



Full wwPDB X-ray Structure Validation Report ⓘ

Sep 26, 2023 – 10:20 AM EDT

PDB ID : 6C5L
Title : Conformation of methylated GGQ in the Peptidyl Transferase Center during translation termination (*T. thermophilus*)
Authors : Zeng, F.; Jin, H.
Deposited on : 2018-01-16
Resolution : 3.20 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 : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.35.1
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) : 2.35.1

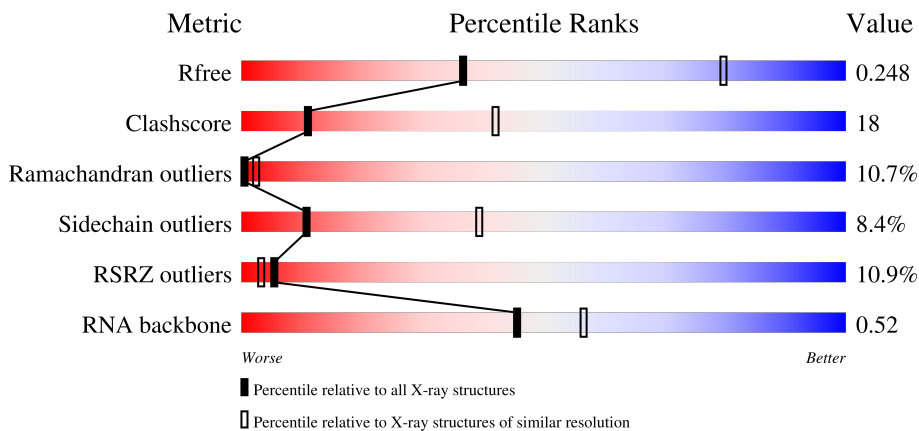
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.20 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	1133 (3.20-3.20)
Clashscore	141614	1253 (3.20-3.20)
Ramachandran outliers	138981	1234 (3.20-3.20)
Sidechain outliers	138945	1233 (3.20-3.20)
RSRZ outliers	127900	1095 (3.20-3.20)
RNA backbone	3102	1010 (3.50-2.90)

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 $\leq 5\%$. 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	 13% 38% 49% 10% ..
1	CA	1522	 13% 38% 49% 11% ..
2	AB	256	 7% 13% 34% 45% 11% • 8%
2	CB	256	 7% 38% 43% 9% • 8%

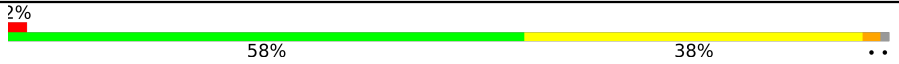
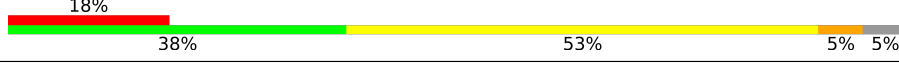
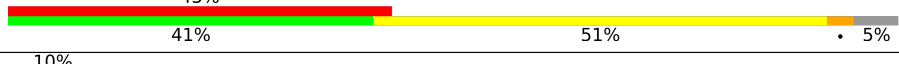


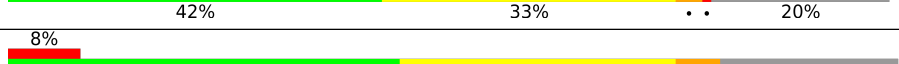
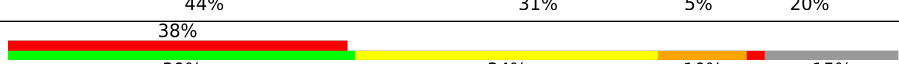
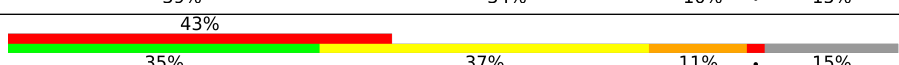
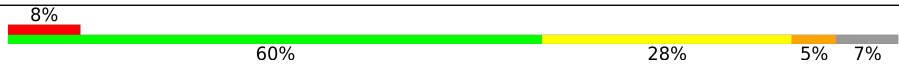




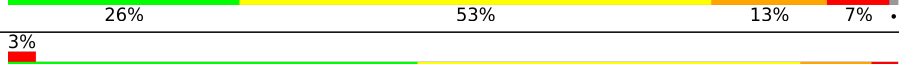
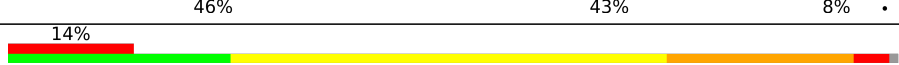
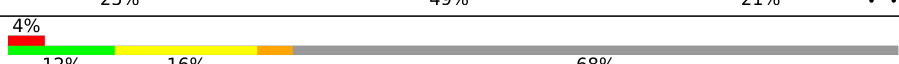
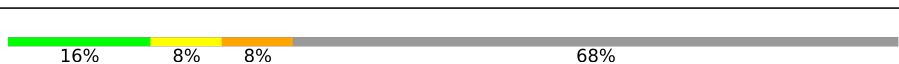

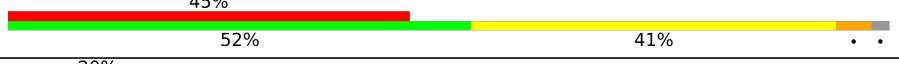






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Mol	Chain	Length	Quality of chain
3	AC	239	
3	CC	239	
4	AD	209	
4	CD	209	
5	AE	162	
5	CE	162	
6	AF	101	
6	CF	101	
7	AG	156	
7	CG	156	
8	AH	138	
8	CH	138	
9	AI	128	
9	CI	128	
10	AJ	105	
10	CJ	105	
11	AK	129	
11	CK	129	
12	AL	132	
12	CL	132	
13	AM	126	
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	
23	AX	25	
23	CX	25	
24	AY	357	
24	CY	357	
25	B0	85	
25	D0	85	
26	B1	98	
26	D1	98	

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Mol	Chain	Length	Quality of chain
27	B2	72	
27	D2	72	
28	B3	60	
28	D3	60	
29	B4	71	
29	D4	71	
30	B5	60	
30	D5	60	
31	B6	54	
31	D6	54	
32	B7	49	
32	D7	49	
33	B8	65	
33	D8	65	
34	B9	37	
34	D9	37	
35	BA	2915	
35	DA	2915	
36	BB	122	
36	DB	122	
37	BC	229	
37	DC	229	
38	BD	276	
38	DD	276	
39	BE	206	

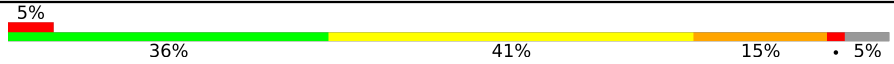
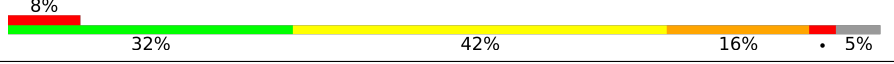


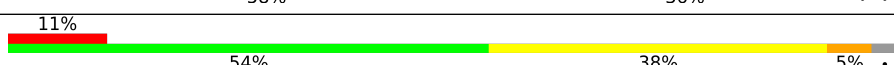
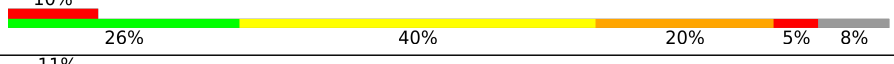
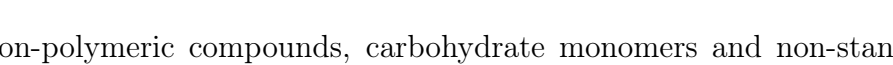
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Mol	Chain	Length	Quality of chain
39	DE	206	10% 49% 41% 10%
40	BF	210	3% 51% 37% 10%
40	DF	210	2% 49% 40% 9%
41	BG	182	14% 32% 51% 15%
41	DG	182	6% 36% 45% 15%
42	BH	180	33% 43% 37% 10% 8%
42	DH	180	12% 42% 38% 10% 8%
43	BI	148	11% 49% 37% 10%
43	DI	148	2% 49% 38% 11%
44	BJ	130	82% 18%
44	DJ	130	84% 16%
45	BK	147	57% 37% 45% 13%
45	DK	147	65% 30% 50% 14%
46	BN	140	15% 60% 33% 6%
46	DN	140	3% 56% 36% 6%
47	BO	122	5% 63% 34%
47	DO	122	5% 67% 30%
48	BP	150	14% 33% 35% 25%
48	DP	150	4% 36% 33% 25%
49	BQ	141	6% 54% 43%
49	DQ	141	9% 51% 42% 6%
50	BR	118	4% 51% 40% 8%
50	DR	118	6% 56% 38% 8%
51	BS	112	19% 39% 38% 8% 12%
51	DS	112	26% 37% 40% 7% 12%

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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	MEQ	CY	240	-	-	-	X
59	MG	AA	1617	-	-	-	X
59	MG	AA	1622	-	-	-	X
59	MG	BA	3082	-	-	-	X
59	MG	BA	3105	-	-	-	X
59	MG	BA	3120	-	-	-	X
59	MG	BA	3125	-	-	-	X
59	MG	BA	3144	-	-	-	X
59	MG	BA	3155	-	-	-	X
59	MG	BA	3162	-	-	-	X
59	MG	BA	3174	-	-	-	X
59	MG	BA	3179	-	-	-	X
59	MG	BB	202	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
59	MG	BQ	201	-	-	-	X
59	MG	BT	201	-	-	-	X
59	MG	CA	1606	-	-	-	X
59	MG	CA	1617	-	-	-	X
59	MG	DA	3104	-	-	-	X
59	MG	DA	3163	-	-	-	X
59	MG	DA	3176	-	-	-	X
60	ZN	B9	101	-	-	-	X

2 Entry composition

There are 61 unique types of molecules in this entry. The entry contains 304459 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
			Total	C	N	O	P			
1	AA	1504	Total 32329	C 14390	N 5992	O 10444	P 1503	0	0	0
1	CA	1504	Total 32329	C 14390	N 5992	O 10444	P 1503	0	0	0

- Molecule 2 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	AB	235	Total 1901	C 1213	N 342	O 341	S 5	0	0	1
2	CB	235	Total 1901	C 1213	N 342	O 341	S 5	0	0	1

- Molecule 3 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	AC	207	Total 1613	C 1016	N 315	O 281	S 1	0	0	1
3	CC	207	Total 1613	C 1016	N 315	O 281	S 1	0	0	1

- Molecule 4 is a protein called 30S ribosomal protein S4.

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

- Molecule 5 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	151	Total	C	N	O	S	0	0	1
			1147	724	218	201	4			
5	CE	151	Total	C	N	O	S	0	0	1
			1147	724	218	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
			1011	639	198	174			
9	CI	127	Total	C	N	O	0	0	0
			1011	639	198	174			

- Molecule 10 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AJ	99	Total	C	N	O	S	0	0	1
			795	499	157	138	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
10	CJ	99	795	499	157	138	1	0	0	1

- Molecule 11 is a protein called 30S ribosomal protein S11.

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

- Molecule 12 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
12	AL	125	971	611	196	163	1	0	0	1
12	CL	125	971	611	196	163	1	0	0	1

- Molecule 13 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
13	AM	125	988	611	206	169	2	0	0	1
13	CM	125	988	611	206	169	2	0	0	1

- Molecule 14 is a protein called 30S ribosomal protein S14 type Z.

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

- Molecule 15 is a protein called 30S ribosomal protein S15.

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

- Molecule 16 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AP	84	Total	C	N	O	S	0	0	1
			701	443	140	117	1			
16	CP	84	Total	C	N	O	S	0	0	1
			701	443	140	117	1			

- Molecule 17 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	100	Total	C	N	O	S	0	0	1
			824	528	152	142	2			
17	CQ	100	Total	C	N	O	S	0	0	1
			824	528	152	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	79	Total	C	N	O	S	0	0	1
			630	403	115	110	2			
19	CS	79	Total	C	N	O	S	0	0	1
			630	403	115	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	25	Total	C	N	O	0	0	1
			209	128	51	30			
21	CU	25	Total	C	N	O	0	0	1
			209	128	51	30			

- Molecule 22 is a RNA chain called E-site tRNA PHE OR P-site tRNA PHE (unmodified bases).

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	75	Total	C	N	O	P	0	0	0
			1597	713	285	525	74			
22	CV	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
22	CW	75	Total	C	N	O	P	0	0	0
			1597	713	285	525	74			

- Molecule 23 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace	
23	AX	8	Total	C	N	O	P	0	0	0
			166	76	29	54	7			
23	CX	8	Total	C	N	O	P	0	0	0
			166	76	29	54	7			

- Molecule 24 is a protein called Peptide chain release factor 2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	AY	351	Total	C	N	O	S	0	0	0
			2802	1753	506	535	8			
24	CY	351	Total	C	N	O	S	0	0	0
			2802	1753	506	535	8			

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AY	0	HIS	-	expression tag	UNP F6DD48
AY	1	HIS	-	expression tag	UNP F6DD48
AY	2	HIS	-	expression tag	UNP F6DD48
AY	3	HIS	-	expression tag	UNP F6DD48
AY	4	HIS	-	expression tag	UNP F6DD48
AY	5	HIS	-	expression tag	UNP F6DD48

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Chain	Residue	Modelled	Actual	Comment	Reference
CY	0	HIS	-	expression tag	UNP F6DD48
CY	1	HIS	-	expression tag	UNP F6DD48
CY	2	HIS	-	expression tag	UNP F6DD48
CY	3	HIS	-	expression tag	UNP F6DD48
CY	4	HIS	-	expression tag	UNP F6DD48
CY	5	HIS	-	expression tag	UNP F6DD48

- Molecule 25 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
25	B0	83	657	407	139	110	1	0	0	0
25	D0	83	657	407	139	110	1	0	0	0

- Molecule 26 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
26	B1	94	732	460	146	125	1	0	0	1
26	D1	94	732	460	146	125	1	0	0	1

- Molecule 27 is a protein called 50S ribosomal protein L29.

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

- Molecule 28 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
28	B3	60	468	298	91	78	1	0	0	1
28	D3	60	468	298	91	78	1	0	0	1

- Molecule 29 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	B4	31	Total	C	N	O	S	0	0	1
			226	142	37	43	4			
29	D4	31	Total	C	N	O	S	0	0	1
			226	142	37	43	4			

- Molecule 30 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	B5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			
30	D5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			

- Molecule 31 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	B6	45	Total	C	N	O	S	0	0	1
			381	235	78	64	4			
31	D6	45	Total	C	N	O	S	0	0	1
			381	235	78	64	4			

- Molecule 32 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	B7	49	Total	C	N	O	S	0	0	1
			419	257	105	55	2			
32	D7	49	Total	C	N	O	S	0	0	1
			419	257	105	55	2			

- Molecule 33 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	B8	64	Total	C	N	O	S	0	0	1
			508	326	102	78	2			
33	D8	64	Total	C	N	O	S	0	0	1
			508	326	102	78	2			

- Molecule 34 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	B9	36	Total	C	N	O	S	0	0	0
			299	183	67	46	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	D9	36	Total	C	N	O	S	0	0	0
			299	183	67	46	3			

- Molecule 35 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BA	2901	Total	C	N	O	P	0	0	0
			62474	27806	11681	20087	2900			
35	DA	2901	Total	C	N	O	P	0	0	0
			62474	27806	11681	20087	2900			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BA	1227	G	UNK	conflict	GB 37223181
DA	1227	G	UNK	conflict	GB 37223181

- Molecule 36 is a RNA chain called 5S rRNA.

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

- Molecule 37 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BC	120	Total	C	N	O	S	0	0	0
			937	590	174	172	1			
37	DC	120	Total	C	N	O	S	0	0	0
			937	590	174	172	1			

- Molecule 38 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BD	273	Total	C	N	O	S	0	0	0
			2120	1338	421	358	3			
38	DD	273	Total	C	N	O	S	0	0	0
			2120	1338	421	358	3			

- Molecule 39 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BE	205	Total	C	N	O	S	0	0	1
			1564	988	300	270	6			
39	DE	205	Total	C	N	O	S	0	0	1
			1564	988	300	270	6			

- Molecule 40 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BF	208	Total	C	N	O	S	0	0	1
			1624	1035	304	282	3			
40	DF	208	Total	C	N	O	S	0	0	1
			1624	1035	304	282	3			

- Molecule 41 is a protein called 50S ribosomal protein L5.

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

- Molecule 42 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BH	165	Total	C	N	O	S	0	0	1
			1248	788	234	225	1			
42	DH	165	Total	C	N	O	S	0	0	1
			1248	788	234	225	1			

- Molecule 43 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BI	146	Total	C	N	O	S	0	0	1
			1132	723	201	207	1			
43	DI	146	Total	C	N	O	S	0	0	1
			1132	723	201	207	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	390	130	131			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
44	DJ	130	651	390	130	131	0	0	0

- Molecule 45 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
45	BK	141	1038	661	184	187	6	0	0	1
45	DK	141	1038	661	184	187	6	0	0	1

- Molecule 46 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
46	BN	139	1105	712	207	182	4	0	0	1
46	DN	139	1105	712	207	182	4	0	0	1

- Molecule 47 is a protein called 50S ribosomal protein L14.

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

- Molecule 48 is a protein called 50S ribosomal protein L15.

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

- Molecule 49 is a protein called 50S ribosomal protein L16.

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

- Molecule 50 is a protein called 50S ribosomal protein L17.

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

- Molecule 51 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
51	BS	99	771	486	155	130	0	0	1
51	DS	99	771	486	155	130	0	0	1

- Molecule 52 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
52	BT	138	1142	710	235	196	1	0	0	1
52	DT	138	1142	710	235	196	1	0	0	1

- Molecule 53 is a protein called 50S ribosomal protein L20.

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

- Molecule 54 is a protein called 50S ribosomal protein L21.

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

- 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	93	Total	C	N	O	0	0	1
			726	471	132	123			
56	DX	93	Total	C	N	O	0	0	1
			726	471	132	123			

- Molecule 57 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	BY	101	Total	C	N	O	S	0	0	1
			776	500	149	123	4			
57	DY	101	Total	C	N	O	S	0	0	1
			776	500	149	123	4			

- Molecule 58 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
58	BZ	185	Total	C	N	O	S	0	0	1
			1468	936	262	268	2			
58	DZ	185	Total	C	N	O	S	0	0	1
			1468	936	262	268	2			

- Molecule 59 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	AA	30	Total	Mg	0	0
			30	30		
59	B5	1	Total	Mg	0	0
			1	1		
59	BA	180	Total	Mg	0	0
			180	180		
59	BB	2	Total	Mg	0	0
			2	2		
59	BD	1	Total	Mg	0	0
			1	1		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	BE	1	Total Mg 1 1	0	0
59	BF	1	Total Mg 1 1	0	0
59	BQ	1	Total Mg 1 1	0	0
59	BT	1	Total Mg 1 1	0	0
59	CA	26	Total Mg 26 26	0	0
59	D5	2	Total Mg 2 2	0	0
59	DA	221	Total Mg 221 221	0	0
59	DB	2	Total Mg 2 2	0	0
59	DD	2	Total Mg 2 2	0	0
59	DP	1	Total Mg 1 1	0	0
59	DU	1	Total Mg 1 1	0	0
59	DW	1	Total Mg 1 1	0	0

- Molecule 60 is ZINC ION (three-letter code: ZN) (formula: Zn).

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

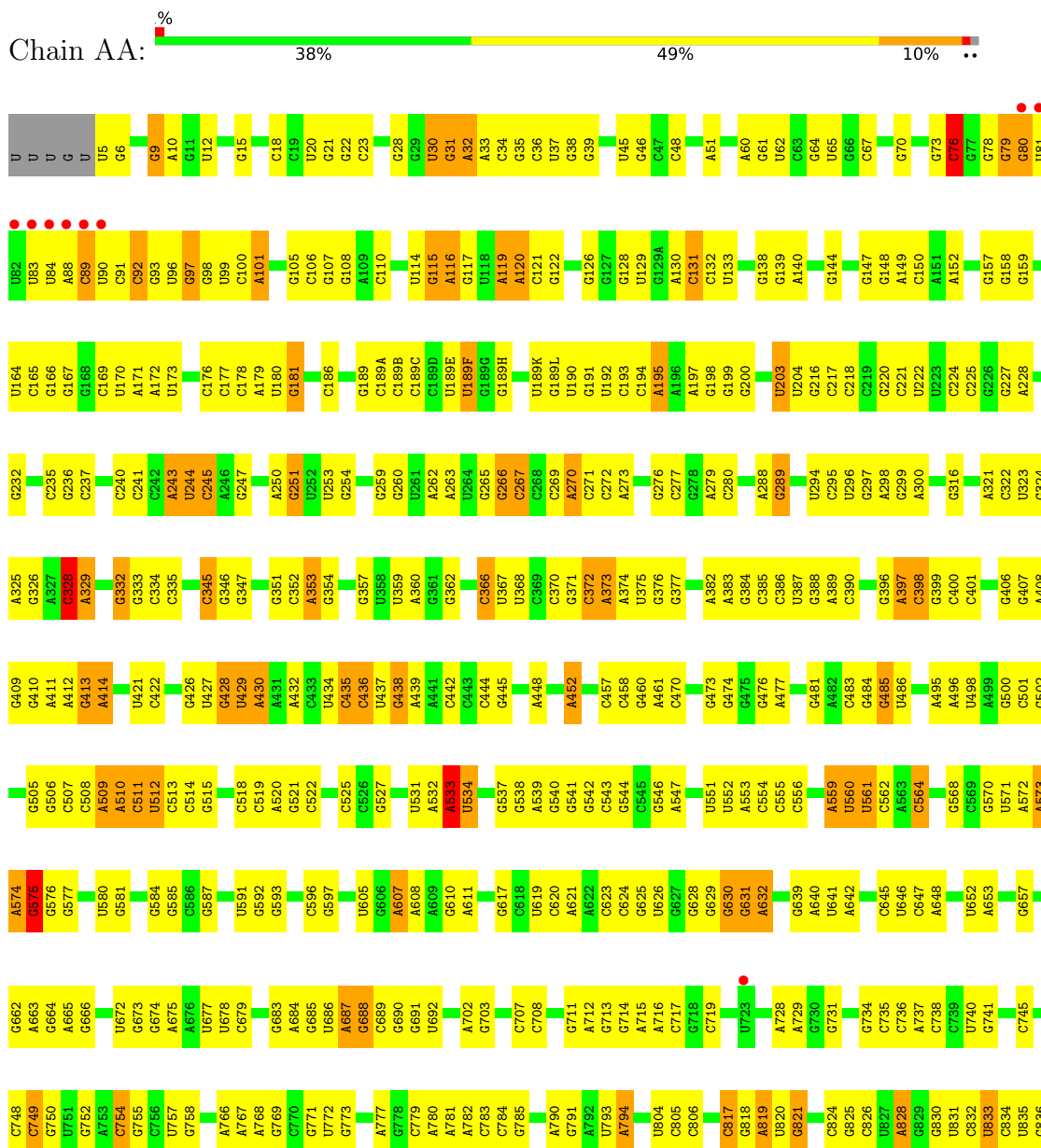
- Molecule 61 is water.

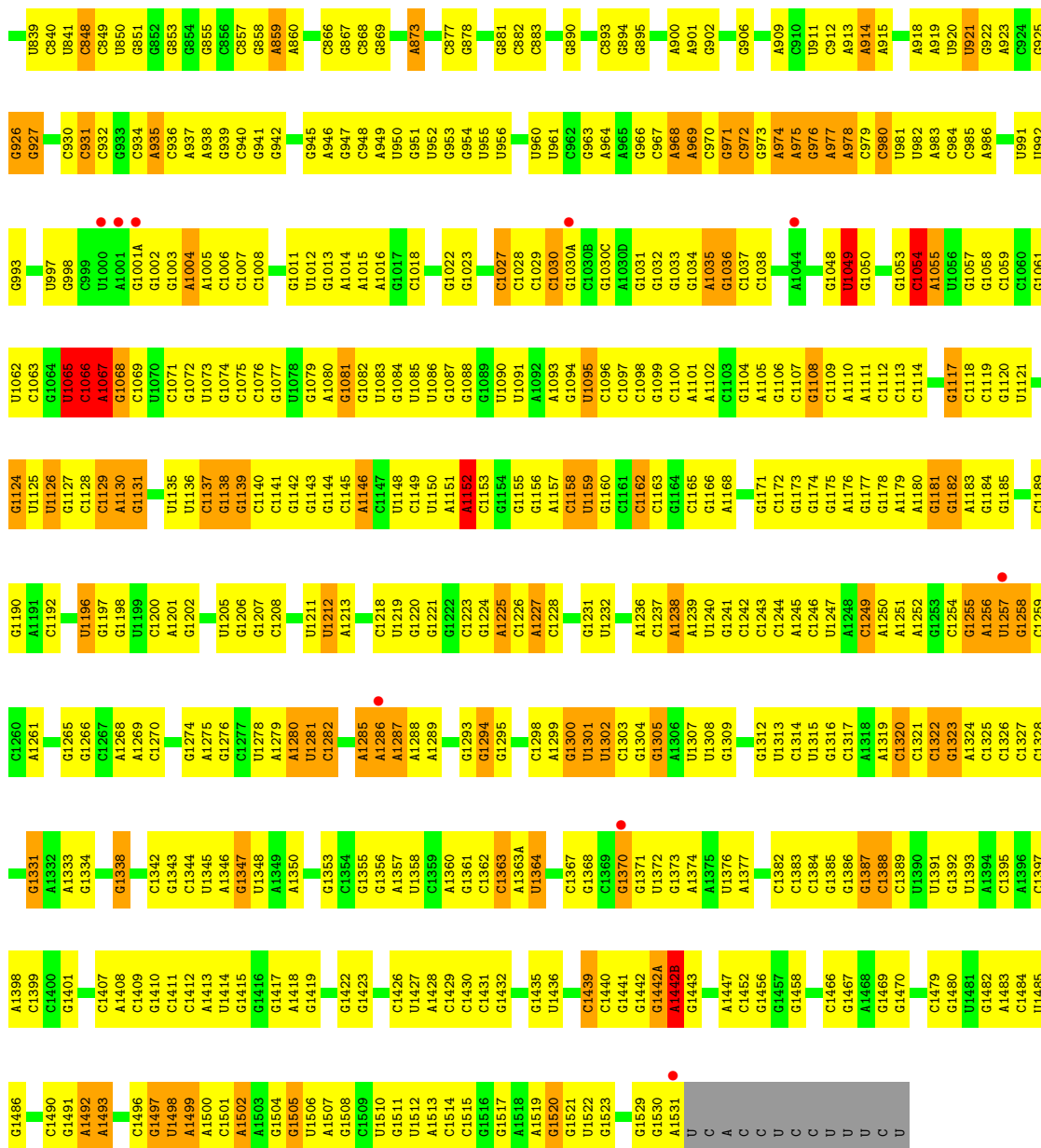
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	AA	2	Total O 2 2	0	0
61	BA	6	Total O 6 6	0	0
61	BE	1	Total O 1 1	0	0
61	DA	7	Total O 7 7	0	0
61	DE	1	Total O 1 1	0	0
61	DS	1	Total O 1 1	0	0
61	DZ	1	Total O 1 1	0	0

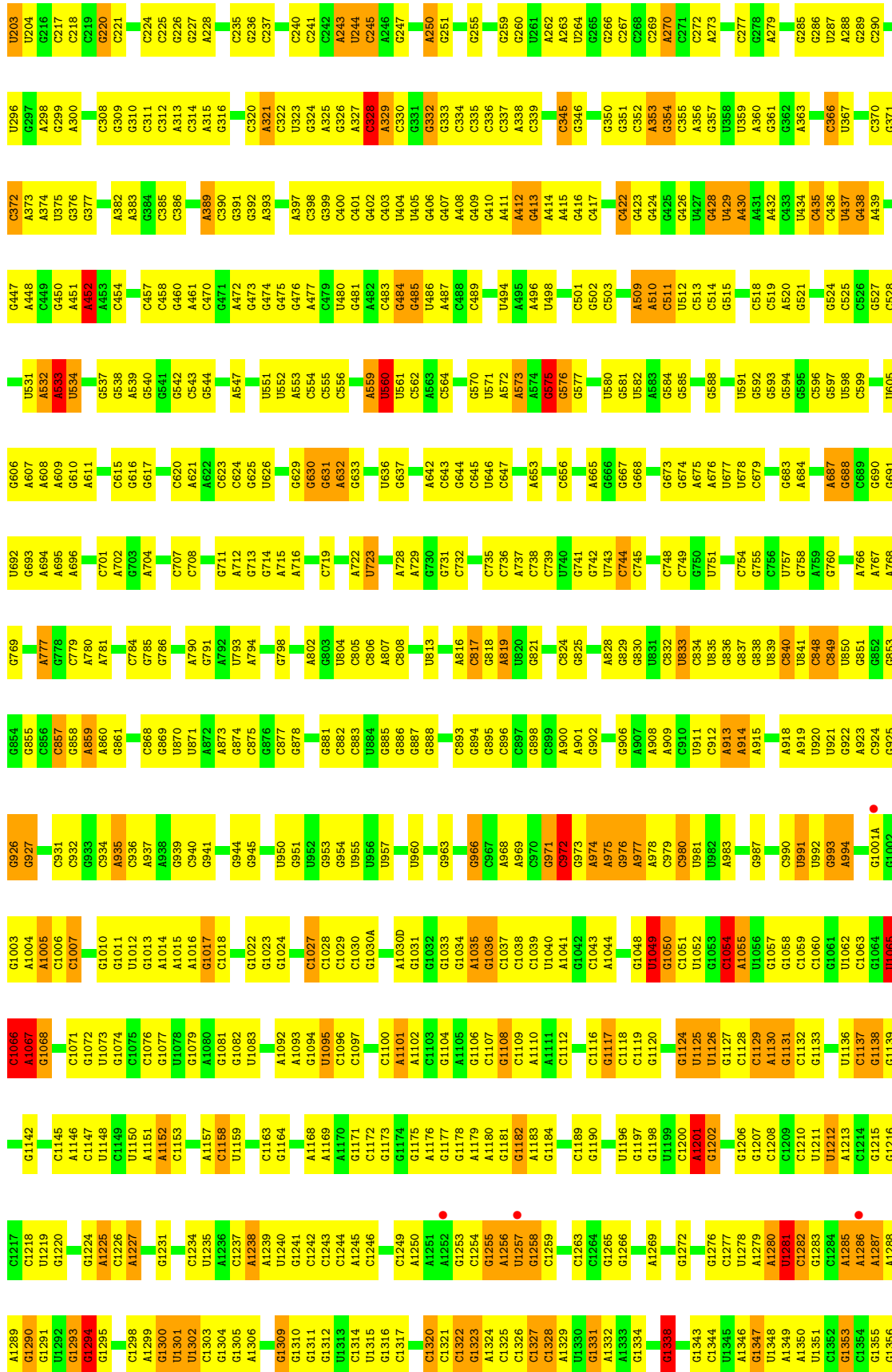
3 Residue-property plots

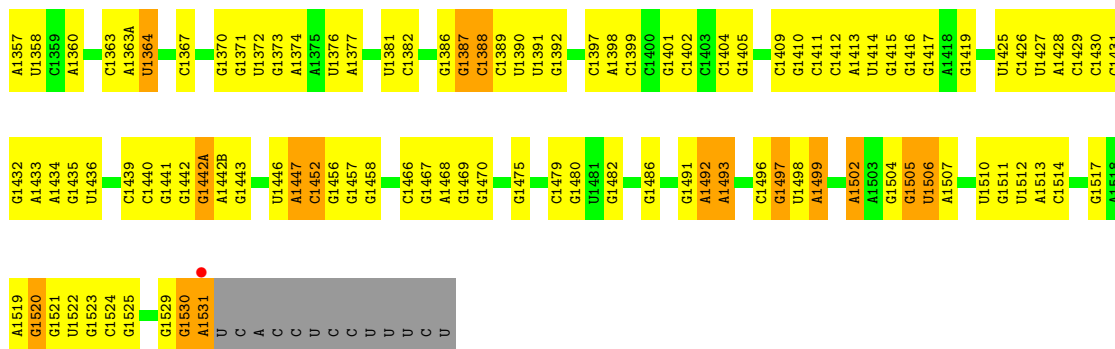
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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

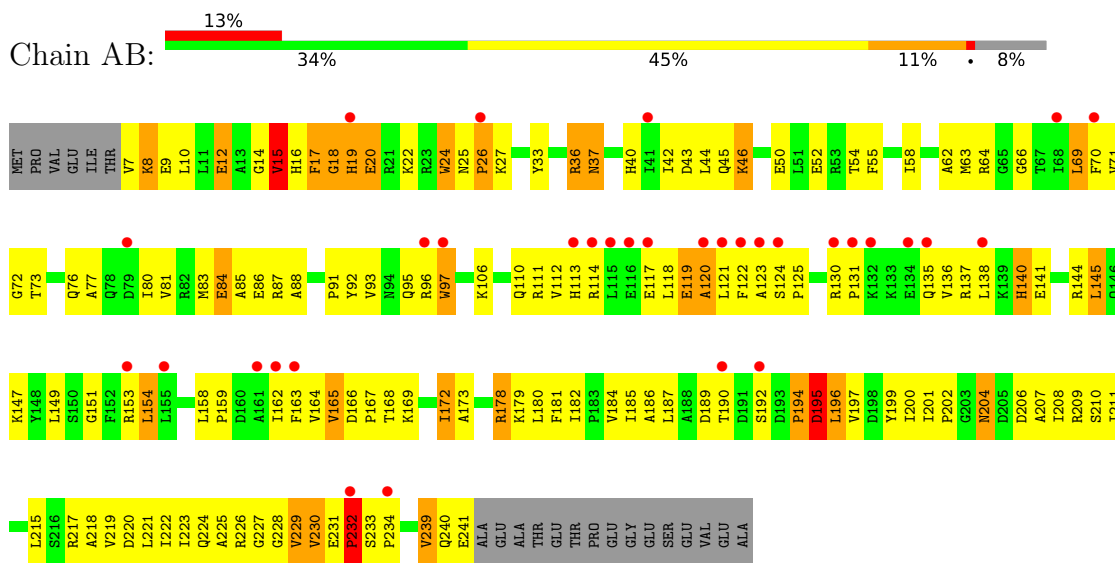




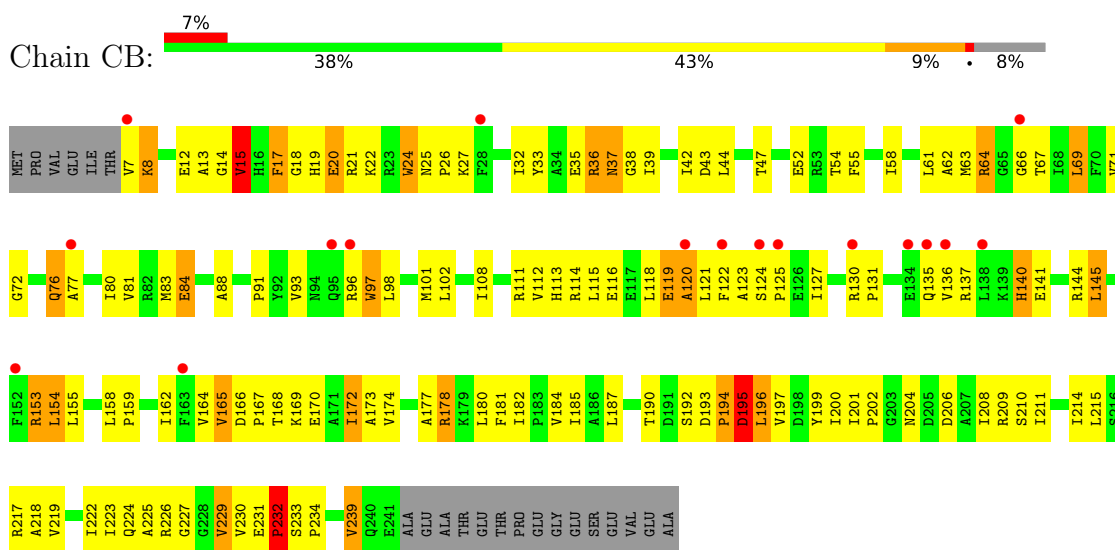




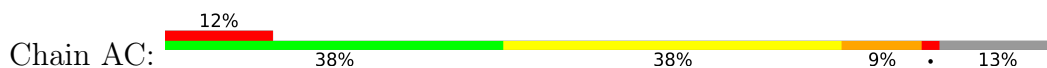
• Molecule 2: 30S ribosomal protein S2

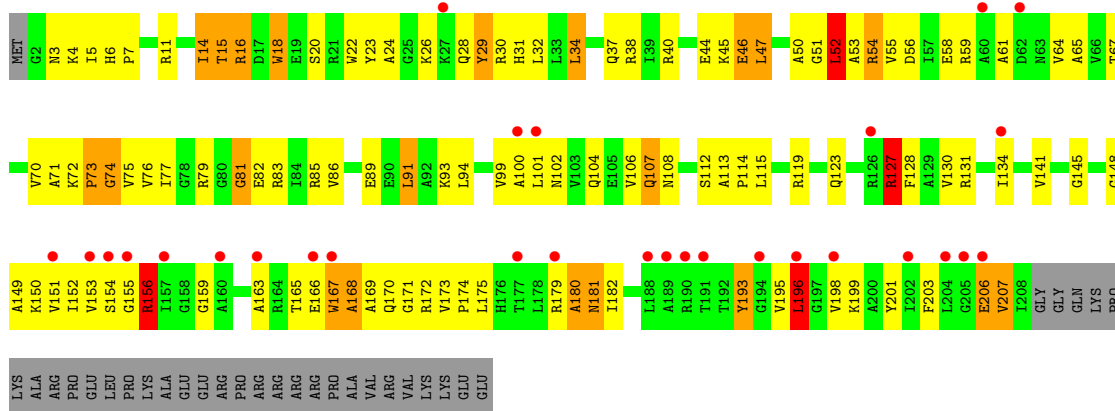


• Molecule 2: 30S ribosomal protein S2

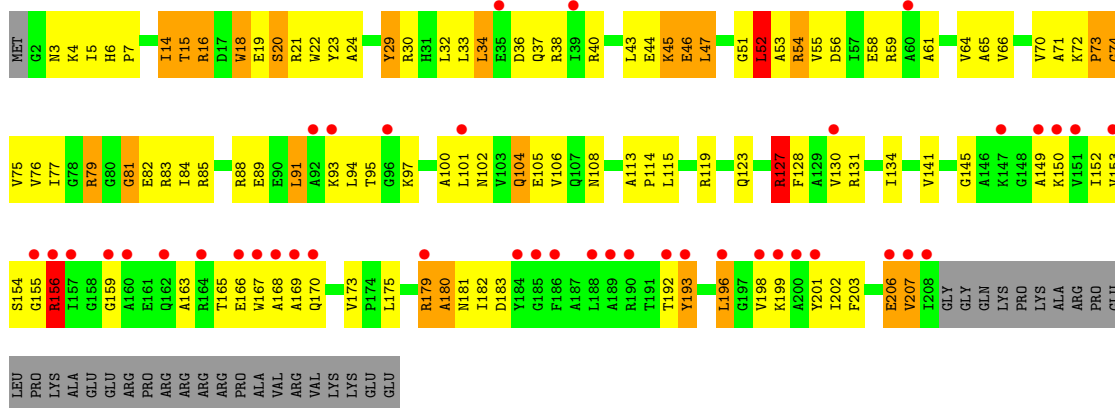
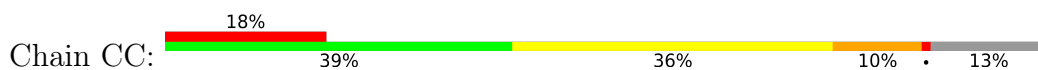


• Molecule 3: 30S ribosomal protein S3

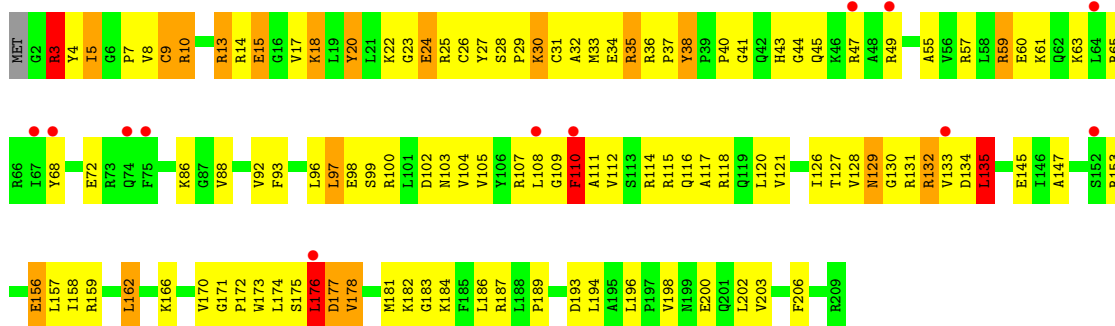




• Molecule 3: 30S ribosomal protein S3

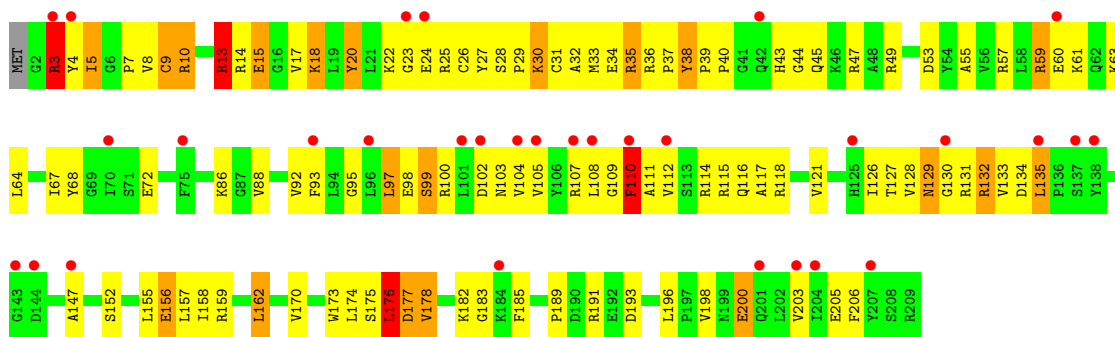


• Molecule 4: 30S ribosomal protein S4

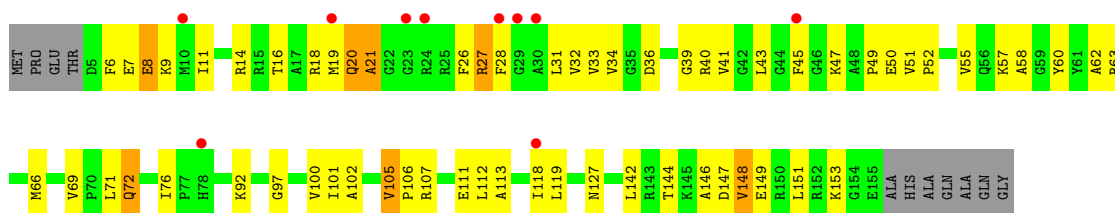


• Molecule 4: 30S ribosomal protein S4

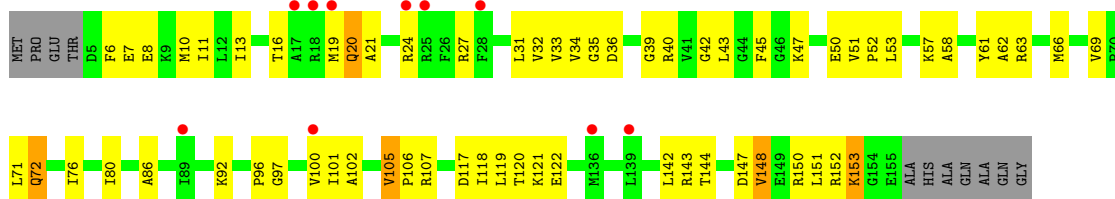




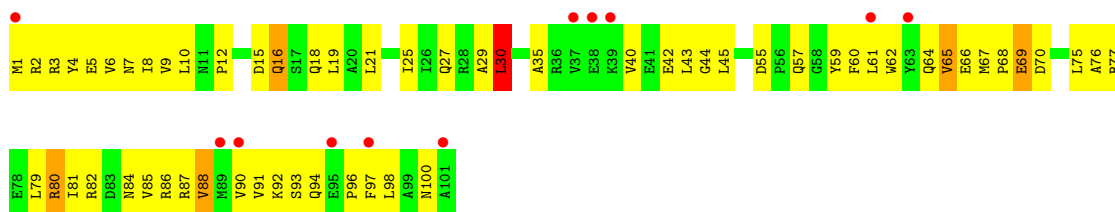
- Molecule 5: 30S ribosomal protein S5



- Molecule 5: 30S ribosomal protein S5

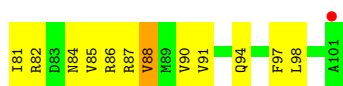


- Molecule 6: 30S ribosomal protein S6

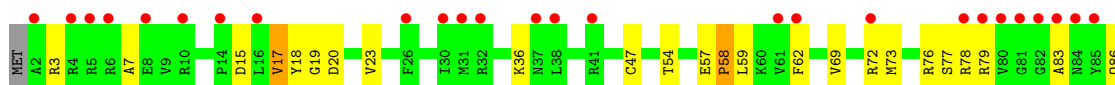


- Molecule 6: 30S ribosomal protein S6





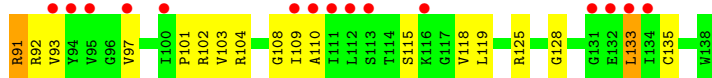
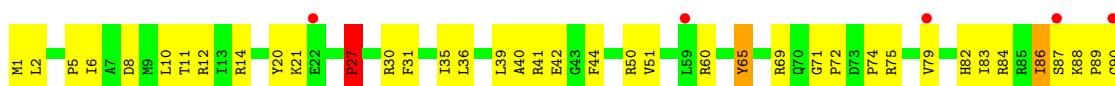
- Molecule 7: 30S ribosomal protein S7



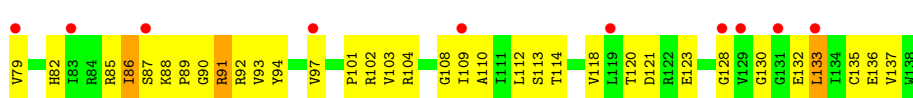
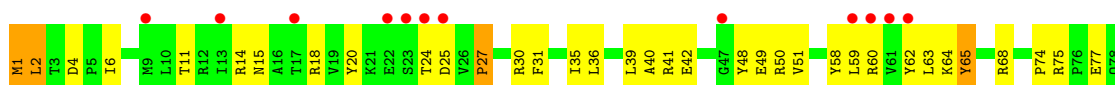
- Molecule 7: 30S ribosomal protein S7



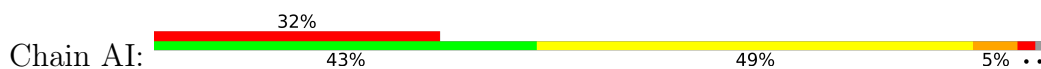
- Molecule 8: 30S ribosomal protein S8

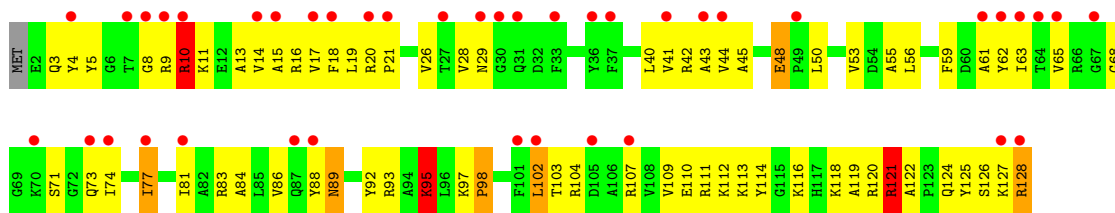


- Molecule 8: 30S ribosomal protein S8

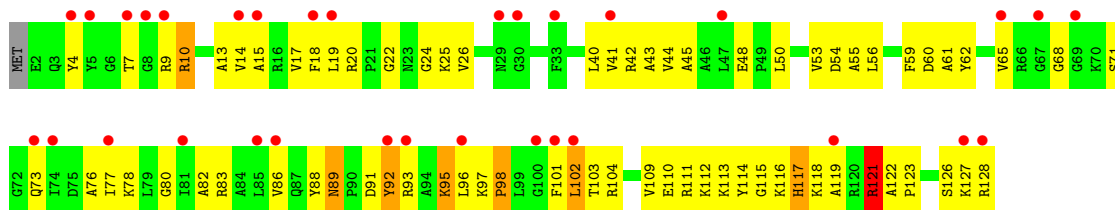


- Molecule 9: 30S ribosomal protein S9

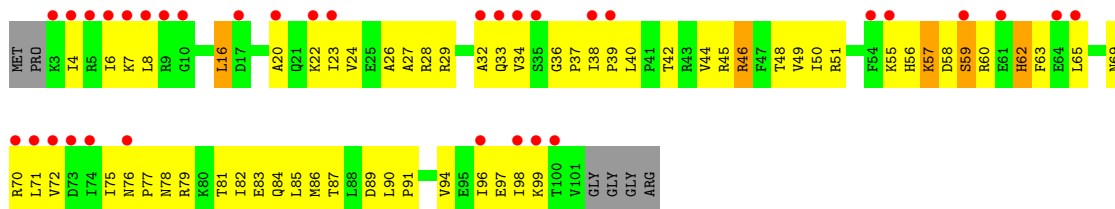




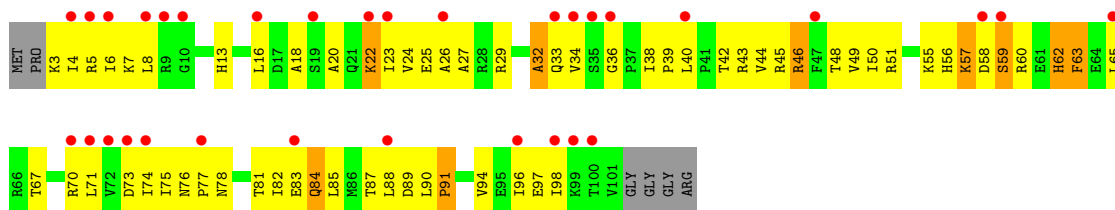
• Molecule 9: 30S ribosomal protein S9



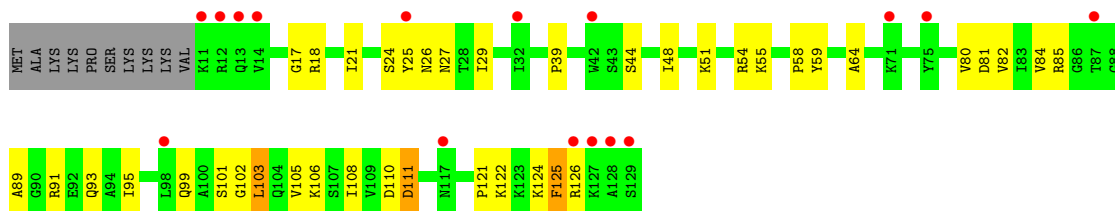
• Molecule 10: 30S ribosomal protein S10



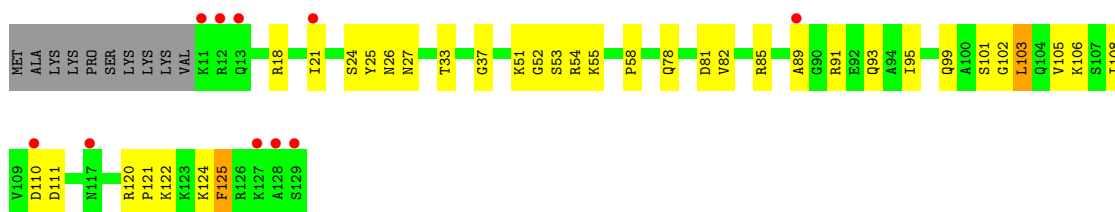
• Molecule 10: 30S ribosomal protein S10



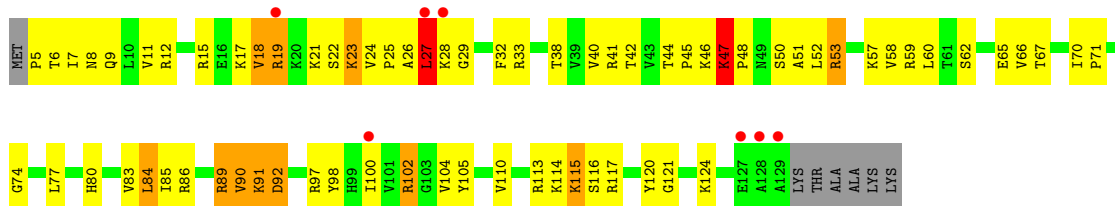
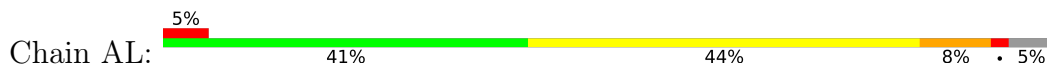
• Molecule 11: 30S ribosomal protein S11



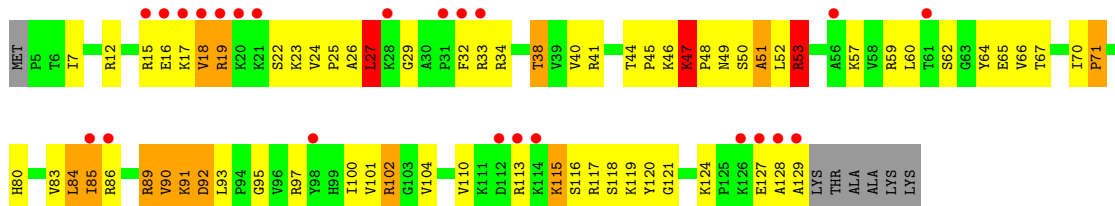
- Molecule 11: 30S ribosomal protein S11



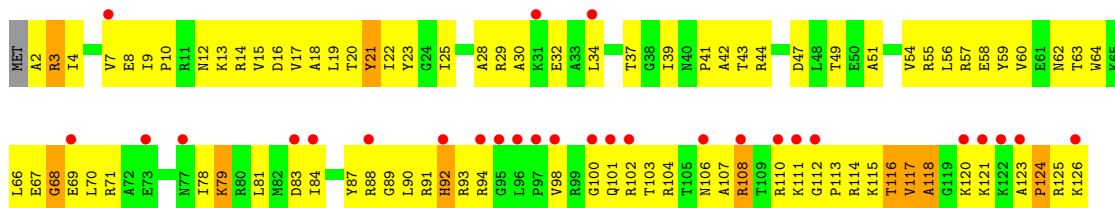
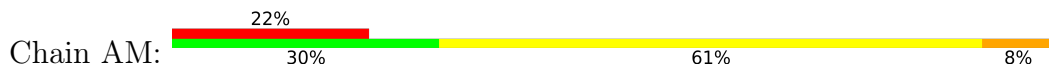
- Molecule 12: 30S ribosomal protein S12



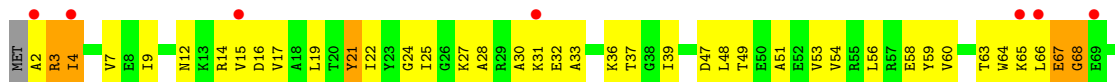
- Molecule 12: 30S ribosomal protein S12

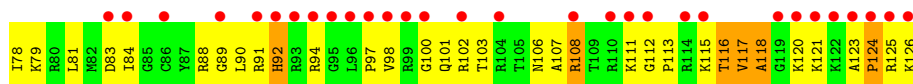


- Molecule 13: 30S ribosomal protein S13

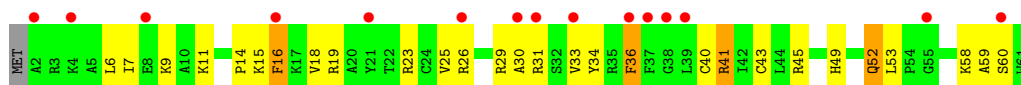


- Molecule 13: 30S ribosomal protein S13





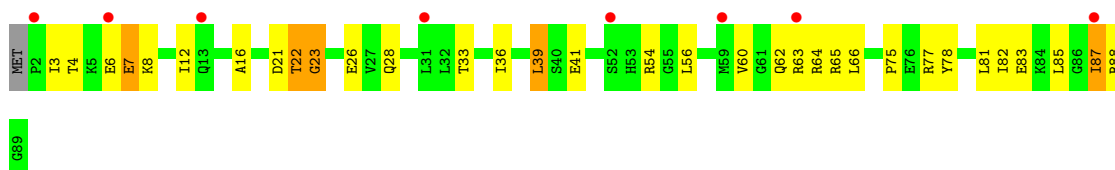
- Molecule 14: 30S ribosomal protein S14 type Z



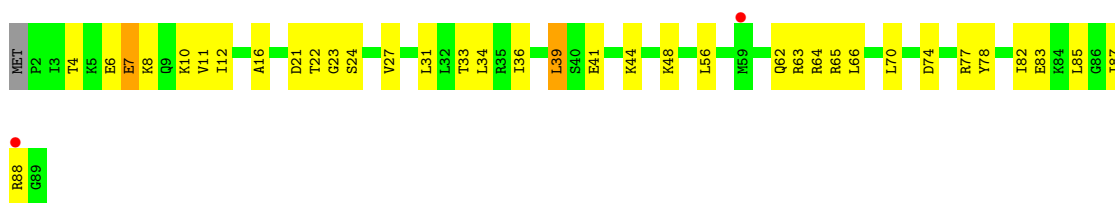
- Molecule 14: 30S ribosomal protein S14 type Z



- Molecule 15: 30S ribosomal protein S15



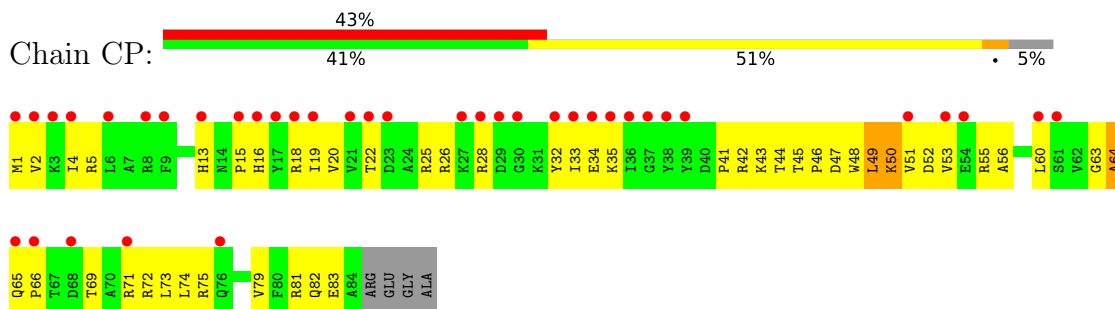
- Molecule 15: 30S ribosomal protein S15



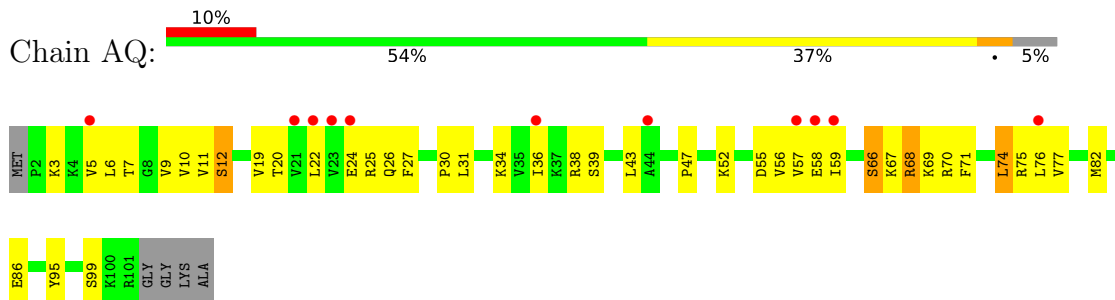
- Molecule 16: 30S ribosomal protein S16



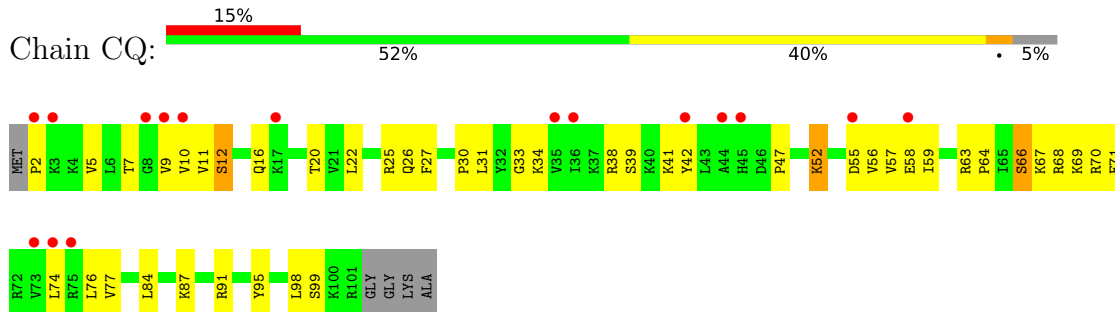
- Molecule 16: 30S ribosomal protein S16



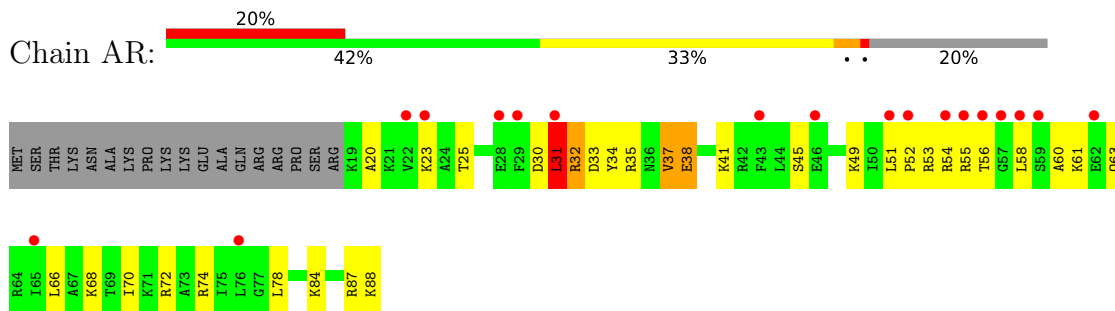
- Molecule 17: 30S ribosomal protein S17



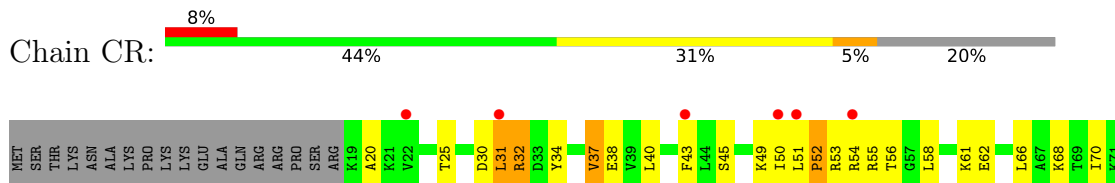
- Molecule 17: 30S ribosomal protein S17

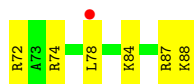


- Molecule 18: 30S ribosomal protein S18

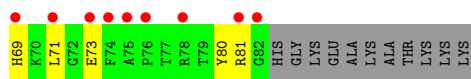
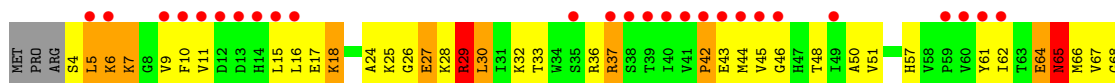
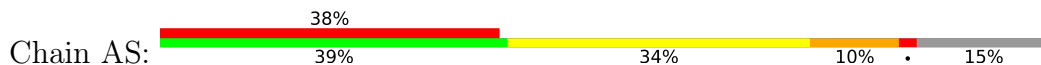


- Molecule 18: 30S ribosomal protein S18

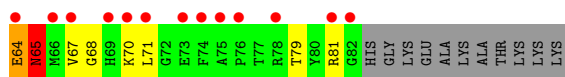
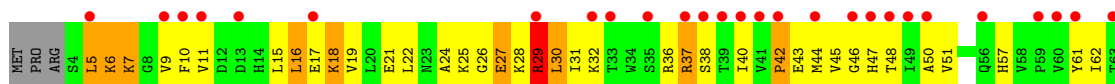




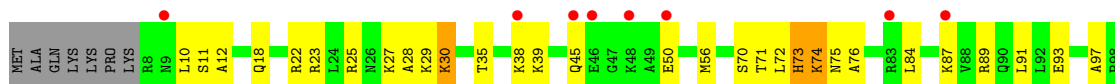
- Molecule 19: 30S ribosomal protein S19



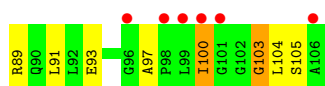
- Molecule 19: 30S ribosomal protein S19



- Molecule 20: 30S ribosomal protein S20

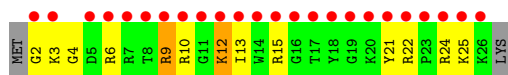


- Molecule 20: 30S ribosomal protein S20

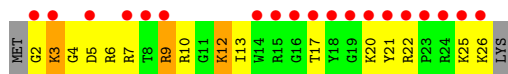
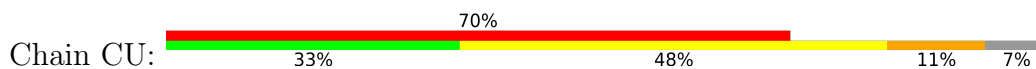


- Molecule 21: 30S ribosomal protein Thx

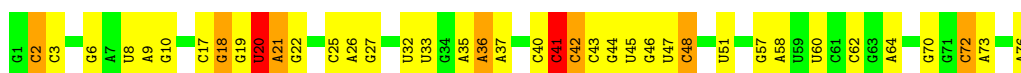




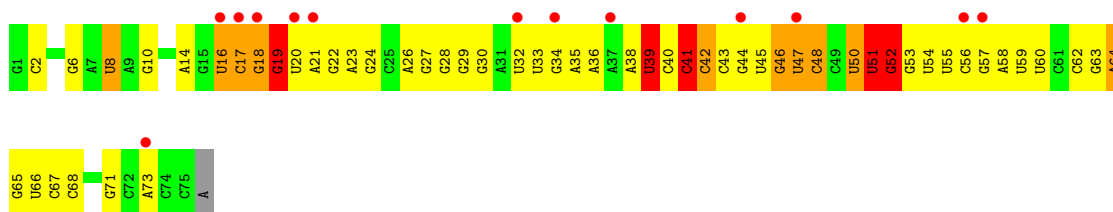
- Molecule 21: 30S ribosomal protein Thx



- Molecule 22: E-site tRNA PHE OR P-site tRNA PHE (unmodified bases)



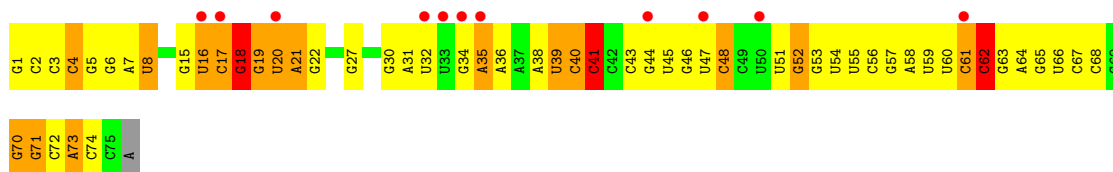
- Molecule 22: E-site tRNA PHE OR P-site tRNA PHE (unmodified bases)



- Molecule 22: E-site tRNA PHE OR P-site tRNA PHE (unmodified bases)

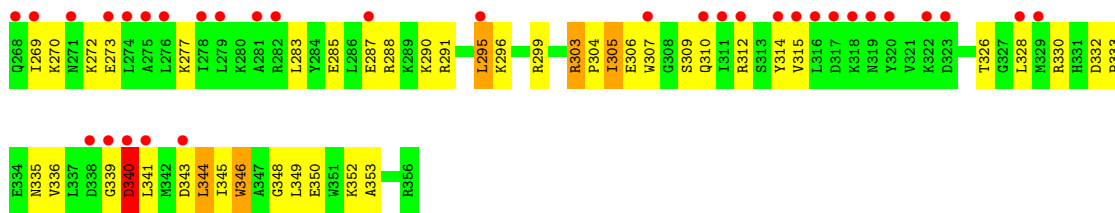


- Molecule 22: E-site tRNA PHE OR P-site tRNA PHE (unmodified bases)

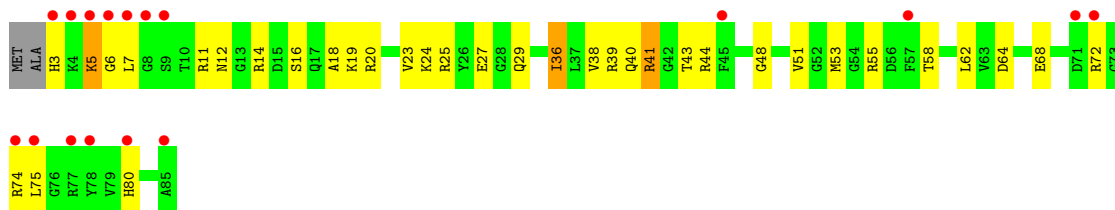


- Molecule 23: mRNA





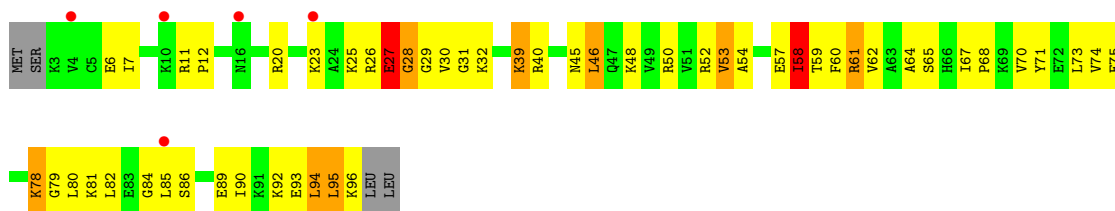
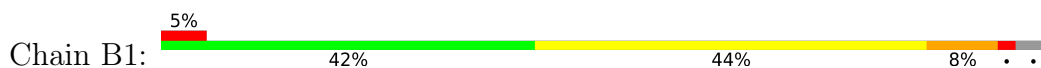
● Molecule 25: 50S ribosomal protein L27



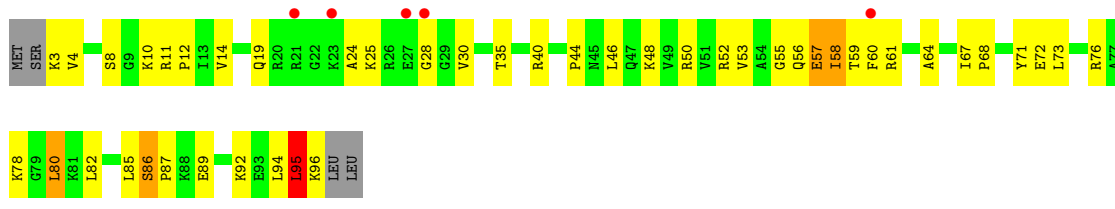
● Molecule 25: 50S ribosomal protein L27



● Molecule 26: 50S ribosomal protein L28

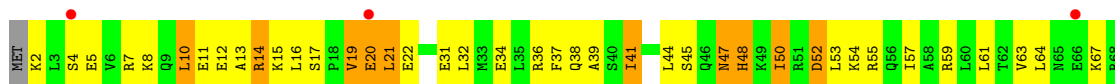


● Molecule 26: 50S ribosomal protein L28



● Molecule 27: 50S ribosomal protein L29

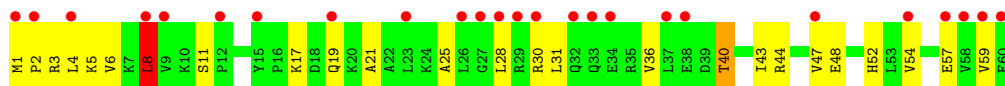
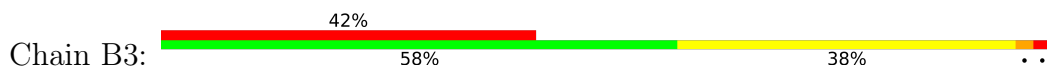




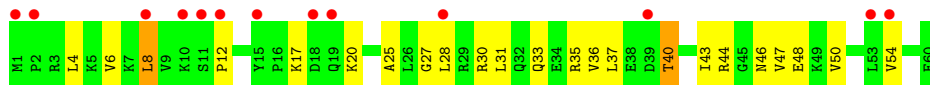
- Molecule 27: 50S ribosomal protein L29



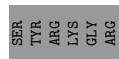
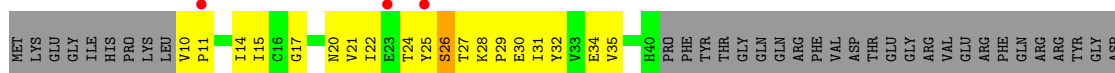
- Molecule 28: 50S ribosomal protein L30



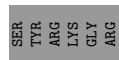
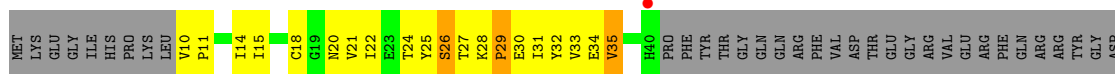
- Molecule 28: 50S ribosomal protein L30



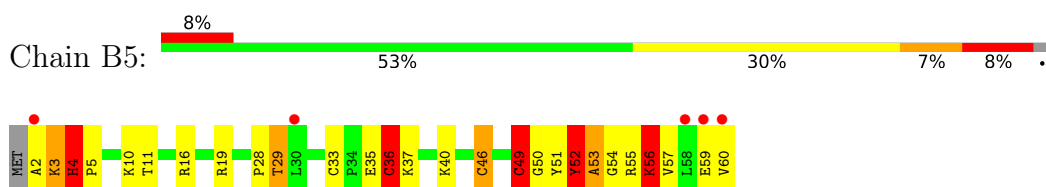
- Molecule 29: 50S ribosomal protein L31



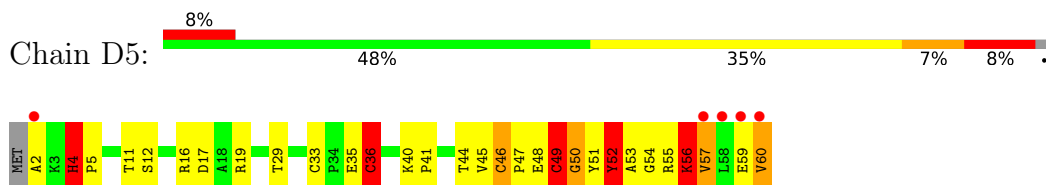
- Molecule 29: 50S ribosomal protein L31



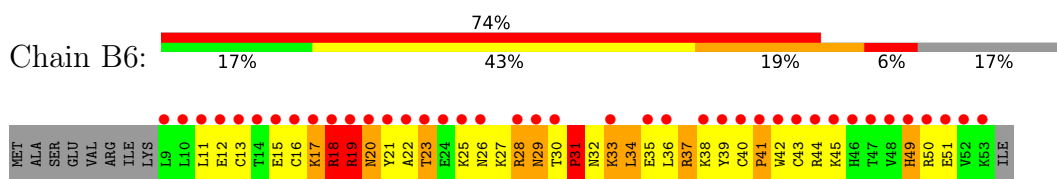
- Molecule 30: 50S ribosomal protein L32



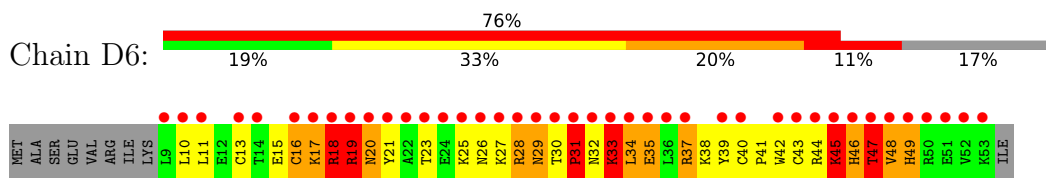
- Molecule 30: 50S ribosomal protein L32



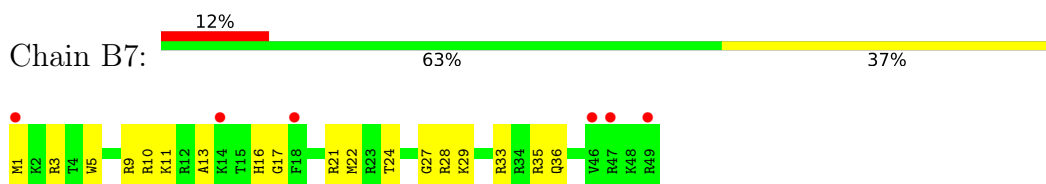
- Molecule 31: 50S ribosomal protein L33



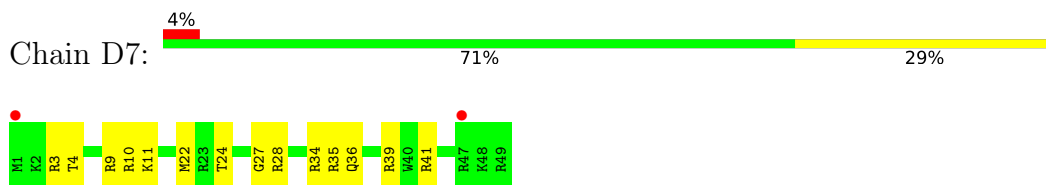
- Molecule 31: 50S ribosomal protein L33



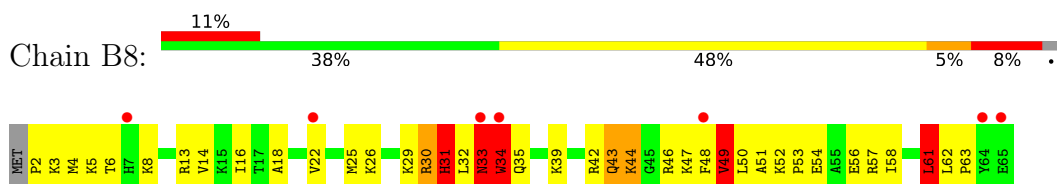
- Molecule 32: 50S ribosomal protein L34



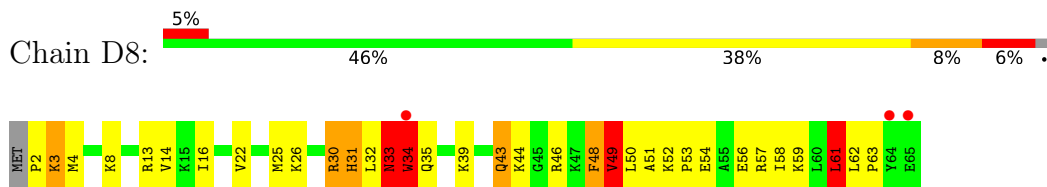
- Molecule 32: 50S ribosomal protein L34



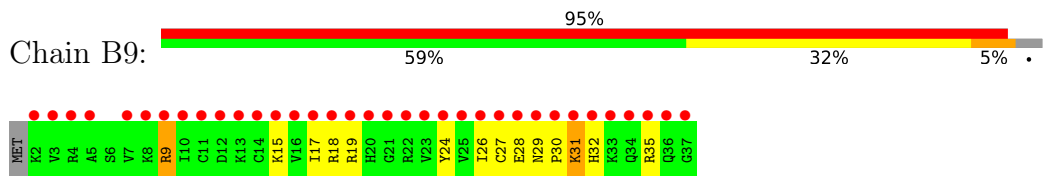
- Molecule 33: 50S ribosomal protein L35



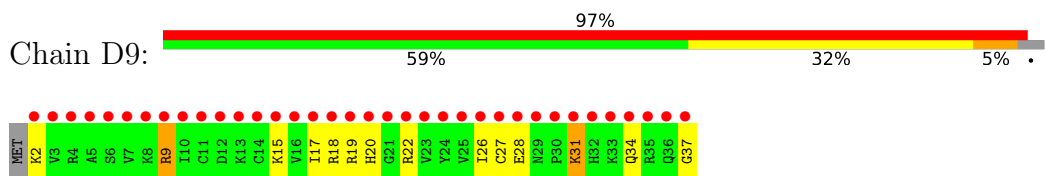
• Molecule 33: 50S ribosomal protein L35



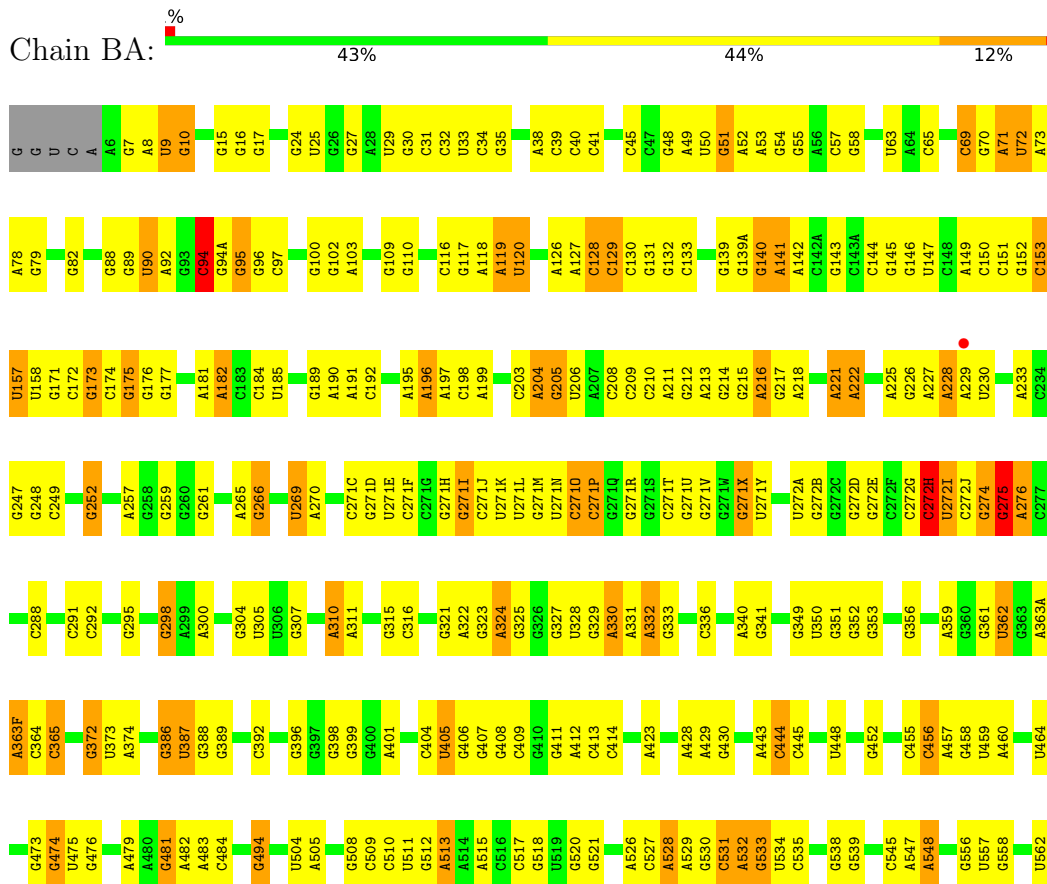
• Molecule 34: 50S ribosomal protein L36



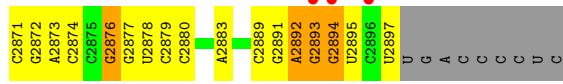
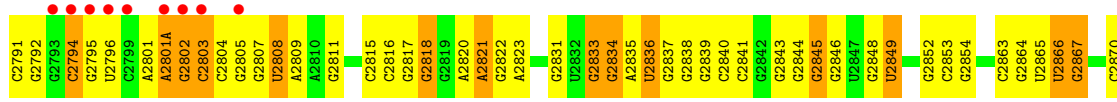
• Molecule 34: 50S ribosomal protein L36



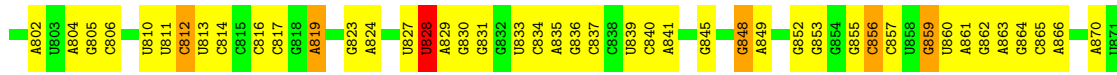
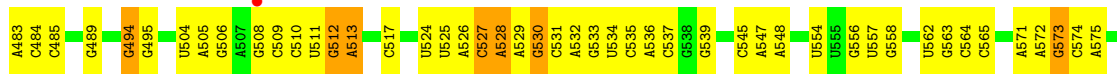
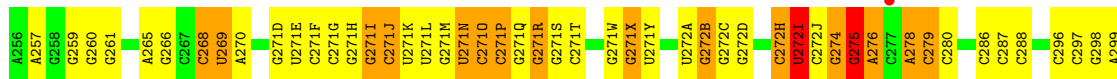
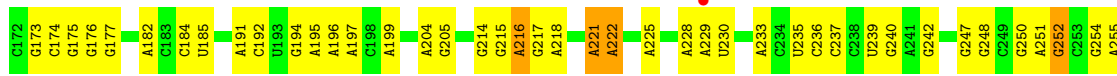
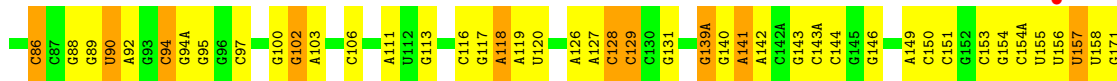
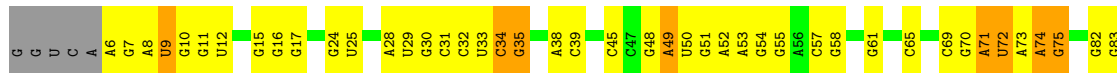
• Molecule 35: 23S rRNA



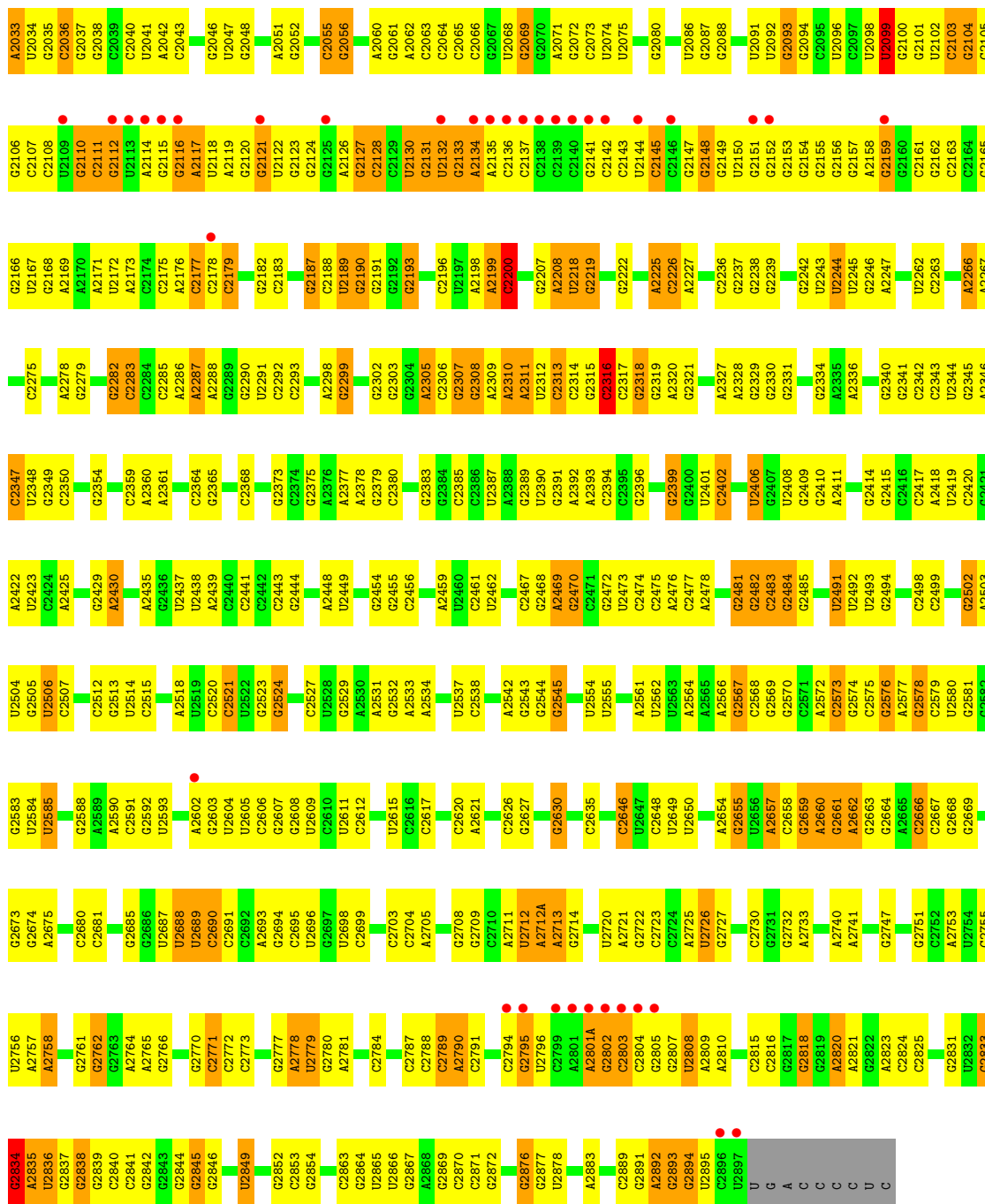
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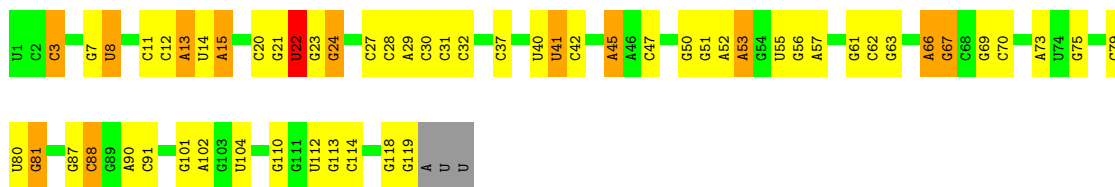
• Molecule 35: 23S rRNA



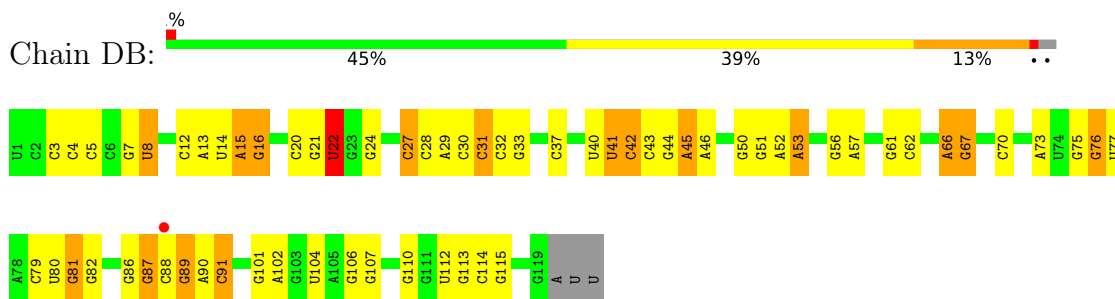
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G1964	U1679	U1679	G1591	G1449	G1364	C1271	U1175	U1101	G1030	C950	U877
C1967	G1865	G1680	C1516	G1450	G1365	C1272	G1176	C1102	U1033	G954	A878
G1968	C1866	G1682	U1517	G1451	A1366	U1273	A1177	C1103	U1034	C955	C879
A1969	A1876	C1683	G1519	C1451	A1367	U1273	C1179	U1105	G1034	G956	G882
A1970	A1877	C1684	G1520	A1452	U1372	G1280	C1180	G1107	G1039	A957	G883
A1971	C1685	C1685	G1525	A1453	A1373	G1281	G1186	G1107	C1040	U958	C884
A1972	G1686	G1686	U1526	G1455	A1373	A1287	G1187	U1108	C1041	A959	C885
C1982	A1881	G1687	G1527	C1458	A1378	U1288	U1188	C1109	G1042	A960	C886
G1973	G1882	A1604	A1528	G1459	A1379	C1289	G1044	G1110	C1043	C961	A887
C1974	A1883	C1604	A1528A	A1460	G1380	C1290	G1045	G1111	G1044	G962	A887
G1975	A1884	C1605	G1529	G1461	G1380	C1290	A1045	G1112	A1045	U963	C888
G1980	G1885	G1606	G1530	G1461	A1384	C1291	A1046	U1113	A1046	C889	C889
A1981	G1888	A1608	C1531	G1466	G1385	U1292	G1047	G1114	G1047	C965	A890
A1889	A1889	A1609	G1532	G1467	G1386	C1293	G1114	G1115	A1048	A965	C892
C1983	A1890	A1610	G1533	A1471	C1386	U1294	C1201	G1120	C1049	U969	C893
G1984	G1897	G1611	U1534	A1471	U1390	G1299	G1205	G1122	A1050	C970	C894
G1985	U1898	A1614	A1535	A1472	A1395	U1300	G1209	G1125	C1051	C971	U895
A1986	U1786	A1700	C1536	C1473	U1396	A1301	G1203	G1125	C1052	C972	A896
G1987	G1899	A1701	G1537	C1474	U1397	A1302	U1205	G1125	A1054	A973	C897
C1988	C1800	G1702	G1538	G1475	U1397	A1302	U1205	G1125	A1054	G974	C897
A1901	G1801	G1703	G1539	C1476	G1400	C1306	A1210	A1129	G1055	C975	A900
C1902	A1802	A1618	U1540	A1477	G1401	A1307	U1211	U1130	G1056	A901	A901
G1906	A1903	G1622	G1541	G1478	G1401	A1307	U1212	U1130	A1057	C902	C902
G1906	C1710	G1633	A1542	G1479	G1402	G1308	G1212	G1135	G1058	C903	C903
A1912	G1813	C1712	C1543	G1480	C1403	G1309	C1217	C1135	G1059	C904	C904
A1913	G1816	G1717	A1544	U1481	C1404	U1313	G1221	G1137	U1060	U905	U905
C1914	G1816	G1718	G1545	G1482	U1405	U1314	C1221A	G1138	U1061	G906	G906
U1915	A1819	G1718	C1546	G1484	U1406	C1315	C1222	G1139	G1062	U907	U907
A1916	U1820	G1719	C1547	G1485	C1407	U1316	C1222	C1140	C1064	C992	C992
U1917	U1820	U1720	C1548	A1486	C1408	U1317	U1141	U1065	U1066	C993	A909
A1918	A1641	G1721	G1549	G1487	C1409	C1318	U1142	U1066	U1066	C994	A910
A1919	G1826	A1722	C1550	G1488	C1409	G1319	A1226	U1067	A1067	A996	A911
C1920	C1827	G1642	A1554	U1489	G1416	C1320	G1230	A1143	A1068	G997	C914
G1906	G1828	G1740	A1558	A1490	C1417	A1321	G1231	A1143	A1069	C998	C914
A1923	A1741	G1742	G1559	G1491	C1418	A1322	U1234	C1146	A1070	U999	A917
C1924	G1742	G1651	G1559	G1492	A1419	U1323	G1235	C1147	G1071	A1000	A918
G1929	G1746	A1652	C1564	A1494	U1420	G1331	G1236	A1148	C1072	A1001	A918
G1930	G1747	A1654	C1565	A1495	G1421	A1331	G1236	G1149	A1073	U922	U922
G1935	U1841	A1655	G1568	U1497	G1423	G1332	G1239	C1150	C1006	C1005	C923
A1936	G1842	C1656	C1569	U1498	G1424	G1337	U1240	C1152	C1007	C1007	C924
A1937	G1845	C1657	A1570	C1499	A1427	G1338	U1240	C1153	C1079	C1079	C925
U1939	A1847	C1658	A1571	G1500	C1428	U1341	G1243	C1154	C1080	U1012	G928
U1946	A1848	A1665	A1572	C1501	G1429	U1341	G1244	A1155	U1081	C1013	G928
C1947	G1849	G1666	G1573	C1502	G1430	C1345	G1245	A1156	U1082	C1013	G932
G1948	G1849	G1667	C1574	C1503	U1433	A1348	A1246	G1157	U1082	U1014	U1014
G1949	A1755	G1668	C1574	C1504	U1433	A1349	A1247	C1158	A1088	G1015	A933
G2024	G1756	A1668	U1578	C1505	A1434	A1349	A1253	G1159	G1089	G1016	G934
C2025	A1762	A1669	A1579	A1507	U1435	U1352	G1256	U1159	U1090	U1019	G939
C2026	G1763	C1670	C1584	A1508	G1436	A1352	C1257	G1160	G1091	G940	G939
U1951	G1764	G1674	C1584	C1509	G1437	A1354	G1265	U1165	U1094	G1023	A941
A1952	A1773	A1675	A1586	G1509	C1437	A1355	G1266	C1166	A1095	U1023	A941
A1955	G1857	A1676	A1587	A1509A	G1444	G1356	G1266	G1169	A1096	G1024	G942
U1955	G1858	A1676	C1588	G1510	A1445	U1357	G1266	G1171	U1097	U1025	A945
										A1027	G947



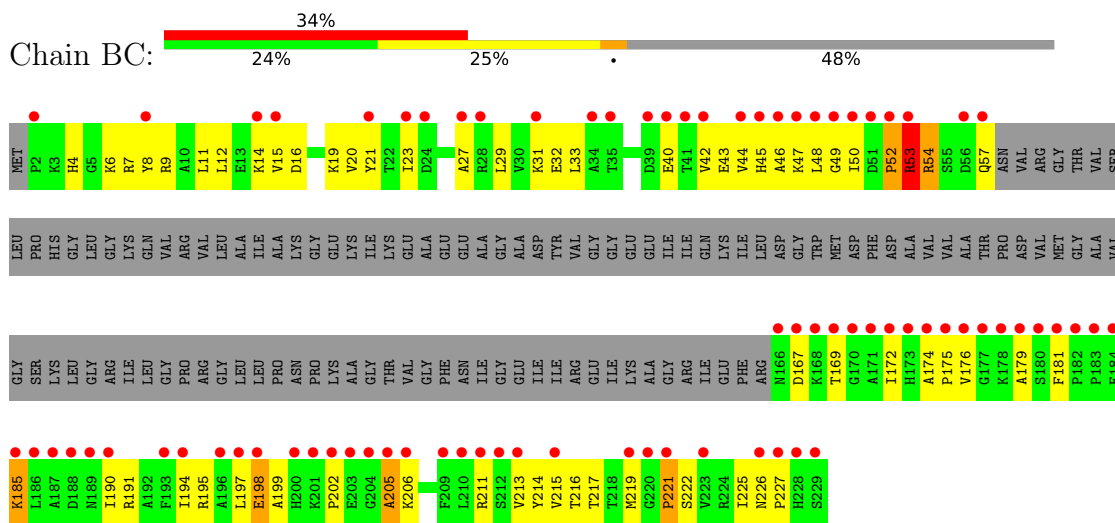
• Molecule 36: 5S rRNA



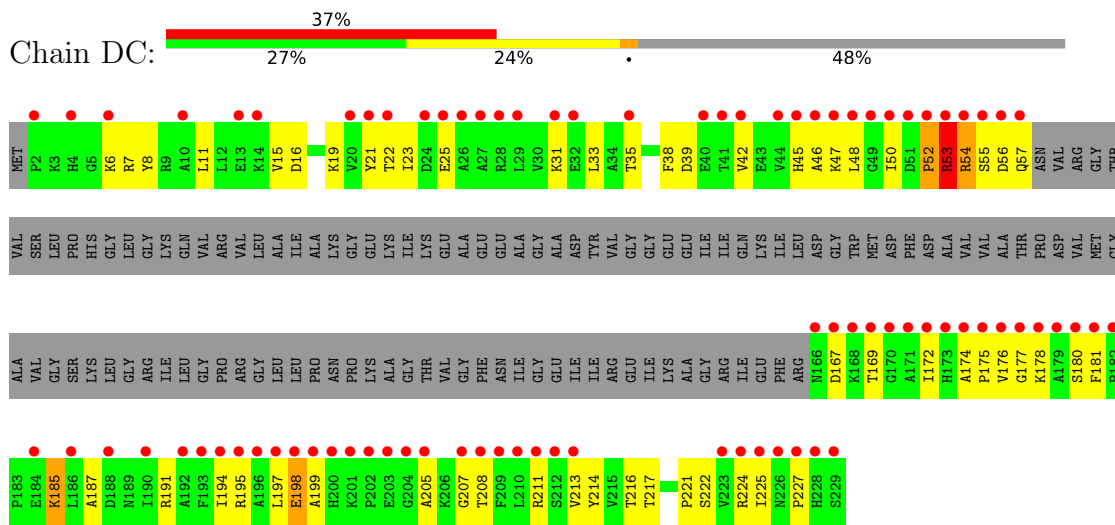
• Molecule 36: 5S rRNA



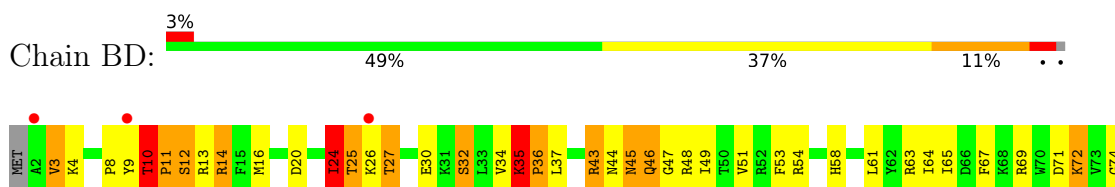
● Molecule 37: 50S ribosomal protein L1

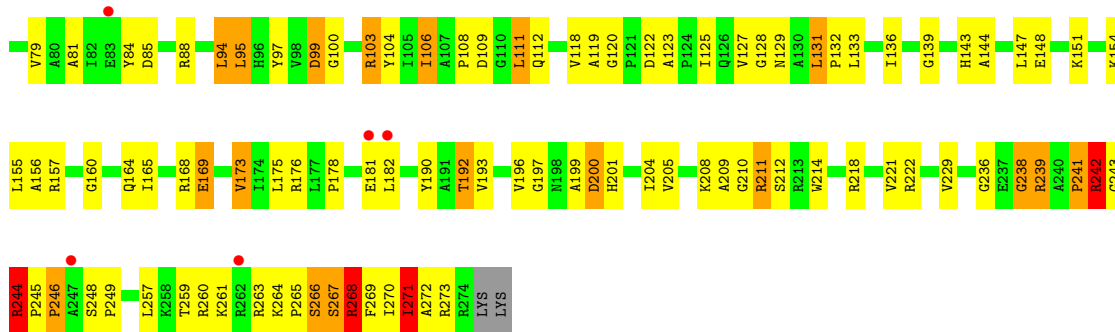


● Molecule 37: 50S ribosomal protein L1

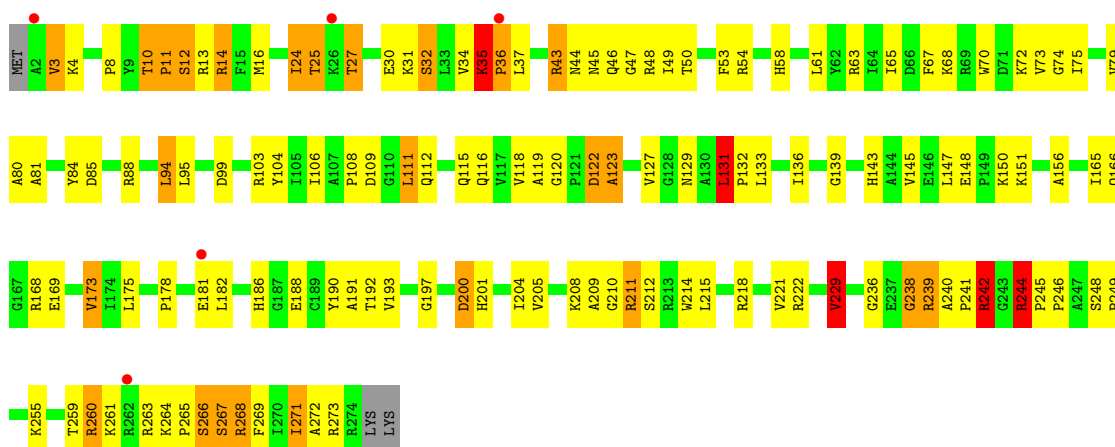


● Molecule 38: 50S ribosomal protein L2

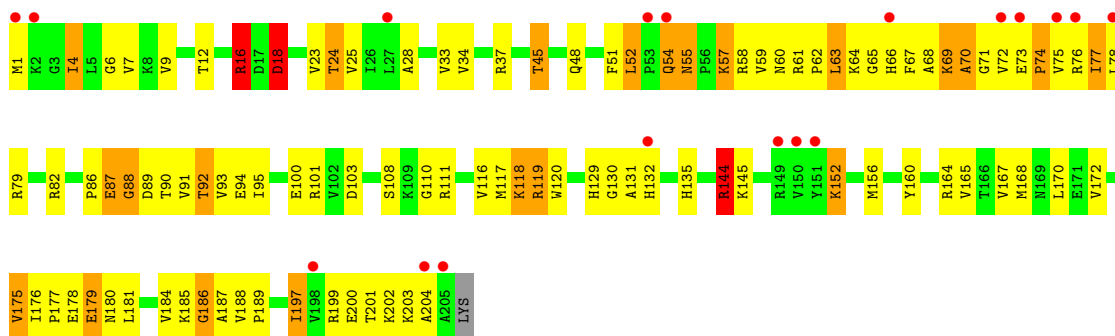




• Molecule 38: 50S ribosomal protein L2

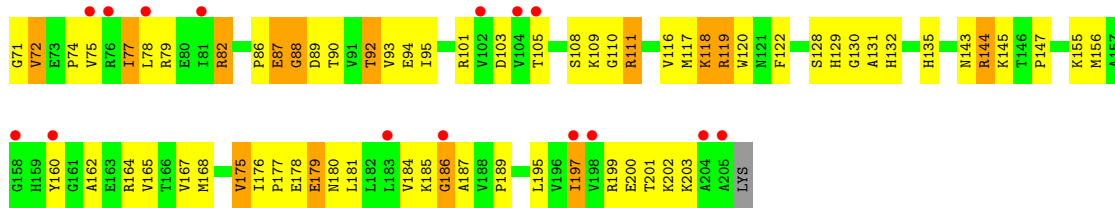


• Molecule 39: 50S ribosomal protein L3

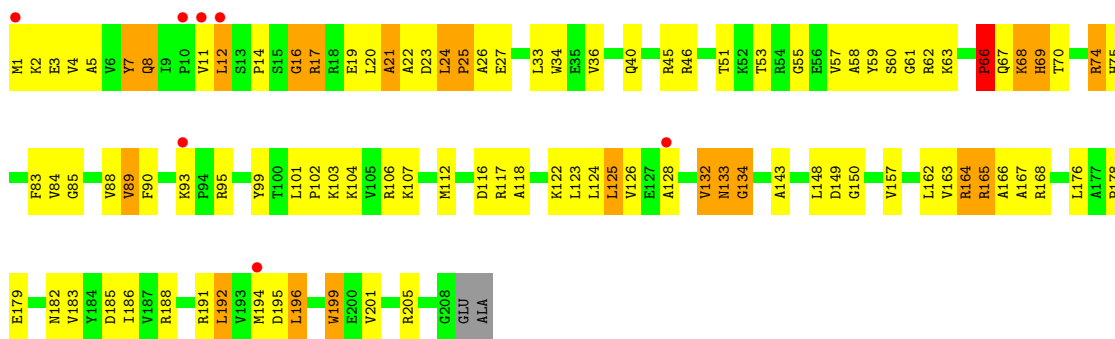


• Molecule 39: 50S ribosomal protein L3

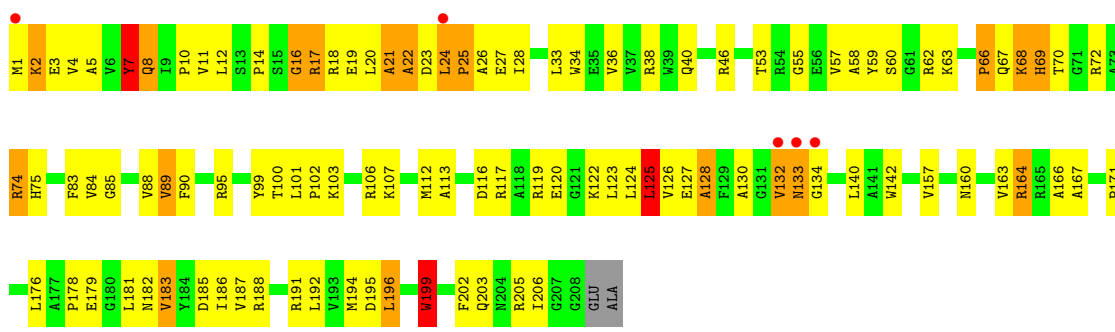




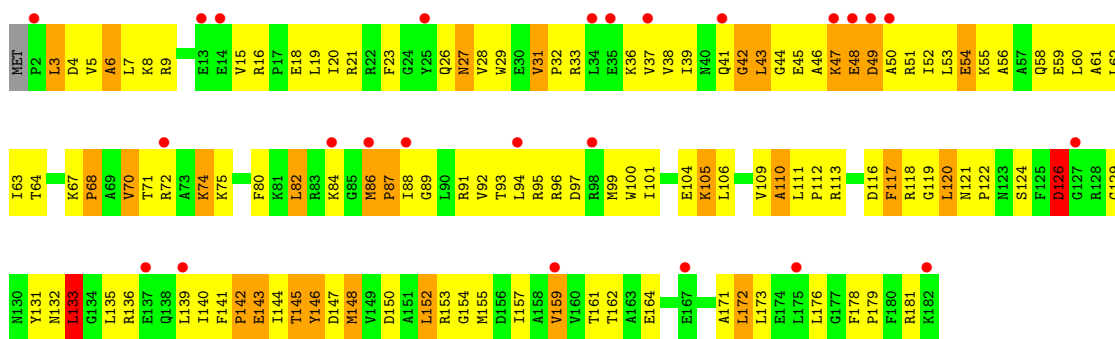
• Molecule 40: 50S ribosomal protein L4

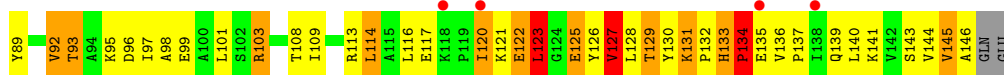


• Molecule 40: 50S ribosomal protein L4

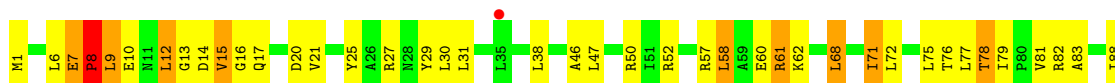


• Molecule 41: 50S ribosomal protein L5

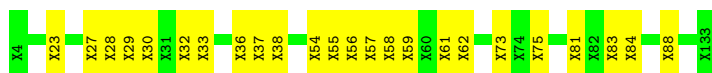
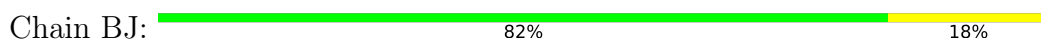




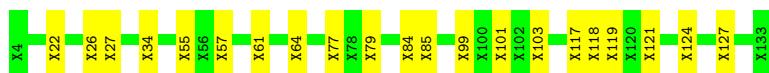
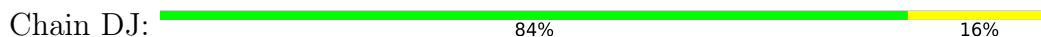
• Molecule 43: 50S ribosomal protein L9



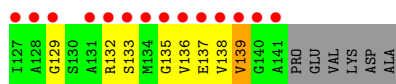
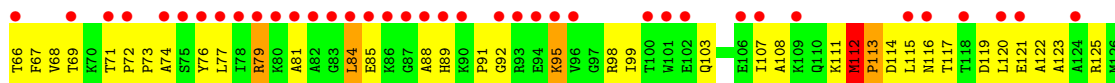
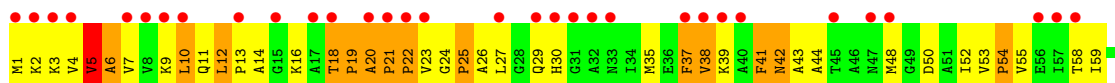
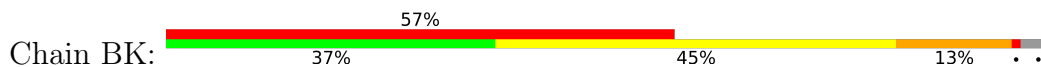
• Molecule 44: 50S ribosomal protein L10



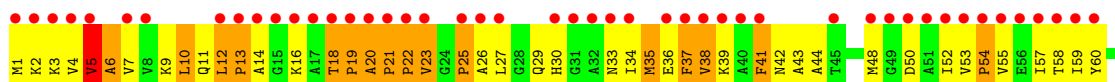
• Molecule 44: 50S ribosomal protein L10

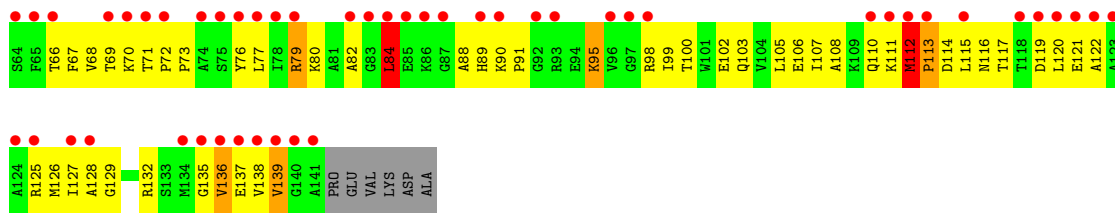


• Molecule 45: 50S ribosomal protein L11

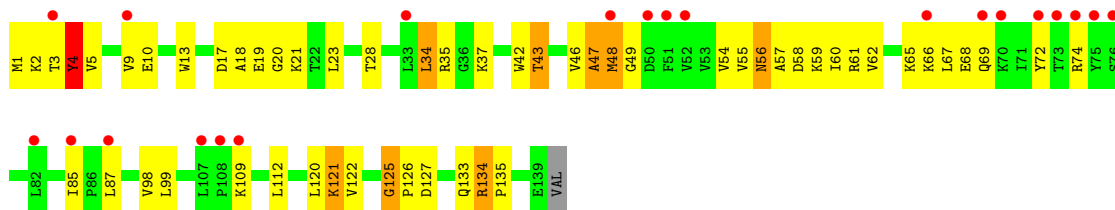


• Molecule 45: 50S ribosomal protein L11

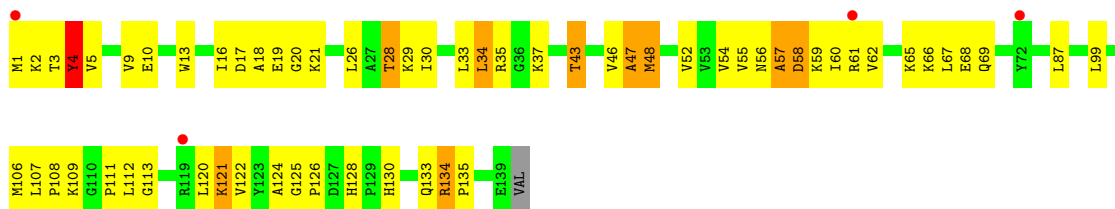




- Molecule 46: 50S ribosomal protein L13



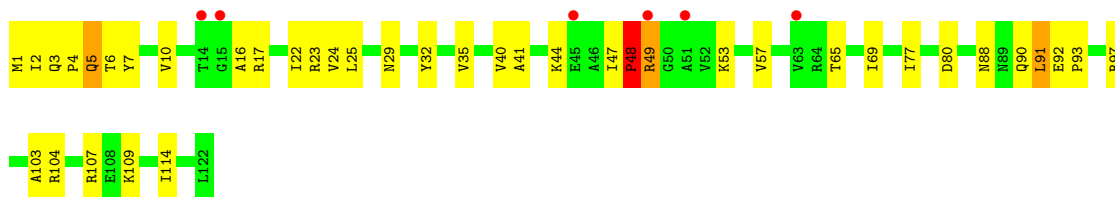
- Molecule 46: 50S ribosomal protein L13



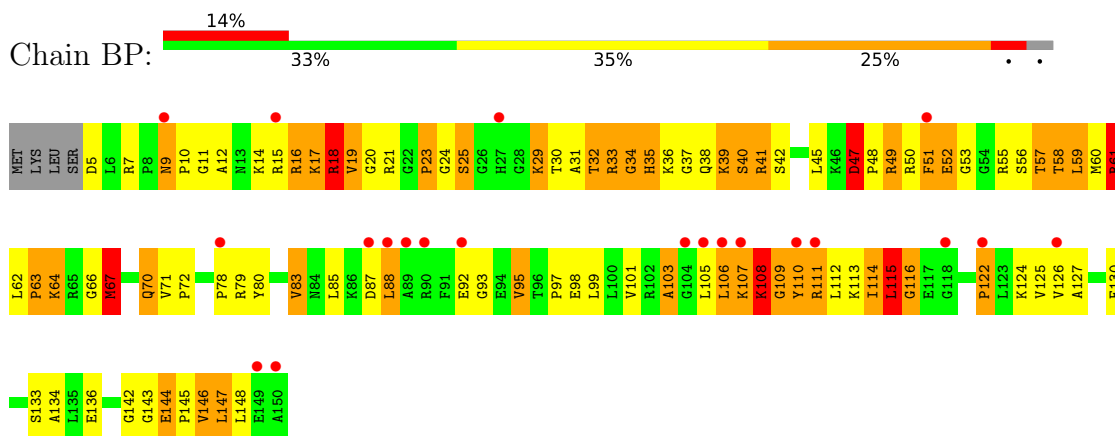
- Molecule 47: 50S ribosomal protein L14



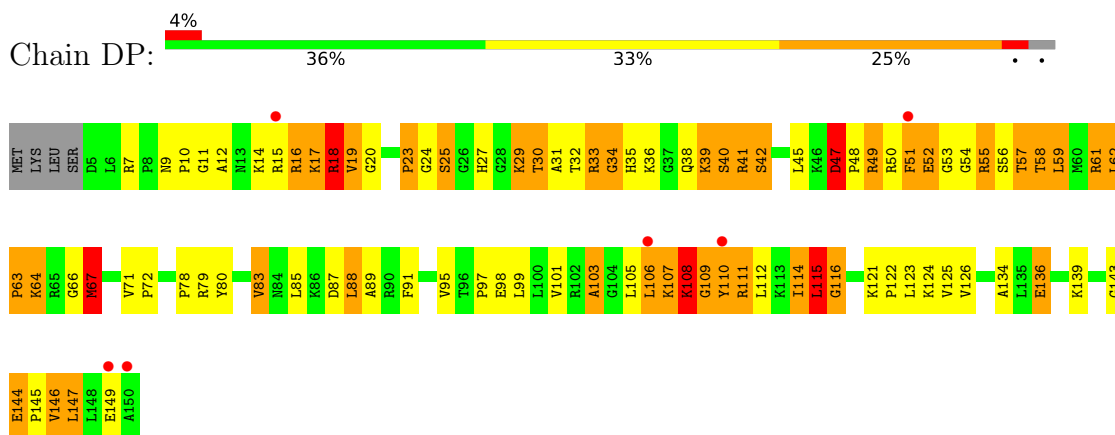
- Molecule 47: 50S ribosomal protein L14



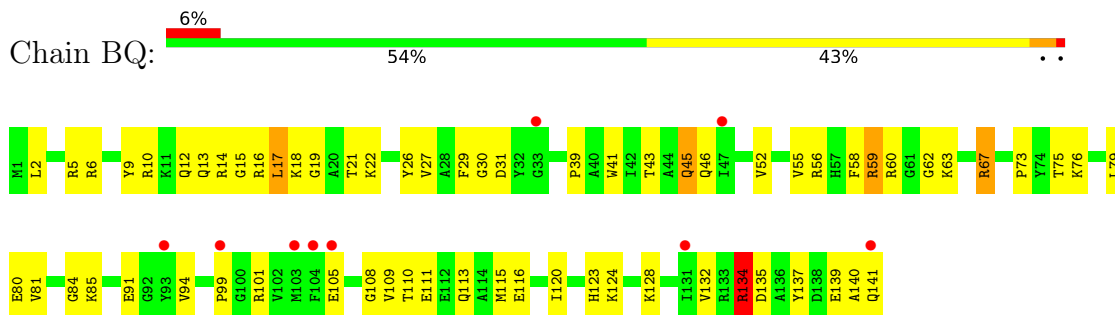
- Molecule 48: 50S ribosomal protein L15



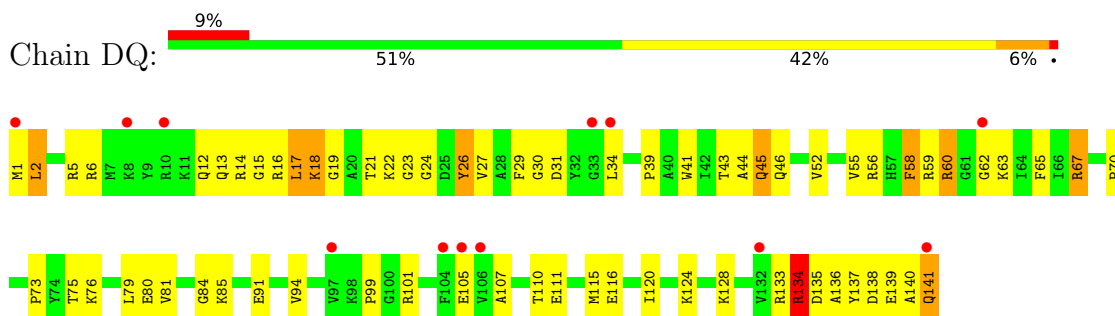
- Molecule 48: 50S ribosomal protein L15



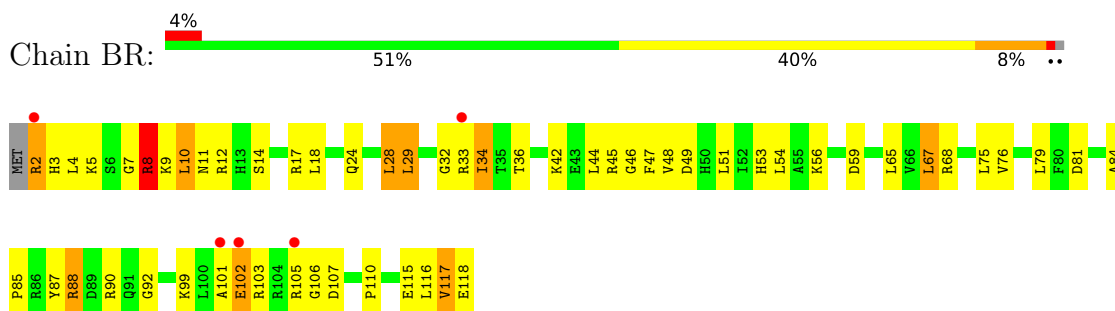
- Molecule 49: 50S ribosomal protein L16



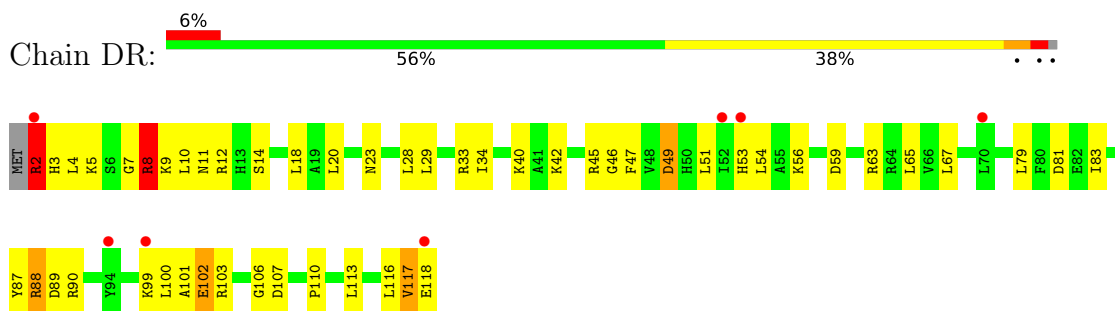
- Molecule 49: 50S ribosomal protein L16



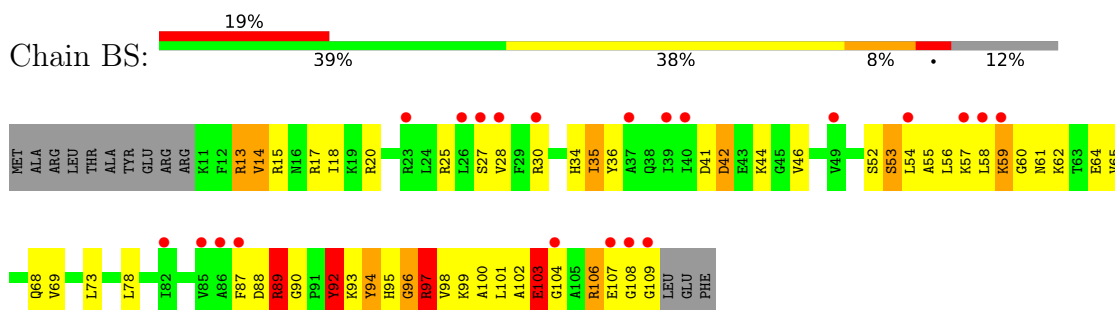
- Molecule 50: 50S ribosomal protein L17



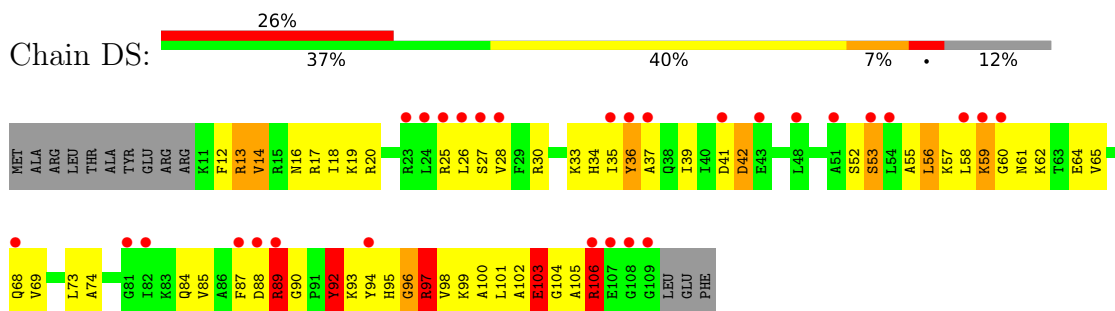
- Molecule 50: 50S ribosomal protein L17



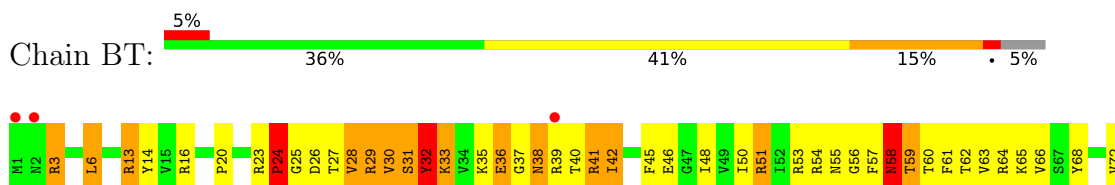
- Molecule 51: 50S ribosomal protein L18

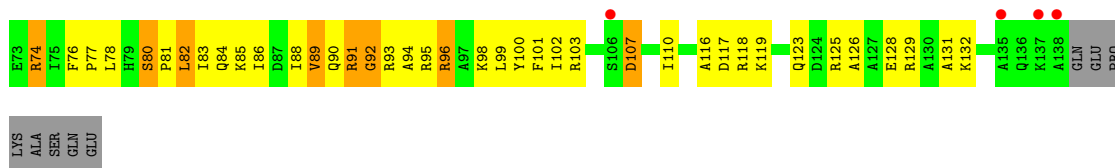


- Molecule 51: 50S ribosomal protein L18

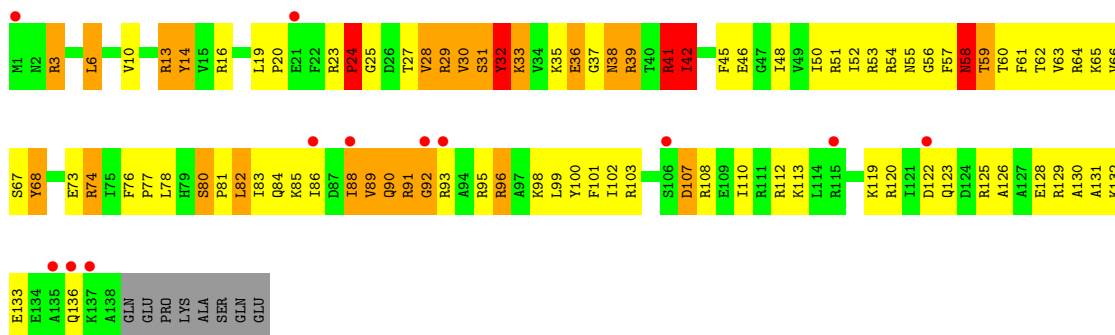


- Molecule 52: 50S ribosomal protein L19





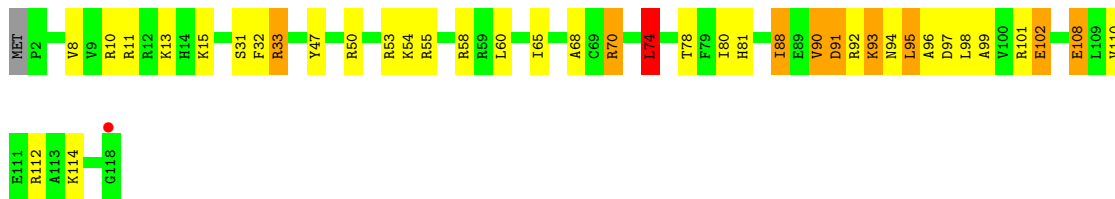
• Molecule 52: 50S ribosomal protein L19



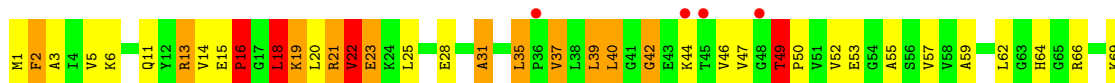
• Molecule 53: 50S ribosomal protein L20



• Molecule 53: 50S ribosomal protein L20

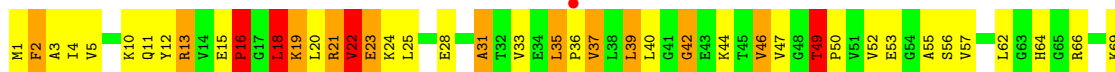
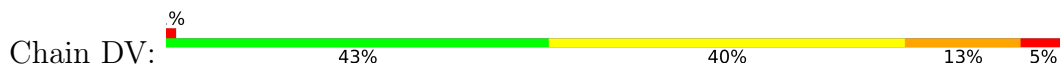


• Molecule 54: 50S ribosomal protein L21

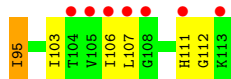
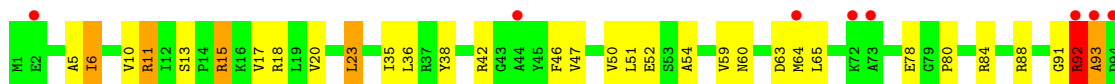




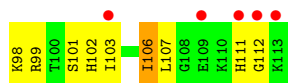
- Molecule 54: 50S ribosomal protein L21



- Molecule 55: 50S ribosomal protein L22



- Molecule 55: 50S ribosomal protein L22

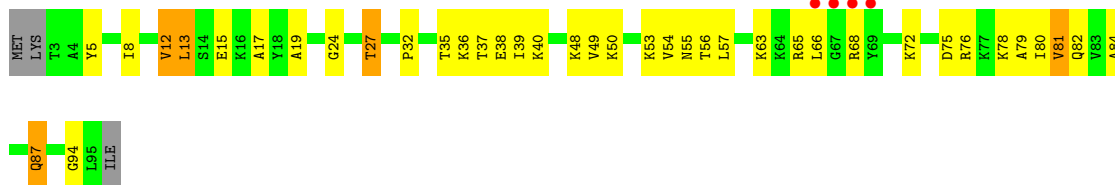


- Molecule 56: 50S ribosomal protein L23

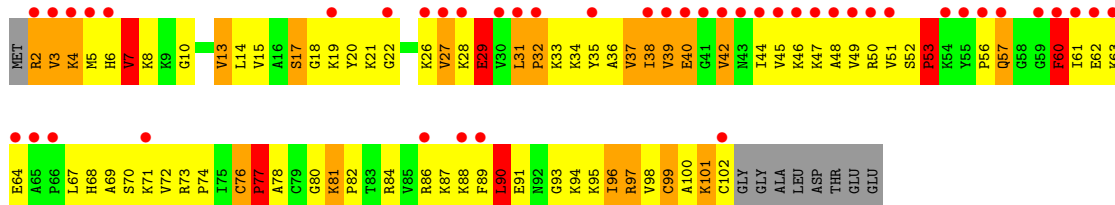
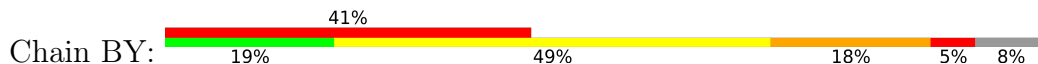


- Molecule 56: 50S ribosomal protein L23

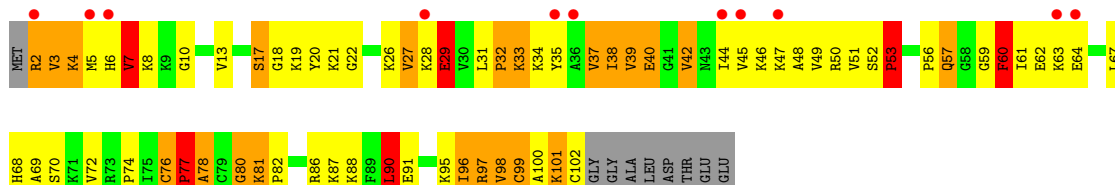




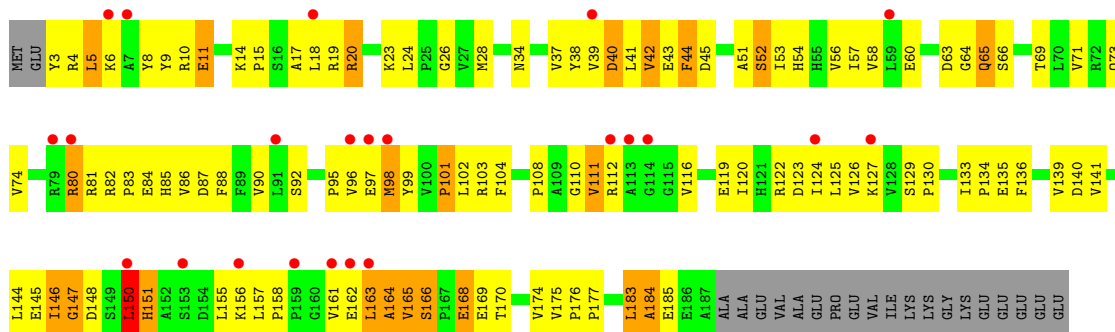
• Molecule 57: 50S ribosomal protein L24



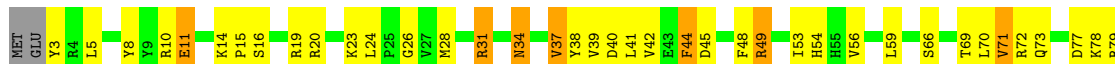
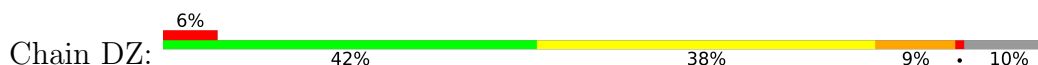
• Molecule 57: 50S ribosomal protein L24

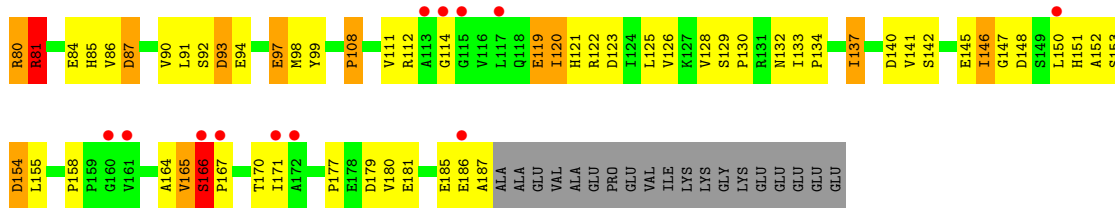


• Molecule 58: 50S ribosomal protein L25



• Molecule 58: 50S ribosomal protein L25





4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	211.02Å 452.53Å 623.44Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	48.98 – 3.20 49.97 – 3.20	Depositor EDS
% Data completeness (in resolution range)	100.0 (48.98-3.20) 100.0 (49.97-3.20)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	5.16 (at 3.19Å)	Xtrriage
Refinement program	PHENIX 1.12_2829	Depositor
R, R_{free}	0.223 , 0.247 0.223 , 0.248	Depositor DCC
R_{free} test set	48519 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å ²)	128.7	Xtrriage
Anisotropy	0.019	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.26 , 121.9	EDS
L-test for twinning ²	$\langle L \rangle = 0.25$, $\langle L^2 \rangle = 0.12$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	304459	wwPDB-VP
Average B, all atoms (Å ²)	160.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.55% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ 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: ZN, MEQ, MG

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	0.36	3/36190 (0.0%)	1.02	60/56486 (0.1%)
1	CA	0.36	2/36190 (0.0%)	1.04	81/56486 (0.1%)
2	AB	0.32	0/1936	0.71	0/2611
2	CB	0.31	0/1936	0.71	0/2611
3	AC	0.30	0/1637	0.69	0/2207
3	CC	0.30	0/1637	0.69	1/2207 (0.0%)
4	AD	0.30	0/1733	0.73	2/2318 (0.1%)
4	CD	0.32	0/1733	0.74	2/2318 (0.1%)
5	AE	0.31	0/1163	0.68	0/1566
5	CE	0.30	0/1163	0.65	0/1566
6	AF	0.32	0/856	0.77	2/1154 (0.2%)
6	CF	0.33	0/856	0.77	1/1154 (0.1%)
7	AG	0.29	0/1276	0.63	0/1709
7	CG	0.30	0/1276	0.66	0/1709
8	AH	0.30	0/1136	0.68	0/1527
8	CH	0.29	0/1136	0.68	0/1527
9	AI	0.31	0/1028	0.71	0/1375
9	CI	0.31	0/1028	0.72	0/1375
10	AJ	0.29	0/808	0.69	1/1087 (0.1%)
10	CJ	0.31	0/808	0.68	0/1087
11	AK	0.28	0/900	0.64	1/1213 (0.1%)
11	CK	0.28	0/900	0.64	0/1213
12	AL	0.34	0/987	0.71	0/1322
12	CL	0.34	0/987	0.73	1/1322 (0.1%)
13	AM	0.32	0/996	0.73	1/1328 (0.1%)
13	CM	0.32	0/996	0.73	0/1328
14	AN	0.30	0/501	0.61	0/664
14	CN	0.32	0/501	0.64	0/664
15	AO	0.30	0/745	0.62	0/992
15	CO	0.28	0/745	0.59	0/992
16	AP	0.29	0/717	0.65	0/965
16	CP	0.30	0/717	0.66	0/965

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AQ	0.29	0/837	0.64	0/1119
17	CQ	0.29	0/837	0.64	0/1119
18	AR	0.33	0/579	0.73	1/768 (0.1%)
18	CR	0.30	0/579	0.79	1/768 (0.1%)
19	AS	0.30	0/643	0.73	0/867
19	CS	0.28	0/643	0.75	1/867 (0.1%)
20	AT	0.29	0/765	0.66	0/1007
20	CT	0.28	0/765	0.62	0/1007
21	AU	0.26	0/213	0.76	0/279
21	CU	0.29	0/213	0.59	0/279
22	AV	0.41	0/1809	1.14	9/2819 (0.3%)
22	AW	0.44	0/1784	1.13	7/2780 (0.3%)
22	CV	0.42	0/1809	1.09	6/2819 (0.2%)
22	CW	0.44	0/1784	1.23	14/2780 (0.5%)
23	AX	0.53	0/185	1.23	0/286
23	CX	0.54	0/185	1.22	0/286
24	AY	0.30	0/2839	0.62	1/3833 (0.0%)
24	CY	0.32	0/2839	0.64	3/3833 (0.1%)
25	B0	0.31	0/666	0.67	0/885
25	D0	0.30	0/666	0.67	0/885
26	B1	0.33	0/739	0.78	1/983 (0.1%)
26	D1	0.35	0/739	0.74	0/983
27	B2	0.29	0/600	0.69	0/793
27	D2	0.32	0/600	0.79	1/793 (0.1%)
28	B3	0.37	0/473	0.72	1/636 (0.2%)
28	D3	0.31	0/473	0.60	0/636
29	B4	0.30	0/229	0.73	0/311
29	D4	0.33	0/229	0.73	0/311
30	B5	0.44	0/473	0.96	2/639 (0.3%)
30	D5	0.39	0/473	0.90	2/639 (0.3%)
31	B6	0.44	0/387	0.95	0/517
31	D6	0.46	0/388	1.11	1/520 (0.2%)
32	B7	0.27	0/427	0.64	0/563
32	D7	0.27	0/427	0.65	0/563
33	B8	0.34	0/516	0.78	0/681
33	D8	0.35	0/516	0.78	0/681
34	B9	0.29	0/302	0.62	0/397
34	D9	0.30	0/302	0.68	0/397
35	BA	0.40	10/69972 (0.0%)	1.09	201/109237 (0.2%)
35	DA	0.41	8/69972 (0.0%)	1.10	197/109237 (0.2%)
36	BB	0.38	0/2853	1.07	6/4451 (0.1%)
36	DB	0.39	0/2853	1.14	10/4451 (0.2%)
37	BC	0.30	0/956	0.67	0/1288

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
37	DC	0.29	0/956	0.67	0/1288
38	BD	0.33	0/2170	0.73	1/2926 (0.0%)
38	DD	0.34	0/2170	0.76	3/2926 (0.1%)
39	BE	0.38	0/1597	0.83	3/2155 (0.1%)
39	DE	0.35	0/1597	0.76	0/2155
40	BF	0.35	0/1659	0.75	2/2246 (0.1%)
40	DF	0.37	1/1659 (0.1%)	0.75	2/2246 (0.1%)
41	BG	0.31	0/1498	0.79	1/2013 (0.0%)
41	DG	0.35	0/1499	0.80	2/2016 (0.1%)
42	BH	0.31	0/1271	0.78	2/1720 (0.1%)
42	DH	0.33	0/1271	0.80	2/1720 (0.1%)
43	BI	0.34	0/1147	0.76	0/1553
43	DI	0.33	0/1147	0.79	0/1553
45	BK	0.31	0/1057	0.73	0/1432
45	DK	0.34	0/1057	0.76	1/1432 (0.1%)
46	BN	0.32	0/1132	0.74	0/1527
46	DN	0.31	0/1132	0.73	0/1527
47	BO	0.32	0/943	0.66	0/1269
47	DO	0.30	0/943	0.65	0/1269
48	BP	0.42	1/1131 (0.1%)	1.03	1/1504 (0.1%)
48	DP	0.39	0/1131	1.05	3/1504 (0.2%)
49	BQ	0.32	0/1143	0.69	1/1527 (0.1%)
49	DQ	0.32	0/1143	0.71	1/1527 (0.1%)
50	BR	0.31	0/974	0.71	1/1302 (0.1%)
50	DR	0.31	0/974	0.76	2/1302 (0.2%)
51	BS	0.33	0/779	0.80	0/1038
51	DS	0.35	0/779	0.85	4/1038 (0.4%)
52	BT	0.34	0/1156	0.84	1/1544 (0.1%)
52	DT	0.35	0/1156	0.87	1/1544 (0.1%)
53	BU	0.33	0/975	0.66	1/1297 (0.1%)
53	DU	0.35	0/975	0.72	2/1297 (0.2%)
54	BV	0.35	0/790	0.81	1/1057 (0.1%)
54	DV	0.38	0/790	0.85	1/1057 (0.1%)
55	BW	0.37	0/907	0.70	0/1216
55	DW	0.32	0/907	0.66	0/1216
56	BX	0.32	0/740	0.74	0/995
56	DX	0.34	0/740	0.74	0/995
57	BY	0.58	2/789 (0.3%)	0.88	0/1053
57	DY	0.39	0/789	0.88	0/1053
58	BZ	0.33	0/1500	0.78	1/2037 (0.0%)
58	DZ	0.32	0/1500	0.76	1/2037 (0.0%)
All	All	0.37	27/328430 (0.0%)	0.99	659/490154 (0.1%)

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
13	AM	0	1
13	CM	0	1
35	BA	0	1
All	All	0	3

All (27) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BY	7	VAL	CB-CG2	10.35	1.74	1.52
35	BA	1649	G	N7-C5	-10.02	1.33	1.39
1	AA	452	A	C5-C4	9.08	1.45	1.38
35	DA	2484	G	N7-C5	-8.84	1.33	1.39
35	DA	2279	G	N3-C4	-8.53	1.29	1.35
35	BA	2379	G	N7-C5	-8.47	1.34	1.39
35	DA	859	G	C5'-C4'	8.09	1.61	1.51
35	BA	726	G	N3-C4	7.88	1.41	1.35
1	CA	39	G	N7-C5	7.80	1.44	1.39
35	BA	1131	G	C3'-C2'	7.57	1.61	1.52
35	BA	764	A	O4'-C1'	-7.26	1.32	1.41
1	CA	452	A	N3-C4	-7.19	1.30	1.34
35	BA	1131	G	N3-C4	7.08	1.40	1.35
35	DA	2279	G	C6-O6	-6.38	1.18	1.24
1	AA	452	A	N3-C4	-6.35	1.31	1.34
35	DA	859	G	N9-C8	-6.14	1.33	1.37
35	DA	2279	G	N7-C5	-6.12	1.35	1.39
48	BP	61	ARG	C-N	-6.04	1.20	1.34
35	BA	2484	G	N7-C5	5.80	1.42	1.39
57	BY	7	VAL	CB-CG1	5.65	1.64	1.52
35	BA	1131	G	C5-C4	-5.51	1.34	1.38
35	DA	2379	G	N7-C5	5.43	1.42	1.39
35	DA	2279	G	C2-N3	-5.33	1.28	1.32
35	BA	1899	G	N9-C4	-5.28	1.33	1.38
35	BA	764	A	C4'-C3'	5.18	1.58	1.53
1	AA	452	A	C8-N7	5.04	1.35	1.31
40	DF	199	TRP	CB-CG	-5.02	1.41	1.50

All (659) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	BA	2155	G	N1-C6-O6	-15.32	110.71	119.90
35	BA	2155	G	C5-C6-O6	13.90	136.94	128.60
35	BA	1899	G	N3-C4-N9	-12.56	118.46	126.00
35	DA	2279	G	C2-N3-C4	12.45	118.12	111.90
35	DA	859	G	C8-N9-C4	10.90	110.76	106.40
35	DA	1899	G	N3-C4-N9	-10.29	119.83	126.00
35	DA	158	U	N3-C2-O2	-9.90	115.27	122.20
39	BE	16	ARG	NE-CZ-NH2	-9.70	115.45	120.30
35	DA	1096	A	N1-C6-N6	9.65	124.39	118.60
1	AA	1054	C	N1-C2-O2	9.51	124.60	118.90
22	CW	62	C	N3-C2-O2	-9.44	115.29	121.90
35	BA	94	C	C2-N1-C1'	9.23	128.96	118.80
35	DA	2871	C	N1-C2-O2	-9.21	113.37	118.90
35	DA	158	U	N1-C2-O2	9.16	129.21	122.80
35	DA	1482	G	C2-N3-C4	9.10	116.45	111.90
36	BB	31	C	C2-N1-C1'	8.85	128.54	118.80
35	DA	94	C	C2-N1-C1'	8.85	128.53	118.80
1	CA	452	A	O4'-C1'-N9	8.82	115.26	108.20
22	CW	61	C	N1-C2-O2	8.79	124.17	118.90
35	BA	1899	G	N3-C4-C5	8.75	132.98	128.60
35	BA	676	A	N7-C8-N9	8.65	118.12	113.80
1	AA	76	C	C5-C6-N1	8.61	125.30	121.00
36	DB	31	C	C2-N1-C1'	8.59	128.25	118.80
1	CA	1439	C	C2-N1-C1'	8.54	128.19	118.80
35	BA	1899	G	C4-N9-C1'	-8.53	115.41	126.50
35	DA	726	G	N9-C4-C5	-8.51	102.00	105.40
35	BA	158	U	N3-C2-O2	-8.48	116.26	122.20
35	DA	2279	G	N3-C4-N9	8.45	131.07	126.00
1	CA	1066	C	N1-C2-O2	8.43	123.96	118.90
1	CA	1066	C	C2-N1-C1'	8.43	128.07	118.80
30	B5	36	CYS	CA-CB-SG	8.32	128.98	114.00
35	DA	1899	G	N3-C2-N2	-8.27	114.11	119.90
53	DU	95	LEU	CA-CB-CG	-8.27	96.29	115.30
35	BA	1899	G	C8-N9-C1'	8.23	137.70	127.00
35	DA	1080	C	N3-C2-O2	-8.20	116.16	121.90
1	AA	1054	C	C2-N1-C1'	8.16	127.77	118.80
35	DA	1899	G	N9-C4-C5	8.14	108.66	105.40
35	BA	2867	G	C5-C6-O6	-8.09	123.75	128.60
35	DA	158	U	C2-N1-C1'	8.05	127.36	117.70
35	BA	158	U	C2-N1-C1'	8.04	127.35	117.70
22	AV	20	U	N1-C2-O2	8.04	128.43	122.80
1	CA	1158	C	C2-N1-C1'	8.00	127.59	118.80
30	D5	36	CYS	CA-CB-SG	7.97	128.35	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	993	G	N3-C4-N9	7.96	130.78	126.00
35	BA	1899	G	C6-C5-N7	7.92	135.15	130.40
35	BA	1899	G	N9-C4-C5	7.90	108.56	105.40
35	BA	2155	G	N3-C2-N2	7.88	125.42	119.90
38	DD	244	ARG	C-N-CD	-7.86	103.32	120.60
1	AA	1066	C	C2-N1-C1'	7.85	127.43	118.80
35	BA	158	U	N1-C2-O2	7.84	128.29	122.80
1	AA	76	C	C2-N1-C1'	7.82	127.41	118.80
4	CD	13	ARG	NE-CZ-NH2	7.82	124.21	120.30
35	DA	2279	G	N3-C4-C5	-7.82	124.69	128.60
1	AA	1158	C	C2-N1-C1'	7.78	127.36	118.80
35	DA	2845	G	N3-C2-N2	-7.77	114.46	119.90
38	BD	244	ARG	C-N-CD	-7.70	103.65	120.60
1	AA	866	C	N3-C2-O2	-7.66	116.54	121.90
1	AA	1054	C	N3-C2-O2	-7.64	116.56	121.90
22	AW	64	A	N1-C2-N3	7.62	133.11	129.30
35	BA	894	C	C6-N1-C2	-7.58	117.27	120.30
40	BF	74	ARG	NE-CZ-NH2	-7.57	116.52	120.30
35	DA	1313	U	C2-N1-C1'	7.55	126.77	117.70
36	DB	31	C	N1-C2-O2	7.55	123.43	118.90
36	BB	31	C	C6-N1-C1'	-7.54	111.76	120.80
35	BA	1899	G	N3-C2-N2	-7.53	114.63	119.90
35	DA	1502	C	C2-N1-C1'	7.51	127.06	118.80
50	BR	10	LEU	CA-CB-CG	7.50	132.55	115.30
35	DA	1096	A	C5-C6-N6	-7.47	117.73	123.70
35	DA	1504	C	N1-C2-O2	7.47	123.38	118.90
39	BE	16	ARG	NE-CZ-NH1	7.46	124.03	120.30
1	CA	127	G	C2-N3-C4	-7.45	108.18	111.90
1	CA	1054	C	C2-N1-C1'	7.42	126.96	118.80
35	DA	1407	C	C2-N1-C1'	7.41	126.95	118.80
58	BZ	150	LEU	CA-CB-CG	7.41	132.34	115.30
1	AA	1338	G	C2-N3-C4	-7.38	108.21	111.90
35	BA	1313	U	C2-N1-C1'	7.38	126.55	117.70
1	CA	1054	C	N1-C2-O2	7.38	123.33	118.90
38	DD	229	VAL	CG1-CB-CG2	7.38	122.70	110.90
50	DR	10	LEU	CA-CB-CG	7.37	132.25	115.30
35	BA	856	C	C2-N1-C1'	7.33	126.86	118.80
18	CR	50	ILE	C-N-CA	-7.33	103.38	121.70
35	DA	1506	C	C2-N1-C1'	7.30	126.84	118.80
35	BA	828	U	C2-N1-C1'	7.28	126.44	117.70
1	AA	1088	G	N9-C4-C5	7.27	108.31	105.40
35	BA	27	G	N3-C4-N9	-7.26	121.64	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	AV	20	U	N3-C2-O2	-7.21	117.15	122.20
35	BA	764	A	O4'-C1'-N9	7.20	113.96	108.20
1	AA	1066	C	C5-C6-N1	7.19	124.59	121.00
1	CA	830	G	N3-C4-N9	-7.19	121.69	126.00
35	BA	2521	C	C2-N1-C1'	7.17	126.69	118.80
35	BA	27	G	N9-C4-C5	7.17	108.27	105.40
54	BV	18	LEU	CA-CB-CG	7.13	131.69	115.30
35	BA	1502	C	C2-N1-C1'	7.12	126.63	118.80
1	CA	849	C	N3-C2-O2	-7.11	116.92	121.90
35	DA	1899	G	C8-N9-C1'	7.10	136.23	127.00
1	CA	972	C	C6-N1-C2	-7.10	117.46	120.30
35	DA	1109	C	C2-N1-C1'	7.08	126.58	118.80
35	BA	882	G	C4-C5-N7	-7.07	107.97	110.80
35	BA	1506	C	C2-N1-C1'	7.07	126.58	118.80
35	DA	2279	G	N1-C6-O6	-7.06	115.66	119.90
35	BA	894	C	C2-N1-C1'	7.03	126.53	118.80
35	BA	1899	G	C4-C5-N7	-7.02	107.99	110.80
35	BA	1332	G	C4-N9-C1'	6.99	135.59	126.50
1	CA	754	C	C2-N1-C1'	6.99	126.49	118.80
35	DA	882	G	N3-C2-N2	-6.98	115.01	119.90
35	BA	94	C	C6-N1-C1'	-6.98	112.42	120.80
22	CW	41	C	C2-N1-C1'	6.98	126.47	118.80
35	DA	1658	C	O5'-P-OP1	-6.97	99.42	105.70
35	BA	828	U	N1-C2-O2	6.97	127.68	122.80
36	DB	22	U	C5-C6-N1	6.96	126.18	122.70
35	DA	1109	C	N1-C2-O2	6.96	123.07	118.90
35	DA	1355	G	C8-N9-C4	6.95	109.18	106.40
35	DA	1899	G	C6-C5-N7	6.94	134.56	130.40
28	B3	8	LEU	CB-CG-CD2	6.94	122.80	111.00
35	BA	2876	G	N9-C4-C5	-6.94	102.62	105.40
35	BA	1407	C	C2-N1-C1'	6.92	126.41	118.80
1	CA	1338	G	C2-N3-C4	6.91	115.36	111.90
35	BA	1493	C	C2-N1-C1'	6.88	126.37	118.80
35	DA	1493	C	C2-N1-C1'	6.88	126.37	118.80
35	DA	1482	G	N1-C2-N3	-6.87	119.78	123.90
35	BA	1109	C	C2-N1-C1'	6.87	126.35	118.80
35	DA	2316	C	C2-N1-C1'	6.85	126.33	118.80
35	DA	717	G	N3-C2-N2	-6.84	115.11	119.90
35	DA	1539	G	N3-C4-N9	-6.83	121.90	126.00
42	DH	10	PRO	N-CA-CB	6.83	111.49	103.30
36	DB	31	C	C5-C6-N1	6.82	124.41	121.00
36	DB	91	C	N3-C2-O2	-6.82	117.13	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	BA	2200	C	C2-N1-C1'	6.81	126.29	118.80
22	AV	20	U	C2-N1-C1'	6.80	125.86	117.70
35	BA	1109	C	N1-C2-O2	6.79	122.98	118.90
35	DA	1963	U	C2-N1-C1'	6.79	125.85	117.70
1	AA	1198	G	C5-C6-O6	6.78	132.67	128.60
35	BA	94	C	C5-C6-N1	6.78	124.39	121.00
35	DA	828	U	C2-N1-C1'	6.77	125.83	117.70
22	AW	19	G	O4'-C1'-N9	-6.77	102.78	108.20
35	BA	882	G	C6-C5-N7	6.76	134.46	130.40
54	DV	18	LEU	CA-CB-CG	6.76	130.85	115.30
19	CS	29	ARG	CA-CB-CG	6.75	128.26	113.40
35	DA	94	C	C6-N1-C1'	-6.75	112.69	120.80
1	CA	849	C	C6-N1-C2	-6.75	117.60	120.30
35	DA	859	G	N3-C4-C5	6.74	131.97	128.60
1	CA	830	G	C2-N3-C4	-6.73	108.53	111.90
35	BA	897	C	C2-N1-C1'	6.72	126.19	118.80
35	BA	1068	G	C4-N9-C1'	6.71	135.22	126.50
36	DB	87	G	N3-C4-C5	6.70	131.95	128.60
35	DA	1899	G	C4-N9-C1'	-6.69	117.80	126.50
35	DA	1301	A	P-O3'-C3'	6.68	127.72	119.70
35	BA	1179	C	C2-N1-C1'	6.67	126.14	118.80
35	DA	1588	C	C2-N1-C1'	6.66	126.13	118.80
35	BA	1131	G	C4-C5-C6	6.65	122.79	118.80
35	BA	676	A	C8-N9-C4	-6.63	103.15	105.80
35	DA	2521	C	C2-N1-C1'	6.62	126.09	118.80
35	BA	882	G	N3-C4-N9	-6.62	122.03	126.00
53	DU	74	LEU	CA-CB-CG	6.61	130.50	115.30
35	DA	1096	A	C6-C5-N7	-6.60	127.68	132.30
51	DS	106	ARG	NE-CZ-NH1	6.60	123.60	120.30
1	CA	993	G	C6-C5-N7	-6.58	126.45	130.40
35	BA	2137	C	C6-N1-C2	-6.58	117.67	120.30
1	AA	1174	G	C4-C5-N7	-6.57	108.17	110.80
1	AA	1158	C	N1-C2-O2	6.57	122.84	118.90
22	CW	41	C	N1-C2-O2	6.56	122.83	118.90
1	AA	1065	U	P-O3'-C3'	6.54	127.55	119.70
35	BA	2103	C	C5-C6-N1	6.54	124.27	121.00
35	BA	1314	C	C2-N1-C1'	6.54	125.99	118.80
35	BA	1385	G	O4'-C1'-N9	6.52	113.41	108.20
35	BA	2155	G	N1-C2-N2	-6.49	110.36	116.20
35	DA	2379	G	C5-C6-O6	-6.49	124.71	128.60
35	DA	2889	C	C2-N1-C1'	6.49	125.94	118.80
35	DA	856	C	C2-N1-C1'	6.48	125.93	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
42	BH	8	PRO	N-CA-CB	6.48	111.08	103.30
22	CW	55	U	N3-C2-O2	-6.47	117.67	122.20
1	AA	1174	G	N1-C6-O6	-6.47	116.02	119.90
4	CD	176	LEU	CA-CB-CG	6.45	130.14	115.30
1	CA	1311	G	N3-C4-N9	-6.45	122.13	126.00
35	BA	1947	C	C2-N1-C1'	6.44	125.88	118.80
35	DA	726	G	C8-N9-C4	6.43	108.97	106.40
35	DA	1059	G	C5-C6-O6	6.43	132.46	128.60
35	BA	2863	C	C2-N1-C1'	6.43	125.87	118.80
1	AA	1174	G	C6-C5-N7	6.43	134.26	130.40
35	DA	94	C	C5-C6-N1	6.42	124.21	121.00
35	BA	1301	A	P-O3'-C3'	6.39	127.37	119.70
36	DB	87	G	C2-N3-C4	-6.38	108.71	111.90
35	DA	1180	C	C2-N1-C1'	6.37	125.81	118.80
1	AA	1088	G	N3-C2-N2	-6.36	115.45	119.90
1	CA	1158	C	N1-C2-O2	6.36	122.71	118.90
22	CW	61	C	N3-C2-O2	-6.36	117.45	121.90
35	BA	2379	G	N3-C4-C5	-6.34	125.43	128.60
1	CA	993	G	C4-N9-C1'	6.34	134.74	126.50
35	DA	1096	A	N9-C4-C5	-6.34	103.26	105.80
35	DA	1437	C	C2-N1-C1'	6.34	125.77	118.80
1	AA	754	C	C2-N1-C1'	6.33	125.77	118.80
4	AD	176	LEU	CA-CB-CG	6.32	129.84	115.30
35	BA	1658	C	O5'-P-OP1	-6.32	100.01	105.70
1	CA	993	G	C8-N9-C1'	-6.30	118.81	127.00
35	DA	1080	C	C5-C4-N4	6.29	124.60	120.20
35	BA	1131	G	N3-C4-C5	-6.27	125.46	128.60
1	AA	1338	G	N1-C2-N2	-6.27	110.56	116.20
1	CA	993	G	N9-C4-C5	-6.27	102.89	105.40
35	DA	413	C	C6-N1-C2	-6.25	117.80	120.30
35	DA	2242	G	C4-C5-N7	6.25	113.30	110.80
30	B5	3	LYS	C-N-CA	6.25	137.31	121.70
35	BA	1649	G	C5-C6-O6	6.23	132.34	128.60
35	DA	1059	G	C2-N3-C4	-6.23	108.78	111.90
42	DH	8	PRO	N-CA-CB	6.23	110.78	103.30
35	DA	1407	C	C5-C6-N1	6.23	124.11	121.00
1	CA	1439	C	C6-N1-C1'	-6.21	113.35	120.80
1	AA	1066	C	N1-C2-O2	6.18	122.61	118.90
35	DA	1899	G	C4-C5-N7	-6.18	108.33	110.80
1	CA	39	G	C2-N3-C4	-6.18	108.81	111.90
35	BA	1588	C	C2-N1-C1'	6.18	125.59	118.80
35	DA	1947	C	C2-N1-C1'	6.18	125.59	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	CV	70	G	C2-N3-C4	6.17	114.99	111.90
35	BA	1478	G	C6-C5-N7	-6.17	126.70	130.40
35	DA	1529	G	C4-N9-C1'	6.17	134.52	126.50
35	BA	764	A	C8-N9-C4	-6.17	103.33	105.80
35	BA	1437	C	C2-N1-C1'	6.16	125.58	118.80
1	CA	1066	C	C6-N1-C1'	-6.16	113.40	120.80
1	CA	1066	C	N3-C2-O2	-6.15	117.59	121.90
1	CA	1309	G	N3-C4-N9	6.14	129.69	126.00
35	BA	828	U	N3-C2-O2	-6.13	117.91	122.20
35	BA	894	C	C5-C6-N1	6.13	124.06	121.00
36	DB	87	G	N3-C4-N9	-6.12	122.33	126.00
35	DA	1774	C	N3-C2-O2	-6.11	117.62	121.90
35	BA	882	G	N9-C4-C5	6.11	107.84	105.40
36	BB	31	C	C5-C6-N1	6.10	124.05	121.00
22	AW	41	C	C2-N1-C1'	6.07	125.48	118.80
36	DB	31	C	C6-N1-C1'	-6.07	113.52	120.80
35	BA	1899	G	C2-N3-C4	-6.06	108.87	111.90
35	DA	2834	G	C2-N3-C4	-6.06	108.87	111.90
35	BA	707	G	N7-C8-N9	6.06	116.13	113.10
13	AM	79	LYS	CD-CE-NZ	6.05	125.61	111.70
22	AV	41	C	C2-N1-C1'	6.04	125.45	118.80
35	BA	2137	C	C5-C6-N1	6.04	124.02	121.00
24	CY	295	LEU	CA-CB-CG	6.03	129.16	115.30
35	BA	1598	C	N1-C2-O2	6.02	122.51	118.90
22	CW	35	A	N9-C4-C5	-6.02	103.39	105.80
35	DA	1963	U	N1-C2-O2	6.02	127.02	122.80
35	DA	527	C	N1-C2-O2	6.01	122.51	118.90
35	DA	2200	C	C2-N1-C1'	6.01	125.41	118.80
35	BA	1068	G	N3-C4-C5	-6.00	125.60	128.60
35	DA	859	G	C6-C5-N7	6.00	134.00	130.40
1	AA	1174	G	N9-C4-C5	6.00	107.80	105.40
35	BA	1493	C	N1-C2-O2	6.00	122.50	118.90
35	BA	1649	G	C6-C5-N7	-6.00	126.80	130.40
1	AA	866	C	N1-C2-O2	5.99	122.49	118.90
1	AA	1022	G	C2-N3-C4	-5.99	108.91	111.90
35	BA	1501	C	C2-N1-C1'	5.98	125.38	118.80
1	AA	76	C	C6-N1-C2	-5.98	117.91	120.30
35	DA	1096	A	C4-C5-N7	5.96	113.68	110.70
22	CV	72	C	C5-C6-N1	5.95	123.97	121.00
35	BA	2134	A	N1-C6-N6	5.95	122.17	118.60
35	BA	2318	G	C4-N9-C1'	5.95	134.23	126.50
35	BA	1505	C	N1-C2-O2	5.94	122.46	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	DA	1502	C	C6-N1-C1'	-5.94	113.68	120.80
35	BA	2316	C	C2-N1-C1'	5.93	125.33	118.80
35	BA	1549	C	C2-N1-C1'	5.93	125.33	118.80
22	AW	39	U	C2-N1-C1'	5.93	124.81	117.70
35	BA	1179	C	N1-C2-O2	5.93	122.46	118.90
1	CA	1065	U	P-O3'-C3'	5.92	126.81	119.70
1	AA	866	C	C6-N1-C2	-5.91	117.94	120.30
35	DA	2688	U	C2-N1-C1'	5.91	124.79	117.70
1	CA	92	C	C2-N1-C1'	5.91	125.30	118.80
35	BA	1301	A	OP1-P-O3'	5.91	118.19	105.20
35	DA	1501	C	C2-N1-C1'	5.90	125.28	118.80
35	BA	2004	G	C2-N3-C4	-5.88	108.96	111.90
35	BA	676	A	O4'-C1'-N9	5.88	112.90	108.20
35	BA	2134	A	N9-C4-C5	-5.88	103.45	105.80
11	AK	111	ASP	C-N-CA	-5.88	107.00	121.70
1	AA	1065	U	OP2-P-O3'	5.87	118.12	105.20
35	BA	1502	C	C6-N1-C1'	-5.87	113.75	120.80
35	DA	1080	C	N3-C4-N4	-5.87	113.89	118.00
35	BA	1478	G	N3-C4-N9	5.87	129.52	126.00
35	DA	1493	C	N1-C2-O2	5.87	122.42	118.90
35	DA	1992	G	P-O3'-C3'	5.87	126.74	119.70
1	CA	1272	G	N3-C4-N9	5.86	129.51	126.00
35	BA	1963	U	C2-N1-C1'	5.84	124.71	117.70
35	BA	2244	U	N3-C4-O4	5.84	123.49	119.40
35	DA	2484	G	N3-C4-C5	-5.84	125.68	128.60
35	DA	268	C	C2-N1-C1'	5.83	125.22	118.80
1	CA	1311	G	C2-N3-C4	-5.83	108.99	111.90
36	BB	22	U	C5-C6-N1	5.81	125.60	122.70
35	DA	1478	G	C6-C5-N7	-5.81	126.92	130.40
1	CA	1272	G	C4-N9-C1'	5.81	134.05	126.50
35	DA	1504	C	N3-C2-O2	-5.80	117.84	121.90
35	DA	2318	G	C4-N9-C1'	5.80	134.04	126.50
27	D2	64	LEU	CA-CB-CG	5.80	128.63	115.30
35	DA	1109	C	N3-C2-O2	-5.79	117.84	121.90
1	CA	1253	G	N3-C4-C5	-5.79	125.71	128.60
48	DP	53	GLY	N-CA-C	-5.79	98.63	113.10
31	D6	35	GLU	CA-CB-CG	5.78	126.12	113.40
35	DA	1478	G	N1-C6-O6	5.78	123.37	119.90
35	BA	172	C	C2-N1-C1'	5.78	125.16	118.80
41	DG	87	PRO	N-CA-C	5.78	127.12	112.10
35	BA	288	C	C2-N1-C1'	5.78	125.16	118.80
10	AJ	16	LEU	CA-CB-CG	5.78	128.58	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	830	G	N3-C4-C5	5.77	131.49	128.60
35	DA	1651	G	C4-C5-N7	5.77	113.11	110.80
1	CA	1054	C	C6-N1-C1'	-5.77	113.88	120.80
35	DA	1069	A	C5-C6-N6	5.77	128.31	123.70
1	AA	1443	G	C6-C5-N7	-5.77	126.94	130.40
35	BA	707	G	C8-N9-C4	-5.77	104.09	106.40
35	DA	1899	G	N3-C4-C5	5.76	131.48	128.60
58	DZ	24	LEU	CA-CB-CG	5.76	128.55	115.30
35	BA	2379	G	N3-C4-N9	5.76	129.45	126.00
35	DA	2871	C	C2-N3-C4	-5.76	117.02	119.90
1	CA	1328	C	N3-C2-O2	-5.75	117.87	121.90
22	AW	51	U	C2-N1-C1'	-5.75	110.80	117.70
1	AA	575	G	O4'-C1'-N9	-5.75	103.60	108.20
1	CA	1272	G	C8-N9-C1'	-5.75	119.53	127.00
30	D5	49	CYS	CA-CB-SG	5.75	124.34	114.00
1	CA	91	C	C5-C6-N1	5.74	123.87	121.00
35	DA	1529	G	N3-C4-C5	-5.74	125.73	128.60
1	CA	1158	C	C6-N1-C1'	-5.74	113.92	120.80
35	DA	1301	A	OP1-P-O3'	5.74	117.82	105.20
40	DF	199	TRP	CB-CG-CD2	-5.72	119.16	126.60
1	CA	993	G	C4-C5-N7	5.72	113.09	110.80
35	DA	1332	G	C4-N9-C1'	5.72	133.93	126.50
35	BA	154	G	N3-C4-N9	5.71	129.43	126.00
35	BA	275	G	C4-N9-C1'	5.71	133.92	126.50
35	BA	1654	A	O5'-P-OP1	-5.70	100.57	105.70
35	BA	272(H)	C	C2-N1-C1'	5.70	125.07	118.80
1	CA	829	G	N3-C4-N9	5.70	129.42	126.00
35	BA	1332	G	C8-N9-C1'	-5.70	119.59	127.00
35	BA	2685	G	N9-C4-C5	5.70	107.68	105.40
35	DA	859	G	C5-C6-O6	5.69	132.01	128.60
42	BH	10	PRO	N-CA-CB	5.69	110.13	103.30
1	CA	39	G	N1-C2-N3	5.68	127.31	123.90
35	BA	1131	G	C3'-C2'-C1'	-5.68	96.96	101.50
1	CA	830	G	C5-C6-N1	-5.68	108.66	111.50
1	AA	1158	C	C6-N1-C1'	-5.68	113.99	120.80
35	BA	2787	C	C6-N1-C2	-5.68	118.03	120.30
35	DA	2521	C	C6-N1-C1'	-5.67	114.00	120.80
1	CA	575	G	P-O3'-C3'	5.67	126.50	119.70
35	BA	647	G	N3-C4-N9	5.66	129.40	126.00
35	DA	859	G	C2-N3-C4	-5.66	109.07	111.90
35	DA	2036	C	C6-N1-C2	-5.66	118.04	120.30
1	AA	186	C	N3-C4-N4	5.66	121.96	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	CV	72	C	C6-N1-C2	-5.65	118.04	120.30
35	DA	1588	C	C5-C6-N1	5.65	123.83	121.00
35	BA	1774	C	N1-C2-O2	5.65	122.29	118.90
35	BA	1514	U	C2-N1-C1'	5.64	124.47	117.70
40	BF	74	ARG	NE-CZ-NH1	5.64	123.12	120.30
48	DP	54	GLY	N-CA-C	-5.64	99.00	113.10
1	AA	1442(B)	A	O5'-P-OP1	5.64	117.47	110.70
35	BA	676	A	C5-N7-C8	-5.64	101.08	103.90
1	AA	76	C	C4-C5-C6	-5.63	114.58	117.40
35	DA	1385	G	O4'-C1'-N9	5.63	112.71	108.20
1	AA	108	G	C4-N9-C1'	5.62	133.81	126.50
35	DA	1509	C	N1-C2-O2	5.62	122.27	118.90
35	DA	897	C	C2-N1-C1'	5.61	124.98	118.80
35	BA	934	G	N3-C4-N9	5.60	129.36	126.00
35	DA	1505	C	N1-C2-O2	5.60	122.26	118.90
1	AA	1066	C	C6-N1-C1'	-5.60	114.08	120.80
35	DA	879	G	N3-C4-N9	5.60	129.36	126.00
1	CA	140	A	N9-C4-C5	5.58	108.03	105.80
35	DA	2148	G	C2-N3-C4	-5.58	109.11	111.90
1	AA	1054	C	C6-N1-C1'	-5.58	114.10	120.80
22	AV	72	C	C5-C6-N1	5.58	123.79	121.00
35	BA	1332	G	N7-C8-N9	5.58	115.89	113.10
1	CA	1311	G	N3-C4-C5	5.58	131.39	128.60
1	AA	1443	G	N9-C4-C5	-5.58	103.17	105.40
1	AA	1054	C	C6-N1-C2	-5.58	118.07	120.30
35	BA	1429	G	C6-C5-N7	-5.58	127.05	130.40
35	DA	1975	G	C5-C6-O6	-5.58	125.25	128.60
22	AV	20	U	C5-C6-N1	5.57	125.49	122.70
35	DA	717	G	N1-C2-N2	5.57	121.22	116.20
35	DA	1109	C	C6-N1-C1'	-5.57	114.11	120.80
1	AA	452	A	N1-C2-N3	-5.57	126.52	129.30
35	BA	1109	C	N3-C2-O2	-5.57	118.00	121.90
22	AV	41	C	N1-C2-O2	5.56	122.24	118.90
35	DA	1786	A	O4'-C1'-N9	5.56	112.65	108.20
35	DA	2242	G	N9-C4-C5	-5.56	103.18	105.40
35	BA	1992	G	P-O3'-C3'	5.56	126.37	119.70
1	AA	575	G	P-O3'-C3'	5.55	126.37	119.70
35	BA	1493	C	C6-N1-C1'	-5.55	114.14	120.80
1	CA	830	G	C5-C6-O6	5.55	131.93	128.60
35	DA	2159	G	C5-C6-O6	5.55	131.93	128.60
35	BA	139	G	C2-N3-C4	-5.54	109.13	111.90
22	CW	62	C	C4-C5-C6	5.54	120.17	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	DA	1146	C	C2-N1-C1'	5.54	124.89	118.80
35	BA	269	U	C2-N1-C1'	5.54	124.34	117.70
35	BA	1179	C	C6-N1-C1'	-5.54	114.16	120.80
35	BA	2248	C	N1-C2-O2	5.54	122.22	118.90
22	CW	62	C	C6-N1-C2	-5.54	118.09	120.30
35	DA	1506	C	C6-N1-C1'	-5.53	114.16	120.80
35	BA	2889	C	C2-N1-C1'	5.53	124.88	118.80
35	DA	2527	C	C6-N1-C2	-5.53	118.09	120.30
1	CA	1311	G	C5-C6-O6	5.52	131.91	128.60
35	DA	1407	C	C6-N1-C1'	-5.52	114.18	120.80
35	BA	1882	C	C2-N1-C1'	5.51	124.86	118.80
1	AA	92	C	C2-N1-C1'	5.51	124.86	118.80
1	AA	1498	U	P-O3'-C3'	5.51	126.31	119.70
35	BA	1588	C	C5-C6-N1	5.51	123.75	121.00
35	BA	2155	G	N3-C4-C5	5.50	131.35	128.60
35	DA	1529	G	C8-N9-C1'	-5.50	119.85	127.00
35	BA	1170	G	C2-N3-C4	5.50	114.65	111.90
1	CA	1263	C	C2-N1-C1'	5.50	124.85	118.80
35	DA	49	A	N1-C6-N6	-5.49	115.31	118.60
1	CA	829	G	N3-C4-C5	-5.49	125.86	128.60
36	DB	31	C	C6-N1-C2	-5.49	118.11	120.30
35	BA	2848	G	O4'-C1'-N9	5.48	112.58	108.20
35	BA	856	C	C6-N1-C1'	-5.47	114.23	120.80
12	CL	53	ARG	NE-CZ-NH1	5.47	123.04	120.30
35	DA	882	G	N1-C2-N2	5.47	121.12	116.20
35	DA	1549	C	C2-N1-C1'	5.47	124.82	118.80
35	DA	2242	G	C6-C5-N7	-5.47	127.12	130.40
35	DA	2666	C	N1-C2-O2	5.47	122.18	118.90
35	DA	1506	C	C5-C6-N1	5.47	123.73	121.00
49	DQ	17	LEU	CA-CB-CG	5.47	127.88	115.30
35	DA	1314	C	C2-N1-C1'	5.47	124.81	118.80
1	CA	723	U	N3-C2-O2	-5.46	118.37	122.20
35	DA	2876	G	N9-C4-C5	-5.46	103.22	105.40
1	AA	1174	G	C6-N1-C2	-5.46	121.83	125.10
35	BA	154(A)	C	C2-N1-C1'	5.46	124.80	118.80
1	CA	1067	A	P-O3'-C3'	5.46	126.25	119.70
35	DA	2876	G	C8-N9-C4	5.46	108.58	106.40
35	DA	2685	G	N3-C4-N9	-5.45	122.73	126.00
1	CA	92	C	N1-C2-O2	5.45	122.17	118.90
35	BA	2248	C	C2-N1-C1'	5.44	124.79	118.80
35	DA	1482	G	N3-C4-C5	-5.44	125.88	128.60
22	CW	41	C	C6-N1-C1'	-5.44	114.27	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	DA	860	U	N3-C2-O2	-5.44	118.39	122.20
35	BA	2134	A	C4-C5-N7	5.44	113.42	110.70
35	DA	2688	U	N3-C2-O2	-5.44	118.39	122.20
24	CY	26	LEU	CA-CB-CG	5.43	127.80	115.30
35	BA	2318	G	O4'-C1'-N9	5.43	112.54	108.20
35	DA	1774	C	N1-C2-O2	5.42	122.15	118.90
35	DA	2569	G	C5-C6-N1	-5.42	108.79	111.50
22	CV	19	G	N3-C2-N2	-5.41	116.11	119.90
35	DA	1498	C	C2-N1-C1'	5.41	124.75	118.80
22	CW	70	G	C2-N3-C4	-5.40	109.20	111.90
39	BE	144	ARG	NE-CZ-NH1	-5.39	117.60	120.30
52	DT	29	ARG	C-N-CA	5.39	135.18	121.70
35	BA	614(C)	A	OP1-P-O3'	5.39	117.06	105.20
35	BA	2474	C	N1-C2-O2	5.39	122.13	118.90
35	DA	1882	C	C2-N1-C1'	5.39	124.73	118.80
35	BA	1157	G	C5-C6-O6	-5.39	125.37	128.60
35	BA	729	G	C6-C5-N7	-5.38	127.17	130.40
35	BA	1068	G	C8-N9-C4	-5.38	104.25	106.40
1	CA	533	A	P-O3'-C3'	5.38	126.15	119.70
1	AA	533	A	P-O3'-C3'	5.37	126.15	119.70
1	AA	931	C	C6-N1-C1'	5.37	127.25	120.80
35	DA	1598	C	C2-N1-C1'	5.37	124.71	118.80
35	DA	1080	C	N1-C2-N3	5.37	122.96	119.20
35	DA	2714	G	N3-C4-N9	5.37	129.22	126.00
51	DS	89	ARG	NE-CZ-NH1	5.37	122.98	120.30
35	BA	94	C	N1-C2-O2	5.36	122.11	118.90
1	AA	328	C	P-O3'-C3'	5.35	126.12	119.70
48	BP	53	GLY	N-CA-C	-5.35	99.72	113.10
52	BT	29	ARG	C-N-CA	5.35	135.08	121.70
35	DA	1529	G	N3-C4-N9	5.35	129.21	126.00
35	BA	934	G	C8-N9-C1'	-5.35	120.05	127.00
35	DA	2845	G	N1-C2-N3	5.35	127.11	123.90
35	BA	1038	C	C2-N1-C1'	5.35	124.68	118.80
35	BA	2867	G	N3-C2-N2	5.35	123.64	119.90
35	BA	654(P)	C	N1-C2-O2	-5.34	115.69	118.90
35	BA	1786	A	O4'-C1'-N9	5.34	112.48	108.20
35	DA	753	C	C5-C6-N1	5.34	123.67	121.00
35	BA	172	C	C6-N1-C1'	-5.33	114.41	120.80
1	AA	108	G	C8-N9-C1'	-5.33	120.08	127.00
35	BA	1509	C	N1-C2-O2	5.32	122.09	118.90
35	DA	998	C	N3-C4-N4	5.32	121.72	118.00
35	DA	1493	C	C6-N1-C1'	-5.31	114.43	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	BA	1506	C	C6-N1-C1'	-5.30	114.44	120.80
35	DA	2484	G	C5-C6-O6	5.29	131.78	128.60
35	DA	2527	C	C5-C6-N1	5.29	123.65	121.00
6	AF	43	LEU	C-N-CA	5.29	133.41	122.30
22	AV	72	C	C6-N1-C2	-5.29	118.18	120.30
1	CA	452	A	C8-N9-C4	-5.29	103.68	105.80
35	DA	879	G	C6-C5-N7	-5.29	127.23	130.40
26	B1	46	LEU	CA-CB-CG	5.29	127.46	115.30
1	CA	1065	U	OP2-P-O3'	5.29	116.83	105.20
3	CC	52	LEU	CA-CB-CG	5.29	127.45	115.30
35	DA	2379	G	C5-C6-N1	5.29	114.14	111.50
48	DP	52	GLU	C-N-CA	5.29	133.40	122.30
35	BA	1463	C	C6-N1-C2	-5.28	118.19	120.30
35	BA	1531	C	N3-C2-O2	-5.28	118.20	121.90
35	BA	158	U	C6-N1-C2	-5.27	117.84	121.00
35	BA	1514	U	C5-C4-O4	-5.27	122.74	125.90
1	CA	1281	U	OP2-P-O3'	5.27	116.79	105.20
1	CA	1443	G	C4-N9-C1'	5.27	133.35	126.50
35	DA	2544	G	C5-C6-O6	-5.27	125.44	128.60
35	DA	1881	C	C2-N1-C1'	5.26	124.59	118.80
35	DA	2484	G	C6-C5-N7	-5.26	127.24	130.40
35	BA	2484	G	C5-C6-O6	-5.26	125.44	128.60
35	BA	2318	G	C8-N9-C1'	-5.26	120.16	127.00
35	DA	2349	G	C4-C5-N7	-5.26	108.70	110.80
35	DA	2863	C	C2-N1-C1'	5.26	124.59	118.80
6	AF	30	LEU	CA-CB-CG	5.26	127.39	115.30
35	BA	2156	G	C2-N3-C4	5.26	114.53	111.90
35	BA	2867	G	C8-N9-C4	-5.26	104.30	106.40
1	CA	1253	G	C8-N9-C4	-5.26	104.30	106.40
22	AW	52	G	C8-N9-C4	-5.25	104.30	106.40
35	BA	729	G	C4-C5-N7	5.25	112.90	110.80
35	BA	2866	U	C2-N1-C1'	5.25	124.00	117.70
35	DA	1478	G	C2-N3-C4	-5.25	109.28	111.90
35	BA	1529	G	C4-N9-C1'	5.25	133.32	126.50
35	BA	1396	U	C2-N1-C1'	5.25	124.00	117.70
1	CA	1017	G	C8-N9-C4	5.24	108.50	106.40
35	BA	2521	C	C6-N1-C1'	-5.24	114.51	120.80
35	DA	1963	U	N3-C2-O2	-5.24	118.53	122.20
35	DA	1686	C	C2-N1-C1'	5.24	124.56	118.80
35	BA	323	G	C4-C5-N7	5.24	112.89	110.80
35	BA	1157	G	C4-N9-C1'	5.23	133.30	126.50
35	DA	879	G	N9-C4-C5	-5.23	103.31	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	DR	2	ARG	NE-CZ-NH2	5.23	122.92	120.30
40	DF	125	LEU	CA-CB-CG	5.23	127.33	115.30
1	AA	362	G	C8-N9-C4	-5.23	104.31	106.40
35	BA	2200	C	C6-N1-C1'	-5.23	114.53	120.80
51	DS	56	LEU	CA-CB-CG	5.23	127.32	115.30
35	BA	27	G	C8-N9-C4	-5.22	104.31	106.40
35	BA	2303	G	N3-C4-N9	-5.22	122.87	126.00
35	BA	1899	G	C5-C6-O6	5.22	131.73	128.60
35	BA	2365	G	N1-C6-O6	-5.22	116.77	119.90
35	BA	2228	G	N1-C6-O6	5.22	123.03	119.90
53	BU	74	LEU	CA-CB-CG	5.21	127.29	115.30
1	CA	57	G	C6-N1-C2	-5.21	121.97	125.10
35	BA	726	G	C2-N3-C4	-5.21	109.29	111.90
35	BA	2867	G	C2-N3-C4	5.21	114.51	111.90
35	DA	1180	C	C6-N1-C1'	-5.21	114.55	120.80
35	BA	2103	C	C4-C5-C6	-5.21	114.80	117.40
35	DA	1318	C	C2-N1-C1'	5.21	124.53	118.80
35	BA	1482	G	C6-C5-N7	-5.21	127.28	130.40
1	AA	1387	G	C5-C6-O6	5.21	131.72	128.60
6	CF	61	LEU	CA-CB-CG	5.21	127.27	115.30
35	DA	301	G	N9-C4-C5	5.20	107.48	105.40
35	DA	934	G	N3-C4-N9	5.20	129.12	126.00
35	BA	1173	G	C2-N3-C4	5.20	114.50	111.90
35	BA	2200	C	N1-C2-O2	5.20	122.02	118.90
35	BA	1462	C	N3-C2-O2	-5.20	118.26	121.90
1	CA	857	C	N3-C2-O2	-5.19	118.27	121.90
35	DA	614(C)	A	P-O3'-C3'	5.19	125.93	119.70
1	AA	1439	C	C2-N1-C1'	5.19	124.51	118.80
35	BA	1598	C	C2-N1-C1'	5.19	124.51	118.80
35	DA	1539	G	N3-C4-C5	5.19	131.19	128.60
35	DA	614	U	N1-C2-O2	5.18	126.43	122.80
35	BA	2484	G	C6-C5-N7	5.18	133.51	130.40
36	BB	31	C	C5-C4-N4	-5.18	116.57	120.20
35	BA	764	A	N9-C4-C5	5.18	107.87	105.80
35	BA	2876	G	C8-N9-C4	5.17	108.47	106.40
22	CV	61	C	C6-N1-C2	-5.17	118.23	120.30
35	DA	1501	C	N1-C2-O2	5.17	122.00	118.90
35	BA	2470	G	C4-N9-C1'	5.16	133.21	126.50
49	BQ	17	LEU	CA-CB-CG	5.16	127.16	115.30
18	AR	31	LEU	CA-CB-CG	5.16	127.16	115.30
38	DD	131	LEU	CA-CB-CG	5.15	127.16	115.30
35	BA	1799	G	C4-N9-C1'	5.15	133.20	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	DA	1482	G	N1-C2-N2	5.15	120.83	116.20
35	BA	2155	G	C4-C5-C6	-5.14	115.72	118.80
1	CA	1049	U	P-O3'-C3'	5.14	125.87	119.70
41	BG	133	LEU	CA-CB-CG	5.13	127.11	115.30
35	DA	269	U	C2-N1-C1'	5.13	123.86	117.70
35	DA	474	G	P-O3'-C3'	5.13	125.86	119.70
35	DA	654(B)	C	C6-N1-C2	-5.13	118.25	120.30
35	DA	2484	G	C8-N9-C4	-5.13	104.35	106.40
35	BA	280	C	C5-C6-N1	5.13	123.56	121.00
1	CA	1017	G	N3-C4-C5	5.13	131.16	128.60
1	CA	1327	C	N3-C2-O2	-5.13	118.31	121.90
41	DG	129	GLY	N-CA-C	-5.13	100.28	113.10
45	DK	84	LEU	CA-CB-CG	5.13	127.09	115.30
35	DA	2838	G	N3-C2-N2	-5.13	116.31	119.90
35	BA	1529	G	C8-N9-C1'	-5.12	120.34	127.00
35	DA	2316	C	C6-N1-C1'	-5.12	114.65	120.80
1	AA	717	C	C2-N1-C1'	5.12	124.44	118.80
1	CA	1325	C	N1-C2-O2	5.12	121.97	118.90
35	BA	2033	A	P-O3'-C3'	5.12	125.84	119.70
1	AA	1088	G	C4-C5-N7	-5.12	108.75	110.80
22	AW	41	C	C6-N1-C1'	-5.12	114.66	120.80
35	DA	2368	C	C2-N1-C1'	5.12	124.43	118.80
35	DA	828	U	N1-C2-O2	5.11	126.38	122.80
1	CA	1294	G	N3-C4-N9	-5.11	122.93	126.00
1	CA	328	C	P-O3'-C3'	5.11	125.83	119.70
35	DA	272(I)	U	N1-C2-O2	5.11	126.38	122.80
35	DA	2655	G	C2-N3-C4	5.11	114.45	111.90
22	CV	41	C	C2-N1-C1'	5.11	124.42	118.80
35	BA	1635	G	C4-N9-C1'	5.11	133.14	126.50
35	BA	2342	C	C2-N1-C1'	5.11	124.42	118.80
1	CA	744	C	C5-C6-N1	5.10	123.55	121.00
35	BA	175	G	C4-C5-N7	5.10	112.84	110.80
35	DA	1313	U	N1-C2-O2	5.10	126.37	122.80
1	CA	1263	C	N1-C2-O2	5.10	121.96	118.90
22	CW	18	G	C2-N3-C4	-5.10	109.35	111.90
35	DA	1588	C	C6-N1-C1'	-5.10	114.68	120.80
1	AA	76	C	C6-N1-C1'	-5.10	114.68	120.80
35	BA	2134	A	C5-C6-N6	-5.10	119.62	123.70
35	BA	2688	U	C2-N1-C1'	5.10	123.82	117.70
1	CA	39	G	N3-C4-C5	5.10	131.15	128.60
1	CA	993	G	C5-C6-O6	-5.10	125.54	128.60
35	DA	1406	U	C2-N1-C1'	5.10	123.81	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1272	G	C6-C5-N7	-5.09	127.34	130.40
35	DA	275	G	C4-N9-C1'	5.09	133.12	126.50
35	BA	2303	G	N9-C4-C5	5.09	107.44	105.40
35	BA	2863	C	C6-N1-C1'	-5.09	114.69	120.80
22	CW	35	A	N1-C6-N6	5.09	121.65	118.60
35	DA	1475	G	C6-C5-N7	-5.09	127.35	130.40
35	BA	1157	G	C8-N9-C1'	-5.09	120.39	127.00
36	BB	22	U	C6-N1-C2	-5.09	117.95	121.00
1	AA	1198	G	N3-C4-N9	-5.08	122.95	126.00
35	DA	158	U	C6-N1-C2	-5.08	117.95	121.00
35	BA	1963	U	N3-C2-O2	-5.08	118.64	122.20
35	DA	272(I)	U	N3-C2-O2	-5.08	118.65	122.20
35	BA	269	U	N1-C2-O2	5.07	126.35	122.80
35	DA	2527	C	C2-N1-C1'	5.07	124.38	118.80
35	DA	1022	G	P-O3'-C3'	5.07	125.78	119.70
22	CW	61	C	N3-C4-C5	5.07	123.93	121.90
1	CA	389	A	O4'-C1'-N9	5.07	112.25	108.20
35	DA	2299	G	C6-C5-N7	-5.07	127.36	130.40
1	CA	560	U	C3'-C2'-C1'	5.07	105.55	101.50
35	DA	610	G	C8-N9-C4	-5.07	104.37	106.40
35	DA	1080	C	C6-N1-C2	-5.06	118.28	120.30
1	CA	1443	G	C8-N9-C1'	-5.06	120.42	127.00
1	CA	1201	A	P-O3'-C3'	5.06	125.77	119.70
35	DA	2838	G	C6-N1-C2	-5.06	122.07	125.10
1	AA	442	C	C2-N1-C1'	5.05	124.36	118.80
35	BA	288	C	N1-C2-O2	5.05	121.93	118.90
35	BA	1157	G	N3-C4-N9	5.05	129.03	126.00
1	CA	575	G	O4'-C1'-N9	-5.04	104.16	108.20
35	DA	1396	U	C2-N1-C1'	5.04	123.75	117.70
1	CA	723	U	N1-C2-O2	5.04	126.33	122.80
35	BA	1022	G	P-O3'-C3'	5.04	125.75	119.70
35	BA	2321	G	C4-N9-C1'	5.04	133.05	126.50
1	CA	1309	G	N3-C4-C5	-5.04	126.08	128.60
35	DA	2099	U	C2-N1-C1'	5.04	123.75	117.70
1	AA	1067	A	P-O3'-C3'	5.04	125.75	119.70
35	DA	272(I)	U	C2-N1-C1'	5.04	123.75	117.70
35	DA	1499	C	C2-N1-C1'	5.04	124.34	118.80
35	DA	1511	C	C2-N1-C1'	5.04	124.34	118.80
35	DA	2033	A	P-O3'-C3'	5.04	125.74	119.70
4	AD	135	LEU	CB-CG-CD2	-5.03	102.44	111.00
1	CA	91	C	C2-N1-C1'	5.03	124.34	118.80
1	AA	1395	C	C2-N1-C1'	5.03	124.33	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	BA	1131	G	C6-C5-N7	-5.03	127.38	130.40
35	DA	726	G	C2-N3-C4	-5.03	109.39	111.90
35	DA	2316	C	C5-C6-N1	5.03	123.52	121.00
35	BA	1963	U	N1-C2-O2	5.03	126.32	122.80
35	DA	897	C	C5-C6-N1	5.03	123.51	121.00
1	AA	1049	U	P-O3'-C3'	5.02	125.73	119.70
35	BA	1407	C	C6-N1-C1'	-5.02	114.77	120.80
22	AV	41	C	C6-N1-C1'	-5.02	114.77	120.80
51	DS	106	ARG	NE-CZ-NH2	-5.02	117.79	120.30
35	BA	174	C	C2-N1-C1'	5.02	124.32	118.80
35	BA	2316	C	C6-N1-C1'	-5.02	114.78	120.80
1	AA	1152	A	O4'-C1'-N9	5.02	112.21	108.20
35	BA	474	G	P-O3'-C3'	5.02	125.72	119.70
35	BA	1407	C	C5-C6-N1	5.01	123.51	121.00
35	DA	1437	C	C6-N1-C1'	-5.01	114.78	120.80
35	DA	1016	G	C6-C5-N7	5.01	133.41	130.40
35	DA	2244	U	N3-C4-O4	5.01	122.91	119.40
35	BA	1170	G	N1-C2-N3	-5.01	120.89	123.90
35	DA	753	C	C6-N1-C2	-5.01	118.30	120.30
35	DA	2685	G	N9-C4-C5	5.01	107.40	105.40
35	BA	1531	C	C6-N1-C2	-5.00	118.30	120.30
35	DA	828	U	C6-N1-C1'	-5.00	114.19	121.20
1	AA	1162	C	C2-N1-C1'	5.00	124.30	118.80
24	AY	295	LEU	CA-CB-CG	5.00	126.81	115.30
35	BA	934	G	C4-N9-C1'	5.00	133.00	126.50
35	BA	2155	G	C6-C5-N7	5.00	133.40	130.40
24	CY	344	LEU	CA-CB-CG	5.00	126.81	115.30
35	DA	928	G	C5-C6-O6	-5.00	125.60	128.60

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
13	AM	118	ALA	Peptide
35	BA	2379	G	Sidechain
13	CM	118	ALA	Peptide

5.2 Too-close contacts

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	846	0
1	CA	32329	0	16318	862	0
2	AB	1901	0	1951	121	0
2	CB	1901	0	1951	106	0
3	AC	1613	0	1677	86	0
3	CC	1613	0	1677	85	0
4	AD	1703	0	1763	112	0
4	CD	1703	0	1763	101	0
5	AE	1147	0	1207	50	0
5	CE	1147	0	1207	48	0
6	AF	843	0	857	49	0
6	CF	843	0	857	54	0
7	AG	1257	0	1296	44	0
7	CG	1257	0	1296	51	0
8	AH	1116	0	1177	49	0
8	CH	1116	0	1177	55	0
9	AI	1011	0	1042	78	0
9	CI	1011	0	1042	62	0
10	AJ	795	0	840	62	0
10	CJ	795	0	840	68	0
11	AK	885	0	904	36	0
11	CK	885	0	904	30	0
12	AL	971	0	1057	54	0
12	CL	971	0	1057	59	0
13	AM	988	0	1057	88	0
13	CM	988	0	1057	66	0
14	AN	492	0	530	22	0
14	CN	492	0	529	24	0
15	AO	734	0	771	26	0
15	CO	734	0	771	23	0
16	AP	701	0	720	38	0
16	CP	701	0	720	36	0
17	AQ	824	0	891	34	0
17	CQ	824	0	891	30	0
18	AR	574	0	644	32	0
18	CR	574	0	644	28	0
19	AS	630	0	652	31	0
19	CS	630	0	652	32	0
20	AT	763	0	861	23	0
20	CT	763	0	861	23	0
21	AU	209	0	221	14	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
21	CU	209	0	221	15	0
22	AV	1619	0	822	19	0
22	AW	1597	0	811	63	0
22	CV	1619	0	822	29	0
22	CW	1597	0	811	59	0
23	AX	166	0	87	3	0
23	CX	166	0	87	9	0
24	AY	2802	0	2818	109	0
24	CY	2802	0	2818	141	0
25	B0	657	0	683	36	0
25	D0	657	0	683	33	0
26	B1	732	0	808	36	0
26	D1	732	0	808	33	0
27	B2	598	0	653	42	0
27	D2	598	0	653	24	0
28	B3	468	0	523	19	0
28	D3	468	0	523	18	0
29	B4	226	0	229	18	0
29	D4	226	0	229	19	0
30	B5	459	0	477	25	0
30	D5	459	0	477	27	0
31	B6	381	0	390	45	0
31	D6	381	0	391	49	0
32	B7	419	0	467	13	0
32	D7	419	0	467	10	0
33	B8	508	0	576	42	0
33	D8	508	0	576	41	0
34	B9	299	0	323	15	0
34	D9	299	0	324	14	0
35	BA	62474	0	31495	1332	0
35	DA	62474	0	31497	1254	0
36	BB	2551	0	1295	56	0
36	DB	2551	0	1295	55	0
37	BC	937	0	957	64	0
37	DC	937	0	957	60	0
38	BD	2120	0	2197	117	0
38	DD	2120	0	2197	110	0
39	BE	1564	0	1629	78	0
39	DE	1564	0	1629	84	0
40	BF	1624	0	1677	83	0
40	DF	1624	0	1677	86	0
41	BG	1474	0	1534	118	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
41	DG	1474	0	1535	116	0
42	BH	1248	0	1289	59	0
42	DH	1248	0	1289	64	0
43	BI	1132	0	1218	46	0
43	DI	1132	0	1218	57	0
44	BJ	651	0	155	14	0
44	DJ	651	0	157	12	0
45	BK	1038	0	1089	76	0
45	DK	1038	0	1089	96	0
46	BN	1105	0	1180	41	0
46	DN	1105	0	1180	59	0
47	BO	933	0	996	38	0
47	DO	933	0	996	35	0
48	BP	1114	0	1186	131	0
48	DP	1114	0	1187	121	0
49	BQ	1122	0	1179	64	0
49	DQ	1122	0	1179	65	0
50	BR	960	0	1021	51	0
50	DR	960	0	1021	43	0
51	BS	771	0	832	55	0
51	DS	771	0	832	61	0
52	BT	1142	0	1202	86	0
52	DT	1142	0	1202	99	0
53	BU	958	0	1015	52	0
53	DU	958	0	1015	49	0
54	BV	779	0	852	46	0
54	DV	779	0	852	60	0
55	BW	896	0	953	26	0
55	DW	896	0	953	30	0
56	BX	726	0	778	29	0
56	DX	726	0	778	27	0
57	BY	776	0	870	89	0
57	DY	776	0	870	73	0
58	BZ	1468	0	1492	102	0
58	DZ	1468	0	1492	72	0
59	AA	30	0	0	0	0
59	B5	1	0	0	0	0
59	BA	180	0	0	0	0
59	BB	2	0	0	0	0
59	BD	1	0	0	0	0
59	BE	1	0	0	0	0
59	BF	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
59	BQ	1	0	0	0	0
59	BT	1	0	0	0	0
59	CA	26	0	0	0	0
59	D5	2	0	0	0	0
59	DA	221	0	0	0	0
59	DB	2	0	0	0	0
59	DD	2	0	0	0	0
59	DP	1	0	0	0	0
59	DU	1	0	0	0	0
59	DW	1	0	0	0	0
60	AD	1	0	0	0	0
60	AN	1	0	0	0	0
60	B9	1	0	0	0	0
60	CD	1	0	0	0	0
60	CN	1	0	0	0	0
60	D9	1	0	0	0	0
61	AA	2	0	0	1	0
61	BA	6	0	0	2	0
61	BE	1	0	0	0	0
61	DA	7	0	0	3	0
61	DE	1	0	0	1	0
61	DS	1	0	0	0	0
61	DZ	1	0	0	0	0
All	All	304459	0	208395	9132	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 18.

All (9132) 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)
57:BY:7:VAL:CB	57:BY:7:VAL:CG2	1.74	1.61
23:AX:20:G:N2	24:AY:203:THR:O	1.69	1.24
35:BA:1048:A:H62	35:BA:1052:C:N4	1.39	1.19
31:D6:35:GLU:HG3	31:D6:37:ARG:HH22	1.10	1.16
35:BA:1048:A:N6	35:BA:1052:C:H42	1.54	1.06
1:AA:78:G:N2	1:AA:91:C:O2	1.90	1.04
35:DA:1529:G:N7	35:DA:1541:G:N2	2.05	1.04
9:CI:4:TYR:HB2	9:CI:19:LEU:HB2	1.36	1.02
39:DE:111:ARG:HA	50:DR:2:ARG:HG2	1.41	1.01
35:DA:1048:A:H62	35:DA:1052:C:H42	1.09	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2098:U:H3	35:BA:2191:G:H1	1.04	1.00
22:CV:19:G:N2	22:CV:56:C:O2	1.95	0.99
35:DA:1899:G:N2	35:DA:1902:C:H41	1.60	0.98
36:DB:22:U:H3	36:DB:61:G:H1	1.00	0.98
35:BA:2867:G:OP2	52:BT:119:LYS:NZ	1.97	0.97
57:BY:95:LYS:HG3	57:BY:100:ALA:HA	1.46	0.97
31:D6:35:GLU:OE1	31:D6:37:ARG:NH1	1.96	0.97
35:BA:1422:G:H1	35:BA:1576:U:H3	1.03	0.97
35:BA:279:C:H42	35:BA:361:G:H1	1.12	0.96
36:BB:80:U:H2'	36:BB:81:G:H21	1.31	0.96
52:BT:25:GLY:HA2	52:BT:92:GLY:HA3	1.46	0.96
30:B5:55:ARG:HD3	30:B5:56:LYS:H	1.32	0.95
31:D6:35:GLU:HG3	31:D6:37:ARG:NH2	1.81	0.95
1:CA:410:G:H21	1:CA:432:A:H62	1.10	0.94
35:BA:1165:U:H3	35:BA:1184:G:H1	1.02	0.94
35:BA:2747:G:H21	35:BA:2757:A:H62	1.08	0.94
35:DA:2098:U:H3	35:DA:2191:G:H1	1.05	0.94
42:DH:41:MET:HG3	42:DH:42:ARG:H	1.31	0.94
57:DY:95:LYS:HG3	57:DY:100:ALA:HA	1.49	0.94
35:DA:1899:G:H22	35:DA:1902:C:H41	0.97	0.93
35:BA:676:A:H8	35:BA:2069:G:H21	1.01	0.93
46:DN:47:ALA:HB2	46:DN:112:LEU:HD11	1.51	0.93
57:DY:7:VAL:HB	57:DY:8:LYS:HD2	1.50	0.93
24:AY:115:ASN:HD22	24:AY:170:LEU:HD11	1.30	0.93
43:BI:131:LYS:HA	43:BI:135:GLU:HG2	1.50	0.92
22:CW:30:G:N2	22:CW:40:C:O2	2.02	0.92
35:DA:1042:G:H1	35:DA:1113:U:H3	0.96	0.92
35:BA:259:G:H21	35:BA:621:A:H8	1.16	0.92
35:DA:2100:G:H1	35:DA:2189:U:H3	0.96	0.92
5:AE:102:ALA:HB1	5:AE:106:PRO:HG2	1.52	0.92
1:AA:932:C:H5''	7:AG:3:ARG:HD2	1.50	0.92
35:BA:336:C:HO2'	57:BY:35:TYR:HH	1.18	0.91
22:CW:6:G:H21	22:CW:7:A:H62	1.17	0.91
40:DF:53:THR:HG23	40:DF:55:GLY:H	1.34	0.91
30:D5:55:ARG:HD3	30:D5:56:LYS:H	1.34	0.91
1:AA:1029:C:HO2'	1:AA:1033:G:H1	1.06	0.91
3:AC:150:LYS:HB3	3:AC:201:TYR:HB2	1.52	0.91
24:AY:182:PRO:O	24:AY:325:ARG:NH2	2.04	0.90
35:BA:272(G):C:H42	35:BA:363(C):G:H1	1.17	0.90
48:DP:16:ARG:HH22	48:DP:18:ARG:HG2	1.34	0.90
33:D8:62:LEU:HD13	35:DA:242:G:H5''	1.52	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:132:G:H1	35:BA:147:U:H3	1.10	0.90
1:AA:376:G:H1	1:AA:387:U:H3	1.20	0.90
35:DA:529:A:H62	35:DA:2041:U:H3	1.18	0.90
35:BA:2784:C:H1'	39:BE:37:ARG:HH12	1.34	0.90
38:BD:79:VAL:HG21	38:BD:111:LEU:HD11	1.52	0.90
10:AJ:63:PHE:HD1	14:AN:58:LYS:HA	1.37	0.90
35:BA:2852:G:H1	35:BA:2865:U:H3	1.16	0.90
1:CA:137:C:H42	1:CA:226:G:H1	1.17	0.89
23:CX:20:G:N2	24:CY:203:THR:O	2.05	0.89
35:DA:2305:A:H5''	41:DG:134:GLY:HA3	1.53	0.88
42:BH:41:MET:HG3	42:BH:42:ARG:H	1.38	0.88
35:BA:2681:C:H5	35:BA:2725:A:H62	1.21	0.88
35:DA:2867:G:OP2	52:DT:119:LYS:NZ	2.06	0.88
35:BA:1068:G:HO2'	35:BA:1096:A:HO2'	1.18	0.88
35:DA:1171:G:H3'	35:DA:1173:G:H4'	1.55	0.88
35:DA:2099:U:H3	35:DA:2190:G:H1	0.88	0.88
41:DG:47:LYS:HB3	41:DG:88:ILE:HD11	1.56	0.88
1:CA:1006:C:H42	1:CA:1024:G:H21	1.22	0.87
22:CV:74:C:OP2	24:CY:266:ARG:NH1	2.07	0.87
1:AA:1401:G:H1	1:AA:1501:C:H42	1.20	0.87
1:CA:927:G:H1	1:CA:1390:U:H3	1.18	0.87
35:BA:2245:U:H5'	35:BA:2246:G:H5'	1.55	0.87
40:BF:53:THR:HG23	40:BF:55:GLY:H	1.39	0.87
37:BC:54:ARG:HB3	37:BC:57:GLN:HB3	1.57	0.87
35:DA:271(D):G:H1	35:DA:271(T):C:H42	1.20	0.87
35:DA:2178:C:H4'	37:DC:47:LYS:HD3	1.55	0.87
40:DF:24:LEU:HB3	40:DF:25:PRO:HD2	1.57	0.87
38:DD:79:VAL:HG21	38:DD:111:LEU:HD11	1.55	0.87
2:CB:172:ILE:H	2:CB:172:ILE:HD12	1.40	0.86
35:DA:2788:C:O2'	35:DA:2809:A:N3	2.08	0.86
35:BA:1852:C:O2	35:BA:1890:A:N6	2.08	0.86
54:BV:62:LEU:HD21	54:BV:95:LEU:HB2	1.55	0.86
22:CV:19:G:N1	22:CV:56:C:N3	2.23	0.86
35:DA:2245:U:H5'	35:DA:2246:G:H5'	1.55	0.86
33:B8:13:ARG:HB3	48:BP:63:PRO:HB3	1.58	0.86
1:CA:501:C:OP1	12:CL:117:ARG:NH2	2.09	0.86
9:CI:26:VAL:HG22	9:CI:61:ALA:HB3	1.58	0.86
40:DF:3:GLU:HA	40:DF:24:LEU:HG	1.57	0.86
1:AA:925:G:H1	1:AA:1391:U:H3	1.18	0.86
22:CW:19:G:H22	22:CW:56:C:H42	1.23	0.86
35:BA:1036:G:N2	35:BA:1119:C:O2	2.07	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:128:VAL:HG12	4:AD:129:ASN:H	1.40	0.86
1:AA:1342:C:H4'	9:AI:125:TYR:HB3	1.57	0.86
2:AB:172:ILE:HD12	2:AB:172:ILE:H	1.39	0.85
33:D8:13:ARG:HB3	48:DP:63:PRO:HB3	1.57	0.85
58:DZ:81:ARG:HB3	58:DZ:81:ARG:HH11	1.41	0.85
30:B5:16:ARG:NH2	35:BA:517:C:OP1	2.08	0.85
35:BA:654(E):G:N1	35:BA:654(P):C:O2	2.09	0.85
35:DA:1451:C:N4	35:DA:1459:G:O6	2.09	0.85
48:DP:144:GLU:H	48:DP:145:PRO:HD3	1.41	0.85
54:DV:62:LEU:HD21	54:DV:95:LEU:HB2	1.58	0.85
35:BA:1607:C:N4	35:BA:1622:G:OP2	2.10	0.85
1:CA:410:G:N2	1:CA:432:A:H62	1.75	0.85
1:AA:346:G:OP1	52:BT:41:ARG:NH1	2.09	0.85
35:BA:631:A:OP1	48:BP:64:LYS:NZ	2.08	0.85
51:BS:58:LEU:HD23	51:BS:65:VAL:HG13	1.57	0.84
9:AI:42:ARG:NH1	9:AI:71:SER:OG	2.09	0.84
51:BS:17:ARG:HH21	51:BS:90:GLY:H	1.25	0.84
57:DY:46:LYS:H	57:DY:62:GLU:HB2	1.42	0.84
22:CW:7:A:N6	22:CW:67:C:O2	2.09	0.84
1:CA:107:G:N7	20:CT:15:ARG:NH2	2.25	0.84
51:DS:13:ARG:HG3	51:DS:14:VAL:H	1.42	0.84
3:AC:153:VAL:HG22	3:AC:198:VAL:HG12	1.60	0.84
4:CD:128:VAL:HG12	4:CD:129:ASN:H	1.41	0.84
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	1.59	0.84
42:DH:12:PRO:HD2	42:DH:49:VAL:HA	1.58	0.84
46:BN:47:ALA:HB2	46:BN:112:LEU:HD11	1.58	0.84
35:DA:2068:U:H3	35:DA:2430:A:H2	1.23	0.84
37:DC:8:TYR:HE1	37:DC:221:PRO:HB3	1.43	0.83
4:CD:59:ARG:HA	4:CD:59:ARG:HE	1.43	0.83
35:DA:676:A:H8	35:DA:2069:G:H21	1.25	0.83
3:AC:14:ILE:HG12	3:AC:15:THR:H	1.43	0.83
35:BA:1485:G:N2	35:BA:1504:C:O2	2.12	0.83
35:BA:2100:G:H1	35:BA:2189:U:H3	1.23	0.83
40:BF:24:LEU:HB3	40:BF:25:PRO:HD2	1.58	0.83
1:CA:617:G:H1	1:CA:623:C:H42	1.25	0.83
35:BA:65:C:O2	35:BA:456:C:N4	2.10	0.83
37:BC:57:GLN:HE21	37:BC:205:ALA:HA	1.42	0.83
35:BA:1686:C:H42	35:BA:1702:G:H1	1.26	0.83
48:BP:144:GLU:H	48:BP:145:PRO:HD3	1.42	0.83
37:DC:42:VAL:HG22	37:DC:217:THR:HG22	1.59	0.83
43:BI:49:ALA:HA	43:BI:52:ARG:HG2	1.61	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:452:A:H62	1:CA:480:U:H3	1.26	0.83
35:DA:848:G:H2'	35:DA:849:A:H8	1.43	0.83
58:DZ:97:GLU:HG2	58:DZ:125:LEU:HD21	1.61	0.83
55:DW:92:ARG:HB3	55:DW:92:ARG:HH11	1.42	0.83
51:BS:13:ARG:HG3	51:BS:14:VAL:H	1.41	0.83
38:DD:44:ASN:HB3	38:DD:49:ILE:HA	1.61	0.83
1:AA:938:A:HO2'	1:AA:1376:U:HO2'	1.25	0.82
35:BA:2285:C:O2	35:BA:2383:G:N2	2.12	0.82
37:BC:8:TYR:HE1	37:BC:221:PRO:HB3	1.43	0.82
1:CA:110:C:O2'	16:CP:25:ARG:O	1.97	0.82
3:CC:32:LEU:HB3	3:CC:59:ARG:HH22	1.45	0.82
56:DX:12:VAL:HB	56:DX:17:ALA:HB1	1.61	0.82
35:DA:2101:G:N2	35:DA:2188:C:O2	2.11	0.82
35:BA:1485:G:N1	35:BA:1504:C:N3	2.27	0.82
3:CC:59:ARG:HG2	3:CC:64:VAL:HA	1.59	0.82
48:BP:16:ARG:HH12	48:BP:18:ARG:HB2	1.44	0.82
12:AL:89:ARG:HA	12:AL:97:ARG:HA	1.60	0.82
35:BA:848:G:H2'	35:BA:849:A:H8	1.45	0.82
2:CB:33:TYR:HB2	2:CB:43:ASP:HB2	1.61	0.82
12:CL:89:ARG:HA	12:CL:97:ARG:HA	1.60	0.82
27:D2:2:LYS:HB3	35:DA:97:C:H5''	1.60	0.82
35:DA:1056:G:N2	35:DA:1102:C:OP1	2.12	0.82
45:BK:91:PRO:O	58:BZ:112:ARG:NH1	2.12	0.82
5:CE:50:GLU:HG3	5:CE:52:PRO:HD2	1.61	0.82
35:BA:1899:G:H22	35:BA:1902:C:H41	1.28	0.82
36:BB:21:G:O2'	36:BB:22:U:O4'	1.97	0.82
2:CB:69:LEU:HD23	2:CB:159:PRO:HG2	1.62	0.82
35:DA:1747(A):G:H2'	35:DA:1748:G:H5''	1.60	0.82
35:BA:1095:A:N6	45:BK:29:GLN:OE1	2.13	0.82
56:BX:12:VAL:HB	56:BX:17:ALA:HB1	1.61	0.82
1:CA:189:G:H1	1:CA:189(K):U:H3	1.28	0.82
1:CA:191:G:C4	20:CT:105:SER:HB3	2.13	0.82
1:CA:1128:C:O2'	1:CA:1130:A:N7	2.12	0.81
35:BA:1747(A):G:H2'	35:BA:1748:G:H5''	1.62	0.81
3:CC:150:LYS:HB3	3:CC:201:TYR:HB2	1.60	0.81
35:BA:885:C:O2	35:BA:890:A:N6	2.14	0.81
41:BG:46:ALA:HB2	41:BG:88:ILE:HD11	1.59	0.81
45:BK:21:PRO:HB2	45:BK:22:PRO:HD3	1.63	0.81
58:BZ:151:HIS:HB2	58:BZ:170:THR:HA	1.62	0.81
57:DY:10:GLY:HA2	57:DY:27:VAL:HG13	1.59	0.81
35:DA:1217:C:OP2	53:DU:15:LYS:NZ	2.12	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:833:U:H3	1:CA:853:G:H1	1.27	0.81
38:DD:165:ILE:HD13	38:DD:175:LEU:HD21	1.62	0.81
55:BW:92:ARG:HB3	55:BW:92:ARG:HH11	1.44	0.81
35:BA:847:U:O4	35:BA:933:A:N6	2.14	0.81
35:BA:881:G:H1	35:BA:895:U:H3	1.26	0.81
48:BP:7:ARG:NH1	48:BP:7:ARG:HA	1.96	0.81
2:CB:185:ILE:HG22	2:CB:199:TYR:HB2	1.63	0.81
1:AA:617:G:H1	1:AA:623:C:H42	1.26	0.81
35:BA:2787:C:O2	39:BE:61:ARG:NH1	2.14	0.81
37:DC:191:ARG:HB3	37:DC:195:ARG:HH12	1.45	0.81
2:AB:224:GLN:HA	2:AB:229:VAL:HG22	1.62	0.81
48:BP:38:GLN:HG3	48:BP:39:LYS:H	1.44	0.81
26:D1:50:ARG:HG2	26:D1:59:THR:HG22	1.63	0.81
35:DA:1332:G:N2	35:DA:1609:A:O2'	2.14	0.81
26:B1:50:ARG:HG2	26:B1:59:THR:HG22	1.62	0.80
57:BY:7:VAL:HB	57:BY:8:LYS:HD2	1.63	0.80
36:BB:20:C:H2'	36:BB:21:G:H5''	1.62	0.80
4:AD:59:ARG:HA	4:AD:59:ARG:HE	1.46	0.80
35:DA:1106:G:O6	35:DA:1107:G:N2	2.13	0.80
13:CM:39:ILE:HD12	13:CM:56:LEU:HD23	1.63	0.80
35:DA:1980:G:O2'	35:DA:1982:C:OP2	1.99	0.80
57:DY:76:CYS:SG	57:DY:77:PRO:HD2	2.22	0.80
1:AA:833:U:H3	1:AA:853:G:H1	1.27	0.80
3:AC:156:ARG:NH2	3:AC:159:GLY:O	2.15	0.80
52:BT:3:ARG:HB2	52:BT:6:LEU:HB3	1.63	0.80
35:BA:2101:G:N2	35:BA:2188:C:O2	2.14	0.80
7:CG:77:SER:HA	7:CG:86:GLN:HA	1.63	0.80
35:DA:819:A:OP2	35:DA:1187:G:N2	2.13	0.80
35:DA:2134:A:N6	35:DA:2157:G:O2'	2.15	0.80
52:DT:25:GLY:HA2	52:DT:92:GLY:HA3	1.62	0.80
1:AA:666:G:H1	1:AA:740:U:H3	1.27	0.80
3:CC:58:GLU:HB2	3:CC:65:ALA:HB3	1.63	0.80
1:AA:1226:C:OP2	13:AM:103:THR:OG1	2.00	0.80
35:BA:996:A:OP2	53:BU:92:ARG:NH2	2.13	0.80
19:CS:32:LYS:HA	19:CS:50:ALA:HB3	1.64	0.80
41:DG:115:ARG:HH22	41:DG:136:ARG:HD2	1.45	0.80
6:AF:1:MET:HB3	6:AF:66:GLU:HG2	1.63	0.80
47:BO:80:ASP:OD2	52:BT:64:ARG:NH2	2.14	0.80
3:CC:6:HIS:HD2	3:CC:7:PRO:HD2	1.46	0.80
1:AA:1129:C:N4	1:AA:1135:U:O4	2.16	0.79
8:AH:97:VAL:HG21	8:AH:128:GLY:HA2	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:28:ARG:HA	31:B6:32:ASN:HD22	1.45	0.79
45:DK:21:PRO:HB2	45:DK:22:PRO:HD3	1.63	0.79
46:DN:58:ASP:O	46:DN:60:ILE:N	2.15	0.79
35:DA:1689:A:H62	35:DA:1698:A:H2	1.26	0.79
9:AI:10:ARG:NH2	9:AI:107:ARG:O	2.14	0.79
35:BA:1411:C:N3	35:BA:1591:G:N1	2.29	0.79
4:CD:13:ARG:NH1	4:CD:38:TYR:O	2.15	0.79
53:DU:88:ILE:HG22	54:DV:47:VAL:HG23	1.63	0.79
35:DA:271(E):U:H3	35:DA:271(S):G:H1	1.29	0.79
13:AM:93:ARG:HD3	35:BA:888:C:H5'	1.65	0.79
35:BA:1568:G:H5''	38:BD:61:LEU:HD23	1.64	0.79
58:DZ:69:THR:HG22	58:DZ:90:VAL:HA	1.65	0.79
40:BF:40:GLN:HE22	40:BF:182:ASN:HB2	1.48	0.79
39:DE:119:ARG:NH1	39:DE:156:MET:O	2.16	0.79
1:CA:189(C):C:O2	1:CA:189(H):G:N2	2.16	0.79
3:CC:14:ILE:HG12	3:CC:15:THR:H	1.47	0.79
13:CM:3:ARG:HH21	13:CM:7:VAL:HG22	1.48	0.79
57:DY:28:LYS:HZ2	57:DY:37:VAL:HG11	1.48	0.79
1:CA:1189:C:OP1	10:CJ:51:ARG:NH2	2.16	0.79
1:CA:1363(A):A:H4'	1:CA:1364:U:H5''	1.63	0.79
1:CA:1392:G:H21	1:CA:1502:A:H8	1.31	0.79
1:AA:945:G:N2	1:AA:1334:G:O2'	2.16	0.78
35:BA:2747:G:N2	35:BA:2757:A:H62	1.80	0.78
38:BD:44:ASN:HB3	38:BD:49:ILE:HA	1.65	0.78
42:BH:12:PRO:HD2	42:BH:49:VAL:HA	1.65	0.78
33:D8:30:ARG:HA	33:D8:30:ARG:HE	1.47	0.78
1:AA:1165:C:O2	1:AA:1171:G:N2	2.13	0.78
35:BA:1529:G:O6	35:BA:1541:G:N1	2.16	0.78
35:BA:1538:G:H2'	35:BA:1539:G:C8	2.18	0.78
1:AA:976:G:N2	1:AA:1363:C:OP2	2.15	0.78
35:BA:1678:G:H22	35:BA:1989:G:H22	1.31	0.78
36:BB:21:G:O6	36:BB:62:C:N4	2.16	0.78
52:BT:35:LYS:O	52:BT:38:ASN:ND2	2.16	0.78
40:DF:25:PRO:HB3	40:DF:119:ARG:HD3	1.65	0.78
40:BF:103:LYS:HA	40:BF:106:ARG:HG3	1.63	0.78
41:BG:44:GLY:HA2	41:BG:88:ILE:HB	1.64	0.78
57:BY:46:LYS:H	57:BY:62:GLU:HB2	1.48	0.78
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.65	0.78
9:AI:4:TYR:HB2	9:AI:19:LEU:HB2	1.66	0.78
2:AB:91:PRO:HG3	2:AB:154:LEU:HB2	1.64	0.78
35:BA:2327:A:H2'	35:BA:2328:A:C8	2.19	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:152:A:H62	1:CA:169:C:H42	1.31	0.78
35:DA:848:G:H2'	35:DA:849:A:C8	2.19	0.78
35:BA:2115:G:N3	35:BA:2117:A:N6	2.32	0.78
2:AB:18:GLY:O	2:AB:204:ASN:ND2	2.17	0.78
1:CA:673:G:H2'	1:CA:674:G:C8	2.19	0.78
48:DP:38:GLN:HG3	48:DP:39:LYS:H	1.49	0.78
47:BO:49:ARG:H	47:BO:49:ARG:HD3	1.47	0.78
9:CI:13:ALA:HB2	9:CI:68:GLY:HA3	1.66	0.78
24:CY:23:GLU:HA	24:CY:26:LEU:HG	1.66	0.78
35:BA:2843:G:H1	35:BA:2874:C:H42	1.32	0.77
1:CA:668:G:H4'	15:CO:48:LYS:HB2	1.67	0.77
1:AA:1363(A):A:H4'	1:AA:1364:U:H5''	1.66	0.77
41:BG:72:ARG:HD3	41:BG:86:MET:HA	1.65	0.77
49:BQ:14:ARG:HG2	49:BQ:41:TRP:HH2	1.48	0.77
1:CA:932:C:H5''	7:CG:3:ARG:HD2	1.64	0.77
35:DA:907:U:O2'	49:DQ:101:ARG:NH2	2.17	0.77
22:AW:62:C:H4'	37:BC:53:ARG:HG3	1.65	0.77
35:DA:1852:C:O2	35:DA:1890:A:N6	2.16	0.77
35:DA:2681:C:H5	35:DA:2725:A:H62	1.28	0.77
4:AD:3:ARG:NH2	4:AD:118:ARG:HD3	1.98	0.77
35:DA:1568:G:H5''	38:DD:61:LEU:HD23	1.66	0.77
35:DA:2121:G:N1	35:DA:2178:C:O2	2.17	0.77
54:DV:19:LYS:HG2	54:DV:94:LEU:HB2	1.67	0.77
58:DZ:53:ILE:HG22	58:DZ:71:VAL:HG12	1.64	0.77
35:BA:281:G:H21	35:BA:359:A:H62	1.33	0.77
1:CA:990:C:O2	1:CA:1215:G:N2	2.14	0.77
1:CA:1004:A:O2'	1:CA:1038:C:N3	2.17	0.77
22:CW:15:G:N2	22:CW:59:U:O2	2.18	0.77
43:DI:88:ILE:HG22	43:DI:90:GLY:H	1.50	0.77
1:CA:714:G:H2'	1:CA:715:A:C8	2.19	0.77
45:DK:27:LEU:HD13	45:DK:57:ILE:HD13	1.66	0.77
1:AA:939:G:H5''	7:AG:102:ARG:HH22	1.50	0.77
1:AA:1376:U:OP1	7:AG:98:SER:OG	2.02	0.77
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.49	0.77
37:BC:7:ARG:NH2	37:BC:219:MET:O	2.15	0.77
38:BD:24:ILE:HG23	38:BD:25:THR:H	1.50	0.77
45:BK:4:VAL:HG22	45:BK:5:VAL:H	1.50	0.77
1:CA:408:A:OP2	4:CD:115:ARG:NH2	2.18	0.77
33:D8:25:MET:HG3	48:DP:64:LYS:HB3	1.67	0.77
35:DA:1040:C:N4	35:DA:1115:G:O6	2.17	0.77
40:DF:63:LYS:NZ	40:DF:75:HIS:O	2.18	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:101:VAL:HB	48:DP:107:LYS:HA	1.65	0.77
10:AJ:26:ALA:HA	10:AJ:29:ARG:HH12	1.49	0.77
35:BA:654(S):G:H2'	35:BA:654(T):C:C6	2.20	0.77
10:AJ:27:ALA:HB2	10:AJ:85:LEU:HD11	1.67	0.77
26:B1:73:LEU:HD11	26:B1:95:LEU:HD23	1.66	0.77
35:BA:2876:G:H4'	52:BT:3:ARG:HE	1.48	0.77
2:CB:80:ILE:H	2:CB:80:ILE:HD12	1.49	0.77
30:D5:4:HIS:HB3	30:D5:5:PRO:CD	2.15	0.77
32:D7:22:MET:O	32:D7:28:ARG:NH1	2.18	0.77
24:AY:188:ARG:HD3	24:AY:310:GLN:HE21	1.50	0.77
41:BG:72:ARG:HB3	41:BG:87:PRO:HD2	1.68	0.77
41:DG:51:ARG:HA	41:DG:51:ARG:HE	1.49	0.77
35:BA:1451:C:N4	35:BA:1459:G:O6	2.16	0.76
37:DC:42:VAL:HA	37:DC:217:THR:HA	1.67	0.76
45:DK:4:VAL:HG22	45:DK:5:VAL:H	1.50	0.76
1:AA:1126:U:OP2	1:AA:1281:U:N3	2.17	0.76
5:AE:92:LYS:HB3	5:AE:119:LEU:HB2	1.65	0.76
35:DA:1798:U:H5'	38:DD:259:THR:HG22	1.65	0.76
41:DG:115:ARG:HG3	41:DG:116:ASP:H	1.49	0.76
30:D5:46:CYS:SG	55:DW:38:TYR:OH	2.41	0.76
16:CP:18:ARG:HD3	16:CP:35:LYS:HE3	1.67	0.76
2:AB:166:ASP:HB3	2:AB:169:LYS:HB2	1.66	0.76
35:BA:1411:C:O2	35:BA:1591:G:N2	2.19	0.76
57:BY:8:LYS:HE3	57:BY:74:PRO:HD3	1.67	0.76
35:DA:1044:G:O2'	35:DA:1111:A:N6	2.18	0.76
35:DA:1858:G:O2'	35:DA:1884:A:N6	2.18	0.76
35:DA:2093:G:H1	35:DA:2196:C:H42	1.33	0.76
36:DB:37:C:O2	51:DS:95:HIS:NE2	2.18	0.76
52:DT:20:PRO:HD2	52:DT:85:LYS:HB2	1.66	0.76
51:DS:30:ARG:HH22	51:DS:62:LYS:HD2	1.48	0.76
1:AA:1189:C:OP1	10:AJ:51:ARG:NH2	2.17	0.76
1:AA:922:G:H4'	5:AE:20:GLN:HA	1.67	0.76
12:AL:18:VAL:HG23	12:AL:19:ARG:H	1.50	0.76
35:BA:2314:C:H2'	35:BA:2315:G:H8	1.50	0.76
52:BT:28:VAL:HG22	52:BT:46:GLU:HA	1.68	0.76
1:AA:673:G:H2'	1:AA:674:G:C8	2.21	0.76
35:BA:1332:G:N2	35:BA:1609:A:O2'	2.18	0.76
35:BA:1636:C:H2'	35:BA:1637:A:C8	2.20	0.76
43:BI:113:ARG:O	43:BI:131:LYS:HB2	1.86	0.76
35:DA:631:A:OP1	48:DP:64:LYS:NZ	2.15	0.76
35:DA:1094:U:H1'	35:DA:1097:U:H5	1.51	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DI:112:LYS:H	43:DI:112:LYS:HD2	1.50	0.76
52:DT:80:SER:HB3	52:DT:81:PRO:HD3	1.66	0.76
6:AF:30:LEU:HB2	6:AF:35:ALA:HB3	1.68	0.75
15:CO:16:ALA:HB1	15:CO:21:ASP:HB3	1.67	0.75
1:AA:6:G:H4'	1:AA:298:A:H4'	1.68	0.75
1:AA:1386:G:H2'	1:AA:1387:G:H8	1.52	0.75
35:DA:996:A:OP2	53:DU:92:ARG:NH2	2.19	0.75
52:DT:65:LYS:NZ	52:DT:66:VAL:O	2.20	0.75
35:BA:1359:A:H62	35:BA:1372:U:H3	1.31	0.75
35:BA:1798:U:H5'	38:BD:259:THR:HG22	1.65	0.75
1:AA:1005:A:O4'	1:AA:1036:G:N2	2.19	0.75
1:AA:1055:A:N7	1:AA:1200:C:N4	2.34	0.75
43:BI:1:MET:N	43:BI:20:ASP:OD1	2.18	0.75
28:B3:6:VAL:HB	28:B3:54:VAL:HG11	1.67	0.75
35:BA:413:C:H42	35:BA:2410:G:H1	1.33	0.75
35:BA:1245:G:OP1	48:BP:16:ARG:NE	2.19	0.75
41:BG:96:ARG:HG2	41:BG:97:ASP:H	1.49	0.75
22:CW:27:G:H1	22:CW:43:C:H42	1.31	0.75
35:DA:252:G:OP2	48:DP:50:ARG:NH1	2.20	0.75
35:DA:1044:G:HO2'	35:DA:1111:A:H61	1.34	0.75
1:AA:1178:G:OP2	9:AI:97:LYS:NZ	2.19	0.75
30:B5:2:ALA:HA	35:BA:2015:A:H1'	1.66	0.75
35:DA:654(E):G:N1	35:DA:654(P):C:O2	2.20	0.75
35:DA:2660:A:H5'	35:DA:2661:G:N2	2.02	0.75
38:DD:24:ILE:HG23	38:DD:25:THR:H	1.52	0.75
46:BN:67:LEU:HD23	46:BN:87:LEU:HD13	1.67	0.75
35:BA:2150:U:H2'	35:BA:2151:G:H8	1.51	0.75
35:BA:1899:G:H22	35:BA:1902:C:N4	1.84	0.75
35:BA:1980:G:O2'	35:BA:1982:C:OP2	2.05	0.75
35:BA:2075:U:OP2	35:BA:2238:G:O2'	2.04	0.75
3:CC:16:ARG:HB2	3:CC:16:ARG:NH1	2.02	0.75
3:CC:156:ARG:NH2	3:CC:159:GLY:O	2.20	0.75
35:BA:2683:C:OP1	52:BT:53:ARG:NH2	2.20	0.74
47:BO:35:VAL:HG11	47:BO:103:ALA:HB3	1.69	0.74
18:CR:56:THR:HB	18:CR:58:LEU:HD13	1.70	0.74
35:DA:1598:C:H5'	56:DX:36:LYS:HB2	1.68	0.74
57:DY:42:VAL:HG21	57:DY:67:LEU:HD13	1.69	0.74
58:DZ:49:ARG:HG2	58:DZ:49:ARG:HH11	1.50	0.74
7:AG:73:MET:HG2	7:AG:90:GLU:HA	1.67	0.74
30:B5:33:CYS:HB2	30:B5:40:LYS:HE3	1.69	0.74
34:D9:22:ARG:NH2	35:DA:2741:A:OP1	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:768:G:O2'	35:DA:1379:A:N6	2.20	0.74
35:DA:1540:U:H3'	35:DA:1541:G:H3'	1.69	0.74
22:AW:52:G:H2'	22:AW:53:G:C8	2.22	0.74
24:AY:130:CYS:HB3	24:AY:164:ILE:H	1.51	0.74
35:BA:271(D):G:H1	35:BA:271(T):C:H42	1.35	0.74
35:DA:1065:U:O2	35:DA:1073:A:N6	2.19	0.74
35:BA:819:A:OP2	35:BA:1187:G:N2	2.20	0.74
52:BT:80:SER:HB3	52:BT:81:PRO:HD3	1.69	0.74
35:DA:587:C:OP2	48:DP:33:ARG:NH2	2.20	0.74
3:AC:6:HIS:HD2	3:AC:7:PRO:HD2	1.53	0.74
3:AC:16:ARG:NH1	3:AC:16:ARG:HB2	2.03	0.74
10:AJ:16:LEU:HD23	10:AJ:94:VAL:HG13	1.69	0.74
39:BE:111:ARG:HB2	39:BE:160:TYR:O	1.88	0.74
45:BK:76:TYR:O	45:BK:79:ARG:HG3	1.88	0.74
4:CD:3:ARG:NH2	4:CD:118:ARG:HD3	2.02	0.74
35:DA:1048:A:N6	35:DA:1108:U:O4	2.16	0.74
37:DC:54:ARG:HB3	37:DC:57:GLN:HB3	1.69	0.74
1:CA:80:G:H22	1:CA:90:U:H5''	1.52	0.74
48:DP:16:ARG:HH12	48:DP:18:ARG:HB2	1.52	0.74
40:BF:125:LEU:HD23	40:BF:125:LEU:H	1.53	0.74
2:CB:233:SER:HB2	2:CB:234:PRO:HD2	1.68	0.74
41:DG:64:THR:HG23	41:DG:66:GLN:H	1.53	0.74
52:DT:23:ARG:O	52:DT:25:GLY:N	2.21	0.74
54:DV:15:GLU:HB3	54:DV:16:PRO:HD2	1.70	0.74
35:BA:494:G:O2'	55:BW:5:ALA:O	2.05	0.74
1:CA:737:A:H2'	1:CA:738:C:C6	2.23	0.74
36:DB:80:U:H2'	36:DB:81:G:H21	1.53	0.74
46:DN:99:LEU:HD12	46:DN:122:VAL:HG21	1.70	0.74
1:AA:15:G:H1	1:AA:920:U:H3	1.35	0.74
38:BD:10:THR:HG23	38:BD:13:ARG:HB3	1.70	0.74
45:BK:77:LEU:HD12	45:BK:111:LYS:HE2	1.68	0.74
35:DA:602:G:HO2'	35:DA:604:G:HO2'	1.32	0.74
2:AB:136:VAL:O	2:AB:140:HIS:HB2	1.88	0.74
7:AG:77:SER:HA	7:AG:86:GLN:HA	1.69	0.74
35:BA:2470:G:OP1	49:BQ:56:ARG:NH2	2.21	0.74
35:DA:2101:G:N1	35:DA:2188:C:N3	2.35	0.74
1:AA:1305:G:O2'	1:AA:1331:G:N2	2.21	0.73
38:BD:71:ASP:HB2	38:BD:103:ARG:HH22	1.53	0.73
24:CY:72:LEU:HD13	24:CY:91:LEU:HG	1.69	0.73
35:DA:65:C:O2	35:DA:456:C:N4	2.18	0.73
51:DS:106:ARG:NH1	51:DS:106:ARG:HB3	2.02	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:29:ARG:HG3	52:DT:30:VAL:HG13	1.70	0.73
6:AF:10:LEU:HD13	6:AF:61:LEU:HD13	1.69	0.73
24:AY:265:THR:OG1	24:AY:271:ASN:OD1	2.05	0.73
52:DT:35:LYS:O	52:DT:38:ASN:ND2	2.21	0.73
1:AA:413:G:N2	1:AA:429:U:OP2	2.20	0.73
2:AB:178:ARG:HB2	2:AB:178:ARG:HH11	1.54	0.73
16:AP:45:THR:HG22	16:AP:47:ASP:H	1.54	0.73
1:CA:410:G:H21	1:CA:432:A:N6	1.83	0.73
1:CA:790:A:OP1	22:CV:38:A:O2'	2.05	0.73
34:D9:15:LYS:HE2	34:D9:17:ILE:HD11	1.69	0.73
35:DA:810:U:O2'	48:DP:33:ARG:NH1	2.21	0.73
35:BA:140:G:H1'	35:BA:141:A:H2	1.52	0.73
35:BA:823:G:H2'	35:BA:824:A:H8	1.53	0.73
35:BA:1048:A:H62	35:BA:1052:C:H42	0.75	0.73
35:BA:1403:C:H5''	35:BA:1471:A:H1'	1.70	0.73
4:CD:13:ARG:O	4:CD:15:GLU:N	2.21	0.73
35:DA:1071:G:N1	35:DA:1091:G:O6	2.16	0.73
32:B7:22:MET:O	32:B7:28:ARG:NH1	2.21	0.73
51:BS:28:VAL:HB	51:BS:89:ARG:HB2	1.67	0.73
35:DA:2132:U:H3	37:DC:6:LYS:NZ	1.85	0.73
2:AB:194:PRO:O	2:AB:196:LEU:N	2.22	0.73
9:AI:53:VAL:HG23	9:AI:55:ALA:H	1.54	0.73
1:CA:1219:U:OP1	14:CN:19:ARG:NH2	2.20	0.73
35:DA:1473:G:O6	35:DA:1519:G:N2	2.22	0.73
35:BA:1658:C:OP1	39:BE:132:HIS:ND1	2.22	0.73
43:BI:127:VAL:HG22	43:BI:139:GLN:HA	1.69	0.73
57:BY:50:ARG:HB2	57:BY:57:GLN:HA	1.71	0.73
35:DA:654(J):A:N7	35:DA:654(N):G:N2	2.37	0.73
35:DA:2150:U:H2'	35:DA:2151:G:H8	1.52	0.73
47:DO:49:ARG:HD3	47:DO:49:ARG:H	1.53	0.73
35:BA:994:C:OP1	53:BU:53:ARG:NH2	2.21	0.73
38:DD:182:LEU:H	38:DD:272:ALA:HB3	1.53	0.73
1:AA:921:U:O2'	5:AE:19:MET:O	2.07	0.73
1:AA:1384:C:H2'	1:AA:1385:G:H8	1.54	0.73
30:D5:33:CYS:HB2	30:D5:40:LYS:HE3	1.70	0.73
13:AM:124:PRO:HB3	24:AY:158:PRO:HA	1.69	0.73
16:AP:18:ARG:HD3	16:AP:35:LYS:HE3	1.70	0.73
16:CP:72:ARG:HH21	16:CP:73:LEU:HD21	1.54	0.73
35:DA:598:G:H5'	48:DP:15:ARG:HB2	1.70	0.73
35:BA:2030:A:H4'	35:BA:2031:A:H8	1.52	0.72
40:BF:188:ARG:HA	48:BP:7:ARG:HD3	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D7:11:LYS:HE2	35:DA:686:G:H5''	1.69	0.72
35:DA:1614:A:H62	55:DW:93:ALA:HB2	1.54	0.72
35:DA:2329:G:H2'	35:DA:2330:G:C8	2.24	0.72
1:AA:1384:C:H2'	1:AA:1385:G:C8	2.23	0.72
52:BT:23:ARG:O	52:BT:25:GLY:N	2.22	0.72
35:DA:7:G:H2'	35:DA:8:A:C8	2.24	0.72
37:DC:214:TYR:HB3	37:DC:222:SER:HB2	1.71	0.72
40:DF:128:ALA:O	40:DF:142:TRP:NE1	2.19	0.72
1:AA:272:C:H2'	1:AA:273:A:H8	1.55	0.72
1:AA:912:C:OP1	12:AL:91:LYS:NZ	2.21	0.72
2:AB:233:SER:HB2	2:AB:234:PRO:HD2	1.71	0.72
57:BY:7:VAL:CG2	57:BY:7:VAL:CA	2.65	0.72
57:BY:44:ILE:HG22	57:BY:45:VAL:H	1.54	0.72
11:CK:99:GLN:HG2	11:CK:105:VAL:HG11	1.70	0.72
27:D2:47:ASN:O	27:D2:49:LYS:N	2.21	0.72
13:AM:83:ASP:OD2	19:AS:65:ASN:ND2	2.23	0.72
35:BA:156:U:H4'	35:BA:157:U:H5''	1.72	0.72
1:CA:1373:G:H5''	7:CG:36:LYS:HZ3	1.52	0.72
22:CW:19:G:N2	22:CW:56:C:H42	1.88	0.72
35:DA:16:G:H1	35:DA:524:U:H3	1.34	0.72
35:DA:1899:G:H22	35:DA:1902:C:N4	1.82	0.72
40:DF:103:LYS:HA	40:DF:106:ARG:HG3	1.71	0.72
1:AA:738:C:H5''	6:AF:69:GLU:HB2	1.69	0.72
35:BA:143:G:H1'	56:BX:37:THR:HG21	1.72	0.72
1:CA:152:A:H62	1:CA:169:C:N4	1.88	0.72
8:CH:87:SER:HB2	8:CH:93:VAL:HB	1.71	0.72
36:DB:52:A:HO2'	36:DB:53:A:H8	1.37	0.72
45:DK:77:LEU:HD12	45:DK:111:LYS:HE2	1.70	0.72
9:AI:13:ALA:HB2	9:AI:68:GLY:HA3	1.72	0.72
51:BS:27:SER:HA	51:BS:88:ASP:HB3	1.72	0.72
35:DA:956:G:OP2	49:DQ:14:ARG:NH2	2.22	0.72
35:DA:2099:U:O4	35:DA:2190:G:O6	2.06	0.72
1:AA:110:C:O2'	16:AP:25:ARG:O	2.06	0.72
36:BB:37:C:O2	51:BS:95:HIS:NE2	2.22	0.72
58:BZ:42:VAL:HG13	58:BZ:43:GLU:H	1.53	0.72
1:CA:324:G:N2	1:CA:327:A:OP2	2.22	0.72
1:CA:991:U:O4	1:CA:1212:U:O2'	2.07	0.72
12:CL:18:VAL:HG23	12:CL:19:ARG:H	1.54	0.72
53:DU:90:VAL:HG13	54:DV:39:LEU:HD12	1.70	0.72
15:AO:36:ILE:HD12	15:AO:63:ARG:HE	1.55	0.72
18:AR:68:LYS:O	18:AR:72:ARG:HG3	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:76:CYS:SG	57:BY:77:PRO:HD2	2.30	0.72
53:DU:90:VAL:HG21	54:DV:47:VAL:HG21	1.72	0.72
1:AA:70:G:H1	1:AA:99:U:H3	1.36	0.72
35:BA:1044:G:O2'	35:BA:1111:A:N6	2.22	0.72
35:BA:2101:G:N1	35:BA:2188:C:N3	2.38	0.72
52:BT:27:THR:O	52:BT:28:VAL:HG23	1.90	0.72
9:CI:53:VAL:HG23	9:CI:55:ALA:H	1.55	0.72
24:CY:36:PRO:HB3	45:DK:29:GLN:HA	1.71	0.72
35:DA:336:C:O2'	57:DY:35:TYR:OH	2.08	0.72
1:AA:573:A:N3	1:AA:883:C:O2'	2.23	0.71
1:AA:1270:C:OP2	21:AU:24:ARG:NH2	2.23	0.71
2:AB:80:ILE:H	2:AB:80:ILE:HD12	1.55	0.71
5:CE:33:VAL:HG22	5:CE:43:LEU:HD13	1.71	0.71
25:D0:41:ARG:NH2	35:DA:2387:U:O2'	2.23	0.71
35:DA:642:G:N2	35:DA:645:C:OP2	2.23	0.71
1:AA:985:C:H42	1:AA:1220:G:H1	1.36	0.71
3:AC:180:ALA:HB1	3:AC:203:PHE:HE1	1.55	0.71
11:AK:80:VAL:HG13	11:AK:103:LEU:HD11	1.71	0.71
35:BA:1048:A:N6	35:BA:1052:C:N4	2.25	0.71
48:BP:124:LYS:HA	48:BP:143:GLY:HA3	1.72	0.71
1:CA:1003:G:O2'	1:CA:1039:C:N3	2.20	0.71
28:D3:8:LEU:HD13	28:D3:31:LEU:HD23	1.71	0.71
35:DA:274:G:O2'	35:DA:276:A:OP2	2.08	0.71
35:BA:2285:C:N3	35:BA:2383:G:N1	2.38	0.71
1:CA:235:C:H5'	17:CQ:70:ARG:HG2	1.72	0.71
1:CA:575:G:N2	1:CA:576:G:N7	2.32	0.71
35:DA:1538:G:H2'	35:DA:1539:G:C8	2.26	0.71
48:DP:7:ARG:NH1	48:DP:7:ARG:HA	2.05	0.71
1:AA:673:G:H2'	1:AA:674:G:H8	1.55	0.71
25:B0:11:ARG:O	25:B0:14:ARG:NH2	2.22	0.71
35:BA:848:G:H2'	35:BA:849:A:C8	2.24	0.71
35:BA:1529:G:N7	35:BA:1541:G:N2	2.38	0.71
41:BG:63:ILE:HG22	41:BG:143:GLU:HG2	1.73	0.71
43:BI:144:VAL:HG12	43:BI:145:VAL:H	1.55	0.71
58:BZ:14:LYS:HB3	58:BZ:17:ALA:HB3	1.71	0.71
3:CC:33:LEU:O	3:CC:37:GLN:NE2	2.22	0.71
9:CI:22:GLY:H	9:CI:59:PHE:HA	1.55	0.71
13:CM:125:ARG:HG3	24:CY:160:PRO:HD2	1.71	0.71
1:CA:1012:U:H2'	1:CA:1013:G:C8	2.25	0.71
10:CJ:4:ILE:HD11	10:CJ:77:PRO:HB3	1.71	0.71
42:DH:153:LYS:H	42:DH:153:LYS:HD3	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:654(B):C:N4	35:BA:654(R):C:N3	2.38	0.71
1:CA:1137:C:O2'	1:CA:1138:G:N2	2.23	0.71
5:CE:92:LYS:HB3	5:CE:119:LEU:HB2	1.70	0.71
45:DK:122:ALA:HA	45:DK:125:ARG:HE	1.54	0.71
52:DT:16:ARG:NH2	52:DT:82:LEU:O	2.24	0.71
1:AA:328:C:H4'	1:AA:329:A:H5'	1.72	0.71
1:AA:711:G:H2'	1:AA:712:A:C8	2.26	0.71
54:BV:55:ALA:HA	54:BV:101:GLY:HA2	1.70	0.71
58:BZ:44:PHE:CZ	58:BZ:86:VAL:HG11	2.25	0.71
1:AA:269:C:H2'	1:AA:270:A:H8	1.56	0.71
13:AM:9:ILE:HD13	41:BG:146:TYR:CE2	2.26	0.71
1:CA:376:G:H5''	16:CP:5:ARG:HD2	1.71	0.71
52:DT:32:TYR:CD2	52:DT:81:PRO:HB2	2.26	0.71
1:AA:157:G:H1	1:AA:164:U:H3	1.38	0.71
4:AD:128:VAL:O	4:AD:130:GLY:N	2.22	0.71
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.72	0.71
43:BI:132:PRO:HG2	43:BI:133:HIS:CE1	2.26	0.71
20:CT:10:LEU:O	20:CT:12:ALA:N	2.21	0.71
35:DA:1658:C:OP1	39:DE:132:HIS:ND1	2.24	0.71
39:DE:175:VAL:HG22	39:DE:177:PRO:HD3	1.71	0.71
4:AD:13:ARG:HG3	4:AD:40:PRO:HD3	1.72	0.71
10:AJ:24:VAL:HG21	10:AJ:37:PRO:HG3	1.73	0.71
24:AY:303:ARG:H	24:AY:304:PRO:HD3	1.54	0.71
35:BA:910:A:N7	49:BQ:13:GLN:HG3	2.06	0.71
30:D5:2:ALA:N	35:DA:2015:A:N3	2.38	0.71
35:DA:494:G:O2'	55:DW:5:ALA:O	2.09	0.71
34:B9:18:ARG:HE	35:BA:1034:G:H5'	1.55	0.70
1:CA:713:G:H2'	1:CA:714:G:C8	2.26	0.70
7:CG:146:GLU:HG2	7:CG:149:ARG:HH12	1.55	0.70
24:CY:267:SER:HB3	25:D0:3:HIS:CE1	2.26	0.70
1:AA:938:A:O2'	1:AA:1376:U:O2'	2.06	0.70
5:AE:9:LYS:NZ	5:AE:111:GLU:OE1	2.23	0.70
35:BA:2485:G:H5''	49:BQ:46:GLN:HE21	1.56	0.70
38:BD:201:HIS:O	38:BD:204:ILE:HG12	1.91	0.70
1:CA:1013:G:N2	1:CA:1016:A:OP2	2.24	0.70
2:AB:111:ARG:HH21	2:AB:114:ARG:HG2	1.56	0.70
2:AB:168:THR:HG23	2:AB:192:SER:OG	1.92	0.70
26:B1:86:SER:HB2	26:B1:89:GLU:HB2	1.74	0.70
35:BA:2747:G:H21	35:BA:2757:A:N6	1.86	0.70
37:BC:8:TYR:CE1	37:BC:221:PRO:HB3	2.26	0.70
42:BH:89:ILE:HD11	42:BH:95:ARG:HA	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:936:C:O2	1:CA:1382:C:N4	2.23	0.70
1:CA:1029:C:H1'	1:CA:1033:G:H1	1.57	0.70
2:CB:112:VAL:C	2:CB:114:ARG:H	1.95	0.70
22:CW:27:G:H1	22:CW:43:C:N4	1.88	0.70
35:BA:517:C:O2'	55:BW:18:ARG:NH2	2.25	0.70
35:BA:1021:A:H62	35:BA:1141:U:H3	1.38	0.70
35:BA:1496:A:O2'	35:BA:1497:U:O2	2.08	0.70
52:BT:29:ARG:HG3	52:BT:30:VAL:HG13	1.73	0.70
1:CA:413:G:N2	1:CA:429:U:OP2	2.24	0.70
4:CD:22:LYS:HG3	4:CD:26:CYS:SG	2.32	0.70
45:DK:66:THR:HG22	45:DK:68:VAL:HG23	1.71	0.70
1:AA:728:A:H2'	1:AA:729:A:H8	1.57	0.70
13:AM:90:LEU:C	13:AM:92:HIS:H	1.94	0.70
18:AR:70:ILE:O	18:AR:74:ARG:HG3	1.91	0.70
35:BA:823:G:H2'	35:BA:824:A:C8	2.26	0.70
35:BA:2576:G:O2'	35:BA:2579:C:OP2	2.10	0.70
1:CA:142:G:H1	1:CA:221:C:H42	1.40	0.70
1:CA:269:C:H2'	1:CA:270:A:H8	1.55	0.70
2:CB:165:VAL:HG23	2:CB:166:ASP:H	1.56	0.70
2:CB:166:ASP:HB3	2:CB:169:LYS:HB2	1.73	0.70
29:D4:28:LYS:O	29:D4:30:GLU:N	2.22	0.70
12:AL:90:VAL:O	12:AL:92:ASP:N	2.25	0.70
35:BA:1000:A:H2'	35:BA:1001:A:C8	2.27	0.70
35:BA:1296:G:OP1	35:BA:2709:G:O2'	2.08	0.70
35:BA:1540:U:H3'	35:BA:1541:G:H3'	1.73	0.70
1:CA:272:C:H2'	1:CA:273:A:H8	1.54	0.70
3:CC:180:ALA:HB1	3:CC:203:PHE:HE1	1.57	0.70
57:DY:39:VAL:HG12	57:DY:40:GLU:H	1.56	0.70
1:AA:345:C:H5'	52:BT:41:ARG:HD3	1.74	0.70
38:BD:4:LYS:HE3	38:BD:20:ASP:HA	1.74	0.70
48:BP:144:GLU:H	48:BP:145:PRO:CD	2.04	0.70
29:D4:31:ILE:HD12	41:DG:142:PRO:HB2	1.73	0.70
35:DA:156:U:H4'	35:DA:157:U:H5''	1.74	0.70
35:DA:2166:G:H2'	35:DA:2167:U:C6	2.27	0.70
45:DK:1:MET:HG2	45:DK:70:LYS:HZ3	1.55	0.70
48:DP:144:GLU:H	48:DP:145:PRO:CD	2.04	0.70
2:AB:165:VAL:HG23	2:AB:166:ASP:H	1.57	0.70
35:BA:2790:A:O2'	35:BA:2893:G:N2	2.21	0.70
36:BB:3:C:H42	36:BB:118:G:H1	1.39	0.70
38:BD:12:SER:HB2	38:BD:208:LYS:HB3	1.73	0.70
46:BN:62:VAL:HG22	46:BN:66:LYS:HD2	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1261:A:H62	1:AA:1274:G:N2	1.89	0.70
27:B2:13:ALA:HA	27:B2:16:LEU:HG	1.73	0.70
36:BB:14:U:OP2	36:BB:70:C:O2'	2.09	0.70
45:BK:54:PRO:HD3	45:BK:73:PRO:HD3	1.73	0.70
1:CA:837:G:H2'	1:CA:838:G:C8	2.27	0.70
1:CA:1452:C:O2	1:CA:1456:G:N2	2.24	0.70
24:CY:130:CYS:HB3	24:CY:164:ILE:H	1.57	0.70
46:BN:99:LEU:HD12	46:BN:122:VAL:HG21	1.73	0.69
58:BZ:69:THR:HG22	58:BZ:90:VAL:HA	1.74	0.69
1:CA:674:G:H2'	1:CA:675:A:H8	1.56	0.69
24:CY:115:ASN:HA	24:CY:176:ALA:HB3	1.74	0.69
35:DA:1348:G:H2'	35:DA:1349:A:H5''	1.74	0.69
10:AJ:28:ARG:NH2	10:AJ:34:VAL:O	2.25	0.69
39:BE:64:LYS:C	39:BE:66:HIS:H	1.95	0.69
1:CA:573:A:N3	1:CA:883:C:O2'	2.24	0.69
16:CP:45:THR:HG22	16:CP:47:ASP:H	1.57	0.69
35:DA:116:C:O2'	35:DA:126:A:N3	2.25	0.69
35:DA:1226:A:OP1	54:DV:84:LYS:NZ	2.23	0.69
48:DP:85:LEU:HD23	48:DP:114:ILE:HD11	1.72	0.69
29:B4:11:PRO:HA	29:B4:25:TYR:HA	1.72	0.69
35:BA:279:C:N4	35:BA:361:G:H1	1.86	0.69
35:BA:2246:G:H2'	35:BA:2247:A:H8	1.57	0.69
1:CA:438:G:O2'	1:CA:494:U:O4	2.10	0.69
5:CE:39:GLY:HA2	5:CE:69:VAL:HB	1.74	0.69
24:AY:214:VAL:HG13	24:AY:215:ASP:H	1.56	0.69
35:BA:1614:A:H62	55:BW:93:ALA:HB2	1.56	0.69
48:BP:114:ILE:HD12	48:BP:115:LEU:H	1.57	0.69
35:DA:969:U:H2'	35:DA:970:C:C6	2.26	0.69
35:DA:2801(A):A:H4'	35:DA:2802:G:H5'	1.75	0.69
42:DH:155:SER:O	42:DH:157:TYR:N	2.26	0.69
53:DU:92:ARG:O	53:DU:94:ASN:N	2.26	0.69
1:AA:714:G:H2'	1:AA:715:A:C8	2.27	0.69
35:BA:272(J):C:H5'	35:BA:274:G:OP2	1.92	0.69
58:BZ:20:ARG:HH11	58:BZ:20:ARG:HB2	1.55	0.69
1:CA:1065:U:O2'	1:CA:1066:C:OP2	2.10	0.69
31:D6:46:HIS:HA	31:D6:47:THR:HG23	1.73	0.69
42:DH:89:ILE:HD11	42:DH:95:ARG:HA	1.72	0.69
15:AO:39:LEU:HD12	15:AO:56:LEU:HB2	1.73	0.69
9:CI:42:ARG:NH1	9:CI:71:SER:OG	2.26	0.69
35:BA:676:A:H8	35:BA:2069:G:N2	1.83	0.69
35:BA:1024:G:H3'	35:BA:1025:G:H5''	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1614:A:N6	55:BW:91:GLY:O	2.26	0.69
35:BA:1899:G:N2	35:BA:1902:C:H41	1.90	0.69
35:BA:2161:C:H2'	35:BA:2162:G:H8	1.55	0.69
53:BU:90:VAL:HG13	54:BV:39:LEU:HD12	1.74	0.69
57:BY:39:VAL:HG12	57:BY:40:GLU:H	1.57	0.69
1:AA:1004:A:N7	1:AA:1035:A:N6	2.41	0.69
1:AA:1176:A:H2'	1:AA:1177:G:C8	2.28	0.69
24:AY:115:ASN:HB3	24:AY:172:LYS:HA	1.75	0.69
35:BA:529:A:H62	35:BA:2041:U:H3	1.40	0.69
36:BB:24:G:H21	36:BB:27:C:H42	1.39	0.69
53:BU:92:ARG:O	53:BU:94:ASN:N	2.26	0.69
58:BZ:97:GLU:HG3	58:BZ:127:LYS:HG2	1.73	0.69
7:CG:78:ARG:HG2	7:CG:79:ARG:H	1.58	0.69
24:CY:332:ASP:HB2	24:CY:335:ASN:HB3	1.73	0.69
35:DA:2849:U:OP2	52:DT:95:ARG:NH1	2.26	0.69
44:DJ:124:UNK:O	44:DJ:127:UNK:N	2.26	0.69
3:AC:37:GLN:NE2	14:AN:52:GLN:OE1	2.26	0.69
6:AF:91:VAL:HG11	18:AR:72:ARG:NH1	2.08	0.69
35:BA:2068:U:H3	35:BA:2430:A:H2	1.38	0.69
4:CD:110:PHE:H	4:CD:110:PHE:HD1	1.41	0.69
35:DA:1359:A:H62	35:DA:1372:U:H3	1.40	0.69
24:AY:188:ARG:HB2	24:AY:310:GLN:HG2	1.75	0.69
35:BA:2305:A:O2'	41:BG:136:ARG:NH1	2.26	0.69
58:BZ:19:ARG:HA	58:BZ:23:LYS:O	1.93	0.69
12:CL:24:VAL:HG22	12:CL:97:ARG:HB3	1.75	0.69
12:CL:57:LYS:HG2	12:CL:67:THR:HG22	1.74	0.69
35:DA:761:A:N7	61:DA:3301:HOH:O	2.25	0.69
1:AA:657:G:N2	15:AO:22:THR:OG1	2.25	0.68
35:BA:1348:G:H2'	35:BA:1349:A:H5''	1.73	0.68
1:CA:953:G:O2'	13:CM:120:LYS:NZ	2.25	0.68
35:DA:2523:G:H2'	35:DA:2524:G:H5''	1.75	0.68
1:AA:316:G:OP2	1:AA:351:G:O2'	2.12	0.68
1:AA:1274:G:H2'	1:AA:1275:A:C8	2.27	0.68
6:AF:77:ARG:NH1	6:AF:77:ARG:HB3	2.08	0.68
9:AI:9:ARG:O	9:AI:104:ARG:NH1	2.25	0.68
3:CC:183:ASP:HB3	3:CC:202:ILE:HB	1.75	0.68
14:CN:23:ARG:NH1	14:CN:30:ALA:HB2	2.09	0.68
20:CT:50:GLU:HA	20:CT:100:ILE:HG22	1.75	0.68
35:DA:1353:A:H2'	35:DA:1354:A:C8	2.27	0.68
35:DA:1607:C:N4	35:DA:1622:G:OP2	2.26	0.68
1:AA:448:A:H62	1:AA:486:U:H3	1.41	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1106:G:O6	35:BA:1107:G:N2	2.26	0.68
4:CD:128:VAL:O	4:CD:130:GLY:N	2.27	0.68
22:CV:6:G:N2	22:CV:67:C:O2	2.19	0.68
35:DA:823:G:H2'	35:DA:824:A:H8	1.58	0.68
35:DA:1068:G:H21	35:DA:1096:A:H5'	1.58	0.68
46:DN:2:LYS:NZ	53:DU:95:LEU:HD21	2.08	0.68
1:AA:372:C:H42	1:AA:389:A:H62	1.39	0.68
4:AD:22:LYS:HG3	4:AD:26:CYS:SG	2.34	0.68
17:AQ:7:THR:HG22	17:AQ:58:GLU:HG2	1.76	0.68
38:BD:109:ASP:HB2	38:BD:197:GLY:HA2	1.74	0.68
52:BT:29:ARG:HD3	52:BT:86:ILE:HG22	1.74	0.68
51:DS:27:SER:HA	51:DS:88:ASP:HB3	1.74	0.68
51:DS:87:PHE:HB2	51:DS:106:ARG:HD3	1.76	0.68
6:AF:91:VAL:HG11	18:AR:72:ARG:HH12	1.58	0.68
9:AI:3:GLN:OE1	9:AI:20:ARG:NH2	2.26	0.68
25:B0:11:ARG:HH11	25:B0:11:ARG:HB2	1.59	0.68
35:BA:1754:C:OP1	52:BT:96:ARG:NH1	2.26	0.68
35:BA:2394:C:OP1	48:BP:63:PRO:HD2	1.93	0.68
1:CA:1255:G:OP1	10:CJ:45:ARG:NH2	2.26	0.68
4:CD:13:ARG:HH11	4:CD:13:ARG:HB3	1.56	0.68
4:CD:14:ARG:HB2	4:CD:40:PRO:HD2	1.75	0.68
29:D4:14:ILE:HA	29:D4:31:ILE:HB	1.75	0.68
31:D6:19:ARG:HD2	31:D6:43:CYS:HB2	1.75	0.68
31:D6:26:ASN:HD22	31:D6:32:ASN:HD21	1.40	0.68
35:DA:1508:A:H4'	35:DA:1509(A):A:C4	2.28	0.68
52:DT:27:THR:O	52:DT:28:VAL:HG23	1.93	0.68
1:AA:1316:G:N2	1:AA:1319:A:OP2	2.26	0.68
19:AS:48:THR:HG22	19:AS:61:TYR:HA	1.75	0.68
35:BA:300:A:OP1	57:BY:84:ARG:NH2	2.26	0.68
35:BA:2730:C:O2'	39:BE:168:MET:O	2.11	0.68
52:BT:32:TYR:CD2	52:BT:81:PRO:HB2	2.29	0.68
1:CA:316:G:OP2	1:CA:351:G:O2'	2.12	0.68
31:D6:15:GLU:HA	31:D6:49:HIS:CE1	2.28	0.68
35:DA:1266:G:O2'	35:DA:2012:G:O6	2.07	0.68
35:DA:2494:G:O2'	49:DQ:80:GLU:HA	1.94	0.68
38:DD:43:ARG:HB3	38:DD:54:ARG:HB2	1.76	0.68
46:DN:19:GLU:O	46:DN:60:ILE:HA	1.93	0.68
1:AA:1304:G:H21	1:AA:1333:A:H62	1.40	0.68
2:AB:223:ILE:HA	2:AB:226:ARG:HB3	1.74	0.68
22:AW:48:C:C5	22:AW:59:U:H1'	2.28	0.68
2:CB:168:THR:HG23	2:CB:192:SER:OG	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2876:G:H4'	52:DT:3:ARG:HE	1.59	0.68
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.75	0.68
10:AJ:56:HIS:O	10:AJ:58:ASP:N	2.27	0.68
29:B4:14:ILE:HA	29:B4:31:ILE:HB	1.75	0.68
35:DA:2156:G:H2'	35:DA:2157:G:C4	2.29	0.68
40:DF:101:LEU:HD12	40:DF:102:PRO:HD2	1.75	0.68
42:DH:41:MET:CG	42:DH:42:ARG:H	2.07	0.68
1:AA:562:C:H1'	12:AL:15:ARG:HD2	1.76	0.68
2:AB:187:LEU:HD23	2:AB:201:ILE:HG22	1.76	0.68
26:B1:53:VAL:HG22	26:B1:74:VAL:HG13	1.75	0.68
35:BA:1788:C:OP1	38:BD:222:ARG:NH2	2.26	0.68
35:BA:2246:G:H2'	35:BA:2247:A:C8	2.29	0.68
39:BE:119:ARG:NH1	39:BE:156:MET:O	2.27	0.68
46:BN:3:THR:O	46:BN:5:VAL:N	2.26	0.68
48:BP:7:ARG:HA	48:BP:7:ARG:HH11	1.59	0.68
1:CA:346:G:OP1	52:DT:41:ARG:NH1	2.27	0.68
4:CD:88:VAL:HG13	5:CE:97:GLY:HA2	1.76	0.68
35:DA:654(O):G:H2'	35:DA:654(P):C:C6	2.29	0.68
35:DA:2572:A:N7	39:DE:145:LYS:HB2	2.09	0.68
41:DG:52:ILE:HG13	41:DG:53:LEU:H	1.59	0.68
48:DP:36:LYS:HD3	48:DP:41:ARG:HB3	1.76	0.68
31:B6:25:LYS:HB2	33:B8:34:TRP:HE1	1.59	0.67
46:BN:23:LEU:HB2	46:BN:60:ILE:HD12	1.76	0.67
1:CA:1381:U:O2	7:CG:78:ARG:NH1	2.27	0.67
24:CY:77:GLU:HB2	24:CY:84:ARG:HG2	1.76	0.67
25:D0:74:ARG:HH12	36:DB:13:A:H8	1.42	0.67
35:DA:654(G):C:H2'	35:DA:654(H):G:C8	2.29	0.67
35:DA:910:A:C5	49:DQ:13:GLN:HG3	2.29	0.67
41:DG:3:LEU:HA	41:DG:97:ASP:OD2	1.93	0.67
45:DK:108:ALA:HB1	45:DK:120:LEU:HG	1.74	0.67
48:DP:114:ILE:HD12	48:DP:115:LEU:H	1.59	0.67
49:DQ:43:THR:HG22	49:DQ:94:VAL:HG12	1.76	0.67
1:AA:131:C:O2'	1:AA:262:A:N3	2.25	0.67
1:AA:191:G:C4	20:AT:105:SER:HB3	2.29	0.67
35:BA:587:C:OP2	48:BP:33:ARG:NH2	2.27	0.67
35:BA:1068:G:H21	35:BA:1096:A:H5'	1.59	0.67
35:BA:1353:A:H2'	35:BA:1354:A:C8	2.29	0.67
57:BY:26:LYS:HG3	57:BY:27:VAL:H	1.60	0.67
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.30	0.67
35:DA:2096:U:H3	35:DA:2193:G:H1	1.40	0.67
35:DA:2122:U:H2'	35:DA:2123:G:H8	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:182:PRO:HD3	24:AY:349:LEU:HD21	1.76	0.67
30:B5:4:HIS:HB3	30:B5:5:PRO:CD	2.23	0.67
43:BI:72:LEU:O	43:BI:74:ASN:N	2.27	0.67
2:CB:194:PRO:O	2:CB:196:LEU:N	2.27	0.67
35:DA:1041:C:H42	35:DA:1114:G:H1	1.40	0.67
36:DB:5:C:O2'	36:DB:27:C:O2	2.13	0.67
58:DZ:153:SER:H	58:DZ:167:PRO:HB2	1.58	0.67
1:AA:975:A:H4'	1:AA:976:G:H5''	1.76	0.67
3:CC:47:LEU:HD23	3:CC:52:LEU:HD13	1.75	0.67
21:CU:6:ARG:O	21:CU:12:LYS:HE3	1.95	0.67
29:D4:18:CYS:HB3	29:D4:35:VAL:HG13	1.76	0.67
31:D6:40:CYS:SG	31:D6:45:LYS:NZ	2.67	0.67
35:DA:2787:C:O2	39:DE:61:ARG:NH1	2.27	0.67
33:B8:53:PRO:HA	33:B8:56:GLU:HB3	1.77	0.67
1:CA:975:A:H4'	1:CA:976:G:H5''	1.76	0.67
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.30	0.67
25:D0:11:ARG:HB2	25:D0:11:ARG:HH11	1.58	0.67
35:DA:2564:A:OP1	35:DA:2648:C:H4'	1.95	0.67
45:DK:76:TYR:O	45:DK:79:ARG:HG3	1.93	0.67
48:DP:111:ARG:NH1	48:DP:149:GLU:OE2	2.27	0.67
2:AB:112:VAL:C	2:AB:114:ARG:H	1.97	0.67
26:B1:39:LYS:NZ	35:BA:190:A:OP2	2.27	0.67
55:BW:88:ARG:HB2	55:BW:92:ARG:HB2	1.77	0.67
3:AC:59:ARG:HG2	3:AC:64:VAL:HA	1.76	0.67
4:AD:110:PHE:HD1	4:AD:110:PHE:H	1.41	0.67
11:AK:85:ARG:HG2	11:AK:111:ASP:O	1.94	0.67
24:AY:106:LEU:HD23	24:AY:349:LEU:HD13	1.76	0.67
35:BA:252:G:OP2	48:BP:50:ARG:NH1	2.25	0.67
52:BT:65:LYS:NZ	52:BT:66:VAL:O	2.21	0.67
52:BT:100:TYR:HD2	52:BT:103:ARG:HH21	1.43	0.67
54:BV:2:PHE:HB3	54:BV:42:GLY:HA2	1.76	0.67
1:CA:939:G:H5''	7:CG:102:ARG:HH12	1.60	0.67
2:CB:93:VAL:HG11	2:CB:97:TRP:HD1	1.59	0.67
19:CS:42:PRO:O	19:CS:43:GLU:HB3	1.95	0.67
35:DA:259:G:H21	35:DA:621:A:H8	1.40	0.67
57:DY:44:ILE:HG22	57:DY:45:VAL:H	1.59	0.67
11:AK:18:ARG:HG2	11:AK:81:ASP:HB2	1.77	0.67
24:AY:244:THR:HG21	35:BA:2452:C:H5''	1.75	0.67
35:BA:142:A:H8	35:BA:1408:C:H1'	1.60	0.67
35:BA:278:A:N1	35:BA:362:U:N3	2.42	0.67
35:BA:969:U:H2'	35:BA:970:C:C6	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:63:LYS:NZ	40:BF:75:HIS:O	2.28	0.67
41:BG:152:LEU:HD23	41:BG:152:LEU:H	1.60	0.67
42:BH:16:SER:HB2	42:BH:27:LYS:HB2	1.75	0.67
1:CA:269:C:H2'	1:CA:270:A:C8	2.29	0.67
1:CA:345:C:H5'	52:DT:41:ARG:HD3	1.76	0.67
1:CA:1224:G:O2'	1:CA:1322:C:OP2	2.12	0.67
35:DA:2777:G:H5''	35:DA:2778:A:H5'	1.77	0.67
45:DK:100:THR:HA	45:DK:139:VAL:HB	1.75	0.67
4:AD:13:ARG:HH12	4:AD:36:ARG:HB3	1.59	0.67
20:AT:10:LEU:O	20:AT:12:ALA:N	2.25	0.67
35:BA:1598:C:H5'	56:BX:36:LYS:HB2	1.76	0.67
40:BF:132:VAL:HG22	40:BF:133:ASN:H	1.58	0.67
10:CJ:25:GLU:O	10:CJ:29:ARG:NH1	2.28	0.67
35:DA:2483:C:N3	49:DQ:124:LYS:NZ	2.42	0.67
40:DF:1:MET:O	40:DF:3:GLU:HG2	1.95	0.67
41:DG:128:ARG:HB3	41:DG:128:ARG:NH1	2.09	0.67
47:DO:77:ILE:HD13	52:DT:74:ARG:HD3	1.76	0.67
53:DU:31:SER:O	53:DU:33:ARG:N	2.25	0.67
1:AA:62:U:H3	1:AA:105:G:H1	1.43	0.67
2:AB:185:ILE:HG22	2:AB:199:TYR:HB2	1.76	0.67
35:BA:626:U:H5''	35:BA:627:A:H5'	1.77	0.67
35:BA:1210:A:H5'	35:BA:1210:A:H8	1.59	0.67
1:CA:15:G:H1	1:CA:920:U:H3	1.43	0.67
33:D8:62:LEU:HD13	35:DA:242:G:C5'	2.25	0.67
40:BF:40:GLN:NE2	40:BF:182:ASN:HB2	2.10	0.66
48:BP:16:ARG:HH12	48:BP:18:ARG:CB	2.08	0.66
1:CA:767:A:O2'	1:CA:1524:C:O2	2.13	0.66
1:CA:1259:C:H42	1:CA:1276:G:H1	1.43	0.66
35:DA:484:C:OP1	57:DY:50:ARG:NE	2.26	0.66
35:DA:2660:A:H5'	35:DA:2661:G:H21	1.60	0.66
46:DN:3:THR:O	46:DN:5:VAL:N	2.27	0.66
1:AA:1011:G:H1	1:AA:1018:C:H42	1.43	0.66
1:AA:1119:C:OP2	9:AI:9:ARG:NH2	2.26	0.66
41:BG:56:ALA:HB1	41:BG:153:ARG:HH12	1.61	0.66
1:CA:1057:G:H5''	3:CC:154:SER:HB2	1.75	0.66
3:CC:32:LEU:HB3	3:CC:59:ARG:NH2	2.10	0.66
45:DK:102:GLU:HA	45:DK:105:LEU:HD13	1.77	0.66
1:AA:322:C:O2'	20:AT:23:ARG:HB2	1.95	0.66
1:AA:713:G:H2'	1:AA:714:G:C8	2.31	0.66
22:AW:8:U:H3	22:AW:14:A:H62	1.44	0.66
35:BA:2502:G:H5''	35:BA:2503:A:H5''	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:D0:55:ARG:NH2	35:DA:2364:C:OP1	2.28	0.66
46:DN:13:TRP:O	46:DN:135:PRO:HD2	1.95	0.66
35:BA:948:G:H1	35:BA:969:U:H3	1.43	0.66
35:BA:2291:U:OP1	35:BA:2380:C:O2'	2.13	0.66
52:BT:28:VAL:CG2	52:BT:46:GLU:HG3	2.24	0.66
2:CB:136:VAL:O	2:CB:140:HIS:HB2	1.95	0.66
3:CC:6:HIS:ND1	14:CN:49:HIS:HB3	2.11	0.66
4:CD:121:VAL:O	4:CD:134:ASP:HA	1.95	0.66
45:DK:77:LEU:HD13	45:DK:107:ILE:HD11	1.75	0.66
52:DT:85:LYS:HZ2	52:DT:85:LYS:HB3	1.61	0.66
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.77	0.66
21:AU:6:ARG:O	21:AU:12:LYS:HE3	1.94	0.66
35:BA:140:G:N2	35:BA:142:A:N1	2.41	0.66
37:BC:43:GLU:HA	37:BC:175:PRO:HA	1.77	0.66
1:CA:592:G:H2'	1:CA:593:G:H8	1.60	0.66
30:D5:47:PRO:HB3	30:D5:57:VAL:HG11	1.77	0.66
35:DA:1826:G:H4'	38:DD:242:ARG:HH21	1.61	0.66
44:DJ:101:UNK:O	44:DJ:103:UNK:N	2.29	0.66
45:DK:11:GLN:HB2	45:DK:52:ILE:HD11	1.77	0.66
54:DV:19:LYS:NZ	54:DV:20:LEU:H	1.93	0.66
1:AA:107:G:OP1	1:AA:325:A:N6	2.27	0.66
44:BJ:55:UNK:O	44:BJ:57:UNK:N	2.29	0.66
1:CA:144:G:N2	1:CA:178:C:O2	2.18	0.66
9:CI:24:GLY:N	9:CI:60:ASP:OD1	2.28	0.66
1:AA:537:G:H5''	12:AL:113:ARG:HH12	1.61	0.66
35:BA:654(O):G:H2'	35:BA:654(P):C:C6	2.30	0.66
45:BK:19:PRO:HB2	45:BK:21:PRO:HD2	1.78	0.66
51:BS:106:ARG:NH1	51:BS:106:ARG:HB3	2.11	0.66
57:BY:13:VAL:HB	57:BY:28:LYS:HD3	1.76	0.66
11:CK:85:ARG:HG2	11:CK:111:ASP:O	1.96	0.66
17:CQ:52:LYS:H	17:CQ:52:LYS:HD2	1.61	0.66
19:CS:11:VAL:HG13	19:CS:16:LEU:HD11	1.78	0.66
22:CW:39:U:H2'	22:CW:40:C:H5''	1.76	0.66
30:D5:2:ALA:HA	35:DA:2015:A:H1'	1.76	0.66
35:DA:2877:G:H5'	52:DT:3:ARG:NH2	2.10	0.66
53:DU:8:VAL:HG23	53:DU:11:ARG:HH21	1.61	0.66
1:AA:539:A:H2'	1:AA:540:G:C8	2.30	0.66
1:AA:1035:A:H2'	1:AA:1036:G:C8	2.31	0.66
29:B4:28:LYS:O	29:B4:30:GLU:N	2.28	0.66
35:BA:69:C:O2	35:BA:73:A:O2'	2.12	0.66
35:BA:2107:C:H41	35:BA:2179:C:H42	1.43	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:58:ASP:O	46:BN:60:ILE:N	2.28	0.66
50:BR:87:TYR:OH	50:BR:116:LEU:O	2.10	0.66
1:CA:1244:C:H2'	1:CA:1245:A:H8	1.61	0.66
35:DA:2032:G:N7	61:DA:3302:HOH:O	2.29	0.66
39:DE:119:ARG:HG2	39:DE:160:TYR:HB2	1.78	0.66
1:AA:1014:A:H2'	1:AA:1015:A:C8	2.31	0.66
1:AA:1432:G:OP1	52:BT:107:ASP:HB2	1.95	0.66
5:AE:100:VAL:HG12	5:AE:118:ILE:HG22	1.78	0.66
9:AI:40:LEU:C	9:AI:42:ARG:H	2.00	0.66
22:AW:27:G:H1	22:AW:43:C:N4	1.93	0.66
35:BA:947:G:H1	35:BA:970:C:H42	1.44	0.66
35:BA:2096:U:H3	35:BA:2193:G:H1	1.44	0.66
1:CA:131:C:O2'	1:CA:262:A:N3	2.27	0.66
1:CA:1315:U:HO2'	1:CA:1360:A:HO2'	1.42	0.66
1:CA:1328:C:OP1	21:CU:21:TYR:OH	2.13	0.66
34:D9:19:ARG:HA	35:DA:2757:A:OP1	1.94	0.66
35:DA:806:C:OP2	48:DP:39:LYS:HG3	1.96	0.66
35:DA:1666:G:HO2'	47:DO:6:THR:HG1	1.40	0.66
41:DG:114:ILE:HG22	41:DG:115:ARG:HG2	1.76	0.66
51:DS:25:ARG:NH1	51:DS:42:ASP:OD1	2.28	0.66
1:AA:1344:C:H4'	9:AI:120:ARG:HB3	1.78	0.66
4:AD:93:PHE:O	4:AD:97:LEU:HB2	1.95	0.66
22:AW:34:G:O6	22:AW:35:A:N6	2.29	0.66
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.29	0.66
1:CA:426:G:OP1	4:CD:36:ARG:NH1	2.29	0.66
22:CW:30:G:N1	22:CW:40:C:N3	2.32	0.66
35:DA:1712:C:H42	35:DA:1747:G:H1	1.41	0.66
1:AA:430:A:OP1	4:AD:9:CYS:N	2.29	0.65
13:AM:125:ARG:HD2	24:AY:165:ASP:HA	1.79	0.65
16:AP:53:VAL:HG12	16:AP:79:VAL:HG22	1.78	0.65
35:BA:1485:G:O6	35:BA:1504:C:N4	2.29	0.65
35:BA:1843:C:H5''	38:BD:257:LEU:HD23	1.78	0.65
35:BA:2120:G:H2'	35:BA:2121:G:H8	1.61	0.65
57:BY:7:VAL:CG2	57:BY:7:VAL:N	2.59	0.65
1:CA:1172:C:H2'	1:CA:1173:G:H8	1.60	0.65
1:CA:1220:G:O3'	19:CS:36:ARG:HD3	1.96	0.65
7:CG:45:ASP:O	7:CG:49:ILE:HG12	1.97	0.65
35:DA:793:A:OP2	35:DA:2071:A:O2'	2.15	0.65
35:DA:2150:U:H2'	35:DA:2151:G:C8	2.31	0.65
37:DC:191:ARG:HB3	37:DC:195:ARG:NH1	2.11	0.65
5:AE:50:GLU:HG3	5:AE:52:PRO:HD2	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AW:27:G:H1	22:AW:43:C:H42	1.44	0.65
33:B8:33:ASN:ND2	35:BA:2419:U:OP2	2.25	0.65
35:BA:2314:C:H2'	35:BA:2315:G:C8	2.31	0.65
40:BF:134:GLY:H	40:BF:162:LEU:HG	1.61	0.65
57:BY:96:ILE:HB	57:BY:99:CYS:HB2	1.77	0.65
1:CA:926:G:H22	23:CX:15:A:H3'	1.60	0.65
1:CA:966:G:O2'	9:CI:127:LYS:O	2.14	0.65
4:CD:25:ARG:NH1	4:CD:30:LYS:O	2.29	0.65
35:DA:1024:G:H3'	35:DA:1025:G:H5''	1.78	0.65
1:AA:401:C:O2'	1:AA:621:A:N3	2.26	0.65
31:B6:36:LEU:H	31:B6:37:ARG:HH21	1.45	0.65
35:DA:2291:U:H3	35:DA:2341:G:H1	1.43	0.65
10:AJ:44:VAL:HG12	10:AJ:46:ARG:HD2	1.78	0.65
13:AM:78:ILE:HA	13:AM:81:LEU:HD12	1.79	0.65
35:BA:321:G:O2'	35:BA:340:A:N3	2.27	0.65
35:BA:1171:G:H3'	35:BA:1173:G:H4'	1.79	0.65
46:BN:55:VAL:HG22	46:BN:126:PRO:HA	1.79	0.65
52:BT:65:LYS:HZ3	52:BT:66:VAL:H	1.45	0.65
1:CA:1499:A:H1'	1:CA:1520:G:H5'	1.78	0.65
2:CB:231:GLU:HB2	2:CB:232:PRO:HD2	1.78	0.65
5:CE:31:LEU:HD23	5:CE:45:PHE:HB2	1.78	0.65
18:CR:70:ILE:O	18:CR:74:ARG:HG3	1.96	0.65
20:CT:23:ARG:O	20:CT:27:LYS:HB2	1.96	0.65
35:DA:363(E):U:H3'	35:DA:363(F):A:O4'	1.96	0.65
48:DP:124:LYS:HA	48:DP:143:GLY:HA3	1.78	0.65
58:DZ:70:LEU:HG	58:DZ:91:LEU:HD11	1.78	0.65
1:AA:537:G:H5''	12:AL:113:ARG:NH1	2.12	0.65
15:AO:36:ILE:HG23	15:AO:56:LEU:HD11	1.78	0.65
48:BP:47:ASP:HB3	48:BP:48:PRO:C	2.17	0.65
1:CA:559:A:H4'	1:CA:560:U:H3'	1.79	0.65
4:CD:95:GLY:O	4:CD:99:SER:OG	2.11	0.65
30:D5:52:TYR:O	30:D5:54:GLY:N	2.30	0.65
35:DA:2137:C:H42	35:DA:2154:G:H22	1.43	0.65
1:AA:539:A:H2'	1:AA:540:G:H8	1.61	0.65
1:AA:782:A:OP1	1:AA:1521:G:N2	2.26	0.65
57:BY:7:VAL:CG2	57:BY:7:VAL:H	2.09	0.65
1:CA:954:G:H5'	13:CM:120:LYS:NZ	2.11	0.65
7:CG:78:ARG:HG2	7:CG:79:ARG:N	2.11	0.65
10:CJ:56:HIS:O	10:CJ:58:ASP:N	2.29	0.65
22:CV:2:C:H4'	25:D0:8:GLY:HA2	1.77	0.65
24:CY:214:VAL:HG13	24:CY:215:ASP:H	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D6:25:LYS:HD3	33:D8:34:TRP:HZ2	1.62	0.65
35:DA:2591:C:H2'	35:DA:2592:G:C8	2.32	0.65
1:AA:114:U:H2'	1:AA:115:G:C8	2.32	0.65
5:AE:6:PHE:HB2	5:AE:34:VAL:HG22	1.79	0.65
12:AL:57:LYS:HG2	12:AL:67:THR:HG22	1.78	0.65
24:AY:189:LEU:HD21	24:AY:191:ARG:HG3	1.79	0.65
35:BA:274:G:O2'	35:BA:275:G:H3'	1.95	0.65
35:BA:2142:C:H2'	35:BA:2143:C:C6	2.32	0.65
38:BD:268:ARG:HB3	38:BD:268:ARG:HH11	1.61	0.65
1:CA:1327:C:H5''	21:CU:20:LYS:HB3	1.79	0.65
22:CV:58:A:O2'	22:CV:60:U:OP2	2.15	0.65
24:CY:269:ILE:HD13	49:DQ:79:LEU:HD13	1.79	0.65
35:DA:2310:A:O2'	35:DA:2311:A:H5'	1.96	0.65
36:DB:21:G:O6	36:DB:62:C:N4	2.20	0.65
37:DC:23:ILE:HD11	37:DC:227:PRO:HA	1.79	0.65
1:AA:519:C:OP1	24:AY:310:GLN:NE2	2.28	0.65
10:AJ:4:ILE:HD11	10:AJ:77:PRO:HB3	1.78	0.65
35:BA:1043:C:H2'	35:BA:1044:G:H8	1.62	0.65
35:BA:1678:G:H22	35:BA:1989:G:N2	1.94	0.65
45:BK:66:THR:HG22	45:BK:68:VAL:HG23	1.78	0.65
48:BP:29:LYS:HB3	48:BP:34:GLY:H	1.62	0.65
50:BR:7:GLY:O	50:BR:8:ARG:HB2	1.97	0.65
57:BY:42:VAL:HG21	57:BY:67:LEU:HD13	1.79	0.65
1:CA:359:U:H2'	1:CA:360:A:C8	2.32	0.65
2:CB:22:LYS:HA	2:CB:22:LYS:HE2	1.78	0.65
35:DA:626:U:H5''	35:DA:627:A:H5'	1.79	0.65
35:DA:2790:A:O2'	35:DA:2893:G:N3	2.29	0.65
43:DI:83:ALA:HB2	43:DI:88:ILE:HG23	1.79	0.65
4:AD:13:ARG:O	4:AD:15:GLU:N	2.30	0.65
5:AE:31:LEU:HD21	5:AE:43:LEU:HD11	1.79	0.65
10:AJ:8:LEU:HD23	10:AJ:96:ILE:HG22	1.78	0.65
25:B0:43:THR:H	35:BA:2331:G:H4'	1.61	0.65
35:BA:2167:U:H2'	35:BA:2168:G:C8	2.32	0.65
35:BA:2178:C:H4'	37:BC:47:LYS:HD3	1.78	0.65
41:BG:124:SER:HB2	41:BG:131:TYR:CE1	2.32	0.65
56:BX:35:THR:O	56:BX:39:ILE:HG12	1.97	0.65
4:CD:14:ARG:HD2	4:CD:59:ARG:NH1	2.11	0.65
5:CE:147:ASP:O	5:CE:151:LEU:HG	1.97	0.65
12:CL:25:PRO:C	12:CL:27:LEU:H	2.00	0.65
12:CL:84:LEU:HD12	12:CL:104:VAL:HG11	1.79	0.65
16:CP:22:THR:HA	16:CP:33:ILE:HG12	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:274:G:O2'	35:DA:275:G:H3'	1.97	0.65
35:DA:2591:C:H2'	35:DA:2592:G:H8	1.61	0.65
43:DI:57:ARG:HG2	43:DI:61:ARG:HH12	1.62	0.65
46:DN:62:VAL:HG22	46:DN:66:LYS:HD2	1.79	0.65
1:AA:426:G:OP1	4:AD:36:ARG:NH1	2.29	0.65
4:AD:187:ARG:NH2	4:AD:193:ASP:OD2	2.30	0.65
22:AW:19:G:H4'	22:AW:57:G:H22	1.61	0.65
35:BA:482:A:H4'	57:BY:47:LYS:HG2	1.78	0.65
35:BA:527:C:N4	35:BA:2779:U:OP2	2.29	0.65
35:BA:956:G:OP2	49:BQ:14:ARG:NH2	2.29	0.65
40:BF:101:LEU:HD12	40:BF:102:PRO:HD2	1.78	0.65
41:BG:52:ILE:HG13	41:BG:53:LEU:H	1.60	0.65
52:BT:51:ARG:HG3	52:BT:98:LYS:HE3	1.77	0.65
35:DA:1156:A:OP1	53:DU:55:ARG:NH1	2.29	0.65
35:DA:1540:U:H2'	35:DA:1541:G:C2	2.32	0.65
38:DD:8:PRO:HB3	38:DD:14:ARG:HB2	1.77	0.65
1:AA:736:C:H2'	1:AA:737:A:C8	2.32	0.64
24:AY:269:ILE:HD13	49:BQ:79:LEU:HD13	1.79	0.64
35:BA:779:U:OP1	38:BD:49:ILE:HG23	1.97	0.64
4:CD:13:ARG:HH11	4:CD:13:ARG:CB	2.10	0.64
17:CQ:67:LYS:HA	17:CQ:70:ARG:HH12	1.61	0.64
33:D8:4:MET:HB2	33:D8:61:LEU:HD13	1.76	0.64
57:DY:26:LYS:HG3	57:DY:27:VAL:H	1.62	0.64
57:DY:96:ILE:HG22	57:DY:97:ARG:H	1.61	0.64
58:DZ:16:SER:O	58:DZ:20:ARG:HG2	1.97	0.64
2:AB:84:GLU:HG3	2:AB:215:LEU:HB3	1.79	0.64
16:AP:28:ARG:HG2	16:AP:28:ARG:HH11	1.62	0.64
35:BA:2591:C:H2'	35:BA:2592:G:H8	1.61	0.64
35:BA:2790:A:HO2'	35:BA:2893:G:N2	1.95	0.64
57:BY:28:LYS:HA	57:BY:38:ILE:HG22	1.79	0.64
1:CA:1119:C:OP2	9:CI:9:ARG:NH2	2.30	0.64
35:DA:2394:C:OP1	48:DP:63:PRO:HD2	1.98	0.64
45:DK:11:GLN:HA	45:DK:54:PRO:HA	1.79	0.64
1:AA:677:U:H3	1:AA:713:G:H22	1.46	0.64
1:AA:1232:U:H5'	9:AI:126:SER:OG	1.97	0.64
15:AO:16:ALA:HB1	15:AO:21:ASP:HB3	1.78	0.64
24:AY:326:THR:HG23	24:AY:328:LEU:H	1.62	0.64
54:BV:15:GLU:HB3	54:BV:16:PRO:HD2	1.78	0.64
1:CA:624:C:H2'	1:CA:625:G:H8	1.60	0.64
3:CC:153:VAL:HG22	3:CC:198:VAL:HG12	1.79	0.64
36:DB:89:G:H2'	36:DB:90:A:C8	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DQ:14:ARG:HG2	49:DQ:41:TRP:HH2	1.62	0.64
1:AA:297:G:N2	1:AA:300:A:OP2	2.27	0.64
2:AB:37:ASN:O	2:AB:37:ASN:ND2	2.30	0.64
18:AR:37:VAL:HG23	18:AR:38:GLU:H	1.62	0.64
33:B8:13:ARG:NH1	48:BP:61:ARG:O	2.29	0.64
1:CA:564:C:C4	17:CQ:31:LEU:HD11	2.33	0.64
12:CL:47:LYS:HB3	12:CL:48:PRO:CD	2.28	0.64
22:CW:35:A:H61	23:CX:14:A:N6	1.95	0.64
37:DC:54:ARG:NH2	37:DC:56:ASP:OD1	2.30	0.64
38:DD:201:HIS:O	38:DD:204:ILE:HG12	1.97	0.64
39:DE:59:VAL:HG13	39:DE:60:ASN:H	1.62	0.64
42:DH:97:ARG:HG3	42:DH:98:LEU:H	1.60	0.64
54:DV:72:VAL:HB	54:DV:85:LYS:HB3	1.78	0.64
35:BA:310:A:OP1	57:BY:18:GLY:HA2	1.98	0.64
35:BA:761:A:N7	61:BA:3201:HOH:O	2.29	0.64
35:BA:941:A:H4'	48:BP:35:HIS:CE1	2.33	0.64
35:BA:997:G:OP1	53:BU:93:LYS:HD3	1.96	0.64
35:BA:2788:C:O2'	35:BA:2809:A:N3	2.27	0.64
56:BX:36:LYS:HD3	56:BX:56:THR:HG23	1.78	0.64
57:BY:17:SER:OG	57:BY:18:GLY:N	2.29	0.64
1:CA:97:G:HO2'	1:CA:98:G:H8	1.44	0.64
1:CA:413:G:O2'	1:CA:428:G:N2	2.30	0.64
25:D0:23:VAL:HG21	35:DA:857:C:H4'	1.79	0.64
35:DA:1530:C:N4	35:DA:1541:G:OP1	2.25	0.64
35:DA:2022:U:O2'	35:DA:2617:C:H5'	1.98	0.64
1:AA:152:A:H62	1:AA:169:C:H42	1.46	0.64
4:AD:57:ARG:NH2	5:AE:107:ARG:HD3	2.13	0.64
35:BA:1040:C:HO2'	35:BA:1041:C:H6	1.45	0.64
35:BA:2132:U:H3	37:BC:6:LYS:HG3	1.62	0.64
38:BD:182:LEU:H	38:BD:272:ALA:HB3	1.63	0.64
40:BF:101:LEU:O	40:BF:106:ARG:NH1	2.30	0.64
1:CA:62:U:H3	1:CA:105:G:H1	1.43	0.64
1:CA:1298:C:H4'	1:CA:1299:A:C4	2.33	0.64
2:CB:97:TRP:HZ2	2:CB:102:LEU:HD13	1.63	0.64
35:DA:2659:G:N2	35:DA:2661:G:O2'	2.31	0.64
35:DA:2807:G:H1	35:DA:2892:A:H62	1.46	0.64
52:DT:28:VAL:HG22	52:DT:46:GLU:HA	1.80	0.64
52:DT:28:VAL:HG21	52:DT:46:GLU:HG3	1.80	0.64
58:DZ:5:LEU:HD21	58:DZ:39:VAL:HG21	1.78	0.64
38:BD:148:GLU:HB2	38:BD:151:LYS:HD2	1.78	0.64
1:CA:963:G:N2	10:CJ:55:LYS:HZ2	1.95	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:84:GLN:HB3	51:DS:105:ALA:HB3	1.80	0.64
53:DU:90:VAL:O	53:DU:92:ARG:N	2.31	0.64
1:AA:1347:G:HO2'	1:AA:1373:G:H1	1.43	0.64
35:BA:484:C:OP1	57:BY:50:ARG:NE	2.29	0.64
35:BA:2119:A:N6	35:BA:2170:A:N7	2.45	0.64
1:CA:798:G:OP2	11:CK:122:LYS:NZ	2.31	0.64
25:D0:11:ARG:HB2	25:D0:11:ARG:NH1	2.13	0.64
35:DA:1000:A:H2'	35:DA:1001:A:C8	2.33	0.64
37:DC:7:ARG:NH1	37:DC:11:LEU:HD11	2.13	0.64
3:AC:206:GLU:HG2	3:AC:207:VAL:H	1.63	0.64
22:AW:50:U:H2'	22:AW:51:U:C5	2.33	0.64
58:BZ:82:ARG:NH1	58:BZ:83:PRO:O	2.31	0.64
35:DA:276:A:O2'	35:DA:278:A:N7	2.29	0.64
35:DA:2698:U:H2'	35:DA:2699:C:C6	2.33	0.64
37:DC:8:TYR:CE1	37:DC:221:PRO:HB3	2.31	0.64
47:DO:23:ARG:HG3	47:DO:24:VAL:N	2.13	0.64
48:DP:146:VAL:HG22	48:DP:147:LEU:H	1.63	0.64
1:AA:78:G:N1	1:AA:91:C:N3	2.42	0.64
1:AA:148:G:H2'	1:AA:149:A:C8	2.33	0.64
8:AH:87:SER:HB2	8:AH:93:VAL:HB	1.80	0.64
24:AY:332:ASP:HB2	24:AY:335:ASN:HB3	1.79	0.64
35:BA:2030:A:H4'	35:BA:2031:A:C8	2.32	0.64
40:BF:123:LEU:HD12	40:BF:124:LEU:H	1.62	0.64
1:CA:224:C:H2'	1:CA:225:C:C6	2.33	0.64
1:CA:973:G:OP1	10:CJ:57:LYS:NZ	2.26	0.64
1:CA:1326:C:H2'	1:CA:1327:C:C6	2.33	0.64
1:CA:1456:G:O3'	20:CT:39:LYS:NZ	2.31	0.64
3:CC:76:VAL:HG23	3:CC:77:ILE:HG13	1.80	0.64
33:D8:53:PRO:HA	33:D8:56:GLU:HB3	1.78	0.64
35:DA:997:G:OP1	53:DU:93:LYS:HD3	1.98	0.64
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.34	0.63
3:AC:70:VAL:HG12	3:AC:72:LYS:H	1.62	0.63
11:AK:29:ILE:HG13	11:AK:44:SER:HB3	1.78	0.63
39:BE:175:VAL:HG22	39:BE:177:PRO:HD3	1.80	0.63
1:CA:611:A:N1	1:CA:629:G:N2	2.46	0.63
35:DA:2291:U:OP1	35:DA:2380:C:O2'	2.16	0.63
40:DF:8:GLN:HB3	40:DF:126:VAL:HA	1.80	0.63
49:DQ:21:THR:HG21	49:DQ:101:ARG:HB2	1.80	0.63
2:AB:208:ILE:HA	2:AB:211:ILE:HD12	1.80	0.63
35:BA:2328:A:H2'	35:BA:2329:G:C8	2.33	0.63
54:BV:19:LYS:HG2	54:BV:94:LEU:HB2	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:192:U:H2'	1:CA:193:C:H6	1.64	0.63
1:CA:1525:G:OP1	11:CK:120:ARG:NH2	2.31	0.63
2:CB:37:ASN:ND2	2:CB:37:ASN:O	2.31	0.63
13:CM:88:ARG:HA	13:CM:98:VAL:HG11	1.79	0.63
24:CY:188:ARG:HB2	24:CY:310:GLN:HG2	1.79	0.63
31:D6:13:CYS:O	31:D6:21:TYR:HA	1.98	0.63
45:DK:27:LEU:HD23	45:DK:27:LEU:H	1.64	0.63
46:DN:58:ASP:C	46:DN:60:ILE:H	2.01	0.63
53:DU:47:TYR:HA	53:DU:50:ARG:NH2	2.14	0.63
1:AA:750:G:N3	15:AO:23:GLY:HA3	2.13	0.63
1:AA:976:G:H5'	1:AA:1358:U:O2'	1.98	0.63
6:AF:77:ARG:HB3	6:AF:77:ARG:HH11	1.63	0.63
10:AJ:39:PRO:HB3	10:AJ:70:ARG:HH12	1.63	0.63
22:AW:63:G:H2'	22:AW:64:A:O4'	1.99	0.63
30:B5:4:HIS:O	35:BA:2056:G:N2	2.30	0.63
35:BA:1592:C:H2'	35:BA:1593:G:H8	1.63	0.63
35:BA:1779:U:H5	35:BA:1784:A:N7	1.96	0.63
35:BA:2123:G:H2'	35:BA:2124:G:H8	1.64	0.63
35:BA:2698:U:H2'	35:BA:2699:C:C6	2.33	0.63
52:BT:28:VAL:HG21	52:BT:46:GLU:HG3	1.79	0.63
57:BY:96:ILE:HG22	57:BY:97:ARG:H	1.62	0.63
1:CA:328:C:H4'	1:CA:329:A:H5'	1.78	0.63
1:CA:987:G:H1	1:CA:1218:C:H42	1.45	0.63
21:CU:9:ARG:HA	21:CU:9:ARG:HH11	1.62	0.63
35:DA:1096:A:H61	45:DK:30:HIS:CE1	2.16	0.63
35:DA:1678:G:H22	35:DA:1989:G:H22	1.44	0.63
41:DG:61:ALA:HA	41:DG:64:THR:HG22	1.79	0.63
5:AE:9:LYS:HB2	5:AE:112:LEU:HD11	1.80	0.63
9:AI:17:VAL:HG13	9:AI:81:ILE:HD13	1.80	0.63
35:BA:993:G:OP1	53:BU:50:ARG:NH2	2.32	0.63
35:BA:1666:G:HO2'	47:BO:6:THR:HG1	1.45	0.63
35:BA:2025:C:H2'	35:BA:2026:C:C6	2.34	0.63
1:CA:188:C:H42	1:CA:189(L):G:H1	1.47	0.63
1:CA:1055:A:N7	1:CA:1200:C:N4	2.46	0.63
16:CP:13:HIS:O	16:CP:15:PRO:HD3	1.97	0.63
35:DA:910:A:N7	49:DQ:13:GLN:HG3	2.14	0.63
43:DI:8:PRO:HG3	43:DI:14:ASP:HA	1.80	0.63
45:DK:54:PRO:HD3	45:DK:73:PRO:HD3	1.81	0.63
53:DU:110:VAL:O	53:DU:114:LYS:HG2	1.98	0.63
58:DZ:10:ARG:HH21	58:DZ:26:GLY:H	1.47	0.63
6:AF:100:ASN:ND2	18:AR:23:LYS:O	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:77:PRO:O	10:AJ:79:ARG:NH1	2.31	0.63
35:BA:140:G:H1'	35:BA:141:A:C2	2.33	0.63
35:BA:676:A:H2	35:BA:802:A:H61	1.44	0.63
42:BH:97:ARG:HG3	42:BH:98:LEU:H	1.64	0.63
51:BS:20:ARG:NE	51:BS:20:ARG:HA	2.12	0.63
53:BU:101:ARG:HB2	53:BU:101:ARG:HH11	1.61	0.63
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.34	0.63
6:CF:39:LYS:H	6:CF:64:GLN:HB3	1.63	0.63
12:CL:90:VAL:O	12:CL:92:ASP:N	2.32	0.63
35:DA:2491:U:H5'	35:DA:2570:G:H5''	1.81	0.63
40:DF:125:LEU:HD23	40:DF:125:LEU:H	1.61	0.63
20:AT:72:LEU:HD22	20:AT:76:ALA:HB1	1.80	0.63
35:BA:2147:G:H2'	35:BA:2148:G:O4'	1.98	0.63
40:BF:67:GLN:HG3	40:BF:67:GLN:O	1.99	0.63
1:CA:224:C:H2'	1:CA:225:C:H6	1.63	0.63
1:CA:737:A:H2'	1:CA:738:C:H6	1.63	0.63
1:CA:1027:C:H2'	1:CA:1028:C:C5	2.33	0.63
1:CA:1469:G:H2'	1:CA:1470:G:H8	1.63	0.63
3:CC:113:ALA:HB3	3:CC:114:PRO:HD3	1.81	0.63
35:DA:658:C:H2'	35:DA:659:C:C6	2.34	0.63
35:DA:885:C:H2'	35:DA:886:C:O4'	1.99	0.63
35:DA:2019:A:H61	35:DA:2035:G:H1	1.47	0.63
1:AA:559:A:H4'	1:AA:560:U:H3'	1.79	0.63
1:AA:982:U:O4	1:AA:1223:C:N3	2.31	0.63
4:AD:25:ARG:NH1	4:AD:30:LYS:O	2.32	0.63
13:AM:8:GLU:OE1	13:AM:22:ILE:HG13	1.98	0.63
35:BA:730:C:OP1	35:BA:1775:U:O2'	2.16	0.63
35:BA:2591:C:H2'	35:BA:2592:G:C8	2.33	0.63
43:BI:53:ALA:O	43:BI:57:ARG:HB3	1.97	0.63
49:BQ:132:VAL:HG11	58:BZ:81:ARG:HH21	1.63	0.63
1:CA:728:A:H2'	1:CA:729:A:C8	2.33	0.63
1:CA:1432:G:OP1	52:DT:107:ASP:HB2	1.99	0.63
2:CB:47:THR:HG23	2:CB:202:PRO:HG2	1.81	0.63
9:CI:15:ALA:HB2	9:CI:65:VAL:HG23	1.80	0.63
10:CJ:3:LYS:N	10:CJ:74:ILE:O	2.31	0.63
12:CL:117:ARG:NH2	12:CL:124:LYS:HB2	2.13	0.63
42:DH:19:VAL:HG22	42:DH:24:VAL:HG23	1.79	0.63
1:AA:1435:G:H2'	1:AA:1436:U:H6	1.63	0.63
24:AY:142:ARG:O	24:AY:146:ARG:HG3	1.99	0.63
31:B6:35:GLU:OE1	31:B6:37:ARG:NH2	2.32	0.63
40:BF:3:GLU:HA	40:BF:24:LEU:HG	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:141:GLN:HB3	58:BZ:99:TYR:CE1	2.33	0.63
58:BZ:10:ARG:NH2	58:BZ:26:GLY:O	2.31	0.63
1:CA:728:A:H2'	1:CA:729:A:H8	1.63	0.63
31:D6:30:THR:HB	31:D6:31:PRO:HD2	1.81	0.63
35:DA:143:G:H1'	56:DX:37:THR:HG21	1.81	0.63
35:DA:1918:A:O2'	35:DA:1920:C:N4	2.32	0.63
45:DK:112:MET:H	45:DK:113:PRO:CD	2.12	0.63
48:DP:29:LYS:HB3	48:DP:34:GLY:H	1.63	0.63
1:AA:269:C:H2'	1:AA:270:A:C8	2.33	0.63
1:AA:574:A:HO2'	1:AA:882:C:HO2'	1.44	0.63
1:AA:1238:A:H62	1:AA:1301:U:H3	1.46	0.63
2:AB:71:VAL:HB	2:AB:164:VAL:HG13	1.80	0.63
8:AH:90:GLY:O	12:AL:7:ILE:HG21	1.98	0.63
12:AL:32:PHE:HE1	12:AL:86:ARG:HG3	1.64	0.63
13:AM:23:TYR:HB3	13:AM:67:GLU:HB2	1.79	0.63
35:BA:912:C:OP1	49:BQ:9:TYR:OH	2.17	0.63
42:BH:56:SER:HB2	42:BH:61:HIS:ND1	2.14	0.63
1:CA:1304:G:H1	1:CA:1331:G:HO2'	1.45	0.63
35:DA:2660:A:H5'	35:DA:2661:G:C2	2.33	0.63
43:DI:78:THR:HA	43:DI:141:LYS:O	1.98	0.63
49:DQ:140:ALA:O	49:DQ:141:GLN:HB2	1.97	0.63
56:DX:63:LYS:HE3	56:DX:72:LYS:HE3	1.79	0.63
1:AA:1003:G:N2	1:AA:1004:A:N3	2.47	0.62
1:AA:1456:G:O3'	20:AT:39:LYS:NZ	2.31	0.62
10:AJ:45:ARG:HB3	10:AJ:65:LEU:HB3	1.80	0.62
15:AO:8:LYS:O	15:AO:12:ILE:HG13	1.99	0.62
35:BA:1007:C:H5''	46:BN:35:ARG:NH1	2.14	0.62
35:BA:2816:C:O2	35:BA:2883:A:O2'	2.17	0.62
46:BN:13:TRP:O	46:BN:135:PRO:HD2	1.99	0.62
52:BT:29:ARG:CB	52:BT:85:LYS:HA	2.29	0.62
53:BU:8:VAL:HG23	53:BU:11:ARG:HH21	1.62	0.62
1:CA:143:A:H2	1:CA:220:G:H1	1.46	0.62
1:CA:722:A:O2'	1:CA:723:U:O2	2.12	0.62
1:CA:832:C:N4	1:CA:855:G:O6	2.31	0.62
1:CA:1238:A:N7	1:CA:1303:C:H1'	2.13	0.62
2:CB:71:VAL:HB	2:CB:164:VAL:HG13	1.81	0.62
35:DA:2147:G:H2'	35:DA:2148:G:O4'	1.98	0.62
1:AA:481:G:O2'	1:AA:483:C:N4	2.32	0.62
1:AA:737:A:H2'	1:AA:738:C:C6	2.35	0.62
2:AB:219:VAL:O	2:AB:223:ILE:HG13	1.99	0.62
22:AW:33:U:H3	22:AW:35:A:H3'	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B0:24:LYS:O	25:B0:25:ARG:HD3	1.99	0.62
35:BA:1948:G:H5'	35:BA:1948:G:H8	1.63	0.62
35:BA:2808:U:H5'	35:BA:2891:G:O6	1.98	0.62
42:BH:27:LYS:HG2	42:BH:32:GLU:HG3	1.81	0.62
51:BS:106:ARG:O	51:BS:106:ARG:HD2	1.98	0.62
1:CA:377:G:OP1	16:CP:5:ARG:NH1	2.33	0.62
7:CG:15:ASP:HB3	7:CG:19:GLY:H	1.63	0.62
15:CO:8:LYS:O	15:CO:12:ILE:HG13	1.99	0.62
35:DA:24:G:O2'	55:DW:78:GLU:O	2.16	0.62
35:DA:1174:A:H5''	35:DA:1175:U:H5'	1.80	0.62
35:DA:2469:A:O2'	49:DQ:56:ARG:NE	2.31	0.62
35:DA:2470:G:OP1	49:DQ:56:ARG:NH2	2.29	0.62
40:DF:132:VAL:HG22	40:DF:133:ASN:H	1.64	0.62
1:AA:1158:C:O2'	1:AA:1160:G:OP1	2.15	0.62
1:AA:1226:C:O2'	13:AM:111:LYS:NZ	2.25	0.62
4:AD:43:HIS:O	4:AD:45:GLN:N	2.32	0.62
24:AY:234:ALA:HB2	24:AY:247:SER:HB2	1.81	0.62
35:BA:364:C:H2'	35:BA:365:C:H5'	1.81	0.62
35:BA:1339:G:H5''	56:BX:16:LYS:HD3	1.81	0.62
43:BI:133:HIS:O	43:BI:135:GLU:HG3	1.99	0.62
1:CA:123:C:O2'	1:CA:290:C:O2	2.16	0.62
1:CA:152:A:N6	1:CA:169:C:H42	1.95	0.62
30:D5:4:HIS:O	35:DA:2056:G:N2	2.31	0.62
35:DA:1614:A:N6	55:DW:91:GLY:O	2.32	0.62
35:DA:2100:G:O6	35:DA:2189:U:O4	2.16	0.62
38:DD:108:PRO:HB3	38:DD:143:HIS:CE1	2.34	0.62
40:DF:36:VAL:HG11	40:DF:183:VAL:HG11	1.81	0.62
40:DF:164:ARG:HG2	40:DF:164:ARG:HH11	1.63	0.62
41:DG:10:LYS:O	41:DG:14:GLU:HB3	1.98	0.62
52:DT:28:VAL:CG2	52:DT:46:GLU:HG3	2.30	0.62
3:AC:16:ARG:NH2	3:AC:182:ILE:O	2.32	0.62
35:BA:458:G:O2'	35:BA:469:G:O6	2.12	0.62
35:BA:2037:G:H2'	35:BA:2038:G:C8	2.34	0.62
35:BA:2787:C:H1'	39:BE:61:ARG:HD3	1.81	0.62
41:BG:16:ARG:HH21	41:BG:33:ARG:HG3	1.63	0.62
42:BH:104:GLU:HA	42:BH:113:VAL:O	1.99	0.62
51:DS:13:ARG:CG	51:DS:14:VAL:H	2.12	0.62
1:AA:542:G:P	4:AD:10:ARG:HH22	2.22	0.62
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.34	0.62
10:AJ:63:PHE:HA	14:AN:59:ALA:H	1.64	0.62
35:BA:672:C:H2'	35:BA:673:C:H5'	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:77:ILE:HD11	52:BT:72:VAL:HG12	1.80	0.62
4:CD:57:ARG:NH2	5:CE:107:ARG:HD3	2.15	0.62
8:CH:97:VAL:HG21	8:CH:128:GLY:HA2	1.82	0.62
35:DA:2577:A:H5''	35:DA:2578:G:H5'	1.82	0.62
35:DA:2853:C:H2'	35:DA:2854:G:H8	1.64	0.62
40:DF:67:GLN:HG3	40:DF:67:GLN:O	2.00	0.62
48:DP:47:ASP:HB3	48:DP:48:PRO:C	2.19	0.62
1:AA:407:G:OP1	4:AD:115:ARG:NH1	2.32	0.62
1:AA:1014:A:C2	1:AA:1219:U:H1'	2.35	0.62
12:AL:117:ARG:NH2	12:AL:124:LYS:HB2	2.15	0.62
25:B0:55:ARG:NH2	35:BA:2364:C:OP1	2.31	0.62
35:BA:639:U:H3	35:BA:649:G:H1	1.47	0.62
38:BD:94:LEU:HB2	38:BD:104:TYR:HE1	1.64	0.62
42:BH:54:ARG:NH2	42:BH:57:ASP:OD1	2.33	0.62
45:BK:38:VAL:HG23	45:BK:39:LYS:H	1.61	0.62
22:CW:66:U:H2'	22:CW:67:C:C6	2.35	0.62
48:DP:16:ARG:HH22	48:DP:18:ARG:CG	2.08	0.62
1:AA:148:G:H2'	1:AA:149:A:H8	1.63	0.62
1:AA:192:U:H1'	20:AT:103:GLY:HA2	1.81	0.62
1:AA:506:G:H1	1:AA:525:C:H42	1.47	0.62
1:AA:596:C:H2'	1:AA:597:G:H8	1.64	0.62
1:AA:1224:G:O2'	1:AA:1322:C:OP2	2.17	0.62
30:B5:52:TYR:O	30:B5:54:GLY:N	2.32	0.62
42:BH:155:SER:O	42:BH:157:TYR:N	2.31	0.62
48:BP:59:LEU:HA	48:BP:61:ARG:NH1	2.15	0.62
49:BQ:12:GLN:HG2	49:BQ:73:PRO:HD2	1.81	0.62
1:CA:323:U:H2'	1:CA:324:G:O4'	1.99	0.62
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.63	0.62
6:CF:35:ALA:HB1	6:CF:65:VAL:HG21	1.82	0.62
16:CP:28:ARG:HH11	16:CP:28:ARG:HG2	1.64	0.62
19:CS:9:VAL:O	19:CS:11:VAL:N	2.32	0.62
25:D0:68:GLU:HG3	25:D0:80:HIS:HB2	1.81	0.62
28:D3:6:VAL:HB	28:D3:54:VAL:HG11	1.82	0.62
35:DA:639:U:H2'	35:DA:640:C:C6	2.35	0.62
35:DA:1902:C:O2'	38:DD:244:ARG:HB2	1.99	0.62
38:DD:268:ARG:HB3	38:DD:268:ARG:HH11	1.64	0.62
41:DG:41:GLN:HG2	41:DG:155:MET:HB3	1.81	0.62
54:DV:5:VAL:HG21	54:DV:35:LEU:HD23	1.80	0.62
1:AA:1249:C:H42	1:AA:1288:A:H62	1.47	0.62
1:AA:1274:G:H2'	1:AA:1275:A:H8	1.62	0.62
2:AB:162:ILE:HD11	2:AB:184:VAL:HG22	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:872:A:OP1	49:BQ:5:ARG:NH2	2.33	0.62
35:BA:1860:G:O3'	37:BC:206:LYS:HB2	1.99	0.62
41:BG:142:PRO:HG2	41:BG:143:GLU:OE2	1.99	0.62
54:BV:47:VAL:HG12	54:BV:52:VAL:HG13	1.82	0.62
15:CO:74:ASP:HB3	15:CO:77:ARG:HG2	1.81	0.62
22:CV:15:G:N2	22:CV:59:U:O2	2.32	0.62
35:DA:1169:G:H2'	35:DA:1170:G:O4'	2.00	0.62
35:DA:1677:A:H2'	35:DA:1678:G:H8	1.64	0.62
35:DA:2030:A:H4'	35:DA:2031:A:H8	1.65	0.62
41:DG:85:GLY:C	41:DG:87:PRO:HD2	2.19	0.62
42:DH:88:LEU:HD22	42:DH:130:ARG:HG2	1.82	0.62
52:DT:83:ILE:HG13	52:DT:84:GLN:N	2.14	0.62
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.63	0.62
1:AA:1240:U:OP2	7:AG:116:ALA:HB2	1.99	0.62
1:AA:1321:C:H5''	1:AA:1322:C:H2'	1.81	0.62
1:AA:1392:G:H21	1:AA:1502:A:H8	1.47	0.62
13:AM:115:LYS:O	13:AM:117:VAL:N	2.32	0.62
16:AP:13:HIS:O	16:AP:15:PRO:HD3	2.00	0.62
35:BA:2696:U:H2'	35:BA:2697:G:C8	2.34	0.62
1:CA:766:A:H62	1:CA:813:U:H3	1.45	0.62
2:CB:119:GLU:C	2:CB:121:LEU:H	2.03	0.62
22:CW:52:G:H2'	22:CW:53:G:C8	2.34	0.62
30:D5:4:HIS:HB3	30:D5:5:PRO:HD3	1.81	0.62
46:DN:2:LYS:HZ2	53:DU:95:LEU:HD21	1.64	0.62
48:DP:89:ALA:HA	48:DP:121:LYS:HD3	1.81	0.62
52:DT:85:LYS:HB3	52:DT:85:LYS:NZ	2.14	0.62
53:DU:101:ARG:HB2	53:DU:101:ARG:HH11	1.63	0.62
1:AA:592:G:H2'	1:AA:593:G:H8	1.63	0.62
1:AA:1124:G:O6	1:AA:1145:C:O2'	2.17	0.62
2:AB:141:GLU:O	2:AB:145:LEU:HB2	2.00	0.62
24:AY:102:TYR:HE2	24:AY:346:TRP:CE2	2.16	0.62
33:B8:50:LEU:HD12	33:B8:51:ALA:H	1.64	0.62
35:BA:2271:G:H2'	35:BA:2272:U:C6	2.34	0.62
1:CA:372:C:H42	1:CA:389:A:H62	1.48	0.62
22:CW:52:G:H2'	22:CW:53:G:H8	1.63	0.62
35:DA:2808:U:H5'	35:DA:2891:G:O6	2.00	0.62
38:DD:10:THR:HG23	38:DD:13:ARG:HB3	1.81	0.62
40:DF:123:LEU:HD12	40:DF:124:LEU:H	1.65	0.62
1:AA:951:G:O2'	1:AA:970:C:O2'	2.12	0.61
1:AA:1036:G:H3'	1:AA:1037:C:C6	2.35	0.61
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1409:C:H42	1:AA:1491:G:H1	1.47	0.61
2:AB:25:ASN:O	2:AB:27:LYS:N	2.33	0.61
35:BA:2876:G:H4'	52:BT:3:ARG:NE	2.15	0.61
42:BH:167:GLU:O	42:BH:169:VAL:N	2.32	0.61
58:BZ:146:ILE:HG13	58:BZ:147:GLY:H	1.65	0.61
1:CA:674:G:H2'	1:CA:675:A:C8	2.34	0.61
1:CA:963:G:H21	10:CJ:55:LYS:HZ2	1.46	0.61
24:CY:348:GLY:O	24:CY:352:LYS:HB2	2.00	0.61
43:DI:92:VAL:HG13	43:DI:120:ILE:HB	1.82	0.61
46:DN:133:GLN:HG2	46:DN:134:ARG:H	1.64	0.61
26:B1:27:GLU:OE2	26:B1:28:GLY:N	2.32	0.61
35:BA:2282:G:N2	35:BA:2390:U:O2	2.32	0.61
57:BY:46:LYS:N	57:BY:62:GLU:HB2	2.15	0.61
4:CD:49:ARG:HE	4:CD:49:ARG:HA	1.65	0.61
4:CD:176:LEU:HG	4:CD:177:ASP:H	1.65	0.61
4:CD:191:ARG:NE	4:CD:200:GLU:OE1	2.33	0.61
22:CW:34:G:N1	23:CX:15:A:N7	2.48	0.61
53:DU:95:LEU:HD12	54:DV:11:GLN:HE21	1.62	0.61
58:DZ:93:ASP:OD1	58:DZ:94:GLU:N	2.33	0.61
5:AE:101:ILE:HD11	5:AE:119:LEU:HD23	1.80	0.61
25:B0:74:ARG:HH12	36:BB:13:A:H8	1.46	0.61
35:BA:2151:G:H2'	35:BA:2152:G:H8	1.65	0.61
40:BF:20:LEU:HD12	40:BF:199:TRP:CH2	2.36	0.61
43:BI:125:GLU:HA	43:BI:125:GLU:OE1	2.01	0.61
51:BS:13:ARG:CG	51:BS:14:VAL:H	2.13	0.61
53:BU:110:VAL:O	53:BU:114:LYS:HG2	2.01	0.61
58:BZ:20:ARG:HB2	58:BZ:20:ARG:NH1	2.14	0.61
7:CG:16:LEU:HD13	9:CI:45:ALA:HB2	1.82	0.61
12:CL:70:ILE:HG12	12:CL:100:ILE:HD12	1.82	0.61
13:CM:90:LEU:C	13:CM:92:HIS:H	2.03	0.61
33:D8:2:PRO:HA	35:DA:591:C:O2	2.00	0.61
35:DA:271(H):G:H1	35:DA:271(P):C:H42	1.49	0.61
35:DA:272(C):G:H1	35:DA:365:C:H42	1.48	0.61
35:DA:2135:A:N6	35:DA:2156:G:O2'	2.32	0.61
37:DC:16:ASP:HB3	37:DC:19:LYS:HB2	1.82	0.61
46:DN:133:GLN:HG2	46:DN:135:PRO:HD3	1.82	0.61
1:AA:652:U:O4	1:AA:752:G:O2'	2.14	0.61
2:AB:33:TYR:HB2	2:AB:43:ASP:HB2	1.83	0.61
10:AJ:7:LYS:HB2	10:AJ:97:GLU:HB2	1.80	0.61
13:AM:108:ARG:CZ	13:AM:114:ARG:HG2	2.29	0.61
13:AM:123:ALA:HB1	24:AY:161:GLU:O	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:29:ARG:HD3	19:AS:30:LEU:H	1.64	0.61
25:B0:11:ARG:HB2	25:B0:11:ARG:NH1	2.15	0.61
35:BA:2305:A:H1'	41:BG:135:LEU:O	1.99	0.61
42:BH:41:MET:CG	42:BH:42:ARG:H	2.11	0.61
1:CA:127:G:HO2'	17:CQ:2:PRO:N	1.98	0.61
1:CA:611:A:H61	1:CA:629:G:H1	1.45	0.61
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.63	0.61
1:CA:1458:G:OP1	20:CT:35:THR:OG1	2.13	0.61
35:DA:1664:A:H61	35:DA:1996:C:H42	1.47	0.61
35:DA:2176:A:H2'	35:DA:2177:C:C6	2.36	0.61
39:DE:77:ILE:HG22	39:DE:78:LEU:H	1.65	0.61
41:DG:16:ARG:O	41:DG:20:ILE:HG13	1.99	0.61
51:DS:30:ARG:NH2	51:DS:62:LYS:HD2	2.15	0.61
54:DV:36:PRO:HA	54:DV:56:SER:HB2	1.81	0.61
1:AA:630:G:H2'	1:AA:631:G:H5'	1.82	0.61
1:AA:1054:C:O4'	1:AA:1196:U:O2'	2.18	0.61
13:AM:34:LEU:HD13	13:AM:41:PRO:HG3	1.82	0.61
16:AP:22:THR:HA	16:AP:33:ILE:HG12	1.83	0.61
31:B6:31:PRO:HB3	35:BA:2286:A:H3'	1.81	0.61
35:BA:2590:A:OP2	38:BD:238:GLY:HA2	2.00	0.61
39:BE:54:GLN:O	39:BE:75:VAL:HG23	1.99	0.61
46:BN:133:GLN:HG2	46:BN:134:ARG:H	1.65	0.61
1:CA:1244:C:H2'	1:CA:1245:A:C8	2.34	0.61
2:CB:224:GLN:HA	2:CB:229:VAL:HG22	1.81	0.61
6:CF:6:VAL:HG13	6:CF:90:VAL:HG22	1.83	0.61
22:CW:5:G:H1	22:CW:68:C:H42	1.49	0.61
35:DA:218:A:H2	35:DA:235:U:H4'	1.66	0.61
35:DA:1403:C:H5''	35:DA:1471:A:H1'	1.82	0.61
35:DA:2177:C:O2	37:DC:45:HIS:HB3	2.00	0.61
38:DD:133:LEU:HB3	38:DD:173:VAL:HG11	1.81	0.61
1:AA:189(L):G:H2'	1:AA:190:U:C6	2.35	0.61
1:AA:666:G:N2	1:AA:740:U:O2	2.29	0.61
35:BA:1174:A:H5''	35:BA:1175:U:H5'	1.82	0.61
35:BA:2661:G:H5''	35:BA:2662:A:C2	2.35	0.61
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.36	0.61
8:CH:40:ALA:C	8:CH:42:GLU:H	2.04	0.61
24:CY:26:LEU:HB2	24:CY:55:LEU:HD21	1.83	0.61
29:D4:26:SER:OG	29:D4:27:THR:N	2.33	0.61
35:DA:1048:A:H2	35:DA:1109:C:H41	1.48	0.61
36:DB:45:A:C1'	41:DG:95:ARG:HH12	2.12	0.61
39:DE:24:THR:HG22	39:DE:186:GLY:HA2	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DE:64:LYS:C	39:DE:66:HIS:H	2.02	0.61
1:AA:1261:A:H62	1:AA:1274:G:H21	1.49	0.61
12:AL:25:PRO:C	12:AL:27:LEU:H	2.04	0.61
13:AM:7:VAL:HG11	41:BG:139:LEU:HD21	1.81	0.61
35:BA:71:A:H8	35:BA:71:A:H5'	1.66	0.61
35:BA:513:A:O2'	35:BA:1217:C:OP1	2.18	0.61
35:BA:996:A:H4'	53:BU:92:ARG:HE	1.64	0.61
35:BA:2150:U:H2'	35:BA:2151:G:C8	2.35	0.61
35:BA:2681:C:H5	35:BA:2725:A:N6	1.95	0.61
35:BA:2801(A):A:H4'	35:BA:2802:G:H5'	1.83	0.61
39:BE:116:VAL:O	39:BE:117:MET:HB3	2.01	0.61
48:BP:16:ARG:HH22	48:BP:18:ARG:HG2	1.65	0.61
58:BZ:141:VAL:HA	58:BZ:144:LEU:HD23	1.83	0.61
1:CA:1226:C:O2'	13:CM:111:LYS:NZ	2.31	0.61
35:DA:1845:G:H2'	35:DA:1846:G:H5''	1.81	0.61
41:DG:77:ILE:HG22	41:DG:80:PHE:H	1.65	0.61
46:DN:43:THR:HB	46:DN:46:VAL:HG12	1.82	0.61
50:DR:7:GLY:O	50:DR:8:ARG:HB2	1.99	0.61
54:DV:19:LYS:HZ3	54:DV:20:LEU:H	1.48	0.61
35:BA:1149:G:H2'	35:BA:1150:C:C6	2.36	0.61
35:BA:1173:G:H3'	35:BA:1174:A:C5'	2.29	0.61
53:BU:88:ILE:HG22	54:BV:47:VAL:HG23	1.83	0.61
1:CA:137:C:N4	1:CA:226:G:H1	1.95	0.61
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.36	0.61
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.36	0.61
3:CC:20:SER:HB2	3:CC:40:ARG:HH22	1.65	0.61
6:CF:16:GLN:H	6:CF:16:GLN:CD	2.04	0.61
17:CQ:59:ILE:CG2	17:CQ:71:PHE:HB3	2.31	0.61
35:DA:823:G:H2'	35:DA:824:A:C8	2.35	0.61
52:DT:50:ILE:HD11	52:DT:102:ILE:HD11	1.83	0.61
57:DY:46:LYS:N	57:DY:62:GLU:HB2	2.14	0.61
1:AA:1307:U:OP1	13:AM:101:GLN:NE2	2.33	0.61
4:AD:35:ARG:O	4:AD:37:PRO:HD3	2.01	0.61
4:AD:196:LEU:H	4:AD:196:LEU:HD12	1.66	0.61
9:AI:40:LEU:O	9:AI:42:ARG:N	2.31	0.61
11:AK:58:PRO:HB2	11:AK:93:GLN:HG3	1.81	0.61
19:AS:6:LYS:HG3	19:AS:7:LYS:HE2	1.83	0.61
31:B6:38:LYS:HD3	35:BA:2344:U:OP1	2.00	0.61
35:BA:654(H):G:H3'	35:BA:654(I):C:H4'	1.82	0.61
39:BE:77:ILE:HG22	39:BE:78:LEU:H	1.66	0.61
45:BK:122:ALA:HA	45:BK:125:ARG:HE	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:126:VAL:HA	48:BP:145:PRO:HB2	1.82	0.61
52:BT:50:ILE:HD11	52:BT:102:ILE:HD11	1.82	0.61
58:BZ:95:PRO:HA	58:BZ:129:SER:HA	1.83	0.61
1:CA:1095:U:OP1	1:CA:1108:G:N2	2.34	0.61
35:DA:527:C:N4	35:DA:2779:U:OP2	2.34	0.61
41:DG:106:LEU:HA	41:DG:110:ALA:HB3	1.83	0.61
49:DQ:111:GLU:OE2	49:DQ:133:ARG:NH1	2.32	0.61
6:AF:6:VAL:HG13	6:AF:90:VAL:HG22	1.81	0.61
35:BA:74:A:H4'	35:BA:75:G:O5'	1.99	0.61
35:BA:1007:C:H5''	46:BN:35:ARG:HH11	1.63	0.61
35:BA:1151:G:H5''	53:BU:81:HIS:CE1	2.36	0.61
35:BA:1187:G:H5''	54:BV:81:TYR:CE2	2.36	0.61
35:BA:2607:G:H2'	35:BA:2608:G:O4'	1.99	0.61
39:BE:59:VAL:HG13	39:BE:60:ASN:H	1.66	0.61
54:BV:64:HIS:ND1	54:BV:92:THR:HG22	2.16	0.61
1:CA:1006:C:H42	1:CA:1024:G:N2	1.96	0.61
4:CD:33:MET:C	4:CD:35:ARG:H	2.04	0.61
15:CO:6:GLU:N	15:CO:6:GLU:OE1	2.34	0.61
35:DA:910:A:H62	49:DQ:12:GLN:HA	1.66	0.61
35:DA:2329:G:H2'	35:DA:2330:G:H8	1.65	0.61
41:DG:55:LYS:NZ	41:DG:148:MET:O	2.32	0.61
1:AA:542:G:OP1	4:AD:10:ARG:NH2	2.34	0.60
4:AD:176:LEU:HG	4:AD:177:ASP:H	1.64	0.60
12:AL:53:ARG:HG2	12:AL:53:ARG:HH11	1.66	0.60
22:AW:64:A:H2'	22:AW:65:G:C8	2.36	0.60
35:BA:941:A:H2'	35:BA:942:G:C8	2.36	0.60
52:BT:85:LYS:HZ2	52:BT:85:LYS:HB3	1.65	0.60
1:CA:531:U:OP2	24:CY:201:ARG:NH1	2.32	0.60
7:CG:15:ASP:HB3	7:CG:19:GLY:N	2.16	0.60
24:CY:303:ARG:H	24:CY:304:PRO:HD3	1.65	0.60
36:DB:21:G:O2'	36:DB:22:U:H6	1.84	0.60
41:DG:101:ILE:O	41:DG:105:LYS:NZ	2.34	0.60
43:DI:31:LEU:HD21	43:DI:38:LEU:HG	1.83	0.60
1:AA:276:G:O3'	17:AQ:68:ARG:NH1	2.32	0.60
1:AA:1079:G:H2'	1:AA:1080:A:C8	2.35	0.60
1:AA:1255:G:O2'	1:AA:1258:G:O2'	2.18	0.60
12:AL:47:LYS:HB3	12:AL:48:PRO:CD	2.30	0.60
22:AW:16:U:C4	22:AW:18:G:H2'	2.36	0.60
33:B8:39:LYS:O	33:B8:43:GLN:HG3	2.01	0.60
35:BA:7:G:N2	35:BA:2897:U:O2	2.33	0.60
35:BA:372:G:N2	35:BA:401:A:OP2	2.29	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:59:VAL:O	39:BE:62:PRO:HD2	2.01	0.60
25:D0:24:LYS:O	25:D0:25:ARG:HD3	2.02	0.60
31:D6:39:TYR:HB3	31:D6:49:HIS:CD2	2.35	0.60
33:D8:25:MET:SD	48:DP:64:LYS:HD2	2.42	0.60
41:DG:37:VAL:HG22	41:DG:159:VAL:HG12	1.83	0.60
43:DI:13:GLY:O	43:DI:17:GLN:NE2	2.34	0.60
51:DS:28:VAL:HB	51:DS:89:ARG:HB2	1.83	0.60
56:DX:50:LYS:HB3	56:DX:84:ALA:HB2	1.81	0.60
1:AA:79:G:H1	1:AA:80:G:H21	1.47	0.60
1:AA:939:G:H5''	7:AG:102:ARG:NH2	2.15	0.60
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.36	0.60
1:AA:1258:G:H2'	1:AA:1259:C:C6	2.36	0.60
5:AE:31:LEU:HD23	5:AE:45:PHE:HB2	1.82	0.60
12:AL:45:PRO:HG3	12:AL:53:ARG:HD3	1.84	0.60
35:BA:806:C:OP2	48:BP:39:LYS:HG3	2.00	0.60
53:BU:31:SER:O	53:BU:33:ARG:N	2.30	0.60
1:CA:1097:C:O2'	1:CA:1169:A:N3	2.30	0.60
1:CA:1435:G:H2'	1:CA:1436:U:H6	1.66	0.60
4:CD:13:ARG:HG3	4:CD:40:PRO:HD3	1.83	0.60
8:CH:103:VAL:HG21	8:CH:110:ALA:HB2	1.83	0.60
35:DA:613:G:N2	35:DA:614(C):A:O2'	2.34	0.60
35:DA:941:A:H2'	35:DA:942:G:C8	2.36	0.60
1:AA:191:G:O2'	20:AT:101:GLY:O	2.18	0.60
1:AA:1095:U:OP1	1:AA:1108:G:N1	2.33	0.60
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.66	0.60
24:AY:187:HIS:CE1	24:AY:311:ILE:HD11	2.37	0.60
35:BA:142:A:C8	35:BA:1408:C:H1'	2.36	0.60
35:BA:1541:G:H4'	35:BA:1542:A:O4'	2.00	0.60
35:BA:2304:G:H4'	41:BG:133:LEU:HA	1.83	0.60
39:BE:86:PRO:O	39:BE:88:GLY:N	2.34	0.60
1:CA:357:G:OP1	1:CA:366:C:O2'	2.12	0.60
1:CA:711:G:H2'	1:CA:712:A:C8	2.36	0.60
1:CA:807:A:H2'	1:CA:808:C:C6	2.36	0.60
1:CA:1355:G:H2'	1:CA:1356:G:C8	2.35	0.60
11:CK:124:LYS:HZ2	11:CK:125:PHE:HE1	1.49	0.60
35:DA:2818:G:OP2	50:DR:42:LYS:NZ	2.35	0.60
38:DD:181:GLU:HA	38:DD:272:ALA:HB3	1.83	0.60
40:DF:24:LEU:HB3	40:DF:25:PRO:CD	2.30	0.60
51:DS:34:HIS:HB3	51:DS:53:SER:HB3	1.84	0.60
1:AA:1244:C:H2'	1:AA:1245:A:H8	1.67	0.60
1:AA:1372:U:H2'	1:AA:1373:G:O4'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B3:17:LYS:HG2	35:BA:969:U:OP1	2.01	0.60
35:BA:271(C):C:H2'	35:BA:271(D):G:C8	2.36	0.60
35:BA:2660:A:H5'	35:BA:2661:G:H21	1.67	0.60
35:BA:2849:U:OP2	52:BT:95:ARG:NH1	2.34	0.60
42:BH:8:PRO:HA	42:BH:69:ARG:HH21	1.66	0.60
57:BY:10:GLY:HA2	57:BY:27:VAL:HG13	1.82	0.60
4:CD:132:ARG:HG2	4:CD:132:ARG:HH11	1.67	0.60
5:CE:101:ILE:O	5:CE:120:THR:OG1	2.16	0.60
31:D6:26:ASN:HD22	31:D6:32:ASN:ND2	1.98	0.60
35:DA:156:U:OP1	35:DA:157:U:N3	2.34	0.60
35:DA:589:C:H2'	35:DA:590:A:H8	1.66	0.60
35:DA:1149:G:H2'	35:DA:1150:C:C6	2.37	0.60
36:DB:106:G:OP1	58:DZ:31:ARG:NH2	2.34	0.60
41:DG:115:ARG:CG	41:DG:116:ASP:H	2.13	0.60
1:AA:279:A:OP2	17:AQ:95:TYR:OH	2.18	0.60
1:AA:692:U:O4	11:AK:26:ASN:ND2	2.29	0.60
6:AF:4:TYR:HD1	6:AF:92:LYS:HA	1.67	0.60
11:AK:82:VAL:HB	11:AK:108:ILE:HG13	1.84	0.60
19:AS:9:VAL:O	19:AS:11:VAL:N	2.35	0.60
22:AW:51:U:H3	22:AW:64:A:H2	1.47	0.60
35:BA:48:G:N1	35:BA:177:G:OP2	2.30	0.60
35:BA:2723:C:H5''	50:BR:2:ARG:HH11	1.66	0.60
44:BJ:23:UNK:C	44:BJ:88:UNK:HA	2.31	0.60
1:CA:110:C:H2'	1:CA:111:G:O4'	2.02	0.60
9:CI:9:ARG:HG2	9:CI:14:VAL:HG22	1.83	0.60
9:CI:110:GLU:OE2	9:CI:113:LYS:NZ	2.33	0.60
13:CM:49:THR:HG22	13:CM:51:ALA:H	1.66	0.60
22:CW:61:C:H2'	22:CW:62:C:C6	2.37	0.60
35:DA:1486:A:N1	35:DA:1504:C:N4	2.49	0.60
56:DX:12:VAL:HG23	56:DX:13:LEU:H	1.65	0.60
1:AA:9:G:H2'	1:AA:10:A:H8	1.67	0.60
3:AC:182:ILE:HG12	3:AC:203:PHE:HD1	1.67	0.60
35:BA:1076:C:H2'	35:BA:1077:A:C8	2.36	0.60
57:BY:28:LYS:HA	57:BY:39:VAL:H	1.67	0.60
1:CA:12:U:H3	1:CA:22:G:H1	1.49	0.60
1:CA:911:U:OP2	12:CL:97:ARG:NH2	2.34	0.60
15:CO:36:ILE:HG23	15:CO:56:LEU:HD11	1.84	0.60
18:CR:37:VAL:HG23	18:CR:38:GLU:H	1.66	0.60
30:D5:40:LYS:NZ	30:D5:49:CYS:SG	2.71	0.60
35:DA:954:G:H5''	49:DQ:13:GLN:HB3	1.83	0.60
35:DA:1678:G:N2	35:DA:1989:G:H22	1.99	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2246:G:H2'	35:DA:2247:A:C8	2.37	0.60
35:DA:2290:G:H1	35:DA:2342:C:H42	1.48	0.60
51:DS:99:LYS:O	51:DS:101:LEU:N	2.34	0.60
57:DY:90:LEU:HD12	57:DY:91:GLU:HG2	1.82	0.60
58:DZ:10:ARG:NH2	58:DZ:26:GLY:O	2.35	0.60
1:AA:1323:G:H4'	1:AA:1363:C:N3	2.17	0.60
7:AG:69:VAL:HA	7:AG:138:LYS:HD2	1.83	0.60
9:AI:28:VAL:HG22	9:AI:63:ILE:HB	1.84	0.60
25:B0:74:ARG:NH1	36:BB:13:A:H8	2.00	0.60
35:BA:910:A:H62	49:BQ:12:GLN:HA	1.67	0.60
35:BA:1991:U:H2'	35:BA:1992:G:H5''	1.82	0.60
35:BA:2401:U:H2'	35:BA:2402:C:H5''	1.83	0.60
35:BA:2831:G:OP1	39:BE:58:ARG:NH1	2.35	0.60
39:BE:119:ARG:HG2	39:BE:160:TYR:HB2	1.83	0.60
43:BI:84:GLY:HA3	43:BI:89:TYR:HE1	1.66	0.60
4:CD:173:TRP:CE2	4:CD:189:PRO:HB3	2.36	0.60
8:CH:89:PRO:HA	8:CH:92:ARG:HH11	1.66	0.60
19:CS:16:LEU:H	19:CS:16:LEU:HD12	1.66	0.60
26:D1:80:LEU:HB3	26:D1:82:LEU:HD22	1.84	0.60
35:DA:704:G:O2'	35:DA:726:G:N2	2.22	0.60
35:DA:2393:A:H5'	48:DP:62:LEU:HB3	1.84	0.60
35:DA:2472:G:H5'	35:DA:2473:U:H5''	1.84	0.60
1:AA:473:G:O3'	16:AP:81:ARG:NH2	2.35	0.60
2:AB:8:LYS:O	2:AB:12:GLU:HG3	2.01	0.60
7:AG:76:ARG:HH21	7:AG:156:TRP:HH2	1.50	0.60
29:B4:26:SER:OG	29:B4:27:THR:N	2.35	0.60
40:BF:3:GLU:O	40:BF:19:GLU:HB2	2.00	0.60
40:BF:4:VAL:HG11	40:BF:17:ARG:HD3	1.83	0.60
45:BK:112:MET:H	45:BK:113:PRO:CD	2.15	0.60
1:CA:1175:G:H2'	1:CA:1176:A:C8	2.37	0.60
1:CA:1427:U:H2'	1:CA:1428:A:H8	1.67	0.60
8:CH:91:ARG:HG2	8:CH:91:ARG:HH11	1.66	0.60
33:D8:50:LEU:HD12	33:D8:51:ALA:H	1.67	0.60
35:DA:690:G:H2'	35:DA:691:C:H6	1.67	0.60
38:DD:35:LYS:O	38:DD:37:LEU:N	2.34	0.60
43:DI:127:VAL:HG22	43:DI:139:GLN:HA	1.84	0.60
43:DI:133:HIS:HB2	43:DI:134:PRO:CD	2.32	0.60
46:DN:67:LEU:HD23	46:DN:87:LEU:HD13	1.83	0.60
24:AY:267:SER:HB3	25:B0:3:HIS:ND1	2.16	0.60
31:B6:19:ARG:HG2	31:B6:19:ARG:HH11	1.67	0.60
35:BA:1677:A:H2'	35:BA:1678:G:H8	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:44:VAL:HG13	37:BC:215:VAL:HG22	1.84	0.60
41:BG:3:LEU:O	41:BG:8:LYS:NZ	2.35	0.60
48:BP:17:LYS:O	48:BP:19:VAL:N	2.35	0.60
3:CC:89:GLU:O	3:CC:93:LYS:HB2	2.02	0.60
7:CG:152:ALA:O	7:CG:155:ARG:NE	2.35	0.60
35:DA:1257:C:OP1	40:DF:72:ARG:NH2	2.35	0.60
35:DA:1682:G:OP2	35:DA:1699:G:N2	2.34	0.60
40:DF:24:LEU:O	40:DF:26:ALA:N	2.31	0.60
41:DG:82:LEU:HD23	41:DG:83:ARG:H	1.66	0.60
51:DS:96:GLY:O	51:DS:98:VAL:N	2.34	0.60
58:DZ:54:HIS:NE2	58:DZ:123:ASP:OD2	2.35	0.60
34:B9:18:ARG:NE	35:BA:1034:G:H5'	2.17	0.59
35:BA:1636:C:H2'	35:BA:1637:A:H8	1.62	0.59
35:BA:1889:A:H2'	35:BA:1890:A:C8	2.37	0.59
35:BA:2291:U:H2'	35:BA:2292:C:C6	2.36	0.59
35:BA:2744:G:N2	42:BH:143:GLN:OE1	2.35	0.59
39:BE:24:THR:HG22	39:BE:186:GLY:HA2	1.83	0.59
40:BF:195:ASP:OD1	40:BF:196:LEU:N	2.35	0.59
51:BS:96:GLY:O	51:BS:98:VAL:N	2.33	0.59
1:CA:537:G:H5''	12:CL:113:ARG:HH12	1.66	0.59
5:CE:6:PHE:HB2	5:CE:34:VAL:HG22	1.83	0.59
25:D0:68:GLU:CG	25:D0:80:HIS:HB2	2.32	0.59
35:DA:143:G:H4'	56:DX:35:THR:HG21	1.84	0.59
35:DA:389:G:H1	48:DP:71:VAL:HG12	1.67	0.59
39:DE:51:PHE:HD1	39:DE:52:LEU:HD22	1.66	0.59
42:DH:20:ALA:HB3	42:DH:23:ARG:HB2	1.84	0.59
1:AA:476:G:H2'	1:AA:477:A:C8	2.37	0.59
1:AA:835:U:H3	1:AA:851:G:H1	1.49	0.59
1:AA:1030:C:H41	1:AA:1032:G:H21	1.49	0.59
15:AO:4:THR:OG1	15:AO:7:GLU:HB2	2.02	0.59
35:BA:1826:G:H4'	38:BD:242:ARG:HH21	1.67	0.59
39:BE:111:ARG:HD2	39:BE:160:TYR:CD2	2.37	0.59
41:BG:31:VAL:HG22	41:BG:32:PRO:HD2	1.83	0.59
58:BZ:96:VAL:HG22	58:BZ:97:GLU:H	1.68	0.59
1:CA:1479:C:H2'	1:CA:1480:G:H8	1.67	0.59
16:CP:53:VAL:HG12	16:CP:79:VAL:HG22	1.84	0.59
35:DA:1054:A:H2'	35:DA:1055:G:O4'	2.02	0.59
35:DA:1779:U:H5	35:DA:1784:A:N7	2.00	0.59
35:DA:1803:A:H4'	38:DD:259:THR:HG23	1.84	0.59
35:DA:2065:C:H2'	35:DA:2066:C:H6	1.67	0.59
39:DE:24:THR:HG23	39:DE:184:VAL:HG23	1.82	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DH:78:GLY:HA2	42:DH:82:GLY:HA3	1.84	0.59
1:AA:783:C:OP1	1:AA:1515:C:O2'	2.19	0.59
13:AM:125:ARG:HG3	24:AY:160:PRO:HD2	1.85	0.59
35:BA:295:G:OP1	57:BY:2:ARG:NH2	2.35	0.59
35:BA:483:A:H4'	57:BY:49:VAL:HA	1.83	0.59
36:BB:24:G:N2	36:BB:27:C:H42	2.00	0.59
38:BD:3:VAL:HG23	38:BD:200:ASP:OD2	2.02	0.59
46:BN:4:TYR:N	46:BN:4:TYR:CD1	2.70	0.59
46:BN:120:LEU:HD11	46:BN:122:VAL:HG23	1.84	0.59
51:BS:34:HIS:HB3	51:BS:53:SER:HB3	1.83	0.59
58:BZ:58:VAL:HG13	58:BZ:66:SER:HB2	1.84	0.59
1:CA:1502:A:H2	1:CA:1505:G:H22	1.48	0.59
9:CI:40:LEU:C	9:CI:42:ARG:H	2.05	0.59
10:CJ:8:LEU:HD23	10:CJ:96:ILE:HG22	1.83	0.59
12:CL:67:THR:OG1	12:CL:95:GLY:O	2.20	0.59
19:CS:67:VAL:HG23	19:CS:68:GLY:H	1.68	0.59
27:D2:51:ARG:HB3	35:DA:61:G:OP2	2.03	0.59
35:DA:534:U:H2'	35:DA:535:C:C6	2.38	0.59
35:DA:994:C:OP1	53:DU:53:ARG:NH2	2.34	0.59
37:DC:216:THR:HB	37:DC:222:SER:HB3	1.85	0.59
56:DX:63:LYS:HB3	56:DX:72:LYS:HG3	1.83	0.59
58:DZ:59:LEU:O	58:DZ:66:SER:HA	2.01	0.59
1:AA:963:G:H21	10:AJ:55:LYS:HZ2	1.51	0.59
1:AA:1499:A:H1'	1:AA:1520:G:H5'	1.83	0.59
13:AM:115:LYS:C	13:AM:117:VAL:H	2.06	0.59
19:AS:67:VAL:HG23	19:AS:68:GLY:H	1.67	0.59
27:B2:5:GLU:O	27:B2:8:LYS:HB2	2.02	0.59
35:BA:2745:C:O2	42:BH:139:GLN:NE2	2.27	0.59
37:BC:57:GLN:NE2	37:BC:205:ALA:HA	2.13	0.59
38:BD:32:SER:O	38:BD:36:PRO:HD3	2.01	0.59
38:BD:35:LYS:O	38:BD:37:LEU:N	2.36	0.59
45:BK:27:LEU:HD23	45:BK:27:LEU:H	1.67	0.59
48:BP:58:THR:O	48:BP:61:ARG:NE	2.35	0.59
49:BQ:43:THR:OG1	49:BQ:46:GLN:HG3	2.02	0.59
58:BZ:102:LEU:HD11	58:BZ:124:ILE:HG12	1.83	0.59
8:CH:86:ILE:HG21	8:CH:133:LEU:HD22	1.83	0.59
9:CI:115:GLY:O	9:CI:116:LYS:HG3	2.03	0.59
13:CM:83:ASP:CG	13:CM:84:ILE:H	2.06	0.59
24:CY:111:HIS:NE2	24:CY:214:VAL:HB	2.17	0.59
35:DA:298:G:N7	61:DA:3303:HOH:O	2.32	0.59
35:DA:779:U:OP1	38:DD:49:ILE:HG23	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DI:77:LEU:HB3	43:DI:140:LEU:HG	1.84	0.59
50:DR:47:PHE:O	50:DR:51:LEU:HD13	2.03	0.59
1:AA:628:G:H2'	1:AA:629:G:C8	2.37	0.59
1:AA:878:G:H5'	8:AH:89:PRO:HG2	1.84	0.59
26:B1:61:ARG:NH2	35:BA:1364:G:OP2	2.35	0.59
27:B2:13:ALA:C	27:B2:15:LYS:H	2.05	0.59
27:B2:19:VAL:O	27:B2:21:LEU:N	2.35	0.59
35:BA:2022:U:O2'	35:BA:2617:C:H5'	2.01	0.59
49:BQ:111:GLU:O	49:BQ:115:MET:HG2	2.01	0.59
1:CA:503:C:OP2	12:CL:116:SER:OG	2.16	0.59
1:CA:1291:G:OP1	7:CG:37:ASN:ND2	2.35	0.59
35:DA:2590:A:OP2	38:DD:238:GLY:HA2	2.03	0.59
35:DA:2646:C:OP2	35:DA:2732:G:O2'	2.11	0.59
35:DA:2865:U:OP2	35:DA:2866:U:O2'	2.14	0.59
39:DE:59:VAL:O	39:DE:62:PRO:HD2	2.02	0.59
57:DY:32:PRO:C	57:DY:34:LYS:H	2.06	0.59
1:AA:1328:C:OP1	21:AU:21:TYR:OH	2.17	0.59
13:AM:54:VAL:O	13:AM:58:GLU:HG2	2.02	0.59
15:AO:33:THR:HG21	15:AO:85:LEU:HD21	1.84	0.59
31:B6:19:ARG:HH21	35:BA:2401:U:H5''	1.68	0.59
31:B6:30:THR:HB	31:B6:31:PRO:HD2	1.83	0.59
35:BA:89:G:OP2	35:BA:90:U:H2'	2.03	0.59
35:BA:2485:G:H5''	49:BQ:46:GLN:NE2	2.16	0.59
35:BA:2514:U:H2'	35:BA:2515:C:C6	2.37	0.59
38:BD:181:GLU:HA	38:BD:272:ALA:HB3	1.84	0.59
40:BF:116:ASP:OD2	48:BP:5:ASP:HA	2.01	0.59
1:CA:1112:C:O2	3:CC:179:ARG:HG2	2.03	0.59
12:CL:53:ARG:NH1	12:CL:92:ASP:OD2	2.35	0.59
26:D1:52:ARG:NH1	35:DA:2218:U:O2	2.35	0.59
35:DA:2010:G:H5''	55:DW:42:ARG:HB2	1.84	0.59
35:DA:2052:G:H4'	39:DE:143:ASN:O	2.02	0.59
35:DA:2086:U:H2'	35:DA:2087:G:C8	2.38	0.59
37:DC:23:ILE:HB	37:DC:191:ARG:HH12	1.67	0.59
58:DZ:40:ASP:OD1	58:DZ:42:VAL:HG12	2.01	0.59
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.38	0.59
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.02	0.59
8:AH:40:ALA:C	8:AH:42:GLU:H	2.06	0.59
11:AK:24:SER:O	11:AK:26:ASN:N	2.36	0.59
17:AQ:59:ILE:CG2	17:AQ:71:PHE:HB3	2.33	0.59
22:AV:27:G:H1	22:AV:43:C:H42	1.51	0.59
35:BA:90:U:O2'	35:BA:92:A:OP2	2.21	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2121:G:N1	35:BA:2178:C:O2	2.36	0.59
35:BA:2469:A:O2'	49:BQ:56:ARG:NE	2.34	0.59
41:BG:46:ALA:HB3	41:BG:82:LEU:HD21	1.84	0.59
48:BP:101:VAL:HG12	48:BP:106:LEU:HB3	1.85	0.59
1:CA:383:A:OP1	1:CA:454:C:O2'	2.15	0.59
5:CE:100:VAL:HG12	5:CE:118:ILE:HG22	1.82	0.59
15:CO:36:ILE:HD12	15:CO:63:ARG:HE	1.67	0.59
36:DB:114:C:H2'	36:DB:115:G:C8	2.36	0.59
38:DD:11:PRO:O	38:DD:13:ARG:N	2.32	0.59
1:AA:531:U:OP2	24:AY:201:ARG:NH2	2.30	0.59
1:AA:857:C:H2'	1:AA:858:G:O4'	2.03	0.59
1:AA:1014:A:H2	1:AA:1219:U:H1'	1.68	0.59
1:AA:1294:G:H2'	1:AA:1295:G:C8	2.37	0.59
22:AW:48:C:H3'	22:AW:50:U:C4	2.38	0.59
35:BA:1423:G:HO2'	35:BA:1499:C:HO2'	1.51	0.59
35:BA:1721:G:H8	35:BA:1741:A:H62	1.50	0.59
35:BA:1827:C:OP2	38:BD:222:ARG:NH1	2.34	0.59
35:BA:2514:U:H2'	35:BA:2515:C:H6	1.68	0.59
50:BR:11:ASN:OD1	50:BR:12:ARG:N	2.35	0.59
56:BX:27:THR:HB	56:BX:80:ILE:HG22	1.84	0.59
1:CA:107:G:OP1	1:CA:325:A:N6	2.35	0.59
6:CF:86:ARG:O	6:CF:87:ARG:HG2	2.03	0.59
22:CW:65:G:H2'	22:CW:66:U:C6	2.38	0.59
30:D5:40:LYS:NZ	30:D5:45:VAL:O	2.36	0.59
35:DA:639:U:H2'	35:DA:640:C:H6	1.68	0.59
35:DA:1044:G:HO2'	35:DA:1111:A:N6	1.99	0.59
38:DD:12:SER:HB2	38:DD:208:LYS:HB3	1.85	0.59
41:DG:41:GLN:HB3	41:DG:43:LEU:HD13	1.85	0.59
50:DR:56:LYS:NZ	50:DR:90:ARG:O	2.35	0.59
1:AA:639:G:H2'	1:AA:640:A:C8	2.38	0.59
1:AA:1212:U:H2'	24:AY:78:GLU:OE2	2.03	0.59
1:AA:1220:G:O3'	19:AS:36:ARG:HD3	2.02	0.59
8:AH:103:VAL:HG21	8:AH:110:ALA:HB2	1.83	0.59
22:AW:33:U:N3	22:AW:36:A:OP2	2.36	0.59
24:AY:226:GLU:HB2	24:AY:255:PRO:HD3	1.83	0.59
35:BA:605:C:OP1	40:BF:104:LYS:NZ	2.36	0.59
35:BA:855:G:H1	35:BA:922:U:H3	1.51	0.59
35:BA:1210:A:H5''	35:BA:1212:G:H5'	1.83	0.59
35:BA:1341:U:OP1	35:BA:1397:U:N3	2.22	0.59
50:BR:10:LEU:HB3	50:BR:17:ARG:NE	2.18	0.59
1:CA:1409:C:H2'	1:CA:1410:G:H8	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:124:SER:OG	2:CB:125:PRO:HD2	2.03	0.59
9:CI:113:LYS:N	9:CI:113:LYS:HD2	2.18	0.59
13:CM:7:VAL:HG11	41:DG:139:LEU:HD22	1.85	0.59
22:CW:6:G:H21	22:CW:7:A:N6	1.96	0.59
24:CY:27:LYS:HA	24:CY:30:GLU:HG3	1.84	0.59
24:CY:229:ILE:HG21	24:CY:272:LYS:HE2	1.85	0.59
28:D3:27:GLY:O	28:D3:33:GLN:NE2	2.36	0.59
35:DA:918:A:N3	36:DB:80:U:O2'	2.32	0.59
35:DA:2122:U:H2'	35:DA:2123:G:C8	2.37	0.59
42:DH:86:GLU:HB3	42:DH:132:ARG:HB3	1.85	0.59
52:DT:3:ARG:HB2	52:DT:6:LEU:HB3	1.85	0.59
55:DW:64:MET:O	55:DW:65:LEU:HB2	2.03	0.59
1:AA:1172:C:H2'	1:AA:1173:G:H8	1.67	0.59
8:AH:91:ARG:HG2	8:AH:91:ARG:HH11	1.68	0.59
13:AM:57:ARG:HH12	29:B4:17:GLY:HA3	1.67	0.59
24:AY:341:LEU:HD22	24:AY:344:LEU:HD11	1.85	0.59
35:BA:1066:U:N3	35:BA:1069:A:OP2	2.33	0.59
49:BQ:63:LYS:HD2	58:BZ:175:VAL:HG21	1.85	0.59
52:BT:91:ARG:HG2	52:BT:116:ALA:HA	1.85	0.59
1:CA:22:G:H2'	1:CA:23:C:C6	2.38	0.59
1:CA:59:A:H2	1:CA:330:C:H42	1.50	0.59
1:CA:108:G:N2	1:CA:108:G:OP2	2.34	0.59
1:CA:950:U:H3	1:CA:1231:G:H1	1.50	0.59
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.38	0.59
4:CD:196:LEU:H	4:CD:196:LEU:HD12	1.68	0.59
6:CF:39:LYS:HG2	6:CF:40:VAL:H	1.66	0.59
11:CK:21:ILE:HD13	11:CK:82:VAL:HG13	1.84	0.59
15:CO:33:THR:HG21	15:CO:85:LEU:HD21	1.84	0.59
22:CW:8:U:H1'	22:CW:48:C:H1'	1.84	0.59
22:CW:63:G:H4'	37:DC:54:ARG:NH1	2.18	0.59
35:DA:1405:U:H2'	35:DA:1406:U:H6	1.68	0.59
35:DA:2133:G:H1'	35:DA:2158:A:N6	2.18	0.59
35:DA:2341:G:H2'	35:DA:2342:C:C6	2.38	0.59
48:DP:58:THR:O	48:DP:61:ARG:NE	2.36	0.59
57:DY:17:SER:OG	57:DY:18:GLY:N	2.35	0.59
1:AA:407:G:O6	1:AA:436:C:N4	2.36	0.58
1:AA:951:G:OP2	13:AM:102:ARG:NH2	2.35	0.58
1:AA:1338:G:H21	22:AV:42:C:H4'	1.68	0.58
4:AD:15:GLU:HG3	4:AD:63:LYS:HE2	1.83	0.58
18:AR:31:LEU:HD12	18:AR:66:LEU:HB2	1.85	0.58
35:BA:833:U:H5''	48:BP:48:PRO:HB3	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1717:G:H2'	35:BA:1718:G:H5''	1.84	0.58
35:BA:1865:G:H5'	35:BA:1866:C:OP2	2.02	0.58
35:BA:2310:A:O2'	35:BA:2311:A:H5'	2.03	0.58
35:BA:2790:A:HO2'	35:BA:2893:G:H21	1.43	0.58
47:BO:49:ARG:HD3	47:BO:49:ARG:N	2.17	0.58
57:BY:7:VAL:H	57:BY:7:VAL:HG22	1.67	0.58
1:CA:624:C:H2'	1:CA:625:G:C8	2.37	0.58
4:CD:43:HIS:O	4:CD:45:GLN:N	2.34	0.58
6:CF:82:ARG:HB2	6:CF:85:VAL:HG23	1.85	0.58
13:CM:120:LYS:HD3	13:CM:121:LYS:N	2.18	0.58
24:CY:303:ARG:HH22	35:DA:1914:C:H1'	1.67	0.58
35:DA:218:A:C2	35:DA:235:U:H4'	2.38	0.58
46:DN:120:LEU:HD11	46:DN:122:VAL:HG23	1.85	0.58
54:DV:64:HIS:ND1	54:DV:92:THR:HG22	2.18	0.58
1:AA:323:U:H2'	1:AA:324:G:O4'	2.02	0.58
7:AG:57:GLU:O	7:AG:59:LEU:N	2.35	0.58
18:AR:56:THR:HB	18:AR:58:LEU:HD13	1.85	0.58
31:B6:31:PRO:CB	35:BA:2286:A:H3'	2.33	0.58
35:BA:910:A:C5	49:BQ:13:GLN:HG3	2.39	0.58
36:BB:20:C:C2'	36:BB:21:G:H5''	2.32	0.58
52:BT:129:ARG:CZ	52:BT:131:ALA:HB3	2.33	0.58
57:BY:44:ILE:H	57:BY:62:GLU:CD	2.07	0.58
57:BY:81:LYS:HD3	57:BY:97:ARG:HG3	1.85	0.58
1:CA:472:A:O2'	16:CP:82:GLN:OE1	2.15	0.58
1:CA:790:A:H2'	1:CA:791:G:C8	2.39	0.58
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.38	0.58
22:CV:29:G:H1	22:CV:41:C:H42	1.51	0.58
41:DG:5:VAL:HG11	41:DG:101:ILE:HG22	1.84	0.58
42:DH:154:PRO:HB3	42:DH:163:TYR:CZ	2.37	0.58
48:DP:17:LYS:O	48:DP:19:VAL:N	2.36	0.58
57:DY:44:ILE:H	57:DY:62:GLU:CD	2.07	0.58
1:AA:940:C:H2'	1:AA:941:G:C8	2.38	0.58
6:AF:98:LEU:HG	18:AR:30:ASP:HB2	1.85	0.58
35:BA:893:C:H2'	35:BA:894:C:H6	1.68	0.58
40:BF:24:LEU:HB3	40:BF:25:PRO:CD	2.32	0.58
51:BS:99:LYS:O	51:BS:101:LEU:N	2.36	0.58
1:CA:848:C:H2'	1:CA:849:C:C6	2.37	0.58
10:CJ:33:GLN:O	10:CJ:75:ILE:HG12	2.03	0.58
12:CL:53:ARG:HG2	12:CL:53:ARG:HH11	1.68	0.58
35:DA:304:G:H2'	35:DA:305:U:C6	2.39	0.58
1:AA:501:C:H2'	1:AA:502:G:H8	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1005:A:OP2	1:AA:1036:G:N2	2.31	0.58
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.04	0.58
6:AF:16:GLN:CD	6:AF:16:GLN:H	2.07	0.58
8:AH:89:PRO:HA	8:AH:92:ARG:HH11	1.69	0.58
35:BA:1557:C:OP2	35:BA:1558:A:O2'	2.16	0.58
1:CA:359:U:H2'	1:CA:360:A:H8	1.68	0.58
1:CA:836:G:H1	1:CA:850:U:H3	1.51	0.58
13:CM:78:ILE:HA	13:CM:81:LEU:HD12	1.84	0.58
27:D2:5:GLU:O	27:D2:9:GLN:HG3	2.04	0.58
35:DA:48:G:N1	35:DA:177:G:OP2	2.34	0.58
35:DA:2167:U:H2'	35:DA:2168:G:C8	2.38	0.58
38:DD:27:THR:HG21	38:DD:81:ALA:HB1	1.85	0.58
1:AA:546:G:P	4:AD:72:GLU:HB3	2.43	0.58
1:AA:1484:C:HO2'	35:BA:1960:A:HO2'	1.50	0.58
17:AQ:67:LYS:O	17:AQ:69:LYS:N	2.34	0.58
35:BA:30:G:H2'	35:BA:31:C:H6	1.68	0.58
1:CA:9:G:H2'	1:CA:10:A:H8	1.68	0.58
1:CA:719:C:O2'	18:CR:49:LYS:HB3	2.02	0.58
18:CR:87:ARG:HB3	18:CR:87:ARG:NH1	2.19	0.58
27:D2:13:ALA:HA	27:D2:16:LEU:HD12	1.85	0.58
35:DA:1022:G:H22	35:DA:1142(A):A:H2	1.48	0.58
35:DA:1747(A):G:C2'	35:DA:1748:G:H5''	2.32	0.58
35:DA:2119:A:O2'	35:DA:2120:G:H5''	2.02	0.58
35:DA:2286:A:H4'	35:DA:2287:A:O4'	2.04	0.58
52:DT:29:ARG:CB	52:DT:85:LYS:HA	2.33	0.58
56:DX:57:LEU:HD11	56:DX:78:LYS:HE2	1.85	0.58
57:DY:86:ARG:HG2	57:DY:87:LYS:N	2.18	0.58
58:DZ:151:HIS:HA	58:DZ:171:ILE:HG12	1.86	0.58
1:AA:426:G:P	4:AD:36:ARG:HH12	2.27	0.58
6:AF:15:ASP:OD1	6:AF:18:GLN:N	2.29	0.58
35:BA:654(T):C:N4	35:BA:654(U):A:N3	2.52	0.58
35:BA:1044:G:HO2'	35:BA:1111:A:N6	2.00	0.58
35:BA:1676:A:C2	35:BA:1993:U:H5'	2.39	0.58
43:BI:12:LEU:HD12	43:BI:19:VAL:HG11	1.84	0.58
1:CA:608:A:O2'	16:CP:32:TYR:OH	2.17	0.58
1:CA:696:A:N3	1:CA:786:G:O2'	2.31	0.58
4:CD:133:VAL:HG12	4:CD:135:LEU:H	1.67	0.58
57:DY:8:LYS:HE3	57:DY:74:PRO:HD3	1.86	0.58
58:DZ:146:ILE:HG13	58:DZ:147:GLY:H	1.68	0.58
1:AA:372:C:N4	1:AA:389:A:H62	2.00	0.58
2:AB:231:GLU:HB2	2:AB:232:PRO:HD2	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:54:ARG:NH1	3:AC:56:ASP:HB2	2.18	0.58
4:AD:28:SER:O	4:AD:30:LYS:N	2.37	0.58
24:AY:231:VAL:HG12	24:AY:249:VAL:HG12	1.86	0.58
35:BA:156:U:OP1	35:BA:157:U:N3	2.37	0.58
35:BA:1845:G:H2'	35:BA:1846:G:H5''	1.86	0.58
35:BA:2127:G:N2	35:BA:2173:A:N3	2.51	0.58
36:BB:61:G:H2'	36:BB:62:C:C6	2.39	0.58
38:BD:133:LEU:HB3	38:BD:173:VAL:HG11	1.86	0.58
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.85	0.58
1:CA:939:G:H5''	7:CG:102:ARG:HH22	1.68	0.58
5:CE:152:ARG:NH1	8:CH:42:GLU:O	2.36	0.58
9:CI:40:LEU:O	9:CI:42:ARG:N	2.32	0.58
40:DF:116:ASP:OD1	40:DF:119:ARG:NH2	2.37	0.58
51:DS:106:ARG:HB3	51:DS:106:ARG:HH11	1.66	0.58
1:AA:1130:A:O2'	9:AI:3:GLN:NE2	2.34	0.58
8:AH:101:PRO:HG2	8:AH:133:LEU:HD11	1.86	0.58
11:AK:54:ARG:NH1	22:AW:39:U:O3'	2.37	0.58
33:B8:14:VAL:HG21	33:B8:22:VAL:HG13	1.86	0.58
37:BC:16:ASP:N	37:BC:21:TYR:OH	2.36	0.58
40:BF:24:LEU:O	40:BF:26:ALA:N	2.35	0.58
1:CA:22:G:H2'	1:CA:23:C:H6	1.67	0.58
1:CA:510:A:N3	1:CA:543:C:H1'	2.19	0.58
1:CA:673:G:H2'	1:CA:674:G:H8	1.67	0.58
28:D3:12:PRO:O	28:D3:20:LYS:NZ	2.37	0.58
39:DE:120:TRP:CE3	39:DE:155:LYS:HD3	2.39	0.58
1:AA:591:U:H2'	1:AA:592:G:C8	2.39	0.58
1:AA:1418:A:H2	35:BA:1948:G:N3	2.02	0.58
8:AH:35:ILE:HD13	8:AH:118:VAL:HG11	1.84	0.58
16:AP:51:VAL:O	16:AP:53:VAL:N	2.36	0.58
35:BA:1019:U:H3	35:BA:1142(A):A:N6	2.01	0.58
35:BA:1899:G:O2'	35:BA:1900:A:H5''	2.02	0.58
50:BR:56:LYS:NZ	50:BR:90:ARG:O	2.36	0.58
1:CA:181:G:N2	1:CA:182:U:O4	2.37	0.58
1:CA:434:U:H2'	1:CA:435:C:C6	2.39	0.58
5:CE:105:VAL:H	5:CE:106:PRO:HD2	1.69	0.58
33:D8:32:LEU:HD11	35:DA:2391:G:H3'	1.86	0.58
35:DA:352:G:N2	35:DA:355:G:OP2	2.37	0.58
35:DA:1309:G:HO2'	35:DA:1611:C:HO2'	1.51	0.58
35:DA:1496:A:O2'	35:DA:1497:U:O2	2.18	0.58
39:DE:86:PRO:O	39:DE:88:GLY:N	2.37	0.58
1:AA:977:A:HO2'	1:AA:981:U:H3	1.52	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:180:ALA:HB1	3:AC:203:PHE:CE1	2.39	0.58
35:BA:132:G:H2'	35:BA:133:C:C6	2.39	0.58
35:BA:893:C:H2'	35:BA:894:C:C6	2.39	0.58
35:BA:1062:G:H2'	35:BA:1063:G:H8	1.69	0.58
35:BA:2065:C:H2'	35:BA:2066:C:H6	1.68	0.58
36:BB:55:U:H2'	36:BB:56:G:C8	2.39	0.58
41:BG:6:ALA:HB3	41:BG:104:GLU:OE2	2.03	0.58
42:BH:111:HIS:CG	42:BH:112:PRO:HD2	2.39	0.58
43:BI:129:THR:HA	43:BI:137:PRO:HA	1.85	0.58
45:BK:81:ALA:O	45:BK:103:GLN:NE2	2.37	0.58
6:CF:68:PRO:HG2	6:CF:71:ARG:HG3	1.86	0.58
26:D1:56:GLN:HG3	26:D1:87:PRO:HD3	1.86	0.58
38:DD:120:GLY:O	38:DD:131:LEU:HB3	2.03	0.58
41:DG:146:TYR:O	41:DG:149:VAL:HG22	2.03	0.58
49:DQ:31:ASP:HA	49:DQ:134:ARG:NH1	2.19	0.58
51:DS:95:HIS:CG	51:DS:96:GLY:H	2.22	0.58
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.37	0.57
1:AA:977:A:O2'	1:AA:981:U:N3	2.37	0.57
1:AA:1250:A:H4'	9:AI:68:GLY:H	1.69	0.57
4:AD:100:ARG:HH21	4:AD:118:ARG:HH22	1.51	0.57
10:AJ:16:LEU:HD13	10:AJ:70:ARG:HD2	1.86	0.57
35:BA:570:G:H2'	35:BA:2030:A:C6	2.39	0.57
35:BA:1048:A:OP2	35:BA:1110:G:N2	2.36	0.57
35:BA:2262:U:H2'	35:BA:2263:C:H6	1.69	0.57
38:BD:210:GLY:O	38:BD:212:SER:N	2.34	0.57
1:CA:1126:U:OP2	1:CA:1281:U:N3	2.28	0.57
1:CA:1349:A:OP2	9:CI:118:LYS:NZ	2.36	0.57
31:D6:48:VAL:HG23	31:D6:49:HIS:H	1.68	0.57
35:DA:1657:C:H2'	35:DA:1658:C:H6	1.69	0.57
37:DC:31:LYS:O	37:DC:31:LYS:HD3	2.04	0.57
1:AA:266:G:H5''	1:AA:267:C:C5	2.39	0.57
1:AA:1250:A:N3	1:AA:1370:G:O2'	2.36	0.57
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.39	0.57
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.39	0.57
14:AN:29:ARG:HH12	14:AN:31:ARG:HB2	1.69	0.57
35:BA:724:U:H2'	35:BA:725:G:O4'	2.04	0.57
38:BD:11:PRO:O	38:BD:13:ARG:N	2.33	0.57
38:BD:129:ASN:O	38:BD:193:VAL:HG12	2.03	0.57
41:BG:15:VAL:HA	41:BG:18:GLU:HB3	1.87	0.57
41:BG:39:ILE:HG22	41:BG:157:ILE:HG12	1.86	0.57
44:BJ:33:UNK:O	44:BJ:37:UNK:N	2.36	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:95:HIS:CG	51:BS:96:GLY:H	2.22	0.57
52:BT:83:ILE:HG13	52:BT:84:GLN:N	2.19	0.57
58:BZ:81:ARG:HG2	58:BZ:81:ARG:HH11	1.68	0.57
1:CA:142:G:H2'	1:CA:143:A:C8	2.40	0.57
13:CM:124:PRO:HD2	24:CY:163:GLY:H	1.69	0.57
17:CQ:57:VAL:HG12	17:CQ:76:LEU:HA	1.85	0.57
28:D3:44:ARG:O	28:D3:48:GLU:HG2	2.04	0.57
35:DA:2784:C:H1'	39:DE:37:ARG:HH12	1.68	0.57
52:DT:13:ARG:CZ	52:DT:13:ARG:HA	2.34	0.57
1:AA:328:C:H4'	1:AA:329:A:C5'	2.34	0.57
1:AA:674:G:H2'	1:AA:675:A:H8	1.69	0.57
31:B6:36:LEU:HB3	31:B6:50:ARG:HD3	1.87	0.57
35:BA:1022:G:H22	35:BA:1142(A):A:H2	1.50	0.57
38:BD:8:PRO:HB3	38:BD:14:ARG:HB2	1.87	0.57
50:BR:33:ARG:HE	50:BR:115:GLU:HG3	1.68	0.57
1:CA:189(L):G:H2'	1:CA:190:U:C6	2.39	0.57
1:CA:972:C:O2'	10:CJ:55:LYS:HG2	2.03	0.57
3:CC:16:ARG:HB2	3:CC:16:ARG:HH11	1.68	0.57
3:CC:150:LYS:HG3	3:CC:169:ALA:HB2	1.86	0.57
5:CE:51:VAL:HB	5:CE:52:PRO:HD3	1.86	0.57
13:CM:91:ARG:CB	13:CM:98:VAL:HG22	2.33	0.57
16:CP:15:PRO:HB2	16:CP:41:PRO:HG3	1.84	0.57
30:D5:19:ARG:NH1	35:DA:1264:G:OP1	2.26	0.57
35:DA:2681:C:H5	35:DA:2725:A:N6	2.01	0.57
43:DI:132:PRO:HG2	43:DI:133:HIS:CE1	2.39	0.57
48:DP:16:ARG:HH12	48:DP:18:ARG:N	2.03	0.57
58:DZ:151:HIS:HB2	58:DZ:170:THR:HA	1.85	0.57
1:AA:674:G:H2'	1:AA:675:A:C8	2.39	0.57
8:AH:12:ARG:HH12	8:AH:27:PRO:HD2	1.69	0.57
35:BA:321:G:C2	35:BA:341:G:H4'	2.39	0.57
35:BA:1918:A:O2'	35:BA:1920:C:N4	2.37	0.57
35:DA:655:A:H4'	35:DA:656:G:H5'	1.86	0.57
45:DK:12:LEU:HB2	45:DK:53:VAL:HG23	1.86	0.57
47:DO:47:ILE:HG23	47:DO:48:PRO:HD2	1.86	0.57
52:DT:24:PRO:HD3	52:DT:52:ILE:HD12	1.85	0.57
55:DW:46:PHE:O	55:DW:50:VAL:HG12	2.04	0.57
56:DX:36:LYS:HD3	56:DX:56:THR:HG23	1.86	0.57
37:BC:195:ARG:HH11	37:BC:195:ARG:HG3	1.69	0.57
38:BD:120:GLY:O	38:BD:131:LEU:HB3	2.05	0.57
1:CA:178:C:C2	1:CA:179:A:C8	2.93	0.57
2:CB:162:ILE:HD11	2:CB:184:VAL:HG22	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:35:ARG:O	4:CD:37:PRO:HD3	2.04	0.57
4:CD:93:PHE:O	4:CD:97:LEU:HB2	2.05	0.57
4:CD:109:GLY:O	4:CD:111:ALA:N	2.37	0.57
12:CL:45:PRO:HG3	12:CL:53:ARG:HD3	1.87	0.57
22:CV:27:G:H2'	22:CV:28:G:H8	1.69	0.57
22:CW:4:C:H2'	22:CW:5:G:O4'	2.05	0.57
24:CY:244:THR:HA	35:DA:2573:C:N4	2.20	0.57
31:D6:25:LYS:HB2	33:D8:34:TRP:HE1	1.68	0.57
35:DA:71:A:H4'	35:DA:72:U:O5'	2.05	0.57
35:DA:2347:C:H2'	35:DA:2348:U:C6	2.39	0.57
36:DB:75:G:H21	58:DZ:85:HIS:CE1	2.22	0.57
36:DB:112:U:H2'	36:DB:113:G:H8	1.68	0.57
41:DG:178:PHE:HB3	41:DG:180:PHE:CE1	2.39	0.57
48:DP:101:VAL:HG12	48:DP:106:LEU:HB3	1.86	0.57
51:DS:20:ARG:NE	51:DS:20:ARG:HA	2.20	0.57
1:AA:1137:C:O2'	1:AA:1138:G:N2	2.34	0.57
1:AA:1439:C:OP1	20:AT:38:LYS:HD2	2.05	0.57
21:AU:2:GLY:O	21:AU:4:GLY:N	2.38	0.57
22:AV:35:A:H2'	22:AV:36:A:H5''	1.86	0.57
31:B6:12:GLU:HG3	31:B6:23:THR:HG22	1.87	0.57
36:BB:104:U:H5''	49:BQ:141:GLN:NE2	2.18	0.57
43:BI:144:VAL:O	43:BI:146:ALA:N	2.36	0.57
54:BV:52:VAL:HG23	54:BV:55:ALA:HB3	1.87	0.57
1:CA:1304:G:N1	1:CA:1331:G:O2'	2.37	0.57
8:CH:86:ILE:HG12	8:CH:135:CYS:HA	1.85	0.57
9:CI:65:VAL:HG21	9:CI:73:GLN:HB3	1.87	0.57
35:DA:271(H):G:HO2'	35:DA:271(I):G:H8	1.50	0.57
35:DA:1639:U:H2'	35:DA:1640:C:H5''	1.86	0.57
35:DA:2047:U:H2'	35:DA:2048:G:H8	1.69	0.57
35:DA:2132:U:H3	37:DC:6:LYS:HZ1	1.50	0.57
58:DZ:164:ALA:O	58:DZ:165:VAL:HG23	2.05	0.57
1:AA:973:G:OP1	10:AJ:57:LYS:NZ	2.38	0.57
1:AA:1245:A:N6	1:AA:1293:G:O6	2.38	0.57
2:AB:69:LEU:HD11	2:AB:93:VAL:HG23	1.86	0.57
8:AH:82:HIS:CE1	8:AH:84:ARG:HB2	2.40	0.57
12:AL:47:LYS:HB3	12:AL:48:PRO:HD3	1.85	0.57
24:AY:34:GLU:HG3	45:BK:25:PRO:HA	1.87	0.57
30:B5:19:ARG:NH1	35:BA:1264:G:OP1	2.32	0.57
35:BA:1747(A):G:C2'	35:BA:1748:G:H5''	2.33	0.57
35:BA:2328:A:H2'	35:BA:2329:G:H8	1.67	0.57
55:BW:10:VAL:O	55:BW:11:ARG:HB3	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:192:U:H2'	1:CA:193:C:C6	2.39	0.57
1:CA:936:C:H1'	1:CA:1382:C:N4	2.19	0.57
1:CA:1432:G:O2'	1:CA:1468:A:N6	2.37	0.57
13:CM:108:ARG:N	13:CM:108:ARG:HD2	2.20	0.57
35:DA:1865:G:H5'	35:DA:1866:C:OP2	2.05	0.57
35:DA:2000:G:OP2	50:DR:3:HIS:NE2	2.34	0.57
35:DA:2328:A:H2'	35:DA:2329:G:C8	2.40	0.57
1:AA:728:A:H2'	1:AA:729:A:C8	2.39	0.57
1:AA:736:C:H2'	1:AA:737:A:H8	1.69	0.57
1:AA:1071:C:H5''	5:AE:49:PRO:HG2	1.87	0.57
22:AV:44:G:H2'	22:AV:45:U:O4'	2.04	0.57
24:AY:157:THR:HG23	24:AY:165:ASP:HB3	1.87	0.57
33:B8:4:MET:HB2	33:B8:61:LEU:HD13	1.86	0.57
50:BR:117:VAL:O	50:BR:118:GLU:HB2	2.02	0.57
52:BT:85:LYS:HB3	52:BT:85:LYS:NZ	2.20	0.57
56:BX:12:VAL:HG23	56:BX:13:LEU:H	1.70	0.57
1:CA:41:G:H2'	1:CA:42:G:H8	1.69	0.57
1:CA:337:C:H2'	1:CA:338:A:H8	1.69	0.57
1:CA:751:U:H4'	15:CO:24:SER:HA	1.87	0.57
1:CA:1469:G:H2'	1:CA:1470:G:C8	2.40	0.57
4:CD:173:TRP:CD2	4:CD:189:PRO:HB3	2.39	0.57
13:CM:65:LYS:O	13:CM:66:LEU:N	2.37	0.57
26:D1:71:TYR:CE1	43:DI:27:ARG:HD2	2.39	0.57
35:DA:271(L):U:H4'	35:DA:271(M):G:C4	2.40	0.57
35:DA:658:C:H2'	35:DA:659:C:H6	1.67	0.57
36:DB:21:G:HO2'	36:DB:22:U:H6	1.53	0.57
45:DK:20:ALA:HA	45:DK:25:PRO:HD3	1.87	0.57
47:DO:35:VAL:HG11	47:DO:103:ALA:HB3	1.87	0.57
56:DX:12:VAL:HB	56:DX:17:ALA:CB	2.32	0.57
1:AA:817:C:H1'	1:AA:819:A:H5'	1.87	0.57
1:AA:921:U:O2	5:AE:19:MET:HB2	2.04	0.57
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.86	0.57
10:AJ:48:THR:HA	10:AJ:62:HIS:HB3	1.87	0.57
35:BA:281:G:N2	35:BA:359:A:H62	2.00	0.57
35:BA:483:A:C5	57:BY:60:PHE:HE1	2.22	0.57
35:BA:1165:U:O2	35:BA:1184:G:N2	2.27	0.57
35:BA:2154:G:H2'	35:BA:2155:G:H8	1.69	0.57
35:BA:2166:G:H2'	35:BA:2167:U:C6	2.40	0.57
35:BA:2572:A:N7	39:BE:145:LYS:HB2	2.20	0.57
35:BA:2660:A:H5'	35:BA:2661:G:N2	2.19	0.57
38:BD:65:ILE:HD11	38:BD:67:PHE:CZ	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:132:HIS:O	39:BE:135:HIS:NE2	2.38	0.57
42:BH:144:VAL:O	42:BH:148:ILE:HG12	2.05	0.57
49:BQ:43:THR:HG22	49:BQ:94:VAL:HG12	1.86	0.57
52:BT:91:ARG:HA	52:BT:117:ASP:H	1.70	0.57
1:CA:976:G:H5'	1:CA:1358:U:O2'	2.05	0.57
2:CB:71:VAL:HG13	2:CB:93:VAL:HB	1.86	0.57
3:CC:53:ALA:HB2	3:CC:115:LEU:HD21	1.87	0.57
24:CY:13:LEU:HA	24:CY:16:TYR:HB2	1.87	0.57
35:DA:904:C:H2'	35:DA:905:U:H6	1.69	0.57
35:DA:1565:C:OP1	38:DD:4:LYS:NZ	2.30	0.57
35:DA:2246:G:H2'	35:DA:2247:A:H8	1.70	0.57
38:DD:94:LEU:HB2	38:DD:104:TYR:HE1	1.69	0.57
38:DD:148:GLU:HB2	38:DD:151:LYS:HD2	1.86	0.57
43:DI:9:LEU:HB2	43:DI:12:LEU:O	2.05	0.57
51:DS:59:LYS:HG2	51:DS:60:GLY:H	1.69	0.57
1:AA:918:A:H2'	1:AA:919:A:C8	2.40	0.57
13:AM:88:ARG:HA	13:AM:98:VAL:HG11	1.86	0.57
22:AW:38:A:H3'	22:AW:39:U:H5''	1.87	0.57
28:B3:6:VAL:HG23	28:B3:28:LEU:HD11	1.87	0.57
35:BA:659:C:H2'	35:BA:660:G:H8	1.69	0.57
35:BA:1042:G:H3'	35:BA:1043:C:C6	2.40	0.57
35:BA:2804:C:H2'	35:BA:2805:G:C8	2.40	0.57
37:BC:20:VAL:HG11	37:BC:226:ASN:HB2	1.85	0.57
49:BQ:141:GLN:HB3	58:BZ:99:TYR:HE1	1.68	0.57
6:CF:91:VAL:HG11	18:CR:72:ARG:NH1	2.20	0.57
8:CH:35:ILE:HD13	8:CH:118:VAL:HG11	1.86	0.57
25:D0:12:ASN:ND2	35:DA:2278:A:OP2	2.37	0.57
35:DA:1754:C:OP1	52:DT:96:ARG:NH1	2.38	0.57
35:DA:2137:C:H42	35:DA:2154:G:N2	2.02	0.57
1:AA:217:C:O2'	1:AA:470:C:N4	2.32	0.56
1:AA:591:U:H2'	1:AA:592:G:H8	1.70	0.56
8:AH:36:LEU:HA	8:AH:39:LEU:HD23	1.87	0.56
19:AS:16:LEU:H	19:AS:16:LEU:HD12	1.69	0.56
35:BA:639:U:H2'	35:BA:640:C:C6	2.39	0.56
35:BA:690:G:H2'	35:BA:691:C:C6	2.40	0.56
35:BA:2537:U:H2'	35:BA:2538:C:C6	2.40	0.56
48:BP:101:VAL:HB	48:BP:107:LYS:HA	1.86	0.56
1:CA:279:A:OP2	17:CQ:95:TYR:OH	2.23	0.56
1:CA:309:G:H2'	1:CA:310:G:H8	1.70	0.56
1:CA:707:C:OP1	11:CK:85:ARG:NH1	2.30	0.56
35:DA:458:G:O2'	35:DA:469:G:O6	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2151:G:H2'	35:DA:2152:G:H8	1.69	0.56
37:DC:31:LYS:NZ	37:DC:180:SER:O	2.32	0.56
54:DV:28:GLU:HB2	54:DV:31:ALA:HB2	1.86	0.56
1:AA:266:G:O2'	1:AA:267:C:OP2	2.21	0.56
3:AC:16:ARG:HB2	3:AC:16:ARG:HH11	1.70	0.56
3:AC:101:LEU:HD23	3:AC:102:ASN:N	2.20	0.56
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.87	0.56
4:AD:26:CYS:O	4:AD:31:CYS:HB2	2.05	0.56
35:BA:1516:C:H2'	35:BA:1517:G:C8	2.40	0.56
35:BA:2130:U:O2'	35:BA:2133:G:O2'	2.19	0.56
35:BA:2853:C:H2'	35:BA:2854:G:H8	1.68	0.56
1:CA:599:C:H4'	8:CH:130:GLY:HA3	1.86	0.56
1:CA:922:G:H2'	1:CA:923:A:C8	2.40	0.56
2:CB:162:ILE:O	2:CB:185:ILE:HG12	2.05	0.56
5:CE:10:MET:HA	5:CE:32:VAL:HG22	1.86	0.56
10:CJ:49:VAL:HG23	14:CN:41:ARG:HB2	1.87	0.56
20:CT:26:ASN:HB2	20:CT:71:THR:HG23	1.86	0.56
35:DA:495:G:N3	55:DW:61:ASN:ND2	2.49	0.56
35:DA:1485:G:N3	35:DA:1505:C:N4	2.52	0.56
35:DA:2580:U:H5'	39:DE:131:ALA:HB2	1.86	0.56
45:DK:44:ALA:O	45:DK:48:MET:HG2	2.05	0.56
48:DP:40:SER:O	48:DP:41:ARG:NE	2.37	0.56
49:DQ:111:GLU:O	49:DQ:115:MET:HG2	2.05	0.56
58:DZ:98:MET:O	58:DZ:125:LEU:HA	2.05	0.56
1:AA:448:A:N7	1:AA:486:U:O4	2.39	0.56
4:AD:49:ARG:HA	4:AD:49:ARG:HE	1.70	0.56
19:AS:64:GLU:HG3	19:AS:65:ASN:H	1.70	0.56
26:B1:11:ARG:HB2	26:B1:12:PRO:HD2	1.86	0.56
35:BA:1278:A:O3'	50:BR:34:ILE:HD12	2.05	0.56
35:BA:2809:A:OP2	35:BA:2891:G:N1	2.26	0.56
41:BG:101:ILE:O	41:BG:105:LYS:HG3	2.04	0.56
43:BI:7:GLU:O	43:BI:9:LEU:HD12	2.05	0.56
45:BK:95:LYS:HD3	45:BK:135:GLY:O	2.05	0.56
1:CA:130:A:C8	17:CQ:63:ARG:HG3	2.41	0.56
1:CA:857:C:H2'	1:CA:858:G:O4'	2.05	0.56
1:CA:1036:G:H3'	1:CA:1037:C:C6	2.40	0.56
1:CA:1059:C:O3'	14:CN:45:ARG:NH2	2.35	0.56
1:CA:1179:A:H4'	9:CI:103:THR:HA	1.88	0.56
12:CL:47:LYS:HB3	12:CL:48:PRO:HD3	1.85	0.56
13:CM:115:LYS:O	13:CM:117:VAL:N	2.39	0.56
24:CY:120:ILE:HB	24:CY:167:ALA:HB3	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D6:15:GLU:HB2	31:D6:20:ASN:HB3	1.87	0.56
31:D6:19:ARG:CG	31:D6:20:ASN:H	2.17	0.56
31:D6:38:LYS:HD3	35:DA:2344:U:OP1	2.06	0.56
35:DA:539:G:H1	35:DA:554:U:H3	1.52	0.56
35:DA:654(S):G:H2'	35:DA:654(T):C:C5	2.40	0.56
35:DA:1550:C:OP1	35:DA:1720:U:O2'	2.23	0.56
35:DA:2406:U:H5''	35:DA:2408:U:OP2	2.06	0.56
36:DB:7:G:H3'	36:DB:8:U:H5''	1.88	0.56
39:DE:34:VAL:HG11	39:DE:78:LEU:HD22	1.87	0.56
41:DG:86:MET:N	41:DG:87:PRO:HD2	2.19	0.56
42:DH:121:ILE:HG23	42:DH:133:VAL:HG13	1.85	0.56
43:DI:8:PRO:HA	43:DI:14:ASP:H	1.70	0.56
46:DN:128:HIS:HE2	46:DN:134:ARG:HD3	1.69	0.56
48:DP:106:LEU:HD22	48:DP:112:LEU:HD23	1.87	0.56
49:DQ:23:GLY:O	49:DQ:101:ARG:NH1	2.38	0.56
1:AA:1065:U:O2'	1:AA:1066:C:OP2	2.17	0.56
13:AM:83:ASP:CG	13:AM:84:ILE:H	2.09	0.56
35:BA:1009:A:N3	35:BA:1153:C:O2'	2.37	0.56
35:BA:1058:G:N1	35:BA:1059:G:O6	2.39	0.56
35:BA:1592:C:H2'	35:BA:1593:G:C8	2.40	0.56
35:BA:1796:U:H2'	35:BA:1797:C:C6	2.41	0.56
52:BT:102:ILE:HB	52:BT:110:ILE:HD12	1.86	0.56
1:CA:97:G:O2'	1:CA:98:G:H8	1.89	0.56
1:CA:401:C:O2'	1:CA:621:A:N3	2.32	0.56
1:CA:1277:C:HO2'	1:CA:1279:A:H8	1.51	0.56
2:CB:196:LEU:HA	8:CH:74:PRO:HG3	1.87	0.56
4:CD:49:ARG:HA	4:CD:49:ARG:NE	2.21	0.56
16:CP:4:ILE:HB	16:CP:66:PRO:HB3	1.88	0.56
33:D8:14:VAL:HG21	33:D8:22:VAL:HG13	1.88	0.56
35:DA:2579:C:H2'	35:DA:2580:U:O4'	2.04	0.56
35:DA:2779:U:H1'	35:DA:2781:A:C5	2.40	0.56
36:DB:40:U:N3	36:DB:44:G:OP2	2.25	0.56
45:DK:7:VAL:HG12	45:DK:58:THR:HA	1.87	0.56
45:DK:72:PRO:HB2	45:DK:77:LEU:HD11	1.87	0.56
47:DO:90:GLN:O	47:DO:91:LEU:HB2	2.06	0.56
1:AA:983:A:H1'	1:AA:1049:U:O2	2.05	0.56
1:AA:1343:G:H4'	9:AI:122:ALA:HB3	1.88	0.56
6:AF:86:ARG:O	6:AF:87:ARG:HG2	2.06	0.56
35:BA:71:A:H2	56:BX:31:HIS:CE1	2.24	0.56
35:BA:1247:A:OP2	48:BP:18:ARG:NH2	2.37	0.56
35:BA:2203:U:H3	35:BA:2220:G:H1	1.51	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:11:LEU:HD22	37:BC:33:LEU:HA	1.86	0.56
41:BG:111:LEU:HB3	41:BG:117:PHE:CE2	2.40	0.56
46:BN:133:GLN:HG2	46:BN:135:PRO:HD3	1.87	0.56
47:BO:4:PRO:O	47:BO:5:GLN:HB2	2.05	0.56
51:BS:65:VAL:O	51:BS:69:VAL:HG12	2.05	0.56
54:BV:19:LYS:NZ	54:BV:20:LEU:H	2.02	0.56
1:CA:551:U:H2'	1:CA:552:U:H6	1.70	0.56
1:CA:1530:G:H2'	1:CA:1531:A:C8	2.41	0.56
35:DA:271(Q):G:HO2'	35:DA:271(R):G:H8	1.52	0.56
35:DA:1529:G:H21	35:DA:1530:C:H5''	1.70	0.56
35:DA:2103:C:N4	35:DA:2187:G:O6	2.38	0.56
43:DI:77:LEU:O	43:DI:104:GLN:NE2	2.39	0.56
52:DT:100:TYR:HD2	52:DT:103:ARG:HH21	1.53	0.56
58:DZ:19:ARG:NH1	58:DZ:84:GLU:O	2.32	0.56
1:AA:1120:G:H2'	1:AA:1121:U:C6	2.41	0.56
4:AD:33:MET:C	4:AD:35:ARG:H	2.09	0.56
4:AD:133:VAL:HG12	4:AD:135:LEU:H	1.71	0.56
10:AJ:87:THR:C	10:AJ:89:ASP:H	2.09	0.56
24:AY:84:ARG:O	24:AY:88:LYS:HG2	2.05	0.56
28:B3:43:ILE:O	28:B3:47:VAL:HG23	2.06	0.56
35:BA:298:G:N7	61:BA:3202:HOH:O	2.33	0.56
35:BA:528:A:O2'	35:BA:529:A:H5'	2.06	0.56
35:BA:787:U:H5''	35:BA:788:A:H5'	1.88	0.56
35:BA:829:A:N7	35:BA:2247:A:O2'	2.36	0.56
35:BA:1165:U:H2'	35:BA:1166:C:C6	2.41	0.56
35:BA:2141:G:H2'	35:BA:2142:C:C6	2.39	0.56
44:BJ:28:UNK:O	44:BJ:30:UNK:N	2.38	0.56
53:BU:92:ARG:HD2	54:BV:11:GLN:HB2	1.88	0.56
1:CA:598:U:H4'	8:CH:94:TYR:CD2	2.41	0.56
1:CA:1425:U:H3	1:CA:1475:G:H1	1.53	0.56
2:CB:162:ILE:HD13	2:CB:177:ALA:CB	2.34	0.56
8:CH:88:LYS:HB3	8:CH:89:PRO:HD2	1.87	0.56
24:CY:223:LYS:C	24:CY:225:GLU:H	2.09	0.56
28:D3:30:ARG:NH2	35:DA:1159:U:OP1	2.38	0.56
35:DA:839:U:H3	35:DA:939:G:H1	1.52	0.56
35:DA:1390:U:H3	35:DA:1395:A:H62	1.51	0.56
41:DG:128:ARG:HB3	41:DG:128:ARG:HH11	1.69	0.56
56:DX:35:THR:O	56:DX:39:ILE:HG12	2.06	0.56
1:AA:15:G:O6	1:AA:920:U:O4	2.23	0.56
1:AA:244:U:H4'	1:AA:245:C:H5''	1.88	0.56
1:AA:936:C:O2	1:AA:1382:C:N4	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:9:ARG:HG2	9:AI:14:VAL:HG22	1.88	0.56
10:AJ:33:GLN:O	10:AJ:75:ILE:HG12	2.06	0.56
22:AW:16:U:H3'	22:AW:17:C:H5'	1.86	0.56
24:AY:109:PHE:HB2	24:AY:112:ALA:HB2	1.88	0.56
35:BA:38:A:H2'	35:BA:39:C:C6	2.39	0.56
35:BA:958:U:H5''	49:BQ:14:ARG:HD2	1.88	0.56
35:BA:1796:U:H2'	35:BA:1797:C:H6	1.71	0.56
35:BA:1948:G:H5'	35:BA:1948:G:C8	2.41	0.56
35:BA:2674:G:H2'	35:BA:2675:A:C8	2.41	0.56
38:BD:44:ASN:HB2	38:BD:48:ARG:O	2.06	0.56
41:BG:37:VAL:HB	41:BG:99:MET:HG3	1.88	0.56
44:BJ:30:UNK:O	44:BJ:32:UNK:N	2.38	0.56
1:CA:322:C:O2'	20:CT:23:ARG:HB2	2.05	0.56
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.41	0.56
4:CD:15:GLU:HG3	4:CD:63:LYS:HE2	1.88	0.56
22:CW:39:U:H4'	22:CW:39:U:OP1	2.05	0.56
31:D6:11:LEU:HD21	31:D6:35:GLU:HG2	1.87	0.56
33:D8:39:LYS:O	33:D8:43:GLN:HG3	2.05	0.56
35:DA:1165:U:H2'	35:DA:1166:C:C6	2.41	0.56
35:DA:2327:A:H2'	35:DA:2328:A:C8	2.41	0.56
35:DA:2807:G:H3'	35:DA:2808:U:H5''	1.87	0.56
45:DK:2:LYS:HE3	45:DK:66:THR:HG21	1.88	0.56
46:DN:19:GLU:HG3	46:DN:20:GLY:N	2.21	0.56
47:DO:22:ILE:HG12	47:DO:41:ALA:HA	1.88	0.56
47:DO:97:ARG:HH11	47:DO:97:ARG:HG3	1.70	0.56
48:DP:23:PRO:HB2	48:DP:33:ARG:HG3	1.88	0.56
51:DS:16:ASN:ND2	51:DS:90:GLY:O	2.35	0.56
52:DT:19:LEU:HD22	52:DT:85:LYS:HG3	1.87	0.56
52:DT:125:ARG:O	52:DT:128:GLU:N	2.39	0.56
58:DZ:154:ASP:N	58:DZ:154:ASP:OD1	2.37	0.56
1:AA:790:A:H2'	1:AA:791:G:C8	2.41	0.56
1:AA:1175:G:H2'	1:AA:1176:A:C8	2.41	0.56
1:AA:1261:A:N6	1:AA:1274:G:H21	2.03	0.56
3:AC:150:LYS:HG3	3:AC:169:ALA:HB2	1.87	0.56
4:AD:109:GLY:O	4:AD:111:ALA:N	2.39	0.56
5:AE:32:VAL:HG21	5:AE:55:VAL:HG13	1.88	0.56
28:B3:8:LEU:HD13	28:B3:31:LEU:HD23	1.87	0.56
53:BU:61:TRP:HB3	53:BU:93:LYS:HB3	1.87	0.56
54:BV:5:VAL:HG23	54:BV:37:VAL:O	2.05	0.56
1:CA:979:C:H3'	1:CA:980:C:H5''	1.87	0.56
1:CA:1057:G:H5''	3:CC:154:SER:CB	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1224:G:H4'	13:CM:102:ARG:HH11	1.71	0.56
26:D1:64:ALA:HA	26:D1:67:ILE:HG13	1.88	0.56
35:DA:615:G:O2'	40:DF:205:ARG:NH2	2.38	0.56
35:DA:1571:A:H2'	35:DA:1572:A:C8	2.40	0.56
35:DA:2401:U:H2'	35:DA:2402:C:H5''	1.88	0.56
38:DD:65:ILE:HD11	38:DD:67:PHE:CZ	2.41	0.56
40:DF:4:VAL:HA	40:DF:19:GLU:HB3	1.87	0.56
46:DN:17:ASP:HB2	46:DN:55:VAL:HG13	1.88	0.56
55:DW:88:ARG:HB2	55:DW:92:ARG:HB2	1.88	0.56
1:AA:1250:A:H2	1:AA:1370:G:H1'	1.70	0.56
1:AA:1373:G:H5''	7:AG:36:LYS:HZ2	1.70	0.56
3:AC:51:GLY:O	3:AC:53:ALA:N	2.39	0.56
7:AG:148:ASN:C	7:AG:150:ALA:H	2.10	0.56
12:AL:59:ARG:NH2	12:AL:65:GLU:OE2	2.39	0.56
19:AS:42:PRO:O	19:AS:43:GLU:HB3	2.06	0.56
22:AV:58:A:O2'	22:AV:60:U:OP2	2.24	0.56
35:BA:259:G:N2	35:BA:621:A:H8	1.96	0.56
35:BA:271(E):U:H2'	35:BA:271(F):C:C6	2.41	0.56
35:BA:272(D):G:H1	35:BA:364:C:N4	2.03	0.56
35:BA:1038:C:H2'	35:BA:1039:G:H5''	1.88	0.56
35:BA:2086:U:H2'	35:BA:2087:G:C8	2.41	0.56
35:BA:2161:C:H2'	35:BA:2162:G:C8	2.41	0.56
35:BA:2647:U:H2'	35:BA:2648:C:H6	1.70	0.56
36:BB:57:A:C4	41:BG:29:TRP:HB3	2.41	0.56
42:BH:30:LYS:HE3	42:BH:81:GLU:H	1.71	0.56
48:BP:7:ARG:O	48:BP:10:PRO:HD3	2.06	0.56
51:BS:25:ARG:NH1	51:BS:42:ASP:OD1	2.39	0.56
58:BZ:165:VAL:HG12	58:BZ:166:SER:N	2.21	0.56
1:CA:1241:G:H2'	1:CA:1242:C:C6	2.40	0.56
2:CB:101:MET:HA	2:CB:108:ILE:HG13	1.88	0.56
5:CE:143:ARG:NH1	8:CH:77:GLU:OE1	2.38	0.56
35:DA:513:A:O2'	35:DA:1217:C:OP1	2.23	0.56
35:DA:1247:A:OP2	48:DP:18:ARG:NH2	2.38	0.56
35:DA:1709:U:H2'	35:DA:1710:C:C6	2.41	0.56
35:DA:1796:U:H2'	35:DA:1797:C:C6	2.41	0.56
35:DA:2311:A:O2'	35:DA:2312:U:O4'	2.19	0.56
46:DN:54:VAL:HB	46:DN:122:VAL:HG22	1.88	0.56
1:AA:501:C:H2'	1:AA:502:G:C8	2.41	0.56
1:AA:1028:C:N4	1:AA:1034:G:H21	2.04	0.56
1:AA:1427:U:H2'	1:AA:1428:A:H8	1.70	0.56
2:AB:20:GLU:HB2	2:AB:190:THR:OG1	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:76:GLN:HB3	2:AB:208:ILE:HG12	1.86	0.56
11:AK:27:ASN:OD1	11:AK:55:LYS:HB3	2.04	0.56
12:AL:84:LEU:HG	12:AL:105:TYR:CE2	2.41	0.56
13:AM:19:LEU:HB3	13:AM:25:ILE:HG21	1.88	0.56
31:B6:37:ARG:O	31:B6:49:HIS:HB2	2.05	0.56
35:BA:658:C:H2'	35:BA:659:C:C6	2.40	0.56
35:BA:1266:G:O5'	55:BW:15:ARG:NH2	2.39	0.56
35:BA:2122:U:H2'	35:BA:2123:G:H8	1.70	0.56
36:BB:104:U:H5''	49:BQ:141:GLN:HE21	1.71	0.56
41:BG:32:PRO:HB2	41:BG:172:LEU:HD12	1.87	0.56
1:CA:636:U:H2'	1:CA:637:G:H8	1.70	0.56
1:CA:715:A:H5''	1:CA:805:C:H1'	1.88	0.56
1:CA:736:C:H2'	1:CA:737:A:C8	2.41	0.56
3:CC:175:LEU:HD21	3:CC:201:TYR:HE2	1.71	0.56
6:CF:60:PHE:CE2	18:CR:78:LEU:HD21	2.41	0.56
16:CP:2:VAL:HG13	16:CP:64:ALA:HA	1.88	0.56
16:CP:51:VAL:HG11	16:CP:74:LEU:CD2	2.36	0.56
27:D2:68:ARG:O	27:D2:69:ARG:HG3	2.06	0.56
33:D8:30:ARG:HA	33:D8:30:ARG:NE	2.20	0.56
35:DA:2816:C:O2	35:DA:2883:A:O2'	2.24	0.56
39:DE:110:GLY:O	50:DR:2:ARG:HD3	2.06	0.56
51:DS:58:LEU:HD21	51:DS:68:GLN:HB2	1.88	0.56
1:AA:750:G:H1'	15:AO:23:GLY:H	1.70	0.55
1:AA:1300:G:O2'	1:AA:1301:U:O5'	2.24	0.55
3:AC:155:GLY:HA3	3:AC:163:ALA:HB1	1.87	0.55
4:AD:14:ARG:HD2	4:AD:59:ARG:NH1	2.20	0.55
26:B1:81:LYS:HD2	35:BA:271(H):G:H4'	1.88	0.55
31:B6:36:LEU:H	31:B6:37:ARG:NH2	2.04	0.55
35:BA:1048:A:H2	35:BA:1109:C:H5	1.54	0.55
35:BA:1105:U:H2'	35:BA:1106:G:H8	1.71	0.55
35:BA:1326:U:O2'	35:BA:2010:G:O2'	2.24	0.55
35:BA:1516:C:H2'	35:BA:1517:G:H8	1.70	0.55
35:BA:2154:G:H2'	35:BA:2155:G:C8	2.41	0.55
41:BG:122:PRO:HD3	41:BG:181:ARG:H	1.71	0.55
41:BG:173:LEU:HD22	41:BG:178:PHE:CZ	2.41	0.55
58:BZ:6:LYS:HZ3	58:BZ:6:LYS:HB2	1.71	0.55
58:BZ:130:PRO:O	58:BZ:133:ILE:HG12	2.05	0.55
1:CA:898:G:N2	1:CA:901:A:OP2	2.37	0.55
1:CA:1014:A:C2	1:CA:1219:U:H1'	2.41	0.55
21:CU:10:ARG:HA	21:CU:13:ILE:HB	1.89	0.55
25:D0:43:THR:H	35:DA:2331:G:H4'	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:30:G:H2'	35:DA:31:C:H6	1.72	0.55
35:DA:279:C:H42	35:DA:361:G:H1	1.54	0.55
35:DA:556:G:H2'	35:DA:557:U:C6	2.40	0.55
2:AB:119:GLU:C	2:AB:121:LEU:H	2.10	0.55
5:AE:41:VAL:HG22	5:AE:113:ALA:HA	1.88	0.55
24:AY:26:LEU:HB2	24:AY:55:LEU:HD21	1.89	0.55
35:BA:672:C:C2'	35:BA:673:C:H5'	2.36	0.55
35:BA:1639:U:H2'	35:BA:1640:C:H5''	1.88	0.55
35:BA:2074:U:H2'	35:BA:2075:U:C6	2.42	0.55
35:BA:2115:G:O2'	35:BA:2166:G:N2	2.40	0.55
43:BI:52:ARG:HG3	43:BI:53:ALA:N	2.19	0.55
49:BQ:140:ALA:O	49:BQ:141:GLN:HB2	2.05	0.55
55:BW:64:MET:O	55:BW:65:LEU:HB2	2.05	0.55
1:CA:5:U:O2'	1:CA:6:G:OP2	2.22	0.55
1:CA:939:G:C5'	7:CG:102:ARG:HH12	2.18	0.55
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.41	0.55
3:CC:64:VAL:O	3:CC:100:ALA:HB3	2.06	0.55
6:CF:77:ARG:NH1	6:CF:77:ARG:HB3	2.20	0.55
8:CH:11:THR:HG22	8:CH:15:ASN:HD21	1.71	0.55
35:DA:38:A:H2'	35:DA:39:C:C6	2.40	0.55
38:DD:43:ARG:HB3	38:DD:54:ARG:CB	2.36	0.55
40:DF:195:ASP:OD1	40:DF:196:LEU:N	2.39	0.55
41:DG:46:ALA:HB3	41:DG:88:ILE:HG12	1.86	0.55
47:DO:4:PRO:O	47:DO:5:GLN:HB2	2.05	0.55
51:DS:26:LEU:HD23	51:DS:39:ILE:HG13	1.88	0.55
1:AA:832:C:N4	1:AA:855:G:O6	2.39	0.55
1:AA:1004:A:H2'	1:AA:1036:G:C6	2.41	0.55
1:AA:1211:U:H5'	1:AA:1212:U:OP1	2.06	0.55
2:AB:124:SER:OG	2:AB:125:PRO:HD2	2.06	0.55
4:AD:20:TYR:HA	4:AD:26:CYS:HB3	1.89	0.55
7:AG:15:ASP:HB3	7:AG:19:GLY:H	1.71	0.55
10:AJ:39:PRO:HB3	10:AJ:70:ARG:NH1	2.21	0.55
13:AM:120:LYS:HD3	13:AM:121:LYS:N	2.21	0.55
35:BA:1534:U:H3'	35:BA:1535:A:C8	2.42	0.55
48:BP:16:ARG:NH1	48:BP:18:ARG:HB2	2.19	0.55
51:BS:92:TYR:CG	51:BS:93:LYS:N	2.74	0.55
1:CA:1010:G:H2'	1:CA:1011:G:H8	1.71	0.55
1:CA:1082:G:H2'	1:CA:1083:U:O4'	2.05	0.55
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.41	0.55
2:CB:178:ARG:HB2	2:CB:178:ARG:HH11	1.70	0.55
4:CD:98:GLU:OE2	4:CD:103:ASN:ND2	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:108:ILE:HG22	18:CR:88:LYS:HB3	1.87	0.55
24:CY:182:PRO:HG3	24:CY:345:ILE:HG23	1.88	0.55
35:DA:482:A:H4'	57:DY:47:LYS:HG2	1.88	0.55
35:DA:2840:C:H2'	35:DA:2841:C:C6	2.41	0.55
45:DK:33:ASN:HD22	45:DK:36:GLU:HG3	1.71	0.55
53:DU:90:VAL:CG2	54:DV:47:VAL:HG21	2.36	0.55
54:DV:21:ARG:HB3	54:DV:91:TYR:HB2	1.89	0.55
13:AM:91:ARG:HB2	13:AM:98:VAL:HG22	1.88	0.55
24:AY:223:LYS:O	24:AY:225:GLU:N	2.38	0.55
28:B3:30:ARG:NH2	35:BA:1159:U:OP1	2.39	0.55
41:BG:48:GLU:O	41:BG:49:ASP:HB2	2.06	0.55
45:BK:137:GLU:HG3	45:BK:138:VAL:N	2.21	0.55
46:BN:43:THR:HB	46:BN:46:VAL:HG12	1.88	0.55
51:BS:106:ARG:HB3	51:BS:106:ARG:HH11	1.72	0.55
1:CA:1294:G:H2'	1:CA:1295:G:C8	2.40	0.55
2:CB:219:VAL:O	2:CB:223:ILE:HG13	2.06	0.55
24:CY:237:PRO:HG3	35:DA:2603:G:H5'	1.88	0.55
28:D3:35:ARG:HE	28:D3:37:LEU:HD21	1.72	0.55
35:DA:870:A:P	49:DQ:6:ARG:HH21	2.29	0.55
35:DA:2293:C:OP1	51:DS:92:TYR:OH	2.24	0.55
38:DD:32:SER:O	38:DD:36:PRO:HD3	2.07	0.55
39:DE:6:GLY:HA2	39:DE:51:PHE:CE2	2.41	0.55
45:DK:84:LEU:HD21	45:DK:136:VAL:HG12	1.88	0.55
53:DU:102:GLU:HG3	54:DV:2:PHE:CE1	2.42	0.55
1:AA:375:U:C2	1:AA:376:G:C8	2.95	0.55
1:AA:473:G:H5''	16:AP:81:ARG:HE	1.70	0.55
1:AA:512:U:H2'	1:AA:513:C:C6	2.42	0.55
35:BA:363(E):U:H3'	35:BA:363(F):A:O4'	2.06	0.55
35:BA:839:U:O2'	35:BA:1191:G:N3	2.39	0.55
35:BA:1019:U:H3	35:BA:1142(A):A:H62	1.54	0.55
35:BA:2647:U:H2'	35:BA:2648:C:C6	2.42	0.55
38:BD:27:THR:HG21	38:BD:81:ALA:HB1	1.88	0.55
38:BD:43:ARG:HB3	38:BD:54:ARG:HB2	1.87	0.55
43:BI:133:HIS:O	43:BI:135:GLU:N	2.39	0.55
45:BK:117:THR:OG1	45:BK:123:ALA:HB2	2.07	0.55
1:CA:385:C:H2'	1:CA:386:C:C6	2.42	0.55
1:CA:922:G:H4'	5:CE:20:GLN:HA	1.88	0.55
3:CC:70:VAL:HG12	3:CC:72:LYS:H	1.72	0.55
6:CF:94:GLN:HB3	18:CR:32:ARG:HH21	1.72	0.55
25:D0:63:VAL:HG21	25:D0:83:PRO:HG3	1.88	0.55
35:DA:271(J):C:N4	35:DA:271(L):U:O2	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:4:TYR:N	46:DN:4:TYR:CD1	2.73	0.55
46:DN:120:LEU:O	46:DN:121:LYS:HD2	2.06	0.55
56:DX:27:THR:HB	56:DX:80:ILE:HG22	1.88	0.55
1:AA:985:C:H2'	1:AA:986:A:H8	1.72	0.55
1:AA:1143:G:H2'	1:AA:1144:G:H8	1.71	0.55
1:AA:1207:G:H2'	1:AA:1208:C:H6	1.72	0.55
1:AA:1347:G:H22	1:AA:1374:A:P	2.29	0.55
24:AY:19:ILE:HG12	24:AY:62:PHE:CE1	2.40	0.55
35:BA:350:U:H2'	35:BA:351:G:O4'	2.06	0.55
35:BA:538:G:H2'	35:BA:539:G:H8	1.71	0.55
35:BA:1048:A:N6	35:BA:1052:C:C4	2.69	0.55
35:BA:1057:A:N6	35:BA:1087:G:OP2	2.40	0.55
35:BA:2506:U:OP1	39:BE:144:ARG:NH2	2.39	0.55
38:BD:11:PRO:C	38:BD:13:ARG:H	2.10	0.55
45:BK:79:ARG:HH21	45:BK:85:GLU:HG2	1.71	0.55
1:CA:881:G:P	12:CL:12:ARG:HH22	2.29	0.55
1:CA:1350:A:O2'	7:CG:33:ASP:OD1	2.16	0.55
35:DA:1654:A:OP1	50:DR:3:HIS:HB2	2.06	0.55
35:DA:1721:G:O6	35:DA:1739:U:H5'	2.06	0.55
35:DA:2051:A:H5'	35:DA:2578:G:O4'	2.06	0.55
35:DA:2101:G:H2'	35:DA:2102:U:H6	1.71	0.55
35:DA:2314:C:H2'	35:DA:2315:G:H8	1.71	0.55
47:DO:88:ASN:OD1	47:DO:92:GLU:N	2.36	0.55
56:DX:50:LYS:N	56:DX:87:GLN:OE1	2.36	0.55
57:DY:81:LYS:HD3	57:DY:97:ARG:HG3	1.87	0.55
1:AA:1002:G:H3'	1:AA:1003:G:H8	1.71	0.55
3:AC:54:ARG:HH12	3:AC:56:ASP:HB2	1.71	0.55
17:AQ:82:MET:O	17:AQ:86:GLU:HG2	2.06	0.55
26:B1:11:ARG:NH2	35:BA:1365:A:O2'	2.40	0.55
35:BA:813:U:H2'	35:BA:814:C:H6	1.71	0.55
35:BA:2122:U:H2'	35:BA:2123:G:C8	2.42	0.55
35:BA:2377:A:H2'	35:BA:2378:A:C8	2.42	0.55
38:BD:210:GLY:O	38:BD:211:ARG:HB3	2.06	0.55
43:BI:78:THR:HA	43:BI:141:LYS:O	2.07	0.55
54:BV:14:VAL:HB	54:BV:96:ILE:HG13	1.89	0.55
1:CA:7:G:H21	5:CE:121:LYS:HG2	1.71	0.55
1:CA:1005:A:O4'	1:CA:1036:G:N2	2.40	0.55
1:CA:1237:C:H5''	1:CA:1238:A:C8	2.40	0.55
2:CB:231:GLU:HB2	2:CB:232:PRO:CD	2.36	0.55
6:CF:30:LEU:HB2	6:CF:35:ALA:HB3	1.87	0.55
35:DA:654(U):A:H5''	35:DA:654(V):A:OP2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2820:A:O4'	50:DR:5:LYS:HD2	2.06	0.55
37:DC:11:LEU:HA	37:DC:33:LEU:HD22	1.87	0.55
38:DD:13:ARG:NH1	38:DD:16:MET:SD	2.79	0.55
40:DF:3:GLU:O	40:DF:19:GLU:HB2	2.07	0.55
41:DG:115:ARG:NH2	41:DG:136:ARG:HD2	2.18	0.55
41:DG:171:ALA:O	41:DG:175:LEU:HG	2.07	0.55
1:AA:5:U:O2'	1:AA:6:G:OP2	2.24	0.55
1:AA:564:C:C4	17:AQ:31:LEU:HD11	2.42	0.55
1:AA:657:G:N2	15:AO:22:THR:HG1	2.03	0.55
9:AI:29:ASN:ND2	9:AI:65:VAL:O	2.39	0.55
16:AP:48:TRP:O	16:AP:49:LEU:HB2	2.07	0.55
35:BA:2475:C:H42	35:BA:2529:G:H22	1.53	0.55
45:BK:55:VAL:HG22	45:BK:69:THR:HG23	1.87	0.55
58:BZ:3:TYR:N	58:BZ:56:VAL:O	2.40	0.55
2:CB:96:ARG:N	2:CB:96:ARG:HD2	2.21	0.55
2:CB:209:ARG:NH1	2:CB:239:VAL:HG11	2.22	0.55
4:CD:176:LEU:HG	4:CD:178:VAL:H	1.72	0.55
14:CN:26:ARG:HG3	14:CN:39:LEU:HD22	1.89	0.55
35:DA:1796:U:H2'	35:DA:1797:C:H6	1.72	0.55
35:DA:2502:G:H5''	35:DA:2503:A:H5''	1.88	0.55
35:DA:2659:G:C2	35:DA:2661:G:C8	2.94	0.55
38:DD:132:PRO:HD3	38:DD:190:TYR:CZ	2.41	0.55
44:DJ:117:UNK:O	44:DJ:119:UNK:N	2.40	0.55
45:DK:111:LYS:HD2	45:DK:127:ILE:HD11	1.88	0.55
50:DR:117:VAL:O	50:DR:118:GLU:HB2	2.07	0.55
53:DU:98:LEU:HA	53:DU:101:ARG:O	2.07	0.55
54:DV:19:LYS:HE3	54:DV:22:VAL:HG13	1.88	0.55
1:AA:359:U:H2'	1:AA:360:A:C8	2.42	0.55
1:AA:368:U:C6	43:DI:90:GLY:HA2	2.42	0.55
1:AA:376:G:H2'	1:AA:377:G:H8	1.72	0.55
1:AA:434:U:H2'	1:AA:435:C:C6	2.42	0.55
12:AL:70:ILE:HG12	12:AL:100:ILE:HD12	1.89	0.55
15:AO:78:TYR:O	15:AO:82:ILE:HG22	2.06	0.55
25:B0:36:ILE:HG23	35:BA:2354:G:O2'	2.07	0.55
27:B2:2:LYS:HB3	35:BA:97:C:O3'	2.07	0.55
32:B7:11:LYS:HE2	35:BA:686:G:H5''	1.88	0.55
35:BA:392:C:H5''	35:BA:409:C:H5''	1.89	0.55
35:BA:2065:C:H2'	35:BA:2066:C:C6	2.42	0.55
51:BS:96:GLY:C	51:BS:98:VAL:H	2.09	0.55
54:BV:1:MET:HB3	54:BV:99:ILE:HD11	1.87	0.55
1:CA:313:A:H2'	1:CA:314:C:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:350:G:O2'	1:CA:351:G:H5'	2.05	0.55
1:CA:474:G:H2'	1:CA:475:G:H8	1.72	0.55
5:CE:13:ILE:HD13	5:CE:51:VAL:HG13	1.89	0.55
12:CL:33:ARG:HA	12:CL:33:ARG:HE	1.72	0.55
18:CR:53:ARG:C	18:CR:55:ARG:H	2.10	0.55
30:D5:19:ARG:HA	35:DA:2046:G:O5'	2.07	0.55
31:D6:48:VAL:HG23	31:D6:49:HIS:N	2.22	0.55
35:DA:689:A:H2'	35:DA:690:G:C8	2.42	0.55
35:DA:1548:C:H2'	35:DA:1549:C:H6	1.72	0.55
35:DA:1795:C:O2	38:DD:255:LYS:NZ	2.36	0.55
35:DA:2635:C:H4'	39:DE:78:LEU:HD12	1.89	0.55
39:DE:75:VAL:C	39:DE:77:ILE:H	2.10	0.55
48:DP:29:LYS:HB3	48:DP:34:GLY:N	2.22	0.55
52:DT:57:PHE:CG	52:DT:58:ASN:N	2.75	0.55
1:AA:12:U:H3	1:AA:22:G:H1	1.55	0.55
1:AA:624:C:H2'	1:AA:625:G:C8	2.42	0.55
1:AA:1029:C:H2'	1:AA:1030(A):G:C6	2.42	0.55
2:AB:167:PRO:HG2	2:AB:192:SER:OG	2.07	0.55
9:AI:65:VAL:HG21	9:AI:73:GLN:HB3	1.89	0.55
10:AJ:23:ILE:HG23	10:AJ:85:LEU:HD22	1.88	0.55
31:B6:26:ASN:HD22	31:B6:32:ASN:ND2	2.05	0.55
35:BA:904:C:H2'	35:BA:905:U:H6	1.72	0.55
35:BA:1348:G:C2'	35:BA:1349:A:H5''	2.36	0.55
35:BA:2415:G:H4'	48:BP:67:MET:N	2.22	0.55
35:BA:2481:G:HO2'	35:BA:2482:G:P	2.30	0.55
36:BB:22:U:H2'	36:BB:23:G:C8	2.42	0.55
55:BW:46:PHE:O	55:BW:50:VAL:HG12	2.07	0.55
57:BY:28:LYS:HG2	57:BY:39:VAL:HG22	1.89	0.55
58:BZ:99:TYR:HD2	58:BZ:123:ASP:O	1.90	0.55
1:CA:552:U:H2'	1:CA:553:A:H8	1.71	0.55
13:CM:58:GLU:C	13:CM:60:VAL:H	2.11	0.55
35:DA:571:A:O2'	54:DV:78:LYS:HE3	2.07	0.55
35:DA:1827:C:OP2	38:DD:222:ARG:NH1	2.40	0.55
57:DY:96:ILE:HB	57:DY:99:CYS:HB2	1.87	0.55
58:DZ:79:ARG:O	58:DZ:80:ARG:HB2	2.07	0.55
1:AA:22:G:H2'	1:AA:23:C:C6	2.41	0.54
1:AA:1162:C:H2'	1:AA:1163:C:C6	2.41	0.54
2:AB:55:PHE:HA	2:AB:58:ILE:HD12	1.89	0.54
4:AD:57:ARG:HH22	5:AE:107:ARG:HD3	1.71	0.54
13:AM:81:LEU:HB3	13:AM:89:GLY:HA2	1.89	0.54
26:B1:94:LEU:O	26:B1:96:LYS:N	2.39	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:654(R):C:H2'	35:BA:654(S):G:C5	2.43	0.54
35:BA:1480:G:H1	35:BA:1511:C:H42	1.54	0.54
35:BA:1718:G:H5'	35:BA:1718:G:H8	1.70	0.54
35:BA:1939:U:OP1	35:BA:2604:U:O2'	2.24	0.54
39:BE:6:GLY:HA2	39:BE:51:PHE:CE2	2.42	0.54
52:BT:35:LYS:C	52:BT:37:GLY:H	2.10	0.54
1:CA:683:G:H2'	1:CA:684:A:C8	2.41	0.54
22:CW:16:U:H3'	22:CW:17:C:H5'	1.89	0.54
35:DA:760:G:H2'	35:DA:761:A:O4'	2.07	0.54
35:DA:2302:G:H21	41:DG:128:ARG:HD3	1.72	0.54
35:DA:2378:A:H2	51:DS:20:ARG:NH2	2.05	0.54
38:DD:210:GLY:O	38:DD:211:ARG:HB3	2.07	0.54
43:DI:46:ALA:O	43:DI:50:ARG:HG3	2.05	0.54
49:DQ:43:THR:OG1	49:DQ:46:GLN:HG3	2.06	0.54
1:AA:272:C:H2'	1:AA:273:A:C8	2.39	0.54
1:AA:973:G:H3'	1:AA:974:A:H5''	1.88	0.54
13:AM:16:ASP:OD1	13:AM:17:VAL:HG23	2.06	0.54
15:AO:6:GLU:OE1	15:AO:6:GLU:N	2.40	0.54
27:B2:32:LEU:HD22	27:B2:36:ARG:NH1	2.22	0.54
35:BA:1181:C:H2'	35:BA:1182:A:C8	2.42	0.54
35:BA:1297:C:OP1	35:BA:2710:C:H4'	2.08	0.54
35:BA:1485:G:N2	35:BA:1504:C:C2	2.74	0.54
35:BA:2329:G:H2'	35:BA:2330:G:C8	2.42	0.54
35:BA:2712:U:H1'	35:BA:2712(A):A:C8	2.42	0.54
40:BF:7:TYR:HD2	40:BF:16:GLY:H	1.54	0.54
1:CA:598:U:H4'	8:CH:94:TYR:CG	2.41	0.54
1:CA:977:A:O2'	1:CA:981:U:N3	2.34	0.54
3:CC:206:GLU:HG2	3:CC:207:VAL:H	1.71	0.54
35:DA:654(B):C:N4	35:DA:654(R):C:N3	2.55	0.54
35:DA:872:A:OP1	49:DQ:5:ARG:NH2	2.40	0.54
35:DA:889:C:O2'	35:DA:890:A:O5'	2.17	0.54
35:DA:996:A:H4'	53:DU:92:ARG:HE	1.71	0.54
37:DC:48:LEU:HB3	37:DC:50:ILE:HG13	1.89	0.54
39:DE:116:VAL:O	39:DE:117:MET:HB3	2.06	0.54
42:DH:41:MET:SD	42:DH:43:VAL:HG13	2.46	0.54
1:AA:119:A:H4'	1:AA:120:A:O5'	2.07	0.54
1:AA:624:C:H2'	1:AA:625:G:H8	1.71	0.54
2:AB:196:LEU:HA	8:AH:74:PRO:HG3	1.89	0.54
3:AC:76:VAL:HG23	3:AC:77:ILE:HG13	1.89	0.54
4:AD:65:ARG:HD2	4:AD:72:GLU:HA	1.88	0.54
5:AE:39:GLY:HA2	5:AE:69:VAL:HB	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:31:PHE:O	8:AH:35:ILE:HG12	2.08	0.54
35:BA:24:G:O2'	55:BW:78:GLU:O	2.24	0.54
35:BA:1718:G:H5'	35:BA:1718:G:C8	2.43	0.54
37:BC:31:LYS:O	37:BC:31:LYS:HD3	2.07	0.54
40:BF:164:ARG:HG2	40:BF:164:ARG:HH11	1.72	0.54
49:BQ:132:VAL:HG11	58:BZ:81:ARG:HE	1.72	0.54
1:CA:299:G:H2'	1:CA:300:A:C8	2.43	0.54
22:CW:40:C:H2'	22:CW:41:C:C6	2.43	0.54
24:CY:88:LYS:HB2	24:CY:89:PRO:HD3	1.89	0.54
30:D5:16:ARG:NH2	35:DA:517:C:OP1	2.40	0.54
35:DA:2584:U:H2'	35:DA:2585:U:H2'	1.88	0.54
41:DG:51:ARG:HE	41:DG:51:ARG:CA	2.20	0.54
42:DH:124:GLU:HB2	42:DH:132:ARG:HG2	1.90	0.54
52:DT:32:TYR:HD1	52:DT:33:LYS:H	1.52	0.54
54:DV:49:THR:HG22	54:DV:50:PRO:HD3	1.89	0.54
1:AA:73:G:C6	1:AA:97:G:C6	2.95	0.54
8:AH:6:ILE:HD12	8:AH:6:ILE:H	1.72	0.54
35:BA:528:A:C2	35:BA:2042:A:H2'	2.43	0.54
35:BA:1405:U:H2'	35:BA:1406:U:H6	1.70	0.54
35:BA:2443:C:H2'	35:BA:2444:G:H8	1.72	0.54
35:BA:2846:G:P	52:BT:54:ARG:HB2	2.48	0.54
39:BE:52:LEU:HD23	39:BE:76:ARG:HB2	1.87	0.54
1:CA:410:G:OP1	4:CD:30:LYS:NZ	2.33	0.54
2:CB:63:MET:HB3	2:CB:225:ALA:O	2.07	0.54
2:CB:141:GLU:O	2:CB:145:LEU:HB2	2.06	0.54
2:CB:172:ILE:H	2:CB:172:ILE:CD1	2.13	0.54
7:CG:57:GLU:O	7:CG:59:LEU:N	2.41	0.54
24:CY:270:LYS:HD3	25:D0:5:LYS:HD3	1.89	0.54
35:DA:1529:G:N7	35:DA:1541:G:C2	2.75	0.54
35:DA:1952:A:C6	47:DO:22:ILE:HD12	2.42	0.54
35:DA:2124:G:H4'	37:DC:175:PRO:HG3	1.90	0.54
35:DA:2199:A:H5''	35:DA:2200:C:H5	1.73	0.54
37:DC:197:LEU:C	37:DC:199:ALA:H	2.09	0.54
51:DS:58:LEU:HD23	51:DS:65:VAL:HG13	1.89	0.54
1:AA:96:U:O2'	1:AA:97:G:O5'	2.22	0.54
1:AA:1141:C:H2'	1:AA:1142:G:C8	2.42	0.54
2:AB:22:LYS:HE2	2:AB:22:LYS:HA	1.90	0.54
2:AB:63:MET:HB3	2:AB:225:ALA:O	2.07	0.54
16:AP:9:PHE:HB2	16:AP:16:HIS:O	2.06	0.54
26:B1:20:ARG:HG2	26:B1:20:ARG:HH11	1.71	0.54
35:BA:654(B):C:H2'	35:BA:654(C):G:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2162:G:H2'	35:BA:2163:C:H6	1.73	0.54
36:BB:8:U:O4	36:BB:113:G:O6	2.24	0.54
48:BP:50:ARG:HG3	48:BP:51:PHE:N	2.23	0.54
50:BR:7:GLY:HA3	50:BR:8:ARG:HH21	1.72	0.54
1:CA:190:U:H2'	1:CA:191:G:H8	1.71	0.54
1:CA:1100:C:O2'	1:CA:1102:A:OP1	2.19	0.54
1:CA:1206:G:H4'	3:CC:192:THR:O	2.08	0.54
1:CA:1302:U:OP2	13:CM:21:TYR:OH	2.22	0.54
3:CC:155:GLY:HA3	3:CC:163:ALA:HB1	1.89	0.54
4:CD:60:GLU:OE2	4:CD:198:VAL:HA	2.08	0.54
5:CE:6:PHE:HD1	5:CE:63:ARG:HH12	1.56	0.54
13:CM:124:PRO:CD	24:CY:163:GLY:H	2.21	0.54
33:D8:30:ARG:NH2	35:DA:2419:U:O4	2.40	0.54
35:DA:83:G:N2	35:DA:103:A:OP2	2.39	0.54
35:DA:1058:G:H2'	35:DA:1059:G:C8	2.43	0.54
35:DA:2291:U:H2'	35:DA:2292:C:C6	2.42	0.54
41:DG:178:PHE:HB3	41:DG:180:PHE:HE1	1.72	0.54
42:DH:41:MET:HE1	42:DH:53:GLU:H	1.72	0.54
50:DR:20:LEU:HD21	50:DR:40:LYS:HD3	1.89	0.54
54:DV:19:LYS:HG3	54:DV:20:LEU:N	2.21	0.54
57:DY:7:VAL:HB	57:DY:8:LYS:CD	2.30	0.54
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.43	0.54
6:AF:60:PHE:CE2	18:AR:78:LEU:HD21	2.42	0.54
13:AM:13:LYS:HA	13:AM:44:ARG:HH11	1.72	0.54
34:B9:19:ARG:HA	35:BA:2757:A:OP1	2.08	0.54
35:BA:2580:U:H5'	39:BE:131:ALA:HB2	1.90	0.54
39:BE:51:PHE:HD1	39:BE:52:LEU:HD22	1.72	0.54
41:BG:4:ASP:HB2	41:BG:9:ARG:HH12	1.72	0.54
51:BS:56:LEU:HD23	51:BS:56:LEU:O	2.08	0.54
58:BZ:157:LEU:HB3	58:BZ:161:VAL:HB	1.88	0.54
1:CA:90:U:OP2	1:CA:91:C:H5'	2.07	0.54
1:CA:217:C:H2'	1:CA:218:C:H6	1.72	0.54
1:CA:312:C:H2'	1:CA:313:A:C8	2.43	0.54
6:CF:30:LEU:HD23	6:CF:30:LEU:H	1.73	0.54
22:CV:44:G:H2'	22:CV:45:U:O4'	2.07	0.54
24:CY:80:PRO:HB3	24:CY:85:GLU:OE1	2.08	0.54
33:D8:13:ARG:NH2	35:DA:250:G:OP2	2.41	0.54
35:DA:1306:C:H2'	35:DA:1307:A:H8	1.73	0.54
35:DA:2025:C:H2'	35:DA:2026:C:C6	2.43	0.54
35:DA:2091:U:OP2	35:DA:2092:U:O2'	2.14	0.54
35:DA:2137:C:N4	35:DA:2154:G:H22	2.04	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DC:16:ASP:HB3	37:DC:19:LYS:CB	2.38	0.54
49:DQ:12:GLN:HG2	49:DQ:73:PRO:HD2	1.90	0.54
50:DR:11:ASN:OD1	50:DR:12:ARG:N	2.40	0.54
52:DT:36:GLU:OE1	52:DT:38:ASN:ND2	2.41	0.54
1:AA:376:G:H2'	1:AA:377:G:C8	2.42	0.54
1:AA:448:A:OP2	1:AA:485:G:N2	2.40	0.54
1:AA:773:G:H1	1:AA:806:C:H42	1.56	0.54
1:AA:922:G:H2'	1:AA:923:A:C8	2.43	0.54
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.07	0.54
3:AC:81:GLY:O	3:AC:85:ARG:HB2	2.06	0.54
21:AU:2:GLY:C	21:AU:4:GLY:H	2.11	0.54
35:BA:1173:G:H3'	35:BA:1174:A:H5'	1.90	0.54
35:BA:1792:G:H5'	38:BD:205:VAL:HG13	1.90	0.54
35:BA:2102:U:H2'	35:BA:2103:C:C6	2.43	0.54
35:BA:2123:G:H2'	35:BA:2124:G:C8	2.43	0.54
35:BA:2178:C:O2'	37:BC:47:LYS:NZ	2.41	0.54
41:BG:52:ILE:HD12	41:BG:54:GLU:OE2	2.08	0.54
42:BH:124:GLU:HB2	42:BH:132:ARG:CG	2.38	0.54
53:BU:47:TYR:HA	53:BU:50:ARG:NH2	2.21	0.54
56:BX:55:ASN:HB2	56:BX:80:ILE:HG13	1.89	0.54
58:BZ:156:LYS:O	58:BZ:158:PRO:HD3	2.07	0.54
1:CA:1116:C:H2'	1:CA:1117:G:O4'	2.08	0.54
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.43	0.54
3:CC:79:ARG:NH1	3:CC:82:GLU:OE1	2.40	0.54
10:CJ:78:ASN:O	10:CJ:82:ILE:HG12	2.08	0.54
24:CY:111:HIS:NE2	24:CY:114:LYS:HG3	2.22	0.54
29:D4:34:GLU:O	41:DG:113:ARG:NH1	2.40	0.54
32:D7:9:ARG:HG3	35:DA:1309:G:OP1	2.08	0.54
35:DA:876:C:H2'	35:DA:877:U:O4'	2.08	0.54
35:DA:1048:A:OP2	35:DA:1109:C:N4	2.40	0.54
35:DA:2712:U:H1'	35:DA:2712(A):A:C8	2.41	0.54
39:DE:111:ARG:HD2	39:DE:160:TYR:CD2	2.43	0.54
46:DN:30:ILE:HG23	46:DN:52:VAL:HG11	1.89	0.54
51:DS:96:GLY:C	51:DS:98:VAL:H	2.10	0.54
54:DV:18:LEU:HD12	54:DV:19:LYS:N	2.23	0.54
1:AA:30:U:H4'	1:AA:31:G:OP2	2.07	0.54
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.89	0.54
6:AF:82:ARG:HB2	6:AF:85:VAL:HG23	1.88	0.54
9:AI:18:PHE:HB2	9:AI:62:TYR:O	2.08	0.54
9:AI:43:ALA:HA	9:AI:74:ILE:HG21	1.89	0.54
11:AK:24:SER:O	11:AK:27:ASN:N	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:14:ARG:HD2	13:AM:42:ALA:HA	1.90	0.54
35:BA:658:C:H2'	35:BA:659:C:H6	1.72	0.54
35:BA:1359:A:N7	35:BA:1372:U:O4	2.40	0.54
35:BA:2341:G:H2'	35:BA:2342:C:C6	2.42	0.54
48:BP:48:PRO:O	48:BP:50:ARG:N	2.40	0.54
48:BP:115:LEU:HA	48:BP:134:ALA:HB2	1.89	0.54
58:BZ:119:GLU:HG3	58:BZ:122:ARG:HD3	1.90	0.54
1:CA:1281:U:H5'	1:CA:1282:C:H5	1.73	0.54
2:CB:194:PRO:HG2	2:CB:195:ASP:OD1	2.08	0.54
22:CW:1:G:C5	22:CW:73:A:N6	2.76	0.54
26:D1:50:ARG:NH2	35:DA:2199:A:H5'	2.23	0.54
31:D6:18:ARG:HD2	31:D6:43:CYS:SG	2.47	0.54
35:DA:272(J):C:N3	35:DA:274:G:H8	2.05	0.54
35:DA:364:C:H2'	35:DA:365:C:H5'	1.90	0.54
35:DA:2567:G:H2'	35:DA:2568:C:C6	2.42	0.54
36:DB:20:C:H2'	36:DB:21:G:H5''	1.90	0.54
42:DH:97:ARG:O	42:DH:98:LEU:HB2	2.08	0.54
50:DR:87:TYR:O	50:DR:90:ARG:N	2.41	0.54
1:AA:900:A:H2'	1:AA:901:A:C8	2.43	0.54
1:AA:940:C:H2'	1:AA:941:G:H8	1.71	0.54
1:AA:1032:G:N2	1:AA:1033:G:O6	2.41	0.54
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.72	0.54
16:AP:72:ARG:HH21	16:AP:73:LEU:HD21	1.72	0.54
24:AY:36:PRO:HD3	45:BK:29:GLN:HA	1.89	0.54
35:BA:813:U:H2'	35:BA:814:C:C6	2.43	0.54
35:BA:918:A:C2	36:BB:80:U:H4'	2.43	0.54
35:BA:1562:A:H2'	35:BA:1563:G:C8	2.43	0.54
37:BC:29:LEU:HA	37:BC:32:GLU:HG2	1.89	0.54
42:BH:13:LYS:O	42:BH:15:VAL:HG13	2.08	0.54
48:BP:79:ARG:NE	48:BP:109:GLY:O	2.41	0.54
58:BZ:183:LEU:HD13	58:BZ:184:ALA:N	2.22	0.54
1:CA:100:C:H2'	1:CA:101:A:C8	2.43	0.54
1:CA:263:A:OP1	20:CT:79:ARG:NH1	2.40	0.54
1:CA:272:C:H2'	1:CA:273:A:C8	2.40	0.54
1:CA:382:A:H2'	1:CA:383:A:C8	2.43	0.54
1:CA:1125:U:OP2	1:CA:1145:C:N4	2.40	0.54
3:CC:43:LEU:O	3:CC:47:LEU:HB3	2.08	0.54
17:CQ:9:VAL:HG11	17:CQ:84:LEU:HD12	1.90	0.54
24:CY:283:LEU:O	24:CY:287:GLU:N	2.40	0.54
35:DA:654(H):G:H21	35:DA:654(N):G:N2	2.06	0.54
35:DA:1087:G:H22	35:DA:1102:C:H42	1.56	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1449:A:O2'	35:DA:1530:C:N4	2.40	0.54
41:DG:119:GLY:N	41:DG:181:ARG:HE	2.05	0.54
41:DG:162:THR:HG22	41:DG:162:THR:O	2.07	0.54
49:DQ:21:THR:CG2	49:DQ:101:ARG:HB2	2.38	0.54
56:DX:12:VAL:HG13	56:DX:27:THR:O	2.08	0.54
57:DY:8:LYS:HD2	57:DY:8:LYS:N	2.23	0.54
57:DY:21:LYS:HG2	57:DY:22:GLY:N	2.22	0.54
1:AA:460:G:O6	1:AA:470:C:H5''	2.07	0.54
1:AA:538:G:O3'	12:AL:114:LYS:HD2	2.08	0.54
1:AA:707:C:H2'	1:AA:708:C:C6	2.43	0.54
4:AD:60:GLU:OE2	4:AD:198:VAL:HA	2.08	0.54
6:AF:84:ASN:O	6:AF:86:ARG:HG3	2.08	0.54
26:B1:25:LYS:NZ	35:BA:2396:G:OP1	2.41	0.54
29:B4:15:ILE:HA	29:B4:21:VAL:HG22	1.89	0.54
35:BA:1417:C:H2'	35:BA:1418:G:O4'	2.07	0.54
35:BA:2577:A:H5''	35:BA:2578:G:H5'	1.90	0.54
38:BD:65:ILE:HD11	38:BD:67:PHE:CE1	2.43	0.54
45:BK:38:VAL:HG23	45:BK:39:LYS:N	2.23	0.54
46:BN:19:GLU:O	46:BN:60:ILE:HA	2.08	0.54
57:BY:2:ARG:C	57:BY:4:LYS:H	2.11	0.54
58:BZ:104:PHE:HB3	58:BZ:141:VAL:HG21	1.90	0.54
1:CA:21:G:H2'	1:CA:22:G:C8	2.43	0.54
1:CA:119:A:H4'	1:CA:120:A:O5'	2.08	0.54
1:CA:944:G:N2	1:CA:1338:G:N7	2.56	0.54
1:CA:1239:A:O2'	7:CG:114:ARG:O	2.16	0.54
6:CF:91:VAL:HG11	18:CR:72:ARG:HH12	1.72	0.54
12:CL:60:LEU:C	12:CL:62:SER:H	2.10	0.54
19:CS:40:ILE:HD11	19:CS:71:LEU:HD23	1.90	0.54
20:CT:87:LYS:HE3	20:CT:91:LEU:HD21	1.89	0.54
35:DA:11:G:H2'	35:DA:12:U:H6	1.73	0.54
35:DA:1689:A:H2'	35:DA:1690:A:H8	1.72	0.54
35:DA:2730:C:O2'	39:DE:168:MET:O	2.24	0.54
36:DB:24:G:H21	36:DB:27:C:H42	1.56	0.54
40:DF:157:VAL:HA	40:DF:176:LEU:O	2.07	0.54
42:DH:19:VAL:HG11	42:DH:43:VAL:O	2.07	0.54
42:DH:41:MET:SD	42:DH:52:VAL:HG13	2.48	0.54
1:AA:1388:C:H2'	1:AA:1389:C:C6	2.44	0.53
3:AC:32:LEU:HB3	3:AC:59:ARG:NH2	2.22	0.53
8:AH:30:ARG:NH1	8:AH:30:ARG:HB3	2.23	0.53
30:B5:46:CYS:SG	55:BW:38:TYR:OH	2.65	0.53
32:B7:9:ARG:HG3	35:BA:1309:G:OP1	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:307:G:N1	35:BA:310:A:OP2	2.41	0.53
35:BA:1059:G:H3'	35:BA:1060:U:H2'	1.90	0.53
35:BA:2347:C:H2'	35:BA:2348:U:C6	2.43	0.53
35:BA:2720:U:C2	35:BA:2721:A:C8	2.96	0.53
50:BR:7:GLY:HA3	50:BR:8:ARG:NH2	2.23	0.53
58:BZ:99:TYR:HA	58:BZ:125:LEU:HA	1.91	0.53
1:CA:70:G:H1	1:CA:99:U:H3	1.56	0.53
1:CA:584:G:H2'	1:CA:585:G:C8	2.43	0.53
1:CA:592:G:H2'	1:CA:593:G:C8	2.41	0.53
1:CA:983:A:H1'	1:CA:1049:U:O2	2.08	0.53
3:CC:183:ASP:N	3:CC:202:ILE:O	2.40	0.53
6:CF:3:ARG:HH11	6:CF:3:ARG:HG3	1.73	0.53
12:CL:27:LEU:C	12:CL:29:GLY:H	2.10	0.53
18:CR:40:LEU:HA	18:CR:43:PHE:HD2	1.73	0.53
24:CY:109:PHE:CE1	24:CY:353:ALA:HB2	2.43	0.53
33:D8:46:ARG:HH21	35:DA:631:A:P	2.31	0.53
35:DA:128:C:H2'	35:DA:129:C:H6	1.74	0.53
35:DA:484:C:H2'	35:DA:485:C:H6	1.73	0.53
35:DA:1301:A:H4'	35:DA:1302:A:OP1	2.08	0.53
36:DB:14:U:OP2	36:DB:70:C:O2'	2.25	0.53
41:DG:63:ILE:HD12	41:DG:141:PHE:CG	2.43	0.53
51:DS:65:VAL:O	51:DS:69:VAL:HG12	2.08	0.53
1:AA:357:G:OP1	1:AA:366:C:O2'	2.23	0.53
13:AM:30:ALA:C	13:AM:32:GLU:H	2.12	0.53
24:AY:311:ILE:HD12	24:AY:325:ARG:HH21	1.72	0.53
31:B6:11:LEU:HD23	31:B6:26:ASN:OD1	2.08	0.53
35:BA:608:A:H2'	35:BA:609:A:C8	2.43	0.53
35:BA:1050:A:H2'	35:BA:1051:G:C8	2.43	0.53
35:BA:1817:G:H3'	38:BD:157:ARG:HH21	1.73	0.53
35:BA:2787:C:H1'	39:BE:61:ARG:CD	2.38	0.53
49:BQ:43:THR:OG1	49:BQ:45:GLN:HG2	2.08	0.53
51:BS:78:LEU:HD11	51:BS:103:GLU:HB3	1.88	0.53
58:BZ:19:ARG:HH12	58:BZ:84:GLU:HA	1.72	0.53
1:CA:191:G:N9	20:CT:105:SER:HB3	2.24	0.53
1:CA:1035:A:H2'	1:CA:1036:G:C8	2.44	0.53
7:CG:9:VAL:HG22	7:CG:94:ARG:NH1	2.23	0.53
11:CK:18:ARG:HH21	11:CK:37:GLY:N	2.06	0.53
17:CQ:7:THR:HG22	17:CQ:58:GLU:HG2	1.91	0.53
33:D8:62:LEU:N	33:D8:63:PRO:HD2	2.23	0.53
35:DA:2127:G:H2'	35:DA:2128:C:C6	2.43	0.53
39:DE:69:LYS:C	39:DE:71:GLY:H	2.11	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DG:4:ASP:OD2	41:DG:9:ARG:NH1	2.41	0.53
48:DP:64:LYS:O	48:DP:66:GLY:N	2.38	0.53
52:DT:83:ILE:HG13	52:DT:84:GLN:H	1.73	0.53
57:DY:8:LYS:HB2	57:DY:28:LYS:NZ	2.22	0.53
3:AC:149:ALA:N	3:AC:170:GLN:O	2.39	0.53
18:AR:88:LYS:C	18:AR:88:LYS:HD3	2.29	0.53
33:B8:30:ARG:O	33:B8:30:ARG:HD3	2.09	0.53
35:BA:307:G:N2	35:BA:310:A:OP2	2.40	0.53
35:BA:639:U:H2'	35:BA:640:C:H6	1.73	0.53
35:BA:1226:A:OP1	54:BV:84:LYS:NZ	2.40	0.53
39:BE:117:MET:O	39:BE:118:LYS:HB2	2.09	0.53
43:BI:131:LYS:HA	43:BI:135:GLU:CG	2.32	0.53
43:BI:133:HIS:HB2	43:BI:134:PRO:CD	2.38	0.53
46:BN:35:ARG:O	46:BN:37:LYS:N	2.40	0.53
1:CA:372:C:N4	1:CA:389:A:H62	2.07	0.53
1:CA:757:U:H2'	1:CA:758:G:O4'	2.08	0.53
2:CB:178:ARG:HH22	2:CB:196:LEU:C	2.12	0.53
9:CI:50:LEU:O	9:CI:53:VAL:HG22	2.09	0.53
35:DA:2315:G:H2'	35:DA:2316:C:C6	2.44	0.53
35:DA:2831:G:OP1	39:DE:58:ARG:NH1	2.40	0.53
40:DF:33:LEU:HD11	40:DF:112:MET:HB2	1.89	0.53
43:DI:133:HIS:HB2	43:DI:134:PRO:HD3	1.91	0.53
48:DP:50:ARG:HG3	48:DP:51:PHE:N	2.23	0.53
51:DS:74:ALA:HB1	51:DS:103:GLU:HG3	1.90	0.53
1:AA:22:G:H2'	1:AA:23:C:H6	1.72	0.53
1:AA:1004:A:O2'	1:AA:1038:C:N3	2.33	0.53
1:AA:1423:G:P	47:BO:49:ARG:HH12	2.31	0.53
3:AC:83:ARG:HA	3:AC:86:VAL:HG22	1.90	0.53
4:AD:153:ARG:HG2	4:AD:181:MET:SD	2.49	0.53
25:B0:74:ARG:HH11	25:B0:74:ARG:HG3	1.73	0.53
35:BA:589:C:H2'	35:BA:590:A:H8	1.73	0.53
42:BH:97:ARG:O	42:BH:98:LEU:HB2	2.08	0.53
45:BK:99:ILE:O	45:BK:138:VAL:HA	2.09	0.53
56:BX:24:GLY:O	56:BX:82:GLN:HA	2.09	0.53
57:BY:94:LYS:O	57:BY:101:LYS:HA	2.09	0.53
1:CA:96:U:O2'	1:CA:97:G:H8	1.92	0.53
1:CA:584:G:H2'	1:CA:585:G:H8	1.73	0.53
1:CA:1250:A:N3	1:CA:1370:G:O2'	2.41	0.53
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.08	0.53
9:CI:114:TYR:CE1	10:CJ:59:SER:HA	2.44	0.53
13:CM:30:ALA:C	13:CM:32:GLU:H	2.12	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CY:33:LEU:HD12	45:DK:20:ALA:HB1	1.90	0.53
28:D3:43:ILE:O	28:D3:47:VAL:HG23	2.09	0.53
35:DA:863:A:H2'	35:DA:864:G:H8	1.74	0.53
35:DA:1689:A:H2'	35:DA:1690:A:C8	2.44	0.53
40:DF:66:PRO:O	40:DF:67:GLN:HB3	2.09	0.53
41:DG:96:ARG:O	41:DG:99:MET:N	2.41	0.53
44:DJ:27:UNK:H	44:DJ:84:UNK:C	2.21	0.53
46:DN:67:LEU:O	46:DN:68:GLU:HB2	2.08	0.53
1:AA:190:U:H2'	1:AA:191:G:H8	1.71	0.53
1:AA:376:G:H5''	16:AP:5:ARG:HB2	1.91	0.53
1:AA:514:C:H2'	1:AA:515:G:H8	1.73	0.53
1:AA:707:C:H2'	1:AA:708:C:H6	1.74	0.53
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.44	0.53
1:AA:1422:G:O3'	47:BO:49:ARG:NH1	2.42	0.53
2:AB:239:VAL:O	2:AB:241:GLU:N	2.42	0.53
5:AE:76:ILE:HD11	5:AE:142:LEU:HD21	1.89	0.53
12:AL:74:GLY:O	12:AL:102:ARG:NH2	2.41	0.53
35:BA:654(S):G:H2'	35:BA:654(T):C:C5	2.44	0.53
35:BA:1039:G:H2'	35:BA:1040:C:C6	2.43	0.53
35:BA:1401:G:H2'	35:BA:1402:C:C6	2.44	0.53
35:BA:2564:A:OP1	35:BA:2648:C:H4'	2.08	0.53
35:BA:2643:G:H2'	35:BA:2644:G:O4'	2.09	0.53
35:BA:2778:A:O2'	35:BA:2780:G:O2'	2.21	0.53
41:BG:67:LYS:H	41:BG:67:LYS:HD2	1.73	0.53
42:BH:123:PHE:CE1	42:BH:133:VAL:HG22	2.44	0.53
43:BI:77:LEU:HD21	43:BI:101:LEU:HD13	1.89	0.53
45:BK:12:LEU:HB2	45:BK:53:VAL:HG23	1.91	0.53
45:BK:137:GLU:HG3	45:BK:138:VAL:H	1.73	0.53
51:BS:97:ARG:C	51:BS:97:ARG:HH11	2.12	0.53
52:BT:36:GLU:OE1	52:BT:38:ASN:ND2	2.41	0.53
58:BZ:166:SER:HB2	58:BZ:168:GLU:N	2.24	0.53
1:CA:15:G:H4'	5:CE:24:ARG:NH1	2.24	0.53
1:CA:735:C:H2'	1:CA:736:C:C6	2.42	0.53
1:CA:736:C:H2'	1:CA:737:A:H8	1.72	0.53
3:CC:95:THR:HG22	3:CC:97:LYS:H	1.74	0.53
8:CH:90:GLY:O	12:CL:7:ILE:HG21	2.08	0.53
13:CM:91:ARG:HB3	13:CM:98:VAL:HG22	1.91	0.53
22:CV:41:C:H2'	22:CV:42:C:H5''	1.91	0.53
24:CY:115:ASN:HB3	24:CY:172:LYS:HA	1.90	0.53
24:CY:198:SER:HB2	24:CY:200:ARG:HG3	1.89	0.53
35:DA:1070:A:H5'	35:DA:1072:C:OP2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1210:A:H5'	35:DA:1210:A:H8	1.72	0.53
35:DA:2298:A:H2'	35:DA:2299:G:O4'	2.09	0.53
35:DA:2795:G:H22	35:DA:2802:G:N2	2.07	0.53
37:DC:22:THR:H	37:DC:25:GLU:HB3	1.74	0.53
47:DO:10:VAL:HG21	47:DO:16:ALA:O	2.09	0.53
48:DP:80:TYR:CZ	48:DP:111:ARG:HD3	2.44	0.53
51:DS:92:TYR:CG	51:DS:93:LYS:N	2.77	0.53
53:DU:92:ARG:NH1	54:DV:11:GLN:O	2.42	0.53
58:DZ:48:PHE:HE2	58:DZ:71:VAL:HG11	1.73	0.53
58:DZ:165:VAL:HG12	58:DZ:167:PRO:HA	1.91	0.53
1:AA:189:G:H2'	1:AA:189(A):C:C6	2.44	0.53
1:AA:824:C:H2'	1:AA:825:G:H8	1.73	0.53
1:AA:935:A:N1	7:AG:3:ARG:NH2	2.56	0.53
1:AA:945:G:N2	1:AA:1334:G:HO2'	2.06	0.53
1:AA:1287:A:H2	1:AA:1353:G:N3	2.06	0.53
17:AQ:5:VAL:HA	17:AQ:59:ILE:O	2.07	0.53
33:B8:62:LEU:N	33:B8:63:PRO:HD2	2.24	0.53
35:BA:52:A:H2'	35:BA:53:A:H8	1.74	0.53
35:BA:336:C:O2'	57:BY:35:TYR:OH	2.02	0.53
35:BA:690:G:H2'	35:BA:691:C:H6	1.74	0.53
35:BA:1099:G:H5''	45:BK:4:VAL:HG21	1.90	0.53
36:BB:24:G:H21	36:BB:27:C:N4	2.06	0.53
48:BP:85:LEU:HD23	48:BP:114:ILE:HD11	1.89	0.53
1:CA:6:G:H4'	1:CA:298:A:H4'	1.91	0.53
1:CA:552:U:C2	1:CA:553:A:C8	2.96	0.53
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.44	0.53
9:CI:83:ARG:HA	9:CI:86:VAL:HG12	1.90	0.53
11:CK:91:ARG:O	11:CK:95:ILE:HG13	2.09	0.53
27:D2:64:LEU:HD23	27:D2:68:ARG:HD2	1.90	0.53
31:D6:48:VAL:O	31:D6:49:HIS:CG	2.62	0.53
35:DA:74:A:H4'	35:DA:75:G:O5'	2.08	0.53
35:DA:904:C:H2'	35:DA:905:U:C6	2.42	0.53
35:DA:1543:C:H3'	35:DA:1544:A:H5''	1.89	0.53
35:DA:1651:G:H2'	35:DA:1652:A:O4'	2.09	0.53
35:DA:2114:A:N6	35:DA:2115:G:H21	2.06	0.53
35:DA:2153:G:H2'	35:DA:2154:G:C8	2.43	0.53
35:DA:2784:C:H1'	39:DE:37:ARG:NH1	2.23	0.53
38:DD:210:GLY:O	38:DD:212:SER:N	2.38	0.53
40:DF:188:ARG:HA	48:DP:7:ARG:HD3	1.89	0.53
43:DI:57:ARG:O	43:DI:60:GLU:HB3	2.09	0.53
45:DK:55:VAL:HG22	45:DK:69:THR:HG23	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:114:GLY:O	58:DZ:177:PRO:HD3	2.09	0.53
1:AA:9:G:H2'	1:AA:10:A:C8	2.43	0.53
1:AA:580:U:H2'	1:AA:581:G:O4'	2.08	0.53
1:AA:1002:G:H3'	1:AA:1003:G:C8	2.44	0.53
8:AH:20:TYR:HA	8:AH:65:TYR:CE2	2.44	0.53
8:AH:21:LYS:O	8:AH:65:TYR:OH	2.20	0.53
26:B1:79:GLY:HA2	35:BA:271(H):G:N2	2.23	0.53
35:BA:373:U:H2'	35:BA:374:A:H8	1.74	0.53
35:BA:1528(A):A:H3'	35:BA:1529:G:H5''	1.91	0.53
35:BA:1831:G:H2'	35:BA:1832:C:C6	2.42	0.53
35:BA:2033:A:O2'	35:BA:2035:G:OP2	2.25	0.53
35:BA:2293:C:OP1	51:BS:92:TYR:OH	2.27	0.53
41:BG:61:ALA:HB2	41:BG:68:PRO:HD3	1.91	0.53
44:BJ:27:UNK:O	44:BJ:29:UNK:N	2.42	0.53
46:BN:9:VAL:HG12	46:BN:10:GLU:H	1.74	0.53
51:BS:58:LEU:HD21	51:BS:68:GLN:HB2	1.91	0.53
57:BY:63:LYS:HG2	57:BY:64:GLU:H	1.74	0.53
1:CA:73:G:C6	1:CA:97:G:C6	2.96	0.53
1:CA:1030(A):G:O2'	1:CA:1031:G:N2	2.42	0.53
3:CC:51:GLY:O	3:CC:53:ALA:N	2.41	0.53
5:CE:101:ILE:HD11	5:CE:119:LEU:HD23	1.90	0.53
24:CY:44:ALA:O	24:CY:48:VAL:HG23	2.07	0.53
35:DA:529:A:N6	35:DA:2041:U:H3	1.97	0.53
35:DA:654(S):G:H2'	35:DA:654(T):C:C4	2.44	0.53
35:DA:754:C:H2'	35:DA:755:C:H6	1.73	0.53
35:DA:2178:C:H3'	35:DA:2179:C:H5''	1.91	0.53
35:DA:2291:U:H2'	35:DA:2292:C:H6	1.74	0.53
48:DP:124:LYS:HD3	48:DP:143:GLY:HA3	1.90	0.53
52:DT:28:VAL:HB	52:DT:88:ILE:HG12	1.91	0.53
57:DY:63:LYS:HG2	57:DY:64:GLU:H	1.74	0.53
2:AB:218:ALA:O	2:AB:222:ILE:HG12	2.09	0.53
9:AI:4:TYR:HH	9:AI:59:PHE:HE2	1.57	0.53
16:AP:15:PRO:HB2	16:AP:41:PRO:HG3	1.89	0.53
24:AY:41:ASP:HB3	24:AY:44:ALA:HB3	1.89	0.53
27:B2:14:ARG:NH2	35:BA:77:C:O3'	2.41	0.53
35:BA:1062:G:H2'	35:BA:1063:G:C8	2.43	0.53
35:BA:1952:A:C6	47:BO:22:ILE:HD12	2.44	0.53
39:BE:111:ARG:HA	50:BR:2:ARG:HG2	1.89	0.53
41:BG:139:LEU:HA	41:BG:144:ILE:HG21	1.91	0.53
45:BK:4:VAL:O	45:BK:5:VAL:HG12	2.07	0.53
52:BT:35:LYS:HZ1	52:BT:41:ARG:HE	1.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:21:ARG:HA	54:BV:92:THR:O	2.08	0.53
1:CA:244:U:H4'	1:CA:245:C:H5''	1.91	0.53
1:CA:1048:G:O3'	1:CA:1049:U:H3'	2.08	0.53
1:CA:1055:A:H62	1:CA:1200:C:H42	1.56	0.53
1:CA:1255:G:HO2'	1:CA:1258:G:HO2'	1.53	0.53
2:CB:162:ILE:O	2:CB:162:ILE:HG13	2.09	0.53
26:D1:44:PRO:HB2	26:D1:46:LEU:CD1	2.39	0.53
27:D2:2:LYS:NZ	27:D2:5:GLU:OE2	2.41	0.53
27:D2:43:GLN:O	27:D2:45:SER:N	2.42	0.53
31:D6:19:ARG:HG3	31:D6:20:ASN:H	1.74	0.53
35:DA:1495:A:H2'	35:DA:1496:A:H2	1.74	0.53
35:DA:1721:G:H5'	35:DA:1722:A:OP2	2.09	0.53
35:DA:1935:G:N2	35:DA:1964:G:OP2	2.42	0.53
35:DA:2674:G:H2'	35:DA:2675:A:C8	2.44	0.53
38:DD:65:ILE:HD11	38:DD:67:PHE:CE1	2.43	0.53
38:DD:129:ASN:O	38:DD:193:VAL:HG12	2.09	0.53
52:DT:112:ARG:HH21	52:DT:113:LYS:HE2	1.74	0.53
53:DU:90:VAL:HG21	54:DV:47:VAL:CG2	2.37	0.53
55:DW:10:VAL:O	55:DW:11:ARG:HB3	2.08	0.53
58:DZ:81:ARG:HH11	58:DZ:81:ARG:CB	2.19	0.53
1:AA:512:U:H2'	1:AA:513:C:H6	1.73	0.53
1:AA:1205:U:H1'	3:AC:195:VAL:HG21	1.91	0.53
2:AB:178:ARG:HG3	8:AH:72:PRO:HA	1.91	0.53
9:AI:43:ALA:C	9:AI:45:ALA:H	2.12	0.53
10:AJ:38:ILE:HD11	10:AJ:71:LEU:HD23	1.90	0.53
22:AW:44:G:H2'	22:AW:45:U:O4'	2.09	0.53
35:BA:1357:U:H2'	35:BA:1358:G:O4'	2.09	0.53
35:BA:2567:G:H2'	35:BA:2568:C:C6	2.44	0.53
36:BB:8:U:H3	36:BB:113:G:H1	1.57	0.53
38:BD:261:LYS:HB3	38:BD:264:LYS:HB2	1.91	0.53
43:BI:116:LEU:HD12	43:BI:117:GLU:H	1.74	0.53
45:BK:6:ALA:O	45:BK:59:ILE:HB	2.09	0.53
45:BK:79:ARG:HB2	45:BK:84:LEU:O	2.09	0.53
1:CA:926:G:N2	23:CX:15:A:H3'	2.24	0.53
1:CA:931:C:N4	1:CA:1387:G:O6	2.41	0.53
2:CB:36:ARG:N	2:CB:36:ARG:HD2	2.24	0.53
4:CD:61:LYS:HG3	4:CD:203:VAL:HG13	1.91	0.53
7:CG:12:LEU:HD13	7:CG:25:ALA:HB2	1.90	0.53
24:CY:52:ALA:HA	24:CY:55:LEU:HD13	1.90	0.53
27:D2:30:ARG:HB2	56:DX:5:TYR:CE1	2.43	0.53
35:DA:654(D):G:H22	35:DA:654(P):C:H42	1.55	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1094:U:N3	35:DA:1097:U:OP2	2.42	0.53
35:DA:1186:G:O5'	35:DA:1186:G:H8	1.92	0.53
37:DC:42:VAL:N	37:DC:177:GLY:O	2.41	0.53
37:DC:214:TYR:HE1	37:DC:224:ARG:HH11	1.56	0.53
39:DE:93:VAL:HG21	39:DE:180:ASN:HA	1.89	0.53
1:AA:64:G:H4'	1:AA:65:U:H5''	1.91	0.53
1:AA:80:G:O6	1:AA:89:C:N4	2.42	0.53
1:AA:1084:G:H5'	1:AA:1102:A:OP2	2.09	0.53
12:AL:27:LEU:C	12:AL:29:GLY:H	2.13	0.53
22:AW:40:C:H2'	22:AW:41:C:C6	2.44	0.53
35:BA:78:A:H2'	35:BA:79:G:H8	1.74	0.53
35:BA:389:G:H1	48:BP:71:VAL:HG12	1.74	0.53
35:BA:2101:G:H2'	35:BA:2102:U:H6	1.73	0.53
35:BA:2579:C:H2'	35:BA:2580:U:O4'	2.09	0.53
36:BB:61:G:H2'	36:BB:62:C:H6	1.73	0.53
39:BE:77:ILE:HG22	39:BE:78:LEU:HG	1.91	0.53
39:BE:101:ARG:HB2	39:BE:201:THR:HG21	1.91	0.53
44:BJ:81:UNK:O	44:BJ:83:UNK:N	2.42	0.53
49:BQ:116:GLU:O	49:BQ:120:ILE:HG12	2.09	0.53
57:BY:35:TYR:CD2	57:BY:69:ALA:HB3	2.44	0.53
1:CA:781:A:O2'	1:CA:1522:U:O2	2.25	0.53
11:CK:111:ASP:OD1	18:CR:84:LYS:HE2	2.09	0.53
12:CL:71:PRO:C	12:CL:102:ARG:HH12	2.13	0.53
19:CS:6:LYS:HG3	19:CS:7:LYS:HE2	1.91	0.53
35:DA:8:A:H2'	35:DA:9:U:C5	2.44	0.53
35:DA:813:U:H2'	35:DA:814:C:H6	1.74	0.53
35:DA:1094:U:H1'	35:DA:1097:U:C5	2.39	0.53
36:DB:40:U:H3'	36:DB:41:U:H5''	1.90	0.53
48:DP:114:ILE:HD12	48:DP:115:LEU:N	2.21	0.53
48:DP:124:LYS:HD3	48:DP:143:GLY:CA	2.39	0.53
50:DR:4:LEU:O	50:DR:5:LYS:HD3	2.09	0.53
52:DT:35:LYS:HZ1	52:DT:41:ARG:HE	1.57	0.53
1:AA:410:G:H21	1:AA:432:A:H62	1.56	0.52
1:AA:1244:C:H2'	1:AA:1245:A:C8	2.44	0.52
3:AC:127:ARG:N	3:AC:127:ARG:HD2	2.24	0.52
7:AG:15:ASP:HB3	7:AG:19:GLY:N	2.23	0.52
13:AM:124:PRO:HD2	24:AY:163:GLY:H	1.73	0.52
35:BA:630:G:N2	35:BA:633:A:OP2	2.29	0.52
35:BA:1425:G:H2'	35:BA:1426:G:C8	2.44	0.52
35:BA:1902:C:H4'	38:BD:244:ARG:HA	1.90	0.52
35:BA:2494:G:O2'	49:BQ:80:GLU:HA	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:42:VAL:HG13	37:BC:217:THR:HG22	1.91	0.52
45:BK:44:ALA:O	45:BK:48:MET:HG2	2.09	0.52
48:BP:114:ILE:HD12	48:BP:115:LEU:N	2.22	0.52
53:BU:91:ASP:OD1	53:BU:96:ALA:HB2	2.09	0.52
1:CA:409:G:H5'	4:CD:25:ARG:HB2	1.92	0.52
1:CA:512:U:H2'	1:CA:513:C:C6	2.44	0.52
1:CA:690:G:H2'	1:CA:691:G:C8	2.44	0.52
1:CA:1178:G:P	9:CI:93:ARG:HH21	2.33	0.52
1:CA:1278:U:H5''	1:CA:1279:A:O4'	2.09	0.52
1:CA:1457:G:H2'	1:CA:1458:G:H8	1.74	0.52
3:CC:77:ILE:O	3:CC:83:ARG:HB3	2.09	0.52
5:CE:6:PHE:HB3	5:CE:35:GLY:O	2.08	0.52
10:CJ:6:ILE:HG22	10:CJ:98:ILE:HG23	1.89	0.52
24:CY:19:ILE:O	24:CY:23:GLU:HB2	2.09	0.52
24:CY:303:ARG:N	24:CY:304:PRO:HD3	2.24	0.52
30:D5:35:GLU:O	30:D5:36:CYS:CB	2.57	0.52
35:DA:1721:G:N1	35:DA:1739:U:OP2	2.42	0.52
35:DA:2176:A:H2'	35:DA:2177:C:C5	2.44	0.52
35:DA:2747:G:O6	35:DA:2755:C:H5''	2.08	0.52
36:DB:56:G:H5'	41:DG:27:ASN:ND2	2.24	0.52
39:DE:51:PHE:CD1	39:DE:52:LEU:HD22	2.43	0.52
1:AA:1165:C:N3	1:AA:1171:G:N1	2.36	0.52
2:AB:96:ARG:N	2:AB:96:ARG:HD2	2.24	0.52
35:BA:150:C:H2'	35:BA:151:C:H6	1.75	0.52
35:BA:225:A:O2'	35:BA:257:A:H4'	2.09	0.52
35:BA:1292:U:H2'	35:BA:1293:C:C6	2.44	0.52
35:BA:1316:U:H2'	35:BA:1317:A:H8	1.75	0.52
35:BA:2467:C:H4'	49:BQ:123:HIS:CD2	2.44	0.52
37:BC:52:PRO:HG2	37:BC:53:ARG:HD3	1.91	0.52
38:BD:132:PRO:HD3	38:BD:190:TYR:CZ	2.44	0.52
41:BG:38:VAL:HG22	41:BG:93:THR:HG23	1.91	0.52
46:BN:120:LEU:O	46:BN:121:LYS:HD2	2.09	0.52
48:BP:97:PRO:C	48:BP:99:LEU:H	2.13	0.52
58:BZ:10:ARG:HH21	58:BZ:26:GLY:H	1.57	0.52
1:CA:1030(D):A:H62	1:CA:1031:G:H21	1.57	0.52
2:CB:84:GLU:HG3	2:CB:215:LEU:HB3	1.90	0.52
3:CC:36:ASP:HB3	3:CC:40:ARG:HH12	1.74	0.52
6:CF:76:ALA:HB1	6:CF:80:ARG:NH2	2.23	0.52
26:D1:52:ARG:NH1	35:DA:2218:U:H1'	2.25	0.52
31:D6:46:HIS:HB2	31:D6:47:THR:O	2.08	0.52
34:D9:15:LYS:NZ	35:DA:2753:A:N3	2.46	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:483:A:C4	57:DY:60:PHE:HE1	2.27	0.52
35:DA:893:C:H2'	35:DA:894:C:C6	2.44	0.52
35:DA:2030:A:H4'	35:DA:2031:A:C8	2.44	0.52
42:DH:84:SER:O	42:DH:85:LYS:HB3	2.09	0.52
43:DI:128:LEU:H	43:DI:128:LEU:HD22	1.73	0.52
52:DT:29:ARG:HD3	52:DT:86:ILE:HG22	1.90	0.52
1:AA:1079:G:O3'	5:AE:14:ARG:NH2	2.41	0.52
3:AC:16:ARG:NH1	3:AC:181:ASN:OD1	2.42	0.52
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.10	0.52
7:AG:146:GLU:HG2	7:AG:149:ARG:HH12	1.73	0.52
13:AM:14:ARG:HA	13:AM:43:THR:O	2.09	0.52
35:BA:1281:G:H8	35:BA:1281:G:H5'	1.74	0.52
47:BO:90:GLN:O	47:BO:91:LEU:HB2	2.08	0.52
58:BZ:44:PHE:HZ	58:BZ:86:VAL:HG11	1.74	0.52
1:CA:553:A:H2'	1:CA:554:C:H6	1.73	0.52
1:CA:738:C:H2'	1:CA:739:C:C6	2.44	0.52
1:CA:1446:U:H4'	1:CA:1447:A:N7	2.24	0.52
2:CB:21:ARG:NH2	2:CB:38:GLY:O	2.42	0.52
2:CB:91:PRO:HG3	2:CB:154:LEU:HB2	1.91	0.52
35:DA:272(D):G:H1	35:DA:364:C:N4	2.06	0.52
35:DA:296:C:O2'	35:DA:297:C:H5'	2.09	0.52
35:DA:1186:G:H2'	35:DA:1187:G:O4'	2.10	0.52
35:DA:1853:A:H2'	35:DA:1854:A:C8	2.44	0.52
35:DA:2561:A:H4'	47:DO:40:VAL:HG11	1.92	0.52
40:DF:185:ASP:HA	40:DF:188:ARG:HG2	1.91	0.52
48:DP:48:PRO:O	48:DP:50:ARG:N	2.43	0.52
56:DX:54:VAL:HG22	56:DX:81:VAL:HG12	1.91	0.52
57:DY:28:LYS:HG2	57:DY:39:VAL:HG22	1.91	0.52
1:AA:189:G:H2'	1:AA:189(A):C:H6	1.74	0.52
1:AA:522:C:H5''	12:AL:120:TYR:OH	2.09	0.52
1:AA:779:C:H5''	11:AK:122:LYS:HG2	1.90	0.52
1:AA:1152:A:H2'	1:AA:1153:C:C6	2.45	0.52
1:AA:1278:U:H5''	1:AA:1279:A:O4'	2.09	0.52
4:AD:88:VAL:HG13	5:AE:97:GLY:HA2	1.92	0.52
11:AK:21:ILE:HB	11:AK:84:VAL:HA	1.90	0.52
22:AW:58:A:O2'	22:AW:60:U:OP2	2.28	0.52
27:B2:53:LEU:O	27:B2:57:ILE:HG13	2.08	0.52
35:BA:51:G:N2	35:BA:120:U:O2	2.42	0.52
35:BA:693:C:O2'	35:BA:1353:A:N3	2.36	0.52
35:BA:784:A:O2'	35:BA:785:G:H5''	2.09	0.52
35:BA:987:G:O2'	35:BA:1000:A:N3	2.38	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1331:A:HO2'	35:BA:1332:G:H8	1.57	0.52
35:BA:1677:A:H2'	35:BA:1678:G:C8	2.44	0.52
35:BA:2174:C:H2'	35:BA:2175:C:C6	2.43	0.52
35:BA:2657:A:O2'	42:BH:160:LYS:HE2	2.10	0.52
45:BK:111:LYS:HB3	45:BK:115:LEU:HD11	1.91	0.52
49:BQ:30:GLY:O	49:BQ:134:ARG:NH1	2.42	0.52
56:BX:12:VAL:CB	56:BX:17:ALA:HB1	2.35	0.52
1:CA:35:G:O2'	12:CL:118:SER:O	2.17	0.52
1:CA:217:C:H2'	1:CA:218:C:C6	2.44	0.52
1:CA:360:A:H2'	1:CA:361:G:C8	2.44	0.52
9:CI:43:ALA:C	9:CI:45:ALA:H	2.13	0.52
24:CY:336:VAL:HA	24:CY:340:ASP:HB2	1.90	0.52
35:DA:527:C:H41	35:DA:2779:U:P	2.32	0.52
35:DA:1653:G:H3'	50:DR:4:LEU:HD23	1.91	0.52
35:DA:2720:U:C2	35:DA:2721:A:C8	2.97	0.52
39:DE:54:GLN:O	39:DE:75:VAL:HG23	2.09	0.52
42:DH:27:LYS:HG2	42:DH:32:GLU:HG3	1.92	0.52
46:DN:55:VAL:HG22	46:DN:126:PRO:HA	1.90	0.52
48:DP:79:ARG:NE	48:DP:109:GLY:O	2.43	0.52
51:DS:85:VAL:HG23	51:DS:106:ARG:HG3	1.91	0.52
1:AA:911:U:H2'	1:AA:912:C:C6	2.45	0.52
4:AD:14:ARG:HB2	4:AD:40:PRO:HD2	1.91	0.52
11:AK:54:ARG:HH12	22:AW:40:C:P	2.32	0.52
12:AL:24:VAL:HG22	12:AL:97:ARG:HB3	1.91	0.52
24:AY:131:ASP:O	24:AY:135:MET:HG3	2.10	0.52
35:BA:82:G:N1	35:BA:103:A:OP2	2.42	0.52
35:BA:863:A:H2'	35:BA:864:G:H8	1.74	0.52
39:BE:4:ILE:HD13	39:BE:28:ALA:HB1	1.92	0.52
39:BE:75:VAL:C	39:BE:77:ILE:H	2.13	0.52
41:BG:32:PRO:HA	41:BG:162:THR:HB	1.91	0.52
52:BT:42:ILE:HG13	52:BT:42:ILE:O	2.08	0.52
1:CA:19:C:H5''	5:CE:86:ALA:HB3	1.90	0.52
1:CA:712:A:H2'	1:CA:713:G:C8	2.45	0.52
1:CA:1158:C:N4	1:CA:1181:G:H22	2.07	0.52
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.09	0.52
2:CB:140:HIS:O	2:CB:144:ARG:HG2	2.10	0.52
8:CH:36:LEU:HA	8:CH:39:LEU:HD23	1.92	0.52
10:CJ:87:THR:C	10:CJ:89:ASP:H	2.12	0.52
31:D6:46:HIS:HA	31:D6:47:THR:CG2	2.37	0.52
35:DA:2075:U:OP2	35:DA:2238:G:O2'	2.28	0.52
41:DG:98:ARG:O	41:DG:101:ILE:HG13	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DK:99:ILE:O	45:DK:138:VAL:HA	2.08	0.52
54:DV:15:GLU:HB3	54:DV:16:PRO:CD	2.39	0.52
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.43	0.52
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.44	0.52
2:AB:73:THR:HG22	2:AB:95:GLN:O	2.09	0.52
4:AD:38:TYR:CD2	4:AD:45:GLN:HB3	2.45	0.52
24:AY:330:ARG:NH1	24:AY:340:ASP:OD2	2.34	0.52
33:B8:52:LYS:N	33:B8:53:PRO:HD2	2.24	0.52
35:BA:30:G:H2'	35:BA:31:C:C6	2.44	0.52
35:BA:459:U:H2'	35:BA:460:A:H8	1.75	0.52
35:BA:2262:U:H2'	35:BA:2263:C:C6	2.44	0.52
35:BA:2779:U:H1'	35:BA:2781:A:C5	2.45	0.52
36:BB:47:C:O2'	51:BS:93:LYS:HG2	2.10	0.52
38:BD:164:GLN:OE1	38:BD:176:ARG:NH2	2.43	0.52
1:CA:954:G:H5'	13:CM:120:LYS:HZ1	1.74	0.52
3:CC:127:ARG:N	3:CC:127:ARG:HD2	2.25	0.52
17:CQ:59:ILE:HG21	17:CQ:71:PHE:HB3	1.92	0.52
22:CW:71:G:H2'	22:CW:72:C:C6	2.44	0.52
36:DB:50:G:OP1	51:DS:62:LYS:HB2	2.10	0.52
39:DE:111:ARG:HA	50:DR:2:ARG:CG	2.27	0.52
41:DG:16:ARG:HD3	41:DG:31:VAL:HG21	1.91	0.52
45:DK:2:LYS:HD3	45:DK:68:VAL:HG21	1.92	0.52
1:AA:1328:C:O2'	13:AM:29:ARG:NH2	2.43	0.52
2:AB:172:ILE:H	2:AB:172:ILE:CD1	2.12	0.52
4:AD:127:THR:HG23	4:AD:147:ALA:HB3	1.90	0.52
6:AF:60:PHE:HE2	18:AR:78:LEU:HD21	1.75	0.52
17:AQ:10:VAL:HG13	17:AQ:19:VAL:HB	1.91	0.52
35:BA:557:U:H2'	35:BA:558:G:H8	1.74	0.52
35:BA:1188:U:H4'	54:BV:79:VAL:HG22	1.91	0.52
35:BA:1210:A:H5'	35:BA:1210:A:C8	2.43	0.52
35:BA:2777:G:H5''	35:BA:2778:A:H5'	1.91	0.52
37:BC:11:LEU:HB3	37:BC:33:LEU:HD22	1.92	0.52
46:BN:19:GLU:HG3	46:BN:20:GLY:N	2.25	0.52
48:BP:23:PRO:HB3	48:BP:29:LYS:HB2	1.91	0.52
1:CA:9:G:OP1	5:CE:122:GLU:HB2	2.10	0.52
1:CA:59:A:H1'	1:CA:354:G:N2	2.25	0.52
1:CA:160:A:H2'	1:CA:161:A:C8	2.44	0.52
1:CA:416:G:H2'	1:CA:417:C:C6	2.44	0.52
1:CA:620:C:H2'	1:CA:621:A:C8	2.44	0.52
1:CA:913:A:H4'	1:CA:914:A:O5'	2.10	0.52
1:CA:1067:A:O2'	1:CA:1068:G:OP2	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:6:ILE:H	8:CH:6:ILE:HD12	1.75	0.52
13:CM:32:GLU:O	13:CM:36:LYS:HG2	2.10	0.52
13:CM:33:ALA:O	13:CM:37:THR:OG1	2.17	0.52
19:CS:48:THR:HG22	19:CS:61:TYR:HD1	1.74	0.52
29:D4:11:PRO:O	29:D4:29:PRO:HG3	2.09	0.52
35:DA:274:G:H1'	35:DA:275:G:C6	2.43	0.52
35:DA:307:G:N1	35:DA:310:A:OP2	2.43	0.52
35:DA:2098:U:O2	35:DA:2191:G:N2	2.30	0.52
41:DG:9:ARG:O	41:DG:13:GLU:HG2	2.09	0.52
41:DG:119:GLY:H	41:DG:181:ARG:HH21	1.58	0.52
42:DH:41:MET:HG3	42:DH:42:ARG:N	2.14	0.52
48:DP:24:GLY:O	48:DP:25:SER:HB3	2.09	0.52
51:DS:97:ARG:HH11	51:DS:97:ARG:C	2.13	0.52
53:DU:91:ASP:OD1	53:DU:96:ALA:HB2	2.10	0.52
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.45	0.52
9:AI:5:TYR:HA	9:AI:17:VAL:O	2.08	0.52
10:AJ:26:ALA:CA	10:AJ:29:ARG:HH12	2.22	0.52
10:AJ:29:ARG:HG2	10:AJ:29:ARG:HH11	1.75	0.52
22:AW:67:C:H2'	22:AW:68:C:H6	1.75	0.52
24:AY:341:LEU:HA	24:AY:344:LEU:HD21	1.91	0.52
25:B0:53:MET:HA	25:B0:58:THR:O	2.09	0.52
26:B1:25:LYS:C	26:B1:27:GLU:H	2.11	0.52
30:B5:35:GLU:O	30:B5:36:CYS:HB3	2.09	0.52
35:BA:52:A:H2'	35:BA:53:A:C8	2.45	0.52
35:BA:144:C:H2'	35:BA:145:G:H8	1.74	0.52
35:BA:527:C:H41	35:BA:2779:U:P	2.33	0.52
35:BA:1525:G:H2'	35:BA:1526:G:C8	2.44	0.52
35:BA:2735:G:H2'	35:BA:2736:G:H8	1.75	0.52
40:BF:21:ALA:C	40:BF:23:ASP:H	2.12	0.52
42:BH:30:LYS:HE3	42:BH:81:GLU:N	2.25	0.52
44:BJ:27:UNK:C	44:BJ:84:UNK:HA	2.40	0.52
45:BK:30:HIS:N	45:BK:30:HIS:CD2	2.77	0.52
48:BP:64:LYS:O	48:BP:66:GLY:N	2.42	0.52
54:BV:21:ARG:HB3	54:BV:91:TYR:HB2	1.90	0.52
58:BZ:41:LEU:HD11	58:BZ:82:ARG:HH21	1.74	0.52
1:CA:28:G:O2'	1:CA:296:U:OP1	2.27	0.52
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.44	0.52
2:CB:97:TRP:CH2	2:CB:173:ALA:HA	2.45	0.52
2:CB:197:VAL:HB	2:CB:200:ILE:HG12	1.91	0.52
10:CJ:34:VAL:HG22	10:CJ:74:ILE:HG22	1.91	0.52
13:CM:83:ASP:OD1	13:CM:84:ILE:N	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:48:TRP:O	16:CP:49:LEU:HB2	2.10	0.52
19:CS:46:GLY:H	19:CS:62:ILE:HG23	1.75	0.52
24:CY:246:ASP:HB2	35:DA:2493:U:H5'	1.92	0.52
24:CY:252:VAL:HG13	24:CY:259:THR:HG22	1.92	0.52
24:CY:304:PRO:HD2	24:CY:309:SER:OG	2.10	0.52
35:DA:1049:C:H2'	35:DA:1050:A:C8	2.45	0.52
35:DA:1088:A:N6	45:DK:129:GLY:O	2.42	0.52
35:DA:1095:A:C6	35:DA:1096:A:C6	2.98	0.52
35:DA:1357:U:H2'	35:DA:1358:G:O4'	2.10	0.52
47:DO:80:ASP:OD2	52:DT:64:ARG:NH2	2.39	0.52
52:DT:63:VAL:O	52:DT:73:GLU:HA	2.10	0.52
1:AA:641:U:O2	1:AA:642:A:N6	2.41	0.52
1:AA:868:C:H2'	1:AA:869:G:O4'	2.10	0.52
1:AA:1442(B):A:OP1	1:AA:1442(B):A:H4'	2.09	0.52
5:AE:101:ILE:HD11	5:AE:119:LEU:CD2	2.40	0.52
24:AY:278:ILE:HG22	24:AY:282:ARG:HH22	1.75	0.52
35:BA:663:G:O3'	48:BP:21:ARG:NH2	2.43	0.52
35:BA:2241:A:H2'	35:BA:2242:G:C8	2.45	0.52
52:BT:28:VAL:HG22	52:BT:46:GLU:HG3	1.92	0.52
58:BZ:4:ARG:NH1	58:BZ:60:GLU:OE1	2.43	0.52
1:CA:189(A):C:H42	1:CA:189(J):G:H1	1.56	0.52
1:CA:376:G:OP1	16:CP:5:ARG:HB2	2.10	0.52
1:CA:1127:G:H1'	1:CA:1148:U:H3	1.75	0.52
24:CY:344:LEU:H	24:CY:344:LEU:HD23	1.75	0.52
31:D6:27:LYS:O	31:D6:29:ASN:N	2.43	0.52
35:DA:948:G:H1	35:DA:969:U:H3	1.58	0.52
53:DU:92:ARG:CZ	54:DV:11:GLN:H	2.23	0.52
1:AA:129:U:H3	1:AA:232:G:H1	1.57	0.52
1:AA:985:C:H2'	1:AA:986:A:C8	2.45	0.52
1:AA:1275:A:H2'	1:AA:1276:G:C8	2.45	0.52
4:AD:3:ARG:O	4:AD:3:ARG:HD3	2.09	0.52
6:AF:96:PRO:HB3	18:AR:30:ASP:CG	2.29	0.52
13:AM:83:ASP:OD1	13:AM:84:ILE:N	2.42	0.52
13:AM:87:TYR:HB3	19:AS:73:GLU:HG3	1.91	0.52
24:AY:295:LEU:HD13	24:AY:299:ARG:HE	1.74	0.52
35:BA:1078:U:H5'	45:BK:132:ARG:HH12	1.75	0.52
40:BF:51:THR:O	40:BF:93:LYS:NZ	2.34	0.52
42:BH:105:LEU:HD23	42:BH:113:VAL:HB	1.92	0.52
53:BU:9:VAL:O	53:BU:13:LYS:HG2	2.10	0.52
1:CA:243:A:H4'	1:CA:244:U:O5'	2.09	0.52
1:CA:543:C:H2'	1:CA:544:G:H8	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:745:C:OP1	1:CA:851:G:O2'	2.28	0.52
6:CF:97:PHE:N	18:CR:30:ASP:OD1	2.43	0.52
35:DA:654(R):C:H2'	35:DA:654(S):G:C5	2.44	0.52
35:DA:724:U:H2'	35:DA:725:G:O4'	2.10	0.52
35:DA:1570:A:H2'	35:DA:1571:A:C8	2.45	0.52
40:DF:117:ARG:HH21	40:DF:187:VAL:HA	1.75	0.52
43:DI:101:LEU:HD12	43:DI:107:VAL:HB	1.92	0.52
45:DK:4:VAL:O	45:DK:5:VAL:HG12	2.09	0.52
1:AA:867:G:O2'	1:AA:873:A:N1	2.41	0.51
1:AA:1075:C:H2'	1:AA:1076:C:C6	2.45	0.51
1:AA:1320:C:H42	19:AS:36:ARG:NE	2.08	0.51
8:AH:86:ILE:HG21	8:AH:133:LEU:HD22	1.93	0.51
9:AI:4:TYR:O	9:AI:18:PHE:HA	2.10	0.51
9:AI:50:LEU:O	9:AI:53:VAL:HG22	2.10	0.51
31:B6:39:TYR:HE1	35:BA:2347:C:H4'	1.75	0.51
35:BA:32:C:O2'	35:BA:33:U:H5'	2.10	0.51
35:BA:71:A:H5'	35:BA:71:A:C8	2.44	0.51
35:BA:271(I):G:N2	35:BA:271(P):C:C2	2.78	0.51
35:BA:295:G:P	57:BY:2:ARG:HH22	2.34	0.51
35:BA:1539:G:C6	35:BA:1540:U:O2	2.62	0.51
35:BA:2158:A:H4'	35:BA:2159:G:H5'	1.91	0.51
35:BA:2291:U:H2'	35:BA:2292:C:H6	1.75	0.51
35:BA:2554:U:H2'	35:BA:2555:U:C6	2.45	0.51
41:BG:45:GLU:N	41:BG:88:ILE:HG13	2.24	0.51
45:BK:77:LEU:HB3	45:BK:107:ILE:CD1	2.40	0.51
48:BP:105:LEU:H	48:BP:105:LEU:HD12	1.76	0.51
58:BZ:101:PRO:O	58:BZ:102:LEU:HD12	2.11	0.51
1:CA:474:G:H2'	1:CA:475:G:C8	2.45	0.51
1:CA:483:C:OP2	1:CA:484:G:O2'	2.19	0.51
1:CA:596:C:H2'	1:CA:597:G:H8	1.75	0.51
1:CA:1388:C:H2'	1:CA:1389:C:H6	1.74	0.51
2:CB:25:ASN:O	2:CB:27:LYS:N	2.42	0.51
4:CD:128:VAL:CG1	4:CD:129:ASN:H	2.18	0.51
7:CG:101:LEU:O	7:CG:105:VAL:HG23	2.10	0.51
10:CJ:81:THR:C	10:CJ:83:GLU:H	2.13	0.51
24:CY:234:ALA:HB2	24:CY:247:SER:OG	2.11	0.51
35:DA:118:A:H5'	35:DA:119:A:H8	1.74	0.51
35:DA:142:A:H8	35:DA:1595:G:H21	1.53	0.51
35:DA:150:C:H2'	35:DA:151:C:H6	1.76	0.51
36:DB:22:U:O4	36:DB:61:G:O6	2.28	0.51
37:DC:6:LYS:HD2	37:DC:6:LYS:O	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DF:7:TYR:HD2	40:DF:16:GLY:H	1.57	0.51
41:DG:88:ILE:HD12	41:DG:88:ILE:H	1.75	0.51
43:DI:1:MET:O	43:DI:20:ASP:HA	2.10	0.51
43:DI:68:LEU:HA	43:DI:71:ILE:HG12	1.92	0.51
45:DK:76:TYR:OH	45:DK:80:LYS:HD2	2.09	0.51
50:DR:3:HIS:O	50:DR:4:LEU:HB3	2.10	0.51
52:DT:23:ARG:HB2	52:DT:24:PRO:HD2	1.92	0.51
1:AA:177:C:H2'	1:AA:178:C:H6	1.75	0.51
1:AA:178:C:C2	1:AA:179:A:C8	2.98	0.51
1:AA:781:A:O2'	1:AA:1522:U:O2	2.23	0.51
1:AA:1034:G:H2'	1:AA:1035:A:C5	2.45	0.51
1:AA:1107:C:P	3:AC:172:ARG:HD2	2.50	0.51
1:AA:1265:G:H2'	1:AA:1266:G:C8	2.45	0.51
6:AF:4:TYR:CD1	6:AF:92:LYS:HA	2.44	0.51
19:AS:27:GLU:OE1	19:AS:27:GLU:N	2.42	0.51
22:AW:30:G:N2	22:AW:40:C:O2	2.39	0.51
31:B6:11:LEU:HD23	31:B6:26:ASN:CG	2.30	0.51
35:BA:635:C:O2'	35:BA:639:U:OP1	2.26	0.51
35:BA:1024:G:C8	35:BA:1025:G:H2'	2.44	0.51
35:BA:2236:C:H2'	35:BA:2237:G:O4'	2.10	0.51
36:BB:91:C:OP2	49:BQ:16:ARG:NH1	2.43	0.51
38:BD:133:LEU:HD23	38:BD:136:ILE:HD12	1.91	0.51
40:BF:83:PHE:O	40:BF:85:GLY:N	2.43	0.51
45:BK:18:THR:H	45:BK:19:PRO:CD	2.23	0.51
1:CA:157:G:H1	1:CA:164:U:H3	1.55	0.51
1:CA:484:G:H5'	1:CA:486:U:O4'	2.10	0.51
1:CA:509:A:N3	1:CA:543:C:O2'	2.42	0.51
1:CA:1129:C:N4	1:CA:1133:G:N7	2.58	0.51
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.46	0.51
2:CB:54:THR:HG23	2:CB:199:TYR:HB3	1.91	0.51
3:CC:73:PRO:HG2	3:CC:74:GLY:H	1.75	0.51
4:CD:30:LYS:C	4:CD:32:ALA:H	2.13	0.51
13:CM:2:ALA:N	13:CM:9:ILE:HG23	2.25	0.51
22:CW:44:G:H2'	22:CW:45:U:O4'	2.11	0.51
35:DA:589:C:H2'	35:DA:590:A:C8	2.44	0.51
35:DA:690:G:H2'	35:DA:691:C:C6	2.45	0.51
38:DD:265:PRO:O	38:DD:267:SER:N	2.43	0.51
39:DE:101:ARG:HB2	39:DE:201:THR:HG21	1.93	0.51
41:DG:113:ARG:NE	41:DG:113:ARG:HA	2.26	0.51
1:AA:235:C:H2'	1:AA:236:G:H8	1.75	0.51
1:AA:749:C:H2'	1:AA:750:G:H8	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:146:ALA:O	5:AE:149:GLU:HG2	2.10	0.51
10:AJ:63:PHE:CD1	14:AN:58:LYS:HA	2.30	0.51
22:AW:50:U:O5'	22:AW:50:U:H6	1.94	0.51
35:BA:1049:C:H2'	35:BA:1050:A:C8	2.45	0.51
35:BA:1681:G:H8	35:BA:1681:G:OP2	1.93	0.51
40:BF:68:LYS:C	40:BF:70:THR:H	2.14	0.51
42:BH:86:GLU:HB3	42:BH:132:ARG:HB3	1.92	0.51
45:BK:108:ALA:HB1	45:BK:120:LEU:HG	1.92	0.51
47:BO:23:ARG:HG3	47:BO:24:VAL:N	2.26	0.51
47:BO:97:ARG:HG3	47:BO:97:ARG:HH11	1.76	0.51
50:BR:2:ARG:HB2	50:BR:5:LYS:HE2	1.92	0.51
58:BZ:20:ARG:HH11	58:BZ:20:ARG:CB	2.22	0.51
1:CA:148:G:O2'	1:CA:149:A:H5'	2.10	0.51
1:CA:1289:A:H3'	1:CA:1290:G:H8	1.75	0.51
1:CA:1512:U:H3	1:CA:1523:G:H1	1.59	0.51
2:CB:80:ILE:H	2:CB:80:ILE:CD1	2.21	0.51
8:CH:51:VAL:HG11	8:CH:60:ARG:HB2	1.92	0.51
31:D6:15:GLU:HA	31:D6:49:HIS:HE1	1.74	0.51
35:DA:16:G:H2'	35:DA:17:G:H8	1.76	0.51
35:DA:1280:G:H2'	35:DA:1281:G:H5''	1.92	0.51
35:DA:1516:C:H2'	35:DA:1517:G:C8	2.46	0.51
35:DA:1791:A:H3'	35:DA:1792:G:H8	1.74	0.51
35:DA:2065:C:H1'	35:DA:2449:U:H3	1.75	0.51
38:DD:11:PRO:C	38:DD:13:ARG:H	2.12	0.51
41:DG:16:ARG:CZ	41:DG:31:VAL:HG11	2.40	0.51
45:DK:38:VAL:HG23	45:DK:39:LYS:H	1.76	0.51
48:DP:50:ARG:HG2	48:DP:50:ARG:HH21	1.75	0.51
1:AA:299:G:H2'	1:AA:300:A:C8	2.45	0.51
4:AD:128:VAL:CG1	4:AD:129:ASN:H	2.18	0.51
4:AD:132:ARG:HG2	4:AD:132:ARG:HH11	1.75	0.51
21:AU:9:ARG:HH11	21:AU:9:ARG:HA	1.75	0.51
25:B0:5:LYS:HE3	49:BQ:81:VAL:HG12	1.93	0.51
35:BA:922:U:H2'	35:BA:923:C:C6	2.46	0.51
42:BH:20:ALA:HB3	42:BH:23:ARG:HB2	1.92	0.51
42:BH:43:VAL:HG11	42:BH:52:VAL:HG22	1.92	0.51
48:BP:18:ARG:NH1	48:BP:18:ARG:O	2.42	0.51
48:BP:146:VAL:HG22	48:BP:147:LEU:H	1.75	0.51
58:BZ:81:ARG:HG2	58:BZ:81:ARG:NH1	2.26	0.51
1:CA:35:G:N2	12:CL:118:SER:OG	2.42	0.51
1:CA:955:U:H1'	1:CA:1227:A:H61	1.76	0.51
1:CA:1326:C:H2'	1:CA:1327:C:H6	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:136:VAL:HG13	2:CB:140:HIS:ND1	2.26	0.51
4:CD:26:CYS:O	4:CD:31:CYS:HB2	2.11	0.51
5:CE:80:ILE:HG22	8:CH:104:ARG:NH1	2.25	0.51
6:CF:77:ARG:HB3	6:CF:77:ARG:HH11	1.74	0.51
6:CF:98:LEU:HA	18:CR:30:ASP:HA	1.91	0.51
9:CI:117:HIS:HE1	9:CI:123:PRO:HB3	1.75	0.51
10:CJ:16:LEU:HD13	10:CJ:70:ARG:HD2	1.93	0.51
26:D1:92:LYS:HE2	35:DA:153:C:OP1	2.11	0.51
29:D4:22:ILE:HG22	29:D4:24:THR:HG23	1.93	0.51
35:DA:1516:C:H2'	35:DA:1517:G:H8	1.75	0.51
35:DA:2359:C:H2'	35:DA:2360:A:O4'	2.10	0.51
38:DD:239:ARG:HH21	38:DD:239:ARG:HG2	1.75	0.51
45:DK:137:GLU:HG3	45:DK:138:VAL:N	2.25	0.51
57:DY:8:LYS:HD3	57:DY:28:LYS:HZ3	1.76	0.51
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.93	0.51
2:AB:54:THR:HG21	2:AB:201:ILE:CD1	2.41	0.51
3:AC:150:LYS:HE2	3:AC:152:ILE:HD11	1.92	0.51
12:AL:84:LEU:HD12	12:AL:104:VAL:HG11	1.93	0.51
14:AN:26:ARG:HB2	14:AN:43:CYS:SG	2.51	0.51
22:AW:66:U:H2'	22:AW:67:C:C6	2.45	0.51
27:B2:55:ARG:NH1	35:BA:75:G:H4'	2.26	0.51
29:B4:20:ASN:OD1	29:B4:21:VAL:N	2.44	0.51
35:BA:141:A:H8	35:BA:1408:C:HO2'	1.58	0.51
35:BA:1486:A:N1	35:BA:1504:C:N4	2.59	0.51
35:BA:1654:A:OP1	50:BR:3:HIS:HB2	2.11	0.51
35:BA:1720:U:H2'	35:BA:1721:G:O4'	2.10	0.51
35:BA:1902:C:O2'	38:BD:244:ARG:HB2	2.10	0.51
38:BD:106:ILE:HD11	38:BD:196:VAL:HG13	1.91	0.51
39:BE:16:ARG:O	39:BE:18:ASP:N	2.42	0.51
39:BE:178:GLU:HG3	39:BE:179:GLU:OE2	2.11	0.51
45:BK:77:LEU:HB3	45:BK:107:ILE:HD11	1.91	0.51
48:BP:40:SER:O	48:BP:41:ARG:NE	2.34	0.51
53:BU:90:VAL:HA	54:BV:39:LEU:HD12	1.91	0.51
1:CA:375:U:C2	1:CA:376:G:C8	2.98	0.51
1:CA:921:U:O2	5:CE:19:MET:HB2	2.09	0.51
1:CA:1119:C:H2'	1:CA:1120:G:H8	1.75	0.51
1:CA:1346:A:N1	1:CA:1374:A:H5''	2.25	0.51
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.45	0.51
17:CQ:9:VAL:HG12	17:CQ:56:VAL:HG22	1.93	0.51
17:CQ:12:SER:HB3	17:CQ:20:THR:HB	1.91	0.51
24:CY:267:SER:HB3	25:D0:3:HIS:ND1	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D2:50:ILE:C	27:D2:52:ASP:H	2.14	0.51
34:D9:17:ILE:HB	34:D9:26:ILE:HD13	1.92	0.51
35:DA:754:C:H2'	35:DA:755:C:C6	2.45	0.51
35:DA:887:A:H1'	35:DA:889:C:N4	2.25	0.51
35:DA:996:A:H4'	53:DU:92:ARG:NE	2.25	0.51
35:DA:1677:A:H2'	35:DA:1678:G:C8	2.44	0.51
35:DA:2182:G:H2'	35:DA:2183:C:H6	1.75	0.51
49:DQ:26:TYR:HA	58:DZ:81:ARG:HH22	1.75	0.51
11:AK:124:LYS:HZ2	11:AK:125:PHE:HE1	1.58	0.51
12:AL:32:PHE:HD1	12:AL:86:ARG:HA	1.74	0.51
24:AY:120:ILE:HG13	24:AY:208:VAL:HG22	1.93	0.51
25:B0:25:ARG:HG2	25:B0:25:ARG:HH11	1.74	0.51
28:B3:11:SER:HB3	35:BA:988:A:P	2.50	0.51
35:BA:675:A:N3	35:BA:2443:C:O2'	2.41	0.51
35:BA:754:C:H2'	35:BA:755:C:H6	1.75	0.51
35:BA:2695:C:H2'	35:BA:2696:U:C6	2.46	0.51
35:BA:2712(A):A:H5''	35:BA:2713:A:OP2	2.11	0.51
45:BK:119:ASP:OD1	45:BK:122:ALA:HB3	2.09	0.51
46:BN:46:VAL:O	46:BN:47:ALA:HB3	2.11	0.51
1:CA:59:A:H5'	1:CA:60:A:H5''	1.91	0.51
1:CA:328:C:H4'	1:CA:329:A:C5'	2.38	0.51
1:CA:1211:U:H5'	1:CA:1212:U:OP1	2.10	0.51
1:CA:1321:C:H5''	1:CA:1322:C:H2'	1.93	0.51
1:CA:1427:U:H2'	1:CA:1428:A:C8	2.46	0.51
3:CC:155:GLY:O	3:CC:156:ARG:HB2	2.10	0.51
4:CD:20:TYR:HA	4:CD:26:CYS:HB3	1.92	0.51
12:CL:47:LYS:HD2	12:CL:47:LYS:C	2.31	0.51
18:CR:31:LEU:H	18:CR:31:LEU:HD23	1.75	0.51
19:CS:5:LEU:HD13	19:CS:6:LYS:H	1.76	0.51
21:CU:2:GLY:O	21:CU:4:GLY:N	2.43	0.51
22:CW:16:U:C5	22:CW:18:G:H5''	2.45	0.51
22:CW:56:C:H1'	35:DA:2169:A:C2	2.45	0.51
22:CW:63:G:H2'	22:CW:64:A:O4'	2.11	0.51
24:CY:61:THR:O	24:CY:65:LEU:N	2.43	0.51
24:CY:68:ASP:OD2	24:CY:94:ALA:HB1	2.11	0.51
24:CY:180:LEU:O	24:CY:210:VAL:HG21	2.11	0.51
33:D8:33:ASN:ND2	35:DA:2419:U:OP2	2.43	0.51
35:DA:590:A:H2'	35:DA:591:C:C6	2.46	0.51
35:DA:1418:G:N2	35:DA:1579:A:N7	2.59	0.51
36:DB:40:U:C2	36:DB:43:C:H5''	2.45	0.51
37:DC:52:PRO:HG2	37:DC:53:ARG:HD3	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DG:47:LYS:HG3	41:DG:48:GLU:H	1.76	0.51
49:DQ:43:THR:OG1	49:DQ:45:GLN:HG2	2.11	0.51
53:DU:108:GLU:O	53:DU:112:ARG:HG2	2.10	0.51
54:DV:2:PHE:HB3	54:DV:42:GLY:HA2	1.91	0.51
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.46	0.51
1:AA:1512:U:H2'	1:AA:1513:A:C8	2.46	0.51
5:AE:105:VAL:H	5:AE:106:PRO:HD2	1.76	0.51
22:AV:3:C:H5'	35:BA:2255:G:O2'	2.11	0.51
24:AY:233:ARG:HB2	35:BA:2555:U:O2	2.11	0.51
34:B9:31:LYS:HE2	35:BA:2528:U:H5''	1.92	0.51
35:BA:128:C:H2'	35:BA:129:C:H6	1.75	0.51
35:BA:691:C:H2'	35:BA:692:C:H6	1.76	0.51
35:BA:918:A:H2	36:BB:80:U:H4'	1.75	0.51
35:BA:1308:A:H2'	35:BA:1309:G:O4'	2.10	0.51
35:BA:1449:A:O2'	35:BA:1530:C:N4	2.43	0.51
35:BA:1509(B):A:H2'	35:BA:1510:G:H8	1.74	0.51
35:BA:2412:A:H2'	35:BA:2413:G:O4'	2.11	0.51
44:BJ:54:UNK:O	44:BJ:56:UNK:N	2.44	0.51
1:CA:237:C:H4'	17:CQ:25:ARG:HH12	1.75	0.51
1:CA:973:G:H3'	1:CA:974:A:H5''	1.92	0.51
1:CA:1225:A:N3	1:CA:1225:A:H2'	2.26	0.51
1:CA:1456:G:N2	1:CA:1457:G:N7	2.59	0.51
2:CB:187:LEU:HA	2:CB:201:ILE:HB	1.93	0.51
4:CD:61:LYS:NZ	4:CD:72:GLU:OE2	2.40	0.51
24:CY:288:ARG:HB3	24:CY:288:ARG:NH1	2.25	0.51
35:DA:327:G:H2'	35:DA:328:U:C6	2.45	0.51
35:DA:481:G:OP2	57:DY:47:LYS:HD3	2.10	0.51
35:DA:2175:C:H42	35:DA:2176:A:H62	1.59	0.51
35:DA:2282:G:H4'	35:DA:2283:C:O5'	2.11	0.51
35:DA:2408:U:H2'	35:DA:2409:G:H8	1.76	0.51
45:DK:99:ILE:HG23	45:DK:103:GLN:HB3	1.92	0.51
49:DQ:134:ARG:HA	49:DQ:137:TYR:CD2	2.45	0.51
54:DV:47:VAL:HG12	54:DV:52:VAL:HG13	1.93	0.51
57:DY:2:ARG:C	57:DY:4:LYS:H	2.13	0.51
57:DY:19:LYS:HB3	57:DY:20:TYR:CD1	2.46	0.51
1:AA:620:C:H2'	1:AA:621:A:C8	2.46	0.51
1:AA:688:G:H2'	1:AA:689:C:H6	1.76	0.51
1:AA:711:G:H2'	1:AA:712:A:H8	1.72	0.51
1:AA:952:U:H4'	1:AA:964:A:H61	1.75	0.51
13:AM:90:LEU:C	13:AM:92:HIS:N	2.64	0.51
17:AQ:26:GLN:O	17:AQ:27:PHE:HB3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:118:LEU:HD11	24:AY:180:LEU:HD13	1.93	0.51
31:B6:12:GLU:HA	31:B6:23:THR:HA	1.92	0.51
35:BA:414:C:O2	35:BA:1864:U:O2'	2.28	0.51
35:BA:729:G:C8	38:BD:208:LYS:HE3	2.46	0.51
35:BA:832:G:O2'	48:BP:52:GLU:HB3	2.11	0.51
35:BA:855:G:H2'	35:BA:856:C:C6	2.46	0.51
35:BA:1176:G:OP2	35:BA:1177:A:N6	2.44	0.51
48:BP:24:GLY:O	48:BP:25:SER:HB3	2.11	0.51
48:BP:125:VAL:H	48:BP:145:PRO:HD2	1.74	0.51
52:BT:23:ARG:HB2	52:BT:24:PRO:HD2	1.93	0.51
1:CA:259:G:H2'	1:CA:260:G:C8	2.46	0.51
1:CA:430:A:OP1	4:CD:9:CYS:N	2.41	0.51
1:CA:940:C:H2'	1:CA:941:G:C8	2.46	0.51
2:CB:7:VAL:HA	2:CB:217:ARG:HH22	1.76	0.51
9:CI:88:TYR:O	9:CI:89:ASN:HB2	2.11	0.51
13:CM:7:VAL:HG11	41:DG:139:LEU:CD2	2.40	0.51
13:CM:81:LEU:HB3	13:CM:89:GLY:HA2	1.92	0.51
35:DA:29:U:H2'	35:DA:30:G:C8	2.46	0.51
35:DA:459:U:H2'	35:DA:460:A:H8	1.76	0.51
35:DA:2136:C:H41	35:DA:2155:G:N2	2.09	0.51
35:DA:2142:C:H2'	35:DA:2143:C:C6	2.46	0.51
48:DP:7:ARG:HA	48:DP:7:ARG:HH11	1.75	0.51
52:DT:90:GLN:OE1	52:DT:120:ARG:NH1	2.44	0.51
1:AA:768:A:OP1	1:AA:804:U:H4'	2.11	0.51
3:AC:150:LYS:O	3:AC:201:TYR:N	2.44	0.51
4:AD:31:CYS:C	4:AD:33:MET:H	2.14	0.51
12:AL:27:LEU:HB2	12:AL:33:ARG:HD2	1.93	0.51
22:AW:19:G:N2	22:AW:56:C:N3	2.58	0.51
24:AY:102:TYR:HE2	24:AY:346:TRP:NE1	2.09	0.51
34:B9:29:ASN:HD21	34:B9:32:HIS:CE1	2.29	0.51
35:BA:527:C:H2'	35:BA:2779:U:C5	2.46	0.51
35:BA:1678:G:N2	35:BA:1989:G:N2	2.59	0.51
35:BA:1858:G:O2'	35:BA:1884:A:N6	2.44	0.51
35:BA:2148:G:H2'	35:BA:2149:G:H8	1.76	0.51
35:BA:2864:G:H2'	35:BA:2865:U:C6	2.46	0.51
37:BC:6:LYS:HA	37:BC:9:ARG:HB3	1.92	0.51
42:BH:136:ILE:HD12	42:BH:136:ILE:N	2.26	0.51
43:BI:77:LEU:HB2	43:BI:140:LEU:HA	1.92	0.51
48:BP:16:ARG:HG3	48:BP:17:LYS:N	2.25	0.51
1:CA:17:U:H2'	1:CA:18:C:C6	2.45	0.51
1:CA:636:U:H2'	1:CA:637:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1054:C:O2'	1:CA:1055:A:H5'	2.11	0.51
1:CA:1158:C:H42	1:CA:1181:G:H22	1.57	0.51
3:CC:20:SER:HB2	3:CC:40:ARG:NH2	2.25	0.51
5:CE:40:ARG:HG2	5:CE:40:ARG:HH11	1.76	0.51
26:D1:11:ARG:HB2	26:D1:12:PRO:HD2	1.93	0.51
35:DA:1866:C:H2'	35:DA:1876:A:C8	2.46	0.51
35:DA:2031:A:N3	35:DA:2455:G:O2'	2.37	0.51
35:DA:2485:G:H5''	49:DQ:46:GLN:NE2	2.26	0.51
35:DA:2722:G:H2'	35:DA:2723:C:C6	2.45	0.51
38:DD:94:LEU:HB2	38:DD:104:TYR:CE1	2.46	0.51
45:DK:10:LEU:HD23	45:DK:23:VAL:HB	1.92	0.51
46:DN:34:LEU:HD23	46:DN:107:LEU:HD11	1.93	0.51
46:DN:35:ARG:O	46:DN:37:LYS:N	2.41	0.51
48:DP:80:TYR:CD1	48:DP:111:ARG:HB3	2.46	0.51
55:DW:11:ARG:HG3	55:DW:11:ARG:O	2.10	0.51
57:DY:20:TYR:CE1	57:DY:42:VAL:HA	2.46	0.51
1:AA:21:G:H2'	1:AA:22:G:C8	2.46	0.51
1:AA:1207:G:H2'	1:AA:1208:C:C6	2.46	0.51
1:AA:1298:C:H4'	1:AA:1299:A:C4	2.46	0.51
3:AC:73:PRO:HG2	3:AC:74:GLY:H	1.76	0.51
4:AD:30:LYS:C	4:AD:32:ALA:H	2.13	0.51
11:AK:121:PRO:HD2	11:AK:126:ARG:HD2	1.93	0.51
12:AL:47:LYS:HD2	12:AL:47:LYS:C	2.31	0.51
13:AM:3:ARG:HA	13:AM:9:ILE:HG13	1.93	0.51
15:AO:56:LEU:O	15:AO:60:VAL:HG23	2.11	0.51
35:BA:65:C:H5'	56:BX:71:GLY:HA3	1.91	0.51
35:BA:589:C:H2'	35:BA:590:A:C8	2.45	0.51
35:BA:2815:C:H2'	35:BA:2816:C:H6	1.76	0.51
35:BA:2865:U:OP2	35:BA:2866:U:O2'	2.18	0.51
42:BH:56:SER:HB2	42:BH:61:HIS:CE1	2.46	0.51
49:BQ:31:ASP:HA	49:BQ:134:ARG:NH1	2.26	0.51
49:BQ:132:VAL:HG11	58:BZ:81:ARG:NH2	2.24	0.51
50:BR:28:LEU:O	50:BR:32:GLY:N	2.29	0.51
58:BZ:28:MET:HA	58:BZ:88:PHE:HB2	1.92	0.51
1:CA:426:G:P	4:CD:36:ARG:HH12	2.34	0.51
1:CA:539:A:H2'	1:CA:540:G:C8	2.46	0.51
1:CA:1157:A:N7	1:CA:1180:A:N6	2.58	0.51
1:CA:1347:G:H22	1:CA:1374:A:P	2.33	0.51
1:CA:1376:U:OP1	7:CG:98:SER:OG	2.22	0.51
7:CG:148:ASN:C	7:CG:150:ALA:H	2.13	0.51
24:CY:312:ARG:HE	24:CY:344:LEU:HD12	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:D4:20:ASN:OD1	29:D4:21:VAL:N	2.44	0.51
31:D6:18:ARG:HH21	31:D6:47:THR:HG22	1.76	0.51
35:DA:414:C:O2	35:DA:1864:U:O2'	2.28	0.51
35:DA:1087:G:N2	35:DA:1102:C:H42	2.08	0.51
35:DA:1952:A:C5	47:DO:22:ILE:HD12	2.45	0.51
56:DX:12:VAL:CB	56:DX:17:ALA:HB1	2.37	0.51
1:AA:533:A:O2'	1:AA:534:U:H5''	2.10	0.50
1:AA:707:C:OP1	11:AK:85:ARG:NH1	2.42	0.50
1:AA:945:G:C2	1:AA:946:A:C8	2.99	0.50
9:AI:126:SER:O	9:AI:127:LYS:HB3	2.11	0.50
22:AW:14:A:H61	22:AW:48:C:N4	2.08	0.50
25:B0:27:GLU:HG3	25:B0:68:GLU:HA	1.93	0.50
35:BA:783:A:H8	35:BA:784:A:H4'	1.77	0.50
35:BA:1028:A:H2'	35:BA:1029:A:C8	2.46	0.50
35:BA:1175:U:O5'	35:BA:1176:G:H5'	2.10	0.50
35:BA:1187:G:H8	35:BA:1187:G:O5'	1.95	0.50
35:BA:1419:A:O2'	35:BA:1420:U:H5''	2.11	0.50
35:BA:1923:U:H2'	35:BA:1924:C:C6	2.46	0.50
35:BA:2722:G:H2'	35:BA:2723:C:C6	2.46	0.50
36:BB:50:G:OP1	51:BS:62:LYS:HB2	2.10	0.50
37:BC:191:ARG:HH11	37:BC:191:ARG:HG3	1.76	0.50
40:BF:205:ARG:O	40:BF:205:ARG:HG2	2.11	0.50
51:BS:17:ARG:O	51:BS:20:ARG:HG2	2.12	0.50
51:BS:35:ILE:O	51:BS:53:SER:HB2	2.10	0.50
52:BT:29:ARG:HB3	52:BT:85:LYS:HA	1.93	0.50
53:BU:101:ARG:HB2	53:BU:101:ARG:NH1	2.26	0.50
1:CA:126:G:OP1	1:CA:605:U:O2'	2.27	0.50
1:CA:1055:A:H62	1:CA:1200:C:N4	2.09	0.50
3:CC:53:ALA:O	3:CC:54:ARG:HB2	2.10	0.50
9:CI:18:PHE:HB2	9:CI:62:TYR:O	2.11	0.50
10:CJ:43:ARG:HB2	10:CJ:67:THR:HB	1.92	0.50
26:D1:25:LYS:NZ	35:DA:2396:G:OP1	2.43	0.50
27:D2:67:LYS:O	27:D2:71:ASN:HB3	2.12	0.50
35:DA:1494:A:H2'	35:DA:1495:A:H5''	1.92	0.50
35:DA:1518:U:H2'	35:DA:1519:G:O4'	2.11	0.50
35:DA:1720:U:H2'	35:DA:1721:G:O4'	2.11	0.50
43:DI:72:LEU:HD12	43:DI:138:ILE:HD11	1.92	0.50
48:DP:59:LEU:HA	48:DP:61:ARG:NH1	2.25	0.50
49:DQ:76:LYS:HB3	49:DQ:91:GLU:HG3	1.93	0.50
1:AA:359:U:H2'	1:AA:360:A:H8	1.76	0.50
1:AA:1346:A:H61	1:AA:1374:A:H3'	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:97:TRP:CH2	2:AB:173:ALA:HA	2.47	0.50
4:AD:127:THR:HA	4:AD:132:ARG:HA	1.92	0.50
27:B2:47:ASN:HD22	35:BA:94(A):G:H21	1.58	0.50
29:B4:14:ILE:N	29:B4:14:ILE:HD12	2.26	0.50
35:BA:1791:A:N6	35:BA:1828:G:O2'	2.43	0.50
43:BI:1:MET:HG3	43:BI:23:PRO:HG3	1.92	0.50
47:BO:122:LEU:HD13	52:BT:72:VAL:HG11	1.93	0.50
48:BP:80:TYR:CZ	48:BP:111:ARG:HD3	2.46	0.50
52:BT:57:PHE:CG	52:BT:58:ASN:N	2.80	0.50
53:BU:78:THR:O	53:BU:81:HIS:N	2.44	0.50
55:BW:36:LEU:HD11	55:BW:47:VAL:HG12	1.93	0.50
57:BY:86:ARG:HH21	57:BY:95:LYS:NZ	2.09	0.50
57:BY:86:ARG:HG2	57:BY:87:LYS:N	2.26	0.50
58:BZ:144:LEU:HD11	58:BZ:150:LEU:HB3	1.93	0.50
1:CA:551:U:H2'	1:CA:552:U:C6	2.46	0.50
1:CA:692:U:O4	11:CK:26:ASN:ND2	2.43	0.50
1:CA:1148:U:H4'	9:CI:14:VAL:HG11	1.93	0.50
2:CB:119:GLU:HA	2:CB:122:PHE:HB3	1.93	0.50
12:CL:127:GLU:O	12:CL:129:ALA:N	2.44	0.50
22:CV:8:U:H3	22:CV:14:A:H62	1.58	0.50
31:D6:37:ARG:O	31:D6:49:HIS:HB2	2.11	0.50
35:DA:536:A:H2'	35:DA:537:C:C6	2.46	0.50
35:DA:674:G:H1'	40:DF:74:ARG:HD2	1.92	0.50
35:DA:689:A:H2'	35:DA:690:G:H8	1.76	0.50
35:DA:1049:C:H2'	35:DA:1050:A:H8	1.75	0.50
35:DA:1299:G:H21	35:DA:1641:A:H62	1.58	0.50
1:AA:83:U:N3	1:AA:84:U:O4	2.44	0.50
1:AA:224:C:H2'	1:AA:225:C:C6	2.46	0.50
1:AA:1075:C:H2'	1:AA:1076:C:H6	1.76	0.50
1:AA:1231:G:OP1	9:AI:128:ARG:NH2	2.44	0.50
1:AA:1237:C:H5''	1:AA:1238:A:C8	2.46	0.50
2:AB:178:ARG:HH22	2:AB:196:LEU:C	2.13	0.50
4:AD:112:VAL:HG12	4:AD:116:GLN:OE1	2.11	0.50
16:AP:75:ARG:HH11	16:AP:75:ARG:HG3	1.76	0.50
24:AY:175:ASN:O	24:AY:179:LEU:HD13	2.11	0.50
33:B8:39:LYS:HE3	35:BA:2365:G:O6	2.11	0.50
35:BA:534:U:H2'	35:BA:535:C:C6	2.46	0.50
35:BA:608:A:H2'	35:BA:609:A:H8	1.77	0.50
35:BA:2661:G:H5''	35:BA:2662:A:H2	1.76	0.50
53:BU:88:ILE:HG22	54:BV:47:VAL:CG2	2.41	0.50
53:BU:98:LEU:HA	53:BU:101:ARG:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:104:PHE:HB3	58:BZ:141:VAL:CG2	2.41	0.50
1:CA:97:G:C4	1:CA:98:G:C8	2.99	0.50
1:CA:285:G:H2'	1:CA:286:G:H8	1.77	0.50
1:CA:736:C:O2'	6:CF:90:VAL:O	2.23	0.50
4:CD:3:ARG:O	4:CD:5:ILE:HG13	2.12	0.50
9:CI:7:THR:HB	9:CI:83:ARG:NH1	2.26	0.50
24:CY:36:PRO:HB3	45:DK:29:GLN:CA	2.41	0.50
25:D0:77:ARG:NH2	35:DA:857:C:OP1	2.40	0.50
26:D1:86:SER:HB2	26:D1:89:GLU:HB2	1.94	0.50
28:D3:46:ASN:O	28:D3:50:VAL:HG22	2.10	0.50
34:D9:27:CYS:SG	34:D9:28:GLU:N	2.84	0.50
35:DA:272(B):G:H2'	35:DA:272(C):G:C8	2.46	0.50
35:DA:640:C:H2'	35:DA:641:C:C6	2.46	0.50
35:DA:833:U:H5''	48:DP:48:PRO:HB3	1.92	0.50
35:DA:1418:G:OP1	35:DA:1588:C:O2'	2.29	0.50
35:DA:1541:G:H1'	35:DA:1542:A:C2	2.46	0.50
35:DA:1590:U:C2	35:DA:1591:G:C8	2.99	0.50
35:DA:2175:C:N4	35:DA:2176:A:H62	2.10	0.50
35:DA:2417:C:H2'	35:DA:2418:A:H8	1.76	0.50
35:DA:2561:A:H5''	47:DO:57:VAL:HG11	1.93	0.50
38:DD:109:ASP:HB2	38:DD:197:GLY:HA2	1.93	0.50
48:DP:83:VAL:H	48:DP:115:LEU:CD2	2.25	0.50
50:DR:2:ARG:HB2	50:DR:5:LYS:HE2	1.94	0.50
1:AA:192:U:H2'	1:AA:193:C:H6	1.77	0.50
1:AA:1069:C:O2'	1:AA:1192:C:O2	2.24	0.50
1:AA:1190:G:OP1	3:AC:5:ILE:HG13	2.10	0.50
1:AA:1411:C:H2'	1:AA:1412:C:C6	2.45	0.50
6:AF:30:LEU:CB	6:AF:35:ALA:HB3	2.41	0.50
9:AI:83:ARG:HA	9:AI:86:VAL:HG12	1.92	0.50
20:AT:23:ARG:O	20:AT:27:LYS:HB2	2.12	0.50
35:BA:271(L):U:H4'	35:BA:271(M):G:C4	2.46	0.50
35:BA:729:G:OP2	38:BD:13:ARG:NH1	2.45	0.50
35:BA:1139:G:O2'	35:BA:1143:A:N1	2.32	0.50
35:BA:2183:C:H2'	35:BA:2184:G:C8	2.47	0.50
37:BC:23:ILE:O	37:BC:27:ALA:HB2	2.12	0.50
48:BP:83:VAL:HG11	48:BP:112:LEU:HD21	1.92	0.50
49:BQ:21:THR:OG1	49:BQ:99:PRO:O	2.29	0.50
1:CA:1152:A:H5''	10:CJ:13:HIS:CD2	2.46	0.50
5:CE:45:PHE:CE2	5:CE:47:LYS:HD2	2.46	0.50
6:CF:42:GLU:C	6:CF:44:GLY:H	2.15	0.50
8:CH:11:THR:HG22	8:CH:15:ASN:ND2	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CY:39:TRP:C	24:CY:41:ASP:H	2.14	0.50
24:CY:81:ALA:HB3	24:CY:84:ARG:HE	1.76	0.50
26:D1:60:PHE:HZ	26:D1:94:LEU:HD12	1.76	0.50
28:D3:6:VAL:HG23	28:D3:28:LEU:HD11	1.94	0.50
35:DA:381:G:C6	35:DA:394:A:C6	3.00	0.50
35:DA:2474:C:H5''	35:DA:2475:C:H5	1.77	0.50
38:DD:44:ASN:HB2	38:DD:48:ARG:O	2.11	0.50
49:DQ:134:ARG:HA	49:DQ:137:TYR:HD2	1.77	0.50
1:AA:1241:G:H2'	1:AA:1242:C:C6	2.45	0.50
1:AA:1302:U:C5	13:AM:17:VAL:HG21	2.46	0.50
1:AA:1345:U:H5''	9:AI:120:ARG:NH1	2.26	0.50
1:AA:1407:C:H2'	1:AA:1408:A:H8	1.77	0.50
2:AB:194:PRO:HG2	2:AB:195:ASP:OD1	2.10	0.50
2:AB:231:GLU:HB2	2:AB:232:PRO:CD	2.41	0.50
10:AJ:56:HIS:C	10:AJ:58:ASP:H	2.14	0.50
11:AK:91:ARG:O	11:AK:95:ILE:HG13	2.12	0.50
12:AL:85:ILE:HG13	12:AL:98:TYR:HB3	1.93	0.50
17:AQ:12:SER:HB3	17:AQ:20:THR:HB	1.93	0.50
24:AY:344:LEU:HD23	24:AY:344:LEU:H	1.76	0.50
31:B6:27:LYS:O	31:B6:29:ASN:N	2.45	0.50
35:BA:57:C:H2'	35:BA:58:G:O4'	2.12	0.50
35:BA:483:A:C4	57:BY:60:PHE:HE1	2.29	0.50
35:BA:2853:C:H2'	35:BA:2854:G:C8	2.47	0.50
48:BP:36:LYS:HD3	48:BP:41:ARG:HB3	1.94	0.50
54:BV:81:TYR:C	54:BV:82:ARG:HD2	2.32	0.50
1:CA:824:C:H4'	8:CH:1:MET:H1	1.76	0.50
1:CA:1011:G:H2'	1:CA:1012:U:C6	2.46	0.50
3:CC:34:LEU:O	3:CC:38:ARG:HG3	2.11	0.50
4:CD:3:ARG:O	4:CD:3:ARG:HD3	2.11	0.50
22:CW:16:U:H3'	22:CW:17:C:C5'	2.42	0.50
27:D2:36:ARG:O	27:D2:40:SER:HB3	2.11	0.50
31:D6:17:LYS:O	31:D6:18:ARG:HB3	2.10	0.50
35:DA:127:A:H5''	35:DA:128:C:C6	2.45	0.50
35:DA:128:C:H2'	35:DA:129:C:C6	2.47	0.50
35:DA:139(A):G:H3'	35:DA:140:G:C8	2.47	0.50
35:DA:1525:G:H2'	35:DA:1526:G:C8	2.46	0.50
41:DG:76:SER:OG	41:DG:84:LYS:HD2	2.11	0.50
45:DK:18:THR:H	45:DK:19:PRO:CD	2.24	0.50
48:DP:17:LYS:O	48:DP:17:LYS:HG2	2.12	0.50
52:DT:35:LYS:C	52:DT:37:GLY:H	2.14	0.50
53:DU:65:ILE:HD11	53:DU:93:LYS:HA	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:73:GLN:HB3	58:DZ:87:ASP:HB2	1.92	0.50
1:AA:1081:G:C5'	5:AE:18:ARG:HB3	2.42	0.50
1:AA:1382:C:H2'	1:AA:1383:C:H6	1.77	0.50
1:AA:1483:A:H2	35:BA:1959:G:N3	2.09	0.50
3:AC:14:ILE:HG12	3:AC:15:THR:N	2.20	0.50
6:AF:2:ARG:O	6:AF:66:GLU:HA	2.11	0.50
8:AH:10:LEU:HD22	8:AH:83:ILE:HD11	1.93	0.50
22:AW:8:U:C2	22:AW:48:C:C2	2.99	0.50
26:B1:71:TYR:C	26:B1:73:LEU:H	2.14	0.50
35:BA:1186:G:H2'	35:BA:1187:G:O4'	2.12	0.50
35:BA:1301:A:H4'	35:BA:1302:A:OP1	2.10	0.50
35:BA:1452:A:O2'	35:BA:1453:U:H2'	2.11	0.50
35:BA:2148:G:H2'	35:BA:2149:G:C8	2.46	0.50
35:BA:2677:G:H2'	35:BA:2678:C:C6	2.46	0.50
36:BB:3:C:N4	36:BB:119:G:O6	2.45	0.50
36:BB:7:G:H3'	36:BB:8:U:H5''	1.94	0.50
37:BC:16:ASP:H	37:BC:21:TYR:HH	1.59	0.50
37:BC:46:ALA:HB2	37:BC:213:VAL:HG13	1.93	0.50
38:BD:165:ILE:HD13	38:BD:175:LEU:HD21	1.92	0.50
40:BF:20:LEU:HD12	40:BF:199:TRP:HH2	1.73	0.50
41:BG:164:GLU:N	41:BG:164:GLU:OE1	2.45	0.50
46:BN:9:VAL:HG12	46:BN:10:GLU:N	2.26	0.50
1:CA:20:U:H2'	1:CA:21:G:O4'	2.12	0.50
1:CA:539:A:H2'	1:CA:540:G:H8	1.76	0.50
1:CA:738:C:H2'	1:CA:739:C:H6	1.77	0.50
1:CA:1172:C:H2'	1:CA:1173:G:C8	2.43	0.50
1:CA:1280:A:H5'	10:CJ:40:LEU:HD22	1.92	0.50
1:CA:1367:C:OP1	9:CI:115:GLY:N	2.37	0.50
10:CJ:48:THR:HA	10:CJ:62:HIS:HB3	1.94	0.50
34:D9:9:ARG:HB3	34:D9:9:ARG:HH11	1.76	0.50
35:DA:906:G:H5'	49:DQ:26:TYR:OH	2.11	0.50
35:DA:1341:U:OP1	35:DA:1397:U:N3	2.22	0.50
35:DA:1541:G:H4'	35:DA:1542:A:O4'	2.12	0.50
35:DA:1754:C:H2'	35:DA:1755:A:O4'	2.12	0.50
38:DD:111:LEU:HD13	38:DD:112:GLN:H	1.77	0.50
43:DI:79:ILE:HD11	43:DI:100:ALA:CB	2.41	0.50
52:DT:28:VAL:O	52:DT:28:VAL:HG12	2.10	0.50
1:AA:1414:U:H2'	1:AA:1415:G:H8	1.77	0.50
10:AJ:76:ASN:O	10:AJ:78:ASN:N	2.42	0.50
30:B5:10:LYS:HE3	35:BA:1262:A:N3	2.27	0.50
35:BA:876:C:H2'	35:BA:877:U:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1266:G:O6	55:BW:13:SER:OG	2.20	0.50
38:BD:94:LEU:HB2	38:BD:104:TYR:CE1	2.45	0.50
42:BH:124:GLU:HB2	42:BH:132:ARG:HG2	1.93	0.50
50:BR:3:HIS:O	50:BR:4:LEU:HB3	2.10	0.50
57:BY:20:TYR:CZ	57:BY:42:VAL:HA	2.47	0.50
1:CA:32:A:H2'	1:CA:33:A:C8	2.46	0.50
1:CA:310:G:H2'	1:CA:311:C:H6	1.77	0.50
1:CA:861:G:O2'	1:CA:874:G:O2'	2.29	0.50
2:CB:208:ILE:HA	2:CB:211:ILE:HD12	1.93	0.50
21:CU:9:ARG:HA	21:CU:9:ARG:NH1	2.25	0.50
24:CY:36:PRO:O	24:CY:39:TRP:HB2	2.11	0.50
26:D1:3:LYS:HD2	35:DA:1364:G:OP2	2.11	0.50
31:D6:46:HIS:HA	31:D6:47:THR:CB	2.42	0.50
35:DA:71:A:H5'	35:DA:71:A:H8	1.77	0.50
35:DA:271(H):G:O2'	35:DA:271(I):G:H8	1.95	0.50
35:DA:654(H):G:N2	35:DA:654(J):A:H2'	2.27	0.50
35:DA:1499:C:C2	35:DA:1500:G:C8	2.99	0.50
35:DA:1543:C:H3'	35:DA:1544:A:C5'	2.42	0.50
35:DA:1948:G:H8	35:DA:1948:G:H5'	1.75	0.50
35:DA:2680:C:H5'	39:DE:189:PRO:HA	1.94	0.50
35:DA:2853:C:H2'	35:DA:2854:G:C8	2.45	0.50
39:DE:92:THR:O	39:DE:95:ILE:HG12	2.11	0.50
43:DI:10:GLU:C	43:DI:12:LEU:H	2.15	0.50
52:DT:33:LYS:NZ	52:DT:74:ARG:HH21	2.09	0.50
52:DT:42:ILE:O	52:DT:42:ILE:HG13	2.11	0.50
57:DY:20:TYR:CZ	57:DY:42:VAL:HA	2.47	0.50
1:AA:296:U:O2'	1:AA:556:C:O2	2.26	0.50
1:AA:510:A:N3	1:AA:543:C:H1'	2.26	0.50
1:AA:1238:A:N7	1:AA:1303:C:H1'	2.27	0.50
33:B8:25:MET:HG3	48:BP:64:LYS:HB3	1.94	0.50
35:BA:1290:C:H2'	35:BA:1291:C:H6	1.75	0.50
35:BA:2000:G:OP2	50:BR:3:HIS:NE2	2.45	0.50
35:BA:2141:G:H2'	35:BA:2142:C:H6	1.75	0.50
35:BA:2655:G:O2'	35:BA:2664:G:O6	2.22	0.50
36:BB:40:U:H3'	36:BB:41:U:H5''	1.93	0.50
36:BB:114:C:H4'	51:BS:46:VAL:HG13	1.92	0.50
38:BD:43:ARG:HB3	38:BD:54:ARG:CB	2.42	0.50
41:BG:95:ARG:HG2	41:BG:95:ARG:HH11	1.76	0.50
42:BH:96:ALA:HB1	42:BH:103:LEU:HD11	1.93	0.50
45:BK:98:ARG:HH21	45:BK:139:VAL:HG13	1.76	0.50
51:BS:34:HIS:CD2	51:BS:54:LEU:HB2	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:18:LEU:HD12	54:BV:19:LYS:N	2.27	0.50
57:BY:32:PRO:C	57:BY:34:LYS:H	2.14	0.50
1:CA:149:A:HO2'	1:CA:150:C:H6	1.57	0.50
1:CA:285:G:H2'	1:CA:286:G:C8	2.45	0.50
1:CA:429:U:H1'	1:CA:430:A:H5''	1.93	0.50
1:CA:542:G:P	4:CD:10:ARG:HH22	2.35	0.50
2:CB:61:LEU:HA	2:CB:64:ARG:HD2	1.92	0.50
4:CD:175:SER:O	4:CD:183:GLY:HA2	2.12	0.50
12:CL:32:PHE:HD1	12:CL:86:ARG:HA	1.77	0.50
13:CM:123:ALA:C	24:CY:162:ALA:HA	2.31	0.50
16:CP:20:VAL:HG23	16:CP:34:GLU:O	2.12	0.50
29:D4:14:ILE:HD12	29:D4:14:ILE:N	2.27	0.50
35:DA:225:A:O2'	35:DA:257:A:H4'	2.12	0.50
35:DA:660:G:O3'	40:DF:38:ARG:NH2	2.45	0.50
35:DA:839:U:H2'	35:DA:840:C:C6	2.47	0.50
35:DA:2154:G:H2'	35:DA:2155:G:C8	2.47	0.50
37:DC:181:PHE:HD2	37:DC:185:LYS:HB3	1.77	0.50
39:DE:105:THR:HB	39:DE:197:ILE:HG12	1.94	0.50
39:DE:117:MET:O	39:DE:118:LYS:HB2	2.12	0.50
43:DI:113:ARG:HB2	43:DI:130:TYR:CE1	2.47	0.50
45:DK:119:ASP:OD1	45:DK:122:ALA:HB3	2.11	0.50
1:AA:280:C:N3	17:AQ:39:SER:OG	2.44	0.50
1:AA:684:A:O2'	11:AK:39:PRO:O	2.30	0.50
1:AA:926:G:C6	1:AA:1505:G:C6	3.00	0.50
1:AA:1067:A:H4'	1:AA:1387:G:O2'	2.12	0.50
2:AB:8:LYS:HD3	2:AB:217:ARG:NH1	2.26	0.50
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.12	0.50
3:AC:53:ALA:O	3:AC:54:ARG:HB2	2.12	0.50
11:AK:91:ARG:CZ	18:AR:88:LYS:HE3	2.42	0.50
11:AK:124:LYS:NZ	11:AK:125:PHE:HE1	2.10	0.50
34:B9:27:CYS:SG	34:B9:28:GLU:N	2.84	0.50
35:BA:9:U:C4	35:BA:2629:A:C6	3.00	0.50
35:BA:654(T):C:H2'	35:BA:654(U):A:H5'	1.94	0.50
35:BA:1270:C:H5''	35:BA:1271:G:H5'	1.92	0.50
35:BA:1332:G:N2	35:BA:1610:A:C8	2.78	0.50
35:BA:2243:U:H2'	35:BA:2244:U:C6	2.47	0.50
35:BA:2537:U:H2'	35:BA:2538:C:H6	1.75	0.50
35:BA:2659:G:N2	35:BA:2663:G:O6	2.45	0.50
36:BB:79:C:H2'	36:BB:80:U:O4'	2.11	0.50
37:BC:195:ARG:HG3	37:BC:195:ARG:NH1	2.27	0.50
46:BN:58:ASP:C	46:BN:60:ILE:H	2.14	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:68:HIS:ND1	57:BY:70:SER:HB3	2.27	0.50
58:BZ:18:LEU:HD22	58:BZ:23:LYS:HD2	1.94	0.50
58:BZ:54:HIS:CG	58:BZ:101:PRO:HD3	2.47	0.50
1:CA:171:A:H2'	1:CA:172:A:C8	2.47	0.50
1:CA:186:C:H2'	1:CA:187:C:H6	1.77	0.50
1:CA:356:A:H2'	1:CA:357:G:H8	1.76	0.50
1:CA:667:G:OP1	1:CA:732:C:O2'	2.23	0.50
1:CA:735:C:H2'	1:CA:736:C:H6	1.77	0.50
4:CD:23:GLY:O	4:CD:27:TYR:HD1	1.95	0.50
10:CJ:39:PRO:HB3	10:CJ:70:ARG:NH1	2.27	0.50
24:CY:49:SER:OG	35:DA:1067:A:H1'	2.11	0.50
33:D8:59:LYS:HZ2	48:DP:50:ARG:HB3	1.77	0.50
35:DA:11:G:H2'	35:DA:12:U:C6	2.46	0.50
35:DA:637:A:P	48:DP:116:GLY:HA2	2.51	0.50
1:AA:784:C:H4'	35:BA:1837:C:OP1	2.12	0.49
1:AA:826:C:H5'	8:AH:12:ARG:HH21	1.77	0.49
3:AC:131:ARG:HH21	3:AC:166:GLU:HG3	1.77	0.49
9:AI:28:VAL:HA	9:AI:63:ILE:O	2.12	0.49
15:AO:85:LEU:O	15:AO:85:LEU:HD23	2.12	0.49
26:B1:48:LYS:HA	26:B1:60:PHE:O	2.12	0.49
28:B3:4:LEU:O	28:B3:36:VAL:HA	2.12	0.49
29:B4:15:ILE:HB	29:B4:31:ILE:O	2.12	0.49
35:BA:646:A:H2'	35:BA:647:G:O4'	2.11	0.49
35:BA:1048:A:C2	35:BA:1109:C:H5	2.29	0.49
35:BA:1292:U:H2'	35:BA:1293:C:H6	1.77	0.49
35:BA:2092:U:H4'	35:BA:2093:G:H5''	1.94	0.49
35:BA:2095:C:H2'	35:BA:2096:U:O4'	2.11	0.49
35:BA:2707:G:H5'	50:BR:68:ARG:HH21	1.76	0.49
42:BH:78:GLY:HA2	42:BH:82:GLY:HA3	1.93	0.49
47:BO:47:ILE:HG23	47:BO:48:PRO:HD2	1.94	0.49
54:BV:19:LYS:HZ3	54:BV:20:LEU:H	1.60	0.49
1:CA:1287:A:N3	1:CA:1353:G:O2'	2.40	0.49
3:CC:180:ALA:HB1	3:CC:203:PHE:CE1	2.41	0.49
11:CK:24:SER:O	11:CK:26:ASN:N	2.45	0.49
15:CO:4:THR:OG1	15:CO:7:GLU:HB2	2.11	0.49
30:D5:33:CYS:O	30:D5:36:CYS:O	2.28	0.49
35:DA:1281:G:H5'	35:DA:1281:G:H8	1.75	0.49
35:DA:2698:U:H3	35:DA:2709:G:H1	1.60	0.49
35:DA:2838:G:C4	35:DA:2839:G:C8	3.00	0.49
38:DD:43:ARG:CB	38:DD:54:ARG:HB2	2.42	0.49
47:DO:49:ARG:HD3	47:DO:49:ARG:N	2.23	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:16:ARG:NH1	48:DP:18:ARG:H	2.10	0.49
58:DZ:45:ASP:CG	58:DZ:49:ARG:HH12	2.16	0.49
1:AA:955:U:H1'	1:AA:1227:A:H61	1.77	0.49
1:AA:1027:C:N3	1:AA:1028:C:N4	2.59	0.49
1:AA:1500:A:H5''	1:AA:1508:G:H5''	1.94	0.49
3:AC:34:LEU:O	3:AC:38:ARG:HG3	2.12	0.49
5:AE:34:VAL:HG12	5:AE:62:ALA:HB1	1.94	0.49
5:AE:40:ARG:HG2	5:AE:40:ARG:HH11	1.77	0.49
6:AF:5:GLU:HG3	6:AF:93:SER:OG	2.12	0.49
27:B2:50:ILE:C	27:B2:52:ASP:H	2.15	0.49
28:B3:19:GLN:HE22	28:B3:52:HIS:HE1	1.60	0.49
35:BA:274:G:O2'	35:BA:276:A:OP2	2.27	0.49
35:BA:321:G:C4	35:BA:341:G:H4'	2.47	0.49
35:BA:364:C:C2'	35:BA:365:C:H5'	2.42	0.49
35:BA:1076:C:H2'	35:BA:1077:A:H8	1.76	0.49
35:BA:1509(B):A:H2'	35:BA:1510:G:C8	2.47	0.49
35:BA:2114:A:N3	35:BA:2167:U:O2'	2.42	0.49
37:BC:181:PHE:HD2	37:BC:185:LYS:HB3	1.77	0.49
38:BD:267:SER:C	38:BD:269:PHE:H	2.15	0.49
39:BE:34:VAL:HG11	39:BE:78:LEU:HD22	1.94	0.49
39:BE:93:VAL:HG21	39:BE:180:ASN:HA	1.94	0.49
45:BK:11:GLN:HB2	45:BK:52:ILE:HD11	1.94	0.49
55:BW:84:ARG:O	55:BW:95:ILE:HA	2.13	0.49
1:CA:520:A:OP1	12:CL:52:LEU:HB2	2.12	0.49
1:CA:1175:G:H2'	1:CA:1176:A:H8	1.76	0.49
1:CA:1414:U:H2'	1:CA:1415:G:H8	1.77	0.49
2:CB:88:ALA:HA	2:CB:226:ARG:HH22	1.76	0.49
3:CC:14:ILE:HG12	3:CC:15:THR:N	2.22	0.49
15:CO:78:TYR:O	15:CO:82:ILE:HG22	2.12	0.49
24:CY:25:ARG:O	24:CY:29:LEU:HB2	2.12	0.49
24:CY:131:ASP:HA	24:CY:163:GLY:HA2	1.94	0.49
35:DA:639:U:H3	35:DA:649:G:H1	1.60	0.49
35:DA:958:U:H5''	49:DQ:14:ARG:HD2	1.94	0.49
35:DA:2100:G:N2	35:DA:2189:U:O2	2.37	0.49
35:DA:2836:U:H2'	35:DA:2837:G:C8	2.46	0.49
39:DE:178:GLU:HG3	39:DE:179:GLU:OE2	2.11	0.49
45:DK:21:PRO:HB2	45:DK:22:PRO:CD	2.38	0.49
5:AE:8:GLU:N	5:AE:34:VAL:HG23	2.26	0.49
13:AM:90:LEU:HD13	13:AM:94:ARG:NH2	2.26	0.49
22:AV:2:C:H4'	25:B0:7:LEU:O	2.11	0.49
35:BA:10:G:N7	35:BA:2629:A:N6	2.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:833:U:H5'	48:BP:48:PRO:CB	2.42	0.49
35:BA:1430:C:H2'	35:BA:1431:U:C6	2.47	0.49
35:BA:2025:C:H2'	35:BA:2026:C:H6	1.77	0.49
35:BA:2836:U:H2'	35:BA:2837:G:C8	2.47	0.49
38:BD:182:LEU:O	38:BD:271:ILE:HG13	2.11	0.49
40:BF:4:VAL:HA	40:BF:19:GLU:HB3	1.93	0.49
42:BH:85:LYS:HD2	42:BH:145:ALA:HB2	1.94	0.49
46:BN:42:TRP:O	53:BU:64:ARG:NH1	2.42	0.49
1:CA:768:A:OP1	1:CA:804:U:H4'	2.12	0.49
1:CA:944:G:N2	1:CA:1338:G:C8	2.81	0.49
2:CB:97:TRP:HZ3	2:CB:172:ILE:HG22	1.77	0.49
2:CB:167:PRO:HG2	2:CB:192:SER:OG	2.12	0.49
3:CC:85:ARG:O	3:CC:89:GLU:HB2	2.11	0.49
5:CE:47:LYS:HD3	5:CE:47:LYS:N	2.27	0.49
6:CF:88:VAL:O	6:CF:88:VAL:HG12	2.13	0.49
10:CJ:38:ILE:HD11	10:CJ:71:LEU:HD23	1.95	0.49
26:D1:57:GLU:O	26:D1:58:ILE:HG22	2.12	0.49
31:D6:31:PRO:HB2	35:DA:2286:A:H3'	1.93	0.49
35:DA:214:G:O2'	35:DA:216:A:O2'	2.27	0.49
35:DA:993:G:OP1	53:DU:50:ARG:NH2	2.45	0.49
35:DA:1245:G:OP1	48:DP:16:ARG:NE	2.45	0.49
35:DA:1294:U:O2	50:DR:23:ASN:ND2	2.45	0.49
35:DA:1527:G:N2	35:DA:1546:C:N3	2.59	0.49
40:DF:20:LEU:HD12	40:DF:199:TRP:CH2	2.47	0.49
40:DF:21:ALA:C	40:DF:23:ASP:H	2.15	0.49
40:DF:122:LYS:O	40:DF:191:ARG:HG3	2.13	0.49
41:DG:118:ARG:H	41:DG:181:ARG:NH2	2.08	0.49
1:AA:34:C:H2'	1:AA:35:G:H8	1.77	0.49
1:AA:552:U:O2'	12:AL:86:ARG:O	2.30	0.49
1:AA:592:G:H2'	1:AA:593:G:C8	2.45	0.49
1:AA:757:U:H2'	1:AA:758:G:O4'	2.12	0.49
1:AA:1007:C:H2'	1:AA:1008:C:H6	1.77	0.49
1:AA:1076:C:O2	1:AA:1082:G:N2	2.44	0.49
1:AA:1312:G:H2'	1:AA:1313:U:C6	2.47	0.49
2:AB:36:ARG:HG2	2:AB:36:ARG:HH11	1.78	0.49
13:AM:66:LEU:O	13:AM:70:LEU:N	2.45	0.49
24:AY:102:TYR:C	24:AY:102:TYR:CD1	2.86	0.49
27:B2:19:VAL:O	27:B2:22:GLU:HG2	2.12	0.49
35:BA:807:U:OP2	48:BP:39:LYS:HG2	2.12	0.49
35:BA:2099:U:O4	35:BA:2190:G:O6	2.28	0.49
39:BE:51:PHE:CD1	39:BE:52:LEU:HD22	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:178:PRO:HG2	40:BF:179:GLU:OE1	2.13	0.49
40:BF:185:ASP:HA	40:BF:188:ARG:HG2	1.94	0.49
47:BO:107:ARG:C	47:BO:109:LYS:H	2.16	0.49
49:BQ:29:PHE:HB2	49:BQ:105:GLU:OE2	2.12	0.49
52:BT:46:GLU:O	52:BT:65:LYS:HD3	2.11	0.49
52:BT:62:THR:HA	52:BT:74:ARG:O	2.12	0.49
53:BU:91:ASP:O	53:BU:95:LEU:HB2	2.12	0.49
56:BX:12:VAL:HB	56:BX:17:ALA:CB	2.37	0.49
56:BX:29:TRP:CZ3	56:BX:78:LYS:HB3	2.47	0.49
58:BZ:74:VAL:HG22	58:BZ:86:VAL:HG12	1.95	0.49
1:CA:1376:U:H2'	1:CA:1377:A:H8	1.77	0.49
2:CB:77:ALA:O	2:CB:81:VAL:HG23	2.12	0.49
4:CD:59:ARG:HE	4:CD:59:ARG:CA	2.20	0.49
19:CS:18:LYS:O	19:CS:22:LEU:HD23	2.11	0.49
25:D0:25:ARG:HG2	25:D0:25:ARG:HH11	1.76	0.49
27:D2:69:ARG:HH21	35:DA:111:A:H4'	1.77	0.49
33:D8:32:LEU:HD21	35:DA:2392:A:OP1	2.12	0.49
35:DA:573:G:O2'	35:DA:574:C:H3'	2.13	0.49
35:DA:604:G:C6	35:DA:625:G:C2	3.00	0.49
35:DA:1789:A:H2'	35:DA:1790:C:O4'	2.13	0.49
35:DA:2064:C:H2'	35:DA:2065:C:C6	2.48	0.49
35:DA:2086:U:H2'	35:DA:2087:G:H8	1.76	0.49
49:DQ:52:VAL:O	49:DQ:56:ARG:HG2	2.13	0.49
57:DY:28:LYS:CB	57:DY:37:VAL:HB	2.42	0.49
1:AA:628:G:H2'	1:AA:629:G:H8	1.74	0.49
1:AA:830:G:H2'	1:AA:831:U:O4'	2.12	0.49
1:AA:1130:A:C6	1:AA:1146:A:C5	3.00	0.49
1:AA:1171:G:H2'	1:AA:1172:C:C6	2.47	0.49
1:AA:1249:C:N4	1:AA:1288:A:H62	2.09	0.49
1:AA:1316:G:H22	1:AA:1319:A:P	2.36	0.49
2:AB:92:TYR:H	2:AB:151:GLY:HA3	1.77	0.49
4:AD:26:CYS:HA	4:AD:31:CYS:HA	1.94	0.49
7:AG:143:ARG:CZ	22:AW:42:C:H5''	2.43	0.49
9:AI:50:LEU:HD21	9:AI:81:ILE:HG22	1.93	0.49
10:AJ:49:VAL:O	10:AJ:60:ARG:HB2	2.12	0.49
22:AW:10:G:C2	22:AW:26:A:H1'	2.47	0.49
24:AY:181:SER:N	24:AY:182:PRO:HD2	2.28	0.49
35:BA:807:U:O2	40:BF:74:ARG:NH2	2.43	0.49
35:BA:839:U:H1'	35:BA:1191:G:H1'	1.93	0.49
35:BA:1747:G:H2'	35:BA:1747(A):G:C8	2.47	0.49
35:BA:2533:A:H2'	35:BA:2534:A:O4'	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:148:GLU:CB	38:BD:151:LYS:HD2	2.42	0.49
48:BP:50:ARG:HH21	48:BP:50:ARG:HG2	1.77	0.49
48:BP:127:ALA:HB3	48:BP:130:PHE:CZ	2.48	0.49
56:BX:50:LYS:HB3	56:BX:84:ALA:HB2	1.95	0.49
1:CA:92:C:C2	1:CA:93:G:N7	2.81	0.49
1:CA:677:U:O2	1:CA:777:A:O2'	2.30	0.49
2:CB:20:GLU:HB2	2:CB:190:THR:OG1	2.13	0.49
8:CH:25:ASP:HA	8:CH:59:LEU:O	2.12	0.49
20:CT:73:HIS:HB3	20:CT:74:LYS:HG2	1.94	0.49
31:D6:19:ARG:HG2	31:D6:19:ARG:HH11	1.76	0.49
34:D9:18:ARG:HE	35:DA:1034:G:H5'	1.77	0.49
35:DA:582:G:H2'	35:DA:583:G:C8	2.47	0.49
35:DA:654(B):C:H5	35:DA:654(D):G:C4	2.31	0.49
35:DA:892:G:H2'	35:DA:893:C:C6	2.48	0.49
35:DA:1889:A:H2'	35:DA:1890:A:C8	2.47	0.49
35:DA:2481:G:HO2'	35:DA:2482:G:P	2.34	0.49
36:DB:40:U:N3	36:DB:43:C:H5''	2.28	0.49
39:DE:109:LYS:HB2	50:DR:2:ARG:NH2	2.28	0.49
42:DH:144:VAL:O	42:DH:148:ILE:HG12	2.12	0.49
56:DX:12:VAL:HG12	56:DX:27:THR:HG23	1.93	0.49
1:AA:973:G:H1'	10:AJ:55:LYS:HE2	1.94	0.49
1:AA:1004:A:OP1	1:AA:1006:C:N4	2.45	0.49
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.47	0.49
2:AB:87:ARG:HE	2:AB:233:SER:CB	2.25	0.49
4:AD:18:LYS:HB2	4:AD:33:MET:HG2	1.94	0.49
33:B8:33:ASN:O	33:B8:34:TRP:HB3	2.11	0.49
35:BA:132:G:H2'	35:BA:133:C:H6	1.76	0.49
35:BA:1058:G:OP1	45:BK:1:MET:HG3	2.12	0.49
35:BA:1080:C:H2'	35:BA:1081:U:H6	1.78	0.49
35:BA:1270:C:O2'	35:BA:1648:C:OP2	2.24	0.49
35:BA:1535:A:H3'	35:BA:1536:C:C6	2.47	0.49
35:BA:1540:U:H2'	35:BA:1541:G:C2	2.47	0.49
35:BA:2083:G:H2'	35:BA:2084:C:H6	1.78	0.49
35:BA:2801:A:H4'	35:BA:2801(A):A:C5	2.48	0.49
35:BA:2852:G:H2'	35:BA:2853:C:C6	2.48	0.49
38:BD:109:ASP:HB2	38:BD:197:GLY:CA	2.43	0.49
42:BH:153:LYS:H	42:BH:153:LYS:HD2	1.77	0.49
1:CA:170:U:O2'	1:CA:171:A:H5'	2.12	0.49
1:CA:1315:U:H2'	1:CA:1316:G:O4'	2.12	0.49
3:CC:101:LEU:HD23	3:CC:102:ASN:N	2.28	0.49
4:CD:112:VAL:HG12	4:CD:116:GLN:OE1	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:173:TRP:CZ3	4:CD:193:ASP:HB3	2.48	0.49
10:CJ:33:GLN:HB2	10:CJ:75:ILE:HD11	1.95	0.49
28:D3:40:THR:HG23	28:D3:43:ILE:HG12	1.94	0.49
33:D8:53:PRO:O	33:D8:57:ARG:HB2	2.12	0.49
35:DA:557:U:H2'	35:DA:558:G:H8	1.78	0.49
35:DA:580:C:H2'	35:DA:581:C:C6	2.47	0.49
35:DA:1826:G:O2'	38:DD:242:ARG:NH2	2.46	0.49
35:DA:2141:G:H2'	35:DA:2142:C:C6	2.48	0.49
45:DK:33:ASN:ND2	45:DK:36:GLU:HG3	2.27	0.49
46:DN:46:VAL:O	46:DN:47:ALA:HB3	2.11	0.49
48:DP:97:PRO:O	48:DP:98:GLU:HB3	2.12	0.49
51:DS:26:LEU:HD23	51:DS:39:ILE:CG1	2.43	0.49
1:AA:555:C:H2'	1:AA:556:C:C6	2.48	0.49
1:AA:980:C:O2	14:AN:19:ARG:HA	2.13	0.49
1:AA:1053:G:N2	1:AA:1058:G:O6	2.46	0.49
1:AA:1346:A:N1	1:AA:1374:A:H5''	2.28	0.49
8:AH:86:ILE:HG12	8:AH:135:CYS:HA	1.93	0.49
13:AM:37:THR:HA	13:AM:55:ARG:NH2	2.27	0.49
15:AO:82:ILE:HG13	15:AO:87:ILE:HG13	1.94	0.49
22:AW:51:U:N3	22:AW:64:A:H2	2.11	0.49
31:B6:11:LEU:HD22	31:B6:51:GLU:OE2	2.12	0.49
35:BA:116:C:O2'	35:BA:126:A:N3	2.39	0.49
35:BA:637:A:OP1	48:BP:133:SER:HB3	2.12	0.49
35:BA:729:G:C5	38:BD:208:LYS:HB2	2.48	0.49
35:BA:2199:A:O2'	43:BI:28:ASN:OD1	2.21	0.49
41:BG:9:ARG:HB2	41:BG:9:ARG:NH1	2.28	0.49
52:BT:83:ILE:HG13	52:BT:84:GLN:H	1.78	0.49
53:BU:24:TYR:HB2	53:BU:29:SER:HB3	1.94	0.49
1:CA:110:C:H3'	1:CA:111:G:H8	1.77	0.49
1:CA:189:G:H2'	1:CA:189(A):C:H6	1.77	0.49
1:CA:1010:G:H2'	1:CA:1011:G:C8	2.47	0.49
1:CA:1207:G:H2'	1:CA:1208:C:H6	1.77	0.49
6:CF:7:ASN:HD21	18:CR:34:TYR:HE1	1.59	0.49
6:CF:67:MET:HB2	6:CF:68:PRO:HD2	1.95	0.49
22:CV:6:G:N1	22:CV:67:C:N3	2.37	0.49
24:CY:287:GLU:O	24:CY:290:LYS:HG2	2.13	0.49
25:D0:48:GLY:HA3	25:D0:80:HIS:ND1	2.28	0.49
27:D2:2:LYS:CB	35:DA:97:C:H5''	2.39	0.49
34:D9:9:ARG:HH11	34:D9:9:ARG:CB	2.26	0.49
35:DA:574:C:N3	39:DE:145:LYS:HE2	2.27	0.49
35:DA:884:C:C4	35:DA:885:C:C4	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1014:U:H2'	35:DA:1015:G:H8	1.77	0.49
35:DA:1082:U:H5'	45:DK:117:THR:CG2	2.43	0.49
35:DA:1639:U:C2'	35:DA:1640:C:H5''	2.43	0.49
35:DA:2127:G:H2'	35:DA:2128:C:H6	1.75	0.49
41:DG:3:LEU:O	41:DG:4:ASP:HB2	2.12	0.49
41:DG:33:ARG:HH11	41:DG:33:ARG:HG3	1.78	0.49
43:DI:82:ARG:NH1	43:DI:145:VAL:O	2.45	0.49
1:AA:1298:C:H2'	7:AG:114:ARG:HH11	1.78	0.49
30:B5:35:GLU:O	30:B5:36:CYS:CB	2.60	0.49
35:BA:336:C:H5''	57:BY:7:VAL:HG11	1.95	0.49
35:BA:1683:C:H2'	35:BA:1684:C:H6	1.78	0.49
35:BA:1794:U:H2'	35:BA:1795:C:H6	1.78	0.49
35:BA:2099:U:H3	35:BA:2190:G:H1	1.61	0.49
35:BA:2839:G:H5'	50:BR:46:GLY:CA	2.43	0.49
37:BC:48:LEU:HB3	37:BC:50:ILE:HG13	1.95	0.49
38:BD:133:LEU:HD22	38:BD:165:ILE:HD11	1.95	0.49
41:BG:96:ARG:HG3	41:BG:100:TRP:HE1	1.77	0.49
47:BO:77:ILE:HD13	52:BT:74:ARG:HD3	1.94	0.49
48:BP:146:VAL:HG13	48:BP:147:LEU:N	2.28	0.49
49:BQ:67:ARG:HG2	49:BQ:67:ARG:HH11	1.78	0.49
57:BY:26:LYS:HG3	57:BY:27:VAL:HG23	1.94	0.49
1:CA:562:C:O2	12:CL:16:GLU:N	2.43	0.49
1:CA:642:A:N3	8:CH:113:SER:OG	2.30	0.49
1:CA:711:G:H2'	1:CA:712:A:H8	1.78	0.49
1:CA:1168:A:H2'	1:CA:1169:A:C8	2.48	0.49
28:D3:31:LEU:HD12	35:DA:1157:G:O2'	2.13	0.49
35:DA:141:A:H8	35:DA:1408:C:HO2'	1.60	0.49
35:DA:528:A:C2	35:DA:2042:A:H2'	2.48	0.49
35:DA:740:U:H2'	35:DA:741:G:C8	2.48	0.49
35:DA:1348:G:C2'	35:DA:1349:A:H5''	2.41	0.49
35:DA:2131:G:H5'	35:DA:2133:G:O4'	2.12	0.49
35:DA:2208:A:H1'	35:DA:2219:G:C5	2.48	0.49
35:DA:2689:U:H4'	35:DA:2690:C:O5'	2.13	0.49
36:DB:101:G:H2'	36:DB:102:A:C8	2.48	0.49
37:DC:39:ASP:OD1	37:DC:178:LYS:HE3	2.13	0.49
38:DD:61:LEU:O	38:DD:63:ARG:NH1	2.45	0.49
46:DN:9:VAL:HG12	46:DN:10:GLU:H	1.76	0.49
49:DQ:76:LYS:HB3	49:DQ:91:GLU:CG	2.43	0.49
51:DS:61:ASN:OD1	51:DS:62:LYS:N	2.33	0.49
55:DW:1:MET:HE3	55:DW:2:GLU:H	1.78	0.49
1:AA:67:C:O2	1:AA:171:A:H2	1.96	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:176:C:H2'	1:AA:177:C:H6	1.77	0.49
1:AA:243:A:H4'	1:AA:244:U:O5'	2.12	0.49
1:AA:1224:G:H4'	13:AM:102:ARG:NH1	2.28	0.49
1:AA:1308:U:H5'	13:AM:110:ARG:HD2	1.94	0.49
1:AA:1350:A:OP1	9:AI:121:ARG:HG3	2.13	0.49
4:AD:128:VAL:HG12	4:AD:129:ASN:N	2.18	0.49
9:AI:5:TYR:HE2	9:AI:16:ARG:HG2	1.77	0.49
13:AM:10:PRO:CG	13:AM:18:ALA:HB1	2.42	0.49
13:AM:19:LEU:HA	13:AM:22:ILE:HD13	1.94	0.49
18:AR:45:SER:HB3	18:AR:51:LEU:HD21	1.95	0.49
31:B6:17:LYS:O	31:B6:18:ARG:HB3	2.12	0.49
35:BA:189:G:H2'	35:BA:205:G:N2	2.27	0.49
35:BA:271(E):U:H2'	35:BA:271(F):C:H6	1.77	0.49
35:BA:590:A:H2'	35:BA:591:C:C6	2.48	0.49
35:BA:1024:G:H8	35:BA:1024:G:O5'	1.96	0.49
35:BA:1341:U:P	35:BA:1397:U:H3	2.31	0.49
35:BA:1656:C:H2'	35:BA:1657:C:H6	1.78	0.49
35:BA:2006:C:O2'	35:BA:2823:A:N3	2.46	0.49
35:BA:2329:G:H2'	35:BA:2330:G:H8	1.77	0.49
35:BA:2794:C:H42	35:BA:2801(A):A:H61	1.61	0.49
35:BA:2880:C:H1'	50:BR:92:GLY:O	2.13	0.49
40:BF:33:LEU:HD11	40:BF:112:MET:HB2	1.95	0.49
51:BS:89:ARG:NH1	51:BS:92:TYR:HA	2.28	0.49
1:CA:1107:C:C4	1:CA:1108:G:C8	3.00	0.49
1:CA:1388:C:H2'	1:CA:1389:C:C6	2.48	0.49
1:CA:1409:C:H2'	1:CA:1410:G:C8	2.46	0.49
3:CC:70:VAL:O	3:CC:105:GLU:HA	2.12	0.49
24:CY:29:LEU:HD12	24:CY:52:ALA:HB2	1.95	0.49
35:DA:28:A:N6	35:DA:512:G:H1'	2.28	0.49
35:DA:480:A:H1'	57:DY:44:ILE:HG21	1.95	0.49
35:DA:796:C:OP1	40:DF:62:ARG:HD2	2.13	0.49
35:DA:1048:A:C2	35:DA:1109:C:H5	2.30	0.49
35:DA:1204:A:O2'	35:DA:1205:U:OP2	2.26	0.49
35:DA:1709:U:H2'	35:DA:1710:C:H6	1.76	0.49
35:DA:1935:G:H1'	35:DA:1964:G:N2	2.28	0.49
35:DA:2308:G:H2'	35:DA:2309:A:C8	2.48	0.49
35:DA:2375:G:N2	35:DA:2378:A:OP2	2.28	0.49
35:DA:2533:A:H2'	35:DA:2534:A:O4'	2.12	0.49
35:DA:2708:G:H2'	35:DA:2709:G:H8	1.78	0.49
39:DE:119:ARG:HA	39:DE:160:TYR:CD2	2.48	0.49
48:DP:105:LEU:HD12	48:DP:105:LEU:H	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:33:LYS:HZ1	52:DT:74:ARG:HH21	1.61	0.49
54:DV:22:VAL:O	54:DV:23:GLU:HB2	2.13	0.49
54:DV:47:VAL:HG12	54:DV:52:VAL:N	2.28	0.49
1:AA:519:C:OP2	12:AL:50:SER:OG	2.26	0.49
1:AA:1054:C:H42	24:AY:201:ARG:HB2	1.77	0.49
1:AA:1081:G:H5'	5:AE:18:ARG:HB3	1.95	0.49
1:AA:1151:A:H5''	10:AJ:42:THR:H	1.78	0.49
1:AA:1249:C:H42	1:AA:1288:A:N6	2.11	0.49
1:AA:1432:G:N2	1:AA:1469:G:O6	2.46	0.49
1:AA:1522:U:H2'	1:AA:1523:G:H8	1.78	0.49
3:AC:155:GLY:O	3:AC:156:ARG:HB2	2.13	0.49
4:AD:68:TYR:HA	4:AD:114:ARG:HD2	1.95	0.49
6:AF:3:ARG:HG3	6:AF:3:ARG:HH11	1.78	0.49
24:AY:252:VAL:HG13	24:AY:259:THR:HG22	1.94	0.49
25:B0:23:VAL:HG22	25:B0:38:VAL:HG22	1.95	0.49
30:B5:33:CYS:O	30:B5:36:CYS:O	2.31	0.49
32:B7:10:ARG:NH2	35:BA:1378:A:OP1	2.46	0.49
35:BA:407:G:H2'	35:BA:408:G:C8	2.47	0.49
35:BA:610:G:H2'	35:BA:611:C:C6	2.48	0.49
35:BA:1070:A:H5'	35:BA:1072:C:OP2	2.13	0.49
35:BA:1570:A:H2'	35:BA:1571:A:C8	2.47	0.49
35:BA:2807:G:H3'	35:BA:2808:U:H5''	1.94	0.49
41:BG:59:GLU:HA	41:BG:62:LEU:HD13	1.94	0.49
53:BU:13:LYS:HE2	53:BU:13:LYS:N	2.28	0.49
1:CA:859:A:H2'	1:CA:860:A:O4'	2.11	0.49
1:CA:971:G:OP1	1:CA:971:G:H3'	2.13	0.49
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.28	0.49
2:CB:120:ALA:O	2:CB:121:LEU:HD23	2.13	0.49
7:CG:6:ARG:O	7:CG:6:ARG:HG2	2.13	0.49
10:CJ:44:VAL:HG12	10:CJ:46:ARG:HD2	1.94	0.49
17:CQ:95:TYR:HA	17:CQ:98:LEU:HD12	1.95	0.49
24:CY:150:GLN:HB3	24:CY:172:LYS:HD3	1.94	0.49
33:D8:14:VAL:CG2	33:D8:22:VAL:HG13	2.42	0.49
35:DA:38:A:H2'	35:DA:39:C:H6	1.78	0.49
35:DA:272(J):C:H5'	35:DA:274:G:OP2	2.13	0.49
35:DA:589:C:O3'	40:DF:95:ARG:NH1	2.45	0.49
35:DA:2103:C:H3'	35:DA:2104:G:H5''	1.95	0.49
39:DE:119:ARG:HD2	39:DE:120:TRP:CE2	2.48	0.49
41:DG:10:LYS:NZ	41:DG:14:GLU:OE1	2.45	0.49
52:DT:46:GLU:O	52:DT:65:LYS:HD3	2.13	0.49
55:DW:6:ILE:HA	55:DW:103:ILE:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:166:G:H2'	1:AA:167:G:H8	1.77	0.48
1:AA:1112:C:O2	3:AC:179:ARG:HG2	2.12	0.48
1:AA:1120:G:H2'	1:AA:1121:U:H6	1.76	0.48
1:AA:1258:G:H2'	1:AA:1259:C:H6	1.76	0.48
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.47	0.48
1:AA:1512:U:H2'	1:AA:1513:A:H8	1.78	0.48
13:AM:125:ARG:HA	24:AY:159:GLY:HA3	1.94	0.48
24:AY:19:ILE:O	24:AY:23:GLU:HB2	2.13	0.48
25:B0:18:ALA:HB1	35:BA:2271:G:OP1	2.13	0.48
25:B0:40:GLN:OE1	25:B0:44:ARG:N	2.46	0.48
32:B7:9:ARG:NE	35:BA:1310:G:OP2	2.44	0.48
35:BA:271(C):C:H2'	35:BA:271(D):G:H8	1.78	0.48
35:BA:579:G:H2'	35:BA:580:C:C6	2.48	0.48
35:BA:675:A:OP1	40:BF:63:LYS:HE2	2.13	0.48
35:BA:1043:C:H2'	35:BA:1044:G:C8	2.43	0.48
35:BA:1153:C:H2'	35:BA:1154:G:O4'	2.12	0.48
35:BA:1790:C:H5''	35:BA:1791:A:OP1	2.13	0.48
35:BA:2406:U:C4	48:BP:72:PRO:HB2	2.48	0.48
35:BA:2636:U:H3	35:BA:2782:G:H1	1.61	0.48
38:BD:24:ILE:HD12	38:BD:84:TYR:HB2	1.94	0.48
40:BF:66:PRO:O	40:BF:67:GLN:HB3	2.13	0.48
46:BN:55:VAL:CG2	46:BN:126:PRO:HA	2.44	0.48
54:BV:39:LEU:N	54:BV:39:LEU:HD23	2.28	0.48
1:CA:9:G:H2'	1:CA:10:A:C8	2.46	0.48
1:CA:337:C:H2'	1:CA:338:A:C8	2.47	0.48
1:CA:415:A:H2'	1:CA:416:G:H8	1.78	0.48
1:CA:1152:A:H2'	1:CA:1153:C:C6	2.47	0.48
2:CB:114:ARG:O	2:CB:118:LEU:HG	2.13	0.48
8:CH:51:VAL:CG1	8:CH:60:ARG:HB2	2.43	0.48
16:CP:56:ALA:O	16:CP:60:LEU:HG	2.13	0.48
19:CS:29:ARG:O	19:CS:31:ILE:HG22	2.13	0.48
20:CT:10:LEU:C	20:CT:12:ALA:H	2.13	0.48
24:CY:237:PRO:HD3	35:DA:2604:U:P	2.53	0.48
33:D8:33:ASN:HD22	35:DA:2419:U:P	2.36	0.48
35:DA:484:C:H2'	35:DA:485:C:C6	2.48	0.48
35:DA:2377:A:H2'	35:DA:2378:A:C8	2.47	0.48
35:DA:2514:U:H2'	35:DA:2515:C:H6	1.78	0.48
38:DD:72:LYS:HZ3	38:DD:75:ILE:HD12	1.78	0.48
40:DF:63:LYS:NZ	40:DF:67:GLN:HB2	2.28	0.48
47:DO:107:ARG:CZ	52:DT:35:LYS:HD2	2.43	0.48
48:DP:62:LEU:CD2	48:DP:62:LEU:H	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:657:G:H4'	15:AO:28:GLN:HG2	1.95	0.48
1:AA:1093:A:H2	1:AA:1109:C:O2	1.96	0.48
2:AB:117:GLU:O	2:AB:117:GLU:HG2	2.13	0.48
4:AD:49:ARG:HA	4:AD:49:ARG:NE	2.28	0.48
9:AI:88:TYR:O	9:AI:89:ASN:HB2	2.12	0.48
12:AL:11:VAL:HG11	17:AQ:36:ILE:HG21	1.95	0.48
24:AY:342:MET:O	24:AY:346:TRP:CD1	2.66	0.48
27:B2:16:LEU:O	27:B2:20:GLU:HB3	2.14	0.48
29:B4:14:ILE:HD12	29:B4:14:ILE:H	1.77	0.48
30:B5:4:HIS:HB3	30:B5:5:PRO:HD3	1.94	0.48
34:B9:9:ARG:CB	34:B9:9:ARG:HH11	2.26	0.48
35:BA:764:A:C6	38:BD:209:ALA:HB1	2.48	0.48
35:BA:793:A:OP2	35:BA:2071:A:O2'	2.28	0.48
35:BA:886:C:H4'	35:BA:888:C:H42	1.78	0.48
35:BA:952:G:C6	35:BA:966:G:C6	3.01	0.48
35:BA:1683:C:H2'	35:BA:1684:C:C6	2.48	0.48
35:BA:2176:A:H2'	35:BA:2177:C:C6	2.48	0.48
35:BA:2227:A:H5''	38:BD:263:ARG:NH1	2.28	0.48
39:BE:87:GLU:O	39:BE:89:ASP:N	2.45	0.48
41:BG:68:PRO:HA	41:BG:92:VAL:HB	1.93	0.48
53:BU:54:LYS:O	53:BU:58:ARG:HG3	2.13	0.48
1:CA:562:C:H1'	12:CL:15:ARG:HD2	1.94	0.48
1:CA:1130:A:O5'	9:CI:20:ARG:NH2	2.46	0.48
9:CI:43:ALA:O	9:CI:45:ALA:N	2.41	0.48
24:CY:34:GLU:OE1	45:DK:34:ILE:HG12	2.13	0.48
35:DA:90:U:O2'	35:DA:92:A:OP2	2.28	0.48
35:DA:375:C:H2'	35:DA:376:C:H6	1.78	0.48
35:DA:893:C:H2'	35:DA:894:C:H6	1.77	0.48
35:DA:1099:G:H5''	45:DK:4:VAL:HG21	1.95	0.48
35:DA:1187:G:O5'	35:DA:1187:G:H8	1.95	0.48
35:DA:1479:G:H1	35:DA:1512:U:H3	1.60	0.48
35:DA:2243:U:H2'	35:DA:2244:U:C6	2.47	0.48
35:DA:2415:G:O3'	48:DP:66:GLY:HA3	2.13	0.48
40:DF:10:PRO:HA	40:DF:127:GLU:HB3	1.94	0.48
42:DH:13:LYS:O	42:DH:15:VAL:HG13	2.13	0.48
1:AA:353:A:H8	1:AA:353:A:H5'	1.78	0.48
1:AA:972:C:O2'	10:AJ:55:LYS:HG2	2.13	0.48
1:AA:1149:C:H2'	1:AA:1150:U:C6	2.49	0.48
1:AA:1313:U:O4	19:AS:4:SER:OG	2.31	0.48
1:AA:1428:A:H2'	1:AA:1429:C:H6	1.79	0.48
2:AB:197:VAL:HB	2:AB:200:ILE:HG12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.27	0.48
5:AE:47:LYS:HD3	5:AE:47:LYS:N	2.28	0.48
8:AH:40:ALA:O	8:AH:42:GLU:N	2.46	0.48
35:BA:150:C:H2'	35:BA:151:C:C6	2.48	0.48
35:BA:191:A:H2'	35:BA:192:C:H6	1.77	0.48
35:BA:1380:G:H2'	35:BA:1381:G:H8	1.78	0.48
35:BA:1485:G:H1'	35:BA:1505:C:N4	2.29	0.48
35:BA:1578:U:H2'	35:BA:1579:A:H5'	1.95	0.48
35:BA:1717:G:C2'	35:BA:1718:G:H5''	2.43	0.48
35:BA:2894:G:H2'	35:BA:2894:G:N3	2.26	0.48
39:BE:1:MET:HB3	39:BE:200:GLU:OE1	2.14	0.48
43:BI:125:GLU:OE2	43:BI:141:LYS:HG2	2.13	0.48
46:BN:18:ALA:HB1	46:BN:21:LYS:HB2	1.96	0.48
56:BX:12:VAL:HG13	56:BX:27:THR:O	2.13	0.48
57:BY:7:VAL:CG2	57:BY:7:VAL:CG1	2.82	0.48
1:CA:113:G:H21	1:CA:353:A:H1'	1.78	0.48
1:CA:179:A:H2'	1:CA:180:U:H6	1.78	0.48
1:CA:202:U:H3'	1:CA:203:U:C5	2.47	0.48
1:CA:332:G:H2'	1:CA:333:G:H8	1.78	0.48
1:CA:407:G:H5''	4:CD:115:ARG:HB3	1.94	0.48
1:CA:1011:G:H1	1:CA:1018:C:H42	1.60	0.48
3:CC:6:HIS:CD2	3:CC:7:PRO:HD2	2.36	0.48
4:CD:25:ARG:CG	4:CD:30:LYS:HG3	2.43	0.48
13:CM:115:LYS:C	13:CM:117:VAL:H	2.16	0.48
24:CY:303:ARG:HH12	35:DA:1914:C:H1'	1.78	0.48
25:D0:11:ARG:O	25:D0:14:ARG:NH2	2.47	0.48
35:DA:1024:G:C3'	35:DA:1025:G:H5''	2.42	0.48
35:DA:1799:G:OP1	35:DA:1799:G:H3'	2.12	0.48
35:DA:1906:G:H1	35:DA:1924:C:H42	1.61	0.48
35:DA:2106:G:H2'	35:DA:2107:C:O4'	2.13	0.48
50:DR:100:LEU:HD21	50:DR:113:LEU:HB3	1.94	0.48
51:DS:18:ILE:C	51:DS:20:ARG:H	2.17	0.48
1:AA:20:U:H2'	1:AA:21:G:O4'	2.13	0.48
1:AA:128:G:O2'	17:AQ:3:LYS:NZ	2.47	0.48
1:AA:531:U:P	24:AY:201:ARG:HH22	2.37	0.48
1:AA:596:C:H2'	1:AA:597:G:C8	2.45	0.48
1:AA:779:C:H2'	1:AA:780:A:O4'	2.13	0.48
1:AA:967:C:OP1	1:AA:969:A:H5'	2.13	0.48
1:AA:1098:C:H2'	1:AA:1099:G:C8	2.49	0.48
3:AC:89:GLU:O	3:AC:93:LYS:HB2	2.13	0.48
9:AI:26:VAL:HG22	9:AI:61:ALA:HB3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:17:LYS:HD3	12:AL:18:VAL:HG22	1.96	0.48
13:AM:93:ARG:HG3	35:BA:888:C:OP1	2.13	0.48
17:AQ:74:LEU:HD12	17:AQ:75:ARG:HG2	1.94	0.48
19:AS:5:LEU:HD13	19:AS:6:LYS:H	1.78	0.48
20:AT:50:GLU:HA	20:AT:100:ILE:HG22	1.95	0.48
25:B0:74:ARG:HG2	36:BB:12:C:O2'	2.13	0.48
32:B7:1:MET:SD	35:BA:752:A:H3'	2.53	0.48
35:BA:1568:G:P	38:BD:63:ARG:HH22	2.36	0.48
35:BA:2378:A:O5'	35:BA:2378:A:H8	1.96	0.48
38:BD:168:ARG:HH11	38:BD:168:ARG:HG3	1.78	0.48
39:BE:101:ARG:HA	39:BE:170:LEU:O	2.13	0.48
41:BG:97:ASP:C	41:BG:99:MET:H	2.17	0.48
41:BG:116:ASP:O	41:BG:117:PHE:HB3	2.14	0.48
46:BN:65:LYS:O	46:BN:69:GLN:HB2	2.13	0.48
50:BR:33:ARG:NE	50:BR:115:GLU:HG3	2.29	0.48
1:CA:460:G:O6	1:CA:470:C:H5''	2.13	0.48
1:CA:533:A:O2'	1:CA:534:U:H5''	2.13	0.48
1:CA:908:A:H2'	1:CA:909:A:H8	1.79	0.48
1:CA:911:U:H2'	1:CA:912:C:C6	2.48	0.48
1:CA:954:G:H5'	13:CM:120:LYS:HZ2	1.77	0.48
2:CB:180:LEU:C	2:CB:182:ILE:H	2.17	0.48
5:CE:42:GLY:HA3	5:CE:66:MET:HG2	1.95	0.48
7:CG:100:ALA:O	7:CG:104:LEU:HD23	2.12	0.48
7:CG:116:ALA:HA	7:CG:119:ARG:HE	1.79	0.48
9:CI:111:ARG:HG2	9:CI:112:LYS:N	2.28	0.48
13:CM:54:VAL:O	13:CM:58:GLU:HG2	2.14	0.48
30:D5:41:PRO:HG2	30:D5:44:THR:HG21	1.96	0.48
35:DA:712:G:H2'	35:DA:713:G:H8	1.77	0.48
35:DA:1899:G:N2	35:DA:1902:C:N4	2.45	0.48
35:DA:2630:G:H1'	35:DA:2894:G:C4	2.48	0.48
42:DH:136:ILE:HD12	42:DH:136:ILE:N	2.28	0.48
52:DT:16:ARG:NH1	52:DT:19:LEU:HD21	2.28	0.48
52:DT:61:PHE:CE1	52:DT:76:PHE:HB2	2.49	0.48
1:AA:221:C:H2'	1:AA:222:U:H6	1.78	0.48
1:AA:672:U:H3	1:AA:734:G:H1	1.60	0.48
1:AA:859:A:H2'	1:AA:860:A:O4'	2.13	0.48
1:AA:946:A:H2'	1:AA:947:G:C8	2.48	0.48
3:AC:123:GLN:O	3:AC:128:PHE:HB2	2.13	0.48
4:AD:8:VAL:HG11	4:AD:115:ARG:CZ	2.43	0.48
4:AD:120:LEU:HB3	4:AD:126:ILE:HD11	1.96	0.48
18:AR:53:ARG:C	18:AR:55:ARG:H	2.15	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B1:23:LYS:HD3	26:B1:28:GLY:HA3	1.96	0.48
27:B2:31:GLU:O	27:B2:34:GLU:HB3	2.14	0.48
35:BA:38:A:H2'	35:BA:39:C:H6	1.78	0.48
35:BA:556:G:H2'	35:BA:557:U:C6	2.48	0.48
35:BA:654(U):A:H5''	35:BA:654(V):A:OP2	2.13	0.48
35:BA:715:G:H2'	35:BA:716:A:C8	2.48	0.48
35:BA:746:A:O2'	35:BA:2611:U:O2'	2.18	0.48
35:BA:1027:A:C2	35:BA:2488:A:H5'	2.48	0.48
35:BA:1047:G:N3	35:BA:1111:A:N6	2.61	0.48
35:BA:1316:U:H2'	35:BA:1317:A:C8	2.49	0.48
35:BA:1657:C:H2'	35:BA:1658:C:H6	1.79	0.48
35:BA:1803:A:H4'	38:BD:259:THR:HG23	1.95	0.48
35:BA:2142:C:H2'	35:BA:2143:C:H6	1.78	0.48
35:BA:2626:C:H2'	35:BA:2627:G:H8	1.78	0.48
35:BA:2655:G:O2'	35:BA:2656:U:OP2	2.31	0.48
35:BA:2712:U:O2'	35:BA:2713:A:H5'	2.13	0.48
45:BK:20:ALA:H	45:BK:21:PRO:CD	2.26	0.48
48:BP:101:VAL:C	48:BP:103:ALA:H	2.17	0.48
52:BT:28:VAL:O	52:BT:28:VAL:HG12	2.13	0.48
53:BU:90:VAL:O	53:BU:92:ARG:N	2.47	0.48
1:CA:91:C:C2	1:CA:92:C:C5	3.02	0.48
1:CA:422:C:O2	1:CA:423:G:N2	2.46	0.48
3:CC:18:TRP:NE1	14:CN:53:LEU:O	2.42	0.48
27:D2:7:ARG:NH2	35:DA:102:G:OP2	2.41	0.48
28:D3:4:LEU:O	28:D3:36:VAL:HA	2.14	0.48
35:DA:30:G:H2'	35:DA:31:C:C6	2.49	0.48
35:DA:862:G:H2'	35:DA:863:A:O4'	2.12	0.48
35:DA:1028:A:H2'	35:DA:1029:A:C8	2.49	0.48
35:DA:1175:U:O5'	35:DA:1176:G:H5'	2.13	0.48
35:DA:1490:A:H5'	35:DA:1491:G:OP2	2.12	0.48
35:DA:2655:G:O2'	35:DA:2664:G:O6	2.22	0.48
39:DE:108:SER:HB3	39:DE:165:VAL:HG21	1.95	0.48
39:DE:132:HIS:CD2	39:DE:135:HIS:NE2	2.81	0.48
42:DH:111:HIS:CD2	42:DH:112:PRO:HD2	2.49	0.48
51:DS:106:ARG:HH11	51:DS:106:ARG:C	2.17	0.48
53:DU:95:LEU:HD12	54:DV:11:GLN:HB2	1.93	0.48
57:DY:28:LYS:HB3	57:DY:37:VAL:HB	1.96	0.48
58:DZ:44:PHE:CZ	58:DZ:86:VAL:HG11	2.48	0.48
58:DZ:185:GLU:O	58:DZ:187:ALA:N	2.47	0.48
1:AA:375:U:H2'	1:AA:376:G:H8	1.78	0.48
1:AA:385:C:H2'	1:AA:386:C:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:144:ARG:HA	2:AB:147:LYS:HB3	1.95	0.48
4:AD:86:LYS:HE3	4:AD:86:LYS:HB3	1.64	0.48
5:AE:144:THR:O	5:AE:148:VAL:HG23	2.14	0.48
5:AE:147:ASP:O	5:AE:151:LEU:HG	2.13	0.48
10:AJ:4:ILE:H	10:AJ:4:ILE:HD12	1.79	0.48
11:AK:105:VAL:HB	11:AK:108:ILE:HD11	1.95	0.48
16:AP:19:ILE:H	16:AP:19:ILE:HD12	1.79	0.48
24:AY:102:TYR:C	24:AY:102:TYR:HD1	2.17	0.48
34:B9:9:ARG:HH11	34:B9:9:ARG:HB3	1.76	0.48
35:BA:582:G:H2'	35:BA:583:G:C8	2.48	0.48
35:BA:760:G:H2'	35:BA:761:A:O4'	2.14	0.48
35:BA:1331:A:O2'	35:BA:1332:G:C8	2.65	0.48
35:BA:1358:G:O2'	35:BA:1359:A:H5''	2.14	0.48
35:BA:2113:U:H2'	35:BA:2114:A:O4'	2.12	0.48
35:BA:2668:G:H2'	35:BA:2669:G:H8	1.77	0.48
35:BA:2740:A:H2'	35:BA:2741:A:C8	2.48	0.48
35:BA:2807:G:H22	35:BA:2892:A:N6	2.10	0.48
39:BE:108:SER:HB3	39:BE:165:VAL:HG21	1.95	0.48
39:BE:197:ILE:HD11	39:BE:199:ARG:HE	1.78	0.48
40:BF:1:MET:O	40:BF:3:GLU:HG2	2.14	0.48
47:BO:104:ARG:NE	52:BT:33:LYS:HD2	2.29	0.48
52:BT:125:ARG:O	52:BT:128:GLU:HG3	2.14	0.48
1:CA:415:A:H2'	1:CA:416:G:C8	2.49	0.48
1:CA:833:U:H2'	1:CA:834:C:H6	1.77	0.48
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.47	0.48
1:CA:1322:C:O2'	1:CA:1323:G:OP2	2.31	0.48
2:CB:111:ARG:HH21	2:CB:114:ARG:HG2	1.77	0.48
7:CG:79:ARG:NH1	22:CW:34:G:OP1	2.46	0.48
11:CK:82:VAL:HB	11:CK:108:ILE:HG13	1.96	0.48
13:CM:112:GLY:HA2	13:CM:113:PRO:HD2	1.96	0.48
22:CW:73:A:C5	22:CW:74:C:C4	3.01	0.48
24:CY:296:LYS:HG2	24:CY:299:ARG:NH1	2.29	0.48
27:D2:47:ASN:HB3	27:D2:48:HIS:H	1.31	0.48
35:DA:214:G:H1'	35:DA:216:A:O2'	2.13	0.48
35:DA:278:A:H2'	35:DA:279:C:C6	2.48	0.48
35:DA:1791:A:OP2	35:DA:1791:A:H8	1.97	0.48
35:DA:1858:G:HO2'	35:DA:1884:A:N6	2.12	0.48
41:DG:82:LEU:CD2	41:DG:83:ARG:H	2.26	0.48
41:DG:88:ILE:HD12	41:DG:88:ILE:N	2.29	0.48
56:DX:55:ASN:HB2	56:DX:80:ILE:HG13	1.95	0.48
1:AA:97:G:C4	1:AA:98:G:C8	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.49	0.48
1:AA:1143:G:H2'	1:AA:1144:G:C8	2.48	0.48
1:AA:1220:G:H2'	1:AA:1221:G:H8	1.78	0.48
3:AC:46:GLU:O	3:AC:47:LEU:HB2	2.14	0.48
4:AD:3:ARG:O	4:AD:5:ILE:HG13	2.13	0.48
4:AD:59:ARG:HE	4:AD:59:ARG:CA	2.23	0.48
6:AF:5:GLU:HB3	18:AR:34:TYR:OH	2.13	0.48
9:AI:93:ARG:NH1	9:AI:102:LEU:HD11	2.28	0.48
24:AY:23:GLU:O	24:AY:26:LEU:HG	2.14	0.48
24:AY:303:ARG:N	24:AY:304:PRO:HD3	2.26	0.48
25:B0:18:ALA:HB3	25:B0:20:ARG:NH1	2.28	0.48
27:B2:14:ARG:HA	27:B2:63:VAL:HG11	1.95	0.48
35:BA:278:A:H2'	35:BA:279:C:C6	2.48	0.48
35:BA:1394:U:H4'	35:BA:1603:A:H4'	1.96	0.48
38:BD:248:SER:HB2	38:BD:249:PRO:HD2	1.96	0.48
43:BI:99:GLU:HG2	43:BI:103:ARG:HH21	1.78	0.48
44:BJ:59:UNK:C	44:BJ:61:UNK:N	2.77	0.48
54:BV:59:ALA:HB2	54:BV:96:ILE:HD13	1.96	0.48
1:CA:180:U:H2'	1:CA:181:G:H5'	1.95	0.48
1:CA:972:C:OP2	10:CJ:57:LYS:HE2	2.14	0.48
2:CB:27:LYS:HD2	2:CB:193:ASP:HB2	1.96	0.48
2:CB:185:ILE:CG2	2:CB:199:TYR:HB2	2.40	0.48
3:CC:46:GLU:O	3:CC:47:LEU:HB2	2.14	0.48
10:CJ:49:VAL:CG2	14:CN:41:ARG:HB2	2.43	0.48
12:CL:53:ARG:HG2	12:CL:93:LEU:HD11	1.96	0.48
17:CQ:26:GLN:O	17:CQ:27:PHE:HB3	2.14	0.48
19:CS:6:LYS:O	19:CS:7:LYS:HD3	2.13	0.48
35:DA:52:A:H2'	35:DA:53:A:C8	2.49	0.48
35:DA:364:C:C2'	35:DA:365:C:H5'	2.44	0.48
35:DA:626:U:O2	48:DP:105:LEU:HG	2.14	0.48
35:DA:812:C:H3'	48:DP:25:SER:HB2	1.95	0.48
35:DA:813:U:H2'	35:DA:814:C:C6	2.48	0.48
35:DA:834:C:C2	35:DA:835:A:C8	3.01	0.48
35:DA:1099:G:C5'	45:DK:4:VAL:HG21	2.44	0.48
35:DA:1234:U:H2'	35:DA:1235:G:O4'	2.13	0.48
35:DA:1300:U:H4'	35:DA:1301:A:O5'	2.13	0.48
35:DA:2176:A:H4'	37:DC:222:SER:HB3	1.94	0.48
35:DA:2626:C:H2'	35:DA:2627:G:H8	1.79	0.48
38:DD:122:ASP:CG	38:DD:123:ALA:H	2.17	0.48
48:DP:16:ARG:HH12	48:DP:18:ARG:CB	2.25	0.48
54:DV:55:ALA:HA	54:DV:101:GLY:HA2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:848:C:H2'	1:AA:849:C:C6	2.48	0.48
1:AA:1119:C:H2'	1:AA:1120:G:H8	1.79	0.48
1:AA:1275:A:H2'	1:AA:1276:G:H8	1.79	0.48
6:AF:88:VAL:O	6:AF:88:VAL:HG12	2.14	0.48
7:AG:135:VAL:HG12	7:AG:139:GLU:OE2	2.14	0.48
7:AG:148:ASN:C	7:AG:150:ALA:N	2.66	0.48
9:AI:116:LYS:HD3	9:AI:119:ALA:O	2.14	0.48
22:AW:64:A:H2'	22:AW:65:G:H8	1.77	0.48
35:BA:195:A:H5''	35:BA:196:A:OP2	2.14	0.48
35:BA:279:C:N3	35:BA:361:G:N2	2.55	0.48
35:BA:640:C:H2'	35:BA:641:C:C6	2.49	0.48
35:BA:1012:U:P	53:BU:70:ARG:HH22	2.36	0.48
35:BA:1562:A:H2'	35:BA:1563:G:H8	1.77	0.48
35:BA:2648:C:H2'	35:BA:2649:U:H6	1.77	0.48
35:BA:2689:U:H4'	35:BA:2690:C:O5'	2.14	0.48
39:BE:92:THR:O	39:BE:95:ILE:HG12	2.14	0.48
50:BR:103:ARG:HH12	50:BR:110:PRO:HD3	1.79	0.48
2:CB:91:PRO:HG2	2:CB:155:LEU:HB2	1.94	0.48
3:CC:16:ARG:HB2	3:CC:16:ARG:CZ	2.44	0.48
3:CC:179:ARG:O	3:CC:206:GLU:HG3	2.13	0.48
6:CF:75:LEU:O	6:CF:79:LEU:HG	2.14	0.48
7:CG:148:ASN:C	7:CG:150:ALA:N	2.67	0.48
13:CM:124:PRO:N	24:CY:163:GLY:H	2.11	0.48
22:CW:19:G:C4'	22:CW:57:G:H22	2.27	0.48
35:DA:565:C:OP2	54:DV:78:LYS:N	2.37	0.48
35:DA:1419:A:O2'	35:DA:1420:U:H5''	2.14	0.48
35:DA:1605:C:H2'	35:DA:1606:G:O4'	2.13	0.48
35:DA:2074:U:H2'	35:DA:2075:U:C6	2.49	0.48
35:DA:2492:U:H2'	35:DA:2493:U:C6	2.49	0.48
36:DB:66:A:O2'	36:DB:67:G:O5'	2.29	0.48
45:DK:60:TYR:OH	45:DK:66:THR:OG1	2.32	0.48
57:DY:96:ILE:HG22	57:DY:97:ARG:N	2.29	0.48
1:AA:513:C:H2'	1:AA:514:C:C6	2.49	0.48
1:AA:1345:U:H5''	9:AI:120:ARG:HH11	1.77	0.48
1:AA:1479:C:H2'	1:AA:1480:G:H8	1.78	0.48
3:AC:47:LEU:HD23	3:AC:52:LEU:HD13	1.94	0.48
10:AJ:78:ASN:O	10:AJ:82:ILE:HG12	2.12	0.48
12:AL:70:ILE:HD13	12:AL:77:LEU:HD12	1.96	0.48
13:AM:67:GLU:O	13:AM:69:GLU:N	2.47	0.48
35:BA:538:G:H2'	35:BA:539:G:C8	2.48	0.48
35:BA:1243:G:O2'	48:BP:9:ASN:HA	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1499:C:C2	35:BA:1500:G:C8	3.01	0.48
35:BA:1568:G:OP1	38:BD:63:ARG:NH1	2.41	0.48
35:BA:2313:C:H4'	41:BG:91:ARG:HG3	1.93	0.48
35:BA:2455:G:H2'	35:BA:2456:C:C6	2.48	0.48
35:BA:2752:C:H2'	35:BA:2753:A:O4'	2.13	0.48
36:BB:80:U:H2'	36:BB:81:G:N2	2.14	0.48
45:BK:99:ILE:HG23	45:BK:103:GLN:HB3	1.96	0.48
52:BT:55:ASN:O	52:BT:57:PHE:N	2.47	0.48
56:BX:57:LEU:HD11	56:BX:78:LYS:HE2	1.96	0.48
58:BZ:23:LYS:HA	58:BZ:40:ASP:HA	1.96	0.48
1:CA:617:G:H8	1:CA:617:G:O5'	1.96	0.48
1:CA:715:A:H2'	1:CA:716:A:C8	2.49	0.48
1:CA:1241:G:H2'	1:CA:1242:C:H6	1.79	0.48
1:CA:1269:A:H2	1:CA:1312:G:N3	2.12	0.48
1:CA:1440:C:H2'	1:CA:1441:G:O4'	2.13	0.48
4:CD:128:VAL:HG12	4:CD:129:ASN:N	2.19	0.48
4:CD:156:GLU:O	4:CD:159:ARG:N	2.44	0.48
7:CG:145:ALA:O	7:CG:147:ALA:N	2.40	0.48
22:CW:48:C:C5	22:CW:59:U:H1'	2.49	0.48
24:CY:186:VAL:HB	24:CY:309:SER:O	2.13	0.48
25:D0:36:ILE:HG23	35:DA:2354:G:O2'	2.13	0.48
29:D4:10:VAL:HB	29:D4:11:PRO:HD2	1.96	0.48
35:DA:272(B):G:H2'	35:DA:272(C):G:H8	1.78	0.48
35:DA:1068:G:N2	35:DA:1096:A:H5'	2.28	0.48
35:DA:1140:C:H5''	46:DN:66:LYS:NZ	2.29	0.48
35:DA:1289:C:H2'	35:DA:1290:C:H6	1.79	0.48
35:DA:1536:C:H2'	35:DA:1537:G:O4'	2.14	0.48
35:DA:2152:G:H2'	35:DA:2153:G:C8	2.49	0.48
40:DF:34:TRP:HB2	48:DP:10:PRO:O	2.14	0.48
41:DG:96:ARG:O	41:DG:99:MET:HB3	2.13	0.48
52:DT:38:ASN:CG	52:DT:39:ARG:H	2.16	0.48
1:AA:411:A:N6	1:AA:413:G:N3	2.62	0.48
1:AA:688:G:H2'	1:AA:689:C:C6	2.48	0.48
1:AA:771:G:H2'	1:AA:772:U:C6	2.49	0.48
1:AA:794:A:H4'	1:AA:1521:G:O2'	2.14	0.48
1:AA:923:A:OP1	5:AE:21:ALA:HB2	2.12	0.48
2:AB:223:ILE:HG12	2:AB:226:ARG:CZ	2.43	0.48
10:AJ:63:PHE:CE1	14:AN:58:LYS:HG2	2.49	0.48
20:AT:89:ARG:HD2	20:AT:104:LEU:HD11	1.96	0.48
29:B4:14:ILE:HB	29:B4:22:ILE:HB	1.95	0.48
33:B8:51:ALA:N	33:B8:53:PRO:HD2	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1429:G:H2'	35:BA:1430:C:C6	2.49	0.48
35:BA:1532:C:H2'	35:BA:1533:G:O4'	2.14	0.48
35:BA:1992:G:N2	35:BA:1996:C:O2'	2.47	0.48
35:BA:2688:U:H5	35:BA:2720:U:OP2	1.97	0.48
39:BE:103:ASP:CG	39:BE:201:THR:HA	2.35	0.48
43:BI:126:TYR:O	43:BI:127:VAL:HG23	2.13	0.48
46:BN:67:LEU:O	46:BN:68:GLU:HB2	2.14	0.48
51:BS:89:ARG:HH11	51:BS:92:TYR:HA	1.79	0.48
58:BZ:175:VAL:HB	58:BZ:176:PRO:HD2	1.95	0.48
1:CA:188:C:H2'	1:CA:189:G:H8	1.78	0.48
1:CA:939:G:H2'	1:CA:940:C:C6	2.49	0.48
1:CA:1372:U:H2'	1:CA:1373:G:O4'	2.13	0.48
4:CD:9:CYS:HB3	4:CD:32:ALA:HB2	1.95	0.48
22:CW:16:U:H5''	22:CW:60:U:O2	2.14	0.48
24:CY:244:THR:HA	35:DA:2573:C:H41	1.78	0.48
29:D4:14:ILE:HD12	29:D4:14:ILE:H	1.79	0.48
33:D8:52:LYS:N	33:D8:53:PRO:HD2	2.29	0.48
35:DA:654(B):C:H42	35:DA:654(R):C:H42	1.61	0.48
35:DA:1059:G:H3'	35:DA:1060:U:H2'	1.96	0.48
35:DA:1495:A:H2'	35:DA:1496:A:C2	2.48	0.48
35:DA:1748:G:H5'	35:DA:1748:G:H8	1.78	0.48
35:DA:2008:C:H2'	35:DA:2009:G:H8	1.78	0.48
35:DA:2063:C:C4	35:DA:2064:C:C5	3.02	0.48
35:DA:2092:U:H4'	35:DA:2093:G:H5''	1.96	0.48
39:DE:9:VAL:HG22	39:DE:25:VAL:HB	1.96	0.48
46:DN:9:VAL:HG12	46:DN:10:GLU:N	2.28	0.48
49:DQ:14:ARG:HG2	49:DQ:41:TRP:CH2	2.45	0.48
52:DT:45:PHE:HE2	52:DT:63:VAL:HB	1.78	0.48
55:DW:92:ARG:HH11	55:DW:92:ARG:CB	2.19	0.48
58:DZ:112:ARG:HD2	58:DZ:112:ARG:HA	1.62	0.48
1:AA:216:G:H2'	1:AA:217:C:C6	2.49	0.47
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.96	0.47
1:AA:427:U:OP2	1:AA:428:G:O2'	2.32	0.47
1:AA:543:C:H2'	1:AA:544:G:H8	1.78	0.47
1:AA:551:U:H2'	1:AA:552:U:H6	1.79	0.47
1:AA:587:G:N2	1:AA:754:C:OP2	2.47	0.47
1:AA:715:A:H2'	1:AA:716:A:C8	2.49	0.47
1:AA:1158:C:H42	1:AA:1181:G:H22	1.61	0.47
1:AA:1300:G:O2'	1:AA:1301:U:H6	1.97	0.47
2:AB:14:GLY:O	2:AB:15:VAL:HG13	2.14	0.47
4:AD:145:GLU:HG2	4:AD:184:LYS:HZ2	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:145:GLU:HG2	4:AD:184:LYS:NZ	2.29	0.47
10:AJ:37:PRO:HA	10:AJ:72:VAL:HG22	1.96	0.47
24:AY:32:ARG:HB3	24:AY:38:LEU:HD22	1.96	0.47
31:B6:13:CYS:O	31:B6:21:TYR:HA	2.14	0.47
35:BA:281:G:H21	35:BA:359:A:N6	2.07	0.47
35:BA:545:C:H2'	35:BA:547:A:C8	2.49	0.47
35:BA:1188:U:C4'	54:BV:79:VAL:HG22	2.44	0.47
35:BA:2110:G:C6	35:BA:2120:G:C8	3.01	0.47
35:BA:2693:A:H2'	35:BA:2694:G:H8	1.79	0.47
36:BB:80:U:C2	36:BB:81:G:N2	2.82	0.47
41:BG:42:GLY:O	41:BG:44:GLY:N	2.45	0.47
45:BK:21:PRO:HB2	45:BK:22:PRO:CD	2.38	0.47
50:BR:47:PHE:O	50:BR:51:LEU:HD13	2.14	0.47
58:BZ:150:LEU:O	58:BZ:151:HIS:HB3	2.13	0.47
1:CA:192:U:H1'	20:CT:103:GLY:HA2	1.95	0.47
1:CA:519:C:OP2	12:CL:50:SER:OG	2.30	0.47
1:CA:645:C:H2'	1:CA:646:U:C6	2.49	0.47
1:CA:1060:C:N4	1:CA:1198:G:O6	2.47	0.47
1:CA:1150:U:O4	1:CA:1151:A:N6	2.47	0.47
2:CB:121:LEU:O	2:CB:127:ILE:HD11	2.14	0.47
5:CE:76:ILE:HD11	5:CE:142:LEU:HD21	1.95	0.47
8:CH:40:ALA:O	8:CH:42:GLU:N	2.47	0.47
19:CS:18:LYS:O	19:CS:21:GLU:HG2	2.14	0.47
22:CV:48:C:H2'	22:CV:59:U:H4'	1.95	0.47
35:DA:52:A:H2'	35:DA:53:A:H8	1.79	0.47
35:DA:654(D):G:H22	35:DA:654(P):C:N4	2.12	0.47
35:DA:900:A:C5	35:DA:901:A:C8	3.02	0.47
35:DA:1080:C:H2'	35:DA:1081:U:H6	1.78	0.47
35:DA:1113:U:H2'	35:DA:1114:G:C8	2.48	0.47
35:DA:1882:C:H3'	35:DA:1883:G:H8	1.78	0.47
35:DA:1923:U:H2'	35:DA:1924:C:C6	2.48	0.47
35:DA:2130:U:H2'	35:DA:2158:A:N1	2.28	0.47
35:DA:2626:C:H2'	35:DA:2627:G:C8	2.49	0.47
35:DA:2790:A:O2'	35:DA:2893:G:N2	2.45	0.47
39:DE:103:ASP:CG	39:DE:201:THR:HA	2.33	0.47
40:DF:117:ARG:NH2	40:DF:187:VAL:HA	2.29	0.47
41:DG:48:GLU:CD	41:DG:49:ASP:H	2.17	0.47
42:DH:111:HIS:CG	42:DH:112:PRO:HD2	2.48	0.47
49:DQ:21:THR:OG1	49:DQ:99:PRO:O	2.31	0.47
1:AA:894:G:H2'	1:AA:895:G:H8	1.79	0.47
1:AA:1128:C:C4	1:AA:1139:G:C4	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:71:VAL:HG13	2:AB:93:VAL:HB	1.95	0.47
7:AG:78:ARG:HG2	7:AG:79:ARG:N	2.29	0.47
18:AR:60:ALA:O	18:AR:63:GLN:HB3	2.14	0.47
35:BA:582:G:H2'	35:BA:583:G:H8	1.79	0.47
35:BA:768:G:O2'	35:BA:1379:A:N6	2.47	0.47
35:BA:1079:C:O2	45:BK:129:GLY:HA3	2.14	0.47
35:BA:1384:A:N3	35:BA:1405:U:H1'	2.29	0.47
35:BA:2648:C:H2'	35:BA:2649:U:C6	2.49	0.47
35:BA:2692:C:H2'	35:BA:2693:A:H8	1.78	0.47
38:BD:133:LEU:HD11	38:BD:175:LEU:HD11	1.95	0.47
42:BH:111:HIS:CD2	42:BH:112:PRO:HD2	2.49	0.47
57:BY:28:LYS:HB3	57:BY:37:VAL:HB	1.95	0.47
1:CA:41:G:H2'	1:CA:42:G:C8	2.48	0.47
1:CA:528:C:N4	12:CL:49:ASN:OD1	2.45	0.47
1:CA:553:A:H2'	1:CA:554:C:C6	2.48	0.47
1:CA:840:C:H1'	1:CA:848:C:N4	2.29	0.47
1:CA:963:G:N2	10:CJ:55:LYS:HD2	2.29	0.47
1:CA:1512:U:H2'	1:CA:1513:A:H8	1.79	0.47
4:CD:14:ARG:HA	4:CD:39:PRO:HB3	1.97	0.47
4:CD:126:ILE:HG22	4:CD:127:THR:N	2.28	0.47
14:CN:26:ARG:HB2	14:CN:43:CYS:SG	2.54	0.47
15:CO:64:ARG:HH12	15:CO:88:ARG:NH1	2.12	0.47
16:CP:19:ILE:H	16:CP:19:ILE:HD12	1.79	0.47
29:D4:14:ILE:HD11	29:D4:24:THR:OG1	2.13	0.47
35:DA:271(Q):G:O2'	35:DA:271(R):G:H8	1.96	0.47
35:DA:588:U:H2'	35:DA:589:C:C6	2.49	0.47
35:DA:892:G:H2'	35:DA:893:C:H6	1.78	0.47
35:DA:1366:A:H2'	35:DA:1367:A:O4'	2.14	0.47
35:DA:2115:G:H21	35:DA:2117:A:H62	1.63	0.47
35:DA:2657:A:O2'	42:DH:160:LYS:HE2	2.13	0.47
35:DA:2668:G:H2'	35:DA:2669:G:H8	1.78	0.47
38:DD:44:ASN:ND2	38:DD:47:GLY:O	2.46	0.47
39:DE:143:ASN:HB2	39:DE:147:PRO:HD2	1.96	0.47
43:DI:113:ARG:HB2	43:DI:130:TYR:HE1	1.78	0.47
1:AA:399:G:H2'	1:AA:400:C:C6	2.49	0.47
1:AA:476:G:H2'	1:AA:477:A:H8	1.79	0.47
1:AA:1061:G:H5'	10:AJ:56:HIS:HB3	1.96	0.47
1:AA:1231:G:O3'	9:AI:126:SER:OG	2.32	0.47
2:AB:50:GLU:OE1	2:AB:200:ILE:HB	2.13	0.47
2:AB:106:LYS:O	2:AB:110:GLN:HG3	2.13	0.47
2:AB:187:LEU:HA	2:AB:201:ILE:HB	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:26:GLU:OE2	15:AO:77:ARG:NH1	2.47	0.47
24:AY:299:ARG:HD3	24:AY:303:ARG:HH22	1.79	0.47
26:B1:62:VAL:HG11	26:B1:70:VAL:HG21	1.95	0.47
27:B2:69:ARG:HG3	27:B2:69:ARG:HH11	1.78	0.47
35:BA:270:A:OP2	35:BA:271(X):G:N2	2.47	0.47
35:BA:811:U:OP2	48:BP:24:GLY:HA2	2.14	0.47
35:BA:870:A:P	49:BQ:6:ARG:HH21	2.37	0.47
35:BA:1800:C:OP1	38:BD:266:SER:OG	2.19	0.47
37:BC:16:ASP:HB3	37:BC:19:LYS:HB2	1.96	0.47
38:BD:24:ILE:O	38:BD:25:THR:O	2.32	0.47
48:BP:88:LEU:H	48:BP:88:LEU:HD12	1.79	0.47
49:BQ:16:ARG:O	49:BQ:17:LEU:HD23	2.14	0.47
1:CA:135:C:H2'	1:CA:136:C:H5'	1.96	0.47
1:CA:227:G:H2'	1:CA:228:A:C8	2.50	0.47
1:CA:287:U:H2'	1:CA:288:A:C8	2.48	0.47
1:CA:1238:A:N7	1:CA:1301:U:O4	2.47	0.47
24:CY:239:GLY:O	24:CY:242:VAL:HG12	2.14	0.47
35:DA:1170:G:H1	35:DA:1179:C:H42	1.62	0.47
35:DA:2101:G:H2'	35:DA:2102:U:C6	2.49	0.47
35:DA:2227:A:H5''	38:DD:263:ARG:NH1	2.29	0.47
38:DD:68:LYS:HB2	38:DD:70:TRP:CZ2	2.49	0.47
38:DD:248:SER:HB2	38:DD:249:PRO:HD2	1.97	0.47
39:DE:11:MET:HE3	39:DE:24:THR:HB	1.95	0.47
41:DG:86:MET:O	41:DG:87:PRO:O	2.33	0.47
42:DH:29:PRO:HD2	42:DH:79:VAL:O	2.14	0.47
42:DH:74:ASN:OD1	42:DH:138:LYS:HD3	2.14	0.47
45:DK:54:PRO:HG3	45:DK:71:THR:O	2.13	0.47
46:DN:18:ALA:HB1	46:DN:21:LYS:HB2	1.96	0.47
47:DO:107:ARG:NH2	52:DT:35:LYS:HD2	2.29	0.47
48:DP:41:ARG:NH1	48:DP:45:LEU:HG	2.29	0.47
1:AA:593:G:H1	1:AA:646:U:H3	1.62	0.47
1:AA:766:A:OP2	61:AA:1701:HOH:O	2.20	0.47
1:AA:1427:U:H2'	1:AA:1428:A:C8	2.50	0.47
2:AB:19:HIS:CG	2:AB:20:GLU:H	2.32	0.47
2:AB:77:ALA:O	2:AB:81:VAL:HG23	2.14	0.47
18:AR:87:ARG:HB3	18:AR:87:ARG:NH1	2.30	0.47
25:B0:16:SER:OG	35:BA:2261:C:H3'	2.14	0.47
26:B1:75:GLU:HA	26:B1:75:GLU:OE2	2.13	0.47
26:B1:86:SER:O	26:B1:90:ILE:HG12	2.13	0.47
27:B2:50:ILE:O	27:B2:54:LYS:HB2	2.15	0.47
31:B6:12:GLU:HB3	31:B6:21:TYR:HD2	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B8:34:TRP:CG	33:B8:35:GLN:N	2.82	0.47
35:BA:914:C:H2'	35:BA:915:C:H5'	1.95	0.47
35:BA:1771:C:H2'	35:BA:1772:G:C8	2.50	0.47
50:BR:28:LEU:HD12	50:BR:44:LEU:HD11	1.97	0.47
52:BT:61:PHE:CE1	52:BT:76:PHE:HB2	2.49	0.47
54:BV:22:VAL:O	54:BV:23:GLU:HB2	2.14	0.47
57:BY:87:LYS:HG3	57:BY:89:PHE:H	1.79	0.47
1:CA:262:A:H2'	1:CA:263:A:C8	2.50	0.47
1:CA:501:C:H2'	1:CA:502:G:H8	1.79	0.47
1:CA:1076:C:C2	1:CA:1082:G:N2	2.82	0.47
4:CD:17:VAL:HG12	4:CD:17:VAL:O	2.15	0.47
4:CD:33:MET:O	4:CD:35:ARG:N	2.46	0.47
4:CD:117:ALA:O	4:CD:121:VAL:HG23	2.14	0.47
10:CJ:6:ILE:O	10:CJ:6:ILE:HD12	2.13	0.47
10:CJ:26:ALA:HB3	10:CJ:85:LEU:HD21	1.97	0.47
17:CQ:67:LYS:O	17:CQ:69:LYS:N	2.47	0.47
28:D3:25:ALA:HB2	35:DA:849:A:N1	2.29	0.47
31:D6:26:ASN:N	31:D6:26:ASN:OD1	2.48	0.47
35:DA:272(J):C:N3	35:DA:274:G:C8	2.83	0.47
35:DA:392:C:H5''	35:DA:409:C:H5''	1.95	0.47
35:DA:1316:U:O2'	35:DA:1317:A:H5'	2.13	0.47
35:DA:1429:G:H2'	35:DA:1430:C:C6	2.50	0.47
35:DA:1711:C:H2'	35:DA:1712:C:H6	1.80	0.47
35:DA:2132:U:H3	37:DC:6:LYS:HZ3	1.60	0.47
35:DA:2208:A:H1'	35:DA:2219:G:C4	2.50	0.47
35:DA:2852:G:H1	35:DA:2865:U:H3	1.62	0.47
38:DD:80:ALA:HB3	38:DD:94:LEU:HD13	1.97	0.47
45:DK:41:PHE:C	45:DK:43:ALA:H	2.18	0.47
47:DO:93:PRO:HD3	47:DO:114:ILE:HD11	1.96	0.47
54:DV:21:ARG:HA	54:DV:92:THR:O	2.15	0.47
57:DY:2:ARG:O	57:DY:4:LYS:HG3	2.14	0.47
57:DY:44:ILE:O	57:DY:62:GLU:HB3	2.14	0.47
1:AA:662:G:O2'	1:AA:836:G:OP1	2.33	0.47
1:AA:954:G:H5'	13:AM:120:LYS:HZ1	1.80	0.47
1:AA:1268:A:N3	1:AA:1326:C:O2'	2.43	0.47
1:AA:1355:G:H2'	1:AA:1356:G:C8	2.50	0.47
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.49	0.47
2:AB:46:LYS:HD3	2:AB:46:LYS:HA	1.66	0.47
4:AD:173:TRP:CD2	4:AD:189:PRO:HB3	2.50	0.47
28:B3:44:ARG:O	28:B3:48:GLU:HG2	2.14	0.47
30:B5:2:ALA:CA	35:BA:2015:A:H1'	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:26:ASN:O	31:B6:27:LYS:HD3	2.13	0.47
35:BA:1175:U:O5'	35:BA:1176:G:H8	1.97	0.47
35:BA:1831:G:C4	35:BA:1975:G:N2	2.83	0.47
35:BA:2184:G:H8	35:BA:2184:G:O5'	1.97	0.47
35:BA:2286:A:H4'	35:BA:2287:A:O4'	2.14	0.47
35:BA:2801(A):A:O4'	35:BA:2802:G:H2'	2.15	0.47
35:BA:2873:A:O2'	35:BA:2874:C:H5'	2.15	0.47
41:BG:74:LYS:HD3	41:BG:74:LYS:N	2.29	0.47
41:BG:139:LEU:HA	41:BG:144:ILE:CG2	2.45	0.47
47:BO:65:THR:OG1	47:BO:69:ILE:HD11	2.14	0.47
1:CA:593:G:H2'	1:CA:594:G:H8	1.78	0.47
1:CA:701:C:OP1	1:CA:702:A:O2'	2.21	0.47
1:CA:881:G:H2'	1:CA:882:C:O4'	2.14	0.47
1:CA:1007:C:N4	1:CA:1023:G:O6	2.48	0.47
1:CA:1040:U:H2'	1:CA:1041:A:H8	1.80	0.47
4:CD:18:LYS:HB2	4:CD:33:MET:HG2	1.97	0.47
4:CD:33:MET:SD	4:CD:37:PRO:HA	2.55	0.47
15:CO:70:LEU:HD11	15:CO:77:ARG:HG3	1.96	0.47
17:CQ:10:VAL:HG23	17:CQ:55:ASP:O	2.14	0.47
35:DA:1175:U:H1'	35:DA:1177:A:N1	2.30	0.47
35:DA:1474:C:H3'	35:DA:1475:G:H8	1.79	0.47
35:DA:1841:U:C2	35:DA:1842:G:C8	3.02	0.47
38:DD:24:ILE:O	38:DD:25:THR:O	2.32	0.47
45:DK:9:LYS:O	45:DK:9:LYS:HG3	2.13	0.47
51:DS:87:PHE:HB2	51:DS:106:ARG:CD	2.43	0.47
1:AA:849:C:H2'	1:AA:850:U:C6	2.50	0.47
1:AA:955:U:H2'	1:AA:956:U:C6	2.50	0.47
1:AA:1325:C:H5'	21:AU:15:ARG:HE	1.79	0.47
2:AB:219:VAL:O	2:AB:222:ILE:HB	2.15	0.47
4:AD:182:LYS:HB3	4:AD:183:GLY:H	1.58	0.47
6:AF:94:GLN:HB3	18:AR:32:ARG:HH21	1.79	0.47
7:AG:69:VAL:HG22	7:AG:135:VAL:HG22	1.97	0.47
24:AY:189:LEU:HD21	24:AY:191:ARG:CG	2.45	0.47
29:B4:22:ILE:HG22	29:B4:24:THR:HG23	1.96	0.47
31:B6:26:ASN:OD1	31:B6:26:ASN:N	2.47	0.47
35:BA:974:G:N2	35:BA:989:G:H1'	2.29	0.47
35:BA:1523:U:H2'	35:BA:1524:G:H8	1.79	0.47
35:BA:1653:G:H3'	50:BR:4:LEU:CD2	2.44	0.47
35:BA:1676:A:H2	35:BA:1993:U:H5'	1.80	0.47
35:BA:2844:G:H3'	35:BA:2845:G:H8	1.79	0.47
38:BD:34:VAL:C	38:BD:36:PRO:HD2	2.35	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BK:20:ALA:HA	45:BK:25:PRO:HD3	1.97	0.47
1:CA:524:G:H2'	1:CA:525:C:C6	2.50	0.47
1:CA:538:G:OP2	12:CL:115:LYS:HG3	2.14	0.47
1:CA:807:A:H2'	1:CA:808:C:H6	1.80	0.47
1:CA:1235:U:H4'	21:CU:3:LYS:HB2	1.97	0.47
3:CC:119:ARG:HH11	3:CC:119:ARG:HG3	1.79	0.47
6:CF:19:LEU:HD23	6:CF:19:LEU:O	2.15	0.47
8:CH:120:THR:OG1	8:CH:123:GLU:HG3	2.15	0.47
10:CJ:90:LEU:N	10:CJ:91:PRO:HD3	2.29	0.47
13:CM:90:LEU:HD13	13:CM:94:ARG:NH2	2.30	0.47
18:CR:45:SER:HB3	18:CR:51:LEU:HD21	1.97	0.47
24:CY:14:ARG:HD3	24:CY:350:GLU:OE2	2.15	0.47
33:D8:22:VAL:HB	33:D8:53:PRO:HB3	1.95	0.47
35:DA:315:G:H2'	35:DA:316:C:C6	2.50	0.47
35:DA:675:A:C8	35:DA:804:A:C6	3.02	0.47
35:DA:2102:U:H2'	35:DA:2103:C:C6	2.49	0.47
35:DA:2135:A:N6	35:DA:2136:C:H42	2.12	0.47
37:DC:7:ARG:HD3	37:DC:35:THR:O	2.15	0.47
37:DC:195:ARG:HG3	37:DC:195:ARG:HH11	1.79	0.47
48:DP:101:VAL:C	48:DP:103:ALA:H	2.17	0.47
49:DQ:67:ARG:HG2	49:DQ:67:ARG:HH11	1.79	0.47
1:AA:1082:G:H2'	1:AA:1083:U:O4'	2.15	0.47
1:AA:1225:A:H2'	1:AA:1225:A:N3	2.30	0.47
1:AA:1232:U:H5''	9:AI:124:GLN:O	2.14	0.47
1:AA:1401:G:H8	1:AA:1401:G:O5'	1.98	0.47
4:AD:117:ALA:O	4:AD:121:VAL:HG23	2.14	0.47
8:AH:69:ARG:NE	8:AH:75:ARG:O	2.48	0.47
9:AI:15:ALA:HB2	9:AI:65:VAL:HG23	1.95	0.47
9:AI:118:LYS:O	9:AI:119:ALA:HB3	2.14	0.47
16:AP:51:VAL:HG11	16:AP:74:LEU:CD2	2.45	0.47
22:AV:57:G:H2'	22:AV:58:A:H5'	1.96	0.47
22:AW:23:A:C2	22:AW:24:G:C5	3.02	0.47
24:AY:114:LYS:HD2	24:AY:115:ASN:OD1	2.14	0.47
35:BA:94(A):G:H2'	35:BA:95:G:O4'	2.15	0.47
35:BA:265:A:H1'	35:BA:266:G:O4'	2.14	0.47
35:BA:598:G:H5'	48:BP:15:ARG:HB2	1.96	0.47
35:BA:754:C:H2'	35:BA:755:C:C6	2.50	0.47
35:BA:1049:C:H2'	35:BA:1050:A:H8	1.79	0.47
35:BA:1204:A:O2'	35:BA:1205:U:OP2	2.33	0.47
35:BA:1526:G:H2'	35:BA:1527:G:O4'	2.15	0.47
35:BA:1779:U:H5''	35:BA:1780:A:H5'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2064:C:H2'	35:BA:2065:C:H6	1.78	0.47
35:BA:2135:A:H61	35:BA:2157:G:H1'	1.78	0.47
35:BA:2163:C:H3'	35:BA:2164:C:H6	1.80	0.47
35:BA:2469:A:H2	35:BA:2481:G:H21	1.61	0.47
35:BA:2663:G:H2'	35:BA:2664:G:O4'	2.15	0.47
35:BA:2698:U:H2'	35:BA:2699:C:H6	1.75	0.47
38:BD:108:PRO:HA	38:BD:196:VAL:O	2.15	0.47
45:BK:11:GLN:HA	45:BK:54:PRO:HA	1.97	0.47
48:BP:56:SER:C	48:BP:57:THR:HG1	2.18	0.47
49:BQ:108:GLY:HA3	58:BZ:116:VAL:CG2	2.45	0.47
52:BT:98:LYS:HB3	52:BT:100:TYR:CE1	2.50	0.47
58:BZ:102:LEU:HD23	58:BZ:104:PHE:CE1	2.50	0.47
1:CA:105:G:H2'	1:CA:106:C:C6	2.49	0.47
1:CA:334:C:H2'	1:CA:335:C:H6	1.80	0.47
1:CA:486:U:H2'	1:CA:487:A:H8	1.79	0.47
1:CA:537:G:H5''	12:CL:113:ARG:NH1	2.28	0.47
1:CA:683:G:H2'	1:CA:684:A:H8	1.78	0.47
1:CA:738:C:H5''	6:CF:69:GLU:HB2	1.97	0.47
1:CA:1212:U:H2'	24:CY:78:GLU:OE2	2.15	0.47
1:CA:1349:A:H5''	9:CI:121:ARG:HB2	1.96	0.47
2:CB:98:LEU:O	2:CB:101:MET:HG3	2.14	0.47
2:CB:170:GLU:O	2:CB:174:VAL:HG23	2.14	0.47
3:CC:16:ARG:NH2	3:CC:182:ILE:O	2.48	0.47
5:CE:101:ILE:HD11	5:CE:119:LEU:CD2	2.45	0.47
6:CF:9:VAL:HB	6:CF:87:ARG:HB2	1.96	0.47
6:CF:62:TRP:CH2	6:CF:64:GLN:HB2	2.50	0.47
8:CH:20:TYR:HD1	8:CH:65:TYR:CD2	2.32	0.47
8:CH:40:ALA:C	8:CH:42:GLU:N	2.67	0.47
10:CJ:63:PHE:HA	14:CN:59:ALA:H	1.80	0.47
13:CM:124:PRO:HB2	24:CY:163:GLY:C	2.35	0.47
18:CR:66:LEU:O	18:CR:70:ILE:HG13	2.15	0.47
22:CW:2:C:H2'	22:CW:3:C:C6	2.49	0.47
22:CW:19:G:H4'	22:CW:57:G:H22	1.80	0.47
22:CW:53:G:HO2'	37:DC:55:SER:HG	1.50	0.47
24:CY:117:ILE:HB	24:CY:211:ILE:HG13	1.95	0.47
27:D2:2:LYS:O	27:D2:2:LYS:HD3	2.13	0.47
33:D8:33:ASN:O	33:D8:34:TRP:HB3	2.14	0.47
35:DA:142:A:C8	35:DA:1408:C:H1'	2.50	0.47
35:DA:194:G:H2'	35:DA:195:A:O4'	2.15	0.47
35:DA:401:A:H2'	35:DA:402:A:C8	2.50	0.47
35:DA:443:A:H1'	35:DA:1201:C:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:833:U:H1'	48:DP:55:ARG:NH1	2.29	0.47
35:DA:848:G:OP2	35:DA:928:G:N2	2.48	0.47
35:DA:861:A:N3	36:DB:79:C:O2'	2.45	0.47
35:DA:907:U:OP1	49:DQ:24:GLY:N	2.48	0.47
35:DA:1014:U:H2'	35:DA:1015:G:C8	2.50	0.47
35:DA:1939:U:OP1	35:DA:2604:U:O2'	2.32	0.47
35:DA:2133:G:C6	35:DA:2157:G:C6	3.03	0.47
35:DA:2334:G:N3	51:DS:18:ILE:HD11	2.30	0.47
35:DA:2562:U:H1'	47:DO:23:ARG:CD	2.44	0.47
35:DA:2695:C:H2'	35:DA:2696:U:C6	2.49	0.47
35:DA:2720:U:H2'	35:DA:2721:A:H8	1.80	0.47
38:DD:111:LEU:HD13	38:DD:112:GLN:N	2.30	0.47
40:DF:34:TRP:CH2	48:DP:12:ALA:HB2	2.49	0.47
40:DF:178:PRO:HG2	40:DF:179:GLU:OE1	2.14	0.47
41:DG:28:VAL:O	41:DG:31:VAL:HG12	2.15	0.47
41:DG:33:ARG:H	41:DG:162:THR:HB	1.80	0.47
42:DH:103:LEU:O	42:DH:114:VAL:HA	2.14	0.47
46:DN:1:MET:HG2	46:DN:2:LYS:N	2.30	0.47
46:DN:58:ASP:C	46:DN:60:ILE:N	2.65	0.47
48:DP:18:ARG:NH1	48:DP:18:ARG:O	2.47	0.47
49:DQ:16:ARG:O	49:DQ:17:LEU:HD23	2.14	0.47
51:DS:17:ARG:O	51:DS:20:ARG:HG2	2.15	0.47
52:DT:90:GLN:O	52:DT:120:ARG:NH2	2.48	0.47
52:DT:98:LYS:HB3	52:DT:100:TYR:CE1	2.48	0.47
53:DU:92:ARG:NH2	54:DV:10:LYS:HB3	2.29	0.47
57:DY:28:LYS:NZ	57:DY:37:VAL:HG11	2.25	0.47
1:AA:100:C:H2'	1:AA:101:A:C8	2.50	0.47
1:AA:1149:C:O2'	1:AA:1280:A:N1	2.43	0.47
1:AA:1175:G:H2'	1:AA:1176:A:H8	1.79	0.47
1:AA:1241:G:H2'	1:AA:1242:C:H6	1.80	0.47
1:AA:1440:C:H2'	1:AA:1441:G:O4'	2.15	0.47
1:AA:1466:C:H2'	1:AA:1467:G:O4'	2.14	0.47
2:AB:120:ALA:O	2:AB:121:LEU:HD23	2.15	0.47
2:AB:162:ILE:O	2:AB:185:ILE:HG12	2.15	0.47
4:AD:88:VAL:O	4:AD:92:VAL:HG23	2.15	0.47
5:AE:33:VAL:HG22	5:AE:43:LEU:HD13	1.97	0.47
10:AJ:4:ILE:HD12	10:AJ:4:ILE:N	2.29	0.47
20:AT:38:LYS:HB3	20:AT:38:LYS:HE2	1.71	0.47
27:B2:2:LYS:HG2	35:BA:97:C:H5''	1.97	0.47
35:BA:71:A:C2	56:BX:31:HIS:CE1	3.02	0.47
35:BA:2051:A:H5'	35:BA:2578:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2141:G:O6	35:BA:2150:U:O2	2.33	0.47
35:BA:2163:C:H3'	35:BA:2164:C:C6	2.50	0.47
35:BA:2377:A:H4'	51:BS:107:GLU:HB3	1.97	0.47
35:BA:2626:C:H2'	35:BA:2627:G:C8	2.49	0.47
35:BA:2761:G:H3'	35:BA:2762:G:H5''	1.96	0.47
35:BA:2821:A:P	50:BR:5:LYS:HZ2	2.38	0.47
37:BC:14:LYS:HE3	37:BC:32:GLU:OE1	2.15	0.47
38:BD:69:ARG:HH21	38:BD:192:THR:HB	1.79	0.47
39:BE:37:ARG:O	39:BE:45:THR:HA	2.15	0.47
39:BE:55:ASN:O	39:BE:57:LYS:N	2.46	0.47
41:BG:56:ALA:HB1	41:BG:153:ARG:NH1	2.27	0.47
58:BZ:104:PHE:HD1	58:BZ:139:VAL:HB	1.79	0.47
1:CA:17:U:H2'	1:CA:18:C:H6	1.78	0.47
1:CA:501:C:H2'	1:CA:502:G:C8	2.50	0.47
1:CA:584:G:H1	1:CA:757:U:H3	1.63	0.47
1:CA:609:A:C5	1:CA:610:G:C8	3.03	0.47
2:CB:114:ARG:O	2:CB:114:ARG:HD3	2.14	0.47
4:CD:31:CYS:C	4:CD:33:MET:H	2.17	0.47
22:CV:66:U:H2'	22:CV:67:C:C6	2.50	0.47
34:D9:2:LYS:O	34:D9:34:GLN:HA	2.14	0.47
35:DA:89:G:OP1	57:DY:33:LYS:HE2	2.15	0.47
35:DA:1066:U:O2'	35:DA:1068:G:N7	2.41	0.47
35:DA:1198:U:H2'	35:DA:1199:U:C6	2.50	0.47
35:DA:2389:G:H5''	35:DA:2390:U:O4'	2.14	0.47
41:DG:51:ARG:HA	41:DG:51:ARG:NE	2.24	0.47
47:DO:49:ARG:HA	47:DO:53:LYS:NZ	2.30	0.47
49:DQ:116:GLU:O	49:DQ:120:ILE:HG12	2.15	0.47
49:DQ:134:ARG:HH11	49:DQ:134:ARG:HG3	1.79	0.47
1:AA:189(E):U:O2'	1:AA:189(F):U:H5'	2.15	0.47
1:AA:948:C:H2'	1:AA:949:A:H8	1.80	0.47
1:AA:1109:C:H2'	1:AA:1110:A:O4'	2.15	0.47
9:AI:63:ILE:HG21	9:AI:77:ILE:HG23	1.96	0.47
24:AY:130:CYS:CB	24:AY:163:GLY:HA3	2.45	0.47
28:B3:40:THR:HG23	28:B3:43:ILE:HG12	1.97	0.47
30:B5:55:ARG:CD	30:B5:56:LYS:H	2.14	0.47
33:B8:14:VAL:CG2	33:B8:22:VAL:HG13	2.45	0.47
35:BA:78:A:H2'	35:BA:79:G:C8	2.50	0.47
35:BA:2696:U:H2'	35:BA:2697:G:H8	1.76	0.47
37:BC:194:ILE:O	37:BC:198:GLU:HG3	2.15	0.47
41:BG:36:LYS:HE2	41:BG:95:ARG:HH12	1.79	0.47
51:BS:95:HIS:O	51:BS:98:VAL:HG23	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:35:LYS:NZ	52:BT:41:ARG:HE	2.12	0.47
53:BU:61:TRP:CB	53:BU:93:LYS:HB3	2.45	0.47
1:CA:448:A:P	1:CA:485:G:H22	2.38	0.47
1:CA:509:A:H2	1:CA:544:G:O4'	1.98	0.47
1:CA:580:U:H2'	1:CA:581:G:O4'	2.15	0.47
1:CA:1151:A:H5''	10:CJ:42:THR:H	1.80	0.47
1:CA:1242:C:H2'	1:CA:1243:C:H6	1.80	0.47
2:CB:218:ALA:O	2:CB:222:ILE:HG12	2.14	0.47
3:CC:131:ARG:HH21	3:CC:166:GLU:HG3	1.80	0.47
7:CG:17:VAL:HG12	7:CG:18:TYR:CD1	2.50	0.47
12:CL:91:LYS:O	12:CL:92:ASP:HB2	2.15	0.47
16:CP:71:ARG:O	16:CP:74:LEU:HB2	2.14	0.47
24:CY:326:THR:HG23	24:CY:328:LEU:H	1.80	0.47
31:D6:19:ARG:NH2	35:DA:2401:U:H5''	2.30	0.47
35:DA:1316:U:H2'	35:DA:1317:A:C8	2.50	0.47
39:DE:144:ARG:HB3	39:DE:145:LYS:H	1.42	0.47
41:DG:45:GLU:H	41:DG:45:GLU:CD	2.18	0.47
54:DV:39:LEU:N	54:DV:39:LEU:HD23	2.29	0.47
1:AA:158:G:H2'	1:AA:159:G:C8	2.50	0.47
1:AA:376:G:P	16:AP:67:THR:HG21	2.55	0.47
1:AA:1226:C:OP1	19:AS:81:ARG:NH2	2.48	0.47
7:AG:47:CYS:HB3	7:AG:58:PRO:HG3	1.97	0.47
9:AI:97:LYS:HB3	9:AI:98:PRO:HD3	1.97	0.47
16:AP:56:ALA:O	16:AP:60:LEU:HG	2.14	0.47
24:AY:292:GLU:O	24:AY:296:LYS:HG3	2.15	0.47
33:B8:30:ARG:HA	33:B8:30:ARG:NE	2.30	0.47
35:BA:94:C:H5'	35:BA:94(A):G:OP2	2.14	0.47
35:BA:203:C:H3'	35:BA:204:A:H5''	1.97	0.47
35:BA:691:C:C2	35:BA:692:C:C5	3.03	0.47
35:BA:1024:G:C3'	35:BA:1025:G:H5''	2.45	0.47
35:BA:1759:A:H4'	35:BA:2715:C:O4'	2.15	0.47
35:BA:1842:G:H1	35:BA:1898:U:H3	1.62	0.47
36:BB:45:A:H8	41:BG:95:ARG:HE	1.58	0.47
37:BC:46:ALA:HB1	37:BC:213:VAL:HG22	1.96	0.47
39:BE:110:GLY:O	50:BR:2:ARG:HD3	2.15	0.47
39:BE:176:ILE:HB	39:BE:181:LEU:HB2	1.97	0.47
41:BG:71:THR:O	41:BG:89:GLY:HA3	2.15	0.47
48:BP:97:PRO:O	48:BP:98:GLU:HB3	2.14	0.47
50:BR:87:TYR:O	50:BR:90:ARG:N	2.47	0.47
54:BV:28:GLU:HB2	54:BV:31:ALA:HB2	1.97	0.47
1:CA:607:A:H2'	1:CA:608:A:H8	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:643:C:H5'	8:CH:31:PHE:CD1	2.50	0.47
1:CA:1234:C:H2'	1:CA:1235:U:C6	2.49	0.47
1:CA:1255:G:O2'	1:CA:1258:G:O2'	2.23	0.47
2:CB:55:PHE:HA	2:CB:58:ILE:HD12	1.97	0.47
2:CB:187:LEU:HD23	2:CB:201:ILE:HG22	1.96	0.47
18:CR:31:LEU:HD11	18:CR:62:GLU:HB2	1.96	0.47
24:CY:83:GLU:HB3	24:CY:84:ARG:NH1	2.30	0.47
35:DA:626:U:H5'	35:DA:627:A:C5'	2.44	0.47
35:DA:672:C:H2'	35:DA:673:C:H5'	1.97	0.47
35:DA:994:C:O2'	35:DA:996:A:OP1	2.14	0.47
35:DA:1151:G:H2'	35:DA:1152:C:C6	2.50	0.47
35:DA:1205:U:C2	40:DF:171:PRO:HB3	2.49	0.47
35:DA:1359:A:N7	35:DA:1372:U:O4	2.48	0.47
35:DA:2047:U:H2'	35:DA:2048:G:C8	2.50	0.47
35:DA:2123:G:H2'	35:DA:2124:G:H8	1.79	0.47
35:DA:2840:C:H2'	35:DA:2841:C:H6	1.80	0.47
37:DC:194:ILE:O	37:DC:198:GLU:HG3	2.15	0.47
40:DF:202:PHE:O	40:DF:206:ILE:HG12	2.15	0.47
46:DN:18:ALA:HB3	46:DN:26:LEU:HD22	1.96	0.47
52:DT:35:LYS:HZ1	52:DT:41:ARG:NE	2.12	0.47
1:AA:444:C:H2'	1:AA:445:G:H8	1.80	0.46
1:AA:539:A:OP2	12:AL:115:LYS:HE3	2.14	0.46
1:AA:1376:U:H2'	1:AA:1377:A:H8	1.80	0.46
1:AA:1388:C:H2'	1:AA:1389:C:H6	1.76	0.46
1:AA:1491:G:H5'	1:AA:1492:A:OP2	2.15	0.46
4:AD:25:ARG:HG3	4:AD:30:LYS:HG3	1.96	0.46
6:AF:60:PHE:C	6:AF:61:LEU:HD12	2.36	0.46
8:AH:44:PHE:HD1	8:AH:79:VAL:HG12	1.80	0.46
21:AU:10:ARG:HA	21:AU:13:ILE:HB	1.97	0.46
26:B1:25:LYS:C	26:B1:27:GLU:N	2.68	0.46
35:BA:882:G:H2'	35:BA:883:G:H8	1.80	0.46
35:BA:1019:U:HO2'	35:BA:1021:A:H2	1.59	0.46
35:BA:1198:U:C2	35:BA:1199:U:C5	3.03	0.46
35:BA:1374:G:H2'	35:BA:1375:C:C6	2.50	0.46
35:BA:1717:G:C2	35:BA:1718:G:C8	3.02	0.46
35:BA:2083:G:H2'	35:BA:2084:C:C6	2.50	0.46
35:BA:2646:C:OP2	35:BA:2732:G:O2'	2.16	0.46
37:BC:47:LYS:HZ1	37:BC:169:THR:C	2.18	0.46
37:BC:191:ARG:HB3	37:BC:195:ARG:NH1	2.29	0.46
40:BF:63:LYS:HE3	40:BF:67:GLN:HB2	1.97	0.46
40:BF:89:VAL:HG12	40:BF:90:PHE:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:124:LYS:HD3	48:BP:143:GLY:HA2	1.97	0.46
1:CA:33:A:H2'	1:CA:34:C:C6	2.50	0.46
1:CA:165:C:H2'	1:CA:166:G:H8	1.80	0.46
1:CA:178:C:H2'	1:CA:179:A:H8	1.80	0.46
1:CA:404:U:H2'	1:CA:405:U:H6	1.81	0.46
1:CA:416:G:H2'	1:CA:417:C:H6	1.80	0.46
1:CA:476:G:H2'	1:CA:477:A:C8	2.51	0.46
1:CA:875:C:H1'	8:CH:15:ASN:OD1	2.14	0.46
4:CD:20:TYR:HA	4:CD:26:CYS:CB	2.46	0.46
4:CD:126:ILE:HD12	4:CD:126:ILE:N	2.30	0.46
9:CI:17:VAL:HG21	9:CI:80:GLY:HA3	1.97	0.46
10:CJ:27:ALA:HB2	10:CJ:85:LEU:HD11	1.96	0.46
22:CW:31:A:H2'	22:CW:32:U:C6	2.50	0.46
31:D6:33:LYS:O	31:D6:34:LEU:HB2	2.15	0.46
35:DA:729:G:C8	38:DD:208:LYS:HE3	2.50	0.46
35:DA:1509(B):A:H2'	35:DA:1510:G:H8	1.80	0.46
35:DA:2574:G:H2'	35:DA:2575:C:O4'	2.14	0.46
37:DC:21:TYR:HB2	37:DC:225:ILE:HG22	1.96	0.46
46:DN:57:ALA:HB3	46:DN:124:ALA:HA	1.97	0.46
48:DP:38:GLN:HG3	48:DP:39:LYS:N	2.25	0.46
48:DP:108:LYS:C	48:DP:110:TYR:H	2.17	0.46
48:DP:108:LYS:C	48:DP:110:TYR:N	2.69	0.46
48:DP:136:GLU:O	48:DP:139:LYS:N	2.48	0.46
48:DP:146:VAL:HG13	48:DP:147:LEU:N	2.30	0.46
58:DZ:97:GLU:HG2	58:DZ:125:LEU:CD2	2.40	0.46
1:AA:45:U:H2'	1:AA:46:G:H8	1.80	0.46
1:AA:277:C:P	17:AQ:68:ARG:HH12	2.38	0.46
1:AA:979:C:H3'	1:AA:980:C:H5''	1.97	0.46
4:AD:20:TYR:HA	4:AD:26:CYS:CB	2.45	0.46
4:AD:20:TYR:N	4:AD:20:TYR:CD1	2.83	0.46
9:AI:113:LYS:N	9:AI:113:LYS:HD2	2.31	0.46
22:AW:63:G:H3'	22:AW:64:A:C8	2.50	0.46
23:AX:14:A:H3'	23:AX:14:A:N3	2.30	0.46
24:AY:237:PRO:HD3	35:BA:2604:U:P	2.55	0.46
26:B1:6:GLU:C	26:B1:7:ILE:HD12	2.36	0.46
26:B1:95:LEU:HD13	26:B1:95:LEU:HA	1.79	0.46
33:B8:54:GLU:O	33:B8:58:ILE:HG12	2.15	0.46
35:BA:321:G:C4	40:BF:165:ARG:NH2	2.83	0.46
35:BA:834:C:H2'	35:BA:835:A:H8	1.80	0.46
35:BA:1061:U:OP2	45:BK:9:LYS:HE2	2.14	0.46
35:BA:1149:G:H2'	35:BA:1150:C:H6	1.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1536:C:H2'	35:BA:1537:G:O4'	2.15	0.46
35:BA:1820:U:H4'	35:BA:1821:A:OP2	2.15	0.46
35:BA:2818:G:OP2	50:BR:42:LYS:NZ	2.47	0.46
37:BC:40:GLU:HB2	37:BC:179:ALA:HB2	1.97	0.46
40:BF:34:TRP:CH2	48:BP:12:ALA:HB2	2.50	0.46
40:BF:196:LEU:HD23	40:BF:196:LEU:HA	1.79	0.46
55:BW:6:ILE:HA	55:BW:103:ILE:O	2.15	0.46
1:CA:148:G:C2	1:CA:175:C:C2	3.03	0.46
1:CA:335:C:O2'	1:CA:1433:A:N3	2.42	0.46
1:CA:966:G:C2	22:CV:34:G:H5'	2.50	0.46
1:CA:1309:G:C6	1:CA:1329:A:N1	2.83	0.46
1:CA:1479:C:H2'	1:CA:1480:G:C8	2.49	0.46
2:CB:209:ARG:HD3	2:CB:239:VAL:HG13	1.97	0.46
12:CL:60:LEU:HD23	12:CL:64:TYR:HB2	1.97	0.46
35:DA:221:A:H4'	35:DA:222:A:O5'	2.15	0.46
35:DA:389:G:N1	48:DP:71:VAL:HG12	2.31	0.46
35:DA:483:A:H4'	57:DY:49:VAL:HA	1.97	0.46
35:DA:1153:C:H2'	35:DA:1154:G:O4'	2.15	0.46
35:DA:1800:C:OP1	38:DD:266:SER:OG	2.32	0.46
35:DA:2340:G:H2'	35:DA:2341:G:C8	2.50	0.46
35:DA:2761:G:H3'	35:DA:2762:G:H5''	1.96	0.46
35:DA:2876:G:H4'	52:DT:3:ARG:NE	2.27	0.46
37:DC:194:ILE:HG13	37:DC:227:PRO:HB2	1.97	0.46
37:DC:214:TYR:HE1	37:DC:224:ARG:NH1	2.12	0.46
38:DD:267:SER:C	38:DD:269:PHE:H	2.18	0.46
58:DZ:49:ARG:HH11	58:DZ:49:ARG:CG	2.26	0.46
1:AA:473:G:H2'	1:AA:474:G:H8	1.81	0.46
1:AA:1181:G:H2'	1:AA:1182:G:C4	2.50	0.46
1:AA:1250:A:H4'	9:AI:68:GLY:N	2.31	0.46
1:AA:1254:C:OP1	10:AJ:45:ARG:HG3	2.16	0.46
3:AC:18:TRP:NE1	14:AN:53:LEU:O	2.47	0.46
9:AI:45:ALA:HA	9:AI:48:GLU:OE1	2.15	0.46
22:AW:50:U:HO2'	22:AW:65:G:H1	1.61	0.46
28:B3:21:ALA:HB1	35:BA:849:A:N3	2.31	0.46
35:BA:128:C:H2'	35:BA:129:C:C6	2.50	0.46
35:BA:898:C:H2'	35:BA:899:A:O4'	2.15	0.46
35:BA:1344:G:H4'	35:BA:1384:A:C5	2.49	0.46
35:BA:1529:G:H2'	35:BA:1530:C:C6	2.51	0.46
35:BA:2064:C:H2'	35:BA:2065:C:C6	2.50	0.46
35:BA:2178:C:O2'	37:BC:169:THR:OG1	2.23	0.46
35:BA:2278:A:OP1	49:BQ:10:ARG:NH2	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2298:A:H2'	35:BA:2299:G:O4'	2.15	0.46
35:BA:2838:G:C4	35:BA:2839:G:C8	3.04	0.46
41:BG:55:LYS:NZ	41:BG:148:MET:HG2	2.29	0.46
45:BK:20:ALA:CA	45:BK:25:PRO:HD3	2.45	0.46
46:BN:126:PRO:O	46:BN:127:ASP:HB2	2.15	0.46
48:BP:124:LYS:HD3	48:BP:143:GLY:CA	2.45	0.46
52:BT:89:VAL:C	52:BT:91:ARG:H	2.19	0.46
55:BW:18:ARG:HH11	55:BW:18:ARG:HG2	1.80	0.46
57:BY:2:ARG:O	57:BY:4:LYS:N	2.48	0.46
57:BY:13:VAL:HG22	57:BY:73:ARG:O	2.16	0.46
58:BZ:24:LEU:HD12	58:BZ:41:LEU:HD23	1.96	0.46
58:BZ:97:GLU:CG	58:BZ:127:LYS:HG2	2.44	0.46
1:CA:552:U:H2'	1:CA:553:A:C8	2.48	0.46
1:CA:555:C:H2'	1:CA:556:C:C6	2.50	0.46
1:CA:760:G:O2'	17:CQ:98:LEU:HD23	2.15	0.46
1:CA:1210:C:H2'	1:CA:1211:U:O4'	2.16	0.46
2:CB:93:VAL:HG11	2:CB:97:TRP:CD1	2.46	0.46
3:CC:23:TYR:CG	3:CC:24:ALA:N	2.83	0.46
10:CJ:7:LYS:HD3	10:CJ:71:LEU:HD13	1.98	0.46
10:CJ:18:ALA:O	10:CJ:22:LYS:HB2	2.16	0.46
13:CM:58:GLU:O	13:CM:60:VAL:N	2.48	0.46
16:CP:51:VAL:O	16:CP:53:VAL:N	2.49	0.46
25:D0:74:ARG:HG2	36:DB:12:C:O2'	2.15	0.46
35:DA:271(F):C:H2'	35:DA:271(G):C:C6	2.50	0.46
35:DA:654(T):C:N4	35:DA:654(U):A:N3	2.63	0.46
35:DA:1542:A:C8	35:DA:1544:A:H5'	2.51	0.46
35:DA:1657:C:H2'	35:DA:1658:C:C6	2.49	0.46
35:DA:1991:U:H2'	35:DA:1992:G:H5''	1.97	0.46
35:DA:2073:C:H5''	38:DD:229:VAL:HG13	1.98	0.46
35:DA:2101:G:O6	35:DA:2188:C:N4	2.47	0.46
35:DA:2127:G:H4'	37:DC:38:PHE:HB3	1.96	0.46
35:DA:2605:U:H2'	35:DA:2606:C:C6	2.50	0.46
35:DA:2663:G:H2'	35:DA:2664:G:O4'	2.16	0.46
36:DB:12:C:O4'	36:DB:15:A:N6	2.48	0.46
37:DC:185:LYS:HD2	37:DC:185:LYS:N	2.31	0.46
39:DE:132:HIS:O	39:DE:135:HIS:NE2	2.48	0.46
42:DH:43:VAL:HG11	42:DH:52:VAL:HG22	1.97	0.46
48:DP:16:ARG:HH12	48:DP:18:ARG:H	1.63	0.46
51:DS:89:ARG:HH11	51:DS:92:TYR:HA	1.80	0.46
58:DZ:108:PRO:HD3	58:DZ:141:VAL:HG11	1.95	0.46
1:AA:890:G:O2'	1:AA:906:G:O6	2.25	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1429:C:H2'	1:AA:1430:C:C6	2.50	0.46
2:AB:17:PHE:HD1	2:AB:17:PHE:H	1.62	0.46
2:AB:72:GLY:HA2	2:AB:165:VAL:CG2	2.46	0.46
4:AD:126:ILE:HD12	4:AD:126:ILE:N	2.30	0.46
8:AH:40:ALA:C	8:AH:42:GLU:N	2.69	0.46
24:AY:91:LEU:HA	24:AY:94:ALA:HB3	1.98	0.46
35:BA:481:G:OP2	57:BY:47:LYS:HD3	2.15	0.46
35:BA:654(S):G:H2'	35:BA:654(T):C:N1	2.31	0.46
35:BA:1173:G:H2'	35:BA:1175:U:H5	1.81	0.46
35:BA:1889:A:H2'	35:BA:1890:A:H8	1.80	0.46
35:BA:2057:A:H2'	35:BA:2058:A:C8	2.50	0.46
35:BA:2343:C:O2'	35:BA:2373:G:O2'	2.26	0.46
35:BA:2468:G:H22	35:BA:2481:G:H2'	1.79	0.46
35:BA:2745:C:H4'	42:BH:142:GLY:O	2.16	0.46
35:BA:2757:A:H2'	35:BA:2758:A:H5'	1.97	0.46
40:BF:117:ARG:HG2	40:BF:192:LEU:HB2	1.97	0.46
41:BG:101:ILE:HG22	41:BG:105:LYS:HD2	1.97	0.46
49:BQ:39:PRO:HB3	49:BQ:99:PRO:HD3	1.98	0.46
50:BR:116:LEU:HA	50:BR:116:LEU:HD23	1.61	0.46
1:CA:1106:G:H2'	1:CA:1107:C:C6	2.50	0.46
2:CB:112:VAL:C	2:CB:114:ARG:N	2.67	0.46
2:CB:185:ILE:HA	2:CB:199:TYR:O	2.15	0.46
10:CJ:84:GLN:HB3	10:CJ:88:LEU:HD22	1.97	0.46
12:CL:115:LYS:O	12:CL:117:ARG:HG3	2.15	0.46
15:CO:11:VAL:HG21	15:CO:34:LEU:HD22	1.97	0.46
15:CO:27:VAL:O	15:CO:31:LEU:HD23	2.16	0.46
22:CV:74:C:P	24:CY:266:ARG:HH12	2.38	0.46
33:D8:54:GLU:O	33:D8:58:ILE:HG12	2.16	0.46
34:D9:31:LYS:NZ	35:DA:2478:A:OP1	2.39	0.46
35:DA:654(H):G:H3'	35:DA:654(I):C:H4'	1.98	0.46
35:DA:1019:U:H3	35:DA:1142(A):A:H62	1.63	0.46
35:DA:1070:A:N1	35:DA:1097:U:O2'	2.49	0.46
35:DA:1138:G:N2	46:DN:106:MET:SD	2.74	0.46
35:DA:1188:U:H4'	54:DV:79:VAL:HG22	1.96	0.46
35:DA:2415:G:H4'	48:DP:67:MET:N	2.29	0.46
39:DE:176:ILE:HB	39:DE:181:LEU:HB2	1.96	0.46
41:DG:138:GLN:OE1	41:DG:153:ARG:N	2.41	0.46
43:DI:6:LEU:HA	43:DI:15:VAL:HG12	1.96	0.46
45:DK:6:ALA:HB1	45:DK:59:ILE:HB	1.97	0.46
45:DK:90:LYS:HG3	58:DZ:112:ARG:NH2	2.31	0.46
48:DP:97:PRO:C	48:DP:99:LEU:H	2.19	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:294:U:OP1	1:AA:610:G:O2'	2.28	0.46
1:AA:687:A:H62	1:AA:703:G:N2	2.14	0.46
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.50	0.46
2:AB:111:ARG:NH2	2:AB:114:ARG:HG2	2.28	0.46
5:AE:27:ARG:HG2	5:AE:28:PHE:N	2.30	0.46
9:AI:53:VAL:HG23	9:AI:55:ALA:N	2.27	0.46
27:B2:13:ALA:O	27:B2:15:LYS:N	2.48	0.46
29:B4:14:ILE:HG23	29:B4:31:ILE:HG21	1.97	0.46
33:B8:2:PRO:HA	35:BA:591:C:O2	2.15	0.46
35:BA:8:A:H2'	35:BA:9:U:C5	2.50	0.46
35:BA:886:C:H4'	35:BA:888:C:N4	2.31	0.46
35:BA:1542:A:H8	35:BA:1542:A:H3'	1.81	0.46
35:BA:1651:G:H2'	35:BA:1652:A:O4'	2.16	0.46
35:BA:2241:A:H2'	35:BA:2242:G:H8	1.80	0.46
35:BA:2766:G:C2	35:BA:2767:C:C6	3.03	0.46
36:BB:55:U:HO2'	41:BG:29:TRP:HD1	1.62	0.46
41:BG:96:ARG:HG2	41:BG:97:ASP:N	2.24	0.46
51:BS:61:ASN:OD1	51:BS:62:LYS:N	2.32	0.46
57:BY:76:CYS:SG	57:BY:102:CYS:N	2.89	0.46
1:CA:475:G:H2'	1:CA:476:G:H8	1.79	0.46
1:CA:974:A:H8	1:CA:974:A:OP1	1.99	0.46
4:CD:28:SER:O	4:CD:30:LYS:N	2.49	0.46
10:CJ:4:ILE:HD12	10:CJ:4:ILE:N	2.31	0.46
35:DA:272(J):C:H3'	35:DA:274:G:H5''	1.97	0.46
35:DA:468:G:H5''	40:DF:60:SER:HB2	1.98	0.46
35:DA:534:U:H2'	35:DA:535:C:H6	1.78	0.46
35:DA:639:U:C2	35:DA:640:C:C5	3.03	0.46
35:DA:699:A:N3	35:DA:1633:G:O2'	2.38	0.46
35:DA:712:G:H2'	35:DA:713:G:C8	2.50	0.46
35:DA:958:U:H5''	49:DQ:14:ARG:CD	2.46	0.46
35:DA:1201:C:H2'	35:DA:1202:C:H6	1.81	0.46
35:DA:1509(A):A:H2'	35:DA:1509(B):A:H8	1.80	0.46
35:DA:1721:G:C6	35:DA:1739:U:H5'	2.51	0.46
35:DA:1899:G:O2'	35:DA:1900:A:H5''	2.16	0.46
35:DA:2155:G:C6	35:DA:2156:G:C2	3.04	0.46
35:DA:2467:C:H2'	35:DA:2468:G:O4'	2.16	0.46
35:DA:2649:U:H2'	35:DA:2650:U:H6	1.81	0.46
35:DA:2660:A:H5'	35:DA:2661:G:N3	2.29	0.46
35:DA:2836:U:H2'	35:DA:2837:G:H8	1.81	0.46
40:DF:181:LEU:HD11	40:DF:186:ILE:HD11	1.96	0.46
51:DS:97:ARG:O	51:DS:97:ARG:NH1	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:35:LYS:NZ	52:DT:41:ARG:HE	2.12	0.46
52:DT:83:ILE:HG13	52:DT:84:GLN:HG2	1.97	0.46
1:AA:631:G:H2'	1:AA:632:A:C8	2.50	0.46
1:AA:1158:C:H2'	1:AA:1159:U:H4'	1.98	0.46
2:AB:80:ILE:H	2:AB:80:ILE:CD1	2.26	0.46
2:AB:220:ASP:C	2:AB:222:ILE:H	2.19	0.46
3:AC:67:THR:HG23	3:AC:102:ASN:HB3	1.98	0.46
6:AF:62:TRP:CH2	6:AF:64:GLN:HB2	2.51	0.46
6:AF:76:ALA:HB1	6:AF:80:ARG:NH2	2.31	0.46
10:AJ:29:ARG:HG2	10:AJ:29:ARG:NH1	2.31	0.46
10:AJ:81:THR:C	10:AJ:83:GLU:H	2.18	0.46
22:AW:46:G:O2'	22:AW:47:U:O5'	2.31	0.46
31:B6:35:GLU:HB3	31:B6:51:GLU:OE2	2.15	0.46
35:BA:520:G:H2'	35:BA:521:G:H8	1.80	0.46
35:BA:796:C:OP1	40:BF:62:ARG:HD2	2.16	0.46
35:BA:1077:A:H2'	35:BA:1078:U:O4'	2.14	0.46
35:BA:1542:A:C8	35:BA:1544:A:H5'	2.50	0.46
35:BA:1789:A:H2'	35:BA:1790:C:O4'	2.16	0.46
35:BA:1803:A:O2'	38:BD:259:THR:HG21	2.16	0.46
35:BA:2047:U:H2'	35:BA:2048:G:H8	1.80	0.46
35:BA:2100:G:N2	35:BA:2189:U:O2	2.43	0.46
41:BG:87:PRO:O	41:BG:88:ILE:HD13	2.15	0.46
48:BP:29:LYS:HB3	48:BP:34:GLY:N	2.29	0.46
53:BU:95:LEU:HA	53:BU:95:LEU:HD23	1.72	0.46
57:BY:44:ILE:O	57:BY:62:GLU:HB3	2.16	0.46
58:BZ:40:ASP:OD1	58:BZ:42:VAL:HG12	2.16	0.46
1:CA:310:G:OP1	16:CP:26:ARG:NH1	2.48	0.46
1:CA:392:G:H2'	1:CA:393:A:H8	1.80	0.46
1:CA:457:C:H2'	1:CA:458:C:H6	1.79	0.46
1:CA:1029:C:H2'	1:CA:1030(A):G:C6	2.50	0.46
10:CJ:7:LYS:HB2	10:CJ:97:GLU:HB2	1.98	0.46
11:CK:124:LYS:NZ	11:CK:125:PHE:HE1	2.13	0.46
30:D5:12:SER:OG	35:DA:2021:C:OP1	2.27	0.46
35:DA:673:C:H5'	35:DA:673:C:H6	1.81	0.46
35:DA:902:C:H2'	35:DA:903:C:C6	2.51	0.46
35:DA:1047:G:H2'	35:DA:1110:G:N2	2.30	0.46
35:DA:1198:U:H2'	35:DA:1199:U:H6	1.81	0.46
35:DA:1747:G:H2'	35:DA:1747(A):G:C8	2.50	0.46
35:DA:1956:U:O2	35:DA:1985:G:H4'	2.16	0.46
38:DD:131:LEU:HD13	38:DD:136:ILE:HG12	1.96	0.46
39:DE:77:ILE:HG22	39:DE:78:LEU:HG	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DG:54:GLU:C	41:DG:56:ALA:H	2.17	0.46
53:DU:93:LYS:HD2	53:DU:93:LYS:H	1.80	0.46
53:DU:101:ARG:HB2	53:DU:101:ARG:NH1	2.29	0.46
56:DX:27:THR:HA	56:DX:79:ALA:O	2.16	0.46
1:AA:152:A:H62	1:AA:169:C:N4	2.12	0.46
1:AA:199:G:H1	1:AA:218:C:H42	1.64	0.46
1:AA:322:C:H42	1:AA:329:A:H62	1.64	0.46
1:AA:385:C:H2'	1:AA:386:C:C6	2.50	0.46
1:AA:894:G:H2'	1:AA:895:G:C8	2.51	0.46
1:AA:1152:A:H2'	1:AA:1153:C:H6	1.81	0.46
1:AA:1344:C:O2'	1:AA:1348:U:O2'	2.27	0.46
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.16	0.46
3:AC:83:ARG:C	3:AC:85:ARG:N	2.69	0.46
3:AC:112:SER:HB3	3:AC:115:LEU:HD12	1.98	0.46
4:AD:166:LYS:HD3	4:AD:178:VAL:HG11	1.98	0.46
9:AI:15:ALA:HA	9:AI:65:VAL:HA	1.98	0.46
10:AJ:50:ILE:HA	10:AJ:60:ARG:CB	2.46	0.46
10:AJ:50:ILE:HA	10:AJ:60:ARG:HB2	1.97	0.46
14:AN:29:ARG:NH1	14:AN:31:ARG:HB2	2.31	0.46
15:AO:81:LEU:HD11	15:AO:85:LEU:HD12	1.96	0.46
21:AU:10:ARG:HG2	21:AU:13:ILE:HD12	1.96	0.46
22:AW:29:G:H2'	22:AW:30:G:O4'	2.15	0.46
24:AY:12:GLY:O	24:AY:16:TYR:HD2	1.99	0.46
24:AY:88:LYS:HB2	24:AY:89:PRO:HD3	1.96	0.46
29:B4:25:TYR:O	29:B4:26:SER:HB3	2.16	0.46
35:BA:184:C:H2'	35:BA:185:U:C6	2.51	0.46
37:BC:190:ILE:O	37:BC:194:ILE:HG12	2.15	0.46
38:BD:267:SER:C	38:BD:269:PHE:N	2.69	0.46
40:BF:36:VAL:CG1	40:BF:183:VAL:HG11	2.45	0.46
43:BI:114:LEU:HD23	43:BI:130:TYR:HA	1.98	0.46
45:BK:5:VAL:O	45:BK:6:ALA:HB2	2.16	0.46
48:BP:78:PRO:HB2	48:BP:111:ARG:HD2	1.97	0.46
49:BQ:14:ARG:HG2	49:BQ:41:TRP:CH2	2.39	0.46
51:BS:34:HIS:CG	51:BS:54:LEU:HB2	2.51	0.46
52:BT:60:THR:HG22	52:BT:77:PRO:HA	1.98	0.46
1:CA:632:A:H8	1:CA:632:A:OP2	1.99	0.46
1:CA:1117:G:H5'	1:CA:1118:C:OP2	2.15	0.46
2:CB:210:SER:O	2:CB:214:ILE:HG12	2.15	0.46
12:CL:25:PRO:C	12:CL:27:LEU:N	2.69	0.46
12:CL:59:ARG:NH2	12:CL:65:GLU:OE2	2.49	0.46
16:CP:75:ARG:HH11	16:CP:75:ARG:HG3	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:25:LYS:HG2	21:CU:26:LYS:N	2.31	0.46
22:CV:42:C:H6	22:CV:42:C:H5'	1.81	0.46
22:CV:48:C:C2	22:CV:59:U:H1'	2.51	0.46
26:D1:73:LEU:HD21	26:D1:94:LEU:HB3	1.98	0.46
31:D6:48:VAL:O	31:D6:49:HIS:ND1	2.49	0.46
35:DA:372:G:N2	35:DA:401:A:OP2	2.40	0.46
35:DA:1030:G:OP2	49:DQ:128:LYS:HE2	2.16	0.46
35:DA:1095:A:H2'	35:DA:1096:A:C8	2.51	0.46
35:DA:1155:A:P	53:DU:55:ARG:HD2	2.56	0.46
36:DB:45:A:C4	36:DB:46:A:C8	3.03	0.46
37:DC:213:VAL:O	37:DC:224:ARG:HA	2.15	0.46
39:DE:1:MET:HB3	39:DE:200:GLU:OE1	2.16	0.46
40:DF:16:GLY:O	40:DF:17:ARG:HG3	2.16	0.46
40:DF:22:ALA:O	40:DF:26:ALA:HB2	2.16	0.46
45:DK:1:MET:HG2	45:DK:70:LYS:NZ	2.28	0.46
47:DO:104:ARG:HH12	52:DT:35:LYS:HD3	1.80	0.46
48:DP:88:LEU:HD12	48:DP:88:LEU:H	1.81	0.46
51:DS:95:HIS:CG	51:DS:96:GLY:N	2.83	0.46
1:AA:1157:A:H5'	1:AA:1158:C:C6	2.51	0.46
1:AA:1399:C:N3	1:AA:1502:A:N6	2.64	0.46
7:AG:79:ARG:HG3	7:AG:83:ALA:O	2.16	0.46
7:AG:100:ALA:O	7:AG:104:LEU:HD23	2.15	0.46
27:B2:2:LYS:HA	27:B2:5:GLU:OE1	2.16	0.46
28:B3:31:LEU:O	35:BA:1158:C:H4'	2.16	0.46
29:B4:10:VAL:HB	29:B4:11:PRO:HD2	1.98	0.46
31:B6:19:ARG:HH21	35:BA:2401:U:C5'	2.29	0.46
35:BA:271(M):G:C6	35:BA:271(O):C:C4	3.04	0.46
35:BA:580:C:H2'	35:BA:581:C:C6	2.51	0.46
35:BA:659:C:H2'	35:BA:660:G:C8	2.50	0.46
35:BA:904:C:H2'	35:BA:905:U:C6	2.51	0.46
35:BA:2345:G:N3	35:BA:2381:C:H2'	2.31	0.46
41:BG:145:THR:OG1	41:BG:146:TYR:N	2.44	0.46
42:BH:154:PRO:HD3	42:BH:162:ILE:O	2.16	0.46
43:BI:80:PRO:HA	43:BI:143:SER:OG	2.15	0.46
45:BK:92:GLY:HA3	58:BZ:112:ARG:NH1	2.31	0.46
51:BS:52:SER:CB	51:BS:55:ALA:HB3	2.46	0.46
57:BY:28:LYS:CB	57:BY:37:VAL:HB	2.46	0.46
1:CA:389:A:H2'	1:CA:390:C:O4'	2.16	0.46
1:CA:1163:C:H2'	1:CA:1164:G:H8	1.81	0.46
1:CA:1304:G:OP1	21:CU:2:GLY:N	2.48	0.46
2:CB:14:GLY:O	2:CB:15:VAL:HG13	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:58:GLU:O	3:CC:65:ALA:N	2.39	0.46
10:CJ:39:PRO:HB3	10:CJ:70:ARG:HH12	1.81	0.46
10:CJ:45:ARG:HB3	10:CJ:65:LEU:HB3	1.98	0.46
10:CJ:75:ILE:HG13	10:CJ:76:ASN:N	2.31	0.46
12:CL:25:PRO:O	12:CL:27:LEU:N	2.48	0.46
27:D2:50:ILE:O	27:D2:52:ASP:N	2.38	0.46
35:DA:1070:A:C5	35:DA:1097:U:H4'	2.50	0.46
35:DA:1306:C:H2'	35:DA:1307:A:C8	2.51	0.46
35:DA:1322:A:C5	35:DA:1323:U:C5	3.04	0.46
35:DA:1535:A:H3'	35:DA:1536:C:C6	2.51	0.46
35:DA:2178:C:O3'	37:DC:47:LYS:NZ	2.35	0.46
35:DA:2877:G:H5'	52:DT:3:ARG:HH21	1.79	0.46
36:DB:42:C:C6	41:DG:69:ALA:HB2	2.50	0.46
41:DG:71:THR:HG23	41:DG:89:GLY:HA3	1.97	0.46
41:DG:97:ASP:O	41:DG:101:ILE:HG23	2.15	0.46
42:DH:109:PHE:C	42:DH:111:HIS:H	2.19	0.46
44:DJ:26:UNK:HA	44:DJ:85:UNK:N	2.30	0.46
48:DP:7:ARG:O	48:DP:10:PRO:HD3	2.16	0.46
52:DT:131:ALA:O	52:DT:133:GLU:N	2.48	0.46
57:DY:8:LYS:HB2	57:DY:28:LYS:HZ1	1.80	0.46
58:DZ:151:HIS:CB	58:DZ:170:THR:HA	2.45	0.46
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.98	0.46
1:AA:1360:A:H2'	1:AA:1361:G:C8	2.51	0.46
2:AB:178:ARG:HD2	8:AH:71:GLY:O	2.16	0.46
5:AE:41:VAL:O	5:AE:66:MET:HA	2.15	0.46
5:AE:102:ALA:HB1	5:AE:106:PRO:CG	2.37	0.46
9:AI:42:ARG:HH12	9:AI:71:SER:HG	1.59	0.46
11:AK:21:ILE:N	11:AK:21:ILE:HD12	2.31	0.46
13:AM:125:ARG:HD2	24:AY:165:ASP:CA	2.44	0.46
16:AP:13:HIS:C	16:AP:15:PRO:HD3	2.36	0.46
27:B2:39:ALA:HA	27:B2:45:SER:OG	2.16	0.46
31:B6:25:LYS:HD3	33:B8:34:TRP:HZ2	1.80	0.46
35:BA:547:A:H2'	35:BA:548:A:C8	2.51	0.46
35:BA:1494:A:H2'	35:BA:1495:A:H5''	1.98	0.46
35:BA:2008:C:H2'	35:BA:2009:G:H8	1.80	0.46
42:BH:154:PRO:HB3	42:BH:163:TYR:CZ	2.51	0.46
43:BI:120:ILE:O	43:BI:122:GLU:N	2.46	0.46
51:BS:87:PHE:HB2	51:BS:106:ARG:HD3	1.97	0.46
53:BU:95:LEU:C	53:BU:97:ASP:H	2.18	0.46
1:CA:1374:A:P	7:CG:36:LYS:HZ1	2.39	0.46
10:CJ:51:ARG:HG3	10:CJ:60:ARG:C	2.37	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D1:61:ARG:HG3	26:D1:61:ARG:HH11	1.80	0.46
33:D8:34:TRP:CG	33:D8:35:GLN:N	2.84	0.46
35:DA:140:G:H1'	35:DA:141:A:H2	1.81	0.46
35:DA:581:C:H2'	35:DA:582:G:H8	1.81	0.46
35:DA:597:U:O3'	48:DP:15:ARG:HD2	2.16	0.46
35:DA:598:G:H2'	35:DA:599:G:O4'	2.16	0.46
35:DA:1508:A:O2'	35:DA:1509(A):A:N7	2.48	0.46
36:DB:8:U:H3	36:DB:113:G:H1	1.64	0.46
41:DG:138:GLN:C	41:DG:140:ILE:H	2.19	0.46
43:DI:60:GLU:C	43:DI:62:LYS:H	2.20	0.46
48:DP:47:ASP:HB3	48:DP:48:PRO:CA	2.46	0.46
50:DR:2:ARG:HD2	50:DR:5:LYS:HE2	1.98	0.46
1:AA:203:U:H3'	1:AA:203:U:OP2	2.16	0.46
1:AA:1057:G:H5''	3:AC:154:SER:CB	2.46	0.46
1:AA:1128:C:C5'	9:AI:16:ARG:HH12	2.29	0.46
1:AA:1237:C:O4'	1:AA:1334:G:N2	2.49	0.46
1:AA:1326:C:H2'	1:AA:1327:C:H6	1.81	0.46
2:AB:22:LYS:H	2:AB:40:HIS:CE1	2.34	0.46
10:AJ:6:ILE:HD12	10:AJ:6:ILE:O	2.16	0.46
11:AK:111:ASP:HA	18:AR:84:LYS:HD2	1.98	0.46
13:AM:116:THR:O	13:AM:118:ALA:N	2.49	0.46
16:AP:82:GLN:OE1	16:AP:82:GLN:N	2.41	0.46
22:AW:16:U:H3'	22:AW:17:C:C5'	2.46	0.46
27:B2:57:ILE:O	27:B2:61:LEU:HG	2.16	0.46
35:BA:330:A:H2	35:BA:1210:A:H2'	1.81	0.46
35:BA:863:A:O3'	36:BB:101:G:N2	2.49	0.46
35:BA:1427:A:H4'	35:BA:1428:C:O5'	2.15	0.46
35:BA:1599:C:OP1	56:BX:36:LYS:HG2	2.15	0.46
35:BA:2126:A:H4'	35:BA:2127:G:O5'	2.16	0.46
36:BB:112:U:H2'	36:BB:113:G:H8	1.81	0.46
40:BF:3:GLU:CA	40:BF:24:LEU:HG	2.46	0.46
42:BH:84:SER:O	42:BH:85:LYS:HB3	2.15	0.46
47:BO:13:ASN:C	47:BO:15:GLY:H	2.20	0.46
48:BP:48:PRO:HG2	48:BP:49:ARG:H	1.81	0.46
48:BP:50:ARG:HG3	48:BP:51:PHE:H	1.81	0.46
48:BP:122:PRO:HA	48:BP:142:GLY:HA2	1.98	0.46
50:BR:4:LEU:O	50:BR:5:LYS:HD3	2.16	0.46
52:BT:20:PRO:HD2	52:BT:85:LYS:HB2	1.96	0.46
1:CA:188:C:C2	1:CA:189:G:C8	3.04	0.46
1:CA:189(K):U:H2'	1:CA:189(L):G:H8	1.79	0.46
1:CA:868:C:H2'	1:CA:869:G:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:939:G:O3'	7:CG:102:ARG:NH1	2.49	0.46
1:CA:1347:G:H1'	1:CA:1348:U:H5	1.81	0.46
1:CA:1399:C:C2	1:CA:1502:A:N6	2.84	0.46
4:CD:176:LEU:CG	4:CD:177:ASP:H	2.27	0.46
6:CF:16:GLN:O	6:CF:20:ALA:HB2	2.16	0.46
9:CI:116:LYS:HG2	9:CI:122:ALA:HA	1.98	0.46
19:CS:37:ARG:H	19:CS:37:ARG:HG3	1.51	0.46
22:CW:18:G:H1'	22:CW:58:A:C2	2.51	0.46
25:D0:74:ARG:HH11	25:D0:74:ARG:HG3	1.80	0.46
31:D6:28:ARG:HA	31:D6:32:ASN:HD22	1.80	0.46
32:D7:24:THR:HG23	32:D7:27:GLY:HA3	1.97	0.46
33:D8:32:LEU:HD11	35:DA:2392:A:OP1	2.16	0.46
35:DA:239:U:H2'	35:DA:240:G:O4'	2.16	0.46
35:DA:1494:A:H4'	35:DA:1494:A:OP1	2.16	0.46
35:DA:1548:C:H2'	35:DA:1549:C:C6	2.49	0.46
35:DA:1717:G:H2'	35:DA:1718:G:H5''	1.98	0.46
35:DA:2092:U:H4'	35:DA:2093:G:C5'	2.46	0.46
35:DA:2757:A:N1	42:DH:67:LEU:HD22	2.31	0.46
39:DE:39:PRO:HA	39:DE:43:GLY:CA	2.46	0.46
40:DF:89:VAL:HG12	40:DF:90:PHE:N	2.32	0.46
47:DO:107:ARG:C	47:DO:109:LYS:H	2.18	0.46
48:DP:57:THR:OG1	48:DP:58:THR:N	2.47	0.46
49:DQ:16:ARG:HE	49:DQ:18:LYS:HZ1	1.63	0.46
49:DQ:30:GLY:O	49:DQ:134:ARG:NH1	2.49	0.46
52:DT:129:ARG:CZ	52:DT:131:ALA:HB3	2.46	0.46
55:DW:18:ARG:HG2	55:DW:18:ARG:HH11	1.81	0.46
55:DW:36:LEU:HD11	55:DW:47:VAL:HG12	1.96	0.46
1:AA:180:U:H2'	1:AA:181:G:H5'	1.97	0.45
1:AA:357:G:O2'	43:DI:89:TYR:HB3	2.16	0.45
1:AA:426:G:H4'	4:AD:41:GLY:O	2.15	0.45
1:AA:645:C:H2'	1:AA:646:U:C6	2.52	0.45
1:AA:719:C:O2'	18:AR:49:LYS:HB3	2.15	0.45
1:AA:1285:A:H1'	1:AA:1286:A:OP2	2.16	0.45
1:AA:1298:C:H2'	7:AG:114:ARG:NH1	2.31	0.45
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.79	0.45
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.84	0.45
7:AG:143:ARG:NE	22:AW:42:C:H5''	2.31	0.45
8:AH:51:VAL:HG11	8:AH:60:ARG:HB2	1.98	0.45
8:AH:88:LYS:HB3	8:AH:89:PRO:HD2	1.97	0.45
9:AI:40:LEU:C	9:AI:42:ARG:N	2.68	0.45
13:AM:58:GLU:O	13:AM:62:ASN:HB2	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:115:ASN:OD1	24:AY:115:ASN:N	2.47	0.45
35:BA:214:G:H1'	35:BA:216:A:O2'	2.16	0.45
35:BA:218:A:H2	35:BA:235:U:H4'	1.80	0.45
35:BA:307:G:C2	35:BA:310:A:OP2	2.69	0.45
35:BA:962:G:O2'	35:BA:963:U:H5'	2.17	0.45
35:BA:1351:C:H2'	35:BA:1352:U:C6	2.51	0.45
35:BA:2208:A:H1'	35:BA:2219:G:C4	2.51	0.45
35:BA:2227:A:H5''	38:BD:263:ARG:HH11	1.81	0.45
35:BA:2308:G:H2'	35:BA:2309:A:C8	2.51	0.45
35:BA:2443:C:H2'	35:BA:2444:G:C8	2.49	0.45
39:BE:23:VAL:HA	39:BE:186:GLY:H	1.81	0.45
39:BE:24:THR:HG23	39:BE:184:VAL:HG23	1.99	0.45
39:BE:77:ILE:CG2	39:BE:78:LEU:H	2.27	0.45
40:BF:157:VAL:HA	40:BF:176:LEU:O	2.16	0.45
45:BK:54:PRO:HG3	45:BK:71:THR:O	2.15	0.45
47:BO:43:VAL:HG12	47:BO:54:GLU:HA	1.98	0.45
49:BQ:134:ARG:NE	58:BZ:122:ARG:HH21	2.13	0.45
51:BS:52:SER:HB3	51:BS:55:ALA:HB3	1.98	0.45
57:BY:8:LYS:HB2	57:BY:28:LYS:HZ1	1.81	0.45
1:CA:192:U:H4'	20:CT:103:GLY:H	1.82	0.45
1:CA:363:A:OP1	12:CL:34:ARG:N	2.29	0.45
1:CA:975:A:N1	10:CJ:48:THR:HB	2.30	0.45
1:CA:1060:C:H5''	10:CJ:51:ARG:HB3	1.97	0.45
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.16	0.45
22:CW:19:G:OP2	22:CW:60:U:N3	2.49	0.45
33:D8:62:LEU:CD1	35:DA:242:G:H5''	2.35	0.45
35:DA:804:A:H2'	35:DA:806:C:C4	2.50	0.45
35:DA:1047:G:H2'	35:DA:1110:G:H22	1.81	0.45
35:DA:1173:G:N2	35:DA:1175:U:O4	2.49	0.45
35:DA:1678:G:N2	35:DA:1989:G:N2	2.64	0.45
43:DI:88:ILE:HG22	43:DI:90:GLY:N	2.24	0.45
45:DK:137:GLU:HG3	45:DK:138:VAL:H	1.82	0.45
46:DN:65:LYS:O	46:DN:69:GLN:HB2	2.15	0.45
48:DP:61:ARG:H	48:DP:61:ARG:CD	2.29	0.45
52:DT:125:ARG:O	52:DT:128:GLU:HG3	2.17	0.45
57:DY:28:LYS:HB2	57:DY:28:LYS:HE3	1.67	0.45
58:DZ:28:MET:O	58:DZ:34:ASN:HA	2.16	0.45
1:AA:267:C:OP2	17:AQ:67:LYS:HD2	2.16	0.45
1:AA:997:U:H2'	1:AA:998:G:C8	2.51	0.45
1:AA:1183:A:H5''	1:AA:1184:G:OP2	2.16	0.45
3:AC:71:ALA:HB2	3:AC:106:VAL:HB	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:91:LEU:HB3	3:AC:99:VAL:HG11	1.98	0.45
4:AD:98:GLU:OE2	4:AD:103:ASN:ND2	2.47	0.45
8:AH:11:THR:HA	8:AH:14:ARG:NH1	2.30	0.45
18:AR:31:LEU:HD23	18:AR:31:LEU:H	1.82	0.45
22:AV:2:C:H2'	22:AV:3:C:C6	2.52	0.45
22:AW:53:G:C6	22:AW:62:C:N4	2.84	0.45
35:BA:1331:A:O2'	35:BA:1332:G:H8	1.97	0.45
35:BA:1711:C:H2'	35:BA:1712:C:H6	1.81	0.45
35:BA:2070:G:C2	35:BA:2442:C:C2	3.04	0.45
35:BA:2651:C:H42	35:BA:2669:G:H1	1.63	0.45
41:BG:181:ARG:HG2	41:BG:181:ARG:O	2.17	0.45
45:BK:95:LYS:HE2	45:BK:95:LYS:HB3	1.75	0.45
46:BN:1:MET:O	46:BN:2:LYS:HG3	2.16	0.45
52:BT:13:ARG:CZ	52:BT:13:ARG:HA	2.45	0.45
55:BW:23:LEU:HD12	55:BW:23:LEU:HA	1.81	0.45
55:BW:92:ARG:HH11	55:BW:92:ARG:CB	2.22	0.45
57:BY:10:GLY:CA	57:BY:27:VAL:HG13	2.46	0.45
58:BZ:144:LEU:HD13	58:BZ:144:LEU:HA	1.76	0.45
1:CA:687:A:N3	1:CA:688:G:H1'	2.31	0.45
1:CA:885:G:H2'	1:CA:886:G:H8	1.82	0.45
1:CA:1235:U:H5''	21:CU:3:LYS:HD2	1.98	0.45
1:CA:1286:A:H2'	1:CA:1287:A:H4'	1.98	0.45
8:CH:20:TYR:HE2	8:CH:75:ARG:HD2	1.80	0.45
10:CJ:50:ILE:HA	10:CJ:60:ARG:HB2	1.98	0.45
22:CW:72:C:H2'	22:CW:73:A:O4'	2.16	0.45
34:D9:20:HIS:H	35:DA:2757:A:P	2.39	0.45
35:DA:962:G:O2'	35:DA:963:U:H5'	2.16	0.45
35:DA:1187:G:H5''	54:DV:81:TYR:CE2	2.51	0.45
35:DA:1316:U:H2'	35:DA:1317:A:H8	1.79	0.45
35:DA:1496:A:C8	35:DA:1498:C:C4	3.04	0.45
35:DA:1721:G:N3	35:DA:1721:G:H5''	2.32	0.45
35:DA:1857:G:H8	35:DA:1857:G:O5'	1.98	0.45
35:DA:2506:U:OP1	39:DE:144:ARG:NH2	2.49	0.45
35:DA:2713:A:OP1	50:DR:14:SER:OG	2.24	0.45
35:DA:2773:C:OP1	39:DE:164:ARG:NE	2.48	0.45
44:DJ:22:UNK:O	44:DJ:119:UNK:HA	2.15	0.45
46:DN:1:MET:O	46:DN:2:LYS:HG3	2.15	0.45
46:DN:17:ASP:OD1	46:DN:19:GLU:HB3	2.16	0.45
46:DN:19:GLU:HG3	46:DN:20:GLY:H	1.82	0.45
48:DP:108:LYS:O	48:DP:110:TYR:N	2.49	0.45
51:DS:64:GLU:O	51:DS:68:GLN:HG3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DV:5:VAL:HG23	54:DV:37:VAL:O	2.16	0.45
57:DY:2:ARG:HD3	57:DY:3:VAL:HG23	1.98	0.45
58:DZ:44:PHE:CE2	58:DZ:86:VAL:HG11	2.51	0.45
1:AA:645:C:H2'	1:AA:646:U:H6	1.81	0.45
1:AA:1227:A:OP2	13:AM:111:LYS:HE2	2.15	0.45
2:AB:158:LEU:HD22	2:AB:182:ILE:HD11	1.98	0.45
2:AB:228:GLY:O	2:AB:230:VAL:HG13	2.15	0.45
3:AC:16:ARG:HB2	3:AC:16:ARG:CZ	2.45	0.45
4:AD:156:GLU:O	4:AD:159:ARG:N	2.45	0.45
6:AF:7:ASN:O	6:AF:8:ILE:HG13	2.17	0.45
8:AH:12:ARG:NH1	8:AH:27:PRO:HD2	2.31	0.45
13:AM:90:LEU:O	13:AM:92:HIS:N	2.48	0.45
18:AR:37:VAL:HG12	18:AR:78:LEU:HB3	1.98	0.45
19:AS:66:MET:HA	19:AS:69:HIS:HD2	1.81	0.45
22:AW:27:G:H2'	22:AW:28:G:H8	1.81	0.45
35:BA:70:G:H21	35:BA:71:A:H62	1.64	0.45
35:BA:633:A:N3	35:BA:2403:C:H4'	2.31	0.45
35:BA:864:G:OP2	49:BQ:22:LYS:HE2	2.17	0.45
35:BA:1198:U:H2'	35:BA:1199:U:H6	1.81	0.45
35:BA:1722:A:C2	35:BA:1740:G:C8	3.04	0.45
35:BA:1827:C:H2'	35:BA:1828:G:O4'	2.16	0.45
35:BA:1899:G:N2	35:BA:1902:C:C5	2.84	0.45
38:BD:69:ARG:NH2	38:BD:128:GLY:O	2.47	0.45
41:BG:47:LYS:HB2	41:BG:51:ARG:HD2	1.99	0.45
47:BO:49:ARG:HA	47:BO:53:LYS:NZ	2.32	0.45
49:BQ:21:THR:HG21	49:BQ:101:ARG:HB2	1.97	0.45
51:BS:64:GLU:O	51:BS:68:GLN:HG3	2.16	0.45
55:BW:17:VAL:O	55:BW:20:VAL:HG22	2.15	0.45
57:BY:2:ARG:O	57:BY:4:LYS:HG3	2.16	0.45
57:BY:28:LYS:O	57:BY:29:GLU:C	2.55	0.45
58:BZ:97:GLU:HA	58:BZ:126:VAL:O	2.17	0.45
1:CA:34:C:H2'	1:CA:35:G:H8	1.80	0.45
1:CA:35:G:H21	12:CL:118:SER:CB	2.30	0.45
1:CA:320:C:H2'	1:CA:321:A:C8	2.51	0.45
1:CA:939:G:H5''	7:CG:102:ARG:NH1	2.30	0.45
1:CA:1338:G:O2'	22:CV:41:C:O2'	2.25	0.45
1:CA:1415:G:C6	1:CA:1486:G:C6	3.04	0.45
1:CA:1442(A):G:N2	35:DA:2864:G:OP1	2.42	0.45
4:CD:88:VAL:O	4:CD:92:VAL:HG23	2.16	0.45
4:CD:100:ARG:O	4:CD:103:ASN:N	2.45	0.45
5:CE:34:VAL:HG12	5:CE:62:ALA:HB1	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:90:LEU:O	13:CM:92:HIS:N	2.49	0.45
21:CU:12:LYS:CB	21:CU:22:ARG:HD2	2.47	0.45
35:DA:676:A:H2	35:DA:802:A:H61	1.64	0.45
35:DA:780:G:H21	35:DA:783:A:H62	1.64	0.45
35:DA:817:C:H4'	35:DA:932:G:C5	2.51	0.45
35:DA:852:G:H2'	35:DA:853:G:H8	1.82	0.45
35:DA:1100:C:H2'	35:DA:1101:U:O4'	2.16	0.45
35:DA:1243:G:H2'	35:DA:1244:G:O4'	2.16	0.45
35:DA:1973:G:H2'	35:DA:1974:C:C6	2.51	0.45
35:DA:2317:C:H2'	35:DA:2318:G:O4'	2.16	0.45
38:DD:260:ARG:NH2	38:DD:264:LYS:HD3	2.31	0.45
39:DE:77:ILE:HG22	39:DE:78:LEU:N	2.30	0.45
40:DF:83:PHE:O	40:DF:85:GLY:N	2.49	0.45
45:DK:12:LEU:HB3	45:DK:13:PRO:HD2	1.98	0.45
49:DQ:21:THR:O	49:DQ:22:LYS:HB3	2.16	0.45
50:DR:116:LEU:HA	50:DR:116:LEU:HD23	1.62	0.45
51:DS:106:ARG:O	51:DS:106:ARG:HD2	2.15	0.45
58:DZ:165:VAL:HG12	58:DZ:166:SER:N	2.30	0.45
1:AA:444:C:H2'	1:AA:445:G:C8	2.52	0.45
1:AA:1280:A:H5'	10:AJ:40:LEU:HD22	1.97	0.45
1:AA:1304:G:OP1	21:AU:2:GLY:N	2.48	0.45
2:AB:114:ARG:O	2:AB:114:ARG:HD3	2.15	0.45
3:AC:83:ARG:C	3:AC:85:ARG:H	2.20	0.45
3:AC:173:VAL:O	3:AC:175:LEU:HD12	2.16	0.45
7:AG:101:LEU:O	7:AG:105:VAL:HG23	2.15	0.45
7:AG:121:ALA:O	7:AG:125:MET:HG3	2.16	0.45
11:AK:95:ILE:O	11:AK:99:GLN:HG3	2.17	0.45
24:AY:193:SER:HB2	24:AY:202:HIS:HB2	1.98	0.45
35:BA:16:G:H2'	35:BA:17:G:H8	1.82	0.45
35:BA:29:U:H2'	35:BA:30:G:C8	2.52	0.45
35:BA:817:C:O2'	35:BA:839:U:H5''	2.17	0.45
35:BA:1277:G:O2'	50:BR:24:GLN:HG2	2.17	0.45
35:BA:1336:A:OP1	56:BX:64:LYS:HE3	2.17	0.45
35:BA:1523:U:H2'	35:BA:1524:G:C8	2.51	0.45
35:BA:1528:A:H2'	35:BA:1528(A):A:O4'	2.17	0.45
35:BA:1853:A:N6	35:BA:1889:A:N7	2.65	0.45
35:BA:1902:C:H1'	38:BD:244:ARG:HG3	1.98	0.45
35:BA:2802:G:O2'	35:BA:2803:C:H5''	2.16	0.45
37:BC:6:LYS:HD2	37:BC:6:LYS:O	2.16	0.45
38:BD:239:ARG:HG2	38:BD:239:ARG:HH21	1.81	0.45
39:BE:144:ARG:HB3	39:BE:145:LYS:H	1.39	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:119:GLY:HA2	41:BG:179:PRO:HB2	1.98	0.45
41:BG:142:PRO:O	41:BG:144:ILE:N	2.48	0.45
44:BJ:81:UNK:C	44:BJ:83:UNK:N	2.79	0.45
56:BX:8:ILE:HD12	56:BX:8:ILE:N	2.32	0.45
1:CA:227:G:H2'	1:CA:228:A:H8	1.81	0.45
1:CA:643:C:C2	1:CA:644:G:C8	3.04	0.45
1:CA:817:C:H1'	1:CA:819:A:H5'	1.99	0.45
1:CA:908:A:H2'	1:CA:909:A:C8	2.51	0.45
1:CA:925:G:H1	1:CA:1391:U:H3	1.64	0.45
1:CA:954:G:H21	1:CA:1227:A:H62	1.63	0.45
1:CA:1073:U:H2'	1:CA:1074:G:C8	2.49	0.45
1:CA:1095:U:OP1	1:CA:1108:G:N1	2.49	0.45
1:CA:1183:A:H5''	1:CA:1184:G:OP2	2.17	0.45
5:CE:50:GLU:HB3	5:CE:53:LEU:HD12	1.98	0.45
10:CJ:32:ALA:HB3	10:CJ:76:ASN:HB2	1.96	0.45
28:D3:6:VAL:HB	28:D3:54:VAL:CG1	2.46	0.45
35:DA:32:C:O2'	35:DA:33:U:H5'	2.16	0.45
35:DA:255:A:H1'	35:DA:384:U:C6	2.51	0.45
35:DA:582:G:H2'	35:DA:583:G:H8	1.81	0.45
35:DA:1055:G:N7	35:DA:1056:G:C2	2.84	0.45
35:DA:1292:U:H2'	35:DA:1293:C:H6	1.81	0.45
35:DA:1466:G:H2'	35:DA:1547:C:C5	2.52	0.45
35:DA:1999:C:H5''	35:DA:2723:C:O2'	2.16	0.45
35:DA:2115:G:N2	35:DA:2117:A:H62	2.13	0.45
35:DA:2142:C:H2'	35:DA:2143:C:H6	1.82	0.45
35:DA:2225:A:H4'	35:DA:2226:C:O5'	2.17	0.45
35:DA:2409:G:H2'	35:DA:2410:G:O4'	2.17	0.45
35:DA:2521:C:C2	35:DA:2545:G:N2	2.84	0.45
36:DB:61:G:H2'	36:DB:62:C:C6	2.51	0.45
38:DD:24:ILE:HD12	38:DD:84:TYR:HB2	1.98	0.45
38:DD:43:ARG:NH1	38:DD:49:ILE:HG22	2.32	0.45
38:DD:239:ARG:HG2	38:DD:239:ARG:NH2	2.31	0.45
38:DD:261:LYS:HB3	38:DD:264:LYS:HB2	1.98	0.45
38:DD:267:SER:C	38:DD:269:PHE:N	2.69	0.45
41:DG:124:SER:HB2	41:DG:131:TYR:CE1	2.52	0.45
41:DG:125:PHE:CZ	41:DG:173:LEU:HD12	2.51	0.45
43:DI:68:LEU:HA	43:DI:71:ILE:CD1	2.46	0.45
43:DI:112:LYS:H	43:DI:112:LYS:CD	2.19	0.45
43:DI:131:LYS:HB3	43:DI:132:PRO:HA	1.99	0.45
48:DP:16:ARG:HG3	48:DP:17:LYS:N	2.31	0.45
48:DP:83:VAL:HG11	48:DP:112:LEU:HD21	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:86:ARG:HD2	57:DY:88:LYS:HD2	1.97	0.45
58:DZ:56:VAL:HG22	58:DZ:70:LEU:HD21	1.97	0.45
58:DZ:70:LEU:HG	58:DZ:91:LEU:HD21	1.99	0.45
1:AA:93:G:O2'	1:AA:96:U:H5'	2.17	0.45
1:AA:189(A):C:C2	1:AA:189(B):C:C5	3.04	0.45
1:AA:288:A:H2'	1:AA:289:G:H4'	1.99	0.45
1:AA:584:G:H2'	1:AA:585:G:H8	1.81	0.45
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.36	0.45
1:AA:1126:U:P	1:AA:1126:U:H6	2.39	0.45
1:AA:1348:U:OP1	9:AI:110:GLU:HG2	2.16	0.45
1:AA:1372:U:OP1	9:AI:71:SER:HB3	2.17	0.45
1:AA:1442(A):G:C8	52:BT:118:ARG:HD2	2.51	0.45
2:AB:97:TRP:HZ3	2:AB:172:ILE:HG22	1.81	0.45
9:AI:17:VAL:CG1	9:AI:81:ILE:HD13	2.46	0.45
10:AJ:24:VAL:O	10:AJ:28:ARG:HG3	2.17	0.45
14:AN:29:ARG:HG2	14:AN:40:CYS:HB2	1.99	0.45
24:AY:10:LEU:O	24:AY:14:ARG:HG3	2.17	0.45
24:AY:107:LEU:O	24:AY:107:LEU:HD23	2.17	0.45
24:AY:244:THR:HA	35:BA:2573:C:H41	1.81	0.45
24:AY:315:VAL:HG11	24:AY:320:TYR:CZ	2.51	0.45
35:BA:144:C:H2'	35:BA:145:G:C8	2.50	0.45
35:BA:476:G:N1	35:BA:479:A:OP2	2.49	0.45
35:BA:588:U:H1'	40:BF:90:PHE:HB3	1.99	0.45
35:BA:871:U:OP1	49:BQ:5:ARG:HB2	2.16	0.45
35:BA:935:C:H2'	35:BA:936:C:H6	1.81	0.45
35:BA:1349:A:H62	35:BA:1598:C:N4	2.15	0.45
35:BA:2840:C:H4'	50:BR:53:HIS:HD2	1.82	0.45
41:BG:91:ARG:HD2	41:BG:92:VAL:N	2.31	0.45
41:BG:120:LEU:HB2	41:BG:179:PRO:O	2.15	0.45
43:BI:98:ALA:HA	43:BI:101:LEU:HB3	1.99	0.45
46:BN:120:LEU:CD1	46:BN:122:VAL:HG23	2.47	0.45
51:BS:95:HIS:CG	51:BS:96:GLY:N	2.84	0.45
53:BU:92:ARG:NH1	54:BV:11:GLN:O	2.50	0.45
58:BZ:5:LEU:HD21	58:BZ:39:VAL:HG21	1.97	0.45
1:CA:225:C:H2'	1:CA:226:G:H8	1.82	0.45
1:CA:314:C:O2'	1:CA:315:A:H5'	2.16	0.45
1:CA:390:C:H2'	1:CA:391:G:C8	2.52	0.45
1:CA:607:A:H2'	1:CA:608:A:C8	2.52	0.45
1:CA:645:C:H2'	1:CA:646:U:H6	1.80	0.45
1:CA:678:U:H2'	1:CA:679:C:H6	1.81	0.45
1:CA:806:C:H2'	1:CA:807:A:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:824:C:H4'	8:CH:1:MET:N	2.32	0.45
3:CC:82:GLU:H	3:CC:82:GLU:CD	2.20	0.45
11:CK:24:SER:O	11:CK:27:ASN:N	2.46	0.45
30:D5:55:ARG:CD	30:D5:56:LYS:H	2.18	0.45
35:DA:86:C:OP1	57:DY:32:PRO:HD2	2.16	0.45
35:DA:608:A:OP1	40:DF:100:THR:OG1	2.34	0.45
35:DA:753:C:O5'	35:DA:753:C:H6	1.98	0.45
35:DA:1592:C:H2'	35:DA:1593:G:H8	1.81	0.45
35:DA:1983:C:H4'	35:DA:2606:C:H4'	1.97	0.45
35:DA:2328:A:H2'	35:DA:2329:G:H8	1.80	0.45
35:DA:2408:U:H2'	35:DA:2409:G:C8	2.51	0.45
37:DC:23:ILE:HG22	37:DC:187:ALA:HA	1.98	0.45
45:DK:48:MET:SD	45:DK:69:THR:HG21	2.57	0.45
45:DK:95:LYS:HD3	45:DK:135:GLY:C	2.37	0.45
46:DN:120:LEU:C	46:DN:121:LYS:HD2	2.37	0.45
48:DP:50:ARG:HG3	48:DP:51:PHE:H	1.81	0.45
50:DR:7:GLY:HA3	50:DR:8:ARG:NH2	2.31	0.45
50:DR:9:LYS:HE3	50:DR:9:LYS:HB2	1.75	0.45
52:DT:53:ARG:HB2	52:DT:53:ARG:HH11	1.81	0.45
53:DU:95:LEU:C	53:DU:97:ASP:H	2.20	0.45
57:DY:51:VAL:HB	57:DY:53:PRO:HD2	1.97	0.45
1:AA:376:G:H5''	16:AP:5:ARG:HD2	1.98	0.45
1:AA:740:U:H2'	1:AA:741:G:H8	1.81	0.45
1:AA:922:G:N3	1:AA:1398:A:H2	2.14	0.45
1:AA:950:U:H3	1:AA:1231:G:H1	1.64	0.45
1:AA:1098:C:H2'	1:AA:1099:G:H8	1.81	0.45
1:AA:1239:A:C4	1:AA:1298:C:N4	2.84	0.45
1:AA:1256:A:H5'	1:AA:1257:U:OP1	2.16	0.45
1:AA:1320:C:H42	19:AS:36:ARG:HE	1.63	0.45
3:AC:119:ARG:HH11	3:AC:119:ARG:HG3	1.82	0.45
19:AS:33:THR:CG2	19:AS:51:VAL:HA	2.47	0.45
22:AV:51:U:O2	22:AV:64:A:C2	2.70	0.45
22:AW:67:C:H2'	22:AW:68:C:C6	2.52	0.45
35:BA:210:C:H2'	35:BA:211:A:C8	2.51	0.45
35:BA:1206:G:H2'	35:BA:1207:C:C6	2.52	0.45
35:BA:1349:A:N6	35:BA:1598:C:H42	2.14	0.45
35:BA:1542:A:H3'	35:BA:1542:A:C8	2.52	0.45
35:BA:1580:A:C8	35:BA:1581:G:C8	3.04	0.45
36:BB:66:A:O2'	36:BB:67:G:O5'	2.34	0.45
47:BO:111:PHE:HB3	47:BO:114:ILE:HD13	1.98	0.45
49:BQ:84:GLY:O	49:BQ:85:LYS:HB2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:2:ARG:N	57:BY:5:MET:HG3	2.32	0.45
58:BZ:97:GLU:HG2	58:BZ:125:LEU:HD21	1.97	0.45
1:CA:59:A:C5'	1:CA:60:A:H5''	2.47	0.45
1:CA:67:C:O2	1:CA:171:A:H2	2.00	0.45
1:CA:833:U:H2'	1:CA:834:C:C6	2.51	0.45
1:CA:1386:G:H2'	1:CA:1387:G:H8	1.82	0.45
6:CF:30:LEU:CB	6:CF:35:ALA:HB3	2.46	0.45
13:CM:108:ARG:HD2	13:CM:108:ARG:H	1.81	0.45
15:CO:33:THR:HG21	15:CO:85:LEU:CD2	2.47	0.45
24:CY:233:ARG:HD3	35:DA:2573:C:N4	2.31	0.45
24:CY:233:ARG:NH2	35:DA:2555:U:O2'	2.50	0.45
25:D0:42:GLY:HA2	35:DA:2330:G:H21	1.81	0.45
35:DA:176:G:O2'	35:DA:177:G:H5'	2.17	0.45
35:DA:1114:G:H3'	35:DA:1115:G:H5''	1.98	0.45
35:DA:1292:U:H2'	35:DA:1293:C:C6	2.51	0.45
35:DA:1494:A:H2'	35:DA:1495:A:H3'	1.97	0.45
35:DA:1547:C:H2'	35:DA:1548:C:C6	2.52	0.45
35:DA:2182:G:H2'	35:DA:2183:C:C6	2.52	0.45
35:DA:2266:A:H4'	35:DA:2267:A:N3	2.32	0.45
36:DB:30:C:H1'	36:DB:57:A:H61	1.82	0.45
38:DD:34:VAL:C	38:DD:36:PRO:HD2	2.37	0.45
38:DD:209:ALA:C	38:DD:210:GLY:O	2.55	0.45
41:DG:173:LEU:HD22	41:DG:178:PHE:CZ	2.52	0.45
45:DK:91:PRO:O	58:DZ:112:ARG:NH2	2.43	0.45
48:DP:85:LEU:CD2	48:DP:114:ILE:HD11	2.43	0.45
52:DT:60:THR:HG22	52:DT:77:PRO:HA	1.97	0.45
54:DV:57:VAL:HB	54:DV:99:ILE:HG22	1.98	0.45
57:DY:26:LYS:HG3	57:DY:27:VAL:HG23	1.98	0.45
1:AA:251:G:N2	1:AA:253:U:C5	2.85	0.45
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.16	0.45
1:AA:1242:C:H2'	1:AA:1243:C:H6	1.81	0.45
1:AA:1367:C:H5''	9:AI:114:TYR:HB2	1.97	0.45
9:AI:26:VAL:HG13	9:AI:61:ALA:O	2.17	0.45
17:AQ:24:GLU:HG2	17:AQ:39:SER:HB3	1.98	0.45
19:AS:24:ALA:O	19:AS:25:LYS:HB2	2.17	0.45
22:AV:18:G:N2	22:AV:58:A:O4'	2.49	0.45
28:B3:5:LYS:HB3	28:B3:57:GLU:HB3	1.98	0.45
33:B8:32:LEU:HD11	35:BA:2392:A:OP1	2.17	0.45
35:BA:109:G:H2'	35:BA:110:G:H8	1.81	0.45
35:BA:527:C:H2'	35:BA:2779:U:H5	1.80	0.45
35:BA:1223:G:O6	54:BV:69:LYS:NZ	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1853:A:H2'	35:BA:1854:A:C8	2.52	0.45
35:BA:2161:C:O2'	35:BA:2173:A:O4'	2.34	0.45
35:BA:2864:G:H2'	35:BA:2865:U:H6	1.82	0.45
37:BC:197:LEU:C	37:BC:199:ALA:H	2.19	0.45
38:BD:9:TYR:CZ	38:BD:13:ARG:HD3	2.51	0.45
38:BD:241:PRO:O	38:BD:243:GLY:N	2.50	0.45
41:BG:106:LEU:HA	41:BG:110:ALA:CB	2.47	0.45
41:BG:135:LEU:O	41:BG:154:GLY:HA3	2.16	0.45
42:BH:125:VAL:HG12	42:BH:127:GLU:O	2.17	0.45
48:BP:45:LEU:HD23	48:BP:45:LEU:HA	1.86	0.45
51:BS:58:LEU:HG	51:BS:59:LYS:H	1.82	0.45
57:BY:76:CYS:CB	57:BY:96:ILE:HD11	2.46	0.45
1:CA:21:G:H2'	1:CA:22:G:H8	1.82	0.45
1:CA:407:G:OP1	4:CD:115:ARG:NH1	2.50	0.45
1:CA:451:A:OP1	1:CA:481:G:N2	2.45	0.45
1:CA:918:A:H2'	1:CA:919:A:C8	2.51	0.45
1:CA:1237:C:H5''	1:CA:1238:A:H8	1.79	0.45
1:CA:1240:U:OP2	7:CG:116:ALA:HB2	2.16	0.45
1:CA:1254:C:H42	1:CA:1283:G:H1	1.65	0.45
1:CA:1433:A:H2'	1:CA:1434:A:O4'	2.17	0.45
2:CB:67:THR:HG21	2:CB:155:LEU:HG	1.98	0.45
24:CY:130:CYS:CB	24:CY:163:GLY:HA3	2.46	0.45
24:CY:273:GLU:O	24:CY:277:LYS:HB2	2.15	0.45
35:DA:271(M):G:C6	35:DA:271(O):C:C4	3.04	0.45
35:DA:1641:A:H2'	35:DA:1642:G:O4'	2.17	0.45
35:DA:1790:C:H5''	35:DA:1791:A:OP1	2.15	0.45
35:DA:2406:U:OP2	35:DA:2411:A:N6	2.49	0.45
40:DF:40:GLN:NE2	40:DF:182:ASN:HB2	2.32	0.45
40:DF:53:THR:HG23	40:DF:55:GLY:N	2.18	0.45
41:DG:21:ARG:HH12	41:DG:22:ARG:HG2	1.81	0.45
43:DI:76:THR:HA	43:DI:139:GLN:O	2.16	0.45
45:DK:128:ALA:O	45:DK:132:ARG:HG3	2.16	0.45
47:DO:107:ARG:NH1	52:DT:35:LYS:HD2	2.31	0.45
52:DT:29:ARG:HB3	52:DT:85:LYS:HA	1.98	0.45
52:DT:55:ASN:O	52:DT:57:PHE:N	2.50	0.45
53:DU:13:LYS:N	53:DU:13:LYS:HE2	2.32	0.45
54:DV:25:LEU:H	54:DV:92:THR:HG21	1.80	0.45
57:DY:8:LYS:NZ	57:DY:72:VAL:O	2.41	0.45
58:DZ:11:GLU:H	58:DZ:11:GLU:CD	2.20	0.45
1:AA:224:C:H2'	1:AA:225:C:H6	1.82	0.45
1:AA:500:G:O5'	12:AL:124:LYS:NZ	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:71:LEU:O	5:AE:72:GLN:HG3	2.17	0.45
8:AH:12:ARG:HH12	8:AH:27:PRO:CD	2.28	0.45
13:AM:20:THR:C	13:AM:22:ILE:H	2.20	0.45
13:AM:23:TYR:O	13:AM:66:LEU:HA	2.17	0.45
13:AM:56:LEU:HD13	13:AM:60:VAL:HG21	1.99	0.45
24:AY:348:GLY:O	24:AY:352:LYS:HB2	2.17	0.45
35:BA:274:G:H1'	35:BA:275:G:C6	2.51	0.45
35:BA:444:C:C2	35:BA:445:C:C5	3.05	0.45
35:BA:515:A:H1'	35:BA:581:C:H1'	1.97	0.45
35:BA:835:A:H2'	35:BA:836:G:H8	1.82	0.45
35:BA:1030:G:OP2	49:BQ:128:LYS:HE2	2.17	0.45
35:BA:1264:G:H3'	35:BA:1265:A:H5''	1.99	0.45
35:BA:1747:G:H2'	35:BA:1747(A):G:H8	1.81	0.45
35:BA:2109:U:H2'	35:BA:2110:G:C4	2.52	0.45
35:BA:2632:A:HO2'	35:BA:2811:G:HO2'	1.63	0.45
35:BA:2708:G:H2'	35:BA:2709:G:H8	1.81	0.45
38:BD:267:SER:O	38:BD:269:PHE:N	2.50	0.45
41:BG:60:LEU:HD12	41:BG:68:PRO:HB3	1.99	0.45
42:BH:130:ARG:NH1	42:BH:130:ARG:HB3	2.32	0.45
43:BI:92:VAL:HG13	43:BI:120:ILE:HD12	1.99	0.45
45:BK:18:THR:HG23	45:BK:38:VAL:HG11	1.99	0.45
48:BP:85:LEU:CD2	48:BP:114:ILE:HD11	2.47	0.45
48:BP:112:LEU:HD13	48:BP:113:LYS:N	2.32	0.45
54:BV:89:GLN:OE1	54:BV:90:PRO:HD2	2.17	0.45
1:CA:437:U:H2'	1:CA:438:G:O4'	2.16	0.45
1:CA:936:C:H2'	1:CA:937:A:O4'	2.17	0.45
1:CA:994:A:C2	14:CN:5:ALA:HA	2.52	0.45
1:CA:1429:C:H2'	1:CA:1430:C:C6	2.52	0.45
1:CA:1521:G:H2'	1:CA:1522:U:C6	2.52	0.45
9:CI:13:ALA:CB	9:CI:68:GLY:HA3	2.43	0.45
10:CJ:4:ILE:HD12	10:CJ:4:ILE:H	1.82	0.45
11:CK:58:PRO:HB2	11:CK:93:GLN:HG3	1.99	0.45
13:CM:126:LYS:N	24:CY:161:GLU:H	2.14	0.45
16:CP:74:LEU:HD22	16:CP:79:VAL:HG21	1.99	0.45
21:CU:2:GLY:C	21:CU:4:GLY:H	2.18	0.45
23:CX:21:A:O2'	24:CY:200:ARG:NH2	2.49	0.45
30:D5:49:CYS:HB2	30:D5:50:GLY:H	1.48	0.45
32:D7:34:ARG:NH1	32:D7:41:ARG:O	2.49	0.45
35:DA:375:C:H2'	35:DA:376:C:C6	2.51	0.45
35:DA:545:C:H2'	35:DA:547:A:C8	2.52	0.45
35:DA:661:C:O3'	48:DP:18:ARG:HD2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2437:U:O2'	35:DA:2438:U:H5'	2.17	0.45
35:DA:2455:G:H2'	35:DA:2456:C:C6	2.52	0.45
37:DC:225:ILE:HD12	37:DC:225:ILE:O	2.16	0.45
42:DH:41:MET:HG3	42:DH:43:VAL:H	1.82	0.45
43:DI:75:LEU:O	43:DI:139:GLN:HB3	2.17	0.45
45:DK:27:LEU:HD13	45:DK:57:ILE:CD1	2.44	0.45
49:DQ:44:ALA:HB2	49:DQ:70:PRO:HG3	1.97	0.45
52:DT:48:ILE:N	52:DT:48:ILE:HD12	2.32	0.45
57:DY:50:ARG:HB2	57:DY:57:GLN:HA	1.99	0.45
1:AA:334:C:H2'	1:AA:335:C:H6	1.81	0.45
1:AA:632:A:OP2	1:AA:632:A:H8	2.00	0.45
1:AA:1083:U:H5	1:AA:1084:G:C6	2.34	0.45
4:AD:92:VAL:O	4:AD:96:LEU:HD13	2.17	0.45
6:AF:7:ASN:HD21	18:AR:34:TYR:HE1	1.64	0.45
7:AG:17:VAL:HG12	7:AG:18:TYR:CD1	2.52	0.45
9:AI:97:LYS:HD3	9:AI:102:LEU:HD13	1.99	0.45
18:AR:84:LYS:HD3	18:AR:84:LYS:HA	1.62	0.45
22:AW:19:G:C4'	22:AW:57:G:H22	2.28	0.45
35:BA:324:A:H2'	35:BA:325:G:O4'	2.17	0.45
35:BA:971:C:OP1	35:BA:974:G:C8	2.70	0.45
35:BA:1534:U:H2'	35:BA:1535:A:O4'	2.17	0.45
35:BA:2483:C:N3	49:BQ:124:LYS:NZ	2.64	0.45
35:BA:2675:A:H5'	47:BO:31:LYS:HZ3	1.81	0.45
35:BA:2808:U:N3	35:BA:2809:A:N7	2.65	0.45
37:BC:213:VAL:HG21	37:BC:227:PRO:HB3	1.99	0.45
38:BD:85:ASP:OD2	38:BD:88:ARG:NH1	2.48	0.45
41:BG:28:VAL:O	41:BG:31:VAL:HG12	2.17	0.45
41:BG:110:ALA:HB1	41:BG:140:ILE:HD13	1.99	0.45
42:BH:88:LEU:HD22	42:BH:130:ARG:HG2	1.99	0.45
48:BP:92:GLU:HG3	48:BP:93:GLY:H	1.82	0.45
57:BY:14:LEU:HD12	57:BY:15:VAL:H	1.82	0.45
1:CA:189(E):U:O2'	1:CA:189(F):U:H5'	2.17	0.45
1:CA:877:C:H2'	1:CA:878:G:H8	1.81	0.45
1:CA:914:A:H2'	1:CA:915:A:H8	1.82	0.45
1:CA:1095:U:P	1:CA:1108:G:H1	2.40	0.45
1:CA:1417:G:C6	1:CA:1482:G:C6	3.05	0.45
3:CC:54:ARG:HH12	3:CC:56:ASP:HB2	1.81	0.45
5:CE:19:MET:O	5:CE:20:GLN:HB2	2.17	0.45
13:CM:27:LYS:O	13:CM:30:ALA:HB3	2.17	0.45
15:CO:62:GLN:O	15:CO:66:LEU:HD13	2.17	0.45
24:CY:106:LEU:HD11	24:CY:179:LEU:HD11	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D6:19:ARG:HG3	31:D6:20:ASN:N	2.31	0.45
31:D6:39:TYR:HE1	35:DA:2347:C:H4'	1.82	0.45
33:D8:48:PHE:HB3	33:D8:49:VAL:H	1.48	0.45
35:DA:271(F):C:H2'	35:DA:271(G):C:H6	1.81	0.45
35:DA:2226:C:C2	35:DA:2227:A:C8	3.05	0.45
35:DA:2649:U:H2'	35:DA:2650:U:C6	2.52	0.45
35:DA:2668:G:H2'	35:DA:2669:G:C8	2.52	0.45
35:DA:2757:A:H2'	35:DA:2758:A:H5'	1.99	0.45
35:DA:2773:C:H5''	39:DE:164:ARG:HD3	1.98	0.45
35:DA:2894:G:H2'	35:DA:2894:G:N3	2.32	0.45
40:DF:28:ILE:HD13	40:DF:119:ARG:HH21	1.82	0.45
40:DF:34:TRP:CZ3	48:DP:12:ALA:HB2	2.52	0.45
40:DF:72:ARG:HA	40:DF:72:ARG:HD2	1.83	0.45
41:DG:17:PRO:HG2	41:DG:18:GLU:H	1.81	0.45
48:DP:98:GLU:O	48:DP:101:VAL:HG22	2.17	0.45
51:DS:52:SER:CB	51:DS:55:ALA:HB3	2.46	0.45
51:DS:89:ARG:NH1	51:DS:92:TYR:HA	2.32	0.45
54:DV:13:ARG:HH11	54:DV:13:ARG:HG3	1.81	0.45
1:AA:189(B):C:H2'	1:AA:189(C):C:C6	2.51	0.45
1:AA:953:G:N7	13:AM:104:ARG:NH2	2.60	0.45
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.51	0.45
1:AA:1410:G:H2'	1:AA:1411:C:H6	1.82	0.45
4:AD:23:GLY:O	4:AD:27:TYR:HD1	2.00	0.45
6:AF:75:LEU:O	6:AF:79:LEU:HG	2.17	0.45
17:AQ:57:VAL:HG12	17:AQ:76:LEU:HA	1.98	0.45
22:AW:23:A:H2'	22:AW:24:G:C8	2.52	0.45
33:B8:26:LYS:HA	33:B8:47:LYS:HZ2	1.82	0.45
35:BA:249:C:OP2	35:BA:2394:C:O2'	2.23	0.45
35:BA:836:G:H2'	35:BA:837:C:C6	2.52	0.45
35:BA:1071:G:N2	35:BA:1089:G:O2'	2.44	0.45
35:BA:1220:A:OP2	53:BU:19:LYS:NZ	2.39	0.45
35:BA:2247:A:H2'	35:BA:2248:C:H6	1.82	0.45
35:BA:2674:G:H2'	35:BA:2675:A:H8	1.82	0.45
37:BC:16:ASP:HB3	37:BC:19:LYS:CB	2.47	0.45
37:BC:202:PRO:HB2	37:BC:205:ALA:HB2	1.99	0.45
40:BF:24:LEU:HD13	40:BF:118:ALA:HB1	1.99	0.45
52:BT:53:ARG:HH11	52:BT:53:ARG:HB2	1.82	0.45
57:BY:90:LEU:HD12	57:BY:91:GLU:HG2	1.98	0.45
58:BZ:108:PRO:O	58:BZ:111:VAL:HG22	2.17	0.45
1:CA:79:G:N2	1:CA:91:C:C2	2.85	0.45
2:CB:17:PHE:CD2	2:CB:44:LEU:HD11	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:104:LEU:HD22	7:CG:134:ALA:HB1	1.99	0.45
10:CJ:23:ILE:HG23	10:CJ:85:LEU:HD13	1.98	0.45
17:CQ:22:LEU:HD11	17:CQ:39:SER:HB2	1.98	0.45
24:CY:115:ASN:CB	24:CY:172:LYS:HA	2.47	0.45
25:D0:73:GLY:HA3	36:DB:12:C:H2'	1.99	0.45
26:D1:3:LYS:HG2	26:D1:4:VAL:H	1.81	0.45
35:DA:94(A):G:H2'	35:DA:95:G:O4'	2.17	0.45
35:DA:272(C):G:H1	35:DA:365:C:N4	2.11	0.45
35:DA:510:C:H2'	35:DA:511:U:O4'	2.16	0.45
35:DA:1434:A:H2'	35:DA:1435:G:C8	2.52	0.45
35:DA:1509(B):A:C4	35:DA:1510:G:C8	3.05	0.45
35:DA:1546:C:H5'	35:DA:1547:C:H5'	1.99	0.45
35:DA:1803:A:O2'	38:DD:259:THR:HG21	2.17	0.45
35:DA:1860:G:H5''	37:DC:207:GLY:HA2	1.98	0.45
35:DA:2690:C:OP2	50:DR:14:SER:HB3	2.16	0.45
42:DH:24:VAL:HG12	42:DH:35:VAL:HB	1.99	0.45
45:DK:20:ALA:CA	45:DK:25:PRO:HD3	2.47	0.45
48:DP:16:ARG:NH1	48:DP:18:ARG:N	2.65	0.45
48:DP:18:ARG:O	48:DP:20:GLY:N	2.50	0.45
1:AA:194:C:H2'	1:AA:195:A:H5''	1.97	0.44
1:AA:505:G:H2'	1:AA:506:G:H8	1.81	0.44
1:AA:570:G:H2'	1:AA:571:U:C6	2.53	0.44
1:AA:626:U:H5''	16:AP:38:TYR:CD2	2.51	0.44
1:AA:642:A:C5	8:AH:115:SER:HA	2.52	0.44
1:AA:971:G:OP1	1:AA:971:G:H3'	2.17	0.44
1:AA:1294:G:H2'	1:AA:1295:G:H8	1.81	0.44
2:AB:145:LEU:O	2:AB:149:LEU:HB2	2.16	0.44
3:AC:130:VAL:O	3:AC:134:ILE:HG13	2.18	0.44
4:AD:55:ALA:O	4:AD:59:ARG:HG2	2.17	0.44
6:AF:45:LEU:HB2	6:AF:59:TYR:HD1	1.82	0.44
24:AY:270:LYS:O	24:AY:274:LEU:HB2	2.17	0.44
24:AY:299:ARG:HD3	24:AY:303:ARG:NH2	2.32	0.44
27:B2:48:HIS:NE2	35:BA:96:G:H4'	2.32	0.44
35:BA:109:G:H2'	35:BA:110:G:C8	2.51	0.44
35:BA:116:C:H2'	35:BA:117:G:O4'	2.16	0.44
35:BA:195:A:H61	35:BA:198:C:H3'	1.82	0.44
35:BA:520:G:H2'	35:BA:521:G:C8	2.52	0.44
35:BA:836:G:H2'	35:BA:837:C:H6	1.83	0.44
35:BA:1282:U:H2'	35:BA:1283:G:O4'	2.17	0.44
35:BA:1666:G:O2'	47:BO:6:THR:OG1	2.24	0.44
35:BA:1857:G:O5'	35:BA:1857:G:H8	2.01	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2359:C:H2'	35:BA:2360:A:O4'	2.17	0.44
39:BE:9:VAL:HG22	39:BE:25:VAL:HB	1.99	0.44
41:BG:61:ALA:HB2	41:BG:68:PRO:CD	2.47	0.44
47:BO:88:ASN:HD21	47:BO:90:GLN:HB2	1.81	0.44
58:BZ:52:SER:OG	58:BZ:53:ILE:N	2.49	0.44
58:BZ:110:GLY:HA3	58:BZ:174:VAL:HG11	1.99	0.44
1:CA:161:A:H2'	1:CA:162:A:C8	2.51	0.44
1:CA:165:C:H2'	1:CA:166:G:C8	2.52	0.44
1:CA:189(B):C:H2'	1:CA:189(C):C:C6	2.52	0.44
1:CA:835:U:H3	1:CA:851:G:H1	1.64	0.44
1:CA:1250:A:H2	1:CA:1370:G:H1'	1.82	0.44
1:CA:1392:G:N2	1:CA:1502:A:C8	2.77	0.44
3:CC:75:VAL:O	3:CC:83:ARG:HG2	2.17	0.44
6:CF:69:GLU:O	6:CF:72:VAL:HG12	2.18	0.44
10:CJ:57:LYS:HG3	10:CJ:57:LYS:O	2.16	0.44
13:CM:19:LEU:HA	13:CM:22:ILE:HD13	2.00	0.44
15:CO:39:LEU:HD12	15:CO:56:LEU:HB2	1.98	0.44
16:CP:82:GLN:OE1	16:CP:82:GLN:N	2.42	0.44
24:CY:87:LEU:O	24:CY:91:LEU:HD23	2.16	0.44
31:D6:31:PRO:CB	35:DA:2286:A:H3'	2.46	0.44
35:DA:265:A:H1'	35:DA:266:G:O4'	2.17	0.44
35:DA:605:C:O2	35:DA:657:U:O2'	2.35	0.44
35:DA:1453:U:H5'	50:DR:63:ARG:NE	2.32	0.44
35:DA:1503:U:N3	35:DA:1504:C:N4	2.66	0.44
35:DA:1747:G:H2'	35:DA:1747(A):G:H8	1.82	0.44
35:DA:2003:G:C6	35:DA:2004:G:C5	3.05	0.44
35:DA:2588:G:C6	35:DA:2607:G:C2	3.04	0.44
35:DA:2712:U:O2	35:DA:2712:U:H5'	2.16	0.44
35:DA:2869:G:H2'	35:DA:2870:C:O4'	2.18	0.44
42:DH:125:VAL:HG12	42:DH:127:GLU:O	2.17	0.44
42:DH:159:GLU:HB3	42:DH:160:LYS:H	1.44	0.44
48:DP:39:LYS:HD2	48:DP:39:LYS:HA	1.75	0.44
48:DP:48:PRO:HG2	48:DP:49:ARG:H	1.82	0.44
1:AA:105:G:H2'	1:AA:106:C:C6	2.53	0.44
1:AA:971:G:H22	1:AA:1363(A):A:P	2.39	0.44
1:AA:1031:G:H2'	1:AA:1032:G:O4'	2.16	0.44
1:AA:1117:G:H22	1:AA:1180:A:H1'	1.82	0.44
1:AA:1238:A:C5	1:AA:1303:C:H1'	2.52	0.44
2:AB:17:PHE:CD2	2:AB:44:LEU:HD11	2.51	0.44
4:AD:61:LYS:HD3	4:AD:206:PHE:CE2	2.51	0.44
6:AF:30:LEU:H	6:AF:30:LEU:HD23	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:131:LYS:HG3	7:AG:131:LYS:O	2.17	0.44
10:AJ:20:ALA:O	10:AJ:24:VAL:HG23	2.17	0.44
10:AJ:40:LEU:HB2	10:AJ:69:ASN:O	2.17	0.44
10:AJ:75:ILE:HG13	10:AJ:76:ASN:N	2.32	0.44
17:AQ:22:LEU:HD11	17:AQ:39:SER:HB2	1.99	0.44
24:AY:130:CYS:HB2	24:AY:163:GLY:HA3	1.99	0.44
25:B0:72:ARG:NE	36:BB:11:C:OP1	2.51	0.44
27:B2:4:SER:HA	27:B2:7:ARG:HG2	1.99	0.44
27:B2:47:ASN:ND2	35:BA:94(A):G:H21	2.15	0.44
30:B5:37:LYS:HB2	30:B5:37:LYS:HE3	1.77	0.44
31:B6:33:LYS:O	31:B6:34:LEU:HB2	2.17	0.44
35:BA:877:U:O2'	35:BA:878:A:H5''	2.18	0.44
35:BA:882:G:H2'	35:BA:883:G:C8	2.52	0.44
35:BA:1177:A:H5'	35:BA:1178:C:C6	2.52	0.44
35:BA:1285:G:O3'	50:BR:105:ARG:NH1	2.50	0.44
35:BA:1490:A:H5'	35:BA:1491:G:OP2	2.17	0.44
36:BB:28:C:H2'	36:BB:29:A:C8	2.52	0.44
40:BF:63:LYS:NZ	40:BF:67:GLN:HB2	2.32	0.44
41:BG:41:GLN:NE2	41:BG:154:GLY:O	2.49	0.44
41:BG:106:LEU:HA	41:BG:110:ALA:HB3	1.99	0.44
48:BP:70:GLN:HB3	48:BP:72:PRO:HD2	1.99	0.44
50:BR:44:LEU:O	50:BR:48:VAL:HG23	2.17	0.44
51:BS:59:LYS:HG2	51:BS:60:GLY:H	1.81	0.44
1:CA:148:G:H2'	1:CA:149:A:H8	1.83	0.44
1:CA:512:U:H2'	1:CA:513:C:H6	1.82	0.44
1:CA:570:G:H2'	1:CA:571:U:C6	2.52	0.44
1:CA:687:A:C2	1:CA:704:A:C6	3.05	0.44
1:CA:974:A:OP1	14:CN:31:ARG:HD3	2.17	0.44
2:CB:165:VAL:HG23	2:CB:166:ASP:N	2.30	0.44
22:CV:1:G:C2	22:CV:2:C:C5	3.05	0.44
28:D3:8:LEU:HB2	28:D3:28:LEU:HD13	2.00	0.44
32:D7:4:THR:HG22	35:DA:687:C:H1'	1.99	0.44
35:DA:534:U:C2	35:DA:535:C:C5	3.04	0.44
35:DA:579:G:H2'	35:DA:580:C:C6	2.52	0.44
35:DA:829:A:N7	35:DA:2247:A:O2'	2.47	0.44
35:DA:987:G:O2'	35:DA:1000:A:N3	2.41	0.44
35:DA:1047:G:N2	35:DA:1111:A:H62	2.15	0.44
35:DA:1496:A:H2'	35:DA:1498:C:C5	2.53	0.44
35:DA:1946:U:H2'	35:DA:1947:C:H6	1.80	0.44
35:DA:2032:G:OP2	35:DA:2454:G:O2'	2.22	0.44
35:DA:2071:A:H2'	35:DA:2072:G:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2110:G:C6	35:DA:2120:G:C8	3.06	0.44
35:DA:2835:A:N6	35:DA:2878:U:H3'	2.32	0.44
38:DD:118:VAL:HG22	38:DD:119:ALA:H	1.81	0.44
41:DG:56:ALA:HA	41:DG:59:GLU:HB3	1.98	0.44
43:DI:58:LEU:C	43:DI:60:GLU:H	2.19	0.44
45:DK:82:ALA:HB2	45:DK:99:ILE:HG13	1.98	0.44
47:DO:65:THR:OG1	47:DO:69:ILE:HD11	2.18	0.44
48:DP:143:GLY:O	48:DP:144:GLU:HB2	2.18	0.44
1:AA:38:G:H22	1:AA:397:A:P	2.40	0.44
1:AA:179:A:H2'	1:AA:180:U:H6	1.81	0.44
1:AA:194:C:C2'	1:AA:195:A:H5''	2.48	0.44
1:AA:640:A:O2'	1:AA:641:U:H5'	2.18	0.44
1:AA:1469:G:H2'	1:AA:1470:G:H8	1.83	0.44
2:AB:70:PHE:HA	2:AB:163:PHE:O	2.17	0.44
13:AM:9:ILE:N	13:AM:9:ILE:HD12	2.33	0.44
16:AP:12:LYS:C	16:AP:14:ASN:H	2.21	0.44
17:AQ:9:VAL:HG12	17:AQ:56:VAL:HG22	1.99	0.44
24:AY:295:LEU:HD13	24:AY:295:LEU:O	2.18	0.44
25:B0:43:THR:HG22	35:BA:2331:G:O3'	2.17	0.44
34:B9:30:PRO:HB2	35:BA:2527:C:H4'	1.98	0.44
35:BA:152:G:H2'	35:BA:153:C:C6	2.52	0.44
35:BA:227:A:C2	35:BA:2407:G:H1'	2.52	0.44
35:BA:1270:C:H5''	35:BA:1271:G:C5'	2.48	0.44
35:BA:1538:G:N1	35:BA:1539:G:C6	2.85	0.44
35:BA:1668:A:N3	35:BA:1670:C:N4	2.66	0.44
35:BA:2112:G:H2'	35:BA:2112:G:N3	2.31	0.44
41:BG:126:ASP:N	41:BG:126:ASP:OD1	2.50	0.44
41:BG:155:MET:O	41:BG:155:MET:HG3	2.17	0.44
47:BO:69:ILE:HD12	47:BO:69:ILE:N	2.32	0.44
1:CA:180:U:H3	1:CA:195:A:H62	1.63	0.44
1:CA:186:C:C2	1:CA:187:C:C5	3.06	0.44
1:CA:881:G:OP2	12:CL:12:ARG:NH2	2.51	0.44
1:CA:1073:U:C2	1:CA:1074:G:C8	3.06	0.44
1:CA:1176:A:H2'	1:CA:1177:G:C8	2.51	0.44
4:CD:33:MET:C	4:CD:35:ARG:N	2.70	0.44
11:CK:105:VAL:HB	11:CK:108:ILE:HD11	1.99	0.44
15:CO:7:GLU:O	15:CO:10:LYS:HB3	2.17	0.44
24:CY:183:GLU:OE2	24:CY:312:ARG:NH2	2.50	0.44
35:DA:359:A:H2'	35:DA:360:G:O4'	2.17	0.44
35:DA:580:C:H2'	35:DA:581:C:H6	1.81	0.44
35:DA:671:C:H2'	35:DA:672:C:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1061:U:OP2	45:DK:9:LYS:HE2	2.18	0.44
35:DA:1923:U:H2'	35:DA:1924:C:H6	1.82	0.44
35:DA:2105:C:C2	35:DA:2106:G:N7	2.86	0.44
35:DA:2693:A:H2'	35:DA:2694:G:H8	1.83	0.44
38:DD:68:LYS:HB2	38:DD:70:TRP:CH2	2.52	0.44
38:DD:70:TRP:CH2	38:DD:150:LYS:HA	2.52	0.44
40:DF:2:LYS:HE2	40:DF:2:LYS:HB3	1.79	0.44
40:DF:113:ALA:HB2	40:DF:183:VAL:HG23	2.00	0.44
40:DF:157:VAL:CG1	40:DF:194:MET:HG2	2.47	0.44
41:DG:125:PHE:HE1	41:DG:180:PHE:CE2	2.36	0.44
43:DI:15:VAL:C	43:DI:17:GLN:H	2.20	0.44
45:DK:84:LEU:HD23	45:DK:84:LEU:H	1.82	0.44
51:DS:89:ARG:HG2	51:DS:92:TYR:HA	1.99	0.44
52:DT:130:ALA:O	52:DT:132:LYS:HE2	2.17	0.44
1:AA:552:U:C2	1:AA:553:A:C8	3.06	0.44
1:AA:1137:C:H4'	1:AA:1138:G:C2	2.53	0.44
6:AF:3:ARG:HB3	6:AF:93:SER:HB2	1.99	0.44
7:AG:78:ARG:HG2	7:AG:79:ARG:H	1.82	0.44
9:AI:21:PRO:HA	9:AI:59:PHE:HA	2.00	0.44
19:AS:36:ARG:HA	19:AS:71:LEU:HB2	1.99	0.44
24:AY:33:LEU:HD21	24:AY:48:VAL:HG12	2.00	0.44
31:B6:19:ARG:HG2	31:B6:19:ARG:NH1	2.32	0.44
34:B9:15:LYS:HE2	34:B9:17:ILE:HD11	1.99	0.44
35:BA:184:C:H2'	35:BA:185:U:H6	1.82	0.44
35:BA:272(G):C:H3'	35:BA:272(H):C:H5''	1.99	0.44
35:BA:783:A:H2'	35:BA:784:A:H4'	1.99	0.44
35:BA:1080:C:H2'	35:BA:1081:U:C6	2.52	0.44
35:BA:1290:C:H2'	35:BA:1291:C:C6	2.51	0.44
35:BA:1538:G:C6	35:BA:1539:G:C6	3.05	0.44
35:BA:1543:C:H3'	35:BA:1544:A:C5'	2.46	0.44
35:BA:1819:A:H2'	38:BD:178:PRO:HB2	1.98	0.44
35:BA:2311:A:O2'	35:BA:2312:U:O4'	2.24	0.44
35:BA:2784:C:H2'	35:BA:2785:C:H6	1.82	0.44
41:BG:18:GLU:O	41:BG:21:ARG:HB3	2.17	0.44
41:BG:105:LYS:HE2	41:BG:143:GLU:OE2	2.17	0.44
43:BI:29:TYR:C	43:BI:32:PRO:HD2	2.37	0.44
52:BT:92:GLY:O	52:BT:94:ALA:N	2.51	0.44
53:BU:101:ARG:HH11	53:BU:101:ARG:CB	2.30	0.44
58:BZ:99:TYR:HA	58:BZ:124:ILE:O	2.18	0.44
58:BZ:127:LYS:HE2	58:BZ:164:ALA:HB2	2.00	0.44
1:CA:35:G:H21	12:CL:118:SER:HG	1.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:335:C:H2'	1:CA:336:C:H6	1.82	0.44
1:CA:452:A:N7	1:CA:480:U:O4	2.51	0.44
1:CA:515:G:C6	1:CA:537:G:C6	3.06	0.44
1:CA:693:G:H2'	1:CA:694:A:C8	2.52	0.44
1:CA:784:C:H2'	1:CA:785:G:H8	1.82	0.44
1:CA:980:C:H5'	1:CA:981:U:C5	2.52	0.44
1:CA:1051:C:H2'	1:CA:1052:U:C6	2.50	0.44
1:CA:1304:G:N2	1:CA:1332:A:OP2	2.37	0.44
13:CM:97:PRO:HB2	13:CM:101:GLN:OE1	2.18	0.44
18:CR:88:LYS:C	18:CR:88:LYS:HD3	2.38	0.44
22:CW:7:A:N6	22:CW:67:C:C2	2.79	0.44
29:D4:25:TYR:O	29:D4:26:SER:HB3	2.17	0.44
30:D5:35:GLU:O	30:D5:36:CYS:HB3	2.17	0.44
30:D5:56:LYS:HE3	30:D5:59:GLU:OE2	2.18	0.44
33:D8:61:LEU:HD12	33:D8:62:LEU:HG	2.00	0.44
35:DA:29:U:H2'	35:DA:30:G:H8	1.79	0.44
35:DA:922:U:H2'	35:DA:923:C:H6	1.82	0.44
35:DA:1012:U:OP1	53:DU:70:ARG:NH2	2.48	0.44
35:DA:1264:G:H3'	35:DA:1265:A:H5''	1.99	0.44
35:DA:1637:A:H4'	35:DA:2711:A:O2'	2.18	0.44
35:DA:2114:A:H62	35:DA:2115:G:H21	1.65	0.44
35:DA:2165:G:C6	35:DA:2166:G:C6	3.06	0.44
38:DD:35:LYS:C	38:DD:37:LEU:H	2.21	0.44
41:DG:127:GLY:O	41:DG:129:GLY:N	2.50	0.44
41:DG:151:ALA:O	41:DG:153:ARG:NH1	2.50	0.44
42:DH:43:VAL:HA	42:DH:46:GLU:OE2	2.18	0.44
48:DP:115:LEU:HA	48:DP:134:ALA:HB2	1.99	0.44
49:DQ:1:MET:O	49:DQ:2:LEU:HB2	2.18	0.44
49:DQ:60:ARG:HG2	58:DZ:179:ASP:OD1	2.18	0.44
51:DS:90:GLY:O	51:DS:92:TYR:HD1	2.00	0.44
52:DT:65:LYS:HZ3	52:DT:66:VAL:H	1.65	0.44
53:DU:68:ALA:HB2	53:DU:99:ALA:HB1	1.99	0.44
58:DZ:8:TYR:O	58:DZ:37:VAL:HB	2.17	0.44
1:AA:745:C:OP1	1:AA:851:G:O2'	2.35	0.44
1:AA:1393:U:HO2'	1:AA:1501:C:HO2'	1.59	0.44
4:AD:17:VAL:O	4:AD:17:VAL:HG12	2.18	0.44
7:AG:120:ILE:H	7:AG:120:ILE:HD12	1.83	0.44
22:AW:57:G:H2'	22:AW:58:A:H5'	2.00	0.44
27:B2:13:ALA:C	27:B2:15:LYS:N	2.71	0.44
27:B2:63:VAL:O	27:B2:67:LYS:HG2	2.18	0.44
31:B6:26:ASN:HD22	31:B6:32:ASN:CG	2.21	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:660:G:H5'	40:BF:99:TYR:CD2	2.53	0.44
35:BA:1278:A:OP1	50:BR:36:THR:HG22	2.16	0.44
35:BA:1558:A:O2'	35:BA:1559:G:OP2	2.35	0.44
35:BA:1590:U:H2'	35:BA:1591:G:H5''	1.99	0.44
35:BA:1763:G:H4'	35:BA:1763:G:OP1	2.18	0.44
35:BA:1876:A:H2'	35:BA:1877:A:C8	2.53	0.44
35:BA:2475:C:H2'	35:BA:2477:C:OP1	2.17	0.44
35:BA:2840:C:H4'	50:BR:53:HIS:CD2	2.53	0.44
40:BF:63:LYS:CE	40:BF:67:GLN:HB2	2.47	0.44
40:BF:157:VAL:CG1	40:BF:194:MET:HG2	2.47	0.44
41:BG:161:THR:HG22	41:BG:162:THR:H	1.82	0.44
43:BI:73:GLU:OE1	43:BI:136:VAL:HG23	2.15	0.44
44:BJ:36:UNK:C	44:BJ:38:UNK:H	2.30	0.44
51:BS:89:ARG:HG2	51:BS:92:TYR:HA	1.98	0.44
1:CA:109:A:C6	1:CA:326:G:C6	3.06	0.44
1:CA:116:A:H2'	1:CA:117:G:O4'	2.18	0.44
1:CA:309:G:H2'	1:CA:310:G:C8	2.52	0.44
1:CA:743:U:H2'	1:CA:744:C:H6	1.81	0.44
1:CA:1015:A:H2'	1:CA:1016:A:C8	2.53	0.44
1:CA:1126:U:H6	1:CA:1126:U:P	2.41	0.44
1:CA:1226:C:OP2	13:CM:103:THR:OG1	2.11	0.44
1:CA:1493:A:N6	24:CY:306:GLU:OE2	2.50	0.44
2:CB:180:LEU:O	2:CB:182:ILE:N	2.50	0.44
4:CD:100:ARG:HB3	4:CD:102:ASP:OD1	2.18	0.44
24:CY:34:GLU:CD	45:DK:34:ILE:HG12	2.38	0.44
24:CY:330:ARG:HH12	24:CY:340:ASP:HB3	1.81	0.44
31:D6:45:LYS:HD3	31:D6:45:LYS:HA	1.33	0.44
35:DA:6:A:H2'	35:DA:7:G:C8	2.52	0.44
35:DA:307:G:H21	35:DA:330:A:N6	2.15	0.44
35:DA:866:A:C6	35:DA:914:C:C5	3.06	0.44
35:DA:910:A:H2'	35:DA:911:A:C8	2.53	0.44
35:DA:1509(A):A:C4	35:DA:1509(B):A:C8	3.05	0.44
35:DA:2161:C:H2'	35:DA:2162:G:H8	1.82	0.44
36:DB:106:G:H2'	36:DB:107:G:H8	1.83	0.44
41:DG:52:ILE:O	41:DG:53:LEU:HB2	2.17	0.44
41:DG:166:ASP:HA	41:DG:169:ALA:HB3	1.98	0.44
42:DH:30:LYS:HE3	42:DH:81:GLU:H	1.82	0.44
42:DH:41:MET:CG	42:DH:42:ARG:N	2.77	0.44
45:DK:13:PRO:O	45:DK:53:VAL:HG22	2.16	0.44
46:DN:87:LEU:HA	46:DN:87:LEU:HD23	1.78	0.44
1:AA:216:G:C2	1:AA:217:C:C4	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:324:G:OP1	20:AT:70:SER:HB2	2.18	0.44
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.52	0.44
1:AA:1113:C:H2'	1:AA:1114:C:H6	1.83	0.44
4:AD:189:PRO:HB2	4:AD:194:LEU:HD21	2.00	0.44
6:AF:21:LEU:O	6:AF:25:ILE:HG12	2.17	0.44
6:AF:59:TYR:HD2	6:AF:61:LEU:HD11	1.83	0.44
6:AF:97:PHE:O	18:AR:31:LEU:HD23	2.18	0.44
8:AH:104:ARG:HB3	8:AH:108:GLY:N	2.33	0.44
9:AI:127:LYS:NZ	22:AV:33:U:OP1	2.51	0.44
12:AL:6:THR:HG23	12:AL:9:GLN:OE1	2.17	0.44
16:AP:21:VAL:HG11	16:AP:59:TRP:NE1	2.33	0.44
19:AS:32:LYS:HA	19:AS:50:ALA:HB3	1.99	0.44
22:AW:14:A:H61	22:AW:48:C:H42	1.64	0.44
25:B0:74:ARG:NH2	36:BB:13:A:OP2	2.51	0.44
32:B7:13:ALA:O	32:B7:17:GLY:HA3	2.18	0.44
32:B7:24:THR:HG23	32:B7:27:GLY:HA3	2.00	0.44
35:BA:271(H):G:O2'	35:BA:271(I):G:H8	2.00	0.44
35:BA:304:G:H2'	35:BA:305:U:C6	2.52	0.44
35:BA:429:A:H2'	35:BA:430:G:C8	2.53	0.44
35:BA:657:U:H2'	35:BA:658:C:C6	2.51	0.44
35:BA:1551:C:H2'	35:BA:1552:G:O4'	2.17	0.44
35:BA:1818:U:H2'	38:BD:157:ARG:HG3	1.99	0.44
35:BA:2086:U:H2'	35:BA:2087:G:H8	1.82	0.44
35:BA:2101:G:O6	35:BA:2188:C:N4	2.47	0.44
38:BD:44:ASN:ND2	38:BD:47:GLY:O	2.50	0.44
41:BG:54:GLU:O	41:BG:58:GLN:HG3	2.18	0.44
41:BG:96:ARG:HA	41:BG:100:TRP:NE1	2.33	0.44
43:BI:69:LYS:HB2	43:BI:136:VAL:HG21	2.00	0.44
52:BT:65:LYS:HG3	52:BT:66:VAL:N	2.32	0.44
57:BY:87:LYS:O	57:BY:88:LYS:HB2	2.17	0.44
58:BZ:97:GLU:O	58:BZ:98:MET:HB3	2.17	0.44
1:CA:707:C:H2'	1:CA:708:C:C6	2.53	0.44
1:CA:951:G:OP2	13:CM:102:ARG:NH2	2.50	0.44
1:CA:1410:G:H2'	1:CA:1411:C:H6	1.82	0.44
1:CA:1466:C:H2'	1:CA:1467:G:O4'	2.18	0.44
3:CC:18:TRP:HB3	3:CC:19:GLU:H	1.61	0.44
3:CC:19:GLU:HG2	3:CC:19:GLU:O	2.18	0.44
3:CC:84:ILE:O	3:CC:88:ARG:HG3	2.17	0.44
4:CD:25:ARG:HG3	4:CD:30:LYS:HG3	1.99	0.44
4:CD:53:ASP:O	4:CD:57:ARG:HD3	2.16	0.44
8:CH:42:GLU:HG3	8:CH:109:ILE:HD12	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:113:LYS:HD2	9:CI:113:LYS:H	1.82	0.44
11:CK:125:PHE:N	11:CK:125:PHE:CD1	2.85	0.44
13:CM:49:THR:O	13:CM:53:VAL:HG23	2.17	0.44
13:CM:126:LYS:N	24:CY:162:ALA:H	2.15	0.44
18:CR:68:LYS:O	18:CR:72:ARG:HG3	2.18	0.44
22:CW:1:G:C6	22:CW:2:C:C4	3.06	0.44
24:CY:196:ASP:OD1	24:CY:197:ALA:N	2.51	0.44
31:D6:10:LEU:HD11	33:D8:34:TRP:CE2	2.53	0.44
35:DA:143(A):C:H4'	56:DX:38:GLU:OE2	2.18	0.44
35:DA:310:A:OP1	57:DY:18:GLY:HA2	2.17	0.44
35:DA:350:U:H2'	35:DA:351:G:O4'	2.17	0.44
35:DA:556:G:H2'	35:DA:557:U:H6	1.81	0.44
35:DA:583:G:OP2	53:DU:10:ARG:HD2	2.17	0.44
35:DA:1056:G:OP1	44:DJ:34:UNK:HA	2.16	0.44
35:DA:1239:G:H2'	35:DA:1240:U:O4'	2.17	0.44
35:DA:1270:C:O2'	35:DA:1648:C:OP2	2.29	0.44
35:DA:1528(A):A:N7	35:DA:1529:G:C8	2.85	0.44
35:DA:1657:C:C2	35:DA:1658:C:C5	3.06	0.44
35:DA:1813:G:H1'	38:DD:50:THR:OG1	2.17	0.44
35:DA:2037:G:H2'	35:DA:2038:G:C8	2.52	0.44
35:DA:2154:G:H2'	35:DA:2155:G:H8	1.82	0.44
36:DB:50:G:P	51:DS:62:LYS:HB2	2.58	0.44
42:DH:158:HIS:CE1	42:DH:170:ARG:HA	2.53	0.44
45:DK:99:ILE:HG23	45:DK:103:GLN:HG2	1.99	0.44
45:DK:102:GLU:OE1	45:DK:102:GLU:N	2.45	0.44
48:DP:50:ARG:HG2	48:DP:50:ARG:NH2	2.33	0.44
48:DP:56:SER:C	48:DP:57:THR:HG1	2.20	0.44
1:AA:878:G:C5'	8:AH:89:PRO:HG2	2.48	0.44
1:AA:1225:A:O3'	19:AS:81:ARG:NH1	2.50	0.44
1:AA:1493:A:H1'	24:AY:125:GLY:H	1.82	0.44
3:AC:46:GLU:HB3	3:AC:83:ARG:NH2	2.33	0.44
4:AD:27:TYR:OH	6:CF:15:ASP:OD2	2.25	0.44
4:AD:61:LYS:HG3	4:AD:203:VAL:HG13	1.99	0.44
9:AI:111:ARG:HG2	9:AI:112:LYS:N	2.33	0.44
20:AT:56:MET:HG3	20:AT:84:LEU:HD12	2.00	0.44
22:AV:27:G:H1	22:AV:43:C:N4	2.16	0.44
27:B2:11:GLU:HA	27:B2:14:ARG:HB2	1.99	0.44
35:BA:291:C:H2'	35:BA:292:C:C6	2.53	0.44
35:BA:1186:G:H8	35:BA:1186:G:O5'	2.00	0.44
35:BA:1247:A:OP1	40:BF:95:ARG:NH2	2.48	0.44
35:BA:1309:G:HO2'	35:BA:1611:C:HO2'	1.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1548:C:H2'	35:BA:1549:C:H6	1.83	0.44
35:BA:1637:A:H4'	35:BA:2711:A:O2'	2.17	0.44
35:BA:2129:C:H2'	35:BA:2130:U:C6	2.53	0.44
35:BA:2327:A:H2'	35:BA:2328:A:H8	1.77	0.44
35:BA:2341:G:H2'	35:BA:2342:C:H6	1.83	0.44
35:BA:2404:C:H2'	35:BA:2405:G:O4'	2.18	0.44
38:BD:160:GLY:HA3	38:BD:199:ALA:HB2	1.98	0.44
40:BF:4:VAL:HG22	40:BF:19:GLU:OE1	2.17	0.44
41:BG:111:LEU:HB2	41:BG:112:PRO:HD3	2.00	0.44
43:BI:109:ILE:HG23	43:BI:130:TYR:CE1	2.53	0.44
45:BK:20:ALA:N	45:BK:21:PRO:CD	2.81	0.44
45:BK:74:ALA:HB2	45:BK:111:LYS:HE3	2.00	0.44
46:BN:17:ASP:HB2	46:BN:55:VAL:HG13	1.99	0.44
48:BP:17:LYS:O	48:BP:17:LYS:HG2	2.17	0.44
52:BT:32:TYR:HD1	52:BT:33:LYS:H	1.65	0.44
57:BY:19:LYS:HE3	57:BY:19:LYS:HB2	1.74	0.44
58:BZ:82:ARG:HG2	58:BZ:82:ARG:HH11	1.82	0.44
58:BZ:165:VAL:HG12	58:BZ:166:SER:H	1.82	0.44
1:CA:30:U:H4'	1:CA:31:G:OP2	2.18	0.44
1:CA:250:A:H8	1:CA:250:A:O5'	2.00	0.44
1:CA:411:A:H2'	1:CA:412:A:H4'	1.99	0.44
1:CA:615:C:H2'	1:CA:616:G:O4'	2.17	0.44
1:CA:1250:A:H4'	9:CI:68:GLY:N	2.33	0.44
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.53	0.44
1:CA:1426:C:H2'	1:CA:1427:U:C6	2.52	0.44
13:CM:91:ARG:HB2	13:CM:98:VAL:HG22	1.98	0.44
17:CQ:66:SER:O	17:CQ:70:ARG:NH1	2.50	0.44
19:CS:19:VAL:HA	19:CS:22:LEU:HB2	1.99	0.44
19:CS:40:ILE:HG21	19:CS:62:ILE:HD11	2.00	0.44
19:CS:65:ASN:O	19:CS:67:VAL:HG22	2.18	0.44
24:CY:164:ILE:HD13	24:CY:167:ALA:HB2	2.00	0.44
35:DA:654(D):G:O3'	35:DA:654(E):G:H8	2.01	0.44
35:DA:1434:A:H61	35:DA:1558:A:N6	2.16	0.44
35:DA:1688:U:H5'	35:DA:1689:A:OP1	2.18	0.44
35:DA:1752:C:H42	35:DA:1756:G:H1	1.63	0.44
35:DA:2820:A:O3'	50:DR:5:LYS:NZ	2.49	0.44
36:DB:28:C:OP2	51:DS:33:LYS:HD2	2.18	0.44
42:DH:24:VAL:CG1	42:DH:35:VAL:HB	2.48	0.44
42:DH:41:MET:CG	42:DH:43:VAL:HG13	2.48	0.44
45:DK:117:THR:HB	45:DK:119:ASP:OD1	2.18	0.44
49:DQ:16:ARG:HB3	49:DQ:18:LYS:HZ1	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:126:ALA:C	52:DT:128:GLU:H	2.20	0.44
55:DW:1:MET:CE	55:DW:2:GLU:H	2.30	0.44
57:DY:21:LYS:HG2	57:DY:22:GLY:H	1.81	0.44
57:DY:61:ILE:HD12	57:DY:62:GLU:N	2.33	0.44
1:AA:133:U:OP1	20:AT:74:LYS:NZ	2.40	0.44
1:AA:176:C:H2'	1:AA:177:C:C6	2.52	0.44
1:AA:678:U:H2'	1:AA:679:C:H6	1.83	0.44
1:AA:881:G:H2'	1:AA:882:C:O4'	2.18	0.44
1:AA:914:A:H2'	1:AA:915:A:H8	1.82	0.44
1:AA:972:C:OP2	10:AJ:57:LYS:HE2	2.18	0.44
1:AA:1225:A:O2'	19:AS:81:ARG:NH1	2.51	0.44
4:AD:100:ARG:O	4:AD:103:ASN:N	2.42	0.44
6:AF:15:ASP:HB2	6:AF:16:GLN:NE2	2.32	0.44
12:AL:28:LYS:HG2	12:AL:28:LYS:O	2.17	0.44
12:AL:53:ARG:NH1	12:AL:92:ASP:OD2	2.51	0.44
16:AP:51:VAL:HG11	16:AP:74:LEU:HD22	2.00	0.44
17:AQ:10:VAL:HG23	17:AQ:55:ASP:O	2.17	0.44
22:AV:40:C:H2'	22:AV:41:C:C6	2.53	0.44
22:AV:57:G:C2'	22:AV:58:A:H5'	2.47	0.44
27:B2:36:ARG:NH2	56:BX:5:TYR:O	2.47	0.44
28:B3:6:VAL:HB	28:B3:54:VAL:CG1	2.41	0.44
34:B9:31:LYS:NZ	35:BA:2478:A:OP1	2.34	0.44
35:BA:127:A:H5''	35:BA:128:C:C6	2.52	0.44
35:BA:1069:A:C4	35:BA:1073:A:N7	2.86	0.44
35:BA:1094:U:N3	35:BA:1097:U:OP2	2.46	0.44
35:BA:1155:A:P	53:BU:55:ARG:HD2	2.58	0.44
35:BA:1449:A:H5'	35:BA:1450:G:OP2	2.18	0.44
35:BA:2199:A:N3	35:BA:2199:A:H2'	2.32	0.44
35:BA:2431:U:N3	35:BA:2434:A:OP2	2.34	0.44
35:BA:2689:U:P	35:BA:2719:G:H22	2.41	0.44
40:BF:68:LYS:HB3	40:BF:69:HIS:H	1.43	0.44
41:BG:118:ARG:HH11	41:BG:118:ARG:HG3	1.82	0.44
45:BK:10:LEU:HD13	45:BK:12:LEU:HG	1.99	0.44
48:BP:97:PRO:C	48:BP:99:LEU:N	2.71	0.44
51:BS:89:ARG:O	51:BS:92:TYR:HB3	2.18	0.44
52:BT:57:PHE:O	52:BT:59:THR:HG22	2.18	0.44
1:CA:542:G:OP1	4:CD:10:ARG:NH2	2.51	0.44
1:CA:677:U:H3	1:CA:713:G:H22	1.65	0.44
2:CB:119:GLU:OE2	2:CB:153:ARG:NH2	2.42	0.44
3:CC:21:ARG:H	3:CC:21:ARG:HG2	1.59	0.44
6:CF:10:LEU:HD13	6:CF:61:LEU:HD13	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:45:LEU:HD21	6:CF:57:GLN:OE1	2.17	0.44
7:CG:79:ARG:HG3	7:CG:83:ALA:H	1.83	0.44
16:CP:13:HIS:C	16:CP:15:PRO:HD3	2.39	0.44
19:CS:46:GLY:N	19:CS:62:ILE:HG23	2.33	0.44
25:D0:5:LYS:HE3	49:DQ:81:VAL:HG12	2.00	0.44
35:DA:33:U:H4'	35:DA:34:C:OP1	2.18	0.44
35:DA:271(N):U:O2'	35:DA:271(O):C:OP1	2.32	0.44
35:DA:618:C:H2'	35:DA:619:G:O4'	2.18	0.44
35:DA:675:A:OP1	40:DF:63:LYS:HE2	2.18	0.44
35:DA:1048:A:H62	35:DA:1052:C:N4	1.93	0.44
35:DA:1097:U:C2	45:DK:30:HIS:HE1	2.36	0.44
35:DA:1332:G:N2	35:DA:1610:A:C8	2.85	0.44
35:DA:1427:A:H4'	35:DA:1428:C:O5'	2.16	0.44
35:DA:1485:G:N2	35:DA:1505:C:C2	2.84	0.44
35:DA:2364:C:H2'	35:DA:2365:G:O4'	2.18	0.44
35:DA:2420:C:O5'	35:DA:2420:C:H6	2.01	0.44
37:DC:194:ILE:HG13	37:DC:227:PRO:CB	2.48	0.44
38:DD:168:ARG:HG3	38:DD:168:ARG:HH11	1.81	0.44
39:DE:69:LYS:C	39:DE:71:GLY:N	2.70	0.44
39:DE:131:ALA:HB1	61:DE:301:HOH:O	2.17	0.44
40:DF:28:ILE:HD13	40:DF:119:ARG:NH2	2.33	0.44
42:DH:121:ILE:HD11	42:DH:140:LYS:HB3	2.00	0.44
52:DT:28:VAL:HG13	52:DT:46:GLU:HA	1.98	0.44
1:AA:33:A:H2'	1:AA:34:C:C6	2.53	0.44
1:AA:157:G:C2	1:AA:165:C:C2	3.06	0.44
1:AA:382:A:H2'	1:AA:383:A:C8	2.53	0.44
1:AA:507:C:H3'	1:AA:508:C:H2'	2.00	0.44
1:AA:967:C:H5''	1:AA:968:A:OP2	2.18	0.44
1:AA:1065:U:O5'	1:AA:1190:G:N2	2.51	0.44
1:AA:1242:C:H2'	1:AA:1243:C:C6	2.53	0.44
2:AB:69:LEU:HD23	2:AB:159:PRO:HG2	2.00	0.44
22:AW:34:G:C6	22:AW:35:A:N6	2.86	0.44
22:AW:35:A:H2'	22:AW:36:A:C8	2.53	0.44
22:AW:62:C:C4'	37:BC:53:ARG:HG3	2.42	0.44
24:AY:276:LEU:HB3	24:AY:280:LYS:HE3	2.00	0.44
33:B8:13:ARG:HD2	48:BP:61:ARG:NH1	2.33	0.44
35:BA:221:A:H4'	35:BA:222:A:O5'	2.18	0.44
35:BA:1265:A:H8	35:BA:1265:A:OP1	2.00	0.44
35:BA:2306:C:H5'	35:BA:2307:G:O5'	2.18	0.44
35:BA:2391:G:O6	35:BA:2425:A:H8	2.00	0.44
35:BA:2668:G:H2'	35:BA:2669:G:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:42:VAL:HG22	37:BC:217:THR:HG22	2.00	0.44
39:BE:59:VAL:HG13	39:BE:60:ASN:N	2.31	0.44
40:BF:122:LYS:O	40:BF:191:ARG:HG3	2.18	0.44
41:BG:132:ASN:HA	41:BG:157:ILE:O	2.18	0.44
49:BQ:58:PHE:HD1	49:BQ:58:PHE:O	2.00	0.44
49:BQ:109:VAL:CG1	49:BQ:113:GLN:HB2	2.47	0.44
53:BU:65:ILE:HD11	53:BU:96:ALA:HB3	1.99	0.44
57:BY:67:LEU:HA	57:BY:67:LEU:HD12	1.87	0.44
1:CA:224:C:C2	1:CA:225:C:C5	3.06	0.44
1:CA:630:G:H2'	1:CA:631:G:H5'	1.99	0.44
1:CA:779:C:H2'	1:CA:780:A:O4'	2.17	0.44
4:CD:127:THR:HG23	4:CD:147:ALA:HB3	2.00	0.44
5:CE:76:ILE:HG13	5:CE:142:LEU:HD13	1.99	0.44
9:CI:20:ARG:HG3	9:CI:20:ARG:HH11	1.83	0.44
15:CO:82:ILE:HG23	15:CO:83:GLU:N	2.33	0.44
16:CP:15:PRO:O	16:CP:16:HIS:ND1	2.51	0.44
19:CS:18:LYS:HG2	19:CS:31:ILE:CD1	2.48	0.44
23:CX:21:A:N1	24:CX:201:ARG:HD3	2.32	0.44
35:DA:271(Q):G:N3	35:DA:271(R):G:C8	2.85	0.44
35:DA:659:C:H2'	35:DA:660:G:H8	1.83	0.44
35:DA:954:G:OP1	49:DQ:15:GLY:N	2.39	0.44
35:DA:2176:A:N3	37:DC:45:HIS:NE2	2.65	0.44
35:DA:2314:C:H2'	35:DA:2315:G:C8	2.52	0.44
35:DA:2756:U:H4'	35:DA:2757:A:OP1	2.17	0.44
38:DD:30:GLU:HB2	38:DD:35:LYS:HE2	2.00	0.44
42:DH:94:TYR:CE1	42:DH:160:LYS:HD3	2.53	0.44
43:DI:1:MET:O	43:DI:21:VAL:N	2.46	0.44
49:DQ:84:GLY:O	49:DQ:85:LYS:HB2	2.17	0.44
50:DR:99:LYS:H	50:DR:99:LYS:HG2	1.57	0.44
57:DY:61:ILE:HD12	57:DY:62:GLU:H	1.82	0.44
58:DZ:44:PHE:CD1	58:DZ:44:PHE:C	2.91	0.44
1:AA:513:C:H2'	1:AA:514:C:H6	1.82	0.43
1:AA:824:C:H2'	1:AA:825:G:C8	2.53	0.43
1:AA:1012:U:H2'	1:AA:1013:G:C8	2.53	0.43
1:AA:1072:G:H2'	1:AA:1073:U:H6	1.81	0.43
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.18	0.43
2:AB:42:ILE:HD11	2:AB:202:PRO:HB2	2.00	0.43
2:AB:43:ASP:OD2	2:AB:45:GLN:HB3	2.18	0.43
2:AB:76:GLN:H	2:AB:76:GLN:HG3	1.55	0.43
7:AG:137:LYS:HD2	7:AG:137:LYS:HA	1.76	0.43
8:AH:6:ILE:H	8:AH:6:ILE:CD1	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:98:ILE:O	10:AJ:99:LYS:HD3	2.18	0.43
11:AK:51:LYS:HB3	11:AK:51:LYS:HE2	1.81	0.43
14:AN:7:ILE:O	14:AN:11:LYS:HG2	2.17	0.43
19:AS:46:GLY:H	19:AS:62:ILE:HG23	1.82	0.43
22:AW:8:U:H3	22:AW:14:A:N6	2.13	0.43
35:BA:510:C:H2'	35:BA:511:U:O4'	2.18	0.43
35:BA:533:G:H5'	53:BU:24:TYR:CD1	2.53	0.43
35:BA:761:A:H8	35:BA:761:A:O5'	2.01	0.43
35:BA:941:A:HO2'	48:BP:35:HIS:CE1	2.36	0.43
35:BA:999:U:H5''	35:BA:1154:G:O6	2.18	0.43
35:BA:1291:C:H2'	35:BA:1292:U:H6	1.83	0.43
35:BA:1654:A:OP1	35:BA:1654:A:H4'	2.18	0.43
35:BA:1799:G:H8	35:BA:1799:G:H2'	1.70	0.43
35:BA:2491:U:H5'	35:BA:2570:G:H5''	2.00	0.43
35:BA:2661:G:H2'	35:BA:2662:A:C4	2.52	0.43
38:BD:43:ARG:CB	38:BD:54:ARG:HB2	2.46	0.43
38:BD:45:ASN:OD1	38:BD:46:GLN:N	2.51	0.43
41:BG:26:GLN:O	41:BG:27:ASN:HB2	2.16	0.43
41:BG:29:TRP:HA	41:BG:29:TRP:CE3	2.52	0.43
42:BH:94:TYR:CD1	42:BH:94:TYR:N	2.86	0.43
47:BO:98:VAL:CG2	47:BO:118:ALA:HA	2.48	0.43
51:BS:97:ARG:O	51:BS:97:ARG:NH1	2.45	0.43
58:BZ:8:TYR:O	58:BZ:37:VAL:HB	2.18	0.43
1:CA:76:C:N4	1:CA:93:G:H1	2.15	0.43
1:CA:166:G:H2'	1:CA:167:G:H8	1.83	0.43
1:CA:191:G:H2'	1:CA:192:U:C6	2.53	0.43
1:CA:335:C:C2	1:CA:336:C:C5	3.06	0.43
1:CA:390:C:H2'	1:CA:391:G:H8	1.82	0.43
1:CA:520:A:OP2	12:CL:51:ALA:HB1	2.18	0.43
1:CA:893:C:C4	1:CA:894:G:N7	2.86	0.43
2:CB:8:LYS:HD3	2:CB:217:ARG:NH1	2.33	0.43
2:CB:17:PHE:HD1	2:CB:17:PHE:H	1.65	0.43
6:CF:97:PHE:O	18:CR:31:LEU:HD23	2.17	0.43
13:CM:16:ASP:OD1	13:CM:17:VAL:HG23	2.18	0.43
14:CN:24:CYS:SG	14:CN:40:CYS:N	2.80	0.43
15:CO:44:LYS:HB2	15:CO:44:LYS:HE3	1.79	0.43
24:CY:285:GLU:HA	24:CY:288:ARG:NH1	2.33	0.43
31:D6:16:CYS:O	31:D6:17:LYS:HB2	2.18	0.43
35:DA:35:G:H1'	35:DA:454:A:C4	2.53	0.43
35:DA:530:G:C5	35:DA:2022:U:H5''	2.52	0.43
35:DA:679:C:H2'	35:DA:680:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:797:C:H2'	35:DA:798:G:O4'	2.18	0.43
35:DA:902:C:H2'	35:DA:903:C:H6	1.83	0.43
35:DA:1048:A:C2	35:DA:1109:C:C5	3.06	0.43
35:DA:1876:A:H8	35:DA:1876:A:OP2	2.01	0.43
35:DA:1946:U:H2'	35:DA:1947:C:C6	2.53	0.43
35:DA:2740:A:H2'	35:DA:2741:A:C8	2.53	0.43
37:DC:48:LEU:HD13	37:DC:172:ILE:HB	1.99	0.43
39:DE:87:GLU:O	39:DE:89:ASP:N	2.49	0.43
45:DK:23:VAL:HG13	45:DK:26:ALA:HB3	2.00	0.43
48:DP:136:GLU:O	48:DP:139:LYS:HB3	2.17	0.43
49:DQ:58:PHE:O	49:DQ:58:PHE:HD1	2.01	0.43
1:AA:195:A:H1'	1:AA:222:U:O2'	2.18	0.43
1:AA:421:U:O4	3:AC:127:ARG:NH1	2.50	0.43
1:AA:1386:G:H2'	1:AA:1387:G:C8	2.42	0.43
3:AC:167:TRP:O	3:AC:168:ALA:HB3	2.18	0.43
5:AE:57:LYS:HA	5:AE:60:TYR:HB3	2.00	0.43
11:AK:80:VAL:HG22	11:AK:103:LEU:HD12	2.00	0.43
13:AM:67:GLU:OE1	13:AM:71:ARG:NH2	2.43	0.43
16:AP:42:ARG:C	16:AP:43:LYS:HD2	2.38	0.43
17:AQ:6:LEU:O	17:AQ:58:GLU:HA	2.18	0.43
20:AT:18:GLN:O	20:AT:22:ARG:HG3	2.18	0.43
22:AW:63:G:H3'	22:AW:64:A:H8	1.83	0.43
26:B1:80:LEU:HD23	26:B1:81:LYS:N	2.32	0.43
27:B2:48:HIS:CE1	35:BA:96:G:H4'	2.54	0.43
35:BA:638:G:C6	35:BA:651:G:C6	3.06	0.43
35:BA:958:U:O2	36:BB:90:A:H4'	2.18	0.43
35:BA:1057:A:H2'	35:BA:1058:G:C8	2.53	0.43
35:BA:1079:C:H2'	35:BA:1080:C:C6	2.53	0.43
35:BA:1264:G:H8	35:BA:1264:G:O5'	2.02	0.43
35:BA:1496:A:C8	35:BA:1498:C:C4	3.05	0.43
35:BA:1543:C:H3'	35:BA:1544:A:H5''	2.00	0.43
35:BA:2031:A:N3	35:BA:2455:G:O2'	2.42	0.43
35:BA:2136:C:H41	35:BA:2156:G:H21	1.66	0.43
35:BA:2250:G:O2'	35:BA:2496:C:OP1	2.30	0.43
35:BA:2415:G:O3'	48:BP:66:GLY:HA3	2.18	0.43
35:BA:2712:U:HO2'	35:BA:2712(A):A:P	2.40	0.43
36:BB:29:A:H2'	36:BB:30:C:O4'	2.17	0.43
36:BB:62:C:C2	36:BB:63:G:C8	3.06	0.43
37:BC:4:HIS:HD1	37:BC:8:TYR:HE2	1.64	0.43
38:BD:30:GLU:HB2	38:BD:35:LYS:NZ	2.33	0.43
41:BG:8:LYS:HE3	41:BG:96:ARG:HH21	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:141:PHE:O	41:BG:144:ILE:HG22	2.18	0.43
46:BN:1:MET:HG2	46:BN:2:LYS:N	2.33	0.43
48:BP:18:ARG:NH1	48:BP:18:ARG:HB3	2.32	0.43
49:BQ:76:LYS:HB3	49:BQ:91:GLU:HG3	2.00	0.43
1:CA:1309:G:C6	1:CA:1310:G:C6	3.06	0.43
7:CG:76:ARG:HG2	7:CG:76:ARG:HH11	1.83	0.43
17:CQ:11:VAL:O	17:CQ:12:SER:HB2	2.18	0.43
24:CY:346:TRP:N	24:CY:346:TRP:CE3	2.86	0.43
25:D0:43:THR:HG22	35:DA:2331:G:O2'	2.18	0.43
27:D2:32:LEU:HD22	27:D2:36:ARG:HH11	1.83	0.43
35:DA:184:C:H1'	35:DA:217:G:H1'	2.01	0.43
35:DA:1292:U:O2'	35:DA:1293:C:H5'	2.19	0.43
35:DA:2461:C:H2'	35:DA:2462:U:C6	2.53	0.43
38:DD:37:LEU:HD23	38:DD:37:LEU:HA	1.67	0.43
38:DD:147:LEU:HD12	38:DD:147:LEU:HA	1.90	0.43
43:DI:71:ILE:O	43:DI:72:LEU:HD23	2.17	0.43
1:AA:23:C:OP2	1:AA:561:U:N3	2.42	0.43
1:AA:198:G:H2'	1:AA:199:G:H8	1.82	0.43
1:AA:368:U:OP1	43:DI:91:SER:HB3	2.18	0.43
1:AA:630:G:C2'	1:AA:631:G:H5'	2.47	0.43
1:AA:832:C:O2'	1:AA:833:U:H6	2.02	0.43
1:AA:1113:C:H2'	1:AA:1114:C:C6	2.53	0.43
2:AB:119:GLU:HA	2:AB:122:PHE:HB3	2.00	0.43
2:AB:165:VAL:HG23	2:AB:166:ASP:N	2.30	0.43
2:AB:185:ILE:CG2	2:AB:199:TYR:HB2	2.46	0.43
3:AC:11:ARG:HB3	3:AC:15:THR:HB	1.99	0.43
3:AC:32:LEU:HB3	3:AC:59:ARG:HH22	1.84	0.43
10:AJ:8:LEU:HB3	10:AJ:16:LEU:HD21	2.00	0.43
13:AM:93:ARG:CD	35:BA:888:C:H5'	2.42	0.43
14:AN:7:ILE:C	14:AN:9:LYS:H	2.22	0.43
35:BA:814:C:OP1	54:BV:83:ARG:HA	2.18	0.43
35:BA:1081:U:H5'	45:BK:125:ARG:HG3	2.00	0.43
35:BA:1497:U:H5'	35:BA:1498:C:H5	1.83	0.43
36:BB:21:G:O2'	36:BB:22:U:H6	2.02	0.43
36:BB:75:G:O2'	58:BZ:85:HIS:NE2	2.51	0.43
39:BE:77:ILE:HG22	39:BE:78:LEU:N	2.31	0.43
43:BI:93:THR:HG23	43:BI:96:ASP:H	1.84	0.43
46:BN:54:VAL:HB	46:BN:122:VAL:HG22	2.00	0.43
47:BO:88:ASN:OD1	47:BO:92:GLU:N	2.43	0.43
49:BQ:52:VAL:O	49:BQ:56:ARG:HG2	2.17	0.43
49:BQ:108:GLY:HA3	58:BZ:116:VAL:HG21	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:59:LYS:HB2	51:BS:59:LYS:HE3	1.81	0.43
52:BT:26:ASP:HB3	52:BT:89:VAL:O	2.19	0.43
52:BT:83:ILE:HG13	52:BT:84:GLN:HG2	1.99	0.43
54:BV:57:VAL:HB	54:BV:99:ILE:HG22	1.99	0.43
1:CA:33:A:H2'	1:CA:34:C:H6	1.83	0.43
1:CA:954:G:H4'	13:CM:120:LYS:HG3	2.00	0.43
1:CA:1015:A:H2'	1:CA:1016:A:H8	1.83	0.43
1:CA:1491:G:H5'	1:CA:1492:A:OP2	2.18	0.43
3:CC:123:GLN:O	3:CC:128:PHE:HB2	2.18	0.43
4:CD:38:TYR:CD2	4:CD:45:GLN:HB3	2.53	0.43
4:CD:159:ARG:O	4:CD:162:LEU:HB2	2.19	0.43
5:CE:96:PRO:HA	5:CE:117:ASP:OD2	2.18	0.43
5:CE:150:ARG:HA	5:CE:153:LYS:HE2	1.99	0.43
6:CF:8:ILE:HG22	6:CF:9:VAL:N	2.34	0.43
9:CI:89:ASN:O	9:CI:92:TYR:HB2	2.19	0.43
22:CW:19:G:N7	35:DA:2112:G:C5	2.86	0.43
26:D1:52:ARG:NH1	26:D1:55:GLY:O	2.51	0.43
26:D1:78:LYS:C	26:D1:80:LEU:H	2.22	0.43
32:D7:3:ARG:HA	32:D7:3:ARG:HD3	1.77	0.43
33:D8:50:LEU:C	33:D8:53:PRO:HD2	2.39	0.43
35:DA:299:A:N1	35:DA:322:A:O2'	2.39	0.43
35:DA:654(S):G:H2'	35:DA:654(T):C:C6	2.52	0.43
35:DA:660:G:H5'	40:DF:99:TYR:CE2	2.53	0.43
35:DA:1484:G:N2	35:DA:1505:C:H42	2.17	0.43
35:DA:1589:C:H2'	35:DA:1590:U:H6	1.83	0.43
35:DA:2162:G:H2'	35:DA:2163:C:H6	1.84	0.43
35:DA:2820:A:C4'	50:DR:5:LYS:HD2	2.47	0.43
37:DC:191:ARG:HH11	37:DC:191:ARG:HG3	1.82	0.43
39:DE:197:ILE:HD11	39:DE:199:ARG:HE	1.83	0.43
40:DF:36:VAL:HG22	40:DF:101:LEU:HD21	2.00	0.43
40:DF:68:LYS:C	40:DF:70:THR:H	2.20	0.43
40:DF:117:ARG:HD3	40:DF:120:GLU:OE1	2.17	0.43
41:DG:115:ARG:HG3	41:DG:116:ASP:N	2.25	0.43
41:DG:154:GLY:O	41:DG:155:MET:HB3	2.18	0.43
41:DG:173:LEU:HD23	41:DG:176:LEU:HD12	2.00	0.43
48:DP:17:LYS:O	48:DP:18:ARG:C	2.56	0.43
50:DR:59:ASP:N	50:DR:59:ASP:OD1	2.51	0.43
52:DT:54:ARG:HA	52:DT:59:THR:HB	2.00	0.43
52:DT:57:PHE:O	52:DT:59:THR:HG22	2.17	0.43
54:DV:81:TYR:C	54:DV:82:ARG:HD2	2.38	0.43
55:DW:4:LYS:HE2	55:DW:6:ILE:HD11	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:84:U:C4	1:AA:88:A:N7	2.86	0.43
1:AA:132:C:H5'	1:AA:262:A:H1'	2.00	0.43
1:AA:396:G:O2'	1:AA:398:C:OP1	2.28	0.43
1:AA:664:G:H22	1:AA:741:G:H1	1.65	0.43
1:AA:690:G:H2'	1:AA:691:G:C8	2.53	0.43
1:AA:735:C:H2'	1:AA:736:C:C6	2.54	0.43
1:AA:740:U:H2'	1:AA:741:G:C8	2.53	0.43
1:AA:1206:G:C4	1:AA:1207:G:C8	3.06	0.43
2:AB:178:ARG:HD2	8:AH:71:GLY:C	2.39	0.43
4:AD:110:PHE:CD1	4:AD:110:PHE:N	2.84	0.43
4:AD:175:SER:HB3	4:AD:186:LEU:HD11	2.00	0.43
4:AD:176:LEU:CG	4:AD:177:ASP:H	2.28	0.43
11:AK:99:GLN:HG2	11:AK:105:VAL:HG11	2.00	0.43
17:AQ:11:VAL:O	17:AQ:12:SER:HB2	2.18	0.43
19:AS:18:LYS:HB2	19:AS:18:LYS:HE2	1.84	0.43
33:B8:31:HIS:NE2	35:BA:2392:A:OP2	2.46	0.43
35:BA:226:G:H21	35:BA:228:A:H62	1.66	0.43
35:BA:404:C:H4'	35:BA:405:U:C5'	2.47	0.43
35:BA:443:A:N7	40:BF:45:ARG:HG2	2.33	0.43
35:BA:638:G:C6	35:BA:639:U:C4	3.07	0.43
35:BA:1366:A:H2'	35:BA:1367:A:O4'	2.18	0.43
35:BA:2392:A:O2'	48:BP:60:MET:HB3	2.18	0.43
35:BA:2653:U:OP2	35:BA:2654:A:H2'	2.19	0.43
35:BA:2839:G:H5'	50:BR:46:GLY:HA2	2.00	0.43
37:BC:6:LYS:HA	37:BC:9:ARG:CB	2.49	0.43
38:BD:48:ARG:HH11	38:BD:48:ARG:HG3	1.83	0.43
50:BR:99:LYS:H	50:BR:99:LYS:HG2	1.53	0.43
50:BR:101:ALA:O	50:BR:102:GLU:HB2	2.18	0.43
52:BT:48:ILE:HD12	52:BT:48:ILE:N	2.33	0.43
58:BZ:23:LYS:HD3	58:BZ:38:TYR:CD1	2.53	0.43
1:CA:575:G:H4'	1:CA:575:G:OP1	2.17	0.43
1:CA:690:G:C6	1:CA:691:G:C6	3.06	0.43
1:CA:923:A:H2'	1:CA:924:C:C6	2.54	0.43
1:CA:940:C:H2'	1:CA:941:G:H8	1.81	0.43
1:CA:1118:C:H5'	9:CI:104:ARG:HD2	2.00	0.43
1:CA:1265:G:H2'	1:CA:1266:G:C8	2.54	0.43
2:CB:32:ILE:HA	2:CB:42:ILE:HA	1.99	0.43
2:CB:115:LEU:O	2:CB:118:LEU:HB2	2.18	0.43
3:CC:30:ARG:HB2	14:CN:36:PHE:O	2.18	0.43
3:CC:54:ARG:NH1	3:CC:56:ASP:HB2	2.33	0.43
3:CC:152:ILE:O	3:CC:198:VAL:HA	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:61:LYS:HD3	4:CD:206:PHE:CD2	2.53	0.43
5:CE:144:THR:O	5:CE:148:VAL:HG23	2.18	0.43
20:CT:89:ARG:HD2	20:CT:104:LEU:HD11	1.99	0.43
20:CT:104:LEU:HD23	20:CT:105:SER:N	2.34	0.43
22:CV:25:C:H2'	22:CV:26:A:O4'	2.19	0.43
22:CV:66:U:H2'	22:CV:67:C:H6	1.81	0.43
35:DA:271(P):C:O2'	35:DA:271(Q):G:H5'	2.17	0.43
35:DA:1291:C:H2'	35:DA:1292:U:H6	1.84	0.43
35:DA:1423:G:H2'	35:DA:1424:G:H8	1.83	0.43
35:DA:1718:G:H2'	35:DA:1719:G:H8	1.83	0.43
35:DA:1762:A:H8	35:DA:1762:A:O5'	2.02	0.43
35:DA:1777:U:O2'	35:DA:1778:U:H5'	2.18	0.43
35:DA:1779:U:C5	35:DA:1784:A:N7	2.83	0.43
35:DA:1790:C:H2'	35:DA:1791:A:C5	2.54	0.43
35:DA:2238:G:H2'	35:DA:2238:G:N3	2.33	0.43
35:DA:2514:U:H2'	35:DA:2515:C:C6	2.52	0.43
35:DA:2712:U:O2'	35:DA:2713:A:H5'	2.18	0.43
35:DA:2840:C:H5''	50:DR:53:HIS:CD2	2.52	0.43
39:DE:55:ASN:HB2	39:DE:72:VAL:CG1	2.48	0.43
39:DE:103:ASP:OD2	39:DE:201:THR:HA	2.19	0.43
45:DK:2:LYS:HG3	45:DK:3:LYS:HG3	2.01	0.43
48:DP:97:PRO:O	48:DP:99:LEU:N	2.45	0.43
49:DQ:21:THR:O	49:DQ:21:THR:HG22	2.18	0.43
52:DT:62:THR:HA	52:DT:74:ARG:O	2.18	0.43
58:DZ:99:TYR:CE1	58:DZ:125:LEU:HD12	2.53	0.43
1:AA:115:G:O5'	1:AA:115:G:H8	2.02	0.43
1:AA:373:A:H2'	1:AA:374:A:H8	1.83	0.43
1:AA:520:A:OP1	12:AL:52:LEU:HB2	2.17	0.43
1:AA:939:G:C5'	7:AG:102:ARG:HH12	2.32	0.43
1:AA:1003:G:H21	1:AA:1038:C:N4	2.17	0.43
1:AA:1005:A:H8	1:AA:1006:C:O4'	2.02	0.43
1:AA:1117:G:N2	1:AA:1179:A:C2	2.86	0.43
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.19	0.43
1:AA:1373:G:H5''	7:AG:36:LYS:NZ	2.32	0.43
2:AB:163:PHE:CD2	2:AB:185:ILE:HG13	2.54	0.43
8:AH:8:ASP:O	8:AH:12:ARG:HG3	2.18	0.43
19:AS:80:TYR:O	19:AS:80:TYR:CG	2.70	0.43
25:B0:39:ARG:HH21	35:BA:2355:C:H1'	1.82	0.43
27:B2:37:PHE:O	27:B2:41:ILE:HG12	2.19	0.43
30:B5:56:LYS:HE3	30:B5:59:GLU:OE2	2.18	0.43
31:B6:25:LYS:CE	35:BA:2285:C:H41	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:40:C:H2'	35:BA:41:C:H6	1.83	0.43
35:BA:210:C:H4'	35:BA:1367:A:H1'	1.98	0.43
35:BA:398:G:H2'	35:BA:399:G:C8	2.53	0.43
35:BA:903:C:C2'	35:BA:904:C:H5'	2.49	0.43
35:BA:1486:A:N6	35:BA:1504:C:H42	2.16	0.43
35:BA:2163:C:H2'	35:BA:2164:C:O4'	2.18	0.43
35:BA:2189:U:H2'	35:BA:2190:G:O4'	2.18	0.43
35:BA:2272:U:H5''	35:BA:2273:A:OP1	2.18	0.43
35:BA:2521:C:O2'	35:BA:2564:A:N3	2.42	0.43
35:BA:2821:A:H2'	35:BA:2822:G:C8	2.54	0.43
38:BD:265:PRO:O	38:BD:267:SER:N	2.51	0.43
39:BE:132:HIS:CD2	39:BE:135:HIS:CE1	3.07	0.43
40:BF:36:VAL:HG11	40:BF:183:VAL:HG11	2.00	0.43
41:BG:61:ALA:HA	41:BG:64:THR:HG22	1.99	0.43
47:BO:3:GLN:HB2	47:BO:4:PRO:HD2	2.00	0.43
48:BP:17:LYS:O	48:BP:18:ARG:C	2.56	0.43
48:BP:57:THR:OG1	48:BP:58:THR:N	2.47	0.43
48:BP:114:ILE:O	48:BP:115:LEU:HB3	2.18	0.43
49:BQ:132:VAL:HG11	58:BZ:81:ARG:NE	2.33	0.43
1:CA:370:C:H2'	1:CA:371:G:H8	1.83	0.43
2:CB:55:PHE:HA	2:CB:58:ILE:HB	2.00	0.43
7:CG:120:ILE:H	7:CG:120:ILE:HD12	1.82	0.43
10:CJ:49:VAL:O	10:CJ:60:ARG:HB2	2.18	0.43
24:CY:304:PRO:O	24:CY:305:ILE:HB	2.17	0.43
26:D1:19:GLN:HG3	35:DA:2080:G:H5'	2.00	0.43
26:D1:52:ARG:HA	26:D1:52:ARG:HD2	1.68	0.43
26:D1:67:ILE:N	26:D1:68:PRO:HD2	2.33	0.43
29:D4:30:GLU:O	29:D4:31:ILE:HD13	2.18	0.43
35:DA:710:G:H2'	35:DA:711:G:H8	1.83	0.43
35:DA:865:C:H42	35:DA:909:A:H62	1.65	0.43
35:DA:1103:A:C8	35:DA:1104:C:C5	3.06	0.43
35:DA:2023:G:H4'	35:DA:2617:C:O3'	2.19	0.43
35:DA:2153:G:H2'	35:DA:2154:G:H8	1.84	0.43
35:DA:2845:G:O2'	35:DA:2846:G:H5'	2.18	0.43
40:DF:36:VAL:CG1	40:DF:183:VAL:HG11	2.48	0.43
51:DS:26:LEU:HD12	51:DS:87:PHE:CD1	2.54	0.43
52:DT:14:TYR:N	52:DT:14:TYR:CD1	2.87	0.43
53:DU:101:ARG:HH11	53:DU:101:ARG:CB	2.31	0.43
1:AA:18:C:H5''	5:AE:127:ASN:ND2	2.34	0.43
1:AA:45:U:H2'	1:AA:46:G:C8	2.53	0.43
1:AA:377:G:OP1	16:AP:3:LYS:HD2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:553:A:H2'	1:AA:554:C:H6	1.84	0.43
1:AA:1104:G:H2'	1:AA:1105:A:O4'	2.18	0.43
1:AA:1155:G:H2'	1:AA:1156:G:C8	2.53	0.43
2:AB:118:LEU:HD23	2:AB:118:LEU:HA	1.89	0.43
2:AB:217:ARG:O	2:AB:221:LEU:HB2	2.18	0.43
3:AC:182:ILE:HG12	3:AC:203:PHE:CD1	2.49	0.43
5:AE:6:PHE:HD1	5:AE:63:ARG:NH1	2.17	0.43
16:AP:4:ILE:HB	16:AP:66:PRO:HB3	2.01	0.43
17:AQ:43:LEU:HD12	17:AQ:68:ARG:HB3	1.99	0.43
24:AY:89:PRO:HA	24:AY:92:GLU:HG2	2.00	0.43
26:B1:67:ILE:N	26:B1:68:PRO:HD2	2.34	0.43
27:B2:59:ARG:HG2	35:BA:77:C:H5'	2.01	0.43
31:B6:39:TYR:OH	35:BA:2348:U:H5'	2.18	0.43
33:B8:33:ASN:HD22	35:BA:2419:U:P	2.39	0.43
35:BA:71:A:H4'	35:BA:72:U:O5'	2.18	0.43
35:BA:205:G:O2'	35:BA:206:U:OP2	2.36	0.43
35:BA:278:A:H2'	35:BA:279:C:H6	1.84	0.43
35:BA:1054:A:H2'	35:BA:1055:G:O4'	2.19	0.43
35:BA:1380:G:H2'	35:BA:1381:G:C8	2.53	0.43
35:BA:1429:G:H2'	35:BA:1430:C:H6	1.83	0.43
35:BA:2839:G:H2'	35:BA:2840:C:H6	1.83	0.43
37:BC:213:VAL:HG12	37:BC:225:ILE:HD11	2.01	0.43
41:BG:56:ALA:CB	41:BG:153:ARG:HH12	2.28	0.43
41:BG:142:PRO:C	41:BG:144:ILE:H	2.22	0.43
42:BH:76:VAL:O	42:BH:80:SER:OG	2.34	0.43
47:BO:77:ILE:HD11	52:BT:72:VAL:CG1	2.45	0.43
58:BZ:4:ARG:O	58:BZ:5:LEU:HB2	2.18	0.43
58:BZ:126:VAL:HA	58:BZ:163:LEU:HA	1.99	0.43
1:CA:83:U:O5'	1:CA:83:U:H6	2.01	0.43
1:CA:676:A:H61	1:CA:714:G:H1	1.67	0.43
1:CA:1131:G:H2'	1:CA:1132:C:C6	2.54	0.43
1:CA:1410:G:H2'	1:CA:1411:C:C6	2.54	0.43
4:CD:20:TYR:N	4:CD:20:TYR:CD1	2.86	0.43
6:CF:3:ARG:HD3	6:CF:64:GLN:NE2	2.34	0.43
6:CF:39:LYS:HB3	6:CF:62:TRP:CZ3	2.54	0.43
7:CG:80:VAL:H	7:CG:83:ALA:HB3	1.84	0.43
10:CJ:63:PHE:HB3	14:CN:57:ARG:O	2.17	0.43
12:CL:25:PRO:O	12:CL:27:LEU:HD13	2.18	0.43
16:CP:42:ARG:C	16:CP:43:LYS:HD2	2.39	0.43
22:CW:20:U:H5	22:CW:60:U:O4	2.00	0.43
22:CW:64:A:H2'	22:CW:65:G:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D5:55:ARG:HG2	50:DR:33:ARG:NH1	2.34	0.43
35:DA:82:G:N1	35:DA:103:A:OP2	2.50	0.43
35:DA:272(I):U:C5	35:DA:363(A):A:N1	2.86	0.43
35:DA:1146:C:O2'	35:DA:1147:C:H5'	2.18	0.43
35:DA:2321:G:H2'	35:DA:2321:G:N3	2.33	0.43
35:DA:2512:C:H2'	35:DA:2513:G:O4'	2.19	0.43
35:DA:2839:G:H5'	50:DR:46:GLY:HA3	2.00	0.43
38:DD:53:PHE:HA	38:DD:218:ARG:HB2	2.00	0.43
39:DE:48:GLN:CD	39:DE:78:LEU:HD13	2.39	0.43
42:DH:49:VAL:HG23	42:DH:50:VAL:N	2.34	0.43
42:DH:52:VAL:HG12	42:DH:65:HIS:CD2	2.53	0.43
48:DP:45:LEU:HD23	48:DP:45:LEU:HA	1.82	0.43
54:DV:52:VAL:HG23	54:DV:55:ALA:HB3	2.00	0.43
57:DY:77:PRO:O	57:DY:78:ALA:HB2	2.18	0.43
58:DZ:179:ASP:C	58:DZ:181:GLU:H	2.21	0.43
1:AA:67:C:O2'	1:AA:171:A:H1'	2.19	0.43
1:AA:429:U:H3'	4:AD:9:CYS:HB2	2.01	0.43
1:AA:584:G:H2'	1:AA:585:G:C8	2.53	0.43
1:AA:647:C:H2'	1:AA:648:A:C8	2.54	0.43
1:AA:805:C:O2'	1:AA:806:C:H5'	2.18	0.43
1:AA:1054:C:H6	1:AA:1196:U:C2	2.36	0.43
1:AA:1077:G:N1	1:AA:1081:G:C6	2.86	0.43
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.83	0.43
1:AA:1342:C:H1'	9:AI:124:GLN:HG3	2.00	0.43
4:AD:159:ARG:O	4:AD:162:LEU:HB2	2.18	0.43
6:AF:19:LEU:O	6:AF:19:LEU:HD23	2.19	0.43
9:AI:43:ALA:O	9:AI:45:ALA:N	2.42	0.43
13:AM:115:LYS:C	13:AM:117:VAL:N	2.70	0.43
24:AY:267:SER:OG	24:AY:270:LYS:HB2	2.19	0.43
30:B5:28:PRO:HD2	55:BW:35:ILE:HG23	2.01	0.43
30:B5:40:LYS:NZ	30:B5:49:CYS:SG	2.79	0.43
35:BA:2171:A:H4'	35:BA:2172:U:OP1	2.17	0.43
35:BA:2307:G:N3	35:BA:2307:G:H5''	2.33	0.43
38:BD:108:PRO:HB3	38:BD:143:HIS:NE2	2.33	0.43
40:BF:125:LEU:H	40:BF:125:LEU:CD2	2.28	0.43
41:BG:46:ALA:HB2	41:BG:88:ILE:CD1	2.39	0.43
42:BH:127:GLU:HB3	42:BH:128:PRO:HD2	2.01	0.43
44:BJ:58:UNK:CB	44:BJ:62:UNK:HA	2.48	0.43
47:BO:93:PRO:HD3	47:BO:114:ILE:HD11	2.00	0.43
48:BP:18:ARG:O	48:BP:20:GLY:N	2.52	0.43
53:BU:84:LYS:HD3	53:BU:84:LYS:HA	1.88	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:51:VAL:HB	57:BY:53:PRO:HD2	2.01	0.43
58:BZ:103:ARG:HH11	58:BZ:103:ARG:HG3	1.83	0.43
58:BZ:145:GLU:HG3	58:BZ:146:ILE:N	2.33	0.43
1:CA:312:C:H2'	1:CA:313:A:H8	1.83	0.43
1:CA:385:C:H2'	1:CA:386:C:H6	1.81	0.43
1:CA:552:U:N3	1:CA:553:A:N7	2.67	0.43
1:CA:707:C:H2'	1:CA:708:C:H6	1.83	0.43
1:CA:1431:C:H2'	1:CA:1432:G:O4'	2.19	0.43
3:CC:81:GLY:O	3:CC:85:ARG:HB2	2.18	0.43
4:CD:88:VAL:HG13	5:CE:97:GLY:CA	2.48	0.43
5:CE:71:LEU:O	5:CE:72:GLN:HG3	2.19	0.43
6:CF:84:ASN:O	6:CF:86:ARG:HG3	2.18	0.43
10:CJ:90:LEU:N	10:CJ:91:PRO:CD	2.81	0.43
12:CL:17:LYS:HD3	12:CL:18:VAL:HG22	2.00	0.43
13:CM:9:ILE:N	13:CM:9:ILE:HD12	2.34	0.43
22:CW:54:U:O4	22:CW:61:C:N3	2.51	0.43
24:CY:283:LEU:HB3	24:CY:287:GLU:OE2	2.19	0.43
25:D0:11:ARG:HH11	25:D0:11:ARG:CB	2.28	0.43
27:D2:26:ARG:HE	27:D2:26:ARG:HB2	1.50	0.43
35:DA:7:G:H2'	35:DA:8:A:H8	1.78	0.43
35:DA:272(H):C:H2'	35:DA:272(I):U:H5'	1.99	0.43
35:DA:481:G:H1'	35:DA:506:G:H21	1.83	0.43
35:DA:710:G:H2'	35:DA:711:G:C8	2.54	0.43
35:DA:1062:G:H2'	35:DA:1063:G:H8	1.82	0.43
35:DA:1532:C:H2'	35:DA:1533:G:O4'	2.18	0.43
35:DA:2833:G:H3'	35:DA:2834:G:H5'	2.00	0.43
38:DD:211:ARG:HA	38:DD:214:TRP:CE3	2.54	0.43
43:DI:92:VAL:CG1	43:DI:120:ILE:HB	2.47	0.43
44:DJ:77:UNK:C	44:DJ:79:UNK:N	2.81	0.43
45:DK:102:GLU:O	45:DK:106:GLU:HG3	2.17	0.43
49:DQ:34:LEU:HD12	49:DQ:34:LEU:HA	1.84	0.43
51:DS:17:ARG:HA	51:DS:20:ARG:NH1	2.33	0.43
52:DT:102:ILE:HB	52:DT:110:ILE:CD1	2.48	0.43
53:DU:92:ARG:O	53:DU:93:LYS:C	2.57	0.43
1:AA:199:G:H2'	1:AA:200:G:C8	2.54	0.43
1:AA:237:C:H4'	17:AQ:25:ARG:HH12	1.84	0.43
1:AA:575:G:OP1	1:AA:575:G:H4'	2.19	0.43
1:AA:687:A:N3	1:AA:688:G:H1'	2.33	0.43
1:AA:1067:A:O2'	1:AA:1068:G:OP2	2.31	0.43
2:AB:7:VAL:N	2:AB:10:LEU:HB2	2.34	0.43
2:AB:72:GLY:HA2	2:AB:165:VAL:HG22	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:164:VAL:O	2:AB:186:ALA:HB1	2.18	0.43
2:AB:204:ASN:OD1	2:AB:207:ALA:N	2.46	0.43
4:AD:196:LEU:HA	6:CF:16:GLN:HG3	2.01	0.43
11:AK:17:GLY:O	11:AK:80:VAL:HA	2.19	0.43
12:AL:58:VAL:O	12:AL:60:LEU:HD22	2.18	0.43
17:AQ:10:VAL:CG1	17:AQ:19:VAL:HB	2.49	0.43
27:B2:10:LEU:O	27:B2:13:ALA:N	2.52	0.43
28:B3:25:ALA:HB2	35:BA:849:A:N1	2.33	0.43
31:B6:13:CYS:HB2	31:B6:22:ALA:HB3	2.01	0.43
35:BA:176:G:O2'	35:BA:177:G:H5'	2.19	0.43
35:BA:1243:G:H2'	35:BA:1244:G:O4'	2.19	0.43
35:BA:1378:A:H4'	35:BA:1379:A:OP1	2.18	0.43
35:BA:1428:C:O2'	35:BA:1429:G:H5'	2.19	0.43
35:BA:1812:A:H2'	35:BA:1813:G:H8	1.84	0.43
35:BA:1857:G:N2	35:BA:1886:C:N4	2.67	0.43
35:BA:2315:G:H2'	35:BA:2316:C:C6	2.54	0.43
38:BD:209:ALA:C	38:BD:210:GLY:O	2.57	0.43
38:BD:211:ARG:HA	38:BD:214:TRP:CE3	2.54	0.43
45:BK:7:VAL:HG12	45:BK:58:THR:HA	1.99	0.43
54:BV:49:THR:HG22	54:BV:50:PRO:HD3	2.00	0.43
56:BX:31:HIS:HA	56:BX:32:PRO:HD2	1.87	0.43
1:CA:374:A:C6	1:CA:375:U:C4	3.06	0.43
1:CA:401:C:H2'	1:CA:402:G:H8	1.84	0.43
1:CA:403:C:H2'	1:CA:404:U:H6	1.83	0.43
1:CA:408:A:N1	1:CA:435:C:N4	2.61	0.43
1:CA:450:G:C8	1:CA:481:G:C6	3.06	0.43
1:CA:608:A:C4	1:CA:609:A:C8	3.07	0.43
1:CA:1005:A:H3'	1:CA:1006:C:H6	1.84	0.43
1:CA:1216:G:H5''	14:CN:5:ALA:CB	2.49	0.43
4:CD:68:TYR:HA	4:CD:114:ARG:HD2	2.00	0.43
7:CG:79:ARG:HH21	7:CG:82:GLY:HA2	1.84	0.43
8:CH:6:ILE:H	8:CH:6:ILE:CD1	2.32	0.43
13:CM:19:LEU:HD22	13:CM:19:LEU:H	1.83	0.43
19:CS:27:GLU:OE1	19:CS:27:GLU:N	2.52	0.43
19:CS:64:GLU:HG3	19:CS:65:ASN:H	1.81	0.43
24:CY:109:PHE:CZ	24:CY:353:ALA:HB2	2.54	0.43
24:CY:178:GLY:O	24:CY:349:LEU:HD21	2.19	0.43
31:D6:15:GLU:HG2	31:D6:15:GLU:O	2.19	0.43
35:DA:141:A:H8	35:DA:1408:C:O2'	2.01	0.43
35:DA:150:C:H2'	35:DA:151:C:C6	2.53	0.43
35:DA:242:G:O2'	35:DA:254:G:O6	2.26	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:270:A:OP2	35:DA:271(X):G:N2	2.52	0.43
35:DA:307:G:H21	35:DA:330:A:H62	1.66	0.43
35:DA:321:G:C2	35:DA:341:G:H4'	2.54	0.43
35:DA:643:A:H2'	35:DA:644:A:O4'	2.18	0.43
35:DA:654(R):C:H2'	35:DA:654(S):G:N7	2.33	0.43
35:DA:1265:A:H8	35:DA:1265:A:OP1	2.01	0.43
35:DA:1452:A:O2'	35:DA:1453:U:H2'	2.18	0.43
35:DA:1547:C:C2	35:DA:1548:C:C5	3.07	0.43
35:DA:1682:G:P	35:DA:1699:G:H22	2.42	0.43
35:DA:1897:G:H2'	35:DA:1898:U:O4'	2.18	0.43
35:DA:2307:G:N3	35:DA:2307:G:H5''	2.33	0.43
35:DA:2401:U:C2'	35:DA:2402:C:H5''	2.48	0.43
37:DC:46:ALA:O	37:DC:172:ILE:HG22	2.19	0.43
42:DH:44:VAL:O	42:DH:45:VAL:C	2.57	0.43
44:DJ:99:UNK:O	44:DJ:101:UNK:N	2.52	0.43
49:DQ:29:PHE:HB2	49:DQ:105:GLU:OE2	2.19	0.43
51:DS:106:ARG:HH11	51:DS:106:ARG:CB	2.30	0.43
53:DU:92:ARG:HD2	54:DV:11:GLN:HB2	2.01	0.43
55:DW:17:VAL:O	55:DW:20:VAL:HG22	2.19	0.43
1:AA:512:U:C2	1:AA:513:C:C5	3.07	0.43
1:AA:930:C:H2'	1:AA:931:C:O4'	2.19	0.43
1:AA:1304:G:N2	1:AA:1333:A:H62	2.12	0.43
1:AA:1431:C:H2'	1:AA:1432:G:O4'	2.19	0.43
1:AA:1490:C:H2'	1:AA:1491:G:O4'	2.18	0.43
2:AB:179:LYS:HA	8:AH:72:PRO:HG3	2.01	0.43
3:AC:6:HIS:ND1	14:AN:49:HIS:HB3	2.34	0.43
3:AC:28:GLN:O	3:AC:31:HIS:N	2.51	0.43
4:AD:23:GLY:H	4:AD:26:CYS:HB2	1.84	0.43
7:AG:106:GLN:O	7:AG:110:GLN:HG3	2.18	0.43
8:AH:118:VAL:O	8:AH:119:LEU:HD23	2.19	0.43
10:AJ:58:ASP:O	10:AJ:59:SER:C	2.57	0.43
27:B2:69:ARG:O	27:B2:70:GLN:HB3	2.18	0.43
33:B8:5:LYS:HG2	35:BA:242:G:C8	2.54	0.43
35:BA:557:U:H2'	35:BA:558:G:C8	2.53	0.43
35:BA:654(B):C:H5	35:BA:654(D):G:N3	2.17	0.43
35:BA:953:A:H2'	35:BA:954:G:H8	1.82	0.43
35:BA:1097:U:C2	45:BK:30:HIS:CE1	3.07	0.43
35:BA:1151:G:H2'	35:BA:1152:C:H6	1.84	0.43
35:BA:1510:G:H2'	35:BA:1511:C:H6	1.84	0.43
35:BA:1535:A:H5''	35:BA:1536:C:OP2	2.19	0.43
35:BA:2114:A:H2'	35:BA:2115:G:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2179:C:OP2	37:BC:169:THR:HB	2.19	0.43
35:BA:2574:G:H2'	35:BA:2575:C:O4'	2.19	0.43
38:BD:72:LYS:NZ	38:BD:99:ASP:OD2	2.46	0.43
39:BE:119:ARG:HD2	39:BE:120:TRP:CE2	2.54	0.43
40:BF:162:LEU:HD12	40:BF:162:LEU:HA	1.82	0.43
47:BO:69:ILE:HD13	47:BO:77:ILE:HG23	2.01	0.43
53:BU:114:LYS:HG2	53:BU:114:LYS:H	1.70	0.43
1:CA:979:C:H42	14:CN:18:VAL:HB	1.83	0.43
6:CF:15:ASP:OD1	6:CF:18:GLN:N	2.38	0.43
8:CH:93:VAL:O	8:CH:132:GLU:HA	2.18	0.43
9:CI:45:ALA:O	9:CI:78:LYS:HE3	2.19	0.43
9:CI:53:VAL:HG23	9:CI:55:ALA:N	2.26	0.43
13:CM:120:LYS:C	13:CM:121:LYS:HD2	2.39	0.43
26:D1:8:SER:OG	26:D1:10:LYS:HG3	2.19	0.43
26:D1:57:GLU:HB3	26:D1:58:ILE:H	1.66	0.43
35:DA:1007:C:H5''	46:DN:35:ARG:HH11	1.83	0.43
35:DA:1042:G:H3'	35:DA:1043:C:C6	2.54	0.43
35:DA:1448:G:H2'	35:DA:1449:A:C8	2.54	0.43
35:DA:1792:G:H5'	38:DD:205:VAL:HG13	2.00	0.43
35:DA:1819:A:H2'	38:DD:178:PRO:HB2	2.00	0.43
35:DA:1971:A:H1'	38:DD:240:ALA:O	2.18	0.43
35:DA:2131:G:C8	35:DA:2158:A:N6	2.87	0.43
35:DA:2443:C:H2'	35:DA:2444:G:H8	1.82	0.43
35:DA:2562:U:H4'	47:DO:25:LEU:CD2	2.49	0.43
35:DA:2661:G:H5''	35:DA:2662:A:C2	2.53	0.43
36:DB:104:U:H5''	49:DQ:141:GLN:OE1	2.19	0.43
38:DD:182:LEU:N	38:DD:272:ALA:HB3	2.27	0.43
42:DH:74:ASN:HD22	42:DH:74:ASN:N	2.17	0.43
42:DH:167:GLU:O	42:DH:169:VAL:N	2.49	0.43
43:DI:81:VAL:HG11	43:DI:88:ILE:HD13	2.01	0.43
45:DK:76:TYR:O	45:DK:79:ARG:N	2.48	0.43
54:DV:47:VAL:HG12	54:DV:52:VAL:H	1.84	0.43
57:DY:68:HIS:CE1	57:DY:70:SER:HB3	2.53	0.43
58:DZ:54:HIS:CE1	58:DZ:123:ASP:OD2	2.72	0.43
1:AA:32:A:H2'	1:AA:33:A:C8	2.53	0.43
1:AA:294:U:H2'	1:AA:295:C:H6	1.84	0.43
1:AA:434:U:H2'	1:AA:435:C:N1	2.34	0.43
1:AA:554:C:H2'	1:AA:555:C:H6	1.83	0.43
1:AA:619:U:O2	4:AD:135:LEU:HD22	2.19	0.43
1:AA:1057:G:H5''	3:AC:154:SER:HB2	2.00	0.43
1:AA:1158:C:N4	1:AA:1181:G:H22	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1347:G:O2'	1:AA:1373:G:N1	2.42	0.43
1:AA:1392:G:N2	1:AA:1502:A:H8	2.14	0.43
1:AA:1415:G:C6	1:AA:1486:G:C6	3.07	0.43
1:AA:1458:G:OP1	20:AT:35:THR:OG1	2.26	0.43
2:AB:9:GLU:HA	2:AB:12:GLU:OE1	2.19	0.43
4:AD:173:TRP:CD1	4:AD:174:LEU:HG	2.53	0.43
7:AG:150:ALA:HA	11:AK:59:TYR:HB3	2.01	0.43
12:AL:25:PRO:O	12:AL:27:LEU:N	2.51	0.43
13:AM:8:GLU:C	13:AM:9:ILE:HD12	2.40	0.43
24:AY:182:PRO:HG3	24:AY:345:ILE:HG23	2.00	0.43
24:AY:189:LEU:HA	24:AY:314:TYR:O	2.19	0.43
26:B1:45:ASN:O	26:B1:64:ALA:HB2	2.19	0.43
27:B2:2:LYS:CB	35:BA:97:C:H5''	2.49	0.43
33:B8:46:ARG:NH2	35:BA:631:A:OP2	2.52	0.43
35:BA:534:U:O2'	53:BU:49:HIS:ND1	2.37	0.43
35:BA:817:C:H2'	35:BA:818:G:O4'	2.19	0.43
35:BA:1028:A:N3	35:BA:2486:G:O2'	2.46	0.43
35:BA:1142:U:H5''	35:BA:1142(A):A:H5''	2.00	0.43
35:BA:1518:U:H2'	35:BA:1519:G:O4'	2.19	0.43
35:BA:1569:A:H4'	38:BD:61:LEU:HD21	2.01	0.43
35:BA:1754:C:H5'	52:BT:101:PHE:CZ	2.54	0.43
35:BA:2075:U:C4	35:BA:2238:G:C6	3.06	0.43
35:BA:2076:U:OP2	35:BA:2238:G:N2	2.44	0.43
35:BA:2249:U:N3	35:BA:2253:G:OP2	2.50	0.43
35:BA:2671:A:H2'	35:BA:2672:G:O4'	2.19	0.43
35:BA:2704:C:H2'	35:BA:2705:A:O4'	2.19	0.43
36:BB:90:A:C5	36:BB:91:C:H1'	2.54	0.43
39:BE:73:GLU:HA	39:BE:74:PRO:HD3	1.87	0.43
40:BF:149:ASP:OD1	40:BF:150:GLY:N	2.52	0.43
40:BF:165:ARG:CB	40:BF:165:ARG:HH11	2.32	0.43
41:BG:74:LYS:O	41:BG:75:LYS:HD3	2.19	0.43
45:BK:41:PHE:C	45:BK:43:ALA:H	2.23	0.43
52:BT:27:THR:OG1	52:BT:28:VAL:N	2.52	0.43
53:BU:61:TRP:CZ2	53:BU:94:ASN:HB2	2.54	0.43
57:BY:8:LYS:HD2	57:BY:8:LYS:N	2.33	0.43
1:CA:922:G:N3	1:CA:1398:A:H2	2.16	0.43
1:CA:1077:G:N2	1:CA:1079:G:H3'	2.33	0.43
1:CA:1300:G:HO2'	1:CA:1301:U:P	2.42	0.43
3:CC:79:ARG:HH11	3:CC:79:ARG:HG3	1.83	0.43
6:CF:7:ASN:O	6:CF:8:ILE:HG13	2.19	0.43
6:CF:21:LEU:O	6:CF:25:ILE:HG12	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:39:LYS:HB3	6:CF:62:TRP:HZ3	1.84	0.43
11:CK:110:ASP:O	18:CR:84:LYS:HD2	2.19	0.43
16:CP:18:ARG:HH11	16:CP:35:LYS:HD2	1.84	0.43
24:CY:136:LEU:HD11	24:CY:187:HIS:HB2	2.00	0.43
24:CY:304:PRO:C	24:CY:306:GLU:H	2.22	0.43
27:D2:21:LEU:HD23	27:D2:21:LEU:HA	1.86	0.43
35:DA:638:G:O6	35:DA:651:G:C6	2.72	0.43
35:DA:775:G:C5	35:DA:794:G:C8	3.07	0.43
35:DA:1061:U:C5	45:DK:10:LEU:HA	2.53	0.43
35:DA:1608:A:H1'	35:DA:1610:A:OP2	2.18	0.43
35:DA:2179:C:OP2	37:DC:169:THR:HB	2.19	0.43
36:DB:77:U:P	58:DZ:19:ARG:HH21	2.42	0.43
39:DE:39:PRO:HD3	39:DE:45:THR:OG1	2.19	0.43
45:DK:37:PHE:CD1	45:DK:41:PHE:HB2	2.54	0.43
47:DO:2:ILE:HD12	47:DO:6:THR:HG21	2.00	0.43
52:DT:89:VAL:C	52:DT:91:ARG:H	2.22	0.43
52:DT:107:ASP:HB2	52:DT:108:ARG:H	1.60	0.43
54:DV:18:LEU:HD12	54:DV:19:LYS:H	1.84	0.43
1:AA:139:G:H2'	1:AA:140:A:H8	1.83	0.42
1:AA:377:G:OP1	16:AP:5:ARG:NH1	2.47	0.42
1:AA:509:A:H2	1:AA:544:G:O4'	2.02	0.42
1:AA:564:C:C5	17:AQ:31:LEU:HD11	2.54	0.42
1:AA:607:A:H2'	1:AA:608:A:O4'	2.19	0.42
1:AA:832:C:C2	1:AA:833:U:C6	3.07	0.42
1:AA:1295:G:O2'	13:AM:14:ARG:NH1	2.52	0.42
5:AE:36:ASP:OD2	5:AE:40:ARG:HB2	2.19	0.42
8:AH:30:ARG:CB	8:AH:30:ARG:HH11	2.32	0.42
12:AL:8:ASN:O	12:AL:12:ARG:HG3	2.19	0.42
14:AN:23:ARG:NH1	14:AN:30:ALA:HB2	2.34	0.42
33:B8:32:LEU:HD11	35:BA:2391:G:H3'	2.00	0.42
35:BA:455:C:N3	35:BA:473:G:H5'	2.34	0.42
35:BA:572:A:H2'	35:BA:573:G:O4'	2.18	0.42
35:BA:654:A:H2	35:BA:654(A):G:C6	2.37	0.42
35:BA:656:G:H2'	35:BA:657:U:C6	2.53	0.42
35:BA:895:U:O2'	35:BA:897:C:OP2	2.28	0.42
35:BA:1060:U:OP2	45:BK:73:PRO:HA	2.19	0.42
35:BA:1418:G:OP1	35:BA:1588:C:O2'	2.37	0.42
35:BA:1802:A:H2'	35:BA:1803:A:C8	2.53	0.42
35:BA:2415:G:C6	35:BA:2416:C:C4	3.07	0.42
35:BA:2455:G:H2'	35:BA:2456:C:H6	1.84	0.42
35:BA:2660:A:H5'	35:BA:2661:G:C2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2817:G:OP1	50:BR:99:LYS:NZ	2.51	0.42
36:BB:21:G:O2'	36:BB:22:U:C6	2.71	0.42
36:BB:118:G:C2	36:BB:119:G:N7	2.87	0.42
37:BC:7:ARG:O	37:BC:7:ARG:HD2	2.19	0.42
42:BH:94:TYR:H	42:BH:94:TYR:HD1	1.67	0.42
43:BI:96:ASP:O	43:BI:99:GLU:HB3	2.19	0.42
50:BR:56:LYS:HE3	50:BR:88:ARG:HA	2.01	0.42
51:BS:90:GLY:O	51:BS:92:TYR:HD1	2.02	0.42
58:BZ:63:ASP:CB	58:BZ:65:GLN:HG3	2.49	0.42
1:CA:324:G:N2	1:CA:326:G:H3'	2.33	0.42
1:CA:513:C:H2'	1:CA:514:C:C6	2.54	0.42
1:CA:1043:C:H2'	1:CA:1044:A:C8	2.54	0.42
1:CA:1058:G:H2'	1:CA:1059:C:C6	2.54	0.42
1:CA:1065:U:O5'	1:CA:1190:G:N2	2.48	0.42
1:CA:1355:G:H2'	1:CA:1356:G:H8	1.82	0.42
4:CD:57:ARG:NE	4:CD:205:GLU:OE2	2.43	0.42
7:CG:146:GLU:HG2	7:CG:149:ARG:NH1	2.28	0.42
9:CI:97:LYS:HB3	9:CI:98:PRO:HD3	1.99	0.42
10:CJ:5:ARG:HA	10:CJ:73:ASP:OD1	2.19	0.42
16:CP:49:LEU:HD12	16:CP:50:LYS:H	1.84	0.42
24:CY:99:ASP:O	24:CY:103:HIS:ND1	2.52	0.42
24:CY:214:VAL:HG13	24:CY:215:ASP:N	2.31	0.42
26:D1:50:ARG:HH21	35:DA:2199:A:H5'	1.84	0.42
35:DA:1221(A):C:O2'	35:DA:1222:C:H5'	2.18	0.42
35:DA:1265:A:H61	35:DA:2013:A:H5''	1.84	0.42
35:DA:1331:A:O2'	35:DA:1332:G:C8	2.72	0.42
35:DA:1534:U:H2'	35:DA:1535:A:O4'	2.19	0.42
35:DA:2720:U:H2'	35:DA:2721:A:C8	2.54	0.42
35:DA:2790:A:O2'	35:DA:2893:G:C2	2.72	0.42
39:DE:36:ARG:HH12	39:DE:86:PRO:HD2	1.83	0.42
39:DE:120:TRP:CD2	39:DE:155:LYS:HD3	2.53	0.42
46:DN:120:LEU:CD1	46:DN:122:VAL:HG23	2.48	0.42
54:DV:22:VAL:O	54:DV:23:GLU:CB	2.67	0.42
58:DZ:72:ARG:HD3	58:DZ:72:ARG:HA	1.88	0.42
1:AA:192:U:H2'	1:AA:193:C:C6	2.54	0.42
1:AA:227:G:H2'	1:AA:228:A:H8	1.84	0.42
1:AA:271:C:H2'	1:AA:272:C:H6	1.83	0.42
1:AA:540:G:H2'	1:AA:541:G:O4'	2.19	0.42
1:AA:728:A:N7	15:AO:54:ARG:HD2	2.34	0.42
1:AA:946:A:H2'	1:AA:947:G:H8	1.84	0.42
1:AA:953:G:H2'	1:AA:954:G:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:984:C:H2'	1:AA:985:C:H6	1.83	0.42
1:AA:1165:C:H2'	1:AA:1166:G:C8	2.53	0.42
1:AA:1393:U:O2'	1:AA:1501:C:O2'	2.32	0.42
1:AA:1399:C:C2	1:AA:1502:A:N6	2.88	0.42
3:AC:155:GLY:O	3:AC:196:LEU:HD13	2.19	0.42
13:AM:108:ARG:HD2	13:AM:108:ARG:N	2.34	0.42
15:AO:62:GLN:O	15:AO:66:LEU:HD13	2.18	0.42
19:AS:37:ARG:H	19:AS:37:ARG:HG3	1.51	0.42
20:AT:56:MET:HG3	20:AT:84:LEU:CD1	2.49	0.42
23:AX:21:A:C2	24:AY:201:ARG:HD3	2.53	0.42
25:B0:12:ASN:OD1	35:BA:2278:A:C8	2.72	0.42
32:B7:3:ARG:HA	32:B7:3:ARG:HD3	1.84	0.42
33:B8:13:ARG:CD	48:BP:61:ARG:HG2	2.49	0.42
33:B8:50:LEU:C	33:B8:53:PRO:HD2	2.40	0.42
35:BA:626:U:O2	48:BP:105:LEU:HG	2.18	0.42
35:BA:733:G:C8	35:BA:761:A:N6	2.88	0.42
35:BA:790:C:H6	35:BA:790:C:H2'	1.65	0.42
35:BA:2695:C:H2'	35:BA:2696:U:H6	1.83	0.42
39:BE:103:ASP:OD2	39:BE:201:THR:HA	2.20	0.42
41:BG:161:THR:HG22	41:BG:162:THR:N	2.34	0.42
52:BT:45:PHE:HE2	52:BT:63:VAL:HB	1.83	0.42
58:BZ:71:VAL:HA	58:BZ:87:ASP:O	2.18	0.42
1:CA:110:C:H3'	1:CA:111:G:C8	2.54	0.42
1:CA:532:A:H2	1:CA:1207:G:H4'	1.84	0.42
1:CA:582:U:OP2	1:CA:758:G:N1	2.48	0.42
1:CA:694:A:H5''	11:CK:53:SER:OG	2.18	0.42
1:CA:1181:G:H2'	1:CA:1182:G:C8	2.54	0.42
1:CA:1226:C:H4'	1:CA:1227:A:OP1	2.19	0.42
3:CC:104:GLN:CD	3:CC:105:GLU:H	2.21	0.42
4:CD:86:LYS:HE3	4:CD:86:LYS:HB3	1.65	0.42
7:CG:44:TYR:O	7:CG:48:LYS:HG3	2.19	0.42
8:CH:49:GLU:OE1	8:CH:62:TYR:OH	2.34	0.42
8:CH:64:LYS:HG2	8:CH:79:VAL:HG21	2.00	0.42
8:CH:104:ARG:HB3	8:CH:108:GLY:N	2.33	0.42
11:CK:21:ILE:HD12	11:CK:21:ILE:N	2.34	0.42
11:CK:125:PHE:N	11:CK:125:PHE:HD1	2.16	0.42
13:CM:14:ARG:NH2	13:CM:16:ASP:OD2	2.52	0.42
15:CO:85:LEU:O	15:CO:85:LEU:HD23	2.19	0.42
29:D4:35:VAL:O	41:DG:113:ARG:NH1	2.52	0.42
31:D6:37:ARG:NE	31:D6:37:ARG:N	2.66	0.42
33:D8:32:LEU:HD22	33:D8:32:LEU:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:240:G:O2'	35:DA:257:A:N6	2.46	0.42
35:DA:247:G:H4'	35:DA:386:G:C5	2.54	0.42
35:DA:1120:G:H2'	35:DA:1121:C:C6	2.54	0.42
35:DA:1993:U:H4'	39:DE:128:SER:OG	2.19	0.42
35:DA:2659:G:C2	35:DA:2661:G:H8	2.37	0.42
35:DA:2666:C:H5'	35:DA:2667:C:OP2	2.19	0.42
35:DA:2802:G:O2'	35:DA:2803:C:H5''	2.18	0.42
35:DA:2805:G:N1	35:DA:2893:G:O6	2.50	0.42
38:DD:48:ARG:HG3	38:DD:48:ARG:HH11	1.84	0.42
40:DF:11:VAL:O	40:DF:12:LEU:C	2.58	0.42
48:DP:114:ILE:O	48:DP:115:LEU:HB3	2.18	0.42
48:DP:126:VAL:HA	48:DP:145:PRO:HB2	2.00	0.42
58:DZ:92:SER:O	58:DZ:93:ASP:HB3	2.19	0.42
58:DZ:152:ALA:HB1	58:DZ:167:PRO:HB2	2.01	0.42
1:AA:116:A:H2'	1:AA:117:G:O4'	2.19	0.42
1:AA:766:A:H2'	1:AA:767:A:O4'	2.19	0.42
1:AA:1316:G:O2'	14:AN:18:VAL:HG11	2.18	0.42
1:AA:1327:C:OP1	21:AU:21:TYR:HD1	2.02	0.42
2:AB:25:ASN:HA	2:AB:26:PRO:HD2	1.82	0.42
3:AC:151:VAL:HA	3:AC:199:LYS:O	2.19	0.42
9:AI:125:TYR:HD1	9:AI:126:SER:H	1.68	0.42
16:AP:28:ARG:HG2	16:AP:28:ARG:NH1	2.32	0.42
17:AQ:67:LYS:C	17:AQ:69:LYS:H	2.21	0.42
24:AY:81:ALA:HB3	24:AY:84:ARG:HE	1.84	0.42
24:AY:226:GLU:H	24:AY:226:GLU:HG2	1.73	0.42
33:B8:18:ALA:HB2	35:BA:628:G:H5''	2.00	0.42
35:BA:322:A:P	40:BF:168:ARG:HH21	2.42	0.42
35:BA:593:G:H2'	35:BA:594:U:C6	2.54	0.42
35:BA:602:G:O2'	35:BA:604:G:O2'	2.22	0.42
35:BA:654(G):C:H2'	35:BA:654(H):G:C8	2.55	0.42
35:BA:709:U:H2'	35:BA:710:G:C8	2.53	0.42
35:BA:721:C:H3'	35:BA:722:A:H8	1.84	0.42
35:BA:839:U:H2'	35:BA:840:C:C6	2.55	0.42
35:BA:1206:G:H2'	35:BA:1207:C:H6	1.84	0.42
35:BA:2840:C:H2'	35:BA:2841:C:C6	2.55	0.42
37:BC:29:LEU:O	37:BC:33:LEU:HG	2.19	0.42
40:BF:11:VAL:HG12	40:BF:12:LEU:H	1.84	0.42
40:BF:68:LYS:O	40:BF:70:THR:N	2.45	0.42
42:BH:159:GLU:HB3	42:BH:160:LYS:H	1.38	0.42
46:BN:19:GLU:HG3	46:BN:20:GLY:H	1.84	0.42
48:BP:61:ARG:H	48:BP:61:ARG:CD	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:108:LYS:C	48:BP:110:TYR:H	2.23	0.42
50:BR:59:ASP:N	50:BR:59:ASP:OD1	2.52	0.42
52:BT:29:ARG:CD	52:BT:86:ILE:HG22	2.43	0.42
53:BU:89:GLU:O	53:BU:89:GLU:HG2	2.19	0.42
54:BV:15:GLU:HB3	54:BV:16:PRO:CD	2.48	0.42
56:BX:72:LYS:N	56:BX:72:LYS:HD2	2.34	0.42
57:BY:15:VAL:HG22	57:BY:72:VAL:HG12	2.02	0.42
1:CA:236:G:H2'	1:CA:237:C:C6	2.54	0.42
1:CA:447:G:H2'	1:CA:485:G:N2	2.34	0.42
1:CA:900:A:H2'	1:CA:901:A:C8	2.54	0.42
1:CA:1201:A:H1'	1:CA:1202:G:OP2	2.19	0.42
3:CC:173:VAL:O	3:CC:175:LEU:HD12	2.18	0.42
4:CD:55:ALA:O	4:CD:59:ARG:HG2	2.19	0.42
7:CG:79:ARG:NH2	23:CX:14:A:H61	2.16	0.42
9:CI:102:LEU:HD23	9:CI:103:THR:N	2.35	0.42
22:CV:2:C:C2	22:CV:3:C:C5	3.07	0.42
24:CY:117:ILE:O	24:CY:210:VAL:HA	2.19	0.42
25:D0:3:HIS:CD2	25:D0:4:LYS:N	2.87	0.42
33:D8:3:LYS:HE2	35:DA:242:G:O5'	2.19	0.42
33:D8:13:ARG:HD2	48:DP:61:ARG:NH1	2.34	0.42
35:DA:7:G:H5'	46:DN:130:HIS:HE1	1.84	0.42
35:DA:250:G:H2'	35:DA:251:A:C8	2.54	0.42
35:DA:1331:A:O2'	35:DA:1332:G:H8	2.02	0.42
35:DA:1358:G:O2'	35:DA:1359:A:H5''	2.19	0.42
35:DA:2343:C:O2'	35:DA:2373:G:O2'	2.26	0.42
35:DA:2399:G:C6	35:DA:2418:A:C6	3.07	0.42
35:DA:2688:U:H5	35:DA:2720:U:OP2	2.01	0.42
36:DB:76:G:O3'	58:DZ:19:ARG:NH2	2.52	0.42
40:DF:205:ARG:HG2	40:DF:205:ARG:O	2.19	0.42
42:DH:56:SER:HB2	42:DH:61:HIS:ND1	2.33	0.42
42:DH:97:ARG:HG3	42:DH:98:LEU:N	2.31	0.42
43:DI:68:LEU:HD23	43:DI:68:LEU:O	2.18	0.42
54:DV:46:VAL:HG12	54:DV:47:VAL:N	2.34	0.42
57:DY:2:ARG:O	57:DY:4:LYS:N	2.51	0.42
1:AA:164:U:O2'	1:AA:165:C:H5'	2.19	0.42
1:AA:413:G:H4'	1:AA:414:A:H5''	2.01	0.42
1:AA:893:C:C4	1:AA:894:G:N7	2.87	0.42
1:AA:1117:G:N2	1:AA:1180:A:H1'	2.34	0.42
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.54	0.42
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.84	0.42
5:AE:26:PHE:CD1	5:AE:26:PHE:N	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:12:PRO:HG3	6:AF:57:GLN:O	2.20	0.42
9:AI:102:LEU:HD23	9:AI:103:THR:N	2.34	0.42
10:AJ:86:MET:HG3	10:AJ:87:THR:HG23	2.02	0.42
12:AL:85:ILE:HA	12:AL:85:ILE:HD12	1.74	0.42
15:AO:64:ARG:HH11	15:AO:64:ARG:HG3	1.83	0.42
22:AV:21:A:C8	22:AV:48:C:N4	2.87	0.42
24:AY:243:ASN:HB3	35:BA:2507:C:O4'	2.18	0.42
31:B6:30:THR:HB	31:B6:31:PRO:CD	2.50	0.42
33:B8:13:ARG:HD2	48:BP:61:ARG:HG2	2.00	0.42
35:BA:279:C:H3'	35:BA:280:C:H5''	2.01	0.42
35:BA:531:C:H4'	35:BA:532:A:H5''	2.01	0.42
35:BA:654(C):G:N7	35:BA:654(D):G:H1'	2.33	0.42
35:BA:654(L):G:C8	35:BA:654(M):C:H1'	2.54	0.42
35:BA:1058:G:C2	35:BA:1059:G:C6	3.07	0.42
35:BA:1290:C:C2	35:BA:1291:C:C5	3.08	0.42
35:BA:1445:A:O2'	35:BA:1445(A):C:H5'	2.20	0.42
35:BA:1469:A:H2'	35:BA:1470:G:C8	2.55	0.42
35:BA:1721:G:H5'	35:BA:1722:A:OP2	2.19	0.42
35:BA:1876:A:H2'	35:BA:1877:A:H8	1.84	0.42
35:BA:2134:A:H61	35:BA:2157:G:C2'	2.33	0.42
35:BA:2193:G:C4	35:BA:2194:G:C8	3.08	0.42
35:BA:2459:A:C5	35:BA:2460:U:C5	3.07	0.42
35:BA:2712:U:O2'	35:BA:2712(A):A:P	2.77	0.42
35:BA:2767:C:C2	35:BA:2768:C:C5	3.07	0.42
37:BC:8:TYR:CZ	37:BC:12:LEU:HD21	2.54	0.42
38:BD:61:LEU:HD13	38:BD:61:LEU:HA	1.79	0.42
38:BD:147:LEU:HD13	38:BD:155:LEU:HD11	2.01	0.42
39:BE:6:GLY:HA2	39:BE:51:PHE:CZ	2.54	0.42
39:BE:60:ASN:O	39:BE:63:LEU:HB2	2.19	0.42
41:BG:5:VAL:HG12	41:BG:6:ALA:H	1.83	0.42
41:BG:104:GLU:C	41:BG:106:LEU:H	2.22	0.42
42:BH:137:ASP:HB3	42:BH:140:LYS:HB2	2.01	0.42
44:BJ:73:UNK:O	44:BJ:75:UNK:N	2.52	0.42
45:BK:77:LEU:HD13	45:BK:107:ILE:HD11	2.01	0.42
47:BO:26:LYS:HB3	47:BO:27:GLY:H	1.65	0.42
47:BO:88:ASN:ND2	47:BO:90:GLN:HB2	2.35	0.42
57:BY:21:LYS:HG2	57:BY:22:GLY:N	2.34	0.42
57:BY:61:ILE:HD12	57:BY:62:GLU:H	1.83	0.42
58:BZ:54:HIS:HA	58:BZ:98:MET:HE3	2.02	0.42
58:BZ:108:PRO:HD3	58:BZ:141:VAL:HG12	2.01	0.42
1:CA:158:G:H2'	1:CA:159:G:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:160:A:H2'	1:CA:161:A:O4'	2.19	0.42
1:CA:513:C:H2'	1:CA:514:C:H6	1.84	0.42
1:CA:837:G:H2'	1:CA:838:G:H8	1.81	0.42
1:CA:953:G:H2'	1:CA:954:G:O4'	2.19	0.42
1:CA:954:G:H2'	1:CA:955:U:C6	2.54	0.42
1:CA:1133:G:C2	1:CA:1142:G:N2	2.87	0.42
1:CA:1242:C:H2'	1:CA:1243:C:C6	2.54	0.42
1:CA:1416:G:H2'	1:CA:1417:G:C8	2.55	0.42
1:CA:1512:U:H2'	1:CA:1513:A:C8	2.54	0.42
2:CB:76:GLN:H	2:CB:76:GLN:HG3	1.60	0.42
3:CC:175:LEU:HD21	3:CC:201:TYR:CE2	2.54	0.42
24:CY:6:LEU:C	24:CY:8:GLN:H	2.23	0.42
24:CY:20:PRO:O	24:CY:24:THR:OG1	2.26	0.42
24:CY:27:LYS:C	24:CY:29:LEU:H	2.23	0.42
24:CY:29:LEU:HG	24:CY:51:GLU:HB2	2.01	0.42
24:CY:149:PHE:CD1	24:CY:173:GLY:HA3	2.55	0.42
30:D5:16:ARG:NH1	30:D5:17:ASP:OD1	2.52	0.42
30:D5:47:PRO:CB	30:D5:57:VAL:HG11	2.46	0.42
35:DA:1408:C:H2'	35:DA:1409:C:C6	2.55	0.42
35:DA:1654:A:OP1	35:DA:1654:A:H4'	2.20	0.42
35:DA:2532:G:H2'	35:DA:2533:A:C8	2.54	0.42
36:DB:86:G:H2'	36:DB:87:G:C8	2.54	0.42
37:DC:31:LYS:HE3	37:DC:180:SER:HA	2.02	0.42
41:DG:125:PHE:CE1	41:DG:180:PHE:HE2	2.36	0.42
41:DG:145:THR:O	41:DG:148:MET:N	2.51	0.42
43:DI:6:LEU:O	43:DI:7:GLU:HB2	2.19	0.42
43:DI:25:TYR:O	43:DI:29:TYR:HB3	2.19	0.42
52:DT:31:SER:OG	52:DT:32:TYR:N	2.52	0.42
1:AA:36:C:H2'	1:AA:37:U:O4'	2.20	0.42
1:AA:265:G:O3'	17:AQ:66:SER:HA	2.19	0.42
1:AA:346:G:H2'	1:AA:347:G:O4'	2.20	0.42
1:AA:458:C:H2'	1:AA:460:G:O4'	2.20	0.42
1:AA:568:G:O6	12:AL:5:PRO:HD3	2.20	0.42
1:AA:1130:A:N6	1:AA:1131:G:O6	2.53	0.42
1:AA:1218:C:H2'	1:AA:1219:U:C5	2.55	0.42
1:AA:1319:A:C8	1:AA:1323:G:C6	3.07	0.42
2:AB:19:HIS:CG	2:AB:20:GLU:N	2.88	0.42
3:AC:148:GLY:HA2	3:AC:171:GLY:HA3	2.00	0.42
4:AD:18:LYS:HG3	4:AD:31:CYS:SG	2.60	0.42
13:AM:66:LEU:N	13:AM:70:LEU:HG	2.34	0.42
15:AO:75:PRO:HA	15:AO:78:TYR:HB3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.54	0.42
20:AT:29:LYS:HE2	20:AT:29:LYS:HB3	1.86	0.42
24:AY:158:PRO:HB2	24:AY:159:GLY:H	1.71	0.42
26:B1:57:GLU:O	26:B1:58:ILE:O	2.37	0.42
34:B9:9:ARG:HB3	34:B9:9:ARG:NH1	2.35	0.42
35:BA:610:G:H2'	35:BA:611:C:H6	1.85	0.42
35:BA:909:A:H2'	35:BA:912:C:H5	1.84	0.42
35:BA:1227:G:OP1	53:BU:13:LYS:HD3	2.19	0.42
35:BA:1605:C:H2'	35:BA:1606:G:O4'	2.20	0.42
35:BA:1717:G:N1	35:BA:1745(A):C:N3	2.67	0.42
35:BA:2010:G:H5''	55:BW:42:ARG:HB2	2.02	0.42
35:BA:2090:G:C6	35:BA:2230:G:C6	3.08	0.42
35:BA:2149:G:H2'	35:BA:2150:U:O4'	2.20	0.42
35:BA:2225:A:H1'	35:BA:2226:C:OP2	2.20	0.42
35:BA:2467:C:H2'	35:BA:2468:G:O4'	2.20	0.42
36:BB:32:C:C2	36:BB:51:G:N2	2.88	0.42
41:BG:144:ILE:HD12	41:BG:144:ILE:HA	1.86	0.42
42:BH:109:PHE:C	42:BH:111:HIS:H	2.23	0.42
49:BQ:21:THR:O	49:BQ:22:LYS:HB3	2.20	0.42
51:BS:106:ARG:HH11	51:BS:106:ARG:C	2.23	0.42
54:BV:82:ARG:HD2	54:BV:82:ARG:N	2.34	0.42
57:BY:17:SER:HB2	57:BY:71:LYS:HD2	2.00	0.42
57:BY:28:LYS:HE3	57:BY:28:LYS:HB2	1.82	0.42
1:CA:109:A:C4	1:CA:327:A:C2	3.08	0.42
1:CA:202:U:O2'	1:CA:203:U:O5'	2.35	0.42
1:CA:489:C:OP1	4:CD:132:ARG:NH2	2.52	0.42
1:CA:511:C:C2	1:CA:512:U:C5	3.07	0.42
1:CA:625:G:H2'	1:CA:626:U:C6	2.54	0.42
1:CA:1058:G:OP1	3:CC:199:LYS:HE3	2.19	0.42
1:CA:1293:G:HO2'	1:CA:1294:G:P	2.43	0.42
9:CI:118:LYS:O	9:CI:119:ALA:HB3	2.19	0.42
10:CJ:6:ILE:O	10:CJ:71:LEU:HD12	2.19	0.42
10:CJ:25:GLU:C	10:CJ:27:ALA:H	2.23	0.42
11:CK:33:THR:HB	11:CK:37:GLY:C	2.40	0.42
19:CS:24:ALA:O	19:CS:25:LYS:HB2	2.19	0.42
22:CW:34:G:H2'	22:CW:35:A:C8	2.55	0.42
35:DA:474:G:O2'	35:DA:475:U:H5''	2.19	0.42
35:DA:649:G:H2'	35:DA:650:C:C6	2.55	0.42
35:DA:755:C:H2'	35:DA:756:C:C6	2.54	0.42
35:DA:1636:C:H2'	35:DA:1637:A:H8	1.85	0.42
35:DA:1683:C:H2'	35:DA:1684:C:H6	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2130:U:O2'	35:DA:2133:G:O2'	2.27	0.42
35:DA:2148:G:H2'	35:DA:2149:G:H8	1.84	0.42
35:DA:2236:C:H2'	35:DA:2237:G:O4'	2.20	0.42
35:DA:2375:G:N2	35:DA:2377:A:H3'	2.35	0.42
35:DA:2523:G:C2'	35:DA:2524:G:H5''	2.47	0.42
35:DA:2777:G:C5'	35:DA:2778:A:H5'	2.47	0.42
36:DB:29:A:H2'	36:DB:30:C:O4'	2.19	0.42
38:DD:85:ASP:OD2	38:DD:88:ARG:NH1	2.53	0.42
38:DD:175:LEU:HD23	38:DD:175:LEU:HA	1.82	0.42
39:DE:14:ILE:HG13	39:DE:21:VAL:HG23	2.00	0.42
39:DE:69:LYS:O	39:DE:71:GLY:N	2.53	0.42
46:DN:1:MET:HG2	46:DN:2:LYS:H	1.85	0.42
46:DN:16:ILE:O	46:DN:54:VAL:HA	2.19	0.42
52:DT:102:ILE:HB	52:DT:110:ILE:HD12	2.02	0.42
56:DX:24:GLY:O	56:DX:82:GLN:HA	2.18	0.42
57:DY:98:VAL:O	57:DY:99:CYS:SG	2.77	0.42
1:AA:116:A:O5'	1:AA:116:A:H8	2.02	0.42
1:AA:139:G:H2'	1:AA:140:A:C8	2.54	0.42
1:AA:298:A:C6	1:AA:299:G:C2	3.07	0.42
1:AA:374:A:C6	1:AA:375:U:C4	3.08	0.42
1:AA:686:U:O4	1:AA:703:G:H1'	2.19	0.42
1:AA:909:A:OP1	12:AL:21:LYS:HD3	2.20	0.42
1:AA:1081:G:H5''	5:AE:18:ARG:HD3	2.00	0.42
1:AA:1236:A:O2'	1:AA:1334:G:N2	2.52	0.42
1:AA:1324:A:H4'	1:AA:1362:C:H4'	2.02	0.42
1:AA:1347:G:N1	1:AA:1374:A:OP2	2.41	0.42
2:AB:86:GLU:C	2:AB:88:ALA:H	2.23	0.42
4:AD:61:LYS:HD3	4:AD:206:PHE:CD2	2.54	0.42
11:AK:108:ILE:O	18:AR:87:ARG:N	2.52	0.42
11:AK:110:ASP:O	18:AR:84:LYS:HD2	2.20	0.42
13:AM:67:GLU:CD	13:AM:68:GLY:H	2.23	0.42
13:AM:112:GLY:HA2	13:AM:113:PRO:HD2	2.01	0.42
27:B2:34:GLU:O	27:B2:38:GLN:HG2	2.20	0.42
27:B2:47:ASN:ND2	35:BA:94(A):G:N3	2.68	0.42
31:B6:15:GLU:HG2	31:B6:15:GLU:O	2.19	0.42
35:BA:671:C:H2'	35:BA:672:C:C6	2.54	0.42
35:BA:1105:U:H2'	35:BA:1106:G:C8	2.53	0.42
35:BA:1198:U:H2'	35:BA:1199:U:C6	2.54	0.42
35:BA:1653:G:H3'	50:BR:4:LEU:HD23	2.01	0.42
35:BA:2061:G:H5''	35:BA:2503:A:C2	2.54	0.42
39:BE:188:VAL:HG13	39:BE:189:PRO:HD2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:8:GLN:HB3	40:BF:126:VAL:HA	2.00	0.42
40:BF:123:LEU:HD12	40:BF:124:LEU:N	2.32	0.42
42:BH:8:PRO:HA	42:BH:69:ARG:NH2	2.33	0.42
42:BH:130:ARG:HB3	42:BH:130:ARG:HH11	1.85	0.42
43:BI:123:LEU:O	43:BI:125:GLU:N	2.53	0.42
57:BY:34:LYS:HB3	57:BY:34:LYS:HE2	1.73	0.42
57:BY:68:HIS:CE1	57:BY:70:SER:HB3	2.55	0.42
58:BZ:73:GLN:HB3	58:BZ:87:ASP:OD1	2.19	0.42
1:CA:106:C:H2'	1:CA:107:G:C8	2.54	0.42
1:CA:236:G:H5''	17:CQ:42:TYR:OH	2.19	0.42
1:CA:325:A:OP2	20:CT:70:SER:HB3	2.19	0.42
1:CA:656:C:H4'	15:CO:62:GLN:NE2	2.35	0.42
1:CA:957:U:H4'	19:CS:79:THR:HB	2.02	0.42
1:CA:1309:G:H2'	1:CA:1310:G:C8	2.55	0.42
2:CB:35:GLU:HA	2:CB:39:ILE:O	2.20	0.42
2:CB:162:ILE:HD11	2:CB:184:VAL:HG13	2.02	0.42
4:CD:57:ARG:HH22	5:CE:107:ARG:HD3	1.82	0.42
6:CF:64:GLN:O	6:CF:65:VAL:HB	2.19	0.42
10:CJ:56:HIS:C	10:CJ:58:ASP:H	2.23	0.42
14:CN:33:VAL:HG12	14:CN:40:CYS:HA	2.01	0.42
17:CQ:5:VAL:HA	17:CQ:59:ILE:O	2.20	0.42
18:CR:51:LEU:HA	18:CR:52:PRO:HD3	1.93	0.42
24:CY:115:ASN:HB2	24:CY:171:VAL:O	2.19	0.42
24:CY:131:ASP:O	24:CY:135:MET:HG3	2.19	0.42
27:D2:16:LEU:O	27:D2:17:SER:HB3	2.19	0.42
28:D3:17:LYS:HA	28:D3:17:LYS:HD3	1.86	0.42
35:DA:57:C:H2'	35:DA:58:G:O4'	2.19	0.42
35:DA:1062:G:H2'	35:DA:1063:G:C8	2.55	0.42
35:DA:1444:G:H2'	35:DA:1445(A):C:C5	2.54	0.42
35:DA:1949:G:H2'	35:DA:1950:G:C8	2.54	0.42
36:DB:3:C:C2	36:DB:4:C:C5	3.08	0.42
38:DD:133:LEU:HD23	38:DD:136:ILE:HD12	2.02	0.42
39:DE:59:VAL:HG13	39:DE:60:ASN:N	2.30	0.42
40:DF:8:GLN:HG2	40:DF:126:VAL:HG12	2.02	0.42
40:DF:68:LYS:HB3	40:DF:69:HIS:H	1.50	0.42
1:AA:28:G:O2'	1:AA:296:U:OP1	2.38	0.42
1:AA:617:G:O5'	1:AA:617:G:H8	2.03	0.42
1:AA:1239:A:O2'	7:AG:114:ARG:O	2.31	0.42
22:AV:9:A:O2'	22:AV:10:G:N7	2.53	0.42
22:AW:39:U:OP1	22:AW:39:U:H4'	2.20	0.42
24:AY:177:TYR:CE1	24:AY:212:PRO:HD3	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:25:LYS:HE3	35:BA:2285:C:H41	1.83	0.42
33:B8:42:ARG:C	33:B8:44:LYS:H	2.22	0.42
34:B9:17:ILE:HB	34:B9:26:ILE:HD13	2.02	0.42
35:BA:272(G):C:N4	35:BA:363(C):G:H1	2.00	0.42
35:BA:639:U:C2	35:BA:640:C:C5	3.07	0.42
35:BA:941:A:O2'	48:BP:35:HIS:CE1	2.73	0.42
35:BA:1405:U:H2'	35:BA:1406:U:C6	2.53	0.42
35:BA:1669:A:H5''	35:BA:2550:G:OP1	2.20	0.42
35:BA:2101:G:H2'	35:BA:2102:U:C6	2.55	0.42
35:BA:2132:U:N3	37:BC:6:LYS:HG3	2.33	0.42
35:BA:2722:G:H2'	35:BA:2723:C:H6	1.84	0.42
38:BD:27:THR:O	38:BD:27:THR:HG23	2.19	0.42
38:BD:111:LEU:HD13	38:BD:112:GLN:N	2.34	0.42
40:BF:60:SER:OG	40:BF:61:GLY:N	2.53	0.42
41:BG:70:VAL:HA	41:BG:89:GLY:O	2.19	0.42
43:BI:95:LYS:O	43:BI:99:GLU:HB2	2.20	0.42
48:BP:32:THR:HG22	48:BP:37:GLY:HA2	2.00	0.42
57:BY:2:ARG:NH1	57:BY:3:VAL:HG23	2.35	0.42
3:CC:44:GLU:HA	3:CC:52:LEU:HD11	2.01	0.42
6:CF:5:GLU:HG2	6:CF:62:TRP:HZ2	1.85	0.42
6:CF:26:ILE:O	6:CF:29:ALA:HB3	2.19	0.42
10:CJ:8:LEU:HB2	10:CJ:70:ARG:O	2.20	0.42
12:CL:44:THR:HA	12:CL:45:PRO:HD3	1.90	0.42
13:CM:90:LEU:C	13:CM:92:HIS:N	2.70	0.42
26:D1:3:LYS:HG2	26:D1:4:VAL:HG12	2.01	0.42
29:D4:35:VAL:O	41:DG:113:ARG:CZ	2.67	0.42
31:D6:30:THR:HB	31:D6:31:PRO:CD	2.50	0.42
35:DA:306:U:H2'	35:DA:307:G:O4'	2.19	0.42
35:DA:613:G:H5''	35:DA:613:G:H8	1.85	0.42
35:DA:657:U:H2'	35:DA:658:C:C6	2.55	0.42
35:DA:748:G:C8	55:DW:89:ALA:HB1	2.55	0.42
35:DA:903:C:C2'	35:DA:904:C:H5'	2.50	0.42
35:DA:1078:U:H5''	35:DA:1079:C:OP1	2.20	0.42
35:DA:1165:U:H2'	35:DA:1166:C:H6	1.83	0.42
35:DA:1291:C:H2'	35:DA:1292:U:C6	2.54	0.42
35:DA:1664:A:H2	47:DO:1:MET:SD	2.42	0.42
35:DA:1754:C:H5'	52:DT:101:PHE:CZ	2.54	0.42
35:DA:1791:A:H3'	35:DA:1792:G:C8	2.55	0.42
35:DA:2065:C:H2'	35:DA:2066:C:C6	2.49	0.42
35:DA:2123:G:C4	35:DA:2124:G:C8	3.08	0.42
35:DA:2341:G:H2'	35:DA:2342:C:H6	1.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2839:G:C4	35:DA:2840:C:C5	3.08	0.42
35:DA:2839:G:H2'	35:DA:2840:C:C6	2.54	0.42
37:DC:208:THR:HB	37:DC:211:ARG:HG3	2.02	0.42
40:DF:128:ALA:O	40:DF:130:ALA:N	2.50	0.42
42:DH:41:MET:CE	42:DH:53:GLU:H	2.32	0.42
45:DK:53:VAL:O	45:DK:55:VAL:N	2.46	0.42
49:DQ:39:PRO:HB3	49:DQ:99:PRO:HD3	2.00	0.42
51:DS:12:PHE:H	51:DS:12:PHE:HD1	1.68	0.42
51:DS:95:HIS:O	51:DS:98:VAL:HG23	2.19	0.42
1:AA:951:G:C6	1:AA:1231:G:C6	3.07	0.42
1:AA:1029:C:O2'	1:AA:1030:C:H5	2.03	0.42
1:AA:1111:A:H2'	1:AA:1112:C:C6	2.54	0.42
1:AA:1302:U:C6	13:AM:17:VAL:HG21	2.55	0.42
2:AB:16:HIS:CD2	2:AB:209:ARG:HB3	2.54	0.42
3:AC:107:GLN:CD	3:AC:107:GLN:H	2.22	0.42
5:AE:32:VAL:HB	5:AE:58:ALA:HB1	2.01	0.42
5:AE:55:VAL:O	5:AE:58:ALA:HB3	2.19	0.42
8:AH:20:TYR:HD1	8:AH:65:TYR:CD2	2.37	0.42
13:AM:91:ARG:CB	13:AM:98:VAL:HG22	2.48	0.42
33:B8:32:LEU:HD12	35:BA:2391:G:OP1	2.19	0.42
35:BA:71:A:OP2	35:BA:71:A:H3'	2.20	0.42
35:BA:272(D):G:H1	35:BA:364:C:H42	1.68	0.42
35:BA:1107:G:H8	35:BA:1107:G:H3'	1.84	0.42
35:BA:1841:U:C2	35:BA:1842:G:C8	3.07	0.42
35:BA:2317:C:H2'	35:BA:2318:G:O4'	2.20	0.42
37:BC:16:ASP:OD2	37:BC:19:LYS:HB2	2.20	0.42
38:BD:35:LYS:C	38:BD:37:LEU:H	2.23	0.42
38:BD:53:PHE:C	38:BD:218:ARG:HB2	2.40	0.42
38:BD:131:LEU:HD13	38:BD:136:ILE:HG12	2.02	0.42
51:BS:107:GLU:O	51:BS:109:GLY:N	2.53	0.42
56:BX:27:THR:HA	56:BX:79:ALA:O	2.20	0.42
58:BZ:11:GLU:H	58:BZ:11:GLU:CD	2.23	0.42
1:CA:226:G:H2'	1:CA:227:G:H8	1.85	0.42
1:CA:605:U:H2'	1:CA:606:G:O4'	2.20	0.42
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.34	0.42
2:CB:80:ILE:HD12	2:CB:80:ILE:N	2.27	0.42
6:CF:12:PRO:HG3	6:CF:57:GLN:O	2.20	0.42
10:CJ:20:ALA:O	10:CJ:24:VAL:HG23	2.20	0.42
21:CU:5:ASP:C	21:CU:7:ARG:H	2.23	0.42
22:CW:16:U:C5	22:CW:18:G:H2'	2.54	0.42
24:CY:295:LEU:HD13	24:CY:299:ARG:HE	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CY:330:ARG:NH2	24:CY:343:ASP:OD2	2.53	0.42
35:DA:118:A:H5'	35:DA:119:A:C8	2.53	0.42
35:DA:613:G:C6	35:DA:614:U:C4	3.08	0.42
35:DA:849:A:N6	35:DA:928:G:O2'	2.45	0.42
35:DA:963:U:H2'	35:DA:964:C:C6	2.55	0.42
35:DA:1139:G:O2'	35:DA:1143:A:N1	2.44	0.42
35:DA:1176:G:O2'	35:DA:1177:A:H5'	2.20	0.42
35:DA:2123:G:H2'	35:DA:2124:G:C8	2.54	0.42
35:DA:2127:G:H8	35:DA:2127:G:OP2	2.03	0.42
35:DA:2408:U:O5'	35:DA:2408:U:H6	2.03	0.42
35:DA:2443:C:H2'	35:DA:2444:G:C8	2.54	0.42
35:DA:2591:C:OP1	38:DD:239:ARG:HG2	2.19	0.42
35:DA:2771:C:C2	35:DA:2772:C:C5	3.08	0.42
38:DD:218:ARG:HH11	38:DD:218:ARG:HG3	1.84	0.42
40:DF:46:ARG:HD2	40:DF:46:ARG:HA	1.88	0.42
40:DF:101:LEU:O	40:DF:106:ARG:NH1	2.50	0.42
41:DG:112:PRO:CB	41:DG:113:ARG:HH21	2.33	0.42
41:DG:120:LEU:HG	41:DG:179:PRO:HG2	2.02	0.42
45:DK:38:VAL:HG23	45:DK:39:LYS:N	2.35	0.42
45:DK:115:LEU:HB3	45:DK:126:MET:SD	2.60	0.42
46:DN:128:HIS:HE1	46:DN:130:HIS:O	2.03	0.42
53:DU:54:LYS:O	53:DU:58:ARG:HG3	2.20	0.42
53:DU:80:ILE:HD13	53:DU:80:ILE:HA	1.91	0.42
57:DY:52:SER:N	57:DY:53:PRO:HD2	2.34	0.42
58:DZ:15:PRO:O	58:DZ:19:ARG:HG3	2.20	0.42
58:DZ:77:ASP:O	58:DZ:79:ARG:N	2.53	0.42
1:AA:126:G:OP1	1:AA:605:U:O2'	2.33	0.42
1:AA:375:U:H2'	1:AA:376:G:C8	2.55	0.42
1:AA:384:G:H2'	1:AA:385:C:C6	2.54	0.42
1:AA:971:G:N2	1:AA:1363(A):A:OP2	2.49	0.42
1:AA:1286:A:N3	21:AU:22:ARG:NH2	2.68	0.42
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.55	0.42
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.55	0.42
2:AB:178:ARG:HH11	2:AB:178:ARG:CB	2.29	0.42
2:AB:228:GLY:O	2:AB:230:VAL:N	2.53	0.42
3:AC:16:ARG:HH11	3:AC:16:ARG:CB	2.33	0.42
4:AD:15:GLU:O	4:AD:17:VAL:HG23	2.19	0.42
4:AD:20:TYR:HA	4:AD:26:CYS:SG	2.59	0.42
12:AL:42:THR:OG1	12:AL:52:LEU:HB3	2.19	0.42
13:AM:37:THR:O	13:AM:39:ILE:HG13	2.20	0.42
13:AM:125:ARG:HD2	24:AY:165:ASP:CB	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:126:LYS:N	24:AY:160:PRO:HG2	2.35	0.42
20:AT:75:ASN:OD1	20:AT:75:ASN:N	2.53	0.42
24:AY:332:ASP:O	24:AY:336:VAL:HG23	2.20	0.42
25:B0:11:ARG:HH11	25:B0:11:ARG:CB	2.30	0.42
35:BA:1349:A:H62	35:BA:1598:C:H42	1.65	0.42
35:BA:1682:G:H5'	35:BA:1762:A:O2'	2.19	0.42
35:BA:2043:C:C2	35:BA:2044:C:C5	3.08	0.42
35:BA:2238:G:N3	35:BA:2238:G:H2'	2.35	0.42
35:BA:2331:G:N2	35:BA:2385:C:C4	2.88	0.42
35:BA:2677:G:H2'	35:BA:2678:C:H6	1.84	0.42
36:BB:15:A:OP2	36:BB:69:G:N2	2.53	0.42
38:BD:118:VAL:HG22	38:BD:119:ALA:H	1.84	0.42
39:BE:100:GLU:O	39:BE:172:VAL:HG23	2.20	0.42
39:BE:111:ARG:HA	50:BR:2:ARG:CG	2.49	0.42
40:BF:143:ALA:HB1	40:BF:148:LEU:HB2	2.02	0.42
41:BG:16:ARG:O	41:BG:20:ILE:HG13	2.20	0.42
42:BH:67:LEU:O	42:BH:71:LEU:HD22	2.20	0.42
43:BI:114:LEU:O	43:BI:131:LYS:HD3	2.20	0.42
46:BN:72:TYR:OH	46:BN:98:VAL:HG13	2.20	0.42
46:BN:74:ARG:NH2	46:BN:85:ILE:HD11	2.34	0.42
48:BP:16:ARG:HH22	48:BP:18:ARG:CG	2.32	0.42
48:BP:50:ARG:HG2	48:BP:50:ARG:NH2	2.34	0.42
48:BP:98:GLU:O	48:BP:101:VAL:HG22	2.20	0.42
54:BV:19:LYS:HG3	54:BV:20:LEU:N	2.34	0.42
54:BV:52:VAL:CG2	54:BV:55:ALA:HB3	2.47	0.42
57:BY:20:TYR:CE2	57:BY:42:VAL:HA	2.55	0.42
57:BY:31:LEU:HB2	57:BY:32:PRO:HA	2.00	0.42
58:BZ:102:LEU:HD23	58:BZ:104:PHE:HE1	1.85	0.42
1:CA:149:A:O2'	1:CA:150:C:H6	2.02	0.42
1:CA:189(C):C:N3	1:CA:189(H):G:N1	2.43	0.42
1:CA:235:C:H2'	1:CA:236:G:H8	1.83	0.42
1:CA:335:C:H2'	1:CA:336:C:C6	2.55	0.42
1:CA:339:C:OP2	47:DO:97:ARG:NH1	2.53	0.42
1:CA:355:C:N4	1:CA:356:A:H62	2.18	0.42
1:CA:895:G:H2'	1:CA:896:C:C6	2.55	0.42
1:CA:1302:U:C6	13:CM:17:VAL:HG21	2.54	0.42
6:CF:3:ARG:NH1	6:CF:38:GLU:OE1	2.53	0.42
8:CH:110:ALA:HB3	8:CH:121:ASP:HB3	2.02	0.42
11:CK:51:LYS:HA	11:CK:55:LYS:HD3	2.02	0.42
12:CL:62:SER:HB2	12:CL:64:TYR:CD1	2.55	0.42
14:CN:34:TYR:N	14:CN:34:TYR:CD1	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:12:ALA:O	20:CT:15:ARG:HB2	2.20	0.42
24:CY:41:ASP:HB3	24:CY:44:ALA:HB3	2.01	0.42
35:DA:286:C:H2'	35:DA:287:C:C6	2.55	0.42
35:DA:1429:G:H2'	35:DA:1430:C:H6	1.85	0.42
35:DA:1564:C:H2'	35:DA:1565:C:C6	2.55	0.42
35:DA:2087:G:O2'	35:DA:2088:G:H5'	2.20	0.42
35:DA:2099:U:C2	35:DA:2100:G:C8	3.08	0.42
35:DA:2262:U:H2'	35:DA:2263:C:H6	1.84	0.42
35:DA:2620:C:C4	35:DA:2621:A:N7	2.88	0.42
38:DD:186:HIS:CE1	38:DD:188:GLU:HB2	2.54	0.42
38:DD:211:ARG:O	38:DD:215:LEU:HG	2.20	0.42
38:DD:265:PRO:C	38:DD:267:SER:N	2.73	0.42
41:DG:125:PHE:HB3	41:DG:166:ASP:CB	2.50	0.42
42:DH:124:GLU:HB2	42:DH:132:ARG:CG	2.49	0.42
47:DO:69:ILE:HD12	47:DO:69:ILE:N	2.34	0.42
52:DT:57:PHE:O	52:DT:59:THR:N	2.53	0.42
55:DW:76:VAL:CG2	55:DW:101:SER:HB3	2.50	0.42
56:DX:65:ARG:HG2	56:DX:65:ARG:HH11	1.85	0.42
57:DY:80:GLY:O	57:DY:81:LYS:HB2	2.20	0.42
57:DY:101:LYS:HG2	57:DY:102:CYS:N	2.35	0.42
1:AA:79:G:C2	1:AA:80:G:N3	2.88	0.42
1:AA:88:A:C8	1:AA:89:C:H5	2.37	0.42
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.37	0.42
1:AA:684:A:H2'	1:AA:685:G:C8	2.55	0.42
1:AA:1015:A:H2'	1:AA:1016:A:H8	1.83	0.42
1:AA:1074:G:H2'	1:AA:1075:C:H6	1.85	0.42
1:AA:1245:A:C6	1:AA:1293:G:C6	3.07	0.42
1:AA:1483:A:H1'	35:BA:1948:G:O4'	2.20	0.42
3:AC:64:VAL:O	3:AC:100:ALA:HB3	2.20	0.42
4:AD:153:ARG:NH1	4:AD:181:MET:SD	2.93	0.42
4:AD:175:SER:OG	4:AD:184:LYS:HB2	2.19	0.42
10:AJ:75:ILE:HG13	10:AJ:76:ASN:H	1.85	0.42
12:AL:44:THR:HA	12:AL:45:PRO:HD3	1.90	0.42
15:AO:3:ILE:O	15:AO:3:ILE:HG13	2.20	0.42
16:AP:49:LEU:O	16:AP:50:LYS:HB2	2.20	0.42
22:AW:22:G:C2	22:AW:23:A:N7	2.88	0.42
25:B0:72:ARG:O	25:B0:75:LEU:HB2	2.19	0.42
26:B1:71:TYR:C	26:B1:73:LEU:N	2.73	0.42
32:B7:35:ARG:HD3	35:BA:54:G:O2'	2.20	0.42
35:BA:949:C:H2'	35:BA:950:G:H8	1.85	0.42
35:BA:958:U:OP2	49:BQ:14:ARG:HD3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1169:G:H2'	35:BA:1170:G:O4'	2.20	0.42
35:BA:1525:G:H2'	35:BA:1526:G:H8	1.82	0.42
35:BA:1527:G:O2'	35:BA:1544:A:N6	2.40	0.42
35:BA:1602:U:H3'	35:BA:1603:A:H5'	2.02	0.42
35:BA:1790:C:H2'	35:BA:1791:A:C5	2.54	0.42
35:BA:1930:G:N2	35:BA:1968:G:H2'	2.35	0.42
35:BA:2807:G:H1	35:BA:2892:A:H62	1.66	0.42
35:BA:2833:G:H3'	35:BA:2834:G:H5'	2.02	0.42
40:BF:4:VAL:CG1	40:BF:17:ARG:HD3	2.47	0.42
41:BG:38:VAL:HG22	41:BG:93:THR:HA	2.01	0.42
50:BR:84:ALA:HB3	50:BR:85:PRO:HD3	2.02	0.42
51:BS:44:LYS:O	51:BS:46:VAL:HG23	2.20	0.42
51:BS:93:LYS:O	51:BS:94:TYR:C	2.58	0.42
53:BU:92:ARG:O	53:BU:93:LYS:C	2.58	0.42
57:BY:61:ILE:HD12	57:BY:62:GLU:N	2.35	0.42
57:BY:86:ARG:HH21	57:BY:95:LYS:HZ2	1.68	0.42
58:BZ:112:ARG:O	58:BZ:112:ARG:HD2	2.20	0.42
58:BZ:127:LYS:HB2	58:BZ:162:GLU:O	2.19	0.42
1:CA:195:A:OP1	20:CT:65:LYS:NZ	2.49	0.42
1:CA:259:G:H2'	1:CA:260:G:H8	1.84	0.42
1:CA:1049:U:H4'	1:CA:1050:G:C5'	2.50	0.42
1:CA:1285:A:H1'	1:CA:1286:A:OP2	2.20	0.42
1:CA:1425:U:H2'	1:CA:1426:C:H6	1.85	0.42
3:CC:71:ALA:HB2	3:CC:106:VAL:HB	2.02	0.42
3:CC:149:ALA:N	3:CC:170:GLN:O	2.42	0.42
9:CI:15:ALA:HA	9:CI:65:VAL:HA	2.01	0.42
9:CI:25:LYS:HE3	9:CI:25:LYS:HB2	1.81	0.42
9:CI:82:ALA:HB1	9:CI:96:LEU:HD21	2.02	0.42
12:CL:38:THR:HG23	12:CL:57:LYS:O	2.20	0.42
13:CM:19:LEU:HB3	13:CM:25:ILE:HG21	2.02	0.42
13:CM:37:THR:O	13:CM:39:ILE:HG13	2.20	0.42
22:CW:21:A:C4	22:CW:48:C:N4	2.88	0.42
22:CW:56:C:H2'	22:CW:57:G:C8	2.54	0.42
24:CY:288:ARG:HB3	24:CY:288:ARG:HH11	1.84	0.42
35:DA:607:U:C5	35:DA:620:G:C5	3.08	0.42
35:DA:924:C:H2'	35:DA:925:C:C6	2.55	0.42
35:DA:1043:C:H2'	35:DA:1044:G:H8	1.85	0.42
35:DA:1573:G:H2'	35:DA:1574:C:H5'	2.02	0.42
35:DA:1971:A:P	38:DD:242:ARG:HH22	2.43	0.42
35:DA:2308:G:H8	35:DA:2309:A:H3'	1.85	0.42
35:DA:2378:A:H2	51:DS:20:ARG:HH21	1.65	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2406:U:C4	48:DP:72:PRO:HB2	2.55	0.42
35:DA:2513:G:H2'	35:DA:2514:U:C6	2.55	0.42
35:DA:2708:G:H2'	35:DA:2709:G:C8	2.54	0.42
36:DB:33:G:H5'	41:DG:3:LEU:HD21	2.01	0.42
38:DD:3:VAL:HG23	38:DD:200:ASP:OD2	2.20	0.42
39:DE:46:ALA:HB2	39:DE:82:ARG:HA	2.02	0.42
40:DF:3:GLU:HA	40:DF:24:LEU:CG	2.39	0.42
41:DG:10:LYS:O	41:DG:15:VAL:HG23	2.19	0.42
42:DH:47:GLU:C	42:DH:49:VAL:H	2.22	0.42
49:DQ:30:GLY:HA2	49:DQ:107:ALA:HB2	2.02	0.42
57:DY:2:ARG:N	57:DY:5:MET:HG3	2.34	0.42
57:DY:38:ILE:CG2	57:DY:39:VAL:N	2.83	0.42
1:AA:191:G:N2	20:AT:103:GLY:O	2.46	0.41
1:AA:672:U:H2'	1:AA:673:G:H8	1.85	0.41
1:AA:683:G:H2'	1:AA:684:A:C8	2.55	0.41
1:AA:877:C:H2'	1:AA:878:G:H8	1.85	0.41
1:AA:978:A:C5	1:AA:1319:A:C2	3.08	0.41
1:AA:1048:G:O3'	1:AA:1049:U:H3'	2.20	0.41
1:AA:1128:C:H4'	9:AI:16:ARG:HH12	1.85	0.41
3:AC:82:GLU:H	3:AC:82:GLU:CD	2.24	0.41
6:AF:64:GLN:O	6:AF:65:VAL:HB	2.19	0.41
7:AG:146:GLU:HG2	7:AG:149:ARG:NH1	2.33	0.41
13:AM:7:VAL:CG1	41:BG:139:LEU:HD21	2.48	0.41
13:AM:13:LYS:HA	13:AM:44:ARG:NH1	2.35	0.41
22:AV:20:U:O2	22:AV:20:U:H2'	2.19	0.41
22:AW:18:G:H22	22:AW:55:U:C2'	2.32	0.41
24:AY:153:VAL:HG13	24:AY:153:VAL:O	2.20	0.41
24:AY:233:ARG:NH1	35:BA:2555:U:O2'	2.53	0.41
26:B1:70:VAL:O	26:B1:74:VAL:HG23	2.20	0.41
27:B2:71:ASN:HB3	27:B2:72:ALA:H	1.59	0.41
30:B5:16:ARG:HH11	30:B5:16:ARG:HG2	1.85	0.41
31:B6:30:THR:O	31:B6:32:ASN:N	2.53	0.41
32:B7:16:HIS:HA	32:B7:21:ARG:NH1	2.34	0.41
33:B8:25:MET:SD	48:BP:64:LYS:HD2	2.59	0.41
33:B8:53:PRO:O	33:B8:57:ARG:HB2	2.19	0.41
35:BA:154:G:C6	35:BA:173:G:C6	3.07	0.41
35:BA:579:G:O2'	35:BA:2019:A:OP1	2.30	0.41
35:BA:881:G:O6	35:BA:895:U:O4	2.38	0.41
35:BA:2406:U:N3	48:BP:72:PRO:HB2	2.35	0.41
41:BG:96:ARG:HA	41:BG:100:TRP:HE1	1.84	0.41
42:BH:8:PRO:CB	42:BH:52:VAL:HB	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BQ:21:THR:CG2	49:BQ:101:ARG:HB2	2.50	0.41
57:BY:31:LEU:HD23	57:BY:36:ALA:C	2.40	0.41
58:BZ:82:ARG:NH1	58:BZ:82:ARG:HG2	2.35	0.41
1:CA:108:G:N7	20:CT:15:ARG:HG3	2.35	0.41
1:CA:552:U:C2	1:CA:553:A:N7	2.88	0.41
1:CA:695:A:OP1	11:CK:52:GLY:HA3	2.20	0.41
1:CA:1049:U:O2'	14:CN:2:ALA:HB3	2.19	0.41
1:CA:1067:A:H8	1:CA:1067:A:O5'	2.02	0.41
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.55	0.41
1:CA:1127:G:N2	1:CA:1147:C:H41	2.18	0.41
2:CB:119:GLU:C	2:CB:121:LEU:N	2.72	0.41
6:CF:94:GLN:HB3	18:CR:32:ARG:HE	1.84	0.41
11:CK:81:ASP:OD1	11:CK:106:LYS:HD2	2.20	0.41
13:CM:116:THR:O	13:CM:118:ALA:N	2.53	0.41
17:CQ:58:GLU:O	17:CQ:59:ILE:HD13	2.20	0.41
24:CY:33:LEU:HD12	45:DK:20:ALA:CB	2.50	0.41
30:D5:59:GLU:O	30:D5:60:VAL:HG23	2.19	0.41
33:D8:26:LYS:NZ	35:DA:2361:A:OP2	2.53	0.41
35:DA:11:G:H8	35:DA:11:G:O5'	2.03	0.41
35:DA:141:A:H1'	35:DA:1408:C:O2'	2.20	0.41
35:DA:412:A:H2'	35:DA:413:C:H5'	2.02	0.41
35:DA:828:U:H4'	35:DA:831:G:N1	2.35	0.41
35:DA:922:U:H2'	35:DA:923:C:C6	2.55	0.41
35:DA:1448:G:N3	35:DA:1528(A):A:H2	2.18	0.41
35:DA:1541:G:H1'	35:DA:1542:A:C4	2.55	0.41
35:DA:2507:C:C2	35:DA:2583:G:C2	3.08	0.41
35:DA:2662:A:N3	35:DA:2662:A:H2'	2.35	0.41
36:DB:15:A:O2'	36:DB:16:G:H5'	2.19	0.41
41:DG:111:LEU:HB2	41:DG:112:PRO:HD3	2.01	0.41
45:DK:3:LYS:O	45:DK:7:VAL:HG21	2.20	0.41
52:DT:29:ARG:HG2	52:DT:85:LYS:HA	2.02	0.41
54:DV:24:LYS:HA	54:DV:92:THR:HG23	2.02	0.41
57:DY:62:GLU:HG2	57:DY:63:LYS:H	1.84	0.41
58:DZ:134:PRO:HB2	58:DZ:137:ILE:HD11	2.02	0.41
1:AA:130:A:N3	1:AA:263:A:O2'	2.41	0.41
1:AA:334:C:H2'	1:AA:335:C:C6	2.56	0.41
1:AA:370:C:H2'	1:AA:371:G:H8	1.85	0.41
1:AA:625:G:H2'	1:AA:626:U:C6	2.56	0.41
1:AA:663:A:H2'	1:AA:664:G:O4'	2.21	0.41
1:AA:925:G:C2	1:AA:927:G:C8	3.08	0.41
1:AA:1028:C:H42	1:AA:1034:G:H21	1.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1059:C:O2'	14:AN:45:ARG:NH2	2.53	0.41
1:AA:1086:U:H2'	1:AA:1087:G:C8	2.55	0.41
1:AA:1119:C:H2'	1:AA:1120:G:C8	2.55	0.41
1:AA:1288:A:H4'	21:AU:13:ILE:HD13	2.02	0.41
2:AB:145:LEU:CD1	2:AB:149:LEU:HD12	2.49	0.41
2:AB:179:LYS:HA	8:AH:72:PRO:CG	2.50	0.41
4:AD:171:GLY:HA2	4:AD:172:PRO:HD3	1.93	0.41
4:AD:172:PRO:HD3	6:CF:21:LEU:HD11	2.02	0.41
24:AY:303:ARG:H	24:AY:304:PRO:CD	2.29	0.41
27:B2:50:ILE:C	27:B2:52:ASP:N	2.73	0.41
29:B4:34:GLU:HB2	41:BG:113:ARG:HD2	2.02	0.41
35:BA:25:U:H5''	55:BW:80:PRO:HD3	2.03	0.41
35:BA:654(D):G:H22	35:BA:654(P):C:H42	1.67	0.41
35:BA:1074:G:H2'	35:BA:1075:C:C6	2.55	0.41
35:BA:1124:C:H2'	35:BA:1125:G:O4'	2.20	0.41
35:BA:1281:G:H5'	35:BA:1281:G:C8	2.55	0.41
35:BA:2273:A:O2'	35:BA:2274:A:H5'	2.20	0.41
35:BA:2491:U:H4'	35:BA:2570:G:OP1	2.19	0.41
35:BA:2839:G:H5'	50:BR:46:GLY:HA3	2.01	0.41
45:BK:12:LEU:HD11	45:BK:37:PHE:HE2	1.85	0.41
45:BK:26:ALA:HA	45:BK:29:GLN:NE2	2.34	0.41
45:BK:72:PRO:O	45:BK:111:LYS:NZ	2.41	0.41
45:BK:125:ARG:H	45:BK:125:ARG:HG2	1.65	0.41
48:BP:95:VAL:HG22	48:BP:125:VAL:HA	2.01	0.41
48:BP:107:LYS:C	48:BP:109:GLY:H	2.23	0.41
53:BU:92:ARG:NH1	53:BU:94:ASN:OD1	2.53	0.41
54:BV:47:VAL:HG12	54:BV:52:VAL:CG1	2.50	0.41
55:BW:5:ALA:HB2	55:BW:54:ALA:HB2	2.02	0.41
1:CA:69:G:H2'	1:CA:70:G:C8	2.55	0.41
1:CA:277:C:OP1	17:CQ:41:LYS:HE3	2.19	0.41
1:CA:430:A:OP2	4:CD:8:VAL:HG22	2.19	0.41
1:CA:832:C:C2	1:CA:833:U:C6	3.07	0.41
1:CA:1004:A:H2'	1:CA:1036:G:O6	2.20	0.41
1:CA:1004:A:H1'	1:CA:1038:C:H42	1.84	0.41
1:CA:1124:G:N7	1:CA:1145:C:O2'	2.40	0.41
1:CA:1181:G:H2'	1:CA:1182:G:C5	2.55	0.41
1:CA:1207:G:H2'	1:CA:1208:C:C6	2.55	0.41
1:CA:1245:A:H2'	1:CA:1246:C:C6	2.55	0.41
2:CB:42:ILE:O	2:CB:44:LEU:HD12	2.18	0.41
2:CB:158:LEU:HD23	2:CB:158:LEU:HA	1.87	0.41
10:CJ:50:ILE:HA	10:CJ:60:ARG:CB	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:2:ALA:O	13:CM:4:ILE:HG13	2.20	0.41
13:CM:67:GLU:CD	13:CM:68:GLY:H	2.22	0.41
19:CS:38:SER:O	19:CS:70:LYS:HB3	2.20	0.41
22:CW:38:A:H3'	22:CW:39:U:H5''	2.01	0.41
24:CY:55:LEU:HA	24:CY:58:THR:OG1	2.20	0.41
24:CY:153:VAL:HG13	24:CY:153:VAL:O	2.21	0.41
24:CY:339:GLY:C	24:CY:341:LEU:H	2.23	0.41
34:D9:37:GLY:HA2	35:DA:1125:G:H5'	2.02	0.41
35:DA:184:C:H2'	35:DA:185:U:C6	2.55	0.41
35:DA:607:U:C5	35:DA:620:G:C6	3.08	0.41
35:DA:855:G:H1	35:DA:922:U:H3	1.67	0.41
35:DA:971:C:H2'	35:DA:972:G:O4'	2.20	0.41
35:DA:1230:C:H2'	35:DA:1231:G:H8	1.84	0.41
35:DA:1400:G:H2'	35:DA:1401:G:H8	1.85	0.41
35:DA:1748:G:H2'	35:DA:1749:A:C8	2.55	0.41
35:DA:1763:G:H4'	35:DA:1763:G:OP1	2.20	0.41
35:DA:2055:C:H4'	35:DA:2056:G:H5''	2.01	0.41
35:DA:2120:G:H2'	35:DA:2121:G:C8	2.55	0.41
35:DA:2824:C:H2'	35:DA:2825:C:O4'	2.20	0.41
36:DB:45:A:O4'	41:DG:95:ARG:NH1	2.43	0.41
38:DD:73:VAL:O	38:DD:75:ILE:HG13	2.21	0.41
40:DF:117:ARG:HD3	40:DF:117:ARG:HA	1.86	0.41
40:DF:185:ASP:HA	40:DF:188:ARG:CG	2.49	0.41
41:DG:118:ARG:HD2	41:DG:181:ARG:HD3	2.03	0.41
46:DN:18:ALA:HB1	46:DN:21:LYS:CB	2.50	0.41
47:DO:114:ILE:N	47:DO:114:ILE:HD12	2.35	0.41
48:DP:78:PRO:HB2	48:DP:111:ARG:HD2	2.02	0.41
50:DR:88:ARG:NH2	50:DR:89:ASP:OD1	2.53	0.41
50:DR:101:ALA:O	50:DR:102:GLU:HB2	2.20	0.41
50:DR:103:ARG:HH12	50:DR:110:PRO:HD3	1.83	0.41
51:DS:59:LYS:HG2	51:DS:60:GLY:N	2.35	0.41
54:DV:47:VAL:HG12	54:DV:52:VAL:CG1	2.50	0.41
57:DY:96:ILE:HG21	57:DY:96:ILE:HD13	1.81	0.41
58:DZ:130:PRO:HA	58:DZ:133:ILE:HD11	2.01	0.41
1:AA:73:G:C6	1:AA:76:C:C4	3.08	0.41
1:AA:521:G:O2'	1:AA:522:C:H5'	2.20	0.41
1:AA:1030(A):G:O2'	1:AA:1030(C):G:N7	2.40	0.41
1:AA:1321:C:C5'	1:AA:1322:C:H5''	2.50	0.41
1:AA:1355:G:C6	1:AA:1368:G:C6	3.09	0.41
3:AC:173:VAL:N	3:AC:174:PRO:HD3	2.35	0.41
11:AK:81:ASP:OD1	11:AK:106:LYS:HD2	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B8:29:LYS:HG3	33:B8:29:LYS:O	2.20	0.41
35:BA:327:G:H2'	35:BA:328:U:C6	2.55	0.41
35:BA:1105:U:C2	35:BA:1106:G:C8	3.08	0.41
35:BA:2136:C:N3	35:BA:2155:G:N2	2.68	0.41
35:BA:2178:C:H3'	35:BA:2179:C:H5''	2.03	0.41
35:BA:2271:G:H2'	35:BA:2272:U:H6	1.82	0.41
35:BA:2364:C:H2'	35:BA:2365:G:O4'	2.19	0.41
35:BA:2395:C:H2'	35:BA:2396:G:O4'	2.21	0.41
35:BA:2455:G:C4	35:BA:2456:C:C5	3.08	0.41
35:BA:2538:C:H2'	35:BA:2539:C:C6	2.54	0.41
35:BA:2635:C:H4'	39:BE:78:LEU:HD12	2.01	0.41
35:BA:2659:G:N2	35:BA:2663:G:C6	2.88	0.41
35:BA:2870:C:H2'	35:BA:2871:C:O4'	2.20	0.41
38:BD:43:ARG:NH1	38:BD:49:ILE:HG22	2.35	0.41
40:BF:163:VAL:O	40:BF:166:ALA:HB3	2.20	0.41
41:BG:60:LEU:O	41:BG:64:THR:HG22	2.20	0.41
41:BG:131:TYR:H	41:BG:159:VAL:HG13	1.85	0.41
47:BO:2:ILE:HD12	47:BO:6:THR:HG21	2.02	0.41
48:BP:16:ARG:NH1	48:BP:18:ARG:H	2.18	0.41
50:BR:67:LEU:HD21	50:BR:76:VAL:HG11	2.02	0.41
52:BT:31:SER:OG	52:BT:32:TYR:N	2.52	0.41
52:BT:32:TYR:HD2	52:BT:81:PRO:HB2	1.84	0.41
53:BU:62:ILE:HG23	53:BU:76:TYR:CE1	2.56	0.41
53:BU:65:ILE:HD11	53:BU:93:LYS:HA	2.01	0.41
1:CA:22:G:H4'	1:CA:885:G:C8	2.56	0.41
1:CA:69:G:H2'	1:CA:70:G:H8	1.85	0.41
1:CA:93:G:O2'	1:CA:96:U:H5'	2.20	0.41
1:CA:97:G:C4	1:CA:98:G:N7	2.88	0.41
1:CA:240:C:H2'	1:CA:241:C:H6	1.86	0.41
1:CA:327:A:C2	1:CA:329:A:C4	3.08	0.41
1:CA:935:A:N1	7:CG:3:ARG:NH2	2.68	0.41
1:CA:1329:A:O2'	13:CM:24:GLY:HA2	2.20	0.41
3:CC:64:VAL:HG12	3:CC:66:VAL:HG23	2.03	0.41
3:CC:130:VAL:O	3:CC:134:ILE:HG13	2.20	0.41
4:CD:18:LYS:HG3	4:CD:31:CYS:SG	2.61	0.41
4:CD:174:LEU:HD21	4:CD:185:PHE:CD1	2.56	0.41
5:CE:32:VAL:HB	5:CE:58:ALA:HB1	2.02	0.41
5:CE:36:ASP:OD2	5:CE:40:ARG:HB2	2.19	0.41
22:CV:8:U:O4	22:CV:14:A:N7	2.53	0.41
24:CY:29:LEU:HD11	24:CY:48:VAL:O	2.21	0.41
26:D1:72:GLU:OE2	26:D1:76:ARG:NH1	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D7:35:ARG:HD3	35:DA:54:G:O2'	2.20	0.41
35:DA:70:G:H2'	35:DA:113:G:O2'	2.20	0.41
35:DA:73:A:H8	35:DA:73:A:O5'	2.03	0.41
35:DA:626:U:C2	48:DP:105:LEU:HG	2.55	0.41
35:DA:1384:A:N3	35:DA:1405:U:H1'	2.35	0.41
35:DA:1400:G:H2'	35:DA:1401:G:C8	2.55	0.41
35:DA:1510:G:H2'	35:DA:1511:C:C6	2.55	0.41
35:DA:1656:C:H2'	35:DA:1657:C:H6	1.85	0.41
35:DA:1668:A:N3	35:DA:1670:C:N4	2.67	0.41
35:DA:2115:G:H2'	35:DA:2116:G:H5''	2.02	0.41
38:DD:139:GLY:H	38:DD:165:ILE:HB	1.84	0.41
40:DF:188:ARG:HA	48:DP:7:ARG:CD	2.50	0.41
41:DG:15:VAL:HG12	41:DG:19:LEU:HD11	2.02	0.41
41:DG:113:ARG:NE	41:DG:113:ARG:CA	2.82	0.41
41:DG:128:ARG:O	41:DG:130:ASN:ND2	2.54	0.41
42:DH:121:ILE:HA	42:DH:134:SER:O	2.20	0.41
45:DK:14:ALA:HB1	45:DK:50:ASP:HA	2.02	0.41
54:DV:35:LEU:HB2	54:DV:57:VAL:O	2.20	0.41
57:DY:28:LYS:O	57:DY:29:GLU:C	2.58	0.41
1:AA:240:C:H2'	1:AA:241:C:H6	1.85	0.41
9:AI:56:LEU:HD23	9:AI:56:LEU:O	2.21	0.41
16:AP:74:LEU:O	16:AP:79:VAL:HG23	2.21	0.41
27:B2:16:LEU:O	27:B2:17:SER:HB3	2.21	0.41
35:BA:184:C:O2'	35:BA:217:G:N3	2.47	0.41
35:BA:373:U:H1'	35:BA:423:A:C2	2.55	0.41
35:BA:935:C:H2'	35:BA:936:C:C6	2.56	0.41
35:BA:1009:A:H2'	35:BA:1010:A:C8	2.56	0.41
35:BA:1322:A:C5	35:BA:1323:U:C5	3.09	0.41
35:BA:1825:A:H2'	35:BA:1826:G:C8	2.55	0.41
35:BA:2108:C:N3	35:BA:2182:G:N1	2.68	0.41
35:BA:2134:A:N6	35:BA:2157:G:H1'	2.35	0.41
35:BA:2282:G:H4'	35:BA:2283:C:O5'	2.19	0.41
35:BA:2392:A:H1'	48:BP:60:MET:SD	2.60	0.41
35:BA:2405:G:HO2'	35:BA:2406:U:P	2.40	0.41
35:BA:2839:G:H2'	35:BA:2840:C:C6	2.55	0.41
37:BC:214:TYR:HD2	37:BC:222:SER:HB2	1.85	0.41
38:BD:144:ALA:HB3	38:BD:192:THR:CG2	2.50	0.41
40:BF:11:VAL:O	40:BF:12:LEU:C	2.58	0.41
48:BP:47:ASP:HB3	48:BP:48:PRO:CA	2.50	0.41
48:BP:97:PRO:O	48:BP:99:LEU:N	2.42	0.41
50:BR:103:ARG:NH1	50:BR:110:PRO:HD3	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:308:C:H2'	1:CA:309:G:H8	1.85	0.41
1:CA:327:A:O2'	1:CA:328:C:O4'	2.35	0.41
1:CA:452:A:O3'	16:CP:72:ARG:HD2	2.21	0.41
1:CA:646:U:H2'	1:CA:647:C:C6	2.55	0.41
1:CA:824:C:O2'	8:CH:1:MET:N	2.45	0.41
1:CA:939:G:H5''	7:CG:102:ARG:NH2	2.36	0.41
1:CA:1095:U:H2'	1:CA:1096:C:O4'	2.20	0.41
1:CA:1112:C:H1'	3:CC:179:ARG:HD3	2.03	0.41
1:CA:1117:G:O3'	9:CI:104:ARG:NE	2.54	0.41
1:CA:1157:A:C5	1:CA:1180:A:C6	3.08	0.41
11:CK:54:ARG:HH12	22:CW:40:C:P	2.43	0.41
11:CK:120:ARG:HA	11:CK:121:PRO:HD3	1.86	0.41
12:CL:47:LYS:HE2	12:CL:48:PRO:HD3	2.02	0.41
14:CN:53:LEU:HD23	14:CN:53:LEU:HA	1.64	0.41
19:CS:64:GLU:O	19:CS:67:VAL:HG13	2.20	0.41
25:D0:70:GLN:OE1	25:D0:80:HIS:NE2	2.45	0.41
26:D1:50:ARG:NH2	35:DA:2200:C:OP2	2.36	0.41
35:DA:634:C:H2'	35:DA:635:C:C6	2.55	0.41
35:DA:1509(A):A:H2'	35:DA:1509(B):A:C8	2.55	0.41
35:DA:1528:A:H2	35:DA:1541:G:C5	2.37	0.41
35:DA:2111:C:N4	35:DA:2144:U:O3'	2.53	0.41
35:DA:2576:G:O2'	35:DA:2579:C:OP2	2.25	0.41
35:DA:2712(A):A:H5''	35:DA:2713:A:OP2	2.20	0.41
38:DD:31:LYS:HD2	38:DD:31:LYS:HA	1.84	0.41
39:DE:6:GLY:O	39:DE:195:LEU:HD12	2.20	0.41
40:DF:18:ARG:HG2	40:DF:19:GLU:N	2.35	0.41
41:DG:138:GLN:OE1	41:DG:152:LEU:HA	2.20	0.41
46:DN:2:LYS:HZ1	54:DV:12:TYR:HA	1.85	0.41
56:DX:8:ILE:HD12	56:DX:8:ILE:N	2.36	0.41
58:DZ:119:GLU:HG3	58:DZ:122:ARG:NH1	2.34	0.41
58:DZ:128:VAL:HG22	58:DZ:129:SER:N	2.34	0.41
1:AA:533:A:H1'	1:AA:534:U:OP1	2.20	0.41
1:AA:781:A:C8	1:AA:782:A:C8	3.09	0.41
1:AA:1269:A:H2	1:AA:1312:G:N3	2.18	0.41
1:AA:1300:G:O2'	1:AA:1301:U:P	2.78	0.41
1:AA:1326:C:H2'	1:AA:1327:C:C6	2.55	0.41
1:AA:1415:G:H1	1:AA:1485:U:H3	1.69	0.41
5:AE:19:MET:O	5:AE:20:GLN:HB2	2.19	0.41
9:AI:95:LYS:HE3	9:AI:95:LYS:HB2	1.81	0.41
13:AM:10:PRO:HG3	13:AM:18:ALA:HB1	2.01	0.41
13:AM:19:LEU:H	13:AM:19:LEU:HD22	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:33:ASP:C	18:AR:35:ARG:H	2.23	0.41
25:B0:41:ARG:HD2	25:B0:41:ARG:HA	1.63	0.41
25:B0:41:ARG:NH2	35:BA:2387:U:H4'	2.35	0.41
30:B5:2:ALA:N	35:BA:2015:A:N3	2.68	0.41
33:B8:30:ARG:NH1	35:BA:2419:U:O4	2.53	0.41
35:BA:130:C:O3'	35:BA:1349:A:H1'	2.21	0.41
35:BA:315:G:H2'	35:BA:316:C:O4'	2.20	0.41
35:BA:933:A:C5	35:BA:934:G:C8	3.08	0.41
35:BA:974:G:C6	35:BA:1186:G:C6	3.09	0.41
35:BA:1064:C:H2'	35:BA:1065:U:O4'	2.20	0.41
35:BA:1190:G:H5'	48:BP:35:HIS:N	2.35	0.41
35:BA:1500:G:O2'	38:BD:100:GLY:O	2.29	0.41
35:BA:1541:G:H1'	35:BA:1542:A:C4	2.55	0.41
35:BA:1542:A:H5'	35:BA:1543:C:OP2	2.20	0.41
35:BA:2153:G:H2'	35:BA:2154:G:C8	2.55	0.41
35:BA:2231:C:H2'	35:BA:2232:U:O4'	2.20	0.41
35:BA:2773:C:OP1	39:BE:164:ARG:NE	2.54	0.41
36:BB:52:A:HO2'	36:BB:53:A:H8	1.66	0.41
39:BE:152:LYS:HE2	39:BE:152:LYS:HB2	1.89	0.41
42:BH:85:LYS:NZ	42:BH:87:LEU:HG	2.35	0.41
45:BK:72:PRO:HA	45:BK:73:PRO:HD3	1.90	0.41
48:BP:83:VAL:H	48:BP:115:LEU:CD2	2.32	0.41
51:BS:30:ARG:HH22	51:BS:62:LYS:HD2	1.85	0.41
54:BV:22:VAL:O	54:BV:23:GLU:CB	2.68	0.41
58:BZ:99:TYR:CE1	58:BZ:125:LEU:HD12	2.56	0.41
1:CA:32:A:H2'	1:CA:33:A:H8	1.84	0.41
1:CA:189:G:H2'	1:CA:189(A):C:C6	2.56	0.41
1:CA:678:U:H2'	1:CA:679:C:C6	2.56	0.41
1:CA:824:C:H2'	1:CA:825:G:H8	1.85	0.41
1:CA:973:G:H1'	10:CJ:55:LYS:HE2	2.02	0.41
1:CA:1106:G:H2'	1:CA:1107:C:H6	1.85	0.41
1:CA:1278:U:H5'	1:CA:1279:A:C8	2.56	0.41
1:CA:1401:G:H2'	1:CA:1402:C:O4'	2.21	0.41
2:CB:209:ARG:HH11	2:CB:239:VAL:HG11	1.84	0.41
7:CG:36:LYS:HB2	7:CG:36:LYS:NZ	2.36	0.41
9:CI:126:SER:O	9:CI:127:LYS:HB3	2.20	0.41
14:CN:46:GLU:O	14:CN:50:LYS:HG3	2.20	0.41
35:DA:1106:G:C6	35:DA:1107:G:N3	2.89	0.41
35:DA:1508:A:H4'	35:DA:1509(A):A:C5	2.56	0.41
35:DA:1509(B):A:H2'	35:DA:1510:G:C8	2.55	0.41
35:DA:1680:U:O2	35:DA:1763:G:C8	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2025:C:H2'	35:DA:2026:C:H6	1.83	0.41
35:DA:2766:G:H2'	35:DA:2766:G:N3	2.36	0.41
35:DA:2842:G:C6	35:DA:2876:G:C6	3.08	0.41
36:DB:21:G:O2'	36:DB:22:U:O4'	2.37	0.41
36:DB:32:C:C2	36:DB:51:G:N2	2.89	0.41
39:DE:117:MET:HA	39:DE:122:PHE:H	1.85	0.41
42:DH:122:THR:HB	42:DH:134:SER:HB2	2.02	0.41
43:DI:77:LEU:HD22	43:DI:79:ILE:HG12	2.02	0.41
44:DJ:55:UNK:O	44:DJ:57:UNK:N	2.53	0.41
48:DP:147:LEU:O	48:DP:149:GLU:HG2	2.20	0.41
51:DS:36:TYR:CD1	51:DS:36:TYR:N	2.88	0.41
51:DS:64:GLU:OE2	51:DS:64:GLU:N	2.52	0.41
52:DT:10:VAL:O	52:DT:13:ARG:HG2	2.21	0.41
52:DT:51:ARG:HH21	52:DT:53:ARG:CD	2.33	0.41
52:DT:67:SER:O	52:DT:68:TYR:HB2	2.20	0.41
1:AA:457:C:H2'	1:AA:458:C:H6	1.85	0.41
1:AA:511:C:C2	1:AA:512:U:C5	3.09	0.41
1:AA:689:C:H2'	1:AA:690:G:C8	2.56	0.41
1:AA:1127:G:H1'	1:AA:1148:U:H3	1.85	0.41
1:AA:1245:A:H2'	1:AA:1246:C:C6	2.56	0.41
1:AA:1302:U:P	13:AM:21:TYR:HH	2.43	0.41
1:AA:1426:C:H2'	1:AA:1427:U:C6	2.56	0.41
2:AB:189:ASP:N	2:AB:189:ASP:OD1	2.53	0.41
4:AD:15:GLU:OE1	4:AD:15:GLU:HA	2.21	0.41
6:AF:27:GLN:HE21	6:AF:27:GLN:HA	1.85	0.41
10:AJ:23:ILE:HG23	10:AJ:85:LEU:HD13	2.01	0.41
12:AL:23:LYS:O	12:AL:24:VAL:HG23	2.19	0.41
22:AW:27:G:H22	22:AW:43:C:H42	1.68	0.41
25:B0:55:ARG:HG3	35:BA:2365:G:OP1	2.21	0.41
26:B1:25:LYS:O	26:B1:27:GLU:N	2.54	0.41
31:B6:15:GLU:OE1	31:B6:43:CYS:HB3	2.20	0.41
31:B6:34:LEU:HD23	31:B6:34:LEU:HA	1.95	0.41
35:BA:208:C:H2'	35:BA:209:C:H6	1.86	0.41
35:BA:247:G:H4'	35:BA:386:G:C4	2.55	0.41
35:BA:271(L):U:H4'	35:BA:271(M):G:C2	2.55	0.41
35:BA:407:G:H2'	35:BA:408:G:H8	1.84	0.41
35:BA:858:U:O2	35:BA:2268:A:H2'	2.21	0.41
35:BA:1068:G:N1	35:BA:1069:A:C6	2.88	0.41
35:BA:1295:C:H2'	35:BA:1296:G:H8	1.85	0.41
35:BA:1579:A:H2'	35:BA:1580:A:O4'	2.20	0.41
35:BA:2096:U:C2	35:BA:2097:C:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:226:ASN:HA	37:BC:227:PRO:HD2	1.94	0.41
38:BD:168:ARG:O	38:BD:169:GLU:HB2	2.21	0.41
38:BD:267:SER:HA	38:BD:270:ILE:HG13	2.02	0.41
39:BE:9:VAL:HG22	39:BE:25:VAL:O	2.21	0.41
40:BF:101:LEU:HD12	40:BF:102:PRO:CD	2.48	0.41
40:BF:117:ARG:NH2	40:BF:186:ILE:O	2.52	0.41
40:BF:178:PRO:HB2	40:BF:201:VAL:HG11	2.03	0.41
41:BG:16:ARG:NH2	41:BG:33:ARG:HG3	2.33	0.41
48:BP:34:GLY:O	48:BP:35:HIS:CG	2.74	0.41
54:BV:25:LEU:HD23	54:BV:25:LEU:HA	1.77	0.41
57:BY:68:HIS:HB3	57:BY:71:LYS:HZ2	1.84	0.41
58:BZ:4:ARG:HA	58:BZ:58:VAL:HB	2.02	0.41
58:BZ:28:MET:O	58:BZ:34:ASN:HA	2.20	0.41
58:BZ:155:LEU:O	58:BZ:157:LEU:HD12	2.20	0.41
1:CA:321:A:N6	1:CA:329:A:OP2	2.54	0.41
1:CA:906:G:H8	1:CA:906:G:O5'	2.04	0.41
1:CA:1058:G:H2'	1:CA:1059:C:H6	1.86	0.41
1:CA:1164:G:C6	1:CA:1173:G:C6	3.09	0.41
1:CA:1258:G:H2'	1:CA:1259:C:H6	1.83	0.41
1:CA:1381:U:H5	1:CA:1382:C:C5	2.38	0.41
1:CA:1442(A):G:O2'	52:DT:122:ASP:OD2	2.38	0.41
1:CA:1510:U:H2'	1:CA:1511:G:H8	1.85	0.41
3:CC:45:LYS:O	3:CC:47:LEU:N	2.53	0.41
4:CD:152:SER:HA	4:CD:155:LEU:HD12	2.03	0.41
4:CD:182:LYS:HB3	4:CD:183:GLY:H	1.66	0.41
7:CG:131:LYS:HG3	7:CG:131:LYS:O	2.20	0.41
8:CH:24:THR:HG22	8:CH:63:LEU:HD21	2.03	0.41
8:CH:82:HIS:HE1	8:CH:136:GLU:OE2	2.04	0.41
8:CH:112:LEU:O	8:CH:114:THR:HG23	2.20	0.41
9:CI:76:ALA:C	9:CI:78:LYS:H	2.24	0.41
9:CI:78:LYS:HD3	9:CI:101:PHE:CD1	2.55	0.41
9:CI:112:LYS:HE3	9:CI:116:LYS:O	2.21	0.41
10:CJ:58:ASP:O	10:CJ:59:SER:C	2.58	0.41
25:D0:41:ARG:HA	25:D0:41:ARG:HD2	1.73	0.41
25:D0:55:ARG:HG3	35:DA:2365:G:OP1	2.20	0.41
26:D1:92:LYS:HA	26:D1:92:LYS:HD2	1.88	0.41
35:DA:236:C:H2'	35:DA:237:C:H6	1.85	0.41
35:DA:547:A:H2'	35:DA:548:A:C8	2.55	0.41
35:DA:558:G:P	46:DN:111:PRO:HD2	2.60	0.41
35:DA:588:U:H2'	35:DA:589:C:H6	1.85	0.41
35:DA:811:U:OP1	48:DP:30:THR:HG22	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1007:C:H5''	46:DN:35:ARG:NH1	2.35	0.41
35:DA:1337:G:H2'	35:DA:1338:G:O4'	2.21	0.41
35:DA:1589:C:H2'	35:DA:1590:U:C6	2.56	0.41
35:DA:1668:A:N6	35:DA:1676:A:H61	2.18	0.41
35:DA:1802:A:H2'	35:DA:1803:A:C8	2.55	0.41
35:DA:2498:C:O2'	35:DA:2499:C:H5'	2.20	0.41
35:DA:2579:C:O3'	39:DE:131:ALA:HB2	2.21	0.41
35:DA:2839:G:H2'	35:DA:2840:C:H6	1.85	0.41
38:DD:267:SER:O	38:DD:269:PHE:N	2.53	0.41
40:DF:101:LEU:HD12	40:DF:102:PRO:CD	2.48	0.41
41:DG:13:GLU:O	41:DG:14:GLU:HB2	2.21	0.41
41:DG:115:ARG:CG	41:DG:116:ASP:N	2.82	0.41
46:DN:29:LYS:O	46:DN:33:LEU:HB2	2.21	0.41
46:DN:43:THR:H	46:DN:48:MET:HE1	1.85	0.41
48:DP:16:ARG:NH1	48:DP:18:ARG:HB2	2.27	0.41
55:DW:12:ILE:O	55:DW:101:SER:OG	2.28	0.41
58:DZ:23:LYS:HD3	58:DZ:38:TYR:CE1	2.55	0.41
1:AA:1066:C:O2	1:AA:1066:C:H2'	2.20	0.41
1:AA:1155:G:H2'	1:AA:1156:G:O4'	2.21	0.41
1:AA:1309:G:OP1	13:AM:88:ARG:NH2	2.49	0.41
2:AB:180:LEU:O	2:AB:182:ILE:N	2.53	0.41
3:AC:34:LEU:HD12	14:AN:25:VAL:HG11	2.02	0.41
6:AF:55:ASP:C	6:AF:57:GLN:H	2.24	0.41
10:AJ:49:VAL:HG23	14:AN:41:ARG:HD3	2.03	0.41
13:AM:58:GLU:C	13:AM:60:VAL:H	2.23	0.41
14:AN:9:LYS:HE3	14:AN:9:LYS:HB2	1.94	0.41
18:AR:38:GLU:HA	18:AR:41:LYS:HB3	2.02	0.41
20:AT:30:LYS:HA	20:AT:30:LYS:HD2	1.77	0.41
21:AU:12:LYS:N	21:AU:12:LYS:HD2	2.36	0.41
22:AW:18:G:N1	22:AW:55:U:O2'	2.45	0.41
28:B3:3:ARG:HG3	28:B3:59:VAL:O	2.21	0.41
28:B3:17:LYS:HA	28:B3:17:LYS:HD3	1.74	0.41
32:B7:29:LYS:O	32:B7:33:ARG:HB2	2.21	0.41
35:BA:217:G:H2'	35:BA:218:A:C8	2.56	0.41
35:BA:271(U):G:H2'	35:BA:271(V):G:C8	2.56	0.41
35:BA:569:U:H5''	35:BA:821:A:C2	2.56	0.41
35:BA:953:A:H61	35:BA:964:C:H42	1.68	0.41
35:BA:996:A:H4'	53:BU:92:ARG:NE	2.32	0.41
35:BA:1062:G:H1'	45:BK:133:SER:OG	2.20	0.41
35:BA:1129:A:N6	35:BA:2491:U:OP1	2.53	0.41
35:BA:1416:G:C4	35:BA:1417:C:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1529:G:H2'	35:BA:1530:C:H6	1.86	0.41
35:BA:2684:U:H2'	35:BA:2685:G:O4'	2.20	0.41
35:BA:2849:U:N3	35:BA:2867:G:N3	2.69	0.41
38:BD:37:LEU:HD23	38:BD:37:LEU:HA	1.83	0.41
39:BE:59:VAL:CG1	39:BE:63:LEU:HG	2.51	0.41
41:BG:19:LEU:HD23	41:BG:19:LEU:HA	1.90	0.41
43:BI:84:GLY:O	43:BI:85:GLU:HB3	2.20	0.41
45:BK:14:ALA:HB1	45:BK:50:ASP:HA	2.01	0.41
45:BK:18:THR:HA	45:BK:38:VAL:HG12	2.03	0.41
47:BO:48:PRO:HB3	47:BO:49:ARG:HD3	2.02	0.41
48:BP:32:THR:CG2	48:BP:37:GLY:HA2	2.50	0.41
48:BP:125:VAL:HG23	48:BP:125:VAL:O	2.20	0.41
49:BQ:15:GLY:O	49:BQ:16:ARG:HG2	2.20	0.41
52:BT:132:LYS:HE3	52:BT:132:LYS:HB2	1.90	0.41
58:BZ:64:GLY:O	58:BZ:66:SER:N	2.53	0.41
1:CA:80:G:H3'	1:CA:81:U:H5'	2.02	0.41
1:CA:99:U:H2'	1:CA:100:C:C6	2.55	0.41
1:CA:190:U:H2'	1:CA:191:G:C8	2.55	0.41
1:CA:264:U:O2'	17:CQ:64:PRO:O	2.32	0.41
1:CA:392:G:H2'	1:CA:393:A:C8	2.55	0.41
1:CA:741:G:H2'	1:CA:742:G:C8	2.56	0.41
1:CA:1109:C:H2'	1:CA:1110:A:O4'	2.21	0.41
1:CA:1119:C:H2'	1:CA:1120:G:C8	2.56	0.41
1:CA:1171:G:H2'	1:CA:1172:C:C6	2.55	0.41
1:CA:1323:G:H2'	1:CA:1324:A:H8	1.85	0.41
22:CV:73:A:OP1	22:CV:73:A:H4'	2.20	0.41
22:CW:16:U:C6	22:CW:18:G:H5''	2.56	0.41
24:CY:141:THR:HG23	24:CY:151:VAL:HG11	2.01	0.41
32:D7:10:ARG:NH2	35:DA:1378:A:OP1	2.54	0.41
35:DA:287:C:H2'	35:DA:288:C:H6	1.85	0.41
35:DA:489:G:N2	35:DA:1321:A:OP1	2.54	0.41
35:DA:840:C:H2'	35:DA:841:A:H8	1.85	0.41
35:DA:889:C:H1'	35:DA:890:A:O4'	2.19	0.41
35:DA:1151:G:H2'	35:DA:1152:C:H6	1.86	0.41
35:DA:1467:C:H5	35:DA:1546:C:H2'	1.85	0.41
35:DA:1534:U:H3'	35:DA:1535:A:C8	2.56	0.41
35:DA:1636:C:H2'	35:DA:1637:A:C8	2.55	0.41
35:DA:2135:A:H62	35:DA:2136:C:H42	1.69	0.41
35:DA:2455:G:C4	35:DA:2456:C:C5	3.09	0.41
35:DA:2803:C:H2'	35:DA:2804:C:C6	2.56	0.41
40:DF:140:LEU:HD12	40:DF:140:LEU:HA	1.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DG:129:GLY:HA2	41:DG:165:THR:O	2.20	0.41
52:DT:129:ARG:HG3	52:DT:129:ARG:O	2.20	0.41
53:DU:92:ARG:NH1	53:DU:94:ASN:OD1	2.54	0.41
1:AA:610:G:H2'	1:AA:611:A:H8	1.86	0.41
1:AA:833:U:H2'	1:AA:834:C:C6	2.56	0.41
1:AA:881:G:OP2	12:AL:9:GLN:NE2	2.51	0.41
1:AA:1073:U:C2	1:AA:1074:G:C8	3.09	0.41
1:AA:1157:A:C2	1:AA:1181:G:N3	2.89	0.41
1:AA:1246:C:H2'	1:AA:1247:U:C6	2.56	0.41
1:AA:1300:G:HO2'	1:AA:1301:U:P	2.44	0.41
3:AC:40:ARG:O	3:AC:44:GLU:HB2	2.21	0.41
4:AD:100:ARG:HB3	4:AD:102:ASP:OD1	2.20	0.41
7:AG:87:VAL:HG11	7:AG:154:TYR:O	2.20	0.41
9:AI:4:TYR:HE1	9:AI:21:PRO:HD3	1.85	0.41
11:AK:125:PHE:N	11:AK:125:PHE:CD1	2.88	0.41
30:B5:52:TYR:O	30:B5:53:ALA:C	2.58	0.41
35:BA:811:U:H3	35:BA:1250:G:P	2.44	0.41
35:BA:852:G:C6	35:BA:926:A:C6	3.09	0.41
35:BA:1374:G:H2'	35:BA:1375:C:H6	1.84	0.41
35:BA:1448:G:H2'	35:BA:1449:A:C8	2.56	0.41
35:BA:1564:C:O2'	35:BA:1565:C:H5'	2.21	0.41
35:BA:1791:A:H3'	35:BA:1792:G:H8	1.86	0.41
35:BA:1902:C:H5'	38:BD:246:PRO:HD3	2.03	0.41
35:BA:2655:G:N3	35:BA:2655:G:H2'	2.35	0.41
39:BE:64:LYS:C	39:BE:66:HIS:N	2.67	0.41
41:BG:16:ARG:HH11	41:BG:16:ARG:HG3	1.86	0.41
41:BG:111:LEU:HD22	41:BG:120:LEU:HD21	2.03	0.41
45:BK:2:LYS:HB3	45:BK:3:LYS:H	1.60	0.41
48:BP:92:GLU:HG3	48:BP:93:GLY:N	2.35	0.41
50:BR:29:LEU:HB3	50:BR:75:LEU:HD21	2.02	0.41
52:BT:53:ARG:HB2	52:BT:53:ARG:NH1	2.35	0.41
53:BU:8:VAL:HG23	53:BU:11:ARG:NH2	2.34	0.41
54:BV:6:LYS:HB2	54:BV:39:LEU:HD21	2.03	0.41
1:CA:109:A:C6	1:CA:327:A:C6	3.09	0.41
1:CA:255:G:H1'	17:CQ:16:GLN:OE1	2.21	0.41
1:CA:298:A:H2'	1:CA:299:G:C8	2.56	0.41
1:CA:591:U:H2'	1:CA:592:G:H8	1.86	0.41
1:CA:1005:A:H3'	1:CA:1006:C:C6	2.56	0.41
1:CA:1060:C:N3	1:CA:1198:G:N1	2.69	0.41
1:CA:1181:G:H2'	1:CA:1182:G:C4	2.56	0.41
2:CB:178:ARG:HH21	8:CH:68:ARG:HH22	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:91:LEU:C	3:CC:93:LYS:H	2.24	0.41
4:CD:127:THR:HA	4:CD:132:ARG:HA	2.03	0.41
8:CH:31:PHE:O	8:CH:35:ILE:HG12	2.21	0.41
9:CI:78:LYS:HG2	9:CI:78:LYS:O	2.21	0.41
9:CI:122:ALA:HB1	9:CI:123:PRO:HD2	2.01	0.41
13:CM:116:THR:O	13:CM:116:THR:HG22	2.21	0.41
18:CR:66:LEU:HG	18:CR:70:ILE:HD11	2.03	0.41
24:CY:228:ARG:NH1	24:CY:230:ASP:OD2	2.54	0.41
26:D1:94:LEU:O	26:D1:96:LYS:N	2.54	0.41
26:D1:95:LEU:HD22	26:D1:95:LEU:HA	1.94	0.41
32:D7:34:ARG:HG2	32:D7:39:ARG:HG3	2.03	0.41
35:DA:7:G:H5'	46:DN:130:HIS:CE1	2.56	0.41
35:DA:71:A:H5'	35:DA:71:A:C8	2.55	0.41
35:DA:106:C:O2'	57:DY:2:ARG:NH2	2.54	0.41
35:DA:143:G:H1'	56:DX:37:THR:CG2	2.47	0.41
35:DA:755:C:H2'	35:DA:756:C:H6	1.85	0.41
35:DA:884:C:H42	35:DA:892:G:H1	1.69	0.41
35:DA:1528:A:H2'	35:DA:1528(A):A:O4'	2.20	0.41
35:DA:2110:G:N1	35:DA:2120:G:C8	2.89	0.41
35:DA:2112:G:H8	35:DA:2112:G:OP1	2.03	0.41
35:DA:2312:U:H2'	35:DA:2313:C:H5'	2.01	0.41
35:DA:2688:U:C5	35:DA:2720:U:OP2	2.73	0.41
36:DB:45:A:H1'	41:DG:95:ARG:HH22	1.85	0.41
36:DB:90:A:N7	36:DB:91:C:H1'	2.35	0.41
41:DG:113:ARG:O	41:DG:140:ILE:HG13	2.21	0.41
46:DN:57:ALA:O	46:DN:58:ASP:C	2.59	0.41
50:DR:103:ARG:HD3	55:DW:40:ASN:ND2	2.35	0.41
53:DU:78:THR:O	53:DU:81:HIS:N	2.53	0.41
1:AA:93:G:C6	1:AA:96:U:C4	3.09	0.41
1:AA:266:G:O2'	1:AA:267:C:P	2.79	0.41
1:AA:514:C:C2	1:AA:515:G:C8	3.09	0.41
1:AA:610:G:C4	1:AA:611:A:C8	3.08	0.41
1:AA:921:U:H5''	1:AA:1082:G:H5'	2.01	0.41
1:AA:997:U:H2'	1:AA:998:G:O4'	2.21	0.41
1:AA:1007:C:H2'	1:AA:1008:C:C6	2.55	0.41
1:AA:1011:G:H2'	1:AA:1012:U:C6	2.56	0.41
1:AA:1100:C:OP2	2:AB:96:ARG:HG2	2.21	0.41
1:AA:1179:A:H8	1:AA:1179:A:O5'	2.04	0.41
1:AA:1250:A:C2	1:AA:1370:G:H1'	2.53	0.41
1:AA:1288:A:H2'	1:AA:1289:A:C8	2.56	0.41
1:AA:1371:G:OP2	9:AI:11:LYS:HD2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:22:LYS:H	2:AB:40:HIS:HE1	1.67	0.41
2:AB:50:GLU:OE1	2:AB:202:PRO:HD3	2.21	0.41
2:AB:85:ALA:HB1	2:AB:92:TYR:CD2	2.56	0.41
3:AC:30:ARG:HB2	14:AN:36:PHE:O	2.21	0.41
4:AD:13:ARG:HA	4:AD:33:MET:CE	2.51	0.41
4:AD:61:LYS:HE2	4:AD:61:LYS:HB3	1.92	0.41
8:AH:125:ARG:HE	8:AH:125:ARG:HB2	1.67	0.41
10:AJ:48:THR:HA	10:AJ:62:HIS:CB	2.50	0.41
12:AL:91:LYS:O	12:AL:92:ASP:HB2	2.20	0.41
15:AO:88:ARG:HD3	15:AO:88:ARG:HA	1.89	0.41
22:AW:52:G:N3	22:AW:63:G:O6	2.54	0.41
24:AY:27:LYS:HE3	24:AY:31:ARG:NH1	2.36	0.41
24:AY:303:ARG:N	24:AY:304:PRO:CD	2.84	0.41
24:AY:304:PRO:C	24:AY:306:GLU:H	2.24	0.41
25:B0:14:ARG:NH1	35:BA:2279:G:O6	2.51	0.41
25:B0:48:GLY:HA3	25:B0:80:HIS:ND1	2.36	0.41
26:B1:12:PRO:HG3	35:BA:1365:A:H5'	2.02	0.41
29:B4:14:ILE:HD11	29:B4:24:THR:OG1	2.20	0.41
29:B4:30:GLU:O	29:B4:31:ILE:HD13	2.21	0.41
31:B6:19:ARG:HG3	31:B6:20:ASN:H	1.86	0.41
33:B8:48:PHE:C	33:B8:49:VAL:HG22	2.42	0.41
34:B9:30:PRO:O	34:B9:32:HIS:N	2.54	0.41
35:BA:155:U:H3	35:BA:156:U:H3	1.69	0.41
35:BA:452:G:C4	35:BA:458:G:C6	3.08	0.41
35:BA:637:A:O5'	48:BP:116:GLY:HA2	2.20	0.41
35:BA:860:U:H5	35:BA:917:A:H62	1.68	0.41
35:BA:889:C:O2'	35:BA:890:A:O5'	2.33	0.41
35:BA:894:C:O2'	35:BA:895:U:H5'	2.20	0.41
35:BA:943:U:OP1	48:BP:38:GLN:HB3	2.21	0.41
35:BA:957:A:N6	35:BA:959:A:C2	2.89	0.41
35:BA:1067:A:H2'	35:BA:1068:G:H5'	2.02	0.41
35:BA:1208:C:C2	35:BA:1239:G:N2	2.89	0.41
35:BA:1494:A:C2'	35:BA:1495:A:H5''	2.51	0.41
35:BA:2335:A:O2'	35:BA:2336:A:H5''	2.21	0.41
35:BA:2649:U:H2'	35:BA:2650:U:H6	1.85	0.41
35:BA:2660:A:C4	35:BA:2661:G:H4'	2.55	0.41
35:BA:2693:A:H2'	35:BA:2694:G:C8	2.56	0.41
37:BC:172:ILE:HD12	37:BC:172:ILE:HA	1.96	0.41
38:BD:95:LEU:HD13	38:BD:97:TYR:CE1	2.56	0.41
39:BE:34:VAL:CG1	39:BE:48:GLN:HG2	2.50	0.41
40:BF:21:ALA:C	40:BF:23:ASP:N	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:53:THR:HG23	40:BF:55:GLY:N	2.21	0.41
41:BG:109:VAL:CG1	41:BG:142:PRO:HD3	2.50	0.41
42:BH:41:MET:HE2	42:BH:43:VAL:HG13	2.03	0.41
43:BI:40:THR:C	43:BI:42:SER:H	2.24	0.41
45:BK:20:ALA:HA	45:BK:24:GLY:HA3	2.03	0.41
45:BK:59:ILE:N	45:BK:59:ILE:HD12	2.36	0.41
46:BN:43:THR:H	46:BN:48:MET:CE	2.34	0.41
48:BP:108:LYS:O	48:BP:110:TYR:N	2.54	0.41
50:BR:9:LYS:HE3	50:BR:9:LYS:HB2	1.71	0.41
52:BT:54:ARG:HA	52:BT:59:THR:HB	2.02	0.41
52:BT:126:ALA:C	52:BT:128:GLU:H	2.23	0.41
54:BV:13:ARG:HG3	54:BV:13:ARG:HH11	1.86	0.41
56:BX:65:ARG:O	56:BX:66:LEU:HB2	2.21	0.41
57:BY:52:SER:O	57:BY:53:PRO:C	2.59	0.41
57:BY:88:LYS:NZ	57:BY:93:GLY:HA3	2.35	0.41
1:CA:79:G:H22	1:CA:80:G:N2	2.19	0.41
1:CA:133:U:OP1	20:CT:74:LYS:NZ	2.39	0.41
1:CA:457:C:H2'	1:CA:458:C:C6	2.55	0.41
1:CA:472:A:O2'	16:CP:81:ARG:HA	2.21	0.41
1:CA:473:G:H2'	1:CA:474:G:H8	1.85	0.41
1:CA:562:C:N3	12:CL:16:GLU:HB3	2.36	0.41
1:CA:591:U:OP2	8:CH:30:ARG:NH1	2.53	0.41
1:CA:980:C:O2	14:CN:19:ARG:HA	2.21	0.41
1:CA:1014:A:H2	1:CA:1219:U:H1'	1.85	0.41
1:CA:1180:A:H5'	9:CI:103:THR:HG23	2.03	0.41
1:CA:1350:A:H2'	1:CA:1351:U:O4'	2.21	0.41
1:CA:1505:G:H5''	1:CA:1506:U:OP1	2.20	0.41
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	2.03	0.41
4:CD:64:LEU:O	4:CD:67:ILE:HB	2.21	0.41
8:CH:14:ARG:O	8:CH:18:ARG:HD3	2.21	0.41
9:CI:53:VAL:O	9:CI:54:ASP:HB2	2.21	0.41
11:CK:78:GLN:O	11:CK:103:LEU:HD13	2.21	0.41
16:CP:45:THR:HG23	16:CP:46:PRO:HD2	2.02	0.41
19:CS:22:LEU:HB3	19:CS:47:HIS:HE2	1.86	0.41
19:CS:51:VAL:O	19:CS:57:HIS:HA	2.21	0.41
21:CU:17:THR:O	21:CU:22:ARG:NH1	2.53	0.41
22:CV:25:C:C2	22:CV:26:A:C8	3.08	0.41
23:CX:21:A:C2	24:CY:201:ARG:HD3	2.56	0.41
24:CY:8:GLN:HA	24:CY:11:GLU:OE1	2.21	0.41
24:CY:114:LYS:HE3	24:CY:214:VAL:HA	2.03	0.41
24:CY:270:LYS:CD	25:D0:5:LYS:HD3	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D6:27:LYS:HD2	35:DA:2285:C:OP2	2.20	0.41
35:DA:25:U:H5''	55:DW:80:PRO:HD3	2.03	0.41
35:DA:363(C):G:H2'	35:DA:363(D):G:H8	1.85	0.41
35:DA:564:C:OP1	54:DV:77:ALA:HB2	2.21	0.41
35:DA:572:A:H2'	35:DA:573:G:O4'	2.20	0.41
35:DA:654(D):G:N2	35:DA:654(P):C:H42	2.17	0.41
35:DA:733:G:C8	35:DA:761:A:N6	2.89	0.41
35:DA:772:C:O2'	35:DA:773:U:H5'	2.21	0.41
35:DA:852:G:H2'	35:DA:853:G:C8	2.56	0.41
35:DA:1039:G:H2'	35:DA:1040:C:C6	2.55	0.41
35:DA:1071:G:H1'	35:DA:1089:G:C8	2.56	0.41
35:DA:1280:G:C2'	35:DA:1281:G:H5''	2.51	0.41
35:DA:1323:U:OP1	55:DW:98:LYS:NZ	2.54	0.41
35:DA:2531:A:H2'	35:DA:2532:G:H8	1.85	0.41
35:DA:2607:G:H2'	35:DA:2608:G:O4'	2.21	0.41
35:DA:2635:C:H4'	39:DE:78:LEU:CD1	2.51	0.41
35:DA:2687:U:H2'	35:DA:2688:U:O4'	2.21	0.41
35:DA:2704:C:H2'	35:DA:2705:A:O4'	2.21	0.41
35:DA:2726:U:O2'	35:DA:2727:G:H8	2.04	0.41
35:DA:2789:C:N3	35:DA:2894:G:O6	2.53	0.41
38:DD:53:PHE:CA	38:DD:218:ARG:HB2	2.51	0.41
38:DD:72:LYS:HZ3	38:DD:72:LYS:HB3	1.85	0.41
38:DD:115:GLN:HG2	38:DD:116:GLN:N	2.36	0.41
39:DE:110:GLY:CA	39:DE:162:ALA:HB2	2.51	0.41
40:DF:18:ARG:CZ	40:DF:199:TRP:CZ3	3.04	0.41
40:DF:164:ARG:HG2	40:DF:164:ARG:NH1	2.31	0.41
41:DG:10:LYS:HG3	41:DG:14:GLU:OE2	2.21	0.41
41:DG:113:ARG:CA	41:DG:113:ARG:HE	2.34	0.41
41:DG:125:PHE:CE1	41:DG:180:PHE:CE2	3.09	0.41
43:DI:29:TYR:HD2	43:DI:30:LEU:HD23	1.86	0.41
43:DI:57:ARG:HG2	43:DI:61:ARG:NH1	2.30	0.41
43:DI:129:THR:HG22	43:DI:130:TYR:N	2.36	0.41
48:DP:56:SER:O	48:DP:57:THR:OG1	2.38	0.41
49:DQ:63:LYS:HD3	49:DQ:65:PHE:CZ	2.55	0.41
49:DQ:136:ALA:C	49:DQ:138:ASP:H	2.24	0.41
50:DR:46:GLY:HA2	50:DR:49:ASP:HB2	2.01	0.41
50:DR:79:LEU:HD22	50:DR:83:ILE:HB	2.02	0.41
51:DS:28:VAL:O	51:DS:89:ARG:HD2	2.21	0.41
52:DT:107:ASP:H	52:DT:110:ILE:HG12	1.85	0.41
53:DU:95:LEU:HD13	54:DV:4:ILE:CG2	2.51	0.41
54:DV:21:ARG:HG2	54:DV:91:TYR:CG	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DW:99:ARG:HH11	55:DW:99:ARG:HG2	1.86	0.41
57:DY:34:LYS:HB3	57:DY:34:LYS:HE2	1.84	0.41
1:AA:171:A:H2'	1:AA:172:A:C8	2.56	0.41
1:AA:276:G:O2'	17:AQ:68:ARG:NH1	2.54	0.41
1:AA:372:C:H42	1:AA:389:A:N6	2.14	0.41
1:AA:408:A:H2'	1:AA:409:G:H8	1.85	0.41
1:AA:1084:G:C5	1:AA:1085:U:C4	3.09	0.41
1:AA:1127:G:H1'	1:AA:1148:U:N3	2.36	0.41
1:AA:1184:G:H2'	1:AA:1185:G:H8	1.86	0.41
1:AA:1417:G:C6	1:AA:1482:G:C6	3.08	0.41
4:AD:13:ARG:HA	4:AD:33:MET:HE1	2.03	0.41
10:AJ:38:ILE:HG12	10:AJ:71:LEU:O	2.21	0.41
10:AJ:90:LEU:N	10:AJ:91:PRO:HD3	2.35	0.41
12:AL:60:LEU:C	12:AL:62:SER:H	2.24	0.41
13:AM:2:ALA:N	13:AM:9:ILE:HG23	2.35	0.41
22:AW:50:U:O2'	22:AW:65:G:N1	2.48	0.41
27:B2:12:GLU:OE2	27:B2:16:LEU:HD21	2.21	0.41
28:B3:1:MET:O	28:B3:2:PRO:C	2.59	0.41
35:BA:130:C:OP1	35:BA:1348:G:N2	2.46	0.41
35:BA:586:A:H5'	40:BF:89:VAL:HG21	2.03	0.41
35:BA:654(P):C:H2'	35:BA:654(Q):C:C6	2.56	0.41
35:BA:729:G:O2'	35:BA:763:G:H4'	2.21	0.41
35:BA:779:U:H2'	35:BA:780:G:O4'	2.21	0.41
35:BA:896:A:H5''	58:BZ:147:GLY:HA3	2.02	0.41
35:BA:975(A):G:H1'	35:BA:990:A:C2	2.56	0.41
35:BA:1050:A:C6	35:BA:1051:G:C6	3.09	0.41
35:BA:1075:C:OP1	49:BQ:59:ARG:NH1	2.54	0.41
35:BA:1175:U:H1'	35:BA:1177:A:C2	2.56	0.41
35:BA:1628:G:H2'	35:BA:1629:U:C6	2.56	0.41
35:BA:1647:G:OP2	35:BA:1647:G:H3'	2.21	0.41
35:BA:1769:G:C6	35:BA:1984:G:C6	3.09	0.41
35:BA:1801:G:OP2	38:BD:154:LYS:HE2	2.21	0.41
35:BA:2037:G:H2'	35:BA:2038:G:H8	1.81	0.41
35:BA:2846:G:OP2	52:BT:54:ARG:HB2	2.20	0.41
37:BC:14:LYS:O	37:BC:29:LEU:HD21	2.21	0.41
37:BC:23:ILE:HG21	37:BC:191:ARG:HH12	1.85	0.41
37:BC:225:ILE:HD12	37:BC:225:ILE:O	2.20	0.41
39:BE:132:HIS:CD2	39:BE:135:HIS:NE2	2.89	0.41
41:BG:38:VAL:CG2	41:BG:93:THR:HG23	2.51	0.41
41:BG:173:LEU:HD23	41:BG:173:LEU:HA	1.87	0.41
42:BH:41:MET:CG	42:BH:42:ARG:N	2.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BI:108:THR:C	43:BI:109:ILE:HD12	2.41	0.41
46:BN:34:LEU:O	46:BN:49:GLY:HA3	2.21	0.41
47:BO:43:VAL:HG21	47:BO:52:VAL:CG1	2.51	0.41
48:BP:126:VAL:HG12	48:BP:148:LEU:HD11	2.02	0.41
55:BW:11:ARG:HG3	55:BW:11:ARG:O	2.21	0.41
1:CA:12:U:H2'	1:CA:13:U:H5''	2.02	0.41
1:CA:15:G:H2'	1:CA:16:A:C8	2.56	0.41
1:CA:376:G:H2'	1:CA:377:G:H8	1.86	0.41
1:CA:887:G:H2'	1:CA:888:G:O4'	2.21	0.41
1:CA:954:G:H21	1:CA:1227:A:N6	2.19	0.41
1:CA:1022:G:H2'	1:CA:1023:G:H8	1.86	0.41
1:CA:1027:C:O5'	1:CA:1027:C:H6	2.04	0.41
1:CA:1028:C:N4	1:CA:1034:G:H21	2.19	0.41
1:CA:1522:U:C2	1:CA:1523:G:C8	3.09	0.41
7:CG:15:ASP:OD1	7:CG:16:LEU:N	2.53	0.41
9:CI:56:LEU:HD23	9:CI:56:LEU:O	2.21	0.41
22:CW:16:U:C4	22:CW:18:G:H2'	2.56	0.41
24:CY:98:LEU:HD23	24:CY:98:LEU:O	2.21	0.41
24:CY:107:LEU:O	24:CY:107:LEU:HD23	2.21	0.41
24:CY:122:PRO:HG3	24:CY:164:ILE:O	2.21	0.41
35:DA:654(J):A:O2'	35:DA:654(K):C:OP1	2.34	0.41
35:DA:816:C:H2'	35:DA:817:C:H6	1.86	0.41
35:DA:1097:U:C2	45:DK:30:HIS:CE1	3.09	0.41
35:DA:1494:A:H3'	35:DA:1494:A:N3	2.36	0.41
35:DA:1510:G:H2'	35:DA:1511:C:H6	1.85	0.41
35:DA:2141:G:H2'	35:DA:2142:C:H6	1.84	0.41
35:DA:2722:G:H2'	35:DA:2723:C:H6	1.85	0.41
35:DA:2815:C:H2'	35:DA:2816:C:H6	1.85	0.41
37:DC:54:ARG:HD3	37:DC:54:ARG:HA	1.89	0.41
38:DD:210:GLY:C	38:DD:212:SER:N	2.74	0.41
40:DF:163:VAL:O	40:DF:166:ALA:HB3	2.21	0.41
45:DK:98:ARG:NH2	45:DK:139:VAL:HG22	2.35	0.41
45:DK:111:LYS:HB3	45:DK:115:LEU:HD11	2.03	0.41
46:DN:16:ILE:HG23	46:DN:54:VAL:HG22	2.03	0.41
49:DQ:133:ARG:HB3	49:DQ:134:ARG:H	1.73	0.41
49:DQ:134:ARG:NH2	58:DZ:122:ARG:NH1	2.69	0.41
51:DS:14:VAL:HG12	51:DS:16:ASN:H	1.86	0.41
57:DY:59:GLY:O	57:DY:60:PHE:HD1	2.04	0.41
58:DZ:119:GLU:O	58:DZ:120:ILE:C	2.60	0.41
1:AA:438:G:N1	1:AA:495:A:OP2	2.49	0.40
1:AA:509:A:H5''	4:AD:55:ALA:HB2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:828:A:H62	1:AA:858:G:H21	1.68	0.40
1:AA:936:C:H2'	1:AA:937:A:O4'	2.20	0.40
2:AB:16:HIS:HB3	2:AB:210:SER:CA	2.51	0.40
3:AC:152:ILE:O	3:AC:198:VAL:HA	2.21	0.40
4:AD:60:GLU:HG2	4:AD:202:LEU:HD12	2.03	0.40
6:AF:8:ILE:HG22	6:AF:9:VAL:N	2.35	0.40
9:AI:8:GLY:O	9:AI:14:VAL:HA	2.21	0.40
12:AL:115:LYS:HB3	12:AL:116:SER:H	1.69	0.40
20:AT:87:LYS:O	20:AT:91:LEU:HG	2.21	0.40
22:AW:18:G:H1'	22:AW:58:A:C2	2.56	0.40
22:AW:23:A:H2'	22:AW:24:G:H8	1.86	0.40
25:B0:25:ARG:HD2	25:B0:29:GLN:NE2	2.36	0.40
27:B2:32:LEU:HD22	27:B2:36:ARG:HH11	1.86	0.40
35:BA:212:G:H2'	35:BA:213:A:C8	2.56	0.40
35:BA:518:G:H4'	55:BW:18:ARG:NH1	2.36	0.40
35:BA:570:G:H2'	35:BA:2030:A:C5	2.55	0.40
35:BA:654(U):A:N7	35:BA:654(V):A:C6	2.89	0.40
35:BA:958:U:H5''	49:BQ:14:ARG:CD	2.50	0.40
35:BA:1061:U:H4'	35:BA:1070:A:O3'	2.21	0.40
35:BA:1348:G:N1	35:BA:1599:C:C4	2.89	0.40
35:BA:1482:G:N2	35:BA:1507:A:H1'	2.36	0.40
35:BA:2343:C:HO2'	35:BA:2373:G:HO2'	1.59	0.40
35:BA:2877:G:H2'	35:BA:2878:U:O4'	2.21	0.40
38:BD:11:PRO:C	38:BD:13:ARG:N	2.73	0.40
48:BP:38:GLN:HG3	48:BP:39:LYS:N	2.24	0.40
48:BP:40:SER:C	48:BP:41:ARG:HE	2.23	0.40
48:BP:108:LYS:HD2	48:BP:108:LYS:N	2.36	0.40
56:BX:39:ILE:HG12	56:BX:39:ILE:H	1.69	0.40
57:BY:13:VAL:HG13	57:BY:14:LEU:N	2.35	0.40
57:BY:95:LYS:HG2	57:BY:96:ILE:N	2.35	0.40
58:BZ:57:ILE:N	58:BZ:57:ILE:HD12	2.36	0.40
1:CA:172:A:OP2	1:CA:172:A:H8	2.04	0.40
1:CA:310:G:H2'	1:CA:311:C:C6	2.55	0.40
1:CA:559:A:H4'	1:CA:560:U:C5'	2.51	0.40
1:CA:825:G:H1'	8:CH:2:LEU:HD21	2.03	0.40
1:CA:1152:A:H2'	1:CA:1153:C:H6	1.86	0.40
1:CA:1298:C:N4	7:CG:114:ARG:HB3	2.37	0.40
12:CL:119:LYS:O	12:CL:120:TYR:HB2	2.22	0.40
24:CY:16:TYR:HD1	24:CY:16:TYR:O	2.03	0.40
24:CY:129:ALA:HA	24:CY:204:SER:HB3	2.02	0.40
28:D3:8:LEU:HD13	28:D3:31:LEU:HA	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:118:A:OP2	35:DA:119:A:H2'	2.21	0.40
35:DA:157:U:H6	35:DA:157:U:H2'	1.67	0.40
35:DA:272(J):C:C4	35:DA:274:G:C8	3.09	0.40
35:DA:528:A:O2'	35:DA:529:A:H5'	2.21	0.40
35:DA:836:G:H2'	35:DA:837:C:C6	2.56	0.40
35:DA:960:A:C8	35:DA:962:G:C8	3.08	0.40
35:DA:1050:A:C2	35:DA:2751:G:C4	3.10	0.40
35:DA:1056:G:N2	35:DA:1102:C:P	2.94	0.40
35:DA:1602:U:H3'	35:DA:1603:A:H5'	2.02	0.40
35:DA:2111:C:C4	35:DA:2145:C:H2'	2.56	0.40
35:DA:2179:C:H4'	35:DA:2179:C:OP1	2.22	0.40
35:DA:2472:G:C5'	35:DA:2473:U:H5''	2.49	0.40
38:DD:48:ARG:HG3	38:DD:48:ARG:NH1	2.37	0.40
39:DE:9:VAL:HG22	39:DE:25:VAL:O	2.21	0.40
39:DE:132:HIS:CD2	39:DE:135:HIS:CE1	3.09	0.40
40:DF:199:TRP:O	40:DF:203:GLN:HG2	2.21	0.40
42:DH:89:ILE:HD11	42:DH:95:ARG:CA	2.45	0.40
43:DI:109:ILE:HG13	43:DI:130:TYR:CZ	2.56	0.40
45:DK:35:MET:SD	45:DK:35:MET:N	2.90	0.40
45:DK:59:ILE:N	45:DK:59:ILE:HD12	2.36	0.40
45:DK:72:PRO:HA	45:DK:73:PRO:HD3	1.95	0.40
45:DK:117:THR:HG21	45:DK:122:ALA:HB1	2.04	0.40
48:DP:83:VAL:HG13	48:DP:114:ILE:HA	2.02	0.40
53:DU:91:ASP:O	53:DU:95:LEU:HB2	2.21	0.40
56:DX:12:VAL:HG23	56:DX:13:LEU:N	2.33	0.40
58:DZ:99:TYR:CZ	58:DZ:125:LEU:HD12	2.56	0.40
1:AA:97:G:O2'	1:AA:98:G:H5''	2.21	0.40
1:AA:170:U:O2'	1:AA:171:A:H5'	2.20	0.40
1:AA:272:C:C2	1:AA:273:A:C8	3.10	0.40
1:AA:942:G:N2	9:AI:124:GLN:OE1	2.29	0.40
1:AA:1106:G:OP1	3:AC:172:ARG:HD3	2.21	0.40
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.21	0.40
1:AA:1158:C:C4	1:AA:1160:G:C5	3.10	0.40
1:AA:1228:C:O2'	13:AM:118:ALA:HB2	2.21	0.40
1:AA:1298:C:P	7:AG:114:ARG:HH12	2.45	0.40
2:AB:112:VAL:C	2:AB:114:ARG:N	2.70	0.40
19:AS:46:GLY:N	19:AS:62:ILE:HG23	2.36	0.40
26:B1:84:GLY:O	26:B1:86:SER:N	2.54	0.40
26:B1:92:LYS:HG3	26:B1:93:GLU:N	2.36	0.40
31:B6:11:LEU:HD12	31:B6:11:LEU:C	2.42	0.40
32:B7:5:TRP:CZ3	35:BA:464:U:H4'	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B9:24:TYR:CE2	34:B9:35:ARG:HG3	2.55	0.40
35:BA:141:A:H8	35:BA:1408:C:O2'	2.03	0.40
35:BA:654(R):C:H2'	35:BA:654(S):G:C8	2.56	0.40
35:BA:671:C:H2'	35:BA:672:C:H6	1.86	0.40
35:BA:1485:G:N3	35:BA:1505:C:N4	2.69	0.40
35:BA:1779:U:C5	35:BA:1784:A:N7	2.84	0.40
35:BA:1876:A:OP2	35:BA:1876:A:H8	2.04	0.40
35:BA:2092:U:H4'	35:BA:2093:G:C5'	2.51	0.40
35:BA:2342:C:O2'	35:BA:2374:C:H5''	2.21	0.40
35:BA:2531:A:H2'	35:BA:2532:G:H8	1.87	0.40
38:BD:51:VAL:HG12	38:BD:54:ARG:HG2	2.03	0.40
39:BE:69:LYS:C	39:BE:71:GLY:H	2.25	0.40
42:BH:49:VAL:HG23	42:BH:50:VAL:N	2.36	0.40
45:BK:76:TYR:O	45:BK:79:ARG:N	2.51	0.40
48:BP:143:GLY:O	48:BP:144:GLU:HB2	2.21	0.40
51:BS:18:ILE:C	51:BS:20:ARG:H	2.24	0.40
52:BT:35:LYS:HZ3	52:BT:41:ARG:HH21	1.70	0.40
53:BU:81:HIS:CE1	53:BU:85:LYS:HD2	2.57	0.40
57:BY:45:VAL:CG1	57:BY:60:PHE:HD2	2.34	0.40
1:CA:35:G:N2	12:CL:118:SER:HG	2.17	0.40
1:CA:92:C:C2	1:CA:93:G:C8	3.09	0.40
1:CA:106:C:H2'	1:CA:107:G:H8	1.85	0.40
1:CA:225:C:C2	1:CA:226:G:C8	3.10	0.40
1:CA:1137:C:H4'	1:CA:1138:G:C2	2.56	0.40
1:CA:1425:U:H2'	1:CA:1426:C:C6	2.56	0.40
2:CB:72:GLY:HA2	2:CB:165:VAL:HG22	2.03	0.40
2:CB:112:VAL:O	2:CB:116:GLU:HG2	2.21	0.40
7:CG:145:ALA:O	7:CG:146:GLU:HB3	2.21	0.40
10:CJ:16:LEU:HD23	10:CJ:94:VAL:HG11	2.04	0.40
12:CL:85:ILE:HD12	12:CL:85:ILE:HA	1.86	0.40
24:CY:246:ASP:H	35:DA:2493:U:H5''	1.85	0.40
24:CY:295:LEU:CD1	24:CY:299:ARG:HH21	2.34	0.40
24:CY:306:GLU:HG3	24:CY:307:TRP:H	1.85	0.40
31:D6:17:LYS:HB2	31:D6:18:ARG:HH12	1.86	0.40
35:DA:435:C:H2'	35:DA:436:C:H5'	2.04	0.40
35:DA:790:C:H6	35:DA:790:C:H2'	1.62	0.40
35:DA:1048:A:N6	35:DA:1052:C:H42	1.93	0.40
35:DA:1683:C:C2	35:DA:1684:C:C5	3.09	0.40
35:DA:2114:A:H2'	35:DA:2115:G:O4'	2.22	0.40
35:DA:2455:G:H2'	35:DA:2456:C:H6	1.86	0.40
35:DA:2468:G:H22	35:DA:2481:G:H2'	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DB:30:C:C4	36:DB:31:C:C6	3.10	0.40
37:DC:52:PRO:O	37:DC:54:ARG:N	2.55	0.40
38:DD:145:VAL:HG22	38:DD:191:ALA:HB1	2.02	0.40
39:DE:109:LYS:HB2	50:DR:2:ARG:HH21	1.85	0.40
41:DG:16:ARG:N	41:DG:17:PRO:HD2	2.36	0.40
42:DH:127:GLU:HB3	42:DH:128:PRO:HD2	2.03	0.40
43:DI:15:VAL:O	43:DI:17:GLN:N	2.54	0.40
45:DK:19:PRO:HB2	45:DK:21:PRO:HD2	2.03	0.40
45:DK:53:VAL:HG23	45:DK:53:VAL:O	2.21	0.40
47:DO:3:GLN:HB2	47:DO:4:PRO:HD2	2.04	0.40
54:DV:69:LYS:HA	54:DV:87:HIS:O	2.21	0.40
58:DZ:153:SER:H	58:DZ:167:PRO:CB	2.30	0.40
1:AA:324:G:N2	1:AA:326:G:H3'	2.35	0.40
1:AA:332:G:C2	1:AA:333:G:C8	3.10	0.40
1:AA:784:C:H2'	1:AA:785:G:H8	1.87	0.40
1:AA:820:U:H4'	1:AA:821:G:OP2	2.21	0.40
1:AA:984:C:H2'	1:AA:985:C:C6	2.56	0.40
1:AA:1502:A:H2	1:AA:1505:G:H22	1.64	0.40
2:AB:138:LEU:O	2:AB:141:GLU:HB3	2.21	0.40
2:AB:164:VAL:HG12	2:AB:165:VAL:N	2.36	0.40
2:AB:220:ASP:C	2:AB:222:ILE:N	2.74	0.40
4:AD:88:VAL:HG13	5:AE:97:GLY:CA	2.51	0.40
4:AD:126:ILE:HG22	4:AD:127:THR:H	1.87	0.40
9:AI:97:LYS:HA	9:AI:102:LEU:HD13	2.02	0.40
11:AK:48:ILE:HD11	11:AK:64:ALA:HA	2.03	0.40
12:AL:25:PRO:C	12:AL:27:LEU:N	2.73	0.40
22:AW:16:U:C5	22:AW:18:G:H2'	2.55	0.40
25:B0:51:VAL:N	25:B0:62:LEU:HD12	2.37	0.40
30:B5:3:LYS:HB2	35:BA:747:U:C5	2.57	0.40
31:B6:11:LEU:O	31:B6:23:THR:HA	2.22	0.40
31:B6:39:TYR:CG	31:B6:40:CYS:N	2.90	0.40
33:B8:52:LYS:N	33:B8:53:PRO:CD	2.83	0.40
35:BA:181:A:H2'	35:BA:182:A:C8	2.57	0.40
35:BA:272(E):G:C6	35:BA:364:C:N4	2.89	0.40
35:BA:272(I):U:C5	35:BA:363(A):A:N1	2.89	0.40
35:BA:272(J):C:H6	35:BA:272(J):C:H5''	1.87	0.40
35:BA:443:A:OP1	40:BF:46:ARG:HB2	2.21	0.40
35:BA:532:A:H4'	35:BA:533:G:C8	2.57	0.40
35:BA:573:G:N1	35:BA:2031:A:OP2	2.34	0.40
35:BA:857:C:O2'	35:BA:858:U:H5'	2.22	0.40
35:BA:1601:G:OP2	56:BX:58:HIS:HD2	2.05	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1635:G:H2'	35:BA:1636:C:C6	2.56	0.40
37:BC:46:ALA:O	37:BC:172:ILE:HG22	2.21	0.40
37:BC:49:GLY:HA2	37:BC:211:ARG:NH2	2.37	0.40
39:BE:87:GLU:C	39:BE:89:ASP:H	2.25	0.40
41:BG:64:THR:OG1	41:BG:94:LEU:HD21	2.21	0.40
41:BG:141:PHE:HA	41:BG:142:PRO:HD2	1.92	0.40
42:BH:89:ILE:HB	42:BH:162:ILE:HD13	2.04	0.40
52:BT:76:PHE:HA	52:BT:77:PRO:HD3	1.94	0.40
58:BZ:98:MET:O	58:BZ:98:MET:HG3	2.21	0.40
1:CA:1074:G:O2'	1:CA:1101:A:N1	2.44	0.40
1:CA:1104:G:H4'	2:CB:111:ARG:NH1	2.36	0.40
2:CB:119:GLU:O	2:CB:122:PHE:N	2.53	0.40
5:CE:57:LYS:O	5:CE:61:TYR:HD2	2.04	0.40
8:CH:101:PRO:HG2	8:CH:133:LEU:HD11	2.02	0.40
10:CJ:75:ILE:HG13	10:CJ:76:ASN:H	1.85	0.40
19:CS:29:ARG:HD2	19:CS:30:LEU:H	1.87	0.40
24:CY:60:ASP:CG	24:CY:61:THR:N	2.74	0.40
29:D4:15:ILE:HA	29:D4:21:VAL:HG22	2.02	0.40
29:D4:31:ILE:HG22	29:D4:33:VAL:HG23	2.03	0.40
35:DA:310:A:C4	35:DA:312:G:C8	3.09	0.40
35:DA:579:G:O2'	35:DA:2019:A:OP1	2.33	0.40
35:DA:646:A:H2'	35:DA:647:G:O4'	2.20	0.40
35:DA:949:C:H2'	35:DA:950:G:C8	2.55	0.40
35:DA:2056:G:N3	35:DA:2056:G:H2'	2.36	0.40
35:DA:2592:G:C5	35:DA:2593:U:C5	3.09	0.40
41:DG:17:PRO:O	41:DG:20:ILE:N	2.53	0.40
42:DH:115:VAL:HG11	42:DH:148:ILE:HD11	2.03	0.40
44:DJ:61:UNK:O	44:DJ:64:UNK:N	2.55	0.40
46:DN:108:PRO:O	46:DN:113:GLY:HA3	2.22	0.40
50:DR:2:ARG:HD2	50:DR:5:LYS:CE	2.50	0.40
51:DS:27:SER:O	51:DS:37:ALA:HA	2.21	0.40
55:DW:3:ALA:O	55:DW:106:ILE:HA	2.21	0.40
58:DZ:97:GLU:HA	58:DZ:126:VAL:O	2.21	0.40
58:DZ:153:SER:HB3	58:DZ:167:PRO:HG3	2.02	0.40
1:AA:259:G:H2'	1:AA:260:G:C8	2.57	0.40
1:AA:735:C:H2'	1:AA:736:C:H6	1.87	0.40
1:AA:1130:A:C6	1:AA:1131:G:C6	3.10	0.40
1:AA:1238:A:H2'	1:AA:1238:A:N3	2.36	0.40
1:AA:1293:G:HO2'	1:AA:1294:G:H8	1.68	0.40
3:AC:6:HIS:CD2	3:AC:7:PRO:HD2	2.43	0.40
3:AC:179:ARG:O	3:AC:206:GLU:HG3	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:42:GLU:C	6:AF:44:GLY:H	2.23	0.40
7:AG:20:ASP:HB3	7:AG:23:VAL:H	1.86	0.40
8:AH:5:PRO:O	8:AH:8:ASP:HB3	2.22	0.40
14:AN:34:TYR:CD1	14:AN:34:TYR:N	2.90	0.40
15:AO:82:ILE:HG23	15:AO:83:GLU:N	2.36	0.40
16:AP:19:ILE:HD11	16:AP:39:TYR:HB2	2.02	0.40
22:AV:25:C:C2	22:AV:26:A:C8	3.09	0.40
26:B1:32:LYS:HB2	35:BA:387:U:O3'	2.22	0.40
35:BA:271(U):G:H2'	35:BA:271(V):G:H8	1.86	0.40
35:BA:332:A:OP2	35:BA:332:A:H3'	2.21	0.40
35:BA:468:G:H2'	35:BA:469:G:O4'	2.21	0.40
35:BA:968:G:H2'	35:BA:969:U:C6	2.57	0.40
35:BA:1472:A:H2'	35:BA:1473:G:C8	2.57	0.40
35:BA:1689:A:H62	35:BA:1698:A:H2	1.68	0.40
35:BA:1709:U:H2'	35:BA:1710:C:C6	2.56	0.40
35:BA:2133:G:N1	35:BA:2157:G:C6	2.89	0.40
35:BA:2321:G:N3	35:BA:2321:G:H2'	2.37	0.40
35:BA:2376:A:H2'	35:BA:2377:A:O4'	2.22	0.40
35:BA:2512:C:H2'	35:BA:2513:G:O4'	2.22	0.40
36:BB:13:A:O2'	36:BB:14:U:H3'	2.22	0.40
36:BB:87:G:H3'	36:BB:88:C:H5''	2.03	0.40
37:BC:45:HIS:HD2	37:BC:216:THR:CG2	2.34	0.40
38:BD:16:MET:HE1	38:BD:208:LYS:HD3	2.04	0.40
38:BD:139:GLY:H	38:BD:165:ILE:HB	1.86	0.40
39:BE:61:ARG:HB3	39:BE:62:PRO:HD3	2.04	0.40
39:BE:91:VAL:HG13	39:BE:95:ILE:HG13	2.02	0.40
40:BF:25:PRO:O	40:BF:26:ALA:C	2.60	0.40
41:BG:36:LYS:HG2	41:BG:38:VAL:HG23	2.03	0.40
48:BP:47:ASP:HB3	48:BP:48:PRO:O	2.21	0.40
49:BQ:67:ARG:HG2	49:BQ:67:ARG:NH1	2.36	0.40
49:BQ:137:TYR:OH	58:BZ:81:ARG:HD3	2.22	0.40
51:BS:13:ARG:O	51:BS:15:ARG:N	2.55	0.40
1:CA:555:C:H2'	1:CA:556:C:H6	1.86	0.40
1:CA:870:U:H4'	1:CA:871:U:H5''	2.03	0.40
1:CA:936:C:H1'	1:CA:1382:C:H42	1.86	0.40
1:CA:945:G:N2	1:CA:1334:G:O2'	2.54	0.40
1:CA:1017:G:H2'	1:CA:1018:C:H6	1.86	0.40
1:CA:1037:C:H2'	1:CA:1038:C:C5	2.57	0.40
1:CA:1092:A:H2'	1:CA:1093:A:C8	2.56	0.40
1:CA:1302:U:O2'	1:CA:1303:C:H5'	2.22	0.40
2:CB:27:LYS:HB2	2:CB:193:ASP:HB2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:119:GLU:O	2:CB:121:LEU:N	2.54	0.40
5:CE:142:LEU:HD23	5:CE:142:LEU:HA	1.92	0.40
10:CJ:63:PHE:HD1	14:CN:58:LYS:HA	1.86	0.40
18:CR:31:LEU:H	18:CR:31:LEU:CD2	2.35	0.40
22:CV:27:G:H2'	22:CV:28:G:C8	2.53	0.40
35:DA:271(D):G:H1	35:DA:271(T):C:N4	2.00	0.40
35:DA:572:A:OP2	54:DV:78:LYS:HE2	2.21	0.40
35:DA:607:U:H5	35:DA:620:G:C6	2.40	0.40
35:DA:987:G:H2'	35:DA:988:A:O4'	2.21	0.40
35:DA:1178:C:C2	35:DA:1179:C:C5	3.09	0.40
35:DA:1432:C:H2'	35:DA:1433:U:O4'	2.21	0.40
35:DA:1688:U:H1'	35:DA:1701:A:C6	2.56	0.40
35:DA:2040:C:H2'	35:DA:2041:U:C6	2.56	0.40
35:DA:2414:G:H21	48:DP:67:MET:CE	2.34	0.40
35:DA:2537:U:H2'	35:DA:2538:C:C6	2.57	0.40
35:DA:2630:G:C8	35:DA:2894:G:C2	3.09	0.40
41:DG:96:ARG:O	41:DG:97:ASP:C	2.59	0.40
42:DH:91:GLY:HA2	42:DH:160:LYS:HG2	2.03	0.40
45:DK:10:LEU:HD13	45:DK:12:LEU:HG	2.02	0.40
45:DK:95:LYS:HD3	45:DK:135:GLY:O	2.21	0.40
47:DO:44:LYS:HD3	47:DO:44:LYS:HA	1.84	0.40
48:DP:125:VAL:HG23	48:DP:125:VAL:O	2.21	0.40
49:DQ:2:LEU:HB3	49:DQ:44:ALA:HB1	2.04	0.40
52:DT:29:ARG:HA	52:DT:29:ARG:HD2	1.85	0.40
1:AA:216:G:H2'	1:AA:217:C:H6	1.86	0.40
1:AA:977:A:H2'	1:AA:978:A:H5'	2.03	0.40
1:AA:1058:G:H2'	1:AA:1059:C:C6	2.56	0.40
1:AA:1168:A:P	1:AA:1168:A:H8	2.45	0.40
1:AA:1333:A:C2	1:AA:1334:G:H1'	2.57	0.40
2:AB:231:GLU:H	2:AB:231:GLU:HG2	1.78	0.40
3:AC:82:GLU:O	3:AC:86:VAL:HG13	2.22	0.40
4:AD:23:GLY:O	4:AD:24:GLU:C	2.60	0.40
4:AD:61:LYS:HA	4:AD:203:VAL:HG22	2.04	0.40
7:AG:36:LYS:NZ	7:AG:36:LYS:HB2	2.37	0.40
8:AH:51:VAL:CG1	8:AH:60:ARG:HB2	2.51	0.40
8:AH:109:ILE:HG12	8:AH:110:ALA:N	2.37	0.40
9:AI:4:TYR:HB3	9:AI:84:ALA:HB1	2.03	0.40
11:AK:111:ASP:HA	18:AR:84:LYS:CD	2.51	0.40
13:AM:94:ARG:CZ	19:AS:81:ARG:HB2	2.52	0.40
13:AM:112:GLY:O	13:AM:115:LYS:NZ	2.48	0.40
13:AM:116:THR:O	13:AM:116:THR:HG22	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:64:ALA:O	16:AP:65:GLN:C	2.59	0.40
26:B1:29:GLY:O	26:B1:31:GLY:N	2.51	0.40
30:B5:29:THR:H	30:B5:29:THR:HG23	1.63	0.40
35:BA:119:A:H4'	35:BA:120:U:H5'	2.04	0.40
35:BA:723:G:H2'	35:BA:724:U:C6	2.56	0.40
35:BA:1208:C:C4	35:BA:1209:G:N7	2.90	0.40
35:BA:1275:A:O2'	35:BA:1645:G:N3	2.54	0.40
35:BA:1900:A:N1	35:BA:1970:A:C6	2.89	0.40
39:BE:65:GLY:HA2	39:BE:70:ALA:CB	2.52	0.40
41:BG:5:VAL:HG12	41:BG:6:ALA:N	2.37	0.40
41:BG:19:LEU:HD22	41:BG:23:PHE:HE2	1.86	0.40
45:BK:98:ARG:NH2	45:BK:139:VAL:HG22	2.36	0.40
46:BN:56:ASN:H	46:BN:125:GLY:HA3	1.85	0.40
48:BP:71:VAL:CG1	48:BP:72:PRO:HD3	2.51	0.40
48:BP:108:LYS:C	48:BP:110:TYR:N	2.75	0.40
48:BP:126:VAL:HG13	48:BP:148:LEU:HD21	2.03	0.40
52:BT:16:ARG:NH2	52:BT:82:LEU:O	2.42	0.40
52:BT:40:THR:H	52:BT:40:THR:HG1	1.63	0.40
54:BV:47:VAL:HB	54:BV:49:THR:O	2.22	0.40
1:CA:193:C:O2'	1:CA:194:C:H5'	2.22	0.40
1:CA:328:C:HO2'	1:CA:329:A:P	2.44	0.40
1:CA:399:G:H2'	1:CA:400:C:C6	2.57	0.40
1:CA:1181:G:O2'	1:CA:1182:G:O4'	2.20	0.40
1:CA:1190:G:OP1	3:CC:5:ILE:HG13	2.22	0.40
1:CA:1256:A:H5'	1:CA:1257:U:OP1	2.22	0.40
1:CA:1320:C:H2'	1:CA:1321:C:O4'	2.22	0.40
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.82	0.40
1:CA:1522:U:N3	1:CA:1523:G:N7	2.70	0.40
4:CD:15:GLU:O	4:CD:17:VAL:HG23	2.22	0.40
6:CF:16:GLN:H	6:CF:16:GLN:NE2	2.19	0.40
8:CH:4:ASP:CG	8:CH:85:ARG:HH21	2.24	0.40
8:CH:48:TYR:HA	8:CH:60:ARG:O	2.22	0.40
8:CH:58:TYR:O	8:CH:59:LEU:HD23	2.22	0.40
9:CI:96:LEU:HD12	9:CI:96:LEU:HA	1.89	0.40
17:CQ:87:LYS:O	17:CQ:91:ARG:NH1	2.55	0.40
22:CW:6:G:N2	22:CW:7:A:H62	1.99	0.40
24:CY:312:ARG:HD2	24:CY:314:TYR:OH	2.22	0.40
27:D2:53:LEU:O	27:D2:57:ILE:HG13	2.22	0.40
34:D9:9:ARG:HB3	34:D9:9:ARG:NH1	2.35	0.40
35:DA:116:C:H2'	35:DA:117:G:O4'	2.21	0.40
35:DA:191:A:H2'	35:DA:192:C:H6	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:394:A:O2'	35:DA:395:U:H5'	2.22	0.40
35:DA:1372:U:H2'	35:DA:1373:A:O4'	2.21	0.40
35:DA:1782:C:H2'	35:DA:1783:A:H5'	2.04	0.40
35:DA:2809:A:H2'	35:DA:2810:A:C8	2.56	0.40
37:DC:6:LYS:C	37:DC:8:TYR:N	2.74	0.40
38:DD:16:MET:HE3	38:DD:16:MET:HB2	1.87	0.40
38:DD:118:VAL:HG22	38:DD:119:ALA:N	2.36	0.40
39:DE:36:ARG:NH1	39:DE:86:PRO:HD2	2.36	0.40
41:DG:63:ILE:O	41:DG:63:ILE:HG13	2.22	0.40
41:DG:71:THR:N	41:DG:89:GLY:O	2.54	0.40
42:DH:119:GLU:O	42:DH:140:LYS:NZ	2.54	0.40
43:DI:114:LEU:C	43:DI:116:LEU:H	2.25	0.40
44:DJ:118:UNK:N	44:DJ:121:UNK:O	2.54	0.40
45:DK:107:ILE:HD12	45:DK:110:GLN:HB2	2.04	0.40
46:DN:28:THR:HG22	46:DN:29:LYS:N	2.36	0.40
52:DT:29:ARG:CD	52:DT:86:ILE:HG22	2.51	0.40
52:DT:53:ARG:HB2	52:DT:53:ARG:NH1	2.37	0.40
54:DV:19:LYS:HE3	54:DV:22:VAL:CG1	2.52	0.40
55:DW:77:ASP:HB2	55:DW:102:HIS:HB2	2.03	0.40
58:DZ:8:TYR:CD1	58:DZ:8:TYR:N	2.89	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	233/256 (91%)	128 (55%)	71 (30%)	34 (15%)	0 1
2	CB	233/256 (91%)	131 (56%)	67 (29%)	35 (15%)	0 1
3	AC	205/239 (86%)	131 (64%)	39 (19%)	35 (17%)	0 0
3	CC	205/239 (86%)	130 (63%)	41 (20%)	34 (17%)	0 0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	AD	206/209 (99%)	138 (67%)	45 (22%)	23 (11%)	0	2
4	CD	206/209 (99%)	141 (68%)	42 (20%)	23 (11%)	0	2
5	AE	149/162 (92%)	116 (78%)	23 (15%)	10 (7%)	1	9
5	CE	149/162 (92%)	117 (78%)	22 (15%)	10 (7%)	1	9
6	AF	99/101 (98%)	71 (72%)	21 (21%)	7 (7%)	1	8
6	CF	99/101 (98%)	73 (74%)	19 (19%)	7 (7%)	1	8
7	AG	153/156 (98%)	116 (76%)	29 (19%)	8 (5%)	2	15
7	CG	153/156 (98%)	118 (77%)	27 (18%)	8 (5%)	2	15
8	AH	136/138 (99%)	106 (78%)	23 (17%)	7 (5%)	2	15
8	CH	136/138 (99%)	106 (78%)	23 (17%)	7 (5%)	2	15
9	AI	123/128 (96%)	86 (70%)	27 (22%)	10 (8%)	1	5
9	CI	123/128 (96%)	86 (70%)	26 (21%)	11 (9%)	1	4
10	AJ	97/105 (92%)	69 (71%)	23 (24%)	5 (5%)	2	15
10	CJ	97/105 (92%)	72 (74%)	20 (21%)	5 (5%)	2	15
11	AK	117/129 (91%)	87 (74%)	26 (22%)	4 (3%)	3	24
11	CK	117/129 (91%)	87 (74%)	26 (22%)	4 (3%)	3	24
12	AL	123/132 (93%)	85 (69%)	21 (17%)	17 (14%)	0	1
12	CL	123/132 (93%)	84 (68%)	20 (16%)	19 (15%)	0	1
13	AM	117/126 (93%)	72 (62%)	30 (26%)	15 (13%)	0	1
13	CM	117/126 (93%)	72 (62%)	28 (24%)	17 (14%)	0	1
14	AN	58/61 (95%)	40 (69%)	12 (21%)	6 (10%)	0	3
14	CN	58/61 (95%)	41 (71%)	11 (19%)	6 (10%)	0	3
15	AO	86/89 (97%)	68 (79%)	16 (19%)	2 (2%)	6	34
15	CO	86/89 (97%)	67 (78%)	17 (20%)	2 (2%)	6	34
16	AP	82/88 (93%)	58 (71%)	17 (21%)	7 (8%)	1	4
16	CP	82/88 (93%)	58 (71%)	16 (20%)	8 (10%)	0	3
17	AQ	98/105 (93%)	75 (76%)	14 (14%)	9 (9%)	1	3
17	CQ	98/105 (93%)	76 (78%)	12 (12%)	10 (10%)	0	3
18	AR	68/88 (77%)	45 (66%)	16 (24%)	7 (10%)	0	3
18	CR	68/88 (77%)	43 (63%)	19 (28%)	6 (9%)	1	4
19	AS	77/93 (83%)	44 (57%)	22 (29%)	11 (14%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
19	CS	77/93 (83%)	43 (56%)	22 (29%)	12 (16%)	0	1
20	AT	97/106 (92%)	64 (66%)	25 (26%)	8 (8%)	1	5
20	CT	97/106 (92%)	63 (65%)	26 (27%)	8 (8%)	1	5
21	AU	23/27 (85%)	15 (65%)	6 (26%)	2 (9%)	1	4
21	CU	23/27 (85%)	16 (70%)	6 (26%)	1 (4%)	2	20
24	AY	348/357 (98%)	303 (87%)	37 (11%)	8 (2%)	6	34
24	CY	348/357 (98%)	297 (85%)	40 (12%)	11 (3%)	4	26
25	B0	81/85 (95%)	69 (85%)	11 (14%)	1 (1%)	13	49
25	D0	81/85 (95%)	69 (85%)	11 (14%)	1 (1%)	13	49
26	B1	92/98 (94%)	64 (70%)	15 (16%)	13 (14%)	0	1
26	D1	92/98 (94%)	72 (78%)	11 (12%)	9 (10%)	0	3
27	B2	69/72 (96%)	45 (65%)	14 (20%)	10 (14%)	0	1
27	D2	69/72 (96%)	42 (61%)	18 (26%)	9 (13%)	0	1
28	B3	58/60 (97%)	51 (88%)	7 (12%)	0	100	100
28	D3	58/60 (97%)	52 (90%)	6 (10%)	0	100	100
29	B4	29/71 (41%)	16 (55%)	10 (34%)	3 (10%)	0	3
29	D4	29/71 (41%)	16 (55%)	10 (34%)	3 (10%)	0	3
30	B5	57/60 (95%)	41 (72%)	6 (10%)	10 (18%)	0	0
30	D5	57/60 (95%)	41 (72%)	5 (9%)	11 (19%)	0	0
31	B6	41/54 (76%)	19 (46%)	7 (17%)	15 (37%)	0	0
31	D6	43/54 (80%)	19 (44%)	7 (16%)	17 (40%)	0	0
32	B7	47/49 (96%)	47 (100%)	0	0	100	100
32	D7	47/49 (96%)	47 (100%)	0	0	100	100
33	B8	62/65 (95%)	43 (69%)	12 (19%)	7 (11%)	0	2
33	D8	62/65 (95%)	42 (68%)	12 (19%)	8 (13%)	0	1
34	B9	34/37 (92%)	31 (91%)	2 (6%)	1 (3%)	4	28
34	D9	34/37 (92%)	31 (91%)	2 (6%)	1 (3%)	4	28
37	BC	116/229 (51%)	89 (77%)	18 (16%)	9 (8%)	1	6
37	DC	116/229 (51%)	88 (76%)	20 (17%)	8 (7%)	1	8
38	BD	271/276 (98%)	205 (76%)	35 (13%)	31 (11%)	0	2
38	DD	271/276 (98%)	205 (76%)	38 (14%)	28 (10%)	0	3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
39	BE	203/206 (98%)	147 (72%)	32 (16%)	24 (12%)	0	2
39	DE	203/206 (98%)	149 (73%)	32 (16%)	22 (11%)	0	2
40	BF	206/210 (98%)	152 (74%)	30 (15%)	24 (12%)	0	2
40	DF	206/210 (98%)	149 (72%)	35 (17%)	22 (11%)	0	2
41	BG	177/182 (97%)	99 (56%)	48 (27%)	30 (17%)	0	0
41	DG	179/182 (98%)	126 (70%)	23 (13%)	30 (17%)	0	0
42	BH	163/180 (91%)	107 (66%)	31 (19%)	25 (15%)	0	1
42	DH	163/180 (91%)	109 (67%)	31 (19%)	23 (14%)	0	1
43	BI	144/148 (97%)	85 (59%)	36 (25%)	23 (16%)	0	0
43	DI	144/148 (97%)	91 (63%)	39 (27%)	14 (10%)	0	3
45	BK	139/147 (95%)	80 (58%)	37 (27%)	22 (16%)	0	1
45	DK	139/147 (95%)	81 (58%)	36 (26%)	22 (16%)	0	1
46	BN	137/140 (98%)	106 (77%)	25 (18%)	6 (4%)	2	19
46	DN	137/140 (98%)	104 (76%)	26 (19%)	7 (5%)	2	15
47	BO	120/122 (98%)	101 (84%)	14 (12%)	5 (4%)	3	20
47	DO	120/122 (98%)	101 (84%)	15 (12%)	4 (3%)	4	25
48	BP	144/150 (96%)	72 (50%)	32 (22%)	40 (28%)	0	0
48	DP	144/150 (96%)	72 (50%)	31 (22%)	41 (28%)	0	0
49	BQ	139/141 (99%)	109 (78%)	23 (16%)	7 (5%)	2	16
49	DQ	139/141 (99%)	110 (79%)	22 (16%)	7 (5%)	2	16
50	BR	115/118 (98%)	93 (81%)	14 (12%)	8 (7%)	1	8
50	DR	115/118 (98%)	93 (81%)	15 (13%)	7 (6%)	1	12
51	BS	97/112 (87%)	52 (54%)	28 (29%)	17 (18%)	0	0
51	DS	97/112 (87%)	52 (54%)	28 (29%)	17 (18%)	0	0
52	BT	136/146 (93%)	86 (63%)	31 (23%)	19 (14%)	0	1
52	DT	136/146 (93%)	87 (64%)	30 (22%)	19 (14%)	0	1
53	BU	115/118 (98%)	96 (84%)	13 (11%)	6 (5%)	2	15
53	DU	115/118 (98%)	97 (84%)	11 (10%)	7 (6%)	1	12
54	BV	99/101 (98%)	72 (73%)	11 (11%)	16 (16%)	0	0
54	DV	99/101 (98%)	72 (73%)	11 (11%)	16 (16%)	0	0
55	BW	111/113 (98%)	94 (85%)	10 (9%)	7 (6%)	1	10

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
55	DW	111/113 (98%)	94 (85%)	9 (8%)	8 (7%)	1	7
56	BX	91/96 (95%)	74 (81%)	10 (11%)	7 (8%)	1	6
56	DX	91/96 (95%)	75 (82%)	8 (9%)	8 (9%)	1	4
57	BY	99/110 (90%)	55 (56%)	18 (18%)	26 (26%)	0	0
57	DY	99/110 (90%)	54 (54%)	18 (18%)	27 (27%)	0	0
58	BZ	183/206 (89%)	109 (60%)	43 (24%)	31 (17%)	0	0
58	DZ	183/206 (89%)	125 (68%)	39 (21%)	19 (10%)	0	3
All	All	12544/13594 (92%)	8912 (71%)	2295 (18%)	1337 (11%)	0	2

All (1337) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	12	GLU
2	AB	15	VAL
2	AB	20	GLU
2	AB	64	ARG
2	AB	97	TRP
2	AB	123	ALA
2	AB	135	GLN
2	AB	194	PRO
2	AB	195	ASP
3	AC	15	THR
3	AC	47	LEU
3	AC	52	LEU
3	AC	79	ARG
3	AC	165	THR
3	AC	167	TRP
3	AC	207	VAL
4	AD	3	ARG
4	AD	4	TYR
4	AD	5	ILE
4	AD	30	LYS
4	AD	44	GLY
4	AD	110	PHE
4	AD	129	ASN
4	AD	177	ASP
5	AE	11	ILE
5	AE	21	ALA
5	AE	153	LYS
6	AF	40	VAL

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Mol	Chain	Res	Type
7	AG	115	ARG
8	AH	2	LEU
9	AI	41	VAL
9	AI	44	VAL
9	AI	89	ASN
10	AJ	57	LYS
11	AK	25	TYR
12	AL	18	VAL
12	AL	46	LYS
12	AL	89	ARG
12	AL	91	LYS
12	AL	92	ASP
12	AL	115	LYS
13	AM	4	ILE
13	AM	63	THR
13	AM	107	ALA
13	AM	116	THR
13	AM	117	VAL
16	AP	52	ASP
18	AR	20	ALA
18	AR	37	VAL
19	AS	10	PHE
19	AS	28	LYS
20	AT	11	SER
20	AT	74	LYS
21	AU	3	LYS
21	AU	25	LYS
24	AY	160	PRO
24	AY	305	ILE
26	B1	52	ARG
26	B1	58	ILE
26	B1	78	LYS
26	B1	95	LEU
27	B2	10	LEU
27	B2	20	GLU
27	B2	47	ASN
27	B2	70	GLN
29	B4	26	SER
30	B5	4	HIS
30	B5	36	CYS
30	B5	49	CYS
30	B5	53	ALA

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Mol	Chain	Res	Type
30	B5	57	VAL
31	B6	17	LYS
31	B6	19	ARG
31	B6	20	ASN
31	B6	23	THR
31	B6	28	ARG
31	B6	31	PRO
31	B6	33	LYS
31	B6	49	HIS
33	B8	33	ASN
33	B8	34	TRP
38	BD	24	ILE
38	BD	25	THR
38	BD	27	THR
38	BD	123	ALA
38	BD	169	GLU
38	BD	239	ARG
38	BD	271	ILE
39	BE	18	ASP
39	BE	72	VAL
39	BE	87	GLU
39	BE	90	THR
39	BE	118	LYS
39	BE	203	LYS
40	BF	21	ALA
40	BF	59	TYR
40	BF	68	LYS
40	BF	132	VAL
40	BF	134	GLY
41	BG	47	LYS
41	BG	49	ASP
41	BG	84	LYS
41	BG	126	ASP
41	BG	143	GLU
41	BG	146	TYR
41	BG	159	VAL
42	BH	8	PRO
42	BH	9	ILE
42	BH	42	ARG
42	BH	45	VAL
42	BH	80	SER
42	BH	83	TYR

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Mol	Chain	Res	Type
42	BH	92	ILE
42	BH	137	ASP
42	BH	138	LYS
42	BH	156	ALA
42	BH	159	GLU
42	BH	165	ALA
43	BI	6	LEU
43	BI	15	VAL
43	BI	73	GLU
43	BI	85	GLU
43	BI	120	ILE
43	BI	122	GLU
43	BI	127	VAL
43	BI	131	LYS
43	BI	133	HIS
43	BI	145	VAL
45	BK	6	ALA
45	BK	19	PRO
45	BK	113	PRO
45	BK	136	VAL
45	BK	139	VAL
46	BN	4	TYR
46	BN	57	ALA
46	BN	59	LYS
47	BO	48	PRO
48	BP	11	GLY
48	BP	17	LYS
48	BP	18	ARG
48	BP	19	VAL
48	BP	35	HIS
48	BP	40	SER
48	BP	47	ASP
48	BP	49	ARG
48	BP	83	VAL
48	BP	144	GLU
48	BP	147	LEU
49	BQ	2	LEU
50	BR	8	ARG
50	BR	45	ARG
51	BS	13	ARG
51	BS	59	LYS
51	BS	97	ARG

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Mol	Chain	Res	Type
51	BS	102	ALA
51	BS	103	GLU
51	BS	104	GLY
51	BS	108	GLY
52	BT	24	PRO
52	BT	28	VAL
52	BT	30	VAL
52	BT	33	LYS
52	BT	39	ARG
52	BT	42	ILE
52	BT	58	ASN
52	BT	80	SER
52	BT	91	ARG
53	BU	32	PHE
53	BU	74	LEU
53	BU	90	VAL
53	BU	91	ASP
53	BU	93	LYS
54	BV	2	PHE
54	BV	19	LYS
54	BV	23	GLU
54	BV	31	ALA
54	BV	46	VAL
54	BV	79	VAL
55	BW	11	ARG
55	BW	92	ARG
55	BW	111	HIS
56	BX	12	VAL
56	BX	48	LYS
56	BX	66	LEU
57	BY	3	VAL
57	BY	17	SER
57	BY	38	ILE
57	BY	39	VAL
57	BY	42	VAL
57	BY	60	PHE
57	BY	77	PRO
57	BY	78	ALA
57	BY	96	ILE
57	BY	101	LYS
58	BZ	42	VAL
58	BZ	51	ALA

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Mol	Chain	Res	Type
58	BZ	52	SER
58	BZ	65	GLN
58	BZ	92	SER
58	BZ	120	ILE
58	BZ	136	PHE
58	BZ	163	LEU
58	BZ	185	GLU
2	CB	12	GLU
2	CB	15	VAL
2	CB	20	GLU
2	CB	64	ARG
2	CB	123	ALA
2	CB	135	GLN
2	CB	194	PRO
2	CB	195	ASP
3	CC	15	THR
3	CC	45	LYS
3	CC	47	LEU
3	CC	52	LEU
3	CC	79	ARG
3	CC	165	THR
3	CC	167	TRP
4	CD	3	ARG
4	CD	4	TYR
4	CD	5	ILE
4	CD	30	LYS
4	CD	110	PHE
4	CD	129	ASN
4	CD	156	GLU
4	CD	177	ASP
5	CE	11	ILE
5	CE	21	ALA
5	CE	153	LYS
6	CF	40	VAL
7	CG	115	ARG
8	CH	2	LEU
9	CI	41	VAL
9	CI	44	VAL
9	CI	89	ASN
10	CJ	57	LYS
11	CK	25	TYR
12	CL	18	VAL

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Mol	Chain	Res	Type
12	CL	27	LEU
12	CL	46	LYS
12	CL	89	ARG
12	CL	91	LYS
12	CL	92	ASP
12	CL	115	LYS
12	CL	128	ALA
13	CM	4	ILE
13	CM	107	ALA
13	CM	116	THR
13	CM	117	VAL
16	CP	52	ASP
18	CR	20	ALA
18	CR	37	VAL
19	CS	10	PHE
19	CS	28	LYS
20	CT	11	SER
20	CT	74	LYS
21	CU	3	LYS
24	CY	110	PRO
24	CY	305	ILE
27	D2	17	SER
27	D2	44	LEU
27	D2	48	HIS
27	D2	71	ASN
29	D4	26	SER
30	D5	4	HIS
30	D5	36	CYS
30	D5	49	CYS
30	D5	53	ALA
30	D5	57	VAL
31	D6	17	LYS
31	D6	19	ARG
31	D6	20	ASN
31	D6	23	THR
31	D6	28	ARG
31	D6	31	PRO
31	D6	33	LYS
31	D6	45	LYS
31	D6	46	HIS
31	D6	48	VAL
33	D8	33	ASN

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Mol	Chain	Res	Type
33	D8	34	TRP
38	DD	24	ILE
38	DD	25	THR
38	DD	27	THR
38	DD	123	ALA
38	DD	169	GLU
38	DD	239	ARG
38	DD	271	ILE
39	DE	18	ASP
39	DE	72	VAL
39	DE	87	GLU
39	DE	90	THR
39	DE	118	LYS
39	DE	203	LYS
40	DF	21	ALA
40	DF	59	TYR
40	DF	68	LYS
40	DF	132	VAL
40	DF	134	GLY
41	DG	3	LEU
41	DG	4	ASP
41	DG	47	LYS
41	DG	48	GLU
41	DG	52	ILE
41	DG	82	LEU
41	DG	87	PRO
41	DG	96	ARG
41	DG	110	ALA
41	DG	115	ARG
41	DG	125	PHE
41	DG	127	GLY
41	DG	149	VAL
41	DG	150	ASP
42	DH	42	ARG
42	DH	45	VAL
42	DH	80	SER
42	DH	83	TYR
42	DH	92	ILE
42	DH	137	ASP
42	DH	138	LYS
42	DH	156	ALA
42	DH	159	GLU

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Mol	Chain	Res	Type
42	DH	165	ALA
43	DI	7	GLU
43	DI	8	PRO
43	DI	15	VAL
43	DI	133	HIS
45	DK	6	ALA
45	DK	19	PRO
45	DK	113	PRO
45	DK	136	VAL
45	DK	139	VAL
46	DN	4	TYR
46	DN	57	ALA
46	DN	59	LYS
47	DO	48	PRO
48	DP	11	GLY
48	DP	17	LYS
48	DP	18	ARG
48	DP	19	VAL
48	DP	35	HIS
48	DP	40	SER
48	DP	47	ASP
48	DP	49	ARG
48	DP	52	GLU
48	DP	83	VAL
48	DP	144	GLU
48	DP	147	LEU
49	DQ	2	LEU
50	DR	8	ARG
50	DR	45	ARG
51	DS	13	ARG
51	DS	59	LYS
51	DS	97	ARG
51	DS	102	ALA
51	DS	103	GLU
51	DS	104	GLY
52	DT	24	PRO
52	DT	28	VAL
52	DT	30	VAL
52	DT	33	LYS
52	DT	39	ARG
52	DT	42	ILE
52	DT	58	ASN

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Mol	Chain	Res	Type
52	DT	80	SER
52	DT	91	ARG
53	DU	32	PHE
53	DU	74	LEU
53	DU	90	VAL
53	DU	91	ASP
53	DU	93	LYS
54	DV	2	PHE
54	DV	19	LYS
54	DV	23	GLU
54	DV	31	ALA
54	DV	46	VAL
54	DV	79	VAL
55	DW	11	ARG
55	DW	92	ARG
55	DW	111	HIS
56	DX	12	VAL
56	DX	48	LYS
56	DX	66	LEU
57	DY	3	VAL
57	DY	17	SER
57	DY	38	ILE
57	DY	39	VAL
57	DY	42	VAL
57	DY	53	PRO
57	DY	60	PHE
57	DY	77	PRO
57	DY	78	ALA
57	DY	80	GLY
57	DY	96	ILE
58	DZ	80	ARG
58	DZ	93	ASP
58	DZ	120	ILE
58	DZ	137	ILE
58	DZ	146	ILE
58	DZ	158	PRO
58	DZ	165	VAL
58	DZ	166	SER
2	AB	19	HIS
2	AB	24	TRP
2	AB	26	PRO
2	AB	66	GLY

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Mol	Chain	Res	Type
2	AB	83	MET
2	AB	154	LEU
2	AB	165	VAL
2	AB	181	PHE
2	AB	204	ASN
2	AB	230	VAL
2	AB	240	GLN
3	AC	4	LYS
3	AC	18	TRP
3	AC	45	LYS
3	AC	61	ALA
3	AC	73	PRO
3	AC	74	GLY
3	AC	94	LEU
3	AC	156	ARG
4	AD	18	LYS
4	AD	24	GLU
4	AD	99	SER
4	AD	156	GLU
4	AD	157	LEU
4	AD	176	LEU
4	AD	178	VAL
6	AF	29	ALA
7	AG	17	VAL
7	AG	54	THR
8	AH	41	ARG
8	AH	91	ARG
9	AI	95	LYS
9	AI	98	PRO
9	AI	109	VAL
10	AJ	36	GLY
10	AJ	59	SER
11	AK	89	ALA
11	AK	101	SER
12	AL	19	ARG
12	AL	22	SER
12	AL	26	ALA
12	AL	27	LEU
12	AL	47	LYS
12	AL	66	VAL
12	AL	121	GLY
13	AM	3	ARG

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Mol	Chain	Res	Type
13	AM	12	ASN
13	AM	15	VAL
13	AM	68	GLY
13	AM	100	GLY
13	AM	124	PRO
14	AN	15	LYS
14	AN	36	PHE
14	AN	60	SER
16	AP	50	LYS
16	AP	63	GLY
17	AQ	66	SER
17	AQ	68	ARG
17	AQ	74	LEU
18	AR	52	PRO
18	AR	61	LYS
19	AS	29	ARG
19	AS	30	LEU
19	AS	64	GLU
20	AT	25	ARG
20	AT	103	GLY
24	AY	158	PRO
26	B1	27	GLU
26	B1	28	GLY
26	B1	30	VAL
27	B2	14	ARG
27	B2	41	ILE
27	B2	48	HIS
29	B4	35	VAL
30	B5	46	CYS
30	B5	51	TYR
31	B6	16	CYS
31	B6	18	ARG
31	B6	29	ASN
31	B6	34	LEU
31	B6	45	LYS
33	B8	43	GLN
33	B8	49	VAL
33	B8	61	LEU
34	B9	31	LYS
37	BC	53	ARG
37	BC	167	ASP
38	BD	58	HIS

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Mol	Chain	Res	Type
38	BD	122	ASP
38	BD	238	GLY
38	BD	266	SER
38	BD	267	SER
39	BE	54	GLN
39	BE	57	LYS
39	BE	70	ALA
39	BE	74	PRO
39	BE	77	ILE
39	BE	88	GLY
39	BE	130	GLY
39	BE	186	GLY
40	BF	8	GLN
40	BF	16	GLY
40	BF	27	GLU
40	BF	84	VAL
40	BF	89	VAL
40	BF	133	ASN
41	BG	27	ASN
41	BG	43	LEU
41	BG	50	ALA
41	BG	87	PRO
41	BG	117	PHE
41	BG	120	LEU
41	BG	129	GLY
41	BG	148	MET
41	BG	171	ALA
42	BH	81	GLU
42	BH	154	PRO
42	BH	155	SER
43	BI	5	LEU
43	BI	60	GLU
43	BI	97	ILE
43	BI	123	LEU
45	BK	5	VAL
45	BK	13	PRO
45	BK	18	THR
45	BK	112	MET
45	BK	116	ASN
47	BO	5	GLN
47	BO	29	ASN
48	BP	14	LYS

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Mol	Chain	Res	Type
48	BP	23	PRO
48	BP	25	SER
48	BP	31	ALA
48	BP	33	ARG
48	BP	34	GLY
48	BP	51	PHE
48	BP	52	GLU
48	BP	58	THR
48	BP	88	LEU
48	BP	103	ALA
48	BP	107	LYS
48	BP	111	ARG
48	BP	116	GLY
48	BP	136	GLU
49	BQ	19	GLY
49	BQ	62	GLY
49	BQ	135	ASP
50	BR	107	ASP
50	BR	117	VAL
51	BS	53	SER
51	BS	92	TYR
51	BS	94	TYR
51	BS	96	GLY
52	BT	38	ASN
52	BT	90	GLN
52	BT	107	ASP
54	BV	44	LYS
55	BW	63	ASP
57	BY	27	VAL
57	BY	29	GLU
57	BY	33	LYS
57	BY	37	VAL
57	BY	53	PRO
57	BY	57	GLN
57	BY	80	GLY
57	BY	90	LEU
57	BY	99	CYS
58	BZ	5	LEU
58	BZ	40	ASP
58	BZ	98	MET
58	BZ	147	GLY
58	BZ	150	LEU

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Mol	Chain	Res	Type
58	BZ	184	ALA
2	CB	19	HIS
2	CB	24	TRP
2	CB	26	PRO
2	CB	66	GLY
2	CB	83	MET
2	CB	97	TRP
2	CB	154	LEU
2	CB	165	VAL
2	CB	181	PHE
2	CB	204	ASN
2	CB	230	VAL
3	CC	4	LYS
3	CC	18	TRP
3	CC	61	ALA
3	CC	73	PRO
3	CC	74	GLY
3	CC	156	ARG
3	CC	207	VAL
4	CD	18	LYS
4	CD	24	GLU
4	CD	44	GLY
4	CD	99	SER
4	CD	157	LEU
4	CD	176	LEU
4	CD	178	VAL
6	CF	80	ARG
7	CG	7	ALA
7	CG	17	VAL
7	CG	54	THR
8	CH	41	ARG
8	CH	91	ARG
9	CI	95	LYS
9	CI	98	PRO
9	CI	109	VAL
10	CJ	36	GLY
10	CJ	59	SER
11	CK	101	SER
12	CL	19	ARG
12	CL	22	SER
12	CL	26	ALA
12	CL	47	LYS

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Mol	Chain	Res	Type
12	CL	66	VAL
12	CL	121	GLY
13	CM	3	ARG
13	CM	12	ASN
13	CM	15	VAL
13	CM	59	TYR
13	CM	63	THR
13	CM	68	GLY
13	CM	100	GLY
13	CM	124	PRO
14	CN	15	LYS
14	CN	36	PHE
14	CN	60	SER
16	CP	50	LYS
16	CP	63	GLY
17	CQ	68	ARG
17	CQ	74	LEU
19	CS	29	ARG
19	CS	30	LEU
19	CS	64	GLU
20	CT	25	ARG
20	CT	103	GLY
24	CY	40	ASN
24	CY	160	PRO
24	CY	218	VAL
25	D0	6	GLY
26	D1	53	VAL
26	D1	58	ILE
26	D1	85	LEU
26	D1	95	LEU
27	D2	51	ARG
27	D2	69	ARG
29	D4	35	VAL
30	D5	46	CYS
30	D5	51	TYR
30	D5	52	TYR
31	D6	16	CYS
31	D6	18	ARG
31	D6	29	ASN
31	D6	34	LEU
31	D6	44	ARG
31	D6	49	HIS

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Mol	Chain	Res	Type
33	D8	49	VAL
34	D9	31	LYS
37	DC	52	PRO
38	DD	58	HIS
38	DD	122	ASP
38	DD	238	GLY
38	DD	266	SER
38	DD	267	SER
39	DE	54	GLN
39	DE	57	LYS
39	DE	74	PRO
39	DE	77	ILE
39	DE	88	GLY
39	DE	130	GLY
39	DE	186	GLY
40	DF	8	GLN
40	DF	16	GLY
40	DF	27	GLU
40	DF	58	ALA
40	DF	69	HIS
40	DF	84	VAL
40	DF	89	VAL
40	DF	133	ASN
40	DF	167	ALA
41	DG	14	GLU
41	DG	24	GLY
41	DG	45	GLU
41	DG	70	VAL
41	DG	84	LYS
41	DG	97	ASP
41	DG	128	ARG
41	DG	130	ASN
42	DH	14	GLY
42	DH	81	GLU
42	DH	98	LEU
42	DH	154	PRO
42	DH	155	SER
43	DI	16	GLY
43	DI	68	LEU
43	DI	119	PRO
45	DK	5	VAL
45	DK	13	PRO

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Mol	Chain	Res	Type
45	DK	18	THR
45	DK	88	ALA
45	DK	112	MET
45	DK	116	ASN
47	DO	5	GLN
47	DO	29	ASN
48	DP	14	LYS
48	DP	23	PRO
48	DP	25	SER
48	DP	31	ALA
48	DP	33	ARG
48	DP	34	GLY
48	DP	51	PHE
48	DP	58	THR
48	DP	88	LEU
48	DP	107	LYS
48	DP	111	ARG
48	DP	116	GLY
48	DP	136	GLU
49	DQ	19	GLY
49	DQ	62	GLY
49	DQ	135	ASP
50	DR	107	ASP
50	DR	117	VAL
51	DS	53	SER
51	DS	92	TYR
51	DS	94	TYR
51	DS	96	GLY
52	DT	38	ASN
52	DT	56	GLY
52	DT	90	GLN
52	DT	107	ASP
54	DV	44	LYS
55	DW	63	ASP
56	DX	19	ALA
57	DY	27	VAL
57	DY	29	GLU
57	DY	33	LYS
57	DY	57	GLN
57	DY	90	LEU
57	DY	99	CYS
58	DZ	81	ARG

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Mol	Chain	Res	Type
58	DZ	111	VAL
58	DZ	186	GLU
2	AB	62	ALA
2	AB	120	ALA
2	AB	153	ARG
2	AB	232	PRO
3	AC	29	TYR
3	AC	81	GLY
3	AC	91	LEU
3	AC	206	GLU
5	AE	20	GLN
5	AE	27	ARG
6	AF	80	ARG
6	AF	81	ILE
7	AG	7	ALA
7	AG	58	PRO
7	AG	116	ALA
8	AH	27	PRO
8	AH	50	ARG
8	AH	133	LEU
9	AI	102	LEU
10	AJ	32	ALA
13	AM	59	TYR
13	AM	106	ASN
15	AO	23	GLY
16	AP	49	LEU
17	AQ	12	SER
17	AQ	34	LYS
17	AQ	99	SER
20	AT	73	HIS
24	AY	303	ARG
25	B0	6	GLY
27	B2	44	LEU
29	B4	29	PRO
30	B5	52	TYR
30	B5	56	LYS
33	B8	31	HIS
37	BC	52	PRO
37	BC	205	ALA
38	BD	32	SER
38	BD	127	VAL
38	BD	156	ALA

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Mol	Chain	Res	Type
38	BD	246	PRO
39	BE	68	ALA
39	BE	185	LYS
39	BE	204	ALA
40	BF	5	ALA
40	BF	17	ARG
40	BF	24	LEU
40	BF	58	ALA
40	BF	69	HIS
40	BF	128	ALA
40	BF	167	ALA
41	BG	6	ALA
41	BG	110	ALA
41	BG	145	THR
41	BG	176	LEU
42	BH	14	GLY
42	BH	98	LEU
43	BI	72	LEU
43	BI	114	LEU
43	BI	134	PRO
45	BK	67	PHE
45	BK	88	ALA
45	BK	114	ASP
46	BN	47	ALA
46	BN	134	ARG
47	BO	14	THR
48	BP	9	ASN
48	BP	106	LEU
48	BP	115	LEU
49	BQ	134	ARG
51	BS	57	LYS
52	BT	32	TYR
52	BT	56	GLY
54	BV	18	LEU
54	BV	49	THR
56	BX	13	LEU
56	BX	19	ALA
56	BX	40	LYS
57	BY	48	ALA
57	BY	56	PRO
57	BY	82	PRO
58	BZ	101	PRO

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Mol	Chain	Res	Type
58	BZ	134	PRO
58	BZ	151	HIS
58	BZ	166	SER
58	BZ	169	GLU
58	BZ	183	LEU
2	CB	113	HIS
2	CB	120	ALA
2	CB	153	ARG
2	CB	232	PRO
3	CC	29	TYR
3	CC	81	GLY
3	CC	94	LEU
3	CC	181	ASN
3	CC	206	GLU
5	CE	7	GLU
5	CE	20	GLN
5	CE	27	ARG
6	CF	29	ALA
6	CF	65	VAL
6	CF	70	ASP
7	CG	58	PRO
7	CG	116	ALA
8	CH	27	PRO
8	CH	133	LEU
9	CI	102	LEU
10	CJ	32	ALA
11	CK	89	ALA
12	CL	23	LYS
13	CM	106	ASN
15	CO	23	GLY
16	CP	49	LEU
17	CQ	12	SER
17	CQ	34	LYS
17	CQ	66	SER
17	CQ	99	SER
18	CR	52	PRO
18	CR	61	LYS
19	CS	26	GLY
20	CT	73	HIS
24	CY	158	PRO
26	D1	24	ALA
26	D1	57	GLU

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Mol	Chain	Res	Type
26	D1	86	SER
27	D2	43	GLN
27	D2	47	ASN
29	D4	29	PRO
30	D5	56	LYS
33	D8	31	HIS
33	D8	43	GLN
33	D8	61	LEU
37	DC	53	ARG
37	DC	167	ASP
37	DC	198	GLU
37	DC	205	ALA
38	DD	32	SER
38	DD	74	GLY
38	DD	127	VAL
38	DD	156	ALA
38	DD	245	PRO
38	DD	246	PRO
39	DE	68	ALA
39	DE	70	ALA
39	DE	185	LYS
40	DF	5	ALA
40	DF	7	TYR
40	DF	17	ARG
40	DF	22	ALA
40	DF	24	LEU
40	DF	128	ALA
41	DG	81	LYS
41	DG	126	ASP
41	DG	146	TYR
41	DG	155	MET
43	DI	145	VAL
45	DK	114	ASP
48	DP	103	ALA
48	DP	106	LEU
48	DP	110	TYR
48	DP	115	LEU
49	DQ	134	ARG
51	DS	42	ASP
51	DS	57	LYS
52	DT	31	SER
54	DV	18	LEU

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Mol	Chain	Res	Type
54	DV	49	THR
56	DX	13	LEU
56	DX	40	LYS
57	DY	37	VAL
57	DY	56	PRO
57	DY	82	PRO
57	DY	101	LYS
58	DZ	31	ARG
58	DZ	34	ASN
58	DZ	78	LYS
58	DZ	108	PRO
58	DZ	180	VAL
2	AB	18	GLY
2	AB	52	GLU
2	AB	84	GLU
2	AB	113	HIS
2	AB	130	ARG
2	AB	227	GLY
3	AC	20	SER
3	AC	46	GLU
3	AC	127	ARG
3	AC	180	ALA
3	AC	181	ASN
3	AC	196	LEU
4	AD	104	VAL
4	AD	162	LEU
5	AE	7	GLU
5	AE	72	GLN
5	AE	105	VAL
6	AF	70	ASP
8	AH	86	ILE
9	AI	10	ARG
9	AI	121	ARG
12	AL	23	LYS
12	AL	51	ALA
13	AM	21	TYR
13	AM	28	ALA
14	AN	16	PHE
16	AP	64	ALA
18	AR	54	ARG
19	AS	17	GLU
19	AS	26	GLY

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Mol	Chain	Res	Type
20	AT	28	ALA
20	AT	97	ALA
26	B1	26	ARG
27	B2	19	VAL
31	B6	44	ARG
37	BC	198	GLU
38	BD	36	PRO
38	BD	45	ASN
38	BD	74	GLY
38	BD	242	ARG
38	BD	244	ARG
38	BD	245	PRO
39	BE	4	ILE
39	BE	55	ASN
39	BE	69	LYS
39	BE	129	HIS
39	BE	187	ALA
40	BF	7	TYR
40	BF	22	ALA
41	BG	7	LEU
41	BG	42	GLY
41	BG	68	PRO
42	BH	158	HIS
43	BI	62	LYS
43	BI	121	LYS
43	BI	129	THR
45	BK	42	ASN
46	BN	125	GLY
48	BP	39	LYS
48	BP	55	ARG
48	BP	63	PRO
48	BP	108	LYS
48	BP	110	TYR
50	BR	14	SER
50	BR	106	GLY
51	BS	35	ILE
51	BS	100	ALA
52	BT	31	SER
52	BT	41	ARG
54	BV	53	GLU
55	BW	6	ILE
58	BZ	45	ASP

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Mol	Chain	Res	Type
58	BZ	111	VAL
58	BZ	164	ALA
2	CB	13	ALA
2	CB	18	GLY
2	CB	52	GLU
2	CB	62	ALA
2	CB	84	GLU
2	CB	130	ARG
3	CC	20	SER
3	CC	46	GLU
3	CC	91	LEU
3	CC	180	ALA
4	CD	34	GLU
4	CD	47	ARG
4	CD	104	VAL
4	CD	162	LEU
5	CE	72	GLN
5	CE	105	VAL
6	CF	81	ILE
8	CH	50	ARG
8	CH	86	ILE
9	CI	10	ARG
9	CI	121	ARG
13	CM	21	TYR
14	CN	16	PHE
16	CP	44	THR
16	CP	83	GLU
18	CR	54	ARG
19	CS	17	GLU
19	CS	65	ASN
19	CS	81	ARG
20	CT	28	ALA
20	CT	97	ALA
24	CY	340	ASP
27	D2	67	LYS
33	D8	48	PHE
37	DC	15	VAL
38	DD	36	PRO
38	DD	242	ARG
38	DD	244	ARG
39	DE	4	ILE
39	DE	55	ASN

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Mol	Chain	Res	Type
39	DE	69	LYS
39	DE	129	HIS
39	DE	187	ALA
41	DG	117	PHE
42	DH	47	GLU
42	DH	84	SER
43	DI	78	THR
43	DI	103	ARG
43	DI	115	ALA
43	DI	131	LYS
45	DK	42	ASN
45	DK	67	PHE
46	DN	47	ALA
46	DN	125	GLY
46	DN	134	ARG
48	DP	9	ASN
48	DP	39	LYS
48	DP	57	THR
48	DP	87	ASP
48	DP	108	LYS
50	DR	88	ARG
50	DR	106	GLY
51	DS	35	ILE
51	DS	100	ALA
52	DT	32	TYR
52	DT	41	ARG
54	DV	16	PRO
54	DV	40	LEU
55	DW	6	ILE
57	DY	48	ALA
58	DZ	14	LYS
58	DZ	148	ASP
2	AB	8	LYS
2	AB	229	VAL
3	AC	14	ILE
3	AC	54	ARG
3	AC	168	ALA
3	AC	193	TYR
4	AD	7	PRO
4	AD	29	PRO
4	AD	34	GLU
4	AD	47	ARG

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Mol	Chain	Res	Type
4	AD	108	LEU
5	AE	8	GLU
6	AF	65	VAL
7	AG	149	ARG
10	AJ	84	GLN
12	AL	90	VAL
16	AP	44	THR
17	AQ	30	PRO
18	AR	25	THR
18	AR	38	GLU
19	AS	65	ASN
20	AT	71	THR
26	B1	54	ALA
26	B1	65	SER
26	B1	85	LEU
26	B1	94	LEU
33	B8	3	LYS
37	BC	15	VAL
38	BD	3	VAL
38	BD	12	SER
38	BD	241	PRO
39	BE	45	THR
40	BF	12	LEU
41	BG	3	LEU
41	BG	82	LEU
41	BG	86	MET
41	BG	105	LYS
41	BG	133	LEU
41	BG	172	LEU
42	BH	47	GLU
42	BH	84	SER
42	BH	110	SER
42	BH	169	VAL
43	BI	14	ASP
43	BI	103	ARG
45	BK	21	PRO
47	BO	91	LEU
48	BP	57	THR
48	BP	67	MET
48	BP	87	ASP
49	BQ	27	VAL
49	BQ	60	ARG

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Mol	Chain	Res	Type
50	BR	88	ARG
50	BR	102	GLU
51	BS	42	ASP
51	BS	89	ARG
52	BT	68	TYR
53	BU	33	ARG
54	BV	16	PRO
54	BV	40	LEU
54	BV	42	GLY
55	BW	93	ALA
57	BY	81	LYS
58	BZ	15	PRO
58	BZ	80	ARG
58	BZ	148	ASP
2	CB	8	LYS
2	CB	76	GLN
2	CB	131	PRO
2	CB	227	GLY
3	CC	14	ILE
3	CC	54	ARG
3	CC	127	ARG
3	CC	168	ALA
3	CC	196	LEU
4	CD	7	PRO
4	CD	29	PRO
4	CD	108	LEU
5	CE	8	GLU
7	CG	100	ALA
7	CG	109	ASN
10	CJ	84	GLN
12	CL	51	ALA
12	CL	71	PRO
12	CL	90	VAL
13	CM	28	ALA
13	CM	31	LYS
13	CM	67	GLU
14	CN	14	PRO
14	CN	23	ARG
16	CP	64	ALA
17	CQ	30	PRO
17	CQ	77	VAL
18	CR	25	THR

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Mol	Chain	Res	Type
19	CS	18	LYS
19	CS	42	PRO
20	CT	71	THR
24	CY	333	PRO
31	D6	47	THR
33	D8	3	LYS
38	DD	3	VAL
38	DD	12	SER
38	DD	45	ASN
39	DE	45	THR
41	DG	139	LEU
42	DH	110	SER
42	DH	158	HIS
42	DH	169	VAL
43	DI	71	ILE
45	DK	21	PRO
45	DK	22	PRO
45	DK	23	VAL
46	DN	58	ASP
47	DO	91	LEU
48	DP	55	ARG
48	DP	63	PRO
48	DP	67	MET
49	DQ	60	ARG
50	DR	102	GLU
51	DS	89	ARG
52	DT	68	TYR
53	DU	33	ARG
54	DV	3	ALA
54	DV	35	LEU
54	DV	53	GLU
55	DW	65	LEU
55	DW	93	ALA
57	DY	81	LYS
58	DZ	142	SER
2	AB	131	PRO
3	AC	22	TRP
3	AC	26	LYS
3	AC	141	VAL
7	AG	109	ASN
9	AI	77	ILE
11	AK	102	GLY

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Mol	Chain	Res	Type
12	AL	71	PRO
14	AN	14	PRO
14	AN	52	GLN
16	AP	65	GLN
17	AQ	47	PRO
17	AQ	77	VAL
19	AS	18	LYS
27	B2	21	LEU
37	BC	174	ALA
38	BD	236	GLY
38	BD	268	ARG
43	BI	12	LEU
45	BK	20	ALA
45	BK	22	PRO
45	BK	23	VAL
48	BP	146	VAL
52	BT	88	ILE
54	BV	3	ALA
54	BV	35	LEU
58	BZ	135	GLU
58	BZ	165	VAL
2	CB	229	VAL
3	CC	22	TRP
3	CC	141	VAL
3	CC	179	ARG
3	CC	193	TYR
9	CI	117	HIS
11	CK	102	GLY
16	CP	65	GLN
17	CQ	47	PRO
24	CY	303	ARG
30	D5	48	GLU
37	DC	174	ALA
38	DD	236	GLY
38	DD	241	PRO
41	DG	17	PRO
41	DG	46	ALA
42	DH	49	VAL
43	DI	92	VAL
45	DK	20	ALA
48	DP	42	SER
48	DP	146	VAL

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Mol	Chain	Res	Type
51	DS	19	LYS
52	DT	88	ILE
54	DV	42	GLY
57	DY	7	VAL
57	DY	69	ALA
57	DY	98	VAL
19	AS	42	PRO
19	AS	45	VAL
24	AY	164	ILE
24	AY	214	VAL
38	BD	11	PRO
38	BD	35	LYS
42	BH	49	VAL
42	BH	168	PRO
51	BS	14	VAL
57	BY	31	LEU
57	BY	98	VAL
38	DD	11	PRO
38	DD	35	LYS
51	DS	14	VAL
52	DT	92	GLY
4	AD	105	VAL
6	AF	88	VAL
24	AY	224	PRO
37	BC	176	VAL
38	BD	125	ILE
40	BF	66	PRO
45	BK	12	LEU
52	BT	92	GLY
56	BX	32	PRO
58	BZ	146	ILE
4	CD	105	VAL
5	CE	148	VAL
6	CF	88	VAL
15	CO	87	ILE
19	CS	45	VAL
24	CY	224	PRO
26	D1	28	GLY
37	DC	176	VAL
40	DF	14	PRO
42	DH	168	PRO
49	DQ	27	VAL

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Mol	Chain	Res	Type
57	DY	31	LEU
2	AB	239	VAL
26	B1	53	VAL
30	B5	50	GLY
38	BD	10	THR
40	BF	14	PRO
40	BF	25	PRO
41	BG	142	PRO
45	BK	38	VAL
57	BY	7	VAL
2	CB	239	VAL
9	CI	77	ILE
17	CQ	33	GLY
24	CY	164	ILE
30	D5	50	GLY
40	DF	25	PRO
45	DK	12	LEU
45	DK	38	VAL
48	DP	109	GLY
56	DX	32	PRO
56	DX	94	GLY
3	AC	55	VAL
3	AC	75	VAL
3	AC	145	GLY
5	AE	148	VAL
15	AO	87	ILE
24	AY	237	PRO
39	BE	33	VAL
45	BK	25	PRO
45	BK	54	PRO
48	BP	109	GLY
48	BP	122	PRO
55	BW	112	GLY
3	CC	55	VAL
3	CC	145	GLY
12	CL	101	VAL
26	D1	30	VAL
42	DH	55	PRO
45	DK	54	PRO
48	DP	122	PRO
53	DU	102	GLU
31	B6	41	PRO

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Mol	Chain	Res	Type
37	BC	221	PRO
42	BH	55	PRO
54	BV	22	VAL
58	BZ	177	PRO
45	DK	25	PRO
54	DV	22	VAL
55	DW	112	GLY

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%)	185 (92%)	17 (8%)	11	39
2	CB	202/220 (92%)	186 (92%)	16 (8%)	12	43
3	AC	160/188 (85%)	148 (92%)	12 (8%)	13	45
3	CC	160/188 (85%)	149 (93%)	11 (7%)	15	49
4	AD	180/181 (99%)	162 (90%)	18 (10%)	7	30
4	CD	180/181 (99%)	162 (90%)	18 (10%)	7	30
5	AE	115/123 (94%)	114 (99%)	1 (1%)	78	91
5	CE	115/123 (94%)	114 (99%)	1 (1%)	78	91
6	AF	90/90 (100%)	87 (97%)	3 (3%)	38	71
6	CF	90/90 (100%)	87 (97%)	3 (3%)	38	71
7	AG	126/127 (99%)	123 (98%)	3 (2%)	49	77
7	CG	126/127 (99%)	123 (98%)	3 (2%)	49	77
8	AH	119/119 (100%)	115 (97%)	4 (3%)	37	70
8	CH	119/119 (100%)	114 (96%)	5 (4%)	30	65
9	AI	98/99 (99%)	92 (94%)	6 (6%)	18	54
9	CI	98/99 (99%)	91 (93%)	7 (7%)	14	47
10	AJ	88/92 (96%)	85 (97%)	3 (3%)	37	70
10	CJ	88/92 (96%)	83 (94%)	5 (6%)	20	56

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
11	AK	90/99 (91%)	88 (98%)	2 (2%)	52	79
11	CK	90/99 (91%)	88 (98%)	2 (2%)	52	79
12	AL	104/109 (95%)	93 (89%)	11 (11%)	6	27
12	CL	104/109 (95%)	92 (88%)	12 (12%)	5	24
13	AM	99/101 (98%)	94 (95%)	5 (5%)	24	60
13	CM	99/101 (98%)	93 (94%)	6 (6%)	18	54
14	AN	49/50 (98%)	45 (92%)	4 (8%)	11	41
14	CN	49/50 (98%)	45 (92%)	4 (8%)	11	41
15	AO	79/80 (99%)	74 (94%)	5 (6%)	18	52
15	CO	79/80 (99%)	74 (94%)	5 (6%)	18	52
16	AP	72/74 (97%)	69 (96%)	3 (4%)	30	65
16	CP	72/74 (97%)	69 (96%)	3 (4%)	30	65
17	AQ	94/97 (97%)	92 (98%)	2 (2%)	53	79
17	CQ	94/97 (97%)	92 (98%)	2 (2%)	53	79
18	AR	61/77 (79%)	59 (97%)	2 (3%)	38	71
18	CR	61/77 (79%)	59 (97%)	2 (3%)	38	71
19	AS	69/80 (86%)	60 (87%)	9 (13%)	4	19
19	CS	69/80 (86%)	59 (86%)	10 (14%)	3	15
20	AT	76/82 (93%)	71 (93%)	5 (7%)	16	51
20	CT	76/82 (93%)	71 (93%)	5 (7%)	16	51
21	AU	19/22 (86%)	17 (90%)	2 (10%)	7	28
21	CU	19/22 (86%)	17 (90%)	2 (10%)	7	28
24	AY	297/303 (98%)	282 (95%)	15 (5%)	24	60
24	CY	297/303 (98%)	283 (95%)	14 (5%)	26	62
25	B0	66/67 (98%)	61 (92%)	5 (8%)	13	45
25	D0	66/67 (98%)	61 (92%)	5 (8%)	13	45
26	B1	78/83 (94%)	70 (90%)	8 (10%)	7	29
26	D1	78/83 (94%)	72 (92%)	6 (8%)	13	44
27	B2	66/67 (98%)	63 (96%)	3 (4%)	27	63
27	D2	66/67 (98%)	60 (91%)	6 (9%)	9	34
28	B3	51/52 (98%)	49 (96%)	2 (4%)	32	67

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
28	D3	51/52 (98%)	49 (96%)	2 (4%)	32	67
29	B4	27/63 (43%)	26 (96%)	1 (4%)	34	68
29	D4	27/63 (43%)	26 (96%)	1 (4%)	34	68
30	B5	51/52 (98%)	43 (84%)	8 (16%)	2	12
30	D5	51/52 (98%)	43 (84%)	8 (16%)	2	12
31	B6	43/52 (83%)	37 (86%)	6 (14%)	3	16
31	D6	43/52 (83%)	34 (79%)	9 (21%)	1	6
32	B7	41/42 (98%)	40 (98%)	1 (2%)	49	77
32	D7	41/42 (98%)	40 (98%)	1 (2%)	49	77
33	B8	53/55 (96%)	43 (81%)	10 (19%)	1	8
33	D8	53/55 (96%)	44 (83%)	9 (17%)	2	10
34	B9	33/34 (97%)	32 (97%)	1 (3%)	41	73
34	D9	33/34 (97%)	32 (97%)	1 (3%)	41	73
37	BC	99/181 (55%)	96 (97%)	3 (3%)	41	73
37	DC	99/181 (55%)	96 (97%)	3 (3%)	41	73
38	BD	214/218 (98%)	187 (87%)	27 (13%)	4	21
38	DD	214/218 (98%)	190 (89%)	24 (11%)	6	25
39	BE	165/166 (99%)	145 (88%)	20 (12%)	5	22
39	DE	165/166 (99%)	145 (88%)	20 (12%)	5	22
40	BF	165/166 (99%)	154 (93%)	11 (7%)	16	50
40	DF	165/166 (99%)	151 (92%)	14 (8%)	10	38
41	BG	155/156 (99%)	142 (92%)	13 (8%)	11	39
41	DG	155/156 (99%)	137 (88%)	18 (12%)	5	24
42	BH	132/148 (89%)	121 (92%)	11 (8%)	11	40
42	DH	132/148 (89%)	121 (92%)	11 (8%)	11	40
43	BI	122/124 (98%)	113 (93%)	9 (7%)	13	46
43	DI	122/124 (98%)	108 (88%)	14 (12%)	5	24
45	BK	106/111 (96%)	93 (88%)	13 (12%)	4	21
45	DK	106/111 (96%)	94 (89%)	12 (11%)	6	25
46	BN	117/119 (98%)	108 (92%)	9 (8%)	13	44
46	DN	117/119 (98%)	108 (92%)	9 (8%)	13	44

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
47	BO	100/100 (100%)	95 (95%)	5 (5%)	24	60
47	DO	100/100 (100%)	95 (95%)	5 (5%)	24	60
48	BP	112/116 (97%)	94 (84%)	18 (16%)	2	11
48	DP	112/116 (97%)	92 (82%)	20 (18%)	2	9
49	BQ	111/111 (100%)	101 (91%)	10 (9%)	9	34
49	DQ	111/111 (100%)	99 (89%)	12 (11%)	6	27
50	BR	100/101 (99%)	88 (88%)	12 (12%)	5	22
50	DR	100/101 (99%)	89 (89%)	11 (11%)	6	26
51	BS	77/88 (88%)	69 (90%)	8 (10%)	7	28
51	DS	77/88 (88%)	68 (88%)	9 (12%)	5	23
52	BT	120/127 (94%)	102 (85%)	18 (15%)	3	14
52	DT	120/127 (94%)	100 (83%)	20 (17%)	2	10
53	BU	92/94 (98%)	86 (94%)	6 (6%)	17	51
53	DU	92/94 (98%)	87 (95%)	5 (5%)	22	58
54	BV	82/82 (100%)	67 (82%)	15 (18%)	1	8
54	DV	82/82 (100%)	68 (83%)	14 (17%)	2	10
55	BW	91/92 (99%)	81 (89%)	10 (11%)	6	26
55	DW	91/92 (99%)	82 (90%)	9 (10%)	8	30
56	BX	74/78 (95%)	65 (88%)	9 (12%)	5	22
56	DX	74/78 (95%)	65 (88%)	9 (12%)	5	22
57	BY	84/91 (92%)	70 (83%)	14 (17%)	2	10
57	DY	84/91 (92%)	70 (83%)	14 (17%)	2	10
58	BZ	162/179 (90%)	154 (95%)	8 (5%)	25	61
58	DZ	162/179 (90%)	143 (88%)	19 (12%)	5	23
All	All	10552/11256 (94%)	9670 (92%)	882 (8%)	11	39

All (882) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	17	PHE
2	AB	24	TRP
2	AB	36	ARG
2	AB	37	ASN

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Mol	Chain	Res	Type
2	AB	46	LYS
2	AB	69	LEU
2	AB	119	GLU
2	AB	137	ARG
2	AB	140	HIS
2	AB	145	LEU
2	AB	172	ILE
2	AB	178	ARG
2	AB	195	ASP
2	AB	196	LEU
2	AB	206	ASP
2	AB	232	PRO
3	AC	3	ASN
3	AC	16	ARG
3	AC	29	TYR
3	AC	34	LEU
3	AC	52	LEU
3	AC	104	GLN
3	AC	107	GLN
3	AC	108	ASN
3	AC	127	ARG
3	AC	156	ARG
3	AC	193	TYR
3	AC	196	LEU
4	AD	3	ARG
4	AD	9	CYS
4	AD	10	ARG
4	AD	13	ARG
4	AD	15	GLU
4	AD	20	TYR
4	AD	35	ARG
4	AD	38	TYR
4	AD	59	ARG
4	AD	97	LEU
4	AD	107	ARG
4	AD	110	PHE
4	AD	131	ARG
4	AD	132	ARG
4	AD	135	LEU
4	AD	158	ILE
4	AD	170	VAL
4	AD	200	GLU

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Mol	Chain	Res	Type
5	AE	16	THR
6	AF	16	GLN
6	AF	30	LEU
6	AF	69	GLU
7	AG	62	PHE
7	AG	72	ARG
7	AG	113	GLU
8	AH	1	MET
8	AH	27	PRO
8	AH	65	TYR
8	AH	102	ARG
9	AI	10	ARG
9	AI	48	GLU
9	AI	92	TYR
9	AI	95	LYS
9	AI	121	ARG
9	AI	128	ARG
10	AJ	22	LYS
10	AJ	46	ARG
10	AJ	62	HIS
11	AK	103	LEU
11	AK	125	PHE
12	AL	27	LEU
12	AL	38	THR
12	AL	40	VAL
12	AL	41	ARG
12	AL	47	LYS
12	AL	53	ARG
12	AL	80	HIS
12	AL	83	VAL
12	AL	84	LEU
12	AL	102	ARG
12	AL	110	VAL
13	AM	47	ASP
13	AM	64	TRP
13	AM	79	LYS
13	AM	92	HIS
13	AM	108	ARG
14	AN	6	LEU
14	AN	16	PHE
14	AN	33	VAL
14	AN	41	ARG

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Mol	Chain	Res	Type
15	AO	7	GLU
15	AO	22	THR
15	AO	39	LEU
15	AO	41	GLU
15	AO	65	ARG
16	AP	1	MET
16	AP	55	ARG
16	AP	69	THR
17	AQ	38	ARG
17	AQ	52	LYS
18	AR	31	LEU
18	AR	32	ARG
19	AS	5	LEU
19	AS	6	LYS
19	AS	7	LYS
19	AS	15	LEU
19	AS	27	GLU
19	AS	29	ARG
19	AS	37	ARG
19	AS	44	MET
19	AS	65	ASN
20	AT	30	LYS
20	AT	45	GLN
20	AT	73	HIS
20	AT	93	GLU
20	AT	100	ILE
21	AU	9	ARG
21	AU	12	LYS
24	AY	16	TYR
24	AY	25	ARG
24	AY	46	ARG
24	AY	56	ARG
24	AY	66	GLU
24	AY	68	ASP
24	AY	84	ARG
24	AY	102	TYR
24	AY	115	ASN
24	AY	189	LEU
24	AY	191	ARG
24	AY	246	ASP
24	AY	291	ARG
24	AY	316	LEU

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Mol	Chain	Res	Type
24	AY	344	LEU
25	B0	5	LYS
25	B0	19	LYS
25	B0	36	ILE
25	B0	41	ARG
25	B0	64	ASP
26	B1	27	GLU
26	B1	39	LYS
26	B1	40	ARG
26	B1	46	LEU
26	B1	58	ILE
26	B1	61	ARG
26	B1	78	LYS
26	B1	82	LEU
27	B2	50	ILE
27	B2	52	ASP
27	B2	64	LEU
28	B3	8	LEU
28	B3	40	THR
29	B4	32	TYR
30	B5	4	HIS
30	B5	11	THR
30	B5	29	THR
30	B5	36	CYS
30	B5	49	CYS
30	B5	52	TYR
30	B5	56	LYS
30	B5	60	VAL
31	B6	18	ARG
31	B6	19	ARG
31	B6	31	PRO
31	B6	37	ARG
31	B6	41	PRO
31	B6	42	TRP
32	B7	36	GLN
33	B8	6	THR
33	B8	8	LYS
33	B8	16	ILE
33	B8	30	ARG
33	B8	31	HIS
33	B8	33	ASN
33	B8	34	TRP

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Mol	Chain	Res	Type
33	B8	44	LYS
33	B8	49	VAL
33	B8	61	LEU
34	B9	9	ARG
37	BC	53	ARG
37	BC	54	ARG
37	BC	185	LYS
38	BD	10	THR
38	BD	14	ARG
38	BD	24	ILE
38	BD	26	LYS
38	BD	35	LYS
38	BD	43	ARG
38	BD	46	GLN
38	BD	64	ILE
38	BD	72	LYS
38	BD	94	LEU
38	BD	95	LEU
38	BD	99	ASP
38	BD	103	ARG
38	BD	106	ILE
38	BD	111	LEU
38	BD	131	LEU
38	BD	173	VAL
38	BD	192	THR
38	BD	200	ASP
38	BD	211	ARG
38	BD	221	VAL
38	BD	229	VAL
38	BD	242	ARG
38	BD	260	ARG
38	BD	268	ARG
38	BD	271	ILE
38	BD	273	ARG
39	BE	7	VAL
39	BE	12	THR
39	BE	16	ARG
39	BE	18	ASP
39	BE	24	THR
39	BE	52	LEU
39	BE	63	LEU
39	BE	67	PHE

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Mol	Chain	Res	Type
39	BE	79	ARG
39	BE	82	ARG
39	BE	92	THR
39	BE	94	GLU
39	BE	119	ARG
39	BE	144	ARG
39	BE	152	LYS
39	BE	167	VAL
39	BE	175	VAL
39	BE	179	GLU
39	BE	197	ILE
39	BE	202	LYS
40	BF	2	LYS
40	BF	57	VAL
40	BF	66	PRO
40	BF	88	VAL
40	BF	107	LYS
40	BF	125	LEU
40	BF	164	ARG
40	BF	165	ARG
40	BF	192	LEU
40	BF	196	LEU
40	BF	199	TRP
41	BG	31	VAL
41	BG	43	LEU
41	BG	48	GLU
41	BG	54	GLU
41	BG	70	VAL
41	BG	74	LYS
41	BG	80	PHE
41	BG	121	ASN
41	BG	126	ASP
41	BG	133	LEU
41	BG	147	ASP
41	BG	150	ASP
41	BG	152	LEU
42	BH	42	ARG
42	BH	69	ARG
42	BH	71	LEU
42	BH	85	LYS
42	BH	86	GLU
42	BH	88	LEU

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Mol	Chain	Res	Type
42	BH	89	ILE
42	BH	94	TYR
42	BH	105	LEU
42	BH	111	HIS
42	BH	159	GLU
43	BI	38	LEU
43	BI	61	ARG
43	BI	92	VAL
43	BI	93	THR
43	BI	123	LEU
43	BI	125	GLU
43	BI	127	VAL
43	BI	128	LEU
43	BI	134	PRO
45	BK	5	VAL
45	BK	10	LEU
45	BK	16	LYS
45	BK	35	MET
45	BK	37	PHE
45	BK	41	PHE
45	BK	42	ASN
45	BK	79	ARG
45	BK	84	LEU
45	BK	89	HIS
45	BK	95	LYS
45	BK	112	MET
45	BK	121	GLU
46	BN	4	TYR
46	BN	28	THR
46	BN	34	LEU
46	BN	43	THR
46	BN	48	MET
46	BN	56	ASN
46	BN	61	ARG
46	BN	109	LYS
46	BN	121	LYS
47	BO	7	TYR
47	BO	17	ARG
47	BO	32	TYR
47	BO	48	PRO
47	BO	49	ARG
48	BP	16	ARG

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Mol	Chain	Res	Type
48	BP	18	ARG
48	BP	29	LYS
48	BP	30	THR
48	BP	32	THR
48	BP	41	ARG
48	BP	42	SER
48	BP	47	ASP
48	BP	59	LEU
48	BP	61	ARG
48	BP	62	LEU
48	BP	64	LYS
48	BP	67	MET
48	BP	70	GLN
48	BP	95	VAL
48	BP	108	LYS
48	BP	114	ILE
48	BP	115	LEU
49	BQ	18	LYS
49	BQ	26	TYR
49	BQ	45	GLN
49	BQ	55	VAL
49	BQ	59	ARG
49	BQ	67	ARG
49	BQ	75	THR
49	BQ	110	THR
49	BQ	134	ARG
49	BQ	139	GLU
50	BR	2	ARG
50	BR	8	ARG
50	BR	18	LEU
50	BR	28	LEU
50	BR	29	LEU
50	BR	34	ILE
50	BR	49	ASP
50	BR	54	LEU
50	BR	65	LEU
50	BR	67	LEU
50	BR	79	LEU
50	BR	81	ASP
51	BS	36	TYR
51	BS	41	ASP
51	BS	73	LEU

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Mol	Chain	Res	Type
51	BS	89	ARG
51	BS	92	TYR
51	BS	97	ARG
51	BS	103	GLU
51	BS	106	ARG
52	BT	3	ARG
52	BT	6	LEU
52	BT	13	ARG
52	BT	14	TYR
52	BT	24	PRO
52	BT	32	TYR
52	BT	36	GLU
52	BT	51	ARG
52	BT	58	ASN
52	BT	59	THR
52	BT	74	ARG
52	BT	78	LEU
52	BT	82	LEU
52	BT	89	VAL
52	BT	93	ARG
52	BT	96	ARG
52	BT	99	LEU
52	BT	123	GLN
53	BU	16	LYS
53	BU	60	LEU
53	BU	70	ARG
53	BU	74	LEU
53	BU	88	ILE
53	BU	108	GLU
54	BV	13	ARG
54	BV	16	PRO
54	BV	21	ARG
54	BV	22	VAL
54	BV	35	LEU
54	BV	37	VAL
54	BV	39	LEU
54	BV	40	LEU
54	BV	49	THR
54	BV	66	ARG
54	BV	79	VAL
54	BV	82	ARG
54	BV	89	GLN

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Mol	Chain	Res	Type
54	BV	95	LEU
54	BV	99	ILE
55	BW	15	ARG
55	BW	23	LEU
55	BW	51	LEU
55	BW	52	GLU
55	BW	59	VAL
55	BW	60	ASN
55	BW	92	ARG
55	BW	95	ILE
55	BW	106	ILE
55	BW	107	LEU
56	BX	15	GLU
56	BX	27	THR
56	BX	49	VAL
56	BX	53	LYS
56	BX	68	ARG
56	BX	75	ASP
56	BX	76	ARG
56	BX	81	VAL
56	BX	87	GLN
57	BY	2	ARG
57	BY	4	LYS
57	BY	6	HIS
57	BY	7	VAL
57	BY	13	VAL
57	BY	29	GLU
57	BY	32	PRO
57	BY	40	GLU
57	BY	53	PRO
57	BY	60	PHE
57	BY	76	CYS
57	BY	77	PRO
57	BY	90	LEU
57	BY	97	ARG
58	BZ	9	TYR
58	BZ	11	GLU
58	BZ	20	ARG
58	BZ	44	PHE
58	BZ	80	ARG
58	BZ	140	ASP
58	BZ	150	LEU

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Mol	Chain	Res	Type
58	BZ	168	GLU
2	CB	15	VAL
2	CB	17	PHE
2	CB	24	TRP
2	CB	36	ARG
2	CB	37	ASN
2	CB	69	LEU
2	CB	119	GLU
2	CB	137	ARG
2	CB	140	HIS
2	CB	145	LEU
2	CB	172	ILE
2	CB	178	ARG
2	CB	195	ASP
2	CB	196	LEU
2	CB	206	ASP
2	CB	232	PRO
3	CC	3	ASN
3	CC	16	ARG
3	CC	29	TYR
3	CC	34	LEU
3	CC	52	LEU
3	CC	104	GLN
3	CC	108	ASN
3	CC	127	ARG
3	CC	156	ARG
3	CC	193	TYR
3	CC	196	LEU
4	CD	3	ARG
4	CD	9	CYS
4	CD	10	ARG
4	CD	13	ARG
4	CD	15	GLU
4	CD	20	TYR
4	CD	35	ARG
4	CD	38	TYR
4	CD	59	ARG
4	CD	97	LEU
4	CD	107	ARG
4	CD	110	PHE
4	CD	131	ARG
4	CD	132	ARG

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Mol	Chain	Res	Type
4	CD	135	LEU
4	CD	158	ILE
4	CD	170	VAL
4	CD	200	GLU
5	CE	16	THR
6	CF	16	GLN
6	CF	30	LEU
6	CF	69	GLU
7	CG	62	PHE
7	CG	72	ARG
7	CG	113	GLU
8	CH	1	MET
8	CH	27	PRO
8	CH	65	TYR
8	CH	102	ARG
8	CH	137	VAL
9	CI	10	ARG
9	CI	48	GLU
9	CI	91	ASP
9	CI	92	TYR
9	CI	95	LYS
9	CI	121	ARG
9	CI	128	ARG
10	CJ	22	LYS
10	CJ	46	ARG
10	CJ	62	HIS
10	CJ	63	PHE
10	CJ	91	PRO
11	CK	103	LEU
11	CK	125	PHE
12	CL	27	LEU
12	CL	38	THR
12	CL	40	VAL
12	CL	41	ARG
12	CL	47	LYS
12	CL	53	ARG
12	CL	80	HIS
12	CL	83	VAL
12	CL	84	LEU
12	CL	85	ILE
12	CL	102	ARG
12	CL	110	VAL

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Mol	Chain	Res	Type
13	CM	47	ASP
13	CM	48	LEU
13	CM	64	TRP
13	CM	79	LYS
13	CM	92	HIS
13	CM	108	ARG
14	CN	6	LEU
14	CN	16	PHE
14	CN	33	VAL
14	CN	41	ARG
15	CO	7	GLU
15	CO	22	THR
15	CO	39	LEU
15	CO	41	GLU
15	CO	65	ARG
16	CP	1	MET
16	CP	55	ARG
16	CP	69	THR
17	CQ	38	ARG
17	CQ	52	LYS
18	CR	31	LEU
18	CR	32	ARG
19	CS	5	LEU
19	CS	6	LYS
19	CS	7	LYS
19	CS	15	LEU
19	CS	16	LEU
19	CS	27	GLU
19	CS	29	ARG
19	CS	37	ARG
19	CS	44	MET
19	CS	65	ASN
20	CT	30	LYS
20	CT	45	GLN
20	CT	73	HIS
20	CT	93	GLU
20	CT	100	ILE
21	CU	9	ARG
21	CU	12	LYS
24	CY	8	GLN
24	CY	16	TYR
24	CY	23	GLU

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Mol	Chain	Res	Type
24	CY	46	ARG
24	CY	50	GLN
24	CY	68	ASP
24	CY	84	ARG
24	CY	87	LEU
24	CY	191	ARG
24	CY	246	ASP
24	CY	291	ARG
24	CY	315	VAL
24	CY	340	ASP
24	CY	346	TRP
25	D0	5	LYS
25	D0	19	LYS
25	D0	36	ILE
25	D0	41	ARG
25	D0	64	ASP
26	D1	14	VAL
26	D1	35	THR
26	D1	40	ARG
26	D1	48	LYS
26	D1	80	LEU
26	D1	95	LEU
27	D2	32	LEU
27	D2	47	ASN
27	D2	51	ARG
27	D2	61	LEU
27	D2	64	LEU
27	D2	70	GLN
28	D3	8	LEU
28	D3	40	THR
29	D4	32	TYR
30	D5	4	HIS
30	D5	11	THR
30	D5	29	THR
30	D5	36	CYS
30	D5	49	CYS
30	D5	52	TYR
30	D5	56	LYS
30	D5	60	VAL
31	D6	18	ARG
31	D6	19	ARG
31	D6	31	PRO

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Mol	Chain	Res	Type
31	D6	33	LYS
31	D6	37	ARG
31	D6	41	PRO
31	D6	42	TRP
31	D6	45	LYS
31	D6	47	THR
32	D7	36	GLN
33	D8	8	LYS
33	D8	16	ILE
33	D8	30	ARG
33	D8	31	HIS
33	D8	33	ASN
33	D8	34	TRP
33	D8	44	LYS
33	D8	49	VAL
33	D8	61	LEU
34	D9	9	ARG
37	DC	53	ARG
37	DC	54	ARG
37	DC	185	LYS
38	DD	10	THR
38	DD	14	ARG
38	DD	35	LYS
38	DD	43	ARG
38	DD	46	GLN
38	DD	94	LEU
38	DD	95	LEU
38	DD	99	ASP
38	DD	103	ARG
38	DD	106	ILE
38	DD	111	LEU
38	DD	131	LEU
38	DD	166	GLN
38	DD	173	VAL
38	DD	192	THR
38	DD	200	ASP
38	DD	211	ARG
38	DD	221	VAL
38	DD	229	VAL
38	DD	242	ARG
38	DD	260	ARG
38	DD	268	ARG

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Mol	Chain	Res	Type
38	DD	271	ILE
38	DD	273	ARG
39	DE	7	VAL
39	DE	12	THR
39	DE	16	ARG
39	DE	18	ASP
39	DE	24	THR
39	DE	52	LEU
39	DE	63	LEU
39	DE	67	PHE
39	DE	79	ARG
39	DE	82	ARG
39	DE	92	THR
39	DE	94	GLU
39	DE	111	ARG
39	DE	119	ARG
39	DE	144	ARG
39	DE	167	VAL
39	DE	175	VAL
39	DE	179	GLU
39	DE	197	ILE
39	DE	202	LYS
40	DF	2	LYS
40	DF	7	TYR
40	DF	57	VAL
40	DF	66	PRO
40	DF	74	ARG
40	DF	88	VAL
40	DF	107	LYS
40	DF	125	LEU
40	DF	160	ASN
40	DF	164	ARG
40	DF	183	VAL
40	DF	192	LEU
40	DF	196	LEU
40	DF	199	TRP
41	DG	33	ARG
41	DG	39	ILE
41	DG	51	ARG
41	DG	58	GLN
41	DG	63	ILE
41	DG	70	VAL

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Mol	Chain	Res	Type
41	DG	82	LEU
41	DG	84	LYS
41	DG	88	ILE
41	DG	113	ARG
41	DG	128	ARG
41	DG	130	ASN
41	DG	133	LEU
41	DG	138	GLN
41	DG	139	LEU
41	DG	147	ASP
41	DG	152	LEU
41	DG	166	ASP
42	DH	42	ARG
42	DH	69	ARG
42	DH	85	LYS
42	DH	86	GLU
42	DH	88	LEU
42	DH	89	ILE
42	DH	94	TYR
42	DH	105	LEU
42	DH	111	HIS
42	DH	153	LYS
42	DH	159	GLU
43	DI	8	PRO
43	DI	9	LEU
43	DI	12	LEU
43	DI	47	LEU
43	DI	52	ARG
43	DI	58	LEU
43	DI	61	ARG
43	DI	89	TYR
43	DI	95	LYS
43	DI	101	LEU
43	DI	108	THR
43	DI	112	LYS
43	DI	117	GLU
43	DI	128	LEU
45	DK	5	VAL
45	DK	10	LEU
45	DK	16	LYS
45	DK	35	MET
45	DK	37	PHE

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Mol	Chain	Res	Type
45	DK	41	PHE
45	DK	79	ARG
45	DK	84	LEU
45	DK	89	HIS
45	DK	95	LYS
45	DK	112	MET
45	DK	121	GLU
46	DN	4	TYR
46	DN	28	THR
46	DN	34	LEU
46	DN	43	THR
46	DN	48	MET
46	DN	56	ASN
46	DN	61	ARG
46	DN	109	LYS
46	DN	121	LYS
47	DO	7	TYR
47	DO	17	ARG
47	DO	32	TYR
47	DO	48	PRO
47	DO	49	ARG
48	DP	16	ARG
48	DP	18	ARG
48	DP	27	HIS
48	DP	29	LYS
48	DP	30	THR
48	DP	32	THR
48	DP	41	ARG
48	DP	42	SER
48	DP	47	ASP
48	DP	59	LEU
48	DP	61	ARG
48	DP	62	LEU
48	DP	64	LYS
48	DP	67	MET
48	DP	91	PHE
48	DP	95	VAL
48	DP	108	LYS
48	DP	114	ILE
48	DP	115	LEU
48	DP	123	LEU
49	DQ	18	LYS

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Mol	Chain	Res	Type
49	DQ	26	TYR
49	DQ	45	GLN
49	DQ	55	VAL
49	DQ	58	PHE
49	DQ	59	ARG
49	DQ	67	ARG
49	DQ	75	THR
49	DQ	110	THR
49	DQ	134	ARG
49	DQ	139	GLU
49	DQ	141	GLN
50	DR	2	ARG
50	DR	8	ARG
50	DR	18	LEU
50	DR	28	LEU
50	DR	29	LEU
50	DR	34	ILE
50	DR	49	ASP
50	DR	54	LEU
50	DR	65	LEU
50	DR	67	LEU
50	DR	81	ASP
51	DS	36	TYR
51	DS	41	ASP
51	DS	56	LEU
51	DS	73	LEU
51	DS	89	ARG
51	DS	92	TYR
51	DS	97	ARG
51	DS	103	GLU
51	DS	106	ARG
52	DT	3	ARG
52	DT	6	LEU
52	DT	13	ARG
52	DT	14	TYR
52	DT	24	PRO
52	DT	32	TYR
52	DT	36	GLU
52	DT	41	ARG
52	DT	42	ILE
52	DT	58	ASN
52	DT	59	THR

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Mol	Chain	Res	Type
52	DT	74	ARG
52	DT	78	LEU
52	DT	82	LEU
52	DT	89	VAL
52	DT	93	ARG
52	DT	96	ARG
52	DT	99	LEU
52	DT	123	GLN
52	DT	136	GLN
53	DU	60	LEU
53	DU	70	ARG
53	DU	74	LEU
53	DU	88	ILE
53	DU	108	GLU
54	DV	1	MET
54	DV	13	ARG
54	DV	16	PRO
54	DV	21	ARG
54	DV	22	VAL
54	DV	33	VAL
54	DV	37	VAL
54	DV	39	LEU
54	DV	49	THR
54	DV	66	ARG
54	DV	79	VAL
54	DV	82	ARG
54	DV	89	GLN
54	DV	95	LEU
55	DW	15	ARG
55	DW	23	LEU
55	DW	51	LEU
55	DW	52	GLU
55	DW	59	VAL
55	DW	92	ARG
55	DW	95	ILE
55	DW	106	ILE
55	DW	107	LEU
56	DX	15	GLU
56	DX	27	THR
56	DX	49	VAL
56	DX	53	LYS
56	DX	68	ARG

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Mol	Chain	Res	Type
56	DX	75	ASP
56	DX	76	ARG
56	DX	81	VAL
56	DX	87	GLN
57	DY	2	ARG
57	DY	4	LYS
57	DY	6	HIS
57	DY	7	VAL
57	DY	13	VAL
57	DY	29	GLU
57	DY	32	PRO
57	DY	40	GLU
57	DY	53	PRO
57	DY	60	PHE
57	DY	76	CYS
57	DY	77	PRO
57	DY	90	LEU
57	DY	97	ARG
58	DZ	3	TYR
58	DZ	11	GLU
58	DZ	37	VAL
58	DZ	41	LEU
58	DZ	44	PHE
58	DZ	49	ARG
58	DZ	71	VAL
58	DZ	81	ARG
58	DZ	87	ASP
58	DZ	97	GLU
58	DZ	119	GLU
58	DZ	121	HIS
58	DZ	132	ASN
58	DZ	140	ASP
58	DZ	145	GLU
58	DZ	150	LEU
58	DZ	154	ASP
58	DZ	155	LEU
58	DZ	166	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (34) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	19	HIS

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Mol	Chain	Res	Type
2	AB	40	HIS
2	AB	212	GLN
3	AC	37	GLN
6	AF	16	GLN
27	B2	46	GLN
28	B3	19	GLN
28	B3	52	HIS
31	B6	32	ASN
40	BF	40	GLN
43	BI	133	HIS
45	BK	103	GLN
51	BS	34	HIS
53	BU	81	HIS
2	CB	212	GLN
6	CF	16	GLN
7	CG	37	ASN
7	CG	64	GLN
7	CG	68	ASN
10	CJ	13	HIS
10	CJ	84	GLN
12	CL	8	ASN
14	CN	52	GLN
25	D0	3	HIS
27	D2	47	ASN
28	D3	19	GLN
31	D6	32	ASN
31	D6	46	HIS
40	DF	160	ASN
43	DI	133	HIS
45	DK	29	GLN
45	DK	33	ASN
48	DP	35	HIS
54	DV	11	GLN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1503/1522 (98%)	233 (15%)	31 (2%)
1	CA	1503/1522 (98%)	238 (15%)	32 (2%)
22	AV	75/76 (98%)	22 (29%)	0
22	AW	74/76 (97%)	22 (29%)	0

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
22	CV	75/76 (98%)	18 (24%)	0
22	CW	74/76 (97%)	21 (28%)	1 (1%)
23	AX	7/25 (28%)	3 (42%)	0
23	CX	7/25 (28%)	2 (28%)	1 (14%)
35	BA	2900/2915 (99%)	574 (19%)	38 (1%)
35	DA	2900/2915 (99%)	588 (20%)	36 (1%)
36	BB	118/122 (96%)	16 (13%)	1 (0%)
36	DB	118/122 (96%)	17 (14%)	1 (0%)
All	All	9354/9472 (98%)	1754 (18%)	141 (1%)

All (1754) 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	48	C
1	AA	51	A
1	AA	61	G
1	AA	76	C
1	AA	79	G
1	AA	80	G
1	AA	81	U
1	AA	89	C
1	AA	90	U
1	AA	92	C
1	AA	97	G
1	AA	101	A
1	AA	116	A
1	AA	120	A
1	AA	121	C
1	AA	122	G
1	AA	131	C
1	AA	138	G
1	AA	144	G
1	AA	147	G
1	AA	150	C
1	AA	173	U
1	AA	181	G
1	AA	189(F)	U
1	AA	189(H)	G

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Mol	Chain	Res	Type
1	AA	195	A
1	AA	197	A
1	AA	203	U
1	AA	204	U
1	AA	220	G
1	AA	244	U
1	AA	245	C
1	AA	247	G
1	AA	251	G
1	AA	266	G
1	AA	267	C
1	AA	270	A
1	AA	289	G
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	332	G
1	AA	345	C
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	388	G
1	AA	397	A
1	AA	398	C
1	AA	406	G
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	435	C
1	AA	436	C
1	AA	437	U
1	AA	439	A
1	AA	452	A
1	AA	461	A
1	AA	485	G

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Mol	Chain	Res	Type
1	AA	496	A
1	AA	498	U
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	512	U
1	AA	518	C
1	AA	527	G
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	547	A
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	564	C
1	AA	572	A
1	AA	573	A
1	AA	574	A
1	AA	575	G
1	AA	576	G
1	AA	577	G
1	AA	607	A
1	AA	630	G
1	AA	631	G
1	AA	632	A
1	AA	653	A
1	AA	665	A
1	AA	687	A
1	AA	688	G
1	AA	702	A
1	AA	731	G
1	AA	749	C
1	AA	755	G
1	AA	777	A
1	AA	793	U
1	AA	794	A
1	AA	817	C
1	AA	818	G
1	AA	819	A
1	AA	821	G
1	AA	828	A

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Mol	Chain	Res	Type
1	AA	833	U
1	AA	839	U
1	AA	840	C
1	AA	841	U
1	AA	848	C
1	AA	859	A
1	AA	873	A
1	AA	902	G
1	AA	914	A
1	AA	921	U
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	961	U
1	AA	966	G
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	972	C
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	980	C
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	1001(A)	G
1	AA	1004	A
1	AA	1023	G
1	AA	1027	C
1	AA	1030	C
1	AA	1035	A
1	AA	1036	G
1	AA	1050	G
1	AA	1054	C
1	AA	1055	A
1	AA	1065	U
1	AA	1066	C

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Mol	Chain	Res	Type
1	AA	1068	G
1	AA	1081	G
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1108	G
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	1131	G
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1146	A
1	AA	1152	A
1	AA	1159	U
1	AA	1181	G
1	AA	1182	G
1	AA	1196	U
1	AA	1197	G
1	AA	1202	G
1	AA	1212	U
1	AA	1213	A
1	AA	1225	A
1	AA	1227	A
1	AA	1238	A
1	AA	1249	C
1	AA	1255	G
1	AA	1256	A
1	AA	1257	U
1	AA	1258	G
1	AA	1280	A
1	AA	1281	U
1	AA	1282	C
1	AA	1286	A
1	AA	1287	A
1	AA	1294	G

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Mol	Chain	Res	Type
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1305	G
1	AA	1317	C
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1347	G
1	AA	1363	C
1	AA	1364	U
1	AA	1370	G
1	AA	1388	C
1	AA	1397	C
1	AA	1419	G
1	AA	1442	G
1	AA	1442(A)	G
1	AA	1442(B)	A
1	AA	1447	A
1	AA	1452	C
1	AA	1492	A
1	AA	1493	A
1	AA	1497	G
1	AA	1499	A
1	AA	1502	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1507	A
1	AA	1517	G
1	AA	1519	A
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
1	AA	1531	A
22	AV	2	C
22	AV	6	G
22	AV	8	U
22	AV	17	C
22	AV	18	G
22	AV	19	G

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Mol	Chain	Res	Type
22	AV	20	U
22	AV	21	A
22	AV	22	G
22	AV	32	U
22	AV	36	A
22	AV	37	A
22	AV	41	C
22	AV	42	C
22	AV	46	G
22	AV	47	U
22	AV	48	C
22	AV	62	C
22	AV	70	G
22	AV	72	C
22	AV	73	A
22	AV	76	A
22	AW	2	C
22	AW	6	G
22	AW	8	U
22	AW	16	U
22	AW	17	C
22	AW	18	G
22	AW	19	G
22	AW	20	U
22	AW	21	A
22	AW	32	U
22	AW	39	U
22	AW	41	C
22	AW	42	C
22	AW	46	G
22	AW	47	U
22	AW	48	C
22	AW	50	U
22	AW	51	U
22	AW	52	G
22	AW	54	U
22	AW	71	G
22	AW	73	A
23	AX	15	A
23	AX	16	U
23	AX	21	A
35	BA	9	U

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Mol	Chain	Res	Type
35	BA	10	G
35	BA	15	G
35	BA	34	C
35	BA	35	G
35	BA	45	C
35	BA	49	A
35	BA	50	U
35	BA	51	G
35	BA	55	G
35	BA	63	U
35	BA	69	C
35	BA	71	A
35	BA	72	U
35	BA	74	A
35	BA	75	G
35	BA	88	G
35	BA	90	U
35	BA	94	C
35	BA	95	G
35	BA	100	G
35	BA	102	G
35	BA	118	A
35	BA	119	A
35	BA	120	U
35	BA	129	C
35	BA	131	G
35	BA	139(A)	G
35	BA	140	G
35	BA	141	A
35	BA	146	G
35	BA	149	A
35	BA	153	C
35	BA	154(A)	C
35	BA	155	U
35	BA	157	U
35	BA	171	G
35	BA	173	G
35	BA	175	G
35	BA	182	A
35	BA	196	A
35	BA	197	A
35	BA	199	A

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Mol	Chain	Res	Type
35	BA	204	A
35	BA	205	G
35	BA	215	G
35	BA	216	A
35	BA	221	A
35	BA	222	A
35	BA	228	A
35	BA	229	A
35	BA	230	U
35	BA	233	A
35	BA	248	G
35	BA	252	G
35	BA	261	G
35	BA	266	G
35	BA	269	U
35	BA	271(I)	G
35	BA	271(J)	C
35	BA	271(K)	U
35	BA	271(N)	U
35	BA	271(O)	C
35	BA	271(P)	C
35	BA	271(R)	G
35	BA	271(X)	G
35	BA	271(Y)	U
35	BA	272(A)	U
35	BA	272(B)	G
35	BA	272(H)	C
35	BA	272(I)	U
35	BA	274	G
35	BA	275	G
35	BA	276	A
35	BA	279	C
35	BA	280	C
35	BA	298	G
35	BA	310	A
35	BA	311	A
35	BA	324	A
35	BA	329	G
35	BA	330	A
35	BA	332	A
35	BA	333	G
35	BA	349	G

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Mol	Chain	Res	Type
35	BA	352	G
35	BA	353	G
35	BA	356	G
35	BA	362	U
35	BA	363(B)	G
35	BA	363(E)	U
35	BA	363(F)	A
35	BA	365	C
35	BA	372	G
35	BA	386	G
35	BA	388	G
35	BA	396	G
35	BA	405	U
35	BA	406	G
35	BA	411	G
35	BA	412	A
35	BA	428	A
35	BA	444	C
35	BA	448	U
35	BA	456	C
35	BA	457	A
35	BA	470	A
35	BA	475	U
35	BA	481	G
35	BA	494	G
35	BA	504	U
35	BA	505	A
35	BA	508	G
35	BA	509	C
35	BA	513	A
35	BA	526	A
35	BA	528	A
35	BA	530	G
35	BA	531	C
35	BA	532	A
35	BA	533	G
35	BA	548	A
35	BA	562	U
35	BA	563	G
35	BA	573	G
35	BA	575	A
35	BA	588	U

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Mol	Chain	Res	Type
35	BA	603	A
35	BA	604	G
35	BA	607	U
35	BA	610	G
35	BA	613	G
35	BA	614	U
35	BA	614(B)	G
35	BA	615	G
35	BA	620	G
35	BA	622	G
35	BA	626	U
35	BA	627	A
35	BA	637	A
35	BA	645	C
35	BA	646	A
35	BA	651	G
35	BA	653	A
35	BA	654	A
35	BA	654(A)	G
35	BA	654(B)	C
35	BA	654(D)	G
35	BA	654(G)	C
35	BA	654(I)	C
35	BA	654(J)	A
35	BA	654(K)	C
35	BA	654(L)	G
35	BA	654(M)	C
35	BA	654(U)	A
35	BA	655	A
35	BA	673	C
35	BA	686	G
35	BA	708	C
35	BA	717	G
35	BA	722	A
35	BA	726	G
35	BA	730	C
35	BA	753	C
35	BA	762	U
35	BA	776	G
35	BA	782	A
35	BA	784	A
35	BA	785	G

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Mol	Chain	Res	Type
35	BA	791	C
35	BA	805	G
35	BA	812	C
35	BA	819	A
35	BA	827	U
35	BA	828	U
35	BA	830	G
35	BA	846	C
35	BA	848	G
35	BA	856	C
35	BA	859	G
35	BA	878	A
35	BA	890	A
35	BA	896	A
35	BA	897	C
35	BA	901	A
35	BA	904	C
35	BA	906	G
35	BA	910	A
35	BA	917	A
35	BA	931	G
35	BA	932	G
35	BA	941	A
35	BA	945	A
35	BA	946	G
35	BA	958	U
35	BA	959	A
35	BA	961	C
35	BA	965	C
35	BA	973	A
35	BA	974	G
35	BA	975	C
35	BA	980	A
35	BA	983	A
35	BA	991	C
35	BA	996	A
35	BA	1012	U
35	BA	1013	C
35	BA	1022	G
35	BA	1023	U
35	BA	1025	G
35	BA	1026	U

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Mol	Chain	Res	Type
35	BA	1039	G
35	BA	1041	C
35	BA	1045	A
35	BA	1046	A
35	BA	1047	G
35	BA	1049	C
35	BA	1051	G
35	BA	1055	G
35	BA	1060	U
35	BA	1067	A
35	BA	1068	G
35	BA	1070	A
35	BA	1088	A
35	BA	1090	U
35	BA	1108	U
35	BA	1109	C
35	BA	1111	A
35	BA	1112	G
35	BA	1113	U
35	BA	1114	G
35	BA	1115	G
35	BA	1116	C
35	BA	1122	G
35	BA	1129	A
35	BA	1130	U
35	BA	1135	C
35	BA	1136	G
35	BA	1142	U
35	BA	1155	A
35	BA	1159	U
35	BA	1171	G
35	BA	1173	G
35	BA	1174	A
35	BA	1175	U
35	BA	1176	G
35	BA	1178	C
35	BA	1195	G
35	BA	1204	A
35	BA	1205	U
35	BA	1211	U
35	BA	1221	C
35	BA	1236	G

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Mol	Chain	Res	Type
35	BA	1247	A
35	BA	1253	A
35	BA	1256	G
35	BA	1265	A
35	BA	1271	G
35	BA	1272	A
35	BA	1273	U
35	BA	1281	G
35	BA	1300	U
35	BA	1301	A
35	BA	1302	A
35	BA	1307	A
35	BA	1314	C
35	BA	1319	G
35	BA	1321	A
35	BA	1332	G
35	BA	1349	A
35	BA	1359	A
35	BA	1379	A
35	BA	1380	G
35	BA	1384	A
35	BA	1385	G
35	BA	1386	C
35	BA	1407	C
35	BA	1416	G
35	BA	1417	C
35	BA	1419	A
35	BA	1420	U
35	BA	1421	G
35	BA	1428	C
35	BA	1437	C
35	BA	1445	A
35	BA	1449	A
35	BA	1450	G
35	BA	1455	G
35	BA	1460	A
35	BA	1461	G
35	BA	1471	A
35	BA	1475	G
35	BA	1476	C
35	BA	1478	G
35	BA	1481	U

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Mol	Chain	Res	Type
35	BA	1482	G
35	BA	1485	G
35	BA	1488	G
35	BA	1490	A
35	BA	1491	G
35	BA	1493	C
35	BA	1494	A
35	BA	1495	A
35	BA	1497	U
35	BA	1502	C
35	BA	1503	U
35	BA	1505	C
35	BA	1508	A
35	BA	1509	C
35	BA	1509(A)	A
35	BA	1512	U
35	BA	1520	G
35	BA	1529	G
35	BA	1530	C
35	BA	1534	U
35	BA	1537	G
35	BA	1541	G
35	BA	1542	A
35	BA	1544	A
35	BA	1547	C
35	BA	1554	A
35	BA	1558	A
35	BA	1559	G
35	BA	1569	A
35	BA	1578	U
35	BA	1579	A
35	BA	1581	G
35	BA	1584	C
35	BA	1586	A
35	BA	1588	C
35	BA	1589	C
35	BA	1591	G
35	BA	1594	G
35	BA	1598	C
35	BA	1603	A
35	BA	1608	A
35	BA	1616	A

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Mol	Chain	Res	Type
35	BA	1617	C
35	BA	1618	A
35	BA	1640	C
35	BA	1648	C
35	BA	1654	A
35	BA	1674	G
35	BA	1678	G
35	BA	1694	C
35	BA	1695	G
35	BA	1696	G
35	BA	1718	G
35	BA	1721	G
35	BA	1722	A
35	BA	1739	U
35	BA	1740	G
35	BA	1742	G
35	BA	1746	G
35	BA	1748	G
35	BA	1749	A
35	BA	1754	C
35	BA	1756	G
35	BA	1763	G
35	BA	1764	G
35	BA	1773	A
35	BA	1780	A
35	BA	1787	A
35	BA	1791	A
35	BA	1800	C
35	BA	1802	A
35	BA	1816	G
35	BA	1820	U
35	BA	1821	A
35	BA	1829	A
35	BA	1835	G
35	BA	1846	G
35	BA	1847	A
35	BA	1848	A
35	BA	1858	G
35	BA	1865	G
35	BA	1866	C
35	BA	1876	A
35	BA	1878	G

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Mol	Chain	Res	Type
35	BA	1881	C
35	BA	1882	C
35	BA	1885	A
35	BA	1888	G
35	BA	1889	A
35	BA	1900	A
35	BA	1906	G
35	BA	1912	A
35	BA	1914	C
35	BA	1929	G
35	BA	1930	G
35	BA	1936	A
35	BA	1938	A
35	BA	1948	G
35	BA	1955	U
35	BA	1963	U
35	BA	1964	G
35	BA	1967	C
35	BA	1969	A
35	BA	1970	A
35	BA	1971	A
35	BA	1972	A
35	BA	1982	C
35	BA	1987	G
35	BA	1993	U
35	BA	1997	G
35	BA	2023	G
35	BA	2031	A
35	BA	2033	A
35	BA	2034	U
35	BA	2036	C
35	BA	2043	C
35	BA	2055	C
35	BA	2056	G
35	BA	2060	A
35	BA	2061	G
35	BA	2062	A
35	BA	2069	G
35	BA	2093	G
35	BA	2099	U
35	BA	2103	C
35	BA	2104	G

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Mol	Chain	Res	Type
35	BA	2108	C
35	BA	2110	G
35	BA	2111	C
35	BA	2112	G
35	BA	2116	G
35	BA	2118	U
35	BA	2121	G
35	BA	2127	G
35	BA	2130	U
35	BA	2131	G
35	BA	2132	U
35	BA	2133	G
35	BA	2134	A
35	BA	2145	C
35	BA	2148	G
35	BA	2172	U
35	BA	2173	A
35	BA	2177	C
35	BA	2179	C
35	BA	2187	G
35	BA	2189	U
35	BA	2190	G
35	BA	2193	G
35	BA	2198	A
35	BA	2199	A
35	BA	2200	C
35	BA	2207	G
35	BA	2208	A
35	BA	2218	U
35	BA	2219	G
35	BA	2225	A
35	BA	2226	C
35	BA	2238	G
35	BA	2239	G
35	BA	2273	A
35	BA	2275	C
35	BA	2283	C
35	BA	2287	A
35	BA	2288	A
35	BA	2305	A
35	BA	2306	C
35	BA	2307	G

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Mol	Chain	Res	Type
35	BA	2308	G
35	BA	2311	A
35	BA	2313	C
35	BA	2316	C
35	BA	2319	G
35	BA	2320	A
35	BA	2336	A
35	BA	2345	G
35	BA	2346	A
35	BA	2347	C
35	BA	2350	C
35	BA	2360	A
35	BA	2383	G
35	BA	2385	C
35	BA	2399	G
35	BA	2402	C
35	BA	2406	U
35	BA	2423	U
35	BA	2425	A
35	BA	2428	G
35	BA	2429	G
35	BA	2430	A
35	BA	2431	U
35	BA	2435	A
35	BA	2439	A
35	BA	2441	C
35	BA	2448	A
35	BA	2459	A
35	BA	2469	A
35	BA	2470	G
35	BA	2476	A
35	BA	2477	C
35	BA	2478	A
35	BA	2482	G
35	BA	2484	G
35	BA	2491	U
35	BA	2502	G
35	BA	2504	U
35	BA	2505	G
35	BA	2506	U
35	BA	2518	A
35	BA	2520	C

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Mol	Chain	Res	Type
35	BA	2524	G
35	BA	2529	G
35	BA	2543	G
35	BA	2545	G
35	BA	2554	U
35	BA	2566	A
35	BA	2567	G
35	BA	2573	C
35	BA	2582	G
35	BA	2585	U
35	BA	2602	A
35	BA	2609	U
35	BA	2611	U
35	BA	2612	C
35	BA	2615	U
35	BA	2630	G
35	BA	2645	G
35	BA	2654	A
35	BA	2657	A
35	BA	2658	C
35	BA	2659	G
35	BA	2660	A
35	BA	2661	G
35	BA	2662	A
35	BA	2673	G
35	BA	2682	U
35	BA	2689	U
35	BA	2690	C
35	BA	2691	C
35	BA	2703	C
35	BA	2711	A
35	BA	2712	U
35	BA	2712(A)	A
35	BA	2713	A
35	BA	2726	U
35	BA	2733	A
35	BA	2744	G
35	BA	2762	G
35	BA	2765	A
35	BA	2770	G
35	BA	2778	A
35	BA	2779	U

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Mol	Chain	Res	Type
35	BA	2780	G
35	BA	2789	C
35	BA	2790	A
35	BA	2791	C
35	BA	2792	G
35	BA	2794	C
35	BA	2795	G
35	BA	2796	U
35	BA	2801(A)	A
35	BA	2802	G
35	BA	2803	C
35	BA	2808	U
35	BA	2818	G
35	BA	2820	A
35	BA	2821	A
35	BA	2833	G
35	BA	2834	G
35	BA	2835	A
35	BA	2836	U
35	BA	2845	G
35	BA	2849	U
35	BA	2872	G
35	BA	2879	C
35	BA	2892	A
35	BA	2893	G
35	BA	2894	G
35	BA	2895	U
36	BB	3	C
36	BB	8	U
36	BB	13	A
36	BB	15	A
36	BB	22	U
36	BB	24	G
36	BB	41	U
36	BB	42	C
36	BB	45	A
36	BB	53	A
36	BB	67	G
36	BB	73	A
36	BB	81	G
36	BB	88	C
36	BB	102	A

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Mol	Chain	Res	Type
36	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	49	U
1	CA	51	A
1	CA	61	G
1	CA	79	G
1	CA	80	G
1	CA	81	U
1	CA	89	C
1	CA	90	U
1	CA	92	C
1	CA	97	G
1	CA	101	A
1	CA	116	A
1	CA	120	A
1	CA	121	C
1	CA	129(A)	G
1	CA	131	C
1	CA	137	C
1	CA	144	G
1	CA	146	G
1	CA	147	G
1	CA	150	C
1	CA	172	A
1	CA	173	U
1	CA	181	G
1	CA	189(F)	U
1	CA	189(H)	G
1	CA	195	A
1	CA	197	A
1	CA	203	U
1	CA	204	U
1	CA	220	G
1	CA	244	U
1	CA	245	C
1	CA	247	G
1	CA	251	G

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Mol	Chain	Res	Type
1	CA	266	G
1	CA	267	C
1	CA	270	A
1	CA	289	G
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	332	G
1	CA	345	C
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	367	U
1	CA	372	C
1	CA	373	A
1	CA	397	A
1	CA	398	C
1	CA	406	G
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	422	C
1	CA	424	G
1	CA	429	U
1	CA	430	A
1	CA	435	C
1	CA	436	C
1	CA	437	U
1	CA	439	A
1	CA	452	A
1	CA	461	A
1	CA	485	G
1	CA	496	A
1	CA	498	U
1	CA	509	A
1	CA	510	A
1	CA	511	C
1	CA	518	C
1	CA	521	G
1	CA	527	G
1	CA	532	A
1	CA	533	A

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Mol	Chain	Res	Type
1	CA	534	U
1	CA	547	A
1	CA	559	A
1	CA	560	U
1	CA	561	U
1	CA	572	A
1	CA	573	A
1	CA	575	G
1	CA	576	G
1	CA	577	G
1	CA	588	G
1	CA	630	G
1	CA	631	G
1	CA	632	A
1	CA	633	G
1	CA	653	A
1	CA	665	A
1	CA	687	A
1	CA	688	G
1	CA	731	G
1	CA	749	C
1	CA	755	G
1	CA	777	A
1	CA	793	U
1	CA	794	A
1	CA	802	A
1	CA	816	A
1	CA	817	C
1	CA	818	G
1	CA	819	A
1	CA	821	G
1	CA	828	A
1	CA	833	U
1	CA	839	U
1	CA	840	C
1	CA	841	U
1	CA	848	C
1	CA	859	A
1	CA	873	A
1	CA	902	G
1	CA	914	A
1	CA	926	G

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Mol	Chain	Res	Type
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	966	G
1	CA	968	A
1	CA	969	A
1	CA	971	G
1	CA	972	C
1	CA	974	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	978	A
1	CA	980	C
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	994	A
1	CA	1001(A)	G
1	CA	1005	A
1	CA	1007	C
1	CA	1027	C
1	CA	1030	C
1	CA	1035	A
1	CA	1036	G
1	CA	1050	G
1	CA	1054	C
1	CA	1055	A
1	CA	1065	U
1	CA	1066	C
1	CA	1068	G
1	CA	1081	G
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1108	G
1	CA	1117	G
1	CA	1124	G
1	CA	1125	U
1	CA	1126	U
1	CA	1129	C

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Mol	Chain	Res	Type
1	CA	1130	A
1	CA	1131	G
1	CA	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1146	A
1	CA	1152	A
1	CA	1159	U
1	CA	1182	G
1	CA	1196	U
1	CA	1197	G
1	CA	1201	A
1	CA	1202	G
1	CA	1212	U
1	CA	1213	A
1	CA	1225	A
1	CA	1227	A
1	CA	1238	A
1	CA	1249	C
1	CA	1255	G
1	CA	1256	A
1	CA	1257	U
1	CA	1258	G
1	CA	1280	A
1	CA	1281	U
1	CA	1282	C
1	CA	1286	A
1	CA	1287	A
1	CA	1290	G
1	CA	1293	G
1	CA	1294	G
1	CA	1300	G
1	CA	1301	U
1	CA	1302	U
1	CA	1305	G
1	CA	1306	A
1	CA	1317	C
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1331	G

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Mol	Chain	Res	Type
1	CA	1338	G
1	CA	1347	G
1	CA	1353	G
1	CA	1363	C
1	CA	1364	U
1	CA	1387	G
1	CA	1388	C
1	CA	1397	C
1	CA	1419	G
1	CA	1442	G
1	CA	1442(A)	G
1	CA	1442(B)	A
1	CA	1447	A
1	CA	1452	C
1	CA	1492	A
1	CA	1493	A
1	CA	1497	G
1	CA	1499	A
1	CA	1502	A
1	CA	1504	G
1	CA	1505	G
1	CA	1506	U
1	CA	1507	A
1	CA	1517	G
1	CA	1519	A
1	CA	1520	G
1	CA	1529	G
1	CA	1530	G
1	CA	1531	A
22	CV	8	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	37	A
22	CV	41	C
22	CV	42	C
22	CV	46	G
22	CV	47	U
22	CV	48	C

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Mol	Chain	Res	Type
22	CV	61	C
22	CV	62	C
22	CV	72	C
22	CV	73	A
22	CV	76	A
22	CW	4	C
22	CW	8	U
22	CW	16	U
22	CW	17	C
22	CW	18	G
22	CW	19	G
22	CW	20	U
22	CW	21	A
22	CW	22	G
22	CW	36	A
22	CW	39	U
22	CW	40	C
22	CW	41	C
22	CW	46	G
22	CW	47	U
22	CW	48	C
22	CW	51	U
22	CW	52	G
22	CW	62	C
22	CW	71	G
22	CW	73	A
23	CX	15	A
23	CX	21	A
35	DA	9	U
35	DA	10	G
35	DA	15	G
35	DA	34	C
35	DA	35	G
35	DA	45	C
35	DA	50	U
35	DA	51	G
35	DA	55	G
35	DA	69	C
35	DA	71	A
35	DA	72	U
35	DA	74	A
35	DA	75	G

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Mol	Chain	Res	Type
35	DA	86	C
35	DA	88	G
35	DA	90	U
35	DA	94	C
35	DA	100	G
35	DA	102	G
35	DA	118	A
35	DA	120	U
35	DA	129	C
35	DA	131	G
35	DA	139(A)	G
35	DA	141	A
35	DA	144	C
35	DA	146	G
35	DA	149	A
35	DA	154	G
35	DA	154(A)	C
35	DA	155	U
35	DA	157	U
35	DA	171	G
35	DA	173	G
35	DA	174	C
35	DA	175	G
35	DA	182	A
35	DA	196	A
35	DA	197	A
35	DA	199	A
35	DA	204	A
35	DA	205	G
35	DA	215	G
35	DA	216	A
35	DA	221	A
35	DA	222	A
35	DA	228	A
35	DA	229	A
35	DA	230	U
35	DA	233	A
35	DA	248	G
35	DA	252	G
35	DA	260	G
35	DA	261	G
35	DA	268	C

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Mol	Chain	Res	Type
35	DA	269	U
35	DA	271(I)	G
35	DA	271(J)	C
35	DA	271(K)	U
35	DA	271(N)	U
35	DA	271(O)	C
35	DA	271(P)	C
35	DA	271(R)	G
35	DA	271(W)	G
35	DA	271(X)	G
35	DA	271(Y)	U
35	DA	272(A)	U
35	DA	272(B)	G
35	DA	272(H)	C
35	DA	272(I)	U
35	DA	274	G
35	DA	275	G
35	DA	276	A
35	DA	278	A
35	DA	279	C
35	DA	280	C
35	DA	311	A
35	DA	324	A
35	DA	329	G
35	DA	330	A
35	DA	332	A
35	DA	333	G
35	DA	352	G
35	DA	353	G
35	DA	356	G
35	DA	362	U
35	DA	363(B)	G
35	DA	363(E)	U
35	DA	363(F)	A
35	DA	365	C
35	DA	372	G
35	DA	386	G
35	DA	388	G
35	DA	396	G
35	DA	405	U
35	DA	406	G
35	DA	411	G

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Mol	Chain	Res	Type
35	DA	412	A
35	DA	428	A
35	DA	441	U
35	DA	444	C
35	DA	448	U
35	DA	451	C
35	DA	456	C
35	DA	457	A
35	DA	470	A
35	DA	475	U
35	DA	479	A
35	DA	481	G
35	DA	494	G
35	DA	504	U
35	DA	505	A
35	DA	508	G
35	DA	509	C
35	DA	513	A
35	DA	525	U
35	DA	526	A
35	DA	528	A
35	DA	530	G
35	DA	531	C
35	DA	532	A
35	DA	533	G
35	DA	562	U
35	DA	563	G
35	DA	573	G
35	DA	575	A
35	DA	588	U
35	DA	603	A
35	DA	604	G
35	DA	607	U
35	DA	613	G
35	DA	614	U
35	DA	614(B)	G
35	DA	615	G
35	DA	620	G
35	DA	622	G
35	DA	626	U
35	DA	627	A
35	DA	637	A

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Mol	Chain	Res	Type
35	DA	645	C
35	DA	646	A
35	DA	651	G
35	DA	653	A
35	DA	654(A)	G
35	DA	654(B)	C
35	DA	654(D)	G
35	DA	654(G)	C
35	DA	654(I)	C
35	DA	654(J)	A
35	DA	654(K)	C
35	DA	654(L)	G
35	DA	654(U)	A
35	DA	655	A
35	DA	670	A
35	DA	673	C
35	DA	686	G
35	DA	708	C
35	DA	717	G
35	DA	722	A
35	DA	730	C
35	DA	738	G
35	DA	753	C
35	DA	762	U
35	DA	776	G
35	DA	782	A
35	DA	784	A
35	DA	785	G
35	DA	791	C
35	DA	805	G
35	DA	812	C
35	DA	819	A
35	DA	827	U
35	DA	828	U
35	DA	830	G
35	DA	845	G
35	DA	848	G
35	DA	856	C
35	DA	859	G
35	DA	878	A
35	DA	879	G
35	DA	890	A

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Mol	Chain	Res	Type
35	DA	896	A
35	DA	897	C
35	DA	901	A
35	DA	904	C
35	DA	910	A
35	DA	917	A
35	DA	932	G
35	DA	933	A
35	DA	941	A
35	DA	945	A
35	DA	946	G
35	DA	958	U
35	DA	959	A
35	DA	961	C
35	DA	964	C
35	DA	965	C
35	DA	973	A
35	DA	974	G
35	DA	975	C
35	DA	983	A
35	DA	991	C
35	DA	996	A
35	DA	1005	C
35	DA	1012	U
35	DA	1013	C
35	DA	1022	G
35	DA	1023	U
35	DA	1025	G
35	DA	1026	U
35	DA	1033	U
35	DA	1039	G
35	DA	1041	C
35	DA	1045	A
35	DA	1046	A
35	DA	1047	G
35	DA	1049	C
35	DA	1051	G
35	DA	1055	G
35	DA	1057	A
35	DA	1060	U
35	DA	1067	A
35	DA	1070	A

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Mol	Chain	Res	Type
35	DA	1071	G
35	DA	1088	A
35	DA	1102	C
35	DA	1108	U
35	DA	1109	C
35	DA	1111	A
35	DA	1112	G
35	DA	1113	U
35	DA	1114	G
35	DA	1115	G
35	DA	1122	G
35	DA	1129	A
35	DA	1130	U
35	DA	1135	C
35	DA	1136	G
35	DA	1141	U
35	DA	1142	U
35	DA	1143	A
35	DA	1155	A
35	DA	1160	G
35	DA	1170	G
35	DA	1173	G
35	DA	1174	A
35	DA	1175	U
35	DA	1176	G
35	DA	1178	C
35	DA	1195	G
35	DA	1204	A
35	DA	1205	U
35	DA	1211	U
35	DA	1212	G
35	DA	1221	C
35	DA	1236	G
35	DA	1247	A
35	DA	1253	A
35	DA	1256	G
35	DA	1265	A
35	DA	1269	A
35	DA	1271	G
35	DA	1272	A
35	DA	1273	U
35	DA	1281	G

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Mol	Chain	Res	Type
35	DA	1287	A
35	DA	1300	U
35	DA	1301	A
35	DA	1302	A
35	DA	1307	A
35	DA	1314	C
35	DA	1319	G
35	DA	1321	A
35	DA	1332	G
35	DA	1345	C
35	DA	1349	A
35	DA	1352	U
35	DA	1359	A
35	DA	1379	A
35	DA	1380	G
35	DA	1384	A
35	DA	1385	G
35	DA	1386	C
35	DA	1407	C
35	DA	1416	G
35	DA	1417	C
35	DA	1419	A
35	DA	1420	U
35	DA	1421	G
35	DA	1428	C
35	DA	1437	C
35	DA	1445	A
35	DA	1449	A
35	DA	1450	G
35	DA	1455	G
35	DA	1458	C
35	DA	1460	A
35	DA	1461	G
35	DA	1471	A
35	DA	1475	G
35	DA	1476	C
35	DA	1478	G
35	DA	1481	U
35	DA	1482	G
35	DA	1485	G
35	DA	1488	G
35	DA	1490	A

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Mol	Chain	Res	Type
35	DA	1491	G
35	DA	1493	C
35	DA	1494	A
35	DA	1495	A
35	DA	1496	A
35	DA	1497	U
35	DA	1500	G
35	DA	1502	C
35	DA	1503	U
35	DA	1505	C
35	DA	1509	C
35	DA	1509(A)	A
35	DA	1520	G
35	DA	1529	G
35	DA	1530	C
35	DA	1534	U
35	DA	1537	G
35	DA	1541	G
35	DA	1542	A
35	DA	1544	A
35	DA	1547	C
35	DA	1554	A
35	DA	1558	A
35	DA	1559	G
35	DA	1569	A
35	DA	1578	U
35	DA	1579	A
35	DA	1584	C
35	DA	1586	A
35	DA	1588	C
35	DA	1591	G
35	DA	1594	G
35	DA	1598	C
35	DA	1603	A
35	DA	1608	A
35	DA	1617	C
35	DA	1618	A
35	DA	1640	C
35	DA	1648	C
35	DA	1654	A
35	DA	1674	G
35	DA	1678	G

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Mol	Chain	Res	Type
35	DA	1694	C
35	DA	1695	G
35	DA	1696	G
35	DA	1703	G
35	DA	1717	G
35	DA	1718	G
35	DA	1722	A
35	DA	1739	U
35	DA	1740	G
35	DA	1742	G
35	DA	1746	G
35	DA	1748	G
35	DA	1749	A
35	DA	1754	C
35	DA	1756	G
35	DA	1763	G
35	DA	1764	G
35	DA	1773	A
35	DA	1780	A
35	DA	1787	A
35	DA	1791	A
35	DA	1800	C
35	DA	1801	G
35	DA	1802	A
35	DA	1816	G
35	DA	1820	U
35	DA	1821	A
35	DA	1829	A
35	DA	1835	G
35	DA	1836	C
35	DA	1846	G
35	DA	1847	A
35	DA	1848	A
35	DA	1850	G
35	DA	1858	G
35	DA	1865	G
35	DA	1866	C
35	DA	1876	A
35	DA	1878	G
35	DA	1881	C
35	DA	1882	C
35	DA	1885	A

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Mol	Chain	Res	Type
35	DA	1888	G
35	DA	1889	A
35	DA	1900	A
35	DA	1906	G
35	DA	1912	A
35	DA	1914	C
35	DA	1916	A
35	DA	1929	G
35	DA	1930	G
35	DA	1936	A
35	DA	1938	A
35	DA	1948	G
35	DA	1955	U
35	DA	1963	U
35	DA	1967	C
35	DA	1969	A
35	DA	1970	A
35	DA	1971	A
35	DA	1972	A
35	DA	1982	C
35	DA	1987	G
35	DA	1993	U
35	DA	1997	G
35	DA	2023	G
35	DA	2031	A
35	DA	2033	A
35	DA	2034	U
35	DA	2036	C
35	DA	2043	C
35	DA	2055	C
35	DA	2056	G
35	DA	2060	A
35	DA	2061	G
35	DA	2062	A
35	DA	2069	G
35	DA	2093	G
35	DA	2094	G
35	DA	2099	U
35	DA	2103	C
35	DA	2104	G
35	DA	2108	C
35	DA	2110	G

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Mol	Chain	Res	Type
35	DA	2111	C
35	DA	2112	G
35	DA	2116	G
35	DA	2117	A
35	DA	2118	U
35	DA	2121	G
35	DA	2127	G
35	DA	2128	C
35	DA	2130	U
35	DA	2131	G
35	DA	2132	U
35	DA	2133	G
35	DA	2134	A
35	DA	2145	C
35	DA	2159	G
35	DA	2172	U
35	DA	2173	A
35	DA	2177	C
35	DA	2179	C
35	DA	2187	G
35	DA	2189	U
35	DA	2190	G
35	DA	2193	G
35	DA	2198	A
35	DA	2199	A
35	DA	2200	C
35	DA	2207	G
35	DA	2208	A
35	DA	2218	U
35	DA	2219	G
35	DA	2222	G
35	DA	2225	A
35	DA	2226	C
35	DA	2239	G
35	DA	2266	A
35	DA	2275	C
35	DA	2283	C
35	DA	2287	A
35	DA	2288	A
35	DA	2303	G
35	DA	2305	A
35	DA	2306	C

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Mol	Chain	Res	Type
35	DA	2307	G
35	DA	2308	G
35	DA	2310	A
35	DA	2311	A
35	DA	2313	C
35	DA	2316	C
35	DA	2319	G
35	DA	2320	A
35	DA	2336	A
35	DA	2345	G
35	DA	2346	A
35	DA	2347	C
35	DA	2350	C
35	DA	2383	G
35	DA	2385	C
35	DA	2399	G
35	DA	2402	C
35	DA	2406	U
35	DA	2423	U
35	DA	2425	A
35	DA	2429	G
35	DA	2430	A
35	DA	2435	A
35	DA	2439	A
35	DA	2441	C
35	DA	2448	A
35	DA	2459	A
35	DA	2469	A
35	DA	2470	G
35	DA	2476	A
35	DA	2477	C
35	DA	2482	G
35	DA	2483	C
35	DA	2484	G
35	DA	2491	U
35	DA	2502	G
35	DA	2504	U
35	DA	2505	G
35	DA	2506	U
35	DA	2518	A
35	DA	2520	C
35	DA	2524	G

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Mol	Chain	Res	Type
35	DA	2529	G
35	DA	2542	A
35	DA	2543	G
35	DA	2545	G
35	DA	2554	U
35	DA	2566	A
35	DA	2567	G
35	DA	2573	C
35	DA	2576	G
35	DA	2578	G
35	DA	2581	G
35	DA	2585	U
35	DA	2602	A
35	DA	2609	U
35	DA	2611	U
35	DA	2612	C
35	DA	2615	U
35	DA	2630	G
35	DA	2646	C
35	DA	2654	A
35	DA	2657	A
35	DA	2658	C
35	DA	2659	G
35	DA	2660	A
35	DA	2661	G
35	DA	2662	A
35	DA	2673	G
35	DA	2689	U
35	DA	2690	C
35	DA	2691	C
35	DA	2703	C
35	DA	2712	U
35	DA	2712(A)	A
35	DA	2713	A
35	DA	2726	U
35	DA	2733	A
35	DA	2758	A
35	DA	2762	G
35	DA	2764	A
35	DA	2765	A
35	DA	2770	G
35	DA	2771	C

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Mol	Chain	Res	Type
35	DA	2778	A
35	DA	2779	U
35	DA	2780	G
35	DA	2789	C
35	DA	2790	A
35	DA	2791	C
35	DA	2794	C
35	DA	2795	G
35	DA	2796	U
35	DA	2801(A)	A
35	DA	2802	G
35	DA	2803	C
35	DA	2808	U
35	DA	2818	G
35	DA	2820	A
35	DA	2821	A
35	DA	2823	A
35	DA	2833	G
35	DA	2834	G
35	DA	2835	A
35	DA	2836	U
35	DA	2844	G
35	DA	2849	U
35	DA	2872	G
35	DA	2892	A
35	DA	2893	G
35	DA	2894	G
35	DA	2895	U
36	DB	8	U
36	DB	15	A
36	DB	16	G
36	DB	22	U
36	DB	27	C
36	DB	41	U
36	DB	42	C
36	DB	45	A
36	DB	53	A
36	DB	67	G
36	DB	73	A
36	DB	76	G
36	DB	81	G
36	DB	82	G

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Mol	Chain	Res	Type
36	DB	88	C
36	DB	89	G
36	DB	110	G

All (141) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	30	U
1	AA	60	A
1	AA	115	G
1	AA	119	A
1	AA	243	A
1	AA	250	A
1	AA	266	G
1	AA	328	C
1	AA	366	C
1	AA	428	G
1	AA	429	U
1	AA	438	G
1	AA	484	G
1	AA	509	A
1	AA	533	A
1	AA	560	U
1	AA	575	G
1	AA	687	A
1	AA	748	C
1	AA	913	A
1	AA	991	U
1	AA	992	U
1	AA	1049	U
1	AA	1065	U
1	AA	1067	A
1	AA	1201	A
1	AA	1281	U
1	AA	1285	A
1	AA	1300	G
1	AA	1498	U
1	AA	1504	G
35	BA	49	A
35	BA	71	A
35	BA	74	A
35	BA	128	C

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Mol	Chain	Res	Type
35	BA	221	A
35	BA	331	A
35	BA	332	A
35	BA	387	U
35	BA	474	G
35	BA	512	G
35	BA	587	C
35	BA	603	A
35	BA	614(C)	A
35	BA	752	A
35	BA	790	C
35	BA	1022	G
35	BA	1048	A
35	BA	1210	A
35	BA	1300	U
35	BA	1301	A
35	BA	1427	A
35	BA	1541	G
35	BA	1558	A
35	BA	1653	G
35	BA	1799	G
35	BA	1819	A
35	BA	1820	U
35	BA	1970	A
35	BA	1992	G
35	BA	2033	A
35	BA	2126	A
35	BA	2171	A
35	BA	2225	A
35	BA	2282	G
35	BA	2422	A
35	BA	2481	G
35	BA	2689	U
35	BA	2791	C
36	BB	66	A
1	CA	30	U
1	CA	60	A
1	CA	115	G
1	CA	119	A
1	CA	243	A
1	CA	250	A
1	CA	266	G

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Mol	Chain	Res	Type
1	CA	328	C
1	CA	353	A
1	CA	366	C
1	CA	428	G
1	CA	429	U
1	CA	438	G
1	CA	484	G
1	CA	509	A
1	CA	533	A
1	CA	560	U
1	CA	575	G
1	CA	687	A
1	CA	748	C
1	CA	913	A
1	CA	991	U
1	CA	992	U
1	CA	1049	U
1	CA	1065	U
1	CA	1067	A
1	CA	1201	A
1	CA	1281	U
1	CA	1285	A
1	CA	1300	G
1	CA	1498	U
1	CA	1504	G
22	CW	70	G
23	CX	15	A
35	DA	49	A
35	DA	71	A
35	DA	74	A
35	DA	128	C
35	DA	221	A
35	DA	331	A
35	DA	332	A
35	DA	387	U
35	DA	474	G
35	DA	512	G
35	DA	587	C
35	DA	603	A
35	DA	614(C)	A
35	DA	752	A
35	DA	790	C

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Mol	Chain	Res	Type
35	DA	1022	G
35	DA	1210	A
35	DA	1300	U
35	DA	1301	A
35	DA	1427	A
35	DA	1541	G
35	DA	1558	A
35	DA	1653	G
35	DA	1799	G
35	DA	1819	A
35	DA	1820	U
35	DA	1970	A
35	DA	1992	G
35	DA	2033	A
35	DA	2126	A
35	DA	2171	A
35	DA	2225	A
35	DA	2282	G
35	DA	2422	A
35	DA	2481	G
35	DA	2689	U
36	DB	66	A

5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

2 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	MEQ	CY	240	24	8,9,10	1.34	2 (25%)	5,10,12	1.82	2 (40%)
24	MEQ	AY	240	24	8,9,10	1.36	2 (25%)	5,10,12	1.83	2 (40%)

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	MEQ	CY	240	24	-	3/8/9/11	-
24	MEQ	AY	240	24	-	2/8/9/11	-

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	AY	240	MEQ	CD-NE2	2.40	1.45	1.34
24	CY	240	MEQ	CD-NE2	2.37	1.45	1.34
24	CY	240	MEQ	OE1-CD	-2.17	1.18	1.23
24	AY	240	MEQ	OE1-CD	-2.15	1.18	1.23

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	AY	240	MEQ	CG-CD-NE2	3.19	120.71	116.29
24	CY	240	MEQ	CG-CD-NE2	2.93	120.36	116.29
24	CY	240	MEQ	CB-CG-CD	-2.50	107.45	113.04
24	AY	240	MEQ	CB-CG-CD	-2.05	108.47	113.04

There are no chirality outliers.

All (5) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
24	AY	240	MEQ	N-CA-CB-CG
24	AY	240	MEQ	C-CA-CB-CG
24	CY	240	MEQ	N-CA-CB-CG
24	CY	240	MEQ	C-CA-CB-CG
24	CY	240	MEQ	O-C-CA-CB

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 480 ligands modelled in this entry, 480 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
13	AM	3
13	CM	3
31	B6	1
9	AI	1
41	BG	1
9	CI	1
48	BP	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B6	46:HIS	C	47:THR	N	7.71
1	AM	112:GLY	C	113:PRO	N	4.87
1	CM	112:GLY	C	113:PRO	N	4.87
1	AI	104:ARG	C	105:ASP	N	4.73
1	AM	65:LYS	C	66:LEU	N	4.57
1	BG	112:PRO	C	113:ARG	N	4.54
1	CM	69:GLU	C	70:LEU	N	4.53
1	CI	104:ARG	C	105:ASP	N	4.52
1	AM	69:GLU	C	70:LEU	N	4.39
1	CM	65:LYS	C	66:LEU	N	3.21
1	BP	61:ARG	C	62:LEU	N	1.20

6 Fit of model and data i

6.1 Protein, DNA and RNA chains i

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, 95th 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%)	-0.31	18 (1%) 79 67	101, 160, 266, 374	0
1	CA	1504/1522 (98%)	-0.32	13 (0%) 84 75	99, 164, 261, 390	0
2	AB	235/256 (91%)	0.68	33 (14%) 2 1	171, 220, 260, 279	0
2	CB	235/256 (91%)	0.34	17 (7%) 15 9	135, 195, 239, 253	0
3	AC	207/239 (86%)	0.59	29 (14%) 2 1	160, 205, 242, 281	0
3	CC	207/239 (86%)	0.67	42 (20%) 1 1	146, 179, 215, 234	0
4	AD	208/209 (99%)	0.35	12 (5%) 23 13	122, 157, 189, 209	0
4	CD	208/209 (99%)	0.80	31 (14%) 2 1	141, 181, 208, 229	0
5	AE	151/162 (93%)	0.41	10 (6%) 18 11	129, 168, 201, 221	0
5	CE	151/162 (93%)	0.30	10 (6%) 18 11	120, 152, 184, 213	0
6	AF	101/101 (100%)	0.39	11 (10%) 5 3	157, 189, 218, 247	0
6	CF	101/101 (100%)	-0.12	1 (0%) 82 72	128, 162, 192, 226	0
7	AG	155/156 (99%)	0.93	30 (19%) 1 1	166, 199, 235, 255	0
7	CG	155/156 (99%)	0.59	22 (14%) 2 1	136, 188, 223, 253	0
8	AH	138/138 (100%)	0.71	20 (14%) 2 1	143, 170, 199, 216	0
8	CH	138/138 (100%)	0.86	22 (15%) 1 1	136, 162, 186, 202	0
9	AI	127/128 (99%)	1.56	41 (32%) 0 0	172, 227, 248, 264	0
9	CI	127/128 (99%)	1.12	32 (25%) 0 0	145, 202, 241, 246	0
10	AJ	99/105 (94%)	1.67	34 (34%) 0 0	174, 216, 246, 256	0
10	CJ	99/105 (94%)	1.60	32 (32%) 0 0	164, 201, 235, 250	0
11	AK	119/129 (92%)	0.79	16 (13%) 3 2	135, 176, 211, 255	0
11	CK	119/129 (92%)	0.53	10 (8%) 11 6	130, 159, 197, 249	0
12	AL	125/132 (94%)	0.37	7 (5%) 24 13	112, 136, 173, 203	0
12	CL	125/132 (94%)	0.76	23 (18%) 1 1	118, 140, 180, 220	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AM	125/126 (99%)	1.02	28 (22%) 0 0	173, 220, 245, 273	0
13	CM	125/126 (99%)	1.18	37 (29%) 0 0	151, 197, 224, 244	0
14	AN	60/61 (98%)	1.45	15 (25%) 0 0	179, 202, 223, 232	0
14	CN	60/61 (98%)	0.53	4 (6%) 17 10	146, 177, 200, 208	0
15	AO	88/89 (98%)	0.39	8 (9%) 9 5	132, 161, 202, 213	0
15	CO	88/89 (98%)	0.32	2 (2%) 60 47	120, 151, 187, 202	0
16	AP	84/88 (95%)	0.94	16 (19%) 1 1	123, 143, 182, 198	0
16	CP	84/88 (95%)	1.99	38 (45%) 0 0	154, 185, 231, 243	0
17	AQ	100/105 (95%)	0.54	11 (11%) 5 3	123, 150, 178, 188	0
17	CQ	100/105 (95%)	0.74	16 (16%) 1 1	121, 152, 181, 200	0
18	AR	70/88 (79%)	1.17	18 (25%) 0 0	162, 190, 227, 235	0
18	CR	70/88 (79%)	0.71	7 (10%) 7 4	120, 161, 192, 205	0
19	AS	79/93 (84%)	2.40	35 (44%) 0 0	180, 225, 257, 264	0
19	CS	79/93 (84%)	2.29	40 (50%) 0 0	152, 200, 248, 260	0
20	AT	99/106 (93%)	0.65	9 (9%) 9 5	112, 149, 188, 211	0
20	CT	99/106 (93%)	1.14	24 (24%) 0 0	133, 171, 215, 243	0
21	AU	25/27 (92%)	5.70	24 (96%) 0 0	187, 213, 239, 242	0
21	CU	25/27 (92%)	3.33	19 (76%) 0 0	156, 181, 195, 199	0
22	AV	76/76 (100%)	-0.10	0 100 100	152, 210, 242, 302	0
22	AW	75/76 (98%)	0.89	13 (17%) 1 1	323, 391, 436, 444	0
22	CV	76/76 (100%)	-0.03	2 (2%) 56 40	141, 191, 230, 296	0
22	CW	75/76 (98%)	0.87	11 (14%) 2 1	342, 398, 492, 499	0
23	AX	8/25 (32%)	0.84	1 (12%) 3 2	93, 149, 231, 248	0
23	CX	8/25 (32%)	0.53	0 100 100	91, 140, 225, 232	0
24	AY	350/357 (98%)	2.04	143 (40%) 0 0	154, 199, 282, 305	0
24	CY	350/357 (98%)	2.42	161 (46%) 0 0	149, 202, 279, 297	0
25	B0	83/85 (97%)	1.58	17 (20%) 1 1	114, 138, 194, 242	0
25	D0	83/85 (97%)	1.22	17 (20%) 1 1	104, 125, 189, 229	0
26	B1	94/98 (95%)	0.63	5 (5%) 26 14	94, 124, 167, 203	0
26	D1	94/98 (95%)	0.50	5 (5%) 26 14	88, 120, 172, 191	0
27	B2	71/72 (98%)	0.33	5 (7%) 16 9	132, 166, 193, 229	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
27	D2	71/72 (98%)	0.11	4 (5%) 24 13	87, 125, 166, 194	0
28	B3	60/60 (100%)	1.84	25 (41%) 0 0	113, 142, 177, 204	0
28	D3	60/60 (100%)	1.01	13 (21%) 0 0	106, 122, 158, 204	0
29	B4	31/71 (43%)	0.75	3 (9%) 7 4	200, 226, 244, 255	0
29	D4	31/71 (43%)	-0.28	1 (3%) 47 31	173, 195, 213, 223	0
30	B5	59/60 (98%)	0.46	5 (8%) 10 6	102, 134, 247, 283	0
30	D5	59/60 (98%)	0.56	5 (8%) 10 6	85, 122, 245, 254	0
31	B6	45/54 (83%)	5.45	40 (88%) 0 0	199, 239, 256, 271	0
31	D6	45/54 (83%)	4.93	41 (91%) 0 0	206, 233, 253, 260	0
32	B7	49/49 (100%)	0.60	6 (12%) 4 2	90, 105, 164, 187	0
32	D7	49/49 (100%)	0.19	2 (4%) 37 24	70, 90, 135, 203	0
33	B8	64/65 (98%)	0.89	7 (10%) 5 3	95, 125, 170, 193	0
33	D8	64/65 (98%)	0.71	3 (4%) 31 19	100, 121, 164, 195	0
34	B9	36/37 (97%)	6.43	35 (97%) 0 0	147, 185, 220, 226	0
34	D9	36/37 (97%)	6.47	36 (100%) 0 0	140, 159, 201, 218	0
35	BA	2901/2915 (99%)	-0.31	42 (1%) 75 63	84, 127, 274, 441	0
35	DA	2901/2915 (99%)	-0.26	51 (1%) 68 55	74, 114, 282, 427	0
36	BB	119/122 (97%)	-0.57	0 100 100	134, 193, 232, 248	0
36	DB	119/122 (97%)	-0.66	1 (0%) 86 78	122, 159, 190, 222	0
37	BC	120/229 (52%)	3.83	79 (65%) 0 0	214, 309, 343, 358	0
37	DC	120/229 (52%)	3.57	84 (70%) 0 0	227, 322, 369, 374	0
38	BD	273/276 (98%)	0.28	8 (2%) 51 36	80, 117, 153, 183	0
38	DD	273/276 (98%)	0.08	5 (1%) 68 55	78, 106, 143, 194	0
39	BE	205/206 (99%)	0.53	18 (8%) 10 5	88, 126, 179, 217	0
39	DE	205/206 (99%)	0.64	21 (10%) 6 4	84, 126, 183, 224	0
40	BF	208/210 (99%)	0.27	7 (3%) 45 29	88, 134, 196, 257	0
40	DF	208/210 (99%)	0.10	5 (2%) 59 44	71, 118, 193, 245	0
41	BG	181/182 (99%)	0.55	25 (13%) 2 2	157, 199, 231, 260	0
41	DG	181/182 (99%)	0.27	11 (6%) 21 12	133, 165, 214, 276	0
42	BH	165/180 (91%)	1.55	60 (36%) 0 0	146, 198, 246, 270	0
42	DH	165/180 (91%)	0.54	21 (12%) 3 2	98, 145, 186, 222	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
43	BI	146/148 (98%)	0.53	17 (11%) 4 3	117, 175, 202, 218	0
43	DI	146/148 (98%)	0.16	3 (2%) 63 49	119, 157, 195, 216	0
44	BJ	0/130	-	-	-	-
44	DJ	0/130	-	-	-	-
45	BK	141/147 (95%)	3.33	84 (59%) 0 0	224, 266, 287, 294	0
45	DK	141/147 (95%)	3.37	96 (68%) 0 0	233, 278, 303, 327	0
46	BN	139/140 (99%)	0.65	21 (15%) 2 1	106, 144, 181, 204	0
46	DN	139/140 (99%)	0.17	4 (2%) 51 36	95, 123, 166, 192	0
47	BO	122/122 (100%)	0.25	6 (4%) 29 17	88, 118, 144, 157	0
47	DO	122/122 (100%)	0.39	6 (4%) 29 17	89, 119, 150, 168	0
48	BP	146/150 (97%)	0.83	21 (14%) 2 1	85, 148, 190, 235	0
48	DP	146/150 (97%)	0.39	6 (4%) 37 24	82, 134, 170, 225	0
49	BQ	141/141 (100%)	0.49	9 (6%) 19 11	113, 141, 176, 223	0
49	DQ	141/141 (100%)	0.54	12 (8%) 10 6	91, 127, 164, 214	0
50	BR	117/118 (99%)	0.36	5 (4%) 35 22	98, 125, 162, 200	0
50	DR	117/118 (99%)	0.54	7 (5%) 21 12	95, 123, 158, 187	0
51	BS	99/112 (88%)	1.05	21 (21%) 0 1	131, 183, 209, 216	0
51	DS	99/112 (88%)	1.35	29 (29%) 0 0	122, 163, 196, 216	0
52	BT	138/146 (94%)	0.28	7 (5%) 28 16	91, 137, 214, 284	0
52	DT	138/146 (94%)	0.42	12 (8%) 10 5	106, 145, 229, 264	0
53	BU	117/118 (99%)	0.35	4 (3%) 45 29	100, 138, 184, 207	0
53	DU	117/118 (99%)	-0.06	1 (0%) 84 75	79, 112, 163, 196	0
54	BV	101/101 (100%)	0.19	5 (4%) 28 16	96, 159, 197, 229	0
54	DV	101/101 (100%)	0.25	1 (0%) 82 72	90, 141, 180, 211	0
55	BW	113/113 (100%)	0.78	15 (13%) 3 2	94, 122, 155, 225	0
55	DW	113/113 (100%)	0.48	7 (6%) 20 11	81, 106, 145, 264	0
56	BX	93/96 (96%)	0.61	11 (11%) 4 2	111, 142, 163, 204	0
56	DX	93/96 (96%)	0.19	4 (4%) 35 22	84, 113, 145, 172	0
57	BY	101/110 (91%)	1.97	45 (44%) 0 0	122, 163, 211, 239	0
57	DY	101/110 (91%)	0.61	11 (10%) 5 3	101, 137, 193, 221	0
58	BZ	185/206 (89%)	0.51	23 (12%) 4 2	146, 176, 218, 239	0
58	DZ	185/206 (89%)	0.19	12 (6%) 18 11	117, 165, 209, 235	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
All	All	22142/23326 (94%)	0.41	2416 (10%) 5 3	70, 153, 269, 499	0

All (2416) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
30	D5	59	GLU	18.4
45	BK	87	GLY	17.6
31	B6	13	CYS	17.3
24	CY	262	CYS	17.1
37	BC	174	ALA	15.7
24	AY	72	LEU	15.7
34	B9	14	CYS	15.7
45	DK	3	LYS	15.0
25	B0	8	GLY	15.0
31	D6	22	ALA	13.8
34	D9	34	GLN	13.7
37	BC	227	PRO	13.6
24	CY	230	ASP	13.6
37	DC	173	HIS	13.6
24	CY	82	GLU	12.7
55	DW	113	LYS	12.6
11	CK	12	ARG	12.4
31	D6	23	THR	12.3
25	D0	8	GLY	12.2
37	DC	177	GLY	12.2
24	AY	82	GLU	12.1
37	BC	182	PRO	11.8
37	DC	176	VAL	11.8
24	CY	238	GLY	11.7
37	DC	57	GLN	11.6
31	B6	20	ASN	11.5
31	B6	14	THR	11.4
39	BE	205	ALA	11.3
19	AS	82	GLY	11.2
24	CY	80	PRO	11.2
34	B9	34	GLN	11.2
37	BC	181	PHE	11.1
1	AA	89	C	11.0
31	B6	22	ALA	11.0
21	AU	18	TYR	11.0
45	BK	8	VAL	10.7
11	CK	11	LYS	10.7

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Mol	Chain	Res	Type	RSRZ
31	B6	25	LYS	10.6
21	AU	5	ASP	10.5
37	BC	173	HIS	10.4
34	B9	25	VAL	10.3
24	AY	259	THR	10.2
37	DC	52	PRO	10.2
24	CY	79	LEU	10.2
31	B6	21	TYR	10.2
11	AK	12	ARG	10.2
13	CM	123	ALA	10.2
13	AM	123	ALA	10.1
35	DA	654(I)	C	10.1
45	DK	84	LEU	10.0
25	D0	6	GLY	10.0
45	DK	2	LYS	10.0
34	B9	37	GLY	9.9
24	AY	71	GLY	9.9
37	BC	203	GLU	9.8
25	D0	5	LYS	9.8
7	AG	80	VAL	9.7
34	D9	24	TYR	9.7
45	BK	3	LYS	9.7
21	AU	8	THR	9.6
25	B0	6	GLY	9.6
11	AK	128	ALA	9.5
57	BY	44	ILE	9.5
45	BK	84	LEU	9.5
45	DK	33	ASN	9.5
24	AY	317	ASP	9.5
45	DK	17	ALA	9.4
34	B9	27	CYS	9.4
21	AU	26	LYS	9.4
35	DA	654(K)	C	9.4
24	CY	43	GLU	9.4
24	CY	77	GLU	9.3
45	BK	57	ILE	9.3
19	AS	81	ARG	9.3
7	AG	79	ARG	9.3
24	AY	76	MET	9.2
42	BH	171	LEU	9.2
24	CY	42	PRO	9.2
37	DC	50	ILE	9.2

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Mol	Chain	Res	Type	RSRZ
37	DC	174	ALA	9.1
21	AU	23	PRO	9.1
58	BZ	113	ALA	9.0
30	D5	58	LEU	9.0
9	AI	7	THR	8.9
30	D5	60	VAL	8.9
45	DK	34	ILE	8.9
25	B0	7	LEU	8.9
34	B9	12	ASP	8.9
34	D9	30	PRO	8.9
57	BY	45	VAL	8.9
41	BG	2	PRO	8.9
37	DC	171	ALA	8.8
45	BK	93	ARG	8.8
1	AA	81	U	8.8
19	CS	81	ARG	8.8
31	D6	50	ARG	8.8
35	DA	2802	G	8.8
9	AI	8	GLY	8.8
37	BC	229	SER	8.7
45	BK	85	GLU	8.7
34	B9	24	TYR	8.7
25	B0	5	LYS	8.7
19	CS	82	GLY	8.7
24	AY	81	ALA	8.6
31	D6	32	ASN	8.6
24	AY	89	PRO	8.6
31	B6	16	CYS	8.6
25	D0	3	HIS	8.5
37	DC	175	PRO	8.5
13	CM	124	PRO	8.4
16	CP	36	ILE	8.4
34	D9	12	ASP	8.4
37	BC	175	PRO	8.4
37	BC	170	GLY	8.4
34	B9	36	GLN	8.4
19	AS	71	LEU	8.4
24	CY	76	MET	8.3
31	B6	50	ARG	8.3
31	D6	53	LYS	8.3
1	AA	82	U	8.3
11	AK	13	GLN	8.3

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Mol	Chain	Res	Type	RSRZ
37	DC	172	ILE	8.3
19	AS	75	ALA	8.3
24	CY	81	ALA	8.3
57	BY	43	ASN	8.3
45	DK	83	GLY	8.3
45	BK	58	THR	8.3
24	AY	260	VAL	8.3
34	D9	23	VAL	8.2
20	CT	99	LEU	8.2
13	AM	112	GLY	8.2
24	AY	90	GLU	8.2
45	BK	2	LYS	8.2
24	AY	73	LEU	8.2
37	BC	171	ALA	8.2
11	AK	11	LYS	8.2
13	AM	121	LYS	8.1
24	CY	6	LEU	8.1
34	B9	23	VAL	8.1
45	BK	7	VAL	8.1
1	AA	83	U	8.1
45	BK	139	VAL	8.0
21	AU	24	ARG	8.0
35	DA	2137	C	8.0
34	D9	33	LYS	8.0
37	DC	49	GLY	8.0
45	DK	87	GLY	7.9
35	BA	654(K)	C	7.9
14	AN	30	ALA	7.9
45	DK	136	VAL	7.9
9	CI	30	GLY	7.9
24	CY	263	GLN	7.9
45	DK	85	GLU	7.9
34	D9	14	CYS	7.8
45	DK	21	PRO	7.8
34	B9	18	ARG	7.8
45	DK	4	VAL	7.8
25	B0	4	LYS	7.8
12	CL	129	ALA	7.8
34	D9	25	VAL	7.8
34	D9	11	CYS	7.8
13	AM	120	LYS	7.8
24	CY	83	GLU	7.7

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Mol	Chain	Res	Type	RSRZ
24	CY	87	LEU	7.7
37	BC	179	ALA	7.7
45	BK	37	PHE	7.7
52	BT	1	MET	7.7
21	CU	18	TYR	7.7
24	AY	268	GLN	7.7
31	D6	25	LYS	7.7
24	CY	86	ALA	7.7
37	DC	178	LYS	7.7
24	CY	88	LYS	7.7
34	B9	17	ILE	7.7
7	AG	78	ARG	7.6
24	CY	41	ASP	7.6
34	D9	7	VAL	7.6
31	D6	24	GLU	7.6
37	DC	167	ASP	7.6
31	B6	47	THR	7.6
37	DC	46	ALA	7.6
9	CI	8	GLY	7.5
24	AY	257	GLY	7.5
31	D6	29	ASN	7.5
11	AK	129	SER	7.5
45	BK	141	ALA	7.5
37	BC	176	VAL	7.5
45	BK	83	GLY	7.5
24	AY	258	ILE	7.5
12	AL	128	ALA	7.5
34	D9	27	CYS	7.4
35	BA	654(I)	C	7.4
22	AW	17	C	7.4
37	BC	188	ASP	7.4
16	CP	19	ILE	7.4
34	D9	29	ASN	7.4
19	AS	11	VAL	7.4
35	BA	654(H)	G	7.4
45	DK	51	ALA	7.4
37	BC	204	GLY	7.3
31	D6	20	ASN	7.3
11	CK	129	SER	7.3
24	CY	237	PRO	7.3
24	AY	87	LEU	7.3
31	D6	26	ASN	7.3

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Mol	Chain	Res	Type	RSRZ
10	AJ	34	VAL	7.3
6	AF	101	ALA	7.3
37	DC	44	VAL	7.2
21	AU	17	THR	7.2
24	CY	236	GLY	7.2
37	BC	193	PHE	7.2
8	CH	25	ASP	7.2
19	CS	40	ILE	7.2
31	B6	44	ARG	7.2
34	D9	4	ARG	7.2
24	CY	250	ARG	7.2
25	B0	3	HIS	7.2
45	BK	140	GLY	7.2
9	AI	102	LEU	7.2
34	D9	5	ALA	7.1
35	BA	654(F)	C	7.1
24	AY	224	PRO	7.1
31	B6	53	LYS	7.1
34	B9	11	CYS	7.1
45	BK	78	ILE	7.1
37	BC	42	VAL	7.1
37	BC	209	PHE	7.1
24	CY	246	ASP	7.0
34	B9	29	ASN	7.0
37	DC	209	PHE	7.0
24	CY	89	PRO	7.0
10	CJ	98	ILE	7.0
45	DK	50	ASP	7.0
24	CY	90	GLU	7.0
42	BH	170	ARG	7.0
37	DC	170	GLY	7.0
31	B6	23	THR	7.0
45	BK	94	GLU	7.0
24	CY	239	GLY	7.0
45	DK	14	ALA	6.9
45	DK	58	THR	6.9
35	BA	2802	G	6.9
1	CA	1257	U	6.9
21	AU	9	ARG	6.9
21	AU	25	LYS	6.9
25	B0	85	ALA	6.9
34	B9	35	ARG	6.9

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Mol	Chain	Res	Type	RSRZ
3	AC	189	ALA	6.9
24	CY	193	SER	6.9
37	BC	172	ILE	6.9
34	D9	6	SER	6.8
31	D6	49	HIS	6.8
34	D9	35	ARG	6.8
48	BP	150	ALA	6.8
45	BK	31	GLY	6.8
10	CJ	10	GLY	6.8
45	DK	16	LYS	6.8
31	B6	51	GLU	6.7
9	CI	15	ALA	6.7
37	BC	180	SER	6.7
28	B3	1	MET	6.7
37	BC	50	ILE	6.7
34	D9	32	HIS	6.7
25	B0	9	SER	6.7
25	D0	4	LYS	6.7
7	AG	81	GLY	6.7
34	B9	16	VAL	6.7
24	CY	93	GLU	6.7
31	D6	14	THR	6.7
11	CK	128	ALA	6.7
24	CY	264	THR	6.6
31	B6	9	LEU	6.6
35	BA	2146	C	6.6
31	B6	45	LYS	6.6
3	AC	155	GLY	6.6
37	BC	210	LEU	6.6
45	DK	37	PHE	6.6
7	CG	84	ASN	6.6
37	DC	51	ASP	6.5
37	BC	200	HIS	6.5
3	AC	205	GLY	6.5
45	BK	128	ALA	6.5
49	DQ	141	GLN	6.5
19	AS	9	VAL	6.5
34	D9	37	GLY	6.5
45	BK	88	ALA	6.5
24	CY	235	SER	6.5
37	DC	198	GLU	6.5
42	BH	101	ARG	6.5

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Mol	Chain	Res	Type	RSRZ
34	B9	15	LYS	6.5
45	BK	138	VAL	6.4
34	B9	26	ILE	6.4
24	AY	249	VAL	6.4
24	CY	91	LEU	6.4
40	DF	133	ASN	6.4
45	DK	1	MET	6.4
19	CS	71	LEU	6.4
28	D3	1	MET	6.4
34	B9	4	ARG	6.4
34	B9	19	ARG	6.4
35	DA	654(H)	G	6.4
39	BE	204	ALA	6.4
24	CY	75	LEU	6.4
35	DA	654(E)	G	6.4
4	CD	207	TYR	6.3
45	BK	71	THR	6.3
24	AY	8	GLN	6.3
37	BC	205	ALA	6.3
45	DK	20	ALA	6.3
31	B6	19	ARG	6.3
34	D9	17	ILE	6.3
16	CP	1	MET	6.3
13	AM	122	LYS	6.3
34	D9	18	ARG	6.3
37	BC	197	LEU	6.3
45	BK	131	ALA	6.3
9	CI	102	LEU	6.3
45	BK	124	ALA	6.3
3	CC	151	VAL	6.2
34	D9	13	LYS	6.2
19	CS	39	THR	6.2
57	BY	64	GLU	6.2
19	AS	38	SER	6.2
45	BK	89	HIS	6.2
35	DA	2139	C	6.2
28	B3	60	GLU	6.2
9	AI	30	GLY	6.2
2	AB	132	LYS	6.2
24	AY	162	ALA	6.1
1	CA	89	C	6.1
35	BA	654(G)	C	6.1

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Mol	Chain	Res	Type	RSRZ
10	AJ	72	VAL	6.1
37	DC	229	SER	6.1
18	CR	31	LEU	6.1
24	CY	198	SER	6.1
25	D0	7	LEU	6.1
24	AY	77	GLU	6.1
34	B9	32	HIS	6.1
37	BC	51	ASP	6.1
13	CM	98	VAL	6.1
34	B9	30	PRO	6.1
24	AY	86	ALA	6.1
11	CK	13	GLN	6.1
19	CS	74	PHE	6.1
24	CY	234	ALA	6.1
51	DS	26	LEU	6.0
7	CG	82	GLY	6.0
45	BK	4	VAL	6.0
23	AX	14	A	6.0
24	CY	33	LEU	6.0
45	BK	17	ALA	6.0
57	BY	59	GLY	6.0
19	CS	35	SER	6.0
24	AY	199	GLY	6.0
24	AY	75	LEU	6.0
10	AJ	33	GLN	6.0
24	AY	196	ASP	5.9
13	AM	84	ILE	5.9
31	B6	42	TRP	5.9
31	D6	9	LEU	5.9
42	DH	170	ARG	5.9
27	D2	72	ALA	5.9
19	AS	74	PHE	5.9
21	AU	12	LYS	5.9
42	BH	169	VAL	5.9
51	BS	59	LYS	5.9
55	DW	112	GLY	5.9
34	D9	9	ARG	5.9
45	BK	136	VAL	5.9
31	D6	31	PRO	5.9
10	CJ	74	ILE	5.9
24	CY	48	VAL	5.9
10	AJ	7	LYS	5.8

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Mol	Chain	Res	Type	RSRZ
22	CW	34	G	5.8
34	D9	26	ILE	5.8
37	BC	44	VAL	5.8
24	AY	248	ALA	5.8
31	B6	26	ASN	5.8
37	DC	53	ARG	5.8
37	BC	185	LYS	5.8
24	CY	249	VAL	5.8
13	AM	7	VAL	5.8
24	AY	198	SER	5.7
45	BK	134	MET	5.7
31	D6	13	CYS	5.7
58	DZ	113	ALA	5.7
19	AS	78	ARG	5.7
8	AH	131	GLY	5.7
57	BY	55	TYR	5.7
35	DA	2113	U	5.7
51	DS	109	GLY	5.7
21	AU	21	TYR	5.7
24	CY	84	ARG	5.7
24	AY	70	GLN	5.7
37	BC	178	LYS	5.7
42	DH	168	PRO	5.7
52	BT	138	ALA	5.7
24	CY	69	LEU	5.7
37	DC	35	THR	5.7
16	CP	17	TYR	5.7
37	DC	201	LYS	5.7
37	DC	26	ALA	5.7
33	D8	65	GLU	5.6
34	D9	31	LYS	5.6
45	BK	21	PRO	5.6
28	B3	28	LEU	5.6
37	DC	48	LEU	5.6
37	BC	52	PRO	5.6
34	D9	16	VAL	5.6
10	AJ	6	ILE	5.6
31	B6	49	HIS	5.6
34	B9	13	LYS	5.6
45	DK	111	LYS	5.6
42	BH	96	ALA	5.6
45	DK	141	ALA	5.6

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Mol	Chain	Res	Type	RSRZ
34	D9	22	ARG	5.6
10	CJ	34	VAL	5.6
45	DK	48	MET	5.6
24	AY	193	SER	5.6
24	AY	227	LEU	5.6
24	AY	253	HIS	5.6
24	CY	62	PHE	5.5
49	BQ	141	GLN	5.5
51	DS	68	GLN	5.5
24	CY	241	GLY	5.5
24	CY	71	GLY	5.5
51	BS	109	GLY	5.5
5	CE	24	ARG	5.5
37	BC	27	ALA	5.5
24	CY	78	GLU	5.5
31	B6	52	VAL	5.5
24	CY	232	MET	5.5
34	B9	3	VAL	5.5
37	BC	28	ARG	5.5
22	AW	16	U	5.5
19	AS	40	ILE	5.5
3	CC	200	ALA	5.5
24	CY	260	VAL	5.4
9	AI	65	VAL	5.4
37	DC	203	GLU	5.4
42	DH	42	ARG	5.4
3	CC	201	TYR	5.4
7	CG	83	ALA	5.4
7	CG	156	TRP	5.4
16	CP	34	GLU	5.4
45	DK	96	VAL	5.4
30	B5	60	VAL	5.4
37	BC	183	PRO	5.4
24	CY	162	ALA	5.4
10	AJ	98	ILE	5.4
24	CY	247	SER	5.4
30	B5	2	ALA	5.4
31	B6	48	VAL	5.4
45	BK	120	LEU	5.4
3	CC	166	GLU	5.4
24	CY	7	ALA	5.4
57	DY	45	VAL	5.3

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Mol	Chain	Res	Type	RSRZ
53	BU	91	ASP	5.3
45	DK	138	VAL	5.3
24	CY	196	ASP	5.3
24	CY	245	THR	5.3
24	CY	218	VAL	5.3
24	CY	67	SER	5.3
45	BK	66	THR	5.3
37	BC	46	ALA	5.3
16	CP	35	LYS	5.3
31	D6	16	CYS	5.3
42	BH	168	PRO	5.3
24	AY	66	GLU	5.3
42	BH	53	GLU	5.3
13	CM	95	GLY	5.3
18	AR	62	GLU	5.3
21	CU	5	ASP	5.3
13	CM	15	VAL	5.3
22	CW	33	U	5.3
21	CU	24	ARG	5.2
22	CW	17	C	5.2
24	AY	69	LEU	5.2
37	DC	200	HIS	5.2
2	AB	114	ARG	5.2
13	CM	126	LYS	5.2
35	DA	2146	C	5.2
24	AY	251	VAL	5.2
37	BC	39	ASP	5.2
45	BK	77	LEU	5.2
7	AG	4	ARG	5.2
13	CM	125	ARG	5.2
31	D6	28	ARG	5.2
41	BG	34	LEU	5.2
37	DC	180	SER	5.2
21	AU	22	ARG	5.2
45	DK	82	ALA	5.2
45	DK	13	PRO	5.2
57	BY	30	VAL	5.2
24	CY	32	ARG	5.2
19	CS	5	LEU	5.2
42	DH	45	VAL	5.2
16	CP	3	LYS	5.1
9	AI	33	PHE	5.1

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Mol	Chain	Res	Type	RSRZ
10	AJ	70	ARG	5.1
34	D9	28	GLU	5.1
37	BC	49	GLY	5.1
34	B9	9	ARG	5.1
21	CU	21	TYR	5.1
34	D9	36	GLN	5.1
42	BH	95	ARG	5.1
45	DK	19	PRO	5.1
14	AN	8	GLU	5.1
45	DK	56	GLU	5.1
21	AU	13	ILE	5.1
24	CY	251	VAL	5.1
31	B6	24	GLU	5.1
45	DK	123	ALA	5.1
31	B6	29	ASN	5.1
1	AA	84	U	5.1
19	CS	42	PRO	5.1
45	DK	26	ALA	5.1
37	DC	193	PHE	5.1
37	BC	189	ASN	5.0
19	CS	59	PRO	5.0
24	CY	267	SER	5.0
42	BH	24	VAL	5.0
24	AY	245	THR	5.0
12	CL	19	ARG	5.0
33	B8	64	TYR	5.0
42	DH	171	LEU	5.0
42	BH	97	ARG	5.0
10	AJ	8	LEU	5.0
31	B6	11	LEU	5.0
35	DA	2138	C	5.0
26	B1	23	LYS	5.0
13	CM	121	LYS	5.0
24	AY	33	LEU	5.0
18	CR	54	ARG	5.0
14	AN	2	ALA	5.0
37	BC	48	LEU	5.0
24	CY	339	GLY	5.0
3	CC	169	ALA	5.0
37	BC	177	GLY	5.0
42	BH	44	VAL	4.9
52	DT	1	MET	4.9

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Mol	Chain	Res	Type	RSRZ
31	D6	21	TYR	4.9
37	DC	168	LYS	4.9
45	BK	132	ARG	4.9
52	DT	92	GLY	4.9
37	BC	202	PRO	4.9
12	CL	128	ALA	4.9
24	CY	44	ALA	4.9
10	CJ	71	LEU	4.9
24	AY	194	PRO	4.9
16	CP	66	PRO	4.9
37	BC	221	PRO	4.9
7	AG	85	TYR	4.9
37	DC	40	GLU	4.9
10	CJ	4	ILE	4.9
13	AM	101	GLN	4.9
21	AU	2	GLY	4.9
7	AG	82	GLY	4.9
9	AI	64	THR	4.9
19	AS	45	VAL	4.9
57	BY	46	LYS	4.9
45	BK	22	PRO	4.9
13	AM	83	ASP	4.9
16	CP	39	TYR	4.9
45	DK	18	THR	4.9
30	D5	2	ALA	4.9
45	BK	32	ALA	4.9
46	BN	70	LYS	4.9
57	BY	47	LYS	4.9
13	AM	108	ARG	4.9
1	AA	723	U	4.9
24	CY	268	GLN	4.8
10	CJ	73	ASP	4.8
24	CY	261	THR	4.8
45	DK	66	THR	4.8
16	CP	32	TYR	4.8
7	AG	5	ARG	4.8
20	CT	100	ILE	4.8
37	BC	35	THR	4.8
34	B9	33	LYS	4.8
37	BC	228	HIS	4.8
10	AJ	35	SER	4.8
37	BC	184	GLU	4.8

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Mol	Chain	Res	Type	RSRZ
51	DS	108	GLY	4.8
35	BA	1534	U	4.8
45	BK	10	LEU	4.8
51	DS	87	PHE	4.8
24	AY	262	CYS	4.8
34	B9	28	GLU	4.8
18	CR	51	LEU	4.8
45	DK	59	ILE	4.8
42	BH	106	THR	4.8
35	BA	654(E)	G	4.8
18	AR	28	GLU	4.7
19	AS	13	ASP	4.7
10	AJ	5	ARG	4.7
24	AY	275	ALA	4.7
31	D6	33	LYS	4.7
34	D9	8	LYS	4.7
32	B7	47	ARG	4.7
2	AB	120	ALA	4.7
27	D2	70	GLN	4.7
45	BK	96	VAL	4.7
24	CY	97	LYS	4.7
16	CP	22	THR	4.7
2	AB	155	LEU	4.7
9	CI	14	VAL	4.7
10	CJ	22	LYS	4.7
22	CW	35	A	4.7
24	CY	275	ALA	4.7
21	CU	26	LYS	4.7
37	DC	226	ASN	4.7
57	DY	44	ILE	4.7
45	BK	56	GLU	4.7
45	BK	137	GLU	4.7
31	B6	43	CYS	4.7
37	BC	45	HIS	4.7
31	D6	51	GLU	4.7
37	BC	198	GLU	4.7
31	D6	44	ARG	4.7
24	CY	161	GLU	4.6
37	DC	179	ALA	4.6
51	DS	59	LYS	4.6
35	BA	654(L)	G	4.6
34	D9	10	ILE	4.6

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Mol	Chain	Res	Type	RSRZ
58	BZ	97	GLU	4.6
37	BC	219	MET	4.6
37	DC	194	ILE	4.6
16	AP	19	ILE	4.6
28	B3	26	LEU	4.6
31	D6	34	LEU	4.6
13	CM	94	ARG	4.6
24	CY	315	VAL	4.6
35	DA	2136	C	4.6
57	BY	28	LYS	4.6
31	D6	10	LEU	4.6
9	AI	62	TYR	4.6
24	AY	261	THR	4.6
35	BA	654(J)	A	4.6
37	BC	2	PRO	4.6
1	AA	80	G	4.6
57	BY	39	VAL	4.6
8	CH	24	THR	4.6
13	CM	96	LEU	4.6
2	AB	135	GLN	4.6
37	DC	41	THR	4.6
24	AY	74	GLU	4.6
37	DC	223	VAL	4.6
37	BC	56	ASP	4.6
24	CY	258	ILE	4.6
45	DK	97	GLY	4.6
45	DK	121	GLU	4.6
4	CD	203	VAL	4.6
10	CJ	70	ARG	4.6
45	DK	98	ARG	4.6
1	CA	80	G	4.6
28	B3	2	PRO	4.5
42	BH	111	HIS	4.5
52	BT	2	ASN	4.5
13	AM	102	ARG	4.5
4	CD	125	HIS	4.5
24	AY	62	PHE	4.5
24	CY	340	ASP	4.5
42	BH	123	PHE	4.5
24	CY	73	LEU	4.5
39	DE	204	ALA	4.5
19	AS	59	PRO	4.5

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Mol	Chain	Res	Type	RSRZ
34	D9	3	VAL	4.5
14	AN	60	SER	4.5
24	CY	47	LYS	4.5
57	BY	57	GLN	4.5
8	CH	61	VAL	4.5
41	DG	35	GLU	4.5
42	BH	112	PRO	4.5
45	DK	89	HIS	4.5
42	BH	88	LEU	4.5
35	BA	2894	G	4.5
2	AB	68	ILE	4.5
19	CS	41	VAL	4.5
3	AC	188	LEU	4.5
21	CU	17	THR	4.5
45	BK	135	GLY	4.5
45	DK	120	LEU	4.5
9	AI	27	THR	4.5
20	CT	106	ALA	4.4
24	CY	72	LEU	4.4
45	BK	33	ASN	4.4
37	DC	25	GLU	4.4
18	AR	31	LEU	4.4
11	AK	126	ARG	4.4
22	AW	18	G	4.4
19	CS	75	ALA	4.4
45	BK	86	LYS	4.4
9	CI	85	LEU	4.4
18	AR	51	LEU	4.4
8	AH	132	GLU	4.4
21	CU	2	GLY	4.4
7	AG	37	ASN	4.4
24	AY	254	LEU	4.4
35	DA	654(F)	C	4.4
10	AJ	99	LYS	4.4
13	AM	77	ASN	4.4
40	BF	12	LEU	4.4
24	CY	149	PHE	4.4
2	CB	96	ARG	4.4
1	AA	1001(A)	G	4.4
11	AK	14	VAL	4.4
35	BA	2795	G	4.4
18	AR	23	LYS	4.4

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Mol	Chain	Res	Type	RSRZ
24	CY	259	THR	4.4
7	AG	26	PHE	4.4
34	B9	22	ARG	4.4
45	BK	102	GLU	4.4
9	AI	81	ILE	4.4
37	DC	202	PRO	4.4
37	BC	47	LYS	4.4
21	CU	16	GLY	4.3
24	CY	68	ASP	4.3
19	CS	76	PRO	4.3
45	DK	115	LEU	4.3
10	AJ	59	SER	4.3
35	DA	654(G)	C	4.3
45	DK	15	GLY	4.3
20	CT	54	LYS	4.3
45	DK	70	LYS	4.3
42	BH	42	ARG	4.3
35	BA	1509	C	4.3
45	DK	38	VAL	4.3
24	AY	195	PHE	4.3
31	B6	39	TYR	4.3
11	AK	127	LYS	4.3
48	DP	150	ALA	4.3
28	B3	57	GLU	4.3
45	BK	92	GLY	4.3
51	BS	37	ALA	4.3
28	B3	29	ARG	4.2
42	BH	29	PRO	4.2
21	AU	20	LYS	4.2
45	BK	95	LYS	4.2
42	BH	94	TYR	4.2
24	CY	94	ALA	4.2
45	DK	124	ALA	4.2
34	B9	8	LYS	4.2
37	DC	190	ILE	4.2
42	BH	17	VAL	4.2
2	AB	116	GLU	4.2
1	CA	88	A	4.2
41	BG	98	ARG	4.2
45	BK	90	LYS	4.2
29	B4	25	TYR	4.2
45	DK	8	VAL	4.2

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Mol	Chain	Res	Type	RSRZ
24	AY	43	GLU	4.2
24	AY	197	ALA	4.2
22	CW	16	U	4.2
14	CN	8	GLU	4.2
39	DE	54	GLN	4.2
2	AB	130	ARG	4.2
31	D6	48	VAL	4.2
45	DK	74	ALA	4.1
34	D9	15	LYS	4.1
9	CI	65	VAL	4.1
37	BC	215	VAL	4.1
2	AB	96	ARG	4.1
2	AB	113	HIS	4.1
31	B6	46	HIS	4.1
9	AI	37	PHE	4.1
7	CG	79	ARG	4.1
42	BH	89	ILE	4.1
1	AA	1286	A	4.1
35	DA	654(J)	A	4.1
34	B9	7	VAL	4.1
35	DA	2141	G	4.1
24	CY	40	ASN	4.1
33	D8	34	TRP	4.1
31	B6	12	GLU	4.1
34	B9	20	HIS	4.1
39	DE	75	VAL	4.1
34	D9	19	ARG	4.1
2	AB	70	PHE	4.1
45	DK	93	ARG	4.1
19	AS	39	THR	4.1
19	AS	12	ASP	4.1
19	CS	47	HIS	4.1
10	CJ	40	LEU	4.1
24	AY	79	LEU	4.1
49	DQ	105	GLU	4.1
37	DC	45	HIS	4.1
43	BI	4	ILE	4.1
38	DD	26	LYS	4.0
24	AY	42	PRO	4.0
37	DC	14	LYS	4.0
41	BG	72	ARG	4.0
24	CY	197	ALA	4.0

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Mol	Chain	Res	Type	RSRZ
51	DS	81	GLY	4.0
21	CU	25	LYS	4.0
45	DK	7	VAL	4.0
35	DA	2116	G	4.0
13	AM	92	HIS	4.0
58	BZ	114	GLY	4.0
24	CY	338	ASP	4.0
13	CM	112	GLY	4.0
21	CU	19	GLY	4.0
42	BH	37	VAL	4.0
31	B6	18	ARG	4.0
4	CD	204	ILE	4.0
46	BN	72	TYR	4.0
17	CQ	2	PRO	4.0
13	CM	84	ILE	4.0
56	BX	26	TYR	4.0
24	CY	85	GLU	4.0
49	DQ	33	GLY	4.0
37	BC	34	ALA	4.0
58	DZ	172	ALA	4.0
31	D6	19	ARG	4.0
10	CJ	26	ALA	4.0
9	AI	9	ARG	4.0
45	DK	60	TYR	4.0
48	BP	110	TYR	4.0
20	CT	9	ASN	4.0
57	BY	62	GLU	4.0
16	CP	30	GLY	4.0
58	DZ	114	GLY	4.0
24	CY	229	ILE	4.0
31	D6	17	LYS	4.0
34	B9	2	LYS	4.0
55	BW	72	LYS	4.0
33	B8	65	GLU	3.9
58	BZ	96	VAL	3.9
24	CY	266	ARG	3.9
35	DA	2799	C	3.9
37	DC	205	ALA	3.9
24	AY	264	THR	3.9
57	DY	2	ARG	3.9
2	AB	79	ASP	3.9
57	BY	65	ALA	3.9

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Mol	Chain	Res	Type	RSRZ
19	CS	38	SER	3.9
24	CY	154	VAL	3.9
24	AY	226	GLU	3.9
31	D6	30	THR	3.9
37	DC	31	LYS	3.9
3	AC	196	LEU	3.9
19	AS	15	LEU	3.9
10	AJ	32	ALA	3.9
13	CM	93	ARG	3.9
24	CY	317	ASP	3.9
45	BK	30	HIS	3.9
13	CM	100	GLY	3.9
37	DC	199	ALA	3.9
45	DK	57	ILE	3.9
57	BY	54	LYS	3.9
1	CA	1001(A)	G	3.9
37	BC	211	ARG	3.9
8	CH	59	LEU	3.9
31	D6	52	VAL	3.9
3	AC	154	SER	3.9
34	B9	5	ALA	3.9
3	AC	204	LEU	3.9
54	BV	101	GLY	3.9
24	CY	164	ILE	3.9
16	CP	61	SER	3.9
21	AU	16	GLY	3.9
16	CP	23	ASP	3.9
35	BA	2803	C	3.9
24	AY	92	GLU	3.9
37	BC	23	ILE	3.9
24	CY	29	LEU	3.9
22	AW	73	A	3.9
37	DC	24	ASP	3.9
4	CD	130	GLY	3.9
10	CJ	77	PRO	3.9
20	CT	70	SER	3.9
12	AL	127	GLU	3.9
16	CP	6	LEU	3.8
27	B2	72	ALA	3.9
24	CY	220	VAL	3.8
37	BC	169	THR	3.8
29	B4	23	GLU	3.8

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Mol	Chain	Res	Type	RSRZ
24	AY	228	ARG	3.8
37	BC	186	LEU	3.8
52	BT	137	LYS	3.8
40	DF	1	MET	3.8
10	AJ	3	LYS	3.8
16	CP	4	ILE	3.8
22	CW	20	U	3.8
24	CY	244	THR	3.8
57	BY	86	ARG	3.8
3	CC	159	GLY	3.8
24	AY	68	ASP	3.8
35	BA	2139	C	3.8
8	AH	94	TYR	3.8
46	BN	75	TYR	3.8
28	D3	54	VAL	3.8
37	DC	22	THR	3.8
39	BE	53	PRO	3.8
45	DK	54	PRO	3.8
2	CB	135	GLN	3.8
5	AE	29	GLY	3.8
37	DC	181	PHE	3.8
19	CS	17	GLU	3.8
16	CP	21	VAL	3.8
21	AU	14	TRP	3.8
58	DZ	167	PRO	3.8
14	AN	38	GLY	3.8
21	AU	19	GLY	3.8
45	BK	75	SER	3.8
3	AC	202	ILE	3.8
10	AJ	4	ILE	3.8
45	BK	1	MET	3.8
9	AI	73	GLN	3.8
12	CL	32	PHE	3.8
22	AW	34	G	3.8
9	AI	77	ILE	3.8
39	DE	158	GLY	3.8
24	CY	314	TYR	3.8
31	D6	47	THR	3.8
4	CD	75	PHE	3.8
40	BF	1	MET	3.8
12	CL	15	ARG	3.8
24	AY	316	LEU	3.8

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Mol	Chain	Res	Type	RSRZ
30	B5	58	LEU	3.8
57	BY	88	LYS	3.8
37	DC	197	LEU	3.8
24	CY	151	VAL	3.8
37	BC	212	SER	3.8
54	BV	48	GLY	3.7
21	CU	9	ARG	3.7
37	BC	53	ARG	3.7
53	BU	2	PRO	3.7
19	AS	35	SER	3.7
24	CY	159	GLY	3.7
21	AU	15	ARG	3.7
24	AY	116	ALA	3.7
13	CM	120	LYS	3.7
9	CI	67	GLY	3.7
39	DE	76	ARG	3.7
35	DA	2795	G	3.7
4	CD	3	ARG	3.7
11	CK	110	ASP	3.7
40	BF	10	PRO	3.7
37	DC	166	ASN	3.7
37	BC	41	THR	3.7
17	AQ	76	LEU	3.7
3	CC	167	TRP	3.7
24	AY	88	LYS	3.7
9	AI	128	ARG	3.7
24	AY	314	TYR	3.7
45	DK	134	MET	3.7
37	BC	8	TYR	3.7
19	CS	10	PHE	3.7
13	CM	111	LYS	3.7
24	AY	272	LYS	3.7
24	CY	165	ASP	3.7
20	AT	83	ARG	3.7
4	CD	70	ILE	3.7
20	AT	99	LEU	3.7
24	AY	47	LYS	3.7
24	CY	265	THR	3.7
34	D9	21	GLY	3.7
24	AY	255	PRO	3.7
24	CY	252	VAL	3.7
51	BS	87	PHE	3.6

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Mol	Chain	Res	Type	RSRZ
31	B6	35	GLU	3.6
35	DA	2178	C	3.6
51	DS	23	ARG	3.6
38	BD	181	GLU	3.6
41	DG	3	LEU	3.6
41	DG	32	PRO	3.6
31	B6	40	CYS	3.6
45	BK	27	LEU	3.6
16	CP	2	VAL	3.6
16	CP	29	ASP	3.6
24	CY	226	GLU	3.6
24	CY	274	LEU	3.6
3	CC	179	ARG	3.6
37	DC	28	ARG	3.6
24	AY	220	VAL	3.6
38	BD	2	ALA	3.6
24	CY	51	GLU	3.6
57	BY	63	LYS	3.6
45	BK	133	SER	3.6
58	DZ	166	SER	3.6
57	BY	50	ARG	3.6
3	CC	157	ILE	3.6
3	CC	199	LYS	3.6
24	CY	322	LYS	3.6
57	BY	6	HIS	3.6
57	BY	60	PHE	3.6
37	DC	32	GLU	3.6
45	BK	81	ALA	3.6
3	AC	194	GLY	3.6
24	AY	65	LEU	3.6
10	CJ	72	VAL	3.6
37	DC	196	ALA	3.6
16	CP	37	GLY	3.6
8	CH	23	SER	3.6
24	AY	269	ILE	3.6
49	DQ	1	MET	3.6
51	DS	25	ARG	3.6
51	DS	82	ILE	3.6
21	AU	3	LYS	3.6
42	BH	83	TYR	3.6
30	D5	57	VAL	3.6
37	DC	42	VAL	3.6

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Mol	Chain	Res	Type	RSRZ
24	AY	277	LYS	3.6
4	CD	135	LEU	3.6
18	AR	58	LEU	3.6
35	BA	2147	G	3.6
24	AY	335	ASN	3.6
31	D6	42	TRP	3.6
52	DT	93	ARG	3.6
12	AL	28	LYS	3.6
31	B6	38	LYS	3.6
14	AN	21	TYR	3.6
3	AC	190	ARG	3.6
15	AO	59	MET	3.6
42	DH	44	VAL	3.6
45	DK	75	SER	3.6
12	CL	28	LYS	3.5
9	CI	29	ASN	3.5
35	DA	2801	A	3.5
3	CC	196	LEU	3.5
16	AP	22	THR	3.5
17	CQ	74	LEU	3.5
39	DE	205	ALA	3.5
45	BK	74	ALA	3.5
32	B7	1	MET	3.5
41	BG	86	MET	3.5
52	DT	106	SER	3.5
58	BZ	112	ARG	3.5
51	DS	60	GLY	3.5
7	CG	85	TYR	3.5
45	DK	76	TYR	3.5
24	CY	92	GLU	3.5
42	DH	53	GLU	3.5
19	CS	70	LYS	3.5
31	D6	45	LYS	3.5
3	CC	208	ILE	3.5
31	D6	11	LEU	3.5
39	DE	56	PRO	3.5
42	BH	114	VAL	3.5
35	BA	2179	C	3.5
37	DC	192	ALA	3.5
56	DX	67	GLY	3.5
42	BH	104	GLU	3.5
41	BG	47	LYS	3.5

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Mol	Chain	Res	Type	RSRZ
34	B9	10	ILE	3.5
51	DS	41	ASP	3.5
21	CU	22	ARG	3.5
38	BD	262	ARG	3.5
57	DY	28	LYS	3.5
3	CC	168	ALA	3.5
37	DC	2	PRO	3.5
24	CY	152	GLU	3.5
4	CD	112	VAL	3.5
8	CH	129	VAL	3.5
26	B1	4	VAL	3.5
42	DH	103	LEU	3.5
40	BF	128	ALA	3.5
10	AJ	39	PRO	3.5
48	BP	126	VAL	3.5
19	CS	49	ILE	3.5
7	CG	5	ARG	3.5
28	B3	27	GLY	3.5
37	BC	201	LYS	3.5
37	DC	4	HIS	3.5
57	BY	22	GLY	3.5
45	DK	25	PRO	3.5
7	AG	16	LEU	3.5
24	CY	189	LEU	3.5
45	BK	106	GLU	3.4
21	AU	7	ARG	3.4
24	AY	247	SER	3.4
42	BH	52	VAL	3.4
3	AC	157	ILE	3.4
42	BH	105	LEU	3.4
3	CC	160	ALA	3.4
24	AY	78	GLU	3.4
24	CY	225	GLU	3.4
39	BE	54	GLN	3.4
32	B7	46	VAL	3.4
39	BE	78	LEU	3.4
35	DA	2115	G	3.4
47	DO	14	THR	3.4
8	CH	22	GLU	3.4
24	AY	192	PRO	3.4
22	CV	17	C	3.4
35	DA	2803	C	3.4

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Mol	Chain	Res	Type	RSRZ
57	DY	47	LYS	3.4
3	CC	184	TYR	3.4
20	CT	18	GLN	3.4
24	AY	252	VAL	3.4
9	AI	29	ASN	3.4
42	BH	109	PHE	3.4
42	BH	51	ARG	3.4
2	AB	138	LEU	3.4
35	BA	2796	U	3.4
5	CE	89	ILE	3.4
24	AY	63	ARG	3.4
45	DK	92	GLY	3.4
57	BY	48	ALA	3.4
1	AA	1257	U	3.4
24	CY	163	GLY	3.4
58	DZ	115	GLY	3.4
3	CC	156	ARG	3.4
10	CJ	35	SER	3.4
24	CY	254	LEU	3.4
51	DS	53	SER	3.4
41	DG	86	MET	3.4
3	CC	198	VAL	3.4
45	DK	128	ALA	3.4
10	AJ	20	ALA	3.4
41	DG	34	LEU	3.4
19	CS	69	HIS	3.4
57	DY	63	LYS	3.4
9	CI	96	LEU	3.4
5	AE	30	ALA	3.4
49	BQ	104	PHE	3.4
51	DS	107	GLU	3.4
13	CM	110	ARG	3.4
57	BY	2	ARG	3.4
3	CC	207	VAL	3.3
19	AS	60	VAL	3.3
28	D3	12	PRO	3.3
24	AY	340	ASP	3.3
39	BE	151	TYR	3.3
43	BI	120	ILE	3.3
9	AI	87	GLN	3.3
17	CQ	58	GLU	3.3
24	AY	299	ARG	3.3

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Mol	Chain	Res	Type	RSRZ
51	BS	58	LEU	3.3
28	B3	12	PRO	3.3
17	CQ	42	TYR	3.3
39	DE	81	ILE	3.3
10	AJ	64	GLU	3.3
19	CS	50	ALA	3.3
4	CD	107	ARG	3.3
20	CT	22	ARG	3.3
45	BK	39	LYS	3.3
22	CW	44	G	3.3
13	AM	94	ARG	3.3
24	AY	96	LYS	3.3
16	AP	59	TRP	3.3
1	CA	202	U	3.3
37	DC	213	VAL	3.3
3	CC	164	ARG	3.3
13	CM	114	ARG	3.3
15	CO	88	ARG	3.3
45	BK	82	ALA	3.3
45	DK	30	HIS	3.3
17	AQ	24	GLU	3.3
24	CY	74	GLU	3.3
3	CC	155	GLY	3.3
24	AY	6	LEU	3.3
24	AY	225	GLU	3.3
5	AE	28	PHE	3.3
19	CS	67	VAL	3.3
35	DA	1534	U	3.3
35	DA	2144	U	3.3
37	BC	166	ASN	3.3
45	DK	39	LYS	3.3
54	BV	36	PRO	3.3
35	DA	508	G	3.3
51	BS	27	SER	3.3
10	AJ	38	ILE	3.3
13	CM	83	ASP	3.3
24	CY	323	ASP	3.3
16	CP	13	HIS	3.3
11	CK	117	ASN	3.3
24	AY	243	ASN	3.3
28	B3	58	VAL	3.3
12	CL	16	GLU	3.3

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Mol	Chain	Res	Type	RSRZ
19	AS	76	PRO	3.2
24	AY	9	ARG	3.2
42	BH	167	GLU	3.2
10	CJ	6	ILE	3.2
45	BK	45	THR	3.2
57	BY	49	VAL	3.2
7	CG	11	GLN	3.2
19	AS	43	GLU	3.2
8	AH	87	SER	3.2
12	CL	56	ALA	3.2
14	AN	55	GLY	3.2
37	DC	204	GLY	3.2
3	CC	93	LYS	3.2
24	CY	343	ASP	3.2
39	DE	4	ILE	3.2
45	BK	127	ILE	3.2
10	AJ	71	LEU	3.2
24	CY	95	ALA	3.2
37	DC	212	SER	3.2
19	CS	48	THR	3.2
37	DC	169	THR	3.2
24	AY	48	VAL	3.2
37	BC	24	ASP	3.2
39	BE	66	HIS	3.2
24	CY	194	PRO	3.2
24	AY	171	VAL	3.2
49	DQ	104	PHE	3.2
13	AM	126	LYS	3.2
25	D0	53	MET	3.2
34	D9	2	LYS	3.2
35	BA	2801(A)	A	3.2
3	CC	170	GLN	3.2
18	AR	57	GLY	3.2
24	CY	148	GLY	3.2
45	BK	29	GLN	3.2
9	AI	14	VAL	3.2
10	AJ	100	THR	3.2
9	AI	105	ASP	3.2
24	AY	118	LEU	3.2
37	DC	225	ILE	3.2
45	BK	13	PRO	3.2
28	B3	34	GLU	3.2

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Mol	Chain	Res	Type	RSRZ
13	CM	108	ARG	3.2
18	AR	76	LEU	3.2
55	BW	106	ILE	3.2
24	CY	45	ALA	3.2
33	B8	34	TRP	3.2
41	BG	48	GLU	3.2
4	AD	47	ARG	3.2
8	AH	112	LEU	3.2
9	AI	67	GLY	3.2
24	AY	241	GLY	3.2
37	DC	186	LEU	3.2
3	AC	60	ALA	3.2
19	CS	60	VAL	3.2
25	B0	72	ARG	3.2
7	AG	31	MET	3.2
20	CT	72	LEU	3.2
51	DS	24	LEU	3.2
41	BG	50	ALA	3.2
21	AU	10	ARG	3.2
24	CY	282	ARG	3.2
35	DA	2132	U	3.2
24	CY	311	ILE	3.2
46	BN	85	ILE	3.2
9	AI	10	ARG	3.2
22	CW	47	U	3.2
25	D0	37	LEU	3.2
57	BY	38	ILE	3.2
7	AG	83	ALA	3.2
8	CH	97	VAL	3.2
24	AY	7	ALA	3.2
38	BD	83	GLU	3.2
51	BS	108	GLY	3.1
24	CY	46	ARG	3.1
56	BX	28	PHE	3.1
37	BC	57	GLN	3.1
10	CJ	23	ILE	3.1
35	DA	2805	G	3.1
51	DS	89	ARG	3.1
37	BC	187	ALA	3.1
15	AO	52	SER	3.1
12	CL	31	PRO	3.1
14	CN	28	GLY	3.1

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Mol	Chain	Res	Type	RSRZ
19	CS	66	MET	3.1
32	D7	1	MET	3.1
24	AY	172	LYS	3.1
55	BW	113	LYS	3.1
9	AI	31	GLN	3.1
35	DA	2794	C	3.1
45	DK	77	LEU	3.1
16	CP	68	ASP	3.1
19	CS	13	ASP	3.1
24	AY	265	THR	3.1
48	BP	51	PHE	3.1
28	B3	9	VAL	3.1
28	D3	10	LYS	3.1
45	DK	137	GLU	3.1
7	AG	6	ARG	3.1
12	AL	27	LEU	3.1
43	BI	38	LEU	3.1
35	BA	2123	G	3.1
10	CJ	83	GLU	3.1
17	CQ	73	VAL	3.1
31	B6	15	GLU	3.1
24	AY	250	ARG	3.1
9	AI	74	ILE	3.1
18	CR	50	ILE	3.1
19	AS	10	PHE	3.1
19	AS	14	HIS	3.1
4	CD	60	GLU	3.1
9	CI	41	VAL	3.1
51	BS	85	VAL	3.1
35	BA	2155	G	3.1
24	AY	26	LEU	3.1
25	B0	75	LEU	3.1
8	AH	113	SER	3.1
13	CM	97	PRO	3.1
45	BK	76	TYR	3.1
24	AY	84	ARG	3.1
48	BP	90	ARG	3.1
39	BE	150	VAL	3.1
3	CC	150	LYS	3.1
10	CJ	59	SER	3.1
13	CM	65	LYS	3.1
42	BH	129	THR	3.1

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Mol	Chain	Res	Type	RSRZ
48	BP	89	ALA	3.1
41	BG	25	TYR	3.1
14	AN	37	PHE	3.1
13	AM	98	VAL	3.1
9	AI	15	ALA	3.1
16	AP	7	ALA	3.1
16	CP	15	PRO	3.1
35	DA	2159	G	3.1
24	AY	278	ILE	3.1
46	BN	51	PHE	3.1
24	CY	160	PRO	3.1
45	DK	12	LEU	3.1
4	CD	4	TYR	3.1
19	AS	46	GLY	3.1
57	BY	61	ILE	3.1
45	DK	23	VAL	3.1
58	BZ	161	VAL	3.1
37	DC	211	ARG	3.1
51	DS	54	LEU	3.1
2	AB	192	SER	3.0
25	B0	78	TYR	3.0
17	CQ	36	ILE	3.0
41	BG	182	LYS	3.0
45	BK	69	THR	3.0
4	CD	108	LEU	3.0
5	AE	24	ARG	3.0
55	BW	107	LEU	3.0
5	CE	28	PHE	3.0
10	CJ	47	PHE	3.0
41	BG	84	LYS	3.0
24	CY	101	LEU	3.0
24	AY	67	SER	3.0
37	DC	224	ARG	3.0
49	DQ	132	VAL	3.0
6	AF	89	MET	3.0
20	CT	71	THR	3.0
22	AW	47	U	3.0
24	AY	256	THR	3.0
24	CY	279	LEU	3.0
28	B3	4	LEU	3.0
13	AM	100	GLY	3.0
57	BY	35	TYR	3.0

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Mol	Chain	Res	Type	RSRZ
20	CT	17	ARG	3.0
24	AY	216	GLU	3.0
41	DG	2	PRO	3.0
49	BQ	105	GLU	3.0
24	CY	231	VAL	3.0
10	CJ	96	ILE	3.0
43	BI	61	ARG	3.0
55	BW	92	ARG	3.0
42	BH	107	VAL	3.0
16	AP	18	ARG	3.0
2	CB	134	GLU	3.0
8	CH	62	TYR	3.0
24	AY	16	TYR	3.0
37	BC	40	GLU	3.0
37	DC	13	GLU	3.0
3	CC	153	VAL	3.0
12	CL	20	LYS	3.0
37	DC	182	PRO	3.0
40	DF	132	VAL	3.0
52	DT	137	LYS	3.0
58	DZ	150	LEU	3.0
3	AC	27	LYS	3.0
24	AY	85	GLU	3.0
37	BC	31	LYS	3.0
38	BD	9	TYR	3.0
2	CB	7	VAL	3.0
35	BA	2799	C	3.0
1	AA	1531	A	3.0
8	CH	60	ARG	3.0
3	AC	134	ILE	3.0
37	DC	27	ALA	3.0
3	AC	153	VAL	3.0
45	DK	112	MET	3.0
21	AU	11	GLY	3.0
37	DC	188	ASP	3.0
42	BH	47	GLU	3.0
45	DK	140	GLY	3.0
10	CJ	19	SER	3.0
47	BO	33	ALA	3.0
52	DT	86	ILE	3.0
18	AR	22	VAL	3.0
41	BG	94	LEU	3.0

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Mol	Chain	Res	Type	RSRZ
45	BK	115	LEU	3.0
42	BH	158	HIS	3.0
3	AC	160	ALA	3.0
9	AI	41	VAL	3.0
16	CP	9	PHE	3.0
56	BX	55	ASN	3.0
9	CI	100	GLY	2.9
10	AJ	74	ILE	2.9
10	CJ	5	ARG	2.9
9	CI	4	TYR	2.9
37	DC	10	ALA	2.9
45	DK	55	VAL	2.9
4	CD	93	PHE	2.9
7	AG	84	ASN	2.9
16	CP	28	ARG	2.9
19	CS	78	ARG	2.9
57	DY	6	HIS	2.9
9	AI	43	ALA	2.9
20	AT	38	LYS	2.9
31	B6	17	LYS	2.9
24	AY	246	ASP	2.9
20	CT	96	GLY	2.9
51	DS	43	GLU	2.9
31	D6	27	LYS	2.9
49	DQ	106	VAL	2.9
54	DV	36	PRO	2.9
55	BW	44	ALA	2.9
18	AR	43	PHE	2.9
15	CO	59	MET	2.9
24	AY	83	GLU	2.9
56	BX	5	TYR	2.9
50	DR	118	GLU	2.9
19	AS	41	VAL	2.9
28	B3	15	TYR	2.9
45	BK	20	ALA	2.9
58	BZ	159	PRO	2.9
2	AB	190	THR	2.9
3	AC	191	THR	2.9
35	BA	2143	C	2.9
40	BF	194	MET	2.9
24	AY	302	VAL	2.9
7	CG	78	ARG	2.9

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Mol	Chain	Res	Type	RSRZ
12	CL	113	ARG	2.9
37	BC	226	ASN	2.9
52	DT	135	ALA	2.9
2	CB	28	PHE	2.9
25	D0	43	THR	2.9
40	BF	93	LYS	2.9
9	CI	69	GLY	2.9
24	AY	239	GLY	2.9
35	DA	2121	G	2.9
24	AY	279	LEU	2.9
24	CY	31	ARG	2.9
42	BH	54	ARG	2.9
52	BT	39	ARG	2.9
12	CL	126	LYS	2.9
13	CM	31	LYS	2.9
48	DP	51	PHE	2.9
55	DW	111	HIS	2.9
10	CJ	100	THR	2.9
12	CL	61	THR	2.9
45	BK	129	GLY	2.9
10	AJ	65	LEU	2.9
17	CQ	75	ARG	2.9
24	CY	9	ARG	2.9
35	DA	277	C	2.9
24	AY	132	TRP	2.9
37	DC	208	THR	2.9
45	DK	49	GLY	2.9
48	DP	15	ARG	2.9
11	CK	127	LYS	2.9
24	CY	316	LEU	2.9
31	D6	36	LEU	2.9
57	BY	31	LEU	2.9
14	AN	16	PHE	2.9
28	B3	23	LEU	2.9
45	BK	18	THR	2.9
55	DW	103	ILE	2.9
2	AB	161	ALA	2.9
9	AI	4	TYR	2.9
24	AY	95	ALA	2.9
10	AJ	96	ILE	2.9
13	AM	96	LEU	2.9
17	AQ	22	LEU	2.9

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Mol	Chain	Res	Type	RSRZ
45	BK	47	ASN	2.9
35	BA	2793	G	2.9
3	AC	206	GLU	2.9
45	DK	127	ILE	2.8
48	BP	9	ASN	2.8
7	CG	4	ARG	2.8
11	AK	87	THR	2.8
13	AM	69	GLU	2.8
16	CP	51	VAL	2.8
2	AB	153	ARG	2.8
39	DE	69	LYS	2.8
50	BR	102	GLU	2.8
24	CY	222	LEU	2.8
37	DC	210	LEU	2.8
48	BP	106	LEU	2.8
9	CI	86	VAL	2.8
12	AL	100	ILE	2.8
21	CU	7	ARG	2.8
21	CU	23	PRO	2.8
24	AY	46	ARG	2.8
12	CL	17	LYS	2.8
13	CM	122	LYS	2.8
4	CD	147	ALA	2.8
37	BC	196	ALA	2.8
31	B6	30	THR	2.8
40	BF	11	VAL	2.8
42	BH	19	VAL	2.8
46	DN	119	ARG	2.8
5	AE	45	PHE	2.8
58	BZ	124	ILE	2.8
7	CG	154	TYR	2.8
17	AQ	44	ALA	2.8
1	AA	1370	G	2.8
42	DH	169	VAL	2.8
45	DK	125	ARG	2.8
24	AY	331	HIS	2.8
42	BH	61	HIS	2.8
58	BZ	98	MET	2.8
4	AD	108	LEU	2.8
9	CI	93	ARG	2.8
25	B0	77	ARG	2.8
45	DK	78	ILE	2.8

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Mol	Chain	Res	Type	RSRZ
51	DS	28	VAL	2.8
5	CE	19	MET	2.8
38	BD	247	ALA	2.8
2	AB	121	LEU	2.8
12	CL	21	LYS	2.8
3	AC	177	THR	2.8
47	BO	1	MET	2.8
37	DC	21	TYR	2.8
45	BK	9	LYS	2.8
2	AB	122	PHE	2.8
4	AD	67	ILE	2.8
33	B8	33	ASN	2.8
56	BX	3	THR	2.8
42	BH	102	ALA	2.8
51	BS	104	GLY	2.8
51	DS	58	LEU	2.8
3	AC	167	TRP	2.8
8	AH	111	ILE	2.8
25	B0	45	PHE	2.8
10	AJ	76	ASN	2.8
13	AM	73	GLU	2.8
58	BZ	80	ARG	2.8
12	AL	129	ALA	2.8
37	BC	167	ASP	2.8
17	CQ	9	VAL	2.8
42	BH	76	VAL	2.8
31	D6	37	ARG	2.8
51	BS	82	ILE	2.8
4	AD	152	SER	2.8
19	AS	16	LEU	2.8
48	BP	105	LEU	2.8
40	DF	134	GLY	2.8
33	B8	48	PHE	2.8
35	BA	2113	U	2.8
24	CY	17	LEU	2.8
8	CH	131	GLY	2.8
25	D0	85	ALA	2.8
34	B9	21	GLY	2.8
45	DK	135	GLY	2.8
4	AD	75	PHE	2.8
4	AD	133	VAL	2.8
35	DA	654(L)	G	2.7

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Mol	Chain	Res	Type	RSRZ
58	BZ	59	LEU	2.7
17	CQ	44	ALA	2.7
37	DC	207	GLY	2.7
19	CS	73	GLU	2.7
30	B5	59	GLU	2.7
35	BA	2794	C	2.7
56	BX	68	ARG	2.7
19	AS	42	PRO	2.7
25	D0	70	GLN	2.7
45	DK	110	GLN	2.7
11	AK	42	TRP	2.7
21	CU	14	TRP	2.7
24	AY	91	LEU	2.7
39	BE	1	MET	2.7
3	CC	193	TYR	2.7
9	AI	21	PRO	2.7
24	AY	152	GLU	2.7
24	CY	255	PRO	2.7
27	B2	20	GLU	2.7
29	D4	40	HIS	2.7
8	CH	17	THR	2.7
15	AO	31	LEU	2.7
5	CE	17	ALA	2.7
6	AF	97	PHE	2.7
51	BS	86	ALA	2.7
53	BU	118	GLY	2.7
45	DK	113	PRO	2.7
52	DT	136	GLN	2.7
57	BY	56	PRO	2.7
50	DR	70	LEU	2.7
46	BN	50	ASP	2.7
24	CY	195	PHE	2.7
45	DK	41	PHE	2.7
9	AI	107	ARG	2.7
4	CD	96	LEU	2.7
28	B3	8	LEU	2.7
28	D3	28	LEU	2.7
35	DA	2142	C	2.7
42	DH	158	HIS	2.7
45	BK	116	ASN	2.7
9	CI	101	PHE	2.7
20	CT	51	GLU	2.7

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Mol	Chain	Res	Type	RSRZ
24	CY	248	ALA	2.7
24	CY	320	TYR	2.7
57	BY	27	VAL	2.7
58	DZ	171	ILE	2.7
13	AM	97	PRO	2.7
24	CY	20	PRO	2.7
2	CB	122	PHE	2.7
4	CD	23	GLY	2.7
3	AC	62	ASP	2.7
3	CC	149	ALA	2.7
57	BY	51	VAL	2.7
2	CB	138	LEU	2.7
13	AM	88	ARG	2.7
24	AY	233	ARG	2.7
12	CL	85	ILE	2.7
35	BA	1536	C	2.7
4	AD	49	ARG	2.7
9	AI	70	LYS	2.7
13	AM	31	LYS	2.7
26	D1	21	ARG	2.7
28	B3	19	GLN	2.7
45	BK	80	LYS	2.7
57	BY	71	LYS	2.7
49	BQ	33	GLY	2.7
3	CC	206	GLU	2.7
45	DK	36	GLU	2.7
22	AW	56	C	2.7
24	CY	276	LEU	2.7
39	DE	78	LEU	2.7
18	AR	29	PHE	2.7
39	BE	149	ARG	2.7
9	AI	17	VAL	2.7
6	CF	101	ALA	2.7
10	AJ	23	ILE	2.7
45	DK	64	SER	2.7
4	CD	101	LEU	2.7
55	BW	94	ASP	2.7
16	CP	71	ARG	2.7
24	CY	233	ARG	2.7
31	B6	28	ARG	2.7
4	AD	110	PHE	2.7
24	AY	163	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
55	BW	64	MET	2.7
4	CD	201	GLN	2.6
24	AY	15	GLY	2.6
28	B3	38	GLU	2.6
48	BP	92	GLU	2.6
49	DQ	97	VAL	2.6
8	CH	13	ILE	2.6
9	AI	49	PRO	2.6
20	AT	48	LYS	2.6
46	BN	109	LYS	2.6
9	CI	5	TYR	2.6
10	CJ	8	LEU	2.6
12	CL	33	ARG	2.6
31	D6	18	ARG	2.6
42	BH	43	VAL	2.6
43	BI	1	MET	2.6
45	BK	23	VAL	2.6
52	DT	115	ARG	2.6
16	CP	60	LEU	2.6
7	CG	26	PHE	2.6
21	AU	6	ARG	2.6
16	CP	33	ILE	2.6
26	B1	85	LEU	2.6
29	B4	11	PRO	2.6
51	DS	36	TYR	2.6
35	DA	2801(A)	A	2.6
2	AB	124	SER	2.6
24	CY	39	TRP	2.6
3	CC	35	GLU	2.6
7	CG	72	ARG	2.6
14	AN	26	ARG	2.6
16	CP	54	GLU	2.6
20	AT	45	GLN	2.6
24	AY	329	MET	2.6
24	AY	169	ILE	2.6
35	DA	2109	U	2.6
48	BP	78	PRO	2.6
10	AJ	55	LYS	2.6
19	CS	11	VAL	2.6
24	CY	139	MET	2.6
24	AY	215	ASP	2.6
35	BA	2136	C	2.6

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Mol	Chain	Res	Type	RSRZ
35	BA	2140	C	2.6
41	BG	49	ASP	2.6
17	AQ	36	ILE	2.6
31	D6	39	TYR	2.6
33	D8	64	TYR	2.6
47	BO	16	ALA	2.6
2	AB	131	PRO	2.6
9	AI	101	PHE	2.6
48	BP	107	LYS	2.6
58	BZ	79	ARG	2.6
3	CC	185	GLY	2.6
7	AG	156	TRP	2.6
7	CG	66	VAL	2.6
41	BG	37	VAL	2.6
46	BN	9	VAL	2.6
11	AK	71	LYS	2.6
19	CS	32	LYS	2.6
45	BK	107	ILE	2.6
35	DA	2896	C	2.6
36	DB	88	C	2.6
37	BC	21	TYR	2.6
42	DH	145	ALA	2.6
2	AB	163	PHE	2.6
39	DE	3	GLY	2.6
48	BP	149	GLU	2.6
8	AH	59	LEU	2.6
27	B2	4	SER	2.6
42	BH	85	LYS	2.6
7	CG	62	PHE	2.6
24	AY	206	ALA	2.6
6	AF	95	GLU	2.6
8	AH	93	VAL	2.6
25	D0	42	GLY	2.6
31	D6	46	HIS	2.6
35	BA	2138	C	2.6
57	BY	3	VAL	2.6
13	AM	111	LYS	2.6
37	DC	47	LYS	2.6
13	AM	34	LEU	2.6
47	BO	19	ILE	2.6
3	CC	130	VAL	2.6
8	CH	79	VAL	2.6

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Mol	Chain	Res	Type	RSRZ
24	AY	51	GLU	2.6
45	DK	139	VAL	2.6
3	AC	101	LEU	2.6
12	AL	19	ARG	2.6
15	AO	63	ARG	2.6
43	DI	120	ILE	2.6
51	DS	48	LEU	2.6
55	DW	82	LEU	2.6
4	CD	102	ASP	2.6
37	DC	56	ASP	2.6
51	BS	28	VAL	2.6
48	BP	122	PRO	2.6
24	CY	295	LEU	2.6
30	B5	30	LEU	2.6
31	B6	10	LEU	2.6
46	DN	1	MET	2.6
51	BS	26	LEU	2.6
56	DX	66	LEU	2.6
9	AI	63	ILE	2.6
45	BK	101	TRP	2.6
7	CG	134	ALA	2.6
9	AI	36	TYR	2.6
6	AF	38	GLU	2.6
12	CL	114	LYS	2.6
16	CP	38	TYR	2.6
45	DK	86	LYS	2.6
10	CJ	58	ASP	2.6
46	BN	108	PRO	2.6
2	CB	152	PHE	2.5
27	D2	11	GLU	2.5
24	CY	191	ARG	2.5
35	DA	1509	C	2.5
46	BN	52	VAL	2.5
24	CY	38	LEU	2.5
27	B2	71	ASN	2.5
37	DC	227	PRO	2.5
26	D1	23	LYS	2.5
19	AS	61	TYR	2.5
24	AY	334	GLU	2.5
3	AC	198	VAL	2.5
1	CA	1286	A	2.5
10	AJ	73	ASP	2.5

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Mol	Chain	Res	Type	RSRZ
22	AW	32	U	2.5
24	CY	328	LEU	2.5
46	BN	33	LEU	2.5
20	CT	65	LYS	2.5
24	CY	278	ILE	2.5
58	BZ	156	LYS	2.5
20	CT	26	ASN	2.5
7	AG	41	ARG	2.5
12	CL	98	TYR	2.5
24	CY	203	THR	2.5
42	BH	18	GLU	2.5
42	BH	23	ARG	2.5
42	DH	54	ARG	2.5
6	AF	37	VAL	2.5
42	DH	115	VAL	2.5
58	DZ	161	VAL	2.5
43	BI	5	LEU	2.5
1	AA	1000	U	2.5
24	AY	229	ILE	2.5
9	CI	9	ARG	2.5
24	AY	191	ARG	2.5
28	D3	2	PRO	2.5
35	DA	229	A	2.5
3	CC	192	THR	2.5
58	BZ	7	ALA	2.5
37	DC	20	VAL	2.5
38	BD	26	LYS	2.5
7	AG	32	ARG	2.5
51	BS	23	ARG	2.5
41	BG	167	GLU	2.5
42	DH	112	PRO	2.5
2	CB	120	ALA	2.5
7	AG	153	HIS	2.5
11	CK	89	ALA	2.5
13	CM	92	HIS	2.5
1	AA	1001	A	2.5
16	CP	53	VAL	2.5
24	AY	61	THR	2.5
24	AY	214	VAL	2.5
55	BW	73	ALA	2.5
51	BS	57	LYS	2.5
21	CU	15	ARG	2.5

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Mol	Chain	Res	Type	RSRZ
16	AP	1	MET	2.5
35	BA	654(N)	G	2.5
45	DK	65	PHE	2.5
10	AJ	17	ASP	2.5
10	AJ	61	GLU	2.5
24	AY	41	ASP	2.5
39	BE	198	VAL	2.5
8	AH	22	GLU	2.5
15	AO	2	PRO	2.5
42	DH	100	GLY	2.5
45	DK	31	GLY	2.5
1	CA	82	U	2.5
34	D9	20	HIS	2.5
3	AC	166	GLU	2.5
19	CS	44	MET	2.5
51	DS	35	ILE	2.5
24	CY	219	GLU	2.5
3	AC	126	ARG	2.5
7	AG	2	ALA	2.5
46	DN	72	TYR	2.5
50	BR	101	ALA	2.5
56	BX	51	VAL	2.5
18	CR	78	LEU	2.5
57	BY	66	PRO	2.5
9	CI	18	PHE	2.5
24	CY	190	VAL	2.5
42	BH	115	VAL	2.5
24	CY	310	GLN	2.5
28	B3	32	GLN	2.5
35	BA	229	A	2.5
24	AY	318	LYS	2.5
37	DC	55	SER	2.5
18	AR	46	GLU	2.5
42	BH	34	GLU	2.5
50	BR	2	ARG	2.5
42	BH	100	GLY	2.5
20	CT	58	LYS	2.5
31	B6	41	PRO	2.5
58	BZ	6	LYS	2.5
24	CY	307	TRP	2.5
45	BK	79	ARG	2.5
57	BY	102	CYS	2.5

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Mol	Chain	Res	Type	RSRZ
19	AS	5	LEU	2.5
42	BH	39	PRO	2.5
25	D0	41	ARG	2.5
28	B3	30	ARG	2.5
42	BH	92	ILE	2.5
48	BP	27	HIS	2.5
50	BR	33	ARG	2.5
50	DR	52	ILE	2.5
56	DX	68	ARG	2.5
7	CG	101	LEU	2.4
8	AH	97	VAL	2.4
24	CY	243	ASN	2.4
42	DH	99	VAL	2.4
45	DK	5	VAL	2.4
25	B0	57	PHE	2.4
2	CB	95	GLN	2.4
10	CJ	33	GLN	2.4
16	CP	18	ARG	2.4
43	BI	80	PRO	2.4
45	DK	22	PRO	2.4
48	BP	111	ARG	2.4
4	CD	105	VAL	2.4
20	CT	21	LYS	2.4
42	BH	56	SER	2.4
13	AM	95	GLY	2.4
35	BA	2893	G	2.4
35	DA	2112	G	2.4
58	DZ	117	LEU	2.4
24	AY	234	ALA	2.4
39	DE	160	TYR	2.4
3	CC	190	ARG	2.4
32	B7	49	ARG	2.4
24	AY	263	GLN	2.4
37	BC	213	VAL	2.4
19	CS	29	ARG	2.4
39	BE	76	ARG	2.4
7	AG	8	GLU	2.4
9	CI	77	ILE	2.4
16	AP	35	LYS	2.4
18	AR	65	ILE	2.4
19	AS	73	GLU	2.4
35	BA	654(C)	G	2.4

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Mol	Chain	Res	Type	RSRZ
41	BG	35	GLU	2.4
41	BG	41	GLN	2.4
42	BH	46	GLU	2.4
57	BY	32	PRO	2.4
5	AE	19	MET	2.4
7	AG	38	LEU	2.4
16	AP	29	ASP	2.4
5	CE	18	ARG	2.4
16	AP	30	GLY	2.4
49	DQ	62	GLY	2.4
58	BZ	150	LEU	2.4
18	AR	55	ARG	2.4
19	CS	37	ARG	2.4
57	DY	36	ALA	2.4
34	B9	31	LYS	2.4
45	BK	109	LYS	2.4
8	CH	128	GLY	2.4
22	AW	20	U	2.4
27	D2	44	LEU	2.4
33	B8	22	VAL	2.4
19	AS	69	HIS	2.4
35	BA	2125	G	2.4
35	DA	654(C)	G	2.4
35	DA	2114	A	2.4
43	BI	16	GLY	2.4
47	DO	15	GLY	2.4
37	DC	6	LYS	2.4
45	DK	40	ALA	2.4
57	DY	64	GLU	2.4
24	CY	271	ASN	2.4
24	CY	224	PRO	2.4
38	BD	182	LEU	2.4
41	BG	159	VAL	2.4
43	BI	3	VAL	2.4
14	AN	36	PHE	2.4
13	CM	2	ALA	2.4
22	AW	57	G	2.4
51	BS	107	GLU	2.4
13	CM	91	ARG	2.4
24	AY	298	LEU	2.4
46	BN	69	GLN	2.4
24	CY	242	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
2	CB	163	PHE	2.4
31	D6	35	GLU	2.4
35	DA	156	U	2.4
42	BH	57	ASP	2.4
8	CH	87	SER	2.4
13	CM	99	ARG	2.4
13	CM	102	ARG	2.4
42	DH	51	ARG	2.4
2	AB	115	LEU	2.4
9	CI	73	GLN	2.4
17	AQ	21	VAL	2.4
17	CQ	35	VAL	2.4
39	DE	183	LEU	2.4
58	BZ	91	LEU	2.4
16	AP	9	PHE	2.4
35	BA	2805	G	2.4
45	BK	100	THR	2.4
45	DK	119	ASP	2.4
47	DO	49	ARG	2.4
58	BZ	162	GLU	2.4
1	CA	81	U	2.4
17	AQ	59	ILE	2.4
6	AF	39	LYS	2.4
14	AN	39	LEU	2.4
20	CT	69	GLY	2.4
24	CY	70	GLN	2.4
28	B3	33	GLN	2.4
41	BG	127	GLY	2.4
24	AY	203	THR	2.4
45	DK	45	THR	2.4
20	CT	64	ASP	2.4
24	AY	230	ASP	2.4
19	CS	9	VAL	2.4
46	BN	48	MET	2.4
2	CB	125	PRO	2.4
9	CI	128	ARG	2.4
4	CD	24	GLU	2.4
6	AF	63	TYR	2.4
28	D3	15	TYR	2.4
45	DK	122	ALA	2.4
5	AE	78	HIS	2.4
47	BO	22	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
24	CY	155	ASP	2.4
48	DP	106	LEU	2.4
17	AQ	5	VAL	2.4
17	CQ	10	VAL	2.4
1	AA	1030(A)	G	2.4
9	AI	18	PHE	2.4
22	CV	44	G	2.4
28	D3	11	SER	2.4
16	CP	27	LYS	2.4
20	AT	87	LYS	2.4
43	BI	135	GLU	2.4
24	AY	40	ASN	2.4
9	CI	47	LEU	2.4
24	AY	170	LEU	2.4
25	D0	59	LEU	2.4
54	BV	45	THR	2.4
8	CH	133	LEU	2.3
9	CI	74	ILE	2.3
38	DD	2	ALA	2.3
16	CP	8	ARG	2.3
17	CQ	45	HIS	2.3
24	AY	111	HIS	2.3
24	CY	228	ARG	2.3
24	CY	319	ASN	2.3
28	B3	54	VAL	2.3
42	BH	35	VAL	2.3
49	BQ	103	MET	2.3
46	BN	76	SER	2.3
10	CJ	9	ARG	2.3
4	CD	184	LYS	2.3
7	CG	153	HIS	2.3
37	BC	206	LYS	2.3
37	BC	220	GLY	2.3
55	BW	105	VAL	2.3
1	CA	103	C	2.3
4	CD	144	ASP	2.3
28	D3	18	ASP	2.3
39	BE	73	GLU	2.3
1	AA	88	A	2.3
2	AB	123	ALA	2.3
3	CC	101	LEU	2.3
4	AD	176	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
24	CY	98	LEU	2.3
10	CJ	99	LYS	2.3
18	CR	43	PHE	2.3
20	AT	50	GLU	2.3
11	AK	75	TYR	2.3
3	CC	147	LYS	2.3
1	AA	1044	A	2.3
45	BK	48	MET	2.3
38	DD	262	ARG	2.3
41	DG	26	GLN	2.3
46	BN	74	ARG	2.3
43	BI	20	ASP	2.3
5	AE	118	ILE	2.3
13	CM	86	CYS	2.3
6	AF	90	VAL	2.3
56	BX	54	VAL	2.3
8	AH	100	ILE	2.3
8	AH	109	ILE	2.3
20	CT	55	ILE	2.3
21	CU	8	THR	2.3
26	B1	16	ASN	2.3
37	BC	190	ILE	2.3
45	DK	118	THR	2.3
28	B3	59	VAL	2.3
31	D6	43	CYS	2.3
58	BZ	39	VAL	2.3
7	AG	14	PRO	2.3
16	AP	8	ARG	2.3
41	DG	78	SER	2.3
33	B8	7	HIS	2.3
58	BZ	127	LYS	2.3
48	BP	88	LEU	2.3
51	BS	54	LEU	2.3
3	CC	60	ALA	2.3
4	CD	138	TYR	2.3
46	BN	73	THR	2.3
52	DT	88	ILE	2.3
25	B0	71	ASP	2.3
35	BA	654(V)	A	2.3
35	DA	2135	A	2.3
56	BX	69	TYR	2.3
39	DE	104	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
13	CM	104	ARG	2.3
19	AS	44	MET	2.3
24	CY	341	LEU	2.3
46	BN	107	LEU	2.3
19	AS	62	ILE	2.3
2	CB	77	ALA	2.3
2	CB	130	ARG	2.3
14	CN	2	ALA	2.3
19	CS	33	THR	2.3
39	BE	72	VAL	2.3
39	DE	105	THR	2.3
42	BH	49	VAL	2.3
14	AN	4	LYS	2.3
17	AQ	58	GLU	2.3
57	BY	19	LYS	2.3
37	DC	29	LEU	2.3
9	CI	119	ALA	2.3
24	CY	206	ALA	2.3
35	DA	2804	C	2.3
37	BC	15	VAL	2.3
1	AA	90	U	2.3
8	CH	47	GLY	2.3
18	AR	56	THR	2.3
19	CS	63	THR	2.3
22	CW	32	U	2.3
24	CY	22	LYS	2.3
24	AY	93	GLU	2.3
57	BY	40	GLU	2.3
2	AB	26	PRO	2.3
35	DA	2125	G	2.3
58	BZ	18	LEU	2.3
24	CY	253	HIS	2.3
45	DK	90	LYS	2.3
24	AY	178	GLY	2.3
24	CY	273	GLU	2.3
9	CI	7	THR	2.3
13	AM	106	ASN	2.3
46	BN	3	THR	2.3
20	CT	98	PRO	2.3
32	D7	47	ARG	2.3
45	BK	72	PRO	2.3
32	B7	18	PHE	2.3

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Mol	Chain	Res	Type	RSRZ
41	DG	50	ALA	2.3
35	DA	2151	G	2.2
24	AY	200	ARG	2.2
2	AB	41	ILE	2.2
12	CL	18	VAL	2.2
42	BH	50	VAL	2.2
12	CL	127	GLU	2.2
24	AY	313	SER	2.2
25	D0	9	SER	2.2
42	BH	38	SER	2.2
43	DI	117	GLU	2.2
45	DK	32	ALA	2.2
6	AF	1	MET	2.2
24	AY	106	LEU	2.2
35	DA	2152	G	2.2
7	AG	62	PHE	2.2
24	CY	192	PRO	2.2
41	DG	80	PHE	2.2
45	BK	38	VAL	2.2
47	BO	40	VAL	2.2
19	CS	64	GLU	2.2
45	BK	40	ALA	2.2
13	AM	110	ARG	2.2
50	BR	105	ARG	2.2
58	BZ	153	SER	2.2
45	DK	27	LEU	2.2
5	AE	10	MET	2.2
57	BY	89	PHE	2.2
4	CD	104	VAL	2.2
18	AR	52	PRO	2.2
12	CL	86	ARG	2.2
28	D3	19	GLN	2.2
32	B7	14	LYS	2.2
39	BE	2	LYS	2.2
35	DA	2140	C	2.2
8	CH	9	MET	2.2
2	AB	162	ILE	2.2
39	BE	75	VAL	2.2
45	DK	53	VAL	2.2
7	CG	155	ARG	2.2
9	AI	20	ARG	2.2
21	CU	3	LYS	2.2

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Mol	Chain	Res	Type	RSRZ
22	AW	21	A	2.2
24	CY	123	GLY	2.2
41	BG	13	GLU	2.2
47	DO	45	GLU	2.2
55	BW	104	THR	2.2
39	BE	132	HIS	2.2
14	AN	33	VAL	2.2
15	AO	87	ILE	2.2
57	BY	5	MET	2.2
9	AI	127	LYS	2.2
12	CL	112	ASP	2.2
41	BG	137	GLU	2.2
52	DT	21	GLU	2.2
57	BY	26	LYS	2.2
15	AO	13	GLN	2.2
49	BQ	99	PRO	2.2
51	DS	51	ALA	2.2
8	CH	119	LEU	2.2
10	CJ	88	LEU	2.2
5	CE	136	MET	2.2
7	CG	6	ARG	2.2
13	CM	4	ILE	2.2
16	AP	36	ILE	2.2
26	D1	60	PHE	2.2
24	CY	221	VAL	2.2
31	B6	33	LYS	2.2
39	DE	102	VAL	2.2
49	BQ	131	ILE	2.2
51	BS	40	ILE	2.2
25	D0	52	GLY	2.2
7	AG	152	ALA	2.2
51	DS	94	TYR	2.2
11	AK	117	ASN	2.2
28	D3	8	LEU	2.2
2	AB	97	TRP	2.2
8	AH	116	LYS	2.2
16	CP	16	HIS	2.2
9	CI	81	ILE	2.2
19	AS	6	LYS	2.2
48	BP	15	ARG	2.2
4	CD	137	SER	2.2
15	AO	6	GLU	2.2

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Mol	Chain	Res	Type	RSRZ
24	AY	34	GLU	2.2
24	AY	204	SER	2.2
35	DA	2134	A	2.2
2	AB	234	PRO	2.2
28	D3	39	ASP	2.2
58	BZ	163	LEU	2.2
26	B1	10	LYS	2.2
54	BV	44	LYS	2.2
18	CR	22	VAL	2.2
35	DA	2897	U	2.2
42	BH	84	SER	2.2
1	CA	1252	A	2.2
9	AI	61	ALA	2.2
18	AR	54	ARG	2.2
24	AY	341	LEU	2.2
39	BE	27	LEU	2.2
24	CY	318	LYS	2.2
51	BS	30	ARG	2.2
39	DE	198	VAL	2.2
10	AJ	10	GLY	2.2
10	CJ	36	GLY	2.2
10	AJ	9	ARG	2.2
45	DK	79	ARG	2.2
10	AJ	54	PHE	2.2
17	CQ	55	ASP	2.2
25	D0	69	PHE	2.2
24	CY	24	THR	2.2
28	B3	47	VAL	2.2
42	DH	89	ILE	2.2
45	BK	121	GLU	2.2
56	BX	89	ILE	2.2
3	CC	96	GLY	2.2
5	AE	23	GLY	2.2
3	CC	189	ALA	2.2
11	AK	98	LEU	2.2
37	BC	168	LYS	2.2
53	BU	115	ALA	2.2
38	DD	36	PRO	2.2
45	DK	72	PRO	2.2
7	AG	61	VAL	2.2
24	CY	287	GLU	2.2
37	BC	194	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
57	BY	42	VAL	2.2
5	CE	25	ARG	2.2
17	CQ	17	LYS	2.2
24	AY	175	ASN	2.2
24	AY	270	LYS	2.2
37	BC	14	LYS	2.2
8	AH	110	ALA	2.1
11	AK	25	TYR	2.1
16	AP	32	TYR	2.1
43	BI	12	LEU	2.1
49	DQ	34	LEU	2.1
35	BA	2896	C	2.1
7	AG	72	ARG	2.1
51	BS	49	VAL	2.1
51	DS	88	ASP	2.1
55	DW	109	GLU	2.1
57	DY	5	MET	2.1
20	AT	9	ASN	2.1
35	DA	2602	A	2.1
40	DF	24	LEU	2.1
41	BG	139	LEU	2.1
45	DK	69	THR	2.1
45	DK	71	THR	2.1
52	BT	135	ALA	2.1
42	DH	104	GLU	2.1
51	DS	106	ARG	2.1
52	BT	106	SER	2.1
13	CM	119	GLY	2.1
55	BW	108	GLY	2.1
13	CM	66	LEU	2.1
37	DC	228	HIS	2.1
17	CQ	3	LYS	2.1
22	AW	44	G	2.1
7	AG	30	ILE	2.1
20	AT	46	GLU	2.1
24	AY	50	GLN	2.1
42	BH	152	ARG	2.1
41	BG	88	ILE	2.1
42	BH	99	VAL	2.1
53	DU	118	GLY	2.1
4	AD	64	LEU	2.1
8	AH	133	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
10	CJ	16	LEU	2.1
10	CJ	65	LEU	2.1
4	CD	110	PHE	2.1
7	AG	154	TYR	2.1
45	BK	118	THR	2.1
50	DR	2	ARG	2.1
3	AC	151	VAL	2.1
8	AH	79	VAL	2.1
11	CK	21	ILE	2.1
37	DC	184	GLU	2.1
42	BH	103	LEU	2.1
10	AJ	22	LYS	2.1
20	CT	14	LYS	2.1
22	CW	50	U	2.1
43	BI	118	LYS	2.1
48	DP	110	TYR	2.1
56	DX	69	TYR	2.1
50	DR	53	HIS	2.1
2	CB	136	VAL	2.1
38	DD	181	GLU	2.1
19	CS	46	GLY	2.1
24	CY	329	MET	2.1
58	DZ	160	GLY	2.1
14	CN	60	SER	2.1
46	BN	66	LYS	2.1
43	BI	36	ALA	2.1
47	DO	51	ALA	2.1
7	CG	80	VAL	2.1
8	AH	95	VAL	2.1
26	D1	27	GLU	2.1
41	BG	14	GLU	2.1
45	DK	52	ILE	2.1
24	AY	12	GLY	2.1
7	AG	10	ARG	2.1
13	CM	115	LYS	2.1
51	DS	27	SER	2.1
35	BA	2169	A	2.1
42	BH	121	ILE	2.1
51	BS	39	ILE	2.1
1	CA	104	G	2.1
2	CB	66	GLY	2.1
5	CE	139	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
17	CQ	8	GLY	2.1
19	CS	56	GLN	2.1
35	BA	2120	G	2.1
43	BI	2	LYS	2.1
3	AC	100	ALA	2.1
9	CI	92	TYR	2.1
13	CM	69	GLU	2.1
16	AP	20	VAL	2.1
28	D3	53	LEU	2.1
37	DC	54	ARG	2.1
39	DE	197	ILE	2.1
42	DH	162	ILE	2.1
6	AF	61	LEU	2.1
8	AH	90	GLY	2.1
3	CC	186	PHE	2.1
2	AB	134	GLU	2.1
39	DE	28	ALA	2.1
48	DP	149	GLU	2.1
49	BQ	93	TYR	2.1
3	CC	39	ILE	2.1
14	AN	31	ARG	2.1
18	AR	59	SER	2.1
50	DR	99	LYS	2.1
26	D1	28	GLY	2.1
41	BG	175	LEU	2.1
16	CP	65	GLN	2.1
57	BY	41	GLY	2.1
20	CT	85	MET	2.1
1	CA	1531	A	2.1
3	AC	163	ALA	2.1
24	AY	80	PRO	2.1
51	DS	37	ALA	2.1
55	BW	2	GLU	2.1
2	CB	124	SER	2.1
22	CW	61	C	2.1
24	AY	37	SER	2.1
28	B3	37	LEU	2.1
42	DH	88	LEU	2.1
46	BN	82	LEU	2.1
48	BP	87	ASP	2.1
21	CU	20	LYS	2.1
25	B0	74	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
56	BX	64	LYS	2.1
2	AB	232	PRO	2.1
17	AQ	23	VAL	2.1
55	BW	93	ALA	2.1
8	CH	109	ILE	2.1
19	AS	49	ILE	2.1
55	DW	23	LEU	2.1
16	CP	76	GLN	2.0
25	B0	80	HIS	2.1
46	DN	61	ARG	2.0
49	DQ	10	ARG	2.0
57	BY	4	LYS	2.0
19	CS	61	TYR	2.0
27	B2	66	GLU	2.0
24	AY	151	VAL	2.0
49	BQ	47	ILE	2.0
22	AW	37	A	2.0
2	AB	117	GLU	2.0
3	CC	188	LEU	2.0
9	CI	19	LEU	2.0
9	CI	127	LYS	2.0
13	CM	89	GLY	2.0
20	CT	101	GLY	2.0
9	CI	33	PHE	2.0
7	CG	20	ASP	2.0
9	AI	44	VAL	2.0
9	AI	88	TYR	2.0
16	AP	2	VAL	2.0
17	AQ	57	VAL	2.0
37	BC	223	VAL	2.0
31	B6	36	LEU	2.0
43	DI	35	LEU	2.0
31	D6	40	CYS	2.0
37	DC	195	ARG	2.0
39	DE	186	GLY	2.0
48	BP	118	GLY	2.0
49	DQ	8	LYS	2.0
4	CD	42	GLN	2.0
2	AB	19	HIS	2.0
55	BW	111	HIS	2.0
3	CC	92	ALA	2.0
4	AD	68	TYR	2.0

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Mol	Chain	Res	Type	RSRZ
5	CE	100	VAL	2.0
11	AK	32	ILE	2.0
24	CY	269	ILE	2.0
24	CY	281	ALA	2.0
57	DY	35	TYR	2.0
3	CC	162	GLN	2.0
4	AD	74	GLN	2.0
41	DG	75	LYS	2.0
47	DO	63	VAL	2.0
4	CD	143	GLY	2.0
8	AH	134	ILE	2.0
8	CH	83	ILE	2.0
24	AY	120	ILE	2.0
24	CY	312	ARG	2.0
52	DT	122	ASP	2.0
43	BI	138	ILE	2.0
35	BA	2154	G	2.0
45	BK	15	GLY	2.0
48	BP	104	GLY	2.0
24	AY	143	PHE	2.0
43	BI	11	ASN	2.0
58	DZ	186	GLU	2.0
3	AC	179	ARG	2.0
16	AP	6	LEU	2.0
19	AS	37	ARG	2.0
46	BN	87	LEU	2.0
50	DR	94	TYR	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, 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
24	MEQ	CY	240	10/11	0.78	0.55	149,152,186,247	0
24	MEQ	AY	240	10/11	0.83	0.51	143,154,163,163	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(\AA^2)	Q<0.9
59	MG	BA	3114	1/1	0.41	0.21	110,110,110,110	0
60	ZN	B9	101	1/1	0.53	0.65	205,205,205,205	1
59	MG	BQ	201	1/1	0.57	1.22	104,104,104,104	0
59	MG	BB	202	1/1	0.59	0.59	95,95,95,95	0
59	MG	BA	3125	1/1	0.62	0.64	100,100,100,100	0
59	MG	AA	1622	1/1	0.62	0.61	96,96,96,96	0
59	MG	BA	3144	1/1	0.64	1.56	91,91,91,91	0
59	MG	DA	3219	1/1	0.65	0.15	115,115,115,115	0
59	MG	CA	1619	1/1	0.67	0.35	87,87,87,87	0
59	MG	BT	201	1/1	0.70	0.44	108,108,108,108	0
59	MG	CA	1606	1/1	0.71	0.42	75,75,75,75	0
59	MG	DA	3073	1/1	0.71	0.17	129,129,129,129	0
59	MG	BA	3174	1/1	0.72	0.73	87,87,87,87	0
59	MG	DA	3176	1/1	0.72	1.58	87,87,87,87	0
59	MG	BA	3105	1/1	0.72	1.32	85,85,85,85	0
59	MG	BA	3151	1/1	0.72	0.27	87,87,87,87	0
59	MG	DA	3205	1/1	0.73	0.26	86,86,86,86	0
59	MG	BA	3155	1/1	0.73	0.53	93,93,93,93	0
59	MG	DA	3190	1/1	0.73	0.30	91,91,91,91	0
59	MG	BA	3166	1/1	0.76	0.21	80,80,80,80	0
59	MG	BA	3179	1/1	0.76	0.65	104,104,104,104	0
59	MG	DA	3163	1/1	0.76	0.94	84,84,84,84	0
59	MG	CA	1617	1/1	0.76	1.07	125,125,125,125	0
59	MG	DA	3104	1/1	0.77	0.97	82,82,82,82	0
59	MG	AA	1617	1/1	0.78	0.60	73,73,73,73	0
59	MG	BA	3120	1/1	0.78	0.56	81,81,81,81	0
59	MG	DA	3213	1/1	0.78	0.28	101,101,101,101	0
59	MG	BA	3162	1/1	0.78	0.53	79,79,79,79	0
59	MG	BA	3145	1/1	0.78	0.40	114,114,114,114	0
59	MG	BA	3082	1/1	0.79	0.97	75,75,75,75	0
59	MG	AA	1629	1/1	0.79	0.13	120,120,120,120	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
59	MG	BA	3152	1/1	0.80	0.61	91,91,91,91	0
59	MG	DA	3141	1/1	0.81	0.45	67,67,67,67	0
59	MG	DA	3086	1/1	0.81	0.70	65,65,65,65	0
59	MG	DA	3128	1/1	0.82	0.30	72,72,72,72	0
59	MG	DA	3195	1/1	0.82	0.57	100,100,100,100	0
59	MG	DA	3199	1/1	0.82	0.37	81,81,81,81	0
59	MG	DA	3202	1/1	0.82	0.93	97,97,97,97	0
59	MG	BA	3112	1/1	0.82	1.26	84,84,84,84	0
59	MG	CA	1610	1/1	0.82	0.40	71,71,71,71	0
59	MG	CA	1621	1/1	0.82	0.22	136,136,136,136	0
59	MG	DA	3182	1/1	0.82	0.52	80,80,80,80	0
59	MG	DA	3136	1/1	0.83	0.51	71,71,71,71	0
59	MG	BA	3163	1/1	0.83	0.51	104,104,104,104	0
59	MG	DA	3147	1/1	0.83	0.44	91,91,91,91	0
59	MG	BA	3147	1/1	0.83	0.18	70,70,70,70	0
59	MG	CA	1624	1/1	0.83	0.47	91,91,91,91	0
59	MG	DA	3119	1/1	0.83	0.29	85,85,85,85	0
59	MG	DA	3033	1/1	0.83	0.65	77,77,77,77	0
59	MG	BA	3148	1/1	0.84	0.51	90,90,90,90	0
59	MG	AA	1628	1/1	0.84	1.30	99,99,99,99	0
59	MG	CA	1625	1/1	0.84	0.41	110,110,110,110	0
59	MG	DA	3016	1/1	0.84	0.54	58,58,58,58	0
59	MG	AA	1612	1/1	0.84	0.80	75,75,75,75	0
59	MG	AA	1630	1/1	0.84	0.54	86,86,86,86	0
59	MG	BF	301	1/1	0.85	0.23	120,120,120,120	0
59	MG	DA	3212	1/1	0.85	1.09	92,92,92,92	0
59	MG	DA	3116	1/1	0.85	0.40	71,71,71,71	0
59	MG	DA	3137	1/1	0.85	0.51	92,92,92,92	0
59	MG	BA	3154	1/1	0.85	1.04	92,92,92,92	0
59	MG	DA	3204	1/1	0.86	0.68	85,85,85,85	0
59	MG	BA	3116	1/1	0.86	0.55	75,75,75,75	0
59	MG	BA	3091	1/1	0.86	0.51	71,71,71,71	0
59	MG	DA	3156	1/1	0.86	0.24	59,59,59,59	0
59	MG	DA	3111	1/1	0.86	0.42	80,80,80,80	0
59	MG	BA	3088	1/1	0.86	0.76	83,83,83,83	0
59	MG	BA	3159	1/1	0.87	0.50	81,81,81,81	0
59	MG	DA	3193	1/1	0.87	0.30	96,96,96,96	0
59	MG	DA	3208	1/1	0.87	0.35	87,87,87,87	0
59	MG	DA	3170	1/1	0.87	0.58	80,80,80,80	0
59	MG	BA	3164	1/1	0.87	0.45	84,84,84,84	0
59	MG	BA	3086	1/1	0.87	0.52	69,69,69,69	0
59	MG	DB	201	1/1	0.87	0.48	78,78,78,78	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
59	MG	DB	202	1/1	0.87	0.39	101,101,101,101	0
59	MG	DA	3203	1/1	0.87	0.41	93,93,93,93	0
59	MG	BA	3126	1/1	0.88	0.26	108,108,108,108	0
59	MG	BA	3143	1/1	0.88	1.00	86,86,86,86	0
59	MG	DA	3206	1/1	0.88	0.46	67,67,67,67	0
59	MG	DA	3131	1/1	0.88	1.38	91,91,91,91	0
59	MG	BA	3038	1/1	0.88	0.35	63,63,63,63	0
59	MG	BA	3052	1/1	0.88	0.45	62,62,62,62	0
59	MG	DA	3217	1/1	0.88	0.55	56,56,56,56	0
59	MG	AA	1626	1/1	0.88	0.45	132,132,132,132	0
59	MG	BA	3121	1/1	0.88	0.34	65,65,65,65	0
59	MG	DA	3113	1/1	0.88	0.58	74,74,74,74	0
59	MG	AA	1618	1/1	0.88	0.51	94,94,94,94	0
59	MG	DA	3164	1/1	0.89	0.62	91,91,91,91	0
59	MG	BA	3169	1/1	0.89	0.23	94,94,94,94	0
59	MG	DA	3138	1/1	0.89	0.39	64,64,64,64	0
59	MG	CA	1616	1/1	0.89	0.35	98,98,98,98	0
59	MG	DA	3220	1/1	0.89	0.81	99,99,99,99	0
59	MG	DA	3129	1/1	0.89	0.71	75,75,75,75	0
59	MG	DA	3114	1/1	0.89	0.28	107,107,107,107	0
59	MG	AA	1602	1/1	0.89	0.25	87,87,87,87	0
59	MG	DA	3112	1/1	0.90	0.28	75,75,75,75	0
59	MG	BA	3168	1/1	0.90	0.48	78,78,78,78	0
59	MG	BA	3078	1/1	0.90	0.39	65,65,65,65	0
59	MG	AA	1605	1/1	0.90	0.44	76,76,76,76	0
59	MG	DA	3207	1/1	0.90	0.23	104,104,104,104	0
59	MG	DA	3027	1/1	0.90	0.80	57,57,57,57	0
59	MG	DA	3123	1/1	0.90	0.19	77,77,77,77	0
59	MG	CA	1614	1/1	0.90	0.78	81,81,81,81	0
59	MG	DA	3064	1/1	0.90	0.38	48,48,48,48	0
59	MG	BA	3047	1/1	0.90	0.43	72,72,72,72	0
59	MG	DA	3132	1/1	0.90	0.78	72,72,72,72	0
59	MG	BA	3137	1/1	0.90	0.46	80,80,80,80	0
59	MG	AA	1611	1/1	0.90	0.67	69,69,69,69	0
59	MG	BA	3061	1/1	0.90	0.87	74,74,74,74	0
59	MG	DA	3196	1/1	0.91	0.77	69,69,69,69	0
59	MG	CA	1615	1/1	0.91	0.96	98,98,98,98	0
59	MG	BA	3177	1/1	0.91	1.02	80,80,80,80	0
59	MG	BA	3075	1/1	0.91	0.48	78,78,78,78	0
59	MG	BB	201	1/1	0.91	0.26	85,85,85,85	0
59	MG	DA	3148	1/1	0.91	0.31	87,87,87,87	0
59	MG	AA	1608	1/1	0.91	0.34	90,90,90,90	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
59	MG	BE	301	1/1	0.91	0.44	73,73,73,73	0
59	MG	BA	3098	1/1	0.91	0.68	66,66,66,66	0
59	MG	BA	3103	1/1	0.91	0.37	88,88,88,88	0
59	MG	BA	3131	1/1	0.91	0.20	76,76,76,76	0
59	MG	BA	3171	1/1	0.91	0.31	91,91,91,91	0
59	MG	DA	3183	1/1	0.91	0.26	82,82,82,82	0
59	MG	BA	3172	1/1	0.91	0.50	78,78,78,78	0
59	MG	DA	3192	1/1	0.91	0.42	86,86,86,86	0
59	MG	CA	1613	1/1	0.91	0.60	80,80,80,80	0
59	MG	BA	3133	1/1	0.91	0.29	83,83,83,83	0
59	MG	CA	1601	1/1	0.92	0.22	78,78,78,78	0
59	MG	AA	1623	1/1	0.92	0.77	83,83,83,83	0
59	MG	AA	1619	1/1	0.92	0.59	90,90,90,90	0
59	MG	CA	1618	1/1	0.92	0.44	105,105,105,105	0
59	MG	DA	3184	1/1	0.92	0.54	85,85,85,85	0
59	MG	DA	3058	1/1	0.92	0.30	54,54,54,54	0
59	MG	CA	1612	1/1	0.92	0.36	77,77,77,77	0
59	MG	BA	3160	1/1	0.92	0.61	98,98,98,98	0
59	MG	DA	3120	1/1	0.92	0.46	83,83,83,83	0
59	MG	BA	3175	1/1	0.92	0.44	69,69,69,69	0
59	MG	DA	3157	1/1	0.92	0.51	80,80,80,80	0
59	MG	DA	3088	1/1	0.92	0.25	75,75,75,75	0
59	MG	DA	3096	1/1	0.92	0.70	62,62,62,62	0
59	MG	DA	3159	1/1	0.93	0.41	89,89,89,89	0
59	MG	BA	3097	1/1	0.93	0.58	69,69,69,69	0
59	MG	BA	3041	1/1	0.93	0.46	63,63,63,63	0
59	MG	DA	3023	1/1	0.93	0.46	51,51,51,51	0
59	MG	DA	3173	1/1	0.93	0.21	102,102,102,102	0
59	MG	BA	3009	1/1	0.93	0.46	46,46,46,46	0
59	MG	BA	3084	1/1	0.93	0.45	87,87,87,87	0
59	MG	DA	3210	1/1	0.93	0.47	77,77,77,77	0
59	MG	DA	3035	1/1	0.93	0.37	50,50,50,50	0
59	MG	DA	3036	1/1	0.93	0.42	40,40,40,40	0
59	MG	DA	3057	1/1	0.93	0.32	52,52,52,52	0
59	MG	BA	3016	1/1	0.93	0.70	69,69,69,69	0
59	MG	DA	3063	1/1	0.93	0.37	54,54,54,54	0
59	MG	DA	3153	1/1	0.93	0.77	66,66,66,66	0
59	MG	BA	3027	1/1	0.93	0.43	76,76,76,76	0
59	MG	AA	1625	1/1	0.93	0.38	78,78,78,78	0
59	MG	BA	3109	1/1	0.94	0.25	74,74,74,74	0
59	MG	BA	3110	1/1	0.94	0.40	75,75,75,75	0
59	MG	AA	1604	1/1	0.94	0.91	76,76,76,76	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
59	MG	DA	3158	1/1	0.94	0.23	71,71,71,71	0
59	MG	DA	3049	1/1	0.94	0.67	64,64,64,64	0
59	MG	DA	3161	1/1	0.94	0.19	58,58,58,58	0
59	MG	BA	3081	1/1	0.94	0.21	107,107,107,107	0
59	MG	BA	3044	1/1	0.94	0.51	81,81,81,81	0
59	MG	BA	3117	1/1	0.94	0.44	100,100,100,100	0
59	MG	CA	1602	1/1	0.94	0.28	64,64,64,64	0
59	MG	DA	3175	1/1	0.94	0.28	60,60,60,60	0
59	MG	DA	3071	1/1	0.94	0.25	66,66,66,66	0
59	MG	DA	3181	1/1	0.94	0.24	82,82,82,82	0
59	MG	CA	1604	1/1	0.94	0.66	58,58,58,58	0
59	MG	DA	3080	1/1	0.94	0.46	68,68,68,68	0
59	MG	BA	3119	1/1	0.94	0.90	80,80,80,80	0
59	MG	DA	3188	1/1	0.94	0.71	87,87,87,87	0
59	MG	CA	1609	1/1	0.94	0.17	110,110,110,110	0
59	MG	DA	3092	1/1	0.94	0.33	70,70,70,70	0
59	MG	BA	3083	1/1	0.94	0.55	64,64,64,64	0
59	MG	BA	3022	1/1	0.94	0.79	68,68,68,68	0
59	MG	BA	3123	1/1	0.94	0.10	105,105,105,105	0
59	MG	DA	3198	1/1	0.94	0.45	85,85,85,85	0
59	MG	BA	3006	1/1	0.94	0.51	41,41,41,41	0
59	MG	DA	3201	1/1	0.94	0.36	82,82,82,82	0
59	MG	BA	3053	1/1	0.94	0.66	71,71,71,71	0
59	MG	BA	3130	1/1	0.94	0.44	63,63,63,63	0
59	MG	BA	3058	1/1	0.94	0.44	66,66,66,66	0
59	MG	BA	3093	1/1	0.94	0.29	110,110,110,110	0
59	MG	BA	3037	1/1	0.94	0.23	98,98,98,98	0
59	MG	CA	1620	1/1	0.94	0.43	121,121,121,121	0
59	MG	BA	3066	1/1	0.94	0.29	75,75,75,75	0
59	MG	CA	1623	1/1	0.94	0.30	151,151,151,151	0
59	MG	BA	3176	1/1	0.94	0.18	98,98,98,98	0
59	MG	BA	3101	1/1	0.94	0.13	86,86,86,86	0
59	MG	CA	1626	1/1	0.94	0.46	97,97,97,97	0
59	MG	D5	102	1/1	0.94	0.90	82,82,82,82	0
59	MG	BA	3178	1/1	0.94	0.56	96,96,96,96	0
59	MG	AA	1603	1/1	0.94	0.30	102,102,102,102	0
59	MG	BA	3076	1/1	0.94	0.32	68,68,68,68	0
59	MG	DW	201	1/1	0.94	0.50	70,70,70,70	0
59	MG	DA	3031	1/1	0.94	0.36	48,48,48,48	0
59	MG	DA	3168	1/1	0.95	0.08	72,72,72,72	0
59	MG	BA	3032	1/1	0.95	0.45	69,69,69,69	0
59	MG	DA	3172	1/1	0.95	0.15	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
59	MG	BD	301	1/1	0.95	0.23	71,71,71,71	0
59	MG	DA	3099	1/1	0.95	1.05	71,71,71,71	0
59	MG	BA	3034	1/1	0.95	0.40	75,75,75,75	0
59	MG	DA	3178	1/1	0.95	0.16	79,79,79,79	0
59	MG	BA	3100	1/1	0.95	0.30	102,102,102,102	0
59	MG	AA	1627	1/1	0.95	0.45	90,90,90,90	0
59	MG	AA	1624	1/1	0.95	0.27	110,110,110,110	0
59	MG	DA	3012	1/1	0.95	0.45	60,60,60,60	0
59	MG	DA	3185	1/1	0.95	0.57	76,76,76,76	0
59	MG	BA	3165	1/1	0.95	0.27	111,111,111,111	0
59	MG	BA	3104	1/1	0.95	0.38	80,80,80,80	0
59	MG	CA	1603	1/1	0.95	0.49	89,89,89,89	0
59	MG	DA	3030	1/1	0.95	0.31	42,42,42,42	0
59	MG	DA	3124	1/1	0.95	0.35	97,97,97,97	0
59	MG	BA	3011	1/1	0.95	0.30	58,58,58,58	0
59	MG	DA	3197	1/1	0.95	0.18	84,84,84,84	0
59	MG	CA	1605	1/1	0.95	0.27	94,94,94,94	0
59	MG	BA	3106	1/1	0.95	0.68	90,90,90,90	0
59	MG	BA	3170	1/1	0.95	0.32	77,77,77,77	0
59	MG	DA	3042	1/1	0.95	0.34	45,45,45,45	0
59	MG	DA	3046	1/1	0.95	0.55	74,74,74,74	0
59	MG	BA	3043	1/1	0.95	0.15	67,67,67,67	0
59	MG	DA	3055	1/1	0.95	0.38	62,62,62,62	0
59	MG	AA	1613	1/1	0.95	0.19	117,117,117,117	0
59	MG	AA	1607	1/1	0.95	0.39	83,83,83,83	0
59	MG	DA	3150	1/1	0.95	0.09	100,100,100,100	0
59	MG	BA	3113	1/1	0.95	0.28	74,74,74,74	0
59	MG	BA	3051	1/1	0.95	0.43	75,75,75,75	0
59	MG	DA	3068	1/1	0.95	0.25	56,56,56,56	0
59	MG	BA	3003	1/1	0.95	0.50	62,62,62,62	0
59	MG	BA	3030	1/1	0.95	0.67	62,62,62,62	0
59	MG	BA	3057	1/1	0.95	0.36	61,61,61,61	0
59	MG	DA	3162	1/1	0.95	0.43	70,70,70,70	0
59	MG	BA	3180	1/1	0.95	0.08	99,99,99,99	0
59	MG	DD	302	1/1	0.95	0.29	54,54,54,54	0
59	MG	DP	201	1/1	0.95	0.24	57,57,57,57	0
59	MG	BA	3031	1/1	0.95	0.64	82,82,82,82	0
59	MG	DA	3165	1/1	0.95	0.34	60,60,60,60	0
60	ZN	D9	101	1/1	0.95	0.28	223,223,223,223	0
59	MG	DA	3133	1/1	0.96	0.28	91,91,91,91	0
59	MG	DA	3078	1/1	0.96	0.18	90,90,90,90	0
59	MG	DA	3187	1/1	0.96	0.23	92,92,92,92	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
59	MG	BA	3010	1/1	0.96	0.82	54,54,54,54	0
59	MG	DA	3189	1/1	0.96	0.35	75,75,75,75	0
59	MG	DA	3082	1/1	0.96	0.18	73,73,73,73	0
59	MG	DA	3085	1/1	0.96	0.62	52,52,52,52	0
59	MG	BA	3153	1/1	0.96	0.40	98,98,98,98	0
59	MG	BA	3005	1/1	0.96	0.56	59,59,59,59	0
59	MG	BA	3132	1/1	0.96	0.17	71,71,71,71	0
59	MG	AA	1609	1/1	0.96	1.08	83,83,83,83	0
59	MG	BA	3134	1/1	0.96	0.30	86,86,86,86	0
59	MG	DA	3038	1/1	0.96	0.32	62,62,62,62	0
59	MG	DA	3200	1/1	0.96	0.24	79,79,79,79	0
59	MG	DA	3110	1/1	0.96	0.30	77,77,77,77	0
59	MG	BA	3161	1/1	0.96	0.34	80,80,80,80	0
59	MG	BA	3017	1/1	0.96	0.74	59,59,59,59	0
59	MG	BA	3085	1/1	0.96	0.28	76,76,76,76	0
59	MG	AA	1620	1/1	0.96	0.51	69,69,69,69	0
59	MG	BA	3070	1/1	0.96	0.26	87,87,87,87	0
59	MG	CA	1611	1/1	0.96	0.70	72,72,72,72	0
59	MG	DA	3166	1/1	0.96	0.66	55,55,55,55	0
59	MG	DA	3004	1/1	0.96	0.32	52,52,52,52	0
59	MG	DA	3169	1/1	0.96	0.21	62,62,62,62	0
59	MG	DA	3122	1/1	0.96	0.15	56,56,56,56	0
59	MG	DA	3214	1/1	0.96	0.33	80,80,80,80	0
59	MG	DA	3215	1/1	0.96	0.42	54,54,54,54	0
59	MG	BA	3048	1/1	0.96	0.56	54,54,54,54	0
59	MG	DA	3218	1/1	0.96	0.17	82,82,82,82	0
59	MG	DA	3065	1/1	0.96	0.33	79,79,79,79	0
59	MG	DA	3174	1/1	0.96	0.31	77,77,77,77	0
59	MG	DA	3126	1/1	0.96	0.37	71,71,71,71	0
59	MG	DA	3127	1/1	0.96	0.56	78,78,78,78	0
59	MG	BA	3036	1/1	0.96	0.30	76,76,76,76	0
59	MG	DA	3180	1/1	0.96	0.29	86,86,86,86	0
59	MG	DA	3017	1/1	0.96	0.36	45,45,45,45	0
59	MG	BA	3025	1/1	0.96	0.21	73,73,73,73	0
59	MG	DA	3077	1/1	0.96	0.17	70,70,70,70	0
59	MG	DA	3171	1/1	0.97	0.42	104,104,104,104	0
59	MG	DA	3007	1/1	0.97	0.50	53,53,53,53	0
59	MG	DA	3097	1/1	0.97	0.30	77,77,77,77	0
59	MG	BA	3049	1/1	0.97	0.31	63,63,63,63	0
59	MG	BA	3015	1/1	0.97	0.47	59,59,59,59	0
59	MG	DA	3107	1/1	0.97	0.23	66,66,66,66	0
59	MG	BA	3033	1/1	0.97	0.54	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
59	MG	DA	3021	1/1	0.97	0.36	56,56,56,56	0
59	MG	AA	1621	1/1	0.97	0.40	81,81,81,81	0
59	MG	BA	3054	1/1	0.97	0.32	74,74,74,74	0
59	MG	BA	3007	1/1	0.97	0.68	54,54,54,54	0
59	MG	BA	3092	1/1	0.97	0.42	80,80,80,80	0
59	MG	BA	3018	1/1	0.97	0.49	52,52,52,52	0
59	MG	CA	1608	1/1	0.97	1.16	78,78,78,78	0
59	MG	BA	3059	1/1	0.97	0.34	66,66,66,66	0
59	MG	BA	3060	1/1	0.97	0.46	76,76,76,76	0
59	MG	BA	3008	1/1	0.97	0.54	58,58,58,58	0
59	MG	BA	3039	1/1	0.97	0.67	60,60,60,60	0
59	MG	DA	3047	1/1	0.97	0.16	63,63,63,63	0
59	MG	DA	3048	1/1	0.97	0.69	51,51,51,51	0
59	MG	BA	3102	1/1	0.97	0.26	78,78,78,78	0
59	MG	DA	3050	1/1	0.97	0.23	49,49,49,49	0
59	MG	DA	3054	1/1	0.97	0.35	68,68,68,68	0
59	MG	BA	3023	1/1	0.97	0.44	45,45,45,45	0
59	MG	DA	3134	1/1	0.97	0.35	64,64,64,64	0
59	MG	BA	3136	1/1	0.97	0.36	67,67,67,67	0
59	MG	BA	3074	1/1	0.97	0.59	69,69,69,69	0
59	MG	DA	3061	1/1	0.97	0.38	50,50,50,50	0
59	MG	DA	3139	1/1	0.97	0.35	90,90,90,90	0
59	MG	BA	3139	1/1	0.97	0.47	61,61,61,61	0
59	MG	DA	3146	1/1	0.97	0.64	92,92,92,92	0
59	MG	BA	3141	1/1	0.97	0.32	72,72,72,72	0
59	MG	AA	1614	1/1	0.97	0.36	105,105,105,105	0
59	MG	AA	1616	1/1	0.97	0.30	77,77,77,77	0
59	MG	BA	3108	1/1	0.97	0.46	67,67,67,67	0
59	MG	DA	3154	1/1	0.97	0.10	80,80,80,80	0
59	MG	CA	1622	1/1	0.97	0.12	104,104,104,104	0
59	MG	DA	3075	1/1	0.97	0.45	74,74,74,74	0
59	MG	BA	3045	1/1	0.97	0.48	63,63,63,63	0
59	MG	BA	3080	1/1	0.97	0.39	77,77,77,77	0
59	MG	DA	3079	1/1	0.97	0.38	66,66,66,66	0
59	MG	BA	3150	1/1	0.97	0.34	94,94,94,94	0
59	MG	DA	3221	1/1	0.97	0.11	92,92,92,92	0
59	MG	BA	3111	1/1	0.97	0.32	71,71,71,71	0
59	MG	DA	3084	1/1	0.97	0.31	56,56,56,56	0
59	MG	DD	301	1/1	0.97	0.33	53,53,53,53	0
59	MG	AA	1601	1/1	0.97	0.26	69,69,69,69	0
59	MG	DA	3001	1/1	0.97	0.43	36,36,36,36	0
59	MG	BA	3012	1/1	0.97	0.45	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
59	MG	DA	3090	1/1	0.97	0.54	47,47,47,47	0
60	ZN	CN	101	1/1	0.97	0.16	170,170,170,170	0
59	MG	DA	3005	1/1	0.97	0.43	44,44,44,44	0
59	MG	BA	3079	1/1	0.98	0.38	83,83,83,83	0
59	MG	BA	3028	1/1	0.98	0.43	56,56,56,56	0
59	MG	BA	3055	1/1	0.98	0.35	85,85,85,85	0
59	MG	BA	3056	1/1	0.98	0.47	76,76,76,76	0
59	MG	DA	3051	1/1	0.98	0.23	60,60,60,60	0
59	MG	DA	3052	1/1	0.98	0.49	51,51,51,51	0
59	MG	DA	3053	1/1	0.98	0.44	72,72,72,72	0
59	MG	BA	3029	1/1	0.98	0.50	59,59,59,59	0
59	MG	DA	3151	1/1	0.98	0.34	70,70,70,70	0
59	MG	BA	3115	1/1	0.98	0.43	90,90,90,90	0
59	MG	BA	3156	1/1	0.98	0.27	62,62,62,62	0
59	MG	BA	3157	1/1	0.98	0.23	107,107,107,107	0
59	MG	DA	3060	1/1	0.98	0.49	57,57,57,57	0
59	MG	AA	1610	1/1	0.98	0.46	64,64,64,64	0
59	MG	AA	1615	1/1	0.98	0.41	87,87,87,87	0
59	MG	BA	3118	1/1	0.98	0.23	80,80,80,80	0
59	MG	BA	3020	1/1	0.98	0.22	69,69,69,69	0
59	MG	DA	3067	1/1	0.98	0.29	57,57,57,57	0
59	MG	BA	3087	1/1	0.98	0.35	74,74,74,74	0
59	MG	BA	3001	1/1	0.98	0.48	56,56,56,56	0
59	MG	DA	3072	1/1	0.98	0.35	61,61,61,61	0
59	MG	BA	3122	1/1	0.98	0.57	67,67,67,67	0
59	MG	DA	3074	1/1	0.98	0.40	61,61,61,61	0
59	MG	BA	3089	1/1	0.98	0.32	60,60,60,60	0
59	MG	DA	3076	1/1	0.98	0.28	73,73,73,73	0
59	MG	BA	3090	1/1	0.98	0.37	60,60,60,60	0
59	MG	BA	3062	1/1	0.98	0.52	70,70,70,70	0
59	MG	BA	3127	1/1	0.98	0.24	63,63,63,63	0
59	MG	BA	3129	1/1	0.98	0.18	69,69,69,69	0
59	MG	DA	3081	1/1	0.98	0.21	62,62,62,62	0
59	MG	DA	3177	1/1	0.98	0.29	86,86,86,86	0
59	MG	BA	3063	1/1	0.98	0.32	74,74,74,74	0
59	MG	DA	3179	1/1	0.98	1.14	93,93,93,93	0
59	MG	D5	101	1/1	0.98	0.14	78,78,78,78	0
59	MG	BA	3173	1/1	0.98	0.28	84,84,84,84	0
59	MG	BA	3064	1/1	0.98	0.56	51,51,51,51	0
59	MG	DA	3087	1/1	0.98	0.36	73,73,73,73	0
59	MG	DA	3002	1/1	0.98	0.50	58,58,58,58	0
59	MG	DA	3003	1/1	0.98	0.54	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
59	MG	DA	3186	1/1	0.98	0.23	93,93,93,93	0
59	MG	BA	3095	1/1	0.98	0.35	69,69,69,69	0
59	MG	DA	3093	1/1	0.98	0.29	74,74,74,74	0
59	MG	DA	3094	1/1	0.98	0.75	64,64,64,64	0
59	MG	BA	3013	1/1	0.98	0.35	62,62,62,62	0
59	MG	DA	3191	1/1	0.98	0.38	83,83,83,83	0
59	MG	BA	3067	1/1	0.98	0.19	67,67,67,67	0
59	MG	DA	3098	1/1	0.98	0.66	60,60,60,60	0
59	MG	BA	3135	1/1	0.98	0.32	71,71,71,71	0
59	MG	DA	3100	1/1	0.98	0.22	57,57,57,57	0
59	MG	DA	3102	1/1	0.98	0.57	77,77,77,77	0
59	MG	DA	3015	1/1	0.98	0.43	51,51,51,51	0
59	MG	DA	3106	1/1	0.98	0.35	43,43,43,43	0
59	MG	BA	3068	1/1	0.98	0.44	76,76,76,76	0
59	MG	DA	3108	1/1	0.98	0.43	69,69,69,69	0
59	MG	DA	3109	1/1	0.98	0.23	80,80,80,80	0
59	MG	BA	3035	1/1	0.98	0.48	51,51,51,51	0
59	MG	DA	3019	1/1	0.98	0.43	66,66,66,66	0
59	MG	BA	3138	1/1	0.98	0.60	93,93,93,93	0
59	MG	DA	3022	1/1	0.98	0.38	40,40,40,40	0
59	MG	BA	3072	1/1	0.98	0.41	80,80,80,80	0
59	MG	DA	3024	1/1	0.98	0.42	53,53,53,53	0
59	MG	DA	3209	1/1	0.98	0.21	64,64,64,64	0
59	MG	DA	3118	1/1	0.98	0.28	67,67,67,67	0
59	MG	DA	3211	1/1	0.98	0.15	80,80,80,80	0
59	MG	DA	3025	1/1	0.98	0.59	44,44,44,44	0
59	MG	BA	3140	1/1	0.98	0.21	85,85,85,85	0
59	MG	DA	3121	1/1	0.98	0.48	50,50,50,50	0
59	MG	BA	3073	1/1	0.98	0.27	91,91,91,91	0
59	MG	BA	3050	1/1	0.98	0.58	66,66,66,66	0
59	MG	BA	3002	1/1	0.98	0.47	50,50,50,50	0
59	MG	DA	3125	1/1	0.98	0.43	80,80,80,80	0
59	MG	DA	3034	1/1	0.98	0.32	47,47,47,47	0
59	MG	BA	3026	1/1	0.98	0.41	58,58,58,58	0
59	MG	BA	3146	1/1	0.98	0.12	104,104,104,104	0
59	MG	BA	3077	1/1	0.98	0.29	93,93,93,93	0
59	MG	DA	3130	1/1	0.98	0.18	63,63,63,63	0
59	MG	DA	3040	1/1	0.98	0.67	63,63,63,63	0
59	MG	AA	1606	1/1	0.98	0.29	87,87,87,87	0
59	MG	DU	201	1/1	0.98	0.49	62,62,62,62	0
59	MG	DA	3044	1/1	0.98	0.51	56,56,56,56	0
60	ZN	AD	301	1/1	0.98	0.34	117,117,117,117	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
60	ZN	AN	101	1/1	0.98	0.19	165,165,165,165	0
59	MG	DA	3045	1/1	0.98	0.59	43,43,43,43	0
60	ZN	CD	301	1/1	0.98	0.30	107,107,107,107	0
59	MG	DA	3135	1/1	0.98	0.18	56,56,56,56	0
59	MG	BA	3149	1/1	0.98	0.33	84,84,84,84	0
59	MG	DA	3056	1/1	0.99	0.23	54,54,54,54	0
59	MG	DA	3018	1/1	0.99	0.49	56,56,56,56	0
59	MG	BA	3069	1/1	0.99	0.51	72,72,72,72	0
59	MG	DA	3059	1/1	0.99	0.30	66,66,66,66	0
59	MG	DA	3020	1/1	0.99	0.57	35,35,35,35	0
59	MG	BA	3094	1/1	0.99	0.24	62,62,62,62	0
59	MG	DA	3062	1/1	0.99	0.31	51,51,51,51	0
59	MG	BA	3128	1/1	0.99	0.23	83,83,83,83	0
59	MG	DA	3115	1/1	0.99	0.26	55,55,55,55	0
59	MG	BA	3167	1/1	0.99	0.33	79,79,79,79	0
59	MG	DA	3117	1/1	0.99	0.50	53,53,53,53	0
59	MG	BA	3014	1/1	0.99	0.38	50,50,50,50	0
59	MG	DA	3066	1/1	0.99	0.44	58,58,58,58	0
59	MG	BA	3096	1/1	0.99	0.19	76,76,76,76	0
59	MG	DA	3026	1/1	0.99	0.41	44,44,44,44	0
59	MG	DA	3069	1/1	0.99	0.40	71,71,71,71	0
59	MG	DA	3070	1/1	0.99	0.36	71,71,71,71	0
59	MG	BA	3071	1/1	0.99	0.19	84,84,84,84	0
59	MG	DA	3028	1/1	0.99	0.37	51,51,51,51	0
59	MG	DA	3029	1/1	0.99	0.45	63,63,63,63	0
59	MG	BA	3042	1/1	0.99	0.59	66,66,66,66	0
59	MG	BA	3099	1/1	0.99	0.40	67,67,67,67	0
59	MG	DA	3032	1/1	0.99	0.50	57,57,57,57	0
59	MG	BA	3004	1/1	0.99	0.32	49,49,49,49	0
59	MG	DA	3194	1/1	0.99	0.27	67,67,67,67	0
59	MG	CA	1607	1/1	0.99	0.46	55,55,55,55	0
59	MG	BA	3024	1/1	0.99	0.35	50,50,50,50	0
59	MG	BA	3019	1/1	0.99	0.39	64,64,64,64	0
59	MG	DA	3037	1/1	0.99	0.47	58,58,58,58	0
59	MG	BA	3046	1/1	0.99	0.32	77,77,77,77	0
59	MG	DA	3083	1/1	0.99	0.26	78,78,78,78	0
59	MG	DA	3039	1/1	0.99	0.33	60,60,60,60	0
59	MG	BA	3065	1/1	0.99	0.36	74,74,74,74	0
59	MG	DA	3041	1/1	0.99	0.28	44,44,44,44	0
59	MG	DA	3140	1/1	0.99	0.32	69,69,69,69	0
59	MG	BA	3158	1/1	0.99	0.53	89,89,89,89	0
59	MG	DA	3142	1/1	0.99	0.55	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
59	MG	DA	3143	1/1	0.99	0.30	72,72,72,72	0
59	MG	DA	3144	1/1	0.99	0.36	70,70,70,70	0
59	MG	DA	3145	1/1	0.99	0.25	58,58,58,58	0
59	MG	DA	3043	1/1	0.99	0.42	53,53,53,53	0
59	MG	DA	3089	1/1	0.99	0.24	67,67,67,67	0
59	MG	DA	3006	1/1	0.99	0.34	51,51,51,51	0
59	MG	DA	3149	1/1	0.99	0.41	59,59,59,59	0
59	MG	DA	3091	1/1	0.99	0.28	56,56,56,56	0
59	MG	B5	101	1/1	0.99	0.12	73,73,73,73	0
59	MG	DA	3216	1/1	0.99	0.11	62,62,62,62	0
59	MG	DA	3152	1/1	0.99	0.26	61,61,61,61	0
59	MG	DA	3008	1/1	0.99	0.30	61,61,61,61	0
59	MG	DA	3009	1/1	0.99	0.44	45,45,45,45	0
59	MG	DA	3155	1/1	0.99	0.21	59,59,59,59	0
59	MG	DA	3095	1/1	0.99	0.26	59,59,59,59	0
59	MG	DA	3010	1/1	0.99	0.51	47,47,47,47	0
59	MG	DA	3011	1/1	0.99	0.43	67,67,67,67	0
59	MG	BA	3021	1/1	0.99	0.34	66,66,66,66	0
59	MG	DA	3160	1/1	0.99	0.24	85,85,85,85	0
59	MG	DA	3013	1/1	0.99	0.51	46,46,46,46	0
59	MG	DA	3014	1/1	0.99	0.35	61,61,61,61	0
59	MG	DA	3101	1/1	0.99	0.56	71,71,71,71	0
59	MG	BA	3107	1/1	0.99	0.20	91,91,91,91	0
59	MG	DA	3103	1/1	0.99	0.38	59,59,59,59	0
59	MG	BA	3124	1/1	0.99	0.36	90,90,90,90	0
59	MG	DA	3167	1/1	0.99	0.29	58,58,58,58	0
59	MG	DA	3105	1/1	0.99	0.29	60,60,60,60	0
59	MG	BA	3040	1/1	0.99	0.36	55,55,55,55	0
59	MG	BA	3142	1/1	1.00	0.44	74,74,74,74	0

6.5 Other polymers [\(i\)](#)

There are no such residues in this entry.