB	95	GLN
2	AB	146	GLN
2	AB	212	GLN
3	AC	3	ASN
3	AC	118	GLN
3	AC	170	GLN
4	AD	62	GLN
4	AD	119	GLN
4	AD	129	ASN

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Mol	Chain	Res	Type
4	AD	161	ASN
4	AD	201	GLN
5	AE	73	ASN
5	AE	127	ASN
6	AF	27	GLN
6	AF	32	ASN
6	AF	84	ASN
6	AF	100	ASN
7	AG	13	GLN
7	AG	37	ASN
7	AG	84	ASN
7	AG	106	GLN
7	AG	110	GLN
8	AH	82	HIS
9	AI	31	GLN
9	AI	124	GLN
10	AJ	13	HIS
10	AJ	56	HIS
10	AJ	62	HIS
10	AJ	68	HIS
10	AJ	78	ASN
11	AK	27	ASN
11	AK	38	ASN
11	AK	116	HIS
11	AK	117	ASN
12	AL	8	ASN
12	AL	9	GLN
12	AL	49	ASN
12	AL	80	HIS
12	AL	99	HIS
13	AM	12	ASN
13	AM	77	ASN
13	AM	92	HIS
13	AM	101	GLN
15	AO	9	GLN
15	AO	37	ASN
15	AO	53	HIS
16	AP	16	HIS
16	AP	76	GLN
17	AQ	16	GLN
17	AQ	26	GLN
18	AR	63	GLN

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Mol	Chain	Res	Type
19	AS	14	HIS
19	AS	53	ASN
20	AT	26	ASN
20	AT	42	GLN
20	AT	45	GLN
25	AZ	11	HIS
25	AZ	64	ASN
25	AZ	67	HIS
25	AZ	79	HIS
25	AZ	115	GLN
25	AZ	285	ASN
25	AZ	331	HIS
26	B0	12	ASN
26	B0	29	GLN
26	B0	50	ASN
26	B0	70	GLN
27	B1	45	ASN
28	B2	43	GLN
28	B2	65	ASN
28	B2	70	GLN
28	B2	71	ASN
29	B3	19	GLN
29	B3	46	ASN
29	B3	52	HIS
30	B4	20	ASN
30	B4	40	HIS
30	B4	46	GLN
30	B4	47	GLN
31	B5	43	HIS
32	B6	20	ASN
32	B6	29	ASN
32	B6	32	ASN
33	B7	36	GLN
35	B9	29	ASN
38	BC	57	ASN
38	BC	66	HIS
38	BC	165	ASN
38	BC	225	ASN
39	BD	44	ASN
39	BD	58	HIS
39	BD	96	HIS
39	BD	164	GLN

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Mol	Chain	Res	Type
39	BD	166	GLN
39	BD	186	HIS
39	BD	198	ASN
39	BD	253	GLN
40	BE	48	GLN
40	BE	54	GLN
40	BE	55	ASN
40	BE	129	HIS
40	BE	169	ASN
40	BE	192	ASN
41	BF	29	ASN
41	BF	69	HIS
41	BF	75	HIS
41	BF	133	ASN
41	BF	160	ASN
41	BF	204	ASN
42	BG	58	GLN
42	BG	132	ASN
43	BH	139	GLN
43	BH	147	ASN
46	BN	45	ASN
46	BN	56	ASN
46	BN	131	GLN
47	BO	82	ASN
48	BP	38	GLN
48	BP	68	GLN
48	BP	81	GLN
48	BP	84	ASN
48	BP	128	HIS
49	BQ	12	GLN
49	BQ	89	ASN
49	BQ	123	HIS
49	BQ	141	GLN
50	BR	13	HIS
50	BR	23	ASN
50	BR	71	GLN
52	BT	38	ASN
52	BT	43	GLN
52	BT	123	GLN
53	BU	14	HIS
53	BU	44	ASN
53	BU	66	ASN

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Mol	Chain	Res	Type
53	BU	94	ASN
53	BU	117	GLN
54	BV	11	GLN
55	BW	57	ASN
56	BX	31	HIS
56	BX	41	ASN
56	BX	55	ASN
56	BX	87	GLN
58	BZ	30	ASN
58	BZ	34	ASN
58	BZ	73	GLN
58	BZ	118	GLN
58	BZ	121	HIS
2	CB	45	GLN
2	CB	76	GLN
2	CB	78	GLN
2	CB	94	ASN
2	CB	146	GLN
2	CB	204	ASN
2	CB	212	GLN
3	CC	3	ASN
3	CC	28	GLN
3	CC	31	HIS
3	CC	118	GLN
3	CC	170	GLN
4	CD	62	GLN
4	CD	129	ASN
5	CE	73	ASN
5	CE	78	HIS
5	CE	127	ASN
6	CF	27	GLN
6	CF	32	ASN
6	CF	64	GLN
6	CF	84	ASN
6	CF	100	ASN
7	CG	13	GLN
7	CG	84	ASN
7	CG	86	GLN
7	CG	109	ASN
7	CG	110	GLN
7	CG	153	HIS
9	CI	31	GLN

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Mol	Chain	Res	Type
9	CI	73	GLN
9	CI	124	GLN
10	CJ	13	HIS
10	CJ	56	HIS
10	CJ	62	HIS
10	CJ	68	HIS
10	CJ	78	ASN
11	CK	22	HIS
11	CK	27	ASN
11	CK	38	ASN
11	CK	117	ASN
12	CL	8	ASN
12	CL	9	GLN
12	CL	49	ASN
12	CL	80	HIS
13	CM	12	ASN
13	CM	77	ASN
13	CM	92	HIS
13	CM	101	GLN
14	CN	49	HIS
14	CN	52	GLN
15	CO	37	ASN
15	CO	53	HIS
16	CP	16	HIS
16	CP	76	GLN
17	CQ	16	GLN
17	CQ	26	GLN
17	CQ	45	HIS
19	CS	14	HIS
19	CS	53	ASN
20	CT	16	HIS
20	CT	26	ASN
20	CT	42	GLN
20	CT	45	GLN
20	CT	75	ASN
25	CZ	11	HIS
25	CZ	67	HIS
25	CZ	79	HIS
25	CZ	85	HIS
25	CZ	115	GLN
25	CZ	285	ASN
25	CZ	331	HIS

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Mol	Chain	Res	Type
26	D0	12	ASN
26	D0	29	GLN
26	D0	50	ASN
26	D0	70	GLN
27	D1	45	ASN
27	D1	47	GLN
28	D2	43	GLN
28	D2	47	ASN
28	D2	48	HIS
28	D2	56	GLN
28	D2	65	ASN
28	D2	70	GLN
28	D2	71	ASN
29	D3	19	GLN
29	D3	46	ASN
29	D3	52	HIS
30	D4	20	ASN
30	D4	47	GLN
31	D5	22	HIS
31	D5	43	HIS
32	D6	32	ASN
32	D6	46	HIS
34	D8	31	HIS
35	D9	29	ASN
38	DC	57	ASN
38	DC	188	ASN
39	DD	44	ASN
39	DD	58	HIS
39	DD	87	ASN
39	DD	96	HIS
39	DD	115	GLN
39	DD	126	GLN
39	DD	166	GLN
39	DD	186	HIS
39	DD	198	ASN
39	DD	253	GLN
40	DE	48	GLN
40	DE	54	GLN
40	DE	55	ASN
40	DE	129	HIS
40	DE	135	HIS
40	DE	192	ASN

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Mol	Chain	Res	Type
41	DF	29	ASN
41	DF	69	HIS
41	DF	75	HIS
41	DF	133	ASN
41	DF	160	ASN
41	DF	169	ASN
41	DF	204	ASN
42	DG	123	ASN
43	DH	139	GLN
43	DH	147	ASN
46	DN	45	ASN
46	DN	56	ASN
46	DN	69	GLN
46	DN	94	HIS
46	DN	131	GLN
47	DO	3	GLN
47	DO	82	ASN
48	DP	9	ASN
48	DP	38	GLN
48	DP	68	GLN
48	DP	81	GLN
48	DP	84	ASN
48	DP	128	HIS
49	DQ	12	GLN
49	DQ	13	GLN
49	DQ	45	GLN
49	DQ	89	ASN
49	DQ	141	GLN
50	DR	16	HIS
50	DR	23	ASN
50	DR	71	GLN
51	DS	34	HIS
51	DS	84	GLN
52	DT	55	ASN
52	DT	123	GLN
53	DU	14	HIS
53	DU	94	ASN
53	DU	117	GLN
54	DV	11	GLN
55	DW	57	ASN
56	DX	41	ASN
56	DX	55	ASN

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Mol	Chain	Res	Type
56	DX	87	GLN
57	DY	6	HIS
58	DZ	30	ASN
58	DZ	75	ASN
58	DZ	85	HIS
58	DZ	118	GLN
58	DZ	151	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1503/1522 (98%)	227 (15%)	50 (3%)
1	CA	1503/1522 (98%)	229 (15%)	41 (2%)
22	AV	75/76 (98%)	20 (26%)	0
22	AW	75/76 (98%)	20 (26%)	0
22	CV	75/76 (98%)	19 (25%)	2 (2%)
22	CW	75/76 (98%)	22 (29%)	2 (2%)
23	AX	17/27 (62%)	8 (47%)	1 (5%)
23	CX	17/27 (62%)	9 (52%)	1 (5%)
24	AY	74/77 (96%)	24 (32%)	1 (1%)
24	CY	74/77 (96%)	25 (33%)	1 (1%)
36	BA	2900/2915 (99%)	511 (17%)	48 (1%)
36	DA	2900/2915 (99%)	513 (17%)	43 (1%)
37	BB	118/122 (96%)	26 (22%)	4 (3%)
37	DB	118/122 (96%)	26 (22%)	4 (3%)
All	All	9524/9630 (98%)	1679 (17%)	198 (2%)

All (1679) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	G
1	AA	31	G
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	51	A
1	AA	60	A
1	AA	61	G
1	AA	63	C
1	AA	65	U

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Mol	Chain	Res	Type
1	AA	79	G
1	AA	80	G
1	AA	81	U
1	AA	90	U
1	AA	101	A
1	AA	110	C
1	AA	116	A
1	AA	120	A
1	AA	121	C
1	AA	131	C
1	AA	146	G
1	AA	147	G
1	AA	151	A
1	AA	172	A
1	AA	173	U
1	AA	182	U
1	AA	189(I)	G
1	AA	195	A
1	AA	197	A
1	AA	198	G
1	AA	199	G
1	AA	202	U
1	AA	203	U
1	AA	204	U
1	AA	216	G
1	AA	244	U
1	AA	246	A
1	AA	247	G
1	AA	251	G
1	AA	267	C
1	AA	275	G
1	AA	281	G
1	AA	289	G
1	AA	321	A
1	AA	328	C
1	AA	330	C
1	AA	332	G
1	AA	345	C
1	AA	346	G
1	AA	347	G
1	AA	348	G
1	AA	352	C

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Mol	Chain	Res	Type
1	AA	353	A
1	AA	354	G
1	AA	368	U
1	AA	369	C
1	AA	372	C
1	AA	373	A
1	AA	388	G
1	AA	389	A
1	AA	397	A
1	AA	398	C
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	422	C
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	439	A
1	AA	452	A
1	AA	484	G
1	AA	485	G
1	AA	496	A
1	AA	499	A
1	AA	508	C
1	AA	509	A
1	AA	518	C
1	AA	527	G
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	548	G
1	AA	559	A
1	AA	561	U
1	AA	562	C
1	AA	572	A
1	AA	573	A
1	AA	576	G
1	AA	577	G
1	AA	588	G
1	AA	632	A
1	AA	653	A
1	AA	665	A

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Mol	Chain	Res	Type
1	AA	688	G
1	AA	701	C
1	AA	702	A
1	AA	703	G
1	AA	721	G
1	AA	722	A
1	AA	723	U
1	AA	731	G
1	AA	748	C
1	AA	749	C
1	AA	755	G
1	AA	777	A
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	817	C
1	AA	821	G
1	AA	828	A
1	AA	839	U
1	AA	840	C
1	AA	841	U
1	AA	848	C
1	AA	858	G
1	AA	859	A
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	962	C
1	AA	968	A
1	AA	969	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	980	C
1	AA	981	U
1	AA	982	U
1	AA	983	A
1	AA	991	U

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Mol	Chain	Res	Type
1	AA	992	U
1	AA	993	G
1	AA	996	A
1	AA	1004	A
1	AA	1026	G
1	AA	1030	C
1	AA	1050	G
1	AA	1051	C
1	AA	1054	C
1	AA	1056	U
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1102	A
1	AA	1117	G
1	AA	1124	G
1	AA	1125	U
1	AA	1126	U
1	AA	1129	C
1	AA	1130	A
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1141	C
1	AA	1145	C
1	AA	1146	A
1	AA	1152	A
1	AA	1154	G
1	AA	1158	C
1	AA	1159	U
1	AA	1171	G
1	AA	1181	G
1	AA	1184	G
1	AA	1186	G
1	AA	1187	G
1	AA	1196	U
1	AA	1197	G
1	AA	1200	C
1	AA	1201	A
1	AA	1212	U

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Mol	Chain	Res	Type
1	AA	1214	C
1	AA	1238	A
1	AA	1240	U
1	AA	1256	A
1	AA	1257	U
1	AA	1258	G
1	AA	1272	G
1	AA	1280	A
1	AA	1284	C
1	AA	1285	A
1	AA	1286	A
1	AA	1287	A
1	AA	1290	G
1	AA	1299	A
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1320	C
1	AA	1321	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1335	C
1	AA	1338	G
1	AA	1346	A
1	AA	1347	G
1	AA	1364	U
1	AA	1370	G
1	AA	1398	A
1	AA	1399	C
1	AA	1419	G
1	AA	1420	C
1	AA	1442(A)	G
1	AA	1446	U
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1457	G
1	AA	1492	A
1	AA	1497	G
1	AA	1499	A
1	AA	1503	A

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Mol	Chain	Res	Type
1	AA	1506	U
1	AA	1507	A
1	AA	1517	G
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
22	AV	3	C
22	AV	5	G
22	AV	8	U
22	AV	9	A
22	AV	16	U
22	AV	17	C
22	AV	18	G
22	AV	19	G
22	AV	21	A
22	AV	22	G
22	AV	44	G
22	AV	45	U
22	AV	46	G
22	AV	47	U
22	AV	48	C
22	AV	60	U
22	AV	61	C
22	AV	69	G
22	AV	73	A
22	AV	76	A
22	AW	4	C
22	AW	7	A
22	AW	9	A
22	AW	10	G
22	AW	18	G
22	AW	19	G
22	AW	20	U
22	AW	21	A
22	AW	34	G
22	AW	43	C
22	AW	44	G
22	AW	45	U
22	AW	47	U
22	AW	48	C
22	AW	50	U
22	AW	57	G

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Mol	Chain	Res	Type
22	AW	59	U
22	AW	61	C
22	AW	62	C
22	AW	73	A
23	AX	12	A
23	AX	13	A
23	AX	14	A
23	AX	16	A
23	AX	17	U
23	AX	18	G
23	AX	26	A
23	AX	27	A
24	AY	5	G
24	AY	8	4SU
24	AY	9	A
24	AY	10	G
24	AY	16	H2U
24	AY	17	H2U
24	AY	18	G
24	AY	19	G
24	AY	20	H2U
24	AY	21	A
24	AY	22	G
24	AY	24	A
24	AY	41	C
24	AY	44	G
24	AY	45	U
24	AY	46	7MG
24	AY	48	U
24	AY	49	G
24	AY	55	PSU
24	AY	56	C
24	AY	58	A
24	AY	59	G
24	AY	62	U
24	AY	76	A
36	BA	10	G
36	BA	45	C
36	BA	51	G
36	BA	69	C
36	BA	71	A
36	BA	72	U

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Mol	Chain	Res	Type
36	BA	74	A
36	BA	75	G
36	BA	84	A
36	BA	88	G
36	BA	90	U
36	BA	92	A
36	BA	94	C
36	BA	100	G
36	BA	102	G
36	BA	118	A
36	BA	119	A
36	BA	120	U
36	BA	129	C
36	BA	131	G
36	BA	139(A)	G
36	BA	141	A
36	BA	146	G
36	BA	149	A
36	BA	174	C
36	BA	181	A
36	BA	182	A
36	BA	196	A
36	BA	197	A
36	BA	199	A
36	BA	204	A
36	BA	205	G
36	BA	215	G
36	BA	216	A
36	BA	221	A
36	BA	222	A
36	BA	229	A
36	BA	241	A
36	BA	245	G
36	BA	248	G
36	BA	267	C
36	BA	271(K)	U
36	BA	271(L)	U
36	BA	271(M)	G
36	BA	271(N)	U
36	BA	271(O)	C
36	BA	271(P)	C
36	BA	271(R)	G

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Mol	Chain	Res	Type
36	BA	271(Y)	U
36	BA	272(A)	U
36	BA	272(B)	G
36	BA	272(I)	U
36	BA	276	A
36	BA	278	A
36	BA	299	A
36	BA	310	A
36	BA	311	A
36	BA	324	A
36	BA	329	G
36	BA	330	A
36	BA	332	A
36	BA	333	G
36	BA	352	G
36	BA	353	G
36	BA	358	U
36	BA	362	U
36	BA	363	G
36	BA	363(A)	A
36	BA	363(E)	U
36	BA	363(F)	A
36	BA	372	G
36	BA	386	G
36	BA	388	G
36	BA	391	G
36	BA	396	G
36	BA	405	U
36	BA	406	G
36	BA	411	G
36	BA	412	A
36	BA	428	A
36	BA	443	A
36	BA	444	C
36	BA	448	U
36	BA	451	C
36	BA	456	C
36	BA	457	A
36	BA	467	G
36	BA	470	A
36	BA	473	G
36	BA	480	A

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Mol	Chain	Res	Type
36	BA	481	G
36	BA	482	A
36	BA	494	G
36	BA	505	A
36	BA	508	G
36	BA	512	G
36	BA	513	A
36	BA	529	A
36	BA	530	G
36	BA	531	C
36	BA	532	A
36	BA	537	C
36	BA	543	C
36	BA	556	G
36	BA	563	G
36	BA	573	G
36	BA	575	A
36	BA	586	A
36	BA	588	U
36	BA	603	A
36	BA	604	G
36	BA	607	U
36	BA	613	G
36	BA	614(B)	G
36	BA	615	G
36	BA	622	G
36	BA	627	A
36	BA	629	G
36	BA	637	A
36	BA	645	C
36	BA	646	A
36	BA	651	G
36	BA	653	A
36	BA	654	A
36	BA	654(H)	G
36	BA	654(J)	A
36	BA	654(M)	C
36	BA	654(T)	C
36	BA	655	A
36	BA	656	G
36	BA	669	G
36	BA	670	A

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Mol	Chain	Res	Type
36	BA	686	G
36	BA	708	C
36	BA	717	G
36	BA	722	A
36	BA	730	C
36	BA	740	U
36	BA	753	C
36	BA	761	A
36	BA	765	G
36	BA	776	G
36	BA	782	A
36	BA	784	A
36	BA	785	G
36	BA	790	C
36	BA	791	C
36	BA	792	G
36	BA	805	G
36	BA	812	C
36	BA	819	A
36	BA	827	U
36	BA	828	U
36	BA	830	G
36	BA	848	G
36	BA	857	C
36	BA	859	G
36	BA	866	A
36	BA	878	A
36	BA	889	C
36	BA	890	A
36	BA	896	A
36	BA	897	C
36	BA	901	A
36	BA	910	A
36	BA	917	A
36	BA	926	A
36	BA	932	G
36	BA	941	A
36	BA	945	A
36	BA	946	G
36	BA	958	U
36	BA	959	A
36	BA	961	C

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Mol	Chain	Res	Type
36	BA	965	C
36	BA	974	G
36	BA	975	C
36	BA	983	A
36	BA	996	A
36	BA	1011	G
36	BA	1012	U
36	BA	1013	C
36	BA	1022	G
36	BA	1023	U
36	BA	1025	G
36	BA	1026	U
36	BA	1033	U
36	BA	1038	C
36	BA	1039	G
36	BA	1045	A
36	BA	1047	G
36	BA	1048	A
36	BA	1053	C
36	BA	1059	G
36	BA	1061	U
36	BA	1062	G
36	BA	1065	U
36	BA	1067	A
36	BA	1068	G
36	BA	1069	A
36	BA	1070	A
36	BA	1071	G
36	BA	1073	A
36	BA	1074	G
36	BA	1079	C
36	BA	1087	G
36	BA	1088	A
36	BA	1090	U
36	BA	1111	A
36	BA	1112	G
36	BA	1135	C
36	BA	1136	G
36	BA	1143	A
36	BA	1155	A
36	BA	1167	U
36	BA	1174	A

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Mol	Chain	Res	Type
36	BA	1175	U
36	BA	1176	G
36	BA	1178	C
36	BA	1205	U
36	BA	1210	A
36	BA	1211	U
36	BA	1212	G
36	BA	1223	G
36	BA	1236	G
36	BA	1244	G
36	BA	1253	A
36	BA	1256	G
36	BA	1265	A
36	BA	1271	G
36	BA	1272	A
36	BA	1273	U
36	BA	1300	U
36	BA	1301	A
36	BA	1302	A
36	BA	1314	C
36	BA	1319	G
36	BA	1332	G
36	BA	1338	G
36	BA	1349	A
36	BA	1359	A
36	BA	1365	A
36	BA	1368	G
36	BA	1379	A
36	BA	1380	G
36	BA	1384	A
36	BA	1385	G
36	BA	1386	C
36	BA	1395	A
36	BA	1396	U
36	BA	1407	C
36	BA	1416	G
36	BA	1419	A
36	BA	1427	A
36	BA	1428	C
36	BA	1437	C
36	BA	1445	A
36	BA	1449	A

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Mol	Chain	Res	Type
36	BA	1455	G
36	BA	1460	A
36	BA	1461	G
36	BA	1467	C
36	BA	1471	A
36	BA	1475	G
36	BA	1478	G
36	BA	1481	U
36	BA	1482	G
36	BA	1485	G
36	BA	1487	G
36	BA	1490	A
36	BA	1493	C
36	BA	1494	A
36	BA	1495	A
36	BA	1496	A
36	BA	1497	U
36	BA	1502	C
36	BA	1505	C
36	BA	1509	C
36	BA	1509(A)	A
36	BA	1517	G
36	BA	1541	G
36	BA	1542	A
36	BA	1544	A
36	BA	1554	A
36	BA	1558	A
36	BA	1559	G
36	BA	1569	A
36	BA	1578	U
36	BA	1579	A
36	BA	1584	C
36	BA	1586	A
36	BA	1588	C
36	BA	1591	G
36	BA	1603	A
36	BA	1608	A
36	BA	1617	C
36	BA	1618	A
36	BA	1619	G
36	BA	1634	A
36	BA	1648	C

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Mol	Chain	Res	Type
36	BA	1654	A
36	BA	1674	G
36	BA	1696	G
36	BA	1718	G
36	BA	1721	G
36	BA	1722	A
36	BA	1739	U
36	BA	1742	G
36	BA	1744	C
36	BA	1748	G
36	BA	1756	G
36	BA	1758	G
36	BA	1763	G
36	BA	1764	G
36	BA	1773	A
36	BA	1780	A
36	BA	1781	C
36	BA	1791	A
36	BA	1799	G
36	BA	1800	C
36	BA	1801	G
36	BA	1816	G
36	BA	1820	U
36	BA	1821	A
36	BA	1829	A
36	BA	1835	G
36	BA	1847	A
36	BA	1858	G
36	BA	1865	G
36	BA	1880	C
36	BA	1882	C
36	BA	1885	A
36	BA	1888	G
36	BA	1889	A
36	BA	1900	A
36	BA	1903	G
36	BA	1906	G
36	BA	1912	A
36	BA	1913	A
36	BA	1929	G
36	BA	1930	G
36	BA	1936	A

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Mol	Chain	Res	Type
36	BA	1937	A
36	BA	1938	A
36	BA	1947	C
36	BA	1955	U
36	BA	1963	U
36	BA	1967	C
36	BA	1969	A
36	BA	1970	A
36	BA	1971	A
36	BA	1972	A
36	BA	1982	C
36	BA	1987	G
36	BA	1992	G
36	BA	1993	U
36	BA	1997	G
36	BA	2020	A
36	BA	2023	G
36	BA	2031	A
36	BA	2032	G
36	BA	2033	A
36	BA	2034	U
36	BA	2036	C
36	BA	2043	C
36	BA	2049	G
36	BA	2055	C
36	BA	2056	G
36	BA	2060	A
36	BA	2061	G
36	BA	2062	A
36	BA	2069	G
36	BA	2093	G
36	BA	2100	G
36	BA	2102	U
36	BA	2103	C
36	BA	2104	G
36	BA	2111	C
36	BA	2116	G
36	BA	2118	U
36	BA	2127	G
36	BA	2129	C
36	BA	2132	U
36	BA	2133	G

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Mol	Chain	Res	Type
36	BA	2146	C
36	BA	2148	G
36	BA	2157	G
36	BA	2159	G
36	BA	2160	G
36	BA	2172	U
36	BA	2173	A
36	BA	2174	C
36	BA	2177	C
36	BA	2180	U
36	BA	2185	C
36	BA	2186	G
36	BA	2187	G
36	BA	2189	U
36	BA	2190	G
36	BA	2192	G
36	BA	2193	G
36	BA	2198	A
36	BA	2199	A
36	BA	2200	C
36	BA	2207	G
36	BA	2208	A
36	BA	2218	U
36	BA	2219	G
36	BA	2225	A
36	BA	2238	G
36	BA	2239	G
36	BA	2275	C
36	BA	2283	C
36	BA	2287	A
36	BA	2288	A
36	BA	2305	A
36	BA	2306	C
36	BA	2307	G
36	BA	2308	G
36	BA	2310	A
36	BA	2313	C
36	BA	2319	G
36	BA	2320	A
36	BA	2334	G
36	BA	2336	A
36	BA	2343	C

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Mol	Chain	Res	Type
36	BA	2347	C
36	BA	2350	C
36	BA	2361	A
36	BA	2383	G
36	BA	2385	C
36	BA	2392	A
36	BA	2393	A
36	BA	2402	C
36	BA	2403	C
36	BA	2406	U
36	BA	2423	U
36	BA	2425	A
36	BA	2429	G
36	BA	2430	A
36	BA	2431	U
36	BA	2441	C
36	BA	2448	A
36	BA	2465	C
36	BA	2469	A
36	BA	2476	A
36	BA	2482	G
36	BA	2484	G
36	BA	2487	G
36	BA	2502	G
36	BA	2505	G
36	BA	2518	A
36	BA	2524	G
36	BA	2529	G
36	BA	2542	A
36	BA	2543	G
36	BA	2554	U
36	BA	2566	A
36	BA	2567	G
36	BA	2581	G
36	BA	2582	G
36	BA	2602	A
36	BA	2612	C
36	BA	2615	U
36	BA	2630	G
36	BA	2645	G
36	BA	2646	C
36	BA	2657	A

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Mol	Chain	Res	Type
36	BA	2660	A
36	BA	2673	G
36	BA	2682	U
36	BA	2690	C
36	BA	2691	C
36	BA	2702	U
36	BA	2703	C
36	BA	2712	U
36	BA	2712(A)	A
36	BA	2713	A
36	BA	2714	G
36	BA	2720	U
36	BA	2726	U
36	BA	2733	A
36	BA	2750	A
36	BA	2751	G
36	BA	2752	C
36	BA	2757	A
36	BA	2759	G
36	BA	2761	G
36	BA	2762	G
36	BA	2765	A
36	BA	2778	A
36	BA	2779	U
36	BA	2780	G
36	BA	2781	A
36	BA	2790	A
36	BA	2791	C
36	BA	2794	C
36	BA	2799	C
36	BA	2802	G
36	BA	2803	C
36	BA	2808	U
36	BA	2818	G
36	BA	2820	A
36	BA	2821	A
36	BA	2823	A
36	BA	2833	G
36	BA	2834	G
36	BA	2847	U
36	BA	2849	U
36	BA	2872	G

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Mol	Chain	Res	Type
36	BA	2894	G
37	BB	8	U
37	BB	13	A
37	BB	15	A
37	BB	16	G
37	BB	17	C
37	BB	21	G
37	BB	25	A
37	BB	26	A
37	BB	27	C
37	BB	32	C
37	BB	35	U
37	BB	41	U
37	BB	42	C
37	BB	43	C
37	BB	45	A
37	BB	53	A
37	BB	57	A
37	BB	66	A
37	BB	67	G
37	BB	68	C
37	BB	73	A
37	BB	81	G
37	BB	82	G
37	BB	88	C
37	BB	97	G
37	BB	110	G
1	CA	9	G
1	CA	31	G
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	51	A
1	CA	61	G
1	CA	63	C
1	CA	79	G
1	CA	80	G
1	CA	81	U
1	CA	90	U
1	CA	101	A
1	CA	110	C

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Mol	Chain	Res	Type
1	CA	116	A
1	CA	120	A
1	CA	121	C
1	CA	131	C
1	CA	146	G
1	CA	151	A
1	CA	172	A
1	CA	173	U
1	CA	182	U
1	CA	189(I)	G
1	CA	195	A
1	CA	197	A
1	CA	198	G
1	CA	199	G
1	CA	202	U
1	CA	203	U
1	CA	216	G
1	CA	244	U
1	CA	246	A
1	CA	247	G
1	CA	250	A
1	CA	251	G
1	CA	267	C
1	CA	274	A
1	CA	275	G
1	CA	281	G
1	CA	289	G
1	CA	321	A
1	CA	328	C
1	CA	330	C
1	CA	332	G
1	CA	345	C
1	CA	346	G
1	CA	347	G
1	CA	348	G
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	369	C
1	CA	372	C
1	CA	373	A
1	CA	388	G

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Mol	Chain	Res	Type
1	CA	389	A
1	CA	397	A
1	CA	398	C
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	422	C
1	CA	423	G
1	CA	428	G
1	CA	429	U
1	CA	430	A
1	CA	435	C
1	CA	439	A
1	CA	452	A
1	CA	484	G
1	CA	485	G
1	CA	495	A
1	CA	496	A
1	CA	499	A
1	CA	508	C
1	CA	509	A
1	CA	511	C
1	CA	518	C
1	CA	527	G
1	CA	530	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	534	U
1	CA	548	G
1	CA	559	A
1	CA	561	U
1	CA	562	C
1	CA	572	A
1	CA	573	A
1	CA	576	G
1	CA	577	G
1	CA	632	A
1	CA	653	A
1	CA	665	A
1	CA	687	A
1	CA	688	G

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Mol	Chain	Res	Type
1	CA	701	C
1	CA	702	A
1	CA	703	G
1	CA	721	G
1	CA	722	A
1	CA	723	U
1	CA	731	G
1	CA	749	C
1	CA	755	G
1	CA	777	A
1	CA	792	A
1	CA	793	U
1	CA	816	A
1	CA	817	C
1	CA	821	G
1	CA	828	A
1	CA	839	U
1	CA	840	C
1	CA	841	U
1	CA	848	C
1	CA	859	A
1	CA	874	G
1	CA	914	A
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	962	C
1	CA	968	A
1	CA	969	A
1	CA	971	G
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	978	A
1	CA	980	C
1	CA	981	U
1	CA	982	U
1	CA	983	A
1	CA	991	U
1	CA	992	U

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Mol	Chain	Res	Type
1	CA	993	G
1	CA	996	A
1	CA	1004	A
1	CA	1026	G
1	CA	1030	C
1	CA	1050	G
1	CA	1051	C
1	CA	1054	C
1	CA	1056	U
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1102	A
1	CA	1117	G
1	CA	1124	G
1	CA	1125	U
1	CA	1126	U
1	CA	1129	C
1	CA	1130	A
1	CA	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1140	C
1	CA	1141	C
1	CA	1145	C
1	CA	1146	A
1	CA	1152	A
1	CA	1154	G
1	CA	1158	C
1	CA	1159	U
1	CA	1171	G
1	CA	1181	G
1	CA	1184	G
1	CA	1187	G
1	CA	1196	U
1	CA	1197	G
1	CA	1199	U
1	CA	1200	C
1	CA	1201	A
1	CA	1212	U
1	CA	1227	A

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Mol	Chain	Res	Type
1	CA	1238	A
1	CA	1240	U
1	CA	1256	A
1	CA	1257	U
1	CA	1258	G
1	CA	1272	G
1	CA	1280	A
1	CA	1281	U
1	CA	1284	C
1	CA	1285	A
1	CA	1286	A
1	CA	1287	A
1	CA	1299	A
1	CA	1300	G
1	CA	1301	U
1	CA	1302	U
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1331	G
1	CA	1335	C
1	CA	1338	G
1	CA	1346	A
1	CA	1347	G
1	CA	1363	C
1	CA	1370	G
1	CA	1398	A
1	CA	1400	C
1	CA	1419	G
1	CA	1437	C
1	CA	1442	G
1	CA	1442(B)	A
1	CA	1443	G
1	CA	1447	A
1	CA	1452	C
1	CA	1456	G
1	CA	1492	A
1	CA	1499	A
1	CA	1503	A
1	CA	1506	U
1	CA	1517	G
1	CA	1519	A

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Mol	Chain	Res	Type
1	CA	1520	G
1	CA	1529	G
1	CA	1530	G
1	CA	1531	A
22	CV	4	C
22	CV	5	G
22	CV	8	U
22	CV	16	U
22	CV	17	C
22	CV	18	G
22	CV	19	G
22	CV	20	U
22	CV	21	A
22	CV	22	G
22	CV	44	G
22	CV	45	U
22	CV	46	G
22	CV	47	U
22	CV	60	U
22	CV	61	C
22	CV	62	C
22	CV	69	G
22	CV	76	A
22	CW	5	G
22	CW	8	U
22	CW	18	G
22	CW	19	G
22	CW	21	A
22	CW	22	G
22	CW	39	U
22	CW	43	C
22	CW	44	G
22	CW	45	U
22	CW	47	U
22	CW	48	C
22	CW	50	U
22	CW	56	C
22	CW	57	G
22	CW	58	A
22	CW	59	U
22	CW	60	U
22	CW	61	C

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Mol	Chain	Res	Type
22	CW	62	C
22	CW	73	A
22	CW	74	C
23	CX	12	A
23	CX	13	A
23	CX	14	A
23	CX	16	A
23	CX	17	U
23	CX	18	G
23	CX	22	U
23	CX	26	A
23	CX	27	A
24	CY	5	G
24	CY	8	4SU
24	CY	9	A
24	CY	10	G
24	CY	16	H2U
24	CY	17	H2U
24	CY	18	G
24	CY	19	G
24	CY	20	H2U
24	CY	21	A
24	CY	22	G
24	CY	24	A
24	CY	41	C
24	CY	44	G
24	CY	45	U
24	CY	46	7MG
24	CY	48	U
24	CY	49	G
24	CY	55	PSU
24	CY	56	C
24	CY	58	A
24	CY	59	G
24	CY	61	C
24	CY	62	U
24	CY	76	A
36	DA	10	G
36	DA	45	C
36	DA	64	A
36	DA	69	C
36	DA	71	A

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Mol	Chain	Res	Type
36	DA	72	U
36	DA	74	A
36	DA	75	G
36	DA	84	A
36	DA	88	G
36	DA	90	U
36	DA	92	A
36	DA	94	C
36	DA	100	G
36	DA	102	G
36	DA	118	A
36	DA	119	A
36	DA	120	U
36	DA	129	C
36	DA	139(A)	G
36	DA	141	A
36	DA	146	G
36	DA	174	C
36	DA	181	A
36	DA	182	A
36	DA	196	A
36	DA	197	A
36	DA	199	A
36	DA	204	A
36	DA	205	G
36	DA	215	G
36	DA	216	A
36	DA	221	A
36	DA	222	A
36	DA	229	A
36	DA	233	A
36	DA	241	A
36	DA	248	G
36	DA	252	G
36	DA	261	G
36	DA	267	C
36	DA	271(K)	U
36	DA	271(L)	U
36	DA	271(M)	G
36	DA	271(N)	U
36	DA	271(O)	C
36	DA	271(P)	C

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Mol	Chain	Res	Type
36	DA	271(Y)	U
36	DA	272(A)	U
36	DA	272(B)	G
36	DA	272(I)	U
36	DA	276	A
36	DA	278	A
36	DA	299	A
36	DA	311	A
36	DA	324	A
36	DA	329	G
36	DA	330	A
36	DA	332	A
36	DA	333	G
36	DA	352	G
36	DA	353	G
36	DA	358	U
36	DA	362	U
36	DA	363	G
36	DA	363(A)	A
36	DA	363(E)	U
36	DA	363(F)	A
36	DA	372	G
36	DA	386	G
36	DA	388	G
36	DA	396	G
36	DA	405	U
36	DA	406	G
36	DA	411	G
36	DA	412	A
36	DA	428	A
36	DA	443	A
36	DA	444	C
36	DA	448	U
36	DA	451	C
36	DA	456	C
36	DA	457	A
36	DA	470	A
36	DA	480	A
36	DA	481	G
36	DA	482	A
36	DA	494	G
36	DA	505	A

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Mol	Chain	Res	Type
36	DA	508	G
36	DA	512	G
36	DA	513	A
36	DA	528	A
36	DA	529	A
36	DA	530	G
36	DA	531	C
36	DA	532	A
36	DA	533	G
36	DA	537	C
36	DA	543	C
36	DA	556	G
36	DA	563	G
36	DA	573	G
36	DA	575	A
36	DA	586	A
36	DA	588	U
36	DA	603	A
36	DA	604	G
36	DA	607	U
36	DA	613	G
36	DA	614(B)	G
36	DA	615	G
36	DA	622	G
36	DA	627	A
36	DA	628	G
36	DA	629	G
36	DA	637	A
36	DA	645	C
36	DA	646	A
36	DA	651	G
36	DA	653	A
36	DA	654	A
36	DA	654(H)	G
36	DA	654(J)	A
36	DA	654(M)	C
36	DA	654(T)	C
36	DA	655	A
36	DA	656	G
36	DA	669	G
36	DA	686	G
36	DA	722	A

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Mol	Chain	Res	Type
36	DA	730	C
36	DA	753	C
36	DA	775	G
36	DA	776	G
36	DA	782	A
36	DA	784	A
36	DA	785	G
36	DA	789	A
36	DA	790	C
36	DA	791	C
36	DA	792	G
36	DA	805	G
36	DA	812	C
36	DA	819	A
36	DA	827	U
36	DA	828	U
36	DA	830	G
36	DA	848	G
36	DA	857	C
36	DA	859	G
36	DA	866	A
36	DA	878	A
36	DA	889	C
36	DA	890	A
36	DA	896	A
36	DA	897	C
36	DA	901	A
36	DA	910	A
36	DA	917	A
36	DA	926	A
36	DA	932	G
36	DA	941	A
36	DA	945	A
36	DA	946	G
36	DA	958	U
36	DA	959	A
36	DA	961	C
36	DA	965	C
36	DA	974	G
36	DA	975	C
36	DA	983	A
36	DA	996	A

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Mol	Chain	Res	Type
36	DA	1011	G
36	DA	1012	U
36	DA	1013	C
36	DA	1022	G
36	DA	1023	U
36	DA	1025	G
36	DA	1026	U
36	DA	1033	U
36	DA	1038	C
36	DA	1039	G
36	DA	1045	A
36	DA	1046	A
36	DA	1047	G
36	DA	1048	A
36	DA	1053	C
36	DA	1059	G
36	DA	1061	U
36	DA	1062	G
36	DA	1065	U
36	DA	1067	A
36	DA	1068	G
36	DA	1069	A
36	DA	1070	A
36	DA	1073	A
36	DA	1074	G
36	DA	1079	C
36	DA	1083	U
36	DA	1087	G
36	DA	1088	A
36	DA	1090	U
36	DA	1111	A
36	DA	1112	G
36	DA	1116	C
36	DA	1135	C
36	DA	1136	G
36	DA	1143	A
36	DA	1155	A
36	DA	1174	A
36	DA	1175	U
36	DA	1176	G
36	DA	1178	C
36	DA	1205	U

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Mol	Chain	Res	Type
36	DA	1210	A
36	DA	1211	U
36	DA	1212	G
36	DA	1223	G
36	DA	1244	G
36	DA	1247	A
36	DA	1248	G
36	DA	1250	G
36	DA	1253	A
36	DA	1255	U
36	DA	1256	G
36	DA	1265	A
36	DA	1271	G
36	DA	1272	A
36	DA	1273	U
36	DA	1287	A
36	DA	1300	U
36	DA	1301	A
36	DA	1302	A
36	DA	1314	C
36	DA	1319	G
36	DA	1321	A
36	DA	1332	G
36	DA	1338	G
36	DA	1349	A
36	DA	1359	A
36	DA	1365	A
36	DA	1379	A
36	DA	1380	G
36	DA	1384	A
36	DA	1385	G
36	DA	1386	C
36	DA	1395	A
36	DA	1396	U
36	DA	1407	C
36	DA	1416	G
36	DA	1419	A
36	DA	1427	A
36	DA	1428	C
36	DA	1437	C
36	DA	1445	A
36	DA	1449	A

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Mol	Chain	Res	Type
36	DA	1455	G
36	DA	1460	A
36	DA	1461	G
36	DA	1467	C
36	DA	1471	A
36	DA	1475	G
36	DA	1478	G
36	DA	1481	U
36	DA	1482	G
36	DA	1485	G
36	DA	1490	A
36	DA	1493	C
36	DA	1494	A
36	DA	1495	A
36	DA	1496	A
36	DA	1497	U
36	DA	1502	C
36	DA	1505	C
36	DA	1509	C
36	DA	1509(A)	A
36	DA	1517	G
36	DA	1541	G
36	DA	1542	A
36	DA	1544	A
36	DA	1554	A
36	DA	1558	A
36	DA	1559	G
36	DA	1569	A
36	DA	1578	U
36	DA	1579	A
36	DA	1580	A
36	DA	1584	C
36	DA	1586	A
36	DA	1588	C
36	DA	1591	G
36	DA	1602	U
36	DA	1603	A
36	DA	1608	A
36	DA	1617	C
36	DA	1618	A
36	DA	1634	A
36	DA	1635	G

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Mol	Chain	Res	Type
36	DA	1648	C
36	DA	1654	A
36	DA	1674	G
36	DA	1718	G
36	DA	1721	G
36	DA	1722	A
36	DA	1739	U
36	DA	1742	G
36	DA	1746	G
36	DA	1748	G
36	DA	1756	G
36	DA	1758	G
36	DA	1763	G
36	DA	1764	G
36	DA	1773	A
36	DA	1780	A
36	DA	1781	C
36	DA	1791	A
36	DA	1799	G
36	DA	1800	C
36	DA	1802	A
36	DA	1816	G
36	DA	1819	A
36	DA	1820	U
36	DA	1821	A
36	DA	1847	A
36	DA	1858	G
36	DA	1865	G
36	DA	1880	C
36	DA	1882	C
36	DA	1885	A
36	DA	1888	G
36	DA	1896	G
36	DA	1900	A
36	DA	1903	G
36	DA	1906	G
36	DA	1912	A
36	DA	1913	A
36	DA	1929	G
36	DA	1937	A
36	DA	1938	A
36	DA	1945	G

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Mol	Chain	Res	Type
36	DA	1947	C
36	DA	1948	G
36	DA	1955	U
36	DA	1963	U
36	DA	1967	C
36	DA	1968	G
36	DA	1969	A
36	DA	1970	A
36	DA	1971	A
36	DA	1972	A
36	DA	1982	C
36	DA	1987	G
36	DA	1992	G
36	DA	1993	U
36	DA	1997	G
36	DA	2020	A
36	DA	2023	G
36	DA	2031	A
36	DA	2033	A
36	DA	2034	U
36	DA	2036	C
36	DA	2043	C
36	DA	2055	C
36	DA	2056	G
36	DA	2060	A
36	DA	2061	G
36	DA	2062	A
36	DA	2069	G
36	DA	2093	G
36	DA	2100	G
36	DA	2102	U
36	DA	2103	C
36	DA	2104	G
36	DA	2116	G
36	DA	2118	U
36	DA	2127	G
36	DA	2129	C
36	DA	2131	G
36	DA	2132	U
36	DA	2133	G
36	DA	2146	C
36	DA	2148	G

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Mol	Chain	Res	Type
36	DA	2157	G
36	DA	2159	G
36	DA	2160	G
36	DA	2171	A
36	DA	2172	U
36	DA	2173	A
36	DA	2174	C
36	DA	2177	C
36	DA	2180	U
36	DA	2185	C
36	DA	2186	G
36	DA	2187	G
36	DA	2189	U
36	DA	2190	G
36	DA	2192	G
36	DA	2193	G
36	DA	2198	A
36	DA	2199	A
36	DA	2200	C
36	DA	2207	G
36	DA	2208	A
36	DA	2218	U
36	DA	2219	G
36	DA	2225	A
36	DA	2238	G
36	DA	2239	G
36	DA	2275	C
36	DA	2283	C
36	DA	2287	A
36	DA	2288	A
36	DA	2305	A
36	DA	2306	C
36	DA	2307	G
36	DA	2308	G
36	DA	2313	C
36	DA	2319	G
36	DA	2320	A
36	DA	2334	G
36	DA	2336	A
36	DA	2343	C
36	DA	2347	C
36	DA	2350	C

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Mol	Chain	Res	Type
36	DA	2361	A
36	DA	2383	G
36	DA	2385	C
36	DA	2392	A
36	DA	2393	A
36	DA	2399	G
36	DA	2402	C
36	DA	2403	C
36	DA	2406	U
36	DA	2423	U
36	DA	2425	A
36	DA	2429	G
36	DA	2430	A
36	DA	2431	U
36	DA	2434	A
36	DA	2441	C
36	DA	2448	A
36	DA	2465	C
36	DA	2468	G
36	DA	2469	A
36	DA	2470	G
36	DA	2471	C
36	DA	2476	A
36	DA	2482	G
36	DA	2484	G
36	DA	2502	G
36	DA	2505	G
36	DA	2518	A
36	DA	2520	C
36	DA	2524	G
36	DA	2529	G
36	DA	2543	G
36	DA	2554	U
36	DA	2566	A
36	DA	2567	G
36	DA	2573	C
36	DA	2578	G
36	DA	2602	A
36	DA	2609	U
36	DA	2612	C
36	DA	2615	U
36	DA	2630	G

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Mol	Chain	Res	Type
36	DA	2645	G
36	DA	2646	C
36	DA	2657	A
36	DA	2660	A
36	DA	2673	G
36	DA	2690	C
36	DA	2691	C
36	DA	2702	U
36	DA	2703	C
36	DA	2712	U
36	DA	2712(A)	A
36	DA	2713	A
36	DA	2714	G
36	DA	2720	U
36	DA	2726	U
36	DA	2733	A
36	DA	2750	A
36	DA	2751	G
36	DA	2752	C
36	DA	2757	A
36	DA	2759	G
36	DA	2761	G
36	DA	2762	G
36	DA	2765	A
36	DA	2766	G
36	DA	2778	A
36	DA	2779	U
36	DA	2780	G
36	DA	2781	A
36	DA	2790	A
36	DA	2791	C
36	DA	2794	C
36	DA	2799	C
36	DA	2802	G
36	DA	2803	C
36	DA	2808	U
36	DA	2818	G
36	DA	2820	A
36	DA	2821	A
36	DA	2823	A
36	DA	2833	G
36	DA	2834	G

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Mol	Chain	Res	Type
36	DA	2847	U
36	DA	2849	U
36	DA	2872	G
36	DA	2894	G
37	DB	8	U
37	DB	13	A
37	DB	15	A
37	DB	16	G
37	DB	17	C
37	DB	21	G
37	DB	25	A
37	DB	26	A
37	DB	27	C
37	DB	32	C
37	DB	35	U
37	DB	41	U
37	DB	42	C
37	DB	43	C
37	DB	45	A
37	DB	53	A
37	DB	57	A
37	DB	66	A
37	DB	67	G
37	DB	68	C
37	DB	73	A
37	DB	81	G
37	DB	88	C
37	DB	89	G
37	DB	110	G
37	DB	116	G

All (198) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	30	U
1	AA	60	A
1	AA	79	G
1	AA	109	A
1	AA	115	G
1	AA	119	A
1	AA	189(H)	G
1	AA	197	A

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Mol	Chain	Res	Type
1	AA	202	U
1	AA	243	A
1	AA	245	C
1	AA	250	A
1	AA	266	G
1	AA	274	A
1	AA	344	A
1	AA	351	G
1	AA	353	A
1	AA	367	U
1	AA	428	G
1	AA	429	U
1	AA	484	G
1	AA	495	A
1	AA	508	C
1	AA	534	U
1	AA	547	A
1	AA	560	U
1	AA	573	A
1	AA	575	G
1	AA	576	G
1	AA	587	G
1	AA	687	A
1	AA	748	C
1	AA	792	A
1	AA	961	U
1	AA	968	A
1	AA	980	C
1	AA	982	U
1	AA	992	U
1	AA	1053	G
1	AA	1054	C
1	AA	1101	A
1	AA	1117	G
1	AA	1139	G
1	AA	1145	C
1	AA	1157	A
1	AA	1200	C
1	AA	1213	A
1	AA	1239	A
1	AA	1285	A
1	AA	1529	G

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Mol	Chain	Res	Type
23	AX	11	U
24	AY	20	H2U
36	BA	71	A
36	BA	181	A
36	BA	197	A
36	BA	221	A
36	BA	331	A
36	BA	332	A
36	BA	387	U
36	BA	481	G
36	BA	512	G
36	BA	587	C
36	BA	603	A
36	BA	614(C)	A
36	BA	752	A
36	BA	764	A
36	BA	790	C
36	BA	856	C
36	BA	1052	C
36	BA	1060	U
36	BA	1068	G
36	BA	1069	A
36	BA	1210	A
36	BA	1300	U
36	BA	1301	A
36	BA	1378	A
36	BA	1427	A
36	BA	1541	G
36	BA	1558	A
36	BA	1653	G
36	BA	1799	G
36	BA	1819	A
36	BA	1820	U
36	BA	1912	A
36	BA	1970	A
36	BA	1992	G
36	BA	2033	A
36	BA	2126	A
36	BA	2131	G
36	BA	2145	C
36	BA	2282	G
36	BA	2422	A

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Mol	Chain	Res	Type
36	BA	2464	C
36	BA	2481	G
36	BA	2524	G
36	BA	2581	G
36	BA	2689	U
36	BA	2750	A
36	BA	2756	U
36	BA	2873	A
37	BB	16	G
37	BB	34	U
37	BB	56	G
37	BB	66	A
1	CA	30	U
1	CA	60	A
1	CA	79	G
1	CA	109	A
1	CA	115	G
1	CA	119	A
1	CA	197	A
1	CA	202	U
1	CA	243	A
1	CA	250	A
1	CA	266	G
1	CA	274	A
1	CA	344	A
1	CA	351	G
1	CA	368	U
1	CA	428	G
1	CA	429	U
1	CA	484	G
1	CA	495	A
1	CA	508	C
1	CA	534	U
1	CA	547	A
1	CA	560	U
1	CA	575	G
1	CA	687	A
1	CA	748	C
1	CA	792	A
1	CA	961	U
1	CA	968	A
1	CA	980	C

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Mol	Chain	Res	Type
1	CA	982	U
1	CA	992	U
1	CA	1053	G
1	CA	1101	A
1	CA	1139	G
1	CA	1145	C
1	CA	1157	A
1	CA	1200	C
1	CA	1239	A
1	CA	1285	A
1	CA	1399	C
22	CV	18	G
22	CV	60	U
22	CW	7	A
22	CW	44	G
23	CX	11	U
24	CY	20	H2U
36	DA	71	A
36	DA	221	A
36	DA	331	A
36	DA	332	A
36	DA	387	U
36	DA	481	G
36	DA	512	G
36	DA	528	A
36	DA	587	C
36	DA	603	A
36	DA	614(C)	A
36	DA	752	A
36	DA	790	C
36	DA	856	C
36	DA	1052	C
36	DA	1060	U
36	DA	1068	G
36	DA	1069	A
36	DA	1210	A
36	DA	1300	U
36	DA	1301	A
36	DA	1378	A
36	DA	1427	A
36	DA	1541	G
36	DA	1558	A

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Mol	Chain	Res	Type
36	DA	1653	G
36	DA	1799	G
36	DA	1819	A
36	DA	1820	U
36	DA	1912	A
36	DA	1948	G
36	DA	1970	A
36	DA	1992	G
36	DA	2033	A
36	DA	2126	A
36	DA	2131	G
36	DA	2160	G
36	DA	2282	G
36	DA	2422	A
36	DA	2481	G
36	DA	2689	U
36	DA	2750	A
36	DA	2756	U
37	DB	34	U
37	DB	42	C
37	DB	56	G
37	DB	66	A

5.4 Non-standard residues in protein, DNA, RNA chains (i)

18 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
24	H2U	CY	17	24	18,21,22	0.87	0	21,30,33	1.85	5 (23%)
24	4SU	AY	8	24	18,21,22	1.98	3 (16%)	26,30,33	1.78	5 (19%)
24	H2U	CY	16	24	18,21,22	0.89	0	21,30,33	1.77	4 (19%)
24	4SU	CY	8	24	18,21,22	2.09	3 (16%)	26,30,33	1.80	4 (15%)
24	H2U	AY	17	24	18,21,22	0.78	0	21,30,33	1.78	5 (23%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
24	MIA	CY	37	24	24,31,32	1.47	3 (12%)	26,44,47	1.50	4 (15%)
24	OMC	AY	32	24	19,22,23	0.62	0	26,31,34	0.43	0
24	H2U	AY	20	24	18,21,22	0.86	1 (5%)	21,30,33	1.92	5 (23%)
24	5MU	AY	54	24	19,22,23	0.28	0	28,32,35	0.40	0
24	OMC	CY	32	24	19,22,23	0.68	0	26,31,34	0.45	0
24	MIA	AY	37	24	24,31,32	1.31	2 (8%)	26,44,47	1.83	4 (15%)
24	5MU	CY	54	24	19,22,23	0.30	0	28,32,35	0.41	0
24	PSU	CY	55	24	18,21,22	1.10	2 (11%)	22,30,33	1.75	4 (18%)
24	H2U	CY	20	24	18,21,22	0.84	0	21,30,33	1.98	6 (28%)
24	PSU	AY	55	24	18,21,22	1.00	2 (11%)	22,30,33	1.81	4 (18%)
24	7MG	CY	46	24	22,26,27	2.99	2 (9%)	29,39,42	1.58	2 (6%)
24	H2U	AY	16	24	18,21,22	0.80	0	21,30,33	1.75	4 (19%)
24	7MG	AY	46	24	22,26,27	3.06	2 (9%)	29,39,42	1.56	2 (6%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	H2U	CY	17	24	-	5/7/38/39	0/2/2/2
24	4SU	AY	8	24	-	1/7/25/26	0/2/2/2
24	H2U	CY	16	24	-	2/7/38/39	0/2/2/2
24	4SU	CY	8	24	-	1/7/25/26	0/2/2/2
24	H2U	AY	17	24	-	5/7/38/39	0/2/2/2
24	MIA	CY	37	24	-	1/11/33/34	0/3/3/3
24	OMC	AY	32	24	-	0/9/27/28	0/2/2/2
24	H2U	AY	20	24	-	5/7/38/39	0/2/2/2
24	5MU	AY	54	24	-	1/7/25/26	0/2/2/2
24	OMC	CY	32	24	-	0/9/27/28	0/2/2/2
24	MIA	AY	37	24	-	1/11/33/34	0/3/3/3
24	5MU	CY	54	24	-	1/7/25/26	0/2/2/2
24	PSU	CY	55	24	-	2/7/25/26	0/2/2/2
24	H2U	CY	20	24	-	5/7/38/39	0/2/2/2
24	PSU	AY	55	24	-	2/7/25/26	0/2/2/2
24	7MG	CY	46	24	-	4/7/37/38	0/3/3/3
24	H2U	AY	16	24	-	2/7/38/39	0/2/2/2
24	7MG	AY	46	24	-	4/7/37/38	0/3/3/3

All (20) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	AY	46	7MG	C8-N9	-13.78	1.38	1.46
24	CY	46	7MG	C8-N9	-13.46	1.38	1.46
24	CY	8	4SU	C4-N3	5.70	1.43	1.37
24	CY	37	MIA	C2-S10	5.33	1.80	1.75
24	AY	8	4SU	C4-N3	5.21	1.43	1.37
24	AY	37	MIA	C2-S10	4.54	1.79	1.75
24	CY	8	4SU	C6-C5	4.54	1.45	1.35
24	AY	8	4SU	C6-C5	4.39	1.45	1.35
24	CY	8	4SU	C2-N3	3.80	1.44	1.38
24	AY	8	4SU	C2-N3	3.67	1.44	1.38
24	AY	46	7MG	C5-N7	3.64	1.39	1.35
24	CY	46	7MG	C5-N7	3.47	1.39	1.35
24	CY	55	PSU	C6-C5	3.44	1.39	1.35
24	AY	55	PSU	C6-C5	2.84	1.38	1.35
24	CY	55	PSU	C6-N1	2.38	1.40	1.36
24	CY	37	MIA	C6-N1	2.31	1.36	1.32
24	AY	20	H2U	C2-N1	2.13	1.38	1.35
24	AY	37	MIA	C8-N7	-2.13	1.30	1.34
24	CY	37	MIA	C8-N7	-2.10	1.31	1.34
24	AY	55	PSU	C6-N1	2.02	1.39	1.36

All (58) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	CY	46	7MG	N9-C8-N7	6.92	113.28	103.38
24	AY	46	7MG	N9-C8-N7	6.83	113.14	103.38
24	AY	37	MIA	C11-S10-C2	6.40	107.05	102.27
24	CY	20	H2U	C4-N3-C2	-4.97	121.67	125.79
24	CY	17	H2U	C4-N3-C2	-4.84	121.78	125.79
24	AY	20	H2U	C4-N3-C2	-4.77	121.84	125.79
24	CY	8	4SU	S4-C4-N3	4.77	124.90	120.21
24	AY	16	H2U	C4-N3-C2	-4.63	121.95	125.79
24	AY	55	PSU	N1-C2-N3	4.63	120.38	115.13
24	AY	17	H2U	C4-N3-C2	-4.63	121.95	125.79
24	CY	16	H2U	C4-N3-C2	-4.60	121.98	125.79
24	CY	8	4SU	O2-C2-N1	-4.39	116.96	122.79
24	AY	8	4SU	S4-C4-N3	4.37	124.52	120.21
24	CY	55	PSU	N1-C2-N3	4.35	120.06	115.13
24	AY	8	4SU	O2-C2-N1	-4.31	117.06	122.79
24	CY	17	H2U	N3-C2-N1	4.29	121.19	116.65
24	CY	16	H2U	N3-C2-N1	4.22	121.12	116.65
24	AY	17	H2U	N3-C2-N1	4.10	120.99	116.65

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	AY	16	H2U	N3-C2-N1	4.09	120.98	116.65
24	AY	37	MIA	C5-C6-N1	-3.95	117.53	120.81
24	CY	20	H2U	N3-C2-N1	3.86	120.74	116.65
24	CY	37	MIA	C11-S10-C2	3.83	105.12	102.27
24	AY	55	PSU	C4-N3-C2	-3.75	120.93	126.34
24	CY	37	MIA	C5-C6-N1	-3.75	117.70	120.81
24	AY	20	H2U	N3-C2-N1	3.74	120.61	116.65
24	AY	16	H2U	C5-C4-N3	3.71	120.81	116.65
24	CY	46	7MG	C4-C5-N7	3.71	110.67	105.53
24	AY	46	7MG	C4-C5-N7	3.70	110.67	105.53
24	CY	16	H2U	C5-C4-N3	3.69	120.80	116.65
24	CY	17	H2U	C5-C4-N3	3.67	120.77	116.65
24	CY	20	H2U	C5-C4-N3	3.65	120.75	116.65
24	CY	8	4SU	C5-C4-S4	-3.58	119.85	124.47
24	AY	20	H2U	C5-C4-N3	3.56	120.65	116.65
24	CY	55	PSU	C4-N3-C2	-3.55	121.22	126.34
24	AY	17	H2U	C5-C4-N3	3.54	120.63	116.65
24	CY	55	PSU	O3'-C3'-C2'	3.51	123.18	111.82
24	AY	8	4SU	C5-C4-S4	-3.44	120.03	124.47
24	CY	20	H2U	O4'-C1'-N1	3.30	113.80	109.30
24	AY	55	PSU	O3'-C3'-C2'	3.28	122.42	111.82
24	AY	20	H2U	O4'-C1'-N1	3.19	113.64	109.30
24	AY	8	4SU	O2-C2-N3	3.14	127.36	121.50
24	AY	37	MIA	C2-N3-C4	-3.09	111.07	115.32
24	CY	8	4SU	O2-C2-N3	3.08	127.25	121.50
24	CY	37	MIA	C2-N3-C4	-3.07	111.09	115.32
24	CY	37	MIA	C12-N6-C6	2.95	126.91	122.55
24	AY	37	MIA	C12-N6-C6	2.94	126.90	122.55
24	AY	55	PSU	O2-C2-N1	-2.79	119.71	122.79
24	CY	55	PSU	O2-C2-N1	-2.58	119.95	122.79
24	CY	17	H2U	O4'-C1'-N1	2.33	112.47	109.30
24	CY	16	H2U	O2-C2-N1	-2.29	120.23	123.11
24	AY	20	H2U	O4'-C1'-C2'	-2.27	101.70	106.64
24	CY	20	H2U	O4'-C1'-C2'	-2.27	101.70	106.64
24	AY	8	4SU	C6-C5-C4	-2.25	118.00	119.95
24	AY	17	H2U	O2-C2-N1	-2.20	120.34	123.11
24	AY	16	H2U	O2-C2-N1	-2.15	120.40	123.11
24	AY	17	H2U	O4'-C1'-N1	2.14	112.21	109.30
24	CY	17	H2U	O2-C2-N1	-2.10	120.47	123.11
24	CY	20	H2U	O2-C2-N1	-2.04	120.54	123.11

There are no chirality outliers.

All (42) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
24	AY	17	H2U	O4'-C1'-N1-C2
24	AY	17	H2U	O4'-C1'-N1-C6
24	AY	20	H2U	O4'-C1'-N1-C6
24	AY	37	MIA	N6-C12-C13-C14
24	AY	55	PSU	C4'-C5'-O5'-P
24	CY	17	H2U	O4'-C1'-N1-C2
24	CY	17	H2U	O4'-C1'-N1-C6
24	CY	20	H2U	O4'-C1'-N1-C6
24	CY	37	MIA	N6-C12-C13-C14
24	CY	55	PSU	C4'-C5'-O5'-P
24	AY	17	H2U	O4'-C4'-C5'-O5'
24	CY	17	H2U	O4'-C4'-C5'-O5'
24	AY	20	H2U	O4'-C4'-C5'-O5'
24	CY	20	H2U	O4'-C4'-C5'-O5'
24	AY	46	7MG	O4'-C4'-C5'-O5'
24	CY	46	7MG	O4'-C4'-C5'-O5'
24	AY	46	7MG	C2'-C1'-N9-C8
24	AY	20	H2U	O4'-C1'-N1-C2
24	CY	20	H2U	O4'-C1'-N1-C2
24	AY	16	H2U	C4'-C5'-O5'-P
24	CY	16	H2U	C4'-C5'-O5'-P
24	AY	46	7MG	C3'-C4'-C5'-O5'
24	CY	46	7MG	C2'-C1'-N9-C8
24	CY	46	7MG	C3'-C4'-C5'-O5'
24	CY	20	H2U	C4'-C5'-O5'-P
24	AY	54	5MU	C3'-C4'-C5'-O5'
24	AY	17	H2U	C4'-C5'-O5'-P
24	AY	20	H2U	C4'-C5'-O5'-P
24	CY	17	H2U	C4'-C5'-O5'-P
24	AY	16	H2U	O4'-C4'-C5'-O5'
24	AY	17	H2U	C3'-C4'-C5'-O5'
24	CY	16	H2U	O4'-C4'-C5'-O5'
24	CY	17	H2U	C3'-C4'-C5'-O5'
24	CY	54	5MU	C3'-C4'-C5'-O5'
24	AY	55	PSU	O4'-C1'-C5-C4
24	CY	55	PSU	O4'-C1'-C5-C4
24	CY	46	7MG	O4'-C1'-N9-C8
24	AY	46	7MG	O4'-C1'-N9-C8
24	AY	8	4SU	O4'-C4'-C5'-O5'
24	CY	8	4SU	O4'-C4'-C5'-O5'
24	AY	20	H2U	C3'-C4'-C5'-O5'
24	CY	20	H2U	C3'-C4'-C5'-O5'

There are no ring outliers.

14 monomers are involved in 24 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	AY	8	4SU	3	0
24	CY	16	H2U	1	0
24	CY	8	4SU	3	0
24	AY	32	OMC	1	0
24	AY	20	H2U	3	0
24	AY	54	5MU	3	0
24	CY	32	OMC	1	0
24	CY	54	5MU	3	0
24	CY	55	PSU	2	0
24	CY	20	H2U	3	0
24	AY	55	PSU	2	0
24	CY	46	7MG	1	0
24	AY	16	H2U	1	0
24	AY	46	7MG	1	0

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 12 ligands modelled in this entry, 8 are monoatomic - leaving 4 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
60	GDP	AZ	501	-	24,30,30	1.11	3 (12%)	30,47,47	1.77	9 (30%)
61	KIR	AZ	502	-	56,59,59	3.56	22 (39%)	62,84,84	1.67	13 (20%)
61	KIR	CZ	502	-	56,59,59	3.66	24 (42%)	62,84,84	1.66	12 (19%)
60	GDP	CZ	501	-	24,30,30	1.11	2 (8%)	30,47,47	1.75	8 (26%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral

centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
60	GDP	AZ	501	-	-	2/12/32/32	0/3/3/3
61	KIR	AZ	502	-	-	8/54/98/98	0/3/3/3
61	KIR	CZ	502	-	-	8/54/98/98	0/3/3/3
60	GDP	CZ	501	-	-	1/12/32/32	0/3/3/3

All (51) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	AZ	502	KIR	O18-C17	-14.95	1.22	1.44
61	CZ	502	KIR	O18-C17	-14.23	1.23	1.44
61	CZ	502	KIR	O30-C30	-12.29	1.18	1.42
61	AZ	502	KIR	O30-C30	-12.09	1.18	1.42
61	CZ	502	KIR	C32-C31	6.53	1.63	1.54
61	AZ	502	KIR	C45-C28	6.06	1.64	1.53
61	AZ	502	KIR	C22-C21	5.69	1.39	1.33
61	AZ	502	KIR	C32-C31	5.68	1.62	1.54
61	CZ	502	KIR	C2-N1	5.54	1.42	1.33
61	CZ	502	KIR	O29-C29	5.32	1.50	1.40
61	AZ	502	KIR	C27-N26	5.29	1.45	1.33
61	CZ	502	KIR	O34-C29	5.28	1.52	1.43
61	CZ	502	KIR	C27-N26	5.09	1.44	1.33
61	CZ	502	KIR	C22-C21	4.70	1.38	1.33
61	AZ	502	KIR	C2-N1	4.70	1.41	1.33
61	CZ	502	KIR	C45-C28	4.50	1.62	1.53
61	CZ	502	KIR	C42-C19	4.30	1.62	1.53
61	CZ	502	KIR	C5-C4	4.22	1.47	1.39
61	CZ	502	KIR	C29-C28	4.19	1.63	1.54
61	AZ	502	KIR	O29-C29	4.12	1.48	1.40
61	CZ	502	KIR	C8-C7	3.86	1.57	1.48
61	AZ	502	KIR	C42-C19	3.85	1.61	1.53
61	AZ	502	KIR	O34-C29	3.85	1.50	1.43
61	CZ	502	KIR	C19-C17	3.80	1.63	1.54
61	AZ	502	KIR	C5-C4	3.68	1.46	1.39
61	AZ	502	KIR	C8-C7	3.67	1.57	1.48
61	CZ	502	KIR	C32-C33	3.53	1.60	1.55
61	AZ	502	KIR	C29-C28	3.52	1.61	1.54
61	AZ	502	KIR	C19-C17	3.50	1.62	1.54
61	CZ	502	KIR	C3-C2	3.39	1.52	1.43
61	CZ	502	KIR	C6-N1	3.07	1.41	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	AZ	502	KIR	C20-C21	3.06	1.56	1.51
61	CZ	502	KIR	C20-C21	3.03	1.56	1.51
61	AZ	502	KIR	C9-C8	3.02	1.43	1.34
60	CZ	501	GDP	C5-C6	-3.01	1.41	1.47
60	AZ	501	GDP	C5-C6	-3.01	1.41	1.47
61	CZ	502	KIR	C31-C30	2.92	1.59	1.54
61	CZ	502	KIR	C9-C8	2.75	1.42	1.34
61	AZ	502	KIR	C3-C2	2.74	1.50	1.43
61	CZ	502	KIR	C29-C30	2.73	1.58	1.53
61	AZ	502	KIR	C32-C33	2.70	1.59	1.55
61	AZ	502	KIR	C31-C30	2.44	1.58	1.54
61	CZ	502	KIR	C37-C38	2.43	1.38	1.32
61	AZ	502	KIR	C6-N1	2.38	1.39	1.34
61	AZ	502	KIR	C44-C21	2.29	1.54	1.50
61	CZ	502	KIR	O2-C2	2.25	1.30	1.24
61	AZ	502	KIR	C37-C38	2.23	1.38	1.32
60	CZ	501	GDP	C6-N1	2.16	1.41	1.37
60	AZ	501	GDP	C6-N1	2.07	1.41	1.37
61	CZ	502	KIR	C47-C32	2.04	1.58	1.53
60	AZ	501	GDP	O4'-C1'	2.02	1.43	1.41

All (42) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
60	AZ	501	GDP	PA-O3A-PB	-4.73	116.58	132.83
61	AZ	502	KIR	O29-C29-O34	-4.61	102.49	110.21
60	CZ	501	GDP	PA-O3A-PB	-4.57	117.13	132.83
61	AZ	502	KIR	C48-C32-C47	-4.42	101.41	107.72
61	CZ	502	KIR	C48-C32-C47	-4.40	101.44	107.72
61	CZ	502	KIR	O29-C29-O34	-4.31	102.99	110.21
61	CZ	502	KIR	C11-C10-C9	-4.29	114.68	123.47
61	AZ	502	KIR	C11-C10-C9	-4.24	114.79	123.47
61	CZ	502	KIR	O34-C29-C28	3.49	113.60	104.46
61	AZ	502	KIR	O34-C29-C28	3.39	113.33	104.46
61	CZ	502	KIR	O18-C17-C16	3.19	110.25	104.27
60	CZ	501	GDP	O6-C6-C5	-3.07	118.37	124.37
60	AZ	501	GDP	O6-C6-C5	-3.00	118.50	124.37
61	AZ	502	KIR	C45-C28-C27	2.96	113.03	108.86
61	AZ	502	KIR	O18-C17-C16	2.92	109.75	104.27
60	CZ	501	GDP	C2-N1-C6	-2.91	119.74	125.10
60	AZ	501	GDP	C2-N1-C6	-2.84	119.86	125.10
61	CZ	502	KIR	O27-C27-C28	-2.77	118.41	122.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
61	AZ	502	KIR	C48-C32-C31	2.74	113.88	109.29
60	CZ	501	GDP	C5-C6-N1	2.71	118.75	113.95
60	AZ	501	GDP	C5'-C4'-C3'	-2.66	105.22	115.18
61	CZ	502	KIR	C48-C32-C31	2.56	113.58	109.29
61	CZ	502	KIR	C45-C28-C27	2.54	112.44	108.86
61	CZ	502	KIR	C44-C21-C20	2.53	120.05	115.68
60	AZ	501	GDP	C5-C6-N1	2.52	118.40	113.95
61	AZ	502	KIR	O27-C27-C28	-2.49	118.80	122.25
61	AZ	502	KIR	C29-C30-C31	-2.47	107.39	110.66
60	CZ	501	GDP	C5'-C4'-C3'	-2.39	106.22	115.18
61	CZ	502	KIR	C29-C30-C31	-2.34	107.56	110.66
60	CZ	501	GDP	C3'-C2'-C1'	-2.32	97.49	100.98
60	AZ	501	GDP	N2-C2-N1	2.30	121.61	116.71
61	AZ	502	KIR	C44-C21-C20	2.28	119.62	115.68
61	AZ	502	KIR	C6-N1-C2	2.22	121.74	116.43
61	CZ	502	KIR	C6-N1-C2	2.16	121.61	116.43
60	CZ	501	GDP	N2-C2-N1	2.16	121.30	116.71
61	CZ	502	KIR	C23-C22-C21	-2.14	124.17	127.32
60	AZ	501	GDP	C3'-C2'-C1'	-2.11	97.80	100.98
61	AZ	502	KIR	C5-C6-N1	-2.08	121.37	123.96
60	AZ	501	GDP	O3B-PB-O2B	2.08	115.57	107.64
60	CZ	501	GDP	O3B-PB-O2B	2.06	115.51	107.64
61	AZ	502	KIR	C23-C22-C21	-2.02	124.36	127.32
60	AZ	501	GDP	O6-C6-N1	2.01	123.02	120.65

There are no chirality outliers.

All (19) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
60	AZ	501	GDP	C5'-O5'-PA-O1A
60	CZ	501	GDP	C5'-O5'-PA-O1A
61	AZ	502	KIR	O18-C17-C19-C42
61	CZ	502	KIR	O18-C17-C19-C42
61	AZ	502	KIR	C11-C10-C9-C8
61	CZ	502	KIR	C11-C10-C9-C8
61	AZ	502	KIR	C36-C37-C38-C39
61	CZ	502	KIR	C36-C37-C38-C39
61	AZ	502	KIR	C19-C20-O20-C43
61	CZ	502	KIR	C19-C20-O20-C43
61	AZ	502	KIR	C16-C17-C19-C20
61	AZ	502	KIR	C16-C17-C19-C42
61	CZ	502	KIR	C16-C17-C19-C42

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Mol	Chain	Res	Type	Atoms
60	AZ	501	GDP	C5'-O5'-PA-O3A
61	AZ	502	KIR	C21-C20-O20-C43
61	CZ	502	KIR	C21-C20-O20-C43
61	AZ	502	KIR	C2-C3-C7-O7
61	CZ	502	KIR	C2-C3-C7-O7
61	CZ	502	KIR	C16-C17-C19-C20

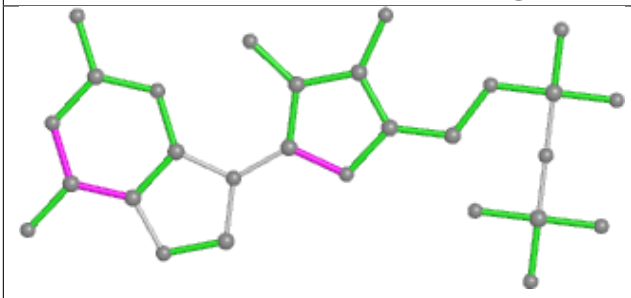
There are no ring outliers.

4 monomers are involved in 50 short contacts:

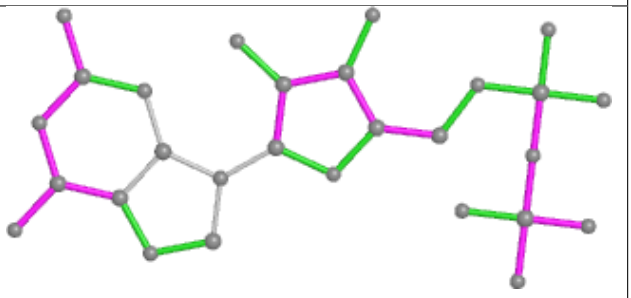
Mol	Chain	Res	Type	Clashes	Symm-Clashes
60	AZ	501	GDP	12	0
61	AZ	502	KIR	11	0
61	CZ	502	KIR	14	0
60	CZ	501	GDP	13	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

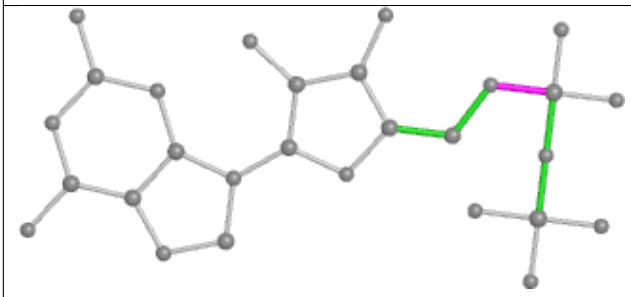
Ligand GDP AZ 501



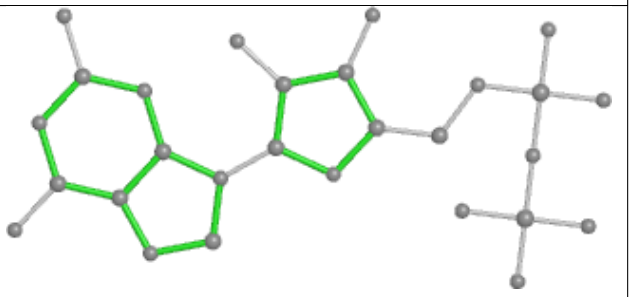
Bond lengths



Bond angles

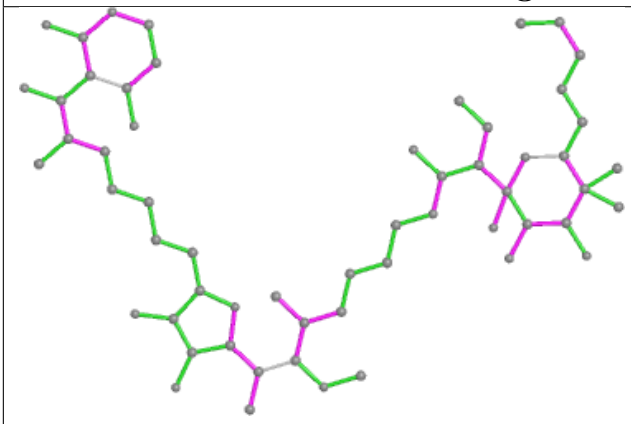


Torsions



Rings

Ligand KIR AZ 502



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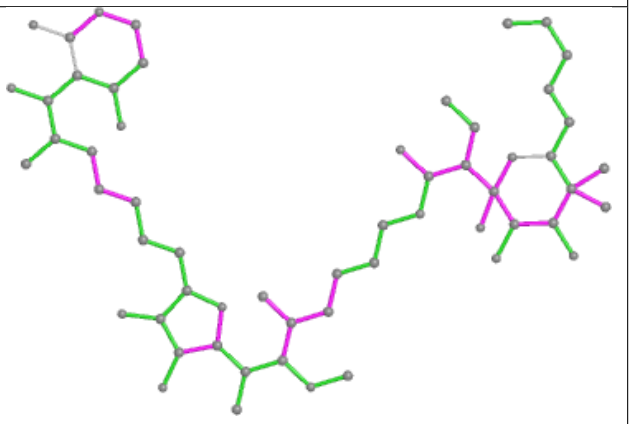
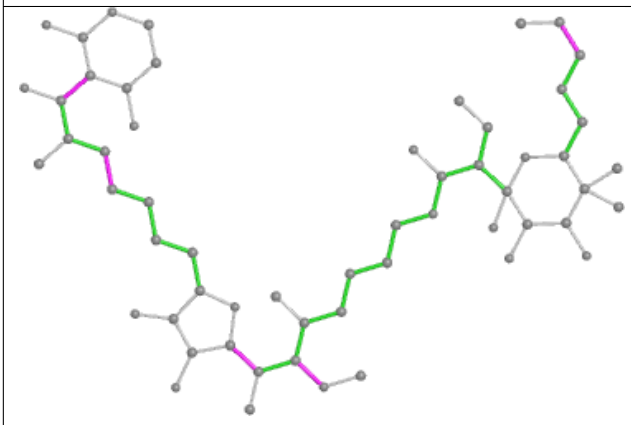
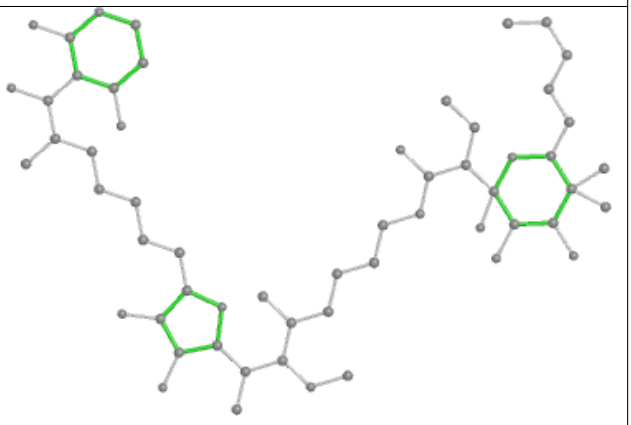


Bond angles

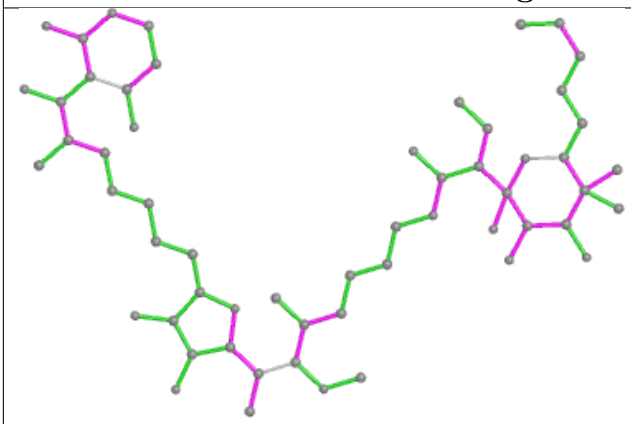


Torsions

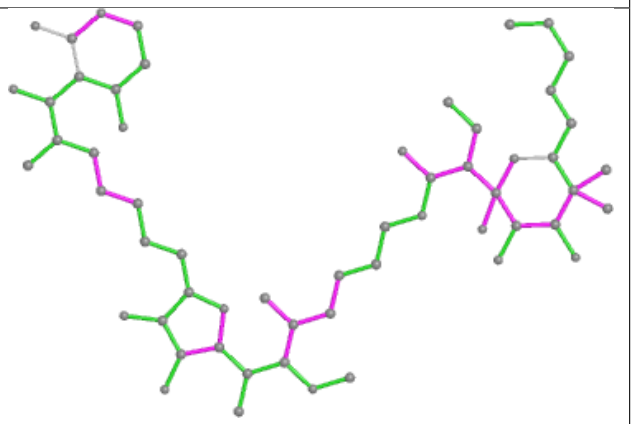


Rings

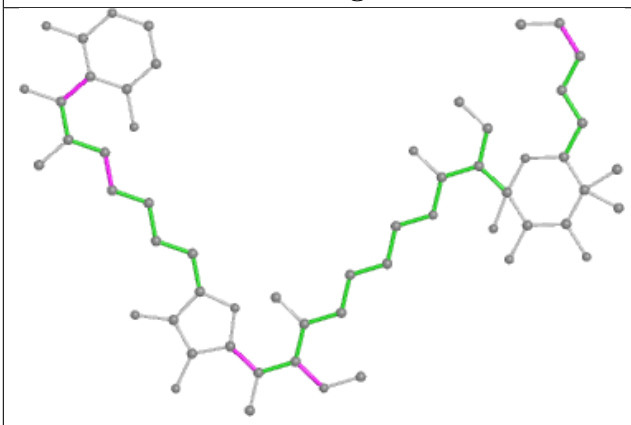
Ligand KIR CZ 502



Bond lengths



Bond angles



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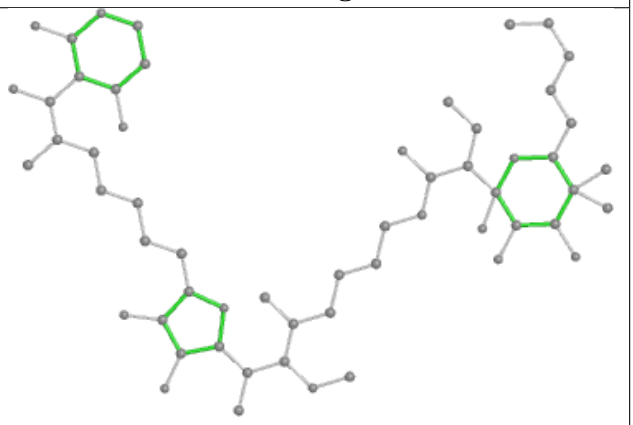
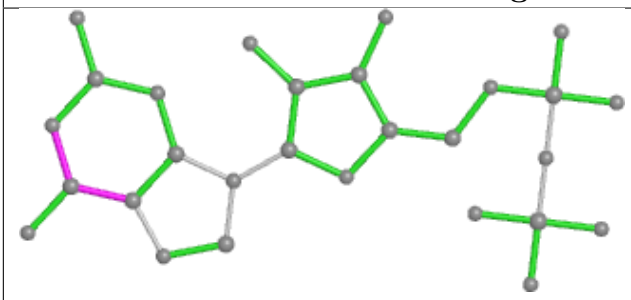


Rings

Ligand GDP CZ 501



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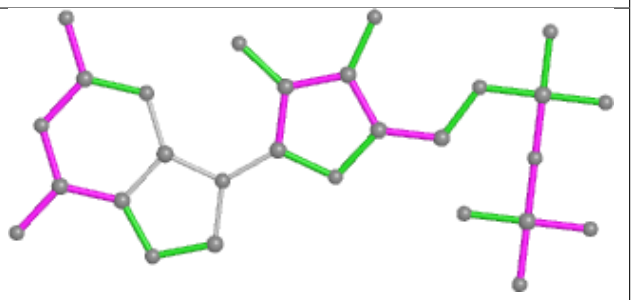
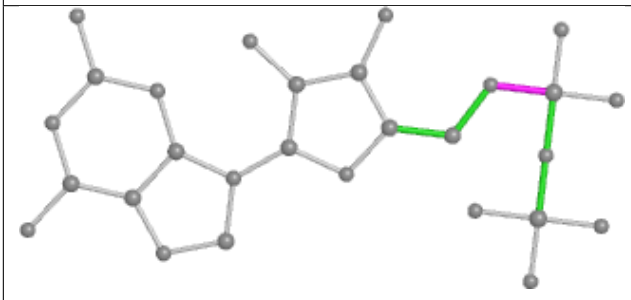
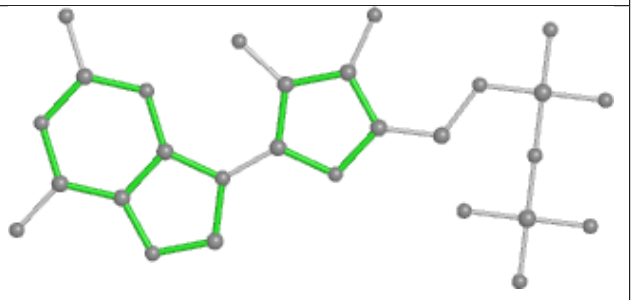


Bond angles



Torsions



Rings

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	AA	1504/1522 (98%)	-0.27	28 (1%) 66 46	22, 58, 151, 200	0
1	CA	1504/1522 (98%)	-0.24	23 (1%) 73 54	39, 79, 157, 200	0
2	AB	234/256 (91%)	-0.32	3 (1%) 77 59	33, 66, 135, 154	0
2	CB	234/256 (91%)	-0.27	3 (1%) 77 59	50, 89, 142, 150	0
3	AC	206/239 (86%)	-0.59	0 100 100	25, 49, 78, 88	0
3	CC	206/239 (86%)	-0.44	1 (0%) 91 81	53, 80, 106, 113	0
4	AD	208/209 (99%)	0.07	8 (3%) 40 20	59, 88, 122, 126	0
4	CD	208/209 (99%)	0.15	9 (4%) 35 17	79, 105, 125, 135	0
5	AE	150/162 (92%)	-0.62	0 100 100	30, 45, 71, 97	0
5	CE	150/162 (92%)	-0.47	0 100 100	48, 63, 85, 102	0
6	AF	101/101 (100%)	-0.50	1 (0%) 82 67	48, 74, 94, 105	0
6	CF	101/101 (100%)	-0.14	1 (0%) 82 67	79, 98, 111, 119	0
7	AG	155/156 (99%)	-0.37	5 (3%) 47 25	39, 65, 96, 117	0
7	CG	155/156 (99%)	-0.08	5 (3%) 47 25	71, 95, 115, 127	0
8	AH	138/138 (100%)	-0.55	0 100 100	32, 49, 69, 74	0
8	CH	138/138 (100%)	-0.44	0 100 100	46, 64, 80, 87	0
9	AI	127/128 (99%)	-0.20	1 (0%) 86 72	32, 68, 111, 124	0
9	CI	127/128 (99%)	0.41	10 (7%) 12 5	66, 106, 132, 139	0
10	AJ	98/105 (93%)	-0.10	0 100 100	33, 70, 112, 125	0
10	CJ	98/105 (93%)	0.43	9 (9%) 9 3	66, 109, 144, 148	0
11	AK	119/129 (92%)	-0.43	2 (1%) 70 49	32, 50, 92, 118	0
11	CK	119/129 (92%)	-0.23	3 (2%) 57 34	52, 76, 100, 120	0
12	AL	124/132 (93%)	-0.28	1 (0%) 86 72	33, 61, 85, 124	0
12	CL	124/132 (93%)	-0.17	2 (1%) 72 51	47, 72, 99, 131	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AM	124/126 (98%)	-0.09	5 (4%) 38 19	43, 72, 103, 131	0
13	CM	124/126 (98%)	0.04	7 (5%) 24 11	76, 99, 122, 142	0
14	AN	60/61 (98%)	-0.29	1 (1%) 70 49	30, 53, 78, 84	0
14	CN	60/61 (98%)	0.05	2 (3%) 46 24	65, 83, 102, 105	0
15	AO	88/89 (98%)	-0.51	0 100 100	36, 54, 82, 88	0
15	CO	88/89 (98%)	-0.31	0 100 100	44, 68, 90, 98	0
16	AP	83/88 (94%)	-0.02	2 (2%) 59 37	61, 74, 98, 133	0
16	CP	83/88 (94%)	0.16	1 (1%) 79 61	74, 90, 110, 132	0
17	AQ	99/105 (94%)	-0.37	0 100 100	40, 60, 79, 89	0
17	CQ	99/105 (94%)	-0.22	0 100 100	53, 71, 91, 102	0
18	AR	70/88 (79%)	-0.43	0 100 100	39, 60, 90, 99	0
18	CR	70/88 (79%)	-0.26	0 100 100	56, 81, 108, 118	0
19	AS	78/93 (83%)	-0.05	2 (2%) 56 33	52, 73, 117, 127	0
19	CS	78/93 (83%)	0.14	5 (6%) 19 8	81, 97, 126, 132	0
20	AT	99/106 (93%)	0.13	4 (4%) 38 19	55, 80, 126, 130	0
20	CT	99/106 (93%)	0.09	1 (1%) 82 67	74, 90, 120, 122	0
21	AU	24/27 (88%)	-0.02	2 (8%) 11 4	41, 55, 79, 99	0
21	CU	24/27 (88%)	0.60	2 (8%) 11 4	74, 92, 105, 113	0
22	AV	76/76 (100%)	-0.46	0 100 100	35, 72, 107, 124	0
22	AW	76/76 (100%)	0.37	8 (10%) 6 2	64, 140, 185, 199	0
22	CV	76/76 (100%)	-0.29	0 100 100	51, 86, 120, 137	0
22	CW	76/76 (100%)	0.42	6 (7%) 12 5	94, 170, 191, 200	0
23	AX	17/27 (62%)	0.45	2 (11%) 4 2	31, 91, 142, 143	0
23	CX	17/27 (62%)	2.24	12 (70%) 0 0	69, 122, 155, 157	0
24	AY	68/77 (88%)	0.24	1 (1%) 73 54	57, 140, 177, 197	0
24	CY	68/77 (88%)	0.36	1 (1%) 73 54	73, 142, 175, 198	0
25	AZ	385/405 (95%)	0.63	29 (7%) 14 5	87, 124, 151, 169	0
25	CZ	385/405 (95%)	1.37	104 (27%) 0 0	111, 133, 156, 170	0
26	B0	84/85 (98%)	0.15	6 (7%) 16 6	58, 73, 107, 122	0
26	D0	84/85 (98%)	0.48	9 (10%) 6 2	69, 86, 113, 123	0
27	B1	93/98 (94%)	0.02	4 (4%) 35 17	45, 69, 129, 134	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
27	D1	93/98 (94%)	0.15	1 (1%) 80 64	59, 86, 133, 139	0
28	B2	71/72 (98%)	1.37	20 (28%) 0 0	130, 143, 155, 158	0
28	D2	71/72 (98%)	0.49	11 (15%) 2 1	100, 122, 136, 143	0
29	B3	59/60 (98%)	0.20	2 (3%) 45 24	65, 81, 106, 122	0
29	D3	59/60 (98%)	0.30	3 (5%) 28 13	60, 93, 106, 126	0
30	B4	44/71 (61%)	0.67	5 (11%) 5 2	111, 140, 167, 173	0
30	D4	44/71 (61%)	1.16	13 (29%) 0 0	136, 163, 184, 186	0
31	B5	59/60 (98%)	0.15	3 (5%) 28 13	62, 87, 148, 163	0
31	D5	59/60 (98%)	0.24	4 (6%) 17 7	63, 92, 145, 154	0
32	B6	50/54 (92%)	0.50	4 (8%) 12 5	57, 84, 103, 110	0
32	D6	50/54 (92%)	0.93	9 (18%) 1 0	73, 97, 116, 122	0
33	B7	48/49 (97%)	0.14	3 (6%) 20 8	51, 64, 101, 121	0
33	D7	48/49 (97%)	0.08	3 (6%) 20 8	64, 73, 104, 125	0
34	B8	63/65 (96%)	0.23	2 (3%) 47 25	56, 73, 91, 115	0
34	D8	63/65 (96%)	0.39	5 (7%) 12 5	72, 85, 101, 120	0
35	B9	37/37 (100%)	0.57	4 (10%) 5 2	73, 85, 103, 104	0
35	D9	37/37 (100%)	1.12	4 (10%) 5 2	67, 96, 107, 120	0
36	BA	2901/2915 (99%)	-0.15	76 (2%) 56 33	26, 77, 181, 200	0
36	DA	2901/2915 (99%)	-0.10	77 (2%) 54 31	37, 87, 180, 200	0
37	BB	119/122 (97%)	-0.48	0 100 100	59, 85, 112, 132	0
37	DB	119/122 (97%)	-0.44	0 100 100	69, 101, 126, 132	0
38	BC	228/229 (99%)	0.01	12 (5%) 26 12	50, 79, 160, 173	0
38	DC	228/229 (99%)	0.47	26 (11%) 5 2	68, 102, 170, 180	0
39	BD	275/276 (99%)	-0.41	4 (1%) 73 54	30, 49, 83, 105	0
39	DD	275/276 (99%)	-0.32	2 (0%) 87 75	42, 61, 91, 111	0
40	BE	204/206 (99%)	-0.02	5 (2%) 57 34	50, 79, 128, 140	0
40	DE	204/206 (99%)	0.00	6 (2%) 51 28	47, 84, 133, 138	0
41	BF	207/210 (98%)	0.32	14 (6%) 17 7	53, 112, 162, 170	0
41	DF	207/210 (98%)	0.43	17 (8%) 11 4	62, 118, 161, 170	0
42	BG	181/182 (99%)	-0.04	9 (4%) 28 13	63, 86, 117, 130	0
42	DG	181/182 (99%)	0.05	8 (4%) 34 17	89, 108, 136, 144	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
43	BH	159/180 (88%)	0.74	22 (13%) 2 1	92, 134, 152, 156	0
43	DH	159/180 (88%)	0.53	11 (6%) 16 7	87, 129, 146, 154	0
44	BJ	0/173	-	-	-	-
44	DJ	0/173	-	-	-	-
45	BK	0/147	-	-	-	-
45	DK	0/147	-	-	-	-
46	BN	138/140 (98%)	-0.08	0 100 100	63, 89, 125, 134	0
46	DN	138/140 (98%)	-0.18	0 100 100	69, 90, 125, 133	0
47	BO	122/122 (100%)	-0.44	0 100 100	46, 63, 77, 85	0
47	DO	122/122 (100%)	-0.38	0 100 100	47, 67, 83, 89	0
48	BP	146/150 (97%)	0.52	13 (8%) 9 3	55, 103, 133, 150	0
48	DP	146/150 (97%)	0.72	21 (14%) 2 1	64, 115, 137, 153	0
49	BQ	141/141 (100%)	-0.22	3 (2%) 63 43	46, 64, 86, 128	0
49	DQ	141/141 (100%)	-0.22	2 (1%) 75 56	51, 66, 90, 126	0
50	BR	117/118 (99%)	0.06	2 (1%) 70 49	60, 85, 107, 126	0
50	DR	117/118 (99%)	0.06	1 (0%) 84 69	57, 90, 105, 123	0
51	BS	98/112 (87%)	0.13	3 (3%) 49 26	63, 90, 116, 126	0
51	DS	98/112 (87%)	0.44	8 (8%) 11 4	77, 102, 126, 128	0
52	BT	137/146 (93%)	-0.02	8 (5%) 23 10	58, 84, 142, 167	0
52	DT	137/146 (93%)	-0.03	6 (4%) 34 17	63, 90, 147, 169	0
53	BU	117/118 (99%)	-0.05	1 (0%) 84 69	64, 79, 111, 128	0
53	DU	117/118 (99%)	-0.03	1 (0%) 84 69	63, 86, 110, 124	0
54	BV	101/101 (100%)	0.28	3 (2%) 50 27	62, 116, 129, 136	0
54	DV	101/101 (100%)	0.38	5 (4%) 28 13	71, 115, 134, 136	0
55	BW	113/113 (100%)	0.10	5 (4%) 34 17	65, 90, 116, 141	0
55	DW	113/113 (100%)	0.31	5 (4%) 34 17	73, 93, 123, 145	0
56	BX	92/96 (95%)	0.22	1 (1%) 80 64	75, 95, 110, 118	0
56	DX	92/96 (95%)	0.20	1 (1%) 80 64	82, 100, 116, 120	0
57	BY	100/110 (90%)	1.25	26 (26%) 0 0	108, 134, 162, 168	0
57	DY	100/110 (90%)	1.13	20 (20%) 1 0	107, 136, 160, 169	0
58	BZ	183/206 (88%)	-0.13	4 (2%) 62 41	56, 83, 120, 132	0
58	DZ	183/206 (88%)	-0.05	5 (2%) 54 31	62, 88, 120, 140	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
All	All	21996/23370 (94%)	-0.02	860 (3%)	39	20	22, 84, 151, 200	0

All (860) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
25	CZ	183	HIS	12.4
41	BF	24	LEU	11.5
25	AZ	85	HIS	10.9
49	BQ	141	GLN	10.5
36	BA	1077	A	9.4
58	DZ	114	GLY	9.4
42	DG	2	PRO	9.0
41	DF	24	LEU	8.9
35	D9	37	GLY	8.8
41	DF	1	MET	8.5
36	BA	654(K)	C	8.5
36	DA	1077	A	8.5
36	BA	654(T)	C	8.4
38	DC	1	PRO	8.2
25	CZ	141	VAL	8.2
58	DZ	113	ALA	8.0
36	BA	654(S)	G	8.0
31	D5	59	GLU	8.0
38	BC	1	PRO	7.8
25	AZ	63	ILE	7.6
25	CZ	36	ALA	7.5
25	CZ	83	PRO	7.4
1	CA	89	C	7.4
36	BA	1066	U	7.4
26	B0	3	HIS	7.3
25	CZ	199	ILE	7.3
36	BA	654(G)	C	7.3
38	DC	106	GLY	7.3
36	BA	654(C)	G	7.2
36	BA	654(I)	C	7.2
31	D5	2	ALA	7.1
11	AK	129	SER	7.0
36	DA	1066	U	6.9
35	D9	1	MET	6.9
57	BY	2	ARG	6.9
38	DC	105	ASP	6.9
36	DA	654(E)	G	6.9

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Mol	Chain	Res	Type	RSRZ
57	BY	51	VAL	6.8
57	DY	51	VAL	6.8
31	B5	59	GLU	6.8
29	D3	1	MET	6.7
42	BG	48	GLU	6.7
43	DH	170	ARG	6.6
57	DY	53	PRO	6.6
1	CA	88	A	6.5
54	DV	36	PRO	6.5
36	DA	654(V)	A	6.5
49	DQ	141	GLN	6.4
38	DC	115	ALA	6.3
1	AA	88	A	6.3
25	CZ	186	PRO	6.3
14	CN	2	ALA	6.3
30	B4	47	GLN	6.2
58	BZ	114	GLY	6.1
20	AT	106	ALA	6.0
36	BA	2802	G	6.0
43	BH	52	VAL	6.0
41	BF	20	LEU	5.9
36	DA	654(C)	G	5.9
36	DA	654(K)	C	5.9
25	CZ	193	ASN	5.9
40	BE	204	ALA	5.8
43	BH	170	ARG	5.8
25	CZ	33	TYR	5.8
43	DH	169	VAL	5.8
36	DA	654(J)	A	5.7
22	AW	5	G	5.7
30	D4	13	ARG	5.7
36	DA	2802	G	5.6
43	BH	169	VAL	5.6
36	BA	654(V)	A	5.6
26	D0	6	GLY	5.6
36	DA	2896	C	5.6
43	DH	53	GLU	5.6
57	BY	45	VAL	5.5
28	B2	63	VAL	5.5
31	B5	2	ALA	5.5
41	BF	8	GLN	5.5
28	B2	71	ASN	5.5

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Mol	Chain	Res	Type	RSRZ
36	DA	1509	C	5.5
25	AZ	42	VAL	5.4
26	B0	4	LYS	5.4
25	CZ	37	ALA	5.4
32	B6	42	TRP	5.4
35	B9	1	MET	5.4
38	BC	105	ASP	5.4
28	D2	72	ALA	5.4
25	CZ	72	THR	5.3
28	B2	38	GLN	5.3
36	BA	654(J)	A	5.3
26	B0	2	ALA	5.3
57	BY	6	HIS	5.2
13	AM	124	PRO	5.2
13	AM	125	ARG	5.2
30	B4	32	TYR	5.2
48	DP	149	GLU	5.2
25	AZ	41	ASN	5.1
52	BT	136	GLN	5.1
13	AM	84	ILE	5.0
32	D6	26	ASN	5.0
36	BA	654(F)	C	5.0
28	B2	42	GLY	5.0
12	AL	128	ALA	4.9
30	D4	32	TYR	4.9
22	AW	7	A	4.9
38	BC	106	GLY	4.9
1	CA	81	U	4.9
57	BY	52	SER	4.8
30	D4	23	GLU	4.8
42	BG	50	ALA	4.8
36	DA	614(B)	G	4.8
36	DA	352	G	4.8
36	DA	1534	U	4.8
57	DY	54	LYS	4.8
36	BA	654(E)	G	4.8
38	DC	107	TRP	4.7
36	BA	2896	C	4.7
1	CA	1036	G	4.7
36	BA	2207	G	4.7
58	DZ	112	ARG	4.7
36	DA	2897	U	4.7

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Mol	Chain	Res	Type	RSRZ
42	BG	2	PRO	4.7
38	BC	109	ASP	4.7
25	CZ	41	ASN	4.6
36	BA	654(H)	G	4.6
36	DA	275	G	4.6
48	BP	150	ALA	4.6
36	DA	654(S)	G	4.6
25	CZ	87	ASP	4.6
31	D5	60	VAL	4.6
25	CZ	143	ASP	4.6
36	DA	654(I)	C	4.5
36	BA	2799	C	4.5
36	DA	277	C	4.5
1	AA	1036	G	4.5
36	DA	156	U	4.5
25	CZ	184	ARG	4.5
4	AD	209	ARG	4.5
25	AZ	112	PRO	4.5
28	B2	64	LEU	4.5
36	BA	1093	G	4.5
1	AA	78	G	4.4
36	DA	654(F)	C	4.4
30	D4	47	GLN	4.4
1	AA	1030(A)	G	4.4
25	CZ	195	TRP	4.4
42	DG	48	GLU	4.4
41	BF	12	LEU	4.4
57	BY	55	TYR	4.4
32	D6	42	TRP	4.4
36	BA	2796	U	4.3
25	CZ	73	ALA	4.3
36	DA	2804	C	4.3
57	BY	39	VAL	4.3
36	BA	654(D)	G	4.3
36	DA	654(H)	G	4.3
36	BA	352	G	4.3
34	B8	64	TYR	4.3
36	BA	654(L)	G	4.3
7	CG	81	GLY	4.3
43	BH	81	GLU	4.2
57	BY	15	VAL	4.2
1	CA	82	U	4.2

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Mol	Chain	Res	Type	RSRZ
25	CZ	185	ASN	4.2
25	CZ	337	GLY	4.2
25	CZ	233	GLY	4.2
41	DF	12	LEU	4.2
57	BY	28	LYS	4.2
25	CZ	290	LEU	4.2
36	DA	1076	C	4.2
30	B4	42	PHE	4.2
31	B5	58	LEU	4.1
36	DA	2796	U	4.1
22	AW	6	G	4.1
28	B2	16	LEU	4.1
9	CI	4	TYR	4.1
33	B7	47	ARG	4.1
28	B2	50	ILE	4.1
36	BA	1087	G	4.1
25	AZ	183	HIS	4.1
38	BC	122	ALA	4.1
13	CM	125	ARG	4.1
29	B3	1	MET	4.1
25	CZ	9	LYS	4.1
25	CZ	247	VAL	4.1
57	BY	5	MET	4.0
20	AT	9	ASN	4.0
57	DY	91	GLU	4.0
40	BE	69	LYS	4.0
14	AN	2	ALA	4.0
25	CZ	40	PRO	4.0
57	BY	53	PRO	4.0
42	DG	84	LYS	4.0
25	CZ	206	ILE	4.0
26	D0	7	LEU	4.0
52	BT	135	ALA	4.0
1	AA	81	U	4.0
40	DE	204	ALA	3.9
23	CX	27	A	3.9
57	DY	52	SER	3.9
25	CZ	196	VAL	3.9
28	B2	49	LYS	3.9
25	CZ	140	MET	3.9
36	BA	2795	G	3.9
57	BY	3	VAL	3.9

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Mol	Chain	Res	Type	RSRZ
55	DW	113	LYS	3.9
28	B2	4	SER	3.9
58	BZ	113	ALA	3.9
13	CM	123	ALA	3.9
53	BU	118	GLY	3.8
58	BZ	115	GLY	3.8
35	D9	34	GLN	3.8
28	B2	68	ARG	3.8
25	CZ	179	LEU	3.8
36	BA	277	C	3.8
40	BE	68	ALA	3.8
57	DY	5	MET	3.8
25	CZ	63	ILE	3.8
36	DA	1535	A	3.8
52	DT	137	LYS	3.8
2	CB	7	VAL	3.8
32	D6	46	HIS	3.8
57	DY	28	LYS	3.8
36	DA	2207	G	3.8
25	AZ	102	ALA	3.8
43	BH	53	GLU	3.8
51	DS	80	LEU	3.8
41	DF	23	ASP	3.8
25	CZ	42	VAL	3.7
51	DS	59	LYS	3.7
57	DY	55	TYR	3.7
4	CD	152	SER	3.7
57	BY	91	GLU	3.7
1	AA	76	C	3.7
48	DP	7	ARG	3.7
39	DD	276	LYS	3.7
9	CI	19	LEU	3.7
21	CU	9	ARG	3.7
36	BA	1065	U	3.7
4	AD	151	LYS	3.6
1	AA	1129	C	3.6
25	CZ	39	ASN	3.6
31	D5	58	LEU	3.6
41	BF	9	ILE	3.6
25	CZ	235	GLY	3.6
36	DA	654	A	3.6
1	CA	204	U	3.6

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Mol	Chain	Res	Type	RSRZ
25	CZ	176	LEU	3.6
13	CM	84	ILE	3.6
25	CZ	335	PHE	3.6
36	BA	275	G	3.6
9	CI	92	TYR	3.6
25	CZ	29	ALA	3.6
36	BA	2801(A)	A	3.6
55	DW	112	GLY	3.6
13	CM	7	VAL	3.6
32	D6	37	ARG	3.6
36	DA	654(G)	C	3.6
1	AA	77	G	3.6
42	BG	26	GLN	3.6
25	CZ	139	ASP	3.6
51	BS	107	GLU	3.6
25	CZ	322	VAL	3.5
34	D8	64	TYR	3.5
12	CL	127	GLU	3.5
42	BG	127	GLY	3.5
25	CZ	217	VAL	3.5
7	AG	156	TRP	3.5
36	BA	271(N)	U	3.5
36	DA	155	U	3.5
41	BF	18	ARG	3.5
25	CZ	212	THR	3.5
39	DD	25	THR	3.5
57	BY	85	VAL	3.5
41	BF	1	MET	3.5
36	DA	1104	C	3.4
41	BF	25	PRO	3.4
32	B6	54	ILE	3.4
38	DC	77	ILE	3.4
10	CJ	85	LEU	3.4
41	BF	11	VAL	3.4
42	DG	49	ASP	3.4
38	DC	76	ALA	3.4
1	AA	1026	G	3.4
36	DA	1074	G	3.4
36	DA	1065	U	3.4
25	CZ	260	PRO	3.4
30	D4	38	LYS	3.4
32	D6	36	LEU	3.4

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Mol	Chain	Res	Type	RSRZ
43	DH	86	GLU	3.4
51	DS	90	GLY	3.4
36	BA	229	A	3.4
36	DA	276	A	3.3
36	BA	1509	C	3.3
38	DC	109	ASP	3.3
57	BY	61	ILE	3.3
48	BP	125	VAL	3.3
25	CZ	318	ALA	3.3
23	CX	13	A	3.3
25	CZ	213	PRO	3.3
1	AA	89	C	3.3
36	DA	1087	G	3.3
40	BE	54	GLN	3.3
25	AZ	326	GLU	3.3
36	DA	654(L)	G	3.3
52	DT	135	ALA	3.3
43	DH	21	PRO	3.3
28	B2	41	ILE	3.3
25	AZ	23	GLY	3.3
36	DA	1174	A	3.3
1	AA	1030(C)	G	3.3
19	CS	42	PRO	3.2
43	BH	51	ARG	3.2
57	BY	56	PRO	3.2
4	CD	209	ARG	3.2
25	CZ	280	GLY	3.2
30	D4	42	PHE	3.2
52	DT	39	ARG	3.2
28	B2	53	LEU	3.2
38	DC	125	SER	3.2
32	B6	46	HIS	3.2
36	BA	654	A	3.2
36	DA	654(R)	C	3.2
28	B2	37	PHE	3.2
57	DY	86	ARG	3.2
54	DV	48	GLY	3.2
48	BP	103	ALA	3.2
57	DY	34	LYS	3.2
25	CZ	336	SER	3.2
32	D6	20	ASN	3.2
43	DH	148	ILE	3.2

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Mol	Chain	Res	Type	RSRZ
36	BA	2894	G	3.2
48	BP	17	LYS	3.2
25	CZ	142	ASP	3.2
28	B2	56	GLN	3.2
41	DF	11	VAL	3.2
39	BD	276	LYS	3.2
11	CK	129	SER	3.2
1	AA	1031	G	3.2
42	BG	49	ASP	3.2
19	AS	81	ARG	3.1
27	D1	85	LEU	3.1
23	AX	27	A	3.1
36	BA	1174	A	3.1
36	DA	2795	G	3.1
35	B9	28	GLU	3.1
28	B2	8	LYS	3.1
51	BS	54	LEU	3.1
57	DY	45	VAL	3.1
4	CD	47	ARG	3.1
30	D4	6	HIS	3.1
21	AU	25	LYS	3.1
26	D0	5	LYS	3.1
48	DP	107	LYS	3.1
38	DC	93	TYR	3.1
20	AT	101	GLY	3.1
25	CZ	287	GLY	3.1
1	AA	1447	A	3.1
49	DQ	140	ALA	3.1
55	BW	112	GLY	3.1
7	CG	79	ARG	3.1
25	AZ	40	PRO	3.1
29	D3	2	PRO	3.1
36	DA	2792	G	3.1
38	DC	121	GLY	3.1
25	AZ	334	PHE	3.1
36	DA	271(L)	U	3.1
28	D2	8	LYS	3.1
32	D6	35	GLU	3.1
56	DX	5	TYR	3.0
26	D0	85	ALA	3.0
25	CZ	264	ARG	3.0
57	DY	2	ARG	3.0

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Mol	Chain	Res	Type	RSRZ
22	CW	21	A	3.0
25	AZ	218	ASP	3.0
32	D6	54	ILE	3.0
50	DR	2	ARG	3.0
27	B1	85	LEU	3.0
11	CK	12	ARG	3.0
43	BH	88	LEU	3.0
48	BP	84	ASN	3.0
25	CZ	85	HIS	3.0
33	D7	1	MET	3.0
38	DC	86	ALA	3.0
48	DP	121	LYS	3.0
52	DT	132	LYS	3.0
25	CZ	320	VAL	3.0
23	CX	12	A	3.0
25	AZ	169	PRO	3.0
36	BA	1069	A	3.0
25	AZ	82	CYS	3.0
38	BC	125	SER	3.0
43	BH	34	GLU	3.0
48	DP	15	ARG	3.0
23	CX	15	A	3.0
30	D4	34	GLU	3.0
7	AG	79	ARG	3.0
23	CX	11	U	3.0
26	B0	6	GLY	3.0
30	B4	5	ILE	3.0
57	DY	75	ILE	3.0
36	DA	2801	A	3.0
25	CZ	13	ASN	3.0
40	DE	76	ARG	3.0
36	BA	1068	G	3.0
14	CN	14	PRO	3.0
19	AS	43	GLU	3.0
38	DC	55	ASP	3.0
16	CP	1	MET	3.0
25	CZ	253	VAL	2.9
1	AA	1030(D)	A	2.9
13	AM	122	LYS	2.9
25	CZ	177	LEU	2.9
1	CA	77	G	2.9
36	DA	1078	U	2.9

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Mol	Chain	Res	Type	RSRZ
36	DA	1097	U	2.9
51	DS	60	GLY	2.9
25	AZ	186	PRO	2.9
36	DA	1089	G	2.9
57	BY	86	ARG	2.9
28	D2	60	LEU	2.9
25	CZ	307	PRO	2.9
1	AA	1030(B)	C	2.9
36	BA	654(M)	C	2.9
56	BX	48	LYS	2.9
1	CA	80	G	2.9
36	BA	1073	A	2.9
48	DP	114	ILE	2.9
34	D8	48	PHE	2.9
52	BT	39	ARG	2.9
43	BH	44	VAL	2.9
9	AI	58	HIS	2.9
10	CJ	23	ILE	2.9
25	CZ	202	LEU	2.9
25	CZ	71	GLU	2.9
48	DP	76	LYS	2.9
35	D9	20	HIS	2.9
13	AM	7	VAL	2.8
25	CZ	266	VAL	2.8
32	B6	23	THR	2.8
38	DC	97	GLU	2.8
36	DA	34	C	2.8
36	DA	271(J)	C	2.8
7	AG	78	ARG	2.8
10	CJ	77	PRO	2.8
28	B2	54	LYS	2.8
22	CW	5	G	2.8
28	D2	71	ASN	2.8
25	CZ	157	LEU	2.8
36	BA	1420	U	2.8
36	BA	1080	C	2.8
57	BY	54	LYS	2.8
25	CZ	8	THR	2.8
38	BC	95	GLY	2.8
52	DT	134	GLU	2.8
36	BA	654(R)	C	2.8
38	DC	89	ALA	2.8

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Mol	Chain	Res	Type	RSRZ
27	B1	84	GLY	2.8
1	CA	1129	C	2.8
36	DA	1068	G	2.8
23	AX	13	A	2.8
36	DA	278	A	2.8
28	D2	42	GLY	2.8
36	DA	654(D)	G	2.8
4	CD	112	VAL	2.8
36	BA	2803	C	2.8
25	CZ	79	HIS	2.8
50	BR	118	GLU	2.7
23	CX	18	G	2.7
36	BA	157	U	2.7
36	BA	271(K)	U	2.7
36	BA	1535	A	2.7
22	AW	71	G	2.7
1	AA	1029	C	2.7
1	CA	1137	C	2.7
36	DA	1740	G	2.7
19	CS	9	VAL	2.7
57	DY	3	VAL	2.7
28	D2	43	GLN	2.7
9	CI	8	GLY	2.7
32	D6	21	TYR	2.7
36	BA	2801	A	2.7
36	DA	1173	G	2.7
25	CZ	145	GLU	2.7
28	B2	51	ARG	2.7
7	CG	82	GLY	2.7
57	BY	4	LYS	2.7
34	B8	63	PRO	2.7
1	CA	1257	U	2.7
4	AD	167	GLY	2.7
6	AF	101	ALA	2.7
43	BH	26	VAL	2.7
30	D4	11	PRO	2.7
36	BA	156	U	2.7
1	AA	1038	C	2.7
25	CZ	216	ASP	2.7
30	B4	30	GLU	2.7
36	BA	1078	U	2.7
52	BT	27	THR	2.7

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Mol	Chain	Res	Type	RSRZ
36	DA	1072	C	2.7
25	AZ	372	VAL	2.7
29	B3	9	VAL	2.7
36	BA	10	G	2.7
36	DA	1093	G	2.7
28	B2	9	GLN	2.6
6	CF	101	ALA	2.6
36	BA	1079	C	2.6
36	DA	2793	G	2.6
40	DE	59	VAL	2.6
52	BT	132	LYS	2.6
1	CA	91	C	2.6
36	DA	1071	G	2.6
20	AT	104	LEU	2.6
36	DA	229	A	2.6
51	DS	107	GLU	2.6
22	CW	44	G	2.6
23	CX	14	A	2.6
25	CZ	132	VAL	2.6
55	DW	1	MET	2.6
38	DC	130	ILE	2.6
2	AB	137	ARG	2.6
24	AY	19	G	2.6
41	DF	2	LYS	2.6
36	DA	1064	C	2.6
50	BR	3	HIS	2.6
40	DE	69	LYS	2.6
48	BP	102	ARG	2.6
40	DE	53	PRO	2.6
43	DH	43	VAL	2.6
1	AA	1024	G	2.6
25	CZ	158	LEU	2.6
48	BP	7	ARG	2.6
48	DP	102	ARG	2.6
22	CW	16	U	2.6
4	AD	152	SER	2.6
42	BG	126	ASP	2.6
55	BW	113	LYS	2.6
25	AZ	1	ALA	2.6
25	AZ	181	GLN	2.6
34	D8	35	GLN	2.6
42	DG	50	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
25	CZ	180	GLU	2.6
2	CB	132	LYS	2.5
22	AW	34	G	2.5
54	DV	73	SER	2.5
25	AZ	64	ASN	2.5
25	CZ	82	CYS	2.5
4	CD	42	GLN	2.5
25	CZ	261	GLU	2.5
25	CZ	321	TYR	2.5
49	BQ	80	GLU	2.5
26	D0	22	GLY	2.5
28	D2	64	LEU	2.5
36	BA	271(L)	U	2.5
13	CM	122	LYS	2.5
57	BY	34	LYS	2.5
38	BC	121	GLY	2.5
42	BG	28	VAL	2.5
43	BH	49	VAL	2.5
42	DG	75	LYS	2.5
57	DY	89	PHE	2.5
36	BA	654(U)	A	2.5
38	DC	129	ARG	2.5
24	CY	18	G	2.5
26	D0	13	GLY	2.5
33	B7	48	LYS	2.5
43	BH	56	SER	2.5
25	AZ	84	GLY	2.5
2	AB	128	GLU	2.5
25	CZ	251	ASP	2.5
35	B9	37	GLY	2.5
53	DU	118	GLY	2.5
36	BA	271(J)	C	2.5
25	CZ	296	GLU	2.5
38	DC	95	GLY	2.5
36	BA	2897	U	2.5
36	BA	1177	A	2.5
25	CZ	215	ARG	2.5
38	BC	93	TYR	2.5
11	AK	13	GLN	2.5
1	CA	78	G	2.5
38	BC	100	ILE	2.5
28	D2	4	SER	2.5

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Mol	Chain	Res	Type	RSRZ
57	DY	19	LYS	2.5
25	CZ	200	TRP	2.5
1	CA	723	U	2.5
25	CZ	268	THR	2.5
28	D2	68	ARG	2.5
20	CT	104	LEU	2.5
36	BA	614(B)	G	2.5
48	BP	118	GLY	2.5
36	BA	1081	U	2.5
1	CA	1002	G	2.5
38	DC	103	ILE	2.5
51	BS	23	ARG	2.5
41	DF	172	TRP	2.4
4	CD	161	ASN	2.4
9	CI	17	VAL	2.4
9	CI	88	TYR	2.4
1	CA	1026	G	2.4
22	CW	34	G	2.4
36	DA	1099	G	2.4
51	DS	54	LEU	2.4
36	DA	1073	A	2.4
2	CB	135	GLN	2.4
41	DF	25	PRO	2.4
25	CZ	227	ASP	2.4
1	CA	1030(B)	C	2.4
1	AA	1001	A	2.4
36	DA	271(K)	U	2.4
55	BW	5	ALA	2.4
36	BA	888	C	2.4
41	DF	194	MET	2.4
36	BA	2190	G	2.4
4	CD	154	ASN	2.4
28	D2	38	GLN	2.4
39	BD	25	THR	2.4
43	DH	51	ARG	2.4
12	CL	128	ALA	2.4
48	DP	127	ALA	2.4
25	CZ	405	GLU	2.4
25	CZ	277	LEU	2.4
25	AZ	65	THR	2.4
7	CG	85	TYR	2.4
25	AZ	252	GLU	2.4

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Mol	Chain	Res	Type	RSRZ
57	BY	65	ALA	2.4
39	BD	275	LYS	2.4
38	BC	97	GLU	2.4
54	BV	101	GLY	2.4
4	AD	154	ASN	2.4
7	AG	84	ASN	2.4
58	DZ	186	GLU	2.4
1	AA	79	G	2.4
36	DA	157	U	2.4
25	CZ	115	GLN	2.4
25	CZ	263	ARG	2.4
25	CZ	70	TYR	2.4
30	D4	30	GLU	2.4
51	DS	58	LEU	2.4
25	CZ	168	VAL	2.4
1	AA	1003	G	2.4
48	DP	90	ARG	2.4
3	CC	161	GLU	2.4
25	CZ	105	VAL	2.3
2	AB	122	PHE	2.3
43	BH	101	ARG	2.3
19	CS	43	GLU	2.3
22	CW	47	U	2.3
25	CZ	30	ALA	2.3
41	BF	14	PRO	2.3
43	BH	137	ASP	2.3
41	DF	18	ARG	2.3
43	DH	168	PRO	2.3
28	B2	6	VAL	2.3
48	DP	95	VAL	2.3
26	D0	4	LYS	2.3
57	BY	47	LYS	2.3
54	BV	53	GLU	2.3
4	CD	21	LEU	2.3
25	CZ	1	ALA	2.3
51	DS	83	LYS	2.3
1	AA	1456	G	2.3
22	AW	48	C	2.3
36	BA	654(Q)	C	2.3
36	DA	654(T)	C	2.3
38	DC	69	GLY	2.3
25	CZ	232	THR	2.3

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Mol	Chain	Res	Type	RSRZ
48	BP	15	ARG	2.3
25	AZ	88	TYR	2.3
25	CZ	304	LEU	2.3
41	BF	21	ALA	2.3
36	DA	2794	C	2.3
54	BV	36	PRO	2.3
25	CZ	252	GLU	2.3
52	BT	134	GLU	2.3
36	BA	1088	A	2.3
57	DY	4	LYS	2.3
48	DP	53	GLY	2.3
57	DY	56	PRO	2.3
38	BC	107	TRP	2.3
48	DP	99	LEU	2.3
33	D7	48	LYS	2.3
54	DV	94	LEU	2.3
25	CZ	6	VAL	2.3
40	BE	88	GLY	2.3
36	BA	1509(A)	A	2.3
25	CZ	153	GLU	2.3
36	BA	1175	U	2.3
58	BZ	162	GLU	2.3
36	BA	6	A	2.3
25	CZ	75	ARG	2.3
43	BH	136	ILE	2.3
41	BF	134	GLY	2.3
36	DA	271(N)	U	2.3
21	AU	9	ARG	2.3
23	CX	16	A	2.3
25	CZ	259	ALA	2.3
48	BP	126	VAL	2.3
1	AA	93	G	2.2
48	BP	149	GLU	2.2
10	CJ	73	ASP	2.2
43	DH	54	ARG	2.2
41	DF	129	PHE	2.2
34	D8	20	GLY	2.2
43	BH	158	HIS	2.2
23	CX	26	A	2.2
36	DA	508	G	2.2
38	DC	102	LYS	2.2
48	DP	87	ASP	2.2

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Mol	Chain	Res	Type	RSRZ
4	CD	164	ALA	2.2
25	CZ	130	TYR	2.2
30	D4	43	TYR	2.2
25	CZ	76	HIS	2.2
43	BH	168	PRO	2.2
36	BA	1063	G	2.2
48	BP	107	LYS	2.2
52	BT	137	LYS	2.2
11	CK	11	LYS	2.2
57	DY	21	LYS	2.2
1	AA	83	U	2.2
1	CA	1001(A)	G	2.2
36	DA	1063	G	2.2
9	CI	15	ALA	2.2
25	AZ	301	GLY	2.2
25	CZ	65	THR	2.2
57	BY	92	ASN	2.2
1	CA	1005	A	2.2
35	B9	20	HIS	2.2
25	CZ	248	LYS	2.2
30	D4	15	ILE	2.2
10	CJ	33	GLN	2.2
42	DG	118	ARG	2.2
43	BH	42	ARG	2.2
54	DV	1	MET	2.2
25	CZ	254	GLU	2.2
25	CZ	326	GLU	2.2
28	D2	19	VAL	2.2
43	BH	155	SER	2.2
41	DF	181	LEU	2.2
1	AA	82	U	2.2
36	DA	1420	U	2.2
43	BH	33	LEU	2.2
25	CZ	250	GLY	2.2
36	BA	654(A)	G	2.2
25	CZ	147	LEU	2.2
41	BF	26	ALA	2.2
49	BQ	140	ALA	2.2
42	BG	5	VAL	2.2
52	BT	2	ASN	2.2
36	DA	271(G)	C	2.2
25	CZ	203	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
1	AA	204	U	2.2
1	CA	1022	G	2.2
25	CZ	210	ILE	2.2
38	DC	94	VAL	2.2
48	DP	65	ARG	2.2
55	BW	82	LEU	2.1
16	AP	80	PHE	2.1
1	AA	1446	U	2.1
4	AD	35	ARG	2.1
19	CS	41	VAL	2.1
25	AZ	75	ARG	2.1
1	AA	73	G	2.1
36	BA	1173	G	2.1
36	BA	1541	G	2.1
57	BY	79	CYS	2.1
25	CZ	11	HIS	2.1
41	DF	83	PHE	2.1
7	CG	80	VAL	2.1
7	AG	81	GLY	2.1
25	AZ	212	THR	2.1
48	DP	51	PHE	2.1
16	AP	82	GLN	2.1
41	BF	10	PRO	2.1
26	B0	7	LEU	2.1
28	B2	60	LEU	2.1
36	BA	2189	U	2.1
36	DA	888	C	2.1
26	B0	5	LYS	2.1
57	BY	57	GLN	2.1
36	DA	2801(A)	A	2.1
41	DF	131	GLY	2.1
25	CZ	187	LYS	2.1
36	BA	2895	U	2.1
36	DA	2799	C	2.1
48	DP	150	ALA	2.1
27	B1	89	GLU	2.1
39	BD	38	LYS	2.1
36	BA	2173	A	2.1
36	BA	1089	G	2.1
38	DC	142	ALA	2.1
55	DW	55	ALA	2.1
38	DC	113	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
52	DT	2	ASN	2.1
57	DY	39	VAL	2.1
42	DG	47	LYS	2.1
34	D8	2	PRO	2.1
27	B1	86	SER	2.1
1	CA	90	U	2.1
38	DC	100	ILE	2.1
10	CJ	90	LEU	2.1
13	CM	43	THR	2.1
22	AW	70	G	2.1
36	DA	363	G	2.1
57	BY	90	LEU	2.1
25	CZ	334	PHE	2.1
36	BA	2804	C	2.1
9	CI	13	ALA	2.1
10	CJ	55	LYS	2.1
25	CZ	35	ALA	2.1
55	DW	73	ALA	2.1
19	CS	81	ARG	2.1
41	DF	156	LEU	2.1
48	DP	5	ASP	2.1
36	DA	1088	A	2.1
36	DA	889	C	2.1
26	D0	3	HIS	2.1
23	CX	17	U	2.1
25	AZ	35	ALA	2.1
25	CZ	102	ALA	2.1
4	AD	174	LEU	2.1
21	CU	24	ARG	2.0
48	DP	92	GLU	2.0
25	AZ	371	THR	2.0
40	DE	68	ALA	2.0
58	DZ	184	ALA	2.0
10	CJ	4	ILE	2.0
26	D0	76	GLY	2.0
9	CI	128	ARG	2.0
25	AZ	124	ARG	2.0
43	BH	86	GLU	2.0
1	CA	73	G	2.0
4	AD	18	LYS	2.0
22	AW	16	U	2.0
23	CX	20	U	2.0

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Mol	Chain	Res	Type	RSRZ
30	D4	4	GLY	2.0
36	BA	274	G	2.0
55	BW	1	MET	2.0
43	BH	32	GLU	2.0
43	DH	81	GLU	2.0
13	CM	31	LYS	2.0
36	BA	654(B)	C	2.0
36	DA	2179	C	2.0
41	DF	14	PRO	2.0
36	BA	1534	U	2.0
48	DP	27	HIS	2.0
29	D3	10	LYS	2.0
25	CZ	398	GLY	2.0
33	D7	47	ARG	2.0
48	BP	33	ARG	2.0
36	DA	1080	C	2.0
1	CA	1125	U	2.0
38	DC	126	LYS	2.0
48	DP	79	ARG	2.0
9	CI	6	GLY	2.0
36	DA	2805	G	2.0
10	CJ	86	MET	2.0
33	B7	1	MET	2.0
41	DF	161	GLU	2.0
23	CX	21	C	2.0

6.2 Non-standard residues in protein, DNA, RNA chains (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
24	H2U	CY	16	20/21	0.60	0.45	194,198,199,199	0
24	H2U	AY	16	20/21	0.61	0.47	196,198,199,200	0
24	H2U	CY	17	20/21	0.62	0.57	199,199,200,200	0
24	H2U	AY	17	20/21	0.68	0.36	199,199,200,200	0
24	PSU	CY	55	20/21	0.69	0.29	158,161,162,162	0
24	PSU	AY	55	20/21	0.77	0.25	156,161,162,162	0
24	4SU	AY	8	20/21	0.77	0.21	142,144,146,146	0
24	H2U	CY	20	20/21	0.79	0.38	188,191,192,192	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
24	5MU	AY	54	21/22	0.81	0.20	139,150,152,154	0
24	4SU	CY	8	20/21	0.81	0.27	143,145,147,148	0
24	H2U	AY	20	20/21	0.83	0.43	186,189,193,193	0
24	5MU	CY	54	21/22	0.84	0.26	139,149,151,155	0
24	7MG	AY	46	24/25	0.84	0.27	145,150,151,151	0
24	7MG	CY	46	24/25	0.85	0.30	148,153,154,154	0
24	OMC	CY	32	21/22	0.87	0.29	108,114,121,121	0
24	OMC	AY	32	21/22	0.89	0.20	101,105,115,115	0
24	MIA	AY	37	29/30	0.91	0.25	64,78,89,98	0
24	MIA	CY	37	29/30	0.92	0.23	80,87,95,99	0

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

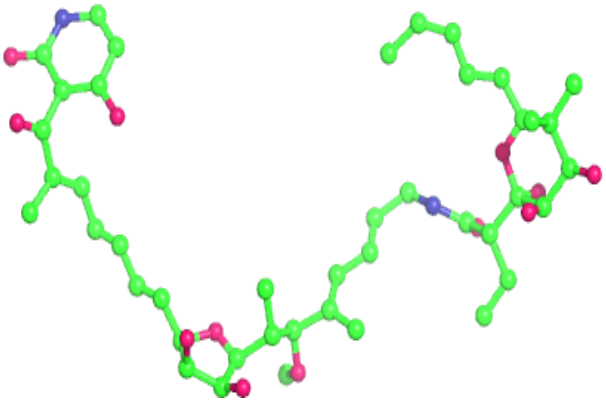
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

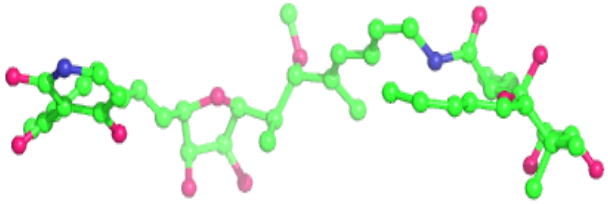
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
61	KIR	CZ	502	57/57	0.67	0.62	122,131,140,141	0
60	GDP	AZ	501	28/28	0.69	0.31	129,133,138,138	0
60	GDP	CZ	501	28/28	0.70	0.26	137,140,141,141	0
61	KIR	AZ	502	57/57	0.81	0.36	115,122,129,130	0
59	ZN	D4	101	1/1	0.85	0.12	196,196,196,196	0
59	ZN	D9	101	1/1	0.90	0.17	141,141,141,141	0
59	ZN	B9	101	1/1	0.92	0.12	113,113,113,113	0
59	ZN	B4	101	1/1	0.95	0.13	112,112,112,112	0
59	ZN	AN	101	1/1	0.98	0.18	48,48,48,48	0
59	ZN	AD	301	1/1	0.99	0.27	74,74,74,74	0
59	ZN	CD	301	1/1	0.99	0.28	79,79,79,79	0
59	ZN	CN	101	1/1	0.99	0.17	77,77,77,77	0

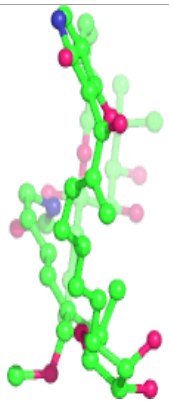
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around KIR CZ 502:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

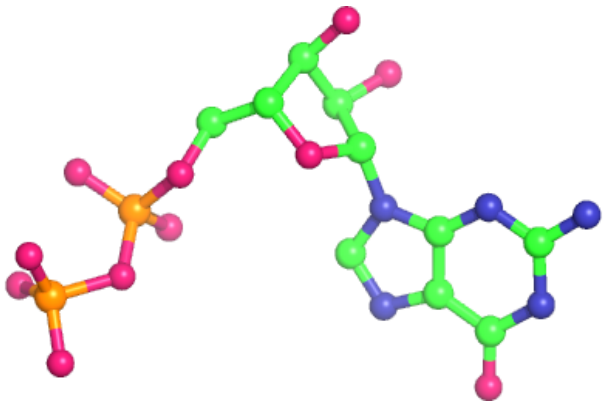


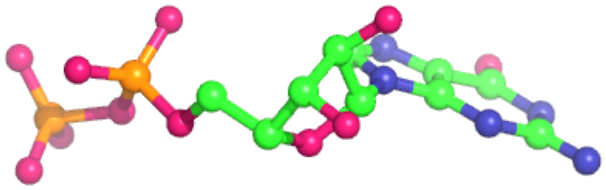


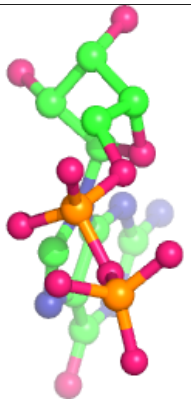


Electron density around GDP AZ 501:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

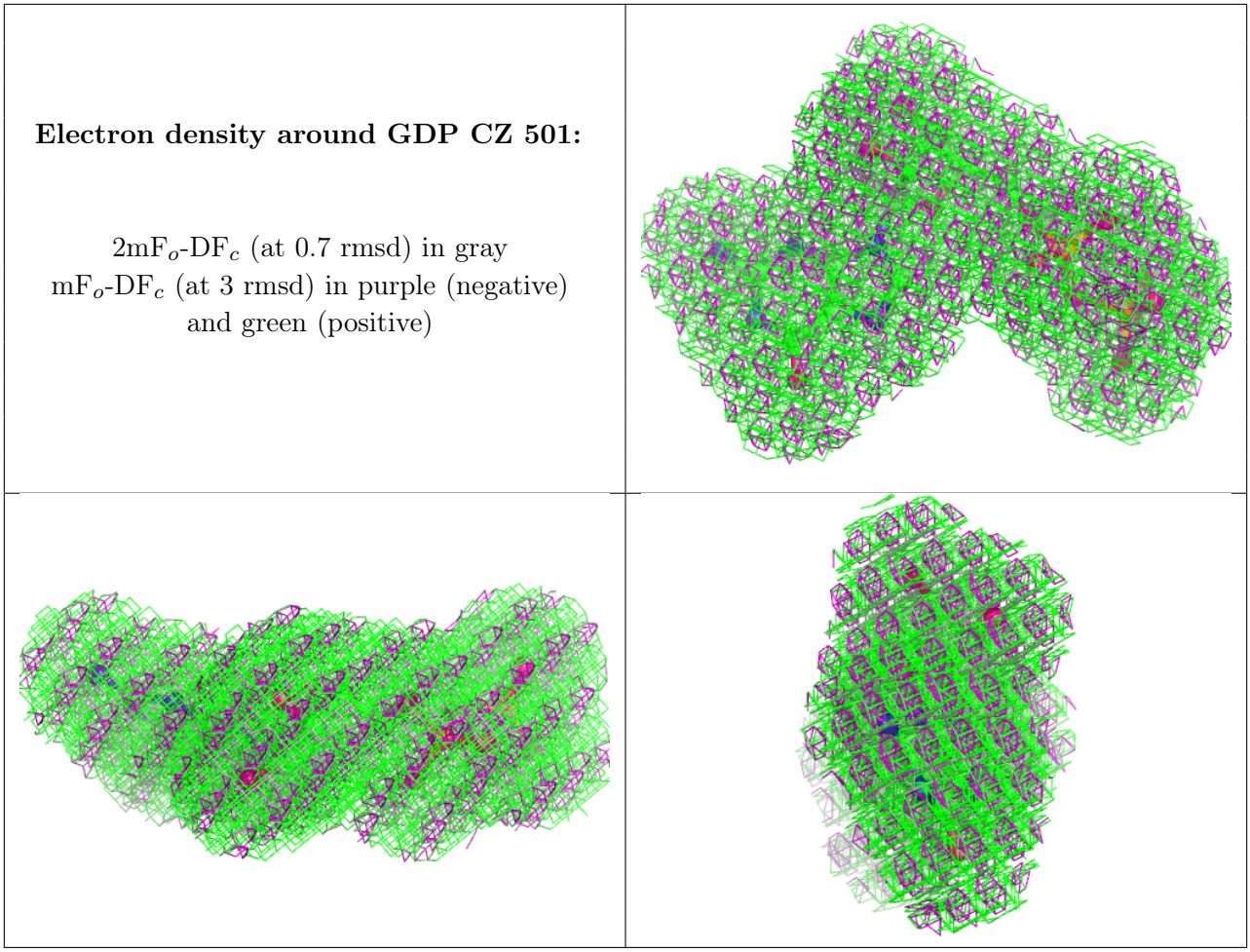






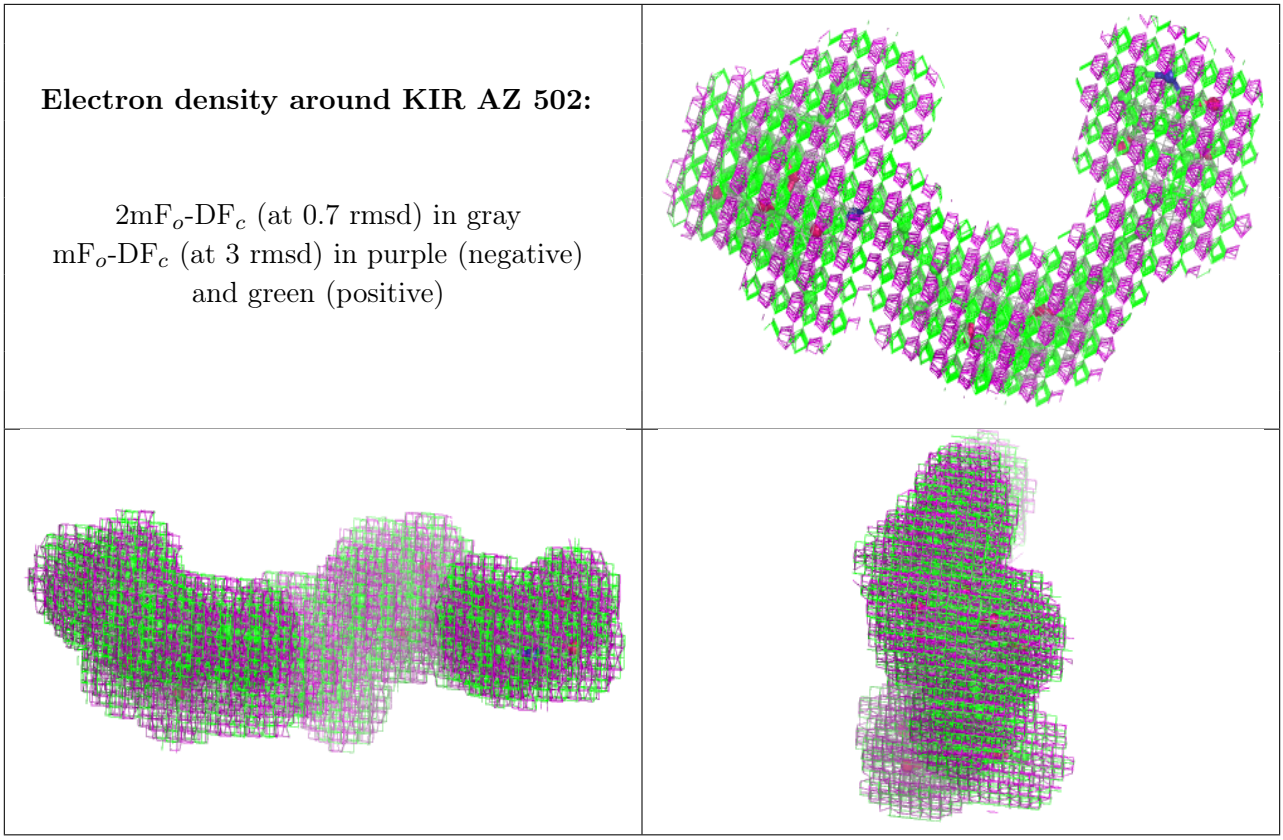
Electron density around GDP CZ 501:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



Electron density around KIR AZ 502:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



6.5 Other polymers (i)

There are no such residues in this entry.