Full wwPDB X-ray Structure Validation Report ⓘ

Dec 17, 2023 – 10:13 AM EST

PDB ID	:	4U27
Title	:	Crystal structure of the E. coli ribosome bound to flopristin and linopristin.
Authors	:	Noeske, J.; Huang, J.; Olivier, N.B.; Giacobbe, R.A.; Zambrowski, M.; Cate, J.H.D.
Deposited on	:	2014-07-16
Resolution	:	2.80 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:

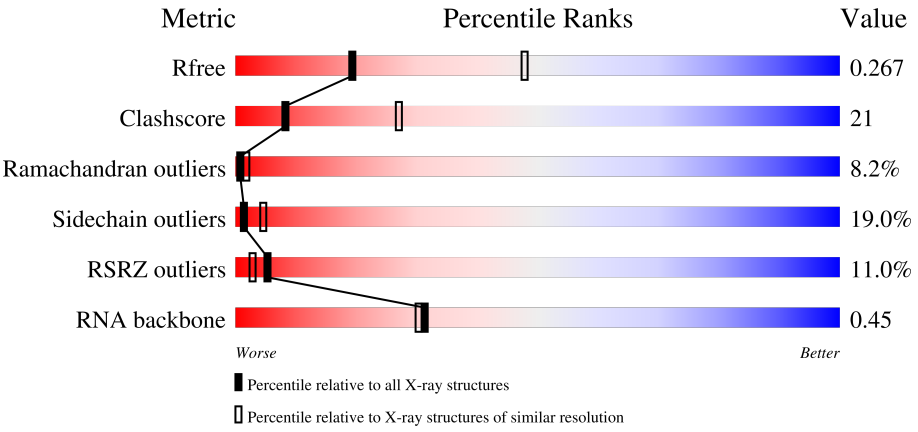
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.80 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	3140 (2.80-2.80)
Clashscore	141614	3569 (2.80-2.80)
Ramachandran outliers	138981	3498 (2.80-2.80)
Sidechain outliers	138945	3500 (2.80-2.80)
RSRZ outliers	127900	3078 (2.80-2.80)
RNA backbone	3102	1227 (3.10-2.50)

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

Mol	Chain	Length	Quality of chain
1	AA	1539	2% 34% 49% 16%
1	CA	1539	4% 33% 52% 15%
2	AB	218	9% 25% 45% 23% 6%
2	CB	218	25% 25% 55% 17%

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Mol	Chain	Length	Quality of chain
3	AC	206	% 46% 39% 13%
3	CC	206	11% 51% 37% 11%
4	AD	205	4% 35% 42% 20%
4	CD	205	2% 40% 43% 15%
5	AE	150	% 41% 39% 18%
5	CE	150	2% 39% 38% 20%
6	AF	100	% 38% 37% 20% 5%
6	CF	100	3% 32% 45% 19%
7	AG	151	8% 39% 45% 16%
7	CG	151	58% 40% 45% 13%
8	AH	129	% 40% 45% 15%
8	CH	129	4% 51% 37% 9%
9	AI	127	12% 37% 35% 26%
9	CI	127	28% 37% 43% 18%
10	AJ	98	6% 33% 41% 23%
10	CJ	98	48% 42% 37% 19%
11	AK	117	9% 44% 38% 16%
11	CK	117	3% 36% 48% 15%
12	AL	123	4% 47% 43% 7%
12	CL	123	5% 37% 42% 16%
13	AM	114	4% 40% 42% 16%
13	CM	114	58% 40% 44% 15%
14	AN	100	10% 37% 38% 19%
14	CN	100	34% 37% 43% 15%
15	AO	88	2% 58% 33% 9%

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Mol	Chain	Length	Quality of chain
15	CO	88	2% 48% 39% 13%
16	AP	82	6% 35% 39% 23%
16	CP	82	23% 54% 30% 15%
17	AQ	80	4% 35% 46% 14% 5%
17	CQ	80	16% 26% 48% 20% 6%
18	AR	55	5% 53% 35% 13%
18	CR	55	5% 29% 51% 16%
19	AS	79	14% 47% 35% 14%
19	CS	79	73% 41% 48% 9%
20	AT	85	2% 40% 47% 9%
20	CT	85	19% 32% 47% 20%
21	AU	51	33% 18% 43% 27% 12%
21	CU	51	12% 20% 33% 41% 6%
22	BA	2903	4% 47% 40% 12%
22	DA	2903	4% 31% 52% 17%
23	BB	119	62% 33% 5%
23	DB	119	% 28% 57% 14%
24	BC	271	59% 35% 6%
24	DC	271	7% 46% 42% 11%
25	BD	209	72% 22% 5%
25	DD	209	11% 56% 37% 7%
26	BE	201	65% 28% 7%
26	DE	201	35% 46% 43% 10%
27	BF	177	2% 47% 39% 13%
27	DF	177	72% 54% 32% 13%

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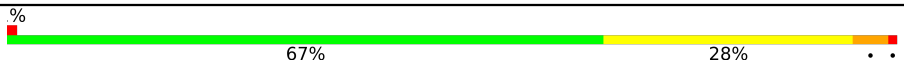
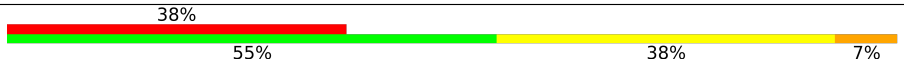
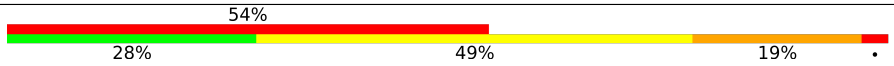
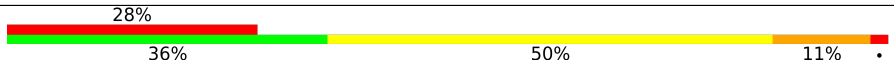
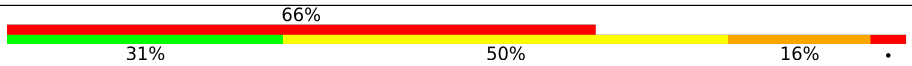
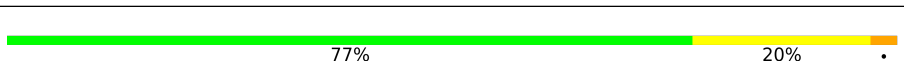
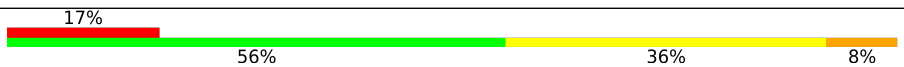
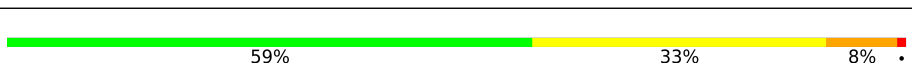
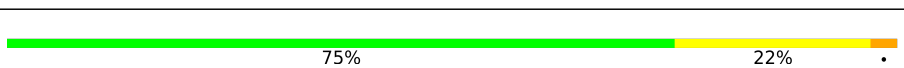
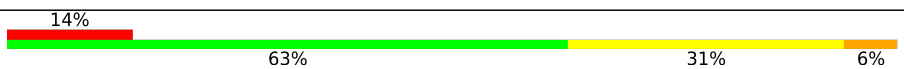
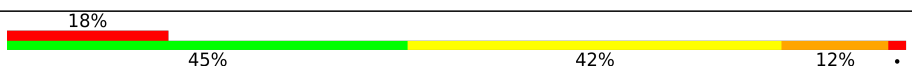
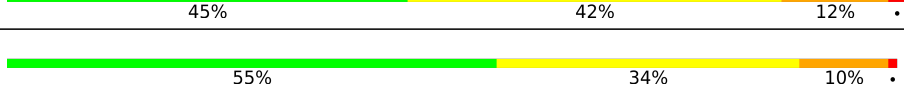
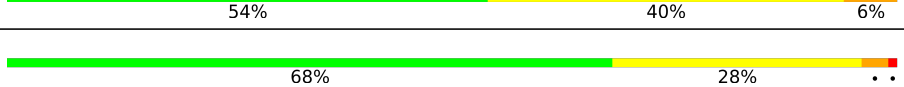
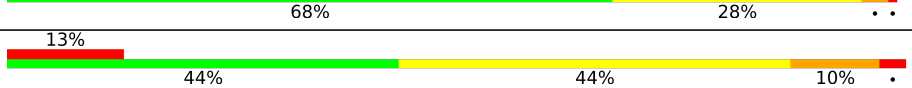
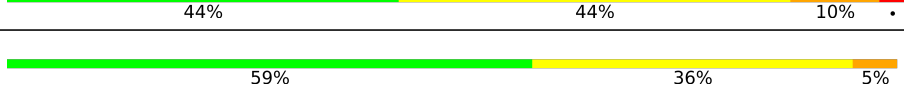
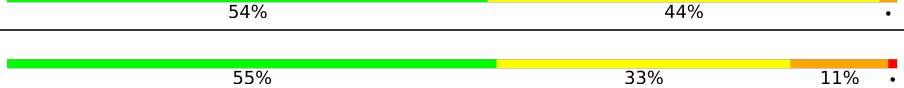
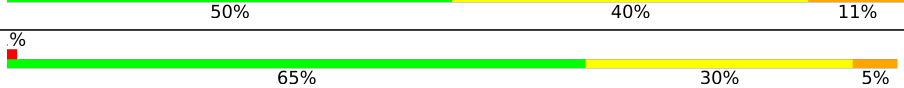
Mol	Chain	Length	Quality of chain
28	BG	176	
28	DG	176	
29	BH	149	
29	DH	149	
30	BI	141	
30	DI	141	
31	BJ	142	
31	DJ	142	
32	BK	122	
32	DK	122	
33	BL	143	
33	DL	143	
34	BM	136	
34	DM	136	
35	BN	120	
35	DN	120	
36	BO	116	
36	DO	116	
37	BP	114	
37	DP	114	
38	BQ	117	
38	DQ	117	
39	BR	103	
39	DR	103	
40	BS	110	

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Mol	Chain	Length	Quality of chain
40	DS	110	34% 54% 34% 12%
41	BT	93	2% 54% 35% 9%
41	DT	93	53% 40% 43% 13%
42	BU	102	2% 59% 30% 10%
42	DU	102	55% 35% 42% 20%
43	BV	94	70% 24% 5%
43	DV	94	16% 56% 40%
44	BW	76	62% 32% 7%
44	DW	76	30% 61% 33%
45	BX	77	56% 38% 6%
45	DX	77	16% 35% 53% 10%
46	BY	63	8% 44% 35% 19%
46	DY	63	43% 19% 67% 13%
47	BZ	58	76% 24%
47	DZ	58	10% 55% 33% 12%
48	B0	56	55% 39% 5%
48	D0	56	30% 57% 38% 5%
49	B1	50	4% 46% 42% 12%
49	D1	50	24% 60% 34% 6%
50	B2	46	2% 67% 28%
50	D2	46	30% 43% 48%
51	B3	64	80% 17%
51	D3	64	25% 59% 31% 9%
52	B4	38	50% 39% 11%
52	D4	38	34% 55% 34% 11%

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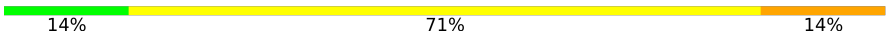
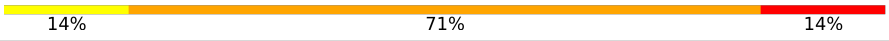
Mol	Chain	Length	Quality of chain
53	B5	228	
54	B6	7	
54	D6	7	

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
54	MHW	B6	1	-	X	-	-
54	MHW	D6	1	-	-	X	-
54	004	D6	7	-	X	-	-
55	MG	AA	1658	-	-	-	X
55	MG	AA	1660	-	-	-	X
55	MG	AA	1662	-	-	-	X
55	MG	AA	1672	-	-	-	X
55	MG	CA	1656	-	-	-	X
55	MG	DA	3008	-	-	-	X
55	MG	DA	3016	-	-	-	X
55	MG	DA	3027	-	-	-	X
55	MG	DA	3063	-	-	-	X
55	MG	DA	3093	-	-	-	X
55	MG	DA	3113	-	-	-	X
55	MG	DA	3132	-	-	-	X
55	MG	DA	3134	-	-	-	X
55	MG	DA	3138	-	-	-	X
55	MG	DA	3165	-	-	-	X

2 Entry composition (i)

There are 58 unique types of molecules in this entry. The entry contains 288396 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1538	Total	C	N	O	P	0	0	0
			32995	14716	6050	10691	1538			
1	CA	1539	Total	C	N	O	P	0	0	0
			33015	14725	6052	10699	1539			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	218	Total	C	N	O	S	0	0	0
			1705	1081	305	312	7			
2	CB	218	Total	C	N	O	S	0	0	0
			1705	1081	305	312	7			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	206	Total	C	N	O	S	0	0	0
			1625	1028	305	289	3			
3	CC	206	Total	C	N	O	S	0	0	0
			1625	1028	305	289	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			
4	CD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	150	Total	C	N	O	S	0	0	0
			1106	687	211	202	6			
5	CE	150	Total	C	N	O	S	0	0	0
			1106	687	211	202	6			

- Molecule 6 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	100	Total	C	N	O	S	0	0	0
			818	515	148	149	6			
6	CF	100	Total	C	N	O	S	0	0	0
			818	515	148	149	6			

- Molecule 7 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	151	Total	C	N	O	S	0	0	0
			1182	735	227	216	4			
7	CG	151	Total	C	N	O	S	0	0	0
			1182	735	227	216	4			

- Molecule 8 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			
8	CH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			

- Molecule 9 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			
9	CI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AJ	98	Total	C	N	O	S	0	0	0
			787	493	150	143	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CJ	98	Total	C	N	O	S	0	0	0
			787	493	150	143	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			
11	CK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			
12	CL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	114	Total	C	N	O	S	0	0	0
			884	546	178	157	3			
13	CM	114	Total	C	N	O	S	0	0	0
			884	546	178	157	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AN	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			
14	CN	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AO	88	Total	C	N	O	S	0	0	0
			710	437	143	129	1			
15	CO	88	Total	C	N	O	S	0	0	0
			710	437	143	129	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			
16	CP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	80	Total	C	N	O	S	0	0	0
			649	411	121	114	3			
17	CQ	80	Total	C	N	O	S	0	0	0
			649	411	121	114	3			

- Molecule 18 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	AR	55	Total	C	N	O	0	0	0
			456	288	86	82			
18	CR	55	Total	C	N	O	0	0	0
			456	288	86	82			

- 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	0
			638	408	120	108	2			
19	CS	79	Total	C	N	O	S	0	0	0
			638	408	120	108	2			

- Molecule 20 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			
20	CT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			

- Molecule 21 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AU	51	Total	C	N	O	S	0	0	0
			426	265	86	74	1			
21	CU	51	Total	C	N	O	S	0	0	0
			426	265	86	74	1			

- Molecule 22 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	BA	2897	Total	C	N	O	P	0	0	0
			62195	27745	11446	20107	2897			
22	DA	2897	Total	C	N	O	P	0	0	0
			62195	27745	11446	20107	2897			

- Molecule 23 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	BB	119	Total	C	N	O	P	0	0	0
			2549	1135	466	829	119			
23	DB	118	Total	C	N	O	P	0	0	0
			2529	1126	464	821	118			

- Molecule 24 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	BC	271	Total	C	N	O	S	0	0	0
			2083	1288	423	365	7			
24	DC	271	Total	C	N	O	S	0	0	0
			2083	1288	423	365	7			

- Molecule 25 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			
25	DD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			

- Molecule 26 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	BE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	DE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			

- Molecule 27 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BF	177	Total	C	N	O	S	0	0	0
			1411	899	249	257	6			
27	DF	177	Total	C	N	O	S	0	0	0
			1411	899	249	257	6			

- Molecule 28 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	BG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			
28	DG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			

- Molecule 29 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	BH	149	Total	C	N	O	S	0	0	0
			1110	699	197	213	1			
29	DH	149	Total	C	N	O	S	0	0	0
			1110	699	197	213	1			

- Molecule 30 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	BI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			
30	DI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			

- Molecule 31 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	BJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			
31	DJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			

- Molecule 32 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BK	122	Total	C	N	O	S	0	0	0
			939	587	180	166	6			
32	DK	122	Total	C	N	O	S	0	0	0
			939	587	180	166	6			

- Molecule 33 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	BL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			
33	DL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			

- Molecule 34 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			
34	DM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			

- Molecule 35 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BN	120	Total	C	N	O	S	0	0	0
			961	593	196	167	5			
35	DN	120	Total	C	N	O	S	0	0	0
			961	593	196	167	5			

- Molecule 36 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
36	BO	116	Total	C	N	O	0	0	0
			892	552	178	162			
36	DO	116	Total	C	N	O	0	0	0
			892	552	178	162			

- Molecule 37 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BP	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			
37	DP	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			

- Molecule 38 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
38	BQ	117	Total	C	N	O	0	0	0
			947	604	192	151			
38	DQ	117	Total	C	N	O	0	0	0
			947	604	192	151			

- Molecule 39 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			
39	DR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			

- Molecule 40 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			
40	DS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			

- Molecule 41 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BT	93	Total	C	N	O	S	0	0	0
			739	466	139	132	2			
41	DT	93	Total	C	N	O	S	0	0	0
			739	466	139	132	2			

- Molecule 42 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	BU	102	Total	C	N	O	0	0	0
			780	492	146	142			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	DU	102	Total	C	N	O	0	0	0
			780	492	146	142			

- Molecule 43 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BV	94	Total	C	N	O	S	0	0	0
			753	479	137	134	3			
43	DV	94	Total	C	N	O	S	0	0	0
			753	479	137	134	3			

- Molecule 44 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	BW	76	Total	C	N	O	S	0	0	0
			580	359	117	103	1			
44	DW	75	Total	C	N	O	S	0	0	0
			569	353	113	102	1			

- Molecule 45 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BX	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			
45	DX	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			

- Molecule 46 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BY	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			
46	DY	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			

- Molecule 47 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BZ	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			
47	DZ	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			

- Molecule 48 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	B0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			
48	D0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			

- Molecule 49 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	B1	50	Total	C	N	O	0	0	0
			410	263	75	72			
49	D1	50	Total	C	N	O	0	0	0
			410	263	75	72			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	B2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			
50	D2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			

- Molecule 51 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	B3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			
51	D3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			

- Molecule 52 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	B4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			
52	D4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			

- Molecule 53 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
53	B5	191	Total	C	N	O	0	0	1
			1142	691	221	230			

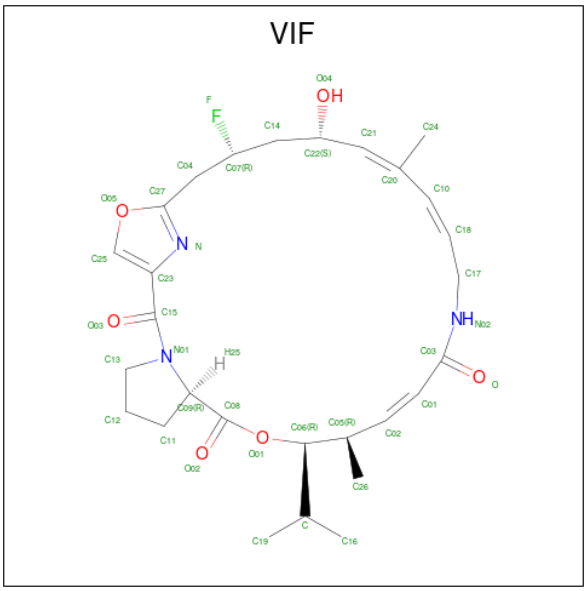
- Molecule 54 is a protein called Linopristin.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
54	B6	7	Total	C	N	O	0	0	0
			69	50	9	10			
54	D6	7	Total	C	N	O	0	0	0
			69	50	9	10			

- Molecule 55 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	AA	72	Total	Mg	0	0
			72	72		
55	BA	193	Total	Mg	0	0
			193	193		
55	BB	4	Total	Mg	0	0
			4	4		
55	BD	1	Total	Mg	0	0
			1	1		
55	BQ	1	Total	Mg	0	0
			1	1		
55	CA	56	Total	Mg	0	0
			56	56		
55	DA	167	Total	Mg	0	0
			167	167		
55	DB	3	Total	Mg	0	0
			3	3		
55	D2	1	Total	Mg	0	0
			1	1		

- Molecule 56 is Flopristin (three-letter code: VIF) (formula: $C_{28}H_{38}FN_3O_6$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	BA	1	Total C F N O 38 28 1 3 6	0	0
56	DA	1	Total C F N O 38 28 1 3 6	0	0

- Molecule 57 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	B4	1	Total Zn 1 1	0	0
57	D4	1	Total Zn 1 1	0	0

- Molecule 58 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	AA	193	Total O 193 193	0	0
58	AL	2	Total O 2 2	0	0
58	AN	5	Total O 5 5	0	0
58	AT	2	Total O 2 2	0	0
58	AU	1	Total O 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	BA	623	Total O 623 623	0	0
58	BB	14	Total O 14 14	0	0
58	BC	6	Total O 6 6	0	0
58	BD	3	Total O 3 3	0	0
58	BE	4	Total O 4 4	0	0
58	BF	1	Total O 1 1	0	0
58	BG	1	Total O 1 1	0	0
58	BL	4	Total O 4 4	0	0
58	BN	3	Total O 3 3	0	0
58	BS	1	Total O 1 1	0	0
58	BT	1	Total O 1 1	0	0
58	B2	1	Total O 1 1	0	0
58	B3	2	Total O 2 2	0	0
58	B4	2	Total O 2 2	0	0
58	CA	192	Total O 192 192	0	0
58	CL	1	Total O 1 1	0	0
58	CN	3	Total O 3 3	0	0
58	CT	1	Total O 1 1	0	0
58	CU	1	Total O 1 1	0	0
58	DA	608	Total O 608 608	0	0
58	DB	13	Total O 13 13	0	0

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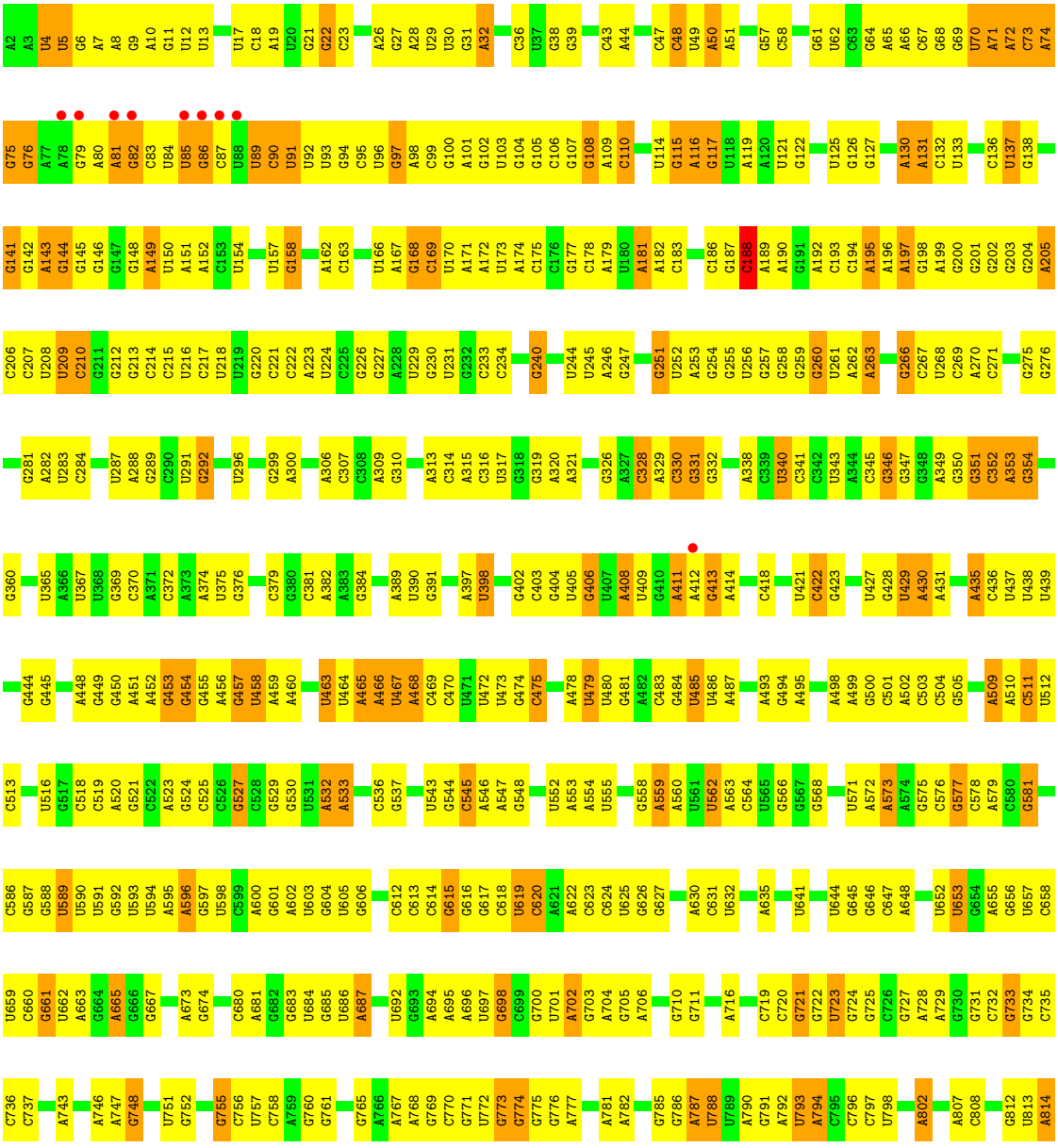
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	DC	11	Total O 11 11	0	0
58	DD	4	Total O 4 4	0	0
58	DE	5	Total O 5 5	0	0
58	DJ	1	Total O 1 1	0	0
58	DL	4	Total O 4 4	0	0
58	DN	2	Total O 2 2	0	0
58	DT	1	Total O 1 1	0	0
58	DU	1	Total O 1 1	0	0
58	DV	1	Total O 1 1	0	0
58	D0	1	Total O 1 1	0	0
58	D2	1	Total O 1 1	0	0
58	D3	2	Total O 2 2	0	0
58	D4	1	Total O 1 1	0	0

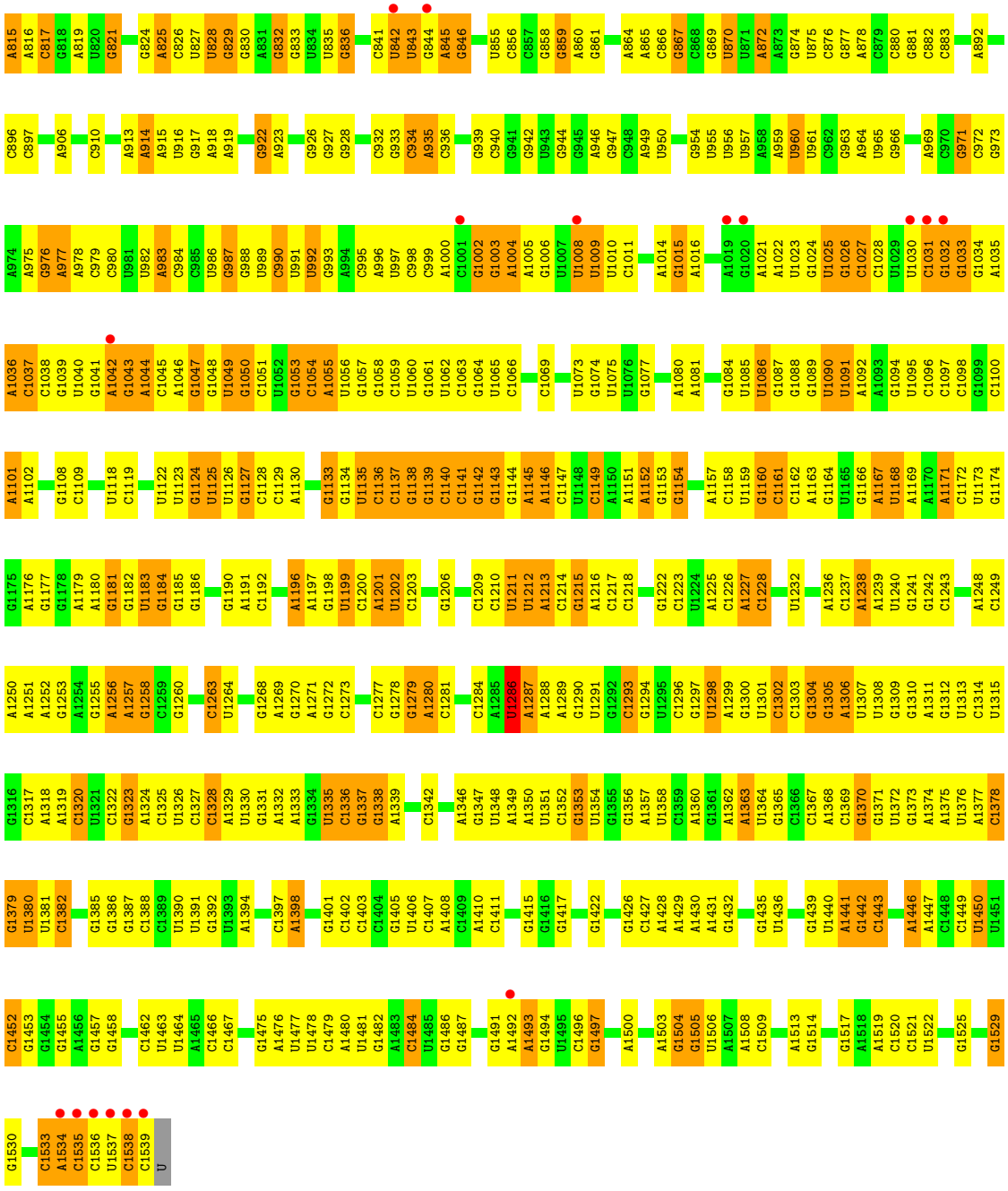
3 Residue-property plots (i)

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

- Molecule 1: 16S rRNA

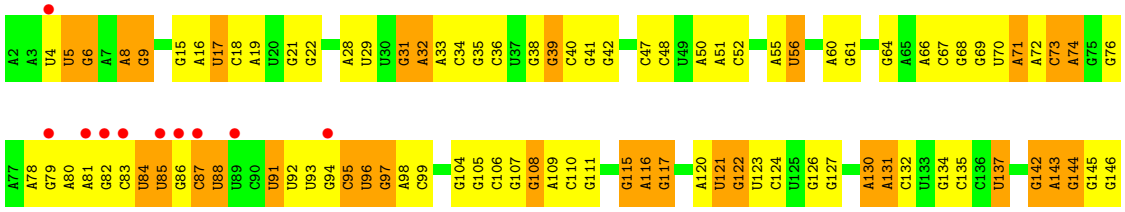
Chain AA: 2% 34% 49% 16%

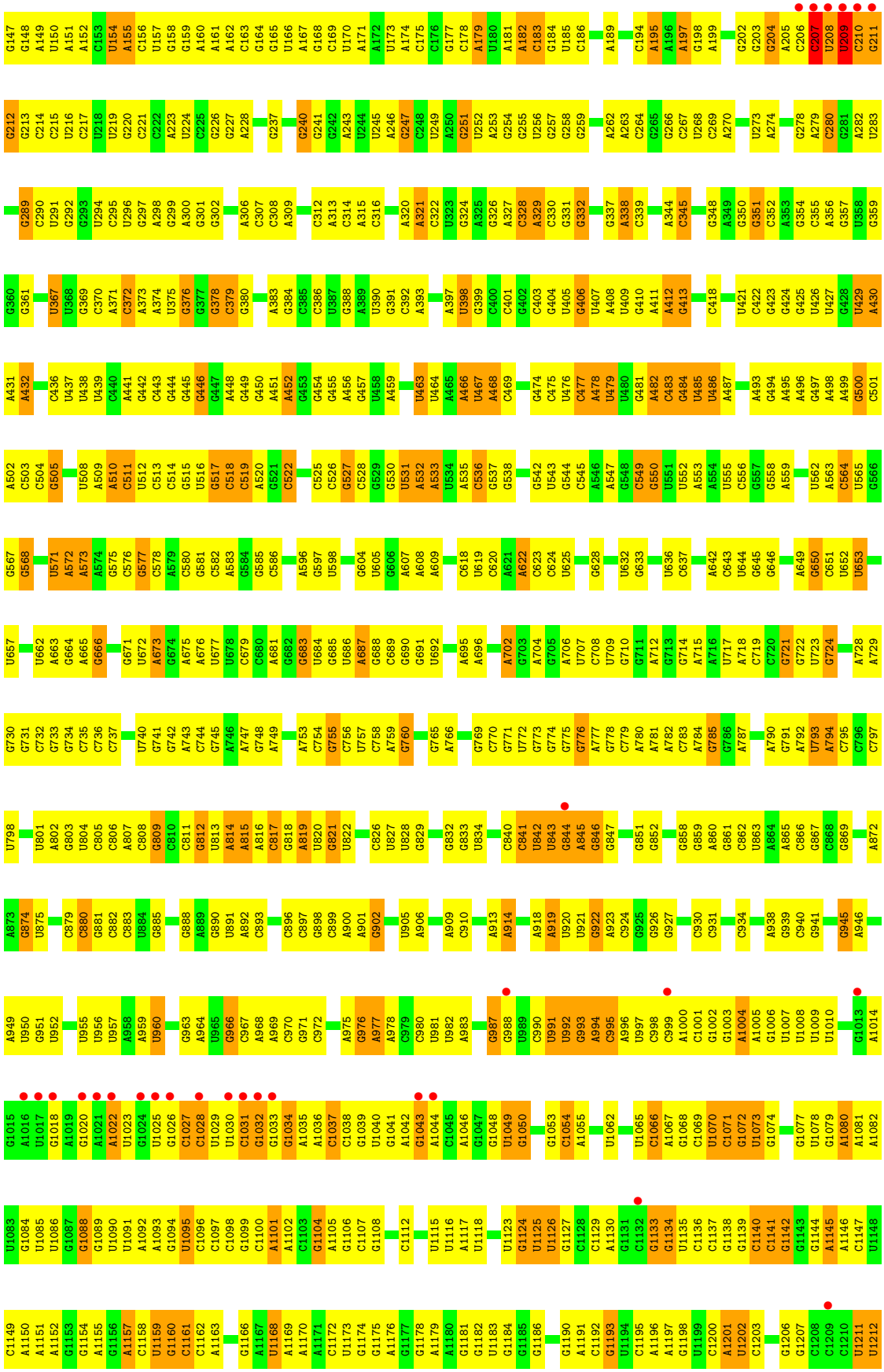




• Molecule 1: 16S rRNA

Chain CA:

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G212 G213 C214 C215 U216 C217 U218 U219 G220 C221 C222 A223 U224 C225 G226 G227 A228 G237 G240 G241 G242 A243 U244 U245 A246 G247 C248 U249 A250 G251 U252 A253 G254 G255 U256 G257 G258 G259 A262 A263 C264 G265 G266 C267 U268 C269 A270 U273 A274 G278 A279 C280 G281 A282 U283
G289 C290 U291 G292 G293 U294 C295 U296 G297 A298 G299 A300 G301 G302 A306 C307 C308 A309 C312 A313 C314 A315 C316 A320 A321 C322 U323 G324 A325 G326 A327 C328 A329 G330 G331 G332 G337 A338 C339 A344 C345 G348 A349 G350 G351 C352 A353 G354 C355 A356 G357 U358 G359
G360 G361 U367 U368 G369 C370 A371 C372 A373 A374 U375 G376 G377 G378 C379 G380 A383 G384 C385 C386 U387 G388 A389 U390 G391 C392 A393 A397 U398 G399 C400 C401 G402 C403 G404 U405 G406 U407 A408 U409 G410 A411 A412 G413 C418 U421 C422 G423 G424 G425 U426 U427 G428 U429 A430
A431 A432 C436 U437 U438 U439 C440 A441 G442 C443 G444 G445 G446 G447 A448 G449 G450 A451 A452 G453 G454 G455 A456 G457 U458 A459 U463 U464 A465 A466 U467 A468 C469 G474 C475 U476 C477 A478 U479 U480 G481 A482 C483 G484 U485 U486 A487 G493 G494 A495 A496 G497 A498 A499 G500 C501
A502 C503 C504 G505 U508 A509 A510 C511 U512 C513 C514 G515 U516 G517 C518 C519 A520 G521 C522 C525 C526 G527 C528 G529 G530 U531 A532 A533 U534 A535 C536 G537 G538 G542 U543 G544 C545 A546 A547 G548 C549 G550 U551 U552 A553 A554 U555 C556 G557 G558 A559 U562 A563 C564 U565 G566
G567 G568 U571 A572 A573 A574 G575 C576 G577 C578 A579 C580 G581 C582 A583 G584 C585 C586 A596 G597 U598 G604 U605 G606 A607 A608 A609 C618 U619 C620 A621 A622 C623 C624 U625 G628 U632 G633 U636 C637 A642 C643 U644 G645 G646 A649 G650 C651 U652 U653
U657 U662 A663 G664 A665 G666 G671 U672 A673 G674 A675 A676 U677 U678 C679 G680 A681 G682 G683 U684 G685 U686 A687 G688 C689 G690 G691 U692 A695 A696 A702 G703 A704 G705 A706 U707 C708 U709 G710 G711 A712 G713 G714 A715 A716 U717 A718 C719 C720 G721 G722 U723 G724 A728 A729
G730 G731 C732 G733 G734 C735 C736 C737 U740 G741 G742 A743 C744 G745 A746 A747 G748 A749 A753 C754 G755 C756 U757 C758 A759 G760 G765 A766 G769 C770 G771 U772 G773 G774 G775 G776 A777 G778 C779 A780 A781 A782 C783 A784 G785 G786 A787 A790 G791 A792 U793 A794 C795 C796 C797
U798 U801 A802 G803 U804 C805 C806 A807 C808 G809 C810 C811 G812 U813 A814 A815 A816 C817 G818 A819 U820 G821 U822 C826 U827 U828 G829 G832 G833 U834 C840 C841 U842 U843 G844 A845 G846 G847 G851 G852 C858 C859 A860 G861 C862 U863 A864 A865 C866 G867 C868 G869 A872
A873 G874 U875 C879 G880 G881 C882 C883 U884 G885 G888 A889 G890 U891 A892 G893 C896 C897 G898 C899 A900 A901 G902 U905 A906 A909 C910 A913 A914 A918 A919 U920 U921 G922 A923 C924 G925 G926 G927 C930 C931 C934 A938 G939 C940 G941 G945 A946
A949 U950 G951 U952 U955 U956 U957 A958 A959 U960 G963 A964 U965 G966 C967 A968 A969 C970 G971 C972 A975 G976 A977 A978 C979 C980 U981 U982 A983 G987 G988 U989 C990 U991 U992 G993 A994 C995 A996 U997 C998 C999 A1000 C1001 G1002 G1003 A1004 A1005 G1006 U1007 U1008 U1009 U1010 G1013 A1014
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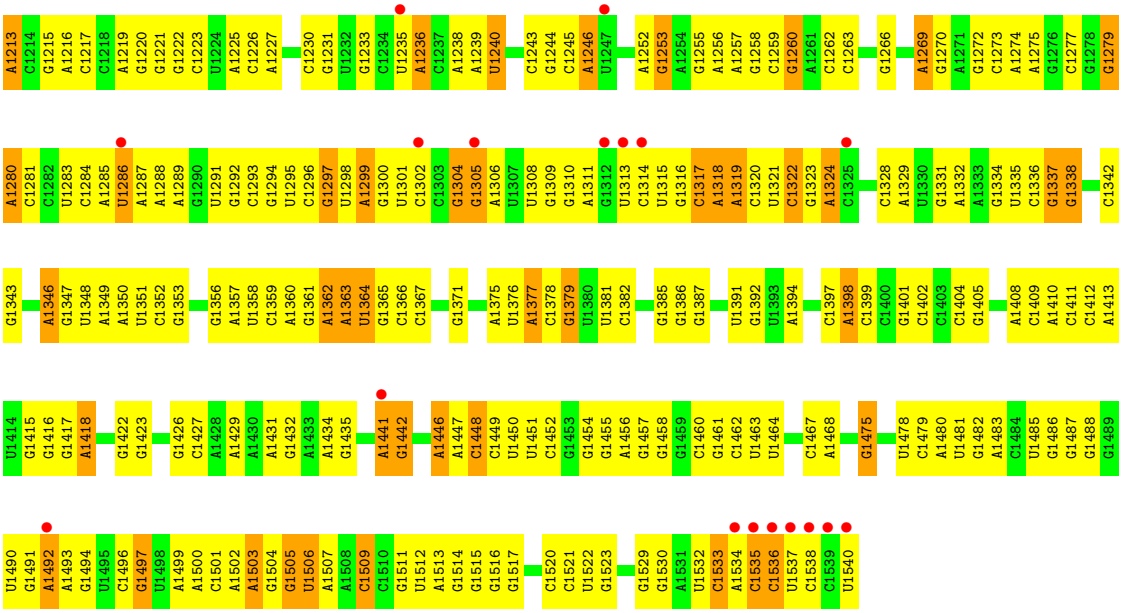
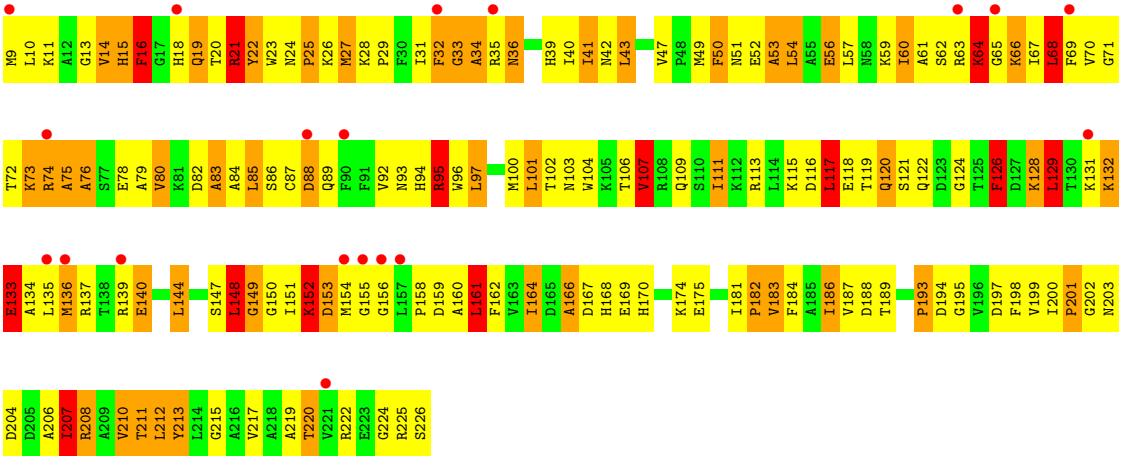
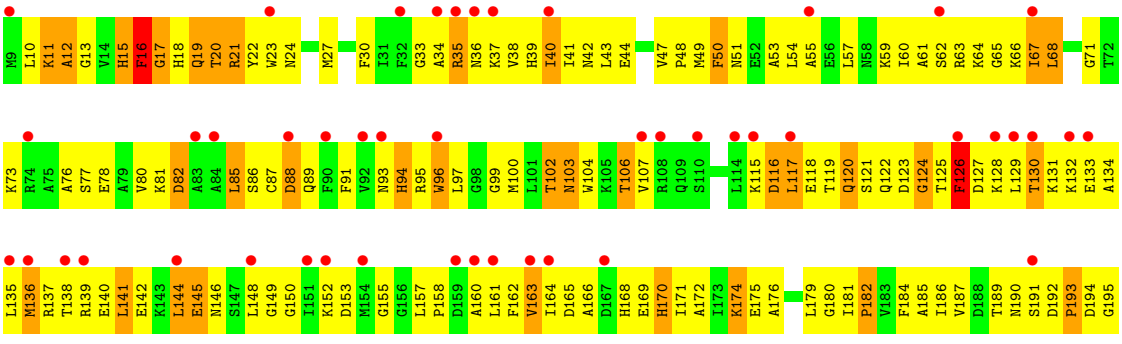
U1083 G1084 U1085 U1086 G1087 G1088 G1089 U1090 U1091 A1092 A1093 G1094 U1095 C1096 C1097 C1098 G1099 C1100 A1101 A1102 C1103 G1104 A1105 G1106 C1107 G1108 C1112 U1115 U1116 A1117 U1118 U1123 G1124 U1125 U1126 G1127 C1128 C1129 A1130 G1131 C1132 G1133 G1134 U1135 C1136 C1137 G1138 G1139 C1140 C1141 G1142 G1143 G1144 A1145 A1146 C1147 U1148
C1149 A1150 A1151 A1152 G1153 G1154 A1155 G1156 A1157 C1158 U1159 G1160 C1161 C1162 A1163 G1166 A1167 U1168 A1169 A1170 A1171 C1172 U1173 G1174 G1175 A1176 G1177 G1178 A1179 A1180 G1181 G1182 U1183 G1184 C1185 G1186 G1190 A1191 C1192 G1193 U1194 C1195 A1196 A1197 G1198 U1199 C1200 A1201 U1202 C1203 G1206 G1207 C1208 C1209 C1210 U1211 U1212



• Molecule 2: 30S ribosomal protein S2



• Molecule 2: 30S ribosomal protein S2



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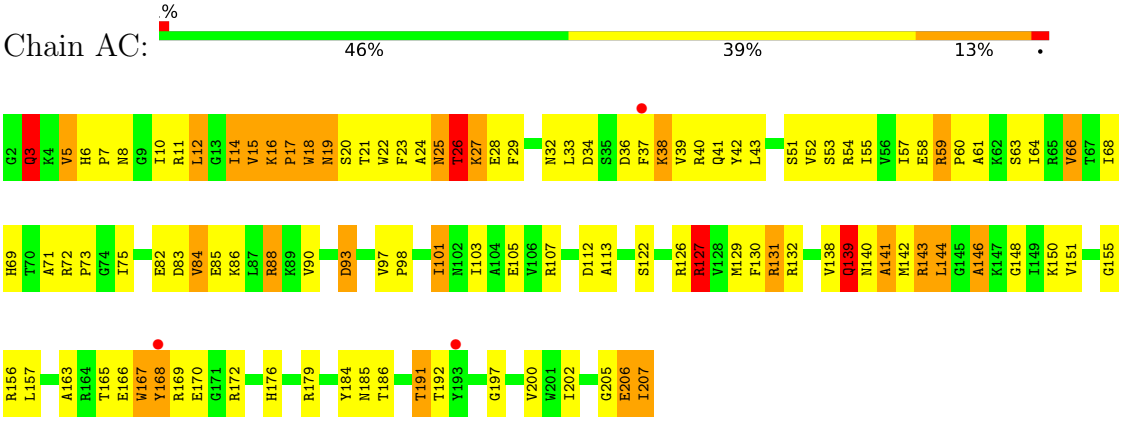
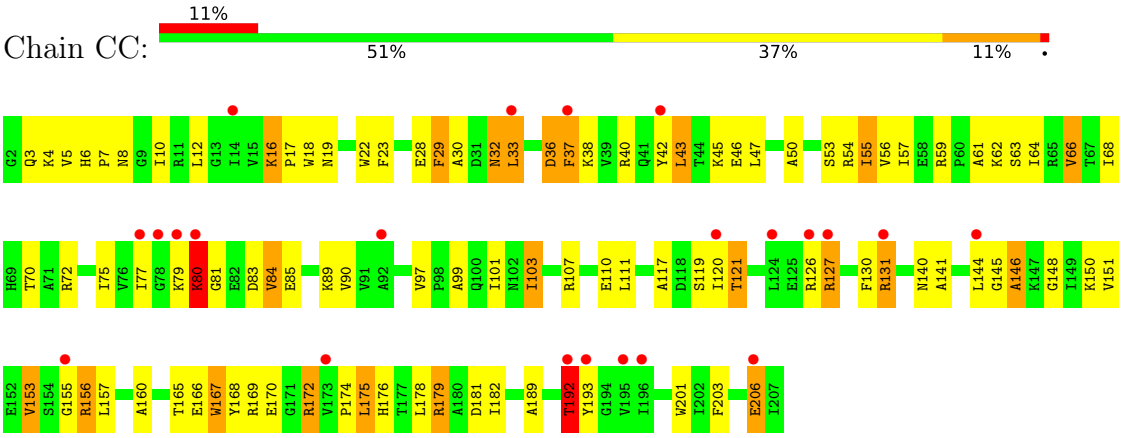


• Molecule 3: 30S ribosomal protein S3



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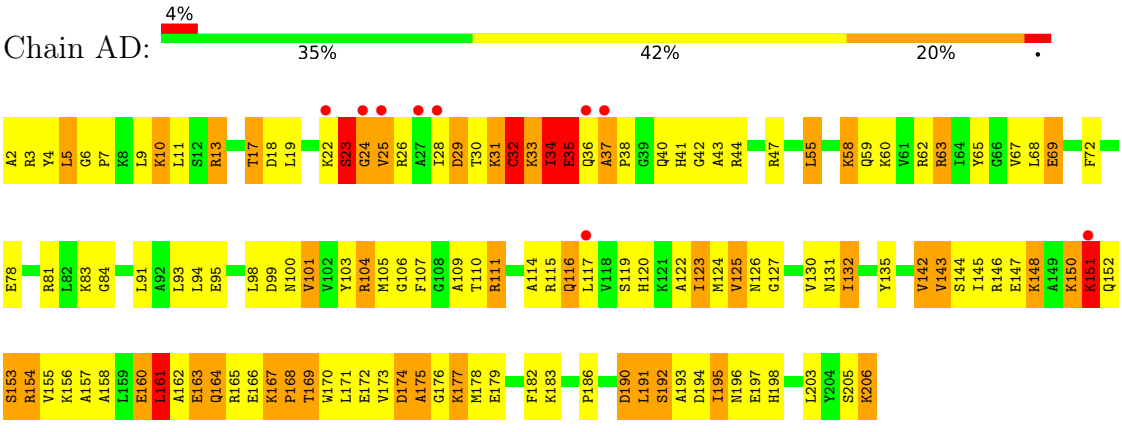
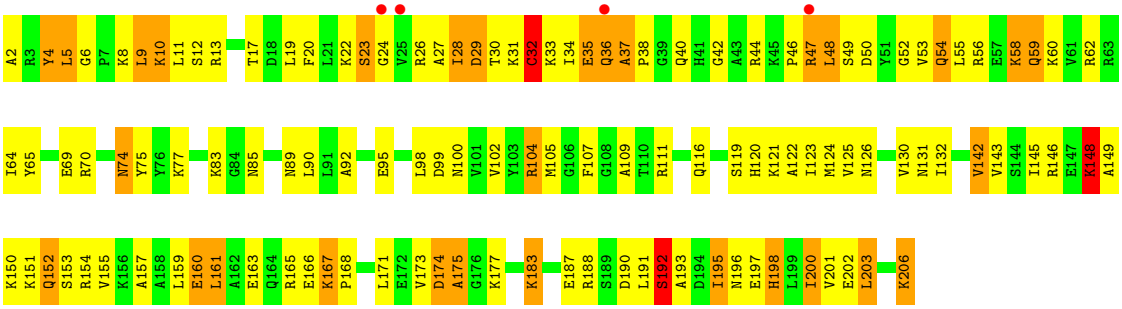
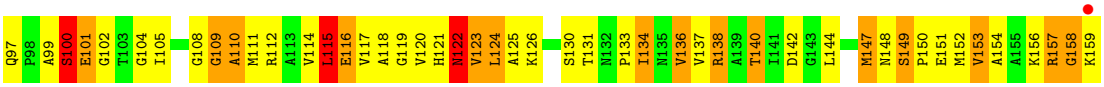


• Molecule 4: 30S ribosomal protein S4



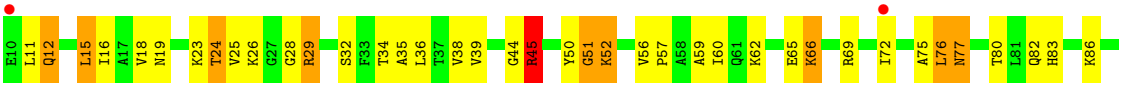
• Molecule 5: 30S ribosomal protein S5

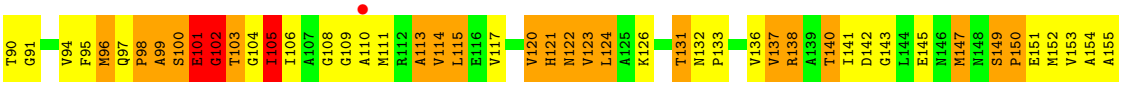
Chain AE:



• Molecule 5: 30S ribosomal protein S5

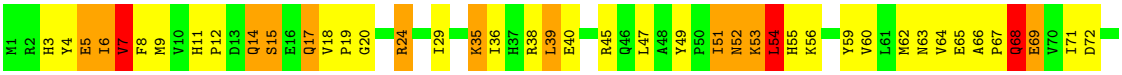
Chain CE:

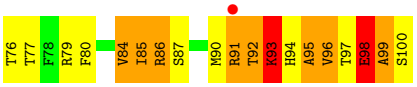




• Molecule 6: 30S ribosomal protein S6

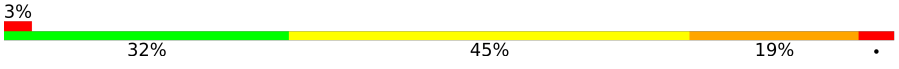
Chain AF:

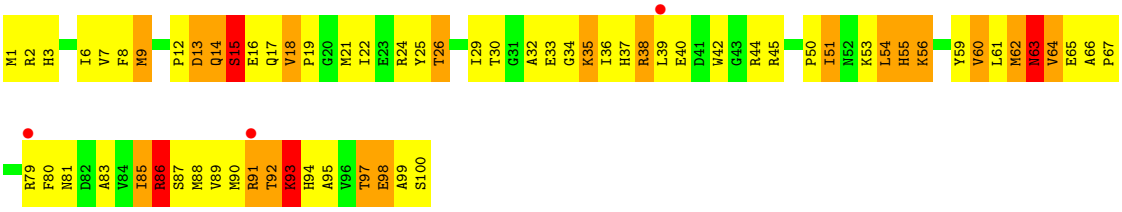




• Molecule 6: 30S ribosomal protein S6

Chain CF:



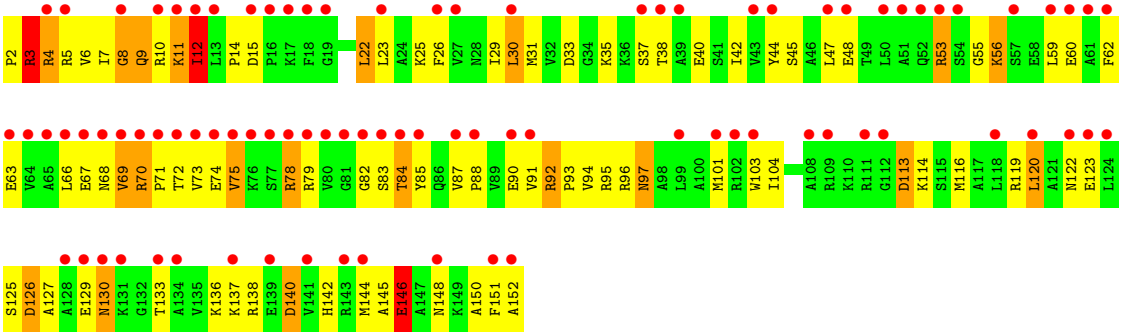


• Molecule 7: 30S ribosomal protein S7

Chain AG:

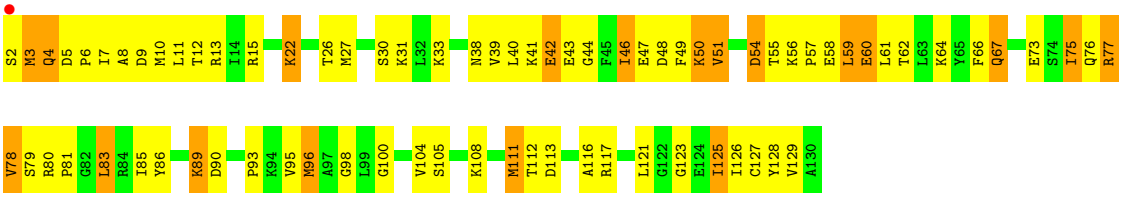
• Molecule 7: 30S ribosomal protein S7

Chain CG:



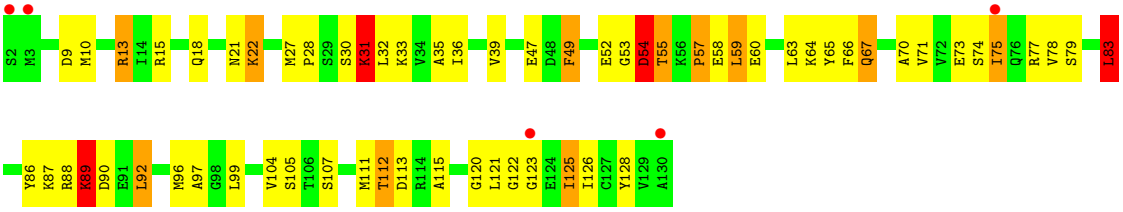
• Molecule 8: 30S ribosomal protein S8

Chain AH:



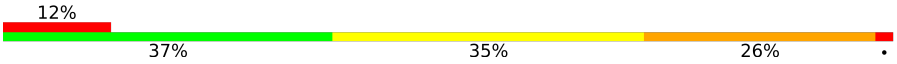
• Molecule 8: 30S ribosomal protein S8

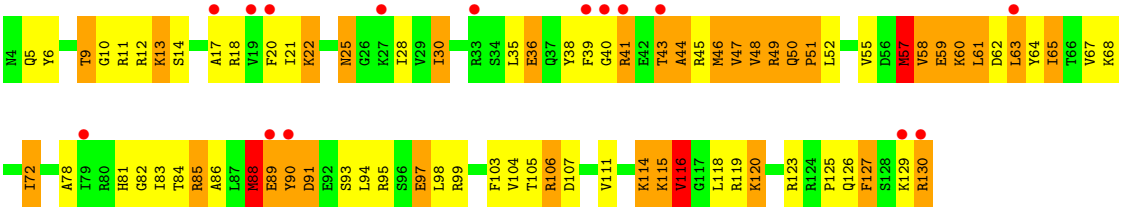
Chain CH:



• Molecule 9: 30S ribosomal protein S9

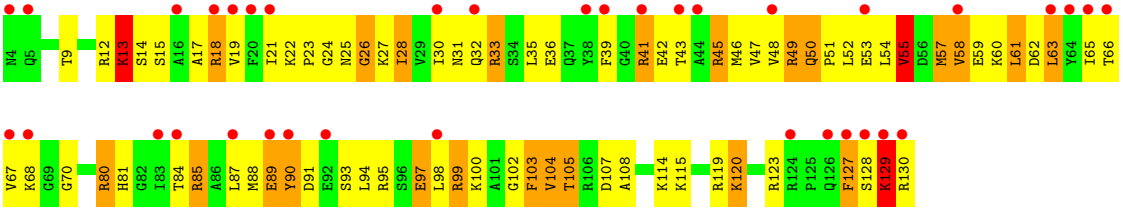
Chain AI:





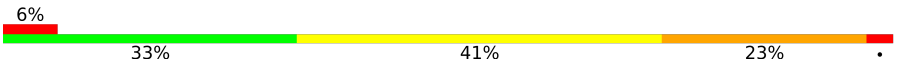
• Molecule 9: 30S ribosomal protein S9

Chain CI:



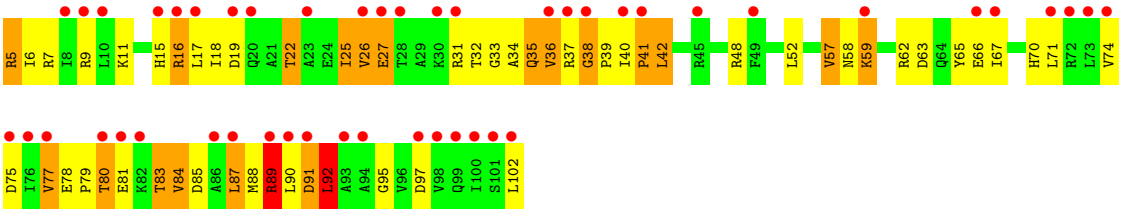
• Molecule 10: 30S ribosomal protein S10

Chain AJ:



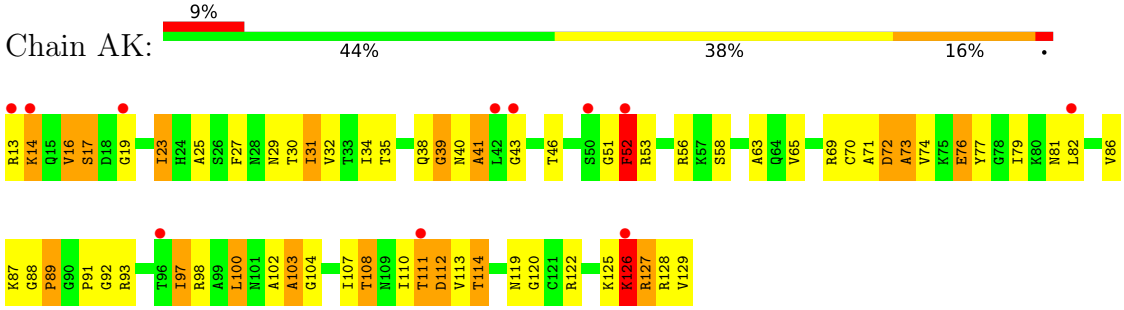
• Molecule 10: 30S ribosomal protein S10

Chain CJ:



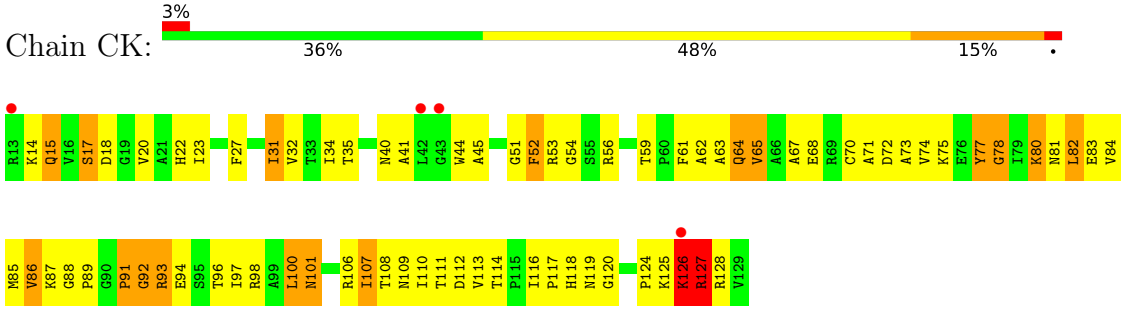
• Molecule 11: 30S ribosomal protein S11

Chain AK:



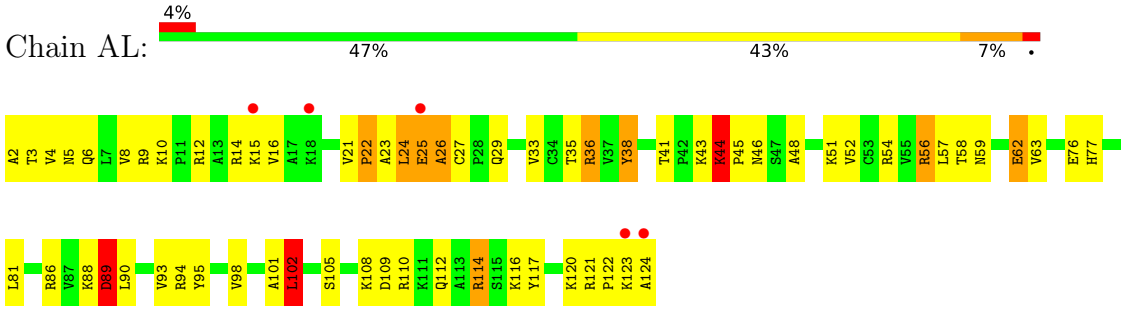
• Molecule 11: 30S ribosomal protein S11

Chain CK:



• Molecule 12: 30S ribosomal protein S12

Chain AL:



• Molecule 12: 30S ribosomal protein S12

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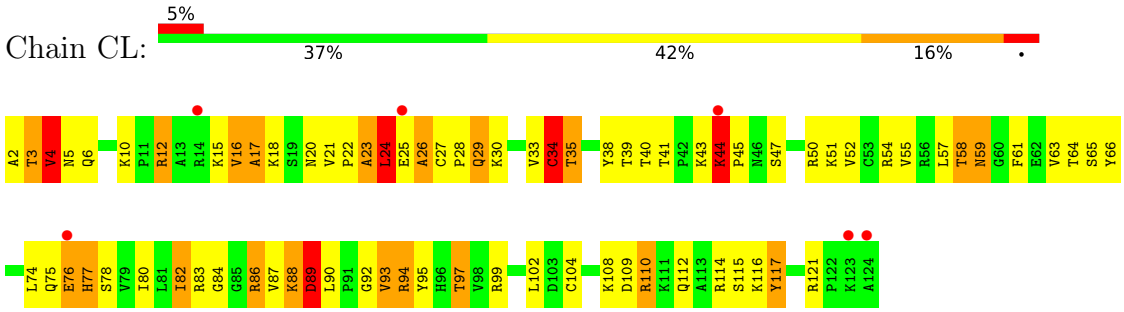
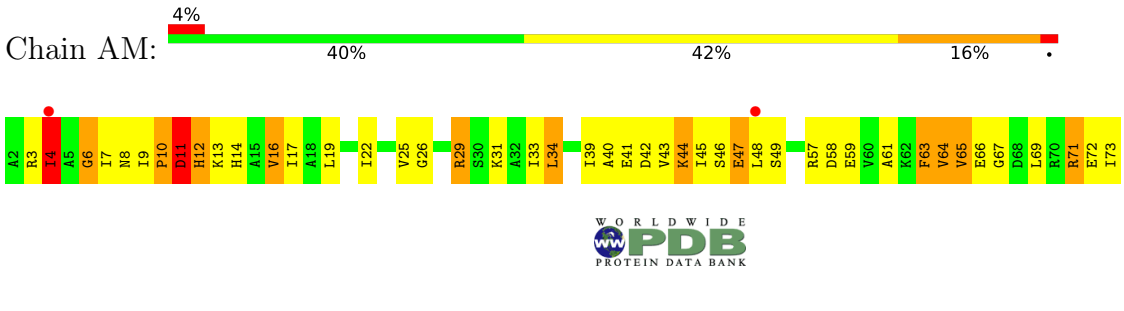
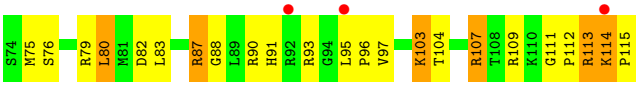


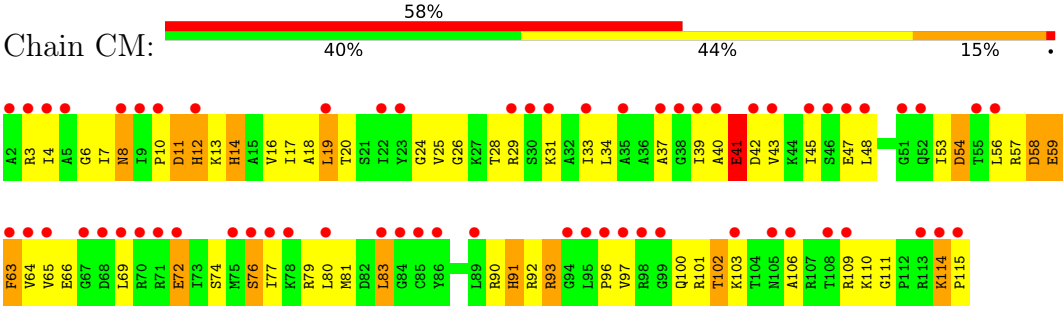
• Molecule 13: 30S ribosomal protein S13

Chain AM:





• Molecule 13: 30S ribosomal protein S13



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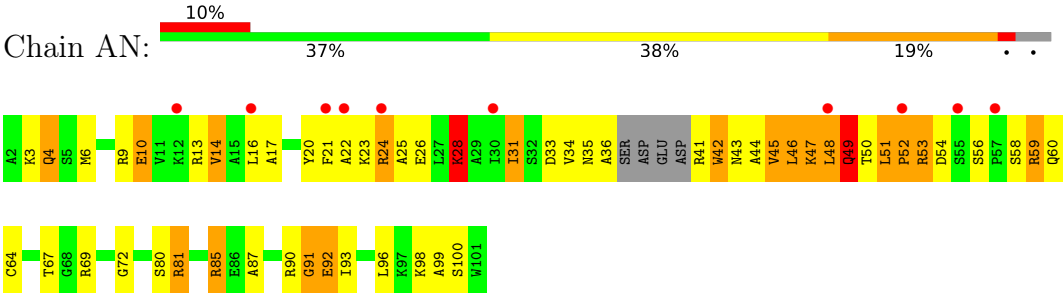

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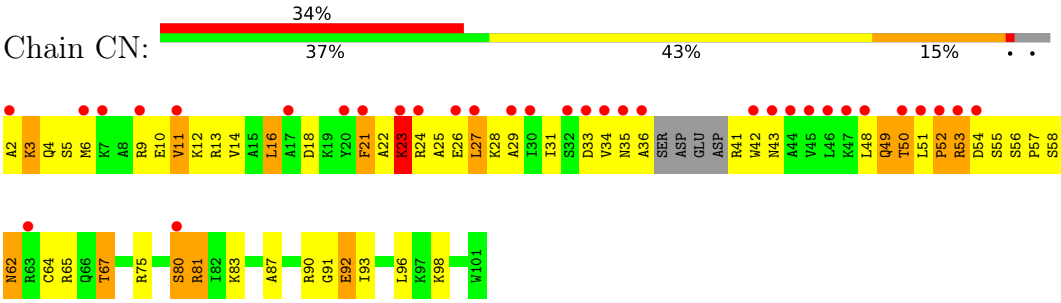
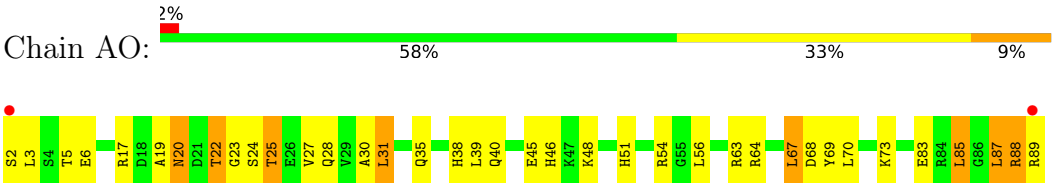
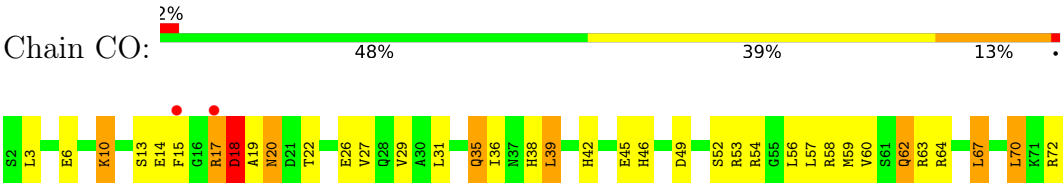
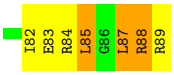


• Molecule 15: 30S ribosomal protein S15



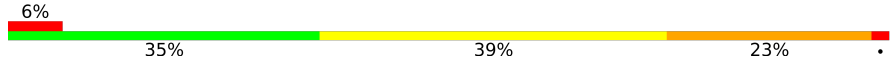
• Molecule 15: 30S ribosomal protein S15

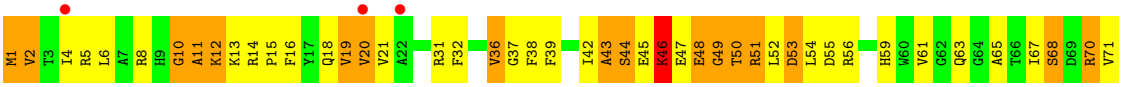


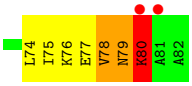


• Molecule 16: 30S ribosomal protein S16

Chain AP:

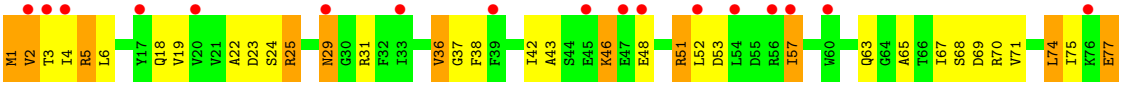






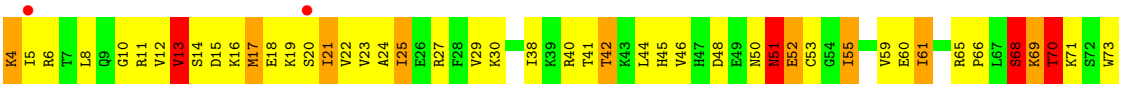
• Molecule 16: 30S ribosomal protein S16

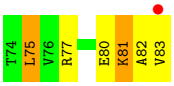
Chain CP:



• Molecule 17: 30S ribosomal protein S17

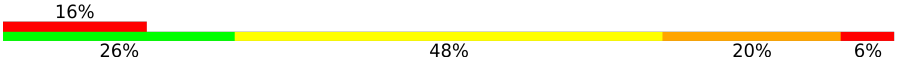
Chain AQ:

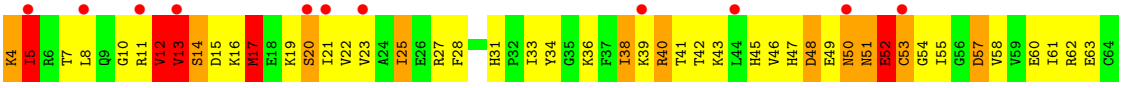


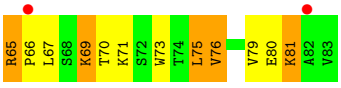


• Molecule 17: 30S ribosomal protein S17

Chain CQ:

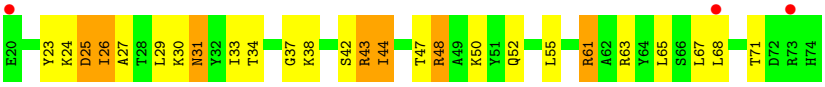






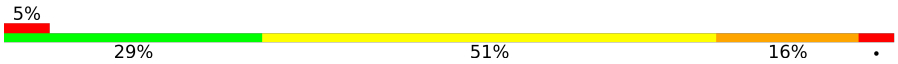
• Molecule 18: 30S ribosomal protein S18

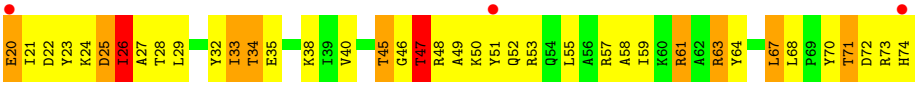
Chain AR:



• Molecule 18: 30S ribosomal protein S18

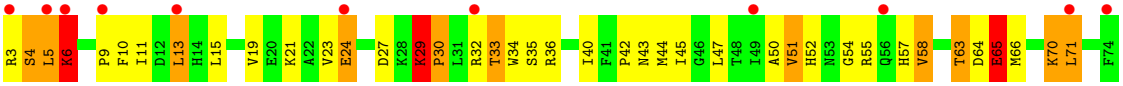
Chain CR:





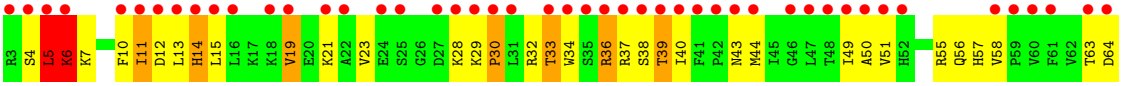
• Molecule 19: 30S ribosomal protein S19

Chain AS:



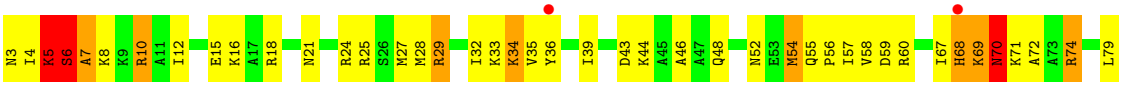
• Molecule 19: 30S ribosomal protein S19

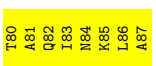
Chain CS:



• Molecule 20: 30S ribosomal protein S20

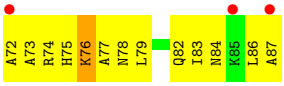
Chain AT:





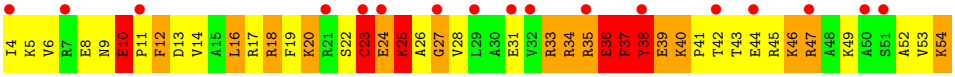
• Molecule 20: 30S ribosomal protein S20

Chain CT:



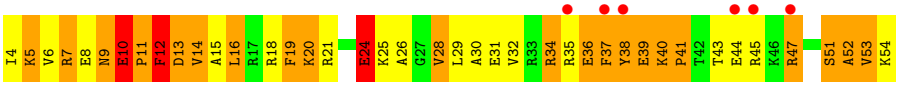
• Molecule 21: 30S ribosomal protein S21

Chain AU:



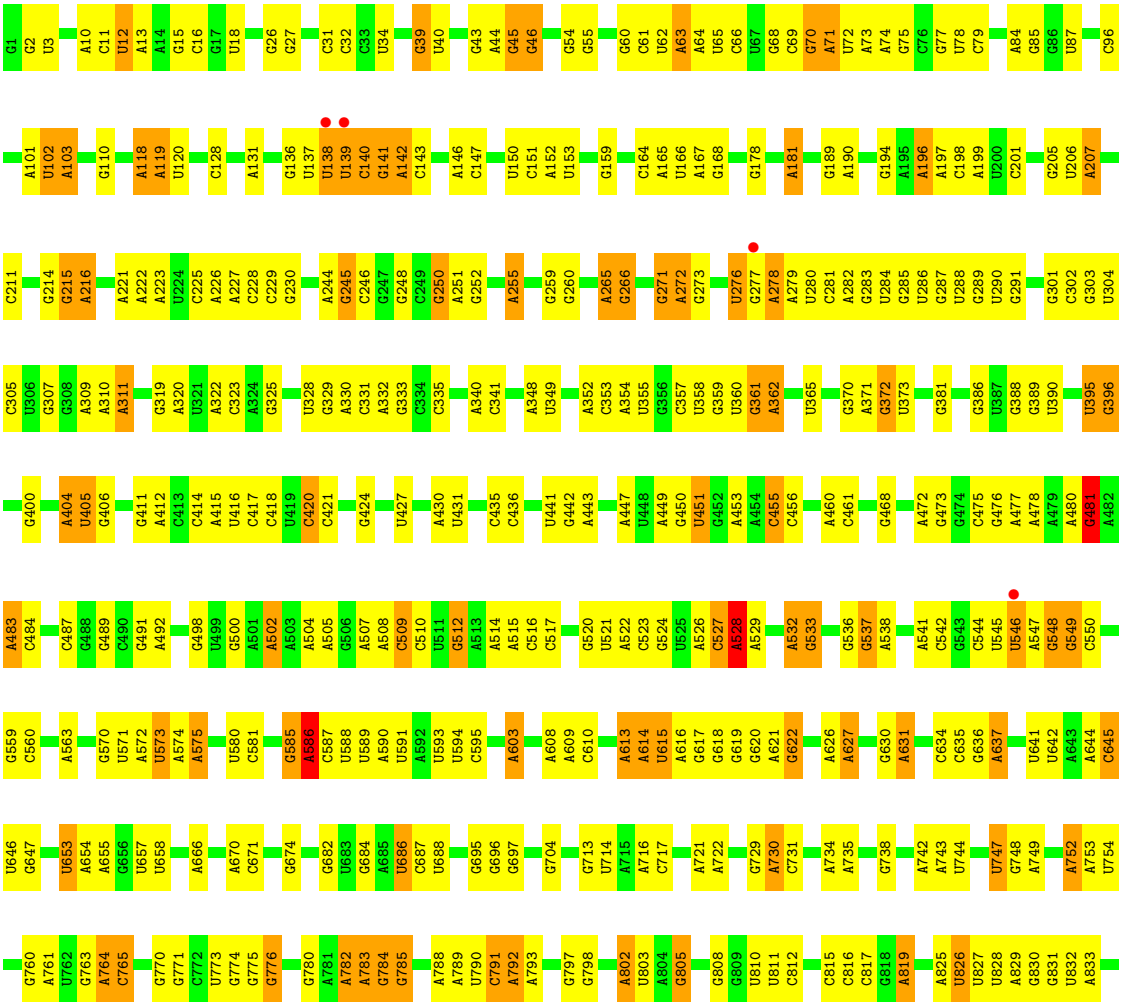
• Molecule 21: 30S ribosomal protein S21

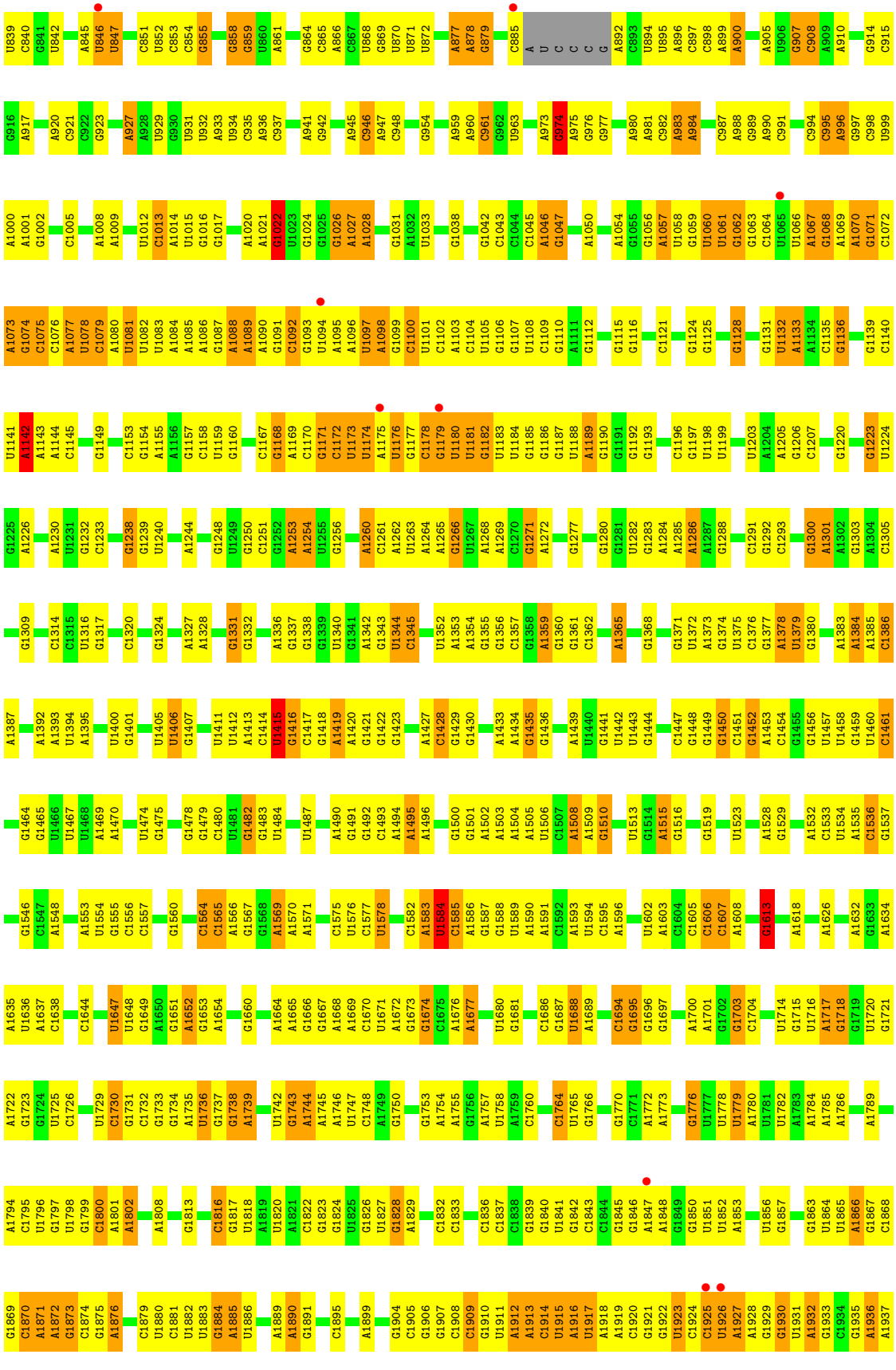
Chain CU:

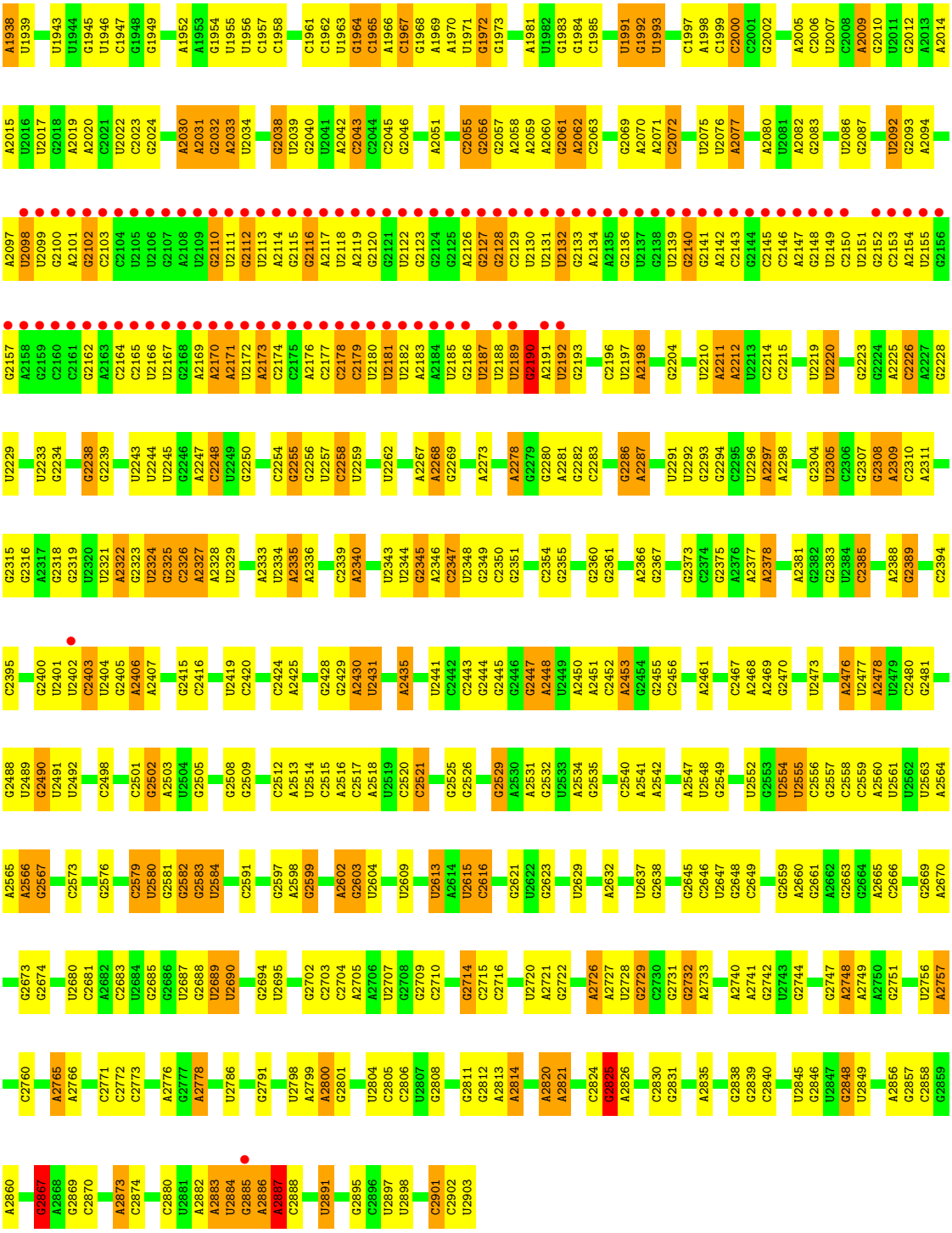


• Molecule 22: 23S rRNA

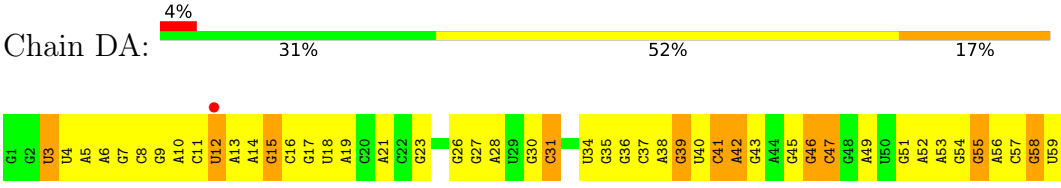
Chain BA:

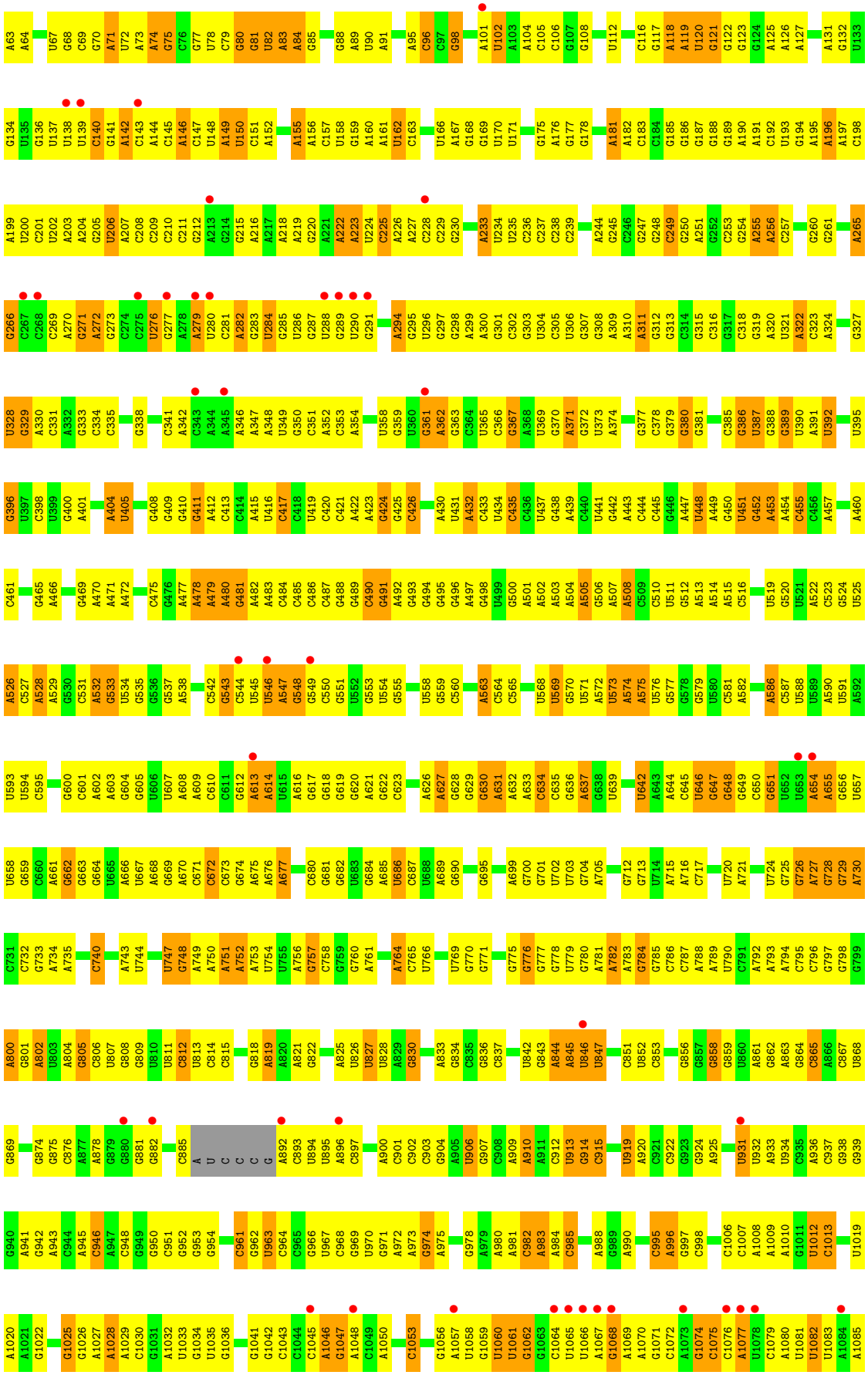


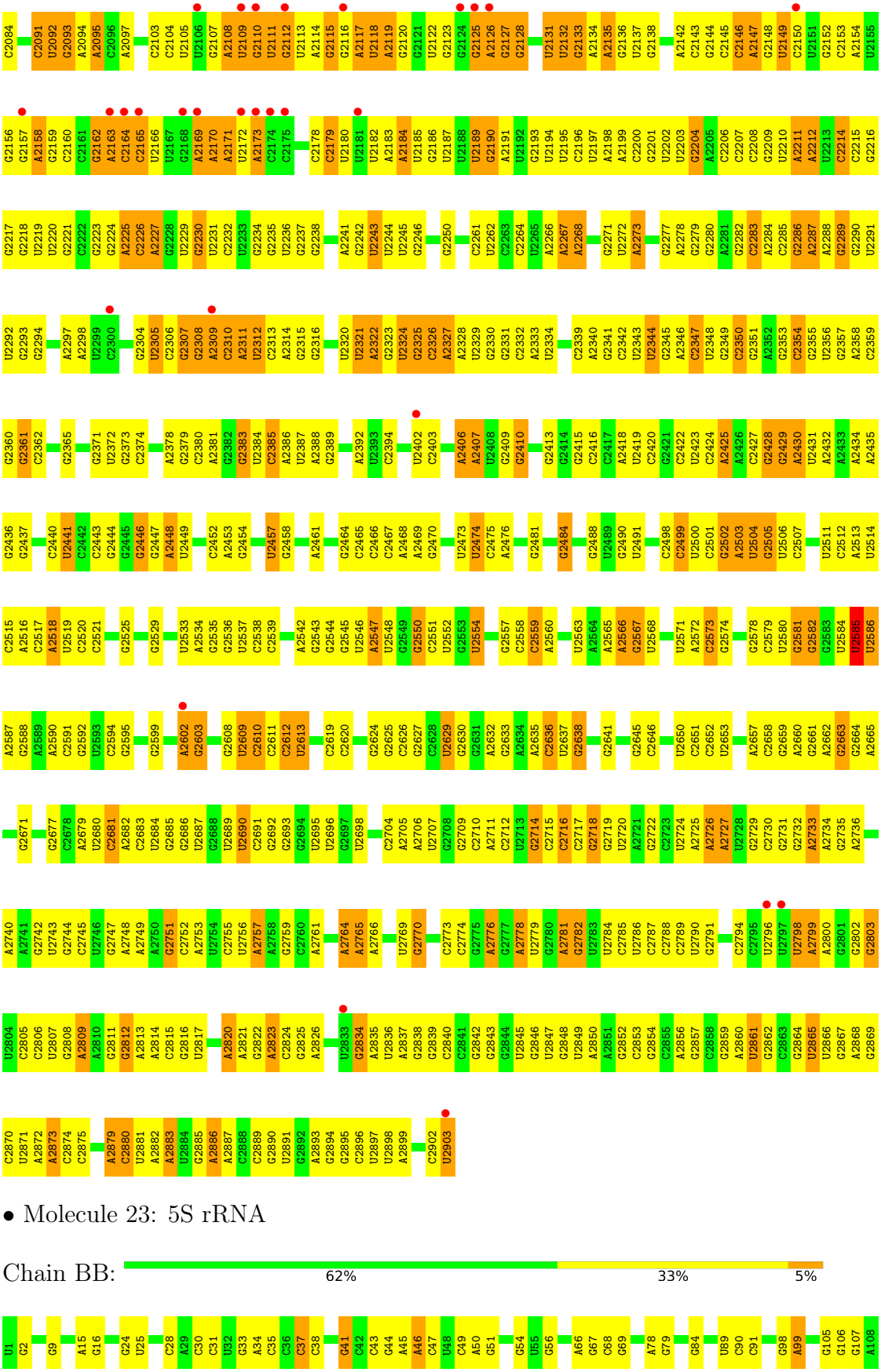




• Molecule 22: 23S rRNA

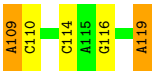






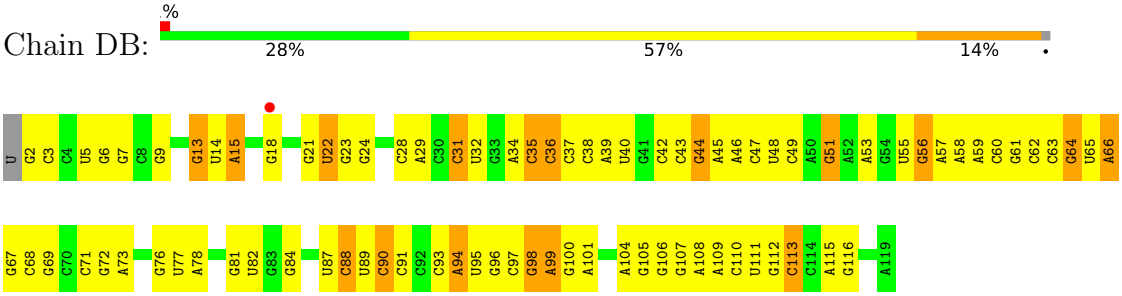
• Molecule 23: 5S rRNA

Chain BB:



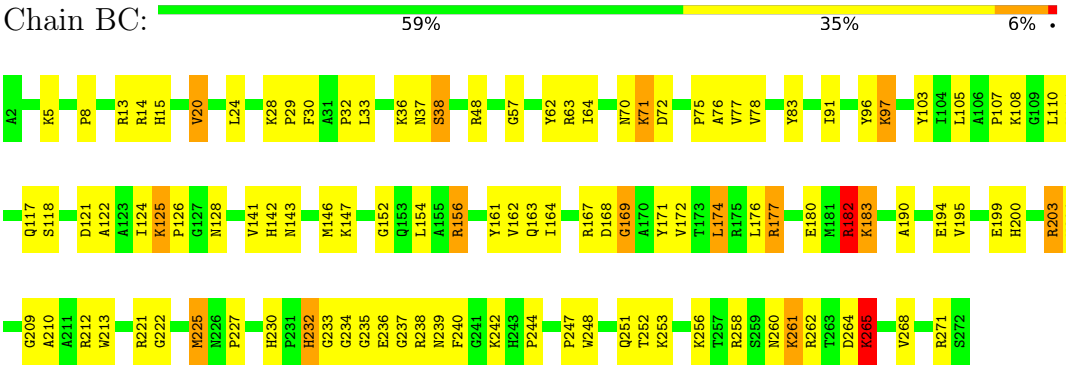
• Molecule 23: 5S rRNA

Chain DB:



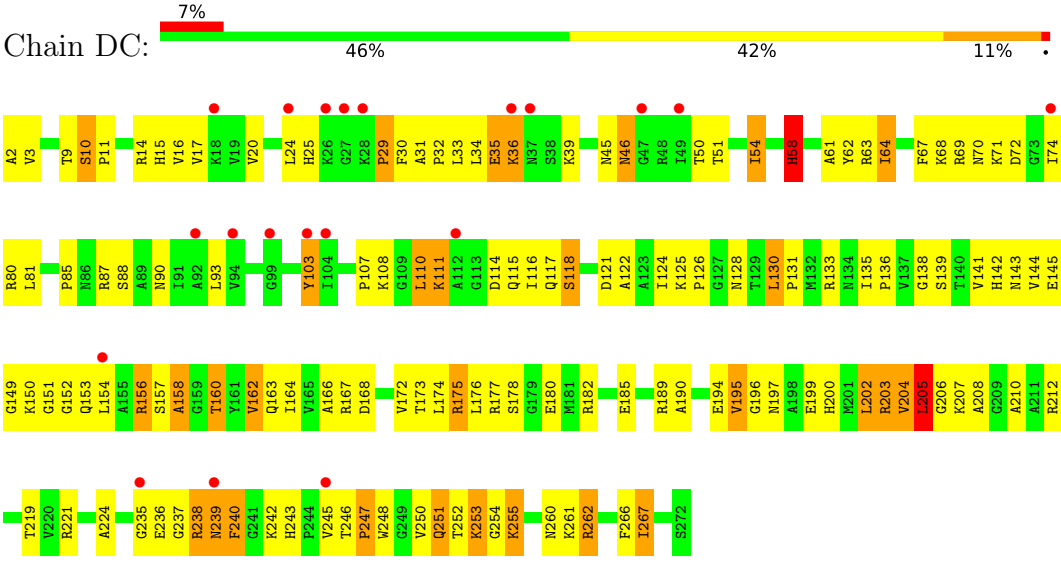
• Molecule 24: 50S ribosomal protein L2

Chain BC:



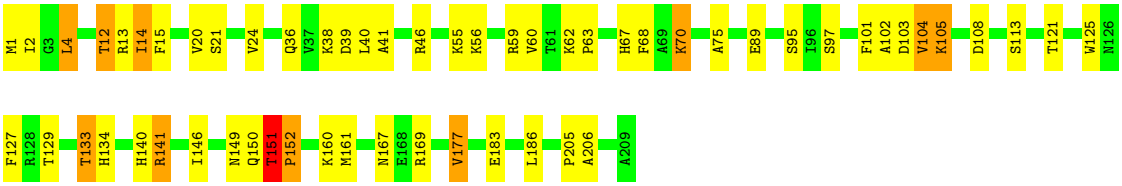
• Molecule 24: 50S ribosomal protein L2

Chain DC:



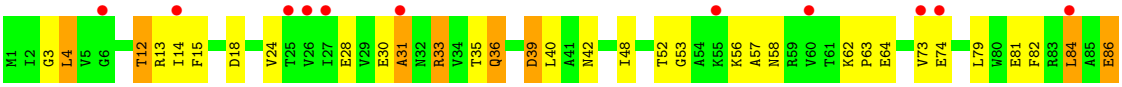
• Molecule 25: 50S ribosomal protein L3

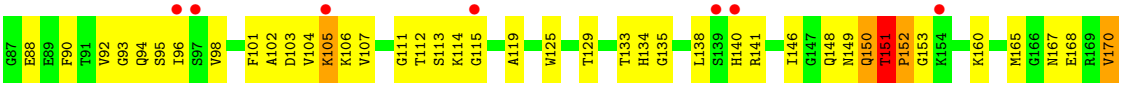
Chain BD:

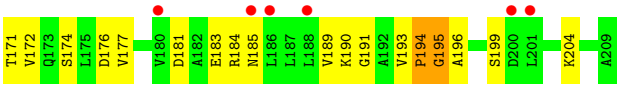


• Molecule 25: 50S ribosomal protein L3

Chain DD:

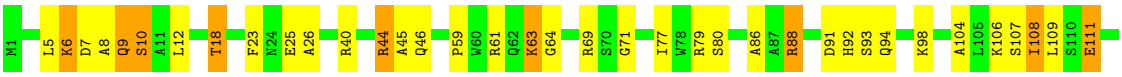






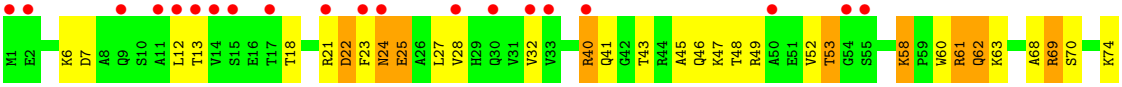
• Molecule 26: 50S ribosomal protein L4

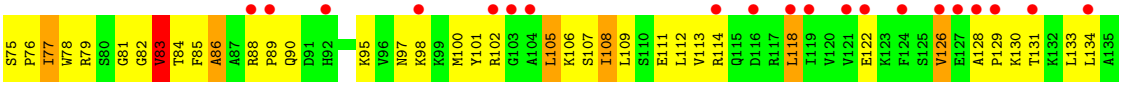
Chain BE:

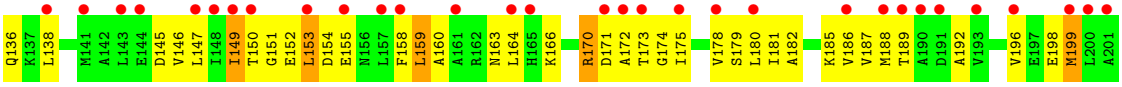


• Molecule 26: 50S ribosomal protein L4

Chain DE:

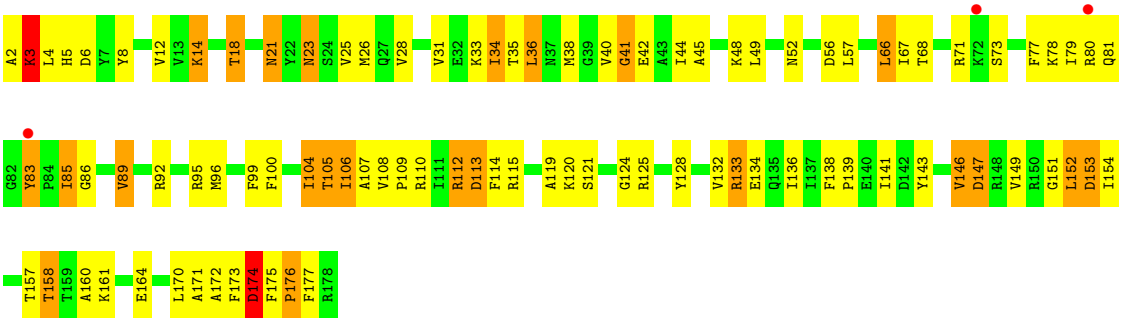






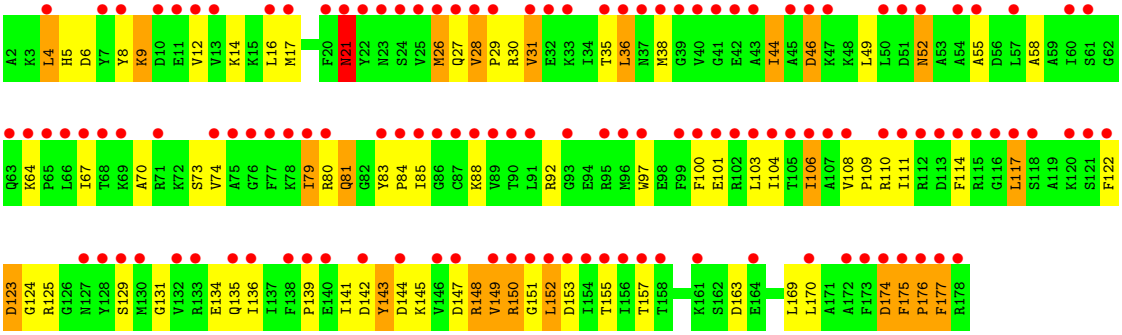
• Molecule 27: 50S ribosomal protein L5

Chain BF:



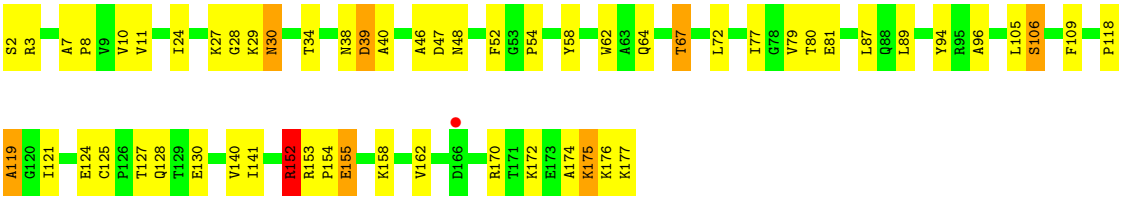
• Molecule 27: 50S ribosomal protein L5

Chain DF:



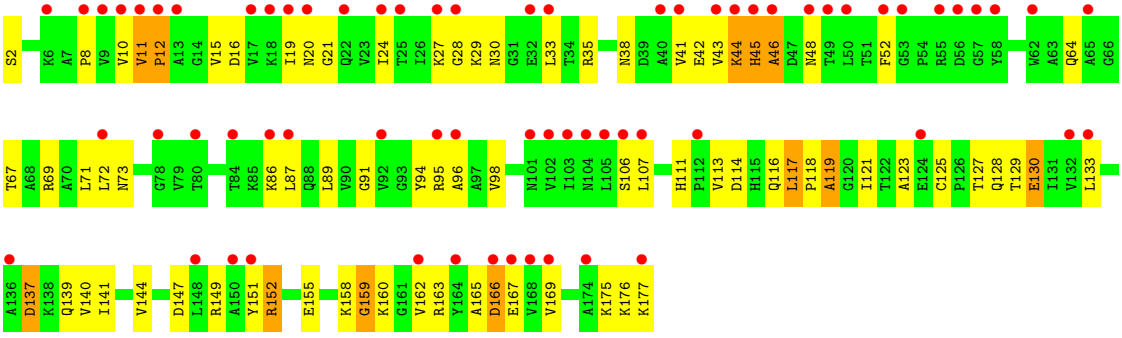
• Molecule 28: 50S ribosomal protein L6

Chain BG:



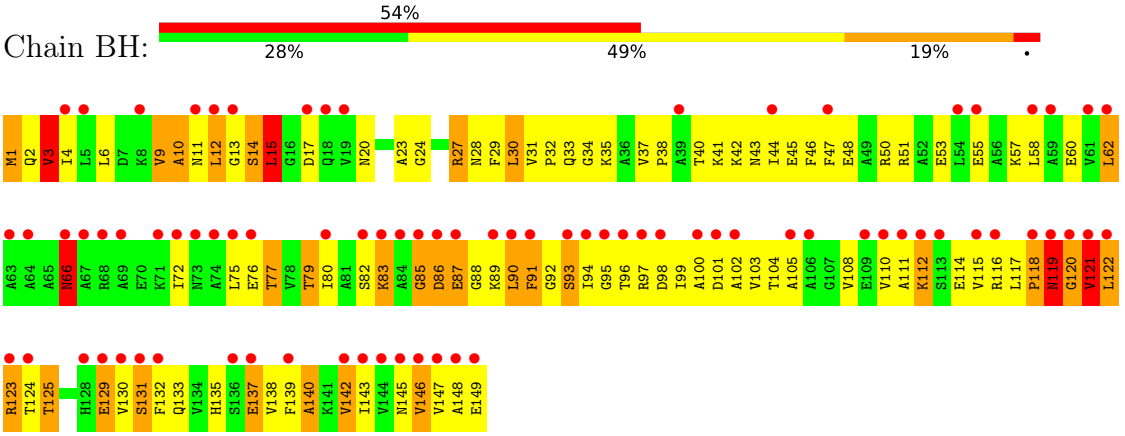
• Molecule 28: 50S ribosomal protein L6

Chain DG:



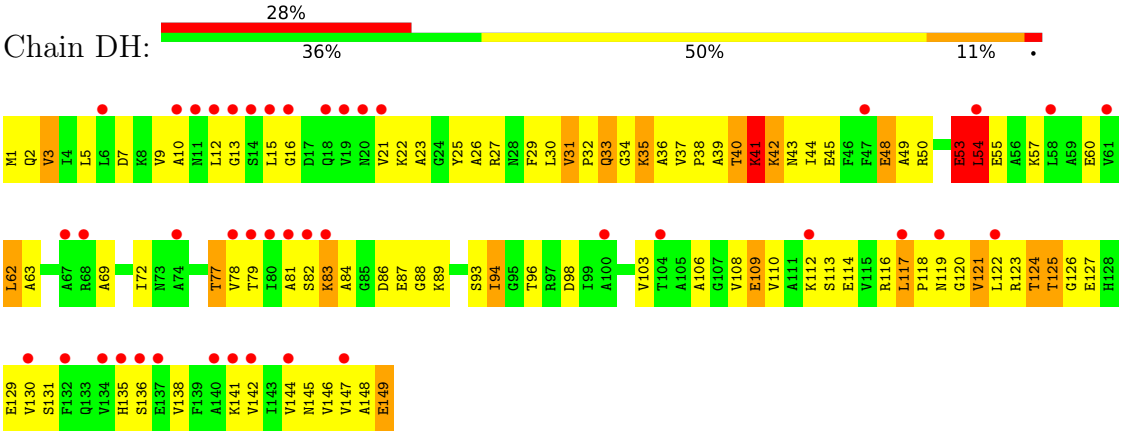
• Molecule 29: 50S ribosomal protein L9

Chain BH:



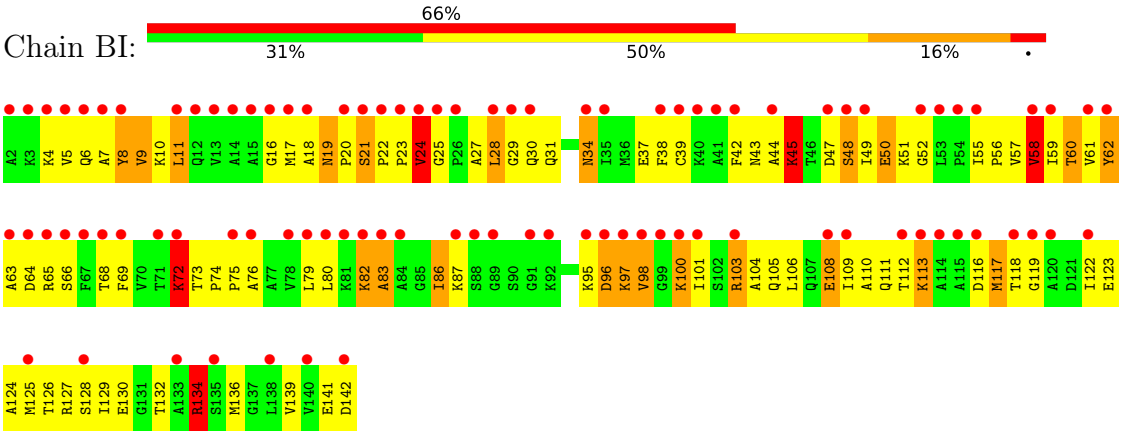
• Molecule 29: 50S ribosomal protein L9

Chain DH:



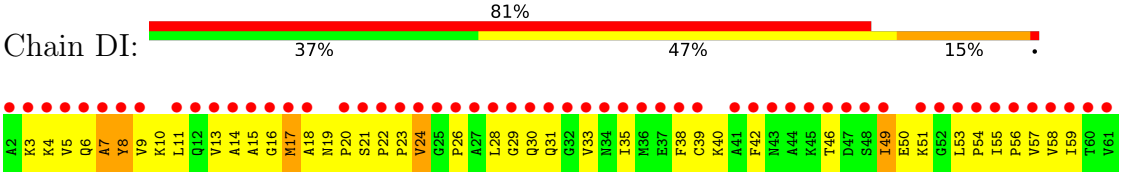
• Molecule 30: 50S ribosomal protein L11

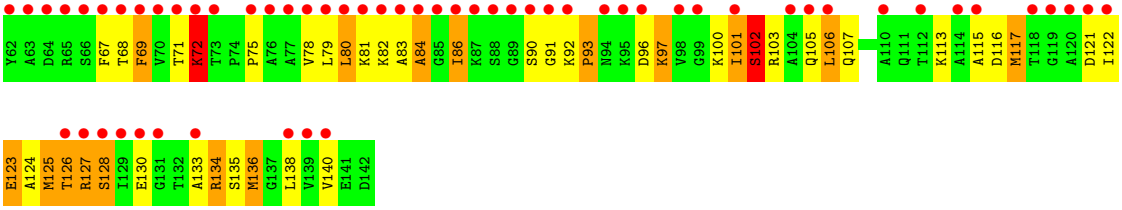
Chain BI:



• Molecule 30: 50S ribosomal protein L11

Chain DI:



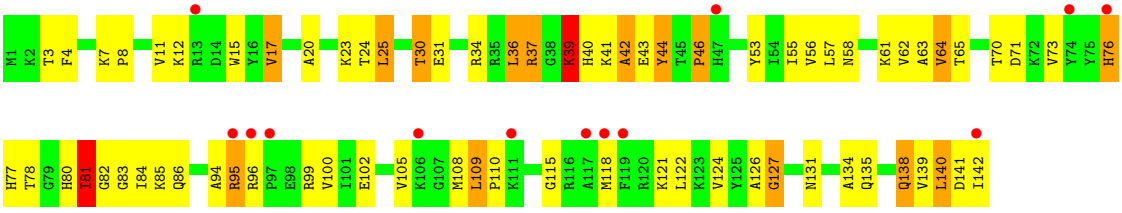


• Molecule 31: 50S ribosomal protein L13

Chain BJ:

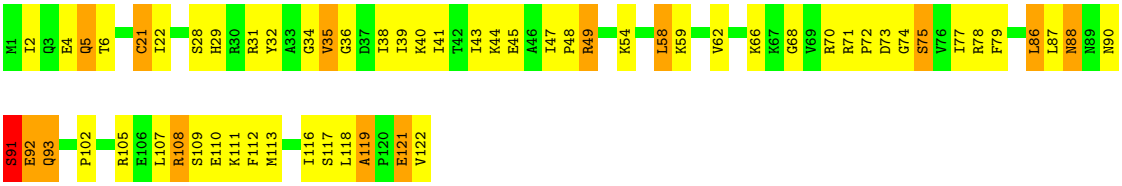
• Molecule 31: 50S ribosomal protein L13

Chain DJ:



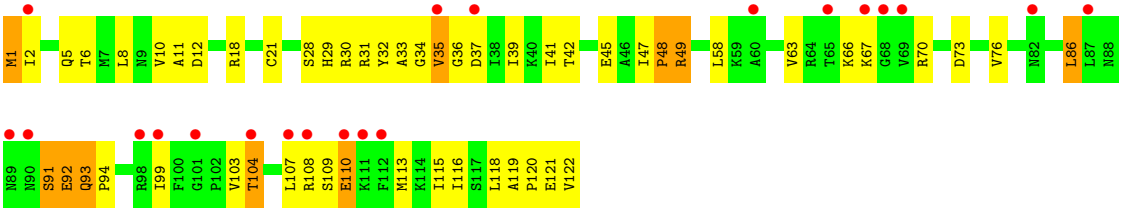
• Molecule 32: 50S ribosomal protein L14

Chain BK:



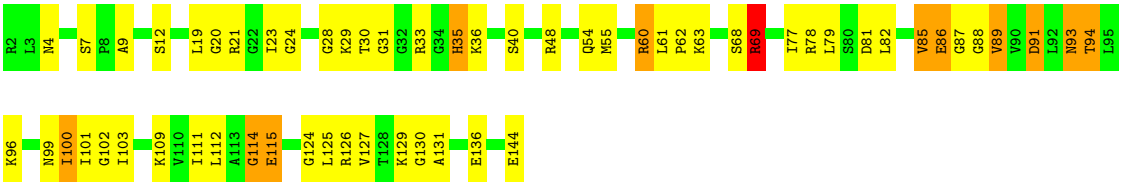
• Molecule 32: 50S ribosomal protein L14

Chain DK:



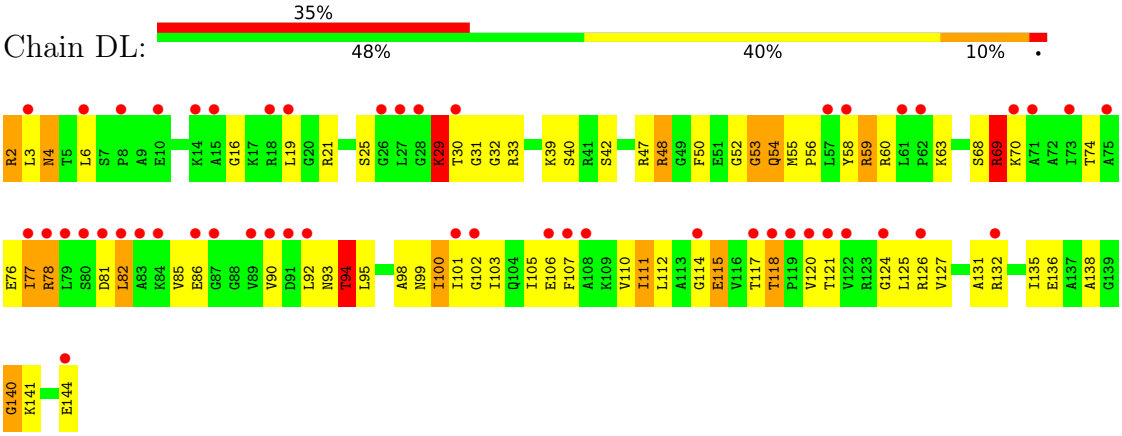
• Molecule 33: 50S ribosomal protein L15

Chain BL:



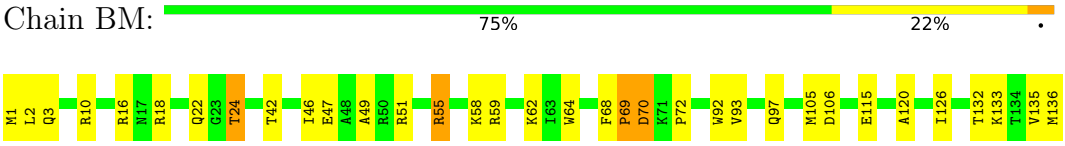
• Molecule 33: 50S ribosomal protein L15

Chain DL:



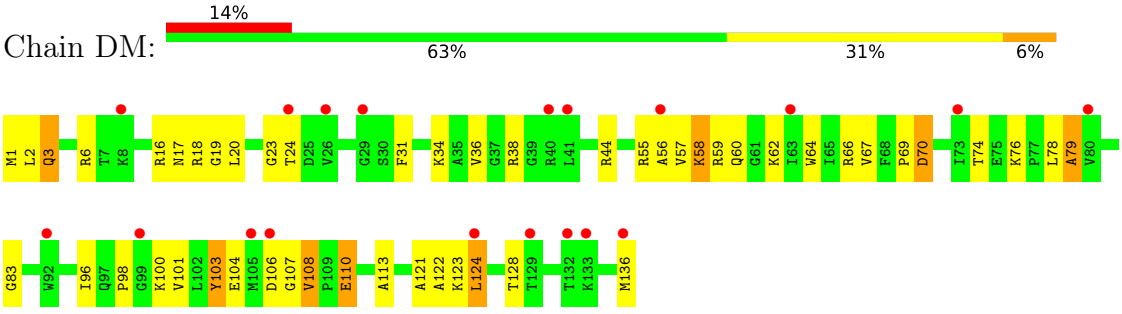
• Molecule 34: 50S ribosomal protein L16

Chain BM:



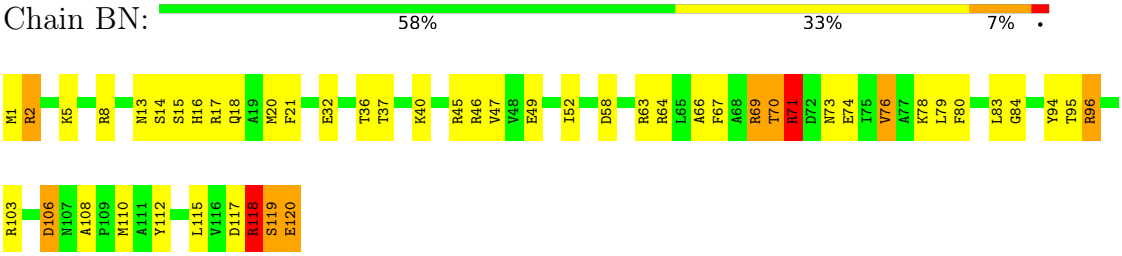
• Molecule 34: 50S ribosomal protein L16

Chain DM:



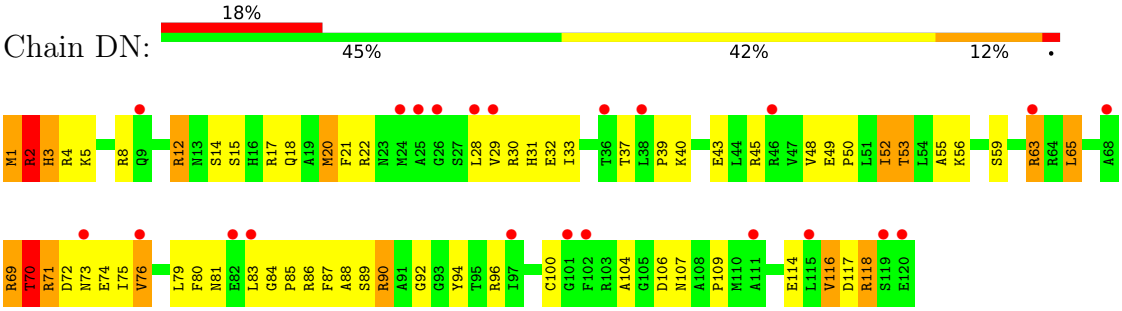
• Molecule 35: 50S ribosomal protein L17

Chain BN:



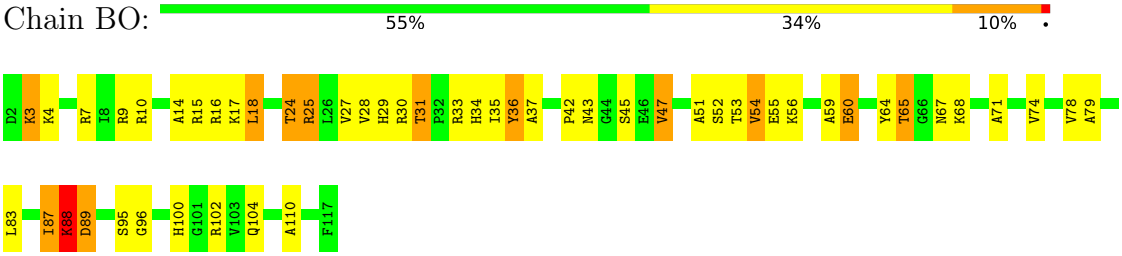
• Molecule 35: 50S ribosomal protein L17

Chain DN:



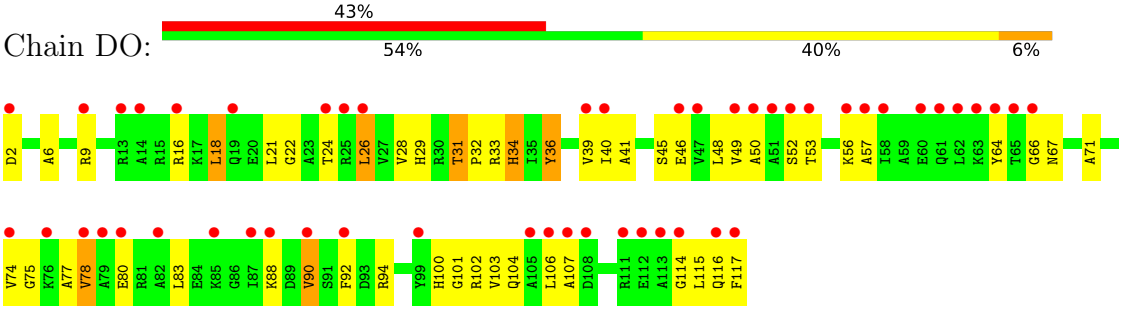
• Molecule 36: 50S ribosomal protein L18

Chain BO:



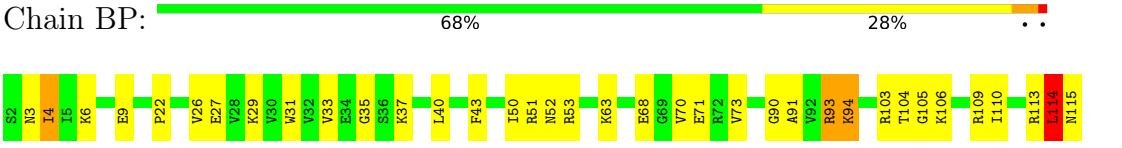
• Molecule 36: 50S ribosomal protein L18

Chain DO:



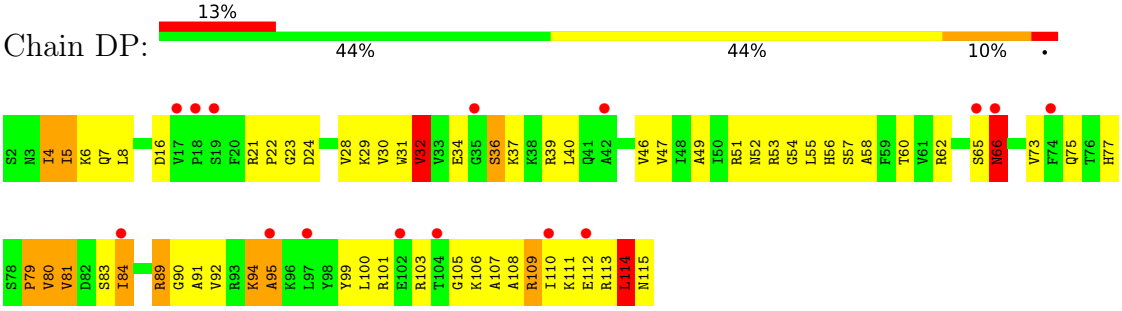
• Molecule 37: 50S ribosomal protein L19

Chain BP:



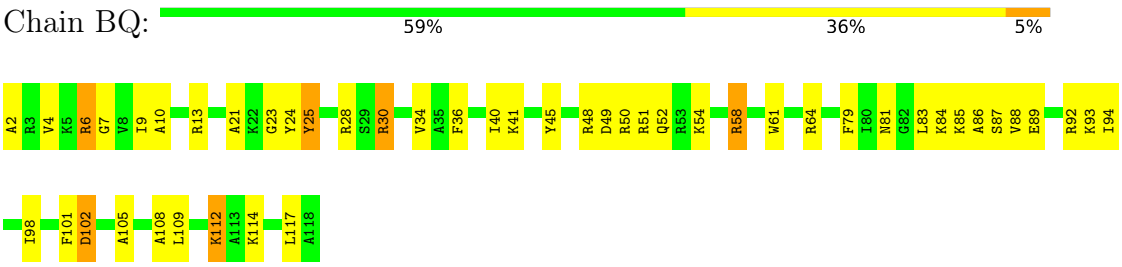
• Molecule 37: 50S ribosomal protein L19

Chain DP:



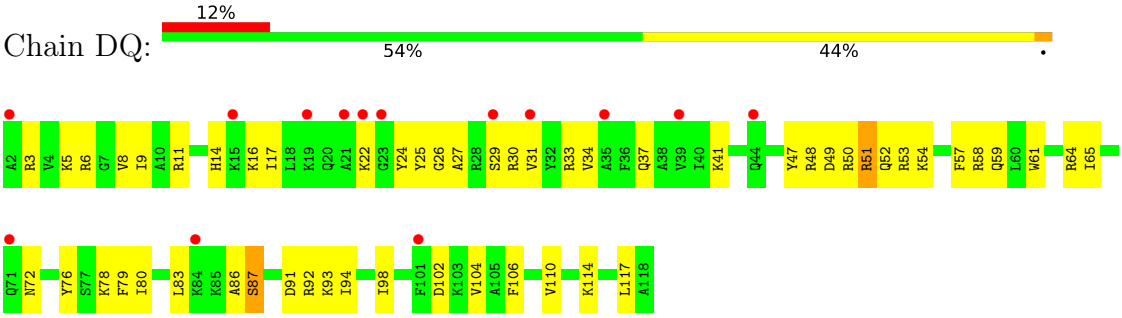
• Molecule 38: 50S ribosomal protein L20

Chain BQ:



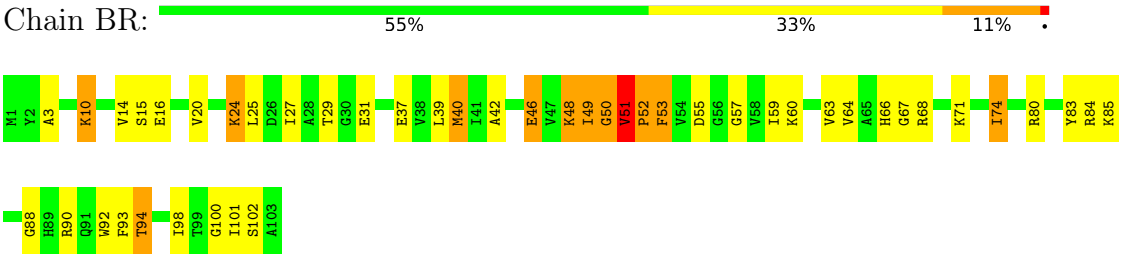
• Molecule 38: 50S ribosomal protein L20

Chain DQ:



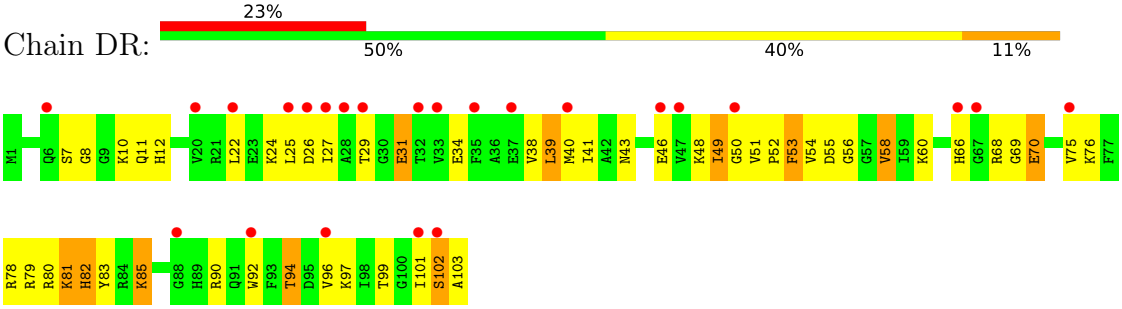
• Molecule 39: 50S ribosomal protein L21

Chain BR:



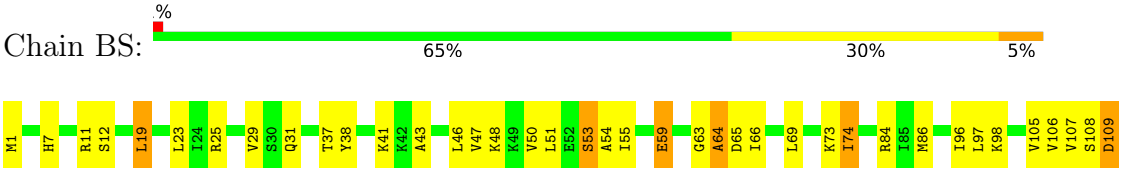
• Molecule 39: 50S ribosomal protein L21

Chain DR:



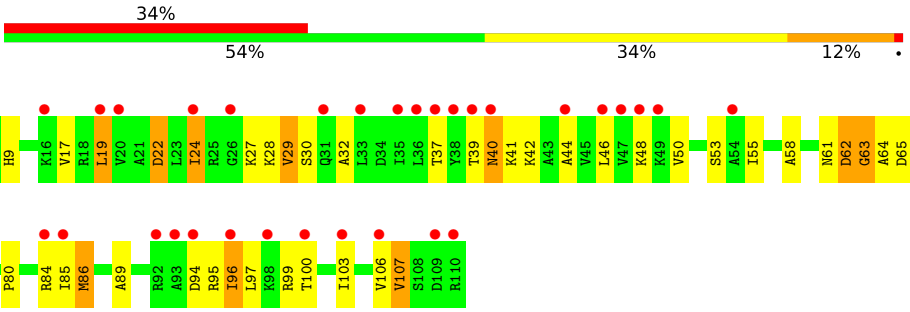
• Molecule 40: 50S ribosomal protein L22

Chain BS:



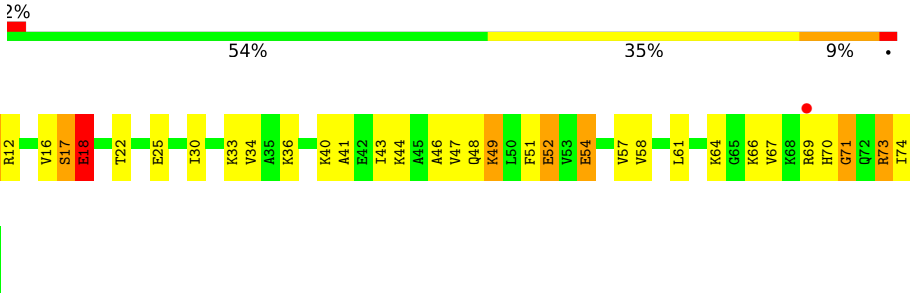
• Molecule 40: 50S ribosomal protein L22

Chain DS:



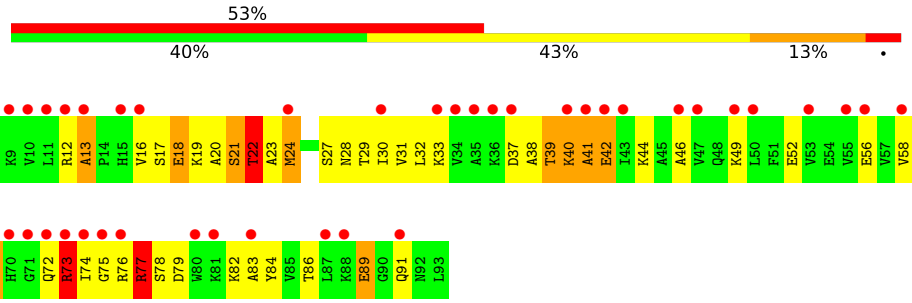
• Molecule 41: 50S ribosomal protein L23

Chain BT:



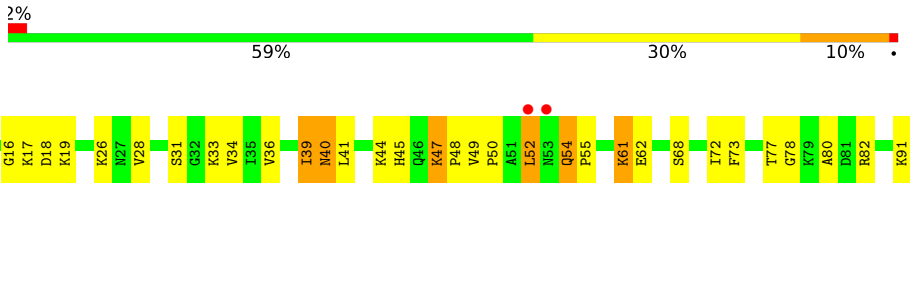
• Molecule 41: 50S ribosomal protein L23

Chain DT:



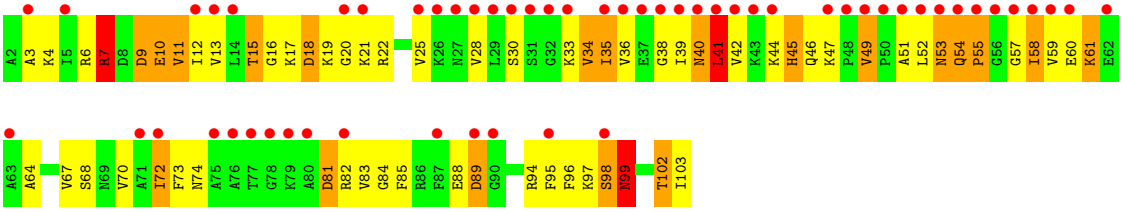
• Molecule 42: 50S ribosomal protein L24

Chain BU:



• Molecule 42: 50S ribosomal protein L24

Chain DU:

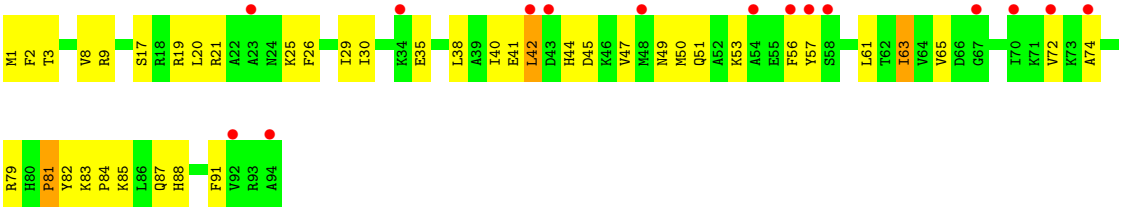


• Molecule 43: 50S ribosomal protein L25

Chain BV:

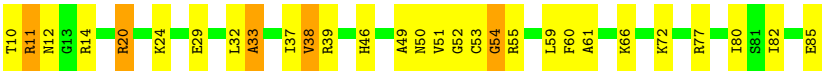
• Molecule 43: 50S ribosomal protein L25

Chain DV:



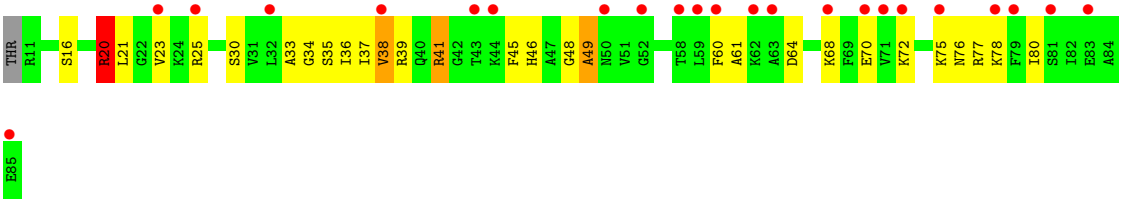
• Molecule 44: 50S ribosomal protein L27

Chain BW:



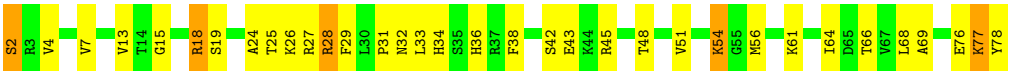
• Molecule 44: 50S ribosomal protein L27

Chain DW:



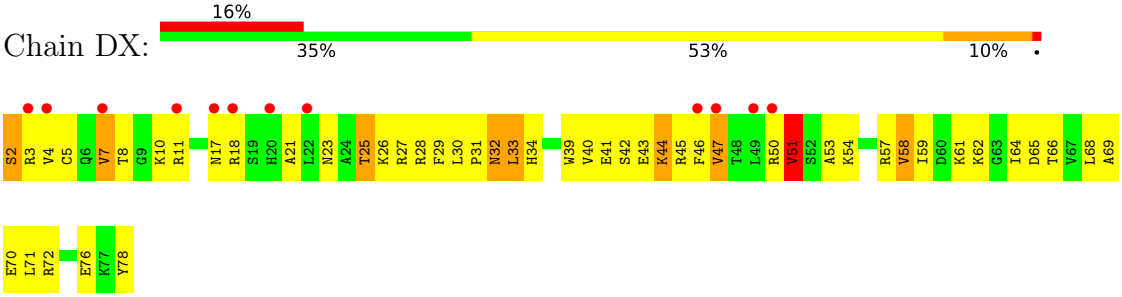
• Molecule 45: 50S ribosomal protein L28

Chain BX:



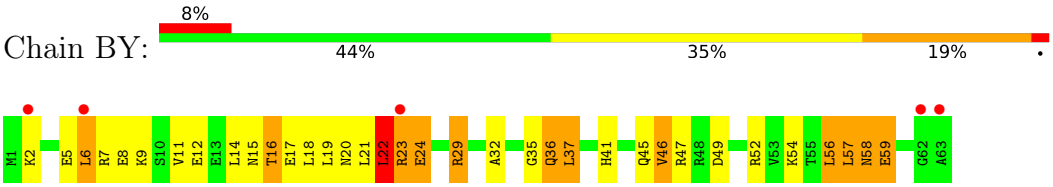
• Molecule 45: 50S ribosomal protein L28

Chain DX:



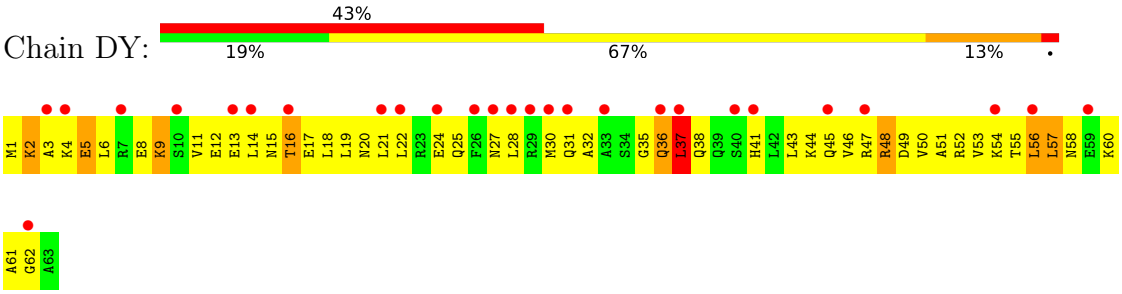
• Molecule 46: 50S ribosomal protein L29

Chain BY:



• Molecule 46: 50S ribosomal protein L29

Chain DY:

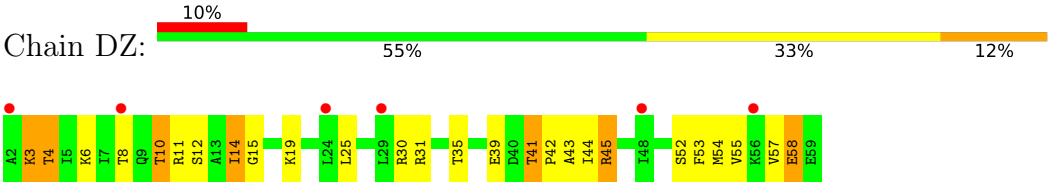


• Molecule 47: 50S ribosomal protein L30

Chain BZ:

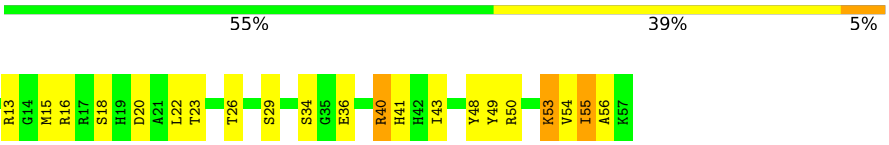
• Molecule 47: 50S ribosomal protein L30

Chain DZ:



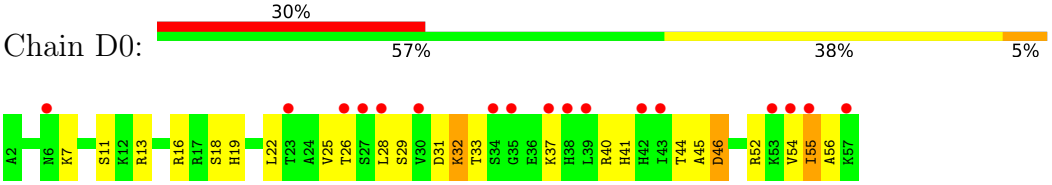
• Molecule 48: 50S ribosomal protein L32

Chain B0:



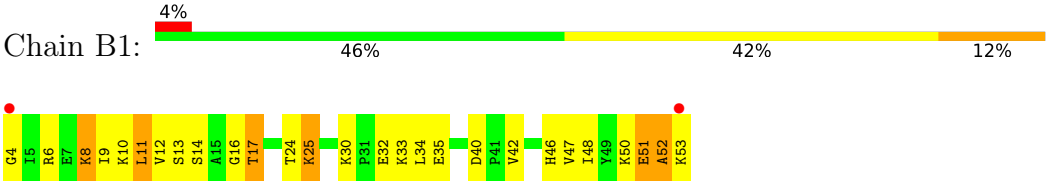
• Molecule 48: 50S ribosomal protein L32

Chain D0:



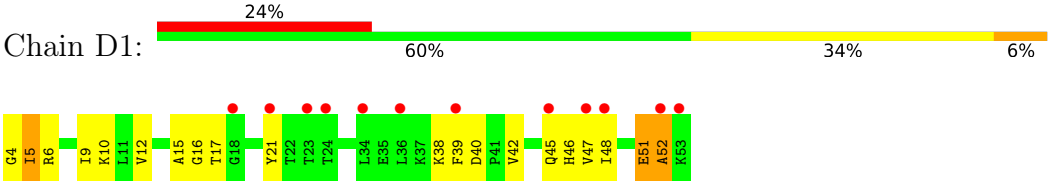
• Molecule 49: 50S ribosomal protein L33

Chain B1:



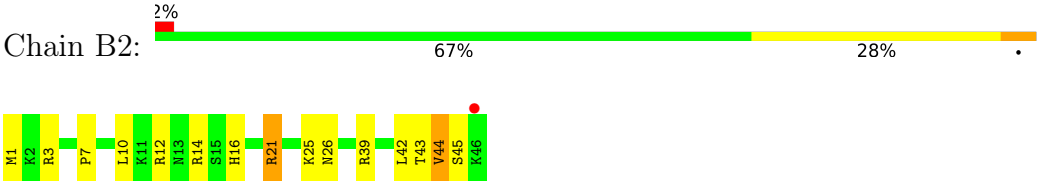
• Molecule 49: 50S ribosomal protein L33

Chain D1:



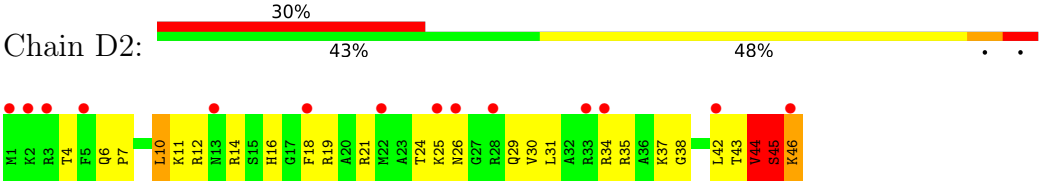
• Molecule 50: 50S ribosomal protein L34

Chain B2:



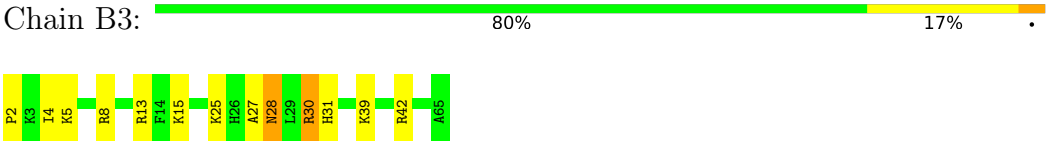
• Molecule 50: 50S ribosomal protein L34

Chain D2:



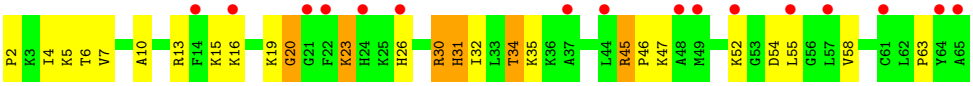
• Molecule 51: 50S ribosomal protein L35

Chain B3:



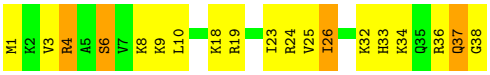
• Molecule 51: 50S ribosomal protein L35

Chain D3:



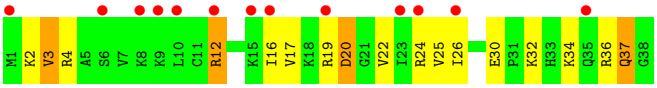
• Molecule 52: 50S ribosomal protein L36

Chain B4:



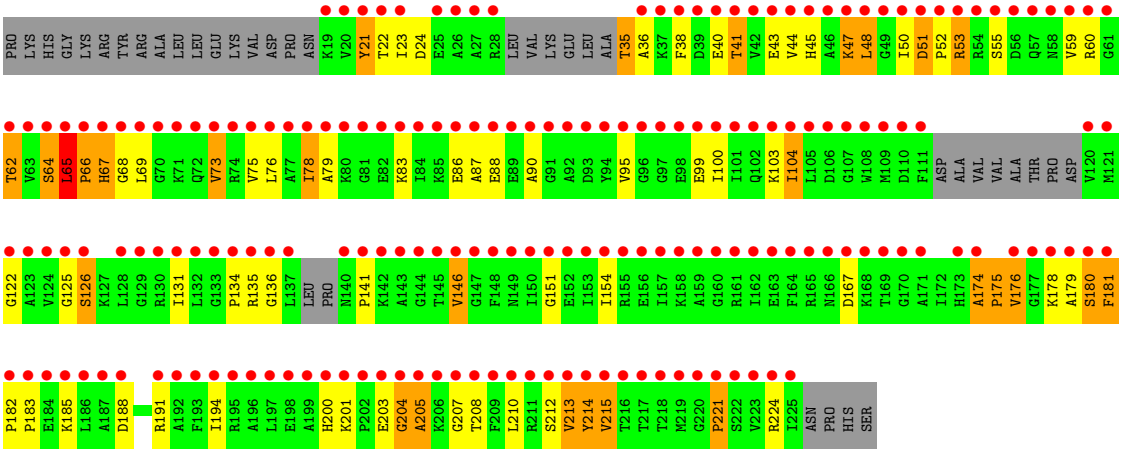
• Molecule 52: 50S ribosomal protein L36

Chain D4:



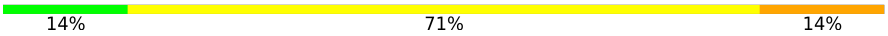
• Molecule 53: 50S ribosomal protein L1

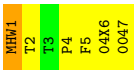
Chain B5:



• Molecule 54: Linopristin

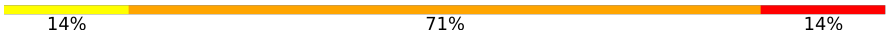
Chain B6:

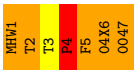




• Molecule 54: Linopristin

Chain D6:





4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	211.97Å 434.65Å 623.91Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	69.36 – 2.80 69.36 – 2.80	Depositor EDS
% Data completeness (in resolution range)	89.2 (69.36-2.80) 89.2 (69.36-2.80)	Depositor EDS
R_{merge}	0.13	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.37 (at 2.81Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.8.1_1168)	Depositor
R, R_{free}	0.215 , 0.260 0.222 , 0.267	Depositor DCC
R_{free} test set	5006 reflections (0.40%)	wwPDB-VP
Wilson B-factor (Å^2)	51.2	Xtriage
Anisotropy	0.182	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.28 , 56.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.46$, $< L^2 > = 0.29$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.92	EDS
Total number of atoms	288396	wwPDB-VP
Average B, all atoms (Å^2)	60.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.01% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: DBB, ZN, VIF, 004, 04X, MG, MHW, MHU

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	0.35	0/36944	0.82	6/57632 (0.0%)
1	CA	0.29	0/36966	0.79	2/57666 (0.0%)
2	AB	0.29	0/1736	0.58	0/2338
2	CB	0.26	0/1736	0.52	0/2338
3	AC	0.28	0/1652	0.54	0/2225
3	CC	0.26	0/1652	0.50	0/2225
4	AD	0.29	0/1665	0.55	0/2227
4	CD	0.32	0/1665	0.57	0/2227
5	AE	0.32	0/1119	0.61	0/1504
5	CE	0.31	0/1119	0.64	0/1504
6	AF	0.31	0/836	0.61	1/1128 (0.1%)
6	CF	0.27	0/836	0.60	1/1128 (0.1%)
7	AG	0.26	0/1196	0.50	0/1602
7	CG	0.26	0/1196	0.50	0/1602
8	AH	0.31	0/989	0.54	0/1326
8	CH	0.26	0/989	0.50	0/1326
9	AI	0.27	0/1034	0.58	0/1375
9	CI	0.27	0/1034	0.54	0/1375
10	AJ	0.29	0/797	0.56	0/1077
10	CJ	0.27	0/797	0.55	0/1077
11	AK	0.28	0/893	0.57	0/1205
11	CK	0.28	0/893	0.58	0/1205
12	AL	0.32	0/969	0.62	0/1300
12	CL	0.30	0/969	0.61	0/1300
13	AM	0.27	0/893	0.56	0/1193
13	CM	0.26	0/893	0.55	0/1193
14	AN	0.29	0/785	0.56	0/1043
14	CN	0.25	0/785	0.48	0/1043
15	AO	0.27	0/718	0.53	0/959
15	CO	0.26	0/718	0.48	0/959
16	AP	0.30	0/659	0.58	0/884
16	CP	0.27	0/659	0.52	0/884

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AQ	0.30	0/658	0.58	0/881
17	CQ	0.29	0/658	0.54	0/881
18	AR	0.27	0/463	0.53	0/621
18	CR	0.28	0/463	0.54	0/621
19	AS	0.29	0/653	0.58	0/877
19	CS	0.28	0/653	0.52	0/877
20	AT	0.30	0/671	0.56	0/888
20	CT	0.26	0/671	0.51	0/888
21	AU	0.35	0/431	0.64	0/570
21	CU	0.35	0/431	0.60	0/570
22	BA	0.60	5/69659 (0.0%)	1.01	98/108672 (0.1%)
22	DA	0.28	0/69659	0.80	8/108672 (0.0%)
23	BB	0.53	0/2850	0.95	0/4444
23	DB	0.24	0/2828	0.79	0/4410
24	BC	0.39	0/2122	0.63	1/2852 (0.0%)
24	DC	0.28	0/2122	0.54	0/2852
25	BD	0.42	0/1586	0.65	1/2134 (0.0%)
25	DD	0.28	0/1586	0.53	0/2134
26	BE	0.38	0/1571	0.60	0/2113
26	DE	0.27	0/1571	0.52	0/2113
27	BF	0.31	0/1435	0.53	0/1926
27	DF	0.26	0/1435	0.48	0/1926
28	BG	0.31	0/1343	0.57	0/1816
28	DG	0.25	0/1343	0.47	0/1816
29	BH	0.36	0/1121	0.66	1/1515 (0.1%)
29	DH	0.35	0/1121	0.56	0/1515
30	BI	0.28	0/1046	0.56	0/1410
30	DI	0.29	0/1046	0.54	0/1410
31	BJ	0.44	0/1152	0.62	0/1551
31	DJ	0.27	0/1152	0.51	0/1551
32	BK	0.44	0/948	0.66	0/1268
32	DK	0.28	0/948	0.51	0/1268
33	BL	0.40	0/1054	0.68	0/1403
33	DL	0.27	0/1054	0.57	0/1403
34	BM	0.43	0/1093	0.64	0/1460
34	DM	0.26	0/1093	0.47	0/1460
35	BN	0.46	0/974	0.68	1/1301 (0.1%)
35	DN	0.27	0/974	0.51	0/1301
36	BO	0.34	0/902	0.59	0/1209
36	DO	0.26	0/902	0.48	0/1209
37	BP	0.39	0/929	0.57	0/1242
37	DP	0.28	0/929	0.53	0/1242
38	BQ	0.48	0/960	0.68	0/1278

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	DQ	0.27	0/960	0.48	0/1278
39	BR	0.47	0/829	0.73	1/1107 (0.1%)
39	DR	0.27	0/829	0.55	0/1107
40	BS	0.51	0/864	0.69	0/1156
40	DS	0.27	0/864	0.52	0/1156
41	BT	0.35	0/745	0.58	0/994
41	DT	0.27	0/745	0.53	0/994
42	BU	0.36	0/788	0.60	0/1051
42	DU	0.30	0/788	0.55	0/1051
43	BV	0.36	0/766	0.59	0/1025
43	DV	0.25	0/766	0.45	0/1025
44	BW	0.43	0/587	0.63	0/776
44	DW	0.26	0/576	0.48	0/762
45	BX	0.35	0/635	0.59	0/848
45	DX	0.28	0/635	0.52	0/848
46	BY	0.32	0/510	0.60	0/677
46	DY	0.26	0/510	0.54	0/677
47	BZ	0.46	0/453	0.60	0/605
47	DZ	0.26	0/453	0.52	0/605
48	B0	0.43	0/450	0.63	0/599
48	D0	0.29	0/450	0.55	0/599
49	B1	0.35	0/417	0.56	0/554
49	D1	0.27	0/417	0.48	0/554
50	B2	0.45	0/380	0.71	0/498
50	D2	0.29	0/380	0.52	0/498
51	B3	0.39	0/513	0.61	0/676
51	D3	0.26	0/513	0.48	0/676
52	B4	0.46	0/303	0.72	0/397
52	D4	0.25	0/303	0.50	0/397
53	B5	0.26	0/1145	0.50	0/1556
54	B6	4.15	4/13 (30.8%)	3.77	4/15 (26.7%)
54	D6	3.89	4/13 (30.8%)	3.55	1/15 (6.7%)
All	All	0.40	13/310652 (0.0%)	0.81	126/464396 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
5	CE	0	1
6	CF	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
11	AK	0	1
12	AL	0	1
12	CL	0	1
21	AU	0	1
21	CU	0	1
24	BC	0	1
25	BD	0	1
25	DD	0	1
All	All	0	10

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	BA	1142	A	N9-C4	-10.72	1.31	1.37
22	BA	984	A	N9-C4	-9.17	1.32	1.37
22	BA	1936	A	N9-C4	-7.33	1.33	1.37
22	BA	974	G	N9-C8	6.97	1.42	1.37
54	B6	2	THR	CB-OG1	-6.86	1.29	1.43
54	B6	4	PRO	N-CD	-6.53	1.38	1.47
54	D6	4	PRO	N-CD	-6.35	1.39	1.47
54	D6	2	THR	CB-OG1	-5.92	1.31	1.43
54	B6	4	PRO	N-CA	-5.91	1.37	1.47
54	D6	2	THR	N-CA	-5.84	1.34	1.46
54	B6	2	THR	N-CA	-5.75	1.34	1.46
54	D6	4	PRO	N-CA	-5.52	1.37	1.47
22	BA	528	A	N7-C5	-5.39	1.36	1.39

All (126) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	984	A	C2-N3-C4	-10.54	105.33	110.60
22	BA	1142	A	C2-N3-C4	-9.69	105.75	110.60
22	BA	1142	A	N3-C4-C5	9.46	133.42	126.80
22	BA	984	A	N3-C4-C5	9.37	133.36	126.80
22	BA	974	G	C4-C5-N7	9.29	114.51	110.80
22	BA	974	G	C5-N7-C8	-8.84	99.88	104.30
25	BD	151	THR	C-N-CD	-8.78	101.28	120.60
22	BA	984	A	N3-C4-N9	-8.74	120.40	127.40
22	BA	752	A	C4-C5-N7	8.72	115.06	110.70
22	BA	528	A	N1-C6-N6	8.69	123.81	118.60
22	BA	528	A	C6-C5-N7	-8.51	126.34	132.30
22	BA	752	A	C5-N7-C8	-8.47	99.67	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	1142	A	N3-C4-N9	-7.87	121.10	127.40
22	BA	1936	A	C2-N3-C4	-7.81	106.69	110.60
22	BA	1936	A	N3-C4-C5	7.73	132.21	126.80
22	BA	528	A	C2-N3-C4	-7.71	106.74	110.60
22	BA	2453	A	N1-C6-N6	7.61	123.17	118.60
22	BA	752	A	N1-C6-N6	7.46	123.08	118.60
24	BC	182	ARG	NE-CZ-NH2	7.29	123.95	120.30
22	BA	2250	G	C5-N7-C8	-7.15	100.72	104.30
22	BA	1936	A	N3-C4-N9	-7.12	121.70	127.40
35	BN	71	ARG	NE-CZ-NH2	7.09	123.84	120.30
54	D6	4	PRO	CA-C-O	-7.07	103.24	120.20
22	BA	2453	A	C5-C6-N6	-7.05	118.06	123.70
22	BA	528	A	N1-C2-N3	7.02	132.81	129.30
22	BA	974	G	N3-C4-C5	6.92	132.06	128.60
22	BA	752	A	C6-C5-N7	-6.71	127.60	132.30
22	BA	2030	A	N9-C4-C5	6.70	108.48	105.80
22	BA	2825	G	C4-N9-C1'	6.66	135.15	126.50
22	BA	528	A	C4-C5-C6	6.41	120.20	117.00
22	BA	984	A	C4-N9-C1'	-6.36	114.86	126.30
22	BA	502	A	O5'-P-OP1	-6.36	99.98	105.70
22	BA	984	A	C8-N9-C1'	6.29	139.03	127.70
22	BA	783	A	C5-N7-C8	-6.27	100.76	103.90
22	BA	2645	G	O4'-C1'-N9	6.26	113.20	108.20
22	BA	2012	G	C5-C6-O6	-6.19	124.89	128.60
1	AA	1286	U	C2-N1-C1'	6.14	125.06	117.70
22	BA	529	A	C8-N9-C4	6.12	108.25	105.80
22	BA	752	A	N7-C8-N9	6.08	116.84	113.80
1	CA	209	U	C2-N1-C1'	6.06	124.97	117.70
22	BA	512	G	O4'-C1'-N9	6.06	113.05	108.20
1	AA	1279	G	C8-N9-C4	-6.04	103.98	106.40
22	BA	783	A	C2-N3-C4	-6.03	107.58	110.60
22	BA	704	G	O4'-C1'-N9	5.99	113.00	108.20
54	B6	2	THR	CA-CB-OG1	-5.98	96.44	109.00
54	B6	2	THR	N-CA-CB	-5.97	98.95	110.30
6	CF	86	ARG	NE-CZ-NH1	5.97	123.28	120.30
54	B6	4	PRO	N-CD-CG	5.96	112.14	103.20
22	BA	2689	U	C5-C4-O4	5.95	129.47	125.90
22	BA	783	A	C4-C5-N7	5.92	113.66	110.70
22	BA	2689	U	N3-C4-O4	-5.91	115.27	119.40
22	DA	1313	U	C2-N1-C1'	5.90	124.78	117.70
22	BA	2867	G	O5'-P-OP1	-5.83	100.45	105.70
22	BA	748	G	O4'-C1'-N9	5.82	112.86	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	974	G	N7-C8-N9	5.80	116.00	113.10
22	BA	2250	G	C4-C5-N7	5.79	113.11	110.80
22	BA	2062	A	O4'-C1'-N9	5.75	112.80	108.20
22	BA	1282	U	C5-C4-O4	-5.74	122.46	125.90
22	BA	2848	G	O4'-C1'-N9	5.74	112.79	108.20
1	AA	578	C	O5'-P-OP1	-5.70	100.57	105.70
22	BA	752	A	N9-C4-C5	-5.68	103.53	105.80
22	BA	528	A	C8-N9-C4	-5.67	103.53	105.80
22	BA	974	G	O4'-C1'-N9	5.65	112.72	108.20
22	BA	1142	A	C5-N7-C8	-5.61	101.09	103.90
22	BA	2030	A	C5-C6-N6	5.57	128.15	123.70
22	DA	2447	G	C4-N9-C1'	-5.56	119.27	126.50
39	BR	51	VAL	C-N-CD	5.55	140.06	128.40
22	BA	984	A	C5-N7-C8	-5.54	101.13	103.90
22	DA	1314	C	C2-N1-C1'	5.54	124.90	118.80
22	BA	586	A	O5'-P-OP1	-5.54	100.71	105.70
22	BA	528	A	N7-C8-N9	5.54	116.57	113.80
22	BA	2190	G	C4-N9-C1'	5.54	133.70	126.50
22	BA	2580	U	C5-C4-O4	-5.53	122.58	125.90
22	BA	2825	G	C8-N9-C1'	-5.52	119.83	127.00
22	BA	2000	C	O5'-P-OP2	-5.51	100.74	105.70
22	BA	528	A	C4-C5-N7	5.51	113.45	110.70
22	BA	2825	G	N3-C4-C5	-5.50	125.85	128.60
22	BA	395	U	O4'-C1'-N1	5.47	112.58	108.20
22	BA	2030	A	N1-C6-N6	-5.46	115.33	118.60
22	BA	1660	G	N1-C6-O6	-5.42	116.64	119.90
22	BA	752	A	C5-C6-N6	-5.39	119.39	123.70
22	BA	2250	G	N7-C8-N9	5.39	115.79	113.10
22	BA	1142	A	C4-C5-C6	-5.38	114.31	117.00
22	BA	2765	A	N1-C6-N6	5.37	121.82	118.60
22	BA	1613	G	N1-C6-O6	-5.36	116.68	119.90
22	BA	1779	U	N3-C4-O4	-5.36	115.65	119.40
22	BA	481	G	O4'-C1'-N9	5.34	112.48	108.20
22	BA	1936	A	N1-C6-N6	5.34	121.80	118.60
1	AA	1279	G	N7-C8-N9	5.32	115.76	113.10
22	BA	1677	A	N1-C6-N6	5.30	121.78	118.60
22	DA	2585	U	C2-N1-C1'	-5.30	111.34	117.70
22	BA	808	G	C5-C6-O6	-5.29	125.42	128.60
22	BA	528	A	C5-N7-C8	-5.29	101.26	103.90
22	BA	537	G	C5-C6-O6	-5.28	125.43	128.60
22	BA	974	G	N1-C6-O6	5.27	123.06	119.90
22	BA	997	G	OP1-P-O3'	5.27	116.78	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	1282	U	N3-C4-O4	5.25	123.08	119.40
22	BA	527	C	N1-C2-O2	-5.25	115.75	118.90
22	BA	2645	G	C4-N9-C1'	5.24	133.31	126.50
22	BA	1415	U	C2-N1-C1'	5.22	123.96	117.70
22	BA	1121	C	N1-C2-O2	-5.21	115.77	118.90
22	BA	1260	A	C8-N9-C4	5.20	107.88	105.80
1	CA	207	C	C2-N1-C1'	5.19	124.51	118.80
22	BA	1223	G	OP2-P-O3'	5.18	116.61	105.20
22	DA	2499	C	N1-C2-O2	-5.18	115.79	118.90
22	DA	2447	G	C8-N9-C1'	5.18	133.73	127.00
22	BA	585	G	N3-C4-C5	-5.17	126.02	128.60
29	BH	121	VAL	C-N-CA	5.15	134.59	121.70
22	BA	2190	G	C8-N9-C1'	-5.15	120.30	127.00
22	BA	537	G	N1-C6-O6	5.13	122.98	119.90
22	BA	2521	C	O5'-P-OP2	-5.13	101.08	105.70
22	BA	1584	U	C2-N1-C1'	5.12	123.85	117.70
22	BA	1785	A	C8-N9-C4	-5.12	103.75	105.80
22	BA	974	G	C5-C6-O6	-5.11	125.54	128.60
1	AA	1504	G	O4'-C1'-N9	5.10	112.28	108.20
22	DA	1786	A	O4'-C1'-N9	5.08	112.27	108.20
22	BA	2731	G	C4-C5-N7	5.07	112.83	110.80
1	AA	188	C	C2-N1-C1'	5.06	124.37	118.80
22	BA	1022	G	N9-C4-C5	5.05	107.42	105.40
22	DA	748	G	O4'-C1'-N9	5.05	112.24	108.20
54	B6	4	PRO	CA-C-O	-5.04	108.10	120.20
22	BA	2248	C	N1-C2-O2	5.04	121.92	118.90
6	AF	54	LEU	CA-CB-CG	5.04	126.89	115.30
22	BA	2645	G	C8-N9-C1'	-5.04	120.45	127.00
22	BA	2887	A	N1-C6-N6	5.03	121.62	118.60
22	BA	2059	A	N1-C6-N6	5.03	121.62	118.60

There are no chirality outliers.

All (10) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
11	AK	126	LYS	Peptide
12	AL	38	TYR	Peptide
21	AU	39	GLU	Peptide
24	BC	232	HIS	Peptide
25	BD	151	THR	Peptide
5	CE	102	GLY	Peptide
6	CF	54	LEU	Peptide

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Mol	Chain	Res	Type	Group
12	CL	24	LEU	Peptide
21	CU	39	GLU	Peptide
25	DD	151	THR	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32995	0	16607	1047	0
1	CA	33015	0	16617	1004	0
2	AB	1705	0	1732	177	0
2	CB	1705	0	1732	125	0
3	AC	1625	0	1696	75	0
3	CC	1625	0	1696	64	0
4	AD	1643	0	1707	134	0
4	CD	1643	0	1707	121	0
5	AE	1106	0	1148	75	0
5	CE	1106	0	1148	101	0
6	AF	818	0	808	60	0
6	CF	818	0	808	56	0
7	AG	1182	0	1238	58	0
7	CG	1182	0	1238	54	0
8	AH	979	0	1031	74	0
8	CH	979	0	1031	42	0
9	AI	1022	0	1070	82	0
9	CI	1022	0	1070	70	0
10	AJ	787	0	828	69	0
10	CJ	787	0	828	59	0
11	AK	877	0	887	66	0
11	CK	877	0	887	65	0
12	AL	955	0	1016	61	0
12	CL	955	0	1016	72	0
13	AM	884	0	941	61	0
13	CM	884	0	941	49	0
14	AN	774	0	824	59	0
14	CN	774	0	824	45	0
15	AO	710	0	728	27	0
15	CO	710	0	728	31	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
16	AP	649	0	666	60	0
16	CP	649	0	666	29	0
17	AQ	649	0	691	65	0
17	CQ	649	0	691	59	0
18	AR	456	0	478	17	0
18	CR	456	0	478	40	0
19	AS	638	0	665	40	0
19	CS	638	0	665	37	0
20	AT	665	0	714	50	0
20	CT	665	0	714	46	0
21	AU	426	0	449	49	0
21	CU	426	0	449	59	0
22	BA	62195	0	31280	1407	0
22	DA	62195	0	31280	2116	0
23	BB	2549	0	1291	30	0
23	DB	2529	0	1281	80	0
24	BC	2083	0	2154	82	0
24	DC	2083	0	2154	116	0
25	BD	1565	0	1616	52	0
25	DD	1565	0	1616	80	0
26	BE	1552	0	1619	46	0
26	DE	1552	0	1619	79	0
27	BF	1411	0	1444	89	0
27	DF	1411	0	1444	55	0
28	BG	1323	0	1371	43	0
28	DG	1323	0	1371	54	0
29	BH	1110	0	1147	151	0
29	DH	1110	0	1148	87	0
30	BI	1032	0	1085	81	0
30	DI	1032	0	1085	78	0
31	BJ	1129	0	1162	22	0
31	DJ	1129	0	1162	52	0
32	BK	939	0	1012	48	0
32	DK	939	0	1012	42	0
33	BL	1045	0	1117	55	0
33	DL	1045	0	1117	66	0
34	BM	1074	0	1157	25	0
34	DM	1074	0	1157	35	0
35	BN	961	0	1000	46	0
35	DN	961	0	1000	58	0
36	BO	892	0	923	37	0
36	DO	892	0	923	39	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
37	BP	917	0	962	28	0
37	DP	917	0	962	47	0
38	BQ	947	0	1019	39	0
38	DQ	947	0	1019	47	0
39	BR	816	0	839	56	0
39	DR	816	0	839	46	0
40	BS	857	0	922	28	0
40	DS	857	0	922	40	0
41	BT	739	0	807	37	0
41	DT	739	0	807	47	0
42	BU	780	0	831	27	0
42	DU	780	0	831	64	0
43	BV	753	0	780	20	0
43	DV	753	0	780	27	0
44	BW	580	0	594	18	0
44	DW	569	0	581	25	0
45	BX	625	0	652	22	0
45	DX	625	0	652	45	0
46	BY	509	0	543	35	0
46	DY	509	0	543	45	0
47	BZ	449	0	488	9	0
47	DZ	449	0	488	13	0
48	B0	444	0	458	23	0
48	D0	444	0	458	18	0
49	B1	410	0	440	22	0
49	D1	410	0	440	11	0
50	B2	377	0	418	17	0
50	D2	377	0	418	24	0
51	B3	504	0	572	12	0
51	D3	504	0	572	27	0
52	B4	302	0	340	23	0
52	D4	302	0	340	15	0
53	B5	1142	0	865	52	0
54	B6	69	0	60	1	0
54	D6	69	0	61	20	0
55	AA	72	0	0	0	0
55	BA	193	0	0	0	0
55	BB	4	0	0	0	0
55	BD	1	0	0	0	0
55	BQ	1	0	0	0	0
55	CA	56	0	0	0	0
55	D2	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
55	DA	167	0	0	0	0
55	DB	3	0	0	0	0
56	BA	38	0	38	2	0
56	DA	38	0	37	11	0
57	B4	1	0	0	0	0
57	D4	1	0	0	0	0
58	AA	193	0	0	20	0
58	AL	2	0	0	0	0
58	AN	5	0	0	0	0
58	AT	2	0	0	0	0
58	AU	1	0	0	0	0
58	B2	1	0	0	0	0
58	B3	2	0	0	0	0
58	B4	2	0	0	0	0
58	BA	623	0	0	64	0
58	BB	14	0	0	0	0
58	BC	6	0	0	1	0
58	BD	3	0	0	2	0
58	BE	4	0	0	0	0
58	BF	1	0	0	1	0
58	BG	1	0	0	1	0
58	BL	4	0	0	2	0
58	BN	3	0	0	0	0
58	BS	1	0	0	0	0
58	BT	1	0	0	0	0
58	CA	192	0	0	21	0
58	CL	1	0	0	0	0
58	CN	3	0	0	0	0
58	CT	1	0	0	0	0
58	CU	1	0	0	1	0
58	D0	1	0	0	0	0
58	D2	1	0	0	0	0
58	D3	2	0	0	0	0
58	D4	1	0	0	0	0
58	DA	608	0	0	99	0
58	DB	13	0	0	1	0
58	DC	11	0	0	0	0
58	DD	4	0	0	2	0
58	DE	5	0	0	2	0
58	DJ	1	0	0	0	0
58	DL	4	0	0	2	0
58	DN	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	DT	1	0	0	0	0
58	DU	1	0	0	0	0
58	DV	1	0	0	0	0
All	All	288396	0	192983	10007	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 21.

All (10007) 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)
29:BH:123:ARG:HH22	1:CA:367:U:P	1.57	1.26
29:BH:117:LEU:O	29:BH:121:VAL:HG23	1.34	1.22
29:BH:117:LEU:O	29:BH:121:VAL:CG2	1.95	1.14
22:BA:2498:C:OP2	58:BA:3690:HOH:O	1.65	1.12
1:AA:533:A:OP1	58:AA:1848:HOH:O	1.68	1.11
22:BA:1153:C:OP2	58:BA:3360:HOH:O	1.70	1.09
29:BH:123:ARG:O	29:BH:124:THR:CG2	2.01	1.09
54:D6:4:PRO:CB	54:D6:5:MHU:HM1	1.80	1.09
23:DB:28:C:OP1	36:DO:36:TYR:OH	1.69	1.08
25:DD:151:THR:O	25:DD:153:GLY:N	1.86	1.08
2:AB:21:ARG:O	2:AB:23:TRP:N	1.88	1.06
24:BC:260:ASN:O	24:BC:262:ARG:N	1.88	1.06
54:D6:4:PRO:HB2	54:D6:5:MHU:CM	1.75	1.06
22:DA:602:A:O2'	22:DA:604:G:O2'	1.74	1.05
22:BA:842:U:O4	58:BA:3590:HOH:O	1.73	1.05
25:BD:140:HIS:NE2	58:BD:402:HOH:O	1.89	1.04
1:CA:1500:A:OP2	58:CA:1883:HOH:O	1.75	1.04
22:BA:1509:A:O2'	22:BA:1510:G:OP2	1.73	1.03
22:DA:2711:A:OP2	58:DA:3548:HOH:O	1.75	1.02
29:BH:123:ARG:NH2	1:CA:367:U:O5'	1.92	1.01
6:CF:12:PRO:O	6:CF:15:SER:OG	1.78	1.01
29:BH:123:ARG:NH2	1:CA:367:U:OP2	1.93	1.00
22:DA:790:U:OP2	58:DA:3755:HOH:O	1.77	1.00
22:DA:1050:A:N6	22:DA:1109:C:O2	1.94	1.00
29:BH:117:LEU:HD21	29:BH:121:VAL:H	1.23	1.00
29:BH:123:ARG:O	29:BH:124:THR:HG23	1.61	0.99
22:BA:2448:A:OP2	58:BA:3690:HOH:O	1.81	0.98
13:AM:11:ASP:OD1	13:AM:12:HIS:N	1.96	0.98
22:DA:2271:G:O6	58:DA:3509:HOH:O	1.79	0.98
22:DA:2627:G:O2'	22:DA:2781:A:N1	1.95	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1198:G:N7	58:CA:1852:HOH:O	1.94	0.97
23:DB:34:A:N6	23:DB:44:G:O2'	1.98	0.97
29:DH:40:THR:O	29:DH:42:LYS:N	1.98	0.97
22:BA:1009:A:OP2	31:BJ:39:LYS:NZ	1.97	0.96
29:BH:123:ARG:NH2	1:CA:367:U:P	2.37	0.96
14:CN:41:ARG:NH1	14:CN:42:TRP:O	1.98	0.96
2:CB:103:ASN:ND2	2:CB:106:THR:OG1	1.98	0.96
18:CR:25:ASP:O	18:CR:27:ALA:N	1.98	0.96
22:BA:2742:G:O6	58:BA:3799:HOH:O	1.82	0.95
1:AA:1077:G:N7	58:AA:1789:HOH:O	1.98	0.95
22:DA:310:A:O2'	22:DA:311:A:OP2	1.84	0.95
29:BH:120:GLY:C	29:BH:122:LEU:HA	1.85	0.95
22:DA:621:A:OP2	58:DA:3290:HOH:O	1.84	0.95
24:DC:157:SER:O	24:DC:160:THR:OG1	1.85	0.95
22:DA:1439:A:OP2	58:DA:3630:HOH:O	1.85	0.95
1:CA:515:G:N7	58:CA:1766:HOH:O	1.99	0.94
22:BA:2211:A:O2'	22:BA:2212:A:OP1	1.84	0.94
24:BC:244:PRO:O	24:BC:251:GLN:NE2	2.01	0.94
22:BA:731:C:OP2	58:BA:3698:HOH:O	1.85	0.94
22:BA:1070:A:O2'	22:BA:1097:U:OP1	1.84	0.94
1:CA:1097:C:OP1	2:CB:139:ARG:NH2	1.99	0.94
22:BA:1916:A:C4	22:BA:1917:U:H1'	2.03	0.94
24:BC:70:ASN:O	24:BC:72:ASP:N	2.02	0.93
22:BA:572:A:OP2	39:BR:80:ARG:NH2	2.02	0.93
27:DF:122:PHE:O	27:DF:124:GLY:N	2.02	0.93
22:BA:1602:U:O4	58:BA:3720:HOH:O	1.87	0.92
1:CA:966:G:O2'	9:CI:130:ARG:OXT	1.87	0.92
1:CA:558:G:OP1	58:CA:1730:HOH:O	1.85	0.92
22:DA:58:G:OP1	41:DT:78:SER:OG	1.86	0.92
22:DA:488:G:N2	22:DA:493:G:O6	2.02	0.92
1:CA:803:G:OP1	58:CA:1802:HOH:O	1.88	0.92
1:AA:1031:C:O2'	1:AA:1032:G:OP2	1.87	0.91
22:DA:787:C:OP1	58:DA:3754:HOH:O	1.88	0.91
3:AC:36:ASP:OD1	3:AC:59:ARG:NH1	2.04	0.91
1:CA:858:G:N7	58:CA:1820:HOH:O	2.04	0.91
22:DA:2506:U:C4	22:DA:2585:U:O4	2.24	0.90
22:BA:2720:U:OP1	37:BP:53:ARG:NH2	2.04	0.90
22:DA:1378:A:O2'	58:DA:3752:HOH:O	1.89	0.90
29:DH:83:LYS:HG3	29:DH:149:GLU:CG	2.02	0.90
35:BN:58:ASP:OD1	35:BN:63:ARG:NH2	2.04	0.90
22:DA:2243:U:OP1	58:DA:3738:HOH:O	1.88	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:452:A:N6	1:AA:480:U:O2	2.05	0.90
6:AF:91:ARG:O	6:AF:92:THR:OG1	1.89	0.89
22:DA:2714:G:OP2	58:DA:3548:HOH:O	1.90	0.89
1:AA:980:C:OP2	58:AA:1836:HOH:O	1.90	0.89
1:AA:1222:G:O6	58:AA:1836:HOH:O	1.90	0.89
22:BA:1179:G:C5	22:BA:1180:U:H1'	2.08	0.89
22:DA:381:G:OP1	45:DX:18:ARG:NH2	2.05	0.89
27:BF:40:VAL:O	27:BF:42:GLU:N	2.06	0.89
22:DA:1619:G:N7	58:DA:3643:HOH:O	2.05	0.88
1:CA:532:A:N6	3:CC:192:THR:OG1	2.06	0.88
1:CA:978:A:OP2	1:CA:1362:A:N6	2.05	0.88
22:BA:1073:A:H3'	22:BA:1074:G:C5'	2.03	0.88
1:CA:1211:U:O2'	1:CA:1212:U:OP2	1.91	0.88
22:DA:732:C:OP2	58:DA:3296:HOH:O	1.89	0.88
5:AE:157:ARG:O	5:AE:159:LYS:N	2.07	0.88
5:AE:99:ALA:O	5:AE:101:GLU:N	2.06	0.88
22:DA:1154:G:OP2	38:DQ:58:ARG:NH1	2.07	0.88
29:BH:123:ARG:O	29:BH:124:THR:HG22	1.74	0.88
22:DA:2550:G:OP1	58:DA:3721:HOH:O	1.89	0.88
22:BA:1180:U:O2'	22:BA:1181:U:OP1	1.92	0.87
29:BH:117:LEU:C	29:BH:121:VAL:HG23	1.93	0.87
22:DA:1269:A:OP2	58:DA:3380:HOH:O	1.93	0.87
22:BA:2579:C:OP1	58:BA:3543:HOH:O	1.94	0.86
8:AH:2:SER:O	8:AH:4:GLN:N	2.08	0.86
20:CT:5:LYS:O	20:CT:7:ALA:N	2.07	0.86
29:DH:83:LYS:HG3	29:DH:149:GLU:HG2	1.56	0.86
22:BA:2683:C:O2	32:BK:70:ARG:NH2	2.08	0.86
22:DA:2055:C:OP2	58:DA:3573:HOH:O	1.92	0.86
29:BH:147:VAL:HG12	29:BH:149:GLU:HG3	1.57	0.86
2:CB:15:HIS:O	2:CB:17:GLY:N	2.09	0.86
3:CC:155:GLY:O	3:CC:157:LEU:N	2.08	0.85
22:DA:1010:A:OP2	58:DA:3779:HOH:O	1.93	0.85
22:DA:1378:A:O2'	22:DA:1380:G:N7	2.09	0.85
1:AA:1145:A:O2'	1:AA:1146:A:O5'	1.94	0.85
1:CA:412:A:O2'	1:CA:413:G:O5'	1.95	0.85
22:DA:2004:G:OP2	58:DA:3798:HOH:O	1.92	0.85
22:DA:1652:A:OP1	35:DN:8:ARG:NH2	2.10	0.85
22:BA:2445:G:OP1	26:BE:69:ARG:NH2	2.09	0.85
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.10	0.85
22:DA:370:G:N7	58:DA:3559:HOH:O	2.09	0.85
35:DN:1:MET:O	35:DN:3:HIS:N	2.09	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2707:U:O2	35:BN:71:ARG:NH1	2.10	0.85
39:BR:24:LYS:HA	39:BR:94:THR:HG23	1.57	0.85
22:DA:1371:G:N7	58:DA:3399:HOH:O	2.10	0.85
21:AU:35:ARG:O	21:AU:37:PHE:N	2.10	0.85
47:DZ:8:THR:OG1	47:DZ:35:THR:OG1	1.95	0.85
1:AA:1232:U:OP1	9:AI:126:GLN:NE2	2.10	0.84
22:BA:2033:A:OP1	58:BA:3480:HOH:O	1.94	0.84
32:BK:70:ARG:NH1	32:BK:74:GLY:O	2.09	0.84
2:AB:82:ASP:O	2:AB:85:LEU:N	2.09	0.84
22:BA:1002:G:O6	58:BA:3745:HOH:O	1.96	0.84
22:DA:842:U:O4	58:DA:3580:HOH:O	1.95	0.84
22:DA:2507:C:OP1	58:DA:3709:HOH:O	1.94	0.84
2:CB:206:ALA:O	2:CB:208:ARG:N	2.11	0.84
1:AA:67:C:O2'	1:AA:171:A:N3	2.10	0.84
22:DA:528:A:OP1	58:DA:3245:HOH:O	1.94	0.84
29:BH:117:LEU:O	29:BH:119:ASN:N	2.07	0.84
29:BH:117:LEU:HD21	29:BH:121:VAL:N	1.93	0.84
1:CA:1124:G:O2'	1:CA:1145:A:N6	2.10	0.84
4:CD:100:ASN:OD1	4:CD:111:ARG:NH1	2.09	0.84
22:DA:18:U:O4	58:DA:3205:HOH:O	1.96	0.84
29:DH:82:SER:O	29:DH:84:ALA:N	2.10	0.84
2:AB:115:LYS:O	2:AB:117:LEU:N	2.10	0.84
1:CA:299:G:O6	58:CA:1731:HOH:O	1.96	0.84
12:CL:22:PRO:O	12:CL:24:LEU:N	2.11	0.84
9:AI:57:MET:SD	9:AI:58:VAL:N	2.51	0.83
22:BA:1342:A:OP2	58:BA:3720:HOH:O	1.96	0.83
22:DA:299:A:N3	22:DA:319:G:O2'	2.11	0.83
12:CL:116:LYS:O	12:CL:117:TYR:CG	2.30	0.83
22:DA:1013:C:OP2	58:DA:3599:HOH:O	1.94	0.83
12:CL:66:TYR:O	12:CL:97:THR:OG1	1.95	0.83
22:DA:1262:A:OP1	40:DS:99:ARG:NH2	2.12	0.83
1:AA:1108:G:O6	58:AA:1861:HOH:O	1.96	0.83
22:BA:545:U:O2'	22:BA:548:G:OP2	1.96	0.83
22:BA:2800:A:H3'	22:BA:2801:G:H5'	1.61	0.83
27:BF:158:THR:O	58:BF:201:HOH:O	1.96	0.83
22:DA:15:G:OP2	58:DA:3549:HOH:O	1.95	0.83
22:DA:2162:G:H4'	22:DA:2163:A:OP1	1.77	0.83
1:AA:503:C:OP1	58:AA:1882:HOH:O	1.95	0.83
22:DA:1667:G:O2'	22:DA:1991:U:O4	1.95	0.83
29:DH:94:ILE:HB	29:DH:122:LEU:HD12	1.60	0.83
1:AA:131:A:O2'	1:AA:262:A:N3	2.10	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:370:G:OP2	58:BA:3563:HOH:O	1.97	0.82
22:DA:618:G:O6	58:DA:3289:HOH:O	1.95	0.82
22:BA:684:G:OP1	50:B2:21:ARG:NH1	2.12	0.82
22:BA:194:G:N7	58:BA:3766:HOH:O	2.12	0.82
29:BH:120:GLY:C	29:BH:122:LEU:CA	2.47	0.82
23:DB:31:C:O2'	23:DB:53:A:N1	2.11	0.82
2:AB:23:TRP:CH2	2:AB:25:PRO:HA	2.15	0.82
3:AC:14:ILE:O	3:AC:16:LYS:N	2.12	0.82
1:AA:536:C:OP1	58:AA:1883:HOH:O	1.98	0.82
22:DA:2757:A:N1	28:DG:67:THR:HG21	1.95	0.82
22:DA:784:G:OP1	58:DA:3313:HOH:O	1.96	0.81
22:BA:1069:A:N1	22:BA:1073:A:N6	2.28	0.81
22:BA:2757:A:N1	28:BG:67:THR:HG21	1.94	0.81
22:DA:642:U:O2'	22:DA:644:A:N7	2.13	0.81
22:DA:1344:U:O2'	22:DA:1345:C:OP2	1.97	0.81
22:BA:1917:U:C4	22:BA:1918:A:C4	2.68	0.81
22:DA:1377:G:OP2	58:DA:3394:HOH:O	1.99	0.81
14:AN:33:ASP:O	14:AN:35:ASN:N	2.13	0.81
49:D1:15:ALA:O	49:D1:17:THR:N	2.13	0.81
1:CA:484:G:H4'	1:CA:485:U:O5'	1.81	0.81
22:DA:684:G:OP1	50:D2:16:HIS:ND1	2.13	0.81
1:AA:825:A:O2'	8:AH:13:ARG:NH1	2.14	0.81
1:CA:209:U:H4'	1:CA:210:C:OP2	1.80	0.81
35:DN:87:PHE:O	35:DN:89:SER:N	2.12	0.81
11:CK:125:LYS:O	21:CU:34:ARG:NE	2.13	0.81
39:BR:49:ILE:HG22	39:BR:53:PHE:N	1.95	0.81
22:DA:733:G:OP2	58:DA:3294:HOH:O	1.98	0.81
22:BA:797:G:O6	58:BA:3323:HOH:O	1.98	0.81
22:DA:1266:G:O2'	22:DA:2012:G:O6	1.98	0.81
1:CA:533:A:OP1	58:CA:1764:HOH:O	1.97	0.80
4:CD:192:SER:OG	4:CD:193:ALA:N	2.11	0.80
14:AN:61:ARG:O	14:AN:62:ASN:HB2	1.80	0.80
16:AP:49:GLY:O	16:AP:50:THR:OG1	1.98	0.80
24:BC:237:GLY:O	58:BC:305:HOH:O	1.98	0.80
22:DA:821:A:O3'	58:DA:3344:HOH:O	1.99	0.80
7:AG:55:GLY:O	7:AG:57:SER:N	2.15	0.80
3:CC:16:LYS:NZ	3:CC:181:ASP:OD1	2.15	0.80
22:DA:1296:G:OP1	22:DA:2709:G:O2'	1.98	0.80
23:DB:29:A:O2'	23:DB:58:A:N1	2.14	0.80
40:DS:28:LYS:O	40:DS:30:SER:N	2.15	0.80
1:AA:692:U:O2'	1:AA:694:A:N7	2.15	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:91:GLY:O	14:AN:93:ILE:N	2.14	0.80
4:CD:70:ARG:O	4:CD:74:ASN:ND2	2.14	0.80
22:BA:1776:G:OP2	58:BA:3449:HOH:O	1.98	0.79
1:CA:1181:G:O2'	1:CA:1182:G:N7	2.15	0.79
23:BB:91:C:OP2	34:BM:18:ARG:NH2	2.16	0.79
1:CA:736:C:OP1	18:CR:61:ARG:NH1	2.15	0.79
22:DA:1377:G:N7	58:DA:3395:HOH:O	2.14	0.79
14:CN:91:GLY:O	14:CN:93:ILE:N	2.15	0.79
7:CG:68:ASN:OD1	7:CG:130:ASN:ND2	2.16	0.79
41:DT:17:SER:O	41:DT:19:LYS:N	2.16	0.79
22:BA:783:A:O2'	22:BA:785:G:OP1	2.00	0.79
12:CL:92:GLY:O	12:CL:94:ARG:N	2.16	0.79
17:CQ:21:ILE:N	17:CQ:48:ASP:OD2	2.16	0.79
22:DA:910:A:N3	22:DA:2264:C:O2'	2.15	0.79
1:AA:965:U:OP2	58:AA:1832:HOH:O	1.99	0.79
1:AA:1003:G:N2	1:AA:1037:C:O2	2.15	0.79
22:DA:1325:U:OP1	22:DA:1647:U:O2'	2.01	0.79
1:AA:516:U:O4	58:AA:1848:HOH:O	2.00	0.79
4:AD:22:LYS:O	4:AD:24:GLY:N	2.16	0.79
1:CA:1198:G:OP1	58:CA:1838:HOH:O	2.01	0.78
11:AK:76:GLU:C	22:BA:2141:G:OP1	2.22	0.78
22:BA:1917:U:C5	22:BA:1918:A:C5	2.71	0.78
25:BD:140:HIS:CE1	58:BD:402:HOH:O	2.31	0.78
1:CA:537:G:OP1	12:CL:110:ARG:NH2	2.17	0.78
5:CE:102:GLY:O	5:CE:104:GLY:N	2.17	0.78
22:DA:2032:G:N7	58:DA:3532:HOH:O	2.14	0.78
1:AA:75:G:N1	1:AA:96:U:O4	2.17	0.78
1:AA:875:U:O2'	8:AH:15:ARG:NH1	2.16	0.78
22:DA:978:G:N7	58:DA:3590:HOH:O	2.17	0.78
22:DA:2588:G:OP1	58:DA:3313:HOH:O	2.01	0.78
2:AB:73:LYS:O	2:AB:75:ALA:N	2.17	0.78
22:BA:2278:A:OP1	34:BM:10:ARG:NH2	2.17	0.78
22:DA:587:C:OP2	33:DL:21:ARG:NH1	2.17	0.78
22:BA:481:G:C4	22:BA:507:A:C2	2.72	0.78
22:DA:1267:U:O3'	58:DA:3377:HOH:O	2.01	0.78
22:DA:2144:G:N2	22:DA:2148:G:O6	2.17	0.78
5:CE:137:VAL:O	5:CE:138:ARG:CB	2.32	0.78
22:DA:161:A:H3'	22:DA:162:U:H5"	1.66	0.78
31:DJ:80:HIS:O	31:DJ:82:GLY:N	2.17	0.78
22:DA:2005:A:OP1	58:DA:3382:HOH:O	2.02	0.77
22:BA:2128:G:H2'	22:BA:2129:C:O4'	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:777:G:C2	22:DA:778:G:C8	2.72	0.77
22:DA:1187:G:N7	58:DA:3577:HOH:O	2.17	0.77
22:DA:2057:G:OP2	58:DA:3486:HOH:O	2.02	0.77
22:BA:1845:G:OP1	24:BC:256:LYS:NZ	2.18	0.77
22:DA:187:G:C2	22:DA:210:C:C2	2.73	0.77
22:BA:1603:A:OP1	58:BA:3413:HOH:O	2.02	0.77
6:CF:91:ARG:O	6:CF:92:THR:OG1	2.01	0.77
22:DA:118:A:C8	22:DA:119:A:C8	2.72	0.77
22:DA:1265:A:OP1	58:DA:3746:HOH:O	2.02	0.77
11:CK:17:SER:O	11:CK:80:LYS:N	2.17	0.77
35:DN:1:MET:H1	35:DN:1:MET:CE	1.96	0.77
22:BA:245:G:N7	51:B3:8:ARG:NH1	2.32	0.77
22:DA:1509:A:O2'	22:DA:1510:G:OP2	2.02	0.77
3:AC:25:ASN:O	3:AC:27:LYS:N	2.18	0.77
29:DH:1:MET:SD	29:DH:27:ARG:NH1	2.58	0.77
35:DN:1:MET:H1	35:DN:1:MET:HE2	1.48	0.77
13:AM:31:LYS:NZ	13:AM:41:GLU:OE1	2.18	0.76
22:BA:999:U:OP2	58:BA:3363:HOH:O	2.03	0.76
22:BA:1780:A:N7	58:BA:3762:HOH:O	2.17	0.76
22:DA:306:U:O2	22:DA:312:G:N2	2.18	0.76
22:DA:2006:C:OP1	58:DA:3378:HOH:O	2.02	0.76
53:B5:65:LEU:O	53:B5:67:HIS:N	2.19	0.76
17:CQ:8:LEU:HB2	17:CQ:61:ILE:CG2	2.14	0.76
22:BA:784:G:H5'	22:BA:785:G:OP1	1.85	0.76
8:AH:42:GLU:OE1	8:AH:42:GLU:N	2.19	0.76
9:AI:30:ILE:HD11	9:AI:38:TYR:CD1	2.21	0.76
1:CA:64:G:C8	1:CA:99:C:N4	2.53	0.76
22:DA:2286:G:H4'	22:DA:2287:A:O5'	1.86	0.76
29:DH:53:GLU:O	29:DH:55:GLU:N	2.19	0.76
4:AD:32:CYS:O	4:AD:33:LYS:HB2	1.84	0.76
1:CA:1049:U:OP1	58:CA:1846:HOH:O	2.04	0.76
13:CM:13:LYS:O	13:CM:14:HIS:ND1	2.19	0.76
22:DA:514:A:N3	22:DA:581:C:O2'	2.17	0.76
39:DR:8:GLY:O	39:DR:10:LYS:NZ	2.19	0.76
22:DA:2407:A:OP1	58:DA:3564:HOH:O	2.04	0.76
29:DH:45:GLU:O	29:DH:49:ALA:N	2.19	0.76
29:BH:123:ARG:NH1	1:CA:367:U:OP2	2.19	0.76
37:DP:89:ARG:NH1	37:DP:115:ASN:OXT	2.19	0.76
1:AA:1181:G:O2'	1:AA:1182:G:C5	2.39	0.76
22:BA:2017:U:OP2	58:BA:3271:HOH:O	2.03	0.76
22:DA:2125:G:N1	22:DA:2171:A:OP1	2.19	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:98:LYS:NZ	58:DE:305:HOH:O	2.16	0.76
50:D2:43:THR:OG1	50:D2:44:VAL:N	2.15	0.76
22:BA:533:G:OP1	38:BQ:24:TYR:O	2.04	0.75
1:CA:1151:A:C2	1:CA:1152:A:C5	2.74	0.75
22:BA:1746:A:H2'	22:BA:1747:U:C6	2.21	0.75
7:AG:27:VAL:HG12	7:AG:43:VAL:HG21	1.68	0.75
1:CA:1004:A:O2'	1:CA:1036:A:N1	2.18	0.75
22:DA:1153:C:P	58:DA:3359:HOH:O	2.43	0.75
4:AD:100:ASN:OD1	4:AD:111:ARG:NH1	2.20	0.75
22:DA:1826:G:O6	58:DA:3783:HOH:O	2.04	0.75
16:AP:46:LYS:HD3	16:AP:47:GLU:N	2.02	0.75
22:DA:2115:G:O2'	22:DA:2117:A:N6	2.19	0.75
22:DA:2520:C:HO2'	22:DA:2565:A:HO2'	1.30	0.75
1:AA:91:U:H2'	1:AA:92:U:O4'	1.86	0.75
22:BA:1379:U:C6	22:BA:1379:U:OP1	2.39	0.75
29:DH:124:THR:OG1	29:DH:125:THR:N	2.17	0.75
1:AA:1149:C:OP2	9:AI:11:ARG:NH2	2.20	0.75
22:DA:1342:A:OP2	58:DA:3712:HOH:O	2.04	0.75
22:DA:2091:C:H3'	22:DA:2092:U:H5"	1.67	0.75
22:BA:1188:U:C2'	22:BA:1189:A:H5'	2.17	0.75
22:DA:2551:C:OP2	58:DA:3720:HOH:O	2.05	0.75
14:AN:90:ARG:NH1	14:AN:92:GLU:OE2	2.20	0.74
22:DA:118:A:N3	22:DA:178:G:H1'	2.01	0.74
22:DA:2566:A:N1	32:DK:28:SER:OG	2.20	0.74
11:AK:29:ASN:OD1	11:AK:30:THR:N	2.19	0.74
14:AN:46:LEU:O	14:AN:48:LEU:N	2.20	0.74
22:DA:108:G:O2'	22:DA:347:A:N3	2.18	0.74
22:BA:198:C:P	58:BA:3768:HOH:O	2.45	0.74
29:BH:117:LEU:HD11	29:BH:122:LEU:HD12	1.69	0.74
22:DA:822:G:OP2	58:DA:3346:HOH:O	2.06	0.74
28:BG:155:GLU:OE2	28:BG:158:LYS:N	2.20	0.74
29:BH:88:GLY:O	29:BH:125:THR:OG1	2.04	0.74
29:BH:123:ARG:C	29:BH:124:THR:HG23	2.06	0.74
22:DA:2057:G:OP1	58:DA:3669:HOH:O	2.05	0.74
36:BO:31:THR:O	36:BO:102:ARG:NH1	2.19	0.74
12:CL:25:GLU:O	12:CL:27:CYS:N	2.21	0.74
22:DA:2838:G:O2'	35:DN:45:ARG:NH1	2.20	0.74
22:BA:301:G:OP2	42:BU:82:ARG:NH1	2.21	0.74
28:BG:80:THR:HG22	28:BG:81:GLU:N	2.02	0.74
22:DA:2707:U:O2	35:DN:71:ARG:NH1	2.20	0.74
31:DJ:41:LYS:O	31:DJ:44:TYR:N	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:85:VAL:HG11	33:BL:94:THR:HG22	1.70	0.73
22:DA:2611:C:H1'	54:D6:6:04X:H33	1.70	0.73
1:AA:108:G:N3	1:AA:108:G:H5'	2.03	0.73
1:AA:119:A:C2	1:AA:240:G:C8	2.76	0.73
22:BA:731:C:OP2	58:BA:3700:HOH:O	2.04	0.73
29:BH:123:ARG:CZ	1:CA:367:U:OP2	2.35	0.73
4:AD:95:GLU:OE2	4:AD:104:ARG:NH1	2.21	0.73
20:AT:69:LYS:O	20:AT:71:LYS:N	2.21	0.73
22:BA:2127:G:H4'	22:BA:2128:G:OP1	1.88	0.73
24:BC:182:ARG:NH2	24:BC:183:LYS:O	2.22	0.73
53:B5:50:ILE:C	53:B5:52:PRO:HD3	2.09	0.73
28:BG:174:ALA:O	28:BG:175:LYS:HB3	1.88	0.73
22:DA:668:A:N6	22:DA:670:A:O2'	2.20	0.73
1:AA:509:A:OP2	58:AA:1722:HOH:O	2.05	0.73
1:AA:1350:A:OP1	9:AI:123:ARG:NE	2.22	0.73
4:AD:150:LYS:O	4:AD:152:GLN:NE2	2.21	0.73
22:DA:84:A:N1	22:DA:98:G:O2'	2.17	0.73
1:CA:495:A:C2	1:CA:496:A:C6	2.75	0.73
24:DC:210:ALA:HA	24:DC:213:TRP:CE2	2.22	0.73
5:AE:104:GLY:O	5:AE:105:ILE:HG22	1.89	0.73
1:CA:688:G:O2'	1:CA:704:A:N1	2.18	0.73
39:BR:49:ILE:HG22	39:BR:53:PHE:CA	2.18	0.73
5:CE:101:GLU:O	5:CE:103:THR:N	2.22	0.73
25:DD:12:THR:OG1	25:DD:13:ARG:N	2.20	0.73
17:AQ:17:MET:SD	17:AQ:17:MET:N	2.62	0.73
48:B0:54:VAL:O	48:B0:56:ALA:N	2.22	0.73
2:CB:169:GLU:O	2:CB:171:ILE:N	2.22	0.73
22:DA:142:A:C6	22:DA:143:C:N4	2.57	0.73
9:AI:45:ARG:HG2	9:AI:46:MET:SD	2.30	0.72
1:AA:254:G:OP1	17:AQ:70:THR:HB	1.88	0.72
22:DA:846:U:O2'	22:DA:847:U:O5'	2.06	0.72
22:DA:2209:G:C2	22:DA:2216:G:C2	2.77	0.72
34:DM:66:ARG:NH1	34:DM:104:GLU:OE1	2.22	0.72
22:BA:761:A:OP1	58:BA:3700:HOH:O	2.06	0.72
29:BH:86:ASP:HB2	1:CA:359:G:O2'	1.88	0.72
1:CA:684:U:O2'	11:CK:40:ASN:O	2.04	0.72
22:DA:1335:C:N4	58:DA:3392:HOH:O	2.21	0.72
22:BA:1776:G:OP2	58:BA:3451:HOH:O	2.07	0.72
39:DR:82:HIS:ND1	39:DR:82:HIS:O	2.23	0.72
22:BA:2057:G:OP2	58:BA:3490:HOH:O	2.06	0.72
22:DA:453:A:OP1	58:DA:3241:HOH:O	2.07	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:79:G:N2	1:AA:91:U:O4	2.22	0.72
22:BA:731:C:P	58:BA:3698:HOH:O	2.45	0.72
22:DA:608:A:H2'	22:DA:609:A:C8	2.24	0.72
1:CA:976:G:OP2	1:CA:1358:U:O2'	2.06	0.72
1:AA:824:G:H1'	8:AH:2:SER:N	2.05	0.72
24:BC:117:GLN:N	24:BC:128:ASN:OD1	2.23	0.72
7:AG:99:LEU:O	7:AG:102:ARG:N	2.23	0.72
22:DA:250:G:OP2	51:D3:13:ARG:NH1	2.23	0.72
22:DA:1394:U:H4'	22:DA:1603:A:H4'	1.72	0.72
22:DA:1776:G:N2	22:DA:1789:A:H1'	2.05	0.72
22:DA:2115:G:HO2'	22:DA:2117:A:N6	1.88	0.72
1:AA:451:A:C8	1:AA:452:A:C2	2.78	0.71
22:DA:362:A:C4	22:DA:363:G:C8	2.78	0.71
3:AC:139:GLN:O	3:AC:141:ALA:N	2.23	0.71
5:AE:81:LEU:HD12	5:AE:147:MET:SD	2.30	0.71
22:BA:1309:G:H4'	50:B2:7:PRO:HB2	1.70	0.71
31:BJ:81:ILE:HG23	31:BJ:82:GLY:N	2.06	0.71
1:CA:552:U:C4	1:CA:553:A:N7	2.57	0.71
22:DA:827:U:OP2	58:DA:3697:HOH:O	2.09	0.71
22:DA:1515:A:HO2'	22:DA:1556:C:HO2'	1.36	0.71
22:BA:1916:A:O5'	22:BA:1917:U:OP2	2.07	0.71
24:BC:204:VAL:O	24:BC:206:GLY:N	2.23	0.71
22:DA:2056:G:OP2	58:DA:3486:HOH:O	2.07	0.71
22:BA:2325:G:C6	22:BA:2326:C:N4	2.58	0.71
22:DA:2061:G:O6	56:DA:3001:VIF:H29	1.90	0.71
22:DA:2171:A:O2'	22:DA:2173:A:OP1	2.08	0.71
22:BA:2334:U:C4	36:BO:16:ARG:HD3	2.24	0.71
28:DG:11:VAL:O	28:DG:48:ASN:ND2	2.23	0.71
29:DH:31:VAL:HB	29:DH:32:PRO:CD	2.20	0.71
15:CO:56:LEU:O	15:CO:59:MET:N	2.24	0.71
22:DA:572:A:OP2	39:DR:80:ARG:NH2	2.24	0.71
22:DA:1376:C:O5'	58:DA:3398:HOH:O	2.06	0.71
1:CA:604:G:H2'	1:CA:605:U:O4'	1.91	0.71
2:CB:193:PRO:O	2:CB:195:GLY:N	2.23	0.71
22:DA:1613:G:O6	58:DA:3641:HOH:O	2.04	0.71
22:BA:627:A:OP1	33:BL:78:ARG:NH1	2.22	0.71
22:BA:653:U:OP2	22:BA:653:U:C6	2.43	0.71
22:BA:714:U:O2'	22:BA:716:A:N7	2.19	0.71
22:BA:2520:C:C6	22:BA:2567:G:H1'	2.26	0.71
26:BE:7:ASP:O	26:BE:9:GLN:N	2.23	0.71
22:DA:334:C:OP1	22:DA:335:C:N4	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:517:C:OP2	48:B0:10:ARG:NH2	2.24	0.71
22:BA:1779:U:H5	22:BA:1784:A:N7	1.89	0.71
22:BA:1869:G:H3'	22:BA:1870:C:H5'	1.72	0.71
22:BA:1918:A:O2'	22:BA:1920:C:N4	2.24	0.71
2:CB:54:LEU:HA	2:CB:57:LEU:HB3	1.73	0.71
22:DA:1380:G:OP2	58:DA:3752:HOH:O	2.08	0.71
22:BA:1731:G:C6	22:BA:1733:G:C5	2.79	0.71
1:CA:1266:G:N2	1:CA:1269:A:OP2	2.23	0.71
22:DA:2284:A:O2'	22:DA:2288:A:N1	2.21	0.71
30:BI:122:ILE:O	30:BI:126:THR:OG1	2.08	0.70
5:CE:101:GLU:O	5:CE:101:GLU:CD	2.29	0.70
3:AC:85:GLU:OE1	3:AC:88:ARG:NH1	2.24	0.70
17:AQ:16:LYS:N	17:AQ:17:MET:SD	2.64	0.70
1:CA:412:A:HO2'	1:CA:413:G:P	2.14	0.70
1:CA:485:U:O2'	1:CA:486:U:OP1	2.08	0.70
1:CA:645:G:N7	58:CA:1791:HOH:O	2.23	0.70
22:DA:2111:U:C5	22:DA:2145:C:H2'	2.27	0.70
22:DA:2857:G:N2	22:DA:2860:A:OP2	2.23	0.70
23:DB:48:U:H4'	36:DO:100:HIS:CD2	2.26	0.70
25:DD:140:HIS:NE2	58:DD:302:HOH:O	2.17	0.70
1:AA:983:A:N3	1:AA:983:A:H2'	2.07	0.70
1:AA:1397:C:O2'	1:AA:1398:A:OP1	2.09	0.70
1:CA:949:A:O2'	1:CA:971:G:O6	2.07	0.70
22:DA:2594:C:N4	22:DA:2595:G:O6	2.25	0.70
20:AT:29:ARG:O	20:AT:33:LYS:HG2	1.91	0.70
22:BA:636:G:C6	33:BL:111:ILE:HD11	2.26	0.70
22:DA:188:G:O2'	22:DA:1365:A:N6	2.25	0.70
20:AT:6:SER:OG	20:AT:7:ALA:N	2.21	0.70
22:BA:357:C:H2'	22:BA:358:U:C6	2.26	0.70
22:BA:1916:A:N3	22:BA:1917:U:H1'	2.05	0.70
1:CA:890:G:O2'	1:CA:891:U:OP2	2.09	0.70
13:AM:66:GLU:O	13:AM:69:LEU:N	2.24	0.70
22:BA:1385:A:H1'	22:BA:1386:C:C6	2.27	0.70
22:BA:1022:G:N2	22:BA:1142:A:C2	2.57	0.70
22:BA:1188:U:H2'	22:BA:1189:A:H5'	1.74	0.70
29:BH:94:ILE:HG22	29:BH:99:ILE:HG13	1.72	0.70
32:BK:105:ARG:NH2	32:BK:122:VAL:O	2.25	0.70
35:BN:2:ARG:HA	35:BN:5:LYS:HD2	1.74	0.70
9:CI:57:MET:SD	9:CI:58:VAL:N	2.64	0.70
20:CT:48:GLN:O	20:CT:52:ASN:ND2	2.25	0.70
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1406:U:C5	1:AA:1407:C:C5	2.80	0.70
8:AH:54:ASP:OD1	8:AH:55:THR:N	2.24	0.70
22:BA:621:A:OP2	58:BA:3294:HOH:O	2.10	0.70
22:BA:1509:A:O2'	22:BA:1510:G:P	2.49	0.70
1:CA:666:G:C6	1:CA:741:G:C6	2.80	0.70
6:CF:97:THR:O	6:CF:98:GLU:HB3	1.91	0.70
22:DA:188:G:HO2'	22:DA:1365:A:N6	1.89	0.70
1:AA:1299:A:H2'	1:AA:1299:A:N3	2.06	0.69
10:AJ:54:SER:O	14:AN:81:ARG:NH2	2.25	0.69
8:CH:59:LEU:HD12	8:CH:60:GLU:N	2.06	0.69
1:AA:781:A:OP2	58:AA:1813:HOH:O	2.09	0.69
22:BA:1079:C:C5	22:BA:1088:A:C2	2.79	0.69
22:DA:1607:C:N4	22:DA:1622:G:N7	2.39	0.69
45:DX:31:PRO:O	45:DX:33:LEU:N	2.25	0.69
22:BA:528:A:C8	22:BA:528:A:H3'	2.26	0.69
22:BA:1090:A:H2'	22:BA:1091:G:H5'	1.73	0.69
1:CA:4:U:H5"	1:CA:5:U:OP1	1.92	0.69
1:CA:718:A:C5	11:CK:118:HIS:CD2	2.80	0.69
12:CL:34:CYS:HA	12:CL:55:VAL:HA	1.73	0.69
22:DA:82:U:N3	22:DA:83:A:N7	2.40	0.69
38:BQ:24:TYR:O	38:BQ:25:TYR:CB	2.40	0.69
1:AA:979:C:OP1	58:AA:1836:HOH:O	2.09	0.69
22:BA:2286:G:H4'	22:BA:2287:A:O5'	1.92	0.69
12:CL:25:GLU:O	12:CL:26:ALA:C	2.30	0.69
22:DA:2592:G:N7	58:DA:3785:HOH:O	2.25	0.69
24:DC:2:ALA:N	24:DC:199:GLU:OE1	2.24	0.69
31:DJ:41:LYS:O	31:DJ:43:GLU:N	2.26	0.69
42:DU:96:PHE:CE1	42:DU:103:ILE:HG13	2.27	0.69
1:AA:652:U:O2'	1:AA:653:U:OP2	2.08	0.69
1:AA:1145:A:O2'	1:AA:1146:A:P	2.50	0.69
2:AB:63:ARG:O	2:AB:64:LYS:HB2	1.92	0.69
22:BA:1073:A:OP1	22:BA:1073:A:C8	2.46	0.69
41:BT:76:ARG:NH2	41:BT:79:ASP:OD1	2.26	0.69
22:DA:1476:U:H1'	22:DA:1732:C:C2	2.28	0.69
1:AA:38:G:C2	1:AA:397:A:C2	2.81	0.69
22:BA:250:G:OP1	58:BA:3821:HOH:O	2.10	0.69
22:BA:819:A:C4	22:BA:1189:A:C2	2.80	0.69
22:BA:2189:U:H2'	22:BA:2190:G:C1'	2.23	0.69
22:BA:2308:G:O6	22:BA:2311:A:N7	2.26	0.69
33:BL:87:GLY:O	33:BL:89:VAL:N	2.25	0.69
53:B5:50:ILE:HG22	53:B5:51:ASP:N	2.08	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1317:C:OP1	14:CN:56:SER:OG	2.08	0.69
9:CI:57:MET:O	9:CI:59:GLU:N	2.26	0.69
22:DA:2407:A:OP2	58:DA:3562:HOH:O	2.10	0.69
22:DA:2683:C:OP1	37:DP:51:ARG:NH2	2.25	0.69
1:AA:1014:A:N7	1:AA:1015:G:C5	2.60	0.69
1:AA:1277:C:HO2'	1:AA:1279:G:H8	1.41	0.69
4:AD:26:ARG:HD2	4:AD:31:LYS:HE3	1.74	0.69
17:AQ:16:LYS:C	17:AQ:17:MET:SD	2.71	0.69
1:CA:577:G:C8	1:CA:816:A:C6	2.81	0.69
22:DA:1786:A:H1'	22:DA:1938:A:N6	2.08	0.69
32:DK:76:VAL:HG12	37:DP:73:VAL:HG22	1.75	0.69
22:BA:954:G:OP2	34:BM:16:ARG:NH2	2.26	0.69
22:DA:1651:G:C2	22:DA:2007:U:O2	2.46	0.69
22:BA:1057:A:C2	22:BA:1086:A:C2	2.80	0.68
22:BA:2075:U:O2'	22:BA:2077:A:OP2	2.10	0.68
22:BA:2685:G:OP1	32:BK:78:ARG:NH2	2.26	0.68
1:CA:728:A:H2'	1:CA:729:A:C8	2.28	0.68
4:CD:4:TYR:O	4:CD:5:LEU:HB2	1.93	0.68
22:DA:1317:G:C2	22:DA:1336:A:C2	2.81	0.68
45:DX:33:LEU:O	45:DX:34:HIS:ND1	2.26	0.68
1:AA:64:G:C8	1:AA:99:C:N4	2.62	0.68
1:AA:104:G:C2	1:AA:105:G:C8	2.80	0.68
22:BA:2019:A:H4'	38:BQ:34:VAL:HG21	1.75	0.68
1:CA:646:G:O6	58:CA:1793:HOH:O	2.11	0.68
22:DA:945:A:OP2	58:DA:3345:HOH:O	2.11	0.68
22:DA:1936:A:OP1	58:DA:3458:HOH:O	2.11	0.68
22:DA:2343:U:O2'	22:DA:2373:G:O2'	2.08	0.68
22:BA:1073:A:H3'	22:BA:1074:G:H5"	1.72	0.68
29:BH:117:LEU:O	29:BH:121:VAL:HG22	1.93	0.68
5:CE:137:VAL:O	5:CE:138:ARG:HB2	1.93	0.68
22:DA:450:G:O6	58:DA:3241:HOH:O	2.11	0.68
22:DA:1855:U:C5	22:DA:1856:U:C5	2.81	0.68
1:AA:657:U:O2	15:AO:22:THR:CG2	2.41	0.68
9:AI:9:THR:HG22	9:AI:10:GLY:N	2.08	0.68
12:AL:76:GLU:O	12:AL:77:HIS:HB2	1.93	0.68
22:BA:381:G:OP1	45:BX:18:ARG:NH2	2.27	0.68
22:DA:2291:U:H2'	22:DA:2292:U:C6	2.29	0.68
28:DG:166:ASP:N	28:DG:166:ASP:OD1	2.26	0.68
54:D6:4:PRO:HB2	54:D6:5:MHU:HM1	0.84	0.68
2:CB:16:PHE:CE2	2:CB:18:HIS:CE1	2.82	0.68
9:CI:41:ARG:O	9:CI:45:ARG:NH1	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:54:ASP:OD1	14:CN:59:ARG:NH1	2.26	0.68
4:AD:11:LEU:HD22	4:AD:63:ARG:HD3	1.75	0.68
6:AF:7:VAL:O	6:AF:7:VAL:HG22	1.94	0.68
22:BA:792:A:N3	22:BA:2072:C:O2'	2.24	0.68
31:BJ:64:VAL:CG1	31:BJ:68:LYS:HB2	2.24	0.68
1:CA:152:A:N6	1:CA:170:U:C2	2.62	0.68
1:CA:1133:G:C2	1:CA:1142:G:C2	2.81	0.68
22:DA:1289:C:O2'	22:DA:1330:C:H4'	1.91	0.68
22:DA:1515:A:O2'	22:DA:1556:C:O2'	2.12	0.68
22:DA:2079:U:H2'	22:DA:2080:A:O4'	1.92	0.68
22:DA:2843:G:N2	22:DA:2875:C:C2	2.62	0.68
30:DI:69:PHE:N	30:DI:69:PHE:CD1	2.62	0.68
41:DT:37:ASP:OD1	41:DT:38:ALA:N	2.27	0.68
4:AD:163:GLU:OE2	4:AD:164:GLN:N	2.27	0.68
22:BA:1141:U:H4'	22:BA:1142:A:O4'	1.93	0.68
53:B5:48:LEU:HA	53:B5:208:THR:CB	2.24	0.68
1:CA:71:A:C2	1:CA:72:A:C8	2.82	0.68
22:BA:977:G:N7	58:BA:3596:HOH:O	2.26	0.68
22:BA:1824:G:N3	24:BC:252:THR:HG21	2.09	0.68
5:CE:82:GLN:OE1	5:CE:150:PRO:HD3	1.94	0.68
6:CF:45:ARG:O	6:CF:56:LYS:HA	1.93	0.68
22:DA:27:G:O2'	22:DA:28:A:OP2	2.12	0.68
22:DA:104:A:H2'	22:DA:105:C:O4'	1.94	0.68
22:DA:1181:U:H2'	22:DA:1182:G:C8	2.28	0.68
22:DA:2164:C:H2'	22:DA:2165:C:C6	2.28	0.68
1:AA:269:C:H2'	1:AA:270:A:C8	2.29	0.68
9:CI:102:GLY:O	9:CI:104:VAL:N	2.27	0.68
22:DA:2143:C:H2'	22:DA:2144:G:O4'	1.93	0.68
16:AP:42:ILE:O	16:AP:44:SER:N	2.27	0.67
22:BA:198:C:OP1	58:BA:3768:HOH:O	2.11	0.67
22:BA:2327:A:H2'	22:BA:2328:A:C8	2.29	0.67
1:CA:1297:G:O2'	7:CG:114:LYS:NZ	2.26	0.67
22:DA:185:G:C6	22:DA:212:G:C2	2.82	0.67
22:DA:1094:U:H2'	22:DA:1096:A:OP2	1.94	0.67
22:DA:1604:C:OP1	58:DA:3406:HOH:O	2.12	0.67
1:AA:1014:A:N3	19:AS:34:TRP:CH2	2.62	0.67
12:AL:24:LEU:O	12:AL:25:GLU:C	2.32	0.67
22:DA:89:A:C2	22:DA:90:U:C2	2.83	0.67
22:DA:1509:A:C4	22:DA:1510:G:C8	2.82	0.67
22:DA:2811:G:H2'	22:DA:2812:G:O4'	1.94	0.67
35:DN:8:ARG:N	35:DN:43:GLU:OE2	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2377:A:C2'	22:BA:2378:A:H5'	2.25	0.67
1:CA:568:G:N2	1:CA:883:C:C2	2.63	0.67
1:CA:1000:A:H2'	1:CA:1001:C:O4'	1.93	0.67
1:CA:1298:U:O2	1:CA:1298:U:H2'	1.93	0.67
4:AD:160:GLU:O	4:AD:162:ALA:N	2.27	0.67
29:BH:122:LEU:HD23	29:BH:123:ARG:N	2.10	0.67
14:CN:61:ARG:O	14:CN:62:ASN:HB2	1.93	0.67
39:DR:39:LEU:HA	39:DR:49:ILE:HG21	1.75	0.67
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.30	0.67
1:AA:1504:G:O3'	58:AA:1869:HOH:O	2.12	0.67
22:BA:2032:G:C8	58:BA:3536:HOH:O	2.47	0.67
22:BA:2321:U:H5'	22:BA:2322:A:OP2	1.94	0.67
41:BT:54:GLU:HB3	41:BT:88:LYS:HG3	1.77	0.67
1:CA:632:U:O2	1:CA:632:U:H2'	1.92	0.67
1:CA:920:U:H2'	1:CA:921:U:C6	2.29	0.67
22:DA:1427:A:N6	22:DA:1571:A:OP2	2.28	0.67
22:DA:2505:G:N2	54:D6:4:PRO:HB3	2.09	0.67
1:AA:319:G:N7	58:AA:1708:HOH:O	2.27	0.67
17:AQ:4:LYS:HD2	17:AQ:4:LYS:O	1.95	0.67
22:BA:265:A:H4'	22:BA:266:G:OP1	1.94	0.67
1:CA:1321:U:O3'	19:CS:78:ARG:NH2	2.27	0.67
22:DA:1006:C:OP2	58:DA:3780:HOH:O	2.11	0.67
22:DA:1209:U:O2	22:DA:1210:G:N2	2.27	0.67
22:DA:1530:G:N2	22:DA:1542:U:O2	2.26	0.67
2:AB:160:ALA:O	2:AB:161:LEU:HB2	1.95	0.67
18:AR:25:ASP:O	18:AR:27:ALA:N	2.28	0.67
22:BA:585:G:N7	38:BQ:6:ARG:NH1	2.42	0.67
22:BA:1924:C:H2'	22:BA:1925:C:H5"	1.76	0.67
1:CA:939:G:OP1	7:CG:95:ARG:NH2	2.27	0.67
1:CA:1361:G:C3'	1:CA:1362:A:H5"	2.24	0.67
9:CI:22:LYS:O	9:CI:24:GLY:N	2.28	0.67
22:DA:2325:G:C6	22:DA:2326:C:N4	2.63	0.67
31:DJ:99:ARG:NH1	31:DJ:102:GLU:OE1	2.28	0.67
1:AA:109:A:H2'	1:AA:326:G:N2	2.10	0.67
1:AA:1047:G:HO2'	1:AA:1215:G:HO2'	1.42	0.67
1:AA:1152:A:OP1	10:AJ:70:HIS:ND1	2.27	0.67
22:BA:636:G:N7	33:BL:109:LYS:HE2	2.10	0.67
22:DA:912:C:N4	22:DA:913:U:O4	2.27	0.67
22:DA:1009:A:N3	22:DA:1153:C:O2'	2.22	0.67
4:AD:11:LEU:CD2	4:AD:63:ARG:HD3	2.25	0.67
12:AL:44:LYS:CB	12:AL:45:PRO:CD	2.72	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:973:A:O4'	22:BA:1188:U:C6	2.47	0.67
22:BA:1083:U:O2	22:BA:1086:A:N1	2.28	0.67
1:CA:1431:A:C6	1:CA:1432:G:C6	2.82	0.67
22:DA:1141:U:H4'	22:DA:1142:A:O4'	1.94	0.67
1:AA:1023:U:H2'	1:AA:1024:G:C8	2.30	0.67
29:BH:27:ARG:O	29:BH:28:ASN:HB2	1.95	0.67
4:CD:148:LYS:O	4:CD:149:ALA:HB3	1.95	0.67
9:CI:84:THR:HG21	9:CI:103:PHE:HB3	1.75	0.67
22:DA:1225:G:C6	22:DA:1226:A:N6	2.63	0.67
22:BA:1061:U:O2'	22:BA:1062:G:O5'	2.11	0.66
1:CA:791:G:C6	1:CA:792:A:N7	2.63	0.66
23:DB:14:U:H2'	23:DB:14:U:O2	1.96	0.66
1:AA:257:G:N7	58:AA:1805:HOH:O	2.28	0.66
13:AM:46:SER:O	13:AM:47:GLU:HB3	1.95	0.66
14:AN:51:LEU:O	14:AN:53:ARG:N	2.28	0.66
22:BA:1508:A:O2'	22:BA:1509:A:O4'	2.12	0.66
31:BJ:17:VAL:HG23	31:BJ:137:PRO:HB2	1.76	0.66
1:CA:373:A:C2	1:CA:374:A:C8	2.84	0.66
1:CA:980:C:N3	58:CA:1845:HOH:O	2.28	0.66
22:DA:47:C:HO2'	22:DA:52:A:HO2'	1.38	0.66
22:DA:1097:U:C5	22:DA:1098:A:H1'	2.29	0.66
22:DA:2128:G:N3	22:DA:2173:A:O2'	2.29	0.66
33:DL:93:ASN:OD1	33:DL:94:THR:N	2.28	0.66
42:DU:11:VAL:HG12	42:DU:72:ILE:HA	1.77	0.66
1:AA:1493:A:O2'	1:AA:1494:G:OP2	2.12	0.66
4:AD:191:LEU:O	4:AD:192:SER:HB2	1.94	0.66
12:AL:21:VAL:HG23	12:AL:95:TYR:CE2	2.30	0.66
29:BH:94:ILE:CG2	29:BH:99:ILE:HG13	2.26	0.66
5:CE:99:ALA:O	5:CE:101:GLU:N	2.28	0.66
22:DA:188:G:C2	22:DA:209:C:N3	2.64	0.66
22:DA:995:C:O2	31:DJ:3:THR:OG1	2.14	0.66
22:DA:1251:C:OP2	38:DQ:6:ARG:NH2	2.28	0.66
30:DI:58:VAL:HG12	30:DI:59:ILE:N	2.10	0.66
1:AA:144:G:C4	1:AA:179:A:C2	2.84	0.66
1:AA:1109:C:OP2	3:AC:176:HIS:ND1	2.27	0.66
3:AC:155:GLY:HA2	3:AC:163:ALA:HB1	1.78	0.66
33:BL:91:ASP:HB3	33:BL:94:THR:HB	1.77	0.66
22:DA:2345:G:C4	22:DA:2381:A:C2	2.84	0.66
33:DL:93:ASN:O	33:DL:95:LEU:N	2.28	0.66
1:CA:405:U:OP1	1:CA:406:G:O2'	2.06	0.66
22:DA:2484:G:OP1	34:DM:44:ARG:NH2	2.27	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:935:A:C2	1:AA:936:C:C2	2.82	0.66
1:AA:983:A:N3	1:AA:983:A:C2'	2.58	0.66
22:BA:747:U:C4	22:BA:2613:U:C5	2.83	0.66
25:BD:12:THR:HG23	37:BP:9:GLU:OE2	1.96	0.66
1:CA:568:G:O6	12:CL:2:ALA:HB2	1.95	0.66
22:DA:526:A:N6	22:DA:2626:C:H4'	2.11	0.66
1:AA:1014:A:H2'	1:AA:1015:G:O4'	1.95	0.66
6:AF:84:VAL:CG2	6:AF:84:VAL:O	2.43	0.66
7:AG:4:ARG:O	7:AG:6:VAL:N	2.29	0.66
22:BA:861:A:C2	22:BA:917:A:C4	2.83	0.66
22:BA:1606:C:HO2'	22:BA:1607:C:P	2.18	0.66
1:CA:686:U:O2'	1:CA:687:A:OP2	2.12	0.66
40:DS:80:PRO:HD2	40:DS:100:THR:OG1	1.96	0.66
47:DZ:14:ILE:HG22	47:DZ:15:GLY:N	2.11	0.66
22:BA:276:U:H2'	22:BA:276:U:O2	1.96	0.66
22:BA:747:U:C5	22:BA:2613:U:C5	2.83	0.66
22:BA:1324:G:N7	58:BA:3619:HOH:O	2.28	0.66
24:BC:141:VAL:HG11	24:BC:190:ALA:HB1	1.77	0.66
1:CA:1077:G:N2	1:CA:1080:A:OP2	2.29	0.66
22:DA:301:G:C2	22:DA:302:C:C2	2.84	0.66
32:DK:30:ARG:NH2	32:DK:37:ASP:OD1	2.28	0.66
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.10	0.66
1:AA:976:G:OP2	1:AA:1358:U:O2'	2.13	0.66
10:AJ:44:THR:HG22	10:AJ:70:HIS:HA	1.78	0.66
38:BQ:87:SER:HB2	39:BR:51:VAL:HA	1.77	0.66
7:CG:88:PRO:HD2	7:CG:151:PHE:O	1.96	0.66
22:DA:352:A:H2'	22:DA:353:C:O4'	1.95	0.66
22:DA:2028:U:O4	58:DA:3478:HOH:O	2.12	0.66
23:DB:23:G:O6	58:DB:304:HOH:O	2.12	0.66
41:DT:21:SER:O	41:DT:23:ALA:N	2.29	0.66
22:BA:981:A:OP1	58:BA:3598:HOH:O	2.14	0.66
51:B3:27:ALA:O	51:B3:28:ASN:HB2	1.96	0.66
1:CA:378:G:C2	1:CA:386:C:O2	2.49	0.66
22:DA:53:A:C8	22:DA:54:G:C8	2.84	0.66
22:DA:1060:U:O4'	22:DA:1062:G:H5'	1.96	0.66
4:AD:123:ILE:HD13	4:AD:123:ILE:N	2.11	0.65
11:AK:38:GLN:O	11:AK:40:ASN:N	2.29	0.65
22:BA:2191:A:C6	22:BA:2192:U:O4	2.49	0.65
2:CB:73:LYS:NZ	2:CB:204:ASP:O	2.24	0.65
9:CI:120:LYS:HG3	9:CI:123:ARG:HB3	1.78	0.65
22:DA:1359:A:C2	22:DA:1360:G:H1'	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:70:ASN:O	24:DC:72:ASP:N	2.28	0.65
40:DS:66:ILE:O	40:DS:68:ASP:N	2.29	0.65
1:AA:437:U:HO2'	4:AD:120:HIS:HD1	1.41	0.65
2:AB:33:GLY:O	2:AB:34:ALA:CB	2.44	0.65
22:BA:619:G:O6	58:BA:3291:HOH:O	2.13	0.65
1:CA:1203:C:H4'	14:CN:67:THR:HB	1.77	0.65
3:CC:150:LYS:HG2	3:CC:201:TRP:CE3	2.31	0.65
17:CQ:48:ASP:N	17:CQ:48:ASP:OD1	2.29	0.65
22:DA:160:A:N3	22:DA:2208:C:O2'	2.28	0.65
22:DA:844:A:C2	22:DA:845:A:N7	2.64	0.65
1:AA:572:A:H5'	1:AA:573:A:OP2	1.96	0.65
22:BA:1187:G:H5'	39:BR:83:TYR:CE2	2.30	0.65
37:BP:106:LYS:O	37:BP:109:ARG:HD3	1.97	0.65
2:CB:82:ASP:OD1	2:CB:82:ASP:N	2.28	0.65
22:DA:616:A:H4'	26:DE:101:TYR:CZ	2.32	0.65
22:DA:1676:A:N7	58:DA:3766:HOH:O	2.29	0.65
22:DA:1935:G:H1'	22:DA:1964:G:N2	2.11	0.65
22:DA:2199:A:C6	22:DA:2200:C:C2	2.84	0.65
22:DA:2268:A:OP1	58:DA:3508:HOH:O	2.12	0.65
22:DA:2692:G:O4'	22:DA:2846:G:N2	2.29	0.65
37:DP:53:ARG:N	37:DP:57:SER:OG	2.29	0.65
17:AQ:14:SER:HB3	17:AQ:22:VAL:CG1	2.26	0.65
22:BA:118:A:C8	22:BA:119:A:C8	2.83	0.65
29:BH:14:SER:O	29:BH:15:LEU:HB2	1.95	0.65
29:BH:139:PHE:O	29:BH:140:ALA:CB	2.44	0.65
50:B2:43:THR:O	50:B2:44:VAL:HG12	1.97	0.65
1:CA:207:C:O2	1:CA:207:C:H2'	1.97	0.65
22:DA:46:G:C2	22:DA:47:C:C6	2.84	0.65
20:AT:69:LYS:NZ	20:AT:70:ASN:OD1	2.29	0.65
43:BV:6:ALA:HB1	43:BV:40:ILE:HG23	1.78	0.65
1:CA:846:G:C2	1:CA:847:G:C8	2.85	0.65
22:DA:1782:U:O2	22:DA:2608:G:O2'	2.09	0.65
4:AD:168:PRO:O	4:AD:169:THR:OG1	2.15	0.65
22:BA:1178:C:H2'	22:BA:1179:G:N7	2.12	0.65
26:BE:119:ILE:HB	26:BE:187:VAL:HG23	1.78	0.65
7:CG:92:ARG:NE	7:CG:93:PRO:HD2	2.11	0.65
22:DA:756:A:N7	58:DA:3299:HOH:O	2.28	0.65
22:DA:990:A:N1	39:DR:78:ARG:NH1	2.44	0.65
22:DA:1120:G:C6	22:DA:1121:C:C4	2.84	0.65
22:DA:1809:A:C5	22:DA:1810:A:N7	2.64	0.65
22:DA:1826:G:O2'	22:DA:1971:U:OP2	2.14	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1998:A:OP2	25:DD:141:ARG:NH2	2.30	0.65
22:DA:2058:A:N6	22:DA:2059:A:N6	2.44	0.65
4:AD:153:SER:OG	4:AD:154:ARG:N	2.28	0.65
22:BA:1064:C:O2	22:BA:1074:G:N2	2.30	0.65
22:BA:1582:C:O2'	22:BA:1585:C:N3	2.30	0.65
22:BA:2140:G:N3	22:BA:2140:G:H2'	2.10	0.65
29:BH:114:GLU:HB3	29:BH:133:GLN:O	1.97	0.65
53:B5:213:VAL:O	53:B5:214:TYR:CB	2.45	0.65
1:CA:72:A:N6	1:CA:73:C:N4	2.45	0.65
1:CA:73:C:O2'	1:CA:74:A:O5'	2.14	0.65
1:CA:1048:G:OP2	58:CA:1849:HOH:O	2.14	0.65
2:CB:141:LEU:O	2:CB:144:LEU:N	2.30	0.65
22:DA:16:C:O3'	48:D0:11:SER:OG	2.09	0.65
22:DA:2498:C:OP2	58:DA:3682:HOH:O	2.15	0.65
1:AA:212:G:N2	1:AA:213:G:C4	2.65	0.65
6:AF:47:LEU:HD13	6:AF:51:ILE:HG23	1.79	0.65
22:BA:2188:U:H2'	22:BA:2189:U:C6	2.32	0.65
5:CE:56:VAL:N	5:CE:57:PRO:HD2	2.11	0.65
42:DU:18:ASP:OD1	42:DU:18:ASP:N	2.28	0.65
22:BA:137:U:H2'	22:BA:140:C:C2	2.32	0.65
22:BA:797:G:N7	58:BA:3321:HOH:O	2.30	0.65
22:BA:2469:A:O2'	34:BM:55:ARG:NH1	2.29	0.65
30:BI:39:CYS:HA	30:BI:42:PHE:HB3	1.79	0.65
38:BQ:49:ASP:HA	38:BQ:52:GLN:HB2	1.79	0.65
10:CJ:35:GLN:HG2	10:CJ:77:VAL:HB	1.77	0.65
22:DA:1028:A:N6	22:DA:1125:G:H2'	2.12	0.65
2:AB:167:ASP:OD1	2:AB:168:HIS:N	2.30	0.65
22:BA:770:G:N7	58:BA:3725:HOH:O	2.29	0.65
22:BA:1754:A:C6	22:BA:1755:A:C6	2.84	0.65
29:BH:122:LEU:C	29:BH:123:ARG:HG2	2.17	0.65
39:BR:49:ILE:CG2	39:BR:53:PHE:N	2.60	0.65
1:CA:309:A:O2'	1:CA:607:A:N1	2.24	0.65
1:CA:992:U:C5	1:CA:1043:G:C8	2.85	0.65
1:CA:1361:G:H3'	1:CA:1362:A:H5"	1.78	0.65
22:DA:1096:A:H2'	22:DA:1097:U:O4'	1.97	0.65
22:DA:1179:G:C5	22:DA:1180:U:H1'	2.32	0.65
22:DA:1668:A:O4'	22:DA:1669:A:C2	2.50	0.65
37:DP:91:ALA:HB2	37:DP:113:ARG:HA	1.79	0.65
22:BA:783:A:H2'	22:BA:785:G:OP1	1.97	0.64
1:CA:536:C:OP1	58:CA:1770:HOH:O	2.15	0.64
5:CE:155:ALA:HB1	8:CH:66:PHE:CD2	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:297:G:H5"	42:DU:85:PHE:HB2	1.77	0.64
1:AA:154:U:C2	1:AA:168:G:N2	2.65	0.64
22:BA:197:A:N6	22:BA:2430:A:H2'	2.11	0.64
22:BA:528:A:H3'	22:BA:528:A:H8	1.61	0.64
22:BA:1936:A:H2	22:BA:1943:U:H3	1.44	0.64
43:BV:14:LYS:HD2	43:BV:18:ARG:NH1	2.11	0.64
53:B5:40:GLU:HA	53:B5:181:PHE:HA	1.78	0.64
22:DA:13:A:N1	22:DA:525:U:H2'	2.12	0.64
22:DA:152:A:C2	22:DA:175:G:C2	2.85	0.64
1:AA:328:C:O2	1:AA:328:C:H2'	1.96	0.64
1:AA:1053:G:N7	1:AA:1199:U:H3'	2.12	0.64
9:AI:43:THR:O	9:AI:44:ALA:CB	2.45	0.64
24:BC:182:ARG:HH21	24:BC:182:ARG:CG	2.09	0.64
12:CL:38:TYR:HB2	12:CL:52:VAL:HG13	1.80	0.64
19:CS:55:ARG:CZ	19:CS:79:THR:HG22	2.27	0.64
1:AA:524:G:C6	1:AA:525:C:N4	2.65	0.64
1:AA:1410:A:C4	1:AA:1491:G:N2	2.66	0.64
22:BA:198:C:OP2	58:BA:3768:HOH:O	2.15	0.64
22:BA:1179:G:C6	22:BA:1180:U:H1'	2.32	0.64
22:BA:1921:G:C2	22:BA:1922:G:C8	2.85	0.64
37:BP:90:GLY:O	37:BP:113:ARG:NH1	2.29	0.64
1:CA:32:A:OP1	1:CA:398:U:H1'	1.97	0.64
8:CH:125:ILE:HD11	8:CH:128:TYR:CE1	2.31	0.64
22:DA:1754:A:N6	22:DA:1755:A:C6	2.65	0.64
1:AA:702:A:N6	22:BA:1846:G:O2'	2.30	0.64
1:AA:1145:A:O2'	1:AA:1146:A:C5'	2.45	0.64
10:AJ:74:VAL:HG12	10:AJ:75:ASP:N	2.12	0.64
22:BA:142:A:C5	22:BA:143:C:C4	2.85	0.64
22:BA:1263:U:OP1	48:B0:13:ARG:NH1	2.30	0.64
22:BA:1949:G:N2	22:BA:1958:C:C2	2.66	0.64
40:BS:84:ARG:HB2	40:BS:96:ILE:HG13	1.77	0.64
1:CA:1124:G:N2	1:CA:1127:G:C2	2.65	0.64
1:CA:1431:A:N6	1:CA:1432:G:O6	2.30	0.64
9:CI:95:ARG:O	9:CI:99:ARG:N	2.30	0.64
1:AA:1129:C:O2	1:AA:1130:A:N6	2.31	0.64
2:AB:85:LEU:HG	2:AB:86:SER:N	2.10	0.64
3:AC:130:PHE:CZ	3:AC:131:ARG:HD2	2.32	0.64
4:AD:3:ARG:CZ	4:AD:115:ARG:HD3	2.28	0.64
5:AE:137:VAL:O	5:AE:138:ARG:CB	2.44	0.64
22:BA:580:U:H2'	22:BA:581:C:C6	2.33	0.64
22:BA:2287:A:OP1	49:B1:30:LYS:NZ	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:88:ARG:O	8:CH:122:GLY:HA3	1.98	0.64
22:DA:826:U:O2'	33:DL:53:GLY:HA3	1.97	0.64
22:DA:1091:G:O2'	22:DA:1092:C:OP2	2.11	0.64
22:DA:2136:G:N1	22:DA:2156:G:H1'	2.11	0.64
22:BA:1124:G:N7	58:BA:3610:HOH:O	2.30	0.64
35:BN:66:ALA:O	35:BN:69:ARG:O	2.15	0.64
22:DA:2094:A:OP1	29:DH:22:LYS:HG3	1.97	0.64
22:DA:2261:C:C2	22:DA:2280:G:N2	2.66	0.64
54:D6:6:04X:H4	54:D6:6:04X:H41	1.79	0.64
16:AP:38:PHE:CZ	16:AP:51:ARG:HB2	2.33	0.64
22:BA:783:A:C2'	22:BA:785:G:OP1	2.45	0.64
22:BA:2190:G:C2	22:BA:2191:A:C4	2.85	0.64
31:BJ:125:TYR:OH	31:BJ:132:HIS:NE2	2.31	0.64
4:CD:174:ASP:O	4:CD:175:ALA:CB	2.46	0.64
13:CM:114:LYS:HB2	13:CM:115:PRO:HD3	1.78	0.64
22:DA:2061:G:C6	56:DA:3001:VIF:H29	2.33	0.64
22:DA:2062:A:N7	54:D6:1:MHW:CG2	2.61	0.64
49:D1:51:GLU:HG3	49:D1:52:ALA:N	2.13	0.64
1:AA:928:G:O2'	1:AA:1533:C:OP1	2.15	0.64
3:AC:205:GLY:O	3:AC:206:GLU:HG3	1.98	0.64
6:AF:93:LYS:HG2	6:AF:93:LYS:O	1.98	0.64
14:AN:52:PRO:O	14:AN:53:ARG:CB	2.46	0.64
17:CQ:12:VAL:HG23	17:CQ:57:ASP:O	1.97	0.64
17:CQ:19:LYS:O	17:CQ:71:LYS:NZ	2.26	0.64
1:AA:1014:A:C2	19:AS:34:TRP:CH2	2.85	0.64
29:BH:83:LYS:HG3	1:CA:55:A:N3	2.13	0.64
40:BS:37:THR:OG1	40:BS:48:LYS:NZ	2.31	0.64
42:BU:39:ILE:HG22	42:BU:40:ASN:H	1.63	0.64
22:DA:508:A:N6	40:DS:9:HIS:CE1	2.66	0.64
22:DA:537:G:N1	22:DA:555:G:C2	2.66	0.64
22:DA:2111:U:C4	22:DA:2145:C:H2'	2.32	0.64
29:DH:117:LEU:CD1	29:DH:130:VAL:HG22	2.28	0.64
1:AA:108:G:N3	1:AA:108:G:C5'	2.60	0.63
22:BA:1131:G:OP1	31:BJ:82:GLY:HA2	1.97	0.63
1:CA:463:U:H5'	1:CA:464:U:OP2	1.98	0.63
39:DR:49:ILE:HG22	39:DR:54:VAL:N	2.13	0.63
1:AA:1100:C:O2'	1:AA:1102:A:OP1	2.16	0.63
22:BA:1071:G:C8	22:BA:1089:A:N6	2.66	0.63
29:BH:97:ARG:NH1	1:CA:370:C:O4'	2.31	0.63
53:B5:180:SER:CB	53:B5:188:ASP:CB	2.76	0.63
6:CF:86:ARG:CG	6:CF:86:ARG:HH11	2.11	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:53:VAL:HG13	21:CU:54:LYS:N	2.14	0.63
22:DA:38:A:C2	22:DA:442:G:C6	2.86	0.63
32:DK:2:ILE:N	32:DK:33:ALA:O	2.31	0.63
1:AA:923:A:O4'	1:AA:1398:A:C2	2.51	0.63
6:AF:92:THR:HG22	6:AF:93:LYS:N	2.12	0.63
13:AM:3:ARG:HA	13:AM:9:ILE:HA	1.80	0.63
13:AM:29:ARG:CZ	13:AM:63:PHE:HB2	2.27	0.63
22:BA:475:C:C4	22:BA:481:G:O6	2.52	0.63
22:BA:830:G:H4'	22:BA:831:G:OP2	1.98	0.63
22:BA:1917:U:O2	22:BA:1917:U:H2'	1.98	0.63
22:DA:300:A:O2'	22:DA:318:C:O2'	2.09	0.63
22:DA:1805:A:C2	22:DA:1813:G:C2	2.86	0.63
22:DA:2610:C:O4'	54:D6:7:004:HD2	1.99	0.63
24:DC:17:VAL:HB	24:DC:204:VAL:HG22	1.80	0.63
22:BA:1417:C:H2'	22:BA:1418:G:O4'	1.98	0.63
22:DA:563:A:C4	22:DA:2018:G:C2	2.86	0.63
22:DA:613:A:OP2	22:DA:614:A:N7	2.31	0.63
22:DA:1075:C:H2'	22:DA:1076:C:C6	2.33	0.63
22:DA:1088:A:N6	30:DI:135:SER:OG	2.30	0.63
22:DA:1826:G:C5	22:DA:1827:U:C5	2.87	0.63
22:DA:2125:G:H5'	22:DA:2126:A:OP2	1.98	0.63
25:DD:133:THR:HG23	25:DD:134:HIS:N	2.13	0.63
1:AA:579:A:O2'	15:AO:54:ARG:NH1	2.31	0.63
17:AQ:60:GLU:OE2	17:AQ:77:ARG:NH1	2.32	0.63
22:BA:1266:G:OP1	48:B0:16:ARG:NE	2.31	0.63
46:BY:56:LEU:O	46:BY:57:LEU:HB2	1.98	0.63
1:CA:1040:U:H2'	1:CA:1041:G:C8	2.34	0.63
1:CA:1225:A:H2'	1:CA:1226:C:C5	2.34	0.63
2:CB:53:ALA:O	2:CB:57:LEU:HB2	1.99	0.63
4:CD:62:ARG:NH1	4:CD:69:GLU:OE1	2.31	0.63
22:DA:1046:A:O2'	22:DA:1047:G:OP1	2.16	0.63
50:D2:35:ARG:O	50:D2:38:GLY:N	2.30	0.63
22:BA:587:C:OP2	33:BL:21:ARG:NH1	2.32	0.63
1:CA:16:A:H2'	1:CA:17:U:H5'	1.80	0.63
2:CB:119:THR:O	2:CB:120:GLN:CB	2.46	0.63
22:DA:1715:G:O2'	22:DA:1743:G:O6	2.12	0.63
22:DA:2579:C:OP1	58:DA:3539:HOH:O	2.14	0.63
29:DH:117:LEU:HG	29:DH:120:GLY:O	1.98	0.63
1:AA:205:A:OP1	1:AA:205:A:H4'	1.97	0.63
2:AB:67:ILE:O	2:AB:68:LEU:HB2	1.96	0.63
2:AB:80:VAL:N	2:AB:82:ASP:OD2	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:149:A:C2	1:CA:150:U:C2	2.87	0.63
22:DA:466:A:N1	22:DA:795:C:O2'	2.28	0.63
22:DA:749:A:C5	22:DA:750:A:N7	2.67	0.63
22:BA:1180:U:O2'	22:BA:1181:U:P	2.56	0.63
23:BB:28:C:OP1	36:BO:31:THR:HG21	1.98	0.63
1:CA:55:A:C6	1:CA:56:U:C2	2.87	0.63
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.63	0.63
1:CA:1377:A:C5	7:CG:7:ILE:HD12	2.33	0.63
22:DA:749:A:C6	22:DA:750:A:N7	2.66	0.63
22:DA:1469:A:H2'	22:DA:1470:A:C8	2.34	0.63
22:DA:1810:A:H2'	22:DA:1811:G:O4'	1.98	0.63
25:DD:48:ILE:HG23	25:DD:84:LEU:CD2	2.28	0.63
11:AK:76:GLU:O	11:AK:77:TYR:CD1	2.52	0.63
22:BA:1439:A:OP2	58:BA:3639:HOH:O	2.15	0.63
24:BC:37:ASN:O	24:BC:38:SER:HB3	1.99	0.63
22:DA:1843:C:H4'	24:DC:251:GLN:CD	2.19	0.63
1:AA:338:A:N1	1:AA:351:G:O6	2.32	0.62
22:BA:1907:G:C6	22:BA:1908:C:C4	2.88	0.62
22:BA:1917:U:O4	22:BA:1918:A:C2	2.52	0.62
1:CA:572:A:H5'	1:CA:573:A:OP2	1.99	0.62
4:AD:101:VAL:O	4:AD:101:VAL:HG12	1.98	0.62
11:AK:102:ALA:O	11:AK:104:GLY:N	2.32	0.62
22:BA:18:U:OP1	38:BQ:30:ARG:NH2	2.32	0.62
22:BA:2063:C:O2	22:BA:2450:A:N1	2.32	0.62
22:BA:2309:A:N6	22:BA:2310:C:N4	2.48	0.62
33:BL:68:SER:O	33:BL:69:ARG:HB2	1.99	0.62
1:CA:32:A:C2	1:CA:33:A:C5	2.87	0.62
2:CB:141:LEU:O	2:CB:145:GLU:N	2.32	0.62
22:DA:287:G:C2	22:DA:354:A:C2	2.87	0.62
22:DA:724:U:H2'	22:DA:725:G:O4'	1.98	0.62
22:DA:2505:G:OP2	56:DA:3001:VIF:H6	1.99	0.62
30:DI:21:SER:HB3	30:DI:22:PRO:HD3	1.81	0.62
15:AO:63:ARG:HG2	15:AO:67:LEU:HD12	1.80	0.62
30:BI:127:ARG:HA	30:BI:130:GLU:HG3	1.81	0.62
5:CE:99:ALA:O	5:CE:122:ASN:ND2	2.31	0.62
22:DA:1323:C:C5	22:DA:1324:G:N7	2.67	0.62
22:DA:1351:C:H2'	22:DA:1352:U:O4'	1.99	0.62
22:DA:1649:G:C6	22:DA:2009:A:C6	2.87	0.62
22:DA:2127:G:H4'	22:DA:2128:G:OP1	1.98	0.62
12:AL:44:LYS:HB2	12:AL:45:PRO:CD	2.29	0.62
17:AQ:52:GLU:CD	17:AQ:52:GLU:N	2.52	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2467:C:OP1	52:B4:8:LYS:NZ	2.25	0.62
22:BA:2683:C:OP1	37:BP:51:ARG:NH2	2.32	0.62
25:BD:13:ARG:HD3	25:BD:21:SER:OG	2.00	0.62
22:DA:1779:U:H5	22:DA:1784:A:N7	1.97	0.62
22:DA:2144:G:C2	22:DA:2146:C:O2	2.52	0.62
1:AA:145:G:N2	1:AA:178:C:N3	2.48	0.62
1:AA:1054:C:C5	1:AA:1196:A:H2'	2.34	0.62
13:AM:64:VAL:O	13:AM:64:VAL:HG12	1.99	0.62
22:BA:1734:G:C4	22:BA:1735:A:C8	2.88	0.62
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.35	0.62
5:CE:141:ILE:O	5:CE:143:GLY:N	2.31	0.62
9:CI:54:LEU:O	9:CI:55:VAL:HG22	1.99	0.62
11:CK:101:ASN:C	11:CK:101:ASN:OD1	2.38	0.62
21:CU:36:GLU:OE1	21:CU:36:GLU:HA	1.99	0.62
22:DA:813:U:H2'	22:DA:814:C:C6	2.35	0.62
22:DA:1313:U:O2	22:DA:1313:U:H2'	1.98	0.62
22:DA:2379:G:H4'	36:DO:21:LEU:HD11	1.81	0.62
2:AB:75:ALA:O	2:AB:76:ALA:HB2	1.99	0.62
4:AD:123:ILE:N	4:AD:123:ILE:CD1	2.62	0.62
21:AU:36:GLU:O	21:AU:37:PHE:HB2	1.98	0.62
22:BA:1061:U:HO2'	22:BA:1062:G:P	2.22	0.62
34:BM:62:LYS:HD3	34:BM:64:TRP:CZ2	2.34	0.62
39:BR:49:ILE:HB	39:BR:51:VAL:O	1.98	0.62
1:CA:1486:G:H2'	1:CA:1487:G:O4'	1.98	0.62
22:DA:1316:U:C2	22:DA:1337:G:N2	2.67	0.62
22:DA:1338:G:O2'	22:DA:1393:A:N1	2.21	0.62
22:DA:1411:U:H2'	22:DA:1412:U:O4'	1.99	0.62
22:DA:2504:U:C5	56:DA:3001:VIF:H30	2.34	0.62
33:DL:29:LYS:HG3	33:DL:30:THR:HG23	1.81	0.62
6:AF:76:THR:O	6:AF:79:ARG:N	2.33	0.62
22:BA:1360:G:C6	22:BA:1372:U:C2	2.88	0.62
22:BA:1747:U:H2'	22:BA:1748:C:C6	2.35	0.62
1:CA:718:A:C8	1:CA:719:C:C5	2.88	0.62
1:CA:1161:C:O2	1:CA:1176:A:C2	2.53	0.62
1:CA:1211:U:C2'	1:CA:1212:U:OP2	2.47	0.62
13:CM:93:ARG:CZ	13:CM:93:ARG:HB3	2.28	0.62
18:CR:25:ASP:O	18:CR:28:THR:N	2.31	0.62
22:DA:35:G:C4	22:DA:454:A:C2	2.87	0.62
22:DA:132:G:N2	22:DA:148:U:C2	2.68	0.62
22:DA:301:G:H1'	22:DA:302:C:C6	2.35	0.62
1:AA:80:A:C2	1:AA:90:C:N3	2.68	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:411:A:C5	1:AA:429:U:C5	2.88	0.62
22:BA:487:C:O2	40:BS:53:SER:OG	2.17	0.62
22:BA:1061:U:H3'	22:BA:1062:G:H5'	1.80	0.62
22:BA:1474:U:H2'	22:BA:1475:G:H5'	1.82	0.62
27:BF:108:VAL:CG1	27:BF:114:PHE:CZ	2.83	0.62
4:CD:99:ASP:OD1	4:CD:100:ASN:N	2.33	0.62
22:DA:973:A:OP2	39:DR:81:LYS:NZ	2.23	0.62
22:DA:1027:A:C6	22:DA:1126:A:N3	2.67	0.62
2:AB:50:PHE:HA	2:AB:213:TYR:OH	1.99	0.62
22:BA:360:U:H3'	22:BA:361:G:C8	2.35	0.62
29:BH:97:ARG:HD3	1:CA:370:C:H5'	1.81	0.62
30:BI:82:LYS:O	30:BI:83:ALA:HB2	1.99	0.62
1:CA:1006:G:H2'	1:CA:1007:U:C6	2.35	0.62
22:DA:479:A:H4'	22:DA:480:A:OP1	2.00	0.62
22:DA:1440:U:O4	58:DA:3630:HOH:O	2.11	0.62
22:DA:2821:A:OP2	25:DD:115:GLY:N	2.33	0.62
30:DI:6:GLN:O	30:DI:7:ALA:CB	2.48	0.62
6:AF:97:THR:O	6:AF:98:GLU:HB3	2.00	0.62
10:AJ:52:LEU:HD11	10:AJ:59:LYS:HA	1.81	0.62
10:AJ:73:LEU:O	10:AJ:74:VAL:HB	2.00	0.62
14:AN:52:PRO:O	14:AN:53:ARG:HB3	2.00	0.62
22:BA:1915:U:O2'	22:BA:1916:A:H5'	1.99	0.62
22:BA:2517:C:C6	22:BA:2542:A:N7	2.68	0.62
1:CA:475:C:H2'	1:CA:476:U:C6	2.34	0.62
22:DA:782:A:O2'	24:DC:224:ALA:O	2.18	0.62
22:DA:1179:G:C6	22:DA:1180:U:H1'	2.34	0.62
30:DI:33:VAL:HG22	30:DI:67:PHE:CE1	2.35	0.62
32:DK:118:LEU:O	32:DK:119:ALA:HB3	2.00	0.62
33:DL:102:GLY:N	58:DL:202:HOH:O	2.33	0.62
1:AA:1407:C:O2'	22:BA:1912:A:N6	2.33	0.61
7:AG:15:ASP:OD1	7:AG:44:TYR:OH	2.18	0.61
22:BA:1224:U:H4'	39:BR:88:GLY:O	1.98	0.61
22:BA:1422:G:C4	22:BA:1423:G:C8	2.88	0.61
22:BA:1917:U:C4	22:BA:1918:A:C5	2.88	0.61
22:BA:1993:U:H4'	25:BD:133:THR:HG21	1.82	0.61
33:BL:61:LEU:O	51:B3:13:ARG:HD3	1.99	0.61
4:CD:35:GLU:O	4:CD:38:PRO:HD3	1.99	0.61
22:DA:1477:A:N6	22:DA:1514:G:O2'	2.32	0.61
22:DA:2611:C:C1'	54:D6:6:04X:H33	2.30	0.61
22:DA:2848:G:OP2	37:DP:95:ALA:N	2.32	0.61
27:DF:106:ILE:HD11	27:DF:139:PRO:HG2	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:74:ASN:HA	42:DU:96:PHE:CZ	2.35	0.61
52:D4:19:ARG:O	52:D4:20:ASP:HB2	2.00	0.61
1:AA:455:G:C2	1:AA:478:A:C2	2.87	0.61
22:BA:1073:A:C3'	22:BA:1074:G:H5"	2.29	0.61
50:B2:43:THR:O	50:B2:44:VAL:CB	2.48	0.61
4:CD:33:LYS:O	4:CD:33:LYS:HG2	1.99	0.61
4:CD:174:ASP:O	4:CD:175:ALA:HB2	2.00	0.61
13:CM:40:ALA:O	13:CM:42:ASP:N	2.32	0.61
21:CU:4:ILE:N	21:CU:19:PHE:CE2	2.68	0.61
22:DA:320:A:H4'	22:DA:322:A:N7	2.15	0.61
22:DA:2062:A:N7	54:D6:1:MHW:CD	2.63	0.61
42:DU:22:ARG:CZ	42:DU:73:PHE:CE2	2.83	0.61
22:BA:1494:A:C2	22:BA:1495:A:C4	2.88	0.61
22:BA:1746:A:H2'	22:BA:1747:U:H6	1.62	0.61
22:BA:2531:A:OP2	28:BG:174:ALA:O	2.17	0.61
24:BC:143:ASN:OD1	24:BC:152:GLY:HA3	2.01	0.61
1:CA:451:A:H4'	1:CA:452:A:O5'	2.00	0.61
5:CE:136:VAL:O	5:CE:140:THR:OG1	2.17	0.61
9:CI:26:GLY:N	9:CI:61:LEU:O	2.33	0.61
22:DA:671:C:O2'	22:DA:672:C:O5'	2.19	0.61
22:DA:1340:U:C4	22:DA:1603:A:C8	2.88	0.61
22:DA:2163:A:OP1	22:DA:2171:A:C8	2.53	0.61
22:DA:2328:A:H2'	22:DA:2329:U:C6	2.35	0.61
29:DH:32:PRO:O	29:DH:33:GLN:CB	2.48	0.61
33:DL:81:ASP:O	33:DL:82:LEU:HB3	2.00	0.61
12:AL:94:ARG:HB2	12:AL:95:TYR:CE1	2.35	0.61
21:AU:34:ARG:CZ	21:AU:35:ARG:HB2	2.30	0.61
22:BA:580:U:H2'	22:BA:581:C:H6	1.65	0.61
28:BG:30:ASN:CG	28:BG:30:ASN:O	2.38	0.61
39:BR:49:ILE:HG22	39:BR:52:PRO:C	2.20	0.61
2:CB:21:ARG:NH1	2:CB:21:ARG:HA	2.16	0.61
22:DA:587:C:N3	33:DL:33:ARG:NH2	2.48	0.61
22:DA:2415:G:C6	22:DA:2416:C:C4	2.88	0.61
22:DA:2658:C:OP1	28:DG:158:LYS:NZ	2.32	0.61
24:DC:145:GLU:HA	24:DC:152:GLY:HA2	1.82	0.61
1:AA:90:C:C2	1:AA:91:U:C5	2.88	0.61
31:BJ:42:ALA:O	38:BQ:64:ARG:HG2	2.01	0.61
40:BS:84:ARG:HB2	40:BS:96:ILE:CG1	2.30	0.61
2:CB:21:ARG:HA	2:CB:21:ARG:CZ	2.29	0.61
2:CB:100:MET:HA	2:CB:107:VAL:HG21	1.82	0.61
4:CD:168:PRO:CB	4:CD:171:LEU:HD12	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:98:PRO:O	5:CE:99:ALA:HB3	2.00	0.61
22:DA:137:U:H2'	22:DA:140:C:C2	2.35	0.61
22:DA:187:G:N2	22:DA:210:C:C2	2.68	0.61
22:DA:1359:A:C8	22:DA:1373:A:N1	2.68	0.61
22:DA:1638:C:O2	22:DA:2698:U:O2'	2.10	0.61
22:DA:2360:G:H1'	33:DL:60:ARG:HD3	1.82	0.61
38:DQ:72:ASN:HB3	38:DQ:110:VAL:HG11	1.83	0.61
54:D6:5:MHU:HB1	54:D6:6:04X:H45	1.82	0.61
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.35	0.61
2:AB:75:ALA:O	2:AB:76:ALA:CB	2.48	0.61
4:AD:122:ALA:O	4:AD:123:ILE:HG23	2.00	0.61
22:BA:15:G:OP2	58:BA:3554:HOH:O	2.16	0.61
22:BA:480:A:OP2	42:BU:44:LYS:NZ	2.32	0.61
22:BA:1415:U:O2	22:BA:1415:U:H2'	1.99	0.61
22:BA:2305:U:C2	27:BF:151:GLY:HA3	2.35	0.61
26:BE:18:THR:HA	26:BE:106:LYS:HG2	1.83	0.61
21:CU:8:GLU:HB3	21:CU:12:PHE:CE2	2.36	0.61
22:DA:811:U:O2	22:DA:1251:C:C6	2.53	0.61
22:BA:1008:A:N6	22:BA:1136:G:C6	2.69	0.61
22:BA:2291:U:H2'	22:BA:2292:U:C6	2.35	0.61
22:BA:2298:A:C6	22:BA:2321:U:O4	2.54	0.61
27:BF:176:PRO:O	27:BF:177:PHE:HB2	2.00	0.61
37:BP:93:ARG:O	37:BP:94:LYS:HB2	1.99	0.61
43:BV:80:HIS:NE2	43:BV:83:LYS:HG3	2.16	0.61
1:CA:170:U:O2'	1:CA:171:A:H5'	2.00	0.61
1:CA:1377:A:C5	7:CG:7:ILE:CD1	2.84	0.61
1:CA:1490:U:H2'	1:CA:1491:G:O4'	1.99	0.61
4:CD:168:PRO:HB2	4:CD:171:LEU:HD12	1.83	0.61
22:DA:1808:A:H3'	22:DA:1809:A:C8	2.35	0.61
22:DA:2009:A:N6	58:DA:3373:HOH:O	2.25	0.61
22:DA:2093:G:C6	22:DA:2225:A:C8	2.89	0.61
23:DB:81:G:C5	23:DB:82:U:C5	2.89	0.61
31:DJ:30:THR:HA	31:DJ:108:MET:SD	2.41	0.61
1:AA:21:G:N2	1:AA:22:G:C6	2.69	0.61
1:AA:562:U:OP2	12:AL:14:ARG:NH1	2.33	0.61
7:AG:79:ARG:NH1	7:AG:82:GLY:O	2.34	0.61
8:AH:113:ASP:OD2	8:AH:117:ARG:NH2	2.32	0.61
9:AI:127:PHE:O	9:AI:127:PHE:CD1	2.53	0.61
12:AL:63:VAL:HG21	12:AL:95:TYR:CE1	2.36	0.61
22:BA:1915:U:H2'	22:BA:1916:A:C8	2.35	0.61
28:BG:121:ILE:HD12	28:BG:141:ILE:HG22	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:51:VAL:HG23	39:BR:52:PRO:HD2	1.83	0.61
22:DA:1808:A:N1	45:DX:28:ARG:HD2	2.16	0.61
27:DF:142:ASP:O	27:DF:144:ASP:N	2.33	0.61
39:DR:58:VAL:HG13	39:DR:102:SER:HB2	1.81	0.61
1:AA:96:U:O2'	1:AA:97:G:P	2.59	0.61
1:AA:381:C:H2'	1:AA:382:A:O4'	2.01	0.61
15:AO:19:ALA:O	15:AO:20:ASN:CB	2.49	0.61
20:AT:70:ASN:OD1	20:AT:70:ASN:N	2.33	0.61
21:AU:20:LYS:CE	21:AU:20:LYS:HA	2.30	0.61
22:BA:1435:G:O2'	22:BA:1436:G:H5'	1.99	0.61
46:BY:18:LEU:O	46:BY:22:LEU:HB2	2.00	0.61
53:B5:204:GLY:O	53:B5:205:ALA:CB	2.48	0.61
1:CA:1151:A:N3	1:CA:1152:A:C8	2.69	0.61
2:CB:85:LEU:HG	2:CB:85:LEU:O	2.00	0.61
22:DA:225:C:H2'	22:DA:226:A:O4'	2.01	0.61
22:DA:533:G:H5'	38:DQ:24:TYR:CE1	2.36	0.61
22:DA:582:A:OP1	38:DQ:14:HIS:ND1	2.34	0.61
22:DA:1091:G:N3	22:DA:1092:C:C5	2.69	0.61
22:DA:1509:A:O2'	22:DA:1510:G:P	2.59	0.61
1:AA:11:G:C6	1:AA:12:U:C4	2.89	0.61
10:AJ:35:GLN:CG	10:AJ:77:VAL:HB	2.31	0.61
39:BR:68:ARG:HD3	39:BR:92:TRP:CZ2	2.35	0.61
47:BZ:10:THR:HG22	47:BZ:54:MET:C	2.21	0.61
1:CA:72:A:C6	1:CA:73:C:C4	2.88	0.61
1:CA:1255:G:C6	1:CA:1279:G:C8	2.89	0.61
8:CH:55:THR:C	8:CH:57:PRO:HD3	2.21	0.61
22:DA:588:U:H1'	26:DE:85:PHE:CD1	2.35	0.61
22:DA:858:G:O2'	22:DA:2268:A:N3	2.25	0.61
22:DA:1651:G:N2	22:DA:2007:U:O2	2.34	0.61
22:DA:1809:A:C4	22:DA:1810:A:C8	2.89	0.61
29:DH:83:LYS:H	29:DH:149:GLU:HG2	1.64	0.61
1:AA:829:G:C2	1:AA:830:G:C8	2.89	0.60
2:AB:222:ARG:HB3	2:AB:222:ARG:CZ	2.30	0.60
3:AC:16:LYS:HG3	3:AC:17:PRO:HD2	1.83	0.60
8:AH:42:GLU:OE1	8:AH:42:GLU:CA	2.49	0.60
12:AL:24:LEU:HB2	12:AL:59:ASN:ND2	2.16	0.60
22:BA:933:A:H5'	22:BA:934:U:OP2	2.01	0.60
22:BA:977:G:C5	58:BA:3596:HOH:O	2.52	0.60
29:BH:121:VAL:N	29:BH:122:LEU:HB2	2.16	0.60
33:BL:85:VAL:CG1	33:BL:94:THR:HG22	2.30	0.60
1:CA:1022:A:C5	1:CA:1023:U:C4	2.89	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1138:G:C2	1:CA:1140:C:C4	2.89	0.60
2:CB:134:ALA:O	2:CB:138:THR:OG1	2.16	0.60
5:CE:154:ALA:HA	5:CE:157:ARG:HB3	1.82	0.60
14:CN:80:SER:O	14:CN:83:LYS:N	2.33	0.60
22:DA:1025:G:O2'	58:DA:3707:HOH:O	2.16	0.60
23:DB:94:A:OP1	43:DV:19:ARG:HD3	2.01	0.60
13:AM:11:ASP:O	13:AM:12:HIS:ND1	2.34	0.60
22:BA:1223:G:OP2	39:BR:68:ARG:NH1	2.34	0.60
1:CA:695:A:H2'	1:CA:696:A:C8	2.36	0.60
1:CA:815:A:N7	1:CA:1509:C:O2'	2.25	0.60
7:CG:145:ALA:O	7:CG:146:GLU:HB2	2.00	0.60
10:CJ:27:GLU:O	10:CJ:31:ARG:HB3	2.00	0.60
22:DA:13:A:N3	22:DA:14:A:N6	2.48	0.60
22:DA:247:G:H4'	22:DA:386:G:C5	2.36	0.60
22:DA:279:A:C2	22:DA:362:A:H4'	2.35	0.60
22:DA:1395:A:O2'	22:DA:1397:U:C6	2.53	0.60
31:DJ:110:PRO:O	31:DJ:115:GLY:HA3	2.01	0.60
1:AA:861:G:HO2'	1:AA:874:G:HO2'	1.49	0.60
12:AL:24:LEU:HG	12:AL:25:GLU:N	2.16	0.60
27:BF:25:VAL:O	27:BF:28:VAL:HG12	2.01	0.60
30:BI:39:CYS:CA	30:BI:42:PHE:HB3	2.31	0.60
22:DA:571:U:C4	22:DA:575:A:C5	2.89	0.60
22:DA:858:G:C4	22:DA:2268:A:C2	2.89	0.60
22:DA:1090:A:N1	22:DA:1091:G:C5	2.69	0.60
1:AA:108:G:O6	20:AT:10:ARG:HG2	2.01	0.60
1:AA:979:C:H1'	1:AA:1317:C:N4	2.16	0.60
10:AJ:63:ASP:HB3	10:AJ:65:TYR:CE1	2.36	0.60
22:BA:1823:G:N7	58:BA:3661:HOH:O	2.31	0.60
29:BH:100:ALA:HB1	29:BH:112:LYS:HA	1.83	0.60
35:BN:58:ASP:CG	35:BN:63:ARG:HH22	2.04	0.60
1:CA:881:G:C6	1:CA:882:C:C4	2.90	0.60
22:DA:856:G:N2	22:DA:922:C:C2	2.69	0.60
22:DA:1783:A:C2	22:DA:2588:G:O4'	2.53	0.60
46:DY:11:VAL:O	46:DY:15:ASN:ND2	2.35	0.60
1:AA:466:A:H5'	1:AA:467:U:OP2	2.01	0.60
11:AK:125:LYS:CG	11:AK:126:LYS:N	2.63	0.60
22:BA:1587:G:C4	22:BA:1588:G:C8	2.90	0.60
27:BF:171:ALA:O	27:BF:174:ASP:N	2.32	0.60
53:B5:64:SER:O	53:B5:65:LEU:CB	2.50	0.60
1:CA:268:U:H2'	1:CA:269:C:C6	2.36	0.60
1:CA:990:C:C4	1:CA:991:U:O4	2.55	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:146:ARG:O	4:CD:150:LYS:N	2.34	0.60
5:CE:98:PRO:O	5:CE:99:ALA:CB	2.49	0.60
9:CI:91:ASP:OD1	9:CI:93:SER:N	2.35	0.60
22:DA:271:G:H1'	22:DA:272:A:O5'	2.01	0.60
22:DA:658:U:O2'	26:DE:95:LYS:NZ	2.28	0.60
26:DE:76:PRO:HA	26:DE:82:GLY:HA2	1.84	0.60
26:DE:150:THR:OG1	26:DE:151:GLY:N	2.35	0.60
22:BA:1734:G:N3	22:BA:1735:A:C8	2.70	0.60
22:BA:1907:G:C5	22:BA:1908:C:C5	2.89	0.60
28:BG:109:PHE:HE1	28:BG:152:ARG:CZ	2.13	0.60
42:BU:39:ILE:HG22	42:BU:40:ASN:N	2.17	0.60
14:CN:21:PHE:O	14:CN:23:LYS:N	2.34	0.60
22:DA:834:G:H1'	22:DA:2358:A:N3	2.17	0.60
22:DA:1171:G:C2	22:DA:1179:G:O6	2.55	0.60
22:DA:2164:C:H5"	22:DA:2165:C:C5	2.36	0.60
22:DA:2202:U:O2'	22:DA:2204:G:OP1	2.15	0.60
22:DA:2820:A:C8	25:DD:196:ALA:HB1	2.36	0.60
46:DY:56:LEU:O	46:DY:57:LEU:CB	2.49	0.60
1:AA:72:A:C2'	1:AA:73:C:H5'	2.32	0.60
1:AA:315:A:O2'	1:AA:330:C:H4'	2.02	0.60
1:AA:484:G:H4'	1:AA:485:U:OP1	2.00	0.60
1:AA:877:G:H21	8:AH:2:SER:N	2.00	0.60
3:AC:83:ASP:O	3:AC:86:LYS:HG3	2.01	0.60
22:BA:1916:A:H2'	22:BA:1917:U:C4'	2.32	0.60
32:BK:36:GLY:HA2	32:BK:62:VAL:O	2.01	0.60
32:BK:73:ASP:OD1	32:BK:75:SER:OG	2.15	0.60
36:BO:10:ARG:NH2	36:BO:96:GLY:O	2.35	0.60
1:CA:1309:G:C6	1:CA:1329:A:C2	2.89	0.60
22:DA:1469:A:C2	22:DA:1470:A:C5	2.89	0.60
22:DA:2019:A:H4'	38:DQ:34:VAL:HG21	1.84	0.60
22:DA:2361:G:C5	22:DA:2362:C:C5	2.90	0.60
29:DH:126:GLY:O	29:DH:146:VAL:HG23	2.00	0.60
36:DO:100:HIS:CD2	36:DO:101:GLY:N	2.70	0.60
38:DQ:76:TYR:CZ	38:DQ:80:ILE:HG13	2.37	0.60
41:DT:39:THR:O	41:DT:41:ALA:N	2.35	0.60
42:DU:33:LYS:HB3	42:DU:64:ALA:HB1	1.82	0.60
1:AA:316:C:C2	1:AA:317:U:C5	2.89	0.60
2:AB:154:MET:O	2:AB:156:GLY:N	2.34	0.60
22:BA:528:A:C8	22:BA:528:A:C3'	2.84	0.60
22:BA:1779:U:C5	22:BA:1784:A:N7	2.69	0.60
29:BH:117:LEU:CD2	29:BH:121:VAL:HA	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:19:ASP:O	31:BJ:23:LYS:HE2	2.02	0.60
1:CA:16:A:C2'	1:CA:17:U:H5'	2.32	0.60
14:CN:33:ASP:O	14:CN:35:ASN:N	2.35	0.60
22:DA:2142:A:C2	22:DA:2150:C:N3	2.70	0.60
24:DC:45:ASN:OD1	24:DC:46:ASN:N	2.35	0.60
1:AA:1191:A:OP2	3:AC:3:GLN:NE2	2.35	0.60
1:AA:1319:A:C8	1:AA:1323:G:C5	2.90	0.60
22:BA:1922:G:N2	22:BA:1923:U:O4'	2.35	0.60
23:BB:41:G:H5"	27:BF:66:LEU:HD13	1.84	0.60
1:CA:533:A:O2'	1:CA:535:A:OP2	2.19	0.60
1:CA:998:C:H2'	1:CA:999:C:C6	2.37	0.60
1:CA:1379:G:N2	1:CA:1381:U:O4	2.32	0.60
2:CB:210:VAL:O	2:CB:214:LEU:HB2	2.02	0.60
4:CD:90:LEU:HD21	4:CD:200:ILE:HD11	1.84	0.60
6:CF:18:VAL:HG12	6:CF:19:PRO:N	2.16	0.60
22:DA:102:U:C2	46:DY:2:LYS:HE2	2.36	0.60
22:DA:247:G:H4'	22:DA:386:G:C4	2.36	0.60
22:DA:2420:C:OP1	51:D3:34:THR:HB	2.01	0.60
28:DG:45:HIS:O	28:DG:46:ALA:HB3	2.02	0.60
1:AA:144:G:C5	1:AA:179:A:C2	2.90	0.60
1:AA:988:G:C6	1:AA:989:U:C4	2.89	0.60
1:AA:1141:C:O2'	1:AA:1142:G:O5'	2.17	0.60
12:AL:23:ALA:O	12:AL:24:LEU:O	2.20	0.60
22:BA:31:C:O2'	22:BA:1238:G:H5'	2.02	0.60
22:BA:819:A:OP2	22:BA:1187:G:N2	2.33	0.60
22:BA:1073:A:H3'	22:BA:1074:G:H5'	1.80	0.60
22:BA:1851:U:C4	22:BA:1852:U:C4	2.90	0.60
25:BD:13:ARG:HD2	25:BD:15:PHE:CE2	2.36	0.60
1:CA:938:A:N6	1:CA:939:G:C6	2.69	0.60
2:CB:47:VAL:HB	2:CB:48:PRO:HD3	1.83	0.60
4:CD:28:ILE:O	4:CD:31:LYS:NZ	2.34	0.60
22:DA:1226:A:OP1	38:DQ:16:LYS:NZ	2.34	0.60
22:DA:1802:A:OP2	22:DA:1815:A:N6	2.35	0.60
22:DA:2058:A:C6	22:DA:2059:A:N6	2.70	0.60
22:DA:2339:C:H2'	22:DA:2340:A:C8	2.37	0.60
22:DA:2898:U:H2'	22:DA:2899:A:C8	2.36	0.60
28:DG:27:LYS:HG3	28:DG:27:LYS:O	2.01	0.60
30:DI:97:LYS:N	30:DI:97:LYS:HD2	2.17	0.60
46:DY:60:LYS:O	46:DY:62:GLY:N	2.35	0.60
1:AA:872:A:C5	1:AA:874:G:C8	2.90	0.59
4:AD:58:LYS:HG3	4:AD:59:GLN:N	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:43:ALA:O	16:AP:46:LYS:HD2	2.02	0.59
22:BA:1179:G:C5	22:BA:1180:U:C1'	2.84	0.59
35:BN:73:ASN:HA	35:BN:76:VAL:HG12	1.84	0.59
22:DA:295:G:H2'	22:DA:295:G:N3	2.16	0.59
22:DA:398:C:OP1	45:DX:32:ASN:ND2	2.34	0.59
22:DA:425:G:N2	22:DA:426:C:C2	2.69	0.59
22:DA:1430:G:H2'	22:DA:1431:A:O4'	2.02	0.59
24:DC:15:HIS:O	24:DC:204:VAL:HG21	2.02	0.59
28:DG:116:GLN:NE2	28:DG:117:LEU:O	2.35	0.59
41:DT:18:GLU:O	41:DT:22:THR:OG1	2.20	0.59
1:AA:1006:G:OP1	1:AA:1037:C:O2'	2.19	0.59
1:AA:1211:U:HO2'	1:AA:1212:U:P	2.24	0.59
4:AD:59:GLN:O	4:AD:63:ARG:HG2	2.02	0.59
5:AE:153:VAL:O	5:AE:156:LYS:HB2	2.01	0.59
8:AH:66:PHE:CD2	8:AH:67:GLN:HG2	2.37	0.59
17:AQ:48:ASP:OD2	17:AQ:52:GLU:OE1	2.19	0.59
17:AQ:69:LYS:O	17:AQ:70:THR:HB	2.01	0.59
22:BA:1378:A:O2'	22:BA:1380:G:OP2	2.20	0.59
29:BH:99:ILE:HB	29:BH:115:VAL:HG11	1.84	0.59
30:BI:19:ASN:N	30:BI:20:PRO:CD	2.65	0.59
36:BO:35:ILE:HG21	36:BO:71:ALA:HA	1.84	0.59
1:CA:1041:G:H2'	1:CA:1042:A:C8	2.37	0.59
4:CD:107:PHE:CG	4:CD:145:ILE:HD11	2.37	0.59
4:CD:174:ASP:OD2	4:CD:175:ALA:N	2.36	0.59
22:DA:1206:G:C5	22:DA:1207:C:C5	2.90	0.59
22:DA:1389:G:N2	22:DA:1398:C:N3	2.50	0.59
22:DA:1958:C:P	58:DA:3731:HOH:O	2.60	0.59
22:DA:2091:C:H1'	45:DX:34:HIS:CD2	2.37	0.59
22:DA:2743:U:OP1	52:D4:34:LYS:NZ	2.31	0.59
4:AD:130:VAL:HG11	4:AD:135:TYR:CG	2.37	0.59
22:BA:150:U:H2'	22:BA:151:C:C6	2.38	0.59
22:BA:1064:C:O2	22:BA:1064:C:H2'	2.01	0.59
24:BC:167:ARG:O	24:BC:168:ASP:HB3	2.02	0.59
29:BH:94:ILE:HG22	29:BH:99:ILE:CG1	2.32	0.59
32:BK:113:MET:O	32:BK:116:ILE:HG13	2.02	0.59
1:CA:455:G:N2	1:CA:478:A:C2	2.70	0.59
5:CE:82:GLN:OE1	5:CE:149:SER:HA	2.02	0.59
14:CN:41:ARG:HG2	14:CN:42:TRP:N	2.18	0.59
14:CN:52:PRO:O	14:CN:53:ARG:HB3	2.02	0.59
22:DA:194:G:O5'	58:DA:3758:HOH:O	2.17	0.59
22:DA:301:G:N3	22:DA:302:C:C2	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:654:A:H3'	22:DA:654:A:N3	2.18	0.59
22:DA:1353:A:C8	22:DA:1378:A:N6	2.70	0.59
22:DA:1361:G:C2	22:DA:1362:C:C6	2.90	0.59
24:DC:3:VAL:CG1	24:DC:202:LEU:HD23	2.31	0.59
33:DL:59:ARG:CZ	33:DL:59:ARG:HB3	2.32	0.59
45:DX:54:LYS:O	45:DX:57:ARG:N	2.35	0.59
1:AA:201:G:C2	1:AA:217:C:O2	2.55	0.59
1:AA:722:G:O2'	21:AU:49:LYS:NZ	2.34	0.59
1:AA:844:G:C6	1:AA:846:G:O2'	2.55	0.59
1:AA:1441:A:H2'	1:AA:1442:G:O5'	2.02	0.59
12:AL:122:PRO:O	12:AL:124:ALA:N	2.36	0.59
22:BA:64:A:H2'	22:BA:65:U:C6	2.37	0.59
22:BA:798:G:O6	58:BA:3323:HOH:O	2.13	0.59
22:BA:999:U:P	58:BA:3363:HOH:O	2.60	0.59
22:BA:2839:G:OP1	35:BN:46:ARG:HD2	2.02	0.59
24:BC:146:MET:SD	24:BC:154:LEU:HD21	2.43	0.59
1:CA:972:C:H4'	10:CJ:59:LYS:HG2	1.84	0.59
4:CD:74:ASN:HA	4:CD:77:LYS:HB2	1.84	0.59
10:CJ:48:ARG:NH1	10:CJ:66:GLU:OE1	2.36	0.59
22:DA:411:G:OP2	22:DA:2406:A:O2'	2.16	0.59
22:DA:565:C:H4'	22:DA:1253:A:N6	2.18	0.59
22:DA:1109:C:H3'	22:DA:1110:G:C8	2.38	0.59
22:DA:2062:A:C2	56:DA:3001:VIF:H12	2.37	0.59
24:DC:62:TYR:CE2	24:DC:63:ARG:O	2.56	0.59
26:DE:75:SER:HB3	26:DE:78:TRP:CE3	2.38	0.59
29:DH:126:GLY:O	29:DH:146:VAL:N	2.35	0.59
1:AA:933:G:N7	7:AG:3:ARG:NH1	2.50	0.59
1:AA:1255:G:O2'	1:AA:1258:G:N3	2.32	0.59
2:AB:118:GLU:O	2:AB:121:SER:N	2.33	0.59
10:AJ:33:GLY:O	10:AJ:34:ALA:CB	2.50	0.59
16:AP:36:VAL:O	16:AP:36:VAL:HG13	2.00	0.59
21:AU:10:GLU:CG	21:AU:11:PRO:HD3	2.31	0.59
22:BA:1932:A:H5"	22:BA:1933:G:OP2	2.02	0.59
22:BA:2534:A:H2'	22:BA:2535:G:O5'	2.03	0.59
46:BY:18:LEU:O	46:BY:22:LEU:CB	2.51	0.59
7:CG:151:PHE:O	7:CG:152:ALA:HB2	2.02	0.59
22:DA:514:A:C2	22:DA:515:A:C4	2.90	0.59
22:DA:1344:U:O2'	22:DA:1345:C:P	2.60	0.59
24:DC:124:ILE:O	24:DC:124:ILE:HG22	2.03	0.59
1:AA:166:U:H3'	1:AA:167:A:C8	2.38	0.59
5:AE:157:ARG:HD2	8:AH:43:GLU:O	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:46:LEU:HG	14:AN:47:LYS:N	2.17	0.59
16:AP:61:VAL:CG2	16:AP:67:ILE:HD11	2.33	0.59
22:BA:744:U:OP1	58:BA:3657:HOH:O	2.15	0.59
35:BN:73:ASN:HA	35:BN:76:VAL:CG1	2.32	0.59
1:CA:957:U:O3'	19:CS:79:THR:OG1	2.19	0.59
15:CO:87:LEU:O	15:CO:88:ARG:HB3	2.02	0.59
22:DA:197:A:H62	22:DA:2430:A:H2'	1.66	0.59
22:DA:777:G:N7	22:DA:793:A:H2	1.99	0.59
22:DA:1045:C:O2	22:DA:1047:G:N1	2.35	0.59
22:DA:2196:C:N3	22:DA:2197:U:C4	2.70	0.59
39:DR:82:HIS:O	39:DR:82:HIS:CG	2.56	0.59
43:DV:51:GLN:OE1	43:DV:57:TYR:OH	2.19	0.59
1:AA:596:A:C6	1:AA:645:G:C2	2.91	0.59
1:AA:620:C:H1'	4:AD:132:ILE:HD11	1.84	0.59
5:AE:109:GLY:O	5:AE:110:ALA:HB2	2.01	0.59
8:AH:125:ILE:O	8:AH:125:ILE:HG13	2.02	0.59
10:AJ:33:GLY:O	10:AJ:34:ALA:HB3	2.03	0.59
22:BA:1106:G:N2	22:BA:1107:G:H1'	2.17	0.59
28:BG:174:ALA:O	28:BG:175:LYS:CB	2.50	0.59
29:BH:1:MET:O	29:BH:20:ASN:ND2	2.35	0.59
46:BY:15:ASN:O	46:BY:19:LEU:HG	2.02	0.59
1:CA:858:G:O6	1:CA:869:G:H3'	2.02	0.59
1:CA:1361:G:H3'	1:CA:1362:A:C5'	2.31	0.59
22:DA:223:A:C5	22:DA:422:A:C8	2.90	0.59
22:DA:1323:C:C4	22:DA:1324:G:N7	2.71	0.59
22:DA:2135:A:C2	22:DA:2136:G:H1'	2.38	0.59
22:DA:2454:G:H1'	58:DA:3532:HOH:O	2.02	0.59
23:DB:37:C:N4	23:DB:38:C:N3	2.50	0.59
25:DD:48:ILE:HG23	25:DD:84:LEU:HD21	1.84	0.59
25:DD:151:THR:HG22	25:DD:152:PRO:CD	2.33	0.59
33:DL:50:PHE:CZ	33:DL:52:GLY:O	2.56	0.59
33:DL:95:LEU:O	33:DL:100:ILE:HG23	2.03	0.59
1:AA:89:U:O2'	1:AA:90:C:H5"	2.03	0.59
1:AA:843:U:OP1	1:AA:846:G:N2	2.36	0.59
5:AE:115:LEU:HG	5:AE:120:VAL:HG21	1.85	0.59
11:AK:34:ILE:HB	11:AK:74:VAL:HG11	1.85	0.59
22:BA:747:U:C4	22:BA:2613:U:C4	2.91	0.59
22:BA:1073:A:C3'	22:BA:1074:G:C5'	2.80	0.59
22:BA:2192:U:C4	22:BA:2193:G:N7	2.71	0.59
22:BA:2886:A:C5	22:BA:2887:A:C8	2.90	0.59
32:BK:121:GLU:O	32:BK:122:VAL:OXT	2.20	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:52:PRO:O	39:BR:53:PHE:O	2.21	0.59
40:BS:63:GLY:O	40:BS:64:ALA:HB3	2.02	0.59
1:CA:227:G:H2'	1:CA:228:A:O4'	2.02	0.59
1:CA:374:A:H5"	1:CA:452:A:N1	2.18	0.59
22:DA:289:G:C2	22:DA:352:A:C2	2.90	0.59
22:DA:341:C:H2'	22:DA:342:A:C8	2.37	0.59
4:AD:150:LYS:O	4:AD:151:LYS:C	2.41	0.59
5:AE:108:GLY:O	5:AE:109:GLY:C	2.41	0.59
11:AK:13:ARG:N	22:BA:2141:G:H4'	2.17	0.59
22:BA:545:U:H3'	22:BA:546:U:H4'	1.84	0.59
22:BA:1482:G:C6	22:BA:1508:A:C6	2.90	0.59
22:BA:1720:U:H2'	22:BA:1721:G:O4'	2.03	0.59
27:BF:132:VAL:HG22	27:BF:152:LEU:HB2	1.84	0.59
41:BT:88:LYS:O	41:BT:89:GLU:CG	2.51	0.59
22:DA:1076:C:H2'	22:DA:1077:A:O4'	2.03	0.59
38:DQ:25:TYR:CD2	38:DQ:26:GLY:N	2.70	0.59
1:AA:64:G:C2	1:AA:67:C:N4	2.71	0.59
5:AE:82:GLN:NE2	5:AE:150:PRO:HD3	2.17	0.59
6:AF:38:ARG:HB3	6:AF:63:ASN:HB2	1.84	0.59
9:AI:52:LEU:HB3	9:AI:57:MET:HG3	1.85	0.59
22:BA:1094:U:N3	22:BA:1097:U:OP2	2.36	0.59
22:BA:1936:A:C2	22:BA:1945:G:C8	2.91	0.59
22:BA:2786:U:OP1	25:BD:70:LYS:NZ	2.30	0.59
22:BA:2897:U:H2'	22:BA:2898:U:C6	2.38	0.59
38:BQ:50:ARG:O	38:BQ:54:LYS:HE2	2.02	0.59
40:BS:55:ILE:HG23	40:BS:66:ILE:HG12	1.84	0.59
3:CC:16:LYS:HG3	3:CC:17:PRO:HD2	1.83	0.59
22:DA:942:G:O2'	22:DA:1189:A:O2'	2.12	0.59
22:DA:1327:A:H2'	22:DA:1328:A:O4'	2.03	0.59
42:DU:45:HIS:HB3	42:DU:58:ILE:HG12	1.84	0.59
1:AA:108:G:C6	20:AT:10:ARG:HG2	2.38	0.58
1:AA:188:C:N3	1:AA:189:A:C2	2.70	0.58
1:AA:408:A:OP1	4:AD:110:THR:HG21	2.03	0.58
6:AF:18:VAL:N	6:AF:19:PRO:HD2	2.17	0.58
7:AG:80:VAL:O	7:AG:82:GLY:N	2.36	0.58
16:AP:79:ASN:O	16:AP:80:LYS:HB2	2.03	0.58
17:AQ:12:VAL:HG12	17:AQ:13:VAL:N	2.17	0.58
22:BA:1922:G:N3	22:BA:1922:G:H2'	2.17	0.58
22:BA:2529:G:OP1	28:BG:172:LYS:NZ	2.35	0.58
32:BK:107:LEU:O	32:BK:109:SER:N	2.36	0.58
1:CA:131:A:O2'	1:CA:262:A:N3	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:60:VAL:O	15:CO:63:ARG:N	2.35	0.58
22:DA:1973:G:C6	22:DA:1974:C:C4	2.91	0.58
22:DA:2726:A:O2'	22:DA:2727:A:O5'	2.16	0.58
22:DA:2854:G:C2	22:DA:2864:G:C2	2.91	0.58
24:DC:147:LYS:HB2	24:DC:150:LYS:HB2	1.84	0.58
25:DD:151:THR:O	25:DD:152:PRO:C	2.41	0.58
1:AA:316:C:C5	1:AA:351:G:C2	2.91	0.58
1:AA:622:A:C8	1:AA:623:C:C6	2.91	0.58
22:BA:1171:G:N2	22:BA:1178:C:O2	2.35	0.58
22:BA:1981:A:OP1	58:BA:3450:HOH:O	2.17	0.58
22:BA:2191:A:C2	22:BA:2192:U:N3	2.72	0.58
39:BR:39:LEU:HA	39:BR:49:ILE:CG2	2.33	0.58
1:CA:513:C:H2'	1:CA:514:C:C6	2.39	0.58
19:CS:63:THR:HG22	19:CS:64:ASP:N	2.18	0.58
22:DA:45:G:O3'	22:DA:46:G:O4'	2.20	0.58
22:DA:811:U:O2	22:DA:1251:C:C5	2.56	0.58
1:AA:767:A:H2'	1:AA:768:A:O4'	2.03	0.58
3:AC:11:ARG:O	3:AC:14:ILE:N	2.36	0.58
3:AC:97:VAL:HB	3:AC:98:PRO:HD2	1.84	0.58
22:BA:645:C:O2'	22:BA:646:U:H5"	2.03	0.58
33:BL:99:ASN:OD1	58:BL:302:HOH:O	2.17	0.58
5:CE:133:PRO:HA	5:CE:136:VAL:HG12	1.84	0.58
11:CK:127:ARG:HB2	21:CU:34:ARG:NH1	2.18	0.58
22:DA:2112:G:H2'	22:DA:2112:G:N3	2.18	0.58
22:DA:2225:A:H4'	22:DA:2226:C:O5'	2.03	0.58
46:DY:18:LEU:O	46:DY:22:LEU:HB3	2.02	0.58
1:AA:49:U:O4	1:AA:365:U:H5	1.86	0.58
13:AM:82:ASP:OD2	27:BF:112:ARG:NH2	2.36	0.58
22:BA:250:G:OP2	51:B3:13:ARG:NH1	2.36	0.58
22:BA:588:U:H2'	22:BA:589:U:C6	2.38	0.58
22:BA:627:A:C6	22:BA:637:A:C8	2.92	0.58
22:BA:1450:G:C6	22:BA:1451:C:N4	2.72	0.58
22:BA:2580:U:C5	22:BA:2581:G:C6	2.92	0.58
1:CA:1523:G:OP1	11:CK:125:LYS:NZ	2.32	0.58
5:CE:77:ASN:HB2	5:CE:82:GLN:HG2	1.85	0.58
10:CJ:15:HIS:CE1	10:CJ:16:ARG:HD3	2.39	0.58
21:CU:44:GLU:OE1	21:CU:45:ARG:NH1	2.36	0.58
22:DA:1050:A:C2	22:DA:2751:G:C4	2.92	0.58
22:DA:2563:U:H1'	22:DA:2566:A:N6	2.19	0.58
1:AA:209:U:H4'	1:AA:210:C:OP2	2.02	0.58
1:AA:1286:U:H2'	1:AA:1286:U:O2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:98:LEU:O	4:AD:101:VAL:N	2.36	0.58
11:AK:69:ARG:HD2	22:BA:2146:C:N3	2.17	0.58
22:BA:1454:C:H5'	35:BN:63:ARG:HD2	1.86	0.58
40:BS:43:ALA:O	40:BS:47:VAL:HG12	2.03	0.58
1:CA:757:U:OP1	1:CA:822:U:O2'	2.16	0.58
2:CB:54:LEU:HD12	2:CB:220:THR:HG21	1.86	0.58
10:CJ:22:THR:HA	10:CJ:25:ILE:HG22	1.84	0.58
13:CM:10:PRO:O	13:CM:11:ASP:HB2	2.04	0.58
21:CU:11:PRO:C	21:CU:12:PHE:CG	2.74	0.58
22:DA:201:C:C4	22:DA:202:U:C5	2.92	0.58
22:DA:276:U:O2	22:DA:276:U:H2'	2.03	0.58
22:DA:830:G:C4	22:DA:2448:A:C5	2.91	0.58
22:DA:1938:A:C6	22:DA:2590:A:H1'	2.38	0.58
22:DA:2345:G:C5	22:DA:2381:A:C2	2.91	0.58
24:DC:145:GLU:OE2	24:DC:149:GLY:N	2.36	0.58
29:DH:34:GLY:O	29:DH:35:LYS:CB	2.51	0.58
1:AA:71:A:H3'	1:AA:71:A:OP2	2.04	0.58
10:AJ:53:ILE:HG22	10:AJ:61:ALA:HB1	1.84	0.58
16:AP:42:ILE:O	16:AP:42:ILE:HG22	2.02	0.58
22:BA:1606:C:O2'	22:BA:1607:C:O5'	2.20	0.58
29:BH:31:VAL:N	29:BH:32:PRO:HD2	2.19	0.58
30:BI:124:ALA:O	30:BI:127:ARG:HG2	2.04	0.58
33:BL:79:LEU:HB2	33:BL:114:GLY:O	2.04	0.58
36:BO:79:ALA:HB2	36:BO:110:ALA:HA	1.86	0.58
36:BO:87:ILE:HG22	36:BO:88:LYS:N	2.17	0.58
39:BR:49:ILE:CG2	39:BR:52:PRO:C	2.72	0.58
40:BS:29:VAL:CG1	40:BS:55:ILE:HD11	2.33	0.58
1:CA:380:G:N2	1:CA:383:A:OP2	2.35	0.58
1:CA:495:A:C2	1:CA:496:A:N6	2.72	0.58
1:CA:955:U:H2'	1:CA:956:U:O4'	2.04	0.58
4:CD:12:SER:HA	4:CD:19:LEU:HD12	1.84	0.58
5:CE:24:THR:HA	5:CE:29:ARG:HA	1.85	0.58
5:CE:105:ILE:HG23	5:CE:105:ILE:O	2.04	0.58
7:CG:83:SER:O	7:CG:85:TYR:N	2.37	0.58
22:DA:192:C:C5	22:DA:193:U:C2	2.90	0.58
22:DA:936:A:C2	22:DA:937:C:C2	2.92	0.58
22:DA:1733:G:C5	22:DA:1734:G:C8	2.91	0.58
22:DA:1817:G:OP1	24:DC:62:TYR:OH	2.13	0.58
22:DA:1951:U:H2'	22:DA:1953:A:OP2	2.03	0.58
34:DM:19:GLY:O	34:DM:38:ARG:NH1	2.33	0.58
35:DN:117:ASP:O	35:DN:118:ARG:HB2	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1181:G:C2	1:AA:1182:G:N2	2.72	0.58
1:AA:1320:C:O2	19:AS:36:ARG:NH1	2.37	0.58
8:AH:11:LEU:HD12	8:AH:77:ARG:HG2	1.85	0.58
15:AO:19:ALA:O	15:AO:20:ASN:HB2	2.04	0.58
17:AQ:17:MET:O	17:AQ:19:LYS:N	2.37	0.58
22:BA:2254:C:C2'	22:BA:2255:G:H5'	2.34	0.58
1:CA:1004:A:C6	1:CA:1005:A:C6	2.91	0.58
1:CA:1337:G:H5"	1:CA:1338:G:OP1	2.04	0.58
3:CC:42:TYR:CE2	3:CC:90:VAL:HG21	2.39	0.58
5:CE:75:ALA:O	5:CE:82:GLN:NE2	2.37	0.58
22:DA:1253:A:OP1	38:DQ:33:ARG:NH1	2.36	0.58
22:DA:2469:A:O2'	34:DM:55:ARG:CZ	2.52	0.58
25:DD:104:VAL:O	25:DD:105:LYS:CB	2.52	0.58
28:DG:19:ILE:O	28:DG:21:GLY:N	2.37	0.58
1:AA:85:U:O4'	1:AA:86:G:N2	2.37	0.58
1:AA:157:U:O2'	1:AA:158:G:H5'	2.04	0.58
1:AA:468:A:N3	1:AA:468:A:H5"	2.18	0.58
22:BA:2318:G:C6	22:BA:2319:G:N1	2.72	0.58
29:BH:123:ARG:NH2	1:CA:367:U:C5'	2.67	0.58
35:BN:49:GLU:OE2	35:BN:95:THR:HG22	2.04	0.58
25:DD:151:THR:HG22	25:DD:152:PRO:N	2.19	0.58
1:AA:452:A:C8	1:AA:453:G:C8	2.91	0.58
1:AA:880:C:OP2	12:AL:3:THR:HG21	2.04	0.58
1:AA:1141:C:C2	1:AA:1142:G:C8	2.92	0.58
2:AB:54:LEU:HD12	2:AB:220:THR:HG21	1.84	0.58
16:AP:10:GLY:HA3	16:AP:15:PRO:HA	1.85	0.58
22:BA:1020:A:C2	22:BA:1141:U:C2	2.92	0.58
22:BA:1248:G:OP1	38:BQ:2:ALA:N	2.37	0.58
22:BA:2554:U:C4	22:BA:2555:U:O4	2.56	0.58
22:BA:2597:G:O2'	22:BA:2598:A:H5'	2.02	0.58
22:BA:2756:U:OP2	52:B4:19:ARG:NE	2.37	0.58
26:BE:128:ALA:HB1	26:BE:129:PRO:HD2	1.85	0.58
27:BF:79:ILE:HG21	27:BF:85:ILE:CD1	2.33	0.58
30:BI:72:LYS:CD	30:BI:72:LYS:N	2.67	0.58
42:BU:12:ILE:HG21	42:BU:80:ALA:HB2	1.85	0.58
53:B5:125:GLY:O	53:B5:126:SER:CB	2.51	0.58
1:CA:1072:G:C6	1:CA:1073:U:C4	2.92	0.58
1:CA:1296:C:H4'	1:CA:1302:C:C4	2.38	0.58
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.38	0.58
22:DA:528:A:N1	22:DA:2042:A:H2'	2.19	0.58
22:DA:2037:A:C6	22:DA:2038:G:C6	2.92	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:121:ASP:OD1	24:DC:121:ASP:N	2.37	0.58
27:DF:46:ASP:N	27:DF:46:ASP:OD1	2.36	0.58
54:D6:3:DBB:HG2	54:D6:4:PRO:HA	1.86	0.58
7:AG:71:PRO:HD2	7:AG:96:ARG:O	2.03	0.58
16:AP:44:SER:O	16:AP:46:LYS:HD2	2.04	0.58
22:BA:947:A:HO2'	22:BA:984:A:H2	1.51	0.58
22:BA:1428:C:C5	22:BA:1569:A:H5"	2.39	0.58
22:BA:2310:C:H2'	22:BA:2311:A:H5'	1.86	0.58
1:CA:765:G:C6	1:CA:812:G:C4	2.92	0.58
1:CA:994:A:N3	1:CA:994:A:H2'	2.19	0.58
1:CA:1521:C:C4	1:CA:1522:U:C5	2.92	0.58
3:CC:42:TYR:CZ	3:CC:46:GLU:HG3	2.38	0.58
4:CD:31:LYS:HD3	4:CD:31:LYS:N	2.19	0.58
6:CF:85:ILE:O	6:CF:86:ARG:O	2.21	0.58
22:DA:776:G:C8	22:DA:793:A:C4	2.92	0.58
22:DA:2683:C:H4'	25:DD:13:ARG:NH1	2.18	0.58
22:DA:2716:C:H2'	22:DA:2717:C:H6	1.69	0.58
29:DH:108:VAL:O	29:DH:110:VAL:N	2.36	0.58
1:AA:451:A:OP2	16:AP:70:ARG:NH2	2.36	0.57
1:AA:946:A:O2'	1:AA:1333:A:N3	2.33	0.57
1:AA:1060:U:OP1	14:AN:85:ARG:NH2	2.37	0.57
1:AA:1378:C:H2'	1:AA:1379:G:O5'	2.04	0.57
2:AB:111:ILE:HD13	2:AB:111:ILE:N	2.20	0.57
2:AB:126:PHE:N	2:AB:126:PHE:HD1	2.02	0.57
3:AC:150:LYS:HA	3:AC:168:TYR:O	2.04	0.57
5:AE:136:VAL:O	5:AE:140:THR:OG1	2.21	0.57
6:AF:98:GLU:O	6:AF:99:ALA:O	2.21	0.57
22:BA:1083:U:O2	22:BA:1086:A:C2	2.57	0.57
22:BA:1925:C:H4'	22:BA:1926:U:C4	2.38	0.57
30:BI:122:ILE:O	30:BI:122:ILE:HG22	2.04	0.57
40:BS:37:THR:HG22	40:BS:38:TYR:CD1	2.39	0.57
1:CA:805:C:C2	1:CA:806:C:C5	2.92	0.57
22:DA:187:G:C2	22:DA:210:C:O2	2.55	0.57
22:DA:305:C:H1'	22:DA:313:G:N2	2.19	0.57
22:DA:575:A:C2	22:DA:576:U:C6	2.92	0.57
22:DA:600:G:C5	22:DA:601:C:C4	2.92	0.57
22:DA:2091:C:C3'	22:DA:2092:U:H5"	2.32	0.57
25:DD:33:ARG:NH2	25:DD:74:GLU:O	2.37	0.57
1:AA:131:A:H2'	1:AA:132:C:C6	2.40	0.57
2:AB:15:HIS:O	2:AB:16:PHE:C	2.41	0.57
2:AB:166:ALA:HB2	2:AB:187:VAL:HG12	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:990:A:H5”	22:BA:991:C:OP1	2.04	0.57
22:BA:1028:A:N6	22:BA:1125:G:H2’	2.19	0.57
1:CA:495:A:N1	1:CA:496:A:N6	2.52	0.57
1:CA:1359:C:OP2	14:CN:75:ARG:NH1	2.37	0.57
3:CC:59:ARG:HB2	3:CC:63:SER:O	2.03	0.57
11:CK:23:ILE:HD11	11:CK:86:VAL:HG13	1.85	0.57
22:DA:547:A:N7	22:DA:548:G:N3	2.52	0.57
22:DA:1087:G:N1	22:DA:1089:A:C2	2.72	0.57
22:DA:1545:A:H2’	22:DA:1546:G:O4’	2.04	0.57
22:DA:1826:G:C6	22:DA:1827:U:C4	2.91	0.57
22:DA:2586:U:C5	22:DA:2608:G:N2	2.72	0.57
22:DA:2612:C:H5”	22:DA:2613:U:OP1	2.04	0.57
22:DA:2736:A:C2	22:DA:2769:U:O2	2.58	0.57
24:DC:30:PHE:CE2	24:DC:32:PRO:HG2	2.38	0.57
35:DN:90:ARG:CZ	35:DN:116:VAL:HG11	2.33	0.57
1:AA:429:U:H1’	1:AA:430:A:H5”	1.86	0.57
1:AA:1141:C:O2’	1:AA:1142:G:P	2.61	0.57
5:AE:50:TYR:CE1	5:AE:134:ILE:HD11	2.39	0.57
6:AF:51:ILE:HD12	6:AF:86:ARG:CZ	2.34	0.57
7:AG:40:GLU:HA	7:AG:43:VAL:CG2	2.35	0.57
20:AT:57:ILE:HD12	20:AT:60:ARG:HD2	1.85	0.57
30:BI:113:LYS:HD3	30:BI:117:MET:HG2	1.86	0.57
52:B4:26:ILE:N	52:B4:26:ILE:CD1	2.67	0.57
1:CA:197:A:O2’	1:CA:220:G:N2	2.37	0.57
1:CA:1080:A:OP1	5:CE:52:LYS:HE2	2.05	0.57
1:CA:1308:U:OP1	13:CM:97:VAL:N	2.37	0.57
10:CJ:88:MET:O	10:CJ:89:ARG:CB	2.52	0.57
22:DA:749:A:C4	22:DA:750:A:C8	2.91	0.57
22:DA:2842:G:H2’	22:DA:2843:G:O4’	2.03	0.57
1:AA:71:A:O2’	1:AA:72:A:P	2.62	0.57
1:AA:1124:G:H3’	1:AA:1145:A:N6	2.19	0.57
1:AA:1304:G:N1	1:AA:1305:G:N2	2.52	0.57
21:AU:37:PHE:HB3	21:AU:41:PRO:HG3	1.86	0.57
22:BA:996:A:N6	22:BA:1160:G:C6	2.72	0.57
22:BA:1168:G:H2’	22:BA:1169:A:O4’	2.05	0.57
22:BA:1277:G:H5’	35:BN:20:MET:CE	2.34	0.57
22:BA:2547:A:H2’	22:BA:2548:U:C6	2.39	0.57
38:BQ:9:ILE:HG13	38:BQ:10:ALA:N	2.18	0.57
53:B5:167:ASP:CB	53:B5:176:VAL:O	2.53	0.57
17:CQ:19:LYS:HD3	17:CQ:49:GLU:HA	1.86	0.57
22:DA:388:G:N7	22:DA:390:U:H2’	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:533:G:C5	22:DA:534:U:C4	2.92	0.57
22:DA:1027:A:N6	22:DA:1126:A:N3	2.52	0.57
22:DA:1068:G:H2'	22:DA:1068:G:N3	2.19	0.57
22:DA:1197:G:H2'	22:DA:1198:U:C6	2.39	0.57
22:DA:2563:U:H1'	22:DA:2566:A:C6	2.39	0.57
25:DD:101:PHE:O	25:DD:104:VAL:HG22	2.04	0.57
29:DH:62:LEU:HD13	29:DH:62:LEU:C	2.25	0.57
42:DU:7:ARG:O	42:DU:25:VAL:HB	2.05	0.57
43:DV:21:ARG:HA	43:DV:25:LYS:O	2.03	0.57
1:AA:1055:A:C6	1:AA:1206:G:C5	2.92	0.57
1:AA:1211:U:O2'	1:AA:1212:U:P	2.63	0.57
4:AD:26:ARG:CD	4:AD:31:LYS:HE3	2.34	0.57
5:AE:149:SER:HB2	5:AE:152:MET:HB2	1.87	0.57
9:AI:90:TYR:O	9:AI:91:ASP:CG	2.42	0.57
11:AK:52:PHE:HB3	11:AK:56:ARG:HB3	1.85	0.57
14:AN:87:ALA:O	14:AN:92:GLU:HB2	2.04	0.57
18:AR:31:ASN:OD1	18:AR:31:ASN:N	2.37	0.57
22:BA:2128:G:H5'	53:B5:36:ALA:HA	1.87	0.57
22:BA:2192:U:C4	22:BA:2193:G:C8	2.93	0.57
25:BD:104:VAL:O	25:BD:105:LYS:HB2	2.05	0.57
39:BR:49:ILE:C	39:BR:51:VAL:O	2.43	0.57
41:BT:17:SER:O	41:BT:18:GLU:C	2.42	0.57
1:CA:511:C:C2	1:CA:512:U:C5	2.92	0.57
1:CA:662:U:H2'	1:CA:663:A:C8	2.39	0.57
1:CA:1179:A:O3'	9:CI:105:THR:OG1	2.22	0.57
11:CK:107:ILE:HG23	11:CK:107:ILE:O	2.04	0.57
12:CL:23:ALA:HA	12:CL:61:PHE:CD2	2.39	0.57
12:CL:90:LEU:HB2	12:CL:93:VAL:CG2	2.35	0.57
22:DA:586:A:H1'	22:DA:672:C:H1'	1.85	0.57
22:DA:1769:U:O2'	22:DA:1958:C:OP1	2.23	0.57
22:DA:2886:A:C2	22:DA:2887:A:H1'	2.40	0.57
33:DL:94:THR:O	33:DL:98:ALA:N	2.34	0.57
50:D2:43:THR:O	50:D2:44:VAL:HB	2.05	0.57
1:AA:73:C:O2'	1:AA:74:A:H5"	2.04	0.57
1:AA:727:G:N1	1:AA:731:G:C6	2.73	0.57
1:AA:1014:A:N3	19:AS:34:TRP:CZ3	2.72	0.57
1:AA:1378:C:C2'	1:AA:1379:G:O5'	2.53	0.57
4:AD:174:ASP:O	4:AD:175:ALA:HB2	2.05	0.57
22:BA:1078:U:H1'	22:BA:1088:A:C2	2.39	0.57
22:BA:1421:G:C2	22:BA:1422:G:C8	2.92	0.57
24:BC:230:HIS:CD2	24:BC:247:PRO:HA	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:149:ILE:HD11	26:BE:172:ALA:HA	1.87	0.57
1:CA:256:U:H2'	1:CA:257:G:O4'	2.04	0.57
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.20	0.57
2:CB:210:VAL:CG2	2:CB:211:THR:N	2.68	0.57
13:CM:10:PRO:O	13:CM:11:ASP:CB	2.52	0.57
20:CT:25:ARG:O	20:CT:29:ARG:HG3	2.04	0.57
22:DA:526:A:P	58:DA:3246:HOH:O	2.63	0.57
22:DA:1300:G:O6	22:DA:1626:A:O2'	2.13	0.57
22:DA:2061:G:H5"	22:DA:2503:A:C2	2.40	0.57
29:DH:117:LEU:HB3	29:DH:120:GLY:O	2.05	0.57
36:DO:80:GLU:HA	36:DO:83:LEU:HD12	1.87	0.57
41:DT:12:ARG:O	41:DT:13:ALA:HB2	2.05	0.57
1:AA:72:A:H2'	1:AA:73:C:H5'	1.86	0.57
1:AA:197:A:N3	1:AA:198:G:H1'	2.20	0.57
1:AA:588:G:C6	1:AA:589:U:N3	2.72	0.57
1:AA:1125:U:C5	1:AA:1127:G:C5	2.93	0.57
4:AD:58:LYS:NZ	4:AD:69:GLU:OE2	2.35	0.57
20:AT:44:LYS:CD	20:AT:87:ALA:HA	2.34	0.57
29:BH:95:GLY:HA2	29:BH:117:LEU:HD22	1.87	0.57
29:BH:132:PHE:CE2	29:BH:142:VAL:HG21	2.40	0.57
30:BI:82:LYS:O	30:BI:83:ALA:CB	2.53	0.57
1:CA:134:G:H2'	1:CA:135:C:O4'	2.04	0.57
1:CA:951:G:N3	1:CA:970:C:O2'	2.33	0.57
4:CD:148:LYS:O	4:CD:149:ALA:CB	2.51	0.57
5:CE:35:ALA:O	5:CE:50:TYR:O	2.23	0.57
7:CG:103:TRP:CD2	7:CG:137:LYS:HG2	2.39	0.57
10:CJ:81:GLU:HA	10:CJ:84:VAL:HG12	1.85	0.57
22:DA:250:G:H2'	22:DA:251:A:C8	2.39	0.57
22:DA:784:G:OP2	58:DA:3311:HOH:O	2.17	0.57
22:DA:1682:G:H2'	22:DA:1683:U:C6	2.39	0.57
22:DA:2063:C:O2	22:DA:2063:C:H2'	2.05	0.57
22:DA:2133:G:N2	22:DA:2158:A:C6	2.73	0.57
22:DA:2706:A:C2	22:DA:2707:U:C2	2.92	0.57
28:DG:133:LEU:CD1	28:DG:141:ILE:HB	2.34	0.57
46:DY:18:LEU:O	46:DY:22:LEU:CB	2.52	0.57
47:DZ:10:THR:HG22	47:DZ:54:MET:HA	1.86	0.57
1:AA:188:C:O2	1:AA:188:C:H2'	2.05	0.57
1:AA:866:C:C4	1:AA:867:G:H1'	2.39	0.57
1:AA:1367:C:OP2	9:AI:114:LYS:NZ	2.37	0.57
2:AB:162:PHE:HA	2:AB:184:PHE:O	2.04	0.57
22:BA:319:G:C4	22:BA:333:G:N2	2.72	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:162:VAL:CG1	24:BC:163:GLN:N	2.67	0.57
24:BC:209:GLY:O	24:BC:212:ARG:N	2.38	0.57
1:CA:86:G:H1'	1:CA:87:C:O4'	2.05	0.57
1:CA:1215:G:C5	1:CA:1216:A:N7	2.73	0.57
1:CA:1244:G:C6	1:CA:1245:C:N4	2.73	0.57
1:CA:1408:A:C2	1:CA:1494:G:C4	2.92	0.57
18:CR:58:ALA:O	18:CR:61:ARG:N	2.38	0.57
19:CS:11:ILE:HG13	19:CS:12:ASP:N	2.19	0.57
22:DA:690:G:O2'	22:DA:780:G:OP1	2.20	0.57
22:DA:781:A:H2'	22:DA:1777:U:O2'	2.05	0.57
22:DA:1907:G:C2	22:DA:1924:C:C2	2.93	0.57
22:DA:2059:A:C2	54:D6:5:MHU:HE2	2.40	0.57
28:DG:159:GLY:O	28:DG:163:ARG:NH1	2.38	0.57
35:DN:76:VAL:HA	35:DN:79:LEU:HD12	1.86	0.57
1:AA:728:A:C6	1:AA:729:A:C6	2.93	0.57
1:AA:1160:G:O6	1:AA:1181:G:C6	2.58	0.57
19:AS:65:GLU:OE2	19:AS:66:MET:N	2.38	0.57
22:BA:307:G:N2	22:BA:309:A:H3'	2.20	0.57
22:BA:528:A:C2	22:BA:2043:C:H4'	2.39	0.57
29:BH:117:LEU:HD21	29:BH:121:VAL:CA	2.35	0.57
39:BR:14:VAL:HG21	39:BR:20:VAL:HG21	1.87	0.57
39:BR:39:LEU:HA	39:BR:49:ILE:HG23	1.86	0.57
45:BX:78:TYR:OXT	45:BX:78:TYR:CD1	2.58	0.57
1:CA:254:G:OP1	17:CQ:69:LYS:O	2.23	0.57
1:CA:409:U:OP1	4:CD:24:GLY:CA	2.53	0.57
4:CD:19:LEU:HD22	4:CD:64:ILE:HG13	1.86	0.57
11:CK:17:SER:OG	11:CK:18:ASP:N	2.38	0.57
12:CL:28:PRO:HB2	12:CL:29:GLN:OE1	2.05	0.57
22:DA:82:U:C2	22:DA:83:A:C8	2.93	0.57
22:DA:190:A:N6	22:DA:191:A:N1	2.53	0.57
22:DA:370:G:O2'	22:DA:424:G:OP1	2.19	0.57
22:DA:590:A:C6	22:DA:591:U:C4	2.93	0.57
22:DA:630:G:H5"	22:DA:631:A:OP2	2.05	0.57
22:DA:1007:C:OP1	31:DJ:37:ARG:NH2	2.37	0.57
22:DA:1799:G:N2	22:DA:1818:U:O2'	2.37	0.57
22:DA:2037:A:N6	22:DA:2038:G:O6	2.37	0.57
22:DA:2104:C:H2'	22:DA:2105:U:O4'	2.04	0.57
27:DF:5:HIS:HB2	27:DF:97:TRP:CG	2.39	0.57
40:DS:37:THR:OG1	40:DS:48:LYS:NZ	2.38	0.57
1:AA:102:G:C2	1:AA:103:U:C6	2.93	0.57
1:AA:208:U:C5	1:AA:210:C:C4	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:184:PHE:CZ	2:AB:198:PHE:CD2	2.93	0.57
9:AI:35:LEU:HD11	9:AI:48:VAL:HG21	1.86	0.57
21:AU:12:PHE:N	21:AU:12:PHE:CD1	2.72	0.57
22:BA:1998:A:OP2	25:BD:141:ARG:NH2	2.38	0.57
22:BA:2808:G:N2	22:BA:2891:U:C6	2.73	0.57
24:BC:72:ASP:HA	24:BC:118:SER:O	2.05	0.57
29:BH:117:LEU:CD2	29:BH:121:VAL:H	2.08	0.57
53:B5:45:HIS:CD2	53:B5:176:VAL:HA	2.40	0.57
1:CA:1041:G:C6	1:CA:1042:A:N6	2.73	0.57
4:CD:35:GLU:HG3	4:CD:36:GLN:HG3	1.87	0.57
6:CF:19:PRO:HA	6:CF:22:ILE:HB	1.87	0.57
22:DA:1450:G:C6	22:DA:1451:C:N4	2.73	0.57
22:DA:2873:A:H4'	58:DA:3802:HOH:O	2.04	0.57
24:DC:141:VAL:HG11	24:DC:190:ALA:HB1	1.87	0.57
30:DI:58:VAL:O	30:DI:69:PHE:HB3	2.05	0.57
40:DS:29:VAL:HG21	40:DS:107:VAL:HG21	1.87	0.57
50:D2:34:ARG:HB2	50:D2:42:LEU:CD1	2.34	0.57
1:AA:596:A:C5	1:AA:645:G:C2	2.92	0.56
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.40	0.56
4:AD:174:ASP:OD2	4:AD:176:GLY:N	2.38	0.56
13:AM:3:ARG:CG	13:AM:4:ILE:N	2.68	0.56
22:BA:139:U:HO2'	22:BA:141:G:H1	1.52	0.56
22:BA:278:A:C2	22:BA:362:A:C8	2.93	0.56
22:BA:1508:A:H4'	22:BA:1508:A:OP1	2.04	0.56
25:BD:62:LYS:HB2	25:BD:63:PRO:HD3	1.87	0.56
27:BF:105:THR:CG2	27:BF:106:ILE:HG23	2.35	0.56
1:CA:211:G:O2'	1:CA:212:G:H4'	2.05	0.56
2:CB:91:PHE:CD1	2:CB:150:GLY:HA3	2.40	0.56
6:CF:22:ILE:O	6:CF:26:THR:OG1	2.22	0.56
22:DA:1224:U:C4	22:DA:1225:G:C6	2.93	0.56
22:DA:1317:G:N2	22:DA:1336:A:C2	2.73	0.56
22:DA:1847:A:O2'	22:DA:1848:A:C8	2.59	0.56
22:DA:2788:C:H2'	22:DA:2789:C:C6	2.40	0.56
29:DH:21:VAL:HG22	29:DH:22:LYS:N	2.19	0.56
41:DT:62:VAL:HG12	41:DT:63:VAL:N	2.20	0.56
1:AA:173:U:C6	1:AA:197:A:C2	2.93	0.56
2:AB:126:PHE:N	2:AB:126:PHE:CD1	2.73	0.56
22:BA:998:C:H3'	58:BA:3363:HOH:O	2.06	0.56
22:BA:2187:U:H2'	22:BA:2188:U:O4'	2.06	0.56
31:BJ:81:ILE:HG23	31:BJ:82:GLY:H	1.70	0.56
33:BL:93:ASN:O	33:BL:94:THR:CB	2.52	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B4:36:ARG:HG2	52:B4:37:GLN:N	2.19	0.56
1:CA:401:C:OP2	4:CD:70:ARG:HD3	2.05	0.56
1:CA:404:G:N7	4:CD:2:ALA:HB3	2.20	0.56
1:CA:1005:A:O3'	1:CA:1037:C:O2'	2.22	0.56
3:CC:148:GLY:O	3:CC:203:PHE:N	2.36	0.56
4:CD:29:ASP:C	4:CD:31:LYS:H	2.08	0.56
22:DA:271:G:H4'	22:DA:272:A:OP1	2.04	0.56
22:DA:347:A:C2	22:DA:348:A:C4	2.93	0.56
22:DA:2126:A:O2'	22:DA:2162:G:O6	2.18	0.56
22:DA:2474:U:H5"	22:DA:2475:C:OP2	2.05	0.56
1:AA:91:U:C4	1:AA:92:U:C2	2.93	0.56
1:AA:207:C:O2	1:AA:213:G:N2	2.38	0.56
1:AA:995:C:N3	1:AA:1046:A:O2'	2.35	0.56
1:AA:1058:G:C5	1:AA:1059:C:C5	2.93	0.56
1:AA:1166:G:N1	1:AA:1169:A:OP2	2.38	0.56
1:AA:1314:C:H41	19:AS:4:SER:HA	1.70	0.56
5:AE:82:GLN:H	5:AE:147:MET:HE1	1.69	0.56
7:AG:40:GLU:HA	7:AG:43:VAL:HG23	1.87	0.56
9:AI:21:ILE:HG22	9:AI:22:LYS:N	2.20	0.56
10:AJ:6:ILE:CD1	10:AJ:76:ILE:HB	2.35	0.56
12:AL:3:THR:HG22	12:AL:4:VAL:N	2.21	0.56
22:BA:372:G:OP2	45:BX:61:LYS:HD3	2.06	0.56
22:BA:477:A:H2'	22:BA:478:A:C8	2.40	0.56
22:BA:528:A:H2	22:BA:2043:C:C5'	2.18	0.56
22:BA:622:G:OP2	58:BL:302:HOH:O	2.17	0.56
22:BA:1842:G:H2'	22:BA:1843:C:O4'	2.06	0.56
22:BA:2583:G:C2'	22:BA:2584:U:O5'	2.53	0.56
22:BA:2615:U:C2	48:B0:4:GLN:HA	2.40	0.56
22:BA:2694:G:H2'	22:BA:2695:U:C6	2.39	0.56
27:BF:2:ALA:O	27:BF:3:LYS:C	2.43	0.56
46:BY:45:GLN:O	46:BY:46:VAL:HB	2.06	0.56
50:B2:43:THR:O	50:B2:44:VAL:HB	2.06	0.56
1:CA:33:A:H2'	1:CA:34:C:C6	2.40	0.56
1:CA:439:U:H4'	4:CD:121:LYS:CG	2.35	0.56
1:CA:439:U:H4'	4:CD:121:LYS:HG3	1.86	0.56
1:CA:844:G:P	1:CA:844:G:O4'	2.63	0.56
1:CA:968:A:C8	1:CA:1062:U:H4'	2.40	0.56
3:CC:130:PHE:CE1	3:CC:131:ARG:HD3	2.40	0.56
5:CE:122:ASN:O	5:CE:123:VAL:O	2.23	0.56
21:CU:18:ARG:O	21:CU:21:ARG:N	2.39	0.56
22:DA:607:U:O4	22:DA:619:G:H2'	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1019:U:OP1	22:DA:1035:U:O2'	2.20	0.56
22:DA:1390:U:H2'	22:DA:1391:U:H5'	1.87	0.56
22:DA:1581:G:C6	22:DA:1582:C:C4	2.93	0.56
22:DA:1676:A:H2'	22:DA:1677:A:O4'	2.05	0.56
22:DA:2511:U:C5	22:DA:2512:C:C5	2.94	0.56
22:DA:2602:A:H4'	22:DA:2603:G:H5'	1.88	0.56
22:DA:2716:C:H2'	22:DA:2717:C:C6	2.40	0.56
22:DA:2820:A:C8	25:DD:196:ALA:CB	2.88	0.56
22:DA:2886:A:C2	48:D0:29:SER:HB3	2.39	0.56
23:DB:39:A:H2'	23:DB:40:U:C6	2.39	0.56
27:DF:147:ASP:O	27:DF:148:ARG:HB2	2.05	0.56
36:DO:33:ARG:O	36:DO:34:HIS:CB	2.53	0.56
1:AA:145:G:N2	1:AA:178:C:C2	2.73	0.56
1:AA:537:G:OP1	12:AL:110:ARG:NH2	2.38	0.56
1:AA:1449:C:C2'	1:AA:1450:U:H5'	2.36	0.56
4:AD:38:PRO:HD2	4:AD:42:GLY:HA3	1.87	0.56
6:AF:98:GLU:CG	6:AF:99:ALA:N	2.69	0.56
11:AK:27:PHE:CE2	11:AK:89:PRO:HG2	2.41	0.56
14:AN:49:GLN:HA	14:AN:49:GLN:OE1	2.05	0.56
21:AU:12:PHE:N	21:AU:12:PHE:HD1	2.03	0.56
21:AU:14:VAL:HG13	21:AU:16:LEU:HG	1.86	0.56
22:BA:1095:A:H2'	22:BA:1096:A:C8	2.40	0.56
22:BA:1914:C:O2	22:BA:1914:C:H2'	2.04	0.56
30:BI:97:LYS:HG3	30:BI:139:VAL:HG22	1.86	0.56
33:BL:68:SER:O	33:BL:69:ARG:CB	2.53	0.56
42:BU:18:ASP:O	42:BU:19:LYS:C	2.44	0.56
1:CA:412:A:O2'	1:CA:413:G:H4'	2.05	0.56
1:CA:679:C:O2	1:CA:712:A:C2	2.58	0.56
1:CA:728:A:C8	15:CO:54:ARG:CZ	2.89	0.56
1:CA:811:C:N4	1:CA:812:G:C6	2.73	0.56
6:CF:81:ASN:OD1	6:CF:83:ALA:N	2.38	0.56
15:CO:19:ALA:O	15:CO:20:ASN:HB2	2.03	0.56
15:CO:35:GLN:NE2	15:CO:39:LEU:HD22	2.19	0.56
22:DA:1313:U:H4'	22:DA:1332:G:H4'	1.87	0.56
22:DA:2663:G:H2'	22:DA:2664:G:O4'	2.04	0.56
42:DU:98:SER:O	42:DU:99:ASN:HB3	2.05	0.56
1:AA:200:G:C2	1:AA:218:U:O2	2.59	0.56
1:AA:1319:A:C8	1:AA:1323:G:C6	2.93	0.56
22:BA:1340:U:C5	22:BA:1603:A:C8	2.93	0.56
22:BA:1467:U:C4	22:BA:1546:G:C2	2.94	0.56
22:BA:2020:A:H5'	48:B0:9:THR:CG2	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2583:G:H2'	22:BA:2584:U:O5'	2.05	0.56
1:CA:706:A:C5	1:CA:707:U:C5	2.93	0.56
1:CA:1166:G:H2'	1:CA:1168:U:OP2	2.06	0.56
1:CA:1431:A:C6	1:CA:1432:G:O6	2.58	0.56
2:CB:205:ASP:N	2:CB:205:ASP:OD1	2.37	0.56
4:CD:29:ASP:O	4:CD:31:LYS:N	2.35	0.56
17:CQ:47:HIS:HB2	17:CQ:67:LEU:CD1	2.36	0.56
18:CR:20:GLU:O	18:CR:22:ASP:N	2.38	0.56
20:CT:3:ASN:O	20:CT:5:LYS:N	2.38	0.56
22:DA:105:C:H2'	22:DA:106:C:C6	2.40	0.56
22:DA:192:C:O2'	22:DA:802:A:N3	2.38	0.56
22:DA:247:G:C8	22:DA:249:C:C6	2.94	0.56
22:DA:981:A:OP2	22:DA:982:C:N4	2.32	0.56
22:DA:1194:A:H2'	22:DA:1195:G:O5'	2.05	0.56
22:DA:1525:A:C2	22:DA:1526:C:C2	2.93	0.56
24:DC:9:THR:O	24:DC:10:SER:CB	2.53	0.56
24:DC:30:PHE:CE2	24:DC:32:PRO:CG	2.88	0.56
40:DS:67:ASP:OD1	40:DS:67:ASP:N	2.38	0.56
41:DT:17:SER:O	41:DT:20:ALA:N	2.38	0.56
1:AA:702:A:H3'	1:AA:703:G:H5'	1.88	0.56
2:AB:118:GLU:HA	2:AB:121:SER:HB2	1.87	0.56
4:AD:190:ASP:OD1	4:AD:190:ASP:N	2.39	0.56
6:AF:5:GLU:O	6:AF:6:ILE:HB	2.06	0.56
20:AT:5:LYS:O	20:AT:7:ALA:N	2.38	0.56
22:BA:2187:U:C5	22:BA:2188:U:C4	2.93	0.56
22:BA:2189:U:H2'	22:BA:2190:G:O4'	2.06	0.56
27:BF:52:ASN:ND2	27:BF:147:ASP:OD2	2.38	0.56
35:BN:32:GLU:HA	35:BN:115:LEU:HD12	1.87	0.56
37:BP:31:TRP:CE2	37:BP:40:LEU:HD11	2.41	0.56
1:CA:429:U:O3'	4:CD:22:LYS:HE3	2.06	0.56
1:CA:1417:G:C6	1:CA:1482:G:C6	2.94	0.56
4:CD:22:LYS:O	4:CD:23:SER:C	2.43	0.56
22:DA:204:A:H5'	22:DA:206:U:O4'	2.05	0.56
22:DA:321:U:C6	26:DE:159:LEU:HD22	2.40	0.56
22:DA:1062:G:C5	22:DA:1088:A:H2'	2.40	0.56
22:DA:2349:G:OP1	51:D3:45:ARG:NH2	2.39	0.56
22:DA:2387:U:H1'	44:DW:41:ARG:CD	2.35	0.56
26:DE:58:LYS:NZ	26:DE:70:SER:O	2.37	0.56
29:DH:83:LYS:N	29:DH:149:GLU:HG2	2.20	0.56
42:DU:4:LYS:O	42:DU:94:ARG:NH2	2.37	0.56
46:DY:57:LEU:HA	46:DY:60:LYS:HB3	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1439:G:H2'	1:AA:1440:U:O4'	2.06	0.56
12:AL:110:ARG:NH1	12:AL:112:GLN:O	2.37	0.56
22:BA:619:G:O6	26:BE:98:LYS:NZ	2.38	0.56
22:BA:1857:G:N2	22:BA:1884:G:H1'	2.19	0.56
52:B4:4:ARG:O	52:B4:37:GLN:O	2.23	0.56
1:CA:307:C:H5"	1:CA:308:C:OP2	2.06	0.56
1:CA:313:A:H2'	1:CA:314:C:C6	2.41	0.56
1:CA:344:A:OP2	1:CA:345:C:N4	2.38	0.56
1:CA:1226:C:H2'	13:CM:102:THR:HB	1.88	0.56
12:CL:110:ARG:NE	12:CL:117:TYR:CD2	2.73	0.56
12:CL:116:LYS:O	12:CL:117:TYR:CD2	2.59	0.56
22:DA:63:A:C2	22:DA:64:A:C5	2.94	0.56
22:DA:159:G:O2'	22:DA:167:A:N6	2.37	0.56
22:DA:564:C:H1'	38:DQ:37:GLN:NE2	2.21	0.56
22:DA:740:C:H5'	22:DA:1784:A:H3'	1.88	0.56
22:DA:845:A:H3'	22:DA:845:A:N3	2.21	0.56
22:DA:1020:A:C2	22:DA:1141:U:C2	2.93	0.56
22:DA:1999:C:O2	22:DA:2687:U:O2'	2.20	0.56
22:DA:2602:A:H4'	22:DA:2603:G:C5'	2.36	0.56
24:DC:212:ARG:NE	24:DC:216:VAL:O	2.39	0.56
39:DR:58:VAL:HG22	39:DR:58:VAL:O	2.06	0.56
1:AA:260:G:H2'	1:AA:261:U:C6	2.40	0.56
1:AA:545:C:H2'	1:AA:546:A:H5'	1.88	0.56
1:AA:702:A:N6	22:BA:1847:A:C4'	2.69	0.56
1:AA:956:U:C4	1:AA:957:U:C5	2.94	0.56
1:AA:1118:U:C5'	9:AI:106:ARG:HG3	2.35	0.56
1:AA:1313:U:OP2	19:AS:6:LYS:HB3	2.06	0.56
1:AA:1426:G:H2'	1:AA:1427:C:O4'	2.05	0.56
2:AB:119:THR:O	2:AB:120:GLN:CB	2.53	0.56
21:AU:10:GLU:HG3	21:AU:11:PRO:HD3	1.88	0.56
22:BA:1585:C:C2'	22:BA:1586:A:H5'	2.36	0.56
22:BA:2151:U:H2'	22:BA:2152:G:N7	2.21	0.56
22:BA:2292:U:H2'	22:BA:2293:G:C8	2.41	0.56
29:BH:40:THR:OG1	29:BH:43:ASN:OD1	2.24	0.56
35:BN:71:ARG:HH21	35:BN:71:ARG:CG	2.19	0.56
43:BV:14:LYS:CD	43:BV:18:ARG:NH1	2.69	0.56
53:B5:212:SER:HA	53:B5:221:PRO:CB	2.36	0.56
1:CA:881:G:C5	1:CA:882:C:C5	2.94	0.56
4:CD:36:GLN:O	4:CD:37:ALA:HB2	2.06	0.56
9:CI:120:LYS:CG	9:CI:123:ARG:HB3	2.35	0.56
21:CU:14:VAL:HG12	21:CU:16:LEU:HG	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:532:A:H2'	22:DA:532:A:N3	2.21	0.56
22:DA:1131:G:OP1	31:DJ:82:GLY:HA2	2.06	0.56
22:DA:2074:U:H2'	22:DA:2075:U:C6	2.41	0.56
22:DA:2504:U:C4	56:DA:3001:VIF:H30	2.41	0.56
22:DA:2757:A:N1	28:DG:67:THR:CG2	2.68	0.56
25:DD:104:VAL:HG23	25:DD:177:VAL:HG11	1.88	0.56
32:DK:92:GLU:O	32:DK:93:GLN:HB2	2.05	0.56
35:DN:117:ASP:O	35:DN:118:ARG:CB	2.53	0.56
1:AA:545:C:H5'	4:AD:69:GLU:HG3	1.88	0.56
1:AA:600:A:C2	1:AA:601:G:C4	2.93	0.56
2:AB:82:ASP:O	2:AB:84:ALA:N	2.39	0.56
3:AC:90:VAL:HA	3:AC:93:ASP:HB2	1.88	0.56
6:AF:84:VAL:O	6:AF:84:VAL:HG23	2.06	0.56
19:AS:5:LEU:O	19:AS:6:LYS:HD2	2.05	0.56
22:BA:225:C:H2'	22:BA:226:A:O4'	2.06	0.56
22:BA:388:G:N7	22:BA:390:U:H2'	2.21	0.56
22:BA:1653:G:H3'	35:BN:2:ARG:HG3	1.86	0.56
22:BA:2140:G:C2	22:BA:2152:G:N1	2.74	0.56
27:BF:132:VAL:CG2	27:BF:152:LEU:HB2	2.36	0.56
30:BI:100:LYS:HB3	30:BI:139:VAL:HB	1.87	0.56
48:B0:40:ARG:O	48:B0:41:HIS:HB2	2.05	0.56
1:CA:207:C:O2'	1:CA:213:G:N2	2.39	0.56
2:CB:68:LEU:HD12	2:CB:158:PRO:HG2	1.88	0.56
5:CE:104:GLY:O	5:CE:105:ILE:HG22	2.06	0.56
11:CK:52:PHE:CZ	11:CK:62:ALA:HA	2.40	0.56
12:CL:90:LEU:HB2	12:CL:93:VAL:HG21	1.88	0.56
22:DA:294:A:C2	22:DA:346:A:N6	2.74	0.56
22:DA:674:G:H1'	26:DE:69:ARG:NE	2.20	0.56
22:DA:1438:U:C5	22:DA:1552:A:C2	2.94	0.56
27:DF:4:LEU:HD13	27:DF:100:PHE:CD2	2.41	0.56
30:DI:54:PRO:O	30:DI:75:PRO:HD2	2.06	0.56
44:DW:21:LEU:HA	44:DW:39:ARG:HB2	1.88	0.56
1:AA:1264:U:O2	1:AA:1272:G:C2	2.59	0.56
2:AB:9:MET:N	2:AB:9:MET:SD	2.79	0.56
2:AB:151:ILE:O	2:AB:152:LYS:C	2.44	0.56
4:AD:95:GLU:OE1	4:AD:191:LEU:CD2	2.54	0.56
4:AD:107:PHE:CG	4:AD:145:ILE:HD11	2.41	0.56
9:AI:50:GLN:O	9:AI:52:LEU:N	2.39	0.56
22:BA:280:U:H2'	22:BA:281:C:O4'	2.06	0.56
22:BA:2307:G:N3	22:BA:2308:G:O6	2.39	0.56
1:CA:247:G:C6	1:CA:278:G:C2	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:636:U:H2'	1:CA:637:C:C6	2.41	0.56
22:DA:1027:A:C6	22:DA:1126:A:C4	2.93	0.56
22:DA:1341:G:C2	41:DT:84:TYR:CD2	2.94	0.56
22:DA:1509:A:N3	22:DA:1510:G:C8	2.74	0.56
22:DA:2467:C:O2	34:DM:123:LYS:NZ	2.38	0.56
22:DA:2822:G:H2'	22:DA:2823:A:H5"	1.88	0.56
51:D3:31:HIS:ND1	51:D3:32:ILE:HG13	2.21	0.56
4:AD:130:VAL:HG11	4:AD:135:TYR:CD2	2.40	0.55
10:AJ:65:TYR:HB3	14:AN:96:LEU:HD11	1.88	0.55
22:BA:1115:G:C2	22:BA:1116:G:C5	2.94	0.55
22:BA:1474:U:C2'	22:BA:1475:G:H5'	2.35	0.55
22:BA:2192:U:H2'	22:BA:2193:G:O4'	2.05	0.55
22:BA:2714:G:O2'	22:BA:2715:C:H5'	2.06	0.55
22:BA:2812:G:H2'	22:BA:2813:A:O4'	2.05	0.55
32:BK:78:ARG:NH1	37:BP:71:GLU:OE2	2.40	0.55
39:BR:49:ILE:HB	39:BR:52:PRO:C	2.27	0.55
1:CA:927:G:O2'	1:CA:1503:A:N7	2.37	0.55
1:CA:1162:C:C2	1:CA:1175:G:N2	2.74	0.55
22:DA:1230:A:H2'	22:DA:1231:U:C6	2.42	0.55
22:DA:1708:C:HO2'	22:DA:2860:A:HO2'	1.53	0.55
31:DJ:140:LEU:HD12	31:DJ:141:ASP:N	2.21	0.55
1:AA:452:A:H2'	1:AA:453:G:C5'	2.35	0.55
1:AA:1394:A:N1	1:AA:1500:A:O2'	2.28	0.55
4:AD:78:GLU:OE2	4:AD:81:ARG:NH1	2.39	0.55
9:AI:25:ASN:N	9:AI:62:ASP:OD1	2.39	0.55
22:BA:70:G:H4'	22:BA:71:A:OP1	2.05	0.55
22:BA:1014:A:C5	22:BA:1015:U:C5	2.95	0.55
22:BA:1717:A:H2'	22:BA:1718:G:O5'	2.07	0.55
22:BA:1910:G:H2'	22:BA:1911:U:O4'	2.06	0.55
22:BA:1926:U:H2'	22:BA:1926:U:O2	2.05	0.55
24:BC:107:PRO:HB3	24:BC:142:HIS:CE1	2.41	0.55
1:CA:66:A:H4'	1:CA:173:U:C5	2.41	0.55
1:CA:994:A:C8	1:CA:1216:A:H4'	2.41	0.55
3:CC:40:ARG:HG2	3:CC:55:ILE:HD11	1.88	0.55
19:CS:80:TYR:O	19:CS:81:ARG:CB	2.53	0.55
22:DA:196:A:O2'	22:DA:805:G:O6	2.16	0.55
22:DA:422:A:C2	22:DA:423:A:C4	2.94	0.55
22:DA:569:U:H5"	22:DA:821:A:C2	2.42	0.55
22:DA:1584:U:O2	22:DA:1584:U:H3'	2.07	0.55
33:DL:136:GLU:HA	33:DL:140:GLY:HA3	1.87	0.55
39:DR:78:ARG:HB3	39:DR:83:TYR:CD1	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:96:U:O2'	1:AA:97:G:O5'	2.22	0.55
1:AA:587:G:C2	1:AA:755:G:C5	2.95	0.55
1:AA:1008:U:H2'	1:AA:1009:U:C6	2.41	0.55
2:AB:72:THR:O	2:AB:73:LYS:HB3	2.06	0.55
9:AI:86:ALA:C	9:AI:88:MET:N	2.60	0.55
13:AM:11:ASP:CG	13:AM:12:HIS:N	2.59	0.55
22:BA:456:C:O2	41:BT:73:ARG:NH1	2.37	0.55
22:BA:858:G:H3'	22:BA:859:G:C8	2.40	0.55
22:BA:1132:U:H3'	22:BA:1133:A:H5"	1.89	0.55
22:BA:1405:U:H2'	22:BA:1406:U:C6	2.42	0.55
27:BF:124:GLY:C	27:BF:125:ARG:HG2	2.25	0.55
1:CA:455:G:C2	1:CA:478:A:N1	2.75	0.55
1:CA:978:A:C5	1:CA:1318:A:N6	2.74	0.55
1:CA:1201:A:H1'	1:CA:1202:U:OP2	2.05	0.55
22:DA:146:A:C2	22:DA:147:C:C2	2.95	0.55
22:DA:224:U:C4	22:DA:225:C:C5	2.94	0.55
22:DA:1027:A:N7	22:DA:1126:A:C2	2.75	0.55
22:DA:1288:G:C4	22:DA:1327:A:C2	2.94	0.55
22:DA:1823:G:N7	58:DA:3653:HOH:O	2.39	0.55
22:DA:2093:G:N7	22:DA:2225:A:H2'	2.22	0.55
35:DN:28:LEU:O	35:DN:32:GLU:HA	2.06	0.55
1:AA:89:U:O2'	1:AA:90:C:C5'	2.54	0.55
1:AA:990:C:N3	1:AA:991:U:C4	2.75	0.55
1:AA:1277:C:O2'	1:AA:1279:G:H1'	2.05	0.55
5:AE:109:GLY:O	5:AE:110:ALA:CB	2.53	0.55
6:AF:53:LYS:O	6:AF:54:LEU:CD1	2.54	0.55
22:BA:1487:U:C2	22:BA:1503:A:C2	2.94	0.55
31:BJ:81:ILE:HG12	31:BJ:82:GLY:H	1.71	0.55
48:B0:55:ILE:HG22	48:B0:56:ALA:N	2.21	0.55
1:CA:976:G:N2	1:CA:1363:A:N3	2.54	0.55
2:CB:35:ARG:O	2:CB:38:VAL:HG12	2.07	0.55
2:CB:131:LYS:O	2:CB:135:LEU:N	2.40	0.55
5:CE:83:HIS:CD2	8:CH:96:MET:CE	2.90	0.55
22:DA:134:G:C2	22:DA:146:A:C2	2.95	0.55
22:DA:182:A:O2'	22:DA:433:C:O2'	2.07	0.55
22:DA:247:G:N7	22:DA:249:C:C2	2.75	0.55
22:DA:945:A:C5	22:DA:2448:A:C2	2.95	0.55
22:DA:1651:G:C6	22:DA:1652:A:C5	2.95	0.55
22:DA:1827:U:O2'	22:DA:1970:A:N3	2.37	0.55
22:DA:2457:U:C4	22:DA:2458:G:C6	2.94	0.55
22:DA:2552:U:C2	22:DA:2554:U:H5'	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:84:LEU:HD13	25:DD:88:GLU:HB2	1.89	0.55
30:DI:10:LYS:HB2	30:DI:56:PRO:HB3	1.88	0.55
1:AA:772:U:C2'	1:AA:773:G:O5'	2.55	0.55
1:AA:1237:C:C4	1:AA:1336:C:N3	2.75	0.55
3:AC:7:PRO:HG2	3:AC:184:TYR:CG	2.42	0.55
22:BA:1176:U:H2'	22:BA:1177:G:C4	2.42	0.55
22:BA:1283:G:N2	22:BA:1285:A:H3'	2.22	0.55
22:BA:1776:G:P	58:BA:3451:HOH:O	2.63	0.55
22:BA:1918:A:O2'	22:BA:1920:C:C4	2.59	0.55
22:BA:2032:G:N7	58:BA:3536:HOH:O	2.37	0.55
22:BA:2114:A:H2'	22:BA:2114:A:N3	2.20	0.55
1:CA:144:G:C5	1:CA:179:A:C2	2.94	0.55
10:CJ:77:VAL:O	10:CJ:79:PRO:HD3	2.07	0.55
22:DA:2011:U:O4	58:DA:3375:HOH:O	2.17	0.55
22:DA:2061:G:H1	56:DA:3001:VIF:H19	1.72	0.55
22:DA:2182:U:H2'	22:DA:2183:A:C8	2.41	0.55
22:DA:2752:C:C5	22:DA:2753:A:N7	2.75	0.55
24:DC:136:PRO:O	24:DC:139:SER:OG	2.21	0.55
24:DC:144:VAL:HB	24:DC:154:LEU:HB2	1.88	0.55
32:DK:107:LEU:O	32:DK:109:SER:N	2.38	0.55
37:DP:89:ARG:HD2	37:DP:113:ARG:CZ	2.37	0.55
40:DS:66:ILE:O	40:DS:67:ASP:C	2.44	0.55
1:AA:451:A:H4'	1:AA:452:A:O5'	2.07	0.55
1:AA:1299:A:C6	1:AA:1301:U:O2	2.60	0.55
2:AB:147:SER:O	2:AB:148:LEU:CB	2.54	0.55
2:AB:151:ILE:HG23	2:AB:152:LYS:N	2.21	0.55
4:AD:147:GLU:HA	4:AD:150:LYS:CD	2.36	0.55
9:AI:58:VAL:O	9:AI:59:GLU:CG	2.55	0.55
16:AP:10:GLY:O	16:AP:11:ALA:HB2	2.06	0.55
17:AQ:45:HIS:CB	17:AQ:70:THR:HG23	2.35	0.55
22:BA:27:G:C4	22:BA:512:G:N2	2.75	0.55
22:BA:1031:G:N3	52:B4:38:GLY:O	2.40	0.55
22:BA:2190:G:C6	22:BA:2191:A:C6	2.95	0.55
29:BH:86:ASP:O	29:BH:87:GLU:CB	2.53	0.55
29:BH:89:LYS:HG2	1:CA:359:G:OP1	2.06	0.55
29:BH:98:ASP:O	29:BH:102:ALA:HB3	2.07	0.55
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.22	0.55
1:CA:1361:G:H2'	1:CA:1362:A:H5"	1.87	0.55
22:DA:684:G:C2	22:DA:794:A:C2	2.95	0.55
22:DA:1335:C:H2'	22:DA:1336:A:C8	2.42	0.55
22:DA:1444:G:C2	22:DA:1548:A:C2	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1916:A:H2'	22:DA:1917:U:O4'	2.07	0.55
22:DA:2261:C:C2	22:DA:2280:G:C2	2.94	0.55
22:DA:2392:A:C8	22:DA:2429:G:C2	2.95	0.55
25:DD:112:THR:O	25:DD:195:GLY:HA2	2.06	0.55
25:DD:133:THR:HG23	25:DD:134:HIS:H	1.72	0.55
46:DY:56:LEU:O	46:DY:57:LEU:HB2	2.07	0.55
5:AE:133:PRO:HA	5:AE:136:VAL:HG13	1.88	0.55
21:AU:42:THR:O	21:AU:46:LYS:HB2	2.06	0.55
22:BA:1090:A:C2'	22:BA:1091:G:H5'	2.36	0.55
22:BA:1738:G:O2'	22:BA:1739:A:O5'	2.23	0.55
22:BA:1912:A:C8	22:BA:1917:U:O4	2.60	0.55
35:BN:103:ARG:HB2	35:BN:110:MET:HE3	1.89	0.55
53:B5:50:ILE:CG2	53:B5:51:ASP:N	2.69	0.55
1:CA:4:U:O2	1:CA:4:U:H2'	2.05	0.55
1:CA:372:C:O2	58:CA:1892:HOH:O	2.08	0.55
1:CA:1317:C:N4	1:CA:1318:A:N3	2.55	0.55
2:CB:16:PHE:CZ	2:CB:18:HIS:CE1	2.95	0.55
2:CB:208:ARG:O	2:CB:210:VAL:N	2.40	0.55
5:CE:15:LEU:C	5:CE:15:LEU:HD12	2.26	0.55
11:CK:89:PRO:HD3	21:CU:29:LEU:CD1	2.37	0.55
12:CL:74:LEU:HD11	12:CL:80:ILE:HG21	1.89	0.55
22:DA:219:A:N3	22:DA:234:U:O2'	2.38	0.55
22:DA:247:G:OP2	22:DA:249:C:N4	2.40	0.55
22:DA:445:C:O2'	22:DA:449:A:N3	2.36	0.55
22:DA:634:C:H2'	22:DA:635:C:C6	2.41	0.55
22:DA:1324:G:N2	22:DA:1328:A:N1	2.55	0.55
22:DA:1838:C:C5	22:DA:1899:A:C5	2.95	0.55
22:DA:2297:A:N1	22:DA:2321:U:C5	2.74	0.55
22:DA:2849:U:H4'	22:DA:2868:A:C2	2.42	0.55
25:DD:149:ASN:OD1	25:DD:150:GLN:N	2.39	0.55
28:DG:176:LYS:O	28:DG:177:LYS:HB2	2.07	0.55
38:DQ:86:ALA:O	38:DQ:87:SER:CB	2.54	0.55
45:DX:68:LEU:HD22	45:DX:78:TYR:CE1	2.40	0.55
1:AA:8:A:H5'	5:AE:125:ALA:O	2.07	0.55
1:AA:196:A:N3	1:AA:222:C:H1'	2.21	0.55
1:AA:702:A:N6	22:BA:1847:A:O4'	2.39	0.55
1:AA:721:G:H4'	1:AA:722:G:O4'	2.07	0.55
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.42	0.55
1:AA:1268:G:H2'	1:AA:1269:A:C8	2.42	0.55
1:AA:1363:A:O2'	1:AA:1365:G:N7	2.39	0.55
2:AB:24:ASN:O	2:AB:26:LYS:N	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:23:ILE:HG13	11:AK:23:ILE:O	2.06	0.55
19:AS:64:ASP:HB3	27:BF:115:ARG:NH2	2.21	0.55
22:BA:1605:C:H2'	22:BA:1606:C:H5'	1.88	0.55
22:BA:1911:U:H2'	22:BA:1918:A:C2	2.41	0.55
26:BE:59:PRO:HD3	26:BE:71:GLY:O	2.07	0.55
29:BH:121:VAL:N	29:BH:122:LEU:CA	2.69	0.55
29:BH:121:VAL:N	29:BH:122:LEU:CB	2.70	0.55
39:BR:27:ILE:CG2	39:BR:63:VAL:HG21	2.37	0.55
1:CA:978:A:P	1:CA:1362:A:N6	2.79	0.55
1:CA:1089:G:C5	1:CA:1090:U:C5	2.95	0.55
2:CB:15:HIS:C	2:CB:15:HIS:ND1	2.59	0.55
7:CG:75:VAL:HG21	7:CG:144:MET:HG2	1.89	0.55
12:CL:87:VAL:HB	12:CL:93:VAL:HG21	1.89	0.55
16:CP:23:ASP:O	16:CP:25:ARG:N	2.40	0.55
17:CQ:60:GLU:HB3	17:CQ:76:VAL:CG2	2.37	0.55
19:CS:19:VAL:HG21	19:CS:44:MET:HG2	1.88	0.55
21:CU:40:LYS:N	21:CU:41:PRO:CD	2.67	0.55
22:DA:116:C:C4	22:DA:117:G:N7	2.74	0.55
22:DA:503:A:C2	22:DA:506:G:C4	2.94	0.55
22:DA:547:A:H3'	22:DA:548:G:C5'	2.37	0.55
22:DA:836:G:C5	22:DA:837:C:C4	2.94	0.55
22:DA:1465:G:C5	22:DA:1466:U:C4	2.95	0.55
22:DA:1993:U:H4'	25:DD:133:THR:CG2	2.37	0.55
50:D2:43:THR:HG1	50:D2:44:VAL:N	2.02	0.55
1:AA:68:G:C5	1:AA:69:G:H1'	2.42	0.55
1:AA:411:A:C6	1:AA:429:U:C5	2.94	0.55
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.88	0.55
1:AA:1157:A:N6	1:AA:1180:A:N7	2.54	0.55
4:AD:29:ASP:O	4:AD:31:LYS:HD3	2.07	0.55
10:AJ:65:TYR:CB	14:AN:96:LEU:HD11	2.36	0.55
17:AQ:81:LYS:N	17:AQ:81:LYS:CD	2.70	0.55
20:AT:44:LYS:NZ	20:AT:86:LEU:O	2.30	0.55
22:BA:1061:U:O2'	22:BA:1062:G:C5'	2.55	0.55
29:BH:120:GLY:CA	29:BH:122:LEU:HA	2.37	0.55
1:CA:66:A:C6	1:CA:67:C:C5	2.95	0.55
1:CA:106:C:O2	1:CA:379:C:H4'	2.07	0.55
19:CS:75:ALA:N	19:CS:76:PRO:CD	2.69	0.55
22:DA:273:G:N2	22:DA:365:U:O2	2.40	0.55
22:DA:422:A:OP2	58:DA:3560:HOH:O	2.18	0.55
22:DA:740:C:H5'	22:DA:1784:A:C2'	2.37	0.55
22:DA:740:C:N4	22:DA:758:C:O2	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:847:U:O2	22:DA:934:U:H1'	2.06	0.55
22:DA:1082:U:OP1	30:DI:124:ALA:CB	2.54	0.55
22:DA:1290:C:C2	22:DA:1291:C:C6	2.95	0.55
24:DC:147:LYS:HB2	24:DC:150:LYS:CB	2.37	0.55
25:DD:140:HIS:CE1	58:DD:303:HOH:O	2.59	0.55
28:DG:118:PRO:HG3	28:DG:144:VAL:HG21	1.89	0.55
28:DG:133:LEU:HD13	28:DG:141:ILE:HB	1.89	0.55
1:AA:246:A:C2	1:AA:282:A:C5	2.95	0.55
1:AA:955:U:O4'	1:AA:1227:A:N6	2.40	0.55
1:AA:1313:U:P	19:AS:6:LYS:HB3	2.47	0.55
5:AE:137:VAL:O	5:AE:137:VAL:HG22	2.07	0.55
6:AF:68:GLN:HA	6:AF:71:ILE:CG2	2.37	0.55
22:BA:468:G:N7	50:B2:39:ARG:NH2	2.53	0.55
22:BA:634:C:H2'	22:BA:635:C:C6	2.42	0.55
22:BA:2846:G:OP1	37:BP:53:ARG:NH1	2.40	0.55
23:BB:49:C:O3'	36:BO:68:LYS:HE2	2.07	0.55
29:BH:10:ALA:O	29:BH:12:LEU:N	2.40	0.55
1:CA:960:U:C5	1:CA:1225:A:C8	2.95	0.55
1:CA:1084:G:C5	1:CA:1085:U:C4	2.95	0.55
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.43	0.55
4:CD:35:GLU:HG3	4:CD:36:GLN:N	2.22	0.55
5:CE:96:MET:HE3	5:CE:111:MET:CE	2.37	0.55
5:CE:101:GLU:C	5:CE:103:THR:N	2.60	0.55
7:CG:126:ASP:N	7:CG:126:ASP:OD1	2.38	0.55
22:DA:5:A:C2	22:DA:2899:A:C2	2.95	0.55
22:DA:310:A:HO2'	22:DA:311:A:P	2.22	0.55
22:DA:447:A:H5'	22:DA:449:A:C5	2.42	0.55
22:DA:2341:G:C5	22:DA:2342:C:C4	2.95	0.55
22:DA:2812:G:N2	22:DA:2889:C:O2	2.40	0.55
24:DC:267:ILE:O	24:DC:267:ILE:HG22	2.07	0.55
31:DJ:56:VAL:HB	31:DJ:124:VAL:HB	1.89	0.55
1:AA:141:G:C2	1:AA:142:G:H1'	2.42	0.54
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.90	0.54
1:AA:1043:G:O6	1:AA:1044:A:N6	2.41	0.54
14:AN:13:ARG:O	14:AN:17:ALA:HB2	2.07	0.54
22:BA:215:G:H4'	22:BA:216:A:OP1	2.07	0.54
22:BA:1585:C:H2'	22:BA:1586:A:O4'	2.07	0.54
22:BA:2061:G:O6	56:BA:3001:VIF:H19	2.07	0.54
1:CA:484:G:C5	1:CA:486:U:H1'	2.42	0.54
5:CE:131:THR:O	5:CE:132:ASN:C	2.45	0.54
22:DA:579:G:N2	22:DA:1262:A:C4	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1308:A:H2'	22:DA:1309:G:O4'	2.07	0.54
22:DA:1355:G:C2	22:DA:1356:G:C8	2.95	0.54
22:DA:1370:C:H2'	22:DA:1371:G:C8	2.42	0.54
22:DA:1638:C:H4'	22:DA:2710:C:O2	2.07	0.54
22:DA:1638:C:H5"	22:DA:2710:C:O2'	2.07	0.54
22:DA:1652:A:C2	22:DA:2006:C:N3	2.75	0.54
22:DA:2093:G:C2	22:DA:2094:A:C5	2.96	0.54
22:DA:2110:G:C6	22:DA:2120:G:C8	2.95	0.54
22:DA:2308:G:H5"	22:DA:2309:A:OP2	2.05	0.54
26:DE:48:THR:O	26:DE:52:VAL:HG23	2.06	0.54
27:DF:36:LEU:O	27:DF:88:LYS:HA	2.06	0.54
34:DM:17:ASN:O	34:DM:38:ARG:HD3	2.07	0.54
42:DU:74:ASN:ND2	42:DU:96:PHE:CD1	2.76	0.54
46:DY:17:GLU:HB2	46:DY:53:VAL:HG11	1.90	0.54
1:AA:114:U:O2'	1:AA:115:G:H5'	2.07	0.54
1:AA:663:A:H5'	1:AA:836:G:OP1	2.07	0.54
1:AA:872:A:C8	1:AA:874:G:C8	2.95	0.54
1:AA:1322:C:OP1	19:AS:78:ARG:NH2	2.40	0.54
2:AB:21:ARG:HA	2:AB:21:ARG:CZ	2.37	0.54
2:AB:86:SER:OG	2:AB:87:CYS:SG	2.63	0.54
11:AK:71:ALA:O	11:AK:73:ALA:N	2.41	0.54
20:AT:58:VAL:HG12	20:AT:72:ALA:CB	2.37	0.54
22:BA:2024:G:OP2	22:BA:2034:U:H4'	2.07	0.54
22:BA:2564:A:C2	22:BA:2647:U:H4'	2.42	0.54
27:BF:171:ALA:O	27:BF:173:PHE:N	2.40	0.54
30:BI:28:LEU:HD12	30:BI:28:LEU:O	2.07	0.54
1:CA:671:G:N2	1:CA:736:C:C2	2.76	0.54
1:CA:960:U:O2'	1:CA:1223:C:H4'	2.07	0.54
7:CG:74:GLU:O	7:CG:88:PRO:HA	2.07	0.54
15:CO:17:ARG:O	15:CO:18:ASP:HB3	2.07	0.54
22:DA:30:G:C6	22:DA:31:C:N3	2.75	0.54
22:DA:478:A:N6	22:DA:500:G:O2'	2.40	0.54
22:DA:491:G:C6	22:DA:492:A:C6	2.94	0.54
22:DA:604:G:N1	22:DA:605:G:C5	2.75	0.54
22:DA:1248:G:C4	38:DQ:3:ARG:HG3	2.43	0.54
22:DA:2118:U:O4	22:DA:2149:U:H1'	2.06	0.54
22:DA:2344:U:H4'	22:DA:2345:G:OP1	2.07	0.54
22:DA:2693:G:N2	22:DA:2717:C:C2	2.74	0.54
22:DA:2790:U:H5'	22:DA:2893:A:N7	2.22	0.54
22:DA:2834:G:H2'	22:DA:2879:A:N6	2.22	0.54
29:DH:31:VAL:HB	29:DH:32:PRO:HD3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:103:ARG:HB3	37:DP:108:ALA:HB2	1.89	0.54
42:DU:95:PHE:HA	42:DU:102:THR:HA	1.90	0.54
47:DZ:52:SER:HA	47:DZ:55:VAL:HG22	1.89	0.54
1:AA:189:A:H2'	1:AA:190:A:O4'	2.06	0.54
1:AA:1257:A:H4'	1:AA:1258:G:OP2	2.07	0.54
3:AC:36:ASP:O	3:AC:39:VAL:HG22	2.08	0.54
22:BA:84:A:H4'	22:BA:85:G:O5'	2.06	0.54
22:BA:614:A:O2'	22:BA:615:U:OP2	2.26	0.54
22:BA:1688:U:H1'	22:BA:1701:A:C6	2.42	0.54
22:BA:2825:G:H2'	22:BA:2826:A:H5'	1.90	0.54
26:BE:149:ILE:HD12	26:BE:150:THR:N	2.22	0.54
29:BH:90:LEU:CD2	29:BH:93:SER:HA	2.37	0.54
32:BK:66:LYS:HD2	32:BK:79:PHE:O	2.08	0.54
39:BR:46:GLU:OE1	39:BR:46:GLU:O	2.26	0.54
1:CA:1291:U:H4'	9:CI:42:GLU:HG2	1.89	0.54
1:CA:1361:G:C2'	1:CA:1362:A:H5"	2.36	0.54
5:CE:157:ARG:O	5:CE:159:LYS:N	2.36	0.54
22:DA:134:G:N2	22:DA:146:A:N3	2.55	0.54
22:DA:668:A:C2	22:DA:670:A:C5	2.95	0.54
22:DA:1125:G:C6	22:DA:1126:A:N6	2.75	0.54
22:DA:2467:C:N4	22:DA:2468:A:C6	2.75	0.54
22:DA:2725:A:C4	22:DA:2727:A:C8	2.95	0.54
22:DA:2740:A:C6	22:DA:2764:A:C8	2.95	0.54
22:DA:2773:C:H2'	22:DA:2774:C:C6	2.42	0.54
22:DA:2800:A:C2	22:DA:2895:G:H1'	2.42	0.54
23:DB:2:G:N2	23:DB:3:C:C2	2.76	0.54
26:DE:52:VAL:HG21	26:DE:81:GLY:HA2	1.89	0.54
30:DI:6:GLN:O	30:DI:7:ALA:HB3	2.08	0.54
1:AA:1035:A:C2	1:AA:1036:A:C4	2.95	0.54
1:AA:1086:U:O2'	1:AA:1087:G:H5'	2.08	0.54
8:AH:59:LEU:HD11	8:AH:61:LEU:HD21	1.90	0.54
10:AJ:91:ASP:OD2	10:AJ:91:ASP:N	2.39	0.54
12:AL:116:LYS:O	12:AL:117:TYR:HB2	2.08	0.54
22:BA:228:C:N4	22:BA:2407:A:N3	2.54	0.54
22:BA:864:G:C6	22:BA:865:C:N4	2.75	0.54
22:BA:1922:G:N2	22:BA:1923:U:C1'	2.71	0.54
22:BA:2451:A:C2	56:BA:3001:VIF:C23	2.90	0.54
24:BC:30:PHE:CZ	24:BC:32:PRO:HG2	2.43	0.54
29:BH:90:LEU:HA	29:BH:125:THR:HG23	1.90	0.54
36:BO:59:ALA:O	36:BO:60:GLU:C	2.45	0.54
46:BY:56:LEU:O	46:BY:57:LEU:CB	2.54	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:76:G:N2	1:CA:95:C:C2	2.75	0.54
1:CA:174:A:C4	1:CA:175:C:C6	2.95	0.54
1:CA:406:G:C2	1:CA:407:U:C5	2.95	0.54
1:CA:718:A:C6	11:CK:118:HIS:CD2	2.95	0.54
2:CB:94:HIS:CD2	2:CB:146:ASN:HB2	2.41	0.54
5:CE:133:PRO:HA	5:CE:136:VAL:CG1	2.37	0.54
6:CF:29:ILE:HG22	6:CF:34:GLY:O	2.08	0.54
8:CH:9:ASP:OD2	8:CH:13:ARG:NH1	2.40	0.54
22:DA:1029:A:N7	22:DA:1030:C:C2	2.76	0.54
22:DA:1731:G:C6	22:DA:1733:G:C5	2.96	0.54
22:DA:2134:A:N6	22:DA:2157:G:O2'	2.39	0.54
1:AA:90:C:H1'	1:AA:91:U:H5'	1.88	0.54
1:AA:260:G:O6	58:AA:1702:HOH:O	2.17	0.54
1:AA:619:U:N3	4:AD:131:ASN:OD1	2.37	0.54
1:AA:721:G:C6	1:AA:733:G:C2	2.95	0.54
1:AA:982:U:H4'	1:AA:983:A:C5'	2.37	0.54
1:AA:1123:U:O2'	10:AJ:39:PRO:O	2.21	0.54
6:AF:3:HIS:O	6:AF:92:THR:OG1	2.26	0.54
7:AG:97:ASN:HA	7:AG:100:ALA:HB3	1.89	0.54
7:AG:113:ASP:HB2	7:AG:119:ARG:HG3	1.89	0.54
22:BA:790:U:OP2	58:BA:3763:HOH:O	2.18	0.54
22:BA:1374:G:C5	22:BA:1375:U:C5	2.96	0.54
22:BA:2191:A:C2	22:BA:2192:U:C4	2.94	0.54
22:BA:2323:G:C2'	22:BA:2324:U:H5'	2.38	0.54
22:BA:2328:A:H2'	22:BA:2329:U:C6	2.42	0.54
29:BH:14:SER:OG	29:BH:17:ASP:CG	2.46	0.54
1:CA:96:U:O2'	1:CA:97:G:P	2.66	0.54
1:CA:920:U:H2'	1:CA:921:U:H6	1.73	0.54
1:CA:1302:C:C5	13:CM:17:ILE:HD13	2.43	0.54
13:CM:20:THR:HG22	13:CM:26:GLY:C	2.27	0.54
14:CN:3:LYS:HB3	14:CN:6:MET:HG2	1.90	0.54
22:DA:52:A:N7	22:DA:117:G:N2	2.56	0.54
22:DA:500:G:N2	22:DA:502:A:C8	2.76	0.54
22:DA:1581:G:C5	22:DA:1582:C:C4	2.96	0.54
22:DA:1831:G:C6	22:DA:1832:C:C4	2.96	0.54
22:DA:2749:A:OP1	28:DG:2:SER:N	2.40	0.54
26:DE:146:VAL:HA	26:DE:185:LYS:O	2.07	0.54
28:DG:41:VAL:HG12	28:DG:42:GLU:N	2.23	0.54
29:DH:79:THR:HA	29:DH:145:ASN:HB2	1.89	0.54
51:D3:34:THR:HG22	51:D3:35:LYS:N	2.22	0.54
1:AA:516:U:O2'	1:AA:519:C:N3	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:50:THR:O	16:AP:50:THR:HG22	2.08	0.54
22:BA:2582:G:C2	22:BA:2583:G:C8	2.95	0.54
27:BF:173:PHE:O	27:BF:174:ASP:CB	2.56	0.54
29:BH:77:THR:O	29:BH:77:THR:CG2	2.56	0.54
29:BH:103:VAL:HG21	29:BH:132:PHE:CE1	2.42	0.54
32:BK:66:LYS:HA	32:BK:79:PHE:O	2.07	0.54
41:BT:49:LYS:HD3	41:BT:49:LYS:N	2.23	0.54
1:CA:299:G:C6	1:CA:300:A:C6	2.95	0.54
1:CA:401:C:P	4:CD:70:ARG:HD3	2.47	0.54
2:CB:132:LYS:O	2:CB:136:MET:HB3	2.07	0.54
3:CC:145:GLY:O	3:CC:146:ALA:O	2.26	0.54
4:CD:167:LYS:HE2	4:CD:173:VAL:HG11	1.89	0.54
11:CK:89:PRO:HD3	21:CU:29:LEU:HD11	1.89	0.54
17:CQ:16:LYS:C	17:CQ:17:MET:SD	2.86	0.54
18:CR:72:ASP:C	18:CR:73:ARG:HG2	2.28	0.54
20:CT:36:TYR:CG	20:CT:37:ALA:N	2.76	0.54
22:DA:219:A:N6	22:DA:220:G:C6	2.76	0.54
22:DA:443:A:N7	26:DE:40:ARG:HG3	2.22	0.54
22:DA:2083:G:N7	22:DA:2084:C:C5	2.76	0.54
30:DI:58:VAL:CG1	30:DI:59:ILE:N	2.71	0.54
37:DP:65:SER:O	37:DP:66:ASN:C	2.44	0.54
1:AA:1493:A:C8	1:AA:1493:A:OP2	2.60	0.54
9:AI:40:GLY:O	9:AI:41:ARG:HB2	2.07	0.54
10:AJ:6:ILE:HD12	10:AJ:76:ILE:O	2.08	0.54
21:AU:40:LYS:N	21:AU:41:PRO:CD	2.71	0.54
22:BA:18:U:O3’	38:BQ:23:GLY:HA2	2.08	0.54
22:BA:1082:U:C5’	30:BI:119:GLY:CA	2.86	0.54
22:BA:1176:U:C4	22:BA:1177:G:O6	2.60	0.54
22:BA:1577:C:H2’	22:BA:1578:U:C1’	2.37	0.54
22:BA:1883:U:O4	22:BA:1884:G:C6	2.60	0.54
23:BB:30:C:H2’	23:BB:31:C:H5’	1.90	0.54
25:BD:133:THR:HG23	25:BD:134:HIS:N	2.21	0.54
30:BI:57:VAL:HG22	30:BI:58:VAL:N	2.23	0.54
8:CH:89:LYS:HG3	8:CH:90:ASP:N	2.22	0.54
22:DA:150:U:H2’	22:DA:151:C:C6	2.42	0.54
22:DA:370:G:C6	22:DA:424:G:C5	2.95	0.54
22:DA:600:G:C5’	26:DE:27:LEU:HD22	2.38	0.54
22:DA:1319:C:H2’	22:DA:1320:C:H5’	1.88	0.54
22:DA:1566:A:N3	24:DC:213:TRP:HB2	2.23	0.54
22:DA:2267:A:H5”	22:DA:2268:A:C5’	2.38	0.54
22:DA:2355:G:OP1	44:DW:25:ARG:NH2	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:94:ALA:O	31:DJ:96:ARG:N	2.41	0.54
35:DN:69:ARG:O	35:DN:71:ARG:N	2.38	0.54
36:DO:33:ARG:O	36:DO:34:HIS:CD2	2.60	0.54
42:DU:3:ALA:O	42:DU:6:ARG:NH1	2.40	0.54
42:DU:7:ARG:HD3	42:DU:7:ARG:C	2.28	0.54
1:AA:270:A:C5	1:AA:271:C:C4	2.96	0.54
1:AA:655:A:C2	1:AA:656:G:C4	2.96	0.54
1:AA:946:A:H2'	1:AA:947:G:C8	2.43	0.54
2:AB:101:LEU:HD11	2:AB:158:PRO:HG2	1.90	0.54
4:AD:65:TYR:CG	4:AD:94:LEU:HD22	2.42	0.54
5:AE:137:VAL:O	5:AE:138:ARG:HB2	2.07	0.54
13:AM:83:LEU:HD21	19:AS:65:GLU:HG2	1.90	0.54
19:AS:15:LEU:HD13	19:AS:33:THR:HG21	1.90	0.54
22:BA:102:U:C2	46:BY:2:LYS:HE3	2.43	0.54
22:BA:815:C:O2'	22:BA:816:C:H5'	2.07	0.54
22:BA:1925:C:H5"	22:BA:1926:U:O4	2.08	0.54
39:BR:49:ILE:HB	39:BR:52:PRO:HA	1.90	0.54
46:BY:37:LEU:C	46:BY:37:LEU:HD12	2.28	0.54
1:CA:158:G:C5	1:CA:164:G:C6	2.96	0.54
1:CA:249:U:O2'	1:CA:252:U:O2'	2.15	0.54
1:CA:442:G:C6	1:CA:443:C:C4	2.96	0.54
1:CA:794:A:O2'	1:CA:1521:C:O2'	2.26	0.54
1:CA:1149:C:N4	1:CA:1150:A:C6	2.75	0.54
1:CA:1181:G:O2'	1:CA:1182:G:C5	2.60	0.54
1:CA:1467:C:H2'	1:CA:1468:A:C8	2.43	0.54
2:CB:62:SER:C	2:CB:64:LYS:N	2.60	0.54
3:CC:36:ASP:O	3:CC:40:ARG:HG3	2.08	0.54
6:CF:6:ILE:HD12	6:CF:6:ILE:N	2.23	0.54
14:CN:16:LEU:HB3	14:CN:55:SER:HA	1.90	0.54
15:CO:70:LEU:HD13	15:CO:78:TYR:HA	1.89	0.54
18:CR:63:ARG:HB3	18:CR:70:TYR:CZ	2.42	0.54
22:DA:39:G:C6	22:DA:40:U:C4	2.96	0.54
22:DA:238:C:H2'	22:DA:239:C:O4'	2.08	0.54
22:DA:547:A:H3'	22:DA:548:G:H5'	1.89	0.54
22:DA:725:G:C6	22:DA:726:G:N1	2.76	0.54
22:DA:998:C:OP2	38:DQ:58:ARG:NH2	2.41	0.54
22:DA:2272:U:H5"	22:DA:2273:A:OP1	2.07	0.54
22:DA:2591:C:OP1	24:DC:238:ARG:NH1	2.41	0.54
22:DA:2690:U:C4	22:DA:2873:A:N1	2.76	0.54
35:DN:55:ALA:HA	35:DN:80:PHE:CE1	2.43	0.54
36:DO:33:ARG:O	36:DO:34:HIS:HB2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:100:HIS:CG	36:DO:101:GLY:N	2.76	0.54
41:DT:61:LEU:HD12	41:DT:62:VAL:N	2.23	0.54
1:AA:255:G:C6	1:AA:256:U:C4	2.96	0.54
1:AA:874:G:C6	1:AA:875:U:C4	2.96	0.54
4:AD:105:MET:HB2	4:AD:107:PHE:CE2	2.43	0.54
22:BA:998:C:OP2	38:BQ:58:ARG:NH2	2.39	0.54
22:BA:2694:G:C5	22:BA:2695:U:C4	2.96	0.54
32:BK:35:VAL:HG12	32:BK:36:GLY:N	2.23	0.54
41:BT:11:LEU:N	41:BT:11:LEU:CD2	2.70	0.54
54:B6:1:MHW:O	54:B6:1:MHW:OG1	2.26	0.54
1:CA:429:U:H3'	4:CD:9:LEU:HD23	1.90	0.54
1:CA:689:C:OP2	11:CK:53:ARG:NH2	2.41	0.54
14:CN:87:ALA:HB1	14:CN:92:GLU:HB2	1.90	0.54
19:CS:58:VAL:HG11	19:CS:75:ALA:HA	1.90	0.54
22:DA:40:U:H2'	22:DA:41:C:C6	2.43	0.54
22:DA:59:U:O2'	22:DA:74:A:OP2	2.14	0.54
22:DA:593:U:H2'	22:DA:594:U:C6	2.43	0.54
22:DA:812:C:H1'	22:DA:1250:G:C2	2.42	0.54
22:DA:845:A:N1	22:DA:847:U:C6	2.76	0.54
22:DA:893:C:H2'	22:DA:894:U:O4'	2.07	0.54
22:DA:1692:U:O2'	22:DA:1693:U:H2'	2.07	0.54
22:DA:1809:A:H2'	22:DA:1810:A:H8	1.73	0.54
22:DA:2294:G:P	36:DO:94:ARG:HH12	2.30	0.54
24:DC:160:THR:HG23	24:DC:177:ARG:HG2	1.90	0.54
32:DK:34:GLY:O	32:DK:36:GLY:N	2.41	0.54
33:DL:77:ILE:HD11	33:DL:101:ILE:HG21	1.90	0.54
1:AA:194:C:C2'	1:AA:195:A:H5'	2.38	0.54
1:AA:376:G:H5"	16:AP:5:ARG:HB2	1.90	0.54
2:AB:27:MET:HG2	2:AB:189:THR:HA	1.89	0.54
2:AB:83:ALA:HA	2:AB:86:SER:OG	2.08	0.54
3:AC:15:VAL:HG11	3:AC:179:ARG:O	2.07	0.54
4:AD:191:LEU:O	4:AD:192:SER:CB	2.56	0.54
16:AP:12:LYS:O	16:AP:13:LYS:HB2	2.08	0.54
20:AT:83:ILE:O	20:AT:87:ALA:CB	2.56	0.54
22:BA:2773:C:H5"	25:BD:169:ARG:HG2	1.90	0.54
30:BI:59:ILE:HG22	30:BI:61:VAL:HG23	1.90	0.54
30:BI:86:ILE:N	30:BI:86:ILE:HD12	2.23	0.54
39:BR:71:LYS:HA	39:BR:90:ARG:HG2	1.90	0.54
1:CA:207:C:HO2'	1:CA:213:G:N2	2.06	0.54
1:CA:474:G:C2	1:CA:475:C:C2	2.96	0.54
1:CA:1386:G:C2	1:CA:1387:G:C8	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1535:C:O2'	1:CA:1536:C:C5	2.61	0.54
2:CB:203:ASN:OD1	2:CB:204:ASP:N	2.41	0.54
2:CB:206:ALA:O	2:CB:207:ILE:C	2.46	0.54
14:CN:24:ARG:HG2	14:CN:27:LEU:HD12	1.90	0.54
18:CR:25:ASP:O	18:CR:26:ILE:C	2.47	0.54
22:DA:783:A:O2'	22:DA:1779:U:O2	2.19	0.54
22:DA:1276:A:C2	22:DA:1295:C:O2	2.61	0.54
22:DA:1464:G:C4	22:DA:1465:G:C8	2.96	0.54
22:DA:1655:A:C6	22:DA:1656:C:C2	2.95	0.54
22:DA:2574:G:O2'	25:DD:148:GLN:HB3	2.08	0.54
35:DN:12:ARG:CZ	35:DN:20:MET:CE	2.86	0.54
36:DO:26:LEU:HD23	36:DO:117:PHE:CE2	2.43	0.54
39:DR:29:THR:O	39:DR:29:THR:HG22	2.08	0.54
1:AA:828:U:C5	1:AA:859:G:C4	2.96	0.53
1:AA:1227:A:H2'	1:AA:1228:C:O5'	2.08	0.53
2:AB:186:ILE:HA	2:AB:200:ILE:HB	1.90	0.53
3:AC:126:ARG:O	3:AC:127:ARG:CB	2.55	0.53
5:AE:41:ASP:OD1	5:AE:43:ASN:N	2.37	0.53
5:AE:105:ILE:HG23	5:AE:105:ILE:O	2.08	0.53
20:AT:48:GLN:OE1	20:AT:52:ASN:ND2	2.41	0.53
20:AT:55:GLN:N	20:AT:56:PRO:HD2	2.24	0.53
22:BA:287:G:C2	22:BA:354:A:C2	2.96	0.53
22:BA:455:C:N3	22:BA:472:A:H2'	2.22	0.53
22:BA:560:C:OP2	58:BA:3250:HOH:O	2.19	0.53
22:BA:616:A:C2	22:BA:617:G:H1'	2.43	0.53
22:BA:1820:U:OP1	24:BC:177:ARG:NH2	2.41	0.53
24:BC:235:GLY:HA3	24:BC:239:ASN:HB2	1.91	0.53
53:B5:35:THR:O	53:B5:35:THR:OG1	2.24	0.53
1:CA:773:G:N3	1:CA:807:A:C2	2.76	0.53
1:CA:1201:A:H4'	1:CA:1202:U:O5'	2.07	0.53
17:CQ:49:GLU:O	17:CQ:50:ASN:CG	2.47	0.53
22:DA:389:G:C8	22:DA:2413:G:H4'	2.44	0.53
22:DA:481:G:C4	22:DA:507:A:C2	2.96	0.53
22:DA:1203:U:O2'	33:DL:4:ASN:OD1	2.26	0.53
22:DA:1252:G:H5"	58:DA:3283:HOH:O	2.08	0.53
27:DF:163:ASP:N	27:DF:163:ASP:OD1	2.41	0.53
30:DI:19:ASN:ND2	30:DI:39:CYS:SG	2.81	0.53
1:AA:483:C:O2	16:AP:13:LYS:NZ	2.41	0.53
1:AA:844:G:N2	1:AA:846:G:H4'	2.23	0.53
1:AA:984:C:N3	1:AA:1222:G:C2	2.76	0.53
2:AB:213:TYR:O	2:AB:217:VAL:HG23	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:15:HIS:CG	10:AJ:16:ARG:N	2.77	0.53
11:AK:25:ALA:HA	11:AK:30:THR:HG22	1.90	0.53
11:AK:125:LYS:HG2	11:AK:126:LYS:N	2.24	0.53
13:AM:46:SER:O	13:AM:47:GLU:CB	2.57	0.53
22:BA:320:A:H2'	26:BE:131:THR:HG21	1.91	0.53
22:BA:960:A:H5"	22:BA:961:C:OP2	2.09	0.53
22:BA:1483:G:C2	22:BA:1484:U:C2	2.97	0.53
22:BA:1853:A:N1	22:BA:2087:G:H1'	2.22	0.53
23:BB:90:C:C2'	23:BB:91:C:O5'	2.56	0.53
24:BC:125:LYS:HG2	24:BC:128:ASN:ND2	2.23	0.53
27:BF:68:THR:N	27:BF:86:GLY:O	2.41	0.53
30:BI:11:LEU:HD12	30:BI:24:VAL:HG12	1.89	0.53
41:BT:11:LEU:O	46:BY:29:ARG:NH1	2.41	0.53
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.43	0.53
2:CB:81:LYS:HG2	2:CB:85:LEU:HD23	1.90	0.53
2:CB:88:ASP:N	2:CB:88:ASP:OD1	2.41	0.53
11:CK:124:PRO:HB2	11:CK:126:LYS:HE3	1.90	0.53
20:CT:36:TYR:CD1	20:CT:36:TYR:C	2.81	0.53
22:DA:47:C:O2'	22:DA:52:A:O2'	2.15	0.53
22:DA:560:C:O2	38:DQ:48:ARG:NH1	2.42	0.53
22:DA:969:G:H2'	22:DA:970:U:C6	2.43	0.53
22:DA:1082:U:OP1	30:DI:124:ALA:HB2	2.09	0.53
22:DA:2062:A:C8	54:D6:1:MHW:CG2	2.92	0.53
22:DA:2563:U:C1'	22:DA:2566:A:N6	2.71	0.53
33:DL:77:ILE:O	33:DL:110:VAL:O	2.26	0.53
42:DU:88:GLU:O	42:DU:89:ASP:CB	2.56	0.53
46:DY:20:ASN:O	46:DY:24:GLU:HB2	2.08	0.53
6:AF:49:TYR:CD1	6:AF:49:TYR:O	2.62	0.53
10:AJ:50:THR:HB	10:AJ:64:GLN:HG2	1.89	0.53
12:AL:25:GLU:O	12:AL:26:ALA:C	2.46	0.53
17:AQ:69:LYS:O	17:AQ:70:THR:CB	2.54	0.53
22:BA:1343:G:C4	22:BA:1344:U:C5	2.96	0.53
22:BA:1730:C:O2'	22:BA:1731:G:C4	2.60	0.53
34:BM:42:THR:HG22	34:BM:93:VAL:HG12	1.89	0.53
35:BN:37:THR:HG22	35:BN:110:MET:HE1	1.89	0.53
39:BR:24:LYS:HA	39:BR:94:THR:CG2	2.34	0.53
1:CA:527:G:C2	1:CA:528:C:C6	2.96	0.53
1:CA:756:C:H2'	1:CA:757:U:H5'	1.90	0.53
4:CD:34:ILE:O	4:CD:35:GLU:HB3	2.08	0.53
9:CI:90:TYR:O	9:CI:91:ASP:CG	2.46	0.53
15:CO:14:GLU:O	15:CO:84:ARG:NH2	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:6:A:N3	31:DJ:135:GLN:NE2	2.56	0.53
22:DA:58:G:N3	22:DA:70:G:N2	2.56	0.53
22:DA:864:G:N2	22:DA:913:U:C2	2.76	0.53
22:DA:864:G:C6	22:DA:865:C:N4	2.76	0.53
22:DA:1012:U:O4	31:DJ:30:THR:HG21	2.09	0.53
22:DA:1060:U:H4'	22:DA:1061:U:H5'	1.89	0.53
22:DA:2094:A:C4	22:DA:2095:A:C8	2.96	0.53
22:DA:2868:A:C2	22:DA:2869:G:C4	2.96	0.53
25:DD:181:ASP:OD1	25:DD:184:ARG:N	2.41	0.53
28:DG:158:LYS:O	28:DG:160:LYS:N	2.41	0.53
29:DH:32:PRO:O	29:DH:33:GLN:HB2	2.08	0.53
35:DN:20:MET:HG3	35:DN:21:PHE:N	2.22	0.53
35:DN:75:ILE:O	35:DN:79:LEU:HD12	2.07	0.53
37:DP:29:LYS:HB3	37:DP:40:LEU:HD21	1.91	0.53
42:DU:13:VAL:HG21	42:DU:39:ILE:CG2	2.39	0.53
1:AA:202:G:C2	1:AA:216:U:O2	2.61	0.53
1:AA:469:C:H2'	1:AA:470:C:O4'	2.09	0.53
1:AA:1181:G:H4'	1:AA:1182:G:OP1	2.07	0.53
6:AF:99:ALA:O	6:AF:100:SER:CB	2.56	0.53
7:AG:57:SER:OG	7:AG:58:GLU:N	2.40	0.53
11:AK:72:ASP:O	11:AK:73:ALA:HB2	2.08	0.53
15:AO:45:GLU:HG2	15:AO:46:HIS:N	2.22	0.53
22:BA:1098:A:C5	22:BA:1099:G:C6	2.95	0.53
22:BA:1098:A:H5'	22:BA:1099:G:OP2	2.07	0.53
22:BA:1584:U:O2	22:BA:1584:U:H2'	2.08	0.53
22:BA:1802:A:N1	22:BA:1822:C:H1'	2.23	0.53
22:BA:1984:G:C6	22:BA:1985:C:C5	2.97	0.53
53:B5:99:GLU:O	53:B5:103:LYS:CB	2.57	0.53
1:CA:60:A:H4'	1:CA:61:G:O5'	2.08	0.53
1:CA:409:U:OP1	4:CD:24:GLY:HA2	2.08	0.53
7:CG:93:PRO:O	7:CG:97:ASN:ND2	2.41	0.53
9:CI:49:ARG:NH2	9:CI:52:LEU:O	2.42	0.53
12:CL:86:ARG:CZ	12:CL:88:LYS:HB3	2.37	0.53
22:DA:12:U:O2	22:DA:12:U:H2'	2.08	0.53
22:DA:370:G:C6	22:DA:424:G:N7	2.77	0.53
22:DA:454:A:H4'	22:DA:455:C:OP2	2.08	0.53
22:DA:489:G:H4'	22:DA:490:C:OP1	2.07	0.53
22:DA:1343:G:H1'	22:DA:1597:A:C4	2.43	0.53
22:DA:1734:G:H2'	22:DA:1735:A:C8	2.44	0.53
22:DA:2283:C:C4	22:DA:2389:G:C5	2.96	0.53
31:DJ:105:VAL:HG12	31:DJ:109:LEU:HD12	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DY:27:ASN:HA	46:DY:30:MET:HB2	1.91	0.53
1:AA:251:G:N1	1:AA:266:G:C6	2.77	0.53
1:AA:258:G:C5	1:AA:259:G:C8	2.95	0.53
1:AA:680:C:C2	1:AA:711:G:N2	2.77	0.53
1:AA:828:U:H2'	1:AA:829:G:O5'	2.08	0.53
13:AM:10:PRO:O	13:AM:11:ASP:CB	2.56	0.53
13:AM:47:GLU:O	13:AM:49:SER:N	2.42	0.53
21:AU:37:PHE:O	21:AU:38:TYR:CB	2.56	0.53
22:BA:480:A:OP2	42:BU:44:LYS:CE	2.57	0.53
37:BP:31:TRP:CE2	37:BP:40:LEU:CD1	2.91	0.53
1:CA:8:A:C6	4:CD:206:LYS:HB3	2.42	0.53
4:CD:46:PRO:O	4:CD:47:ARG:C	2.46	0.53
4:CD:126:ASN:OD1	4:CD:142:VAL:HG23	2.08	0.53
5:CE:133:PRO:O	5:CE:137:VAL:HG13	2.07	0.53
13:CM:6:GLY:O	13:CM:8:ASN:N	2.42	0.53
15:CO:53:ARG:O	15:CO:56:LEU:HB3	2.07	0.53
22:DA:161:A:C3'	22:DA:162:U:H5"	2.35	0.53
22:DA:1314:C:OP1	22:DA:1332:G:OP1	2.25	0.53
22:DA:1809:A:C6	22:DA:1810:A:C5	2.96	0.53
22:DA:2038:G:H2'	22:DA:2039:U:O4'	2.06	0.53
25:DD:84:LEU:CD1	25:DD:88:GLU:HB2	2.39	0.53
33:DL:68:SER:O	33:DL:69:ARG:CB	2.57	0.53
36:DO:2:ASP:O	36:DO:6:ALA:HB2	2.09	0.53
45:DX:30:LEU:HB3	45:DX:31:PRO:CD	2.38	0.53
1:AA:1319:A:C5	1:AA:1323:G:C4	2.97	0.53
4:AD:170:TRP:O	4:AD:183:LYS:HB3	2.09	0.53
11:AK:34:ILE:HG12	11:AK:70:CYS:SG	2.49	0.53
13:AM:16:VAL:HG13	13:AM:41:GLU:HB2	1.91	0.53
19:AS:40:ILE:HG12	19:AS:71:LEU:HD23	1.89	0.53
19:AS:44:MET:HA	19:AS:47:LEU:HD12	1.91	0.53
22:BA:1179:G:H3'	22:BA:1180:U:H4'	1.88	0.53
22:BA:2127:G:C4'	22:BA:2128:G:OP1	2.55	0.53
22:BA:2153:C:H2'	22:BA:2154:A:O4'	2.09	0.53
22:BA:2346:A:H4'	22:BA:2347:C:OP2	2.09	0.53
24:BC:252:THR:HG22	24:BC:253:LYS:H	1.73	0.53
1:CA:436:C:C2	1:CA:437:U:C5	2.97	0.53
1:CA:501:C:H1'	1:CA:549:C:H1'	1.91	0.53
1:CA:582:C:C2	1:CA:760:G:N1	2.77	0.53
4:CD:196:ASN:HB3	4:CD:198:HIS:CD2	2.43	0.53
19:CS:10:PHE:O	19:CS:39:THR:OG1	2.26	0.53
22:DA:125:A:OP2	50:D2:19:ARG:NH2	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:471:A:OP1	26:DE:79:ARG:NH1	2.41	0.53
22:DA:543:G:C2	22:DA:551:G:C5	2.96	0.53
22:DA:995:C:C5	38:DQ:57:PHE:CE2	2.97	0.53
22:DA:1462:C:C2	22:DA:1463:C:C5	2.96	0.53
22:DA:1679:A:N6	58:DA:3439:HOH:O	2.41	0.53
22:DA:2093:G:O2'	22:DA:2094:A:H5'	2.08	0.53
22:DA:2557:G:H2'	22:DA:2558:C:C6	2.43	0.53
29:DH:2:GLN:O	29:DH:3:VAL:HG22	2.09	0.53
1:AA:316:C:O2	1:AA:316:C:H2'	2.08	0.53
1:AA:545:C:H2'	1:AA:545:C:O2	2.09	0.53
1:AA:791:G:N2	1:AA:1497:G:O3'	2.39	0.53
1:AA:1406:U:C6	1:AA:1407:C:C5	2.97	0.53
1:AA:1422:G:O3'	32:BK:49:ARG:NH2	2.36	0.53
2:AB:186:ILE:HA	2:AB:200:ILE:O	2.08	0.53
4:AD:23:SER:HB2	4:AD:110:THR:HB	1.90	0.53
22:BA:2355:G:O3'	44:BW:24:LYS:NZ	2.41	0.53
27:BF:36:LEU:HD21	27:BF:99:PHE:CE2	2.44	0.53
29:BH:147:VAL:CG1	29:BH:149:GLU:HG3	2.36	0.53
53:B5:78:ILE:HG23	53:B5:78:ILE:O	2.09	0.53
1:CA:898:G:N2	1:CA:901:A:OP2	2.40	0.53
5:CE:115:LEU:O	5:CE:120:VAL:HG23	2.09	0.53
6:CF:18:VAL:O	6:CF:21:MET:N	2.41	0.53
22:DA:53:A:N7	22:DA:54:G:N7	2.57	0.53
22:DA:55:G:C2	22:DA:56:A:C8	2.95	0.53
22:DA:60:G:C5	22:DA:62:U:C4	2.97	0.53
22:DA:61:C:OP1	46:DY:44:LYS:HD3	2.08	0.53
22:DA:511:U:O4	22:DA:512:G:N1	2.42	0.53
22:DA:684:G:OP1	50:D2:16:HIS:CE1	2.62	0.53
22:DA:1220:G:C2	22:DA:1230:A:C2	2.97	0.53
22:DA:1231:U:H2'	22:DA:1232:G:C8	2.43	0.53
22:DA:1350:C:C2	22:DA:1382:G:C2	2.97	0.53
22:DA:1790:C:O2'	24:DC:208:ALA:HB2	2.09	0.53
22:DA:2332:C:OP1	44:DW:77:ARG:NH2	2.42	0.53
24:DC:204:VAL:O	24:DC:205:LEU:HB2	2.08	0.53
29:DH:103:VAL:HA	29:DH:106:ALA:HB3	1.89	0.53
31:DJ:30:THR:HG22	31:DJ:31:GLU:N	2.23	0.53
39:DR:101:ILE:O	39:DR:103:ALA:N	2.42	0.53
1:AA:594:U:C4	1:AA:595:A:C6	2.96	0.53
1:AA:615:G:C2	1:AA:616:G:C8	2.97	0.53
1:AA:683:G:N2	11:AK:39:GLY:O	2.42	0.53
2:AB:79:ALA:C	2:AB:82:ASP:OD2	2.48	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:45:ARG:HA	5:AE:72:ILE:O	2.09	0.53
6:AF:79:ARG:NE	6:AF:79:ARG:HA	2.23	0.53
12:AL:3:THR:CG2	12:AL:4:VAL:N	2.71	0.53
22:BA:1483:G:C6	22:BA:1484:U:C4	2.96	0.53
28:BG:10:VAL:HG23	28:BG:48:ASN:O	2.08	0.53
31:BJ:64:VAL:HG13	31:BJ:68:LYS:HB2	1.90	0.53
39:BR:3:ALA:HB3	39:BR:59:ILE:HD11	1.90	0.53
52:B4:26:ILE:N	52:B4:26:ILE:HD13	2.24	0.53
1:CA:160:A:H2'	1:CA:161:A:O4'	2.09	0.53
1:CA:223:A:C6	1:CA:224:U:C4	2.97	0.53
11:CK:51:GLY:O	11:CK:52:PHE:O	2.27	0.53
20:CT:84:ASN:HA	20:CT:87:ALA:HB3	1.90	0.53
22:DA:235:U:C4	22:DA:236:C:C5	2.96	0.53
22:DA:846:U:HO2'	22:DA:847:U:P	2.32	0.53
22:DA:1805:A:N3	22:DA:1813:G:N2	2.57	0.53
22:DA:2032:G:H1'	25:DD:150:GLN:NE2	2.23	0.53
22:DA:2134:A:OP2	22:DA:2157:G:N2	2.38	0.53
22:DA:2428:G:H5"	22:DA:2429:G:OP1	2.09	0.53
22:DA:2691:C:HO2'	22:DA:2871:U:HO2'	1.57	0.53
29:DH:37:VAL:CG2	29:DH:38:PRO:HD2	2.39	0.53
34:DM:31:PHE:CD2	34:DM:113:ALA:HB2	2.44	0.53
1:AA:91:U:C2	1:AA:92:U:H1'	2.44	0.53
1:AA:313:A:H2'	1:AA:314:C:C6	2.44	0.53
1:AA:375:U:OP1	16:AP:70:ARG:NH1	2.42	0.53
1:AA:978:A:C5	1:AA:1318:A:C6	2.96	0.53
5:AE:90:THR:HG22	5:AE:91:GLY:N	2.24	0.53
22:BA:281:C:H2'	22:BA:282:A:C8	2.43	0.53
22:BA:1082:U:H5"	30:BI:119:GLY:HA2	1.90	0.53
22:BA:1433:A:O2'	22:BA:1434:A:H5'	2.09	0.53
22:BA:2057:G:C6	22:BA:2058:A:C6	2.97	0.53
22:BA:2334:U:O4	36:BO:16:ARG:HD3	2.09	0.53
53:B5:52:PRO:O	53:B5:53:ARG:HB2	2.09	0.53
53:B5:66:PRO:HG2	53:B5:194:ILE:CB	2.39	0.53
1:CA:322:C:O2	1:CA:332:G:N2	2.41	0.53
1:CA:577:G:C8	1:CA:816:A:N1	2.77	0.53
1:CA:1031:C:H4'	1:CA:1032:G:C2	2.43	0.53
2:CB:19:GLN:HB3	2:CB:189:THR:OG1	2.08	0.53
12:CL:102:LEU:N	12:CL:102:LEU:HD12	2.24	0.53
22:DA:54:G:C2	22:DA:55:G:C8	2.96	0.53
22:DA:371:A:N3	45:DX:61:LYS:NZ	2.57	0.53
22:DA:457:A:N1	22:DA:470:A:H5"	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:586:A:N1	22:DA:809:G:O2'	2.31	0.53
22:DA:720:U:H2'	22:DA:721:A:C8	2.44	0.53
22:DA:1194:A:C2'	22:DA:1195:G:O5'	2.57	0.53
22:DA:1321:A:N6	22:DA:1322:A:C2	2.77	0.53
22:DA:1323:C:N4	22:DA:1324:G:O6	2.41	0.53
22:DA:1359:A:C8	22:DA:1373:A:C2	2.97	0.53
22:DA:1736:U:H2'	22:DA:1737:G:O4'	2.09	0.53
22:DA:1791:A:C8	22:DA:1792:G:C8	2.96	0.53
27:DF:111:ILE:HB	27:DF:114:PHE:HB2	1.90	0.53
35:DN:79:LEU:O	35:DN:81:ASN:N	2.39	0.53
37:DP:39:ARG:HG3	37:DP:40:LEU:H	1.73	0.53
48:D0:54:VAL:O	48:D0:56:ALA:N	2.42	0.53
51:D3:45:ARG:N	51:D3:46:PRO:HD2	2.24	0.53
1:AA:76:G:H2'	1:AA:76:G:N3	2.23	0.53
1:AA:1157:A:C4	1:AA:1181:G:N1	2.77	0.53
19:AS:4:SER:O	19:AS:6:LYS:N	2.42	0.53
22:BA:644:A:H2'	22:BA:645:C:O4'	2.09	0.53
33:BL:91:ASP:HB3	33:BL:93:ASN:O	2.08	0.53
40:BS:37:THR:HG22	40:BS:38:TYR:CE1	2.44	0.53
47:BZ:37:GLU:O	47:BZ:38:ARG:HD3	2.09	0.53
4:CD:4:TYR:CE2	4:CD:11:LEU:HD11	2.44	0.53
7:CG:8:GLY:O	7:CG:9:GLN:HB3	2.09	0.53
17:CQ:52:GLU:HG2	17:CQ:53:CYS:H	1.74	0.53
22:DA:16:C:C3'	48:D0:11:SER:HG	2.18	0.53
22:DA:350:G:C2	22:DA:351:C:C2	2.97	0.53
22:DA:1109:C:H5"	22:DA:1110:G:OP2	2.09	0.53
22:DA:1445:G:C2	22:DA:1547:C:N3	2.77	0.53
22:DA:1525:A:H2'	22:DA:1526:C:O4'	2.09	0.53
25:DD:56:LYS:O	25:DD:58:ASN:N	2.42	0.53
27:DF:16:LEU:HD11	27:DF:169:LEU:HD12	1.90	0.53
29:DH:40:THR:O	29:DH:41:LYS:C	2.48	0.53
1:AA:90:C:C2	1:AA:91:U:C6	2.97	0.52
1:AA:268:U:H2'	1:AA:269:C:C6	2.44	0.52
1:AA:877:G:N2	8:AH:2:SER:N	2.57	0.52
1:AA:1324:A:C6	1:AA:1325:C:C4	2.98	0.52
3:AC:42:TYR:CZ	3:AC:90:VAL:HG21	2.44	0.52
3:AC:141:ALA:O	3:AC:146:ALA:HB3	2.09	0.52
4:AD:68:LEU:HD22	4:AD:68:LEU:N	2.23	0.52
13:AM:11:ASP:O	13:AM:12:HIS:CB	2.57	0.52
22:BA:12:U:H2'	22:BA:12:U:O2	2.09	0.52
22:BA:528:A:H2	22:BA:2043:C:H5'	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1735:A:C4	22:BA:1736:U:C6	2.97	0.52
22:BA:1794:A:H2'	22:BA:1795:C:C6	2.44	0.52
23:BB:33:G:O2'	23:BB:34:A:H5'	2.09	0.52
24:BC:141:VAL:CG1	24:BC:190:ALA:HB1	2.39	0.52
27:BF:108:VAL:HG13	27:BF:114:PHE:CZ	2.44	0.52
33:BL:100:ILE:HD12	33:BL:100:ILE:O	2.09	0.52
35:BN:37:THR:HG22	35:BN:110:MET:CE	2.38	0.52
53:B5:50:ILE:O	53:B5:52:PRO:HD3	2.08	0.52
1:CA:328:C:O2	1:CA:328:C:C2'	2.58	0.52
1:CA:714:G:H2'	1:CA:715:A:C8	2.43	0.52
1:CA:1314:C:C5	19:CS:6:LYS:HE2	2.44	0.52
10:CJ:27:GLU:O	10:CJ:27:GLU:HG2	2.08	0.52
21:CU:12:PHE:O	21:CU:13:ASP:CB	2.57	0.52
22:DA:307:G:N2	22:DA:310:A:C8	2.76	0.52
22:DA:475:C:N3	22:DA:481:G:C6	2.77	0.52
22:DA:487:C:C2	22:DA:494:G:N2	2.77	0.52
22:DA:962:G:C2'	22:DA:963:U:H5'	2.39	0.52
22:DA:1607:C:O2	22:DA:1621:U:C5	2.61	0.52
22:DA:2199:A:C5	22:DA:2225:A:C6	2.97	0.52
22:DA:2502:G:H5'	22:DA:2503:A:H5"	1.91	0.52
36:DO:64:TYR:O	36:DO:67:ASN:ND2	2.41	0.52
41:DT:38:ALA:O	41:DT:39:THR:HB	2.09	0.52
42:DU:96:PHE:CZ	42:DU:103:ILE:HG12	2.44	0.52
1:AA:701:U:H4'	1:AA:702:A:O5'	2.09	0.52
2:AB:56:GLU:HA	2:AB:59:LYS:HB3	1.92	0.52
2:AB:147:SER:O	2:AB:148:LEU:HB2	2.09	0.52
2:AB:161:LEU:HD12	2:AB:181:ILE:CG2	2.39	0.52
4:AD:25:VAL:HG12	4:AD:26:ARG:N	2.24	0.52
4:AD:34:ILE:O	4:AD:35:GLU:CB	2.57	0.52
8:AH:125:ILE:O	8:AH:125:ILE:CG1	2.58	0.52
14:AN:14:VAL:HA	14:AN:60:GLN:OE1	2.09	0.52
22:BA:1084:A:C5	22:BA:1085:A:C6	2.97	0.52
22:BA:1846:G:N2	22:BA:1895:C:C2	2.78	0.52
22:BA:2406:A:C2	33:BL:69:ARG:NH2	2.77	0.52
29:BH:77:THR:HA	29:BH:143:ILE:O	2.09	0.52
30:BI:116:ASP:O	30:BI:117:MET:CB	2.56	0.52
30:BI:117:MET:SD	30:BI:129:ILE:HD11	2.49	0.52
50:B2:43:THR:O	50:B2:44:VAL:CG1	2.56	0.52
1:CA:949:A:C2	1:CA:1233:G:N3	2.77	0.52
1:CA:1191:A:H5"	3:CC:4:LYS:HE3	1.90	0.52
2:CB:68:LEU:HD13	2:CB:161:LEU:HD13	1.89	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:38:VAL:HG12	5:CE:117:VAL:HG21	1.91	0.52
8:CH:105:SER:O	8:CH:123:GLY:HA3	2.09	0.52
10:CJ:35:GLN:O	10:CJ:36:VAL:HB	2.10	0.52
10:CJ:85:ASP:HA	10:CJ:88:MET:HB2	1.90	0.52
22:DA:488:G:N2	22:DA:493:G:C6	2.75	0.52
22:DA:1923:U:H2'	22:DA:1924:C:C6	2.44	0.52
22:DA:2069:G:N2	22:DA:2443:C:C2	2.77	0.52
22:DA:2204:G:C5	22:DA:2221:G:C2	2.98	0.52
22:DA:2208:C:O2	22:DA:2217:G:C2	2.62	0.52
22:DA:2226:C:H2'	22:DA:2227:A:O4'	2.09	0.52
22:DA:2808:G:H4'	22:DA:2809:A:O5'	2.09	0.52
29:DH:72:ILE:HG22	29:DH:72:ILE:O	2.09	0.52
30:DI:51:LYS:N	30:DI:51:LYS:HD3	2.23	0.52
39:DR:66:HIS:CG	39:DR:94:THR:HG23	2.44	0.52
1:AA:661:G:N2	1:AA:662:U:C2	2.77	0.52
1:AA:1130:A:O3'	9:AI:5:GLN:NE2	2.41	0.52
1:AA:1157:A:C5	1:AA:1181:G:C6	2.98	0.52
2:AB:119:THR:O	2:AB:120:GLN:HB2	2.08	0.52
2:AB:148:LEU:HA	2:AB:151:ILE:HG22	1.91	0.52
6:AF:15:SER:O	6:AF:18:VAL:HG23	2.08	0.52
14:AN:46:LEU:O	14:AN:47:LYS:C	2.47	0.52
37:BP:22:PRO:HD3	37:BP:50:ILE:HD12	1.92	0.52
38:BQ:79:PHE:CZ	38:BQ:83:LEU:HD11	2.44	0.52
48:B0:34:SER:OG	48:B0:36:GLU:HG3	2.09	0.52
1:CA:81:A:H2'	1:CA:82:G:C8	2.44	0.52
1:CA:987:G:C6	1:CA:988:G:C5	2.96	0.52
1:CA:1022:A:C6	1:CA:1023:U:C4	2.97	0.52
1:CA:1080:A:OP1	5:CE:52:LYS:CE	2.57	0.52
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.44	0.52
6:CF:88:MET:SD	6:CF:90:MET:SD	3.08	0.52
16:CP:51:ARG:C	16:CP:51:ARG:HD3	2.30	0.52
22:DA:46:G:C2	22:DA:47:C:C5	2.97	0.52
22:DA:78:U:OP2	46:DY:2:LYS:HD2	2.09	0.52
22:DA:193:U:C4	22:DA:194:G:N7	2.77	0.52
22:DA:455:C:N3	22:DA:472:A:H2'	2.25	0.52
22:DA:572:A:H5"	22:DA:573:U:OP2	2.09	0.52
22:DA:1262:A:C6	22:DA:1263:U:N3	2.77	0.52
28:DG:96:ALA:N	28:DG:128:GLN:O	2.42	0.52
1:AA:64:G:C8	1:AA:99:C:C4	2.97	0.52
1:AA:109:A:C6	1:AA:326:G:C6	2.97	0.52
1:AA:587:G:N2	1:AA:755:G:C5	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1157:A:C6	1:AA:1180:A:C5	2.97	0.52
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.91	0.52
3:AC:6:HIS:CD2	3:AC:7:PRO:HD2	2.44	0.52
3:AC:22:TRP:CZ2	3:AC:32:ASN:HB3	2.45	0.52
5:AE:109:GLY:HA2	5:AE:112:ARG:HB3	1.90	0.52
8:AH:9:ASP:OD1	8:AH:13:ARG:HD2	2.09	0.52
11:AK:23:ILE:HG22	11:AK:32:VAL:HG22	1.90	0.52
22:BA:137:U:H2'	22:BA:140:C:N1	2.24	0.52
22:BA:753:A:H2'	22:BA:754:U:H6	1.75	0.52
22:BA:1818:U:OP2	24:BC:156:ARG:NH1	2.43	0.52
22:BA:2211:A:C2'	22:BA:2212:A:OP1	2.58	0.52
22:BA:2534:A:C2'	22:BA:2535:G:O5'	2.58	0.52
24:BC:57:GLY:HA2	24:BC:213:TRP:HA	1.90	0.52
26:BE:149:ILE:CD1	26:BE:172:ALA:HA	2.38	0.52
34:BM:24:THR:HG23	34:BM:24:THR:O	2.10	0.52
41:BT:16:VAL:O	41:BT:17:SER:HB3	2.09	0.52
1:CA:425:G:H2'	1:CA:426:U:O4'	2.09	0.52
1:CA:1095:U:P	58:CA:1855:HOH:O	2.67	0.52
1:CA:1213:A:C5	1:CA:1215:G:C4	2.97	0.52
1:CA:1243:C:N4	1:CA:1244:G:O6	2.42	0.52
1:CA:1286:U:O2	1:CA:1286:U:H2'	2.09	0.52
1:CA:1480:A:H2'	1:CA:1481:U:O4'	2.09	0.52
2:CB:50:PHE:CD1	2:CB:54:LEU:HD23	2.44	0.52
13:CM:14:HIS:HB2	13:CM:17:ILE:CD1	2.40	0.52
15:CO:27:VAL:O	15:CO:31:LEU:HD12	2.09	0.52
22:DA:631:A:N3	22:DA:2415:G:O2'	2.32	0.52
22:DA:1356:G:N2	22:DA:1357:C:H1'	2.24	0.52
22:DA:1783:A:C6	22:DA:2587:A:C2	2.97	0.52
22:DA:2019:A:H4'	38:DQ:34:VAL:CG2	2.39	0.52
22:DA:2189:U:H2'	22:DA:2190:G:H5'	1.91	0.52
22:DA:2234:G:C6	22:DA:2235:G:N7	2.78	0.52
22:DA:2624:G:H2'	22:DA:2625:G:O4'	2.10	0.52
22:DA:2711:A:N6	22:DA:2714:G:N7	2.57	0.52
22:DA:2845:U:H5"	37:DP:52:ASN:O	2.09	0.52
23:DB:87:U:O2'	23:DB:88:C:H5'	2.08	0.52
27:DF:142:ASP:O	27:DF:145:LYS:N	2.42	0.52
29:DH:31:VAL:CB	29:DH:32:PRO:CD	2.86	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HB2	2.09	0.52
32:DK:11:ALA:O	32:DK:12:ASP:HB3	2.09	0.52
52:D4:16:ILE:HD13	52:D4:25:VAL:HG22	1.91	0.52
1:AA:142:G:H2'	1:AA:142:G:N3	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:428:G:O4'	1:AA:430:A:C8	2.63	0.52
1:AA:771:G:O2'	1:AA:772:U:H5'	2.09	0.52
1:AA:844:G:N3	1:AA:845:A:N7	2.57	0.52
2:AB:109:GLN:N	2:AB:109:GLN:OE1	2.42	0.52
8:AH:79:SER:HA	8:AH:85:ILE:HG12	1.91	0.52
12:AL:56:ARG:NH1	12:AL:62:GLU:HG3	2.24	0.52
17:AQ:15:ASP:C	17:AQ:17:MET:SD	2.88	0.52
22:BA:1494:A:C2'	22:BA:1495:A:O5'	2.57	0.52
22:BA:1680:U:H2'	22:BA:1681:G:O4'	2.09	0.52
22:BA:2339:C:H2'	22:BA:2340:A:C8	2.44	0.52
23:BB:37:C:C5	23:BB:38:C:C4	2.97	0.52
29:BH:51:ARG:NH1	29:BH:55:GLU:OE1	2.43	0.52
30:BI:39:CYS:O	30:BI:43:ASN:HB2	2.10	0.52
1:CA:38:G:C2	1:CA:397:A:C2	2.98	0.52
1:CA:41:G:H2'	1:CA:42:G:C8	2.44	0.52
1:CA:369:G:OP2	1:CA:388:G:N1	2.39	0.52
1:CA:485:U:OP2	1:CA:485:U:H4'	2.09	0.52
1:CA:793:U:O2	1:CA:1516:G:H4'	2.10	0.52
1:CA:813:U:H2'	1:CA:814:A:H5"	1.91	0.52
1:CA:1141:C:O2'	1:CA:1142:G:OP2	2.23	0.52
1:CA:1277:C:O2'	1:CA:1279:G:H1'	2.08	0.52
1:CA:1328:C:H5"	13:CM:28:THR:HG21	1.90	0.52
5:CE:106:ILE:HG13	5:CE:123:VAL:O	2.10	0.52
12:CL:90:LEU:O	12:CL:93:VAL:HG22	2.09	0.52
17:CQ:15:ASP:HA	17:CQ:21:ILE:HD12	1.90	0.52
22:DA:190:A:C6	22:DA:191:A:C2	2.97	0.52
22:DA:497:A:H2'	22:DA:498:G:O4'	2.09	0.52
22:DA:740:C:H5'	22:DA:1784:A:C3'	2.40	0.52
22:DA:931:U:OP1	47:DZ:30:ARG:NH1	2.42	0.52
22:DA:1208:C:C4	22:DA:1209:U:C5	2.97	0.52
22:DA:2209:G:C2	22:DA:2216:G:N3	2.77	0.52
22:DA:2209:G:C4	22:DA:2216:G:N2	2.78	0.52
22:DA:2720:U:OP1	37:DP:53:ARG:NH2	2.42	0.52
1:AA:49:U:O4	1:AA:365:U:C5	2.63	0.52
1:AA:173:U:C2	1:AA:197:A:N1	2.77	0.52
1:AA:328:C:O2	1:AA:328:C:C2'	2.58	0.52
1:AA:408:A:C2	1:AA:435:A:C2	2.97	0.52
1:AA:982:U:H4'	1:AA:983:A:H5'	1.89	0.52
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.43	0.52
1:AA:1160:G:N3	1:AA:1161:C:C6	2.78	0.52
3:AC:22:TRP:CD1	3:AC:59:ARG:HD3	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:71:ARG:NH2	27:BF:136:ILE:HG22	2.23	0.52
14:AN:41:ARG:HG3	14:AN:42:TRP:N	2.25	0.52
22:BA:304:U:H2'	22:BA:305:C:C6	2.45	0.52
22:BA:1115:G:N3	22:BA:1116:G:C8	2.78	0.52
22:BA:2430:A:H5'	22:BA:2431:U:OP2	2.09	0.52
46:BY:59:GLU:HG2	46:BY:59:GLU:O	2.08	0.52
1:CA:1092:A:C2	1:CA:1183:U:O2	2.62	0.52
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.44	0.52
9:CI:30:ILE:HA	9:CI:65:ILE:HG13	1.92	0.52
21:CU:12:PHE:O	21:CU:13:ASP:HB2	2.10	0.52
22:DA:374:A:C6	22:DA:401:A:C8	2.98	0.52
22:DA:481:G:C2	22:DA:507:A:C4	2.98	0.52
22:DA:535:G:O2'	38:DQ:53:ARG:HG3	2.10	0.52
22:DA:971:G:H2'	22:DA:972:A:O4'	2.09	0.52
22:DA:1213:A:O2'	22:DA:1239:G:O4'	2.28	0.52
22:DA:1494:A:H2'	22:DA:1495:A:C8	2.45	0.52
22:DA:2214:C:C2	22:DA:2215:C:C6	2.98	0.52
22:DA:2874:C:H2'	22:DA:2875:C:C6	2.44	0.52
23:DB:21:G:N2	23:DB:63:C:C2	2.78	0.52
24:DC:87:ARG:HB3	24:DC:87:ARG:NH1	2.24	0.52
24:DC:157:SER:O	24:DC:158:ALA:C	2.48	0.52
29:DH:23:ALA:O	29:DH:27:ARG:N	2.38	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HD2	2.10	0.52
32:DK:113:MET:SD	32:DK:116:ILE:HD11	2.50	0.52
34:DM:106:ASP:OD2	34:DM:107:GLY:N	2.42	0.52
1:AA:73:C:C2	1:AA:74:A:C8	2.97	0.52
1:AA:202:G:N2	1:AA:216:U:O2	2.42	0.52
1:AA:315:A:C8	1:AA:330:C:H5'	2.45	0.52
1:AA:1145:A:O2'	1:AA:1146:A:H5"	2.08	0.52
1:AA:1362:A:H5"	1:AA:1363:A:OP2	2.10	0.52
2:AB:49:MET:O	2:AB:53:ALA:HB2	2.10	0.52
13:AM:6:GLY:C	13:AM:8:ASN:N	2.59	0.52
13:AM:64:VAL:O	13:AM:69:LEU:HB2	2.10	0.52
15:AO:30:ALA:HA	15:AO:85:LEU:HD21	1.92	0.52
22:BA:26:G:H1'	22:BA:514:A:N6	2.25	0.52
22:BA:1046:A:OP2	22:BA:1046:A:H4'	2.08	0.52
22:BA:1754:A:N6	22:BA:1755:A:C6	2.78	0.52
22:BA:2477:U:O2	52:B4:4:ARG:NH2	2.43	0.52
30:BI:16:GLY:CA	30:BI:51:LYS:HB3	2.40	0.52
32:BK:86:LEU:N	32:BK:86:LEU:HD23	2.25	0.52
40:BS:25:ARG:NH2	40:BS:74:ILE:O	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BU:49:VAL:O	42:BU:49:VAL:HG13	2.09	0.52
46:BY:23:ARG:O	46:BY:24:GLU:C	2.46	0.52
1:CA:211:G:N3	1:CA:211:G:H2'	2.25	0.52
1:CA:409:U:H2'	1:CA:410:G:O4'	2.09	0.52
1:CA:765:G:N1	1:CA:812:G:H1'	2.23	0.52
1:CA:772:U:O2'	1:CA:773:G:H5'	2.09	0.52
1:CA:774:G:C5	1:CA:775:G:N7	2.77	0.52
1:CA:1072:G:C5	1:CA:1073:U:C4	2.97	0.52
1:CA:1364:U:O2	1:CA:1364:U:C2'	2.57	0.52
4:CD:32:CYS:O	4:CD:33:LYS:HB3	2.10	0.52
22:DA:188:G:N2	22:DA:209:C:C2	2.78	0.52
22:DA:449:A:C5	22:DA:450:G:C8	2.97	0.52
22:DA:488:G:H2'	22:DA:489:G:H2'	1.92	0.52
22:DA:830:G:C2	22:DA:2448:A:N7	2.78	0.52
22:DA:1060:U:OP2	30:DI:75:PRO:HA	2.10	0.52
22:DA:1695:G:H3'	22:DA:1695:G:N3	2.25	0.52
22:DA:2547:A:H2'	22:DA:2548:U:C6	2.44	0.52
22:DA:2722:G:H4'	35:DN:4:ARG:HB2	1.90	0.52
22:DA:2880:C:C2	22:DA:2881:U:C5	2.97	0.52
23:DB:100:G:H2'	23:DB:101:A:O4'	2.10	0.52
31:DJ:81:ILE:HG12	31:DJ:82:GLY:N	2.23	0.52
34:DM:78:LEU:O	34:DM:79:ALA:HB3	2.10	0.52
34:DM:121:ALA:O	34:DM:123:LYS:N	2.43	0.52
43:DV:9:ARG:NH2	43:DV:17:SER:OG	2.42	0.52
1:AA:181:A:N6	1:AA:195:A:C8	2.78	0.52
2:AB:88:ASP:C	2:AB:89:GLN:HG3	2.29	0.52
8:AH:95:VAL:HG12	8:AH:96:MET:N	2.25	0.52
13:AM:16:VAL:HG13	13:AM:34:LEU:HD13	1.92	0.52
13:AM:40:ALA:O	13:AM:43:VAL:HG22	2.10	0.52
17:AQ:12:VAL:O	17:AQ:13:VAL:HG12	2.10	0.52
22:BA:1422:G:C6	22:BA:1423:G:C5	2.98	0.52
22:BA:1883:U:O4	22:BA:1884:G:N1	2.43	0.52
22:BA:2415:G:C5	22:BA:2416:C:C5	2.98	0.52
24:BC:77:VAL:HG23	24:BC:114:ASP:O	2.09	0.52
28:BG:94:TYR:HA	28:BG:106:SER:O	2.10	0.52
29:BH:94:ILE:HD12	29:BH:98:ASP:HB3	1.92	0.52
30:BI:72:LYS:N	30:BI:72:LYS:HD3	2.24	0.52
1:CA:115:G:H4'	1:CA:116:A:O5'	2.10	0.52
1:CA:202:G:H2'	1:CA:203:G:O4'	2.10	0.52
1:CA:273:U:C2'	1:CA:274:A:H5'	2.39	0.52
4:CD:107:PHE:CD2	4:CD:145:ILE:HD11	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:40:GLU:O	7:CG:44:TYR:CD2	2.63	0.52
22:DA:116:C:C5	22:DA:117:G:N7	2.78	0.52
22:DA:1032:A:H4'	52:D4:16:ILE:HD12	1.91	0.52
22:DA:1838:C:C6	22:DA:1899:A:C6	2.98	0.52
22:DA:2050:C:C4	22:DA:2051:A:C6	2.98	0.52
22:DA:2308:G:C5'	22:DA:2309:A:OP2	2.57	0.52
22:DA:2679:A:C2	22:DA:2680:U:C2	2.97	0.52
24:DC:247:PRO:HB2	24:DC:248:TRP:CZ3	2.44	0.52
29:DH:25:TYR:CZ	29:DH:30:LEU:HD21	2.45	0.52
1:AA:340:U:H2'	1:AA:341:C:C6	2.45	0.52
1:AA:662:U:H2'	1:AA:663:A:C8	2.45	0.52
1:AA:772:U:H2'	1:AA:773:G:O5'	2.10	0.52
1:AA:977:A:H1'	1:AA:982:U:O4	2.10	0.52
1:AA:1311:A:C2	1:AA:1327:C:N3	2.77	0.52
7:AG:130:ASN:HA	7:AG:135:VAL:HG11	1.91	0.52
10:AJ:51:VAL:O	10:AJ:62:ARG:HA	2.09	0.52
13:AM:16:VAL:CG1	13:AM:41:GLU:HB2	2.39	0.52
17:AQ:50:ASN:O	17:AQ:51:ASN:O	2.28	0.52
18:AR:48:ARG:N	18:AR:48:ARG:HD2	2.23	0.52
22:BA:287:G:H2'	22:BA:288:U:C6	2.45	0.52
22:BA:1153:C:N4	22:BA:1154:G:C6	2.78	0.52
22:BA:1182:G:H2'	22:BA:1183:U:O4'	2.09	0.52
22:BA:1916:A:H2'	22:BA:1917:U:O4'	2.10	0.52
22:BA:2097:A:C2	22:BA:2098:U:C4	2.97	0.52
22:BA:2502:G:C5'	22:BA:2503:A:H5"	2.39	0.52
24:BC:225:MET:CE	24:BC:230:HIS:HB2	2.40	0.52
25:BD:177:VAL:O	25:BD:177:VAL:CG2	2.58	0.52
29:BH:2:GLN:O	29:BH:3:VAL:HG22	2.10	0.52
41:BT:43:ILE:O	41:BT:47:VAL:HG23	2.10	0.52
1:CA:39:G:N2	1:CA:40:C:C2	2.78	0.52
1:CA:624:C:H2'	1:CA:625:U:O4'	2.09	0.52
1:CA:756:C:H2'	1:CA:757:U:C5'	2.40	0.52
1:CA:981:U:H5	1:CA:982:U:HO2'	1.57	0.52
3:CC:10:ILE:HD12	14:CN:98:LYS:HG3	1.92	0.52
4:CD:131:ASN:O	4:CD:131:ASN:CG	2.48	0.52
12:CL:93:VAL:HG23	12:CL:93:VAL:O	2.10	0.52
18:CR:32:TYR:C	18:CR:33:ILE:HG22	2.30	0.52
22:DA:380:G:N2	22:DA:395:U:O2	2.43	0.52
22:DA:1526:C:N4	22:DA:1527:G:C6	2.78	0.52
22:DA:1776:G:C2	22:DA:1789:A:N3	2.78	0.52
22:DA:1847:A:C2'	22:DA:1848:A:OP2	2.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2146:C:H5”	22:DA:2147:A:OP1	2.10	0.52
23:DB:14:U:O2	23:DB:14:U:C2’	2.58	0.52
26:DE:77:ILE:O	26:DE:77:ILE:CG1	2.58	0.52
28:DG:91:GLY:O	28:DG:94:TYR:CD2	2.63	0.52
28:DG:169:VAL:O	28:DG:169:VAL:HG12	2.07	0.52
30:DI:53:LEU:HD21	30:DI:82:LYS:HE2	1.91	0.52
42:DU:34:VAL:HG13	42:DU:67:VAL:HG23	1.92	0.52
51:D3:34:THR:CG2	51:D3:35:LYS:N	2.71	0.52
1:AA:157:U:C2’	1:AA:158:G:H5’	2.40	0.52
1:AA:457:G:C6	1:AA:458:U:C2	2.98	0.52
1:AA:468:A:C2	1:AA:469:C:C5	2.98	0.52
1:AA:977:A:O2’	1:AA:979:C:OP2	2.28	0.52
2:AB:120:GLN:O	2:AB:120:GLN:HG2	2.10	0.52
5:AE:104:GLY:HA3	5:AE:122:ASN:HA	1.92	0.52
16:AP:20:VAL:HG21	16:AP:32:PHE:CG	2.45	0.52
22:BA:265:A:N1	22:BA:427:U:O2’	2.31	0.52
22:BA:574:A:H4’	22:BA:575:A:O5’	2.10	0.52
22:BA:686:U:H4’	22:BA:687:C:OP2	2.09	0.52
22:BA:764:A:H3’	22:BA:765:C:H5’	1.91	0.52
22:BA:948:C:O2	22:BA:984:A:O2’	2.28	0.52
22:BA:1502:A:C2	22:BA:1503:A:C4	2.98	0.52
22:BA:1731:G:C2	22:BA:1733:G:C4	2.98	0.52
32:BK:118:LEU:O	32:BK:119:ALA:HB3	2.09	0.52
39:BR:59:ILE:HG12	39:BR:101:ILE:HD12	1.92	0.52
40:BS:29:VAL:HG13	40:BS:55:ILE:HD11	1.91	0.52
49:B1:35:GLU:HG2	49:B1:50:LYS:HG3	1.92	0.52
1:CA:555:U:H2’	1:CA:556:C:C6	2.44	0.52
1:CA:1211:U:O2’	1:CA:1212:U:P	2.68	0.52
14:CN:52:PRO:O	14:CN:53:ARG:CB	2.58	0.52
17:CQ:47:HIS:HB2	17:CQ:67:LEU:HD13	1.91	0.52
22:DA:27:G:N2	22:DA:512:G:H1’	2.25	0.52
22:DA:147:C:N4	22:DA:148:U:O4	2.43	0.52
22:DA:1783:A:H5’	22:DA:2608:G:H4’	1.91	0.52
27:DF:55:ALA:HA	27:DF:58:ALA:HB3	1.92	0.52
33:DL:100:ILE:O	33:DL:100:ILE:CG1	2.58	0.52
37:DP:28:VAL:HG12	37:DP:30:VAL:HG23	1.92	0.52
39:DR:81:LYS:HD3	39:DR:81:LYS:N	2.25	0.52
1:AA:1307:U:C2	1:AA:1308:U:C6	2.98	0.51
2:AB:23:TRP:CZ3	2:AB:25:PRO:HA	2.44	0.51
2:AB:28:LYS:N	2:AB:29:PRO:CD	2.73	0.51
2:AB:51:ASN:O	2:AB:52:GLU:HB2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:186:ILE:HD11	2:AB:204:ASP:HA	1.92	0.51
3:AC:7:PRO:O	3:AC:11:ARG:HG3	2.10	0.51
4:AD:37:ALA:HA	4:AD:42:GLY:HA3	1.91	0.51
13:AM:3:ARG:HG3	13:AM:4:ILE:N	2.25	0.51
13:AM:95:LEU:HB3	13:AM:96:PRO:HD2	1.92	0.51
22:BA:323:C:O2	26:BE:163:ASN:ND2	2.43	0.51
22:BA:373:U:OP1	45:BX:54:LYS:NZ	2.43	0.51
22:BA:1187:G:OP2	58:BA:3371:HOH:O	2.19	0.51
22:BA:1344:U:O2'	22:BA:1345:C:P	2.69	0.51
22:BA:1638:C:H4'	22:BA:2710:C:O2	2.10	0.51
22:BA:1912:A:C2	22:BA:1919:A:C4	2.97	0.51
22:BA:2637:U:C2'	22:BA:2638:G:H5'	2.40	0.51
22:BA:2728:U:O2'	22:BA:2729:G:OP2	2.25	0.51
25:BD:103:ASP:O	25:BD:104:VAL:HG22	2.09	0.51
28:BG:38:ASN:O	28:BG:39:ASP:HB2	2.10	0.51
36:BO:88:LYS:O	36:BO:89:ASP:HB2	2.11	0.51
1:CA:780:A:C2	1:CA:803:G:N1	2.78	0.51
1:CA:1034:G:H2'	1:CA:1035:A:C8	2.44	0.51
1:CA:1273:C:H2'	1:CA:1274:A:O4'	2.09	0.51
5:CE:106:ILE:HD11	5:CE:124:LEU:HD23	1.91	0.51
6:CF:88:MET:HE1	18:CR:64:TYR:CD2	2.45	0.51
10:CJ:25:ILE:O	10:CJ:25:ILE:HD13	2.11	0.51
22:DA:321:U:OP2	26:DE:130:LYS:HA	2.10	0.51
22:DA:410:G:C2	22:DA:2407:A:C5	2.98	0.51
22:DA:1343:G:C6	22:DA:1344:U:O4	2.63	0.51
22:DA:1570:A:H2'	22:DA:1571:A:C8	2.44	0.51
22:DA:1726:C:H2'	22:DA:1727:C:H6	1.74	0.51
22:DA:2107:G:C2	22:DA:2183:A:C2	2.98	0.51
1:AA:468:A:C2	1:AA:469:C:C4	2.98	0.51
1:AA:697:U:C5	1:AA:698:G:C8	2.98	0.51
1:AA:1492:A:OP1	12:AL:44:LYS:HA	2.08	0.51
2:AB:40:ILE:HD13	2:AB:40:ILE:N	2.25	0.51
2:AB:68:LEU:HD21	2:AB:92:VAL:HG23	1.92	0.51
2:AB:72:THR:O	2:AB:73:LYS:CB	2.58	0.51
5:AE:159:LYS:O	8:AH:64:LYS:NZ	2.41	0.51
9:AI:61:LEU:N	9:AI:61:LEU:CD2	2.72	0.51
14:AN:47:LYS:O	14:AN:49:GLN:N	2.43	0.51
22:BA:244:A:C2	22:BA:255:A:C4	2.98	0.51
22:BA:832:U:H2'	22:BA:833:A:C8	2.45	0.51
22:BA:871:U:H2'	22:BA:872:U:C6	2.45	0.51
22:BA:1250:G:OP2	33:BL:21:ARG:NH2	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1869:G:O2'	22:BA:1872:A:N6	2.44	0.51
22:BA:2388:A:H5'	22:BA:2389:G:OP2	2.10	0.51
25:BD:13:ARG:NH2	25:BD:15:PHE:CZ	2.78	0.51
29:BH:97:ARG:HD2	1:CA:369:G:O2'	2.10	0.51
29:BH:110:VAL:HG22	29:BH:114:GLU:HB2	1.90	0.51
1:CA:451:A:C8	1:CA:452:A:C6	2.98	0.51
1:CA:575:G:C6	1:CA:821:G:N7	2.78	0.51
1:CA:872:A:C4	1:CA:874:G:C8	2.98	0.51
2:CB:103:ASN:CG	2:CB:103:ASN:O	2.48	0.51
6:CF:97:THR:O	6:CF:98:GLU:CB	2.57	0.51
18:CR:67:LEU:HD23	18:CR:67:LEU:N	2.25	0.51
20:CT:71:LYS:HE3	20:CT:75:HIS:CE1	2.45	0.51
22:DA:291:G:N1	22:DA:350:G:N7	2.59	0.51
22:DA:370:G:O2'	22:DA:423:A:H3'	2.11	0.51
22:DA:646:U:H3'	22:DA:647:G:C4'	2.41	0.51
22:DA:1182:G:H2'	22:DA:1183:U:O4'	2.10	0.51
22:DA:1364:G:N7	45:DX:2:SER:N	2.58	0.51
22:DA:1694:C:H4'	22:DA:1695:G:O5'	2.09	0.51
22:DA:1773:A:N7	22:DA:1829:A:H1'	2.24	0.51
22:DA:1793:C:N4	58:DA:3783:HOH:O	2.43	0.51
24:DC:131:PRO:HB2	24:DC:133:ARG:HG2	1.91	0.51
33:DL:68:SER:O	33:DL:69:ARG:HB2	2.10	0.51
34:DM:59:ARG:O	34:DM:59:ARG:CD	2.59	0.51
40:DS:85:ILE:HG22	40:DS:86:MET:N	2.24	0.51
45:DX:17:ASN:HB2	45:DX:25:THR:HB	1.92	0.51
46:DY:9:LYS:HB3	46:DY:12:GLU:HG3	1.92	0.51
54:D6:4:PRO:HG2	54:D6:7:004:CD2	2.40	0.51
1:AA:736:C:H2'	1:AA:737:C:C6	2.45	0.51
1:AA:842:U:H3'	1:AA:843:U:C5'	2.40	0.51
1:AA:859:G:H2'	1:AA:860:A:C8	2.45	0.51
1:AA:1157:A:C4	1:AA:1181:G:C6	2.98	0.51
3:AC:126:ARG:O	3:AC:127:ARG:HB2	2.09	0.51
4:AD:124:MET:CE	4:AD:146:ARG:HD2	2.40	0.51
4:AD:161:LEU:HD22	4:AD:161:LEU:N	2.26	0.51
9:AI:57:MET:SD	9:AI:57:MET:N	2.83	0.51
11:AK:35:THR:OG1	11:AK:41:ALA:N	2.44	0.51
22:BA:45:G:C5'	22:BA:46:G:OP1	2.58	0.51
22:BA:500:G:N2	22:BA:502:A:H3'	2.25	0.51
22:BA:1169:A:N1	22:BA:1180:U:O4	2.43	0.51
22:BA:1840:G:C6	22:BA:1841:U:C4	2.98	0.51
27:BF:21:ASN:CG	27:BF:21:ASN:O	2.48	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:143:TYR:O	27:BF:146:VAL:HG22	2.11	0.51
41:BT:48:GLN:O	41:BT:52:GLU:HA	2.11	0.51
46:BY:54:LYS:O	46:BY:58:ASN:HB2	2.10	0.51
53:B5:65:LEU:HD11	53:B5:191:ARG:CA	2.41	0.51
1:CA:50:A:N6	1:CA:361:G:H4'	2.26	0.51
4:CD:48:LEU:HD23	4:CD:53:VAL:N	2.25	0.51
4:CD:105:MET:SD	4:CD:143:VAL:HG13	2.51	0.51
6:CF:16:GLU:O	6:CF:18:VAL:N	2.43	0.51
17:CQ:51:ASN:O	17:CQ:52:GLU:O	2.28	0.51
17:CQ:60:GLU:HB3	17:CQ:76:VAL:HG23	1.92	0.51
22:DA:310:A:O2'	22:DA:311:A:P	2.65	0.51
22:DA:747:U:O2	22:DA:2014:A:H1'	2.10	0.51
22:DA:1466:U:O2'	22:DA:1546:G:O2'	2.02	0.51
22:DA:1646:C:H5"	22:DA:1647:U:C5'	2.40	0.51
22:DA:1773:A:N3	22:DA:1978:A:C2	2.78	0.51
22:DA:1993:U:H4'	25:DD:133:THR:HG21	1.92	0.51
22:DA:2056:G:C2	22:DA:2057:G:C8	2.98	0.51
22:DA:2379:G:C6	22:DA:2380:C:C4	2.99	0.51
22:DA:2571:U:C4	22:DA:2574:G:C8	2.99	0.51
23:DB:76:G:OP1	43:DV:9:ARG:NH2	2.40	0.51
29:DH:121:VAL:O	29:DH:122:LEU:HB2	2.11	0.51
1:AA:109:A:H4'	1:AA:110:C:OP2	2.10	0.51
1:AA:554:A:H5'	12:AL:26:ALA:HB1	1.92	0.51
2:AB:68:LEU:CD2	2:AB:92:VAL:HG23	2.40	0.51
4:AD:150:LYS:O	4:AD:152:GLN:N	2.43	0.51
4:AD:153:SER:O	4:AD:155:VAL:N	2.44	0.51
4:AD:170:TRP:CD2	4:AD:186:PRO:HG3	2.45	0.51
7:AG:71:PRO:O	7:AG:96:ARG:CG	2.58	0.51
10:AJ:17:LEU:HD23	10:AJ:18:ILE:N	2.25	0.51
10:AJ:37:ARG:HB2	10:AJ:75:ASP:HB3	1.91	0.51
22:BA:995:C:H5'	22:BA:995:C:H6	1.75	0.51
22:BA:1179:G:N7	22:BA:1180:U:O4'	2.44	0.51
22:BA:1197:G:H2'	22:BA:1198:U:C6	2.46	0.51
22:BA:1439:A:C2	22:BA:1553:A:C4	2.98	0.51
22:BA:1866:A:N7	22:BA:1867:G:C8	2.79	0.51
22:BA:1918:A:HO2'	22:BA:1920:C:N4	2.07	0.51
22:BA:2211:A:O2'	22:BA:2212:A:P	2.69	0.51
24:BC:227:PRO:HA	24:BC:233:GLY:HA2	1.91	0.51
29:BH:99:ILE:O	29:BH:103:VAL:CG2	2.58	0.51
45:BX:33:LEU:O	45:BX:34:HIS:CG	2.63	0.51
1:CA:773:G:C2	1:CA:807:A:C2	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:91:PHE:O	2:CB:150:GLY:HA3	2.11	0.51
2:CB:186:ILE:HA	2:CB:200:ILE:O	2.10	0.51
2:CB:206:ALA:C	2:CB:208:ARG:N	2.64	0.51
4:CD:173:VAL:O	4:CD:174:ASP:HB3	2.10	0.51
5:CE:83:HIS:CD2	8:CH:96:MET:HE2	2.45	0.51
20:CT:44:LYS:NZ	20:CT:86:LEU:O	2.31	0.51
22:DA:222:A:H3'	22:DA:421:C:H5'	1.91	0.51
22:DA:537:G:C6	22:DA:555:G:C2	2.98	0.51
22:DA:945:A:C8	22:DA:2448:A:C2	2.98	0.51
22:DA:972:A:C6	22:DA:973:A:C6	2.98	0.51
22:DA:1240:U:HO2'	22:DA:1241:A:P	2.33	0.51
22:DA:1301:A:C5	22:DA:1303:G:C8	2.99	0.51
22:DA:2415:G:C5	22:DA:2416:C:C4	2.98	0.51
22:DA:2440:C:C4	22:DA:2441:U:H1'	2.44	0.51
26:DE:83:VAL:HG11	26:DE:86:ALA:HA	1.93	0.51
28:DG:12:PRO:HD2	28:DG:15:VAL:HG21	1.92	0.51
28:DG:24:ILE:HD11	28:DG:43:VAL:HG11	1.92	0.51
30:DI:117:MET:SD	30:DI:125:MET:HG2	2.51	0.51
42:DU:96:PHE:CE1	42:DU:103:ILE:CG1	2.92	0.51
1:AA:104:G:N3	1:AA:105:G:C8	2.78	0.51
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.64	0.51
1:AA:1317:C:H4'	14:AN:49:GLN:CG	2.40	0.51
8:AH:5:ASP:OD2	8:AH:8:ALA:HB2	2.10	0.51
10:AJ:28:THR:HG22	10:AJ:86:ALA:HB1	1.90	0.51
12:AL:51:LYS:CD	12:AL:51:LYS:N	2.74	0.51
13:AM:69:LEU:HG	13:AM:73:ILE:HD11	1.93	0.51
16:AP:19:VAL:CG1	16:AP:37:GLY:C	2.79	0.51
16:AP:76:LYS:HG3	16:AP:76:LYS:O	2.10	0.51
17:AQ:16:LYS:O	17:AQ:16:LYS:CG	2.59	0.51
20:AT:44:LYS:HB3	20:AT:87:ALA:HB1	1.93	0.51
22:BA:877:A:O2'	22:BA:900:A:N6	2.41	0.51
22:BA:959:A:C6	22:BA:960:A:N1	2.79	0.51
22:BA:977:G:C6	58:BA:3596:HOH:O	2.58	0.51
22:BA:1022:G:N7	31:BJ:68:LYS:HE2	2.25	0.51
22:BA:1082:U:H5"	30:BI:119:GLY:CA	2.40	0.51
22:BA:1832:C:N4	22:BA:1833:C:C4	2.79	0.51
22:BA:2228:G:H2'	22:BA:2229:U:C6	2.46	0.51
22:BA:2318:G:C6	22:BA:2319:G:C6	2.99	0.51
24:BC:200:HIS:O	24:BC:203:ARG:HG2	2.11	0.51
29:BH:85:GLY:HA2	29:BH:91:PHE:CE2	2.46	0.51
29:BH:94:ILE:CG2	29:BH:99:ILE:CG1	2.88	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:72:A:C5	1:CA:73:C:C5	2.99	0.51
1:CA:207:C:O2	1:CA:207:C:C2'	2.58	0.51
1:CA:811:C:C4	1:CA:812:G:C6	2.99	0.51
1:CA:991:U:H4'	1:CA:992:U:H5"	1.92	0.51
1:CA:1074:G:O2'	2:CB:102:THR:CG2	2.58	0.51
5:CE:57:PRO:O	5:CE:60:ILE:HG13	2.09	0.51
5:CE:101:GLU:HA	5:CE:122:ASN:HB2	1.93	0.51
7:CG:116:MET:HA	7:CG:119:ARG:HD3	1.92	0.51
9:CI:12:ARG:CD	9:CI:107:ASP:HB3	2.41	0.51
10:CJ:35:GLN:HB2	10:CJ:78:GLU:HB2	1.92	0.51
10:CJ:87:LEU:HD13	10:CJ:88:MET:N	2.25	0.51
17:CQ:46:VAL:CG2	17:CQ:61:ILE:HD11	2.41	0.51
22:DA:249:C:P	22:DA:2394:C:HO2'	2.33	0.51
22:DA:450:G:N1	22:DA:454:A:OP2	2.33	0.51
22:DA:485:C:N4	22:DA:496:G:C6	2.78	0.51
22:DA:577:G:O2'	22:DA:1254:A:OP1	2.28	0.51
22:DA:594:U:H2'	22:DA:595:C:C6	2.46	0.51
22:DA:757:G:H2'	22:DA:757:G:N3	2.25	0.51
22:DA:777:G:N3	22:DA:778:G:C8	2.78	0.51
22:DA:868:U:C4	22:DA:869:G:N7	2.78	0.51
22:DA:982:C:H4'	22:DA:983:A:OP1	2.11	0.51
22:DA:1187:G:H5"	39:DR:83:TYR:CE2	2.45	0.51
22:DA:2283:C:C5	22:DA:2389:G:C4	2.98	0.51
22:DA:2326:C:H1'	22:DA:2327:A:OP1	2.10	0.51
22:DA:2356:U:O3'	44:DW:20:ARG:HD3	2.10	0.51
22:DA:2898:U:O2'	31:DJ:134:ALA:O	2.27	0.51
23:DB:7:G:H5'	36:DO:29:HIS:CE1	2.44	0.51
29:DH:53:GLU:O	29:DH:54:LEU:C	2.49	0.51
30:DI:75:PRO:HG2	30:DI:78:VAL:HG21	1.92	0.51
42:DU:34:VAL:HG13	42:DU:67:VAL:CG2	2.39	0.51
44:DW:23:VAL:HG22	44:DW:38:VAL:HG13	1.91	0.51
45:DX:7:VAL:HG23	45:DX:51:VAL:HG12	1.92	0.51
46:DY:28:LEU:HD22	46:DY:37:LEU:HD11	1.91	0.51
1:AA:192:A:C6	1:AA:193:C:C4	2.99	0.51
1:AA:545:C:C2'	1:AA:546:A:H5'	2.41	0.51
1:AA:558:G:C5	1:AA:559:A:C2	2.99	0.51
1:AA:774:G:C4	1:AA:775:G:C8	2.98	0.51
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.11	0.51
10:AJ:19:ASP:HA	10:AJ:22:THR:HB	1.92	0.51
16:AP:5:ARG:HA	16:AP:68:SER:OG	2.10	0.51
22:BA:404:A:H1'	22:BA:405:U:OP2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:752:A:H3'	50:B2:1:MET:SD	2.50	0.51
22:BA:1031:G:H4'	52:B4:6:SER:HB2	1.92	0.51
26:BE:119:ILE:HB	26:BE:187:VAL:CG2	2.40	0.51
27:BF:23:ASN:OD1	27:BF:23:ASN:N	2.41	0.51
27:BF:107:ALA:O	27:BF:110:ARG:N	2.43	0.51
29:BH:117:LEU:CD2	29:BH:121:VAL:N	2.70	0.51
29:BH:132:PHE:O	29:BH:139:PHE:HB3	2.11	0.51
38:BQ:89:GLU:H	39:BR:49:ILE:CD1	2.23	0.51
41:BT:1:MET:O	41:BT:2:ILE:HG13	2.10	0.51
46:BY:45:GLN:O	46:BY:46:VAL:CB	2.58	0.51
1:CA:724:G:OP2	1:CA:833:G:O2'	2.24	0.51
1:CA:1288:A:N6	1:CA:1289:A:N6	2.59	0.51
2:CB:99:GLY:O	2:CB:103:ASN:N	2.42	0.51
4:CD:160:GLU:O	4:CD:163:GLU:HB2	2.11	0.51
5:CE:19:ASN:HB2	5:CE:34:THR:OG1	2.09	0.51
18:CR:46:GLY:O	18:CR:47:THR:O	2.29	0.51
20:CT:54:MET:HE1	20:CT:58:VAL:HG21	1.92	0.51
22:DA:546:U:O2	22:DA:546:U:H3'	2.11	0.51
22:DA:1286:A:N6	22:DA:1329:U:C2	2.79	0.51
22:DA:2199:A:C4	22:DA:2225:A:C2	2.98	0.51
22:DA:2798:U:H4'	22:DA:2799:A:H5'	1.93	0.51
29:DH:26:ALA:HA	29:DH:30:LEU:HB2	1.92	0.51
30:DI:72:LYS:HG3	30:DI:116:ASP:CG	2.30	0.51
1:AA:397:A:C6	1:AA:548:G:N7	2.78	0.51
1:AA:469:C:C4	1:AA:470:C:C4	2.99	0.51
1:AA:663:A:C2	1:AA:743:A:C2	2.99	0.51
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.10	0.51
1:AA:1277:C:O2'	1:AA:1279:G:C8	2.63	0.51
3:AC:22:TRP:CD1	3:AC:59:ARG:CD	2.94	0.51
12:AL:86:ARG:HA	12:AL:94:ARG:HA	1.93	0.51
15:AO:64:ARG:NH2	15:AO:68:ASP:OD1	2.44	0.51
22:BA:776:G:C8	22:BA:793:A:C2	2.99	0.51
22:BA:1075:C:H2'	22:BA:1076:C:C6	2.46	0.51
22:BA:1694:C:H4'	22:BA:1695:G:H5"	1.92	0.51
29:BH:100:ALA:CB	29:BH:112:LYS:HA	2.41	0.51
39:BR:66:HIS:CE1	39:BR:94:THR:CG2	2.94	0.51
41:BT:67:VAL:HG22	41:BT:76:ARG:CG	2.41	0.51
1:CA:72:A:C6	1:CA:73:C:N4	2.79	0.51
1:CA:392:C:C2	1:CA:393:A:C8	2.98	0.51
1:CA:718:A:H5'	11:CK:119:ASN:ND2	2.26	0.51
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:16:PHE:N	2:CB:16:PHE:CD1	2.79	0.51
2:CB:20:THR:OG1	2:CB:21:ARG:N	2.44	0.51
2:CB:102:THR:HG23	2:CB:102:THR:O	2.10	0.51
6:CF:13:ASP:O	6:CF:15:SER:N	2.43	0.51
7:CG:78:ARG:HB2	7:CG:85:TYR:HB2	1.93	0.51
9:CI:45:ARG:HG2	9:CI:46:MET:N	2.26	0.51
22:DA:26:G:C6	22:DA:27:G:N1	2.78	0.51
22:DA:579:G:C5'	22:DA:2018:G:OP2	2.59	0.51
22:DA:1290:C:N3	22:DA:1291:C:C5	2.79	0.51
22:DA:1881:C:H2'	22:DA:1882:U:O4'	2.10	0.51
22:DA:2134:A:C2	22:DA:2135:A:C8	2.99	0.51
22:DA:2537:U:H2'	22:DA:2538:C:C6	2.46	0.51
23:DB:95:U:OP2	43:DV:19:ARG:NH1	2.43	0.51
24:DC:251:GLN:HG2	24:DC:255:LYS:HB2	1.93	0.51
25:DD:90:PHE:CE2	25:DD:96:ILE:HD11	2.45	0.51
26:DE:52:VAL:HG21	26:DE:81:GLY:CA	2.40	0.51
32:DK:91:SER:O	32:DK:92:GLU:O	2.29	0.51
1:AA:626:G:H2'	1:AA:627:G:O4'	2.10	0.51
1:AA:645:G:C6	1:AA:646:G:N7	2.78	0.51
1:AA:792:A:N3	1:AA:794:A:C5	2.78	0.51
1:AA:829:G:N3	1:AA:830:G:C8	2.79	0.51
1:AA:914:A:C2	1:AA:915:A:C8	2.99	0.51
1:AA:1126:U:C6	1:AA:1281:C:N3	2.79	0.51
1:AA:1406:U:C5	1:AA:1407:C:C4	2.99	0.51
1:AA:1442:G:H2'	1:AA:1443:C:C6	2.46	0.51
2:AB:95:ARG:NH1	2:AB:97:LEU:HA	2.26	0.51
2:AB:193:PRO:O	2:AB:195:GLY:N	2.37	0.51
5:AE:74:VAL:HG11	5:AE:144:LEU:HB3	1.93	0.51
11:AK:51:GLY:O	11:AK:52:PHE:O	2.28	0.51
11:AK:126:LYS:HA	21:AU:34:ARG:HH21	1.75	0.51
13:AM:16:VAL:HG13	13:AM:41:GLU:CB	2.40	0.51
18:AR:48:ARG:N	18:AR:48:ARG:CD	2.73	0.51
22:BA:430:A:H5"	22:BA:431:U:OP2	2.11	0.51
22:BA:1045:C:H3'	22:BA:1046:A:H5'	1.93	0.51
22:BA:1668:A:H4'	22:BA:1669:A:O5'	2.10	0.51
22:BA:2139:U:C2	22:BA:2140:G:C8	2.99	0.51
22:BA:2598:A:H2'	22:BA:2599:G:O5'	2.11	0.51
27:BF:107:ALA:N	27:BF:109:PRO:HD2	2.26	0.51
27:BF:132:VAL:HG22	27:BF:152:LEU:CB	2.41	0.51
29:BH:117:LEU:CD2	29:BH:121:VAL:CA	2.89	0.51
53:B5:100:ILE:HG22	53:B5:104:ILE:CB	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:17:U:H2'	1:CA:18:C:C6	2.45	0.51
1:CA:406:G:C2	1:CA:407:U:C6	2.99	0.51
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.10	0.51
1:CA:940:C:N4	1:CA:941:G:O6	2.44	0.51
1:CA:1002:G:C4	1:CA:1003:G:C8	2.98	0.51
1:CA:1192:C:C5	1:CA:1193:G:C8	2.99	0.51
1:CA:1499:A:H3'	58:CA:1883:HOH:O	2.10	0.51
4:CD:157:ALA:O	4:CD:161:LEU:HD22	2.11	0.51
5:CE:90:THR:HG22	5:CE:91:GLY:N	2.25	0.51
14:CN:2:ALA:O	14:CN:3:LYS:CB	2.58	0.51
19:CS:29:LYS:CB	19:CS:30:PRO:HD2	2.40	0.51
22:DA:17:G:H4'	38:DQ:25:TYR:CE1	2.46	0.51
22:DA:315:G:H2'	22:DA:316:C:O4'	2.11	0.51
22:DA:483:A:C8	42:DU:45:HIS:CD2	2.99	0.51
22:DA:2378:A:N7	22:DA:2379:G:H1'	2.25	0.51
22:DA:2418:A:H2'	22:DA:2419:U:O4'	2.10	0.51
22:DA:2584:U:H3'	22:DA:2585:U:H5"	1.93	0.51
23:DB:64:G:H2'	23:DB:65:U:C6	2.46	0.51
40:DS:22:ASP:OD1	40:DS:22:ASP:N	2.44	0.51
47:DZ:6:LYS:HB2	47:DZ:58:GLU:HG3	1.91	0.51
1:AA:142:G:C6	1:AA:143:A:C5	2.99	0.51
1:AA:1084:G:C5	1:AA:1085:U:C4	2.99	0.51
2:AB:21:ARG:HA	2:AB:21:ARG:NE	2.25	0.51
8:AH:113:ASP:O	8:AH:117:ARG:HB2	2.10	0.51
9:AI:36:GLU:HA	9:AI:40:GLY:HA3	1.92	0.51
22:BA:2648:G:H2'	22:BA:2649:C:C6	2.46	0.51
25:BD:13:ARG:HD2	25:BD:15:PHE:CZ	2.46	0.51
38:BQ:88:VAL:HG13	39:BR:49:ILE:HD11	1.93	0.51
40:BS:96:ILE:CD1	40:BS:98:LYS:HG3	2.41	0.51
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.44	0.51
1:CA:920:U:C2	1:CA:921:U:C5	2.99	0.51
5:CE:50:TYR:O	5:CE:51:GLY:O	2.29	0.51
7:CG:68:ASN:O	7:CG:138:ARG:NH2	2.44	0.51
18:CR:59:ILE:O	18:CR:63:ARG:HD2	2.10	0.51
21:CU:10:GLU:CB	21:CU:11:PRO:HD3	2.41	0.51
22:DA:195:A:C6	22:DA:198:C:C5	2.98	0.51
22:DA:2266:A:C2	22:DA:2272:U:C5	2.99	0.51
22:DA:2297:A:N1	22:DA:2321:U:H5	2.08	0.51
28:DG:118:PRO:HG3	28:DG:144:VAL:CG2	2.41	0.51
29:DH:5:LEU:HA	29:DH:36:ALA:HA	1.93	0.51
46:DY:1:MET:N	46:DY:4:LYS:HD3	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DY:28:LEU:HD12	46:DY:46:VAL:HG21	1.93	0.51
1:AA:92:U:H2'	1:AA:93:U:C6	2.46	0.51
1:AA:141:G:N2	1:AA:142:G:H1'	2.26	0.51
1:AA:276:G:OP1	17:AQ:17:MET:HE2	2.10	0.51
1:AA:429:U:H4'	1:AA:430:A:OP1	2.11	0.51
1:AA:724:G:C2	1:AA:725:G:C8	2.98	0.51
1:AA:760:G:C5	1:AA:761:G:C8	2.99	0.51
1:AA:989:U:C2'	1:AA:990:C:O5'	2.59	0.51
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.41	0.51
1:AA:1096:C:O2'	1:AA:1097:C:H5'	2.11	0.51
1:AA:1533:C:H4'	1:AA:1534:A:O5'	2.11	0.51
2:AB:50:PHE:HA	2:AB:53:ALA:HB3	1.93	0.51
2:AB:187:VAL:HG23	2:AB:187:VAL:O	2.11	0.51
4:AD:166:GLU:O	4:AD:167:LYS:HB2	2.11	0.51
9:AI:43:THR:O	9:AI:44:ALA:HB3	2.11	0.51
16:AP:46:LYS:CD	16:AP:47:GLU:N	2.73	0.51
16:AP:47:GLU:O	16:AP:48:GLU:O	2.29	0.51
16:AP:77:GLU:C	16:AP:79:ASN:H	2.13	0.51
22:BA:483:A:C8	22:BA:484:C:C5	2.99	0.51
22:BA:1085:A:C6	22:BA:1086:A:N6	2.79	0.51
22:BA:1665:A:H2'	22:BA:1666:G:O4'	2.11	0.51
22:BA:1672:A:C2	22:BA:2582:G:H5'	2.46	0.51
22:BA:1738:G:HO2'	22:BA:1739:A:P	2.33	0.51
22:BA:1754:A:C8	37:BP:94:LYS:HE2	2.45	0.51
22:BA:2191:A:N1	22:BA:2192:U:C4	2.79	0.51
22:BA:2267:A:H5"	22:BA:2268:A:H5'	1.93	0.51
22:BA:2561:U:O3'	32:BK:40:LYS:HE2	2.10	0.51
28:BG:80:THR:CG2	28:BG:81:GLU:N	2.72	0.51
29:BH:14:SER:OG	29:BH:17:ASP:OD1	2.29	0.51
29:BH:83:LYS:HA	29:BH:148:ALA:HA	1.93	0.51
30:BI:116:ASP:O	30:BI:117:MET:HB2	2.10	0.51
33:BL:89:VAL:O	33:BL:94:THR:HG21	2.10	0.51
33:BL:109:LYS:HG2	33:BL:126:ARG:CB	2.41	0.51
39:BR:14:VAL:HG13	39:BR:15:SER:N	2.26	0.51
46:BY:35:GLY:O	46:BY:36:GLN:O	2.29	0.51
1:CA:32:A:H2'	1:CA:32:A:N3	2.25	0.51
1:CA:106:C:O2	1:CA:379:C:H5'	2.10	0.51
1:CA:502:A:H2'	1:CA:503:C:O4'	2.11	0.51
1:CA:756:C:C2'	1:CA:757:U:H5'	2.41	0.51
9:CI:31:ASN:HA	9:CI:66:THR:HG22	1.92	0.51
22:DA:249:C:O5'	22:DA:2394:C:O2'	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:621:A:C5	22:DA:622:G:H1'	2.45	0.51
22:DA:764:A:N1	22:DA:1789:A:O2'	2.38	0.51
22:DA:875:G:N2	22:DA:903:C:C2	2.79	0.51
22:DA:1171:G:N2	22:DA:1178:C:O2	2.42	0.51
22:DA:1324:G:C2	22:DA:1328:A:C6	2.99	0.51
22:DA:1383:A:C2	22:DA:1384:A:C5	2.99	0.51
22:DA:1622:G:H2'	22:DA:1623:G:O4'	2.10	0.51
22:DA:1745:A:C2	22:DA:1746:A:C8	2.99	0.51
22:DA:2186:G:C5	22:DA:2187:U:C5	2.99	0.51
22:DA:2216:G:H2'	22:DA:2217:G:C8	2.46	0.51
22:DA:2334:U:C4	36:DO:16:ARG:HD3	2.46	0.51
22:DA:2744:G:C6	22:DA:2761:A:C6	2.98	0.51
24:DC:68:LYS:HD3	24:DC:149:GLY:O	2.11	0.51
24:DC:260:ASN:O	24:DC:261:LYS:HB2	2.11	0.51
39:DR:56:GLY:O	39:DR:58:VAL:HG12	2.11	0.51
1:AA:411:A:C6	1:AA:429:U:C4	2.98	0.50
1:AA:448:A:C4	1:AA:487:A:C2	2.98	0.50
3:AC:97:VAL:HB	3:AC:98:PRO:CD	2.41	0.50
3:AC:167:TRP:HE3	3:AC:167:TRP:C	2.15	0.50
4:AD:91:LEU:HD11	4:AD:195:ILE:HD11	1.93	0.50
7:AG:64:VAL:O	7:AG:68:ASN:ND2	2.43	0.50
12:AL:22:PRO:C	12:AL:24:LEU:N	2.65	0.50
12:AL:110:ARG:NH2	12:AL:117:TYR:CE2	2.78	0.50
17:AQ:16:LYS:O	17:AQ:17:MET:HE3	2.11	0.50
17:AQ:81:LYS:N	17:AQ:81:LYS:HD3	2.26	0.50
22:BA:839:U:H2'	22:BA:840:C:C6	2.47	0.50
22:BA:990:A:H5"	22:BA:991:C:P	2.51	0.50
22:BA:1654:A:OP2	35:BN:1:MET:HA	2.11	0.50
22:BA:2665:A:C2	22:BA:2666:C:C6	2.99	0.50
24:BC:15:HIS:O	24:BC:204:VAL:CG2	2.59	0.50
39:BR:49:ILE:O	39:BR:51:VAL:O	2.29	0.50
52:B4:4:ARG:HD2	52:B4:6:SER:O	2.10	0.50
53:B5:83:LYS:HB3	53:B5:87:ALA:HB3	1.93	0.50
1:CA:252:U:O4	1:CA:253:A:N6	2.44	0.50
5:CE:80:THR:HA	5:CE:120:VAL:HG12	1.93	0.50
6:CF:38:ARG:HG3	6:CF:63:ASN:HB2	1.93	0.50
12:CL:39:THR:HA	12:CL:50:ARG:O	2.10	0.50
17:CQ:47:HIS:HA	17:CQ:71:LYS:HE2	1.94	0.50
22:DA:193:U:C5	22:DA:194:G:N7	2.80	0.50
22:DA:485:C:N3	22:DA:496:G:C2	2.79	0.50
22:DA:633:A:H5"	33:DL:70:LYS:HD2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:680:C:H2'	22:DA:681:G:C8	2.46	0.50
22:DA:749:A:C6	22:DA:1618:A:C2	2.99	0.50
22:DA:770:G:O4'	22:DA:1379:U:C5	2.64	0.50
22:DA:988:A:P	47:DZ:12:SER:HB3	2.51	0.50
22:DA:996:A:C2	22:DA:997:G:C8	2.99	0.50
22:DA:2025:C:H2'	22:DA:2026:U:C6	2.47	0.50
22:DA:2142:A:N6	22:DA:2143:C:N4	2.59	0.50
22:DA:2199:A:N7	22:DA:2225:A:C6	2.79	0.50
22:DA:2341:G:C6	22:DA:2342:C:C4	2.99	0.50
22:DA:2443:C:H2'	22:DA:2444:G:O4'	2.11	0.50
23:DB:6:G:H2'	23:DB:7:G:O4'	2.11	0.50
27:DF:131:GLY:HA2	27:DF:153:ASP:HA	1.93	0.50
37:DP:55:LEU:HA	37:DP:77:HIS:CD2	2.46	0.50
1:AA:188:C:O2	1:AA:188:C:C2'	2.59	0.50
1:AA:872:A:C4	1:AA:874:G:N7	2.79	0.50
2:AB:33:GLY:HA3	2:AB:40:ILE:H	1.76	0.50
4:AD:83:LYS:HD3	4:AD:84:GLY:N	2.27	0.50
22:BA:63:A:C2	22:BA:64:A:C5	2.99	0.50
22:BA:996:A:OP2	38:BQ:93:LYS:HD3	2.11	0.50
22:BA:998:C:C3'	58:BA:3363:HOH:O	2.59	0.50
22:BA:1917:U:O2	22:BA:1918:A:O4'	2.29	0.50
26:BE:189:THR:O	26:BE:190:ALA:C	2.49	0.50
35:BN:79:LEU:O	35:BN:80:PHE:HB2	2.11	0.50
38:BQ:36:PHE:CZ	38:BQ:40:ILE:HD11	2.46	0.50
43:BV:10:LYS:HG2	43:BV:11:GLU:HG3	1.92	0.50
1:CA:8:A:N6	4:CD:206:LYS:HB3	2.27	0.50
1:CA:165:G:N2	1:CA:166:U:O2	2.44	0.50
1:CA:620:C:C6	4:CD:132:ILE:HD13	2.46	0.50
1:CA:1144:G:H5"	1:CA:1145:A:OP2	2.11	0.50
1:CA:1172:C:H2'	1:CA:1173:U:C6	2.46	0.50
1:CA:1279:G:O2'	1:CA:1281:C:OP2	2.26	0.50
5:CE:100:SER:O	5:CE:101:GLU:C	2.49	0.50
10:CJ:19:ASP:HA	10:CJ:22:THR:HB	1.92	0.50
10:CJ:41:PRO:O	10:CJ:42:LEU:HB2	2.11	0.50
12:CL:3:THR:O	12:CL:6:GLN:N	2.44	0.50
13:CM:4:ILE:HA	13:CM:57:ARG:CZ	2.42	0.50
22:DA:533:G:O5'	38:DQ:24:TYR:CD1	2.65	0.50
22:DA:627:A:C6	22:DA:637:A:C8	2.99	0.50
22:DA:1080:A:N6	22:DA:1087:G:OP2	2.44	0.50
22:DA:1353:A:O2'	22:DA:1354:A:H5'	2.12	0.50
22:DA:2264:C:C2	22:DA:2277:G:N2	2.78	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2345:G:C6	22:DA:2347:C:N4	2.79	0.50
23:DB:72:G:O2'	23:DB:104:A:N6	2.43	0.50
25:DD:35:THR:O	25:DD:36:GLN:HB2	2.10	0.50
42:DU:54:GLN:N	42:DU:55:PRO:HD3	2.27	0.50
1:AA:702:A:H3'	1:AA:703:G:C5'	2.40	0.50
1:AA:790:A:C6	1:AA:791:G:C6	3.00	0.50
1:AA:864:A:N1	1:AA:865:A:C2	2.79	0.50
1:AA:1160:G:O2'	1:AA:1161:C:P	2.70	0.50
1:AA:1466:C:H2'	1:AA:1467:C:O4'	2.11	0.50
7:AG:120:LEU:O	7:AG:124:LEU:HD23	2.10	0.50
8:AH:95:VAL:O	8:AH:96:MET:C	2.49	0.50
10:AJ:10:LEU:O	10:AJ:71:LEU:HA	2.11	0.50
13:AM:29:ARG:O	13:AM:33:ILE:HG12	2.11	0.50
14:AN:36:ALA:HB2	14:AN:41:ARG:HE	1.75	0.50
22:BA:1173:U:C2'	22:BA:1174:U:O5'	2.59	0.50
22:BA:1379:U:OP1	22:BA:1379:U:C5	2.64	0.50
22:BA:1778:U:H2'	22:BA:1784:A:N6	2.25	0.50
29:BH:66:ASN:OD1	29:BH:138:VAL:HG21	2.11	0.50
32:BK:2:ILE:HG23	32:BK:6:THR:HG21	1.93	0.50
40:BS:73:LYS:HB2	40:BS:106:VAL:HB	1.94	0.50
42:BU:54:GLN:N	42:BU:55:PRO:CD	2.75	0.50
43:BV:61:LEU:HD13	43:BV:61:LEU:N	2.26	0.50
49:B1:17:THR:HG21	49:B1:42:VAL:HB	1.94	0.50
1:CA:243:A:C2	1:CA:246:A:C8	2.99	0.50
1:CA:756:C:C4	1:CA:757:U:C5	2.99	0.50
1:CA:775:G:C2'	1:CA:776:G:H5'	2.41	0.50
1:CA:844:G:H2'	1:CA:844:G:N3	2.27	0.50
1:CA:1028:C:C6	1:CA:1034:G:N2	2.80	0.50
1:CA:1300:G:C6	1:CA:1335:U:C6	2.98	0.50
21:CU:12:PHE:N	21:CU:12:PHE:CD1	2.78	0.50
22:DA:121:G:H1'	22:DA:131:A:N1	2.26	0.50
22:DA:224:U:OP2	22:DA:408:G:N2	2.44	0.50
22:DA:396:G:C1'	45:DX:29:PHE:HB3	2.42	0.50
22:DA:579:G:C2	22:DA:1262:A:C6	3.00	0.50
22:DA:931:U:O4	22:DA:1184:U:O4'	2.30	0.50
22:DA:948:C:O2	22:DA:984:A:O2'	2.27	0.50
22:DA:1594:U:H2'	22:DA:1595:C:C6	2.47	0.50
22:DA:2235:G:C4	22:DA:2236:U:C6	3.00	0.50
22:DA:2518:A:N3	22:DA:2518:A:H2'	2.26	0.50
22:DA:2546:U:O4'	22:DA:2565:A:C2	2.64	0.50
26:DE:52:VAL:HB	26:DE:74:LYS:HD3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:53:TYR:CD2	31:DJ:121:LYS:HA	2.46	0.50
32:DK:1:MET:HG2	32:DK:32:TYR:CD2	2.46	0.50
32:DK:99:ILE:HD13	32:DK:118:LEU:HD12	1.93	0.50
35:DN:20:MET:HG2	35:DN:21:PHE:CD2	2.46	0.50
41:DT:4:GLU:HA	41:DT:7:LEU:HB2	1.93	0.50
1:AA:198:G:C5	1:AA:220:G:C2	3.00	0.50
1:AA:418:C:N4	58:AA:1718:HOH:O	2.45	0.50
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.11	0.50
1:AA:1138:G:C2	1:AA:1140:C:C5	2.98	0.50
1:AA:1251:A:H2'	1:AA:1252:A:O4'	2.11	0.50
10:AJ:9:ARG:O	10:AJ:98:VAL:HA	2.11	0.50
12:AL:24:LEU:HG	12:AL:25:GLU:H	1.75	0.50
14:AN:64:CYS:HB2	14:AN:80:SER:HB3	1.93	0.50
17:AQ:52:GLU:N	17:AQ:52:GLU:OE1	2.44	0.50
19:AS:64:ASP:O	19:AS:65:GLU:HB3	2.11	0.50
22:BA:65:U:H2'	22:BA:66:C:H6	1.76	0.50
22:BA:608:A:C6	22:BA:609:A:C6	3.00	0.50
22:BA:831:G:C6	22:BA:832:U:C4	2.99	0.50
22:BA:878:A:H5'	22:BA:879:G:OP2	2.12	0.50
22:BA:1342:A:OP1	41:BT:40:LYS:NZ	2.43	0.50
22:BA:1670:C:C5	22:BA:1671:U:C4	2.99	0.50
22:BA:2075:U:C2'	22:BA:2077:A:OP2	2.59	0.50
22:BA:2326:C:H1'	22:BA:2327:A:OP1	2.11	0.50
22:BA:2869:G:H2'	22:BA:2870:C:O4'	2.10	0.50
24:BC:36:LYS:O	24:BC:37:ASN:HB2	2.11	0.50
27:BF:108:VAL:HG11	27:BF:176:PRO:HG2	1.91	0.50
29:BH:80:ILE:O	29:BH:147:VAL:N	2.44	0.50
30:BI:103:ARG:HB3	30:BI:142:ASP:HA	1.93	0.50
50:B2:10:LEU:O	50:B2:14:ARG:HG3	2.11	0.50
1:CA:68:G:C6	1:CA:69:G:H1'	2.46	0.50
1:CA:734:G:C6	1:CA:735:C:C4	2.99	0.50
2:CB:117:LEU:HB3	2:CB:141:LEU:HD11	1.92	0.50
8:CH:126:ILE:N	8:CH:126:ILE:CD1	2.73	0.50
12:CL:80:ILE:HD12	12:CL:97:THR:CG2	2.41	0.50
14:CN:51:LEU:O	14:CN:53:ARG:N	2.44	0.50
22:DA:460:A:C2	22:DA:470:A:C4	3.00	0.50
22:DA:770:G:H1'	22:DA:1379:U:C4	2.47	0.50
22:DA:1722:A:C2	22:DA:1739:A:H1'	2.46	0.50
22:DA:1805:A:N3	24:DC:50:THR:HB	2.26	0.50
22:DA:1926:U:H2'	22:DA:1928:A:N7	2.26	0.50
22:DA:1973:G:C5	22:DA:1974:C:C4	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2267:A:H5”	22:DA:2268:A:H5’	1.93	0.50
22:DA:2307:G:H4’	22:DA:2308:G:O5’	2.12	0.50
23:DB:84:G:N2	23:DB:93:C:C2	2.79	0.50
25:DD:39:ASP:CG	25:DD:40:LEU:N	2.64	0.50
25:DD:104:VAL:O	25:DD:105:LYS:HB3	2.12	0.50
27:DF:70:ALA:HB3	27:DF:80:ARG:O	2.11	0.50
28:DG:111:HIS:ND1	28:DG:111:HIS:O	2.43	0.50
31:DJ:76:HIS:CE1	31:DJ:85:LYS:HB2	2.46	0.50
35:DN:69:ARG:O	35:DN:70:THR:HG23	2.12	0.50
1:AA:148:G:H2’	1:AA:149:A:O5’	2.12	0.50
1:AA:254:G:OP1	17:AQ:70:THR:CB	2.60	0.50
1:AA:751:U:H1’	15:AO:23:GLY:O	2.11	0.50
1:AA:796:C:OP1	11:AK:126:LYS:HG3	2.11	0.50
1:AA:827:U:C4	1:AA:870:U:C2	3.00	0.50
1:AA:1270:G:O3’	1:AA:1314:C:H5’	2.11	0.50
1:AA:1477:U:H2’	1:AA:1478:U:C6	2.45	0.50
4:AD:132:ILE:O	4:AD:132:ILE:HG13	2.12	0.50
4:AD:153:SER:O	4:AD:154:ARG:C	2.50	0.50
8:AH:125:ILE:HD11	8:AH:128:TYR:CE1	2.47	0.50
13:AM:6:GLY:O	13:AM:8:ASN:N	2.45	0.50
13:AM:73:ILE:O	13:AM:76:SER:OG	2.27	0.50
15:AO:2:SER:O	15:AO:3:LEU:CB	2.58	0.50
20:AT:67:ILE:HG13	20:AT:71:LYS:CG	2.41	0.50
22:BA:1005:C:C4	22:BA:1143:A:N3	2.79	0.50
22:BA:1203:U:H1’	33:BL:4:ASN:HB3	1.94	0.50
22:BA:1915:U:H2’	22:BA:1916:A:O4’	2.11	0.50
22:BA:2191:A:C6	22:BA:2192:U:C4	2.99	0.50
22:BA:2564:A:C6	22:BA:2565:A:N1	2.80	0.50
25:BD:40:LEU:O	25:BD:41:ALA:C	2.50	0.50
25:BD:101:PHE:O	25:BD:103:ASP:N	2.45	0.50
26:BE:77:ILE:HG22	26:BE:77:ILE:O	2.11	0.50
27:BF:119:ALA:HB2	27:BF:177:PHE:CD1	2.46	0.50
30:BI:108:GLU:HA	30:BI:111:GLN:HB3	1.92	0.50
33:BL:20:GLY:HA2	33:BL:28:GLY:HA2	1.92	0.50
1:CA:96:U:HO2’	1:CA:97:G:P	2.35	0.50
1:CA:666:G:C5	1:CA:741:G:C6	3.00	0.50
2:CB:130:THR:HB	2:CB:132:LYS:HB3	1.94	0.50
2:CB:163:VAL:HG23	2:CB:185:ALA:HB2	1.93	0.50
14:CN:21:PHE:CD2	14:CN:25:ALA:HB2	2.45	0.50
17:CQ:12:VAL:HG21	17:CQ:54:GLY:O	2.11	0.50
17:CQ:50:ASN:O	17:CQ:52:GLU:N	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:24:ARG:O	20:CT:27:MET:HG3	2.12	0.50
22:DA:7:G:H4'	31:DJ:15:TRP:CH2	2.46	0.50
22:DA:306:U:C5	22:DA:307:G:C5	3.00	0.50
22:DA:348:A:C6	22:DA:349:U:C4	2.99	0.50
22:DA:362:A:C5	22:DA:363:G:C8	3.00	0.50
22:DA:404:A:C4'	22:DA:405:U:OP2	2.60	0.50
22:DA:690:G:H1'	22:DA:779:U:O3'	2.12	0.50
22:DA:1360:G:C2	22:DA:1361:G:H1'	2.46	0.50
22:DA:1599:U:O4	22:DA:1600:C:N4	2.45	0.50
22:DA:1738:G:O2'	22:DA:1739:A:O5'	2.29	0.50
22:DA:2298:A:C4	22:DA:2321:U:C5	2.99	0.50
29:DH:44:ILE:O	29:DH:48:GLU:HB2	2.11	0.50
30:DI:18:ALA:O	30:DI:19:ASN:HB3	2.11	0.50
1:AA:151:A:H2'	1:AA:152:A:O4'	2.12	0.50
1:AA:1109:C:P	3:AC:176:HIS:CE1	3.05	0.50
1:AA:1322:C:O2'	1:AA:1323:G:OP2	2.23	0.50
1:AA:1462:C:C2	1:AA:1463:U:C6	3.00	0.50
2:AB:21:ARG:C	2:AB:23:TRP:N	2.62	0.50
3:AC:40:ARG:NH1	3:AC:57:ILE:HD12	2.27	0.50
4:AD:32:CYS:SG	4:AD:33:LYS:N	2.85	0.50
6:AF:14:GLN:OE1	6:AF:17:GLN:HB2	2.11	0.50
17:AQ:8:LEU:HD23	17:AQ:25:ILE:HD12	1.94	0.50
22:BA:196:A:O2'	22:BA:805:G:O6	2.18	0.50
22:BA:959:A:C6	22:BA:960:A:C6	2.99	0.50
22:BA:1078:U:H5"	22:BA:1079:C:OP1	2.12	0.50
22:BA:1263:U:H2'	22:BA:1264:A:C8	2.46	0.50
22:BA:1429:G:O2'	22:BA:1430:G:H5'	2.12	0.50
22:BA:2131:U:H5'	22:BA:2132:U:H5"	1.93	0.50
25:BD:39:ASP:CG	25:BD:40:LEU:N	2.64	0.50
28:BG:38:ASN:O	28:BG:39:ASP:CB	2.59	0.50
42:BU:41:LEU:CD2	42:BU:62:GLU:HG3	2.41	0.50
1:CA:135:C:O2	16:CP:1:MET:HB2	2.10	0.50
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.46	0.50
3:CC:174:PRO:O	3:CC:176:HIS:N	2.45	0.50
12:CL:25:GLU:CD	12:CL:27:CYS:SG	2.90	0.50
17:CQ:8:LEU:HB2	17:CQ:61:ILE:HG21	1.90	0.50
18:CR:59:ILE:HG22	18:CR:63:ARG:HD2	1.93	0.50
22:DA:70:G:N2	22:DA:71:A:N1	2.58	0.50
22:DA:126:A:OP2	50:D2:19:ARG:HG3	2.12	0.50
22:DA:391:A:C5	22:DA:392:U:C5	3.00	0.50
22:DA:1178:C:H2'	22:DA:1179:G:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1333:G:C2	22:DA:1334:G:C8	2.99	0.50
22:DA:1404:C:O2'	22:DA:1405:U:H5'	2.11	0.50
22:DA:1439:A:C8	22:DA:1440:U:C5	3.00	0.50
22:DA:1917:U:C2'	22:DA:1918:A:H5'	2.41	0.50
22:DA:2131:U:H5'	22:DA:2132:U:H5"	1.93	0.50
22:DA:2217:G:C4	22:DA:2218:G:C8	2.99	0.50
22:DA:2331:G:N2	22:DA:2385:C:C2	2.79	0.50
22:DA:2466:C:OP1	52:D4:4:ARG:HB3	2.11	0.50
30:DI:28:LEU:HD13	30:DI:38:PHE:CD2	2.47	0.50
37:DP:46:VAL:HG12	37:DP:47:VAL:N	2.26	0.50
41:DT:27:SER:O	41:DT:29:THR:N	2.45	0.50
50:D2:44:VAL:HG13	50:D2:45:SER:N	2.26	0.50
1:AA:4:U:O2	1:AA:4:U:H2'	2.11	0.50
1:AA:11:G:C5	1:AA:12:U:C5	2.99	0.50
1:AA:438:U:C2	1:AA:494:G:C6	2.99	0.50
1:AA:444:G:C6	1:AA:445:G:N7	2.79	0.50
2:AB:18:HIS:O	2:AB:19:GLN:HB2	2.11	0.50
2:AB:111:ILE:N	2:AB:111:ILE:CD1	2.75	0.50
9:AI:120:LYS:HG3	9:AI:123:ARG:HB3	1.93	0.50
13:AM:11:ASP:O	13:AM:12:HIS:HB2	2.12	0.50
14:AN:10:GLU:OE2	14:AN:61:ARG:HB3	2.11	0.50
21:AU:4:ILE:HA	21:AU:20:LYS:HE3	1.92	0.50
22:BA:980:A:C6	22:BA:981:A:N1	2.80	0.50
22:BA:1570:A:C6	22:BA:1571:A:C6	3.00	0.50
22:BA:1786:A:C4	22:BA:1938:A:C6	3.00	0.50
32:BK:116:ILE:O	32:BK:118:LEU:O	2.30	0.50
33:BL:77:ILE:HD11	33:BL:101:ILE:HG21	1.94	0.50
35:BN:45:ARG:HG2	35:BN:95:THR:HG21	1.94	0.50
35:BN:69:ARG:C	35:BN:70:THR:HG23	2.32	0.50
44:BW:49:ALA:O	44:BW:50:ASN:HB2	2.10	0.50
1:CA:324:G:N2	1:CA:327:A:C8	2.80	0.50
1:CA:411:A:C6	1:CA:429:U:C5	3.00	0.50
1:CA:644:U:C2	1:CA:645:G:C8	2.99	0.50
1:CA:784:A:H2'	1:CA:785:G:C8	2.47	0.50
1:CA:1360:A:C2	1:CA:1361:G:H1'	2.47	0.50
20:CT:58:VAL:HG13	20:CT:72:ALA:CB	2.42	0.50
21:CU:32:VAL:O	21:CU:32:VAL:HG12	2.11	0.50
22:DA:627:A:OP1	33:DL:78:ARG:NH1	2.45	0.50
22:DA:942:G:H4'	22:DA:1190:G:H5'	1.92	0.50
22:DA:1121:C:C2	22:DA:1122:G:C8	3.00	0.50
22:DA:1255:U:C5	26:DE:68:ALA:HA	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1432:G:C2	22:DA:1433:A:C4	3.00	0.50
22:DA:1440:U:H2'	22:DA:1441:G:O4'	2.12	0.50
22:DA:1567:G:H2'	24:DC:85:PRO:HG3	1.93	0.50
22:DA:1870:C:C3'	22:DA:1871:A:H5'	2.41	0.50
22:DA:2262:U:C2	22:DA:2279:G:N2	2.80	0.50
22:DA:2665:A:N3	22:DA:2665:A:H2'	2.27	0.50
28:DG:86:LYS:HB3	28:DG:165:ALA:HB3	1.92	0.50
29:DH:127:GLU:HG3	29:DH:145:ASN:HA	1.93	0.50
36:DO:115:LEU:O	36:DO:117:PHE:N	2.45	0.50
37:DP:4:ILE:O	37:DP:8:LEU:HB2	2.11	0.50
40:DS:41:LYS:O	40:DS:42:LYS:C	2.50	0.50
48:D0:44:THR:C	48:D0:46:ASP:H	2.15	0.50
1:AA:374:A:H5"	1:AA:452:A:H2	1.77	0.50
1:AA:724:G:N1	1:AA:725:G:C5	2.80	0.50
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.46	0.50
1:AA:1379:G:C6	1:AA:1380:U:C4	2.99	0.50
3:AC:144:LEU:HD13	3:AC:144:LEU:N	2.27	0.50
11:AK:107:ILE:HD11	11:AK:110:ILE:HD11	1.94	0.50
15:AO:46:HIS:O	15:AO:48:LYS:N	2.35	0.50
16:AP:56:ARG:O	16:AP:59:HIS:N	2.44	0.50
22:BA:201:C:OP1	45:BX:18:ARG:NH1	2.45	0.50
22:BA:509:C:O3'	58:BA:3779:HOH:O	2.19	0.50
22:BA:923:G:H4'	44:BW:29:GLU:HG2	1.93	0.50
22:BA:1667:G:O2'	22:BA:1991:U:O4	2.20	0.50
22:BA:1798:U:OP2	24:BC:271:ARG:NH2	2.35	0.50
22:BA:1925:C:H4'	22:BA:1926:U:C5	2.47	0.50
22:BA:2669:G:O2'	22:BA:2670:A:H5'	2.11	0.50
23:BB:90:C:H2'	23:BB:91:C:O5'	2.12	0.50
24:BC:240:PHE:O	24:BC:242:LYS:HG2	2.12	0.50
27:BF:2:ALA:O	27:BF:4:LEU:N	2.45	0.50
32:BK:4:GLU:O	32:BK:5:GLN:HB2	2.12	0.50
1:CA:563:A:N7	1:CA:567:G:H1'	2.26	0.50
1:CA:582:C:N3	1:CA:760:G:C6	2.80	0.50
1:CA:1163:A:C2	1:CA:1174:G:C2	3.00	0.50
7:CG:90:GLU:OE1	7:CG:90:GLU:N	2.44	0.50
12:CL:44:LYS:HB2	12:CL:45:PRO:HD3	1.94	0.50
16:CP:52:LEU:HD21	16:CP:57:ILE:CD1	2.41	0.50
22:DA:43:G:N2	22:DA:437:U:C6	2.79	0.50
22:DA:297:G:H5"	42:DU:85:PHE:CB	2.42	0.50
22:DA:727:A:H2'	22:DA:728:G:C8	2.47	0.50
22:DA:821:A:H4'	58:DA:3344:HOH:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:972:A:N1	22:DA:973:A:N6	2.60	0.50
22:DA:2133:G:H2'	22:DA:2157:G:H22	1.77	0.50
22:DA:2195:U:C2	22:DA:2196:C:C6	3.00	0.50
22:DA:2195:U:O2'	22:DA:2196:C:H5'	2.12	0.50
22:DA:2704:C:C4	22:DA:2705:A:C5	3.00	0.50
23:DB:32:U:C2	23:DB:51:G:N2	2.80	0.50
29:DH:5:LEU:HD11	29:DH:13:GLY:HA2	1.93	0.50
33:DL:92:LEU:HA	33:DL:125:LEU:HD11	1.93	0.50
38:DQ:76:TYR:OH	38:DQ:92:ARG:NH1	2.45	0.50
44:DW:33:ALA:N	44:DW:64:ASP:OD1	2.44	0.50
1:AA:499:A:H4'	1:AA:500:G:OP1	2.12	0.50
1:AA:1010:U:H2'	1:AA:1011:C:C6	2.47	0.50
1:AA:1035:A:C2	1:AA:1036:A:C5	2.99	0.50
1:AA:1157:A:C5	1:AA:1180:A:C6	3.00	0.50
1:AA:1317:C:H4'	14:AN:49:GLN:HG2	1.93	0.50
2:AB:106:THR:O	2:AB:107:VAL:CB	2.60	0.50
20:AT:68:HIS:HB3	20:AT:69:LYS:HE3	1.93	0.50
21:AU:53:VAL:O	21:AU:54:LYS:HB2	2.12	0.50
22:BA:1171:G:C5	22:BA:1172:C:C4	3.00	0.50
22:BA:2443:C:O2'	22:BA:2444:G:H5'	2.11	0.50
22:BA:2547:A:H5"	32:BK:29:HIS:NE2	2.27	0.50
27:BF:107:ALA:C	27:BF:109:PRO:HD2	2.33	0.50
28:BG:40:ALA:HB2	28:BG:58:TYR:CD1	2.47	0.50
33:BL:93:ASN:O	33:BL:94:THR:HB	2.12	0.50
1:CA:515:G:H2'	1:CA:516:U:O4'	2.11	0.50
1:CA:774:G:C5	1:CA:775:G:C8	3.00	0.50
1:CA:840:C:N3	1:CA:842:U:H4'	2.26	0.50
1:CA:1213:A:C6	1:CA:1215:G:N3	2.80	0.50
2:CB:123:ASP:O	2:CB:124:GLY:O	2.29	0.50
11:CK:82:LEU:HD23	11:CK:82:LEU:O	2.12	0.50
22:DA:479:A:C8	22:DA:481:G:C8	3.00	0.50
22:DA:569:U:H4'	22:DA:946:C:O2	2.12	0.50
22:DA:570:G:H2'	22:DA:571:U:H5'	1.93	0.50
22:DA:669:G:N2	22:DA:670:A:N1	2.60	0.50
22:DA:1669:A:N3	22:DA:1669:A:H3'	2.27	0.50
22:DA:1731:G:N1	22:DA:1733:G:C4	2.80	0.50
22:DA:2014:A:H2'	22:DA:2015:A:C8	2.47	0.50
22:DA:2815:C:H2'	22:DA:2816:G:O4'	2.12	0.50
24:DC:158:ALA:HA	24:DC:195:VAL:HG22	1.94	0.50
30:DI:20:PRO:HB2	30:DI:23:PRO:HD2	1.93	0.50
31:DJ:94:ALA:O	31:DJ:95:ARG:C	2.50	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:118:LEU:HD23	32:DK:118:LEU:N	2.26	0.50
34:DM:31:PHE:CD2	34:DM:113:ALA:CB	2.95	0.50
39:DR:83:TYR:CD1	39:DR:83:TYR:C	2.85	0.50
1:AA:502:A:H2'	1:AA:503:C:O4'	2.12	0.49
1:AA:704:A:N6	1:AA:705:G:C6	2.80	0.49
1:AA:1118:U:H5'	9:AI:106:ARG:HG3	1.94	0.49
1:AA:1242:G:C6	1:AA:1243:C:C4	3.00	0.49
1:AA:1277:C:O2'	1:AA:1279:G:H8	1.93	0.49
1:AA:1379:G:C5	1:AA:1380:U:C5	3.00	0.49
2:AB:21:ARG:O	2:AB:22:TYR:C	2.50	0.49
4:AD:30:THR:C	4:AD:31:LYS:HD3	2.33	0.49
11:AK:76:GLU:HA	22:BA:2141:G:P	2.52	0.49
22:BA:78:U:H2'	22:BA:79:C:C6	2.47	0.49
22:BA:441:U:H2'	22:BA:442:G:C8	2.47	0.49
22:BA:1385:A:C4	22:BA:1386:C:C5	3.00	0.49
22:BA:2563:U:H1'	22:BA:2566:A:N6	2.26	0.49
24:BC:247:PRO:HD2	24:BC:248:TRP:CZ3	2.47	0.49
25:BD:103:ASP:O	25:BD:105:LYS:N	2.41	0.49
29:BH:99:ILE:O	29:BH:99:ILE:HG22	2.12	0.49
36:BO:28:VAL:HG22	36:BO:29:HIS:N	2.27	0.49
42:BU:99:ASN:C	42:BU:99:ASN:OD1	2.50	0.49
46:BY:49:ASP:O	46:BY:52:ARG:N	2.45	0.49
1:CA:162:A:H2'	1:CA:163:C:O4'	2.11	0.49
1:CA:1206:G:C6	1:CA:1207:G:C5	3.01	0.49
3:CC:64:ILE:HG22	3:CC:97:VAL:HG23	1.94	0.49
5:CE:38:VAL:HG12	5:CE:39:VAL:N	2.27	0.49
9:CI:28:ILE:HB	9:CI:35:LEU:HB2	1.92	0.49
17:CQ:69:LYS:O	17:CQ:70:THR:CB	2.59	0.49
22:DA:210:C:OP1	50:D2:29:GLN:NE2	2.46	0.49
22:DA:460:A:H2'	22:DA:461:C:O4'	2.12	0.49
22:DA:776:G:N7	22:DA:793:A:C4	2.80	0.49
22:DA:972:A:N1	22:DA:973:A:C6	2.81	0.49
22:DA:1272:A:C5	22:DA:1618:A:H1'	2.47	0.49
22:DA:2409:G:C6	22:DA:2410:G:C5	3.00	0.49
22:DA:2690:U:O2'	22:DA:2872:A:H1'	2.12	0.49
22:DA:2882:A:H5'	35:DN:96:ARG:HB2	1.93	0.49
23:DB:58:A:H2'	23:DB:59:A:O4'	2.13	0.49
25:DD:33:ARG:NH1	25:DD:53:GLY:O	2.45	0.49
35:DN:1:MET:CE	35:DN:1:MET:N	2.71	0.49
1:AA:1000:A:C2	1:AA:1041:G:C2	2.99	0.49
1:AA:1228:C:OP2	13:AM:107:ARG:NH2	2.37	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1378:C:C5	1:AA:1379:G:C8	3.00	0.49
2:AB:96:TRP:CZ3	2:AB:175:GLU:OE2	2.65	0.49
6:AF:6:ILE:C	6:AF:7:VAL:HG12	2.32	0.49
6:AF:18:VAL:N	6:AF:19:PRO:CD	2.75	0.49
10:AJ:10:LEU:HG	10:AJ:98:VAL:HG12	1.94	0.49
12:AL:59:ASN:C	12:AL:59:ASN:OD1	2.48	0.49
16:AP:11:ALA:O	16:AP:12:LYS:C	2.50	0.49
19:AS:5:LEU:C	19:AS:6:LYS:HG3	2.31	0.49
22:BA:593:U:H2'	22:BA:594:U:C6	2.46	0.49
22:BA:1159:U:C2'	22:BA:1160:G:H5'	2.42	0.49
22:BA:1742:U:H2'	22:BA:1743:G:O5'	2.12	0.49
22:BA:2110:G:N2	22:BA:2180:U:C2	2.80	0.49
22:BA:2189:U:H2'	22:BA:2190:G:H1'	1.95	0.49
22:BA:2394:C:C4	22:BA:2395:C:C4	3.00	0.49
22:BA:2502:G:H5"	22:BA:2503:A:H5"	1.93	0.49
22:BA:2849:U:N3	22:BA:2867:G:O4'	2.45	0.49
29:BH:43:ASN:O	29:BH:46:PHE:HB3	2.12	0.49
41:BT:61:LEU:C	41:BT:61:LEU:HD12	2.32	0.49
46:BY:9:LYS:HB3	46:BY:12:GLU:HG3	1.93	0.49
1:CA:8:A:N6	4:CD:54:GLN:OE1	2.45	0.49
1:CA:206:C:H2'	1:CA:207:C:C5'	2.42	0.49
2:CB:119:THR:O	2:CB:120:GLN:HB3	2.12	0.49
12:CL:3:THR:O	12:CL:4:VAL:C	2.50	0.49
13:CM:3:ARG:C	13:CM:4:ILE:HG12	2.32	0.49
22:DA:1379:U:OP1	22:DA:1379:U:C6	2.65	0.49
22:DA:2061:G:C8	22:DA:2501:C:H4'	2.47	0.49
22:DA:2624:G:H1'	48:D0:19:HIS:CE1	2.46	0.49
22:DA:2840:C:OP1	35:DN:53:THR:OG1	2.30	0.49
24:DC:51:THR:O	24:DC:54:ILE:HG13	2.12	0.49
33:DL:53:GLY:O	33:DL:54:GLN:O	2.29	0.49
34:DM:59:ARG:O	34:DM:59:ARG:HD3	2.11	0.49
42:DU:25:VAL:HG22	42:DU:36:VAL:HG22	1.93	0.49
1:AA:1035:A:H2'	1:AA:1036:A:C1'	2.42	0.49
1:AA:1130:A:C2	1:AA:1146:A:C5	3.01	0.49
9:AI:115:LYS:O	9:AI:116:VAL:C	2.50	0.49
10:AJ:6:ILE:HD12	10:AJ:76:ILE:HB	1.93	0.49
10:AJ:52:LEU:HD11	10:AJ:58:ASN:O	2.12	0.49
15:AO:27:VAL:O	15:AO:31:LEU:HG	2.12	0.49
16:AP:19:VAL:HG13	16:AP:37:GLY:C	2.33	0.49
21:AU:25:LYS:O	21:AU:27:GLY:N	2.45	0.49
22:BA:1268:A:H2'	22:BA:1269:A:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1356:G:C2	22:BA:1357:C:C2	3.00	0.49
22:BA:1384:A:H5"	22:BA:1385:A:OP2	2.12	0.49
22:BA:1564:C:O2'	22:BA:1565:C:H5'	2.12	0.49
22:BA:1939:U:OP1	22:BA:2604:U:O2'	2.29	0.49
22:BA:2033:A:P	58:BA:3480:HOH:O	2.66	0.49
22:BA:2182:U:H2'	22:BA:2183:A:C8	2.47	0.49
22:BA:2478:A:H5'	52:B4:32:LYS:HD3	1.94	0.49
22:BA:2615:U:C2'	22:BA:2616:C:O5'	2.60	0.49
29:BH:83:LYS:HD2	1:CA:55:A:O2'	2.13	0.49
32:BK:107:LEU:C	32:BK:109:SER:N	2.65	0.49
1:CA:33:A:C2	1:CA:34:C:C2	3.00	0.49
1:CA:182:A:C5	1:CA:184:G:N7	2.81	0.49
1:CA:321:A:C8	1:CA:328:C:C2	3.00	0.49
1:CA:1365:G:H2'	1:CA:1366:C:O4'	2.13	0.49
2:CB:35:ARG:O	2:CB:37:LYS:N	2.45	0.49
2:CB:96:TRP:CE3	2:CB:97:LEU:O	2.65	0.49
4:CD:22:LYS:O	4:CD:24:GLY:N	2.46	0.49
9:CI:13:LYS:O	9:CI:14:SER:HB3	2.12	0.49
22:DA:729:G:OP2	24:DC:207:LYS:NZ	2.44	0.49
22:DA:830:G:C6	22:DA:2448:A:C8	3.00	0.49
22:DA:845:A:H5'	22:DA:846:U:OP2	2.12	0.49
22:DA:914:G:H5'	22:DA:915:C:OP2	2.12	0.49
22:DA:1203:U:H4'	33:DL:3:LEU:HB3	1.94	0.49
22:DA:1320:C:N4	22:DA:1331:G:N7	2.59	0.49
22:DA:1607:C:H4'	22:DA:1608:A:O5'	2.12	0.49
22:DA:2345:G:H4'	22:DA:2346:A:H5"	1.94	0.49
22:DA:2469:A:H4'	34:DM:55:ARG:HD3	1.93	0.49
22:DA:2612:C:H5"	22:DA:2613:U:P	2.52	0.49
22:DA:2744:G:C6	22:DA:2761:A:N6	2.80	0.49
22:DA:2843:G:C2	22:DA:2875:C:N3	2.80	0.49
25:DD:36:GLN:HA	25:DD:92:VAL:HG22	1.94	0.49
29:DH:81:ALA:C	29:DH:149:GLU:HB3	2.33	0.49
46:DY:46:VAL:O	46:DY:50:VAL:HG23	2.13	0.49
51:D3:32:ILE:HG22	51:D3:32:ILE:O	2.12	0.49
1:AA:246:A:C2	1:AA:282:A:C6	3.01	0.49
1:AA:616:G:N2	1:AA:617:G:C4	2.80	0.49
1:AA:878:A:OP2	8:AH:80:ARG:NH1	2.45	0.49
1:AA:1408:A:H5'	22:BA:1912:A:N6	2.27	0.49
2:AB:181:ILE:O	2:AB:183:VAL:HG23	2.12	0.49
4:AD:105:MET:CB	4:AD:107:PHE:CE2	2.96	0.49
12:AL:114:ARG:CZ	12:AL:114:ARG:HB2	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1176:U:H2'	22:BA:1177:G:N9	2.27	0.49
22:BA:2094:A:C2	22:BA:2196:C:C2	3.01	0.49
22:BA:2646:C:OP2	22:BA:2732:G:O2'	2.27	0.49
23:BB:91:C:OP2	34:BM:18:ARG:HG2	2.13	0.49
27:BF:73:SER:OG	27:BF:80:ARG:HA	2.12	0.49
29:BH:86:ASP:O	29:BH:87:GLU:HB2	2.11	0.49
35:BN:118:ARG:O	35:BN:120:GLU:N	2.45	0.49
36:BO:67:ASN:HA	36:BO:102:ARG:HD3	1.94	0.49
38:BQ:41:LYS:HG3	38:BQ:45:TYR:CE2	2.47	0.49
51:B3:27:ALA:O	51:B3:28:ASN:CB	2.60	0.49
1:CA:448:A:C4	1:CA:487:A:C2	3.01	0.49
1:CA:558:G:P	58:CA:1730:HOH:O	2.65	0.49
1:CA:811:C:C5	1:CA:812:G:C6	3.00	0.49
1:CA:949:A:C2	1:CA:1233:G:C4	3.00	0.49
1:CA:1096:C:C2	1:CA:1097:C:C5	3.01	0.49
1:CA:1190:G:H5'	3:CC:176:HIS:CE1	2.46	0.49
22:DA:222:A:H3'	22:DA:421:C:C5'	2.43	0.49
22:DA:244:A:C2	22:DA:255:A:C4	3.01	0.49
22:DA:451:U:H2'	22:DA:453:A:N7	2.28	0.49
22:DA:527:C:H4'	22:DA:528:A:O5'	2.12	0.49
22:DA:920:A:OP1	47:DZ:19:LYS:HE3	2.11	0.49
22:DA:1177:G:H2'	22:DA:1178:C:O4'	2.12	0.49
22:DA:1665:A:C6	22:DA:1666:G:C5	3.00	0.49
22:DA:2111:U:C4	22:DA:2147:A:C2	3.00	0.49
22:DA:2145:C:H5"	22:DA:2146:C:OP1	2.11	0.49
22:DA:2211:A:H1'	22:DA:2212:A:OP1	2.12	0.49
22:DA:2286:G:C4'	22:DA:2287:A:O5'	2.58	0.49
28:DG:129:THR:C	28:DG:130:GLU:HG2	2.31	0.49
32:DK:47:ILE:HB	32:DK:48:PRO:HD2	1.93	0.49
33:DL:117:THR:HG22	33:DL:118:THR:N	2.26	0.49
39:DR:49:ILE:CD1	39:DR:52:PRO:HA	2.43	0.49
47:DZ:10:THR:HG23	47:DZ:11:ARG:HG3	1.94	0.49
1:AA:203:G:O2'	1:AA:465:A:N1	2.45	0.49
1:AA:532:A:N6	3:AC:192:THR:OG1	2.46	0.49
1:AA:828:U:O4	1:AA:859:G:C8	2.66	0.49
1:AA:1004:A:H2'	1:AA:1005:A:O4'	2.13	0.49
4:AD:17:THR:CG2	4:AD:18:ASP:N	2.74	0.49
7:AG:13:LEU:HD22	7:AG:13:LEU:N	2.27	0.49
13:AM:14:HIS:HB2	13:AM:17:ILE:HD12	1.94	0.49
14:AN:43:ASN:C	14:AN:45:VAL:N	2.66	0.49
17:AQ:12:VAL:O	17:AQ:22:VAL:O	2.31	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1094:U:O4	22:BA:1097:U:OP2	2.30	0.49
22:BA:1800:C:H3'	24:BC:146:MET:HE1	1.94	0.49
22:BA:1921:G:N3	22:BA:1922:G:C8	2.80	0.49
22:BA:2309:A:C6	22:BA:2310:C:C4	3.00	0.49
22:BA:2517:C:C5	22:BA:2542:A:C5	2.99	0.49
29:BH:91:PHE:O	1:CA:55:A:C6	2.66	0.49
33:BL:124:GLY:C	33:BL:125:LEU:HD12	2.33	0.49
49:B1:47:VAL:HG13	49:B1:48:ILE:N	2.27	0.49
1:CA:1221:G:O3'	19:CS:77:THR:HG21	2.11	0.49
1:CA:1279:G:H4'	1:CA:1280:A:OP1	2.12	0.49
3:CC:42:TYR:CZ	3:CC:90:VAL:HG21	2.47	0.49
7:CG:60:GLU:HA	7:CG:63:GLU:HB3	1.94	0.49
9:CI:12:ARG:HG3	9:CI:12:ARG:O	2.13	0.49
17:CQ:13:VAL:HG12	17:CQ:22:VAL:HG13	1.94	0.49
22:DA:45:G:N2	22:DA:434:U:C2	2.80	0.49
22:DA:295:G:C2	22:DA:296:U:C5	3.00	0.49
22:DA:1057:A:C2	22:DA:1082:U:N3	2.81	0.49
22:DA:1388:G:N2	22:DA:1389:G:H1'	2.28	0.49
22:DA:1390:U:C2'	22:DA:1391:U:H5'	2.43	0.49
22:DA:2013:A:N1	22:DA:2014:A:C2	2.80	0.49
22:DA:2024:G:OP2	22:DA:2034:U:H4'	2.12	0.49
22:DA:2066:C:H5"	58:DA:3505:HOH:O	2.11	0.49
22:DA:2305:U:C4	27:DF:152:LEU:HA	2.48	0.49
22:DA:2785:C:H2'	22:DA:2786:U:O4'	2.13	0.49
24:DC:267:ILE:O	24:DC:267:ILE:CG2	2.61	0.49
26:DE:136:GLN:O	26:DE:138:LEU:N	2.45	0.49
28:DG:45:HIS:O	28:DG:46:ALA:CB	2.60	0.49
33:DL:81:ASP:O	33:DL:82:LEU:CB	2.60	0.49
39:DR:80:ARG:C	39:DR:82:HIS:H	2.15	0.49
50:D2:18:PHE:O	50:D2:19:ARG:C	2.50	0.49
1:AA:544:G:C5	1:AA:545:C:C5	3.01	0.49
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.48	0.49
1:AA:1133:G:C6	1:AA:1134:G:N7	2.80	0.49
1:AA:1484:C:O2'	22:BA:1961:C:H5'	2.13	0.49
1:AA:1493:A:HO2'	1:AA:1494:G:P	2.33	0.49
2:AB:21:ARG:O	2:AB:23:TRP:HB3	2.13	0.49
12:AL:44:LYS:CB	12:AL:45:PRO:HD3	2.43	0.49
21:AU:34:ARG:NH2	21:AU:35:ARG:HD2	2.28	0.49
22:BA:627:A:P	33:BL:78:ARG:NH1	2.85	0.49
22:BA:687:C:H2'	22:BA:688:U:O4'	2.12	0.49
22:BA:947:A:O2'	22:BA:984:A:C2	2.66	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1000:A:C6	22:BA:1001:A:C6	3.00	0.49
22:BA:1092:C:H2'	22:BA:1093:G:O4'	2.12	0.49
22:BA:1439:A:OP2	58:BA:3636:HOH:O	2.20	0.49
22:BA:2415:G:C4	22:BA:2416:C:C6	3.00	0.49
28:BG:118:PRO:O	28:BG:119:ALA:C	2.51	0.49
30:BI:79:LEU:HD22	30:BI:109:ILE:HG22	1.95	0.49
43:BV:6:ALA:HB1	43:BV:40:ILE:CG2	2.42	0.49
1:CA:203:G:N2	1:CA:215:C:C2	2.80	0.49
1:CA:1219:A:N6	1:CA:1220:G:O6	2.46	0.49
6:CF:38:ARG:HB3	6:CF:97:THR:HG23	1.95	0.49
8:CH:52:GLU:O	8:CH:58:GLU:N	2.46	0.49
10:CJ:40:ILE:HG22	10:CJ:42:LEU:HG	1.94	0.49
18:CR:22:ASP:OD1	18:CR:23:TYR:N	2.45	0.49
22:DA:118:A:N7	22:DA:119:A:C8	2.80	0.49
22:DA:626:A:C2	33:DL:78:ARG:HD3	2.47	0.49
22:DA:753:A:H2'	22:DA:754:U:C6	2.48	0.49
22:DA:846:U:O2'	22:DA:847:U:P	2.70	0.49
22:DA:919:U:H2'	22:DA:920:A:O4'	2.12	0.49
22:DA:1047:G:N2	22:DA:1110:G:O2'	2.46	0.49
22:DA:1299:G:H5'	22:DA:1301:A:O4'	2.12	0.49
22:DA:1304:A:C6	22:DA:1305:C:C4	2.99	0.49
22:DA:2062:A:C5	54:D6:1:MHW:CB	2.96	0.49
22:DA:2651:C:O2'	22:DA:2652:C:H5'	2.12	0.49
28:DG:176:LYS:O	28:DG:177:LYS:CB	2.61	0.49
29:DH:112:LYS:CG	29:DH:113:SER:N	2.76	0.49
30:DI:10:LYS:HB2	30:DI:56:PRO:CB	2.43	0.49
31:DJ:7:LYS:O	31:DJ:11:VAL:HG23	2.11	0.49
1:AA:198:G:C4	1:AA:199:A:C8	3.01	0.49
1:AA:374:A:H5"	1:AA:452:A:C2	2.48	0.49
1:AA:724:G:C4	1:AA:725:G:C8	3.01	0.49
2:AB:82:ASP:C	2:AB:84:ALA:N	2.65	0.49
6:AF:91:ARG:O	6:AF:92:THR:CB	2.60	0.49
8:AH:49:PHE:HB3	8:AH:61:LEU:CD2	2.43	0.49
8:AH:55:THR:C	8:AH:57:PRO:HD3	2.32	0.49
8:AH:96:MET:C	8:AH:98:GLY:H	2.15	0.49
9:AI:46:MET:SD	9:AI:46:MET:N	2.75	0.49
22:BA:573:U:O2'	22:BA:574:A:H3'	2.12	0.49
22:BA:682:G:H5'	50:B2:26:ASN:CG	2.33	0.49
22:BA:864:G:O2'	22:BA:865:C:H5'	2.12	0.49
22:BA:1292:G:H2'	22:BA:1293:C:C6	2.48	0.49
22:BA:1405:U:C2	22:BA:1406:U:C5	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1469:A:C2	22:BA:1470:A:C4	3.00	0.49
24:BC:225:MET:HE3	24:BC:230:HIS:HB2	1.95	0.49
35:BN:112:TYR:CG	48:B0:55:ILE:HD11	2.47	0.49
1:CA:154:U:C2'	1:CA:155:A:H5'	2.42	0.49
1:CA:429:U:H4'	1:CA:430:A:OP1	2.11	0.49
1:CA:572:A:H5'	1:CA:573:A:P	2.53	0.49
1:CA:972:C:H4'	10:CJ:59:LYS:CG	2.43	0.49
1:CA:992:U:C6	1:CA:1043:G:N7	2.81	0.49
1:CA:1211:U:O4'	1:CA:1213:A:C2	2.65	0.49
1:CA:1222:G:OP2	1:CA:1322:C:N4	2.46	0.49
2:CB:190:ASN:OD1	2:CB:191:SER:N	2.45	0.49
4:CD:192:SER:O	4:CD:193:ALA:HB3	2.13	0.49
8:CH:126:ILE:N	8:CH:126:ILE:HD12	2.27	0.49
21:CU:9:ASN:N	21:CU:12:PHE:HE2	2.11	0.49
21:CU:35:ARG:NH2	58:CU:101:HOH:O	2.44	0.49
22:DA:53:A:C8	22:DA:54:G:N7	2.81	0.49
22:DA:410:G:H2'	22:DA:2407:A:C8	2.47	0.49
22:DA:1083:U:O2	22:DA:1086:A:N1	2.46	0.49
22:DA:1731:G:H2'	22:DA:1732:C:H3'	1.94	0.49
22:DA:2714:G:P	58:DA:3548:HOH:O	2.66	0.49
32:DK:1:MET:HB2	32:DK:67:LYS:HG3	1.94	0.49
40:DS:85:ILE:CG2	40:DS:86:MET:N	2.76	0.49
1:AA:22:G:C5	1:AA:23:C:C5	3.00	0.49
1:AA:102:G:N1	1:AA:103:U:C4	2.81	0.49
1:AA:131:A:C2	1:AA:132:C:C4	3.00	0.49
1:AA:229:U:O2'	1:AA:230:G:H5'	2.12	0.49
1:AA:481:G:O2'	1:AA:483:C:N4	2.42	0.49
1:AA:604:G:C6	1:AA:635:A:N1	2.81	0.49
1:AA:792:A:H4'	1:AA:793:U:O5'	2.12	0.49
1:AA:1161:C:H2'	1:AA:1162:C:H6	1.77	0.49
1:AA:1293:C:H2'	1:AA:1294:G:O4'	2.13	0.49
2:AB:16:PHE:O	2:AB:41:ILE:HD12	2.13	0.49
2:AB:33:GLY:O	2:AB:34:ALA:HB2	2.11	0.49
5:AE:137:VAL:O	5:AE:137:VAL:CG2	2.60	0.49
16:AP:39:PHE:CD2	16:AP:74:LEU:HD11	2.48	0.49
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.95	0.49
22:BA:118:A:N3	22:BA:178:G:H1'	2.28	0.49
22:BA:480:A:OP2	42:BU:44:LYS:HE2	2.13	0.49
22:BA:894:U:H2'	22:BA:895:U:C6	2.48	0.49
22:BA:1386:C:H2'	22:BA:1387:A:C8	2.48	0.49
22:BA:1644:C:O2	22:BA:1644:C:H2'	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1871:A:C8	22:BA:1872:A:C6	3.00	0.49
22:BA:1956:U:H2'	22:BA:1957:C:H5'	1.94	0.49
22:BA:2310:C:C4	27:BF:77:PHE:CZ	3.01	0.49
24:BC:182:ARG:HH21	24:BC:182:ARG:HG3	1.76	0.49
30:BI:10:LYS:HB3	30:BI:56:PRO:HB2	1.95	0.49
33:BL:30:THR:O	33:BL:33:ARG:HG2	2.13	0.49
34:BM:132:THR:HG22	34:BM:133:LYS:N	2.28	0.49
36:BO:24:THR:HG22	36:BO:42:PRO:HD3	1.95	0.49
42:BU:61:LYS:HA	42:BU:61:LYS:HE3	1.93	0.49
53:B5:65:LEU:HD11	53:B5:191:ARG:CB	2.43	0.49
1:CA:158:G:C6	1:CA:164:G:C6	3.00	0.49
1:CA:246:A:C4	1:CA:279:A:C6	3.00	0.49
1:CA:748:G:H2'	1:CA:749:A:C8	2.47	0.49
9:CI:25:ASN:O	9:CI:27:LYS:N	2.45	0.49
10:CJ:15:HIS:HB3	10:CJ:70:HIS:CD2	2.47	0.49
17:CQ:46:VAL:HG22	17:CQ:61:ILE:HD11	1.94	0.49
22:DA:538:A:O2'	31:DJ:8:PRO:CG	2.60	0.49
22:DA:851:C:O2'	47:DZ:43:ALA:O	2.29	0.49
22:DA:1009:A:O2'	22:DA:1153:C:H4'	2.12	0.49
22:DA:1276:A:N1	22:DA:1295:C:C2	2.80	0.49
22:DA:1581:G:C6	22:DA:1582:C:N4	2.80	0.49
22:DA:1581:G:C5	22:DA:1582:C:N4	2.81	0.49
22:DA:1805:A:N3	22:DA:1813:G:C2	2.81	0.49
22:DA:1936:A:N6	22:DA:1963:U:C4	2.81	0.49
22:DA:2236:U:H2'	22:DA:2237:G:O4'	2.13	0.49
22:DA:2262:U:H1'	22:DA:2328:A:H1'	1.94	0.49
22:DA:2835:A:C2	22:DA:2879:A:N7	2.81	0.49
22:DA:2896:C:C4	22:DA:2897:U:C5	3.01	0.49
23:DB:48:U:H2'	23:DB:49:C:C6	2.48	0.49
23:DB:84:G:N2	23:DB:93:C:O2	2.46	0.49
24:DC:72:ASP:HA	24:DC:118:SER:O	2.13	0.49
25:DD:12:THR:HG21	37:DP:5:ILE:HG23	1.95	0.49
27:DF:108:VAL:N	27:DF:109:PRO:HD2	2.28	0.49
28:DG:118:PRO:O	28:DG:119:ALA:C	2.51	0.49
35:DN:87:PHE:CD1	35:DN:90:ARG:HD2	2.48	0.49
51:D3:45:ARG:N	51:D3:46:PRO:CD	2.76	0.49
52:D4:19:ARG:O	52:D4:20:ASP:CB	2.61	0.49
1:AA:8:A:C6	4:AD:206:LYS:HB3	2.48	0.49
1:AA:102:G:C2	1:AA:103:U:C5	3.00	0.49
1:AA:588:G:N1	1:AA:589:U:C2	2.81	0.49
1:AA:1307:U:C2	1:AA:1308:U:C5	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:113:ARG:O	2:AB:117:LEU:HB2	2.12	0.49
4:AD:122:ALA:HA	4:AD:146:ARG:HG3	1.95	0.49
8:AH:125:ILE:HD11	8:AH:128:TYR:CZ	2.48	0.49
10:AJ:35:GLN:O	10:AJ:36:VAL:O	2.31	0.49
11:AK:112:ASP:OD1	11:AK:112:ASP:C	2.51	0.49
22:BA:684:G:C6	22:BA:774:G:C4	3.01	0.49
22:BA:868:U:C4	22:BA:869:G:N7	2.81	0.49
22:BA:1588:G:C2	22:BA:1589:U:C6	3.01	0.49
22:BA:1917:U:C5	22:BA:1918:A:C6	3.01	0.49
22:BA:1985:C:H2'	22:BA:1985:C:O2	2.12	0.49
22:BA:2316:G:O2'	27:BF:125:ARG:NH1	2.46	0.49
24:BC:204:VAL:O	24:BC:204:VAL:HG23	2.13	0.49
26:BE:108:ILE:HD11	26:BE:180:LEU:HD13	1.94	0.49
33:BL:85:VAL:HG11	33:BL:94:THR:CG2	2.42	0.49
34:BM:135:VAL:O	34:BM:136:MET:O	2.30	0.49
39:BR:66:HIS:CE1	39:BR:94:THR:HB	2.47	0.49
1:CA:130:A:O2'	1:CA:131:A:O5'	2.31	0.49
1:CA:355:C:C4	1:CA:356:A:N7	2.80	0.49
1:CA:451:A:H61	1:CA:481:G:H5'	1.77	0.49
1:CA:1002:G:C5	1:CA:1003:G:C8	3.01	0.49
11:CK:65:VAL:O	11:CK:68:GLU:HB2	2.12	0.49
11:CK:126:LYS:O	11:CK:127:ARG:HB2	2.13	0.49
15:CO:19:ALA:O	15:CO:20:ASN:CB	2.61	0.49
19:CS:80:TYR:O	19:CS:81:ARG:HB2	2.13	0.49
22:DA:307:G:N1	22:DA:310:A:OP2	2.45	0.49
22:DA:1064:C:N3	22:DA:1074:G:N2	2.59	0.49
22:DA:1097:U:O2	30:DI:9:VAL:HG11	2.13	0.49
22:DA:1483:G:C6	22:DA:1484:U:C4	3.00	0.49
22:DA:1805:A:O2'	24:DC:50:THR:HA	2.12	0.49
22:DA:2184:A:H2'	22:DA:2185:U:C6	2.46	0.49
22:DA:2331:G:N2	22:DA:2385:C:C6	2.80	0.49
22:DA:2373:G:C6	22:DA:2374:C:N4	2.81	0.49
23:DB:94:A:H2'	23:DB:95:U:O4'	2.12	0.49
24:DC:93:LEU:HD13	24:DC:103:TYR:CE1	2.48	0.49
1:AA:1039:G:O2'	1:AA:1040:U:H5'	2.13	0.49
1:AA:1319:A:C4	1:AA:1323:G:C8	3.01	0.49
1:AA:1537:U:C4	1:AA:1538:C:C4	3.00	0.49
2:AB:67:ILE:O	2:AB:68:LEU:CB	2.59	0.49
2:AB:106:THR:O	2:AB:107:VAL:HG23	2.13	0.49
4:AD:36:GLN:O	4:AD:37:ALA:HB2	2.13	0.49
4:AD:124:MET:HE2	4:AD:146:ARG:HD2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:46:LEU:C	14:AN:46:LEU:HD12	2.32	0.49
15:AO:56:LEU:HD12	15:AO:56:LEU:O	2.12	0.49
18:AR:37:GLY:O	18:AR:63:ARG:NH2	2.45	0.49
22:BA:523:C:O2'	22:BA:524:G:H5'	2.13	0.49
22:BA:532:A:H2'	38:BQ:28:ARG:NH1	2.27	0.49
22:BA:742:A:H2'	22:BA:743:A:C8	2.48	0.49
22:BA:907:G:H2'	22:BA:908:C:O5'	2.13	0.49
22:BA:1045:C:C3'	22:BA:1046:A:H5'	2.42	0.49
22:BA:1338:G:N7	41:BT:66:LYS:NZ	2.61	0.49
22:BA:2198:A:C2	29:BH:29:PHE:HB2	2.48	0.49
26:BE:106:LYS:HG3	26:BE:200:LEU:HG	1.94	0.49
29:BH:121:VAL:H	29:BH:122:LEU:HB2	1.77	0.49
29:BH:139:PHE:O	29:BH:140:ALA:HB2	2.13	0.49
36:BO:24:THR:HG22	36:BO:42:PRO:CG	2.43	0.49
1:CA:577:G:C2	1:CA:578:C:C6	3.01	0.49
1:CA:671:G:O2'	1:CA:672:U:H5'	2.13	0.49
1:CA:1014:A:H5"	19:CS:14:HIS:CD2	2.47	0.49
1:CA:1055:A:C6	1:CA:1206:G:C5	3.01	0.49
2:CB:185:ALA:O	2:CB:200:ILE:HB	2.13	0.49
4:CD:145:ILE:CG2	4:CD:150:LYS:HA	2.43	0.49
6:CF:8:PHE:CE1	6:CF:60:VAL:HB	2.48	0.49
8:CH:13:ARG:HD3	8:CH:27:MET:HB3	1.94	0.49
9:CI:127:PHE:C	9:CI:127:PHE:CD1	2.86	0.49
22:DA:309:A:H1'	22:DA:329:G:N3	2.27	0.49
22:DA:1095:A:H2'	22:DA:1096:A:C4	2.48	0.49
22:DA:1262:A:N3	48:D0:7:LYS:NZ	2.57	0.49
22:DA:1820:U:O2	24:DC:200:HIS:HB3	2.12	0.49
22:DA:2359:C:O2'	51:D3:54:ASP:OD2	2.22	0.49
23:DB:9:G:O2'	36:DO:45:SER:OG	2.28	0.49
26:DE:196:VAL:O	26:DE:196:VAL:HG12	2.11	0.49
29:DH:21:VAL:CG2	29:DH:22:LYS:N	2.76	0.49
29:DH:72:ILE:O	29:DH:141:LYS:O	2.30	0.49
30:DI:8:TYR:HB3	30:DI:59:ILE:O	2.12	0.49
30:DI:75:PRO:HG2	30:DI:78:VAL:CG2	2.42	0.49
30:DI:101:ILE:O	30:DI:102:SER:HB3	2.12	0.49
32:DK:34:GLY:O	32:DK:35:VAL:C	2.51	0.49
36:DO:104:GLN:O	36:DO:107:ALA:N	2.46	0.49
37:DP:113:ARG:O	37:DP:114:LEU:C	2.50	0.49
1:AA:66:A:H4'	1:AA:173:U:C5	2.48	0.48
1:AA:402:G:C5	1:AA:403:C:C5	3.01	0.48
1:AA:453:G:H2'	1:AA:454:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:618:C:H1'	16:AP:14:ARG:NH1	2.28	0.48
1:AA:874:G:C5	1:AA:875:U:C5	3.01	0.48
1:AA:998:C:H2'	1:AA:999:C:C6	2.48	0.48
1:AA:1307:U:N3	1:AA:1308:U:C5	2.81	0.48
2:AB:161:LEU:HD12	2:AB:181:ILE:HG21	1.95	0.48
4:AD:9:LEU:HD21	4:AD:22:LYS:HB2	1.94	0.48
4:AD:91:LEU:HD21	4:AD:195:ILE:CD1	2.43	0.48
5:AE:136:VAL:HG22	5:AE:137:VAL:N	2.28	0.48
9:AI:120:LYS:HG3	9:AI:123:ARG:CB	2.43	0.48
10:AJ:32:THR:OG1	10:AJ:33:GLY:N	2.46	0.48
13:AM:19:LEU:O	13:AM:25:VAL:HG21	2.13	0.48
21:AU:6:VAL:O	21:AU:6:VAL:HG23	2.14	0.48
22:BA:947:A:O2'	22:BA:984:A:H2	1.96	0.48
22:BA:1176:U:H2'	22:BA:1177:G:C8	2.48	0.48
22:BA:1556:C:O2'	22:BA:1557:C:H5'	2.12	0.48
22:BA:2887:A:H5'	22:BA:2888:C:OP2	2.13	0.48
26:BE:40:ARG:HD2	26:BE:92:HIS:CD2	2.48	0.48
30:BI:44:ALA:O	30:BI:45:LYS:HD3	2.12	0.48
33:BL:85:VAL:CG1	33:BL:94:THR:CG2	2.91	0.48
36:BO:25:ARG:HG3	36:BO:27:VAL:HG12	1.94	0.48
43:BV:80:HIS:ND1	43:BV:81:PRO:HD2	2.28	0.48
1:CA:454:G:N2	1:CA:479:U:O2	2.44	0.48
1:CA:755:G:C2	1:CA:756:C:C5	3.01	0.48
1:CA:977:A:H3'	1:CA:977:A:N3	2.28	0.48
1:CA:1092:A:N1	1:CA:1183:U:O2	2.46	0.48
1:CA:1215:G:C6	1:CA:1216:A:C5	3.00	0.48
10:CJ:6:ILE:HD11	10:CJ:79:PRO:HA	1.95	0.48
14:CN:36:ALA:HB2	14:CN:42:TRP:CH2	2.47	0.48
22:DA:60:G:C6	22:DA:74:A:C6	3.01	0.48
22:DA:77:G:H5"	46:DY:2:LYS:HB3	1.95	0.48
22:DA:186:G:C2	22:DA:211:C:C2	3.01	0.48
22:DA:333:G:C5	22:DA:334:C:C5	3.01	0.48
22:DA:657:U:C2	22:DA:658:U:C5	3.01	0.48
22:DA:950:G:H2'	22:DA:951:C:O4'	2.13	0.48
22:DA:1355:G:O2'	22:DA:1356:G:H5'	2.12	0.48
22:DA:1817:G:O2'	22:DA:1818:U:H5'	2.12	0.48
22:DA:2734:A:C8	22:DA:2735:G:C8	3.01	0.48
28:DG:35:ARG:NE	28:DG:71:LEU:HD22	2.28	0.48
33:DL:81:ASP:O	33:DL:82:LEU:CD2	2.61	0.48
37:DP:89:ARG:HD2	37:DP:113:ARG:NH1	2.27	0.48
1:AA:287:U:C2	1:AA:288:A:C8	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:592:G:C2	1:AA:593:U:C2	3.01	0.48
1:AA:1126:U:O2	1:AA:1280:A:H5"	2.12	0.48
2:AB:219:ALA:HA	2:AB:222:ARG:NH2	2.28	0.48
3:AC:7:PRO:HG2	3:AC:184:TYR:CD2	2.47	0.48
4:AD:190:ASP:O	4:AD:191:LEU:HD12	2.13	0.48
5:AE:82:GLN:HG2	5:AE:150:PRO:HB3	1.95	0.48
8:AH:89:LYS:HG3	8:AH:90:ASP:H	1.79	0.48
9:AI:50:GLN:C	9:AI:52:LEU:H	2.17	0.48
9:AI:130:ARG:NH1	9:AI:130:ARG:HB3	2.28	0.48
10:AJ:41:PRO:O	10:AJ:42:LEU:HB3	2.13	0.48
12:AL:43:LYS:HG3	12:AL:44:LYS:HD3	1.95	0.48
26:BE:104:ALA:O	26:BE:108:ILE:HG23	2.13	0.48
27:BF:158:THR:HG22	27:BF:160:ALA:H	1.78	0.48
29:BH:91:PHE:HB3	1:CA:55:A:C4	2.49	0.48
38:BQ:112:LYS:CD	39:BR:48:LYS:HD2	2.43	0.48
46:BY:6:LEU:HD13	46:BY:56:LEU:HD22	1.95	0.48
53:B5:55:SER:HB3	53:B5:203:GLU:CB	2.43	0.48
1:CA:31:G:O4'	1:CA:306:A:C2	2.66	0.48
1:CA:84:U:O2'	1:CA:85:U:H5'	2.13	0.48
1:CA:295:C:C4	1:CA:296:U:C5	3.00	0.48
1:CA:806:C:O2'	1:CA:807:A:H5'	2.13	0.48
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.13	0.48
6:CF:37:HIS:O	6:CF:38:ARG:HB3	2.13	0.48
21:CU:11:PRO:O	21:CU:12:PHE:CB	2.62	0.48
22:DA:77:G:OP1	46:DY:52:ARG:HD3	2.12	0.48
22:DA:204:A:C8	22:DA:206:U:C2	3.01	0.48
22:DA:489:G:HO2'	22:DA:491:G:H8	1.61	0.48
22:DA:937:C:C2	22:DA:938:G:C8	3.01	0.48
22:DA:1865:U:C5	22:DA:1875:G:C2	3.01	0.48
22:DA:2196:C:O2'	22:DA:2197:U:H5'	2.13	0.48
22:DA:2432:A:N1	45:DX:21:ALA:HA	2.28	0.48
22:DA:2718:G:C6	22:DA:2719:G:C4	3.01	0.48
22:DA:2773:C:OP1	25:DD:171:THR:OG1	2.26	0.48
22:DA:2812:G:N2	22:DA:2889:C:C2	2.80	0.48
32:DK:113:MET:O	32:DK:116:ILE:HG13	2.13	0.48
45:DX:40:VAL:HG22	45:DX:45:ARG:O	2.13	0.48
1:AA:104:G:C2	1:AA:105:G:N7	2.81	0.48
1:AA:316:C:N3	1:AA:317:U:C5	2.81	0.48
1:AA:568:G:O6	12:AL:2:ALA:HB2	2.13	0.48
1:AA:787:A:H2'	1:AA:788:U:O5'	2.14	0.48
1:AA:828:U:C4	1:AA:859:G:C4	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1379:G:C4	1:AA:1380:U:C5	3.01	0.48
1:AA:1405:G:H1'	1:AA:1519:A:O4'	2.13	0.48
1:AA:1535:C:H2'	1:AA:1536:C:C6	2.47	0.48
2:AB:10:LEU:C	2:AB:10:LEU:HD23	2.33	0.48
4:AD:157:ALA:O	4:AD:160:GLU:HB3	2.13	0.48
4:AD:190:ASP:O	4:AD:191:LEU:O	2.30	0.48
5:AE:115:LEU:CG	5:AE:120:VAL:HG21	2.43	0.48
6:AF:7:VAL:O	6:AF:7:VAL:CG2	2.59	0.48
8:AH:39:VAL:CG1	8:AH:112:THR:HG22	2.43	0.48
8:AH:51:VAL:O	8:AH:51:VAL:HG22	2.12	0.48
9:AI:61:LEU:N	9:AI:61:LEU:HD22	2.29	0.48
13:AM:91:HIS:HA	13:AM:109:ARG:NH2	2.29	0.48
17:AQ:17:MET:HG2	17:AQ:20:SER:HB3	1.95	0.48
20:AT:44:LYS:HD3	20:AT:87:ALA:HA	1.94	0.48
22:BA:1079:C:C4	22:BA:1088:A:C2	3.01	0.48
22:BA:1260:A:C6	22:BA:1261:C:C4	3.01	0.48
22:BA:1716:U:C2'	22:BA:1717:A:H5'	2.43	0.48
22:BA:1914:C:C2	22:BA:1915:U:C6	3.01	0.48
22:BA:1916:A:H2'	22:BA:1917:U:C1'	2.43	0.48
23:BB:24:G:N2	23:BB:28:C:C2	2.81	0.48
27:BF:105:THR:HG23	27:BF:106:ILE:CG2	2.43	0.48
1:CA:198:G:O2'	1:CA:199:A:H5'	2.12	0.48
1:CA:254:G:H4'	17:CQ:20:SER:HB2	1.96	0.48
1:CA:525:C:N4	1:CA:526:C:N4	2.61	0.48
1:CA:992:U:O4'	1:CA:993:G:N2	2.46	0.48
1:CA:1160:G:O2'	1:CA:1161:C:P	2.71	0.48
2:CB:152:LYS:HG3	2:CB:153:ASP:N	2.28	0.48
6:CF:38:ARG:CG	6:CF:63:ASN:HB2	2.43	0.48
6:CF:99:ALA:O	6:CF:100:SER:CB	2.61	0.48
10:CJ:57:VAL:HG22	10:CJ:58:ASN:H	1.78	0.48
19:CS:40:ILE:HA	19:CS:44:MET:SD	2.53	0.48
21:CU:10:GLU:N	21:CU:12:PHE:CE2	2.81	0.48
22:DA:3:U:H2'	22:DA:4:U:O4'	2.13	0.48
22:DA:84:A:H4'	22:DA:85:G:H4'	1.95	0.48
22:DA:192:C:P	58:DA:3740:HOH:O	2.70	0.48
22:DA:636:G:C6	33:DL:111:ILE:HD11	2.48	0.48
22:DA:847:U:O2	22:DA:847:U:H2'	2.13	0.48
22:DA:1211:C:H5"	22:DA:1212:G:C8	2.47	0.48
22:DA:1469:A:C2	22:DA:1470:A:C4	3.01	0.48
22:DA:1530:G:N2	22:DA:1542:U:C2	2.81	0.48
22:DA:1553:A:N7	22:DA:1555:G:C6	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2033:A:H4'	22:DA:2034:U:OP1	2.13	0.48
22:DA:2164:C:H2'	22:DA:2165:C:H6	1.75	0.48
23:DB:62:C:H2'	23:DB:63:C:C6	2.47	0.48
24:DC:160:THR:CG2	24:DC:177:ARG:HG2	2.43	0.48
30:DI:39:CYS:HA	30:DI:42:PHE:HB3	1.94	0.48
38:DQ:98:ILE:HG22	38:DQ:106:PHE:HB2	1.95	0.48
44:DW:38:VAL:CG2	44:DW:80:ILE:CD1	2.91	0.48
46:DY:28:LEU:HB3	46:DY:43:LEU:HD23	1.94	0.48
1:AA:32:A:OP1	1:AA:398:U:H1'	2.13	0.48
1:AA:126:G:H2'	1:AA:127:G:O4'	2.13	0.48
1:AA:152:A:N6	1:AA:170:U:C2	2.80	0.48
1:AA:590:U:H2'	1:AA:591:U:C6	2.49	0.48
1:AA:1133:G:N2	1:AA:1142:G:C4	2.81	0.48
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.49	0.48
4:AD:38:PRO:HD2	4:AD:42:GLY:CA	2.44	0.48
4:AD:99:ASP:OD2	4:AD:115:ARG:NH2	2.46	0.48
4:AD:171:LEU:HD12	4:AD:171:LEU:O	2.12	0.48
7:AG:129:GLU:O	7:AG:130:ASN:C	2.51	0.48
8:AH:125:ILE:CD1	8:AH:128:TYR:CE1	2.96	0.48
9:AI:81:HIS:NE2	9:AI:104:VAL:O	2.47	0.48
11:AK:52:PHE:CB	11:AK:56:ARG:HB3	2.42	0.48
17:AQ:12:VAL:CG1	17:AQ:55:ILE:HA	2.43	0.48
19:AS:4:SER:HB2	19:AS:5:LEU:HD12	1.95	0.48
21:AU:35:ARG:O	21:AU:36:GLU:C	2.51	0.48
22:BA:1439:A:C2	22:BA:1553:A:C5	3.01	0.48
22:BA:1744:A:H2'	22:BA:1745:A:O4'	2.14	0.48
22:BA:1879:C:C4	22:BA:1880:U:C4	3.01	0.48
22:BA:1927:A:C6	22:BA:1928:A:C6	3.01	0.48
22:BA:1936:A:H2	22:BA:1943:U:N3	2.10	0.48
26:BE:44:ARG:HG2	26:BE:45:ALA:N	2.28	0.48
32:BK:58:LEU:HD23	32:BK:59:LYS:O	2.13	0.48
36:BO:7:ARG:CG	36:BO:96:GLY:HA3	2.44	0.48
36:BO:53:THR:HB	36:BO:65:THR:HG22	1.95	0.48
43:BV:36:ALA:O	43:BV:93:ARG:NH2	2.43	0.48
49:B1:16:GLY:O	49:B1:17:THR:O	2.31	0.48
1:CA:409:U:OP1	4:CD:24:GLY:HA3	2.12	0.48
4:CD:90:LEU:CD2	4:CD:200:ILE:HD11	2.43	0.48
4:CD:148:LYS:CD	4:CD:148:LYS:H	2.26	0.48
6:CF:93:LYS:O	6:CF:93:LYS:HG2	2.13	0.48
7:CG:78:ARG:O	7:CG:79:ARG:HB2	2.13	0.48
12:CL:61:PHE:N	12:CL:61:PHE:CD1	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:79:ARG:O	13:CM:83:LEU:HD23	2.13	0.48
22:DA:188:G:C2	22:DA:209:C:C2	3.02	0.48
22:DA:1593:A:C2	22:DA:1594:U:C2	3.01	0.48
22:DA:2040:G:H2'	22:DA:2041:U:O4'	2.13	0.48
22:DA:2304:G:N2	22:DA:2313:C:C2	2.81	0.48
22:DA:2387:U:H1'	44:DW:41:ARG:HD3	1.95	0.48
22:DA:2533:U:OP1	22:DA:2665:A:O2'	2.27	0.48
24:DC:24:LEU:HD21	24:DC:90:ASN:ND2	2.28	0.48
24:DC:33:LEU:C	24:DC:64:ILE:HD12	2.33	0.48
30:DI:14:ALA:O	30:DI:16:GLY:N	2.45	0.48
30:DI:123:GLU:O	30:DI:127:ARG:CZ	2.61	0.48
47:DZ:41:THR:HG23	47:DZ:44:ILE:HG12	1.95	0.48
1:AA:107:G:H2'	1:AA:108:G:H5"	1.96	0.48
1:AA:1270:G:C6	1:AA:1271:A:C5	3.01	0.48
3:AC:83:ASP:O	3:AC:84:VAL:C	2.52	0.48
10:AJ:66:GLU:HB3	14:AN:99:ALA:CB	2.42	0.48
11:AK:74:VAL:C	11:AK:76:GLU:N	2.65	0.48
13:AM:29:ARG:NH1	13:AM:63:PHE:HB2	2.28	0.48
22:BA:139:U:O2'	22:BA:141:G:N1	2.37	0.48
22:BA:146:A:H2'	22:BA:147:C:O4'	2.14	0.48
22:BA:283:G:C5	22:BA:284:U:C5	3.02	0.48
22:BA:388:G:N7	22:BA:390:U:C2'	2.77	0.48
22:BA:435:C:H2'	22:BA:436:C:H5'	1.95	0.48
22:BA:1972:G:N2	22:BA:1973:G:C5	2.82	0.48
22:BA:2709:G:OP1	35:BN:18:GLN:NE2	2.46	0.48
22:BA:2740:A:C6	22:BA:2741:A:C6	3.01	0.48
34:BM:2:LEU:O	34:BM:3:GLN:HB3	2.14	0.48
38:BQ:50:ARG:O	38:BQ:54:LYS:CE	2.60	0.48
53:B5:83:LYS:HB3	53:B5:87:ALA:CB	2.44	0.48
1:CA:209:U:O2	1:CA:209:U:H2'	2.13	0.48
1:CA:291:U:H2'	1:CA:291:U:O2	2.14	0.48
1:CA:643:C:H5'	8:CH:32:LEU:HD13	1.95	0.48
1:CA:690:G:H2'	1:CA:691:G:O4'	2.13	0.48
1:CA:734:G:C2	1:CA:735:C:C6	3.02	0.48
1:CA:945:G:H2'	1:CA:945:G:N3	2.29	0.48
1:CA:945:G:C2	1:CA:946:A:C8	3.00	0.48
1:CA:1144:G:C2	1:CA:1145:A:C2	3.01	0.48
1:CA:1302:C:C4	13:CM:17:ILE:CD1	2.97	0.48
9:CI:51:PRO:HB3	9:CI:84:THR:HG23	1.95	0.48
16:CP:36:VAL:O	16:CP:36:VAL:HG13	2.13	0.48
17:CQ:14:SER:C	17:CQ:17:MET:HE1	2.33	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:52:GLU:HG2	17:CQ:53:CYS:SG	2.53	0.48
22:DA:158:U:O2	22:DA:169:G:N1	2.45	0.48
22:DA:676:A:C2	22:DA:2070:A:O4'	2.67	0.48
22:DA:753:A:C2	22:DA:754:U:C2	3.01	0.48
22:DA:1139:G:N3	22:DA:1143:A:H2	2.11	0.48
22:DA:1196:C:H1'	22:DA:1226:A:C4	2.49	0.48
22:DA:1248:G:N7	26:DE:46:GLN:NE2	2.61	0.48
22:DA:1792:G:O2'	22:DA:1793:C:H5'	2.13	0.48
22:DA:1798:U:O2'	22:DA:1802:A:N3	2.46	0.48
22:DA:2211:A:C1'	22:DA:2212:A:OP1	2.60	0.48
22:DA:2212:A:C2	22:DA:2214:C:N4	2.81	0.48
22:DA:2287:A:C8	22:DA:2289:G:C8	3.01	0.48
22:DA:2550:G:C6	22:DA:2551:C:N4	2.81	0.48
22:DA:2599:G:C8	24:DC:236:GLU:HB2	2.48	0.48
23:DB:31:C:H5'	27:DF:26:MET:CE	2.43	0.48
26:DE:149:ILE:HG23	26:DE:188:MET:HG2	1.96	0.48
39:DR:52:PRO:O	39:DR:53:PHE:CB	2.60	0.48
1:AA:299:G:O6	58:AA:1840:HOH:O	2.18	0.48
1:AA:389:A:C6	1:AA:390:U:H1'	2.48	0.48
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.14	0.48
1:AA:1407:C:O2'	22:BA:1912:A:C6	2.63	0.48
2:AB:210:VAL:O	2:AB:211:THR:C	2.51	0.48
4:AD:147:GLU:HA	4:AD:150:LYS:HD3	1.96	0.48
5:AE:100:SER:O	5:AE:101:GLU:C	2.52	0.48
8:AH:30:SER:O	8:AH:31:LYS:C	2.51	0.48
14:AN:43:ASN:O	14:AN:45:VAL:N	2.47	0.48
22:BA:31:C:O3'	22:BA:1238:G:H5"	2.14	0.48
22:BA:1189:A:H2'	22:BA:1190:G:O4'	2.13	0.48
22:BA:1867:G:O2'	22:BA:1868:C:H5'	2.13	0.48
22:BA:1930:G:N2	22:BA:1968:G:H2'	2.28	0.48
22:BA:2343:U:HO2'	22:BA:2373:G:HO2'	1.59	0.48
22:BA:2377:A:H2'	22:BA:2378:A:H5'	1.95	0.48
24:BC:97:LYS:HA	24:BC:97:LYS:HE3	1.96	0.48
26:BE:91:ASP:OD1	26:BE:93:SER:OG	2.31	0.48
27:BF:67:ILE:HD12	27:BF:67:ILE:O	2.14	0.48
29:BH:86:ASP:CB	1:CA:359:G:O2'	2.59	0.48
35:BN:58:ASP:CG	35:BN:63:ARG:NH2	2.64	0.48
44:BW:66:LYS:HD2	44:BW:85:GLU:HB3	1.96	0.48
46:BY:46:VAL:O	46:BY:47:ARG:C	2.51	0.48
1:CA:950:U:H2'	1:CA:951:G:C8	2.48	0.48
1:CA:976:G:C2	1:CA:1363:A:C2	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1000:A:C2	1:CA:1041:G:N2	2.82	0.48
9:CI:50:GLN:N	9:CI:51:PRO:HD2	2.29	0.48
13:CM:58:ASP:C	13:CM:58:ASP:OD1	2.51	0.48
22:DA:1924:C:H2'	22:DA:1925:C:O4'	2.13	0.48
22:DA:2060:A:O4'	22:DA:2502:G:H1'	2.14	0.48
22:DA:2612:C:C5'	22:DA:2613:U:OP1	2.62	0.48
27:DF:170:LEU:O	27:DF:175:PHE:HB3	2.13	0.48
29:DH:127:GLU:HG3	29:DH:144:VAL:O	2.13	0.48
33:DL:111:ILE:N	33:DL:111:ILE:HD12	2.28	0.48
37:DP:31:TRP:C	37:DP:32:VAL:HG12	2.34	0.48
41:DT:38:ALA:O	41:DT:39:THR:CB	2.61	0.48
42:DU:39:ILE:HG22	42:DU:39:ILE:O	2.12	0.48
49:D1:21:TYR:CE2	49:D1:38:LYS:HD2	2.49	0.48
1:AA:65:A:C4	1:AA:381:C:C5	3.01	0.48
1:AA:96:U:HO2'	1:AA:97:G:P	2.37	0.48
1:AA:208:U:C5	1:AA:210:C:N3	2.82	0.48
1:AA:512:U:H2'	1:AA:513:C:C6	2.48	0.48
1:AA:797:C:OP2	11:AK:126:LYS:HE2	2.13	0.48
1:AA:913:A:H4'	1:AA:914:A:OP1	2.12	0.48
1:AA:1272:G:H2'	1:AA:1273:C:O4'	2.13	0.48
2:AB:206:ALA:O	2:AB:210:VAL:HG22	2.13	0.48
4:AD:23:SER:O	4:AD:24:GLY:O	2.32	0.48
7:AG:146:GLU:HA	7:AG:149:LYS:HB2	1.96	0.48
9:AI:51:PRO:HB3	9:AI:84:THR:HG23	1.95	0.48
22:BA:196:A:C4	22:BA:805:G:C6	3.02	0.48
22:BA:846:U:C2'	22:BA:847:U:OP2	2.62	0.48
22:BA:983:A:C6	22:BA:984:A:C2	3.02	0.48
22:BA:1288:G:C4	22:BA:1327:A:C2	3.01	0.48
22:BA:1764:C:C2'	22:BA:1765:U:H5'	2.43	0.48
22:BA:2394:C:OP2	51:B3:30:ARG:HD3	2.14	0.48
22:BA:2742:G:OP2	52:B4:24:ARG:NH1	2.47	0.48
24:BC:78:VAL:HG21	24:BC:110:LEU:CD2	2.44	0.48
27:BF:5:HIS:O	27:BF:8:TYR:HB3	2.14	0.48
30:BI:130:GLU:HB3	30:BI:134:ARG:HH21	1.79	0.48
41:BT:57:VAL:HG22	41:BT:58:VAL:N	2.27	0.48
44:BW:20:ARG:HD2	44:BW:20:ARG:N	2.28	0.48
53:B5:65:LEU:HD21	53:B5:191:ARG:CB	2.44	0.48
1:CA:73:C:HO2'	1:CA:74:A:C5'	2.25	0.48
1:CA:206:C:H2'	1:CA:207:C:C4'	2.44	0.48
1:CA:350:G:C6	1:CA:351:G:C6	3.02	0.48
1:CA:485:U:O2	1:CA:485:U:O4'	2.32	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:811:C:H4'	1:CA:900:A:N6	2.28	0.48
1:CA:1003:G:C2	1:CA:1038:C:N3	2.82	0.48
1:CA:1379:G:N7	7:CG:2:PRO:HB2	2.28	0.48
1:CA:1422:G:C2	1:CA:1423:G:C8	3.01	0.48
1:CA:1533:C:H4'	1:CA:1534:A:OP1	2.14	0.48
7:CG:4:ARG:HG3	7:CG:5:ARG:N	2.28	0.48
7:CG:42:ILE:HG21	7:CG:116:MET:HG3	1.95	0.48
8:CH:96:MET:HB2	8:CH:99:LEU:O	2.13	0.48
11:CK:45:ALA:HB3	11:CK:70:CYS:HB2	1.96	0.48
13:CM:11:ASP:O	13:CM:12:HIS:HB2	2.14	0.48
21:CU:12:PHE:CD1	21:CU:13:ASP:N	2.82	0.48
22:DA:36:G:H4'	22:DA:451:U:C2	2.48	0.48
22:DA:199:A:N6	22:DA:2434:A:C5	2.82	0.48
22:DA:396:G:O4'	45:DX:29:PHE:HB3	2.12	0.48
22:DA:448:U:H4'	22:DA:449:A:OP2	2.13	0.48
22:DA:942:G:H2'	22:DA:943:A:H5'	1.96	0.48
22:DA:1627:G:C2	22:DA:1628:G:N7	2.82	0.48
22:DA:2092:U:H4'	22:DA:2093:G:H5"	1.96	0.48
22:DA:2326:C:C1'	22:DA:2327:A:OP1	2.62	0.48
22:DA:2345:G:C5	22:DA:2347:C:C5	3.02	0.48
24:DC:117:GLN:N	24:DC:128:ASN:OD1	2.47	0.48
32:DK:92:GLU:O	32:DK:93:GLN:CB	2.62	0.48
35:DN:22:ARG:HG3	35:DN:70:THR:HA	1.94	0.48
40:DS:106:VAL:HG12	40:DS:107:VAL:N	2.29	0.48
42:DU:12:ILE:HG13	42:DU:21:LYS:O	2.13	0.48
43:DV:42:LEU:HD23	43:DV:42:LEU:N	2.28	0.48
1:AA:785:G:N2	1:AA:798:U:C2	2.82	0.48
1:AA:996:A:C2	1:AA:997:U:C4	3.02	0.48
1:AA:1263:C:H2'	1:AA:1264:U:O4'	2.14	0.48
4:AD:13:ARG:HD2	4:AD:34:ILE:HA	1.96	0.48
5:AE:13:GLU:CB	5:AE:39:VAL:HG12	2.44	0.48
17:AQ:16:LYS:O	17:AQ:16:LYS:HG3	2.12	0.48
18:AR:67:LEU:O	18:AR:68:LEU:HG	2.14	0.48
19:AS:34:TRP:O	19:AS:36:ARG:N	2.47	0.48
22:BA:71:A:H5"	22:BA:72:U:H3'	1.96	0.48
22:BA:303:G:C5	22:BA:304:U:C5	3.02	0.48
22:BA:520:G:H2'	22:BA:521:U:C6	2.48	0.48
22:BA:1916:A:H2'	22:BA:1917:U:H4'	1.94	0.48
29:BH:135:HIS:CD2	29:BH:137:GLU:HG3	2.48	0.48
36:BO:52:SER:O	36:BO:55:GLU:HG2	2.13	0.48
38:BQ:24:TYR:O	38:BQ:25:TYR:HB2	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:145:G:C2	1:CA:146:G:C8	3.01	0.48
1:CA:754:C:OP1	15:CO:72:ARG:NH2	2.47	0.48
1:CA:803:G:C5	1:CA:804:U:C4	3.02	0.48
1:CA:1066:C:C4	1:CA:1067:A:C6	3.02	0.48
4:CD:173:VAL:HG13	4:CD:174:ASP:N	2.28	0.48
6:CF:86:ARG:HH11	6:CF:86:ARG:HG2	1.78	0.48
10:CJ:18:ILE:HG23	10:CJ:19:ASP:N	2.29	0.48
10:CJ:52:LEU:HB2	14:CN:81:ARG:HD2	1.94	0.48
22:DA:58:G:C2	22:DA:70:G:C2	3.01	0.48
22:DA:136:G:N2	22:DA:144:A:C5	2.81	0.48
22:DA:320:A:H2'	26:DE:131:THR:HG21	1.95	0.48
22:DA:321:U:H4'	26:DE:159:LEU:O	2.14	0.48
22:DA:892:A:H2'	22:DA:892:A:N3	2.28	0.48
22:DA:1360:G:N1	22:DA:1361:G:H1'	2.28	0.48
22:DA:1598:A:C2'	22:DA:1599:U:H5'	2.43	0.48
22:DA:1682:G:N3	22:DA:1757:A:H1'	2.28	0.48
31:DJ:25:LEU:CD1	31:DJ:100:VAL:HG12	2.44	0.48
31:DJ:80:HIS:O	31:DJ:81:ILE:C	2.52	0.48
37:DP:5:ILE:HG22	37:DP:6:LYS:N	2.29	0.48
44:DW:38:VAL:HG21	44:DW:80:ILE:CD1	2.44	0.48
1:AA:524:G:C6	1:AA:525:C:C4	3.01	0.48
1:AA:596:A:C5	1:AA:645:G:N2	2.82	0.48
1:AA:663:A:N1	1:AA:743:A:C2	2.82	0.48
1:AA:1077:G:N1	1:AA:1081:A:C6	2.82	0.48
1:AA:1125:U:C5	1:AA:1127:G:C6	3.01	0.48
1:AA:1142:G:C4	1:AA:1143:G:H1'	2.49	0.48
4:AD:30:THR:O	4:AD:31:LYS:C	2.53	0.48
6:AF:68:GLN:HA	6:AF:71:ILE:HG22	1.95	0.48
10:AJ:61:ALA:O	10:AJ:62:ARG:HB2	2.13	0.48
12:AL:3:THR:HB	12:AL:6:GLN:HG3	1.95	0.48
19:AS:29:LYS:O	19:AS:30:PRO:O	2.32	0.48
19:AS:45:ILE:HG23	19:AS:63:THR:HA	1.96	0.48
22:BA:11:C:H2'	22:BA:12:U:H5'	1.94	0.48
22:BA:211:C:OP1	50:B2:25:LYS:NZ	2.32	0.48
22:BA:753:A:OP1	50:B2:1:MET:CE	2.62	0.48
22:BA:1314:C:H2'	22:BA:1314:C:O2	2.14	0.48
22:BA:1441:G:H2'	22:BA:1442:U:C6	2.48	0.48
22:BA:1700:A:H5'	22:BA:1701:A:OP2	2.13	0.48
22:BA:1796:U:H2'	22:BA:1797:G:H8	1.79	0.48
24:BC:76:ALA:HB2	24:BC:96:TYR:CD2	2.49	0.48
29:BH:103:VAL:HG21	29:BH:132:PHE:CZ	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:117:ASP:O	35:BN:119:SER:N	2.47	0.48
42:BU:72:ILE:HD13	42:BU:96:PHE:CE1	2.49	0.48
45:BX:77:LYS:HE3	45:BX:78:TYR:N	2.29	0.48
1:CA:240:G:H4'	1:CA:240:G:OP1	2.14	0.48
1:CA:649:A:H2'	1:CA:650:G:O4'	2.14	0.48
1:CA:735:C:H2'	1:CA:736:C:C6	2.49	0.48
1:CA:1490:U:H2'	1:CA:1491:G:C8	2.48	0.48
3:CC:153:VAL:CG2	3:CC:157:LEU:HD21	2.44	0.48
6:CF:14:GLN:C	6:CF:16:GLU:H	2.16	0.48
9:CI:129:LYS:O	9:CI:130:ARG:CD	2.61	0.48
11:CK:23:ILE:HG22	11:CK:32:VAL:HG22	1.95	0.48
12:CL:92:GLY:O	12:CL:93:VAL:C	2.51	0.48
18:CR:25:ASP:C	18:CR:27:ALA:N	2.65	0.48
19:CS:4:SER:O	19:CS:5:LEU:HB2	2.12	0.48
19:CS:67:VAL:O	19:CS:67:VAL:HG12	2.13	0.48
22:DA:563:A:C6	22:DA:2018:G:C4	3.02	0.48
22:DA:602:A:N3	22:DA:655:A:C2	2.82	0.48
22:DA:973:A:O4'	22:DA:1188:U:C6	2.67	0.48
22:DA:984:A:H5"	22:DA:985:C:OP2	2.14	0.48
22:DA:1258:U:H2'	22:DA:1259:G:C8	2.48	0.48
22:DA:1338:G:O6	41:DT:66:LYS:NZ	2.33	0.48
22:DA:1651:G:H4'	35:DN:39:PRO:HG2	1.96	0.48
22:DA:1847:A:O2'	22:DA:1848:A:P	2.72	0.48
22:DA:1998:A:H2'	22:DA:1999:C:O4'	2.14	0.48
22:DA:2023:C:O2'	22:DA:2024:G:H5'	2.14	0.48
22:DA:2262:U:OP1	44:DW:41:ARG:NH2	2.47	0.48
22:DA:2353:G:H2'	22:DA:2354:C:O4'	2.13	0.48
22:DA:2847:U:H2'	22:DA:2848:G:H5'	1.94	0.48
33:DL:101:ILE:HD12	33:DL:105:ILE:HG21	1.95	0.48
35:DN:12:ARG:O	35:DN:17:ARG:NH2	2.47	0.48
37:DP:89:ARG:O	37:DP:112:GLU:HA	2.14	0.48
45:DX:43:GLU:O	45:DX:44:LYS:C	2.51	0.48
1:AA:7:A:N6	5:AE:97:GLN:OE1	2.47	0.48
1:AA:142:G:H3'	1:AA:143:A:H8	1.78	0.48
1:AA:310:G:H5"	16:AP:31:ARG:HB2	1.95	0.48
1:AA:478:A:H2'	1:AA:479:U:O4'	2.14	0.48
1:AA:880:C:O2'	1:AA:881:G:H5'	2.14	0.48
1:AA:1005:A:H2'	1:AA:1006:G:O4'	2.14	0.48
1:AA:1073:U:O2'	2:AB:103:ASN:OD1	2.23	0.48
2:AB:61:ALA:HA	2:AB:65:GLY:CA	2.44	0.48
2:AB:206:ALA:O	2:AB:208:ARG:N	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:22:TRP:CB	3:AC:59:ARG:HG2	2.43	0.48
4:AD:95:GLU:OE1	4:AD:191:LEU:HD22	2.14	0.48
5:AE:83:HIS:HB2	5:AE:84:PRO:HD2	1.96	0.48
9:AI:45:ARG:O	9:AI:48:VAL:HG23	2.14	0.48
13:AM:40:ALA:HB3	13:AM:43:VAL:HG13	1.96	0.48
18:AR:43:ARG:HG2	18:AR:44:ILE:HD13	1.95	0.48
21:AU:47:ARG:HA	21:AU:47:ARG:HE	1.79	0.48
22:BA:15:G:C6	22:BA:16:C:C4	3.02	0.48
22:BA:508:A:H4'	22:BA:509:C:OP2	2.14	0.48
22:BA:1916:A:C5	22:BA:1917:U:C6	3.02	0.48
22:BA:1952:A:C5	32:BK:22:ILE:HG21	2.48	0.48
22:BA:2591:C:P	24:BC:238:ARG:HG3	2.54	0.48
23:BB:43:C:O2	27:BF:92:ARG:NH2	2.47	0.48
24:BC:75:PRO:HG2	24:BC:97:LYS:HD2	1.96	0.48
27:BF:57:LEU:HD21	27:BF:152:LEU:HD11	1.95	0.48
27:BF:105:THR:HG22	27:BF:106:ILE:HG23	1.96	0.48
36:BO:14:ALA:O	36:BO:18:LEU:HB2	2.14	0.48
1:CA:463:U:H3'	1:CA:464:U:C6	2.48	0.48
1:CA:1295:U:H2'	1:CA:1296:C:C6	2.49	0.48
2:CB:164:ILE:HG23	2:CB:165:ASP:N	2.29	0.48
2:CB:199:VAL:C	2:CB:200:ILE:HD12	2.33	0.48
3:CC:155:GLY:O	3:CC:156:ARG:C	2.53	0.48
3:CC:172:ARG:NH1	3:CC:174:PRO:HG3	2.29	0.48
4:CD:192:SER:HB2	4:CD:195:ILE:CG1	2.44	0.48
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.95	0.48
20:CT:51:PHE:C	20:CT:51:PHE:CD2	2.87	0.48
20:CT:65:GLY:CA	20:CT:68:HIS:CE1	2.97	0.48
22:DA:55:G:C6	22:DA:116:C:N3	2.81	0.48
22:DA:82:U:C2	22:DA:83:A:N7	2.82	0.48
22:DA:122:G:H2'	22:DA:123:G:O4'	2.13	0.48
22:DA:486:C:C2	22:DA:495:G:N2	2.82	0.48
22:DA:1109:C:C4	22:DA:1110:G:O6	2.67	0.48
22:DA:1223:G:N2	22:DA:1226:A:OP2	2.43	0.48
22:DA:1605:C:O2	22:DA:1610:A:O2'	2.29	0.48
22:DA:1608:A:C6	22:DA:1611:C:C5	3.02	0.48
22:DA:2179:C:H2'	22:DA:2180:U:C6	2.49	0.48
22:DA:2209:G:N2	22:DA:2216:G:N3	2.61	0.48
23:DB:78:A:C6	23:DB:99:A:C8	3.02	0.48
24:DC:108:LYS:HA	24:DC:196:GLY:HA2	1.95	0.48
26:DE:23:PHE:CG	26:DE:111:GLU:HG3	2.49	0.48
29:DH:117:LEU:HD11	29:DH:130:VAL:HG22	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:46:THR:HG22	30:DI:51:LYS:HG3	1.96	0.48
30:DI:57:VAL:HG23	30:DI:71:THR:N	2.29	0.48
33:DL:50:PHE:CE1	33:DL:52:GLY:O	2.67	0.48
35:DN:106:ASP:OD1	35:DN:107:ASN:N	2.47	0.48
45:DX:58:VAL:HG12	45:DX:59:ILE:N	2.29	0.48
54:D6:3:DBB:HB3	54:D6:4:PRO:O	2.14	0.48
1:AA:695:A:H2'	1:AA:696:A:O4'	2.14	0.47
1:AA:787:A:C2'	1:AA:788:U:O5'	2.62	0.47
1:AA:829:G:C6	1:AA:858:G:N2	2.82	0.47
1:AA:1324:A:C2	1:AA:1325:C:C2	3.02	0.47
1:AA:1428:A:H2'	1:AA:1429:A:O4'	2.14	0.47
2:AB:33:GLY:HA3	2:AB:40:ILE:N	2.29	0.47
5:AE:80:THR:OG1	5:AE:81:LEU:N	2.45	0.47
6:AF:39:LEU:O	6:AF:40:GLU:HG3	2.14	0.47
11:AK:102:ALA:O	11:AK:103:ALA:C	2.52	0.47
17:AQ:5:ILE:O	17:AQ:5:ILE:HG22	2.12	0.47
22:BA:140:C:O2	22:BA:140:C:O4'	2.30	0.47
22:BA:609:A:H2'	22:BA:610:C:O4'	2.14	0.47
22:BA:877:A:C2	22:BA:899:A:C2	3.02	0.47
22:BA:907:G:C2'	22:BA:908:C:O5'	2.62	0.47
22:BA:1355:G:C2	22:BA:1356:G:C8	3.02	0.47
22:BA:1495:A:O2'	22:BA:1496:A:H5'	2.13	0.47
22:BA:1734:G:C2	22:BA:1735:A:C8	3.02	0.47
22:BA:2116:G:C6	22:BA:2171:A:N6	2.81	0.47
22:BA:2151:U:H2'	22:BA:2152:G:C8	2.49	0.47
22:BA:2176:A:C6	22:BA:2177:C:N4	2.82	0.47
22:BA:2555:U:C5	22:BA:2556:C:C2	3.02	0.47
23:BB:54:G:H21	27:BF:26:MET:CE	2.27	0.47
26:BE:149:ILE:HD12	26:BE:149:ILE:C	2.34	0.47
32:BK:4:GLU:O	32:BK:5:GLN:CB	2.62	0.47
32:BK:21:CYS:HA	32:BK:41:ILE:HG22	1.95	0.47
37:BP:31:TRP:CZ2	37:BP:40:LEU:CD1	2.97	0.47
39:BR:74:ILE:N	39:BR:74:ILE:CD1	2.77	0.47
41:BT:11:LEU:HD21	41:BT:46:ALA:CB	2.44	0.47
1:CA:123:U:O2'	1:CA:290:C:H1'	2.14	0.47
1:CA:216:U:H2'	1:CA:217:C:C6	2.49	0.47
1:CA:373:A:N3	1:CA:374:A:C8	2.82	0.47
3:CC:30:ALA:HB1	14:CN:65:ARG:NH2	2.29	0.47
4:CD:26:ARG:HG3	4:CD:27:ALA:N	2.28	0.47
5:CE:72:ILE:HD13	5:CE:145:GLU:HG3	1.96	0.47
11:CK:112:ASP:OD1	11:CK:114:THR:HG23	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:55:VAL:HG12	12:CL:57:LEU:HD23	1.96	0.47
20:CT:83:ILE:HD12	20:CT:84:ASN:N	2.29	0.47
22:DA:189:G:C4	22:DA:205:G:N2	2.82	0.47
22:DA:391:A:C4	22:DA:392:U:C6	3.02	0.47
22:DA:478:A:C2	22:DA:480:A:C4	3.02	0.47
22:DA:1532:A:C2	22:DA:1540:G:C6	3.02	0.47
22:DA:1869:G:C2	22:DA:1873:G:N1	2.82	0.47
22:DA:2127:G:H2'	22:DA:2128:G:C8	2.49	0.47
40:DS:55:ILE:CG2	40:DS:66:ILE:HD12	2.44	0.47
41:DT:72:GLN:O	41:DT:73:ARG:C	2.53	0.47
42:DU:35:ILE:HG22	42:DU:35:ILE:O	2.14	0.47
43:DV:44:HIS:CE1	43:DV:85:LYS:HB2	2.49	0.47
1:AA:10:A:OP2	5:AE:131:THR:HG21	2.13	0.47
1:AA:604:G:C2	1:AA:635:A:C2	3.02	0.47
1:AA:1118:U:H5"	9:AI:106:ARG:HG3	1.96	0.47
3:AC:73:PRO:HG3	3:AC:105:GLU:HG3	1.96	0.47
4:AD:177:LYS:O	4:AD:178:MET:HB2	2.14	0.47
9:AI:91:ASP:C	9:AI:91:ASP:OD1	2.52	0.47
10:AJ:52:LEU:HD22	10:AJ:62:ARG:HG2	1.97	0.47
11:AK:17:SER:HA	11:AK:79:ILE:HA	1.95	0.47
11:AK:97:ILE:HG13	11:AK:98:ARG:N	2.28	0.47
16:AP:51:ARG:CZ	16:AP:51:ARG:HB3	2.44	0.47
19:AS:32:ARG:HA	19:AS:50:ALA:HB3	1.95	0.47
22:BA:54:G:C5	22:BA:55:G:C8	3.02	0.47
22:BA:229:C:N3	22:BA:230:G:H1'	2.30	0.47
22:BA:416:U:C4	22:BA:417:C:C4	3.02	0.47
22:BA:447:A:C4	22:BA:473:G:N7	2.82	0.47
22:BA:686:U:H2'	22:BA:788:A:N1	2.29	0.47
22:BA:714:U:C2'	22:BA:716:A:N7	2.77	0.47
22:BA:1074:G:C5	22:BA:1075:C:C4	3.02	0.47
22:BA:1422:G:C5	22:BA:1423:G:N7	2.82	0.47
22:BA:1491:G:C6	22:BA:1500:G:C2	3.02	0.47
22:BA:1826:G:H2'	22:BA:1827:U:H6	1.79	0.47
22:BA:1846:G:C2	22:BA:1895:C:C2	3.02	0.47
22:BA:1954:G:O2'	22:BA:1956:U:O4	2.24	0.47
22:BA:2166:U:O4	22:BA:2170:A:N7	2.47	0.47
24:BC:264:ASP:O	24:BC:265:LYS:C	2.52	0.47
27:BF:28:VAL:HG13	27:BF:28:VAL:O	2.14	0.47
30:BI:130:GLU:HB3	30:BI:134:ARG:NH2	2.30	0.47
31:BJ:5:THR:HG22	31:BJ:45:THR:HG21	1.95	0.47
1:CA:64:G:C2	1:CA:67:C:N4	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:104:G:C2	1:CA:105:G:C8	3.02	0.47
1:CA:211:G:O2'	1:CA:212:G:C4'	2.62	0.47
1:CA:826:C:H2'	1:CA:827:U:C6	2.49	0.47
1:CA:1117:A:O2'	9:CI:108:ALA:HB2	2.15	0.47
1:CA:1125:U:C6	10:CJ:40:ILE:HD13	2.48	0.47
1:CA:1491:G:C6	1:CA:1492:A:C6	3.01	0.47
2:CB:211:THR:HA	2:CB:214:LEU:HB2	1.95	0.47
4:CD:20:PHE:N	4:CD:20:PHE:CD1	2.81	0.47
4:CD:145:ILE:HD12	4:CD:145:ILE:N	2.29	0.47
7:CG:8:GLY:O	7:CG:9:GLN:CB	2.62	0.47
7:CG:26:PHE:HB2	7:CG:101:MET:SD	2.54	0.47
7:CG:92:ARG:HB3	7:CG:93:PRO:HD2	1.97	0.47
11:CK:20:VAL:O	11:CK:35:THR:HG22	2.14	0.47
13:CM:54:ASP:HA	13:CM:57:ARG:CB	2.44	0.47
15:CO:27:VAL:HG13	15:CO:31:LEU:CD1	2.44	0.47
15:CO:56:LEU:O	15:CO:59:MET:HB2	2.13	0.47
22:DA:85:G:OP1	42:DU:7:ARG:N	2.46	0.47
22:DA:88:G:C2	22:DA:89:A:C8	3.01	0.47
22:DA:228:C:H4'	22:DA:229:C:H5"	1.96	0.47
22:DA:500:G:C2	22:DA:502:A:C8	3.02	0.47
22:DA:522:A:C6	22:DA:523:C:N3	2.82	0.47
22:DA:532:A:N1	22:DA:2020:A:H1'	2.29	0.47
22:DA:1082:U:P	30:DI:124:ALA:HB1	2.54	0.47
22:DA:1176:U:H2'	22:DA:1177:G:N9	2.29	0.47
22:DA:1632:A:C2	22:DA:1633:G:C2	3.02	0.47
22:DA:1753:G:C2	22:DA:1756:G:C2	3.03	0.47
22:DA:1866:A:N7	22:DA:1867:G:C8	2.83	0.47
22:DA:1869:G:C3'	22:DA:1870:C:H5'	2.43	0.47
22:DA:2322:A:C5	22:DA:2323:G:C8	3.02	0.47
24:DC:51:THR:CG2	24:DC:54:ILE:HD11	2.44	0.47
25:DD:101:PHE:O	25:DD:102:ALA:C	2.51	0.47
26:DE:181:ILE:HG23	33:DL:2:ARG:HD3	1.96	0.47
27:DF:106:ILE:HD11	27:DF:139:PRO:CG	2.44	0.47
30:DI:101:ILE:HG22	30:DI:102:SER:N	2.29	0.47
34:DM:24:THR:O	34:DM:101:VAL:CG2	2.62	0.47
36:DO:33:ARG:O	36:DO:34:HIS:CG	2.67	0.47
37:DP:54:GLY:O	37:DP:77:HIS:NE2	2.47	0.47
39:DR:49:ILE:HD13	39:DR:52:PRO:HA	1.96	0.47
41:DT:2:ILE:HG23	41:DT:3:ARG:C	2.34	0.47
48:D0:55:ILE:O	48:D0:56:ALA:HB3	2.15	0.47
1:AA:209:U:C4'	1:AA:210:C:OP2	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:500:G:H2'	1:AA:501:C:C6	2.49	0.47
1:AA:704:A:C6	1:AA:705:G:C5	3.02	0.47
1:AA:1238:A:C2	1:AA:1303:C:H4'	2.49	0.47
3:AC:19:ASN:OD1	3:AC:19:ASN:N	2.46	0.47
9:AI:90:TYR:O	9:AI:91:ASP:CB	2.62	0.47
9:AI:95:ARG:HA	9:AI:98:LEU:HB2	1.96	0.47
10:AJ:18:ILE:CG2	10:AJ:19:ASP:N	2.77	0.47
10:AJ:57:VAL:O	10:AJ:58:ASN:HB2	2.15	0.47
10:AJ:67:ILE:O	10:AJ:67:ILE:HG22	2.14	0.47
11:AK:31:ILE:HD12	11:AK:32:VAL:N	2.29	0.47
14:AN:21:PHE:O	14:AN:22:ALA:HB3	2.13	0.47
22:BA:417:C:H2'	22:BA:418:C:H6	1.80	0.47
22:BA:1491:G:N2	22:BA:1492:G:C4	2.83	0.47
22:BA:2254:C:H2'	22:BA:2255:G:H5'	1.95	0.47
22:BA:2452:C:C4	22:BA:2453:A:C6	3.02	0.47
27:BF:8:TYR:HA	27:BF:12:VAL:CG2	2.44	0.47
29:BH:116:ARG:O	29:BH:118:PRO:HD3	2.14	0.47
30:BI:127:ARG:HA	30:BI:130:GLU:CG	2.44	0.47
37:BP:31:TRP:CD2	37:BP:40:LEU:HD12	2.49	0.47
41:BT:69:ARG:CB	41:BT:74:ILE:HG22	2.45	0.47
53:B5:52:PRO:HG3	53:B5:205:ALA:O	2.14	0.47
53:B5:66:PRO:CG	53:B5:194:ILE:CB	2.93	0.47
1:CA:174:A:C2	1:CA:175:C:H1'	2.49	0.47
1:CA:819:A:H4'	1:CA:820:U:OP2	2.15	0.47
1:CA:1002:G:H2'	1:CA:1003:G:O4'	2.14	0.47
1:CA:1147:C:O2	9:CI:18:ARG:NH2	2.47	0.47
1:CA:1166:G:O2'	1:CA:1169:A:N6	2.46	0.47
1:CA:1288:A:O2'	1:CA:1352:C:O3'	2.32	0.47
5:CE:137:VAL:O	5:CE:138:ARG:HB3	2.09	0.47
6:CF:66:ALA:HB1	6:CF:67:PRO:HD2	1.96	0.47
10:CJ:88:MET:O	10:CJ:89:ARG:HB2	2.14	0.47
22:DA:68:G:H2'	22:DA:69:C:O4'	2.15	0.47
22:DA:503:A:N3	22:DA:506:G:C8	2.83	0.47
22:DA:572:A:H3'	22:DA:573:U:O4'	2.14	0.47
22:DA:1231:U:H2'	22:DA:1232:G:H8	1.78	0.47
22:DA:1431:A:C6	22:DA:1432:G:C5	3.03	0.47
22:DA:1432:G:N2	22:DA:1433:A:C4	2.82	0.47
22:DA:1453:A:N1	35:DN:74:GLU:HG3	2.29	0.47
22:DA:1494:A:H2'	22:DA:1495:A:O4'	2.14	0.47
22:DA:2159:G:H2'	22:DA:2160:C:C6	2.49	0.47
22:DA:2323:G:C6	22:DA:2324:U:C4	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:62:LEU:O	29:DH:62:LEU:HD22	2.14	0.47
30:DI:54:PRO:HG2	30:DI:78:VAL:HG21	1.96	0.47
30:DI:101:ILE:O	30:DI:102:SER:CB	2.61	0.47
47:DZ:42:PRO:HA	47:DZ:45:ARG:HB2	1.96	0.47
1:AA:595:A:C6	1:AA:641:U:C6	3.03	0.47
1:AA:684:U:O2'	11:AK:40:ASN:O	2.33	0.47
1:AA:1004:A:OP1	1:AA:1024:G:O6	2.32	0.47
1:AA:1059:C:N3	1:AA:1060:U:C5	2.82	0.47
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.49	0.47
4:AD:98:LEU:O	4:AD:99:ASP:C	2.52	0.47
8:AH:51:VAL:HA	8:AH:58:GLU:O	2.14	0.47
12:AL:81:LEU:HB2	12:AL:102:LEU:HD22	1.96	0.47
22:BA:141:G:H5"	22:BA:142:A:C6	2.49	0.47
22:BA:451:U:C2	22:BA:453:A:N7	2.82	0.47
22:BA:1074:G:C6	22:BA:1075:C:C4	3.02	0.47
22:BA:1094:U:C4	22:BA:1097:U:OP2	2.67	0.47
22:BA:2517:C:C2	22:BA:2542:A:N6	2.82	0.47
22:BA:2704:C:H2'	22:BA:2705:A:O4'	2.15	0.47
24:BC:174:LEU:HD13	24:BC:174:LEU:N	2.30	0.47
26:BE:59:PRO:CD	26:BE:71:GLY:O	2.62	0.47
28:BG:127:THR:HG22	28:BG:128:GLN:N	2.30	0.47
29:BH:111:ALA:O	29:BH:114:GLU:HB2	2.13	0.47
33:BL:101:ILE:HG13	33:BL:102:GLY:N	2.29	0.47
45:BX:7:VAL:HG23	45:BX:51:VAL:HG12	1.97	0.47
53:B5:100:ILE:CG2	53:B5:104:ILE:CB	2.92	0.47
1:CA:263:A:P	20:CT:74:ARG:NH1	2.88	0.47
1:CA:302:G:O2'	1:CA:556:C:H5"	2.15	0.47
1:CA:369:G:OP2	1:CA:388:G:N2	2.47	0.47
1:CA:1028:C:C6	1:CA:1028:C:OP2	2.67	0.47
1:CA:1260:G:OP1	1:CA:1284:C:O2'	2.21	0.47
1:CA:1317:C:O2'	14:CN:49:GLN:HG2	2.14	0.47
5:CE:109:GLY:O	5:CE:110:ALA:HB3	2.14	0.47
5:CE:149:SER:OG	5:CE:152:MET:HG3	2.15	0.47
8:CH:49:PHE:C	8:CH:49:PHE:CD1	2.88	0.47
11:CK:63:ALA:CB	11:CK:92:GLY:HA2	2.44	0.47
11:CK:97:ILE:HG13	11:CK:98:ARG:N	2.29	0.47
16:CP:3:THR:HG22	16:CP:4:ILE:N	2.29	0.47
17:CQ:4:LYS:HG2	17:CQ:5:ILE:N	2.28	0.47
17:CQ:11:ARG:HA	17:CQ:58:VAL:HA	1.97	0.47
20:CT:78:ASN:O	20:CT:82:GLN:HG2	2.14	0.47
22:DA:85:G:P	42:DU:7:ARG:HB2	2.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:195:A:C5	22:DA:198:C:C5	3.03	0.47
22:DA:511:U:O3'	22:DA:1215:G:N2	2.47	0.47
22:DA:732:C:H2'	22:DA:733:G:O4'	2.14	0.47
22:DA:1053:C:C2	22:DA:1107:G:C2	3.02	0.47
22:DA:1314:C:O2	22:DA:1314:C:H2'	2.13	0.47
22:DA:1577:C:H2'	22:DA:1578:U:O4'	2.14	0.47
22:DA:1620:G:C6	22:DA:1621:U:C4	3.02	0.47
22:DA:2013:A:N1	22:DA:2014:A:N3	2.62	0.47
22:DA:2226:C:C4	22:DA:2227:A:C5	3.02	0.47
22:DA:2350:C:H2'	22:DA:2351:G:O4'	2.14	0.47
22:DA:2394:C:OP2	51:D3:30:ARG:NH2	2.48	0.47
22:DA:2637:U:C4	22:DA:2638:G:C6	3.02	0.47
22:DA:2847:U:C5	22:DA:2848:G:C5	3.03	0.47
24:DC:111:LYS:NZ	24:DC:114:ASP:OD1	2.43	0.47
26:DE:109:LEU:O	26:DE:112:LEU:N	2.47	0.47
30:DI:57:VAL:HG22	30:DI:58:VAL:N	2.29	0.47
45:DX:54:LYS:HA	45:DX:57:ARG:HB2	1.95	0.47
1:AA:186:C:H2'	1:AA:187:G:O4'	2.14	0.47
1:AA:452:A:H2'	1:AA:453:G:H5'	1.96	0.47
1:AA:724:G:C6	1:AA:725:G:N7	2.83	0.47
1:AA:1368:A:OP2	9:AI:114:LYS:HD3	2.15	0.47
1:AA:1446:A:N6	1:AA:1447:A:N6	2.62	0.47
2:AB:95:ARG:HG2	2:AB:95:ARG:HH11	1.78	0.47
2:AB:104:TRP:CH2	2:AB:154:MET:HB3	2.49	0.47
2:AB:131:LYS:HA	2:AB:131:LYS:HE2	1.95	0.47
2:AB:149:GLY:O	2:AB:151:ILE:N	2.47	0.47
5:AE:45:ARG:HG2	5:AE:73:ASN:HB3	1.96	0.47
20:AT:81:ALA:O	20:AT:85:LYS:HG2	2.13	0.47
21:AU:41:PRO:O	21:AU:45:ARG:HD3	2.15	0.47
22:BA:572:A:P	58:BA:3572:HOH:O	2.72	0.47
22:BA:588:U:O4	22:BA:670:A:H1'	2.14	0.47
22:BA:1180:U:O2'	22:BA:1181:U:H5'	2.14	0.47
22:BA:1429:G:C2'	22:BA:1430:G:O5'	2.62	0.47
22:BA:1923:U:O2'	22:BA:1924:C:H5'	2.15	0.47
22:BA:2714:G:C2'	22:BA:2715:C:H5'	2.45	0.47
1:CA:146:G:N2	1:CA:147:G:H1'	2.29	0.47
1:CA:255:G:P	17:CQ:71:LYS:HZ2	2.38	0.47
1:CA:728:A:C6	1:CA:729:A:C6	3.02	0.47
1:CA:756:C:C2	1:CA:757:U:C6	3.03	0.47
1:CA:841:C:H2'	1:CA:843:U:O4'	2.14	0.47
1:CA:1002:G:C6	1:CA:1003:G:C5	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:96:TRP:CE2	2:CB:172:ALA:HB2	2.50	0.47
6:CF:15:SER:CB	6:CF:44:ARG:NH1	2.78	0.47
11:CK:87:LYS:HA	11:CK:114:THR:HG22	1.97	0.47
12:CL:38:TYR:HB2	12:CL:52:VAL:CG1	2.43	0.47
17:CQ:38:ILE:CG2	17:CQ:39:LYS:N	2.78	0.47
19:CS:75:ALA:N	19:CS:76:PRO:HD3	2.29	0.47
21:CU:51:SER:O	21:CU:52:ALA:C	2.51	0.47
22:DA:157:C:H2'	22:DA:158:U:O4'	2.14	0.47
22:DA:443:A:C8	26:DE:40:ARG:HD3	2.49	0.47
22:DA:1096:A:H2'	22:DA:1097:U:H5"	1.95	0.47
22:DA:1323:C:N4	22:DA:1324:G:C6	2.82	0.47
22:DA:1436:G:C2	22:DA:1437:C:H1'	2.49	0.47
22:DA:1489:C:HO2'	22:DA:1490:A:C5'	2.26	0.47
22:DA:1491:G:C6	22:DA:1500:G:C2	3.03	0.47
22:DA:1530:G:C2	22:DA:1542:U:O2	2.68	0.47
22:DA:1684:G:C2	22:DA:1705:A:C2	3.03	0.47
22:DA:2164:C:H2'	22:DA:2165:C:C5	2.48	0.47
22:DA:2734:A:N6	22:DA:2770:G:O2'	2.42	0.47
56:DA:3001:VIF:C02	56:DA:3001:VIF:O02	2.63	0.47
23:DB:65:U:O4	23:DB:108:A:H1'	2.15	0.47
30:DI:28:LEU:C	30:DI:28:LEU:HD12	2.34	0.47
36:DO:74:VAL:O	36:DO:78:VAL:HG23	2.14	0.47
36:DO:92:PHE:HB2	36:DO:117:PHE:CD1	2.49	0.47
37:DP:53:ARG:O	37:DP:56:HIS:N	2.47	0.47
42:DU:13:VAL:HG21	42:DU:39:ILE:HG23	1.95	0.47
43:DV:26:PHE:CZ	43:DV:42:LEU:HD12	2.50	0.47
1:AA:687:A:C5	1:AA:701:U:C5	3.02	0.47
1:AA:914:A:C4	1:AA:915:A:C8	3.02	0.47
1:AA:1042:A:H2'	1:AA:1043:G:O4'	2.15	0.47
1:AA:1049:U:OP1	58:AA:1781:HOH:O	2.20	0.47
2:AB:104:TRP:CZ2	2:AB:154:MET:HB3	2.49	0.47
3:AC:206:GLU:O	3:AC:207:ILE:HG22	2.15	0.47
5:AE:82:GLN:OE1	5:AE:148:ASN:O	2.32	0.47
14:AN:20:TYR:O	14:AN:23:LYS:HB3	2.14	0.47
22:BA:1177:G:C2'	22:BA:1178:C:O5'	2.63	0.47
22:BA:1196:C:H1'	22:BA:1226:A:C4	2.50	0.47
22:BA:2310:C:H2'	22:BA:2311:A:C5'	2.44	0.47
25:BD:68:PHE:CE2	25:BD:75:ALA:HA	2.49	0.47
28:BG:121:ILE:HD11	28:BG:140:VAL:HG12	1.96	0.47
29:BH:86:ASP:H	1:CA:359:G:H4'	1.79	0.47
36:BO:36:TYR:N	36:BO:36:TYR:CD1	2.81	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BV:63:ILE:HD12	43:BV:72:VAL:HG21	1.96	0.47
44:BW:32:LEU:O	44:BW:33:ALA:C	2.53	0.47
1:CA:328:C:H4'	1:CA:329:A:H5"	1.97	0.47
1:CA:483:C:H2'	1:CA:484:G:C8	2.50	0.47
1:CA:734:G:N3	1:CA:735:C:C6	2.83	0.47
1:CA:829:G:C6	1:CA:858:G:N2	2.82	0.47
1:CA:888:G:H4'	1:CA:1488:G:O2'	2.14	0.47
1:CA:1255:G:N1	1:CA:1279:G:C8	2.82	0.47
1:CA:1298:U:O2	1:CA:1298:U:C2'	2.62	0.47
1:CA:1299:A:O2'	1:CA:1301:U:O4'	2.23	0.47
2:CB:128:LYS:O	2:CB:129:LEU:HB2	2.14	0.47
6:CF:88:MET:CE	18:CR:64:TYR:CD2	2.97	0.47
7:CG:151:PHE:O	7:CG:152:ALA:CB	2.62	0.47
11:CK:85:MET:HA	11:CK:111:THR:O	2.14	0.47
12:CL:24:LEU:HB2	12:CL:59:ASN:OD1	2.14	0.47
12:CL:29:GLN:O	12:CL:30:LYS:HG2	2.15	0.47
13:CM:40:ALA:O	13:CM:41:GLU:C	2.52	0.47
13:CM:54:ASP:HA	13:CM:57:ARG:HB3	1.96	0.47
14:CN:41:ARG:NH2	14:CN:43:ASN:OD1	2.47	0.47
17:CQ:27:ARG:CG	17:CQ:40:ARG:HB3	2.45	0.47
22:DA:12:U:O2	22:DA:12:U:C2'	2.63	0.47
22:DA:142:A:N6	22:DA:143:C:N4	2.62	0.47
22:DA:194:G:P	58:DA:3758:HOH:O	2.73	0.47
22:DA:269:C:O2	22:DA:269:C:H2'	2.15	0.47
22:DA:477:A:C2'	22:DA:478:A:O5'	2.63	0.47
22:DA:734:A:C5	22:DA:735:A:C8	3.03	0.47
22:DA:833:A:H2'	22:DA:834:G:C8	2.50	0.47
22:DA:1488:C:N3	22:DA:1489:C:C5	2.82	0.47
22:DA:1738:G:HO2'	22:DA:1739:A:P	2.37	0.47
22:DA:2536:G:C6	22:DA:2537:U:N3	2.83	0.47
22:DA:2816:G:N3	22:DA:2883:A:O2'	2.39	0.47
23:DB:56:G:H4'	23:DB:57:A:OP1	2.15	0.47
24:DC:204:VAL:O	24:DC:206:GLY:N	2.47	0.47
24:DC:252:THR:HG22	24:DC:253:LYS:N	2.29	0.47
28:DG:123:ALA:HB2	28:DG:133:LEU:HA	1.97	0.47
29:DH:5:LEU:HD13	29:DH:13:GLY:HA3	1.96	0.47
30:DI:123:GLU:O	30:DI:123:GLU:HG3	2.15	0.47
32:DK:18:ARG:HB2	32:DK:45:GLU:HB3	1.97	0.47
33:DL:135:ILE:HG22	33:DL:140:GLY:HA2	1.96	0.47
40:DS:84:ARG:HB2	40:DS:96:ILE:CG1	2.44	0.47
41:DT:7:LEU:CD2	41:DT:46:ALA:HA	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:39:THR:O	41:DT:40:LYS:C	2.53	0.47
44:DW:45:PHE:CD1	44:DW:80:ILE:HD11	2.49	0.47
45:DX:10:LYS:HE3	45:DX:54:LYS:CD	2.44	0.47
46:DY:28:LEU:CD1	46:DY:46:VAL:HG21	2.44	0.47
48:D0:40:ARG:O	48:D0:41:HIS:HB2	2.15	0.47
49:D1:4:GLY:O	49:D1:6:ARG:N	2.48	0.47
52:D4:30:GLU:HG3	52:D4:32:LYS:HB2	1.97	0.47
1:AA:29:U:O2'	1:AA:30:U:H5'	2.14	0.47
1:AA:97:G:C5	1:AA:98:A:H1'	2.50	0.47
1:AA:105:G:H2'	1:AA:106:C:C6	2.50	0.47
1:AA:205:A:H2'	1:AA:205:A:N3	2.29	0.47
1:AA:213:G:C8	1:AA:214:C:C5	3.02	0.47
1:AA:349:A:O2'	1:AA:350:G:H5'	2.15	0.47
1:AA:957:U:C2	1:AA:959:A:OP2	2.67	0.47
1:AA:1026:G:C6	1:AA:1027:C:N3	2.83	0.47
2:AB:94:HIS:O	2:AB:95:ARG:C	2.52	0.47
2:AB:133:GLU:O	2:AB:137:ARG:N	2.47	0.47
3:AC:83:ASP:O	3:AC:85:GLU:N	2.48	0.47
4:AD:35:GLU:O	4:AD:38:PRO:HD3	2.15	0.47
6:AF:9:MET:CE	18:AR:65:LEU:HD22	2.45	0.47
7:AG:27:VAL:HG23	7:AG:28:ASN:N	2.29	0.47
8:AH:22:LYS:HE2	8:AH:22:LYS:HA	1.97	0.47
8:AH:41:LYS:HD2	8:AH:48:ASP:HA	1.97	0.47
8:AH:78:VAL:HG11	8:AH:125:ILE:HD11	1.96	0.47
8:AH:96:MET:O	8:AH:98:GLY:N	2.43	0.47
12:AL:43:LYS:CG	12:AL:44:LYS:HD3	2.45	0.47
13:AM:10:PRO:O	13:AM:11:ASP:HB3	2.15	0.47
16:AP:4:ILE:HG13	16:AP:21:VAL:HG22	1.97	0.47
16:AP:46:LYS:CD	16:AP:47:GLU:H	2.28	0.47
17:AQ:17:MET:CG	17:AQ:20:SER:HB3	2.44	0.47
17:AQ:53:CYS:SG	17:AQ:75:LEU:CD2	3.03	0.47
20:AT:80:THR:O	20:AT:83:ILE:HG13	2.14	0.47
22:BA:71:A:H5'	22:BA:73:A:C8	2.50	0.47
22:BA:603:A:C8	22:BA:655:A:C6	3.03	0.47
22:BA:973:A:H5'	22:BA:1188:U:H1'	1.96	0.47
22:BA:1013:C:OP2	58:BA:3606:HOH:O	2.20	0.47
22:BA:1056:G:H5"	22:BA:1057:A:C4'	2.45	0.47
22:BA:1073:A:C2'	22:BA:1074:G:H5"	2.44	0.47
22:BA:1090:A:H2'	22:BA:1091:G:C5'	2.42	0.47
22:BA:1587:G:C5	22:BA:1588:G:N7	2.82	0.47
22:BA:1839:G:C8	22:BA:1927:A:C1'	2.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1922:G:C2	22:BA:1923:U:C6	3.02	0.47
22:BA:2233:U:H2'	22:BA:2234:G:C8	2.49	0.47
22:BA:2526:G:C2'	52:B4:1:MET:H1	2.24	0.47
22:BA:2702:G:H2'	22:BA:2703:C:C6	2.49	0.47
25:BD:38:LYS:O	25:BD:46:ARG:HA	2.14	0.47
26:BE:61:ARG:NH2	26:BE:64:GLY:HA3	2.29	0.47
27:BF:100:PHE:O	27:BF:104:ILE:HD13	2.14	0.47
27:BF:108:VAL:N	27:BF:109:PRO:CD	2.78	0.47
27:BF:132:VAL:O	27:BF:132:VAL:HG23	2.15	0.47
29:BH:14:SER:O	29:BH:15:LEU:CB	2.61	0.47
29:BH:97:ARG:NH1	1:CA:369:G:O2'	2.48	0.47
29:BH:117:LEU:HD23	29:BH:121:VAL:HA	1.95	0.47
30:BI:10:LYS:CB	30:BI:56:PRO:HB2	2.45	0.47
30:BI:22:PRO:HB2	30:BI:23:PRO:HD3	1.97	0.47
33:BL:96:LYS:NZ	33:BL:103:ILE:O	2.41	0.47
34:BM:72:PRO:HB3	34:BM:92:TRP:CZ3	2.50	0.47
38:BQ:9:ILE:O	38:BQ:13:ARG:HG3	2.14	0.47
41:BT:51:PHE:O	41:BT:52:GLU:C	2.53	0.47
1:CA:269:C:H2'	1:CA:270:A:C8	2.49	0.47
1:CA:309:A:H5"	16:CP:29:ASN:O	2.15	0.47
1:CA:496:A:C2	1:CA:497:G:C5	3.02	0.47
1:CA:622:A:H5"	1:CA:623:C:OP2	2.15	0.47
1:CA:801:U:H2'	1:CA:802:A:C8	2.49	0.47
1:CA:851:G:C2	1:CA:852:G:C8	3.03	0.47
1:CA:1027:C:N4	1:CA:1034:G:N1	2.62	0.47
1:CA:1266:G:N1	1:CA:1270:G:C6	2.83	0.47
1:CA:1397:C:O2'	1:CA:1398:A:OP1	2.29	0.47
7:CG:113:ASP:HB2	7:CG:119:ARG:HG3	1.96	0.47
10:CJ:65:TYR:HB3	14:CN:96:LEU:HD11	1.96	0.47
11:CK:44:TRP:O	11:CK:44:TRP:CE3	2.68	0.47
12:CL:51:LYS:N	12:CL:51:LYS:HD2	2.30	0.47
16:CP:79:ASN:O	16:CP:80:LYS:HB2	2.15	0.47
22:DA:30:G:C5	22:DA:31:C:C4	3.03	0.47
22:DA:126:A:N7	22:DA:127:A:N1	2.63	0.47
22:DA:319:G:H2'	22:DA:320:A:O4'	2.15	0.47
22:DA:377:G:C6	22:DA:378:C:C4	3.03	0.47
22:DA:465:G:C6	22:DA:466:A:C6	3.02	0.47
22:DA:671:C:C2'	22:DA:672:C:O5'	2.63	0.47
22:DA:732:C:C5	22:DA:733:G:N7	2.83	0.47
22:DA:874:G:C2	22:DA:904:G:C2	3.02	0.47
22:DA:933:A:H5'	22:DA:934:U:OP2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1091:G:C2	22:DA:1092:C:C4	3.02	0.47
22:DA:1171:G:C2	22:DA:1179:G:C6	3.03	0.47
22:DA:1223:G:OP2	39:DR:68:ARG:NH1	2.47	0.47
22:DA:1312:U:N3	22:DA:1603:A:C6	2.83	0.47
22:DA:1358:G:C8	22:DA:1371:G:O6	2.68	0.47
22:DA:1435:G:O2'	22:DA:1436:G:H5'	2.15	0.47
22:DA:1805:A:H1'	24:DC:50:THR:O	2.15	0.47
22:DA:1833:C:C4	22:DA:1834:U:C4	3.02	0.47
22:DA:2093:G:C5	22:DA:2225:A:C8	3.03	0.47
22:DA:2114:A:C2	22:DA:2115:G:H1'	2.50	0.47
22:DA:2217:G:C5	22:DA:2218:G:N7	2.83	0.47
22:DA:2324:U:O2	22:DA:2385:C:C5	2.68	0.47
22:DA:2415:G:C5	22:DA:2416:C:C5	3.02	0.47
22:DA:2536:G:C5	22:DA:2537:U:C4	3.03	0.47
22:DA:2567:G:H2'	22:DA:2568:U:C6	2.50	0.47
22:DA:2683:C:OP1	37:DP:56:HIS:HB3	2.14	0.47
22:DA:2824:C:C4	22:DA:2825:G:C5	3.03	0.47
23:DB:68:C:O2'	23:DB:69:G:H5'	2.15	0.47
24:DC:125:LYS:HB2	24:DC:126:PRO:HD2	1.95	0.47
26:DE:22:ASP:OD1	26:DE:22:ASP:N	2.48	0.47
27:DF:176:PRO:O	27:DF:177:PHE:HB2	2.15	0.47
30:DI:103:ARG:O	30:DI:107:GLN:HB2	2.15	0.47
31:DJ:77:HIS:HA	31:DJ:83:GLY:O	2.15	0.47
33:DL:58:TYR:O	51:D3:13:ARG:HD3	2.14	0.47
39:DR:81:LYS:O	39:DR:82:HIS:C	2.53	0.47
43:DV:42:LEU:HD12	43:DV:47:VAL:HG21	1.96	0.47
45:DX:3:ARG:HG2	45:DX:33:LEU:HD22	1.97	0.47
1:AA:100:G:N7	1:AA:101:A:N7	2.62	0.47
1:AA:485:U:O2	1:AA:485:U:O4'	2.31	0.47
1:AA:605:U:O2'	1:AA:606:G:H5'	2.14	0.47
2:AB:210:VAL:HG23	2:AB:211:THR:N	2.30	0.47
7:AG:24:ALA:HA	7:AG:27:VAL:HG22	1.96	0.47
8:AH:11:LEU:HD11	8:AH:127:CYS:HB3	1.97	0.47
18:AR:47:THR:OG1	18:AR:48:ARG:N	2.48	0.47
22:BA:65:U:H2'	22:BA:66:C:C6	2.50	0.47
22:BA:2180:U:H5"	22:BA:2181:U:OP2	2.15	0.47
23:BB:30:C:OP1	36:BO:3:LYS:NZ	2.46	0.47
24:BC:33:LEU:HD13	24:BC:103:TYR:CD2	2.50	0.47
27:BF:105:THR:HG23	27:BF:106:ILE:HG23	1.96	0.47
27:BF:136:ILE:N	27:BF:136:ILE:HD12	2.29	0.47
28:BG:121:ILE:HD12	28:BG:141:ILE:CG2	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:92:GLU:OE1	32:BK:92:GLU:N	2.48	0.47
1:CA:412:A:HO2'	1:CA:413:G:C5'	2.20	0.47
1:CA:818:G:O2'	1:CA:819:A:H5'	2.12	0.47
1:CA:861:G:C5	1:CA:862:C:C5	3.03	0.47
1:CA:1512:U:O2'	1:CA:1513:A:H5'	2.14	0.47
2:CB:134:ALA:O	2:CB:138:THR:HG23	2.15	0.47
5:CE:104:GLY:HA3	5:CE:122:ASN:HA	1.97	0.47
6:CF:59:TYR:HE2	18:CR:67:LEU:HD22	1.80	0.47
8:CH:78:VAL:HG12	8:CH:79:SER:N	2.30	0.47
10:CJ:84:VAL:O	10:CJ:88:MET:HB2	2.15	0.47
12:CL:25:GLU:C	12:CL:27:CYS:N	2.65	0.47
13:CM:63:PHE:O	13:CM:65:VAL:HG13	2.15	0.47
16:CP:52:LEU:HD23	16:CP:53:ASP:N	2.29	0.47
22:DA:46:G:C2'	22:DA:47:C:O5'	2.63	0.47
22:DA:303:G:C2	22:DA:315:G:C2	3.02	0.47
22:DA:438:G:C6	22:DA:439:A:C6	3.02	0.47
22:DA:938:G:C2	22:DA:939:G:N7	2.83	0.47
22:DA:1332:G:C6	22:DA:1609:A:N7	2.83	0.47
22:DA:1415:U:C2	22:DA:1588:G:C2	3.02	0.47
22:DA:1435:G:C2'	22:DA:1436:G:H5'	2.44	0.47
22:DA:2200:C:H2'	22:DA:2201:G:H8	1.79	0.47
22:DA:2229:U:H2'	22:DA:2230:G:H8	1.80	0.47
22:DA:2747:G:O2'	28:DG:67:THR:HG22	2.15	0.47
23:DB:58:A:C8	23:DB:59:A:N7	2.83	0.47
31:DJ:30:THR:CG2	31:DJ:31:GLU:N	2.78	0.47
35:DN:49:GLU:N	35:DN:50:PRO:CD	2.78	0.47
44:DW:37:ILE:HG22	44:DW:38:VAL:HG22	1.97	0.47
50:D2:30:VAL:O	50:D2:34:ARG:HG3	2.15	0.47
1:AA:206:C:H2'	1:AA:207:C:O4'	2.14	0.47
1:AA:369:G:C2	1:AA:370:C:C6	3.02	0.47
1:AA:543:U:O2'	1:AA:544:G:H5'	2.15	0.47
1:AA:1129:C:O2'	1:AA:1139:G:N7	2.43	0.47
1:AA:1280:A:H3'	1:AA:1281:C:H5'	1.97	0.47
1:AA:1301:U:C5	1:AA:1303:C:C5	3.02	0.47
1:AA:1330:U:O4	1:AA:1331:G:N1	2.48	0.47
2:AB:86:SER:HG	2:AB:87:CYS:HG	1.61	0.47
2:AB:164:ILE:O	2:AB:186:ILE:HG12	2.15	0.47
4:AD:155:VAL:HG11	4:AD:178:MET:HE1	1.97	0.47
7:AG:108:ALA:HB2	7:AG:123:GLU:HG3	1.96	0.47
9:AI:78:ALA:O	9:AI:81:HIS:N	2.48	0.47
19:AS:29:LYS:HB3	19:AS:30:PRO:HD2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:285:G:N2	22:BA:286:U:H1'	2.30	0.47
22:BA:360:U:C4	22:BA:361:G:O6	2.68	0.47
22:BA:1042:G:C6	22:BA:1043:C:C4	3.03	0.47
22:BA:1361:G:C6	22:BA:1362:C:N4	2.83	0.47
22:BA:1883:U:C2'	22:BA:1884:G:H5'	2.45	0.47
22:BA:2694:G:H2'	22:BA:2695:U:H6	1.79	0.47
28:BG:176:LYS:O	28:BG:177:LYS:HB2	2.14	0.47
29:BH:89:LYS:HD3	1:CA:359:G:OP1	2.15	0.47
30:BI:76:ALA:HB1	30:BI:129:ILE:HG23	1.96	0.47
32:BK:113:MET:SD	32:BK:116:ILE:HD11	2.54	0.47
36:BO:78:VAL:HG23	36:BO:79:ALA:N	2.30	0.47
1:CA:403:C:O2'	1:CA:404:G:H5'	2.15	0.47
1:CA:517:G:C5'	1:CA:519:C:C2	2.98	0.47
1:CA:790:A:C6	1:CA:791:G:C6	3.02	0.47
1:CA:970:C:OP1	10:CJ:59:LYS:NZ	2.40	0.47
1:CA:1410:A:H2'	1:CA:1411:C:C6	2.49	0.47
1:CA:1418:A:C2	1:CA:1483:A:C2	3.03	0.47
2:CB:20:THR:O	2:CB:21:ARG:NH1	2.48	0.47
9:CI:28:ILE:CG2	9:CI:35:LEU:HB2	2.45	0.47
9:CI:84:THR:HA	9:CI:87:LEU:HD12	1.96	0.47
22:DA:39:G:N2	22:DA:441:U:C2	2.83	0.47
22:DA:705:A:C2	22:DA:727:A:O4'	2.67	0.47
22:DA:783:A:H8	22:DA:784:G:H4'	1.79	0.47
22:DA:1570:A:C6	22:DA:1571:A:C6	3.03	0.47
22:DA:1597:A:O3'	22:DA:1598:A:H8	1.98	0.47
22:DA:1599:U:C4	22:DA:1600:C:N4	2.83	0.47
22:DA:1730:C:OP1	22:DA:1730:C:H4'	2.15	0.47
22:DA:2235:G:C5	22:DA:2236:U:C5	3.03	0.47
22:DA:2543:G:N3	22:DA:2765:A:H2'	2.30	0.47
22:DA:2773:C:H2'	22:DA:2774:C:H6	1.80	0.47
22:DA:2893:A:O4'	22:DA:2894:G:C2	2.68	0.47
24:DC:108:LYS:N	24:DC:194:GLU:O	2.48	0.47
26:DE:155:GLU:O	26:DE:158:PHE:N	2.48	0.47
28:DG:107:LEU:O	28:DG:152:ARG:NH2	2.48	0.47
32:DK:63:VAL:HB	32:DK:103:VAL:HG12	1.97	0.47
35:DN:106:ASP:OD1	35:DN:106:ASP:C	2.53	0.47
42:DU:19:LYS:HG2	42:DU:19:LYS:O	2.15	0.47
1:AA:255:G:C5	1:AA:256:U:C5	3.03	0.47
1:AA:374:A:C5	1:AA:375:U:C5	3.03	0.47
1:AA:597:G:C2	1:AA:644:U:C2	3.03	0.47
1:AA:828:U:O2	2:AB:25:PRO:HG2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:144:SER:HA	4:AD:179:GLU:HA	1.96	0.47
16:AP:1:MET:O	16:AP:1:MET:SD	2.72	0.47
22:BA:190:A:C4	22:BA:207:A:C2	3.02	0.47
22:BA:1047:G:N2	22:BA:1110:G:C4	2.83	0.47
22:BA:1875:G:H2'	22:BA:1876:A:OP2	2.14	0.47
22:BA:2346:A:H3'	22:BA:2347:C:H5"	1.96	0.47
25:BD:146:ILE:HD12	25:BD:161:MET:CE	2.45	0.47
26:BE:61:ARG:HD2	26:BE:63:LYS:O	2.14	0.47
41:BT:11:LEU:N	41:BT:11:LEU:HD23	2.30	0.47
47:BZ:38:ARG:HB3	47:BZ:44:ILE:HD12	1.97	0.47
53:B5:214:TYR:O	53:B5:215:VAL:CB	2.63	0.47
1:CA:78:A:N6	1:CA:79:G:C6	2.84	0.47
1:CA:632:U:O2	1:CA:632:U:C2'	2.62	0.47
1:CA:679:C:C2	1:CA:712:A:C2	3.03	0.47
1:CA:734:G:C4	1:CA:735:C:C5	3.03	0.47
1:CA:976:G:N2	1:CA:1363:A:C2	2.83	0.47
1:CA:1159:U:C4	1:CA:1182:G:C5	3.03	0.47
4:CD:37:ALA:HA	4:CD:42:GLY:HA3	1.97	0.47
6:CF:38:ARG:HG3	6:CF:62:MET:O	2.14	0.47
9:CI:30:ILE:HA	9:CI:65:ILE:O	2.15	0.47
9:CI:57:MET:O	9:CI:60:LYS:N	2.47	0.47
10:CJ:35:GLN:O	10:CJ:36:VAL:CB	2.62	0.47
12:CL:61:PHE:N	12:CL:61:PHE:HD1	2.13	0.47
19:CS:6:LYS:HB2	19:CS:7:LYS:HE3	1.97	0.47
19:CS:15:LEU:HD13	19:CS:33:THR:HG21	1.96	0.47
22:DA:269:C:N3	22:DA:270:A:C8	2.83	0.47
22:DA:290:U:N3	22:DA:291:G:N7	2.63	0.47
22:DA:630:G:C3'	22:DA:631:A:H5"	2.45	0.47
22:DA:1240:U:O2'	22:DA:1241:A:O5'	2.30	0.47
22:DA:1469:A:N1	22:DA:1470:A:C6	2.82	0.47
22:DA:1576:U:O2'	22:DA:1577:C:H5'	2.15	0.47
22:DA:1675:C:C5	22:DA:1676:A:C5	3.03	0.47
22:DA:1818:U:H2'	24:DC:156:ARG:CD	2.45	0.47
22:DA:2069:G:C2	22:DA:2443:C:C2	3.03	0.47
22:DA:2289:G:C2	22:DA:2290:G:C8	3.03	0.47
22:DA:2371:G:C2	22:DA:2372:U:C5	3.03	0.47
22:DA:2563:U:O4'	22:DA:2566:A:N6	2.48	0.47
22:DA:2726:A:HO2'	22:DA:2727:A:C5'	2.23	0.47
22:DA:2868:A:C6	22:DA:2869:G:C6	3.03	0.47
25:DD:114:LYS:HE2	25:DD:196:ALA:HA	1.97	0.47
26:DE:23:PHE:CD1	26:DE:111:GLU:HG3	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:108:ILE:HD11	26:DE:180:LEU:HB3	1.97	0.47
27:DF:31:VAL:CG1	27:DF:97:TRP:CH2	2.98	0.47
33:DL:92:LEU:HD23	33:DL:125:LEU:HD12	1.97	0.47
40:DS:40:ASN:N	40:DS:40:ASN:OD1	2.48	0.47
1:AA:807:A:C5	1:AA:808:C:C5	3.03	0.46
1:AA:1014:A:N7	1:AA:1015:G:C6	2.83	0.46
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.51	0.46
1:AA:1441:A:C2'	1:AA:1442:G:O5'	2.63	0.46
1:AA:1525:G:OP1	11:AK:122:ARG:NH2	2.48	0.46
3:AC:83:ASP:O	3:AC:86:LYS:N	2.48	0.46
9:AI:28:ILE:HG13	9:AI:63:LEU:HD21	1.97	0.46
11:AK:126:LYS:CA	21:AU:34:ARG:HH21	2.29	0.46
17:AQ:50:ASN:O	17:AQ:51:ASN:C	2.53	0.46
22:BA:696:G:O2'	22:BA:697:G:H5'	2.15	0.46
22:BA:1070:A:C2'	22:BA:1097:U:OP1	2.62	0.46
22:BA:1098:A:N7	22:BA:1099:G:O6	2.48	0.46
22:BA:1179:G:C8	22:BA:1180:U:O4'	2.68	0.46
22:BA:1924:C:O2	22:BA:1926:U:O4	2.33	0.46
22:BA:2020:A:H5'	48:B0:9:THR:HG22	1.97	0.46
22:BA:2615:U:H2'	22:BA:2616:C:O5'	2.14	0.46
22:BA:2742:G:P	52:B4:24:ARG:HH12	2.38	0.46
24:BC:125:LYS:HB2	24:BC:126:PRO:HD2	1.97	0.46
30:BI:9:VAL:HG23	30:BI:59:ILE:HG13	1.95	0.46
42:BU:73:PHE:CZ	42:BU:78:GLY:HA2	2.50	0.46
1:CA:919:A:C2	1:CA:920:U:C5	3.03	0.46
1:CA:1394:A:C5	1:CA:1501:C:H4'	2.50	0.46
12:CL:74:LEU:HD21	12:CL:104:CYS:SG	2.55	0.46
12:CL:116:LYS:O	12:CL:117:TYR:CB	2.62	0.46
20:CT:30:THR:O	20:CT:34:LYS:HG2	2.14	0.46
22:DA:61:C:H4'	46:DY:43:LEU:HD12	1.97	0.46
22:DA:310:A:H5"	42:DU:15:THR:CG2	2.45	0.46
22:DA:570:G:C4	22:DA:2030:A:N7	2.83	0.46
22:DA:749:A:C5	22:DA:750:A:C8	3.02	0.46
22:DA:2097:A:C2	22:DA:2193:G:C2	3.04	0.46
22:DA:2201:G:N3	22:DA:2202:U:C6	2.83	0.46
22:DA:2214:C:O2	22:DA:2214:C:H2'	2.15	0.46
22:DA:2341:G:C6	22:DA:2342:C:N3	2.83	0.46
22:DA:2346:A:H3'	22:DA:2347:C:H5"	1.96	0.46
24:DC:210:ALA:HA	24:DC:213:TRP:NE1	2.29	0.46
35:DN:2:ARG:O	35:DN:3:HIS:C	2.52	0.46
1:AA:343:U:H2'	1:AA:345:C:C5	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:427:U:C4	1:AA:428:G:C6	3.02	0.46
1:AA:501:C:H2'	1:AA:502:A:C8	2.50	0.46
1:AA:560:A:H5'	1:AA:566:G:N2	2.30	0.46
1:AA:673:A:H2'	1:AA:674:G:C8	2.51	0.46
1:AA:723:U:O2'	1:AA:855:U:H4'	2.14	0.46
1:AA:896:C:O2'	1:AA:897:C:H5'	2.15	0.46
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.50	0.46
1:AA:1328:C:H2'	1:AA:1329:A:O4'	2.15	0.46
1:AA:1353:G:C2	1:AA:1354:U:C6	3.03	0.46
2:AB:27:MET:HE1	2:AB:193:PRO:HB3	1.97	0.46
7:AG:69:VAL:HG12	7:AG:135:VAL:HA	1.96	0.46
7:AG:99:LEU:O	7:AG:100:ALA:C	2.54	0.46
8:AH:2:SER:C	8:AH:4:GLN:N	2.67	0.46
9:AI:9:THR:O	9:AI:17:ALA:O	2.32	0.46
10:AJ:19:ASP:N	10:AJ:19:ASP:OD1	2.44	0.46
10:AJ:41:PRO:O	10:AJ:42:LEU:CB	2.63	0.46
16:AP:38:PHE:CD1	16:AP:38:PHE:C	2.88	0.46
22:BA:626:A:H2'	33:BL:78:ARG:NH1	2.31	0.46
22:BA:1577:C:H2'	22:BA:1578:U:O4'	2.15	0.46
22:BA:1737:G:C6	22:BA:1738:G:N1	2.83	0.46
22:BA:1905:C:N4	22:BA:1930:G:N1	2.63	0.46
22:BA:1917:U:C2	22:BA:1918:A:O4'	2.68	0.46
22:BA:2142:A:H2'	22:BA:2143:C:C5	2.51	0.46
22:BA:2178:C:H2'	22:BA:2179:C:C5	2.51	0.46
25:BD:12:THR:HG21	37:BP:9:GLU:CG	2.46	0.46
44:BW:61:ALA:CB	44:BW:82:ILE:CD1	2.94	0.46
49:B1:33:LYS:HA	49:B1:52:ALA:HB3	1.96	0.46
1:CA:182:A:C8	1:CA:184:G:N7	2.83	0.46
1:CA:1105:A:C2	1:CA:1106:G:C5	3.03	0.46
1:CA:1259:C:N4	1:CA:1260:G:C4	2.83	0.46
6:CF:15:SER:HB2	6:CF:44:ARG:NH1	2.30	0.46
12:CL:80:ILE:HD12	12:CL:97:THR:HG22	1.97	0.46
14:CN:3:LYS:HD3	14:CN:6:MET:HG2	1.96	0.46
15:CO:67:LEU:HD23	15:CO:78:TYR:CE2	2.49	0.46
21:CU:40:LYS:HB3	21:CU:41:PRO:HD3	1.98	0.46
22:DA:822:G:O6	22:DA:943:A:H2	1.99	0.46
22:DA:858:G:N2	22:DA:919:U:O4	2.46	0.46
22:DA:875:G:H2'	22:DA:876:C:O4'	2.15	0.46
22:DA:1351:C:H1'	22:DA:1381:G:N2	2.30	0.46
22:DA:1716:U:C5	22:DA:1743:G:C2	3.03	0.46
22:DA:1917:U:H2'	22:DA:1918:A:H5'	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2062:A:C5	54:D6:1:MHW:CG2	2.98	0.46
22:DA:2244:U:H2'	22:DA:2245:U:O4'	2.16	0.46
22:DA:2784:U:O4	22:DA:2785:C:N4	2.48	0.46
22:DA:2838:G:C6	22:DA:2839:G:C5	3.03	0.46
23:DB:71:C:H2'	23:DB:72:G:H5'	1.95	0.46
26:DE:187:VAL:HG12	26:DE:187:VAL:O	2.14	0.46
29:DH:41:LYS:O	29:DH:44:ILE:HG12	2.15	0.46
35:DN:2:ARG:O	35:DN:5:LYS:HG3	2.15	0.46
42:DU:96:PHE:CZ	42:DU:103:ILE:CG1	2.98	0.46
44:DW:21:LEU:HD11	44:DW:41:ARG:HG3	1.97	0.46
51:D3:7:VAL:O	51:D3:10:ALA:HB3	2.16	0.46
52:D4:12:ARG:NH1	52:D4:12:ARG:HB2	2.30	0.46
1:AA:26:A:H2'	1:AA:27:G:H5'	1.97	0.46
1:AA:220:G:C5	1:AA:221:C:C5	3.03	0.46
1:AA:598:U:H4'	8:AH:86:TYR:CD2	2.50	0.46
1:AA:1212:U:O2	1:AA:1212:U:H2'	2.15	0.46
1:AA:1256:A:N6	1:AA:1277:C:N3	2.63	0.46
2:AB:62:SER:C	2:AB:64:LYS:N	2.69	0.46
2:AB:147:SER:O	2:AB:148:LEU:HG	2.16	0.46
2:AB:211:THR:O	2:AB:215:GLY:N	2.44	0.46
12:AL:22:PRO:C	12:AL:24:LEU:H	2.19	0.46
16:AP:78:VAL:O	16:AP:79:ASN:HB2	2.15	0.46
17:AQ:75:LEU:C	17:AQ:75:LEU:CD1	2.84	0.46
22:BA:526:A:O2'	22:BA:2043:C:O2	2.25	0.46
22:BA:544:C:H5'	22:BA:545:U:OP2	2.14	0.46
22:BA:1057:A:N3	22:BA:1086:A:C2	2.84	0.46
22:BA:1062:G:N2	22:BA:1077:A:C2	2.82	0.46
22:BA:1444:G:C2	22:BA:1548:A:C2	3.04	0.46
22:BA:1827:U:H2'	22:BA:1828:G:O5'	2.16	0.46
30:BI:64:ASP:O	30:BI:66:SER:N	2.48	0.46
32:BK:43:ILE:CG2	32:BK:54:LYS:HA	2.45	0.46
33:BL:23:ILE:O	33:BL:24:GLY:C	2.53	0.46
35:BN:108:ALA:HB3	35:BN:110:MET:CE	2.46	0.46
42:BU:39:ILE:O	42:BU:41:LEU:HG	2.15	0.46
1:CA:445:G:C2	1:CA:446:G:C8	3.04	0.46
1:CA:496:A:H2'	1:CA:497:G:N7	2.29	0.46
1:CA:1003:G:N2	1:CA:1038:C:C2	2.83	0.46
1:CA:1010:U:C2	1:CA:1020:G:N1	2.83	0.46
1:CA:1126:U:C6	1:CA:1281:C:C4	3.03	0.46
4:CD:26:ARG:HD2	4:CD:31:LYS:CE	2.46	0.46
9:CI:26:GLY:CA	9:CI:61:LEU:O	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:78:VAL:O	16:CP:80:LYS:N	2.47	0.46
21:CU:20:LYS:HZ3	21:CU:20:LYS:HA	1.79	0.46
22:DA:37:C:H2'	22:DA:38:A:C8	2.50	0.46
22:DA:202:U:H2'	22:DA:203:A:C8	2.50	0.46
22:DA:477:A:H2'	22:DA:478:A:O5'	2.15	0.46
22:DA:1034:G:C6	22:DA:1035:U:N3	2.83	0.46
22:DA:1141:U:OP2	31:DJ:65:THR:OG1	2.24	0.46
22:DA:1385:A:C2	22:DA:1386:C:C2	3.03	0.46
22:DA:1608:A:C5	22:DA:1611:C:C5	3.04	0.46
22:DA:1666:G:O3'	32:DK:6:THR:HG23	2.15	0.46
22:DA:1843:C:H4'	24:DC:251:GLN:NE2	2.30	0.46
22:DA:2286:G:H5'	22:DA:2287:A:O4'	2.15	0.46
22:DA:2550:G:O6	22:DA:2551:C:N4	2.49	0.46
24:DC:29:PRO:HG3	24:DC:63:ARG:CZ	2.45	0.46
24:DC:141:VAL:O	24:DC:162:VAL:N	2.40	0.46
24:DC:160:THR:H	24:DC:195:VAL:HG13	1.79	0.46
25:DD:14:ILE:HG12	25:DD:24:VAL:HG21	1.96	0.46
30:DI:46:THR:CG2	30:DI:51:LYS:HG3	2.45	0.46
34:DM:2:LEU:O	34:DM:3:GLN:CB	2.64	0.46
39:DR:58:VAL:O	39:DR:102:SER:HB2	2.15	0.46
1:AA:36:C:OP1	12:AL:120:LYS:HE3	2.15	0.46
1:AA:233:C:H2'	1:AA:234:C:C6	2.51	0.46
1:AA:262:A:H2'	1:AA:263:A:C8	2.50	0.46
1:AA:545:C:H5'	4:AD:69:GLU:CG	2.45	0.46
1:AA:1135:U:C2	1:AA:1137:C:N3	2.83	0.46
1:AA:1371:G:P	9:AI:13:LYS:HD3	2.55	0.46
1:AA:1446:A:C2'	1:AA:1447:A:H5'	2.46	0.46
2:AB:14:VAL:HG23	2:AB:208:ARG:NH2	2.30	0.46
2:AB:106:THR:O	2:AB:107:VAL:HB	2.14	0.46
9:AI:17:ALA:HB2	9:AI:67:VAL:CG2	2.45	0.46
10:AJ:8:ILE:HG13	10:AJ:74:VAL:HG11	1.97	0.46
10:AJ:53:ILE:HD11	14:AN:85:ARG:NH1	2.31	0.46
12:AL:41:THR:HG22	12:AL:48:ALA:O	2.16	0.46
22:BA:27:G:C2	22:BA:512:G:N3	2.84	0.46
22:BA:142:A:N7	22:BA:143:C:C4	2.83	0.46
22:BA:142:A:H2'	22:BA:143:C:C6	2.50	0.46
22:BA:361:G:HO2'	22:BA:362:A:H8	1.63	0.46
22:BA:920:A:C6	22:BA:921:C:C4	3.03	0.46
22:BA:1060:U:H4'	22:BA:1061:U:H3'	1.97	0.46
22:BA:1442:U:H2'	22:BA:1443:U:C6	2.50	0.46
22:BA:1584:U:O2	22:BA:1584:U:C2'	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1827:U:C2'	22:BA:1828:G:O5'	2.63	0.46
22:BA:2580:U:C5	22:BA:2581:G:O6	2.69	0.46
29:BH:80:ILE:HG21	29:BH:94:ILE:CG1	2.45	0.46
29:BH:132:PHE:CD2	29:BH:142:VAL:CG2	2.99	0.46
30:BI:49:ILE:O	30:BI:50:GLU:HB2	2.16	0.46
52:B4:10:LEU:HB2	52:B4:33:HIS:CE1	2.50	0.46
1:CA:109:A:C6	1:CA:327:A:C6	3.03	0.46
1:CA:439:U:H4'	4:CD:121:LYS:CD	2.45	0.46
1:CA:666:G:C5	1:CA:741:G:N1	2.84	0.46
1:CA:683:G:H2'	1:CA:684:U:O4'	2.15	0.46
1:CA:756:C:N3	1:CA:757:U:C6	2.83	0.46
1:CA:775:G:O2'	1:CA:776:G:H5'	2.16	0.46
1:CA:941:G:C2	1:CA:1343:G:C2	3.03	0.46
1:CA:1149:C:C4	1:CA:1150:A:C6	3.03	0.46
1:CA:1342:C:H2'	1:CA:1343:G:C8	2.50	0.46
1:CA:1533:C:H4'	1:CA:1533:C:OP1	2.15	0.46
2:CB:221:VAL:O	2:CB:223:GLU:N	2.48	0.46
9:CI:81:HIS:O	9:CI:85:ARG:HB2	2.16	0.46
11:CK:34:ILE:HG13	11:CK:70:CYS:SG	2.54	0.46
11:CK:77:TYR:CD1	11:CK:77:TYR:N	2.83	0.46
13:CM:43:VAL:HG23	13:CM:43:VAL:O	2.16	0.46
16:CP:6:LEU:CD1	16:CP:71:VAL:HG23	2.46	0.46
18:CR:33:ILE:HA	18:CR:40:VAL:HG23	1.96	0.46
22:DA:204:A:O4'	22:DA:206:U:C6	2.68	0.46
22:DA:236:C:H4'	22:DA:431:U:O2'	2.16	0.46
22:DA:288:U:H2'	22:DA:289:G:C8	2.51	0.46
22:DA:1362:C:N4	22:DA:1363:C:C4	2.84	0.46
22:DA:2103:C:C2	22:DA:2104:C:C5	3.03	0.46
22:DA:2127:G:C2	22:DA:2162:G:C8	3.03	0.46
22:DA:2208:C:O2	22:DA:2217:G:N2	2.48	0.46
23:DB:43:C:O2	27:DF:92:ARG:NH2	2.47	0.46
24:DC:16:VAL:HG22	24:DC:206:GLY:HA3	1.97	0.46
24:DC:147:LYS:O	24:DC:150:LYS:HB3	2.15	0.46
25:DD:3:GLY:C	25:DD:82:PHE:CE1	2.89	0.46
25:DD:105:LYS:O	25:DD:177:VAL:HG12	2.16	0.46
28:DG:38:ASN:HB3	28:DG:41:VAL:HG23	1.98	0.46
30:DI:80:LEU:HD11	30:DI:133:ALA:HB2	1.96	0.46
30:DI:133:ALA:C	30:DI:138:LEU:HD12	2.36	0.46
31:DJ:71:ASP:O	31:DJ:73:VAL:HG23	2.15	0.46
50:D2:10:LEU:O	50:D2:14:ARG:HG3	2.15	0.46
1:AA:251:G:C6	1:AA:266:G:O6	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:660:C:OP1	15:AO:5:THR:HG21	2.15	0.46
1:AA:665:A:C2	1:AA:732:C:C4	3.03	0.46
1:AA:1048:G:N3	1:AA:1050:G:C8	2.83	0.46
1:AA:1306:A:C4	1:AA:1307:U:C6	3.03	0.46
1:AA:1431:A:C5	1:AA:1432:G:C6	3.04	0.46
2:AB:88:ASP:OD1	2:AB:88:ASP:N	2.48	0.46
10:AJ:36:VAL:O	10:AJ:36:VAL:HG12	2.14	0.46
11:AK:126:LYS:HA	21:AU:34:ARG:NH2	2.30	0.46
12:AL:101:ALA:O	12:AL:102:LEU:C	2.54	0.46
22:BA:528:A:C2	22:BA:2042:A:H2'	2.51	0.46
22:BA:589:U:H2'	22:BA:590:A:C8	2.50	0.46
22:BA:852:U:H2'	22:BA:853:C:C6	2.51	0.46
22:BA:1005:C:O2	22:BA:1005:C:H2'	2.15	0.46
22:BA:1664:A:H1'	22:BA:2726:A:N1	2.30	0.46
22:BA:1735:A:C2	22:BA:1736:U:C6	3.04	0.46
22:BA:2339:C:H2'	22:BA:2340:A:H8	1.79	0.46
22:BA:2350:C:H2'	22:BA:2351:G:O4'	2.16	0.46
22:BA:2532:G:N2	22:BA:2663:G:O2'	2.49	0.46
22:BA:2748:A:C2	22:BA:2757:A:C4	3.04	0.46
22:BA:2901:C:N4	22:BA:2902:C:C4	2.83	0.46
26:BE:79:ARG:O	26:BE:80:SER:CB	2.64	0.46
29:BH:37:VAL:CG2	29:BH:38:PRO:HD2	2.45	0.46
41:BT:57:VAL:CG2	41:BT:58:VAL:N	2.78	0.46
1:CA:503:C:H2'	1:CA:504:C:C6	2.51	0.46
1:CA:598:U:H4'	8:CH:86:TYR:CD1	2.51	0.46
2:CB:30:PHE:CD1	2:CB:30:PHE:N	2.82	0.46
4:CD:119:SER:O	4:CD:131:ASN:OD1	2.34	0.46
8:CH:30:SER:OG	8:CH:33:LYS:HG3	2.15	0.46
9:CI:114:LYS:HG3	9:CI:120:LYS:HA	1.97	0.46
10:CJ:65:TYR:CB	14:CN:96:LEU:HD11	2.46	0.46
15:CO:27:VAL:HG13	15:CO:31:LEU:HD11	1.97	0.46
16:CP:1:MET:HG2	16:CP:2:VAL:N	2.31	0.46
20:CT:43:ASP:HB3	20:CT:46:ALA:HB3	1.96	0.46
22:DA:181:A:H1'	22:DA:435:C:O4'	2.16	0.46
22:DA:223:A:C4	22:DA:408:G:H1'	2.51	0.46
22:DA:265:A:H4'	22:DA:266:G:OP1	2.16	0.46
22:DA:609:A:C5	22:DA:610:C:C2	3.04	0.46
22:DA:663:G:O6	22:DA:664:G:C6	2.68	0.46
22:DA:1271:G:N7	22:DA:1325:U:H5	2.14	0.46
22:DA:1359:A:N1	22:DA:1360:G:H1'	2.31	0.46
22:DA:2136:G:C2	22:DA:2156:G:H1'	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2514:U:H2'	22:DA:2515:C:C6	2.51	0.46
22:DA:2573:C:OP2	58:DA:3709:HOH:O	2.20	0.46
22:DA:2580:U:H5"	22:DA:2581:G:OP2	2.15	0.46
26:DE:28:VAL:O	26:DE:32:VAL:HG23	2.15	0.46
35:DN:84:GLY:N	35:DN:85:PRO:HD2	2.31	0.46
1:AA:493:A:N7	1:AA:494:G:C6	2.84	0.46
1:AA:586:C:O3'	8:AH:81:PRO:HB3	2.16	0.46
1:AA:1135:U:C2'	1:AA:1136:C:O5'	2.64	0.46
1:AA:1410:A:H2'	1:AA:1411:C:C6	2.50	0.46
2:AB:203:ASN:OD1	2:AB:204:ASP:N	2.48	0.46
3:AC:169:ARG:O	3:AC:169:ARG:NE	2.48	0.46
12:AL:25:GLU:O	12:AL:27:CYS:N	2.49	0.46
16:AP:67:ILE:HG23	16:AP:71:VAL:HG12	1.98	0.46
17:AQ:5:ILE:O	17:AQ:6:ARG:HB2	2.16	0.46
20:AT:82:GLN:O	20:AT:85:LYS:HB2	2.16	0.46
22:BA:572:A:C2	22:BA:2033:A:C2	3.03	0.46
22:BA:858:G:C4	22:BA:2268:A:C2	3.03	0.46
22:BA:1605:C:C2'	22:BA:1606:C:H5'	2.46	0.46
22:BA:1647:U:H3'	22:BA:1647:U:P	2.56	0.46
22:BA:1735:A:C2	22:BA:1736:U:C1'	2.98	0.46
22:BA:1747:U:H2'	22:BA:1748:C:H6	1.79	0.46
22:BA:2690:U:C4	22:BA:2873:A:N1	2.84	0.46
32:BK:34:GLY:O	32:BK:35:VAL:C	2.53	0.46
32:BK:38:ILE:HD11	32:BK:112:PHE:HZ	1.81	0.46
36:BO:7:ARG:HG3	36:BO:96:GLY:HA3	1.97	0.46
38:BQ:101:PHE:O	38:BQ:102:ASP:HB2	2.15	0.46
39:BR:48:LYS:O	39:BR:49:ILE:C	2.54	0.46
1:CA:178:C:H2'	1:CA:179:A:O4'	2.15	0.46
1:CA:754:C:H3'	1:CA:754:C:O2	2.15	0.46
1:CA:1133:G:H2'	1:CA:1133:G:N3	2.30	0.46
1:CA:1151:A:C2	1:CA:1152:A:C4	3.04	0.46
1:CA:1259:C:O2'	1:CA:1283:U:O2	2.30	0.46
2:CB:85:LEU:O	2:CB:85:LEU:CG	2.64	0.46
3:CC:156:ARG:HD3	3:CC:160:ALA:O	2.15	0.46
5:CE:155:ALA:HB1	8:CH:66:PHE:CE2	2.51	0.46
11:CK:40:ASN:O	11:CK:41:ALA:HB3	2.15	0.46
22:DA:155:A:H2'	22:DA:156:A:C8	2.51	0.46
22:DA:308:G:C6	22:DA:309:A:C6	3.03	0.46
22:DA:404:A:C1'	22:DA:405:U:OP2	2.63	0.46
22:DA:1028:A:H61	22:DA:1125:G:H2'	1.77	0.46
22:DA:1090:A:C6	22:DA:1091:G:N7	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1754:A:H4'	37:DP:99:TYR:CE2	2.50	0.46
22:DA:1754:A:C6	22:DA:1755:A:C6	3.04	0.46
22:DA:1838:C:C5	22:DA:1899:A:C6	3.03	0.46
22:DA:2142:A:C6	22:DA:2143:C:C4	3.04	0.46
24:DC:158:ALA:HB1	24:DC:197:ASN:O	2.15	0.46
25:DD:13:ARG:HD2	25:DD:15:PHE:CE2	2.51	0.46
27:DF:85:ILE:HG13	27:DF:85:ILE:O	2.16	0.46
29:DH:60:GLU:HA	29:DH:60:GLU:OE2	2.15	0.46
34:DM:56:ALA:C	34:DM:58:LYS:H	2.19	0.46
37:DP:39:ARG:HG3	37:DP:40:LEU:N	2.31	0.46
38:DQ:94:ILE:HD13	39:DR:11:GLN:HB2	1.96	0.46
45:DX:27:ARG:NE	45:DX:28:ARG:O	2.48	0.46
1:AA:82:G:O6	1:AA:87:C:N4	2.48	0.46
1:AA:91:U:C5	1:AA:92:U:C5	3.03	0.46
1:AA:230:G:C6	1:AA:231:U:C4	3.03	0.46
1:AA:276:G:P	17:AQ:17:MET:HE2	2.56	0.46
1:AA:1147:C:O2	9:AI:18:ARG:NH1	2.47	0.46
1:AA:1164:G:C2	1:AA:1173:U:O2	2.69	0.46
1:AA:1227:A:C2'	1:AA:1228:C:O5'	2.64	0.46
1:AA:1353:G:C2	1:AA:1354:U:C5	3.04	0.46
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.50	0.46
1:AA:1377:A:C5	7:AG:7:ILE:HD11	2.51	0.46
2:AB:53:ALA:O	2:AB:57:LEU:HB2	2.15	0.46
2:AB:84:ALA:O	2:AB:89:GLN:OE1	2.34	0.46
4:AD:147:GLU:HA	4:AD:150:LYS:HD2	1.96	0.46
5:AE:111:MET:HE1	5:AE:125:ALA:HB1	1.98	0.46
7:AG:17:LYS:HD3	7:AG:18:PHE:CE2	2.51	0.46
7:AG:49:THR:O	7:AG:53:ARG:HB3	2.16	0.46
7:AG:80:VAL:O	7:AG:81:GLY:C	2.53	0.46
8:AH:10:MET:HE1	8:AH:33:LYS:HA	1.97	0.46
9:AI:63:LEU:N	9:AI:63:LEU:CD2	2.78	0.46
14:AN:9:ARG:O	14:AN:13:ARG:HG3	2.16	0.46
14:AN:54:ASP:OD1	14:AN:59:ARG:NH1	2.49	0.46
22:BA:164:C:H2'	22:BA:165:A:O4'	2.15	0.46
22:BA:570:G:H2'	22:BA:2030:A:C8	2.50	0.46
22:BA:780:G:H2'	22:BA:782:A:N7	2.31	0.46
22:BA:1061:U:C3'	22:BA:1062:G:H5'	2.44	0.46
22:BA:1300:G:H4'	22:BA:1301:A:H5'	1.97	0.46
22:BA:1734:G:H2'	22:BA:1735:A:H8	1.81	0.46
22:BA:1770:G:C5	22:BA:1983:G:C6	3.04	0.46
22:BA:1910:G:N1	22:BA:1921:G:C5	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1930:G:H22	22:BA:1968:G:H2'	1.81	0.46
22:BA:2196:C:O2'	22:BA:2197:U:H5'	2.16	0.46
22:BA:2512:C:H2'	22:BA:2513:A:O4'	2.16	0.46
29:BH:94:ILE:HG23	29:BH:98:ASP:HB2	1.98	0.46
30:BI:124:ALA:C	30:BI:126:THR:N	2.69	0.46
31:BJ:80:HIS:O	31:BJ:81:ILE:C	2.54	0.46
33:BL:109:LYS:HG2	33:BL:126:ARG:HB2	1.98	0.46
41:BT:69:ARG:HA	41:BT:74:ILE:HA	1.98	0.46
46:BY:22:LEU:O	46:BY:23:ARG:C	2.54	0.46
1:CA:21:G:H2'	1:CA:22:G:C8	2.51	0.46
1:CA:73:C:O2'	1:CA:74:A:P	2.73	0.46
1:CA:186:C:O4'	20:CT:76:LYS:HD2	2.15	0.46
1:CA:821:G:H2'	1:CA:822:U:H6	1.80	0.46
1:CA:1491:G:H5"	12:CL:44:LYS:HD2	1.98	0.46
2:CB:17:GLY:O	2:CB:40:ILE:HA	2.15	0.46
2:CB:60:ILE:O	2:CB:65:GLY:N	2.48	0.46
4:CD:64:ILE:HG22	4:CD:65:TYR:CD1	2.50	0.46
5:CE:137:VAL:HA	5:CE:140:THR:OG1	2.15	0.46
9:CI:28:ILE:HG21	9:CI:35:LEU:HB2	1.97	0.46
11:CK:35:THR:OG1	11:CK:40:ASN:N	2.48	0.46
11:CK:113:VAL:HB	18:CR:73:ARG:NH2	2.30	0.46
12:CL:77:HIS:O	12:CL:78:SER:OG	2.33	0.46
13:CM:106:ALA:O	13:CM:110:LYS:HB3	2.16	0.46
22:DA:7:G:H2'	22:DA:8:C:O4'	2.16	0.46
22:DA:144:A:H2'	22:DA:144:A:N3	2.30	0.46
22:DA:387:U:O2	22:DA:388:G:N7	2.49	0.46
22:DA:503:A:N6	22:DA:505:A:N6	2.63	0.46
22:DA:542:C:N3	22:DA:551:G:O6	2.48	0.46
22:DA:553:G:H2'	22:DA:554:U:O4'	2.16	0.46
22:DA:1266:G:OP1	48:D0:16:ARG:NE	2.48	0.46
22:DA:1366:A:C2	22:DA:1367:A:C4	3.04	0.46
22:DA:1817:G:C2'	22:DA:1818:U:H5'	2.45	0.46
22:DA:2062:A:C6	54:D6:1:MHW:CA	2.99	0.46
22:DA:2282:G:C5	22:DA:2425:A:N1	2.84	0.46
22:DA:2880:C:N3	22:DA:2881:U:C5	2.83	0.46
24:DC:138:GLY:N	24:DC:164:ILE:O	2.48	0.46
26:DE:25:GLU:OE1	33:DL:6:LEU:HA	2.16	0.46
28:DG:98:VAL:HG22	28:DG:125:CYS:SG	2.56	0.46
29:DH:34:GLY:O	29:DH:35:LYS:CG	2.64	0.46
38:DQ:110:VAL:HG12	38:DQ:114:LYS:HD2	1.97	0.46
41:DT:17:SER:O	41:DT:18:GLU:C	2.54	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:64:LYS:HA	41:DT:79:ASP:OD2	2.15	0.46
42:DU:72:ILE:HD11	42:DU:83:VAL:HG23	1.97	0.46
1:AA:125:U:O2'	1:AA:126:G:H5'	2.16	0.46
1:AA:405:U:O4	4:AD:2:ALA:N	2.48	0.46
1:AA:577:G:C8	1:AA:816:A:C6	3.03	0.46
1:AA:652:U:C2	1:AA:752:G:N2	2.83	0.46
1:AA:680:C:C2	1:AA:711:G:C2	3.04	0.46
1:AA:1268:G:C6	1:AA:1269:A:N6	2.84	0.46
1:AA:1314:C:N4	19:AS:4:SER:HA	2.31	0.46
1:AA:1330:U:C4	1:AA:1331:G:C6	3.04	0.46
1:AA:1375:A:C5	1:AA:1376:U:C5	3.04	0.46
1:AA:1446:A:H2'	1:AA:1447:A:H5'	1.97	0.46
2:AB:35:ARG:HB3	2:AB:40:ILE:HD11	1.97	0.46
2:AB:217:VAL:O	2:AB:220:THR:HG22	2.15	0.46
6:AF:95:ALA:O	6:AF:96:VAL:HG13	2.16	0.46
12:AL:43:LYS:O	12:AL:44:LYS:C	2.54	0.46
12:AL:116:LYS:O	12:AL:117:TYR:CB	2.64	0.46
21:AU:40:LYS:HA	21:AU:43:THR:HG23	1.98	0.46
22:BA:541:A:C6	22:BA:542:C:C4	3.04	0.46
22:BA:747:U:N3	22:BA:2613:U:C4	2.84	0.46
22:BA:1583:A:HO2'	22:BA:1584:U:P	2.39	0.46
22:BA:1637:A:H5'	22:BA:1760:C:O2'	2.15	0.46
22:BA:1747:U:O2'	22:BA:1748:C:H5'	2.16	0.46
22:BA:1946:U:C2	22:BA:1947:C:C6	3.04	0.46
22:BA:2086:U:H2'	22:BA:2087:G:C8	2.51	0.46
24:BC:162:VAL:HG22	24:BC:176:LEU:HA	1.98	0.46
30:BI:125:MET:O	30:BI:128:SER:OG	2.33	0.46
39:BR:39:LEU:O	39:BR:49:ILE:HG23	2.16	0.46
39:BR:49:ILE:HB	39:BR:52:PRO:CA	2.46	0.46
45:BX:66:THR:O	45:BX:69:ALA:HB3	2.16	0.46
53:B5:40:GLU:HG2	53:B5:181:PHE:CB	2.45	0.46
53:B5:41:THR:O	53:B5:215:VAL:CB	2.64	0.46
1:CA:157:U:O2'	1:CA:158:G:H5'	2.16	0.46
1:CA:181:A:C5	1:CA:194:C:C5	3.04	0.46
1:CA:216:U:H5"	1:CA:464:U:H4'	1.98	0.46
1:CA:296:U:C2	1:CA:297:G:C8	3.03	0.46
1:CA:518:C:H4'	1:CA:519:C:O5'	2.15	0.46
1:CA:597:G:C8	1:CA:598:U:C5	3.03	0.46
1:CA:692:U:H1'	1:CA:695:A:N7	2.30	0.46
1:CA:1118:U:H1'	1:CA:1179:A:C5	2.51	0.46
1:CA:1323:G:H2'	1:CA:1324:A:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:99:GLY:HA2	2:CB:102:THR:HG22	1.98	0.46
11:CK:27:PHE:CZ	11:CK:89:PRO:HG2	2.51	0.46
16:CP:19:VAL:HG12	16:CP:37:GLY:C	2.37	0.46
17:CQ:51:ASN:O	17:CQ:51:ASN:ND2	2.49	0.46
19:CS:55:ARG:CZ	19:CS:79:THR:CG2	2.93	0.46
22:DA:36:G:C6	22:DA:37:C:C4	3.04	0.46
22:DA:347:A:N1	22:DA:348:A:C5	2.84	0.46
22:DA:370:G:OP2	58:DA:3560:HOH:O	2.21	0.46
22:DA:480:A:O3'	42:DU:44:LYS:HG3	2.15	0.46
22:DA:511:U:O2'	22:DA:1215:G:N2	2.49	0.46
22:DA:635:C:O2'	22:DA:639:U:OP1	2.34	0.46
22:DA:651:G:OP1	51:D3:19:LYS:HB2	2.15	0.46
22:DA:1274:A:N3	22:DA:1297:C:H1'	2.31	0.46
22:DA:1691:C:C4	22:DA:1692:U:C5	3.03	0.46
22:DA:2212:A:C2	22:DA:2214:C:C4	3.03	0.46
22:DA:2499:C:N4	22:DA:2500:U:O4	2.48	0.46
23:DB:66:A:N6	23:DB:107:G:H2'	2.31	0.46
24:DC:266:PHE:N	24:DC:266:PHE:CD1	2.84	0.46
31:DJ:39:LYS:HA	31:DJ:39:LYS:HE3	1.97	0.46
38:DQ:47:TYR:CE2	38:DQ:51:ARG:NH2	2.84	0.46
39:DR:54:VAL:HG12	39:DR:55:ASP:N	2.31	0.46
1:AA:844:G:N3	1:AA:845:A:C8	2.84	0.46
2:AB:200:ILE:O	2:AB:201:PRO:O	2.33	0.46
6:AF:90:MET:HG2	18:AR:61:ARG:NH2	2.31	0.46
13:AM:58:ASP:O	13:AM:61:ALA:HB3	2.16	0.46
13:AM:114:LYS:HB2	13:AM:115:PRO:HD3	1.98	0.46
14:AN:6:MET:HB3	14:AN:63:ARG:NH2	2.31	0.46
15:AO:24:SER:O	15:AO:25:THR:C	2.54	0.46
20:AT:44:LYS:HG2	20:AT:87:ALA:HA	1.98	0.46
21:AU:22:SER:C	21:AU:23:CYS:SG	2.94	0.46
22:BA:1100:C:H2'	22:BA:1101:U:C5	2.51	0.46
22:BA:1816:C:C5	24:BC:62:TYR:CE2	3.04	0.46
22:BA:1850:G:C5	22:BA:1851:U:C4	3.04	0.46
22:BA:2185:U:H2'	22:BA:2186:G:H5'	1.96	0.46
22:BA:2579:C:O2'	22:BA:2580:U:H5'	2.15	0.46
27:BF:149:VAL:HG23	27:BF:149:VAL:O	2.16	0.46
29:BH:90:LEU:HD23	29:BH:93:SER:HA	1.97	0.46
32:BK:88:ASN:OD1	32:BK:88:ASN:C	2.55	0.46
1:CA:6:G:H2'	5:CE:124:LEU:CD2	2.46	0.46
1:CA:110:C:C4	1:CA:111:G:C5	3.04	0.46
1:CA:137:U:H1'	1:CA:227:G:N2	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:158:G:C6	1:CA:159:G:C5	3.04	0.46
1:CA:212:G:C2	1:CA:213:G:C8	3.04	0.46
1:CA:295:C:C2	1:CA:296:U:C6	3.04	0.46
1:CA:583:A:C2	1:CA:759:A:C5	3.04	0.46
1:CA:585:G:C6	1:CA:586:C:C4	3.04	0.46
1:CA:940:C:H2'	1:CA:941:G:C8	2.51	0.46
1:CA:951:G:C2	1:CA:1231:G:C2	3.04	0.46
1:CA:1042:A:H2'	1:CA:1043:G:C1'	2.46	0.46
1:CA:1089:G:C4	1:CA:1090:U:C6	3.04	0.46
1:CA:1115:U:H2'	1:CA:1116:U:H6	1.80	0.46
1:CA:1225:A:N3	1:CA:1225:A:C2'	2.79	0.46
1:CA:1239:A:H4'	1:CA:1240:U:H5"	1.96	0.46
4:CD:166:GLU:O	4:CD:167:LYS:HB2	2.14	0.46
12:CL:110:ARG:NE	12:CL:117:TYR:CE2	2.84	0.46
15:CO:10:LYS:O	15:CO:14:GLU:HG3	2.16	0.46
18:CR:45:THR:O	18:CR:45:THR:OG1	2.33	0.46
21:CU:24:GLU:HG3	21:CU:28:VAL:HG21	1.96	0.46
22:DA:118:A:N7	22:DA:119:A:N7	2.64	0.46
22:DA:189:G:P	45:DX:26:LYS:HE2	2.56	0.46
22:DA:609:A:H2'	22:DA:610:C:O4'	2.15	0.46
22:DA:614:A:H4'	22:DA:616:A:N7	2.30	0.46
22:DA:995:C:C6	38:DQ:57:PHE:CE2	3.04	0.46
22:DA:1428:C:C4	22:DA:1569:A:H5"	2.51	0.46
22:DA:1673:G:C2'	22:DA:1674:G:H5'	2.46	0.46
22:DA:2429:G:OP2	22:DA:2430:A:OP2	2.33	0.46
22:DA:2511:U:C4	22:DA:2512:C:C4	3.04	0.46
23:DB:58:A:N7	23:DB:59:A:C5	2.83	0.46
30:DI:22:PRO:HB2	30:DI:23:PRO:HD3	1.98	0.46
50:D2:6:GLN:OE1	50:D2:6:GLN:HA	2.16	0.46
51:D3:4:ILE:HG21	51:D3:63:PRO:HG3	1.97	0.46
1:AA:254:G:OP1	17:AQ:68:SER:OG	2.33	0.46
1:AA:880:C:OP1	12:AL:9:ARG:NH2	2.46	0.46
1:AA:982:U:H4'	1:AA:983:A:O5'	2.15	0.46
1:AA:1124:G:H2'	1:AA:1145:A:C6	2.51	0.46
1:AA:1302:C:C4	13:AM:17:ILE:HD13	2.51	0.46
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.51	0.46
2:AB:24:ASN:O	2:AB:25:PRO:C	2.54	0.46
3:AC:34:ASP:O	3:AC:38:LYS:HB2	2.15	0.46
4:AD:58:LYS:HG2	4:AD:203:LEU:HD22	1.98	0.46
5:AE:56:VAL:N	5:AE:57:PRO:HD2	2.31	0.46
12:AL:21:VAL:O	12:AL:21:VAL:HG13	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:46:ASN:ND2	12:AL:89:ASP:OD2	2.49	0.46
12:AL:90:LEU:HB3	12:AL:93:VAL:CG2	2.45	0.46
19:AS:3:ARG:O	19:AS:4:SER:HB2	2.16	0.46
22:BA:11:C:C2'	22:BA:12:U:H5'	2.45	0.46
22:BA:372:G:C8	45:BX:61:LYS:HD2	2.51	0.46
22:BA:1464:G:H2'	22:BA:1465:G:C8	2.50	0.46
22:BA:1984:G:C5	22:BA:1985:C:C5	3.03	0.46
23:BB:99:A:H2'	23:BB:99:A:N3	2.31	0.46
24:BC:20:VAL:HG22	24:BC:20:VAL:O	2.14	0.46
27:BF:38:MET:HG3	27:BF:152:LEU:CD1	2.46	0.46
29:BH:79:THR:HG23	29:BH:147:VAL:HB	1.98	0.46
30:BI:47:ASP:HA	30:BI:51:LYS:HD2	1.98	0.46
39:BR:49:ILE:CB	39:BR:52:PRO:C	2.85	0.46
43:BV:14:LYS:HD2	43:BV:18:ARG:HH11	1.81	0.46
45:BX:36:HIS:CD2	45:BX:56:MET:CE	2.99	0.46
53:B5:212:SER:CB	53:B5:221:PRO:CB	2.94	0.46
1:CA:457:G:N2	1:CA:476:U:C2	2.84	0.46
1:CA:527:G:N1	1:CA:528:C:C5	2.84	0.46
1:CA:597:G:H2'	1:CA:598:U:H5'	1.96	0.46
1:CA:772:U:C2'	1:CA:773:G:H5'	2.45	0.46
1:CA:951:G:C6	1:CA:1231:G:C6	3.04	0.46
1:CA:1108:G:H5"	3:CC:176:HIS:CD2	2.50	0.46
1:CA:1272:G:N2	1:CA:1273:C:H1'	2.31	0.46
2:CB:67:ILE:HG22	2:CB:68:LEU:N	2.31	0.46
2:CB:71:GLY:O	2:CB:93:ASN:HA	2.16	0.46
4:CD:102:VAL:HG13	4:CD:107:PHE:HB2	1.98	0.46
7:CG:11:LYS:O	7:CG:12:ILE:C	2.55	0.46
9:CI:28:ILE:HG23	9:CI:63:LEU:HD11	1.98	0.46
11:CK:88:GLY:H	11:CK:114:THR:HG22	1.81	0.46
13:CM:96:PRO:HA	13:CM:109:ARG:HG2	1.97	0.46
17:CQ:19:LYS:CD	17:CQ:49:GLU:HA	2.46	0.46
20:CT:55:GLN:N	20:CT:56:PRO:HD2	2.31	0.46
22:DA:96:C:H4'	46:DY:41:HIS:CD2	2.51	0.46
22:DA:137:U:H2'	22:DA:140:C:N1	2.31	0.46
22:DA:143:C:O2	41:DT:1:MET:N	2.49	0.46
22:DA:286:U:H2'	22:DA:287:G:C8	2.51	0.46
22:DA:379:G:C6	22:DA:396:G:C6	3.04	0.46
22:DA:475:C:O2	22:DA:481:G:N1	2.49	0.46
22:DA:491:G:C6	22:DA:492:A:C5	3.04	0.46
22:DA:806:C:H2'	22:DA:807:U:C6	2.50	0.46
22:DA:963:U:H2'	22:DA:964:C:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1006:C:P	58:DA:3780:HOH:O	2.74	0.46
22:DA:1992:G:N2	22:DA:1996:C:O2'	2.49	0.46
22:DA:2138:G:C2	22:DA:2154:A:N3	2.83	0.46
22:DA:2869:G:H2'	22:DA:2870:C:O4'	2.16	0.46
23:DB:29:A:N1	23:DB:56:G:C6	2.84	0.46
25:DD:193:VAL:HB	25:DD:194:PRO:CD	2.46	0.46
26:DE:7:ASP:OD1	26:DE:7:ASP:N	2.49	0.46
31:DJ:17:VAL:HG23	31:DJ:55:ILE:HB	1.97	0.46
33:DL:94:THR:CG2	33:DL:95:LEU:N	2.79	0.46
41:DT:2:ILE:CG2	41:DT:4:GLU:HG3	2.46	0.46
41:DT:74:ILE:HD12	41:DT:75:GLY:N	2.31	0.46
44:DW:48:GLY:O	44:DW:49:ALA:C	2.55	0.46
45:DX:41:GLU:O	45:DX:44:LYS:HD2	2.15	0.46
46:DY:35:GLY:C	46:DY:36:GLN:HG3	2.36	0.46
1:AA:19:A:C2	1:AA:917:G:C5	3.04	0.45
1:AA:523:A:C2	1:AA:527:G:C6	3.04	0.45
1:AA:591:U:OP2	8:AH:31:LYS:HD2	2.16	0.45
1:AA:705:G:C5	1:AA:706:A:C8	3.03	0.45
1:AA:1026:G:C2	1:AA:1027:C:O2	2.69	0.45
1:AA:1062:U:H2'	1:AA:1063:C:C5	2.52	0.45
1:AA:1075:U:O3'	2:AB:174:LYS:NZ	2.47	0.45
1:AA:1270:G:N1	1:AA:1271:A:C5	2.84	0.45
2:AB:87:CYS:HB2	2:AB:89:GLN:CD	2.37	0.45
5:AE:154:ALA:O	5:AE:158:GLY:N	2.49	0.45
6:AF:4:TYR:CD2	6:AF:71:ILE:HD13	2.51	0.45
6:AF:45:ARG:HB3	6:AF:59:TYR:CD1	2.51	0.45
7:AG:137:LYS:O	7:AG:141:VAL:HG23	2.16	0.45
8:AH:40:LEU:HB2	8:AH:46:ILE:HD11	1.98	0.45
9:AI:12:ARG:O	9:AI:13:LYS:C	2.54	0.45
10:AJ:11:LYS:HB3	10:AJ:71:LEU:HD13	1.98	0.45
22:BA:1353:A:C8	22:BA:1378:A:N6	2.85	0.45
22:BA:1717:A:C2	22:BA:1718:G:H1'	2.51	0.45
22:BA:1826:G:O2'	22:BA:1971:U:OP2	2.35	0.45
22:BA:1914:C:H2'	22:BA:1915:U:O5'	2.16	0.45
22:BA:2800:A:C2	22:BA:2895:G:H1'	2.51	0.45
27:BF:108:VAL:N	27:BF:109:PRO:HD2	2.32	0.45
40:BS:29:VAL:HG11	40:BS:55:ILE:HD11	1.97	0.45
41:BT:64:LYS:N	41:BT:64:LYS:HD3	2.30	0.45
46:BY:22:LEU:O	46:BY:23:ARG:O	2.34	0.45
49:B1:48:ILE:HD12	49:B1:48:ILE:H	1.80	0.45
1:CA:142:G:C2	1:CA:143:A:H1'	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:729:A:C4	1:CA:730:G:C8	3.04	0.45
1:CA:755:G:C2	1:CA:756:C:C6	3.05	0.45
1:CA:774:G:C6	1:CA:775:G:C5	3.03	0.45
1:CA:1244:G:C2	1:CA:1294:G:C2	3.04	0.45
1:CA:1255:G:C6	1:CA:1279:G:N7	2.84	0.45
3:CC:22:TRP:CH2	3:CC:29:PHE:CE1	3.04	0.45
5:CE:99:ALA:HB2	5:CE:124:LEU:CD1	2.45	0.45
5:CE:103:THR:O	5:CE:122:ASN:HA	2.16	0.45
6:CF:50:PRO:CD	18:CR:74:HIS:HB3	2.46	0.45
12:CL:108:LYS:O	12:CL:109:ASP:HB2	2.16	0.45
13:CM:37:ALA:CB	13:CM:56:LEU:HG	2.47	0.45
20:CT:69:LYS:HB2	20:CT:70:ASN:OD1	2.17	0.45
22:DA:82:U:H5'	22:DA:296:U:C5'	2.46	0.45
22:DA:305:C:C2	22:DA:313:G:N1	2.85	0.45
22:DA:308:G:C8	22:DA:501:A:H1'	2.51	0.45
22:DA:469:G:O6	50:D2:37:LYS:NZ	2.42	0.45
22:DA:524:G:C5	22:DA:525:U:C5	3.04	0.45
22:DA:1102:C:H2'	22:DA:1103:A:C8	2.51	0.45
22:DA:1465:G:H2'	22:DA:1466:U:C6	2.51	0.45
22:DA:2097:A:N6	22:DA:2193:G:C6	2.84	0.45
22:DA:2111:U:O2	22:DA:2111:U:O4'	2.34	0.45
22:DA:2297:A:C6	22:DA:2320:U:C6	3.04	0.45
22:DA:2468:A:C2	22:DA:2481:G:C2	3.04	0.45
27:DF:12:VAL:O	27:DF:16:LEU:HG	2.15	0.45
30:DI:90:SER:HB3	30:DI:93:PRO:HG3	1.98	0.45
33:DL:95:LEU:O	33:DL:100:ILE:CG2	2.64	0.45
34:DM:124:LEU:HD23	34:DM:124:LEU:N	2.31	0.45
36:DO:18:LEU:O	36:DO:22:GLY:N	2.47	0.45
1:AA:594:U:O4	1:AA:595:A:C6	2.68	0.45
1:AA:1367:C:P	9:AI:114:LYS:NZ	2.89	0.45
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.52	0.45
1:AA:1539:C:O3'	21:AU:18:ARG:HB3	2.16	0.45
4:AD:167:LYS:O	4:AD:168:PRO:O	2.34	0.45
7:AG:75:VAL:HB	7:AG:86:GLN:HG3	1.97	0.45
10:AJ:8:ILE:O	10:AJ:73:LEU:O	2.35	0.45
11:AK:53:ARG:N	11:AK:56:ARG:HB2	2.31	0.45
22:BA:545:U:H2'	22:BA:546:U:O3'	2.16	0.45
22:BA:854:C:C2'	22:BA:855:G:H5'	2.45	0.45
22:BA:870:U:N3	22:BA:871:U:C5	2.84	0.45
22:BA:1400:U:O2'	22:BA:1401:G:H5'	2.16	0.45
22:BA:1839:G:C8	22:BA:1927:A:H1'	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2598:A:C2'	22:BA:2599:G:O5'	2.64	0.45
25:BD:39:ASP:CG	25:BD:40:LEU:H	2.20	0.45
29:BH:90:LEU:HD21	29:BH:93:SER:HA	1.97	0.45
29:BH:94:ILE:HG23	29:BH:98:ASP:CB	2.47	0.45
30:BI:21:SER:HA	30:BI:25:GLY:HA2	1.98	0.45
32:BK:39:ILE:HG13	32:BK:41:ILE:HG23	1.97	0.45
45:BX:78:TYR:OXT	45:BX:78:TYR:CG	2.68	0.45
1:CA:255:G:C2	1:CA:256:U:C5	3.05	0.45
1:CA:537:G:H2'	1:CA:538:G:C8	2.51	0.45
1:CA:1069:C:H2'	1:CA:1070:U:O4'	2.16	0.45
1:CA:1309:G:C6	1:CA:1329:A:N1	2.84	0.45
2:CB:53:ALA:C	2:CB:54:LEU:HD22	2.37	0.45
2:CB:200:ILE:O	2:CB:200:ILE:HG22	2.16	0.45
11:CK:23:ILE:HG22	11:CK:32:VAL:HG13	1.98	0.45
12:CL:75:GLN:O	12:CL:76:GLU:C	2.54	0.45
19:CS:36:ARG:HG2	19:CS:51:VAL:HG13	1.98	0.45
19:CS:51:VAL:O	19:CS:58:VAL:HG12	2.16	0.45
22:DA:480:A:H2'	22:DA:480:A:N3	2.31	0.45
22:DA:526:A:C6	22:DA:2626:C:H4'	2.51	0.45
22:DA:535:G:C6	22:DA:559:G:C6	3.04	0.45
22:DA:607:U:O4	22:DA:620:G:H5'	2.16	0.45
22:DA:622:G:H2'	22:DA:623:C:C6	2.50	0.45
22:DA:856:G:C2	22:DA:922:C:N3	2.84	0.45
22:DA:1355:G:C2'	22:DA:1356:G:H5'	2.45	0.45
22:DA:1609:A:N3	22:DA:1616:A:O4'	2.48	0.45
22:DA:1744:A:C5	22:DA:1745:A:C5	3.04	0.45
22:DA:1965:C:H3'	22:DA:1966:A:C8	2.51	0.45
22:DA:2128:G:O6	22:DA:2160:C:C4	2.68	0.45
22:DA:2660:A:H2'	22:DA:2661:G:O4'	2.16	0.45
24:DC:61:ALA:O	24:DC:63:ARG:NH2	2.49	0.45
27:DF:16:LEU:HD11	27:DF:169:LEU:CD1	2.46	0.45
27:DF:136:ILE:HA	27:DF:141:ILE:HG21	1.97	0.45
33:DL:111:ILE:C	33:DL:131:ALA:HB2	2.36	0.45
34:DM:38:ARG:HG3	34:DM:98:PRO:HD3	1.98	0.45
1:AA:172:A:C6	1:AA:174:A:C8	3.05	0.45
1:AA:468:A:H5'	1:AA:469:C:OP2	2.17	0.45
1:AA:630:A:O2'	1:AA:631:C:H5'	2.17	0.45
1:AA:652:U:O4	1:AA:752:G:O2'	2.25	0.45
2:AB:10:LEU:HD23	2:AB:11:LYS:N	2.32	0.45
2:AB:149:GLY:O	2:AB:152:LYS:N	2.49	0.45
2:AB:151:ILE:O	2:AB:153:ASP:N	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:157:ALA:O	4:AD:161:LEU:HD22	2.17	0.45
5:AE:101:GLU:CB	5:AE:122:ASN:HB2	2.46	0.45
5:AE:149:SER:O	5:AE:153:VAL:HG12	2.16	0.45
6:AF:67:PRO:O	6:AF:69:GLU:N	2.48	0.45
8:AH:59:LEU:HD13	8:AH:60:GLU:N	2.32	0.45
10:AJ:29:ALA:HA	10:AJ:32:THR:CG2	2.45	0.45
10:AJ:36:VAL:HG22	10:AJ:76:ILE:HG12	1.99	0.45
20:AT:83:ILE:HD12	20:AT:84:ASN:N	2.31	0.45
22:BA:348:A:H2'	22:BA:349:U:O4'	2.17	0.45
22:BA:974:G:H2'	22:BA:974:G:N3	2.32	0.45
22:BA:1014:A:C6	22:BA:1015:U:C4	3.04	0.45
22:BA:1283:G:N1	22:BA:1286:A:OP2	2.49	0.45
22:BA:1789:A:P	24:BC:221:ARG:HH11	2.40	0.45
22:BA:1842:G:C5	22:BA:1843:C:C5	3.03	0.45
22:BA:1935:G:O2'	22:BA:1936:A:H5'	2.16	0.45
24:BC:182:ARG:NH2	24:BC:182:ARG:CG	2.75	0.45
24:BC:182:ARG:HH21	24:BC:182:ARG:HG2	1.81	0.45
25:BD:129:THR:HG23	25:BD:140:HIS:O	2.17	0.45
30:BI:124:ALA:O	30:BI:127:ARG:N	2.49	0.45
34:BM:97:GLN:N	34:BM:97:GLN:NE2	2.64	0.45
35:BN:32:GLU:OE1	35:BN:118:ARG:HA	2.16	0.45
43:BV:43:ASP:OD1	43:BV:44:HIS:N	2.49	0.45
1:CA:890:G:O2'	1:CA:891:U:P	2.74	0.45
1:CA:938:A:N6	1:CA:939:G:C5	2.84	0.45
1:CA:1323:G:H4'	1:CA:1362:A:C2	2.50	0.45
2:CB:60:ILE:HD12	2:CB:61:ALA:N	2.31	0.45
2:CB:67:ILE:HD13	2:CB:160:ALA:HB3	1.99	0.45
5:CE:82:GLN:OE1	5:CE:150:PRO:CD	2.64	0.45
5:CE:115:LEU:HG	5:CE:123:VAL:HG21	1.98	0.45
7:CG:2:PRO:O	7:CG:3:ARG:C	2.54	0.45
17:CQ:70:THR:HG22	17:CQ:71:LYS:H	1.80	0.45
21:CU:14:VAL:O	21:CU:16:LEU:HG	2.16	0.45
22:DA:77:G:H4'	46:DY:56:LEU:HD21	1.98	0.45
22:DA:158:U:O2	22:DA:169:G:C2	2.70	0.45
22:DA:289:G:N2	22:DA:352:A:C2	2.85	0.45
22:DA:303:G:C6	22:DA:304:U:N3	2.84	0.45
22:DA:526:A:O5'	58:DA:3246:HOH:O	2.20	0.45
22:DA:729:G:H2'	22:DA:1775:U:H1'	1.98	0.45
22:DA:751:A:C6	22:DA:789:A:C6	3.05	0.45
22:DA:796:C:H2'	22:DA:797:G:C8	2.52	0.45
22:DA:856:G:C2	22:DA:922:C:C2	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:982:C:H5"	22:DA:983:A:P	2.56	0.45
22:DA:1355:G:C6	22:DA:1377:G:N2	2.83	0.45
22:DA:1545:A:C8	22:DA:1546:G:C8	3.05	0.45
22:DA:1675:C:N3	25:DD:133:THR:HG21	2.31	0.45
22:DA:2200:C:O2	22:DA:2226:C:N4	2.49	0.45
22:DA:2661:G:C6	22:DA:2662:A:C6	3.04	0.45
22:DA:2740:A:N6	22:DA:2764:A:C8	2.85	0.45
23:DB:7:G:C5'	36:DO:29:HIS:CE1	2.99	0.45
23:DB:35:C:C2'	23:DB:36:C:O5'	2.65	0.45
29:DH:34:GLY:O	29:DH:35:LYS:CD	2.65	0.45
29:DH:112:LYS:HG2	29:DH:113:SER:N	2.32	0.45
31:DJ:84:ILE:HG23	31:DJ:84:ILE:O	2.16	0.45
32:DK:2:ILE:CD1	32:DK:6:THR:HG21	2.46	0.45
33:DL:82:LEU:HB2	33:DL:90:VAL:HG21	1.98	0.45
34:DM:67:VAL:HG11	34:DM:96:ILE:CD1	2.46	0.45
41:DT:21:SER:O	41:DT:22:THR:C	2.54	0.45
41:DT:39:THR:C	41:DT:41:ALA:N	2.69	0.45
50:D2:12:ARG:NH2	50:D2:44:VAL:CG1	2.79	0.45
1:AA:102:G:N3	1:AA:103:U:C6	2.85	0.45
1:AA:212:G:C2	1:AA:213:G:C5	3.04	0.45
1:AA:554:A:H2'	1:AA:555:U:H6	1.82	0.45
1:AA:719:C:H1'	18:AR:38:LYS:HG2	1.99	0.45
1:AA:934:C:H4'	1:AA:935:A:OP1	2.16	0.45
1:AA:960:U:H2'	1:AA:1225:A:H62	1.81	0.45
1:AA:1337:G:C5'	1:AA:1338:G:OP1	2.64	0.45
1:AA:1478:U:H2'	1:AA:1479:C:C6	2.51	0.45
2:AB:80:VAL:CA	2:AB:82:ASP:OD2	2.64	0.45
14:AN:47:LYS:HD2	19:AS:13:LEU:HD21	1.99	0.45
22:BA:332:A:C2	22:BA:335:C:C5	3.05	0.45
22:BA:1167:C:H2'	22:BA:1168:G:H5"	1.98	0.45
22:BA:1171:G:C6	22:BA:1172:C:N3	2.85	0.45
22:BA:1416:G:O2'	22:BA:1417:C:H6	2.00	0.45
22:BA:1731:G:N1	22:BA:1733:G:C5	2.84	0.45
22:BA:2017:U:H4'	48:B0:5:GLN:O	2.16	0.45
22:BA:2243:U:O2'	22:BA:2244:U:H5'	2.17	0.45
22:BA:2514:U:H2'	22:BA:2515:C:C6	2.51	0.45
22:BA:2884:U:O2	22:BA:2884:U:O4'	2.32	0.45
23:BB:41:G:H5"	27:BF:66:LEU:CD1	2.47	0.45
25:BD:4:LEU:HD22	25:BD:101:PHE:HE1	1.80	0.45
25:BD:105:LYS:O	25:BD:177:VAL:HG13	2.16	0.45
30:BI:57:VAL:CG2	30:BI:58:VAL:N	2.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:81:ILE:CG2	31:BJ:82:GLY:N	2.73	0.45
34:BM:47:GLU:OE2	34:BM:51:ARG:NE	2.49	0.45
34:BM:69:PRO:O	34:BM:70:ASP:CB	2.65	0.45
1:CA:258:G:H2'	1:CA:259:G:O4'	2.16	0.45
1:CA:510:A:H5"	1:CA:511:C:P	2.56	0.45
1:CA:577:G:C2	1:CA:578:C:C5	3.05	0.45
1:CA:731:G:H5'	1:CA:766:A:H4'	1.96	0.45
1:CA:879:C:H2'	1:CA:880:C:O5'	2.16	0.45
1:CA:909:A:H2'	1:CA:910:C:O4'	2.16	0.45
1:CA:1536:C:H2'	1:CA:1537:U:O4'	2.16	0.45
2:CB:87:CYS:O	2:CB:89:GLN:N	2.48	0.45
5:CE:15:LEU:C	5:CE:15:LEU:CD1	2.84	0.45
6:CF:9:MET:HB2	6:CF:85:ILE:HG13	1.98	0.45
7:CG:53:ARG:NH2	7:CG:122:ASN:OD1	2.44	0.45
10:CJ:33:GLY:O	10:CJ:34:ALA:HB2	2.17	0.45
10:CJ:52:LEU:HD23	10:CJ:62:ARG:HG3	1.98	0.45
14:CN:57:PRO:O	14:CN:59:ARG:N	2.49	0.45
15:CO:15:PHE:CZ	15:CO:85:LEU:HD11	2.51	0.45
22:DA:38:A:C6	22:DA:39:G:C5	3.04	0.45
22:DA:304:U:H2'	22:DA:305:C:C6	2.51	0.45
22:DA:465:G:C6	22:DA:466:A:N6	2.85	0.45
22:DA:906:U:C2'	22:DA:907:G:O5'	2.65	0.45
22:DA:945:A:C4	22:DA:2448:A:C2	3.04	0.45
22:DA:1027:A:C5	22:DA:1126:A:C2	3.04	0.45
22:DA:1363:C:O2'	22:DA:1809:A:N3	2.47	0.45
22:DA:2119:A:C2	22:DA:2169:A:H2'	2.52	0.45
22:DA:2122:U:H2'	22:DA:2123:G:C8	2.51	0.45
22:DA:2461:A:C2	22:DA:2490:G:N2	2.84	0.45
23:DB:57:A:C2	27:DF:26:MET:SD	3.08	0.45
23:DB:84:G:C2	23:DB:93:C:C2	3.03	0.45
25:DD:4:LEU:HD22	25:DD:101:PHE:CE2	2.52	0.45
25:DD:150:GLN:C	25:DD:151:THR:O	2.52	0.45
26:DE:175:ILE:HG13	26:DE:175:ILE:O	2.16	0.45
36:DO:39:VAL:HG23	36:DO:78:VAL:CG1	2.46	0.45
36:DO:53:THR:HG23	36:DO:74:VAL:HG21	1.98	0.45
40:DS:63:GLY:O	40:DS:64:ALA:HB3	2.15	0.45
1:AA:215:C:H2'	1:AA:216:U:O4'	2.17	0.45
1:AA:657:U:O2	15:AO:22:THR:HG22	2.15	0.45
1:AA:720:C:N4	1:AA:721:G:C2	2.84	0.45
1:AA:922:G:C6	1:AA:923:A:C6	3.04	0.45
1:AA:999:C:H2'	1:AA:1000:A:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1040:U:H2'	1:AA:1041:G:C8	2.51	0.45
2:AB:95:ARG:NH1	2:AB:95:ARG:HG2	2.32	0.45
3:AC:68:ILE:HD11	3:AC:101:ILE:HD11	1.99	0.45
10:AJ:7:ARG:HD3	10:AJ:73:LEU:HD21	1.98	0.45
11:AK:89:PRO:HA	21:AU:25:LYS:HE2	1.99	0.45
16:AP:2:VAL:CG2	16:AP:65:ALA:HB2	2.45	0.45
22:BA:197:A:H62	22:BA:2430:A:H2'	1.80	0.45
22:BA:1081:U:O2	22:BA:1081:U:H2'	2.15	0.45
22:BA:1376:C:H2'	22:BA:1377:G:O4'	2.17	0.45
22:BA:1411:U:H2'	22:BA:1412:U:O4'	2.16	0.45
22:BA:1419:A:C4	22:BA:1421:G:C8	3.05	0.45
22:BA:1672:A:N6	22:BA:1673:G:C6	2.84	0.45
22:BA:1880:U:H2'	22:BA:1881:C:C6	2.51	0.45
22:BA:2039:U:H2'	22:BA:2040:G:H8	1.81	0.45
22:BA:2120:G:N2	22:BA:2179:C:C2	2.85	0.45
22:BA:2377:A:O2'	22:BA:2378:A:H5'	2.15	0.45
22:BA:2508:G:C4	22:BA:2509:G:C8	3.04	0.45
22:BA:2749:A:OP1	28:BG:2:SER:N	2.50	0.45
22:BA:2771:C:H2'	22:BA:2772:C:C6	2.51	0.45
23:BB:116:G:H4'	36:BO:54:VAL:HG13	1.98	0.45
25:BD:125:TRP:CE3	25:BD:160:LYS:HD3	2.51	0.45
26:BE:5:LEU:HD13	26:BE:10:SER:O	2.17	0.45
28:BG:141:ILE:C	28:BG:141:ILE:HD12	2.37	0.45
32:BK:47:ILE:HB	32:BK:48:PRO:CD	2.46	0.45
1:CA:110:C:N4	1:CA:111:G:C6	2.84	0.45
1:CA:169:C:H2'	1:CA:170:U:C6	2.52	0.45
1:CA:355:C:H2'	1:CA:356:A:O4'	2.17	0.45
1:CA:522:C:O2	1:CA:522:C:H2'	2.16	0.45
1:CA:1028:C:O2	1:CA:1028:C:H2'	2.16	0.45
1:CA:1134:G:C2	1:CA:1135:U:H1'	2.51	0.45
1:CA:1140:C:O2'	1:CA:1141:C:P	2.74	0.45
1:CA:1409:C:H4'	22:DA:1915:U:O4	2.17	0.45
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.17	0.45
2:CB:217:VAL:HG12	2:CB:218:ALA:N	2.31	0.45
4:CD:29:ASP:C	4:CD:31:LYS:N	2.69	0.45
4:CD:187:GLU:N	4:CD:190:ASP:OD2	2.50	0.45
5:CE:96:MET:HE3	5:CE:96:MET:HB3	1.71	0.45
7:CG:22:LEU:HA	7:CG:25:LYS:NZ	2.30	0.45
7:CG:70:ARG:HG3	7:CG:96:ARG:HG2	1.97	0.45
9:CI:49:ARG:NH2	9:CI:53:GLU:HA	2.31	0.45
11:CK:59:THR:HA	11:CK:91:PRO:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:79:THR:OG1	19:CS:79:THR:O	2.33	0.45
21:CU:24:GLU:OE1	21:CU:24:GLU:N	2.49	0.45
22:DA:228:C:C5'	22:DA:229:C:C6	3.00	0.45
22:DA:765:C:C4	22:DA:766:U:C4	3.05	0.45
22:DA:1268:A:H2'	22:DA:1269:A:O4'	2.17	0.45
22:DA:1737:G:C6	22:DA:1738:G:N1	2.85	0.45
22:DA:1838:C:C4	22:DA:1899:A:C4	3.04	0.45
22:DA:1926:U:H1'	22:DA:1929:G:C6	2.52	0.45
22:DA:2079:U:C2'	22:DA:2080:A:O4'	2.64	0.45
22:DA:2199:A:C4	22:DA:2225:A:N1	2.85	0.45
22:DA:2365:G:H4'	44:DW:60:PHE:CE2	2.52	0.45
22:DA:2415:G:C2	22:DA:2416:C:C2	3.05	0.45
23:DB:106:G:H2'	23:DB:107:G:O4'	2.16	0.45
23:DB:115:A:H2'	23:DB:116:G:C8	2.52	0.45
27:DF:108:VAL:N	27:DF:109:PRO:CD	2.79	0.45
29:DH:83:LYS:HG3	29:DH:149:GLU:HG3	1.93	0.45
29:DH:86:ASP:C	29:DH:88:GLY:H	2.19	0.45
36:DO:49:VAL:HG12	36:DO:50:ALA:N	2.32	0.45
39:DR:24:LYS:HA	39:DR:94:THR:OG1	2.17	0.45
1:AA:430:A:OP1	4:AD:9:LEU:HB2	2.16	0.45
1:AA:457:G:H5'	1:AA:458:U:OP2	2.17	0.45
1:AA:1130:A:N3	1:AA:1146:A:C4	2.85	0.45
1:AA:1405:G:O4'	1:AA:1519:A:H4'	2.16	0.45
6:AF:64:VAL:HG12	6:AF:65:GLU:N	2.32	0.45
7:AG:62:PHE:CD1	7:AG:62:PHE:C	2.90	0.45
8:AH:111:MET:SD	8:AH:116:ALA:HA	2.57	0.45
12:AL:35:THR:C	12:AL:36:ARG:HD2	2.36	0.45
17:AQ:15:ASP:HA	17:AQ:21:ILE:HD11	1.98	0.45
22:BA:460:A:H2'	22:BA:461:C:O4'	2.17	0.45
22:BA:1061:U:O4	30:BI:11:LEU:HA	2.17	0.45
22:BA:1452:G:C4	22:BA:2702:G:C6	3.05	0.45
22:BA:1696:G:C6	22:BA:1697:G:C4	3.04	0.45
22:BA:1731:G:C4	22:BA:1733:G:C8	3.04	0.45
22:BA:1916:A:C2'	22:BA:1917:U:H4'	2.47	0.45
22:BA:2660:A:H2'	22:BA:2661:G:O4'	2.17	0.45
25:BD:149:ASN:OD1	25:BD:150:GLN:N	2.50	0.45
27:BF:52:ASN:HB3	27:BF:147:ASP:OD2	2.17	0.45
29:BH:40:THR:O	29:BH:42:LYS:N	2.48	0.45
33:BL:9:ALA:HB3	33:BL:12:SER:OG	2.17	0.45
33:BL:19:LEU:HD22	33:BL:31:GLY:O	2.15	0.45
37:BP:31:TRP:CE3	37:BP:40:LEU:HD12	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:16:GLU:OE1	39:BR:100:GLY:HA2	2.16	0.45
45:BX:15:GLY:C	45:BX:27:ARG:HG2	2.37	0.45
1:CA:35:G:O2'	12:CL:115:SER:O	2.33	0.45
1:CA:82:G:N2	1:CA:88:U:O2	2.50	0.45
1:CA:320:A:H2'	1:CA:321:A:C1'	2.47	0.45
1:CA:451:A:OP2	16:CP:70:ARG:NH1	2.48	0.45
1:CA:543:U:O2'	1:CA:544:G:H5'	2.16	0.45
1:CA:797:C:O2'	1:CA:798:U:H5'	2.17	0.45
2:CB:162:PHE:HA	2:CB:184:PHE:O	2.17	0.45
3:CC:72:ARG:HB3	3:CC:75:ILE:HG22	1.99	0.45
3:CC:126:ARG:O	3:CC:127:ARG:CB	2.64	0.45
3:CC:165:THR:OG1	3:CC:166:GLU:N	2.47	0.45
6:CF:13:ASP:C	6:CF:15:SER:H	2.19	0.45
6:CF:25:TYR:N	6:CF:25:TYR:CD1	2.85	0.45
11:CK:72:ASP:O	11:CK:73:ALA:HB3	2.15	0.45
21:CU:35:ARG:CG	21:CU:36:GLU:N	2.80	0.45
22:DA:226:A:N6	22:DA:227:A:N1	2.64	0.45
22:DA:319:G:C4	22:DA:333:G:N2	2.84	0.45
22:DA:329:G:O4'	22:DA:477:A:H1'	2.17	0.45
22:DA:503:A:C2	22:DA:506:G:C5	3.04	0.45
22:DA:900:A:C2	22:DA:901:C:H1'	2.51	0.45
22:DA:961:C:C2	22:DA:2031:A:C6	3.05	0.45
22:DA:1581:G:C5	22:DA:1582:C:C5	3.05	0.45
22:DA:1651:G:C2	22:DA:2007:U:C2	3.04	0.45
23:DB:5:U:H2'	23:DB:6:G:C8	2.52	0.45
25:DD:168:GLU:O	25:DD:170:VAL:HG22	2.16	0.45
26:DE:131:THR:HG22	26:DE:160:ALA:O	2.15	0.45
29:DH:39:ALA:O	29:DH:41:LYS:N	2.47	0.45
29:DH:147:VAL:HG12	29:DH:148:ALA:N	2.32	0.45
31:DJ:11:VAL:HG12	31:DJ:12:LYS:N	2.31	0.45
35:DN:65:LEU:HD11	35:DN:69:ARG:NH2	2.32	0.45
38:DQ:76:TYR:CE1	38:DQ:80:ILE:HG13	2.52	0.45
42:DU:49:VAL:HG13	42:DU:53:ASN:O	2.17	0.45
1:AA:8:A:C5	4:AD:206:LYS:HB3	2.52	0.45
1:AA:223:A:H2'	1:AA:224:U:C6	2.52	0.45
1:AA:1140:C:O2'	1:AA:1141:C:P	2.75	0.45
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.17	0.45
1:AA:1306:A:C2	1:AA:1307:U:H1'	2.52	0.45
1:AA:1402:C:O2	1:AA:1500:A:N1	2.50	0.45
2:AB:128:LYS:HG3	2:AB:129:LEU:N	2.31	0.45
4:AD:58:LYS:HG2	4:AD:203:LEU:CD2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:51:ARG:HB3	16:AP:51:ARG:NH1	2.32	0.45
18:AR:42:SER:OG	18:AR:47:THR:HG23	2.16	0.45
19:AS:15:LEU:HB2	19:AS:33:THR:HG21	1.99	0.45
22:BA:102:U:H4'	22:BA:103:A:OP1	2.16	0.45
22:BA:359:G:C6	22:BA:360:U:C4	3.04	0.45
22:BA:760:G:H4'	22:BA:1776:G:OP1	2.16	0.45
22:BA:1360:G:O6	22:BA:1372:U:C2	2.70	0.45
22:BA:2150:C:H2'	22:BA:2151:U:O4'	2.15	0.45
22:BA:2520:C:O2'	22:BA:2521:C:H5'	2.17	0.45
22:BA:2848:G:N3	22:BA:2867:G:C2	2.85	0.45
23:BB:54:G:H21	27:BF:26:MET:HE2	1.80	0.45
29:BH:12:LEU:HG	29:BH:13:GLY:N	2.31	0.45
29:BH:72:ILE:HG23	29:BH:142:VAL:HG22	1.99	0.45
30:BI:106:LEU:HA	30:BI:109:ILE:HB	1.99	0.45
35:BN:52:ILE:HG21	35:BN:94:TYR:CD2	2.52	0.45
46:BY:21:LEU:O	46:BY:22:LEU:O	2.35	0.45
1:CA:774:G:C4	1:CA:775:G:C8	3.04	0.45
1:CA:983:A:OP1	14:CN:9:ARG:NH2	2.50	0.45
1:CA:1151:A:N3	1:CA:1152:A:N7	2.65	0.45
1:CA:1280:A:C8	10:CJ:42:LEU:HD23	2.51	0.45
7:CG:103:TRP:CE3	7:CG:137:LYS:HG2	2.52	0.45
8:CH:65:TYR:CD1	8:CH:65:TYR:N	2.84	0.45
10:CJ:34:ALA:O	10:CJ:78:GLU:HB3	2.17	0.45
12:CL:16:VAL:O	12:CL:17:ALA:O	2.35	0.45
14:CN:49:GLN:C	14:CN:51:LEU:H	2.20	0.45
16:CP:67:ILE:HG23	16:CP:71:VAL:CG1	2.47	0.45
17:CQ:7:THR:HG21	17:CQ:60:GLU:OE1	2.17	0.45
17:CQ:80:GLU:O	17:CQ:81:LYS:HG3	2.17	0.45
22:DA:136:G:N2	22:DA:144:A:N7	2.65	0.45
22:DA:147:C:C4	22:DA:148:U:C4	3.05	0.45
22:DA:277:G:H1'	22:DA:361:G:O6	2.16	0.45
22:DA:444:C:C2	22:DA:445:C:C5	3.05	0.45
22:DA:491:G:C5	22:DA:492:A:C5	3.05	0.45
22:DA:533:G:C5'	38:DQ:24:TYR:CE1	3.00	0.45
22:DA:579:G:H5'	22:DA:2018:G:OP2	2.16	0.45
22:DA:658:U:N3	22:DA:659:G:N7	2.65	0.45
22:DA:1208:C:C4	22:DA:1209:U:C4	3.05	0.45
22:DA:1248:G:C5	38:DQ:3:ARG:HB2	2.52	0.45
22:DA:1786:A:H3'	22:DA:1787:A:C8	2.51	0.45
22:DA:2119:A:C2	22:DA:2170:A:C4	3.04	0.45
22:DA:2314:A:O4'	27:DF:155:THR:HG21	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2695:U:O2'	22:DA:2696:U:H5'	2.17	0.45
22:DA:2784:U:H4'	25:DD:42:ASN:O	2.17	0.45
26:DE:83:VAL:CG1	26:DE:86:ALA:HA	2.46	0.45
31:DJ:62:VAL:HG22	31:DJ:63:ALA:N	2.32	0.45
37:DP:49:ALA:O	37:DP:60:THR:N	2.47	0.45
39:DR:80:ARG:O	39:DR:82:HIS:N	2.46	0.45
42:DU:52:LEU:O	42:DU:53:ASN:CG	2.55	0.45
1:AA:451:A:C8	1:AA:452:A:N1	2.85	0.45
1:AA:625:U:O2'	1:AA:626:G:H5'	2.17	0.45
1:AA:716:A:H1'	11:AK:120:GLY:HA2	1.98	0.45
1:AA:786:G:C2	1:AA:797:C:C2	3.04	0.45
1:AA:866:C:N3	1:AA:867:G:H1'	2.32	0.45
1:AA:1024:G:C2'	1:AA:1025:U:O5'	2.65	0.45
1:AA:1122:U:C4	1:AA:1123:U:C5	3.05	0.45
1:AA:1387:G:C6	1:AA:1388:C:N4	2.85	0.45
1:AA:1505:G:P	58:AA:1869:HOH:O	2.75	0.45
2:AB:63:ARG:O	2:AB:64:LYS:CB	2.62	0.45
4:AD:125:VAL:O	4:AD:127:GLY:N	2.46	0.45
4:AD:126:ASN:HA	4:AD:142:VAL:HG23	1.98	0.45
8:AH:105:SER:HB2	8:AH:126:ILE:HD11	1.98	0.45
10:AJ:52:LEU:CB	14:AN:81:ARG:HE	2.29	0.45
11:AK:43:GLY:HA3	11:AK:74:VAL:HG13	1.99	0.45
11:AK:69:ARG:CD	22:BA:2146:C:N3	2.80	0.45
14:AN:20:TYR:CE1	14:AN:52:PRO:HG2	2.51	0.45
17:AQ:53:CYS:SG	17:AQ:75:LEU:HD23	2.57	0.45
17:AQ:81:LYS:O	17:AQ:82:ALA:C	2.56	0.45
19:AS:23:VAL:HG12	19:AS:24:GLU:N	2.31	0.45
22:BA:271:G:C4'	22:BA:272:A:OP1	2.65	0.45
22:BA:1487:U:O2	22:BA:1503:A:C2	2.70	0.45
22:BA:1501:G:C2'	22:BA:1502:A:H5'	2.46	0.45
22:BA:1671:U:O2'	22:BA:1673:G:N7	2.46	0.45
22:BA:1789:A:OP1	24:BC:221:ARG:HD3	2.17	0.45
22:BA:1796:U:H2'	22:BA:1797:G:C8	2.51	0.45
22:BA:2309:A:C6	22:BA:2310:C:N4	2.85	0.45
22:BA:2323:G:O2'	22:BA:2324:U:H5'	2.16	0.45
30:BI:18:ALA:HB2	30:BI:42:PHE:CZ	2.52	0.45
31:BJ:74:TYR:CD1	31:BJ:92:MET:HG3	2.52	0.45
33:BL:100:ILE:O	33:BL:100:ILE:CG1	2.64	0.45
34:BM:68:PHE:O	34:BM:69:PRO:O	2.34	0.45
36:BO:24:THR:HG22	36:BO:42:PRO:HG3	1.99	0.45
45:BX:68:LEU:HD13	45:BX:78:TYR:CE1	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:50:LYS:O	49:B1:51:GLU:HB3	2.16	0.45
1:CA:449:G:H2'	1:CA:450:G:C8	2.52	0.45
1:CA:1049:U:H4'	1:CA:1050:G:O5'	2.16	0.45
1:CA:1108:G:H2'	1:CA:1108:G:N3	2.31	0.45
1:CA:1181:G:O2'	1:CA:1182:G:C8	2.56	0.45
5:CE:76:LEU:H	5:CE:76:LEU:HD12	1.81	0.45
5:CE:121:HIS:O	5:CE:122:ASN:HB3	2.16	0.45
7:CG:68:ASN:O	7:CG:138:ARG:CZ	2.65	0.45
7:CG:148:ASN:C	7:CG:150:ALA:H	2.20	0.45
12:CL:3:THR:HB	12:CL:6:GLN:HG3	1.99	0.45
17:CQ:57:ASP:OD1	17:CQ:57:ASP:N	2.49	0.45
22:DA:67:U:H2'	22:DA:68:G:O4'	2.17	0.45
22:DA:125:A:H3'	50:D2:19:ARG:HG3	1.99	0.45
22:DA:158:U:O4	22:DA:159:G:C6	2.70	0.45
22:DA:208:C:H2'	22:DA:209:C:C6	2.52	0.45
22:DA:800:A:N1	22:DA:802:A:C8	2.85	0.45
22:DA:924:G:C2	22:DA:925:A:C4	3.04	0.45
22:DA:1364:G:N2	22:DA:1367:A:OP2	2.44	0.45
22:DA:1378:A:C2'	22:DA:1380:G:N7	2.80	0.45
22:DA:1394:U:H2'	22:DA:1395:A:O4'	2.17	0.45
22:DA:1436:G:N2	22:DA:1557:C:C2	2.85	0.45
22:DA:1509:A:C4	22:DA:1510:G:N7	2.84	0.45
22:DA:2070:A:H2'	22:DA:2071:A:C8	2.52	0.45
22:DA:2209:G:N3	22:DA:2216:G:N2	2.64	0.45
22:DA:2234:G:C5	22:DA:2235:G:C8	3.05	0.45
22:DA:2632:A:O2'	22:DA:2633:G:H5'	2.15	0.45
22:DA:2711:A:N6	22:DA:2714:G:C8	2.85	0.45
22:DA:2885:G:N2	48:D0:32:LYS:HB2	2.32	0.45
23:DB:42:C:C4	27:DF:88:LYS:HE3	2.52	0.45
27:DF:73:SER:HB2	27:DF:81:GLN:CB	2.46	0.45
29:DH:15:LEU:HD22	29:DH:15:LEU:N	2.32	0.45
29:DH:31:VAL:CG1	29:DH:32:PRO:HD3	2.47	0.45
29:DH:93:SER:HB3	29:DH:123:ARG:HG3	1.99	0.45
31:DJ:20:ALA:HA	31:DJ:23:LYS:HG3	1.99	0.45
31:DJ:138:GLN:O	31:DJ:138:GLN:HG3	2.17	0.45
36:DO:117:PHE:CD1	36:DO:117:PHE:C	2.89	0.45
37:DP:62:ARG:CZ	37:DP:101:ARG:HA	2.46	0.45
37:DP:62:ARG:NH1	37:DP:101:ARG:HA	2.31	0.45
40:DS:84:ARG:HB2	40:DS:96:ILE:HG12	1.97	0.45
42:DU:38:GLY:HA2	42:DU:41:LEU:CD2	2.47	0.45
45:DX:33:LEU:CD2	45:DX:50:ARG:CZ	2.95	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:142:G:H3'	1:AA:143:A:C8	2.51	0.45
1:AA:346:G:P	32:BK:105:ARG:NH1	2.90	0.45
1:AA:411:A:C4	1:AA:413:G:O4'	2.70	0.45
1:AA:587:G:N2	1:AA:755:G:C8	2.85	0.45
1:AA:723:U:H5"	21:AU:49:LYS:HG2	1.98	0.45
1:AA:1140:C:HO2'	1:AA:1141:C:P	2.40	0.45
1:AA:1349:A:OP1	9:AI:123:ARG:N	2.49	0.45
2:AB:47:VAL:C	2:AB:49:MET:N	2.69	0.45
2:AB:210:VAL:HG23	2:AB:211:THR:H	1.81	0.45
11:AK:102:ALA:C	11:AK:104:GLY:N	2.69	0.45
12:AL:35:THR:O	12:AL:36:ARG:HD2	2.16	0.45
16:AP:52:LEU:O	16:AP:54:LEU:N	2.50	0.45
21:AU:5:LYS:HG3	21:AU:5:LYS:O	2.16	0.45
22:BA:319:G:C5	22:BA:333:G:C2	3.05	0.45
22:BA:559:G:H2'	22:BA:560:C:O4'	2.17	0.45
22:BA:753:A:H2'	22:BA:754:U:C6	2.52	0.45
22:BA:2039:U:H2'	22:BA:2040:G:C8	2.52	0.45
22:BA:2131:U:OP1	22:BA:2132:U:H3'	2.17	0.45
22:BA:2552:U:C2	22:BA:2554:U:H5'	2.52	0.45
22:BA:2559:C:O2'	22:BA:2560:A:H5'	2.17	0.45
22:BA:2820:A:C2'	22:BA:2821:A:OP1	2.65	0.45
22:BA:2825:G:C2'	22:BA:2826:A:H5'	2.47	0.45
25:BD:125:TRP:CD2	25:BD:160:LYS:HD3	2.52	0.45
29:BH:76:GLU:HA	29:BH:142:VAL:CG1	2.46	0.45
32:BK:91:SER:O	32:BK:93:GLN:HG2	2.17	0.45
34:BM:18:ARG:HG2	34:BM:18:ARG:HH21	1.82	0.45
36:BO:31:THR:HG22	36:BO:34:HIS:H	1.82	0.45
38:BQ:81:ASN:O	38:BQ:84:LYS:HB3	2.16	0.45
39:BR:37:GLU:HG2	39:BR:53:PHE:CD2	2.52	0.45
40:BS:23:LEU:HD11	48:B0:22:LEU:HD12	1.99	0.45
46:BY:11:VAL:O	46:BY:15:ASN:ND2	2.43	0.45
1:CA:131:A:H2'	1:CA:132:C:C6	2.52	0.45
1:CA:642:A:C5	8:CH:107:SER:HA	2.52	0.45
1:CA:791:G:C5	1:CA:792:A:N7	2.85	0.45
1:CA:899:C:H6	1:CA:899:C:OP1	1.99	0.45
1:CA:993:G:H2'	1:CA:995:C:H41	1.81	0.45
1:CA:1416:G:N2	1:CA:1485:U:H1'	2.31	0.45
1:CA:1483:A:N1	22:DA:1959:G:O2'	2.43	0.45
3:CC:19:ASN:HA	3:CC:56:VAL:HG13	1.99	0.45
4:CD:9:LEU:HG	4:CD:32:CYS:SG	2.57	0.45
4:CD:27:ALA:O	4:CD:31:LYS:NZ	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:35:GLU:O	4:CD:37:ALA:N	2.47	0.45
4:CD:59:GLN:OE1	4:CD:59:GLN:HA	2.17	0.45
5:CE:101:GLU:OE2	5:CE:103:THR:HA	2.17	0.45
6:CF:51:ILE:O	6:CF:51:ILE:HG12	2.17	0.45
9:CI:13:LYS:O	9:CI:13:LYS:HG2	2.17	0.45
17:CQ:10:GLY:HA3	17:CQ:25:ILE:HD13	1.99	0.45
20:CT:68:HIS:HB3	20:CT:69:LYS:HG3	1.99	0.45
22:DA:53:A:N7	22:DA:54:G:C8	2.84	0.45
22:DA:60:G:C4	22:DA:74:A:C2	3.05	0.45
22:DA:391:A:C8	22:DA:392:U:C5	3.05	0.45
22:DA:396:G:H1'	45:DX:29:PHE:HB3	1.99	0.45
22:DA:687:C:C2	22:DA:788:A:O4'	2.70	0.45
22:DA:1059:G:H4'	30:DI:117:MET:HE3	1.99	0.45
22:DA:1265:A:O4'	22:DA:1267:U:C6	2.70	0.45
22:DA:1306:C:C2	22:DA:1307:A:C8	3.05	0.45
22:DA:1510:G:C2	22:DA:1511:G:C4	3.04	0.45
22:DA:1563:U:H2'	22:DA:1564:C:C6	2.52	0.45
22:DA:2186:G:C5	22:DA:2187:U:C4	3.05	0.45
22:DA:2210:U:O2	22:DA:2212:A:C8	2.70	0.45
25:DD:28:GLU:HA	25:DD:185:ASN:O	2.16	0.45
25:DD:125:TRP:CE3	25:DD:160:LYS:HD3	2.52	0.45
29:DH:5:LEU:CD1	29:DH:13:GLY:CA	2.95	0.45
30:DI:20:PRO:HB2	30:DI:23:PRO:HG2	1.99	0.45
33:DL:56:PRO:HD2	33:DL:59:ARG:HB2	1.99	0.45
35:DN:37:THR:OG1	35:DN:40:LYS:HB2	2.16	0.45
39:DR:68:ARG:HD3	39:DR:92:TRP:CZ2	2.52	0.45
1:AA:71:A:O2'	1:AA:72:A:OP2	2.32	0.45
1:AA:166:U:H3'	1:AA:167:A:H8	1.79	0.45
1:AA:374:A:C5'	1:AA:452:A:H2	2.30	0.45
1:AA:463:U:H3'	1:AA:464:U:C6	2.52	0.45
1:AA:559:A:H2'	1:AA:559:A:N3	2.31	0.45
1:AA:602:A:C2	1:AA:603:U:C2	3.05	0.45
1:AA:747:A:C6	1:AA:748:G:C6	3.05	0.45
1:AA:1057:G:O3'	3:AC:197:GLY:HA3	2.17	0.45
1:AA:1157:A:N7	1:AA:1180:A:N6	2.65	0.45
1:AA:1442:G:C2	1:AA:1443:C:C2	3.05	0.45
3:AC:73:PRO:CG	3:AC:105:GLU:HG3	2.47	0.45
4:AD:2:ALA:O	4:AD:68:LEU:HD21	2.17	0.45
5:AE:77:ASN:O	5:AE:78:ASN:CB	2.66	0.45
5:AE:114:VAL:HG22	5:AE:115:LEU:N	2.32	0.45
5:AE:152:MET:O	5:AE:156:LYS:HG3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:51:LYS:N	12:AL:51:LYS:HD3	2.31	0.45
13:AM:3:ARG:O	13:AM:4:ILE:O	2.34	0.45
13:AM:96:PRO:N	13:AM:109:ARG:HG2	2.31	0.45
22:BA:572:A:H5"	22:BA:573:U:OP2	2.16	0.45
22:BA:998:C:P	38:BQ:92:ARG:NH2	2.89	0.45
22:BA:1174:U:O2	22:BA:1174:U:O4'	2.35	0.45
22:BA:1176:U:OP1	22:BA:1176:U:H4'	2.17	0.45
22:BA:1730:C:H4'	22:BA:1730:C:OP1	2.13	0.45
22:BA:1778:U:H2'	22:BA:1784:A:H62	1.82	0.45
22:BA:1917:U:C3'	22:BA:1918:A:H5'	2.46	0.45
22:BA:1924:C:H2'	22:BA:1925:C:C5'	2.46	0.45
22:BA:2031:A:C6	22:BA:2498:C:H1'	2.52	0.45
22:BA:2097:A:C2	22:BA:2193:G:C6	3.05	0.45
22:BA:2176:A:C5	22:BA:2177:C:N4	2.85	0.45
22:BA:2186:G:C2'	22:BA:2187:U:O5'	2.65	0.45
22:BA:2420:C:H5"	49:B1:8:LYS:NZ	2.32	0.45
22:BA:2455:G:C6	22:BA:2456:C:N4	2.85	0.45
24:BC:232:HIS:NE2	24:BC:244:PRO:HA	2.32	0.45
25:BD:104:VAL:O	25:BD:105:LYS:CB	2.65	0.45
25:BD:108:ASP:OD1	25:BD:206:ALA:HA	2.16	0.45
26:BE:23:PHE:CD1	26:BE:111:GLU:HG3	2.52	0.45
26:BE:25:GLU:O	26:BE:26:ALA:C	2.55	0.45
26:BE:108:ILE:HD11	26:BE:180:LEU:HB3	1.98	0.45
37:BP:114:LEU:O	37:BP:115:ASN:HB3	2.17	0.45
1:CA:33:A:H2'	1:CA:34:C:H6	1.82	0.45
1:CA:292:G:O2'	1:CA:608:A:N6	2.45	0.45
1:CA:477:C:H2'	1:CA:478:A:C8	2.52	0.45
1:CA:564:C:C4	1:CA:565:U:C4	3.05	0.45
1:CA:664:G:H2'	1:CA:666:G:OP1	2.17	0.45
1:CA:794:A:C5	1:CA:795:C:C4	3.05	0.45
1:CA:1074:G:H4'	2:CB:103:ASN:HB3	1.98	0.45
4:CD:116:GLN:HG3	4:CD:120:HIS:CE1	2.52	0.45
4:CD:183:LYS:HE2	4:CD:183:LYS:HB2	1.89	0.45
5:CE:15:LEU:HD12	5:CE:15:LEU:O	2.17	0.45
9:CI:129:LYS:O	9:CI:130:ARG:HD2	2.16	0.45
15:CO:70:LEU:HD22	15:CO:78:TYR:HB2	1.97	0.45
16:CP:43:ALA:O	16:CP:46:LYS:CG	2.65	0.45
18:CR:24:LYS:C	18:CR:26:ILE:H	2.20	0.45
22:DA:600:G:OP1	26:DE:24:ASN:ND2	2.46	0.45
22:DA:1352:U:C5	22:DA:1377:G:C6	3.05	0.45
22:DA:1358:G:H1'	22:DA:1374:G:N2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1373:A:H2'	22:DA:1374:G:O4'	2.17	0.45
22:DA:1526:C:C4	22:DA:1527:G:C5	3.05	0.45
22:DA:1990:C:H2'	22:DA:1991:U:O4'	2.16	0.45
22:DA:2550:G:C6	22:DA:2551:C:C4	3.05	0.45
24:DC:130:LEU:HD12	24:DC:135:ILE:HG13	1.98	0.45
25:DD:151:THR:HG22	25:DD:152:PRO:HD3	1.99	0.45
26:DE:128:ALA:O	26:DE:130:LYS:N	2.50	0.45
26:DE:149:ILE:CD1	26:DE:172:ALA:HA	2.46	0.45
29:DH:1:MET:CE	29:DH:27:ARG:NH1	2.80	0.45
30:DI:20:PRO:HB2	30:DI:23:PRO:CG	2.47	0.45
30:DI:29:GLY:HA2	30:DI:33:VAL:HB	1.98	0.45
38:DQ:50:ARG:O	38:DQ:54:LYS:HE3	2.17	0.45
41:DT:2:ILE:HG23	41:DT:4:GLU:N	2.32	0.45
1:AA:255:G:H4'	17:AQ:19:LYS:HD2	1.98	0.44
1:AA:457:G:C6	1:AA:458:U:N3	2.85	0.44
1:AA:558:G:C4	1:AA:559:A:C2	3.04	0.44
1:AA:855:U:H2'	1:AA:856:C:C6	2.52	0.44
1:AA:918:A:H2'	1:AA:919:A:C8	2.52	0.44
1:AA:1077:G:C6	1:AA:1081:A:C6	3.05	0.44
1:AA:1141:C:HO2'	1:AA:1142:G:C5'	2.28	0.44
1:AA:1326:U:H2'	1:AA:1327:C:C6	2.52	0.44
2:AB:132:LYS:O	2:AB:136:MET:HB2	2.17	0.44
6:AF:9:MET:HE1	18:AR:65:LEU:HB3	1.99	0.44
9:AI:6:TYR:CD1	9:AI:89:GLU:HB3	2.52	0.44
10:AJ:18:ILE:HG23	10:AJ:19:ASP:N	2.31	0.44
11:AK:126:LYS:H	11:AK:126:LYS:HD3	1.81	0.44
14:AN:72:GLY:O	14:AN:80:SER:HA	2.18	0.44
22:BA:716:A:N6	22:BA:717:C:C4	2.85	0.44
22:BA:899:A:HO2'	22:BA:900:A:H8	1.62	0.44
22:BA:1494:A:H2'	22:BA:1495:A:O5'	2.15	0.44
22:BA:1588:G:C2	22:BA:1589:U:C5	3.04	0.44
22:BA:2223:G:OP1	24:BC:171:TYR:OH	2.28	0.44
22:BA:2766:A:N3	22:BA:2766:A:H2'	2.31	0.44
24:BC:28:LYS:HB3	24:BC:29:PRO:HD2	1.99	0.44
26:BE:155:GLU:OE1	26:BE:155:GLU:HA	2.17	0.44
32:BK:87:LEU:HD13	32:BK:92:GLU:HB3	1.99	0.44
43:BV:89:ILE:HG21	43:BV:91:PHE:CZ	2.52	0.44
45:BX:2:SER:O	45:BX:4:VAL:N	2.49	0.44
46:BY:9:LYS:CB	46:BY:12:GLU:HG3	2.47	0.44
48:B0:20:ASP:OD1	48:B0:20:ASP:N	2.50	0.44
1:CA:4:U:O2	1:CA:4:U:C2'	2.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:268:U:N3	1:CA:269:C:C4	2.85	0.44
1:CA:374:A:OP1	1:CA:452:A:N1	2.50	0.44
1:CA:401:C:OP2	4:CD:70:ARG:CD	2.64	0.44
1:CA:898:G:O2'	1:CA:900:A:N7	2.35	0.44
1:CA:1446:A:N6	1:CA:1447:A:H62	2.14	0.44
3:CC:121:THR:OG1	3:CC:189:ALA:N	2.49	0.44
7:CG:66:LEU:HD23	7:CG:70:ARG:NE	2.32	0.44
11:CK:59:THR:CA	11:CK:91:PRO:HB3	2.48	0.44
11:CK:84:VAL:HG11	11:CK:97:ILE:HG22	1.99	0.44
18:CR:34:THR:CG2	18:CR:38:LYS:HB2	2.47	0.44
22:DA:297:G:H2'	22:DA:298:G:O4'	2.17	0.44
22:DA:327:G:H2'	22:DA:328:U:O4'	2.16	0.44
22:DA:442:G:N2	26:DE:43:THR:O	2.49	0.44
22:DA:482:A:H1'	22:DA:498:G:N2	2.33	0.44
22:DA:523:C:H2'	22:DA:524:G:C8	2.52	0.44
22:DA:533:G:C6	22:DA:534:U:C4	3.05	0.44
22:DA:822:G:H5"	58:DA:3344:HOH:O	2.17	0.44
22:DA:1140:C:O4'	22:DA:1143:A:C2	2.70	0.44
22:DA:1385:A:H4'	22:DA:1386:C:OP1	2.17	0.44
22:DA:1439:A:N7	22:DA:1552:A:H2	2.15	0.44
22:DA:1846:G:H3'	22:DA:1847:A:C8	2.52	0.44
22:DA:1867:G:O6	22:DA:1875:G:C2	2.71	0.44
22:DA:2004:G:P	58:DA:3798:HOH:O	2.71	0.44
22:DA:2018:G:O2'	22:DA:2019:A:H5'	2.17	0.44
22:DA:2040:G:C2	22:DA:2041:U:C2	3.05	0.44
22:DA:2897:U:H2'	22:DA:2898:U:C6	2.52	0.44
23:DB:76:G:H2'	23:DB:77:U:O4'	2.17	0.44
24:DC:78:VAL:HG21	24:DC:110:LEU:HD21	1.99	0.44
27:DF:8:TYR:OH	27:DF:29:PRO:O	2.32	0.44
30:DI:49:ILE:O	30:DI:50:GLU:HB2	2.17	0.44
33:DL:77:ILE:HG23	33:DL:81:ASP:OD1	2.16	0.44
34:DM:20:LEU:N	34:DM:20:LEU:HD22	2.32	0.44
36:DO:71:ALA:O	36:DO:75:GLY:N	2.45	0.44
43:DV:63:ILE:HG13	43:DV:72:VAL:CG2	2.47	0.44
45:DX:64:ILE:O	45:DX:68:LEU:HG	2.17	0.44
46:DY:50:VAL:O	46:DY:54:LYS:HG3	2.17	0.44
49:D1:51:GLU:O	49:D1:52:ALA:HB2	2.16	0.44
1:AA:4:U:O2	1:AA:4:U:C2'	2.63	0.44
1:AA:73:C:O2'	1:AA:74:A:C5'	2.65	0.44
1:AA:142:G:C6	1:AA:143:A:C4	3.05	0.44
1:AA:213:G:N7	1:AA:214:C:C4	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:351:G:H1'	1:AA:352:C:OP1	2.16	0.44
1:AA:351:G:H4'	1:AA:352:C:OP2	2.15	0.44
1:AA:406:G:O5'	4:AD:5:LEU:HD21	2.17	0.44
1:AA:600:A:C2	1:AA:601:G:C5	3.05	0.44
1:AA:987:G:C2	1:AA:988:G:C8	3.05	0.44
1:AA:1002:G:C2	1:AA:1003:G:H1'	2.52	0.44
1:AA:1144:G:N1	1:AA:1145:A:H2	2.15	0.44
1:AA:1163:A:C2	1:AA:1174:G:C2	3.05	0.44
4:AD:160:GLU:C	4:AD:162:ALA:N	2.70	0.44
5:AE:148:ASN:ND2	8:AH:73:GLU:OE1	2.50	0.44
6:AF:9:MET:CG	6:AF:86:ARG:HB2	2.47	0.44
7:AG:145:ALA:O	7:AG:146:GLU:HB3	2.16	0.44
8:AH:2:SER:C	8:AH:4:GLN:H	2.19	0.44
8:AH:47:GLU:HB2	8:AH:62:THR:HG22	1.98	0.44
8:AH:105:SER:O	8:AH:123:GLY:HA3	2.17	0.44
10:AJ:17:LEU:HD23	10:AJ:17:LEU:C	2.37	0.44
11:AK:19:GLY:O	11:AK:82:LEU:HA	2.16	0.44
11:AK:126:LYS:C	21:AU:34:ARG:NH2	2.71	0.44
14:AN:21:PHE:HA	14:AN:25:ALA:HB3	1.98	0.44
16:AP:53:ASP:C	16:AP:53:ASP:OD1	2.55	0.44
22:BA:587:C:N3	33:BL:33:ARG:NH2	2.63	0.44
22:BA:936:A:H2'	22:BA:937:C:C6	2.52	0.44
22:BA:945:A:C4	22:BA:2448:A:C2	3.06	0.44
22:BA:987:C:H2'	22:BA:988:A:O4'	2.17	0.44
22:BA:1014:A:C2	22:BA:1149:G:C2	3.05	0.44
22:BA:1144:A:C6	22:BA:1145:C:C4	3.06	0.44
22:BA:1365:A:O5'	45:BX:28:ARG:NH2	2.50	0.44
22:BA:1394:U:H2'	22:BA:1395:A:O4'	2.17	0.44
22:BA:1464:G:C6	22:BA:1465:G:C6	3.06	0.44
22:BA:1967:C:H2'	22:BA:1968:G:H5'	1.99	0.44
22:BA:2057:G:C6	22:BA:2058:A:C5	3.05	0.44
22:BA:2082:A:H2'	22:BA:2083:G:O4'	2.17	0.44
22:BA:2187:U:H2'	22:BA:2188:U:C1'	2.47	0.44
22:BA:2857:G:N2	22:BA:2860:A:OP2	2.47	0.44
25:BD:1:MET:HG3	25:BD:205:PRO:HG2	1.99	0.44
39:BR:51:VAL:O	39:BR:52:PRO:O	2.35	0.44
1:CA:151:A:H2'	1:CA:152:A:O4'	2.18	0.44
1:CA:237:G:OP1	17:CQ:42:THR:OG1	2.31	0.44
1:CA:296:U:C4	1:CA:297:G:N7	2.86	0.44
1:CA:337:G:H2'	1:CA:338:A:C8	2.51	0.44
1:CA:493:A:C6	1:CA:494:G:N1	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:571:U:H5'	1:CA:819:A:C5	2.52	0.44
1:CA:879:C:C2'	1:CA:880:C:O5'	2.64	0.44
1:CA:1072:G:OP1	5:CE:62:LYS:NZ	2.50	0.44
3:CC:83:ASP:O	3:CC:85:GLU:N	2.50	0.44
5:CE:66:LYS:O	5:CE:69:ARG:O	2.35	0.44
6:CF:3:HIS:O	6:CF:92:THR:HA	2.17	0.44
7:CG:11:LYS:HD2	7:CG:11:LYS:N	2.31	0.44
8:CH:53:GLY:C	8:CH:54:ASP:CG	2.76	0.44
9:CI:49:ARG:C	9:CI:49:ARG:HD3	2.37	0.44
22:DA:85:G:OP2	42:DU:28:VAL:HG12	2.18	0.44
22:DA:88:G:C6	22:DA:89:A:N7	2.85	0.44
22:DA:301:G:N2	22:DA:302:C:O2	2.50	0.44
22:DA:416:U:H2'	22:DA:417:C:O4'	2.16	0.44
22:DA:672:C:N4	22:DA:673:C:N4	2.65	0.44
22:DA:894:U:C4	22:DA:895:U:C5	3.05	0.44
22:DA:942:G:C2'	22:DA:943:A:H5'	2.47	0.44
22:DA:1056:G:N1	22:DA:1102:C:OP2	2.49	0.44
22:DA:1277:G:H2'	22:DA:1278:C:O4'	2.17	0.44
22:DA:1310:G:O6	22:DA:1311:G:C2	2.71	0.44
22:DA:1310:G:H1'	22:DA:1611:C:H5"	1.99	0.44
22:DA:1441:G:H2'	22:DA:1442:U:C6	2.52	0.44
22:DA:1606:C:O2'	22:DA:1607:C:P	2.75	0.44
22:DA:1606:C:O2'	22:DA:1607:C:OP2	2.32	0.44
22:DA:1688:U:C4	22:DA:1698:A:C2	3.05	0.44
22:DA:1782:U:O4'	22:DA:2609:U:C2	2.70	0.44
22:DA:1828:G:P	58:DA:3453:HOH:O	2.75	0.44
22:DA:1916:A:C2	22:DA:1917:U:C2	3.05	0.44
22:DA:2052:A:OP1	25:DD:146:ILE:HG12	2.17	0.44
22:DA:2110:G:H5'	22:DA:2118:U:C2	2.52	0.44
22:DA:2371:G:C2	22:DA:2372:U:C6	3.05	0.44
22:DA:2415:G:C6	22:DA:2416:C:N3	2.85	0.44
22:DA:2635:A:H5'	25:DD:79:LEU:HB2	1.98	0.44
24:DC:25:HIS:N	24:DC:81:LEU:O	2.47	0.44
24:DC:145:GLU:CA	24:DC:152:GLY:HA2	2.47	0.44
26:DE:126:VAL:HG21	26:DE:134:LEU:HB2	1.99	0.44
27:DF:8:TYR:O	27:DF:12:VAL:HB	2.16	0.44
31:DJ:3:THR:HG22	31:DJ:4:PHE:N	2.32	0.44
35:DN:71:ARG:HH21	35:DN:71:ARG:CG	2.30	0.44
41:DT:82:LYS:HG2	41:DT:83:ALA:N	2.32	0.44
46:DY:11:VAL:O	46:DY:15:ASN:CG	2.55	0.44
49:D1:39:PHE:CG	49:D1:40:ASP:N	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:D2:46:LYS:C	50:D2:46:LYS:HD3	2.38	0.44
51:D3:52:LYS:HA	51:D3:55:LEU:HD12	1.99	0.44
1:AA:858:G:O2'	1:AA:859:G:H5"	2.18	0.44
1:AA:1429:A:C4	1:AA:1430:A:C8	3.05	0.44
4:AD:106:GLY:O	4:AD:158:ALA:HB1	2.16	0.44
4:AD:190:ASP:C	4:AD:191:LEU:HG	2.37	0.44
8:AH:6:PRO:O	8:AH:9:ASP:HB3	2.18	0.44
9:AI:30:ILE:HB	9:AI:65:ILE:HD11	1.99	0.44
12:AL:38:TYR:HB2	12:AL:52:VAL:HG23	1.98	0.44
16:AP:39:PHE:O	16:AP:39:PHE:CG	2.70	0.44
22:BA:142:A:H2'	22:BA:143:C:O5'	2.18	0.44
22:BA:301:G:H4'	22:BA:301:G:OP1	2.18	0.44
22:BA:695:G:C2	22:BA:696:G:C8	3.06	0.44
22:BA:1262:A:C6	22:BA:1263:U:C4	3.05	0.44
22:BA:1449:G:H2'	22:BA:1450:G:O5'	2.17	0.44
22:BA:1786:A:H1'	22:BA:1938:A:N6	2.32	0.44
22:BA:2262:U:H4'	22:BA:2328:A:C2	2.53	0.44
22:BA:2280:G:C2	22:BA:2281:A:C8	3.05	0.44
22:BA:2305:U:O2	27:BF:151:GLY:HA3	2.18	0.44
22:BA:2602:A:H4'	22:BA:2603:G:OP2	2.17	0.44
24:BC:70:ASN:O	24:BC:71:LYS:C	2.54	0.44
26:BE:46:GLN:O	26:BE:88:ARG:NH1	2.50	0.44
27:BF:31:VAL:HG23	27:BF:96:MET:SD	2.58	0.44
29:BH:57:LYS:CG	29:BH:58:LEU:N	2.81	0.44
29:BH:62:LEU:HD12	29:BH:62:LEU:O	2.17	0.44
30:BI:110:ALA:O	30:BI:113:LYS:HG3	2.17	0.44
35:BN:103:ARG:HD3	35:BN:110:MET:HE3	1.99	0.44
1:CA:38:G:N2	1:CA:397:A:C4	2.84	0.44
1:CA:177:G:C6	1:CA:178:C:N4	2.85	0.44
1:CA:518:C:H2'	1:CA:530:G:C8	2.52	0.44
1:CA:651:C:N4	1:CA:753:A:OP2	2.51	0.44
1:CA:1029:U:O2	1:CA:1029:U:H2'	2.16	0.44
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.80	0.44
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.51	0.44
4:CD:38:PRO:HD2	4:CD:42:GLY:CA	2.47	0.44
6:CF:86:ARG:CG	6:CF:86:ARG:NH1	2.75	0.44
8:CH:27:MET:HB2	8:CH:28:PRO:HD2	2.00	0.44
12:CL:64:THR:HG23	12:CL:93:VAL:HA	1.99	0.44
14:CN:61:ARG:O	14:CN:62:ASN:CB	2.62	0.44
22:DA:410:G:H2'	22:DA:2407:A:N7	2.32	0.44
22:DA:634:C:OP2	33:DL:70:LYS:HD3	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1767:G:O6	22:DA:1986:C:N4	2.51	0.44
22:DA:2108:A:C2	22:DA:2182:U:C2	3.06	0.44
22:DA:2152:G:H2'	22:DA:2153:C:C6	2.52	0.44
22:DA:2636:C:H2'	22:DA:2637:U:C6	2.52	0.44
24:DC:17:VAL:CB	24:DC:204:VAL:HG22	2.48	0.44
24:DC:69:ARG:NH2	24:DC:116:ILE:HD12	2.32	0.44
26:DE:196:VAL:O	26:DE:196:VAL:CG1	2.65	0.44
27:DF:17:MET:O	27:DF:21:ASN:HA	2.17	0.44
27:DF:38:MET:HG3	27:DF:152:LEU:HB3	1.98	0.44
42:DU:13:VAL:HG21	42:DU:39:ILE:HD12	1.99	0.44
42:DU:82:ARG:O	42:DU:97:LYS:CG	2.66	0.44
43:DV:30:ILE:HG12	43:DV:91:PHE:HB2	1.99	0.44
1:AA:19:A:N3	1:AA:917:G:C2	2.86	0.44
1:AA:244:U:O4	1:AA:906:A:H1'	2.17	0.44
1:AA:858:G:O6	1:AA:869:G:C8	2.70	0.44
1:AA:1126:U:O4'	1:AA:1281:C:O2	2.36	0.44
1:AA:1329:A:C2'	1:AA:1330:U:H5'	2.46	0.44
1:AA:1457:G:H2'	1:AA:1458:G:O4'	2.18	0.44
1:AA:1539:C:H5"	21:AU:18:ARG:CB	2.47	0.44
2:AB:66:LYS:HG2	2:AB:156:GLY:O	2.18	0.44
6:AF:29:ILE:HG23	6:AF:66:ALA:HB2	2.00	0.44
11:AK:110:ILE:HB	21:AU:6:VAL:CG2	2.48	0.44
12:AL:4:VAL:O	12:AL:8:VAL:HG23	2.17	0.44
13:AM:34:LEU:HD23	13:AM:39:ILE:HB	2.00	0.44
14:AN:64:CYS:SG	14:AN:67:THR:OG1	2.57	0.44
21:AU:41:PRO:HA	21:AU:44:GLU:HB2	2.00	0.44
22:BA:215:G:H4'	22:BA:216:A:H4'	2.00	0.44
22:BA:2039:U:O2'	22:BA:2040:G:H5'	2.16	0.44
22:BA:2258:C:H4'	22:BA:2259:U:OP2	2.16	0.44
22:BA:2453:A:H8	22:BA:2453:A:O5'	2.00	0.44
22:BA:2637:U:H2'	22:BA:2638:G:H5'	1.99	0.44
22:BA:2741:A:O3'	52:B4:36:ARG:NH1	2.50	0.44
26:BE:108:ILE:HG13	26:BE:109:LEU:N	2.31	0.44
29:BH:31:VAL:N	29:BH:32:PRO:CD	2.80	0.44
29:BH:100:ALA:HB2	29:BH:115:VAL:HG21	1.98	0.44
39:BR:42:ALA:HA	39:BR:46:GLU:CB	2.48	0.44
41:BT:69:ARG:HB3	41:BT:74:ILE:HG22	1.99	0.44
46:BY:16:THR:HA	46:BY:19:LEU:HB2	1.99	0.44
47:BZ:13:ALA:O	47:BZ:21:LYS:HE2	2.17	0.44
1:CA:517:G:H5'	1:CA:519:C:C2	2.51	0.44
1:CA:607:A:C2	1:CA:608:A:C4	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:632:U:H3'	1:CA:633:G:H5'	1.99	0.44
1:CA:702:A:C6	22:DA:1848:A:C6	3.06	0.44
1:CA:866:C:H4'	1:CA:919:A:H5'	1.98	0.44
1:CA:1078:U:C5	1:CA:1079:G:C5	3.05	0.44
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.18	0.44
1:CA:1101:A:H4'	1:CA:1102:A:O5'	2.17	0.44
1:CA:1479:C:C2	1:CA:1480:A:C8	3.05	0.44
3:CC:103:ILE:N	3:CC:103:ILE:HD12	2.33	0.44
5:CE:104:GLY:O	5:CE:105:ILE:CB	2.65	0.44
8:CH:64:LYS:HB3	8:CH:71:VAL:HG21	1.99	0.44
8:CH:78:VAL:N	8:CH:126:ILE:O	2.50	0.44
10:CJ:67:ILE:HG13	14:CN:96:LEU:HD13	1.99	0.44
12:CL:86:ARG:HD2	12:CL:88:LYS:N	2.32	0.44
16:CP:29:ASN:N	16:CP:29:ASN:OD1	2.50	0.44
21:CU:28:VAL:O	21:CU:32:VAL:HG23	2.18	0.44
22:DA:484:C:N4	22:DA:497:A:C2	2.85	0.44
22:DA:595:C:O2	22:DA:663:G:C2	2.70	0.44
22:DA:600:G:C8	22:DA:601:C:C5	3.05	0.44
22:DA:1139:G:O2'	22:DA:1140:C:H5'	2.17	0.44
22:DA:1248:G:N3	38:DQ:3:ARG:HG3	2.32	0.44
22:DA:1707:G:C6	22:DA:1708:C:N3	2.86	0.44
22:DA:2033:A:OP1	22:DA:2033:A:H2'	2.17	0.44
22:DA:2039:U:H2'	22:DA:2040:G:C8	2.53	0.44
22:DA:2138:G:N2	22:DA:2154:A:H1'	2.33	0.44
22:DA:2379:G:C6	22:DA:2380:C:N4	2.85	0.44
22:DA:2711:A:C6	22:DA:2714:G:C8	3.05	0.44
22:DA:2847:U:C2'	22:DA:2848:G:H5'	2.47	0.44
23:DB:39:A:H2'	23:DB:40:U:C5	2.53	0.44
23:DB:71:C:C2	23:DB:106:G:C2	3.05	0.44
29:DH:25:TYR:O	29:DH:29:PHE:HB3	2.18	0.44
30:DI:24:VAL:CG2	30:DI:28:LEU:HD23	2.48	0.44
37:DP:103:ARG:HG2	37:DP:107:ALA:HB1	1.98	0.44
38:DQ:83:LEU:O	38:DQ:86:ALA:HB3	2.16	0.44
42:DU:98:SER:O	42:DU:99:ASN:CB	2.65	0.44
43:DV:9:ARG:CG	43:DV:41:GLU:HB3	2.47	0.44
44:DW:46:HIS:N	44:DW:78:LYS:O	2.39	0.44
45:DX:40:VAL:CG2	45:DX:45:ARG:O	2.65	0.44
1:AA:665:A:C2	1:AA:732:C:C5	3.05	0.44
1:AA:724:G:N3	1:AA:725:G:C8	2.85	0.44
1:AA:829:G:C6	1:AA:858:G:C2	3.05	0.44
1:AA:1005:A:H3'	1:AA:1006:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1032:G:C5'	1:AA:1033:G:OP2	2.66	0.44
1:AA:1050:G:N3	1:AA:1050:G:H2'	2.33	0.44
1:AA:1329:A:H2'	1:AA:1330:U:H5'	2.00	0.44
1:AA:1401:G:C2	1:AA:1402:C:H1'	2.53	0.44
1:AA:1463:U:H2'	1:AA:1464:U:C6	2.53	0.44
2:AB:65:GLY:C	2:AB:66:LYS:HD3	2.38	0.44
3:AC:82:GLU:O	3:AC:85:GLU:HB3	2.16	0.44
3:AC:85:GLU:OE1	3:AC:88:ARG:CZ	2.65	0.44
3:AC:191:THR:OG1	3:AC:192:THR:N	2.50	0.44
7:AG:40:GLU:O	7:AG:44:TYR:CD2	2.71	0.44
7:AG:69:VAL:HG23	7:AG:100:ALA:HB1	1.99	0.44
9:AI:57:MET:HA	9:AI:60:LYS:HB2	1.99	0.44
13:AM:80:LEU:HD21	13:AM:87:ARG:NE	2.32	0.44
17:AQ:80:GLU:C	17:AQ:81:LYS:HD3	2.38	0.44
21:AU:14:VAL:CG1	21:AU:16:LEU:CD2	2.96	0.44
22:BA:68:G:H2'	22:BA:69:C:O4'	2.18	0.44
22:BA:96:C:H4'	46:BY:41:HIS:CD2	2.53	0.44
22:BA:846:U:O2'	22:BA:847:U:P	2.75	0.44
22:BA:1185:G:H5"	22:BA:1186:G:OP1	2.17	0.44
22:BA:1536:C:O4'	22:BA:1537:G:C2	2.70	0.44
22:BA:1840:G:C2	22:BA:1841:U:C2	3.06	0.44
22:BA:2186:G:H2'	22:BA:2187:U:C6	2.53	0.44
22:BA:2293:G:H2'	22:BA:2294:G:O4'	2.17	0.44
25:BD:104:VAL:HG23	25:BD:105:LYS:N	2.32	0.44
39:BR:48:LYS:O	39:BR:48:LYS:HG2	2.15	0.44
41:BT:64:LYS:HA	41:BT:79:ASP:OD1	2.18	0.44
49:B1:4:GLY:C	49:B1:6:ARG:H	2.20	0.44
1:CA:39:G:N1	1:CA:40:C:C4	2.86	0.44
1:CA:181:A:N6	1:CA:195:A:OP2	2.51	0.44
1:CA:444:G:C6	1:CA:445:G:N7	2.86	0.44
1:CA:468:A:O4'	1:CA:468:A:N3	2.50	0.44
1:CA:474:G:N1	1:CA:475:C:C2	2.85	0.44
1:CA:505:G:C6	1:CA:535:A:C2	3.05	0.44
1:CA:681:A:C2	1:CA:710:G:C4	3.05	0.44
1:CA:1302:C:C4	13:CM:17:ILE:HD11	2.53	0.44
3:CC:43:LEU:HD21	3:CC:68:ILE:HD11	2.00	0.44
4:CD:23:SER:CB	4:CD:109:ALA:O	2.66	0.44
7:CG:25:LYS:O	7:CG:29:ILE:HG12	2.17	0.44
9:CI:46:MET:O	9:CI:49:ARG:HB3	2.18	0.44
9:CI:52:LEU:HD13	9:CI:57:MET:HG2	1.98	0.44
9:CI:57:MET:O	9:CI:60:LYS:HB2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:87:LEU:C	9:CI:89:GLU:H	2.21	0.44
15:CO:89:ARG:NH1	22:DA:716:A:OP1	2.49	0.44
22:DA:38:A:H4'	26:DE:45:ALA:HB2	2.00	0.44
22:DA:46:G:N3	22:DA:47:C:C6	2.86	0.44
22:DA:95:A:H2'	22:DA:96:C:O5'	2.18	0.44
22:DA:176:A:N7	22:DA:177:G:C6	2.86	0.44
22:DA:200:U:C6	22:DA:201:C:C6	3.06	0.44
22:DA:724:U:C4	22:DA:725:G:C6	3.06	0.44
22:DA:1067:A:O5'	22:DA:1068:G:OP2	2.35	0.44
22:DA:1176:U:C4	22:DA:1177:G:C6	3.05	0.44
22:DA:1219:U:H2'	22:DA:1220:G:C8	2.52	0.44
22:DA:1332:G:H2'	22:DA:1332:G:N3	2.32	0.44
22:DA:2519:U:C6	22:DA:2542:A:N6	2.85	0.44
22:DA:2544:G:H5'	22:DA:2645:G:C2	2.52	0.44
22:DA:2787:C:O4'	25:DD:63:PRO:HA	2.18	0.44
25:DD:92:VAL:CG1	25:DD:93:GLY:N	2.80	0.44
26:DE:150:THR:C	26:DE:192:ALA:HB2	2.37	0.44
1:AA:57:G:H2'	1:AA:58:C:C6	2.52	0.44
1:AA:81:A:O2'	1:AA:89:U:O2	2.19	0.44
1:AA:146:G:C2	1:AA:177:G:N7	2.86	0.44
1:AA:353:A:C2'	1:AA:354:G:OP2	2.66	0.44
1:AA:765:G:C6	1:AA:812:G:C4	3.05	0.44
1:AA:824:G:H1'	8:AH:2:SER:CA	2.48	0.44
1:AA:973:G:H1'	10:AJ:56:HIS:HD2	1.83	0.44
1:AA:1289:A:H5'	1:AA:1290:G:OP2	2.17	0.44
1:AA:1312:G:N2	1:AA:1313:U:C2	2.86	0.44
1:AA:1449:C:H2'	1:AA:1450:U:O4'	2.18	0.44
2:AB:144:LEU:N	2:AB:144:LEU:HD23	2.33	0.44
4:AD:22:LYS:O	4:AD:23:SER:C	2.56	0.44
5:AE:115:LEU:O	5:AE:116:GLU:C	2.56	0.44
6:AF:52:ASN:O	6:AF:53:LYS:CB	2.65	0.44
8:AH:10:MET:CE	8:AH:33:LYS:HA	2.48	0.44
11:AK:70:CYS:O	11:AK:74:VAL:HG22	2.17	0.44
13:AM:11:ASP:O	13:AM:12:HIS:CG	2.69	0.44
14:AN:45:VAL:HG23	14:AN:46:LEU:H	1.83	0.44
19:AS:51:VAL:HG22	19:AS:71:LEU:HD13	1.99	0.44
22:BA:301:G:P	42:BU:82:ARG:NH1	2.91	0.44
22:BA:311:A:C6	22:BA:328:U:C4	3.05	0.44
22:BA:682:G:H5'	50:B2:26:ASN:OD1	2.17	0.44
22:BA:825:A:H2'	22:BA:826:U:O4'	2.18	0.44
22:BA:870:U:C4	22:BA:871:U:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:998:C:P	38:BQ:92:ARG:HH21	2.41	0.44
22:BA:1754:A:N1	22:BA:2716:C:O2'	2.41	0.44
22:BA:2403:C:C2	22:BA:2404:U:C6	3.06	0.44
22:BA:2804:U:H2'	22:BA:2805:C:C6	2.53	0.44
25:BD:55:LYS:HD3	25:BD:60:VAL:HG22	1.99	0.44
29:BH:97:ARG:O	29:BH:101:ASP:HB2	2.17	0.44
35:BN:20:MET:HE1	35:BN:40:LYS:HE2	2.00	0.44
36:BO:30:ARG:HG2	36:BO:31:THR:N	2.33	0.44
41:BT:67:VAL:HG22	41:BT:76:ARG:HG2	1.99	0.44
46:BY:23:ARG:O	46:BY:24:GLU:O	2.36	0.44
1:CA:40:C:H2'	1:CA:41:G:O4'	2.17	0.44
1:CA:519:C:H2'	1:CA:520:A:O4'	2.18	0.44
1:CA:608:A:H2'	1:CA:609:A:O4'	2.17	0.44
1:CA:731:G:O2'	1:CA:732:C:H5'	2.18	0.44
1:CA:1112:C:N4	3:CC:178:LEU:HD23	2.33	0.44
1:CA:1350:A:N1	1:CA:1351:U:C2	2.85	0.44
1:CA:1450:U:O2'	1:CA:1451:U:H2'	2.17	0.44
1:CA:1502:A:H5'	1:CA:1504:G:N7	2.33	0.44
2:CB:117:LEU:HD23	2:CB:141:LEU:HG	1.99	0.44
5:CE:156:LYS:HD3	8:CH:71:VAL:HG22	2.00	0.44
7:CG:55:GLY:O	7:CG:56:LYS:O	2.35	0.44
7:CG:116:MET:O	7:CG:120:LEU:N	2.49	0.44
8:CH:18:GLN:NE2	8:CH:70:ALA:HB1	2.32	0.44
9:CI:47:VAL:O	9:CI:80:ARG:HG2	2.18	0.44
12:CL:99:ARG:HD2	12:CL:104:CYS:SG	2.58	0.44
14:CN:23:LYS:HG3	14:CN:24:ARG:N	2.33	0.44
22:DA:21:A:N1	22:DA:520:G:C6	2.85	0.44
22:DA:52:A:N3	22:DA:178:G:N2	2.55	0.44
22:DA:219:A:N7	22:DA:220:G:N7	2.66	0.44
22:DA:289:G:H2'	22:DA:290:U:O4'	2.18	0.44
22:DA:527:C:H2'	22:DA:2779:U:O2	2.18	0.44
22:DA:574:A:H4'	22:DA:575:A:O5'	2.18	0.44
22:DA:699:A:H2'	22:DA:700:G:O4'	2.17	0.44
22:DA:728:G:C2	22:DA:730:A:C4	3.05	0.44
22:DA:1178:C:N4	22:DA:1180:U:N3	2.65	0.44
22:DA:1343:G:C5	22:DA:1344:U:O4	2.70	0.44
22:DA:1394:U:H6	22:DA:1394:U:H3'	1.83	0.44
22:DA:1407:G:N2	22:DA:1596:A:C4	2.85	0.44
22:DA:1553:A:N7	22:DA:1555:G:C5	2.86	0.44
22:DA:1582:C:O2'	22:DA:1585:C:N3	2.35	0.44
22:DA:1584:U:O2	22:DA:1584:U:C2'	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1663:G:C6	22:DA:1992:G:C8	3.06	0.44
22:DA:1676:A:C6	22:DA:1677:A:C5	3.05	0.44
22:DA:2061:G:H2'	22:DA:2501:C:O2'	2.17	0.44
22:DA:2283:C:N4	22:DA:2389:G:C5	2.86	0.44
22:DA:2304:G:C2	22:DA:2313:C:N3	2.86	0.44
22:DA:2859:G:H2'	22:DA:2860:A:C8	2.52	0.44
24:DC:107:PRO:HB3	24:DC:142:HIS:CE1	2.53	0.44
24:DC:200:HIS:O	24:DC:203:ARG:HG2	2.17	0.44
27:DF:52:ASN:HB3	27:DF:150:ARG:NH1	2.32	0.44
28:DG:118:PRO:CG	28:DG:144:VAL:HG21	2.48	0.44
28:DG:137:ASP:HB3	28:DG:140:VAL:HG23	2.00	0.44
35:DN:56:LYS:NZ	35:DN:87:PHE:HB3	2.32	0.44
38:DQ:27:ALA:HB1	38:DQ:31:VAL:CG2	2.48	0.44
44:DW:36:ILE:HG22	44:DW:37:ILE:N	2.32	0.44
45:DX:78:TYR:OXT	45:DX:78:TYR:CD1	2.70	0.44
52:D4:36:ARG:HG2	52:D4:37:GLN:H	1.82	0.44
1:AA:258:G:C4	1:AA:259:G:C8	3.05	0.44
1:AA:612:C:H2'	1:AA:613:C:C6	2.53	0.44
1:AA:1168:U:O2	1:AA:1168:U:C2'	2.66	0.44
2:AB:24:ASN:HA	2:AB:25:PRO:HD2	1.86	0.44
2:AB:41:ILE:HG21	2:AB:202:GLY:HA2	2.00	0.44
2:AB:128:LYS:O	2:AB:129:LEU:C	2.56	0.44
3:AC:206:GLU:O	3:AC:207:ILE:O	2.35	0.44
4:AD:143:VAL:O	4:AD:143:VAL:CG2	2.65	0.44
7:AG:63:GLU:O	7:AG:67:GLU:N	2.50	0.44
8:AH:75:ILE:O	8:AH:75:ILE:HG23	2.18	0.44
13:AM:12:HIS:HA	13:AM:44:LYS:HE3	1.99	0.44
20:AT:84:ASN:HA	20:AT:87:ALA:HB3	2.00	0.44
22:BA:749:A:C6	22:BA:1618:A:C2	3.06	0.44
22:BA:851:C:H2'	22:BA:852:U:C6	2.53	0.44
22:BA:1384:A:H1'	22:BA:1405:U:C1'	2.47	0.44
22:BA:1851:U:C4	22:BA:1852:U:C5	3.05	0.44
22:BA:2190:G:H3'	22:BA:2191:A:H8	1.83	0.44
22:BA:2727:A:C6	22:BA:2728:U:O4	2.71	0.44
24:BC:108:LYS:HD2	24:BC:194:GLU:OE1	2.18	0.44
26:BE:125:SER:OG	26:BE:126:VAL:N	2.50	0.44
29:BH:57:LYS:HG3	29:BH:58:LEU:N	2.33	0.44
29:BH:89:LYS:CE	29:BH:124:THR:HG22	2.48	0.44
34:BM:70:ASP:C	34:BM:70:ASP:OD1	2.56	0.44
41:BT:1:MET:HB2	41:BT:2:ILE:HD12	2.00	0.44
1:CA:216:U:H4'	1:CA:464:U:H4'	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:995:C:N3	1:CA:1046:A:O2'	2.46	0.44
1:CA:1036:A:N3	1:CA:1036:A:H2'	2.32	0.44
1:CA:1088:G:C4	1:CA:1089:G:C8	3.05	0.44
1:CA:1141:C:O2'	1:CA:1142:G:P	2.76	0.44
1:CA:1216:A:OP1	14:CN:5:SER:HB2	2.18	0.44
1:CA:1346:A:O3'	1:CA:1347:G:H4'	2.17	0.44
4:CD:116:GLN:HG3	4:CD:120:HIS:ND1	2.33	0.44
5:CE:56:VAL:N	5:CE:57:PRO:CD	2.80	0.44
9:CI:128:SER:O	9:CI:129:LYS:C	2.56	0.44
12:CL:87:VAL:O	12:CL:89:ASP:N	2.51	0.44
20:CT:33:LYS:O	20:CT:36:TYR:CD2	2.70	0.44
22:DA:45:G:H4'	22:DA:46:G:O4'	2.18	0.44
22:DA:49:A:C8	22:DA:51:G:C2	3.06	0.44
22:DA:487:C:N4	22:DA:488:G:C6	2.86	0.44
22:DA:662:G:O3'	33:DL:16:GLY:HA2	2.17	0.44
22:DA:769:U:C4	22:DA:770:G:N7	2.86	0.44
22:DA:1127:A:N7	22:DA:2488:G:O2'	2.48	0.44
22:DA:1340:U:C5	22:DA:1603:A:C8	3.05	0.44
22:DA:1655:A:C2	22:DA:1656:C:H1'	2.52	0.44
22:DA:1663:G:C6	22:DA:1992:G:N7	2.86	0.44
22:DA:1665:A:N6	22:DA:1666:G:C6	2.86	0.44
22:DA:1688:U:H1'	22:DA:1701:A:C6	2.52	0.44
22:DA:2314:A:C2	22:DA:2315:G:C4	3.06	0.44
22:DA:2729:G:H2'	22:DA:2730:C:O4'	2.18	0.44
22:DA:2784:U:C4	22:DA:2785:C:N4	2.86	0.44
22:DA:2784:U:N3	22:DA:2785:C:C4	2.86	0.44
22:DA:2838:G:O2'	35:DN:45:ARG:CZ	2.66	0.44
24:DC:34:LEU:O	24:DC:35:GLU:HB3	2.17	0.44
24:DC:124:ILE:CD1	24:DC:136:PRO:HD3	2.48	0.44
25:DD:30:GLU:HG2	25:DD:185:ASN:ND2	2.32	0.44
29:DH:32:PRO:HB3	45:DX:39:TRP:HB3	1.99	0.44
29:DH:37:VAL:HG22	29:DH:38:PRO:HD2	1.98	0.44
35:DN:107:ASN:ND2	35:DN:107:ASN:O	2.51	0.44
36:DO:36:TYR:CD2	36:DO:36:TYR:N	2.86	0.44
40:DS:73:LYS:CB	40:DS:106:VAL:HB	2.47	0.44
42:DU:13:VAL:HB	42:DU:18:ASP:O	2.17	0.44
1:AA:177:G:OP2	20:AT:60:ARG:NH1	2.51	0.44
1:AA:330:C:O2'	1:AA:331:G:H5'	2.17	0.44
1:AA:404:G:H4'	1:AA:439:U:O2	2.17	0.44
1:AA:728:A:N6	1:AA:729:A:N6	2.65	0.44
1:AA:1386:G:H2'	1:AA:1387:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:136:MET:N	2:AB:136:MET:SD	2.91	0.44
4:AD:123:ILE:HD13	4:AD:123:ILE:H	1.81	0.44
4:AD:151:LYS:CB	4:AD:156:LYS:HE3	2.48	0.44
5:AE:117:VAL:HG23	5:AE:118:ALA:N	2.33	0.44
8:AH:41:LYS:O	8:AH:44:GLY:N	2.48	0.44
11:AK:91:PRO:O	11:AK:93:ARG:N	2.51	0.44
11:AK:111:THR:HA	21:AU:4:ILE:O	2.18	0.44
13:AM:6:GLY:C	13:AM:8:ASN:H	2.21	0.44
16:AP:45:GLU:O	16:AP:46:LYS:O	2.35	0.44
17:AQ:48:ASP:OD1	17:AQ:48:ASP:O	2.36	0.44
22:BA:686:U:O4	50:B2:12:ARG:HB2	2.17	0.44
22:BA:976:G:N3	22:BA:976:G:H2'	2.33	0.44
22:BA:1100:C:H2'	22:BA:1101:U:C6	2.53	0.44
22:BA:1406:U:C2'	22:BA:1407:G:O5'	2.66	0.44
22:BA:1414:C:C4	22:BA:1415:U:H5	2.35	0.44
22:BA:1588:G:N3	22:BA:1589:U:C6	2.86	0.44
22:BA:1590:A:H2'	22:BA:1591:A:H8	1.83	0.44
22:BA:1721:G:O2'	22:BA:1739:A:N6	2.50	0.44
22:BA:1742:U:C2'	22:BA:1743:G:O5'	2.66	0.44
22:BA:1935:G:C6	22:BA:1962:C:C6	3.06	0.44
22:BA:2102:G:H5'	22:BA:2103:C:OP2	2.18	0.44
22:BA:2683:C:H4'	25:BD:13:ARG:NH1	2.32	0.44
22:BA:2687:U:H2'	22:BA:2688:G:O4'	2.18	0.44
26:BE:5:LEU:O	26:BE:6:LYS:HB3	2.17	0.44
27:BF:3:LYS:O	27:BF:6:ASP:HB2	2.18	0.44
29:BH:4:ILE:HG23	29:BH:17:ASP:O	2.17	0.44
31:BJ:58:ASN:HA	31:BJ:126:ALA:O	2.18	0.44
38:BQ:109:LEU:HD11	39:BR:40:MET:CE	2.48	0.44
1:CA:50:A:H1'	1:CA:52:C:O4'	2.18	0.44
1:CA:254:G:C4	1:CA:255:G:C8	3.06	0.44
1:CA:769:G:H4'	1:CA:1513:A:H4'	2.00	0.44
1:CA:1244:G:C6	1:CA:1245:C:C4	3.06	0.44
1:CA:1521:C:N3	1:CA:1522:U:C5	2.85	0.44
1:CA:1536:C:C5	1:CA:1537:U:C5	3.06	0.44
11:CK:52:PHE:CE1	11:CK:62:ALA:HB1	2.52	0.44
16:CP:5:ARG:O	16:CP:19:VAL:HA	2.17	0.44
18:CR:49:ALA:O	18:CR:50:LYS:C	2.56	0.44
20:CT:62:ALA:HA	20:CT:67:ILE:HG22	2.00	0.44
22:DA:575:A:C2	22:DA:576:U:C5	3.06	0.44
22:DA:1361:G:N3	22:DA:1362:C:C6	2.85	0.44
22:DA:1445:G:N2	22:DA:1547:C:C2	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1671:U:O2'	22:DA:1673:G:N7	2.41	0.44
22:DA:1712:U:H2'	22:DA:1713:A:C8	2.53	0.44
22:DA:1718:G:C6	22:DA:1743:G:N3	2.86	0.44
22:DA:1726:C:H2'	22:DA:1727:C:C6	2.51	0.44
22:DA:1740:G:H2'	22:DA:1741:C:O4'	2.17	0.44
22:DA:2043:C:H1'	22:DA:2779:U:O4	2.18	0.44
22:DA:2152:G:H2'	22:DA:2153:C:O4'	2.18	0.44
22:DA:2195:U:N3	22:DA:2196:C:C5	2.86	0.44
22:DA:2552:U:C2	22:DA:2554:U:C5'	3.01	0.44
22:DA:2732:G:O2'	22:DA:2733:A:H5'	2.18	0.44
22:DA:2799:A:O2'	22:DA:2800:A:H5"	2.18	0.44
22:DA:2836:U:H2'	22:DA:2837:A:C8	2.52	0.44
24:DC:246:THR:C	24:DC:248:TRP:H	2.21	0.44
26:DE:58:LYS:HG3	26:DE:70:SER:O	2.18	0.44
27:DF:122:PHE:O	27:DF:123:ASP:C	2.56	0.44
27:DF:142:ASP:O	27:DF:143:TYR:C	2.56	0.44
30:DI:17:MET:HB3	30:DI:20:PRO:HB3	1.99	0.44
31:DJ:71:ASP:O	31:DJ:73:VAL:CG2	2.66	0.44
39:DR:52:PRO:O	39:DR:53:PHE:CG	2.70	0.44
45:DX:30:LEU:HB3	45:DX:31:PRO:HD2	2.00	0.44
1:AA:22:G:C6	1:AA:23:C:C4	3.06	0.44
1:AA:174:A:C2'	1:AA:175:C:H5'	2.48	0.44
1:AA:374:A:C6	1:AA:375:U:C4	3.06	0.44
1:AA:587:G:N2	1:AA:755:G:C4	2.86	0.44
1:AA:665:A:N1	1:AA:732:C:C4	2.86	0.44
1:AA:1032:G:H3'	1:AA:1033:G:O4'	2.18	0.44
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.52	0.44
1:AA:1504:G:H4'	1:AA:1505:G:C4	2.53	0.44
2:AB:67:ILE:HG21	2:AB:69:PHE:CE1	2.52	0.44
4:AD:150:LYS:O	4:AD:152:GLN:HG2	2.17	0.44
4:AD:155:VAL:CG1	4:AD:178:MET:HE1	2.48	0.44
5:AE:19:ASN:O	5:AE:33:PHE:HA	2.17	0.44
6:AF:79:ARG:O	6:AF:80:PHE:C	2.56	0.44
12:AL:63:VAL:CG2	12:AL:95:TYR:CE1	3.01	0.44
14:AN:16:LEU:HD12	14:AN:54:ASP:HB2	2.00	0.44
20:AT:15:GLU:OE2	20:AT:18:ARG:NE	2.49	0.44
22:BA:39:G:H2'	22:BA:40:U:C6	2.53	0.44
22:BA:587:C:C6	22:BA:671:C:H1'	2.53	0.44
22:BA:983:A:N6	22:BA:984:A:N1	2.66	0.44
22:BA:1087:G:N2	22:BA:1090:A:C8	2.86	0.44
22:BA:1566:A:O4'	24:BC:213:TRP:CD1	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1735:A:C2	22:BA:1736:U:H1'	2.53	0.44
22:BA:1789:A:OP2	24:BC:221:ARG:NH1	2.51	0.44
22:BA:1912:A:O5'	22:BA:1913:A:P	2.75	0.44
22:BA:1915:U:C2	22:BA:1916:A:C8	3.06	0.44
22:BA:1918:A:H4'	22:BA:1919:A:OP1	2.18	0.44
22:BA:1968:G:O2'	22:BA:1969:A:O4'	2.29	0.44
22:BA:2070:A:H2'	22:BA:2071:A:O4'	2.17	0.44
22:BA:2075:U:O2	22:BA:2077:A:C8	2.70	0.44
22:BA:2098:U:H2'	22:BA:2099:U:C6	2.53	0.44
22:BA:2344:U:H4'	22:BA:2345:G:OP1	2.17	0.44
29:BH:89:LYS:HE3	29:BH:124:THR:HG22	1.99	0.44
29:BH:99:ILE:CD1	29:BH:117:LEU:HD13	2.48	0.44
30:BI:112:THR:O	30:BI:113:LYS:C	2.56	0.44
34:BM:97:GLN:N	34:BM:97:GLN:CD	2.71	0.44
48:B0:43:ILE:HG22	48:B0:49:TYR:HB2	2.00	0.44
1:CA:126:G:C2'	1:CA:127:G:O5'	2.66	0.44
1:CA:158:G:C5	1:CA:159:G:N7	2.86	0.44
1:CA:695:A:OP2	11:CK:54:GLY:HA2	2.17	0.44
1:CA:770:C:O2'	1:CA:771:G:H5'	2.18	0.44
1:CA:983:A:N3	1:CA:983:A:C2'	2.81	0.44
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.33	0.44
1:CA:1375:A:C5	1:CA:1376:U:C5	3.06	0.44
2:CB:222:ARG:CZ	2:CB:223:GLU:HB2	2.48	0.44
4:CD:38:PRO:HD2	4:CD:42:GLY:HA3	2.00	0.44
6:CF:42:TRP:CZ2	6:CF:61:LEU:HB2	2.52	0.44
6:CF:64:VAL:HG12	6:CF:65:GLU:H	1.82	0.44
10:CJ:37:ARG:O	10:CJ:38:GLY:O	2.36	0.44
12:CL:82:ILE:HD11	12:CL:95:TYR:HB2	1.99	0.44
13:CM:11:ASP:HA	13:CM:45:ILE:HB	2.00	0.44
20:CT:47:ALA:HB1	20:CT:83:ILE:HG22	1.99	0.44
20:CT:79:LEU:O	20:CT:83:ILE:HG23	2.18	0.44
21:CU:14:VAL:HG12	21:CU:16:LEU:HD23	1.99	0.44
21:CU:26:ALA:HB1	21:CU:30:ALA:HB2	2.00	0.44
22:DA:35:G:N2	22:DA:450:G:H1'	2.32	0.44
22:DA:196:A:C2'	22:DA:805:G:O6	2.66	0.44
22:DA:233:A:C2	22:DA:234:U:H1'	2.53	0.44
22:DA:669:G:N2	22:DA:670:A:C2	2.86	0.44
22:DA:973:A:H5"	39:DR:81:LYS:HG3	1.99	0.44
22:DA:1263:U:C5	22:DA:1264:A:N6	2.86	0.44
22:DA:1287:A:H2'	22:DA:1288:G:H5'	2.00	0.44
22:DA:1307:A:H2'	22:DA:1308:A:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1319:C:C2'	22:DA:1320:C:H5'	2.48	0.44
22:DA:1829:A:H2'	24:DC:15:HIS:CE1	2.53	0.44
22:DA:2204:G:C5	22:DA:2221:G:N2	2.86	0.44
22:DA:2511:U:C4	22:DA:2512:C:C5	3.06	0.44
22:DA:2729:G:O2'	25:DD:191:GLY:HA3	2.17	0.44
22:DA:2813:A:H2'	22:DA:2814:A:C8	2.52	0.44
24:DC:148:PRO:CD	24:DC:185:GLU:OE2	2.66	0.44
24:DC:163:GLN:HB3	24:DC:175:ARG:HB3	1.99	0.44
25:DD:33:ARG:HB3	25:DD:95:SER:OG	2.17	0.44
26:DE:49:ARG:O	26:DE:74:LYS:HD2	2.18	0.44
26:DE:153:LEU:HB2	26:DE:171:ASP:HB2	2.00	0.44
27:DF:106:ILE:C	27:DF:109:PRO:HD2	2.38	0.44
29:DH:31:VAL:CB	29:DH:32:PRO:HD3	2.47	0.44
30:DI:57:VAL:HG22	30:DI:58:VAL:H	1.83	0.44
30:DI:81:LYS:HB2	30:DI:81:LYS:HE3	1.90	0.44
33:DL:101:ILE:O	33:DL:105:ILE:HG13	2.18	0.44
34:DM:136:MET:O	43:DV:79:ARG:NH2	2.51	0.44
36:DO:90:VAL:HG23	36:DO:117:PHE:HB3	1.99	0.44
39:DR:12:HIS:CE1	39:DR:22:LEU:HD22	2.53	0.44
39:DR:69:GLY:O	39:DR:70:GLU:C	2.56	0.44
41:DT:73:ARG:HA	41:DT:73:ARG:CZ	2.48	0.44
43:DV:38:LEU:HB3	43:DV:40:ILE:HD11	2.00	0.44
48:D0:13:ARG:HG3	48:D0:16:ARG:NH1	2.32	0.44
1:AA:104:G:N1	1:AA:105:G:N7	2.66	0.43
1:AA:119:A:C4	1:AA:240:G:N7	2.86	0.43
1:AA:306:A:H2'	1:AA:307:C:O4'	2.18	0.43
1:AA:438:U:C2	1:AA:494:G:N1	2.86	0.43
1:AA:944:G:O2'	1:AA:1339:A:N6	2.51	0.43
1:AA:954:G:C6	1:AA:955:U:N3	2.85	0.43
1:AA:1182:G:H4'	1:AA:1183:U:H5'	1.99	0.43
1:AA:1202:U:C2	1:AA:1203:C:C6	3.06	0.43
2:AB:132:LYS:CG	2:AB:133:GLU:N	2.81	0.43
2:AB:148:LEU:HA	2:AB:151:ILE:CG2	2.48	0.43
3:AC:23:PHE:CD1	3:AC:24:ALA:N	2.86	0.43
8:AH:50:LYS:O	8:AH:60:GLU:N	2.50	0.43
8:AH:93:PRO:HG3	8:AH:125:ILE:HD13	1.98	0.43
12:AL:44:LYS:HB2	12:AL:44:LYS:NZ	2.32	0.43
16:AP:79:ASN:O	16:AP:80:LYS:HE3	2.18	0.43
22:BA:2:G:H2'	22:BA:3:U:H6	1.82	0.43
22:BA:60:G:C8	22:BA:62:U:C6	3.06	0.43
22:BA:259:G:O2'	22:BA:260:G:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:447:A:C5	22:BA:473:G:C5	3.06	0.43
22:BA:657:U:H2'	22:BA:658:U:C6	2.53	0.43
22:BA:1005:C:C5	22:BA:1143:A:C4	3.05	0.43
22:BA:1016:G:C6	22:BA:1017:G:N7	2.85	0.43
22:BA:1071:G:P	22:BA:1071:G:H8	2.41	0.43
22:BA:1429:G:H2'	22:BA:1430:G:O5'	2.18	0.43
22:BA:1879:C:N4	22:BA:1880:U:C4	2.86	0.43
22:BA:1915:U:H2'	22:BA:1916:A:H8	1.79	0.43
22:BA:2400:G:H2'	22:BA:2401:U:O4'	2.18	0.43
22:BA:2756:U:H1'	22:BA:2757:A:H5"	2.00	0.43
26:BE:196:VAL:HG13	26:BE:200:LEU:CD2	2.46	0.43
27:BF:80:ARG:O	27:BF:83:TYR:HB2	2.18	0.43
27:BF:170:LEU:O	27:BF:173:PHE:HB2	2.18	0.43
30:BI:39:CYS:N	30:BI:42:PHE:HB3	2.32	0.43
32:BK:92:GLU:HG3	32:BK:111:LYS:NZ	2.33	0.43
38:BQ:105:ALA:O	38:BQ:108:ALA:HB3	2.18	0.43
40:BS:59:GLU:HA	40:BS:64:ALA:HA	2.00	0.43
41:BT:67:VAL:HG22	41:BT:76:ARG:HG3	2.00	0.43
49:B1:6:ARG:HD3	49:B1:24:THR:OG1	2.18	0.43
49:B1:34:LEU:HB3	49:B1:52:ALA:HB2	2.00	0.43
53:B5:44:VAL:HG23	53:B5:179:ALA:HB2	2.00	0.43
53:B5:68:GLY:O	53:B5:69:LEU:HB2	2.17	0.43
1:CA:446:G:N3	1:CA:446:G:H2'	2.33	0.43
1:CA:657:U:O2	15:CO:22:THR:HG23	2.18	0.43
1:CA:930:C:C4	1:CA:931:C:C5	3.05	0.43
1:CA:1133:G:O6	1:CA:1141:C:N4	2.50	0.43
1:CA:1300:G:O6	1:CA:1334:G:H3'	2.18	0.43
2:CB:181:ILE:HD13	2:CB:181:ILE:N	2.33	0.43
6:CF:14:GLN:O	6:CF:16:GLU:N	2.51	0.43
6:CF:59:TYR:HE2	18:CR:67:LEU:CD2	2.31	0.43
18:CR:51:TYR:O	18:CR:53:ARG:N	2.51	0.43
22:DA:27:G:HO2'	22:DA:28:A:P	2.37	0.43
22:DA:72:U:C6	46:DY:54:LYS:HD3	2.53	0.43
22:DA:1154:G:OP1	38:DQ:58:ARG:HD3	2.18	0.43
22:DA:1553:A:C5	22:DA:1555:G:C5	3.06	0.43
22:DA:1651:G:N2	22:DA:1652:A:H1'	2.33	0.43
22:DA:1831:G:C5	22:DA:1832:C:C4	3.06	0.43
22:DA:1981:A:H5"	22:DA:1982:U:OP2	2.17	0.43
22:DA:2134:A:N3	22:DA:2159:G:H1'	2.33	0.43
22:DA:2342:C:H2'	22:DA:2343:U:O4'	2.18	0.43
22:DA:2473:U:O2	22:DA:2473:U:H2'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:1:MET:N	35:DN:1:MET:HE3	2.31	0.43
35:DN:29:VAL:HG13	35:DN:83:LEU:CD1	2.48	0.43
39:DR:39:LEU:O	39:DR:49:ILE:HG12	2.18	0.43
40:DS:39:THR:CG2	40:DS:44:ALA:HB2	2.48	0.43
40:DS:46:LEU:O	40:DS:50:VAL:HG23	2.18	0.43
40:DS:61:ASN:O	40:DS:62:ASP:CB	2.65	0.43
41:DT:40:LYS:NZ	41:DT:58:VAL:O	2.46	0.43
49:D1:17:THR:HG21	49:D1:42:VAL:HB	1.99	0.43
1:AA:685:G:N1	1:AA:686:U:O4	2.51	0.43
1:AA:989:U:H2'	1:AA:990:C:O5'	2.19	0.43
1:AA:1160:G:C2	1:AA:1161:C:C6	3.06	0.43
1:AA:1431:A:C6	1:AA:1432:G:C6	3.06	0.43
2:AB:182:PRO:O	2:AB:197:ASP:OD1	2.36	0.43
3:AC:42:TYR:OH	3:AC:90:VAL:HG21	2.18	0.43
5:AE:25:VAL:O	5:AE:26:LYS:C	2.56	0.43
6:AF:38:ARG:NH1	6:AF:99:ALA:HB3	2.33	0.43
16:AP:61:VAL:HG22	16:AP:67:ILE:HD11	2.00	0.43
17:AQ:5:ILE:O	17:AQ:6:ARG:CB	2.65	0.43
20:AT:25:ARG:O	20:AT:29:ARG:CG	2.66	0.43
22:BA:142:A:C6	22:BA:143:C:N3	2.86	0.43
22:BA:181:A:H1'	22:BA:435:C:O4'	2.17	0.43
22:BA:1413:A:O2'	22:BA:1414:C:H5'	2.18	0.43
22:BA:1846:G:O3'	22:BA:1847:A:O4'	2.36	0.43
22:BA:2824:C:C4	22:BA:2825:G:C5	3.05	0.43
24:BC:91:ILE:HD12	24:BC:103:TYR:CD1	2.53	0.43
31:BJ:84:ILE:HG23	31:BJ:84:ILE:O	2.18	0.43
32:BK:28:SER:O	32:BK:29:HIS:HB2	2.17	0.43
32:BK:68:GLY:HA3	32:BK:77:ILE:O	2.19	0.43
40:BS:46:LEU:O	40:BS:50:VAL:HG23	2.18	0.43
46:BY:14:LEU:HA	46:BY:17:GLU:HB3	2.00	0.43
49:B1:11:LEU:N	49:B1:11:LEU:HD23	2.33	0.43
49:B1:12:VAL:HG12	49:B1:13:SER:N	2.33	0.43
50:B2:44:VAL:O	50:B2:44:VAL:HG13	2.17	0.43
51:B3:4:ILE:HG22	51:B3:5:LYS:N	2.32	0.43
1:CA:66:A:C4'	1:CA:173:U:C4	3.01	0.43
1:CA:121:U:H3'	1:CA:122:G:H5'	2.00	0.43
1:CA:194:C:O2'	1:CA:195:A:H5'	2.17	0.43
1:CA:1053:G:O5'	1:CA:1054:C:H3'	2.18	0.43
1:CA:1144:G:N2	1:CA:1145:A:C2	2.86	0.43
1:CA:1160:G:O6	1:CA:1181:G:C6	2.71	0.43
1:CA:1532:U:N3	1:CA:1533:C:C5	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:79:LYS:O	3:CC:81:GLY:N	2.51	0.43
6:CF:42:TRP:N	6:CF:42:TRP:CD1	2.82	0.43
7:CG:69:VAL:HG21	7:CG:104:ILE:HD11	1.99	0.43
15:CO:29:VAL:HG13	15:CO:63:ARG:HG3	2.01	0.43
22:DA:35:G:H1'	22:DA:454:A:C4	2.53	0.43
22:DA:373:U:C2	22:DA:374:A:C8	3.07	0.43
22:DA:1087:G:C2	22:DA:1089:A:C2	3.06	0.43
22:DA:1993:U:C2	22:DA:1994:C:C6	3.06	0.43
22:DA:2223:G:H2'	22:DA:2224:G:H5'	2.00	0.43
22:DA:2658:C:H5"	28:DG:158:LYS:CD	2.47	0.43
22:DA:2840:C:H5"	35:DN:53:THR:CG2	2.48	0.43
24:DC:9:THR:O	24:DC:10:SER:HB3	2.17	0.43
24:DC:145:GLU:HG2	24:DC:152:GLY:N	2.34	0.43
29:DH:127:GLU:CG	29:DH:144:VAL:O	2.65	0.43
33:DL:114:GLY:O	33:DL:115:GLU:C	2.56	0.43
34:DM:34:LYS:NZ	43:DV:81:PRO:O	2.33	0.43
43:DV:38:LEU:HD23	43:DV:40:ILE:CD1	2.47	0.43
43:DV:63:ILE:HG13	43:DV:72:VAL:HG22	2.00	0.43
1:AA:11:G:C5	1:AA:12:U:C4	3.07	0.43
1:AA:29:U:H5'	1:AA:296:U:OP1	2.18	0.43
1:AA:64:G:N2	1:AA:67:C:C4	2.86	0.43
1:AA:75:G:C6	1:AA:96:U:O4	2.70	0.43
1:AA:478:A:H2'	1:AA:479:U:C5'	2.49	0.43
1:AA:601:G:H2'	1:AA:602:A:C8	2.52	0.43
1:AA:781:A:H5'	1:AA:782:A:OP2	2.18	0.43
1:AA:1048:G:O6	1:AA:1209:C:N4	2.50	0.43
1:AA:1347:G:HO2'	1:AA:1348:U:P	2.40	0.43
2:AB:31:ILE:HD13	2:AB:39:HIS:CD2	2.53	0.43
7:AG:17:LYS:HD2	7:AG:44:TYR:CD1	2.53	0.43
7:AG:23:LEU:O	7:AG:27:VAL:HG22	2.19	0.43
9:AI:30:ILE:HA	9:AI:65:ILE:O	2.18	0.43
14:AN:51:LEU:CB	14:AN:52:PRO:HD2	2.47	0.43
22:BA:830:G:C4	22:BA:2448:A:C5	3.07	0.43
22:BA:1239:G:H2'	22:BA:1240:U:O4'	2.17	0.43
22:BA:1505:A:H2'	22:BA:1506:U:O4'	2.18	0.43
22:BA:2045:C:O3'	48:B0:15:MET:HB3	2.19	0.43
22:BA:2190:G:C6	22:BA:2191:A:C5	3.07	0.43
22:BA:2659:G:OP2	28:BG:158:LYS:NZ	2.50	0.43
29:BH:1:MET:HE3	29:BH:23:ALA:HA	2.00	0.43
29:BH:9:VAL:O	29:BH:10:ALA:O	2.36	0.43
29:BH:27:ARG:O	29:BH:28:ASN:CB	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:80:ILE:HG21	29:BH:94:ILE:HG13	2.00	0.43
29:BH:96:THR:O	29:BH:100:ALA:N	2.50	0.43
32:BK:79:PHE:CD1	37:BP:70:VAL:HG22	2.53	0.43
33:BL:129:LYS:O	33:BL:130:GLY:C	2.57	0.43
36:BO:51:ALA:O	36:BO:74:VAL:HG13	2.19	0.43
37:BP:113:ARG:O	37:BP:114:LEU:O	2.36	0.43
42:BU:7:ARG:O	42:BU:8:ASP:O	2.36	0.43
49:B1:35:GLU:CG	49:B1:50:LYS:HG3	2.48	0.43
53:B5:50:ILE:CG2	53:B5:51:ASP:H	2.30	0.43
1:CA:963:G:O2'	1:CA:964:A:H5'	2.18	0.43
1:CA:1029:U:O2	1:CA:1031:C:O2	2.36	0.43
1:CA:1077:G:N1	1:CA:1081:A:C6	2.87	0.43
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.52	0.43
1:CA:1318:A:O2'	19:CS:37:ARG:HD3	2.17	0.43
2:CB:174:LYS:HG2	2:CB:175:GLU:N	2.31	0.43
10:CJ:74:VAL:HG12	10:CJ:75:ASP:N	2.32	0.43
12:CL:58:THR:CG2	12:CL:59:ASN:N	2.81	0.43
14:CN:93:ILE:HG21	14:CN:96:LEU:HD22	1.99	0.43
15:CO:56:LEU:O	15:CO:57:LEU:C	2.55	0.43
17:CQ:50:ASN:O	17:CQ:51:ASN:C	2.56	0.43
21:CU:53:VAL:HG22	21:CU:54:LYS:H	1.82	0.43
22:DA:46:G:H2'	22:DA:47:C:O5'	2.19	0.43
22:DA:513:A:C2	22:DA:514:A:C8	3.07	0.43
22:DA:657:U:O2'	22:DA:658:U:H5'	2.19	0.43
22:DA:658:U:C2	22:DA:659:G:C8	3.07	0.43
22:DA:682:G:N3	22:DA:682:G:H2'	2.33	0.43
22:DA:786:C:H4'	22:DA:1780:A:N7	2.33	0.43
22:DA:867:C:C5	22:DA:868:U:C5	3.06	0.43
22:DA:936:A:H2'	22:DA:937:C:C6	2.53	0.43
22:DA:1352:U:H5	58:DA:3395:HOH:O	1.99	0.43
22:DA:1651:G:N2	22:DA:2007:U:C2	2.87	0.43
22:DA:1691:C:N4	22:DA:1692:U:O4	2.52	0.43
22:DA:1751:U:H2'	22:DA:1752:C:C6	2.53	0.43
22:DA:1797:G:N2	22:DA:1823:G:C4	2.86	0.43
22:DA:1998:A:H4'	22:DA:2724:U:O2'	2.19	0.43
22:DA:2095:A:N3	22:DA:2095:A:H2'	2.33	0.43
22:DA:2199:A:C6	22:DA:2200:C:N3	2.85	0.43
22:DA:2262:U:OP2	44:DW:16:SER:HB2	2.16	0.43
22:DA:2436:G:C2	22:DA:2437:G:C8	3.07	0.43
22:DA:2747:G:O6	22:DA:2755:C:H5"	2.18	0.43
22:DA:2864:G:H2'	22:DA:2865:U:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:13:G:H1	23:DB:69:G:HO2'	1.59	0.43
23:DB:46:A:C5	23:DB:47:C:C5	3.06	0.43
25:DD:176:ASP:HB2	25:DD:190:LYS:HB3	2.01	0.43
28:DG:94:TYR:HA	28:DG:106:SER:O	2.18	0.43
30:DI:8:TYR:CD1	30:DI:8:TYR:O	2.72	0.43
30:DI:127:ARG:HA	30:DI:130:GLU:HB2	1.99	0.43
33:DL:76:GLU:HG3	33:DL:76:GLU:O	2.17	0.43
46:DY:28:LEU:CD2	46:DY:37:LEU:HD11	2.48	0.43
51:D3:31:HIS:CE1	51:D3:32:ILE:CD1	3.01	0.43
1:AA:130:A:N7	17:AQ:65:ARG:HB2	2.32	0.43
1:AA:133:U:H1'	1:AA:230:G:N2	2.33	0.43
1:AA:459:A:H2'	1:AA:460:A:C8	2.53	0.43
1:AA:1042:A:H2'	1:AA:1043:G:C1'	2.49	0.43
1:AA:1171:A:C2	1:AA:1172:C:C2	3.06	0.43
1:AA:1248:A:C2	9:AI:72:ILE:HD11	2.54	0.43
1:AA:1278:G:H4'	1:AA:1279:G:C8	2.53	0.43
2:AB:41:ILE:HG12	2:AB:42:ASN:N	2.34	0.43
9:AI:6:TYR:HB3	9:AI:89:GLU:HB3	2.00	0.43
17:AQ:46:VAL:HG11	17:AQ:61:ILE:HG12	2.00	0.43
17:AQ:65:ARG:HB2	17:AQ:66:PRO:HD2	2.00	0.43
19:AS:3:ARG:O	19:AS:4:SER:CB	2.64	0.43
19:AS:10:PHE:CD1	19:AS:11:ILE:N	2.87	0.43
20:AT:68:HIS:C	20:AT:69:LYS:HG3	2.37	0.43
22:BA:12:U:O2	22:BA:12:U:C2'	2.61	0.43
22:BA:77:G:H2'	22:BA:78:U:O4'	2.18	0.43
22:BA:196:A:C4	22:BA:805:G:O6	2.72	0.43
22:BA:480:A:H2'	22:BA:481:G:OP1	2.18	0.43
22:BA:533:G:H5'	38:BQ:24:TYR:CD1	2.54	0.43
22:BA:810:U:C2	33:BL:29:LYS:O	2.71	0.43
22:BA:877:A:C6	22:BA:899:A:C6	3.06	0.43
22:BA:1001:A:H2'	22:BA:1002:G:O4'	2.18	0.43
22:BA:1014:A:C5	22:BA:1015:U:C4	3.06	0.43
22:BA:1021:A:N6	22:BA:1142:A:H61	2.16	0.43
22:BA:1057:A:N6	22:BA:1087:G:OP2	2.51	0.43
22:BA:1059:G:C6	22:BA:1080:A:C2	3.07	0.43
22:BA:1097:U:H3'	22:BA:1098:A:H4'	1.99	0.43
22:BA:1197:G:H2'	22:BA:1198:U:H6	1.82	0.43
22:BA:2243:U:H2'	22:BA:2244:U:C6	2.53	0.43
22:BA:2375:G:N2	22:BA:2378:A:OP2	2.46	0.43
27:BF:14:LYS:O	27:BF:18:THR:HG23	2.17	0.43
29:BH:76:GLU:HA	29:BH:142:VAL:HG12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:12:LYS:HE2	31:BJ:14:ASP:OD1	2.19	0.43
33:BL:20:GLY:CA	33:BL:28:GLY:HA2	2.48	0.43
33:BL:35:HIS:O	33:BL:36:LYS:HB2	2.17	0.43
42:BU:39:ILE:O	42:BU:41:LEU:N	2.51	0.43
1:CA:165:G:C2	1:CA:166:U:C2	3.06	0.43
1:CA:456:A:C6	1:CA:457:G:C5	3.06	0.43
1:CA:706:A:C1'	11:CK:31:ILE:HD11	2.48	0.43
1:CA:898:G:C6	1:CA:902:G:O6	2.71	0.43
1:CA:1104:G:C6	1:CA:1105:A:C5	3.06	0.43
1:CA:1124:G:N2	1:CA:1127:G:N2	2.65	0.43
1:CA:1138:G:N2	1:CA:1140:C:N4	2.66	0.43
1:CA:1347:G:O2'	1:CA:1348:U:P	2.75	0.43
1:CA:1422:G:H5'	32:DK:48:PRO:HG3	1.99	0.43
6:CF:35:LYS:HG3	6:CF:37:HIS:NE2	2.33	0.43
12:CL:59:ASN:N	12:CL:59:ASN:HD22	2.16	0.43
17:CQ:49:GLU:C	17:CQ:50:ASN:CG	2.76	0.43
22:DA:21:A:N1	22:DA:520:G:C5	2.87	0.43
22:DA:149:A:H2'	22:DA:150:U:O4'	2.18	0.43
22:DA:228:C:H5"	22:DA:229:C:C6	2.53	0.43
22:DA:303:G:C2	22:DA:304:U:C2	3.07	0.43
22:DA:533:G:H5'	38:DQ:24:TYR:CD1	2.53	0.43
22:DA:909:A:C6	22:DA:912:C:C2	3.06	0.43
22:DA:1034:G:C6	22:DA:1035:U:C4	3.06	0.43
22:DA:1478:G:O2'	22:DA:1479:G:H5'	2.18	0.43
22:DA:1730:C:O2'	22:DA:1731:G:C2	2.72	0.43
22:DA:1821:A:C5	22:DA:1822:C:C5	3.06	0.43
22:DA:2539:C:H4'	52:D4:3:VAL:HG11	2.00	0.43
22:DA:2781:A:H5"	22:DA:2782:G:O5'	2.17	0.43
22:DA:2838:G:C6	22:DA:2839:G:C6	3.07	0.43
23:DB:29:A:C2	23:DB:56:G:C2	3.05	0.43
31:DJ:31:GLU:HG3	31:DJ:142:ILE:HD11	2.00	0.43
34:DM:107:GLY:C	34:DM:108:VAL:HG22	2.38	0.43
38:DQ:79:PHE:CZ	38:DQ:83:LEU:HD11	2.53	0.43
45:DX:47:VAL:O	45:DX:47:VAL:HG12	2.19	0.43
45:DX:69:ALA:O	45:DX:72:ARG:HB3	2.18	0.43
1:AA:554:A:H2'	1:AA:555:U:C6	2.53	0.43
1:AA:826:C:H5'	8:AH:13:ARG:CZ	2.48	0.43
1:AA:872:A:C4	1:AA:874:G:C8	3.06	0.43
1:AA:992:U:C2	1:AA:1043:G:N7	2.87	0.43
1:AA:1145:A:HO2'	1:AA:1146:A:C5'	2.27	0.43
1:AA:1462:C:C4	1:AA:1463:U:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:70:VAL:HG21	2:AB:96:TRP:CD1	2.53	0.43
2:AB:71:GLY:HA2	2:AB:164:ILE:HG22	2.00	0.43
2:AB:147:SER:O	2:AB:147:SER:OG	2.37	0.43
4:AD:168:PRO:HG2	4:AD:171:LEU:HD11	2.01	0.43
9:AI:84:THR:HG21	9:AI:103:PHE:HB3	2.01	0.43
15:AO:20:ASN:O	15:AO:22:THR:N	2.52	0.43
16:AP:36:VAL:O	16:AP:36:VAL:CG1	2.67	0.43
16:AP:42:ILE:O	16:AP:43:ALA:C	2.57	0.43
18:AR:25:ASP:O	18:AR:26:ILE:C	2.57	0.43
19:AS:42:PRO:C	19:AS:44:MET:H	2.21	0.43
20:AT:67:ILE:CG1	20:AT:71:LYS:HG2	2.49	0.43
22:BA:142:A:OP2	22:BA:142:A:C8	2.71	0.43
22:BA:404:A:C8	22:BA:406:G:C6	3.07	0.43
22:BA:1059:G:H3'	22:BA:1060:U:H2'	2.00	0.43
22:BA:1169:A:C2	22:BA:1181:U:O2	2.72	0.43
22:BA:1178:C:O3'	22:BA:1179:G:C8	2.71	0.43
22:BA:1206:G:C5	22:BA:1207:C:C5	3.06	0.43
22:BA:1469:A:H2'	22:BA:1470:A:C8	2.52	0.43
22:BA:1686:C:C2'	22:BA:1687:G:H5'	2.48	0.43
22:BA:1847:A:H2'	22:BA:1848:A:C8	2.53	0.43
22:BA:1867:G:C2'	22:BA:1868:C:H5'	2.49	0.43
22:BA:2564:A:OP1	22:BA:2648:G:H4'	2.19	0.43
26:BE:193:VAL:O	26:BE:197:GLU:HB2	2.18	0.43
27:BF:79:ILE:HG21	27:BF:85:ILE:HD12	1.99	0.43
29:BH:41:LYS:HA	29:BH:44:ILE:HG12	2.01	0.43
29:BH:103:VAL:O	29:BH:108:VAL:O	2.37	0.43
36:BO:37:ALA:HB3	36:BO:78:VAL:HG11	2.00	0.43
40:BS:1:MET:N	40:BS:109:ASP:OD1	2.52	0.43
40:BS:51:LEU:O	40:BS:55:ILE:HD12	2.18	0.43
45:BX:13:VAL:HG23	45:BX:29:PHE:HB2	2.00	0.43
48:B0:48:TYR:CZ	48:B0:53:LYS:HD2	2.53	0.43
53:B5:174:ALA:O	53:B5:175:PRO:CB	2.66	0.43
1:CA:280:C:N3	17:CQ:40:ARG:HA	2.33	0.43
1:CA:464:U:C2	1:CA:466:A:OP2	2.71	0.43
1:CA:652:U:O2'	1:CA:653:U:OP2	2.30	0.43
1:CA:721:G:H4'	1:CA:722:G:O5'	2.18	0.43
1:CA:748:G:H2'	1:CA:749:A:H8	1.84	0.43
1:CA:862:C:C4	1:CA:863:U:C5	3.06	0.43
1:CA:892:A:C6	1:CA:893:C:C4	3.06	0.43
1:CA:1397:C:O2	1:CA:1397:C:O4'	2.37	0.43
3:CC:29:PHE:O	3:CC:33:LEU:HB2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:42:TYR:CE1	3:CC:46:GLU:CG	3.02	0.43
3:CC:141:ALA:O	3:CC:146:ALA:HB3	2.19	0.43
7:CG:30:LEU:HD11	7:CG:116:MET:HE2	2.01	0.43
9:CI:120:LYS:HG3	9:CI:120:LYS:O	2.18	0.43
10:CJ:25:ILE:O	10:CJ:25:ILE:HG23	2.18	0.43
13:CM:39:ILE:HG13	13:CM:56:LEU:HD21	2.00	0.43
13:CM:72:GLU:O	13:CM:76:SER:OG	2.36	0.43
15:CO:82:ILE:HG13	15:CO:83:GLU:N	2.33	0.43
21:CU:10:GLU:HB2	21:CU:11:PRO:HD3	1.99	0.43
22:DA:56:A:C2	22:DA:57:C:C2	3.07	0.43
22:DA:58:G:N2	22:DA:59:U:H1'	2.33	0.43
22:DA:186:G:C2	22:DA:211:C:O2	2.72	0.43
22:DA:187:G:N1	22:DA:210:C:N3	2.66	0.43
22:DA:1383:A:O2'	22:DA:1384:A:O5'	2.29	0.43
22:DA:1857:G:C2	22:DA:1884:G:C4	3.07	0.43
22:DA:1953:A:H1'	22:DA:2560:A:O4'	2.18	0.43
22:DA:2093:G:N2	22:DA:2094:A:C4	2.86	0.43
22:DA:2110:G:H3'	22:DA:2118:U:O2'	2.17	0.43
22:DA:2235:G:N2	22:DA:2236:U:H1'	2.34	0.43
22:DA:2283:C:C4	22:DA:2389:G:C4	3.06	0.43
22:DA:2474:U:O2	22:DA:2474:U:H2'	2.17	0.43
22:DA:2711:A:N6	22:DA:2714:G:C5	2.86	0.43
25:DD:111:GLY:HA3	25:DD:194:PRO:HB2	1.99	0.43
27:DF:70:ALA:CB	27:DF:80:ARG:O	2.67	0.43
31:DJ:58:ASN:HA	31:DJ:126:ALA:O	2.17	0.43
31:DJ:58:ASN:OD1	31:DJ:127:GLY:O	2.36	0.43
31:DJ:64:VAL:HG23	31:DJ:65:THR:N	2.34	0.43
32:DK:28:SER:O	32:DK:29:HIS:HB2	2.18	0.43
32:DK:31:ARG:HB3	32:DK:32:TYR:CD1	2.53	0.43
35:DN:72:ASP:CG	35:DN:75:ILE:HG12	2.39	0.43
37:DP:91:ALA:HB2	37:DP:113:ARG:HG3	1.98	0.43
37:DP:113:ARG:O	37:DP:114:LEU:HD23	2.19	0.43
38:DQ:110:VAL:CG1	38:DQ:114:LYS:HD2	2.49	0.43
40:DS:6:LYS:HA	40:DS:103:ILE:O	2.18	0.43
40:DS:29:VAL:HG21	40:DS:107:VAL:CG2	2.49	0.43
40:DS:95:ARG:O	40:DS:95:ARG:HG3	2.19	0.43
45:DX:69:ALA:O	45:DX:72:ARG:N	2.51	0.43
46:DY:45:GLN:O	46:DY:47:ARG:N	2.52	0.43
47:DZ:3:LYS:CD	47:DZ:3:LYS:N	2.82	0.43
1:AA:43:C:H2'	1:AA:44:A:O4'	2.18	0.43
1:AA:71:A:N3	1:AA:72:A:C8	2.85	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:142:G:O6	1:AA:143:A:C6	2.72	0.43
1:AA:463:U:O2	1:AA:463:U:H2'	2.17	0.43
1:AA:624:C:H2'	1:AA:625:U:H6	1.84	0.43
1:AA:979:C:C6	1:AA:1318:A:N1	2.87	0.43
1:AA:1108:G:H2'	1:AA:1108:G:N3	2.34	0.43
1:AA:1153:G:C4	1:AA:1154:G:C8	3.07	0.43
1:AA:1406:U:C2'	1:AA:1407:C:H5'	2.49	0.43
6:AF:29:ILE:HG21	6:AF:64:VAL:CG1	2.48	0.43
9:AI:50:GLN:CB	9:AI:51:PRO:CD	2.96	0.43
11:AK:86:VAL:HG12	11:AK:93:ARG:NH1	2.34	0.43
14:AN:3:LYS:O	14:AN:4:GLN:C	2.56	0.43
16:AP:78:VAL:O	16:AP:78:VAL:HG13	2.17	0.43
22:BA:515:A:C8	22:BA:516:C:C6	3.07	0.43
22:BA:1045:C:H3'	22:BA:1046:A:C5'	2.48	0.43
22:BA:1180:U:H2'	22:BA:1181:U:C5'	2.49	0.43
22:BA:1316:U:C2	22:BA:1337:G:N2	2.86	0.43
22:BA:1635:A:C6	22:BA:1636:U:C2	3.06	0.43
22:BA:1856:U:C4	22:BA:1857:G:C6	3.06	0.43
22:BA:1992:G:H4'	22:BA:1993:U:OP1	2.19	0.43
22:BA:2031:A:N1	22:BA:2498:C:H1'	2.34	0.43
22:BA:2256:G:O2'	22:BA:2257:U:H5'	2.19	0.43
22:BA:2776:A:H4'	22:BA:2778:A:OP1	2.18	0.43
24:BC:161:TYR:O	24:BC:161:TYR:CD1	2.72	0.43
24:BC:209:GLY:O	24:BC:210:ALA:C	2.55	0.43
25:BD:62:LYS:N	25:BD:63:PRO:CD	2.81	0.43
29:BH:94:ILE:CD1	29:BH:98:ASP:HB3	2.48	0.43
35:BN:36:THR:HG23	35:BN:37:THR:O	2.18	0.43
39:BR:29:THR:O	39:BR:29:THR:HG22	2.19	0.43
46:BY:56:LEU:O	46:BY:56:LEU:HD12	2.18	0.43
1:CA:407:U:H2'	1:CA:408:A:C8	2.54	0.43
1:CA:1067:A:H4'	1:CA:1068:G:O5'	2.18	0.43
1:CA:1127:G:H5'	1:CA:1280:A:O2'	2.18	0.43
2:CB:23:TRP:CD1	2:CB:23:TRP:O	2.71	0.43
2:CB:184:PHE:CE2	2:CB:198:PHE:CD2	3.05	0.43
3:CC:28:GLU:OE1	3:CC:28:GLU:N	2.52	0.43
3:CC:47:LEU:HB3	3:CC:50:ALA:HB3	1.99	0.43
4:CD:12:SER:HA	4:CD:19:LEU:CD1	2.48	0.43
6:CF:39:LEU:HD12	6:CF:40:GLU:N	2.33	0.43
9:CI:19:VAL:HG22	9:CI:65:ILE:HG22	2.00	0.43
15:CO:58:ARG:O	15:CO:62:GLN:HB2	2.19	0.43
16:CP:38:PHE:CE2	16:CP:51:ARG:HD2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:247:G:N7	22:DA:249:C:N1	2.66	0.43
22:DA:301:G:C2	22:DA:302:C:N3	2.87	0.43
22:DA:419:U:N3	22:DA:420:C:C5	2.87	0.43
22:DA:545:U:H3'	22:DA:545:U:O2	2.19	0.43
22:DA:600:G:H5"	26:DE:27:LEU:HD22	2.01	0.43
22:DA:777:G:N7	22:DA:793:A:C2	2.82	0.43
22:DA:1288:G:C8	22:DA:1327:A:C6	3.06	0.43
22:DA:1365:A:H3'	22:DA:1366:A:C8	2.53	0.43
22:DA:2309:A:C6	22:DA:2310:C:N3	2.86	0.43
22:DA:2427:C:OP1	58:DA:3696:HOH:O	2.21	0.43
22:DA:2558:C:C2'	22:DA:2559:C:H5'	2.49	0.43
22:DA:2852:G:H2'	22:DA:2853:C:O4'	2.18	0.43
24:DC:72:ASP:O	24:DC:74:ILE:N	2.44	0.43
27:DF:4:LEU:HD11	27:DF:101:GLU:HB2	2.01	0.43
35:DN:53:THR:HA	35:DN:56:LYS:HG3	2.01	0.43
37:DP:23:GLY:O	37:DP:90:GLY:HA3	2.18	0.43
37:DP:79:PRO:O	37:DP:80:VAL:C	2.56	0.43
41:DT:69:ARG:NH1	41:DT:69:ARG:HB3	2.33	0.43
42:DU:72:ILE:HD12	42:DU:81:ASP:O	2.19	0.43
46:DY:46:VAL:O	46:DY:46:VAL:HG12	2.18	0.43
1:AA:261:U:C5	20:AT:74:ARG:NH1	2.87	0.43
1:AA:501:C:H2'	1:AA:502:A:H8	1.83	0.43
1:AA:658:C:C1'	15:AO:22:THR:HG21	2.48	0.43
1:AA:685:G:C2	1:AA:686:U:C4	3.06	0.43
1:AA:1059:C:C2	1:AA:1060:U:C6	3.07	0.43
1:AA:1089:G:C2'	1:AA:1090:U:H5'	2.49	0.43
1:AA:1144:G:N1	1:AA:1145:A:C2	2.87	0.43
1:AA:1269:A:N1	1:AA:1312:G:O2'	2.42	0.43
3:AC:64:ILE:HG12	3:AC:66:VAL:HG23	1.99	0.43
4:AD:4:TYR:CE2	4:AD:6:GLY:O	2.71	0.43
4:AD:34:ILE:O	4:AD:35:GLU:HB2	2.19	0.43
4:AD:62:ARG:HG3	4:AD:72:PHE:CD2	2.54	0.43
4:AD:147:GLU:O	4:AD:148:LYS:C	2.56	0.43
9:AI:49:ARG:O	9:AI:50:GLN:C	2.57	0.43
22:BA:591:U:O2	51:B3:2:PRO:HD2	2.19	0.43
22:BA:974:G:N9	22:BA:989:G:N2	2.67	0.43
22:BA:1042:G:C5	22:BA:1043:C:C5	3.06	0.43
22:BA:1082:U:H5'	30:BI:119:GLY:CA	2.48	0.43
22:BA:1850:G:C6	22:BA:1851:U:C4	3.06	0.43
22:BA:1875:G:C2'	22:BA:1876:A:OP2	2.67	0.43
22:BA:2297:A:C2	22:BA:2298:A:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2415:G:H2'	22:BA:2416:C:H6	1.83	0.43
22:BA:2727:A:C2'	22:BA:2728:U:H5'	2.48	0.43
24:BC:83:TYR:C	24:BC:83:TYR:CD2	2.91	0.43
28:BG:64:GLN:NE2	58:BG:201:HOH:O	2.51	0.43
28:BG:176:LYS:O	28:BG:177:LYS:CB	2.66	0.43
30:BI:122:ILE:HA	30:BI:125:MET:SD	2.59	0.43
32:BK:107:LEU:C	32:BK:109:SER:H	2.22	0.43
36:BO:33:ARG:CG	36:BO:33:ARG:O	2.67	0.43
40:BS:63:GLY:O	40:BS:64:ALA:CB	2.67	0.43
43:BV:50:MET:HE2	43:BV:56:PHE:HE1	1.84	0.43
52:B4:19:ARG:HG3	52:B4:24:ARG:HD2	2.00	0.43
1:CA:9:G:H5'	5:CE:108:GLY:HA3	2.01	0.43
1:CA:28:A:H2'	1:CA:29:U:O4'	2.19	0.43
1:CA:183:C:O2'	1:CA:184:G:O5'	2.36	0.43
1:CA:247:G:C6	1:CA:278:G:N1	2.86	0.43
1:CA:976:G:P	1:CA:1358:U:O2'	2.76	0.43
1:CA:991:U:C4	1:CA:1212:U:O4'	2.72	0.43
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.18	0.43
5:CE:36:LEU:HD23	5:CE:133:PRO:HB2	2.01	0.43
5:CE:133:PRO:CA	5:CE:136:VAL:HG12	2.48	0.43
5:CE:154:ALA:O	5:CE:155:ALA:C	2.57	0.43
9:CI:28:ILE:CB	9:CI:35:LEU:HB2	2.49	0.43
9:CI:119:ARG:O	9:CI:120:LYS:HB3	2.19	0.43
11:CK:22:HIS:CE1	11:CK:35:THR:HG21	2.54	0.43
21:CU:14:VAL:HG12	21:CU:16:LEU:CD2	2.49	0.43
21:CU:14:VAL:HG12	21:CU:16:LEU:CG	2.47	0.43
21:CU:47:ARG:HA	21:CU:47:ARG:HE	1.84	0.43
22:DA:190:A:H2'	22:DA:191:A:O4'	2.19	0.43
22:DA:197:A:N6	22:DA:2430:A:H2'	2.32	0.43
22:DA:254:G:OP2	51:D3:5:LYS:NZ	2.52	0.43
22:DA:284:U:O2	22:DA:284:U:H2'	2.18	0.43
22:DA:408:G:C6	22:DA:409:G:C5	3.07	0.43
22:DA:533:G:C5'	38:DQ:24:TYR:CD1	3.01	0.43
22:DA:622:G:OP2	58:DA:3292:HOH:O	2.21	0.43
22:DA:1285:A:N6	22:DA:1329:U:C6	2.87	0.43
22:DA:1301:A:C6	22:DA:1303:G:C4	3.07	0.43
22:DA:1383:A:H2'	22:DA:1384:A:C8	2.53	0.43
22:DA:1401:G:C5	22:DA:1402:U:C4	3.06	0.43
22:DA:1669:A:O4'	32:DK:5:GLN:HG3	2.17	0.43
22:DA:1842:G:O4'	24:DC:243:HIS:NE2	2.51	0.43
22:DA:2062:A:H2	56:DA:3001:VIF:H12	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2464:G:H2'	22:DA:2465:C:O4'	2.19	0.43
22:DA:2850:A:OP2	22:DA:2866:U:N3	2.39	0.43
25:DD:172:VAL:CG2	25:DD:194:PRO:HD3	2.49	0.43
26:DE:179:SER:HA	26:DE:182:ALA:HB3	2.00	0.43
28:DG:113:VAL:CG1	28:DG:114:ASP:N	2.82	0.43
30:DI:91:GLY:O	30:DI:93:PRO:HD3	2.19	0.43
37:DP:21:ARG:HB3	37:DP:22:PRO:HD2	2.01	0.43
38:DQ:48:ARG:NE	38:DQ:49:ASP:OD1	2.48	0.43
42:DU:67:VAL:HA	42:DU:70:VAL:HG22	2.00	0.43
1:AA:258:G:C5	1:AA:259:G:N7	2.86	0.43
1:AA:408:A:OP1	4:AD:110:THR:CG2	2.66	0.43
1:AA:529:G:H4'	1:AA:533:A:C2	2.53	0.43
1:AA:826:C:H5'	8:AH:13:ARG:NH1	2.34	0.43
1:AA:1031:C:O2'	1:AA:1032:G:P	2.77	0.43
1:AA:1044:A:C5	1:AA:1045:C:H1'	2.54	0.43
1:AA:1118:U:H2'	1:AA:1119:C:O4'	2.19	0.43
1:AA:1141:C:HO2'	1:AA:1142:G:P	2.37	0.43
2:AB:70:VAL:HG23	2:AB:92:VAL:HB	2.01	0.43
3:AC:71:ALA:O	3:AC:72:ARG:HG2	2.19	0.43
5:AE:97:GLN:O	5:AE:123:VAL:HG12	2.19	0.43
12:AL:3:THR:HG22	12:AL:5:ASN:N	2.33	0.43
12:AL:23:ALA:C	12:AL:24:LEU:O	2.57	0.43
14:AN:23:LYS:HG2	14:AN:24:ARG:N	2.34	0.43
16:AP:53:ASP:OD1	16:AP:55:ASP:OD2	2.36	0.43
22:BA:395:U:O2'	22:BA:396:G:N7	2.42	0.43
22:BA:420:C:O2'	22:BA:421:C:H5'	2.19	0.43
22:BA:515:A:C8	22:BA:516:C:C5	3.07	0.43
22:BA:1082:U:O4'	30:BI:118:THR:HB	2.19	0.43
22:BA:1153:C:N4	22:BA:1154:G:N1	2.67	0.43
22:BA:1482:G:N2	22:BA:1483:G:C4	2.87	0.43
22:BA:1593:A:H2'	22:BA:1594:U:O4'	2.19	0.43
22:BA:1999:C:H2'	22:BA:2000:C:O4'	2.19	0.43
22:BA:2141:G:O6	22:BA:2142:A:C2	2.72	0.43
22:BA:2297:A:N1	22:BA:2321:U:H5	2.16	0.43
22:BA:2526:G:O2'	52:B4:1:MET:N	2.27	0.43
22:BA:2703:C:H2'	22:BA:2704:C:H6	1.82	0.43
22:BA:2721:A:H2'	22:BA:2722:G:O4'	2.18	0.43
30:BI:29:GLY:O	30:BI:30:GLN:HG3	2.19	0.43
33:BL:62:PRO:CG	51:B3:25:LYS:HD3	2.48	0.43
35:BN:70:THR:OG1	35:BN:71:ARG:N	2.52	0.43
39:BR:67:GLY:C	39:BR:93:PHE:CE1	2.91	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:59:GLU:HA	40:BS:64:ALA:CB	2.49	0.43
42:BU:97:LYS:O	42:BU:98:SER:CB	2.66	0.43
44:BW:52:GLY:HA3	44:BW:60:PHE:CE1	2.54	0.43
53:B5:50:ILE:HG22	53:B5:51:ASP:H	1.81	0.43
1:CA:76:G:C2	1:CA:95:C:N3	2.87	0.43
1:CA:116:A:C2	1:CA:117:G:H1'	2.54	0.43
1:CA:252:U:H5'	1:CA:253:A:OP2	2.19	0.43
1:CA:476:U:C2'	1:CA:477:C:H5'	2.48	0.43
1:CA:805:C:H2'	1:CA:806:C:H6	1.84	0.43
1:CA:807:A:N7	1:CA:808:C:C4	2.87	0.43
1:CA:1092:A:C6	1:CA:1183:U:O2	2.72	0.43
1:CA:1269:A:C2	1:CA:1313:U:O4'	2.72	0.43
2:CB:82:ASP:H	2:CB:85:LEU:HB3	1.83	0.43
2:CB:89:GLN:OE1	2:CB:221:VAL:HB	2.19	0.43
3:CC:23:PHE:CD1	10:CJ:97:ASP:HB2	2.53	0.43
3:CC:61:ALA:O	3:CC:62:LYS:HB2	2.18	0.43
3:CC:111:LEU:HD21	3:CC:144:LEU:HB2	2.01	0.43
3:CC:182:ILE:HD13	3:CC:203:PHE:HA	2.01	0.43
4:CD:145:ILE:HG21	4:CD:150:LYS:HA	2.00	0.43
5:CE:94:VAL:CG1	5:CE:111:MET:CE	2.97	0.43
12:CL:21:VAL:HG12	12:CL:95:TYR:CE1	2.52	0.43
19:CS:6:LYS:CB	19:CS:7:LYS:HE3	2.49	0.43
19:CS:55:ARG:NE	19:CS:79:THR:HG22	2.34	0.43
20:CT:58:VAL:HG13	20:CT:72:ALA:HB1	2.01	0.43
22:DA:54:G:C6	22:DA:55:G:N7	2.86	0.43
22:DA:142:A:H2'	22:DA:143:C:C6	2.53	0.43
22:DA:183:C:HO2'	22:DA:432:A:HO2'	1.63	0.43
22:DA:299:A:N7	22:DA:300:A:C6	2.87	0.43
22:DA:1036:G:C6	22:DA:1120:G:C5	3.07	0.43
22:DA:1447:C:H2'	22:DA:1448:G:C8	2.54	0.43
22:DA:1490:A:H2'	22:DA:1490:A:N3	2.34	0.43
22:DA:1510:G:C6	22:DA:1511:G:C5	3.06	0.43
22:DA:1544:A:C6	22:DA:1545:A:C6	3.06	0.43
22:DA:1567:G:O2'	24:DC:63:ARG:NH1	2.51	0.43
22:DA:1785:A:N1	22:DA:1787:A:H1'	2.34	0.43
22:DA:1823:G:C8	58:DA:3653:HOH:O	2.57	0.43
22:DA:2242:G:C6	22:DA:2243:U:C4	3.07	0.43
22:DA:2677:G:C2	22:DA:2731:G:C2	3.06	0.43
56:DA:3001:VIF:H6	56:DA:3001:VIF:H7	1.65	0.43
23:DB:42:C:C5	23:DB:43:C:C5	3.07	0.43
26:DE:149:ILE:HG13	26:DE:188:MET:HE3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:69:ARG:NH1	28:DG:73:ASN:HB2	2.34	0.43
33:DL:106:GLU:O	33:DL:107:PHE:CD1	2.72	0.43
41:DT:62:VAL:CG1	41:DT:63:VAL:N	2.82	0.43
43:DV:51:GLN:HA	43:DV:56:PHE:HB2	2.00	0.43
45:DX:32:ASN:ND2	45:DX:53:ALA:HB2	2.34	0.43
46:DY:31:GLN:CG	46:DY:36:GLN:HB2	2.48	0.43
49:D1:21:TYR:CD2	49:D1:38:LYS:HD2	2.54	0.43
1:AA:464:U:C2	1:AA:466:A:H5"	2.53	0.43
1:AA:659:U:H2'	1:AA:660:C:C6	2.54	0.43
1:AA:1242:G:C5	1:AA:1243:C:C5	3.07	0.43
1:AA:1330:U:O4	1:AA:1331:G:C6	2.71	0.43
1:AA:1360:A:C8	14:AN:58:SER:HB3	2.54	0.43
1:AA:1442:G:H2'	1:AA:1443:C:H6	1.81	0.43
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.18	0.43
1:AA:1513:A:H2'	1:AA:1514:G:C8	2.54	0.43
2:AB:74:ARG:O	2:AB:75:ALA:HB2	2.19	0.43
2:AB:207:ILE:HD13	2:AB:207:ILE:N	2.33	0.43
4:AD:95:GLU:OE2	4:AD:100:ASN:ND2	2.50	0.43
11:AK:38:GLN:O	11:AK:39:GLY:C	2.56	0.43
15:AO:2:SER:O	15:AO:3:LEU:HB2	2.18	0.43
16:AP:38:PHE:CE2	16:AP:51:ARG:HB2	2.53	0.43
17:AQ:75:LEU:C	17:AQ:75:LEU:HD12	2.38	0.43
19:AS:29:LYS:CB	19:AS:30:PRO:HD2	2.49	0.43
21:AU:37:PHE:HA	21:AU:40:LYS:HE3	2.01	0.43
22:BA:760:G:H2'	22:BA:761:A:O4'	2.19	0.43
22:BA:811:U:C2	22:BA:1251:C:C5	3.07	0.43
22:BA:1000:A:C4	22:BA:1155:A:C6	3.07	0.43
22:BA:1050:A:C2	22:BA:2751:G:C5	3.07	0.43
22:BA:1528:A:H2'	22:BA:1529:G:O4'	2.19	0.43
22:BA:1672:A:C6	22:BA:1673:G:C6	3.07	0.43
22:BA:2262:U:H4'	22:BA:2328:A:H2	1.84	0.43
22:BA:2710:C:P	58:BA:3553:HOH:O	2.76	0.43
23:BB:2:G:C2	23:BB:119:A:C2	3.07	0.43
23:BB:78:A:H2'	23:BB:79:G:O4'	2.19	0.43
24:BC:260:ASN:O	24:BC:260:ASN:OD1	2.37	0.43
26:BE:137:LYS:NZ	26:BE:141:MET:SD	2.92	0.43
27:BF:121:SER:HB2	27:BF:128:TYR:CE1	2.54	0.43
28:BG:10:VAL:HG13	28:BG:10:VAL:O	2.19	0.43
30:BI:61:VAL:HG12	30:BI:62:TYR:N	2.34	0.43
37:BP:26:VAL:HG23	37:BP:27:GLU:N	2.33	0.43
37:BP:27:GLU:HA	37:BP:43:PHE:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:68:G:C5	1:CA:69:G:H1'	2.53	0.43
1:CA:107:G:H2'	1:CA:108:G:H5"	2.00	0.43
1:CA:158:G:C4	1:CA:159:G:C8	3.07	0.43
1:CA:207:C:H5"	1:CA:208:U:OP2	2.18	0.43
1:CA:228:A:H4'	16:CP:63:GLN:HG2	2.01	0.43
1:CA:436:C:O2	1:CA:436:C:H2'	2.18	0.43
1:CA:1222:G:O6	58:CA:1864:HOH:O	2.21	0.43
2:CB:144:LEU:N	2:CB:144:LEU:HD23	2.34	0.43
5:CE:83:HIS:NE2	8:CH:96:MET:HE3	2.34	0.43
10:CJ:52:LEU:CD2	10:CJ:59:LYS:HA	2.49	0.43
20:CT:3:ASN:O	20:CT:4:ILE:C	2.57	0.43
22:DA:186:G:N1	22:DA:211:C:C2	2.87	0.43
22:DA:192:C:C4	22:DA:193:U:C2	3.06	0.43
22:DA:218:A:C2	22:DA:219:A:C4	3.07	0.43
22:DA:352:A:C6	22:DA:353:C:N3	2.86	0.43
22:DA:661:A:H2'	22:DA:662:G:O4'	2.19	0.43
22:DA:675:A:H4'	26:DE:62:GLN:OE1	2.19	0.43
22:DA:846:U:O2'	22:DA:847:U:C5'	2.67	0.43
22:DA:974:G:H1'	22:DA:975:A:C8	2.54	0.43
22:DA:1344:U:HO2'	22:DA:1345:C:P	2.38	0.43
22:DA:1693:U:H4'	22:DA:1694:C:OP2	2.19	0.43
22:DA:2386:A:H2'	22:DA:2387:U:C6	2.53	0.43
22:DA:2387:U:H1'	44:DW:41:ARG:NE	2.34	0.43
22:DA:2657:A:C4	22:DA:2665:A:C6	3.07	0.43
22:DA:2681:C:C2	22:DA:2724:U:O4	2.72	0.43
22:DA:2824:C:N4	22:DA:2825:G:N7	2.67	0.43
24:DC:199:GLU:O	24:DC:200:HIS:C	2.57	0.43
26:DE:152:GLU:O	26:DE:154:ASP:N	2.51	0.43
27:DF:104:ILE:O	27:DF:109:PRO:HD3	2.18	0.43
28:DG:52:PHE:CE2	28:DG:69:ARG:HA	2.53	0.43
29:DH:82:SER:O	29:DH:83:LYS:C	2.57	0.43
41:DT:23:ALA:O	41:DT:27:SER:N	2.51	0.43
41:DT:61:LEU:HD12	41:DT:61:LEU:C	2.39	0.43
42:DU:4:LYS:HG2	42:DU:85:PHE:CE2	2.53	0.43
42:DU:25:VAL:HA	42:DU:36:VAL:HA	2.00	0.43
45:DX:7:VAL:HG12	45:DX:8:THR:N	2.33	0.43
46:DY:24:GLU:HB3	46:DY:46:VAL:HG21	2.01	0.43
46:DY:31:GLN:O	46:DY:32:ALA:C	2.57	0.43
49:D1:9:ILE:HG13	49:D1:10:LYS:N	2.33	0.43
1:AA:10:A:OP2	5:AE:131:THR:OG1	2.37	0.43
1:AA:202:G:O2'	1:AA:468:A:H2'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:469:C:C5	1:AA:470:C:C5	3.07	0.43
1:AA:1176:A:H2'	1:AA:1177:G:C8	2.53	0.43
1:AA:1260:G:OP1	1:AA:1284:C:O2'	2.35	0.43
1:AA:1346:A:C8	7:AG:10:ARG:NH2	2.87	0.43
1:AA:1386:G:H2'	1:AA:1387:G:H8	1.83	0.43
1:AA:1406:U:H2'	1:AA:1407:C:H5'	2.00	0.43
2:AB:70:VAL:O	2:AB:70:VAL:HG13	2.18	0.43
7:AG:133:THR:O	7:AG:136:LYS:HB3	2.19	0.43
9:AI:91:ASP:OD1	9:AI:93:SER:N	2.49	0.43
10:AJ:53:ILE:HG12	14:AN:85:ARG:CZ	2.49	0.43
17:AQ:12:VAL:HG11	17:AQ:55:ILE:HA	2.00	0.43
19:AS:15:LEU:O	19:AS:19:VAL:HG23	2.18	0.43
22:BA:142:A:H2'	22:BA:143:C:O4'	2.19	0.43
22:BA:359:G:C5	22:BA:360:U:C5	3.07	0.43
22:BA:560:C:O2	38:BQ:48:ARG:NH1	2.51	0.43
22:BA:790:U:O2'	22:BA:791:C:P	2.77	0.43
22:BA:1067:A:N3	22:BA:1067:A:H2'	2.33	0.43
22:BA:1192:G:O2'	22:BA:1193:G:H5'	2.18	0.43
22:BA:1384:A:H1'	22:BA:1405:U:H1'	1.99	0.43
22:BA:1436:G:N2	22:BA:1557:C:C2	2.86	0.43
22:BA:1670:C:H3'	22:BA:1671:U:C6	2.53	0.43
22:BA:1826:G:C5	22:BA:1827:U:C5	3.07	0.43
22:BA:1853:A:N6	22:BA:1889:A:C4	2.87	0.43
22:BA:1911:U:H2'	22:BA:1918:A:N1	2.34	0.43
22:BA:1964:G:H4'	22:BA:1965:C:OP2	2.18	0.43
22:BA:2076:U:O2	22:BA:2076:U:O4'	2.37	0.43
22:BA:2557:G:H2'	22:BA:2558:C:C6	2.53	0.43
27:BF:34:ILE:HD11	27:BF:96:MET:HG3	2.01	0.43
27:BF:171:ALA:C	27:BF:173:PHE:N	2.72	0.43
28:BG:28:GLY:O	28:BG:29:LYS:C	2.57	0.43
29:BH:45:GLU:HA	29:BH:48:GLU:HB2	2.01	0.43
30:BI:22:PRO:CB	30:BI:23:PRO:HD3	2.49	0.43
39:BR:25:LEU:H	39:BR:94:THR:CG2	2.32	0.43
40:BS:37:THR:CG2	40:BS:38:TYR:CE1	3.01	0.43
41:BT:88:LYS:O	41:BT:89:GLU:CB	2.67	0.43
43:BV:13:GLY:O	43:BV:17:SER:OG	2.33	0.43
47:BZ:10:THR:HG22	47:BZ:54:MET:HA	2.01	0.43
49:B1:40:ASP:C	49:B1:40:ASP:OD1	2.57	0.43
1:CA:15:G:O4'	5:CE:29:ARG:NH2	2.52	0.43
1:CA:282:A:C8	1:CA:283:U:C5	3.07	0.43
1:CA:301:G:H2'	1:CA:302:G:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:793:U:HO2'	1:CA:1516:G:C1'	2.31	0.43
1:CA:927:G:OP2	1:CA:927:G:H4'	2.18	0.43
1:CA:1296:C:H5"	1:CA:1297:G:OP2	2.18	0.43
1:CA:1317:C:O2'	14:CN:49:GLN:CG	2.67	0.43
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.54	0.43
1:CA:1537:U:C4	1:CA:1538:C:N4	2.87	0.43
2:CB:23:TRP:O	2:CB:23:TRP:CG	2.72	0.43
2:CB:123:ASP:O	2:CB:124:GLY:C	2.58	0.43
4:CD:202:GLU:OE1	5:CE:105:ILE:CG2	2.67	0.43
5:CE:133:PRO:O	5:CE:137:VAL:CG1	2.67	0.43
13:CM:19:LEU:HG	13:CM:34:LEU:HD21	2.00	0.43
13:CM:47:GLU:HG3	13:CM:47:GLU:O	2.18	0.43
13:CM:77:ILE:O	13:CM:81:MET:HG3	2.18	0.43
19:CS:55:ARG:NH2	19:CS:79:THR:HG22	2.34	0.43
21:CU:36:GLU:CG	21:CU:37:PHE:H	2.31	0.43
22:DA:102:U:O4	46:DY:3:ALA:HB3	2.19	0.43
22:DA:170:U:N3	22:DA:171:U:C5	2.86	0.43
22:DA:207:A:H2'	22:DA:208:C:O4'	2.18	0.43
22:DA:621:A:C6	22:DA:622:G:H1'	2.54	0.43
22:DA:655:A:H4'	22:DA:656:G:H5'	2.01	0.43
22:DA:967:U:H2'	22:DA:968:C:C6	2.54	0.43
22:DA:981:A:H1'	22:DA:2037:A:O4'	2.18	0.43
22:DA:1462:C:N3	22:DA:1463:C:C5	2.86	0.43
22:DA:2428:G:H5"	22:DA:2429:G:P	2.59	0.43
22:DA:2516:A:N6	22:DA:2517:C:N4	2.67	0.43
26:DE:24:ASN:O	26:DE:28:VAL:HG23	2.18	0.43
26:DE:149:ILE:CG2	26:DE:188:MET:HG2	2.48	0.43
29:DH:62:LEU:HD13	29:DH:63:ALA:N	2.34	0.43
32:DK:118:LEU:O	32:DK:119:ALA:CB	2.63	0.43
42:DU:9:ASP:C	42:DU:9:ASP:OD1	2.57	0.43
48:D0:25:VAL:HG13	48:D0:26:THR:N	2.34	0.43
51:D3:15:LYS:HD3	51:D3:23:LYS:HE2	2.00	0.43
1:AA:472:U:C4	1:AA:473:U:O4	2.72	0.42
1:AA:631:C:H3'	1:AA:632:U:H5'	2.01	0.42
1:AA:781:A:C5	1:AA:802:A:C2	3.06	0.42
1:AA:814:A:N7	1:AA:816:A:C4	2.87	0.42
1:AA:1087:G:N2	1:AA:1088:G:C4	2.87	0.42
1:AA:1216:A:H2'	1:AA:1217:C:H6	1.84	0.42
1:AA:1291:U:OP1	7:AG:37:SER:OG	2.25	0.42
1:AA:1299:A:C5	1:AA:1301:U:O2	2.71	0.42
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:76:ALA:O	2:AB:80:VAL:HG23	2.19	0.42
2:AB:95:ARG:HH12	2:AB:97:LEU:HA	1.83	0.42
2:AB:104:TRP:CZ2	2:AB:154:MET:CB	3.02	0.42
2:AB:140:GLU:O	2:AB:144:LEU:HG	2.18	0.42
3:AC:43:LEU:HD21	3:AC:68:ILE:HD11	2.01	0.42
4:AD:116:GLN:NE2	4:AD:120:HIS:CE1	2.87	0.42
4:AD:152:GLN:O	4:AD:153:SER:C	2.57	0.42
10:AJ:17:LEU:HD21	10:AJ:96:VAL:HG22	2.01	0.42
11:AK:100:LEU:HD12	11:AK:100:LEU:HA	1.93	0.42
13:AM:11:ASP:OD1	13:AM:45:ILE:HB	2.19	0.42
16:AP:67:ILE:HG23	16:AP:71:VAL:CG1	2.49	0.42
22:BA:152:A:H2'	22:BA:153:U:C6	2.54	0.42
22:BA:489:G:O4'	22:BA:1284:A:C8	2.72	0.42
22:BA:1098:A:N7	22:BA:1099:G:C6	2.87	0.42
22:BA:1124:G:H1'	52:B4:38:GLY:OXT	2.18	0.42
22:BA:1565:C:N4	22:BA:1567:G:C2	2.87	0.42
22:BA:1722:A:N6	22:BA:1738:G:H1'	2.34	0.42
22:BA:1723:G:O6	22:BA:1737:G:H1'	2.19	0.42
22:BA:1750:G:O2'	22:BA:2860:A:N1	2.47	0.42
22:BA:1925:C:C4'	22:BA:1926:U:C4	3.02	0.42
22:BA:2214:C:H2'	22:BA:2215:C:O4'	2.19	0.42
22:BA:2226:C:O2	22:BA:2226:C:H2'	2.19	0.42
22:BA:2747:G:O2'	28:BG:67:THR:HB	2.19	0.42
22:BA:2845:U:H5"	37:BP:52:ASN:O	2.19	0.42
22:BA:2856:A:N6	22:BA:2857:G:C6	2.87	0.42
22:BA:2885:G:H2'	22:BA:2886:A:O4'	2.19	0.42
23:BB:78:A:H61	23:BB:98:G:C2'	2.32	0.42
26:BE:115:GLN:OE1	26:BE:115:GLN:HA	2.19	0.42
30:BI:80:LEU:HD13	30:BI:136:MET:SD	2.58	0.42
30:BI:97:LYS:HB3	30:BI:139:VAL:CG2	2.49	0.42
30:BI:122:ILE:HG23	30:BI:125:MET:SD	2.59	0.42
35:BN:106:ASP:C	35:BN:106:ASP:OD1	2.58	0.42
38:BQ:86:ALA:O	38:BQ:87:SER:HB2	2.19	0.42
43:BV:65:VAL:O	43:BV:65:VAL:HG22	2.19	0.42
44:BW:37:ILE:HG21	44:BW:80:ILE:HG21	2.02	0.42
44:BW:38:VAL:HG23	44:BW:59:LEU:HB2	2.01	0.42
53:B5:43:GLU:HA	53:B5:178:LYS:HA	1.99	0.42
1:CA:109:A:O2'	1:CA:326:G:N2	2.51	0.42
1:CA:121:U:H3'	1:CA:122:G:C5'	2.48	0.42
1:CA:905:U:C5	1:CA:906:A:C5	3.07	0.42
1:CA:922:G:H4'	5:CE:25:VAL:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:923:A:H2'	1:CA:924:C:O4'	2.18	0.42
1:CA:1361:G:C2	1:CA:1362:A:N7	2.87	0.42
1:CA:1385:G:H2'	1:CA:1386:G:O4'	2.18	0.42
2:CB:21:ARG:C	2:CB:22:TYR:CD1	2.92	0.42
4:CD:100:ASN:O	4:CD:104:ARG:HG2	2.19	0.42
4:CD:150:LYS:O	4:CD:151:LYS:C	2.57	0.42
5:CE:102:GLY:O	5:CE:104:GLY:CA	2.66	0.42
5:CE:157:ARG:C	5:CE:159:LYS:N	2.72	0.42
7:CG:148:ASN:C	7:CG:150:ALA:N	2.72	0.42
8:CH:30:SER:O	8:CH:31:LYS:C	2.56	0.42
10:CJ:7:ARG:HD3	10:CJ:75:ASP:OD2	2.18	0.42
11:CK:71:ALA:O	11:CK:75:LYS:HG3	2.19	0.42
15:CO:42:HIS:O	15:CO:45:GLU:O	2.37	0.42
16:CP:2:VAL:HA	16:CP:22:ALA:O	2.19	0.42
17:CQ:45:HIS:O	17:CQ:71:LYS:HA	2.18	0.42
18:CR:35:GLU:HB2	21:CU:19:PHE:CZ	2.54	0.42
20:CT:9:LYS:O	20:CT:12:ILE:HG12	2.19	0.42
21:CU:4:ILE:N	21:CU:4:ILE:HD13	2.34	0.42
21:CU:24:GLU:HG3	21:CU:28:VAL:CG2	2.49	0.42
22:DA:9:G:C6	22:DA:2629:U:C6	3.07	0.42
22:DA:176:A:C5	22:DA:177:G:C6	3.07	0.42
22:DA:306:U:O4	22:DA:307:G:C6	2.71	0.42
22:DA:479:A:H1'	22:DA:481:G:H5'	2.01	0.42
22:DA:568:U:H2'	22:DA:570:G:OP2	2.18	0.42
22:DA:618:G:N3	22:DA:618:G:H2'	2.34	0.42
22:DA:749:A:C5	22:DA:1618:A:C2	3.07	0.42
22:DA:1045:C:H1'	22:DA:1047:G:C6	2.54	0.42
22:DA:1502:A:C2	22:DA:1503:A:C4	3.07	0.42
22:DA:1816:C:H3'	24:DC:62:TYR:CE1	2.54	0.42
22:DA:1866:A:C4	22:DA:1876:A:C6	3.07	0.42
22:DA:1914:C:H2'	22:DA:1915:U:O4'	2.19	0.42
22:DA:1965:C:OP1	22:DA:1966:A:H2'	2.19	0.42
22:DA:2061:G:N1	56:DA:3001:VIF:H19	2.33	0.42
22:DA:2512:C:H2'	22:DA:2513:A:O4'	2.18	0.42
22:DA:2889:C:H2'	22:DA:2890:G:C8	2.54	0.42
23:DB:71:C:C2'	23:DB:72:G:H5'	2.49	0.42
25:DD:62:LYS:N	25:DD:63:PRO:CD	2.82	0.42
27:DF:31:VAL:HG11	27:DF:97:TRP:CH2	2.54	0.42
27:DF:151:GLY:O	27:DF:152:LEU:HB3	2.18	0.42
30:DI:20:PRO:HG2	30:DI:24:VAL:HG23	1.99	0.42
30:DI:103:ARG:O	30:DI:107:GLN:N	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DM:1:MET:HE1	34:DM:44:ARG:HG3	2.00	0.42
37:DP:16:ASP:N	37:DP:16:ASP:OD1	2.52	0.42
37:DP:80:VAL:HG12	37:DP:81:VAL:N	2.33	0.42
38:DQ:47:TYR:CD1	38:DQ:47:TYR:C	2.92	0.42
38:DQ:72:ASN:CB	38:DQ:110:VAL:HG11	2.49	0.42
39:DR:51:VAL:O	39:DR:52:PRO:C	2.56	0.42
1:AA:594:U:O4	1:AA:595:A:N6	2.52	0.42
1:AA:727:G:N2	1:AA:731:G:C4	2.87	0.42
1:AA:775:G:O2'	1:AA:776:G:H5'	2.18	0.42
1:AA:781:A:H4'	1:AA:1522:U:O2'	2.18	0.42
1:AA:815:A:O2'	1:AA:816:A:OP1	2.27	0.42
1:AA:882:C:O2'	1:AA:883:C:H5'	2.19	0.42
1:AA:918:A:C6	1:AA:919:A:C6	3.07	0.42
1:AA:1037:C:H2'	1:AA:1038:C:C6	2.54	0.42
1:AA:1158:C:C4	1:AA:1160:G:C5	3.08	0.42
1:AA:1342:C:O2'	9:AI:126:GLN:HG3	2.19	0.42
1:AA:1381:U:C2'	1:AA:1382:C:H5'	2.50	0.42
1:AA:1417:G:C6	1:AA:1482:G:C6	3.08	0.42
2:AB:35:ARG:CB	2:AB:40:ILE:HD11	2.49	0.42
6:AF:54:LEU:C	6:AF:54:LEU:HD22	2.40	0.42
9:AI:9:THR:CG2	9:AI:10:GLY:N	2.78	0.42
9:AI:49:ARG:NH2	9:AI:52:LEU:O	2.50	0.42
12:AL:44:LYS:HB2	12:AL:45:PRO:HD3	1.99	0.42
17:AQ:4:LYS:N	17:AQ:4:LYS:HE3	2.34	0.42
17:AQ:83:VAL:HG13	17:AQ:83:VAL:OXT	2.18	0.42
20:AT:43:ASP:C	20:AT:43:ASP:OD1	2.57	0.42
21:AU:25:LYS:C	21:AU:27:GLY:H	2.22	0.42
21:AU:40:LYS:HB3	21:AU:41:PRO:HD3	2.01	0.42
22:BA:78:U:OP2	46:BY:2:LYS:CD	2.67	0.42
22:BA:150:U:H2'	22:BA:151:C:H6	1.83	0.42
22:BA:245:G:O6	51:B3:8:ARG:HD3	2.20	0.42
22:BA:1108:U:H2'	22:BA:1109:C:O4'	2.19	0.42
22:BA:1448:G:C2'	22:BA:1449:G:H5'	2.49	0.42
22:BA:1722:A:C4	22:BA:1739:A:C2	3.07	0.42
22:BA:1731:G:C5	22:BA:1733:G:N7	2.87	0.42
22:BA:1915:U:C2'	22:BA:1916:A:H5'	2.49	0.42
22:BA:2298:A:C6	22:BA:2321:U:C4	3.07	0.42
26:BE:106:LYS:HD2	26:BE:200:LEU:HB3	2.00	0.42
27:BF:31:VAL:O	27:BF:31:VAL:CG2	2.66	0.42
29:BH:79:THR:CG2	29:BH:147:VAL:CG2	2.97	0.42
30:BI:105:GLN:O	30:BI:106:LEU:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:81:ASP:CG	33:BL:100:ILE:HD13	2.39	0.42
33:BL:100:ILE:O	33:BL:100:ILE:HG13	2.17	0.42
34:BM:69:PRO:O	34:BM:70:ASP:CG	2.57	0.42
41:BT:11:LEU:HD21	41:BT:46:ALA:HB3	2.00	0.42
44:BW:51:VAL:HG13	44:BW:60:PHE:O	2.18	0.42
49:B1:32:GLU:OE2	49:B1:32:GLU:N	2.45	0.42
1:CA:130:A:C2	1:CA:264:C:C6	3.07	0.42
1:CA:519:C:OP2	12:CL:47:SER:OG	2.37	0.42
1:CA:571:U:H5"	1:CA:572:A:OP2	2.19	0.42
1:CA:865:A:H2	1:CA:918:A:H4'	1.84	0.42
1:CA:1097:C:C2	1:CA:1098:C:C6	3.07	0.42
1:CA:1245:C:H2'	1:CA:1246:A:H8	1.83	0.42
2:CB:115:LYS:O	2:CB:117:LEU:N	2.52	0.42
2:CB:140:GLU:C	2:CB:144:LEU:HG	2.39	0.42
2:CB:180:GLY:O	2:CB:182:PRO:HD3	2.19	0.42
3:CC:19:ASN:OD1	3:CC:54:ARG:NE	2.50	0.42
4:CD:19:LEU:HD21	4:CD:60:LYS:HG2	2.01	0.42
6:CF:32:ALA:O	6:CF:33:GLU:C	2.57	0.42
9:CI:17:ALA:HB2	9:CI:67:VAL:HB	2.01	0.42
9:CI:91:ASP:OD1	9:CI:91:ASP:C	2.58	0.42
10:CJ:52:LEU:HD23	10:CJ:62:ARG:CG	2.49	0.42
11:CK:93:ARG:HB3	11:CK:94:GLU:H	1.72	0.42
12:CL:40:THR:HG22	12:CL:41:THR:N	2.33	0.42
14:CN:80:SER:O	14:CN:81:ARG:C	2.56	0.42
17:CQ:14:SER:OG	17:CQ:22:VAL:HG12	2.20	0.42
20:CT:57:ILE:O	20:CT:61:GLN:HG2	2.20	0.42
20:CT:67:ILE:HD12	20:CT:67:ILE:HA	1.77	0.42
22:DA:513:A:N3	22:DA:514:A:C8	2.87	0.42
22:DA:593:U:N3	22:DA:594:U:C4	2.88	0.42
22:DA:825:A:H4'	22:DA:2428:G:C5	2.54	0.42
22:DA:1042:G:C6	22:DA:1043:C:C4	3.08	0.42
22:DA:1081:U:O3'	30:DI:124:ALA:HB1	2.19	0.42
22:DA:1097:U:C2'	30:DI:9:VAL:HG11	2.48	0.42
22:DA:1204:A:C2	22:DA:1240:U:N3	2.87	0.42
22:DA:1248:G:C5	26:DE:46:GLN:NE2	2.87	0.42
22:DA:1486:U:C2	22:DA:1504:A:C2	3.06	0.42
22:DA:1537:G:H3'	22:DA:1537:G:N3	2.33	0.42
22:DA:1826:G:C4	22:DA:1827:U:C5	3.07	0.42
22:DA:1936:A:H2	22:DA:1943:U:H3	1.65	0.42
22:DA:2014:A:H5'	40:DS:94:ASP:OD2	2.19	0.42
22:DA:2093:G:N1	22:DA:2094:A:C5	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2361:G:OP1	51:D3:26:HIS:HA	2.20	0.42
22:DA:2636:C:O5'	25:DD:81:GLU:HB2	2.19	0.42
22:DA:2766:A:N3	22:DA:2766:A:H2'	2.34	0.42
22:DA:2856:A:C6	22:DA:2857:G:C6	3.08	0.42
30:DI:69:PHE:N	30:DI:69:PHE:HD1	2.15	0.42
1:AA:181:A:C4	1:AA:194:C:C4	3.07	0.42
1:AA:815:A:H4'	1:AA:817:C:C4	2.54	0.42
1:AA:819:A:N7	1:AA:1529:G:C2	2.87	0.42
1:AA:1138:G:H3'	1:AA:1138:G:N3	2.33	0.42
1:AA:1181:G:O2'	1:AA:1182:G:C6	2.72	0.42
1:AA:1296:C:H5"	1:AA:1297:G:OP2	2.19	0.42
1:AA:1374:A:O3'	7:AG:28:ASN:ND2	2.53	0.42
2:AB:148:LEU:C	2:AB:151:ILE:HG22	2.40	0.42
4:AD:91:LEU:HD21	4:AD:195:ILE:HD11	2.01	0.42
4:AD:160:GLU:C	4:AD:162:ALA:H	2.22	0.42
5:AE:95:PHE:CD1	5:AE:95:PHE:C	2.92	0.42
6:AF:3:HIS:O	6:AF:4:TYR:CG	2.73	0.42
6:AF:49:TYR:CD1	6:AF:49:TYR:C	2.92	0.42
7:AG:15:ASP:OD1	7:AG:15:ASP:C	2.58	0.42
7:AG:44:TYR:O	7:AG:48:GLU:N	2.52	0.42
10:AJ:52:LEU:CD1	10:AJ:58:ASN:O	2.68	0.42
13:AM:65:VAL:HG23	13:AM:66:GLU:N	2.33	0.42
14:AN:46:LEU:CG	14:AN:47:LYS:N	2.81	0.42
16:AP:10:GLY:O	16:AP:11:ALA:CB	2.68	0.42
18:AR:52:GLN:OE1	18:AR:52:GLN:HA	2.19	0.42
22:BA:26:G:H1'	22:BA:514:A:H61	1.84	0.42
22:BA:289:G:H2'	22:BA:290:U:O4'	2.20	0.42
22:BA:538:A:O2'	31:BJ:8:PRO:HD2	2.19	0.42
22:BA:1014:A:C2	22:BA:1149:G:N3	2.87	0.42
22:BA:1098:A:C6	22:BA:1099:G:C6	3.07	0.42
22:BA:1179:G:N7	22:BA:1180:U:C1'	2.82	0.42
22:BA:1371:G:N7	58:BA:3403:HOH:O	2.37	0.42
22:BA:1460:U:H3'	22:BA:1461:C:H5'	2.01	0.42
22:BA:1606:C:O2'	22:BA:1607:C:P	2.76	0.42
22:BA:1725:U:C5	22:BA:1726:C:C5	3.07	0.42
22:BA:1826:G:H2'	22:BA:1827:U:O5'	2.20	0.42
22:BA:2142:A:H2'	22:BA:2143:C:C6	2.53	0.42
22:BA:2366:A:H2'	22:BA:2367:G:O4'	2.19	0.42
22:BA:2480:C:C2'	22:BA:2481:G:H5'	2.49	0.42
22:BA:2703:C:O5'	22:BA:2703:C:H6	2.02	0.42
35:BN:14:SER:HA	35:BN:17:ARG:NH1	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:10:THR:O	44:BW:11:ARG:HB2	2.20	0.42
44:BW:53:CYS:O	44:BW:54:GLY:O	2.37	0.42
1:CA:223:A:H2'	1:CA:224:U:C6	2.54	0.42
1:CA:374:A:H5"	1:CA:452:A:C2	2.54	0.42
1:CA:511:C:C2	1:CA:512:U:C6	3.07	0.42
1:CA:597:G:N7	1:CA:598:U:C5	2.87	0.42
1:CA:604:G:N7	1:CA:605:U:C5	2.87	0.42
1:CA:618:C:H5"	1:CA:619:U:H5"	2.00	0.42
1:CA:740:U:H4'	15:CO:42:HIS:CD2	2.54	0.42
1:CA:778:G:C6	1:CA:779:C:N3	2.88	0.42
1:CA:833:G:C4	1:CA:834:U:C6	3.08	0.42
1:CA:892:A:C5	1:CA:893:C:C5	3.07	0.42
1:CA:992:U:O4'	1:CA:993:G:C2	2.72	0.42
1:CA:1099:G:H2'	1:CA:1100:C:O4'	2.19	0.42
1:CA:1426:G:H2'	1:CA:1427:C:O4'	2.20	0.42
1:CA:1490:U:C2'	1:CA:1491:G:O4'	2.65	0.42
4:CD:98:LEU:HD22	4:CD:130:VAL:HG12	2.01	0.42
6:CF:88:MET:HE3	18:CR:64:TYR:CE2	2.54	0.42
12:CL:110:ARG:NH1	12:CL:112:GLN:O	2.53	0.42
17:CQ:63:GLU:N	17:CQ:73:TRP:CE3	2.87	0.42
22:DA:140:C:O2	22:DA:140:C:O4'	2.37	0.42
22:DA:161:A:P	22:DA:162:U:H3'	2.60	0.42
22:DA:749:A:C2	22:DA:750:A:C8	3.08	0.42
22:DA:1093:G:H1'	22:DA:1098:A:H61	1.84	0.42
22:DA:1272:A:C6	22:DA:1618:A:H1'	2.54	0.42
22:DA:1545:A:N7	22:DA:1546:G:C4	2.87	0.42
22:DA:1959:G:C6	22:DA:1960:A:C5	3.08	0.42
22:DA:2712:C:C2	22:DA:2715:C:OP1	2.72	0.42
23:DB:9:G:HO2'	36:DO:45:SER:HG	1.60	0.42
23:DB:43:C:N4	23:DB:45:A:N1	2.67	0.42
23:DB:78:A:H61	23:DB:98:G:C2'	2.31	0.42
24:DC:67:PHE:HB3	24:DC:151:GLY:O	2.19	0.42
25:DD:30:GLU:O	25:DD:52:THR:OG1	2.13	0.42
26:DE:147:LEU:HB3	26:DE:186:VAL:HG22	2.02	0.42
31:DJ:105:VAL:HG12	31:DJ:109:LEU:CD1	2.48	0.42
37:DP:106:LYS:HD2	37:DP:109:ARG:CZ	2.49	0.42
39:DR:26:ASP:C	39:DR:27:ILE:HG12	2.38	0.42
40:DS:27:LYS:HB2	40:DS:32:ALA:HB2	2.02	0.42
44:DW:34:GLY:N	44:DW:61:ALA:O	2.47	0.42
45:DX:58:VAL:CG1	45:DX:59:ILE:N	2.82	0.42
1:AA:61:G:H2'	1:AA:62:U:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:251:G:C6	1:AA:266:G:C6	3.07	0.42
1:AA:864:A:C6	1:AA:865:A:C2	3.08	0.42
1:AA:872:A:N7	1:AA:874:G:C8	2.87	0.42
1:AA:1031:C:H4'	1:AA:1032:G:O5'	2.19	0.42
1:AA:1055:A:N3	3:AC:156:ARG:NH1	2.68	0.42
1:AA:1210:C:N4	1:AA:1211:U:C4	2.88	0.42
4:AD:19:LEU:CD1	4:AD:63:ARG:HB2	2.49	0.42
7:AG:14:PRO:O	7:AG:15:ASP:O	2.37	0.42
9:AI:30:ILE:HD11	9:AI:38:TYR:CE1	2.53	0.42
9:AI:81:HIS:O	9:AI:85:ARG:HB2	2.19	0.42
16:AP:19:VAL:HG13	16:AP:37:GLY:CA	2.49	0.42
19:AS:58:VAL:CG1	19:AS:75:ALA:HB1	2.49	0.42
20:AT:35:VAL:CG1	20:AT:79:LEU:HD22	2.50	0.42
22:BA:278:A:N1	22:BA:362:A:C8	2.87	0.42
22:BA:670:A:H4'	22:BA:671:C:O5'	2.19	0.42
22:BA:1077:A:C8	22:BA:1078:U:C4	3.06	0.42
22:BA:1856:U:O4	22:BA:1857:G:C6	2.73	0.42
22:BA:2002:G:OP1	35:BN:13:ASN:HA	2.19	0.42
22:BA:2057:G:C5	22:BA:2058:A:C5	3.08	0.42
22:BA:2311:A:N7	27:BF:77:PHE:CD1	2.88	0.42
22:BA:2311:A:C2	27:BF:85:ILE:HD11	2.53	0.42
22:BA:2548:U:C4	22:BA:2549:G:N7	2.87	0.42
22:BA:2673:G:C2	22:BA:2674:G:C8	3.07	0.42
22:BA:2680:U:O2'	22:BA:2681:C:H5'	2.19	0.42
23:BB:46:A:H2'	23:BB:47:C:C6	2.54	0.42
24:BC:174:LEU:N	24:BC:174:LEU:CD1	2.82	0.42
25:BD:101:PHE:C	25:BD:103:ASP:N	2.73	0.42
25:BD:113:SER:O	25:BD:167:ASN:HA	2.20	0.42
30:BI:19:ASN:N	30:BI:20:PRO:HD3	2.34	0.42
30:BI:76:ALA:HB1	30:BI:129:ILE:CG2	2.49	0.42
35:BN:78:LYS:C	35:BN:79:LEU:O	2.54	0.42
36:BO:100:HIS:O	36:BO:104:GLN:HB3	2.19	0.42
38:BQ:89:GLU:H	39:BR:49:ILE:HD12	1.84	0.42
38:BQ:112:LYS:HD3	39:BR:48:LYS:HD2	2.00	0.42
47:BZ:9:GLN:HB2	47:BZ:29:LEU:HD13	2.00	0.42
49:B1:25:LYS:HD3	49:B1:52:ALA:O	2.20	0.42
52:B4:4:ARG:C	52:B4:37:GLN:NE2	2.72	0.42
53:B5:64:SER:O	53:B5:65:LEU:HB2	2.18	0.42
53:B5:122:GLY:HA3	53:B5:146:VAL:CB	2.49	0.42
1:CA:144:G:C6	1:CA:179:A:C2	3.08	0.42
1:CA:289:G:N1	1:CA:290:C:C4	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:438:U:C2	1:CA:494:G:C6	3.07	0.42
1:CA:582:C:C4	1:CA:760:G:C6	3.07	0.42
1:CA:872:A:C5	1:CA:874:G:C8	3.07	0.42
1:CA:1220:G:H2'	1:CA:1221:G:O4'	2.18	0.42
1:CA:1235:U:H2'	1:CA:1236:A:O4'	2.20	0.42
1:CA:1262:C:O2'	1:CA:1263:C:H5'	2.19	0.42
1:CA:1328:C:OP1	13:CM:28:THR:HG21	2.19	0.42
1:CA:1328:C:C5'	13:CM:28:THR:HG21	2.49	0.42
1:CA:1537:U:C5	1:CA:1538:C:N4	2.88	0.42
2:CB:117:LEU:O	2:CB:118:GLU:C	2.57	0.42
3:CC:77:ILE:HA	3:CC:84:VAL:HG23	2.00	0.42
7:CG:31:MET:O	7:CG:31:MET:HG2	2.20	0.42
8:CH:83:LEU:HD22	8:CH:83:LEU:C	2.39	0.42
9:CI:13:LYS:O	9:CI:13:LYS:CG	2.67	0.42
9:CI:13:LYS:O	9:CI:14:SER:CB	2.68	0.42
9:CI:49:ARG:C	9:CI:51:PRO:HD2	2.40	0.42
16:CP:67:ILE:HG22	16:CP:68:SER:O	2.19	0.42
20:CT:64:LYS:HA	20:CT:64:LYS:HE3	2.00	0.42
22:DA:319:G:C5	22:DA:333:G:C2	3.08	0.42
22:DA:353:C:H2'	22:DA:354:A:C8	2.55	0.42
22:DA:365:U:C4	22:DA:366:C:N4	2.88	0.42
22:DA:537:G:C2	22:DA:555:G:N2	2.87	0.42
22:DA:760:G:C6	22:DA:761:A:C4	3.08	0.42
22:DA:813:U:H1'	22:DA:1226:A:N3	2.35	0.42
22:DA:1127:A:H2'	22:DA:1128:G:H5"	2.01	0.42
22:DA:1401:G:C5	22:DA:1402:U:C5	3.07	0.42
22:DA:1668:A:N3	22:DA:1670:C:C4	2.88	0.42
22:DA:1745:A:O2'	22:DA:1746:A:H5'	2.19	0.42
22:DA:1875:G:H2'	22:DA:1876:A:OP2	2.19	0.42
22:DA:2127:G:N3	22:DA:2162:G:N7	2.66	0.42
22:DA:2571:U:N3	22:DA:2574:G:C8	2.88	0.42
22:DA:2838:G:O6	22:DA:2839:G:C6	2.72	0.42
26:DE:48:THR:HG22	26:DE:86:ALA:HB3	2.01	0.42
26:DE:170:ARG:HG3	26:DE:174:GLY:O	2.19	0.42
26:DE:178:VAL:HG13	26:DE:179:SER:N	2.34	0.42
32:DK:31:ARG:CB	32:DK:32:TYR:CD1	3.03	0.42
35:DN:30:ARG:HD2	35:DN:31:HIS:NE2	2.34	0.42
36:DO:71:ALA:HB2	36:DO:102:ARG:HB2	2.01	0.42
40:DS:7:HIS:CE1	40:DS:46:LEU:HD23	2.54	0.42
42:DU:16:GLY:O	42:DU:17:LYS:HB2	2.19	0.42
42:DU:19:LYS:O	42:DU:19:LYS:CG	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DV:20:LEU:HD22	43:DV:26:PHE:HA	2.01	0.42
45:DX:10:LYS:HE3	45:DX:54:LYS:HD3	2.01	0.42
1:AA:4:U:H5"	1:AA:5:U:C5	2.55	0.42
1:AA:624:C:H4'	16:AP:11:ALA:HB2	2.02	0.42
1:AA:702:A:C6	22:BA:1847:A:H5'	2.55	0.42
1:AA:824:G:C2	1:AA:877:G:C2	3.08	0.42
1:AA:1058:G:C2'	1:AA:1059:C:H5'	2.49	0.42
1:AA:1075:U:OP1	2:AB:102:THR:HG21	2.19	0.42
1:AA:1184:G:C6	1:AA:1185:G:N7	2.88	0.42
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.54	0.42
3:AC:66:VAL:O	3:AC:101:ILE:HA	2.20	0.42
5:AE:77:ASN:O	5:AE:78:ASN:HB3	2.20	0.42
8:AH:49:PHE:HA	8:AH:60:GLU:O	2.20	0.42
11:AK:91:PRO:C	11:AK:93:ARG:H	2.23	0.42
13:AM:95:LEU:C	13:AM:109:ARG:HG2	2.39	0.42
17:AQ:16:LYS:C	17:AQ:17:MET:CE	2.88	0.42
21:AU:39:GLU:OE2	21:AU:42:THR:HG21	2.19	0.42
22:BA:521:U:H2'	22:BA:522:A:C8	2.55	0.42
22:BA:945:A:H4'	22:BA:946:C:OP2	2.19	0.42
22:BA:1300:G:C4	22:BA:1626:A:C2	3.08	0.42
22:BA:1400:U:C2'	22:BA:1401:G:H5'	2.49	0.42
22:BA:1413:A:C6	22:BA:1414:C:N3	2.87	0.42
22:BA:1456:G:C6	22:BA:1457:U:C4	3.07	0.42
22:BA:1736:U:H2'	22:BA:1737:G:O4'	2.20	0.42
22:BA:1885:A:C5	22:BA:1886:U:C5	3.07	0.42
22:BA:1890:A:C5	22:BA:1891:G:C8	3.07	0.42
22:BA:2173:A:C8	22:BA:2174:C:C5	3.08	0.42
22:BA:2648:G:N2	22:BA:2673:G:H1'	2.34	0.42
22:BA:2808:G:C2	22:BA:2891:U:C6	3.08	0.42
28:BG:52:PHE:CD1	28:BG:52:PHE:N	2.87	0.42
28:BG:154:PRO:HD3	28:BG:162:VAL:O	2.19	0.42
29:BH:45:GLU:C	29:BH:47:PHE:N	2.72	0.42
30:BI:16:GLY:HA3	30:BI:51:LYS:HB3	2.01	0.42
30:BI:61:VAL:CG1	30:BI:62:TYR:N	2.83	0.42
39:BR:48:LYS:O	39:BR:50:GLY:N	2.53	0.42
44:BW:46:HIS:CE1	44:BW:77:ARG:HD3	2.55	0.42
44:BW:82:ILE:O	44:BW:82:ILE:HG22	2.20	0.42
46:BY:56:LEU:HA	46:BY:59:GLU:HB3	2.01	0.42
53:B5:24:ASP:HB3	53:B5:185:LYS:O	2.20	0.42
1:CA:55:A:N7	1:CA:56:U:C5	2.87	0.42
1:CA:145:G:N1	1:CA:146:G:N7	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:375:U:N3	1:CA:376:G:N7	2.67	0.42
1:CA:375:U:C2	1:CA:376:G:C8	3.07	0.42
1:CA:405:U:O4	4:CD:2:ALA:N	2.52	0.42
1:CA:455:G:C6	1:CA:456:A:C6	3.07	0.42
1:CA:484:G:N7	1:CA:486:U:H1'	2.34	0.42
1:CA:745:G:H5"	1:CA:851:G:O2'	2.19	0.42
1:CA:1133:G:C6	1:CA:1142:G:C6	3.08	0.42
1:CA:1202:U:C2'	1:CA:1203:C:H5'	2.50	0.42
2:CB:115:LYS:C	2:CB:117:LEU:N	2.73	0.42
2:CB:133:GLU:O	2:CB:137:ARG:HB3	2.19	0.42
2:CB:169:GLU:O	2:CB:170:HIS:C	2.56	0.42
4:CD:29:ASP:O	4:CD:31:LYS:NZ	2.43	0.42
4:CD:107:PHE:N	4:CD:107:PHE:CD1	2.86	0.42
11:CK:61:PHE:O	11:CK:65:VAL:HG12	2.20	0.42
22:DA:21:A:C2	22:DA:520:G:C2	3.08	0.42
22:DA:75:G:H4'	46:DY:48:ARG:NH1	2.34	0.42
22:DA:324:A:N6	22:DA:338:G:O2'	2.49	0.42
22:DA:690:G:O4'	22:DA:780:G:H5'	2.20	0.42
22:DA:743:A:H2'	22:DA:744:U:O4'	2.20	0.42
22:DA:952:G:C2	22:DA:966:G:C2	3.07	0.42
22:DA:1056:G:H5"	22:DA:1057:A:O4'	2.19	0.42
22:DA:1090:A:N1	22:DA:1091:G:N7	2.68	0.42
22:DA:1359:A:N7	22:DA:1373:A:C2	2.88	0.42
22:DA:1464:G:N1	22:DA:1465:G:C5	2.87	0.42
22:DA:1608:A:C5	22:DA:1611:C:C4	3.08	0.42
22:DA:1819:A:H4'	22:DA:1820:U:H5"	2.01	0.42
22:DA:1914:C:C5	22:DA:1915:U:C2	3.07	0.42
22:DA:2134:A:C8	22:DA:2158:A:N3	2.87	0.42
22:DA:2262:U:N3	22:DA:2279:G:C2	2.87	0.42
22:DA:2305:U:H2'	22:DA:2306:C:O4'	2.20	0.42
22:DA:2796:U:O4	22:DA:2798:U:C4	2.73	0.42
24:DC:14:ARG:HG2	24:DC:15:HIS:CD2	2.55	0.42
30:DI:101:ILE:HG13	30:DI:138:LEU:HD13	2.01	0.42
32:DK:39:ILE:HG13	32:DK:39:ILE:O	2.18	0.42
35:DN:52:ILE:HG21	35:DN:94:TYR:CG	2.55	0.42
36:DO:40:ILE:HG22	36:DO:41:ALA:N	2.34	0.42
42:DU:10:GLU:OE2	42:DU:73:PHE:CD2	2.73	0.42
45:DX:33:LEU:HD23	45:DX:50:ARG:CZ	2.50	0.42
52:D4:16:ILE:HG22	52:D4:17:VAL:N	2.35	0.42
1:AA:17:U:H2'	1:AA:18:C:C6	2.55	0.42
1:AA:291:U:O2'	1:AA:292:G:H5'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:340:U:H2'	1:AA:341:C:H6	1.84	0.42
1:AA:350:G:O2'	1:AA:351:G:H5'	2.19	0.42
1:AA:504:C:H1'	1:AA:510:A:C4	2.55	0.42
1:AA:647:C:O2'	1:AA:648:A:H5'	2.19	0.42
1:AA:769:G:C2'	1:AA:770:C:H5'	2.49	0.42
3:AC:10:ILE:O	3:AC:10:ILE:HG13	2.20	0.42
3:AC:113:ALA:HB1	3:AC:200:VAL:HG22	2.02	0.42
5:AE:81:LEU:N	5:AE:81:LEU:HD22	2.35	0.42
7:AG:145:ALA:C	7:AG:147:ALA:H	2.22	0.42
8:AH:26:THR:O	8:AH:27:MET:HB3	2.20	0.42
8:AH:64:LYS:HB3	8:AH:64:LYS:HE2	1.84	0.42
10:AJ:11:LYS:HG3	10:AJ:97:ASP:HB3	2.00	0.42
14:AN:48:LEU:O	14:AN:50:THR:N	2.52	0.42
17:AQ:65:ARG:HB2	17:AQ:66:PRO:CD	2.50	0.42
22:BA:613:A:C8	22:BA:616:A:C2	3.07	0.42
22:BA:897:C:H2'	22:BA:898:C:C6	2.55	0.42
22:BA:1170:C:H2'	22:BA:1171:G:C8	2.55	0.42
22:BA:1199:U:H1'	38:BQ:4:VAL:HG22	2.01	0.42
22:BA:1717:A:C2'	22:BA:1718:G:O5'	2.67	0.42
22:BA:1731:G:C6	22:BA:1733:G:C6	3.07	0.42
22:BA:2129:C:H2'	22:BA:2130:U:C6	2.54	0.42
22:BA:2307:G:H4'	22:BA:2308:G:O5'	2.20	0.42
23:BB:37:C:C5	23:BB:38:C:C5	3.06	0.42
23:BB:78:A:C2	23:BB:99:A:C4	3.08	0.42
29:BH:89:LYS:O	29:BH:90:LEU:C	2.58	0.42
29:BH:114:GLU:CB	29:BH:133:GLN:O	2.66	0.42
32:BK:71:ARG:HB3	32:BK:72:PRO:HD2	2.01	0.42
37:BP:91:ALA:HB2	37:BP:113:ARG:HA	2.01	0.42
39:BR:3:ALA:CB	39:BR:59:ILE:HD11	2.49	0.42
42:BU:8:ASP:O	42:BU:9:ASP:OD1	2.38	0.42
46:BY:5:GLU:HA	46:BY:8:GLU:HG3	2.01	0.42
53:B5:131:ILE:HA	53:B5:135:ARG:CB	2.49	0.42
1:CA:96:U:O2'	1:CA:97:G:O5'	2.37	0.42
1:CA:675:A:OP1	18:CR:74:HIS:CE1	2.72	0.42
1:CA:803:G:C6	1:CA:804:U:N3	2.88	0.42
1:CA:957:U:O2	1:CA:959:A:C8	2.72	0.42
1:CA:1006:G:OP1	1:CA:1038:C:H5'	2.19	0.42
1:CA:1053:G:N7	1:CA:1200:C:H5"	2.34	0.42
1:CA:1123:U:H2'	1:CA:1124:G:C8	2.55	0.42
1:CA:1399:C:C2	1:CA:1401:G:C5	3.07	0.42
1:CA:1408:A:C2	1:CA:1494:G:C5	3.06	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1491:G:H2'	1:CA:1492:A:C8	2.55	0.42
4:CD:9:LEU:HD13	4:CD:9:LEU:HA	1.81	0.42
4:CD:58:LYS:CB	4:CD:200:ILE:HB	2.50	0.42
4:CD:89:ASN:O	4:CD:92:ALA:HB3	2.19	0.42
5:CE:94:VAL:HG13	5:CE:111:MET:CE	2.49	0.42
5:CE:113:ALA:O	5:CE:114:VAL:C	2.58	0.42
7:CG:15:ASP:OD1	7:CG:44:TYR:OH	2.31	0.42
10:CJ:35:GLN:CG	10:CJ:77:VAL:HB	2.49	0.42
12:CL:23:ALA:O	12:CL:24:LEU:O	2.36	0.42
13:CM:19:LEU:HD11	13:CM:33:ILE:HG21	2.01	0.42
22:DA:123:G:O3'	22:DA:1376:C:H4'	2.19	0.42
22:DA:279:A:N6	22:DA:361:G:O2'	2.51	0.42
22:DA:404:A:H1'	22:DA:405:U:OP2	2.19	0.42
22:DA:752:A:O2'	22:DA:753:A:P	2.77	0.42
22:DA:1061:U:H3'	22:DA:1062:G:C5'	2.50	0.42
22:DA:1239:G:C6	22:DA:1240:U:C4	3.06	0.42
22:DA:1364:G:H1'	22:DA:1368:G:N2	2.35	0.42
22:DA:1746:A:H2'	22:DA:1747:U:C6	2.55	0.42
22:DA:1826:G:C5	22:DA:1827:U:C4	3.08	0.42
22:DA:2097:A:C6	22:DA:2193:G:N1	2.88	0.42
22:DA:2371:G:N1	22:DA:2372:U:C5	2.87	0.42
22:DA:2547:A:C8	22:DA:2566:A:C8	3.08	0.42
22:DA:2650:U:H2'	22:DA:2651:C:C6	2.53	0.42
23:DB:37:C:C5	23:DB:38:C:C4	3.07	0.42
29:DH:69:ALA:HB2	29:DH:138:VAL:HG12	2.02	0.42
29:DH:72:ILE:O	29:DH:72:ILE:CG2	2.67	0.42
29:DH:127:GLU:HA	29:DH:144:VAL:O	2.19	0.42
30:DI:20:PRO:HG2	30:DI:24:VAL:CG2	2.49	0.42
33:DL:63:LYS:HB3	51:D3:13:ARG:HG3	2.02	0.42
40:DS:39:THR:HG22	40:DS:44:ALA:HB2	2.00	0.42
42:DU:83:VAL:HG11	42:DU:94:ARG:CD	2.50	0.42
48:D0:18:SER:OG	48:D0:19:HIS:N	2.52	0.42
51:D3:16:LYS:HE3	51:D3:20:GLY:O	2.18	0.42
1:AA:275:G:OP1	17:AQ:16:LYS:HE2	2.19	0.42
1:AA:283:U:C5	1:AA:284:C:C5	3.08	0.42
1:AA:397:A:C5	1:AA:548:G:C8	3.07	0.42
1:AA:661:G:C2	1:AA:662:U:C2	3.08	0.42
1:AA:760:G:N7	1:AA:761:G:C8	2.88	0.42
1:AA:915:A:H2'	1:AA:916:U:O4'	2.20	0.42
1:AA:1171:A:H2'	1:AA:1172:C:C6	2.55	0.42
1:AA:1372:U:C4	1:AA:1373:G:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:57:LEU:O	2:AB:60:ILE:HG13	2.19	0.42
2:AB:107:VAL:O	2:AB:111:ILE:HD13	2.19	0.42
3:AC:11:ARG:O	3:AC:14:ILE:O	2.37	0.42
5:AE:157:ARG:C	5:AE:159:LYS:N	2.72	0.42
6:AF:3:HIS:HB2	6:AF:92:THR:HG23	2.00	0.42
6:AF:9:MET:HE3	18:AR:65:LEU:HD22	2.01	0.42
9:AI:36:GLU:HA	9:AI:40:GLY:CA	2.50	0.42
10:AJ:37:ARG:O	10:AJ:38:GLY:O	2.38	0.42
13:AM:71:ARG:CZ	27:BF:136:ILE:HG22	2.49	0.42
17:AQ:23:VAL:HG21	17:AQ:61:ILE:HD11	2.02	0.42
20:AT:21:ASN:O	20:AT:25:ARG:HB2	2.20	0.42
22:BA:138:U:OP2	22:BA:139:U:H2'	2.20	0.42
22:BA:142:A:O2'	22:BA:143:C:H5'	2.20	0.42
22:BA:226:A:C6	22:BA:227:A:C6	3.08	0.42
22:BA:359:G:H2'	22:BA:360:U:O4'	2.20	0.42
22:BA:713:G:C6	22:BA:714:U:C4	3.08	0.42
22:BA:974:G:C8	22:BA:989:G:C2	3.07	0.42
22:BA:1354:A:H2'	22:BA:1355:G:O4'	2.20	0.42
22:BA:1458:U:H5'	22:BA:1459:G:N3	2.34	0.42
22:BA:1575:C:H2'	22:BA:1576:U:O4'	2.20	0.42
22:BA:1676:A:C2	22:BA:1993:U:H5'	2.55	0.42
22:BA:1853:A:C5	22:BA:1889:A:C6	3.07	0.42
22:BA:2014:A:H2'	22:BA:2015:A:C8	2.55	0.42
22:BA:2051:A:H8	22:BA:2051:A:OP2	2.03	0.42
22:BA:2311:A:C2	27:BF:41:GLY:CA	3.02	0.42
22:BA:2470:G:O6	22:BA:2476:A:O2'	2.22	0.42
22:BA:2488:G:C6	22:BA:2489:U:C4	3.08	0.42
27:BF:36:LEU:O	27:BF:89:VAL:N	2.51	0.42
27:BF:133:ARG:O	27:BF:134:GLU:CB	2.65	0.42
29:BH:116:ARG:HB3	29:BH:131:SER:O	2.20	0.42
29:BH:118:PRO:O	29:BH:119:ASN:CB	2.68	0.42
38:BQ:58:ARG:HA	38:BQ:61:TRP:CE3	2.55	0.42
43:BV:1:MET:SD	43:BV:1:MET:C	2.98	0.42
44:BW:52:GLY:O	44:BW:59:LEU:HA	2.20	0.42
52:B4:3:VAL:HG12	52:B4:36:ARG:HB3	2.01	0.42
53:B5:79:ALA:HB3	53:B5:95:VAL:HG11	2.00	0.42
1:CA:197:A:C5	1:CA:221:C:H4'	2.54	0.42
1:CA:338:A:C5	1:CA:339:C:C5	3.08	0.42
1:CA:390:U:C2	1:CA:391:G:C8	3.08	0.42
1:CA:673:A:C2	1:CA:734:G:C2	3.08	0.42
1:CA:676:A:C2	1:CA:677:U:C2	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:728:A:N1	1:CA:729:A:C6	2.87	0.42
1:CA:952:U:OP1	1:CA:972:C:N4	2.52	0.42
1:CA:1107:C:OP1	3:CC:172:ARG:HG3	2.20	0.42
1:CA:1213:A:C8	1:CA:1215:G:C6	3.07	0.42
1:CA:1226:C:C4	13:CM:103:LYS:HA	2.54	0.42
1:CA:1288:A:O2'	1:CA:1352:C:O2'	2.31	0.42
1:CA:1422:G:O3'	32:DK:49:ARG:NH2	2.52	0.42
1:CA:1431:A:C5	1:CA:1432:G:C6	3.08	0.42
1:CA:1491:G:C5	1:CA:1492:A:C6	3.08	0.42
2:CB:62:SER:O	2:CB:64:LYS:N	2.53	0.42
9:CI:57:MET:HB3	9:CI:61:LEU:HD21	2.01	0.42
10:CJ:11:LYS:HG2	10:CJ:71:LEU:CD1	2.50	0.42
13:CM:16:VAL:CG1	13:CM:41:GLU:HB3	2.50	0.42
13:CM:40:ALA:O	13:CM:43:VAL:HG22	2.19	0.42
13:CM:45:ILE:HG22	13:CM:45:ILE:O	2.20	0.42
16:CP:70:ARG:O	16:CP:74:LEU:HD23	2.19	0.42
17:CQ:31:HIS:CD2	17:CQ:34:TYR:CD2	3.08	0.42
19:CS:40:ILE:HB	19:CS:66:MET:O	2.20	0.42
19:CS:73:GLU:HB2	19:CS:74:PHE:CD2	2.54	0.42
22:DA:55:G:C2	22:DA:116:C:C2	3.07	0.42
22:DA:78:U:H2'	22:DA:79:C:O4'	2.20	0.42
22:DA:204:A:C8	22:DA:206:U:N3	2.88	0.42
22:DA:415:A:C2	22:DA:2409:G:C2	3.07	0.42
22:DA:452:G:C8	26:DE:53:THR:HG21	2.55	0.42
22:DA:554:U:O4	22:DA:555:G:C6	2.73	0.42
22:DA:622:G:H2'	22:DA:623:C:H6	1.84	0.42
22:DA:677:A:C2	22:DA:802:A:C2	3.07	0.42
22:DA:1085:A:C5	22:DA:1086:A:N6	2.88	0.42
22:DA:1232:G:H2'	22:DA:1233:C:C6	2.55	0.42
22:DA:1376:C:C5'	58:DA:3398:HOH:O	2.64	0.42
22:DA:1383:A:C2	22:DA:1384:A:C4	3.08	0.42
22:DA:1754:A:N6	22:DA:1755:A:N1	2.67	0.42
22:DA:1757:A:N1	22:DA:1762:A:H2	2.18	0.42
22:DA:2229:U:H2'	22:DA:2230:G:C8	2.55	0.42
22:DA:2322:A:N7	22:DA:2323:G:N7	2.67	0.42
26:DE:97:ASN:HB2	26:DE:100:MET:SD	2.60	0.42
27:DF:28:VAL:HG22	27:DF:29:PRO:HD2	2.02	0.42
29:DH:31:VAL:HG12	29:DH:32:PRO:HD3	2.02	0.42
33:DL:124:GLY:HA2	33:DL:144:GLU:HA	2.01	0.42
35:DN:117:ASP:O	35:DN:118:ARG:HG3	2.19	0.42
36:DO:31:THR:O	36:DO:32:PRO:C	2.57	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:91:ALA:HB2	37:DP:113:ARG:CA	2.49	0.42
38:DQ:61:TRP:CD2	38:DQ:93:LYS:HA	2.54	0.42
39:DR:52:PRO:C	39:DR:53:PHE:CG	2.93	0.42
40:DS:106:VAL:CG1	40:DS:107:VAL:N	2.81	0.42
42:DU:41:LEU:HB3	42:DU:60:GLU:HG2	2.00	0.42
43:DV:51:GLN:HB3	43:DV:56:PHE:CG	2.54	0.42
43:DV:83:LYS:O	43:DV:85:LYS:N	2.53	0.42
45:DX:40:VAL:CG2	45:DX:43:GLU:HB2	2.49	0.42
51:D3:15:LYS:HB3	51:D3:23:LYS:HE2	2.01	0.42
1:AA:31:G:O2'	1:AA:48:C:N4	2.52	0.42
1:AA:353:A:H2'	1:AA:354:G:OP2	2.20	0.42
1:AA:1009:U:O2	1:AA:1021:A:C2	2.73	0.42
1:AA:1049:U:O2	1:AA:1201:A:C5	2.72	0.42
1:AA:1251:A:C5	1:AA:1252:A:N7	2.88	0.42
1:AA:1311:A:C2'	1:AA:1312:G:O5'	2.67	0.42
1:AA:1476:A:H2'	1:AA:1477:U:O4'	2.20	0.42
2:AB:32:PHE:O	2:AB:32:PHE:CG	2.73	0.42
3:AC:103:ILE:HD12	3:AC:103:ILE:O	2.20	0.42
4:AD:114:ALA:HA	4:AD:117:LEU:HD12	2.01	0.42
5:AE:44:GLY:HA2	5:AE:74:VAL:HG23	2.01	0.42
5:AE:81:LEU:HD23	5:AE:123:VAL:HG13	2.02	0.42
6:AF:51:ILE:O	6:AF:52:ASN:CB	2.67	0.42
6:AF:76:THR:O	6:AF:77:THR:C	2.57	0.42
9:AI:20:PHE:O	9:AI:63:LEU:HA	2.20	0.42
11:AK:88:GLY:H	11:AK:114:THR:HG22	1.84	0.42
15:AO:85:LEU:HD13	15:AO:85:LEU:HA	1.92	0.42
16:AP:16:PHE:C	16:AP:16:PHE:CD1	2.92	0.42
20:AT:67:ILE:HG13	20:AT:71:LYS:HD3	2.01	0.42
22:BA:2:G:H2'	22:BA:3:U:C6	2.55	0.42
22:BA:77:G:N2	22:BA:110:G:H1'	2.34	0.42
22:BA:594:U:H2'	22:BA:595:C:C6	2.55	0.42
22:BA:829:A:N7	22:BA:2247:A:O2'	2.47	0.42
22:BA:1069:A:O2'	22:BA:1070:A:H2'	2.19	0.42
22:BA:1088:A:N3	22:BA:1088:A:H5"	2.33	0.42
22:BA:1456:G:C5	22:BA:1457:U:C5	3.08	0.42
22:BA:2055:C:H5'	22:BA:2056:G:O5'	2.19	0.42
22:BA:2244:U:O2'	22:BA:2245:U:H5'	2.20	0.42
24:BC:222:GLY:HA3	24:BC:230:HIS:ND1	2.35	0.42
28:BG:24:ILE:HG21	28:BG:72:LEU:HD21	2.02	0.42
28:BG:125:CYS:HB3	28:BG:127:THR:O	2.19	0.42
28:BG:125:CYS:HB3	28:BG:130:GLU:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:5:VAL:HA	30:BI:8:TYR:OH	2.20	0.42
1:CA:204:G:H2'	1:CA:205:A:O4'	2.20	0.42
1:CA:666:G:C6	1:CA:741:G:C5	3.08	0.42
1:CA:1082:A:OP2	5:CE:23:LYS:HE2	2.20	0.42
1:CA:1162:C:C2	1:CA:1175:G:C2	3.08	0.42
1:CA:1202:U:H2'	1:CA:1203:C:H5'	2.01	0.42
1:CA:1216:A:H2'	1:CA:1217:C:C6	2.55	0.42
4:CD:4:TYR:CZ	4:CD:6:GLY:HA3	2.55	0.42
5:CE:25:VAL:HG22	5:CE:28:GLY:O	2.19	0.42
5:CE:122:ASN:CG	5:CE:123:VAL:N	2.73	0.42
6:CF:38:ARG:NH2	6:CF:98:GLU:O	2.50	0.42
9:CI:28:ILE:HG23	9:CI:63:LEU:CD1	2.50	0.42
10:CJ:25:ILE:O	10:CJ:25:ILE:CD1	2.68	0.42
10:CJ:78:GLU:CD	10:CJ:80:THR:HG1	2.23	0.42
13:CM:16:VAL:HG13	13:CM:34:LEU:HD12	2.02	0.42
14:CN:27:LEU:C	14:CN:31:ILE:HD13	2.40	0.42
18:CR:33:ILE:O	18:CR:33:ILE:HG12	2.19	0.42
21:CU:34:ARG:CD	21:CU:35:ARG:HB2	2.50	0.42
22:DA:206:U:C2	22:DA:207:A:C8	3.07	0.42
22:DA:260:G:C6	22:DA:261:G:N7	2.87	0.42
22:DA:321:U:C6	26:DE:159:LEU:CD2	3.02	0.42
22:DA:425:G:C2	22:DA:426:C:C4	3.07	0.42
22:DA:543:G:N2	22:DA:551:G:C8	2.87	0.42
22:DA:579:G:C2	22:DA:1262:A:C5	3.07	0.42
22:DA:704:G:H1'	22:DA:726:G:N2	2.34	0.42
22:DA:748:G:C8	40:DS:89:ALA:HB1	2.55	0.42
22:DA:1317:G:H2'	22:DA:1318:U:O4'	2.20	0.42
22:DA:2347:C:H2'	22:DA:2348:U:C6	2.55	0.42
22:DA:2566:A:H4'	22:DA:2567:G:H5"	2.02	0.42
22:DA:2650:U:C2	22:DA:2671:G:N2	2.87	0.42
22:DA:2776:A:C6	22:DA:2778:A:C6	3.07	0.42
22:DA:2805:C:H2'	22:DA:2806:C:C6	2.55	0.42
22:DA:2834:G:O6	22:DA:2879:A:O2'	2.32	0.42
23:DB:96:G:C5	23:DB:97:C:C5	3.08	0.42
24:DC:237:GLY:O	24:DC:239:ASN:N	2.53	0.42
26:DE:21:ARG:HD3	26:DE:106:LYS:HB3	2.01	0.42
29:DH:121:VAL:O	29:DH:122:LEU:CB	2.67	0.42
30:DI:121:ASP:O	30:DI:124:ALA:HB3	2.20	0.42
30:DI:125:MET:HA	30:DI:128:SER:HB3	2.01	0.42
39:DR:39:LEU:HA	39:DR:49:ILE:CG2	2.47	0.42
43:DV:44:HIS:NE2	43:DV:85:LYS:HB2	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DV:57:TYR:HA	43:DV:74:ALA:HB3	2.01	0.42
1:AA:102:G:C6	1:AA:103:U:C4	3.07	0.42
1:AA:189:A:O2'	1:AA:190:A:H5'	2.19	0.42
1:AA:257:G:O2'	1:AA:258:G:H5'	2.20	0.42
1:AA:292:G:C2	1:AA:309:A:C2	3.08	0.42
1:AA:588:G:C6	1:AA:589:U:C2	3.08	0.42
1:AA:588:G:C2	1:AA:589:U:C2	3.07	0.42
1:AA:595:A:C6	1:AA:641:U:C5	3.08	0.42
1:AA:612:C:H2'	1:AA:613:C:H6	1.85	0.42
1:AA:681:A:C6	1:AA:710:G:C6	3.08	0.42
1:AA:1069:C:H4'	1:AA:1192:C:O2	2.20	0.42
1:AA:1173:U:OP1	7:AG:5:ARG:NH1	2.52	0.42
1:AA:1299:A:N3	1:AA:1299:A:C2'	2.79	0.42
1:AA:1446:A:N6	1:AA:1447:A:H62	2.18	0.42
1:AA:1539:C:H5"	21:AU:18:ARG:CG	2.49	0.42
2:AB:103:ASN:ND2	2:AB:106:THR:HB	2.34	0.42
2:AB:147:SER:O	2:AB:148:LEU:CG	2.68	0.42
3:AC:129:MET:HB3	3:AC:132:ARG:HG3	2.01	0.42
6:AF:85:ILE:O	6:AF:86:ARG:HG2	2.20	0.42
8:AH:11:LEU:HD11	8:AH:127:CYS:CB	2.49	0.42
22:BA:245:G:H2'	22:BA:246:C:H6	1.84	0.42
22:BA:340:A:H2'	22:BA:341:C:C5'	2.50	0.42
22:BA:536:G:C6	22:BA:537:G:C4	3.08	0.42
22:BA:571:U:C5	22:BA:575:A:C6	3.08	0.42
22:BA:618:G:C6	22:BA:619:G:C4	3.08	0.42
22:BA:729:G:H4'	22:BA:763:G:C5'	2.49	0.42
22:BA:1076:C:H2'	22:BA:1077:A:N9	2.35	0.42
22:BA:2267:A:H5"	22:BA:2268:A:C5'	2.50	0.42
22:BA:2540:C:H2'	22:BA:2541:A:O4'	2.20	0.42
22:BA:2786:U:P	25:BD:70:LYS:HZ1	2.40	0.42
29:BH:139:PHE:O	29:BH:140:ALA:HB3	2.20	0.42
30:BI:96:ASP:O	30:BI:98:VAL:HG23	2.19	0.42
33:BL:79:LEU:HD12	33:BL:112:LEU:HD12	2.02	0.42
1:CA:143:A:H5'	1:CA:144:G:C5'	2.50	0.42
1:CA:278:G:OP2	17:CQ:43:LYS:NZ	2.53	0.42
1:CA:499:A:H4'	1:CA:500:G:OP1	2.19	0.42
1:CA:549:C:H2'	1:CA:550:G:O5'	2.20	0.42
1:CA:865:A:C2	1:CA:918:A:H4'	2.55	0.42
1:CA:880:C:C2'	1:CA:881:G:H5'	2.50	0.42
1:CA:921:U:H2'	1:CA:922:G:O4'	2.20	0.42
1:CA:1072:G:C2	1:CA:1104:G:C2	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1130:A:C1'	1:CA:1146:A:C2	3.02	0.42
1:CA:1133:G:N3	1:CA:1142:G:C2	2.87	0.42
1:CA:1401:G:C2	1:CA:1402:C:H1'	2.55	0.42
1:CA:1441:A:C8	1:CA:1442:G:C8	3.08	0.42
1:CA:1520:C:H2'	1:CA:1521:C:C6	2.55	0.42
2:CB:64:LYS:HD3	2:CB:64:LYS:C	2.41	0.42
2:CB:102:THR:HB	2:CB:175:GLU:HG2	2.02	0.42
3:CC:40:ARG:HA	3:CC:55:ILE:CD1	2.50	0.42
3:CC:64:ILE:HG23	3:CC:99:ALA:HB2	2.02	0.42
4:CD:148:LYS:H	4:CD:148:LYS:CE	2.33	0.42
5:CE:11:LEU:HG	5:CE:12:GLN:N	2.35	0.42
5:CE:12:GLN:OE1	5:CE:12:GLN:HA	2.19	0.42
10:CJ:26:VAL:HG21	10:CJ:39:PRO:HG3	2.01	0.42
11:CK:35:THR:HG1	11:CK:40:ASN:H	1.68	0.42
11:CK:91:PRO:O	11:CK:92:GLY:O	2.38	0.42
17:CQ:75:LEU:C	17:CQ:75:LEU:CD1	2.88	0.42
20:CT:39:ILE:HD11	20:CT:83:ILE:HG22	2.01	0.42
21:CU:34:ARG:HE	21:CU:35:ARG:HB2	1.85	0.42
22:DA:142:A:C5	22:DA:143:C:N4	2.87	0.42
22:DA:271:G:C2	22:DA:367:G:C2	3.07	0.42
22:DA:980:A:C4	22:DA:1136:G:O4'	2.73	0.42
22:DA:1180:U:H5'	22:DA:1181:U:OP2	2.19	0.42
22:DA:1199:U:H2'	22:DA:1200:C:C6	2.55	0.42
22:DA:2073:C:O2	22:DA:2437:G:C2	2.72	0.42
22:DA:2104:C:C2'	22:DA:2105:U:O4'	2.66	0.42
22:DA:2323:G:C5	22:DA:2324:U:C5	3.08	0.42
22:DA:2327:A:H2'	22:DA:2328:A:C8	2.54	0.42
22:DA:2330:G:N2	22:DA:2386:A:C2	2.87	0.42
22:DA:2521:C:C2	22:DA:2545:G:N2	2.88	0.42
22:DA:2685:G:C4	22:DA:2686:G:C8	3.07	0.42
24:DC:67:PHE:CE2	24:DC:156:ARG:NH2	2.88	0.42
24:DC:160:THR:N	24:DC:195:VAL:HG13	2.35	0.42
25:DD:150:GLN:O	25:DD:150:GLN:HG3	2.17	0.42
29:DH:32:PRO:HB3	45:DX:39:TRP:CD1	2.54	0.42
29:DH:41:LYS:HE2	29:DH:44:ILE:CD1	2.50	0.42
30:DI:80:LEU:HD13	30:DI:136:MET:SD	2.60	0.42
30:DI:113:LYS:O	30:DI:117:MET:HB2	2.20	0.42
32:DK:6:THR:O	32:DK:8:LEU:HD12	2.20	0.42
33:DL:19:LEU:HD23	33:DL:31:GLY:O	2.19	0.42
37:DP:30:VAL:HG12	37:DP:31:TRP:O	2.19	0.42
37:DP:99:TYR:CE2	37:DP:100:LEU:HD21	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:D1:47:VAL:HG12	49:D1:48:ILE:N	2.35	0.42
1:AA:69:G:H3'	1:AA:70:U:C6	2.55	0.42
1:AA:105:G:N2	1:AA:379:C:O3'	2.53	0.42
1:AA:961:U:OP2	1:AA:1223:C:H1'	2.20	0.42
1:AA:1025:U:H5"	1:AA:1026:G:O5'	2.20	0.42
1:AA:1074:G:O3'	2:AB:102:THR:CG2	2.67	0.42
1:AA:1312:G:C2	1:AA:1326:U:N3	2.88	0.42
2:AB:19:GLN:HB3	2:AB:189:THR:OG1	2.19	0.42
3:AC:97:VAL:CB	3:AC:98:PRO:CD	2.97	0.42
4:AD:165:ARG:O	4:AD:166:GLU:C	2.57	0.42
7:AG:63:GLU:O	7:AG:67:GLU:HB2	2.20	0.42
7:AG:69:VAL:HG21	7:AG:104:ILE:HG13	2.02	0.42
9:AI:57:MET:CG	9:AI:58:VAL:H	2.32	0.42
9:AI:130:ARG:HB3	9:AI:130:ARG:CZ	2.50	0.42
10:AJ:56:HIS:O	10:AJ:57:VAL:HG12	2.20	0.42
11:AK:112:ASP:CG	11:AK:114:THR:HG23	2.40	0.42
20:AT:67:ILE:O	20:AT:68:HIS:C	2.57	0.42
20:AT:67:ILE:HD11	20:AT:71:LYS:CE	2.50	0.42
22:BA:136:G:C6	22:BA:137:U:O4	2.73	0.42
22:BA:549:G:N3	22:BA:549:G:O4'	2.53	0.42
22:BA:687:C:O2'	22:BA:1780:A:N1	2.44	0.42
22:BA:770:G:O2'	22:BA:771:G:H5'	2.20	0.42
22:BA:973:A:P	58:BA:3781:HOH:O	2.78	0.42
22:BA:1022:G:C5	22:BA:1140:C:C4	3.07	0.42
22:BA:1206:G:C6	22:BA:1207:C:C4	3.08	0.42
22:BA:1651:G:N2	22:BA:2007:U:C2	2.88	0.42
22:BA:1721:G:HO2'	22:BA:1722:A:H8	1.67	0.42
22:BA:1731:G:C5	22:BA:1733:G:C8	3.08	0.42
22:BA:2130:U:OP2	22:BA:2132:U:O4	2.38	0.42
22:BA:2473:U:O2	22:BA:2473:U:H2'	2.19	0.42
22:BA:2560:A:C6	22:BA:2561:U:C4	3.08	0.42
22:BA:2582:G:O2'	22:BA:2583:G:H5'	2.20	0.42
22:BA:2591:C:OP2	24:BC:237:GLY:O	2.38	0.42
22:BA:2883:A:OP2	48:B0:50:ARG:NH1	2.52	0.42
27:BF:41:GLY:HA2	27:BF:85:ILE:HG13	2.02	0.42
28:BG:46:ALA:O	28:BG:47:ASP:HB2	2.20	0.42
28:BG:89:LEU:N	28:BG:89:LEU:CD1	2.83	0.42
29:BH:82:SER:HG	29:BH:90:LEU:HG	1.85	0.42
30:BI:18:ALA:CB	30:BI:42:PHE:CZ	3.03	0.42
35:BN:32:GLU:CB	35:BN:115:LEU:HD12	2.50	0.42
43:BV:43:ASP:OD1	43:BV:43:ASP:C	2.58	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B5:200:HIS:O	53:B5:201:LYS:C	2.58	0.42
1:CA:116:A:C4	1:CA:117:G:C8	3.08	0.42
1:CA:273:U:H2'	1:CA:274:A:H5'	2.02	0.42
1:CA:562:U:H1'	12:CL:12:ARG:HG3	2.02	0.42
1:CA:582:C:O2	1:CA:760:G:C2	2.73	0.42
1:CA:821:G:C4	1:CA:822:U:C5	3.08	0.42
1:CA:1014:A:C4	19:CS:34:TRP:CH2	3.08	0.42
1:CA:1125:U:H4'	10:CJ:7:ARG:NH1	2.34	0.42
1:CA:1456:A:H2'	1:CA:1457:G:O4'	2.20	0.42
1:CA:1540:U:H4'	21:CU:18:ARG:HG2	2.02	0.42
2:CB:119:THR:O	2:CB:120:GLN:HB2	2.20	0.42
4:CD:95:GLU:OE2	4:CD:100:ASN:ND2	2.46	0.42
7:CG:123:GLU:O	7:CG:127:ALA:HB2	2.20	0.42
10:CJ:5:ARG:HA	10:CJ:5:ARG:HD3	1.89	0.42
11:CK:67:ALA:HB1	11:CK:100:LEU:HD13	2.02	0.42
13:CM:11:ASP:HA	13:CM:45:ILE:HD13	2.01	0.42
14:CN:10:GLU:O	14:CN:11:VAL:C	2.58	0.42
16:CP:19:VAL:CG1	16:CP:37:GLY:CA	2.98	0.42
21:CU:14:VAL:HG13	21:CU:15:ALA:N	2.35	0.42
21:CU:36:GLU:OE2	21:CU:38:TYR:CD2	2.73	0.42
22:DA:70:G:H5"	22:DA:112:U:O2	2.19	0.42
22:DA:300:A:HO2'	22:DA:318:C:HO2'	1.34	0.42
22:DA:374:A:C8	22:DA:400:G:N2	2.88	0.42
22:DA:480:A:H4'	42:DU:44:LYS:HB2	2.02	0.42
22:DA:712:G:C6	22:DA:713:G:C5	3.07	0.42
22:DA:844:A:N3	22:DA:845:A:N7	2.68	0.42
22:DA:852:U:H2'	22:DA:853:C:O4'	2.20	0.42
22:DA:996:A:O3'	38:DQ:91:ASP:HB2	2.19	0.42
22:DA:1190:G:OP1	33:DL:32:GLY:CA	2.68	0.42
22:DA:1483:G:C5	22:DA:1484:U:C5	3.08	0.42
22:DA:1524:G:H2'	22:DA:1524:G:N3	2.35	0.42
22:DA:1544:A:N1	22:DA:1545:A:C2	2.88	0.42
22:DA:1623:G:C2	22:DA:1624:U:C6	3.08	0.42
22:DA:1818:U:H2'	24:DC:156:ARG:HD3	2.02	0.42
22:DA:1858:A:C2	22:DA:1859:U:C2	3.08	0.42
22:DA:2219:U:O2'	22:DA:2220:U:H5'	2.20	0.42
22:DA:2582:G:H2'	22:DA:2582:G:N3	2.35	0.42
23:DB:29:A:OP2	36:DO:32:PRO:HD2	2.20	0.42
23:DB:60:C:N4	23:DB:61:G:O6	2.53	0.42
23:DB:84:G:C2	23:DB:93:C:O2	2.73	0.42
24:DC:240:PHE:CE1	24:DC:242:LYS:O	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:104:VAL:HG23	25:DD:105:LYS:H	1.85	0.42
25:DD:194:PRO:O	25:DD:195:GLY:O	2.38	0.42
27:DF:117:LEU:CD2	27:DF:176:PRO:HG2	2.50	0.42
28:DG:41:VAL:HG22	28:DG:64:GLN:HB3	2.02	0.42
31:DJ:25:LEU:HD11	31:DJ:100:VAL:HG12	2.02	0.42
31:DJ:34:ARG:CG	31:DJ:39:LYS:HB2	2.50	0.42
33:DL:74:THR:HG22	33:DL:107:PHE:HB2	2.01	0.42
34:DM:64:TRP:CE3	34:DM:64:TRP:N	2.88	0.42
40:DS:55:ILE:O	40:DS:58:ALA:HB3	2.20	0.42
42:DU:51:ALA:O	42:DU:52:LEU:HB2	2.19	0.42
51:D3:16:LYS:HE3	51:D3:20:GLY:HA2	2.02	0.42
52:D4:3:VAL:O	52:D4:3:VAL:CG2	2.68	0.42
1:AA:194:C:O2'	1:AA:195:A:H5'	2.19	0.41
1:AA:756:C:H2'	1:AA:757:U:O4'	2.20	0.41
1:AA:1049:U:O4'	1:AA:1201:A:C8	2.73	0.41
1:AA:1064:G:O2'	1:AA:1190:G:N2	2.52	0.41
1:AA:1080:A:OP1	5:AE:52:LYS:CE	2.68	0.41
1:AA:1133:G:C2	1:AA:1142:G:C2	3.08	0.41
1:AA:1217:C:H2'	1:AA:1218:C:C6	2.54	0.41
1:AA:1280:A:C3'	1:AA:1281:C:H5'	2.50	0.41
1:AA:1308:U:OP1	13:AM:97:VAL:N	2.52	0.41
1:AA:1350:A:P	9:AI:123:ARG:HD3	2.60	0.41
1:AA:1442:G:C6	1:AA:1443:C:C4	3.09	0.41
2:AB:21:ARG:NE	2:AB:21:ARG:CA	2.83	0.41
2:AB:210:VAL:O	2:AB:212:LEU:N	2.52	0.41
5:AE:46:VAL:HG11	5:AE:118:ALA:HB2	2.02	0.41
11:AK:31:ILE:HB	11:AK:46:THR:HG22	2.02	0.41
13:AM:107:ARG:HG2	13:AM:107:ARG:HH11	1.85	0.41
17:AQ:41:THR:HG22	17:AQ:42:THR:N	2.35	0.41
19:AS:52:HIS:CD2	19:AS:54:GLY:H	2.38	0.41
22:BA:1026:G:H2'	22:BA:1027:A:C8	2.55	0.41
22:BA:1836:C:C2'	22:BA:1837:C:H5'	2.50	0.41
22:BA:2032:G:H1'	25:BD:150:GLN:OE1	2.18	0.41
22:BA:2077:A:C5	22:BA:2435:A:C6	3.08	0.41
22:BA:2282:G:H4'	22:BA:2389:G:O2'	2.20	0.41
22:BA:2315:G:OP1	27:BF:33:LYS:NZ	2.47	0.41
22:BA:2800:A:H3'	22:BA:2801:G:C5'	2.40	0.41
22:BA:2887:A:H2'	22:BA:2887:A:N3	2.34	0.41
22:BA:2897:U:H2'	22:BA:2898:U:H6	1.85	0.41
23:BB:50:A:H2'	23:BB:51:G:O5'	2.20	0.41
27:BF:112:ARG:O	27:BF:113:ASP:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:24:ILE:O	28:BG:34:THR:HA	2.20	0.41
29:BH:104:THR:CG2	29:BH:110:VAL:O	2.68	0.41
30:BI:42:PHE:CD2	30:BI:42:PHE:C	2.94	0.41
34:BM:105:MET:HG2	34:BM:106:ASP:N	2.35	0.41
36:BO:15:ARG:HH21	36:BO:95:SER:CB	2.33	0.41
1:CA:78:A:C2	1:CA:92:U:O2	2.73	0.41
1:CA:108:G:C6	20:CT:10:ARG:HG2	2.55	0.41
1:CA:1138:G:O2'	1:CA:1140:C:H5'	2.20	0.41
1:CA:1302:C:C4	13:CM:17:ILE:HD13	2.54	0.41
1:CA:1319:A:OP2	19:CS:5:LEU:HD22	2.20	0.41
2:CB:210:VAL:HG22	2:CB:211:THR:H	1.85	0.41
5:CE:147:MET:O	5:CE:147:MET:HG2	2.20	0.41
7:CG:71:PRO:HD2	7:CG:96:ARG:O	2.20	0.41
8:CH:35:ALA:O	8:CH:39:VAL:HG23	2.19	0.41
10:CJ:34:ALA:O	10:CJ:35:GLN:CB	2.68	0.41
16:CP:4:ILE:HD11	16:CP:65:ALA:HB1	2.02	0.41
20:CT:8:LYS:O	20:CT:11:ALA:HB3	2.20	0.41
20:CT:43:ASP:HB3	20:CT:46:ALA:CB	2.50	0.41
22:DA:391:A:N7	22:DA:392:U:C5	2.88	0.41
22:DA:412:A:H2'	22:DA:413:C:H5'	2.02	0.41
22:DA:449:A:H2'	22:DA:450:G:H5'	2.01	0.41
22:DA:527:C:OP2	22:DA:2779:U:N3	2.53	0.41
22:DA:1068:G:N3	22:DA:1096:A:C5'	2.83	0.41
22:DA:1238:G:C2	22:DA:1239:G:C8	3.08	0.41
22:DA:1710:G:H2'	22:DA:1711:A:O4'	2.20	0.41
22:DA:1739:A:C5	22:DA:1740:G:C5	3.07	0.41
22:DA:1844:C:H5'	24:DC:254:GLY:O	2.20	0.41
22:DA:1874:C:H3'	22:DA:1875:G:C8	2.55	0.41
22:DA:2103:C:H2'	22:DA:2104:C:C6	2.54	0.41
22:DA:2117:A:C2	22:DA:2171:A:N1	2.87	0.41
22:DA:2195:U:H2'	22:DA:2196:C:H6	1.85	0.41
22:DA:2286:G:C5'	22:DA:2287:A:O4'	2.68	0.41
22:DA:2321:U:H5'	22:DA:2322:A:OP2	2.20	0.41
27:DF:135:GLN:OE1	27:DF:135:GLN:N	2.51	0.41
31:DJ:11:VAL:CG1	31:DJ:12:LYS:N	2.83	0.41
33:DL:40:SER:HB3	58:DL:203:HOH:O	2.21	0.41
33:DL:59:ARG:HB3	33:DL:59:ARG:NH1	2.34	0.41
34:DM:76:LYS:NZ	34:DM:83:GLY:O	2.50	0.41
54:D6:2:THR:O	54:D6:2:THR:OG1	2.35	0.41
1:AA:64:G:N7	1:AA:99:C:C4	2.88	0.41
1:AA:69:G:H5'	1:AA:70:U:P	2.60	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:100:G:H2'	1:AA:101:A:H5'	2.02	0.41
1:AA:174:A:C2	1:AA:175:C:C1'	3.03	0.41
1:AA:181:A:C4	1:AA:194:C:N4	2.88	0.41
1:AA:452:A:N7	1:AA:453:G:C8	2.88	0.41
1:AA:615:G:N3	1:AA:616:G:C8	2.88	0.41
1:AA:658:C:H1'	15:AO:22:THR:HG21	2.02	0.41
1:AA:1211:U:O2'	1:AA:1212:U:O5'	2.37	0.41
1:AA:1298:U:O4'	1:AA:1299:A:C6	2.74	0.41
1:AA:1385:G:O2'	1:AA:1386:G:H5'	2.20	0.41
1:AA:1475:G:H4'	22:BA:1689:A:H4'	2.02	0.41
3:AC:11:ARG:O	3:AC:12:LEU:C	2.58	0.41
7:AG:127:ALA:O	7:AG:128:ALA:C	2.57	0.41
9:AI:10:GLY:HA2	9:AI:81:HIS:ND1	2.34	0.41
11:AK:27:PHE:CE2	11:AK:89:PRO:CG	3.03	0.41
13:AM:16:VAL:HA	13:AM:34:LEU:CD1	2.50	0.41
17:AQ:16:LYS:HB3	17:AQ:17:MET:HE1	2.02	0.41
19:AS:70:LYS:HD2	19:AS:70:LYS:HA	1.89	0.41
20:AT:5:LYS:O	20:AT:6:SER:C	2.59	0.41
20:AT:58:VAL:HG12	20:AT:72:ALA:HB1	2.02	0.41
21:AU:4:ILE:N	21:AU:20:LYS:HE3	2.35	0.41
22:BA:44:A:C2	22:BA:45:G:C4	3.08	0.41
22:BA:959:A:N6	22:BA:960:A:N1	2.68	0.41
22:BA:994:C:H1'	39:BR:10:LYS:HE3	2.02	0.41
22:BA:1073:A:H2'	22:BA:1074:G:H5"	2.01	0.41
22:BA:1153:C:H2'	22:BA:1154:G:O4'	2.20	0.41
22:BA:1205:A:C6	26:BE:165:HIS:HB2	2.55	0.41
22:BA:1244:A:OP1	33:BL:7:SER:OG	2.37	0.41
22:BA:1421:G:C2	22:BA:1422:G:N7	2.88	0.41
22:BA:1479:G:O2'	22:BA:1480:C:H5'	2.19	0.41
22:BA:1753:G:OP1	37:BP:93:ARG:HD3	2.20	0.41
22:BA:1916:A:C2	22:BA:1917:U:H1'	2.55	0.41
22:BA:1936:A:C6	22:BA:1945:G:C4	3.07	0.41
22:BA:2038:G:H2'	22:BA:2039:U:O4'	2.21	0.41
22:BA:2075:U:C4	22:BA:2238:G:C6	3.08	0.41
22:BA:2127:G:H5'	22:BA:2128:G:OP1	2.19	0.41
22:BA:2185:U:C2'	22:BA:2186:G:H5'	2.50	0.41
22:BA:2336:A:N3	22:BA:2385:C:H1'	2.35	0.41
22:BA:2348:U:O2'	22:BA:2349:G:H5'	2.19	0.41
27:BF:52:ASN:CB	27:BF:147:ASP:OD2	2.68	0.41
30:BI:11:LEU:HD11	30:BI:27:ALA:O	2.20	0.41
35:BN:67:PHE:O	35:BN:71:ARG:N	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:2:ILE:HG23	41:BT:4:GLU:HA	2.01	0.41
1:CA:79:G:N2	1:CA:91:U:C2	2.88	0.41
1:CA:98:A:C2	1:CA:99:C:C2	3.09	0.41
1:CA:147:G:H2'	1:CA:148:G:C8	2.55	0.41
1:CA:174:A:C2	1:CA:175:C:C1'	3.03	0.41
1:CA:211:G:H21	1:CA:212:G:H1'	1.83	0.41
1:CA:247:G:C5	1:CA:278:G:C2	3.08	0.41
1:CA:463:U:O2	1:CA:463:U:H2'	2.19	0.41
1:CA:577:G:N3	1:CA:578:C:C6	2.89	0.41
1:CA:833:G:C5	1:CA:834:U:C5	3.08	0.41
1:CA:1461:G:H2'	1:CA:1462:C:O4'	2.20	0.41
2:CB:126:PHE:C	2:CB:126:PHE:CD1	2.91	0.41
2:CB:207:ILE:HG12	2:CB:208:ARG:N	2.34	0.41
3:CC:179:ARG:O	3:CC:206:GLU:O	2.38	0.41
4:CD:33:LYS:O	4:CD:34:ILE:C	2.58	0.41
4:CD:188:ARG:HD2	4:CD:188:ARG:HA	1.80	0.41
11:CK:77:TYR:O	11:CK:78:GLY:C	2.59	0.41
12:CL:94:ARG:HB2	12:CL:95:TYR:CE2	2.55	0.41
15:CO:49:ASP:OD2	15:CO:52:SER:OG	2.37	0.41
22:DA:818:G:O2'	22:DA:819:A:O4'	2.35	0.41
22:DA:1153:C:H2'	22:DA:1154:G:O4'	2.20	0.41
22:DA:1276:A:C2	22:DA:1295:C:C2	3.08	0.41
22:DA:1327:A:N6	22:DA:1328:A:C2	2.88	0.41
22:DA:1500:G:C6	22:DA:1501:G:C5	3.07	0.41
22:DA:1664:A:C8	22:DA:1664:A:OP2	2.73	0.41
22:DA:2144:G:N2	22:DA:2146:C:O2	2.53	0.41
22:DA:2813:A:H2'	22:DA:2814:A:O4'	2.20	0.41
27:DF:6:ASP:HA	27:DF:9:LYS:HD2	2.01	0.41
29:DH:135:HIS:CG	29:DH:136:SER:N	2.88	0.41
30:DI:83:ALA:O	30:DI:84:ALA:HB2	2.20	0.41
32:DK:70:ARG:HG2	32:DK:76:VAL:HG23	2.02	0.41
40:DS:24:ILE:CG2	40:DS:32:ALA:HB1	2.50	0.41
41:DT:2:ILE:HA	41:DT:3:ARG:CB	2.50	0.41
1:AA:142:G:C6	1:AA:143:A:C6	3.08	0.41
1:AA:346:G:C8	37:BP:37:LYS:HE2	2.55	0.41
1:AA:478:A:H2'	1:AA:479:U:C4'	2.50	0.41
1:AA:880:C:C2'	1:AA:881:G:H5'	2.50	0.41
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.50	0.41
1:AA:1152:A:O2'	1:AA:1153:G:H5'	2.20	0.41
1:AA:1237:C:C4	1:AA:1336:C:C2	3.08	0.41
1:AA:1379:G:C6	1:AA:1380:U:O4	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:33:GLY:N	2:AB:40:ILE:O	2.53	0.41
2:AB:169:GLU:O	2:AB:170:HIS:C	2.59	0.41
4:AD:40:GLN:OE1	4:AD:41:HIS:CE1	2.74	0.41
5:AE:104:GLY:O	5:AE:105:ILE:CG2	2.66	0.41
7:AG:135:VAL:O	7:AG:139:GLU:HG2	2.19	0.41
8:AH:12:THR:OG1	8:AH:15:ARG:NH2	2.53	0.41
11:AK:23:ILE:HD11	11:AK:86:VAL:HG13	2.02	0.41
14:AN:43:ASN:HA	14:AN:45:VAL:HG22	2.03	0.41
20:AT:69:LYS:NZ	20:AT:69:LYS:HB2	2.36	0.41
21:AU:4:ILE:HD13	21:AU:20:LYS:NZ	2.36	0.41
21:AU:17:ARG:NH1	21:AU:20:LYS:HG2	2.34	0.41
21:AU:33:ARG:O	21:AU:33:ARG:HG3	2.20	0.41
22:BA:141:G:H3'	22:BA:142:A:C8	2.54	0.41
22:BA:189:G:H2'	22:BA:205:G:N2	2.35	0.41
22:BA:273:G:N2	22:BA:365:U:C2	2.89	0.41
22:BA:283:G:C5	22:BA:284:U:C4	3.09	0.41
22:BA:620:G:H4'	22:BA:621:A:O5'	2.20	0.41
22:BA:674:G:H5"	26:BE:71:GLY:N	2.34	0.41
22:BA:1056:G:H5"	22:BA:1057:A:C5'	2.51	0.41
22:BA:1105:U:H2'	22:BA:1106:G:H8	1.85	0.41
22:BA:1317:G:C2	22:BA:1336:A:C2	3.08	0.41
22:BA:1652:A:C2	22:BA:2006:C:N3	2.89	0.41
22:BA:1695:G:C8	24:BC:8:PRO:HG2	2.55	0.41
22:BA:2077:A:C5	22:BA:2435:A:C5	3.08	0.41
22:BA:2419:U:H2'	22:BA:2420:C:C6	2.55	0.41
22:BA:2560:A:C5	22:BA:2561:U:C5	3.07	0.41
22:BA:2623:G:H4'	22:BA:2825:G:C8	2.55	0.41
22:BA:2838:G:O3'	35:BN:46:ARG:HD3	2.20	0.41
27:BF:124:GLY:O	27:BF:125:ARG:HG2	2.18	0.41
28:BG:80:THR:HG22	28:BG:81:GLU:H	1.84	0.41
35:BN:21:PHE:HB3	35:BN:47:VAL:HG21	2.02	0.41
36:BO:64:TYR:O	36:BO:67:ASN:ND2	2.52	0.41
41:BT:41:ALA:O	41:BT:44:LYS:N	2.53	0.41
48:B0:54:VAL:O	48:B0:55:ILE:C	2.59	0.41
53:B5:47:LYS:C	53:B5:48:LEU:HD23	2.41	0.41
1:CA:130:A:C2	1:CA:264:C:N1	2.88	0.41
1:CA:219:U:C2	1:CA:220:G:C8	3.09	0.41
1:CA:743:A:C6	1:CA:744:C:C4	3.08	0.41
1:CA:773:G:C2	1:CA:807:A:N1	2.89	0.41
1:CA:939:G:P	7:CG:95:ARG:NH2	2.94	0.41
1:CA:976:G:H5"	1:CA:1358:U:O2'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1216:A:H2'	1:CA:1217:C:H6	1.86	0.41
1:CA:1494:G:O2'	22:DA:1912:A:O2'	2.11	0.41
1:CA:1514:G:C4	1:CA:1515:G:C8	3.09	0.41
2:CB:104:TRP:CH2	2:CB:155:GLY:C	2.93	0.41
3:CC:101:ILE:O	3:CC:101:ILE:CG2	2.68	0.41
4:CD:24:GLY:O	4:CD:161:LEU:HD11	2.19	0.41
4:CD:40:GLN:O	4:CD:40:GLN:HG2	2.20	0.41
4:CD:124:MET:HG3	4:CD:146:ARG:HG2	2.02	0.41
5:CE:44:GLY:O	5:CE:45:ARG:O	2.39	0.41
7:CG:33:ASP:HB3	7:CG:35:LYS:HE3	2.01	0.41
11:CK:64:GLN:O	11:CK:68:GLU:HG3	2.20	0.41
12:CL:33:VAL:O	12:CL:34:CYS:CB	2.68	0.41
15:CO:36:ILE:HG23	15:CO:56:LEU:HD11	2.03	0.41
16:CP:4:ILE:CD1	16:CP:65:ALA:HB1	2.50	0.41
21:CU:29:LEU:C	21:CU:29:LEU:HD23	2.40	0.41
22:DA:41:C:H2'	22:DA:42:A:O4'	2.20	0.41
22:DA:46:G:N2	22:DA:47:C:N1	2.69	0.41
22:DA:119:A:H4'	22:DA:120:U:O5'	2.21	0.41
22:DA:120:U:H3'	22:DA:120:U:OP2	2.21	0.41
22:DA:226:A:C2	22:DA:230:G:O6	2.74	0.41
22:DA:282:A:C6	22:DA:283:G:C6	3.08	0.41
22:DA:558:U:H2'	22:DA:559:G:C8	2.55	0.41
22:DA:783:A:C8	22:DA:784:G:H4'	2.55	0.41
22:DA:804:A:H2'	22:DA:806:C:C4	2.55	0.41
22:DA:1351:C:H2'	22:DA:1352:U:C1'	2.50	0.41
22:DA:1632:A:C6	22:DA:1633:G:C6	3.08	0.41
22:DA:1654:A:OP1	35:DN:1:MET:HA	2.20	0.41
22:DA:1801:A:C5	24:DC:262:ARG:NH2	2.88	0.41
22:DA:1874:C:C4	22:DA:1875:G:C6	3.08	0.41
22:DA:2744:G:N1	22:DA:2761:A:C6	2.88	0.41
22:DA:2756:U:C4	22:DA:2759:G:O6	2.73	0.41
22:DA:2788:C:O2'	22:DA:2809:A:N3	2.41	0.41
26:DE:113:VAL:HG23	26:DE:118:LEU:HD23	2.01	0.41
29:DH:31:VAL:HB	29:DH:32:PRO:HD2	2.00	0.41
29:DH:40:THR:OG1	29:DH:43:ASN:ND2	2.53	0.41
29:DH:53:GLU:C	29:DH:55:GLU:N	2.72	0.41
30:DI:124:ALA:C	30:DI:126:THR:H	2.23	0.41
34:DM:62:LYS:HD3	34:DM:64:TRP:CZ2	2.55	0.41
34:DM:67:VAL:HG11	34:DM:96:ILE:HD11	2.01	0.41
35:DN:20:MET:CG	35:DN:21:PHE:N	2.83	0.41
46:DY:5:GLU:HB3	46:DY:8:GLU:OE1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D3:30:ARG:O	51:D3:31:HIS:HB3	2.20	0.41
1:AA:65:A:C2	1:AA:381:C:C6	3.09	0.41
1:AA:116:A:H2'	1:AA:117:G:C8	2.55	0.41
1:AA:246:A:N3	1:AA:282:A:C6	2.88	0.41
1:AA:581:G:C8	1:AA:758:C:N4	2.88	0.41
1:AA:697:U:C6	1:AA:698:G:C8	3.07	0.41
1:AA:1216:A:H2'	1:AA:1217:C:C6	2.54	0.41
1:AA:1324:A:C6	1:AA:1325:C:N3	2.88	0.41
1:AA:1377:A:N3	7:AG:2:PRO:HG3	2.35	0.41
1:AA:1491:G:H2'	1:AA:1492:A:O4'	2.20	0.41
1:AA:1539:C:H5"	21:AU:18:ARG:HG3	2.02	0.41
2:AB:54:LEU:N	2:AB:54:LEU:HD22	2.35	0.41
2:AB:93:ASN:OD1	2:AB:94:HIS:ND1	2.52	0.41
4:AD:60:LYS:NZ	4:AD:194:ASP:O	2.53	0.41
5:AE:115:LEU:HD12	5:AE:115:LEU:HA	1.92	0.41
6:AF:11:HIS:HA	6:AF:12:PRO:HD2	1.91	0.41
9:AI:28:ILE:CG1	9:AI:63:LEU:HD21	2.49	0.41
9:AI:51:PRO:HB2	9:AI:83:ILE:CG2	2.51	0.41
9:AI:63:LEU:N	9:AI:63:LEU:HD22	2.36	0.41
9:AI:97:GLU:CD	9:AI:97:GLU:N	2.73	0.41
20:AT:83:ILE:O	20:AT:87:ALA:HB2	2.19	0.41
22:BA:167:A:H2'	22:BA:168:G:O4'	2.20	0.41
22:BA:310:A:O2'	22:BA:311:A:OP2	2.35	0.41
22:BA:1071:G:O4'	22:BA:1089:A:N7	2.53	0.41
22:BA:1085:A:N6	22:BA:1086:A:N6	2.69	0.41
22:BA:1441:G:H2'	22:BA:1442:U:H6	1.84	0.41
22:BA:1863:G:C6	22:BA:1864:U:N3	2.89	0.41
22:BA:1904:G:C2'	22:BA:1905:C:H5'	2.51	0.41
22:BA:2219:U:H2'	22:BA:2220:U:O5'	2.20	0.41
22:BA:2489:U:C4	22:BA:2490:G:C6	3.09	0.41
22:BA:2831:G:OP1	25:BD:56:LYS:NZ	2.50	0.41
23:BB:106:G:H2'	23:BB:107:G:O4'	2.20	0.41
24:BC:261:LYS:HA	24:BC:264:ASP:OD2	2.20	0.41
25:BD:14:ILE:HD13	25:BD:24:VAL:HG21	2.03	0.41
26:BE:108:ILE:CD1	26:BE:180:LEU:HB3	2.51	0.41
27:BF:78:LYS:O	27:BF:79:ILE:HG23	2.21	0.41
29:BH:90:LEU:HD13	29:BH:125:THR:HA	2.03	0.41
30:BI:51:LYS:HB2	30:BI:51:LYS:HE2	1.93	0.41
33:BL:63:LYS:HA	51:B3:13:ARG:HG3	2.02	0.41
35:BN:16:HIS:O	35:BN:17:ARG:C	2.58	0.41
40:BS:51:LEU:O	40:BS:54:ALA:HB3	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BU:39:ILE:O	42:BU:40:ASN:C	2.58	0.41
49:B1:14:SER:HB3	49:B1:48:ILE:O	2.20	0.41
51:B3:39:LYS:HA	51:B3:42:ARG:NH2	2.36	0.41
52:B4:25:VAL:O	52:B4:34:LYS:HA	2.20	0.41
1:CA:575:G:O2'	1:CA:821:G:OP2	2.25	0.41
1:CA:598:U:H4'	8:CH:86:TYR:CG	2.56	0.41
1:CA:1140:C:O2'	1:CA:1141:C:O5'	2.36	0.41
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.54	0.41
2:CB:21:ARG:HA	2:CB:21:ARG:NE	2.33	0.41
13:CM:33:ILE:HG23	13:CM:59:GLU:CB	2.51	0.41
18:CR:20:GLU:HG3	18:CR:55:LEU:HD13	2.01	0.41
18:CR:58:ALA:O	18:CR:59:ILE:C	2.58	0.41
22:DA:78:U:OP2	46:DY:2:LYS:CD	2.68	0.41
22:DA:323:C:O2	22:DA:323:C:O4'	2.36	0.41
22:DA:477:A:C4	22:DA:478:A:C8	3.08	0.41
22:DA:485:C:C4	22:DA:496:G:N1	2.88	0.41
22:DA:515:A:H2'	22:DA:516:C:H5'	2.02	0.41
22:DA:590:A:C5	22:DA:591:U:C4	3.08	0.41
22:DA:750:A:N3	22:DA:750:A:H2'	2.36	0.41
22:DA:842:U:C2	22:DA:843:G:C8	3.08	0.41
22:DA:863:A:H2'	22:DA:864:G:C8	2.55	0.41
22:DA:983:A:N6	22:DA:984:A:C2	2.88	0.41
22:DA:1345:C:H2'	22:DA:1346:G:O4'	2.20	0.41
22:DA:1492:G:C4	22:DA:1496:A:N6	2.88	0.41
22:DA:1525:A:C6	22:DA:1526:C:C4	3.08	0.41
22:DA:1603:A:OP2	22:DA:1604:C:OP2	2.39	0.41
22:DA:1875:G:C2'	22:DA:1876:A:OP2	2.68	0.41
22:DA:1878:G:H2'	22:DA:1879:C:O4'	2.20	0.41
22:DA:2135:A:N6	22:DA:2156:G:O2'	2.53	0.41
22:DA:2190:G:O2'	22:DA:2191:A:H5'	2.20	0.41
22:DA:2685:G:C5	22:DA:2686:G:N7	2.88	0.41
23:DB:64:G:C6	23:DB:65:U:C4	3.09	0.41
23:DB:94:A:C6	23:DB:95:U:C4	3.08	0.41
26:DE:88:ARG:HB3	26:DE:89:PRO:HD2	2.03	0.41
28:DG:44:LYS:N	28:DG:44:LYS:HE3	2.36	0.41
30:DI:28:LEU:HD11	30:DI:35:ILE:HD13	2.02	0.41
31:DJ:24:THR:O	31:DJ:25:LEU:C	2.58	0.41
35:DN:90:ARG:HG2	35:DN:92:GLY:O	2.21	0.41
41:DT:12:ARG:O	41:DT:13:ALA:CB	2.68	0.41
42:DU:9:ASP:O	42:DU:25:VAL:HG23	2.21	0.41
48:D0:31:ASP:O	48:D0:33:THR:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:D2:26:ASN:O	50:D2:30:VAL:HG23	2.20	0.41
1:AA:116:A:H2'	1:AA:117:G:H8	1.84	0.41
1:AA:212:G:C2	1:AA:213:G:C4	3.08	0.41
1:AA:428:G:C6	1:AA:430:A:N6	2.87	0.41
1:AA:622:A:N7	1:AA:623:C:C6	2.89	0.41
1:AA:828:U:C2'	1:AA:829:G:O5'	2.69	0.41
1:AA:1123:U:H4'	10:AJ:39:PRO:HD2	2.02	0.41
1:AA:1128:C:N4	1:AA:1129:C:N4	2.68	0.41
1:AA:1133:G:H2'	1:AA:1133:G:N3	2.35	0.41
1:AA:1313:U:C2	1:AA:1314:C:C5	3.09	0.41
1:AA:1520:C:C2	1:AA:1521:C:C5	3.09	0.41
3:AC:7:PRO:HD2	3:AC:184:TYR:CD1	2.55	0.41
4:AD:9:LEU:O	4:AD:10:LYS:C	2.59	0.41
4:AD:28:ILE:O	4:AD:29:ASP:C	2.59	0.41
6:AF:53:LYS:O	6:AF:54:LEU:HD13	2.20	0.41
9:AI:44:ALA:O	9:AI:47:VAL:HG22	2.21	0.41
10:AJ:65:TYR:HB3	14:AN:96:LEU:CD1	2.51	0.41
10:AJ:66:GLU:HG2	14:AN:99:ALA:HB2	2.02	0.41
11:AK:76:GLU:O	22:BA:2141:G:OP1	2.36	0.41
12:AL:86:ARG:CZ	12:AL:88:LYS:HB3	2.51	0.41
15:AO:63:ARG:HG2	15:AO:67:LEU:CD1	2.50	0.41
16:AP:67:ILE:CG2	16:AP:71:VAL:HG12	2.50	0.41
17:AQ:11:ARG:O	17:AQ:23:VAL:HG13	2.20	0.41
22:BA:846:U:O2'	22:BA:847:U:C6	2.71	0.41
22:BA:1009:A:P	31:BJ:39:LYS:NZ	2.93	0.41
22:BA:1220:G:C2	22:BA:1230:A:C2	3.08	0.41
22:BA:1327:A:N6	22:BA:1328:A:C2	2.88	0.41
22:BA:1478:G:H1	22:BA:1513:U:H3	1.67	0.41
22:BA:1595:C:H2'	22:BA:1596:A:O4'	2.20	0.41
22:BA:1688:U:C5'	22:BA:1689:A:OP1	2.69	0.41
22:BA:1965:C:OP1	22:BA:1966:A:O2'	2.30	0.41
22:BA:2005:A:OP1	58:BA:3386:HOH:O	2.22	0.41
22:BA:2885:G:H2'	22:BA:2886:A:C4'	2.50	0.41
25:BD:151:THR:HG22	25:BD:152:PRO:CD	2.50	0.41
26:BE:199:MET:HE2	26:BE:199:MET:HB3	1.94	0.41
27:BF:2:ALA:O	27:BF:5:HIS:N	2.53	0.41
28:BG:109:PHE:CE1	28:BG:152:ARG:CZ	2.99	0.41
29:BH:33:GLN:O	29:BH:35:LYS:N	2.53	0.41
36:BO:31:THR:HG22	36:BO:34:HIS:N	2.35	0.41
38:BQ:94:ILE:O	38:BQ:98:ILE:HG13	2.21	0.41
42:BU:16:GLY:O	42:BU:18:ASP:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BU:47:LYS:HA	42:BU:48:PRO:HD2	1.93	0.41
46:BY:32:ALA:HB2	46:BY:37:LEU:HD23	2.01	0.41
1:CA:66:A:H4'	1:CA:173:U:C4	2.55	0.41
1:CA:110:C:C4	1:CA:111:G:C6	3.09	0.41
1:CA:167:A:C2'	1:CA:168:G:O5'	2.68	0.41
1:CA:439:U:H4'	4:CD:121:LYS:HD2	2.03	0.41
1:CA:508:U:O3'	58:CA:1759:HOH:O	2.22	0.41
1:CA:577:G:O2'	1:CA:578:C:H5'	2.21	0.41
1:CA:624:C:C2	1:CA:625:U:C6	3.07	0.41
1:CA:708:C:O2'	1:CA:709:U:H5'	2.20	0.41
1:CA:782:A:C8	1:CA:783:C:C5	3.08	0.41
1:CA:814:A:H4'	1:CA:1511:G:C4'	2.51	0.41
2:CB:118:GLU:HA	2:CB:121:SER:HB2	2.02	0.41
2:CB:165:ASP:HB3	2:CB:168:HIS:HB3	2.02	0.41
5:CE:44:GLY:O	5:CE:45:ARG:C	2.59	0.41
9:CI:19:VAL:HA	9:CI:65:ILE:HG22	2.01	0.41
10:CJ:52:LEU:HD22	10:CJ:59:LYS:HA	2.01	0.41
12:CL:38:TYR:O	12:CL:39:THR:HG23	2.20	0.41
17:CQ:12:VAL:CG1	17:CQ:21:ILE:HD11	2.51	0.41
17:CQ:17:MET:CE	17:CQ:20:SER:O	2.69	0.41
19:CS:63:THR:CG2	19:CS:64:ASP:N	2.83	0.41
22:DA:77:G:C6	22:DA:78:U:N3	2.89	0.41
22:DA:256:A:O2'	22:DA:257:C:H5'	2.20	0.41
22:DA:303:G:N1	22:DA:304:U:C2	2.88	0.41
22:DA:667:U:O2	51:D3:2:PRO:HG2	2.20	0.41
22:DA:751:A:C6	22:DA:789:A:C5	3.08	0.41
22:DA:1118:C:N4	22:DA:1119:U:C4	2.89	0.41
22:DA:1275:A:H4'	22:DA:1276:A:OP1	2.20	0.41
22:DA:1372:U:O2'	22:DA:2214:C:C6	2.71	0.41
22:DA:1509:A:C5	22:DA:1510:G:N7	2.89	0.41
22:DA:1623:G:C6	22:DA:1624:U:C5	3.09	0.41
22:DA:2109:U:H5"	22:DA:2110:G:OP2	2.21	0.41
22:DA:2283:C:C2'	22:DA:2284:A:H5'	2.51	0.41
22:DA:2446:G:C2	22:DA:2501:C:C5	3.09	0.41
22:DA:2861:U:C2	22:DA:2862:G:C8	3.08	0.41
23:DB:18:G:C2	23:DB:67:G:O6	2.74	0.41
24:DC:130:LEU:CD1	24:DC:135:ILE:HG13	2.50	0.41
24:DC:235:GLY:HA2	24:DC:239:ASN:HB2	2.02	0.41
31:DJ:41:LYS:O	31:DJ:42:ALA:C	2.59	0.41
34:DM:36:VAL:HG13	43:DV:82:TYR:CD2	2.55	0.41
34:DM:70:ASP:OD1	34:DM:70:ASP:C	2.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:53:THR:O	35:DN:56:LYS:HB2	2.21	0.41
37:DP:99:TYR:CE2	37:DP:100:LEU:CD2	3.04	0.41
40:DS:4:ILE:HG12	40:DS:106:VAL:HG22	2.02	0.41
41:DT:73:ARG:HA	41:DT:73:ARG:NH2	2.35	0.41
46:DY:18:LEU:O	46:DY:22:LEU:HB2	2.19	0.41
1:AA:194:C:H2'	1:AA:195:A:H5'	2.02	0.41
1:AA:390:U:H2'	1:AA:391:G:C8	2.56	0.41
1:AA:644:U:O2'	1:AA:645:G:H5'	2.21	0.41
1:AA:813:U:H2'	1:AA:814:A:H5"	2.03	0.41
1:AA:864:A:C2	1:AA:865:A:C2	3.09	0.41
1:AA:1136:C:O2	1:AA:1136:C:O4'	2.38	0.41
1:AA:1160:G:HO2'	1:AA:1161:C:P	2.43	0.41
1:AA:1190:G:P	3:AC:5:VAL:HB	2.60	0.41
1:AA:1270:G:C2	1:AA:1271:A:C8	3.09	0.41
1:AA:1309:G:C6	1:AA:1310:G:C5	3.09	0.41
1:AA:1314:C:O2'	1:AA:1315:U:H5'	2.21	0.41
1:AA:1335:U:H5'	1:AA:1336:C:H5'	2.02	0.41
1:AA:1350:A:C5	1:AA:1351:U:C4	3.09	0.41
2:AB:39:HIS:HB2	2:AB:189:THR:HG21	2.02	0.41
4:AD:151:LYS:HB2	4:AD:156:LYS:HE3	2.02	0.41
4:AD:174:ASP:O	4:AD:175:ALA:CB	2.68	0.41
5:AE:99:ALA:HB2	5:AE:124:LEU:HG	2.03	0.41
7:AG:97:ASN:OD1	7:AG:97:ASN:N	2.52	0.41
8:AH:76:GLN:O	8:AH:127:CYS:HB2	2.21	0.41
12:AL:63:VAL:HG21	12:AL:95:TYR:CD1	2.55	0.41
22:BA:164:C:C2'	22:BA:165:A:H5'	2.50	0.41
22:BA:359:G:C6	22:BA:360:U:N3	2.88	0.41
22:BA:929:U:H4'	47:BZ:38:ARG:NH2	2.35	0.41
22:BA:1061:U:C4	30:BI:10:LYS:O	2.73	0.41
22:BA:1090:A:C6	22:BA:1091:G:N7	2.88	0.41
22:BA:1703:G:H2'	22:BA:1704:C:C6	2.56	0.41
22:BA:2813:A:C2'	22:BA:2814:A:O5'	2.68	0.41
22:BA:2813:A:H2'	22:BA:2814:A:O5'	2.20	0.41
24:BC:36:LYS:O	24:BC:37:ASN:CB	2.69	0.41
35:BN:117:ASP:O	35:BN:118:ARG:C	2.59	0.41
39:BR:25:LEU:H	39:BR:94:THR:HG23	1.86	0.41
41:BT:70:HIS:O	41:BT:71:GLY:O	2.38	0.41
42:BU:28:VAL:HG23	42:BU:34:VAL:HG12	2.03	0.41
43:BV:80:HIS:CD2	43:BV:83:LYS:HG3	2.55	0.41
49:B1:47:VAL:CG1	49:B1:48:ILE:N	2.83	0.41
1:CA:36:C:O2'	12:CL:114:ARG:NH2	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:66:A:C6	1:CA:67:C:C4	3.08	0.41
1:CA:72:A:C5	1:CA:73:C:C4	3.08	0.41
1:CA:154:U:H2'	1:CA:155:A:H5'	2.03	0.41
1:CA:308:C:N4	1:CA:309:A:N6	2.68	0.41
1:CA:369:G:C2	1:CA:370:C:C6	3.09	0.41
1:CA:431:A:H2'	1:CA:432:A:O4'	2.21	0.41
1:CA:552:U:O2'	12:CL:83:ARG:O	2.38	0.41
1:CA:811:C:O2'	1:CA:901:A:N1	2.44	0.41
1:CA:1304:G:N1	1:CA:1305:G:N2	2.69	0.41
5:CE:149:SER:O	5:CE:153:VAL:HG13	2.21	0.41
6:CF:93:LYS:C	6:CF:94:HIS:CG	2.93	0.41
7:CG:37:SER:HA	7:CG:40:GLU:HG2	2.03	0.41
8:CH:92:LEU:HD22	8:CH:113:ASP:HB2	2.03	0.41
8:CH:112:THR:HG23	8:CH:115:ALA:HB2	2.03	0.41
10:CJ:19:ASP:HA	10:CJ:22:THR:CB	2.50	0.41
11:CK:116:ILE:O	11:CK:116:ILE:HG22	2.20	0.41
12:CL:35:THR:N	12:CL:54:ARG:O	2.54	0.41
17:CQ:25:ILE:HG12	17:CQ:42:THR:O	2.21	0.41
17:CQ:27:ARG:HG2	17:CQ:40:ARG:HB3	2.02	0.41
22:DA:37:C:H2'	22:DA:38:A:O4'	2.21	0.41
22:DA:616:A:C2	22:DA:617:G:C1'	3.03	0.41
22:DA:647:G:C5	22:DA:648:G:C5	3.08	0.41
22:DA:861:A:H2'	22:DA:862:G:O4'	2.20	0.41
22:DA:1109:C:C4	22:DA:1110:G:C6	3.08	0.41
22:DA:1197:G:O5'	22:DA:1227:G:O2'	2.37	0.41
22:DA:1250:G:C5'	38:DQ:6:ARG:HD2	2.50	0.41
22:DA:1324:G:O4'	22:DA:1616:A:N6	2.53	0.41
22:DA:1361:G:C5	22:DA:1362:C:C5	3.08	0.41
22:DA:1422:G:N2	22:DA:1577:C:H1'	2.35	0.41
22:DA:1680:U:O2'	22:DA:1763:G:N7	2.36	0.41
22:DA:1856:U:O4	22:DA:1857:G:C6	2.73	0.41
22:DA:2024:G:C2	22:DA:2040:G:N3	2.89	0.41
22:DA:2208:C:C2	22:DA:2217:G:N2	2.88	0.41
22:DA:2373:G:C6	22:DA:2374:C:C4	3.09	0.41
22:DA:2444:G:OP2	26:DE:63:LYS:HE2	2.21	0.41
22:DA:2619:C:O2'	22:DA:2620:C:H5'	2.20	0.41
22:DA:2742:G:OP1	52:D4:36:ARG:HD3	2.20	0.41
22:DA:2817:U:O2	22:DA:2836:U:H1'	2.21	0.41
22:DA:2824:C:N4	22:DA:2825:G:C5	2.89	0.41
23:DB:68:C:H2'	23:DB:69:G:O4'	2.20	0.41
24:DC:31:ALA:HB3	24:DC:32:PRO:HD3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:105:LEU:HD23	26:DE:105:LEU:HA	1.95	0.41
27:DF:46:ASP:HB3	27:DF:49:LEU:HB2	2.02	0.41
28:DG:144:VAL:HA	28:DG:147:ASP:OD2	2.20	0.41
32:DK:94:PRO:HG3	32:DK:115:ILE:HG12	2.03	0.41
36:DO:71:ALA:HB1	36:DO:106:LEU:HB2	2.01	0.41
42:DU:40:ASN:O	42:DU:42:VAL:N	2.54	0.41
43:DV:87:GLN:O	43:DV:88:HIS:HB2	2.21	0.41
50:D2:31:LEU:HD21	50:D2:43:THR:CG2	2.50	0.41
1:AA:137:U:O2	1:AA:227:G:C2	2.73	0.41
1:AA:263:A:OP2	20:AT:74:ARG:NH1	2.52	0.41
1:AA:422:C:H1'	1:AA:423:G:C2	2.56	0.41
1:AA:520:A:N1	1:AA:536:C:H1'	2.36	0.41
1:AA:843:U:O2	1:AA:843:U:O4'	2.37	0.41
1:AA:1124:G:P	10:AJ:38:GLY:HA3	2.60	0.41
2:AB:33:GLY:CA	2:AB:40:ILE:H	2.33	0.41
3:AC:14:ILE:N	3:AC:14:ILE:HD13	2.35	0.41
5:AE:101:GLU:O	5:AE:101:GLU:CG	2.68	0.41
5:AE:101:GLU:HB3	5:AE:122:ASN:HB2	2.02	0.41
6:AF:51:ILE:O	6:AF:51:ILE:HG12	2.19	0.41
8:AH:56:LYS:N	8:AH:57:PRO:HD3	2.35	0.41
14:AN:49:GLN:OE1	14:AN:49:GLN:CA	2.67	0.41
16:AP:67:ILE:CG2	16:AP:68:SER:N	2.83	0.41
16:AP:77:GLU:C	16:AP:79:ASN:N	2.74	0.41
22:BA:481:G:N3	22:BA:507:A:C2	2.89	0.41
22:BA:527:C:H4'	22:BA:528:A:O5'	2.20	0.41
22:BA:749:A:H4'	22:BA:1271:G:N3	2.35	0.41
22:BA:892:A:H2'	22:BA:892:A:N3	2.35	0.41
22:BA:927:A:O2'	47:BZ:39:GLU:OE2	2.30	0.41
22:BA:959:A:N1	22:BA:960:A:C2	2.88	0.41
22:BA:975:A:C5	22:BA:990:A:N7	2.88	0.41
22:BA:1128:G:O4'	22:BA:2516:A:O2'	2.38	0.41
22:BA:1178:C:C2'	22:BA:1179:G:N7	2.83	0.41
22:BA:1183:U:H2'	22:BA:1184:U:C6	2.56	0.41
22:BA:2140:G:N3	22:BA:2140:G:C2'	2.82	0.41
22:BA:2286:G:C4'	22:BA:2287:A:O5'	2.66	0.41
22:BA:2405:G:O2'	22:BA:2406:A:OP1	2.30	0.41
22:BA:2480:C:H2'	22:BA:2481:G:H5'	2.02	0.41
22:BA:2508:G:C2	22:BA:2582:G:C6	3.08	0.41
29:BH:95:GLY:HA2	29:BH:117:LEU:CD2	2.51	0.41
30:BI:103:ARG:HE	30:BI:104:ALA:N	2.19	0.41
32:BK:73:ASP:OD1	32:BK:74:GLY:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:54:GLN:O	33:BL:55:MET:C	2.59	0.41
33:BL:109:LYS:HG2	33:BL:126:ARG:HB3	2.03	0.41
34:BM:49:ALA:HB1	34:BM:120:ALA:HB1	2.03	0.41
46:BY:5:GLU:C	46:BY:7:ARG:N	2.73	0.41
46:BY:20:ASN:O	46:BY:24:GLU:HB2	2.21	0.41
53:B5:65:LEU:HD11	53:B5:191:ARG:HA	2.01	0.41
1:CA:144:G:C4	1:CA:179:A:C2	3.08	0.41
1:CA:552:U:N3	1:CA:553:A:N7	2.69	0.41
1:CA:790:A:C6	1:CA:791:G:N1	2.89	0.41
1:CA:851:G:H2'	1:CA:851:G:N3	2.34	0.41
1:CA:881:G:C4	1:CA:882:C:C6	3.09	0.41
1:CA:1073:U:H5'	1:CA:1074:G:OP2	2.21	0.41
1:CA:1279:G:OP1	10:CJ:9:ARG:NH2	2.54	0.41
1:CA:1434:A:N6	1:CA:1435:G:C6	2.88	0.41
2:CB:96:TRP:CZ3	2:CB:175:GLU:OE2	2.73	0.41
3:CC:6:HIS:C	3:CC:8:ASN:H	2.24	0.41
3:CC:37:PHE:HZ	14:CN:90:ARG:NH1	2.19	0.41
3:CC:66:VAL:O	3:CC:66:VAL:HG12	2.21	0.41
4:CD:151:LYS:O	4:CD:152:GLN:OE1	2.39	0.41
4:CD:197:GLU:O	4:CD:201:VAL:HG23	2.20	0.41
5:CE:122:ASN:O	5:CE:123:VAL:C	2.59	0.41
6:CF:3:HIS:ND1	6:CF:65:GLU:HG3	2.36	0.41
9:CI:28:ILE:HG21	9:CI:35:LEU:HD13	2.03	0.41
11:CK:118:HIS:O	11:CK:119:ASN:HB2	2.20	0.41
13:CM:64:VAL:O	13:CM:69:LEU:HD13	2.21	0.41
17:CQ:8:LEU:N	17:CQ:8:LEU:CD1	2.83	0.41
20:CT:25:ARG:HD2	20:CT:29:ARG:NH1	2.34	0.41
22:DA:197:A:C2	22:DA:198:C:H1'	2.56	0.41
22:DA:270:A:C2	22:DA:369:U:H4'	2.55	0.41
22:DA:279:A:N7	22:DA:280:U:C5	2.89	0.41
22:DA:404:A:O4'	22:DA:405:U:OP2	2.38	0.41
22:DA:511:U:O4	22:DA:512:G:C6	2.74	0.41
22:DA:570:G:C2'	22:DA:571:U:H5'	2.50	0.41
22:DA:604:G:C6	22:DA:605:G:C5	3.08	0.41
22:DA:658:U:N3	22:DA:659:G:C8	2.89	0.41
22:DA:725:G:C5	22:DA:726:G:C6	3.09	0.41
22:DA:1403:A:H2'	22:DA:1404:C:C6	2.56	0.41
22:DA:1434:A:H2'	22:DA:1435:G:C8	2.56	0.41
22:DA:1662:U:O2	22:DA:2687:U:H5'	2.21	0.41
22:DA:1774:C:O2	24:DC:11:PRO:HB2	2.21	0.41
22:DA:1809:A:N6	22:DA:1810:A:C6	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1814:G:C6	22:DA:1815:A:N6	2.89	0.41
22:DA:2037:A:C6	22:DA:2038:G:C5	3.08	0.41
22:DA:2204:G:C6	22:DA:2221:G:C2	3.09	0.41
22:DA:2231:U:H2'	22:DA:2232:C:C6	2.56	0.41
22:DA:2340:A:H2'	22:DA:2341:G:C8	2.55	0.41
23:DB:57:A:H1'	27:DF:27:GLN:HA	2.02	0.41
25:DD:113:SER:OG	25:DD:167:ASN:N	2.53	0.41
25:DD:148:GLN:HB2	25:DD:152:PRO:HG2	2.01	0.41
28:DG:133:LEU:O	28:DG:133:LEU:HD12	2.20	0.41
29:DH:2:GLN:O	29:DH:3:VAL:O	2.38	0.41
32:DK:73:ASP:O	37:DP:75:GLN:HG3	2.21	0.41
32:DK:121:GLU:HG2	32:DK:122:VAL:HG23	2.02	0.41
38:DQ:27:ALA:HB1	38:DQ:31:VAL:HB	2.03	0.41
39:DR:66:HIS:CD2	39:DR:66:HIS:N	2.88	0.41
41:DT:56:GLU:HB3	41:DT:86:THR:HB	2.02	0.41
42:DU:41:LEU:HD13	42:DU:60:GLU:O	2.20	0.41
50:D2:43:THR:O	50:D2:44:VAL:CB	2.68	0.41
1:AA:90:C:N3	1:AA:91:U:C5	2.89	0.41
1:AA:1118:U:O4'	1:AA:1179:A:H1'	2.20	0.41
1:AA:1130:A:C2	1:AA:1146:A:C4	3.08	0.41
2:AB:35:ARG:O	2:AB:36:ASN:C	2.59	0.41
2:AB:73:LYS:O	2:AB:73:LYS:HG3	2.20	0.41
4:AD:107:PHE:C	4:AD:158:ALA:HB1	2.41	0.41
6:AF:93:LYS:O	6:AF:94:HIS:HB2	2.20	0.41
7:AG:139:GLU:OE1	7:AG:139:GLU:CA	2.69	0.41
9:AI:104:VAL:HG23	9:AI:105:THR:N	2.36	0.41
10:AJ:42:LEU:HA	10:AJ:43:PRO:HD2	1.80	0.41
11:AK:23:ILE:HD12	11:AK:25:ALA:HB2	2.02	0.41
13:AM:107:ARG:HH21	13:AM:113:ARG:HB3	1.84	0.41
17:AQ:23:VAL:HG21	17:AQ:61:ILE:CD1	2.51	0.41
18:AR:23:TYR:CE1	18:AR:24:LYS:HG2	2.56	0.41
20:AT:58:VAL:O	20:AT:59:ASP:C	2.58	0.41
22:BA:45:G:H5'	22:BA:46:G:OP1	2.21	0.41
22:BA:138:U:OP2	22:BA:139:U:H5"	2.21	0.41
22:BA:361:G:O2'	22:BA:362:A:H8	2.03	0.41
22:BA:414:C:H2'	22:BA:415:A:C8	2.55	0.41
22:BA:1024:G:N2	22:BA:1142:A:H2	2.18	0.41
22:BA:1169:A:H2'	22:BA:1170:C:O4'	2.20	0.41
22:BA:1253:A:C3'	22:BA:1254:A:H5'	2.50	0.41
22:BA:1447:C:H2'	22:BA:1448:G:C8	2.55	0.41
22:BA:1565:C:HO2'	22:BA:1566:A:P	2.44	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1717:A:C5	22:BA:1718:G:C8	3.08	0.41
22:BA:1909:C:H5'	22:BA:1910:G:OP2	2.20	0.41
22:BA:1956:U:C2'	22:BA:1957:C:H5'	2.51	0.41
22:BA:2154:A:H2'	22:BA:2155:U:C6	2.56	0.41
22:BA:2333:A:H5'	22:BA:2335:A:H1'	2.03	0.41
25:BD:104:VAL:CG2	25:BD:105:LYS:N	2.84	0.41
26:BE:190:ALA:O	26:BE:193:VAL:HB	2.21	0.41
28:BG:54:PRO:HG3	28:BG:62:TRP:CE2	2.56	0.41
29:BH:82:SER:HB3	29:BH:146:VAL:HG12	2.03	0.41
37:BP:104:THR:O	37:BP:106:LYS:N	2.54	0.41
39:BR:14:VAL:CG1	39:BR:98:ILE:HG13	2.51	0.41
40:BS:50:VAL:CG1	40:BS:105:VAL:HG23	2.51	0.41
45:BX:31:PRO:O	45:BX:33:LEU:N	2.54	0.41
1:CA:116:A:OP2	1:CA:116:A:C8	2.73	0.41
1:CA:376:G:H5'	16:CP:5:ARG:HB2	2.03	0.41
1:CA:423:G:H3'	1:CA:423:G:N3	2.36	0.41
1:CA:444:G:C4	1:CA:445:G:C8	3.08	0.41
1:CA:718:A:H5'	11:CK:119:ASN:CG	2.41	0.41
1:CA:736:C:H2'	1:CA:737:C:C6	2.56	0.41
1:CA:771:G:C4	1:CA:809:G:N2	2.89	0.41
1:CA:875:U:O2'	8:CH:15:ARG:NH1	2.54	0.41
1:CA:1088:G:C6	1:CA:1089:G:N7	2.89	0.41
1:CA:1138:G:C6	1:CA:1140:C:C2	3.09	0.41
1:CA:1310:G:H2'	1:CA:1311:A:O4'	2.21	0.41
1:CA:1505:G:H4'	1:CA:1506:U:H5"	2.03	0.41
2:CB:18:HIS:CG	2:CB:203:ASN:ND2	2.88	0.41
2:CB:55:ALA:O	2:CB:59:LYS:HB2	2.20	0.41
3:CC:6:HIS:O	3:CC:8:ASN:N	2.53	0.41
3:CC:56:VAL:C	3:CC:57:ILE:HD12	2.41	0.41
4:CD:49:SER:O	4:CD:53:VAL:HG13	2.21	0.41
4:CD:173:VAL:O	4:CD:174:ASP:CB	2.67	0.41
9:CI:24:GLY:H	9:CI:61:LEU:HA	1.85	0.41
9:CI:84:THR:HB	9:CI:98:LEU:HD21	2.02	0.41
11:CK:52:PHE:HB3	11:CK:56:ARG:NH2	2.36	0.41
12:CL:25:GLU:HB3	12:CL:27:CYS:SG	2.60	0.41
13:CM:60:VAL:HG23	13:CM:65:VAL:HG21	2.02	0.41
20:CT:73:ALA:O	20:CT:77:ALA:HB2	2.20	0.41
21:CU:5:LYS:HD2	21:CU:5:LYS:O	2.20	0.41
22:DA:228:C:H4'	22:DA:229:C:C5'	2.51	0.41
22:DA:358:U:C2	22:DA:359:G:C8	3.09	0.41
22:DA:571:U:N3	22:DA:575:A:N7	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:621:A:OP2	33:DL:99:ASN:ND2	2.53	0.41
22:DA:635:C:O2'	22:DA:639:U:H5"	2.20	0.41
22:DA:699:A:H2'	22:DA:700:G:H5'	2.01	0.41
22:DA:715:A:N6	22:DA:716:A:C6	2.88	0.41
22:DA:765:C:H2'	22:DA:766:U:C6	2.56	0.41
22:DA:942:G:O2'	22:DA:1189:A:C2'	2.69	0.41
22:DA:1343:G:O6	22:DA:1403:A:N6	2.54	0.41
22:DA:1401:G:C6	22:DA:1402:U:C4	3.08	0.41
22:DA:1838:C:H4'	22:DA:1839:G:H8	1.86	0.41
22:DA:1862:G:C2	22:DA:1881:C:C2	3.09	0.41
22:DA:2013:A:OP1	40:DS:96:ILE:HA	2.21	0.41
22:DA:2114:A:H2'	22:DA:2114:A:N3	2.35	0.41
22:DA:2189:U:H2'	22:DA:2189:U:O2	2.20	0.41
22:DA:2341:G:C6	22:DA:2342:C:N4	2.89	0.41
22:DA:2345:G:H4'	22:DA:2346:A:C5'	2.50	0.41
23:DB:22:U:H2'	23:DB:23:G:C8	2.55	0.41
23:DB:90:C:H5'	34:DM:18:ARG:HG2	2.01	0.41
25:DD:3:GLY:HA3	25:DD:204:LYS:HG2	2.02	0.41
26:DE:58:LYS:HD3	26:DE:60:TRP:O	2.21	0.41
26:DE:98:LYS:O	26:DE:102:ARG:HG3	2.20	0.41
27:DF:44:ILE:CG2	27:DF:79:ILE:HG22	2.51	0.41
28:DG:159:GLY:HA2	28:DG:169:VAL:HG11	2.03	0.41
29:DH:130:VAL:CG1	29:DH:131:SER:N	2.82	0.41
30:DI:71:THR:HG23	30:DI:72:LYS:N	2.35	0.41
35:DN:2:ARG:HD3	35:DN:5:LYS:HB2	2.02	0.41
37:DP:51:ARG:N	37:DP:58:ALA:O	2.53	0.41
37:DP:84:ILE:HG22	37:DP:84:ILE:O	2.19	0.41
41:DT:89:GLU:HA	41:DT:89:GLU:OE2	2.20	0.41
45:DX:54:LYS:O	45:DX:58:VAL:N	2.48	0.41
48:D0:55:ILE:HG22	48:D0:56:ALA:N	2.35	0.41
51:D3:31:HIS:ND1	51:D3:31:HIS:C	2.74	0.41
1:AA:50:A:O2'	1:AA:360:G:N2	2.54	0.41
1:AA:130:A:C8	17:AQ:65:ARG:HD2	2.55	0.41
1:AA:178:C:H2'	1:AA:179:A:O4'	2.21	0.41
1:AA:200:G:N1	1:AA:201:G:C5	2.89	0.41
1:AA:212:G:N2	1:AA:213:G:N3	2.69	0.41
1:AA:430:A:C4	1:AA:431:A:C8	3.08	0.41
1:AA:474:G:C4	1:AA:475:C:C5	3.09	0.41
1:AA:652:U:C4	1:AA:752:G:N3	2.89	0.41
1:AA:687:A:C2	1:AA:700:G:N3	2.89	0.41
1:AA:696:A:N1	1:AA:797:C:O2'	2.43	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:832:G:C2	1:AA:833:G:C8	3.09	0.41
1:AA:971:G:H1'	1:AA:1365:G:O2'	2.20	0.41
1:AA:1118:U:C1'	1:AA:1179:A:C4	3.04	0.41
1:AA:1181:G:O2'	1:AA:1182:G:N7	2.51	0.41
1:AA:1241:G:C2	1:AA:1242:G:C5	3.09	0.41
1:AA:1296:C:H4'	1:AA:1302:C:N4	2.36	0.41
1:AA:1322:C:O2'	1:AA:1323:G:P	2.79	0.41
1:AA:1403:C:H1'	1:AA:1500:A:N1	2.36	0.41
1:AA:1462:C:C4	1:AA:1463:U:C5	3.09	0.41
1:AA:1508:A:H2'	1:AA:1509:C:O4'	2.21	0.41
1:AA:1533:C:H5'	1:AA:1534:A:OP1	2.20	0.41
1:AA:1537:U:H2'	1:AA:1538:C:O4'	2.21	0.41
2:AB:28:LYS:HB3	2:AB:29:PRO:HD3	2.03	0.41
2:AB:96:TRP:HZ3	2:AB:175:GLU:OE2	2.02	0.41
3:AC:8:ASN:C	3:AC:8:ASN:OD1	2.60	0.41
3:AC:53:SER:HB2	3:AC:112:ASP:OD1	2.21	0.41
4:AD:55:LEU:O	4:AD:55:LEU:HD23	2.20	0.41
5:AE:79:GLY:O	5:AE:121:HIS:N	2.48	0.41
6:AF:35:LYS:HD3	6:AF:35:LYS:N	2.36	0.41
7:AG:65:ALA:HA	7:AG:128:ALA:HA	2.03	0.41
10:AJ:10:LEU:O	10:AJ:71:LEU:HD13	2.21	0.41
10:AJ:52:LEU:HB3	14:AN:81:ARG:HE	1.86	0.41
10:AJ:57:VAL:HG13	10:AJ:58:ASN:N	2.36	0.41
10:AJ:65:TYR:HB2	14:AN:96:LEU:HD11	2.03	0.41
11:AK:63:ALA:CB	11:AK:92:GLY:HA3	2.51	0.41
12:AL:24:LEU:CB	12:AL:59:ASN:HD22	2.34	0.41
13:AM:19:LEU:O	13:AM:22:ILE:HD12	2.21	0.41
13:AM:103:LYS:O	13:AM:104:THR:HG23	2.20	0.41
14:AN:25:ALA:O	14:AN:28:LYS:HB3	2.21	0.41
15:AO:69:TYR:O	15:AO:70:LEU:C	2.58	0.41
17:AQ:10:GLY:HA3	17:AQ:24:ALA:O	2.20	0.41
20:AT:28:MET:O	20:AT:32:ILE:HG13	2.21	0.41
20:AT:34:LYS:HD3	20:AT:34:LYS:HA	1.92	0.41
20:AT:43:ASP:OD1	20:AT:46:ALA:N	2.48	0.41
20:AT:67:ILE:HG13	20:AT:71:LYS:HG2	2.03	0.41
21:AU:24:GLU:HB3	21:AU:25:LYS:H	1.63	0.41
22:BA:31:C:O2'	22:BA:32:C:H5'	2.21	0.41
22:BA:159:G:O2'	22:BA:167:A:N6	2.45	0.41
22:BA:271:G:H4'	22:BA:272:A:OP1	2.19	0.41
22:BA:641:U:C5	22:BA:642:U:C4	3.08	0.41
22:BA:734:A:C4	22:BA:735:A:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1320:C:N3	22:BA:1331:G:O6	2.54	0.41
22:BA:1515:A:H2'	22:BA:1516:G:O4'	2.20	0.41
22:BA:1688:U:H5'	22:BA:1689:A:OP1	2.21	0.41
22:BA:1922:G:N1	22:BA:1923:U:C6	2.89	0.41
22:BA:1923:U:C2	22:BA:1924:C:C6	3.08	0.41
22:BA:1949:G:C2	22:BA:1958:C:C2	3.09	0.41
22:BA:1985:C:O2	22:BA:1985:C:C2'	2.64	0.41
22:BA:2045:C:C2'	22:BA:2046:G:O5'	2.69	0.41
22:BA:2080:A:C5'	45:BX:19:SER:HB2	2.50	0.41
22:BA:2092:U:H4'	29:BH:24:GLY:HA3	2.03	0.41
22:BA:2287:A:N3	22:BA:2287:A:H2'	2.36	0.41
22:BA:2326:C:C1'	22:BA:2327:A:OP1	2.68	0.41
22:BA:2468:A:C2	22:BA:2481:G:C2	3.08	0.41
22:BA:2742:G:P	52:B4:36:ARG:HH11	2.44	0.41
22:BA:2830:C:P	25:BD:59:ARG:HD2	2.61	0.41
22:BA:2882:A:OP1	35:BN:96:ARG:HD3	2.21	0.41
24:BC:162:VAL:CG2	24:BC:176:LEU:HD23	2.51	0.41
25:BD:14:ILE:N	25:BD:14:ILE:CD1	2.84	0.41
27:BF:146:VAL:HG23	27:BF:146:VAL:O	2.21	0.41
28:BG:7:ALA:HA	28:BG:8:PRO:HD3	1.86	0.41
28:BG:96:ALA:HB2	28:BG:105:LEU:HD23	2.03	0.41
29:BH:30:LEU:C	29:BH:32:PRO:HD2	2.41	0.41
29:BH:100:ALA:HB2	29:BH:115:VAL:CG2	2.50	0.41
29:BH:129:GLU:C	29:BH:130:VAL:HG23	2.41	0.41
29:BH:132:PHE:CE2	29:BH:142:VAL:CG2	3.04	0.41
30:BI:76:ALA:CB	30:BI:129:ILE:HG23	2.51	0.41
31:BJ:64:VAL:HG11	31:BJ:68:LYS:HB2	2.00	0.41
32:BK:31:ARG:HD3	32:BK:32:TYR:CZ	2.56	0.41
33:BL:127:VAL:HG13	33:BL:131:ALA:HB3	2.03	0.41
34:BM:51:ARG:O	34:BM:55:ARG:HG3	2.21	0.41
35:BN:64:ARG:O	35:BN:67:PHE:HB3	2.21	0.41
35:BN:83:LEU:O	35:BN:84:GLY:C	2.59	0.41
38:BQ:21:ALA:HB1	38:BQ:28:ARG:O	2.21	0.41
45:BX:36:HIS:HB3	45:BX:38:PHE:CE1	2.55	0.41
1:CA:64:G:C8	1:CA:99:C:C4	3.08	0.41
1:CA:66:A:O4'	1:CA:173:U:C4	2.74	0.41
1:CA:251:G:H4'	1:CA:252:U:O5'	2.20	0.41
1:CA:781:A:H4'	1:CA:1522:U:O2'	2.21	0.41
1:CA:842:U:O2	1:CA:845:A:OP1	2.38	0.41
1:CA:913:A:H4'	1:CA:914:A:H4'	2.03	0.41
1:CA:997:U:H2'	1:CA:998:C:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.69	0.41
1:CA:1163:A:N3	1:CA:1174:G:C2	2.88	0.41
1:CA:1216:A:OP1	14:CN:5:SER:CB	2.69	0.41
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.55	0.41
1:CA:1408:A:N1	1:CA:1494:G:C5	2.89	0.41
1:CA:1448:C:H2'	1:CA:1449:C:C6	2.55	0.41
1:CA:1467:C:H2'	1:CA:1468:A:H8	1.84	0.41
1:CA:1534:A:H4'	1:CA:1535:C:H2'	2.02	0.41
2:CB:11:LYS:O	2:CB:12:ALA:C	2.59	0.41
2:CB:17:GLY:O	2:CB:39:HIS:O	2.38	0.41
2:CB:71:GLY:HA2	2:CB:164:ILE:HG22	2.03	0.41
2:CB:120:GLN:O	2:CB:120:GLN:HG2	2.21	0.41
3:CC:5:VAL:HG21	3:CC:10:ILE:HD13	2.02	0.41
3:CC:130:PHE:CZ	3:CC:131:ARG:CD	3.04	0.41
3:CC:150:LYS:HB2	3:CC:169:ARG:CG	2.51	0.41
4:CD:44:ARG:HA	4:CD:44:ARG:NE	2.36	0.41
4:CD:48:LEU:HD23	4:CD:52:GLY:C	2.41	0.41
5:CE:149:SER:OG	5:CE:152:MET:CG	2.69	0.41
8:CH:10:MET:HE1	8:CH:36:ILE:HB	2.03	0.41
8:CH:88:ARG:O	8:CH:122:GLY:CA	2.69	0.41
9:CI:15:SER:OG	9:CI:70:GLY:HA3	2.21	0.41
9:CI:33:ARG:HD3	9:CI:33:ARG:HA	1.86	0.41
10:CJ:11:LYS:HG2	10:CJ:71:LEU:HD13	2.02	0.41
11:CK:88:GLY:N	11:CK:114:THR:HG22	2.36	0.41
11:CK:126:LYS:O	21:CU:34:ARG:CZ	2.68	0.41
11:CK:126:LYS:C	21:CU:34:ARG:CZ	2.89	0.41
12:CL:65:SER:OG	12:CL:97:THR:HG23	2.20	0.41
13:CM:91:HIS:HA	13:CM:109:ARG:HH21	1.86	0.41
14:CN:50:THR:CG2	19:CS:13:LEU:HG	2.51	0.41
21:CU:4:ILE:HA	21:CU:20:LYS:HZ1	1.86	0.41
21:CU:6:VAL:C	21:CU:7:ARG:HG2	2.40	0.41
21:CU:11:PRO:O	21:CU:12:PHE:CG	2.74	0.41
22:DA:45:G:H5"	22:DA:46:G:H5'	2.03	0.41
22:DA:149:A:C5	22:DA:150:U:C4	3.09	0.41
22:DA:197:A:C8	22:DA:2430:A:C8	3.09	0.41
22:DA:374:A:N6	22:DA:400:G:O2'	2.54	0.41
22:DA:486:C:H1'	22:DA:495:G:N2	2.35	0.41
22:DA:545:U:H2'	22:DA:546:U:O3'	2.20	0.41
22:DA:563:A:H1'	22:DA:2018:G:N2	2.36	0.41
22:DA:629:G:H4'	22:DA:650:C:O2	2.20	0.41
22:DA:666:A:H4'	33:DL:48:ARG:NE	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:747:U:C5	22:DA:2613:U:C5	3.09	0.41
22:DA:1146:C:N4	22:DA:1147:A:N6	2.69	0.41
22:DA:1287:A:C2'	22:DA:1288:G:H5'	2.50	0.41
22:DA:1310:G:C2'	22:DA:1311:G:H5'	2.51	0.41
22:DA:1320:C:N3	22:DA:1333:G:C2	2.89	0.41
22:DA:1361:G:C6	22:DA:1362:C:C5	3.09	0.41
22:DA:1413:A:C2	22:DA:1590:A:C2	3.09	0.41
22:DA:1519:G:N3	22:DA:1519:G:H2'	2.35	0.41
22:DA:1520:U:O4	22:DA:1521:G:C6	2.74	0.41
22:DA:1567:G:H4'	24:DC:58:HIS:CE1	2.56	0.41
22:DA:1588:G:C5	22:DA:1589:U:C4	3.09	0.41
22:DA:1789:A:H5"	24:DC:219:THR:O	2.21	0.41
22:DA:1845:G:C6	22:DA:1846:G:C5	3.08	0.41
22:DA:1952:A:OP1	32:DK:42:THR:OG1	2.39	0.41
22:DA:2058:A:H5"	22:DA:2059:A:OP2	2.21	0.41
22:DA:2108:A:H4'	22:DA:2150:C:H4'	2.03	0.41
22:DA:2119:A:N1	22:DA:2170:A:C5	2.89	0.41
22:DA:2131:U:C2	22:DA:2158:A:N6	2.88	0.41
22:DA:2164:C:O2	22:DA:2164:C:C2'	2.68	0.41
22:DA:2199:A:C5	22:DA:2225:A:N1	2.88	0.41
22:DA:2602:A:OP2	22:DA:2603:G:H5"	2.21	0.41
22:DA:2652:C:C4	22:DA:2653:U:C4	3.09	0.41
23:DB:13:G:O2'	23:DB:15:A:H5'	2.20	0.41
24:DC:176:LEU:HD12	24:DC:180:GLU:HB3	2.03	0.41
24:DC:202:LEU:HD12	24:DC:202:LEU:HA	1.95	0.41
25:DD:35:THR:O	25:DD:36:GLN:CB	2.69	0.41
25:DD:125:TRP:CG	25:DD:160:LYS:HB3	2.56	0.41
26:DE:12:LEU:HD23	26:DE:13:THR:N	2.36	0.41
26:DE:81:GLY:HA2	58:DE:301:HOH:O	2.20	0.41
28:DG:10:VAL:O	28:DG:10:VAL:HG13	2.21	0.41
28:DG:87:LEU:HD12	28:DG:87:LEU:N	2.35	0.41
28:DG:121:ILE:HD12	28:DG:141:ILE:HG22	2.03	0.41
29:DH:1:MET:HB3	29:DH:21:VAL:O	2.20	0.41
30:DI:46:THR:O	30:DI:51:LYS:HD3	2.21	0.41
33:DL:85:VAL:HG23	33:DL:86:GLU:N	2.36	0.41
35:DN:59:SER:O	35:DN:63:ARG:HB2	2.21	0.41
35:DN:85:PRO:C	35:DN:87:PHE:H	2.23	0.41
36:DO:33:ARG:O	36:DO:33:ARG:HG2	2.21	0.41
40:DS:7:HIS:HB2	40:DS:50:VAL:CG2	2.50	0.41
42:DU:83:VAL:HG12	42:DU:84:GLY:N	2.35	0.41
44:DW:68:LYS:HE3	44:DW:70:GLU:HG3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D0:25:VAL:HG13	48:D0:26:THR:H	1.86	0.41
50:D2:18:PHE:O	50:D2:21:ARG:N	2.54	0.41
52:D4:22:VAL:HG12	52:D4:24:ARG:HG3	2.03	0.41
1:AA:57:G:H2'	1:AA:58:C:O4'	2.21	0.41
1:AA:100:G:C2'	1:AA:101:A:H5'	2.51	0.41
1:AA:107:G:C3'	1:AA:108:G:H5"	2.51	0.41
1:AA:299:G:H2'	1:AA:300:A:C8	2.55	0.41
1:AA:436:C:H2'	1:AA:437:U:C6	2.56	0.41
1:AA:552:U:O2'	1:AA:553:A:H5'	2.21	0.41
1:AA:721:G:H4'	1:AA:722:G:C5'	2.51	0.41
1:AA:844:G:N1	1:AA:846:G:O2'	2.50	0.41
1:AA:939:G:H2'	1:AA:940:C:C6	2.56	0.41
1:AA:1095:U:H2'	1:AA:1096:C:O4'	2.21	0.41
1:AA:1212:U:H4'	1:AA:1213:A:C8	2.56	0.41
1:AA:1311:A:H2'	1:AA:1312:G:O5'	2.20	0.41
2:AB:139:ARG:HG3	2:AB:140:GLU:N	2.35	0.41
3:AC:25:ASN:O	3:AC:26:THR:C	2.59	0.41
3:AC:59:ARG:HA	3:AC:63:SER:O	2.20	0.41
4:AD:62:ARG:NE	4:AD:67:VAL:O	2.49	0.41
5:AE:119:GLY:O	5:AE:121:HIS:ND1	2.53	0.41
5:AE:157:ARG:CD	8:AH:43:GLU:O	2.67	0.41
7:AG:72:THR:HG23	7:AG:73:VAL:HG22	2.03	0.41
8:AH:83:LEU:C	8:AH:83:LEU:CD2	2.89	0.41
9:AI:10:GLY:HA3	9:AI:82:GLY:N	2.36	0.41
16:AP:39:PHE:CG	16:AP:74:LEU:HD11	2.56	0.41
22:BA:102:U:C4	46:BY:2:LYS:HD2	2.56	0.41
22:BA:251:A:H2'	22:BA:252:G:O4'	2.21	0.41
22:BA:322:A:H4'	22:BA:323:C:OP2	2.21	0.41
22:BA:730:A:C3'	58:BA:3698:HOH:O	2.68	0.41
22:BA:846:U:H1'	22:BA:847:U:C5	2.56	0.41
22:BA:999:U:O2'	22:BA:1000:A:H5'	2.21	0.41
22:BA:1059:G:H5"	22:BA:1060:U:H3'	2.03	0.41
22:BA:1265:A:O3'	22:BA:1266:G:H4'	2.21	0.41
22:BA:1744:A:C2	22:BA:1745:A:H1'	2.56	0.41
22:BA:1866:A:H2'	22:BA:1867:G:H5'	2.03	0.41
22:BA:2114:A:N3	22:BA:2114:A:C2'	2.83	0.41
22:BA:2192:U:C2'	22:BA:2193:G:H5'	2.51	0.41
22:BA:2210:U:H4'	22:BA:2211:A:H5'	2.03	0.41
22:BA:2648:G:H2'	22:BA:2649:C:O4'	2.21	0.41
22:BA:2771:C:H2'	22:BA:2772:C:H6	1.84	0.41
25:BD:36:GLN:OE1	25:BD:67:HIS:HE1	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:121:THR:HB	25:BD:127:PHE:CD2	2.56	0.41
26:BE:23:PHE:CG	26:BE:111:GLU:HG3	2.56	0.41
27:BF:38:MET:HE1	27:BF:56:ASP:HB3	2.03	0.41
27:BF:100:PHE:O	27:BF:104:ILE:CD1	2.70	0.41
29:BH:90:LEU:HG	29:BH:92:GLY:C	2.42	0.41
29:BH:91:PHE:HB3	1:CA:55:A:N3	2.36	0.41
29:BH:129:GLU:C	29:BH:130:VAL:CG2	2.90	0.41
32:BK:102:PRO:HB3	32:BK:121:GLU:CB	2.51	0.41
34:BM:105:MET:CG	34:BM:106:ASP:N	2.83	0.41
43:BV:14:LYS:CD	43:BV:18:ARG:HH11	2.34	0.41
49:B1:9:ILE:HG22	49:B1:53:LYS:HB2	2.03	0.41
1:CA:246:A:N3	1:CA:279:A:N6	2.69	0.41
1:CA:552:U:C2	1:CA:553:A:C8	3.09	0.41
1:CA:756:C:O2'	1:CA:757:U:H5'	2.21	0.41
1:CA:866:C:C4	1:CA:867:G:H1'	2.56	0.41
1:CA:1022:A:C4	1:CA:1023:U:C5	3.09	0.41
1:CA:1093:A:C5	1:CA:1095:U:O4'	2.74	0.41
1:CA:1401:G:C4	1:CA:1402:C:C6	3.09	0.41
3:CC:117:ALA:O	3:CC:121:THR:HB	2.21	0.41
4:CD:125:VAL:HG22	4:CD:130:VAL:HB	2.02	0.41
5:CE:95:PHE:CG	5:CE:96:MET:N	2.88	0.41
8:CH:18:GLN:HG2	8:CH:63:LEU:HD13	2.03	0.41
9:CI:26:GLY:HA2	9:CI:61:LEU:O	2.21	0.41
9:CI:97:GLU:OE2	9:CI:97:GLU:N	2.54	0.41
10:CJ:35:GLN:HG2	10:CJ:77:VAL:CB	2.47	0.41
13:CM:18:ALA:HB2	13:CM:45:ILE:HD11	2.03	0.41
14:CN:12:LYS:O	14:CN:14:VAL:N	2.54	0.41
16:CP:6:LEU:N	16:CP:6:LEU:HD12	2.35	0.41
17:CQ:14:SER:OG	17:CQ:17:MET:CE	2.69	0.41
18:CR:32:TYR:CG	18:CR:55:LEU:HD21	2.56	0.41
19:CS:38:SER:HB2	19:CS:71:LEU:HG	2.03	0.41
20:CT:54:MET:HG3	20:CT:55:GLN:N	2.36	0.41
20:CT:65:GLY:HA2	20:CT:68:HIS:CE1	2.56	0.41
22:DA:121:G:H8	22:DA:121:G:O5'	2.04	0.41
22:DA:167:A:H2'	22:DA:168:G:O4'	2.21	0.41
22:DA:612:G:O2'	22:DA:613:A:C8	2.74	0.41
22:DA:621:A:H2'	22:DA:622:G:O4'	2.21	0.41
22:DA:788:A:OP1	22:DA:790:U:O4	2.38	0.41
22:DA:982:C:H5"	22:DA:983:A:OP2	2.21	0.41
22:DA:1069:A:C2	22:DA:1074:G:C8	3.09	0.41
22:DA:1417:C:N3	22:DA:1581:G:O6	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1855:U:C6	22:DA:1856:U:C5	3.09	0.41
22:DA:2103:C:N3	22:DA:2104:C:N4	2.68	0.41
22:DA:2119:A:N1	22:DA:2169:A:H2'	2.36	0.41
22:DA:2131:U:O4'	22:DA:2133:G:H1'	2.20	0.41
22:DA:2201:G:N3	22:DA:2201:G:H2'	2.35	0.41
22:DA:2244:U:C5	22:DA:2245:U:C5	3.09	0.41
22:DA:2355:G:O2'	44:DW:39:ARG:HD2	2.20	0.41
22:DA:2745:C:O2'	28:DG:139:GLN:O	2.39	0.41
22:DA:2902:C:OP1	22:DA:2903:U:C5	2.73	0.41
25:DD:148:GLN:N	25:DD:148:GLN:CD	2.75	0.41
28:DG:123:ALA:CB	28:DG:133:LEU:HA	2.51	0.41
28:DG:140:VAL:O	28:DG:140:VAL:HG12	2.21	0.41
30:DI:26:PRO:O	30:DI:30:GLN:HB2	2.20	0.41
32:DK:58:LEU:HD11	32:DK:86:LEU:HB3	2.01	0.41
38:DQ:64:ARG:O	38:DQ:65:ILE:C	2.60	0.41
40:DS:73:LYS:HB2	40:DS:106:VAL:HB	2.03	0.41
41:DT:64:LYS:HB3	41:DT:76:ARG:NH2	2.35	0.41
43:DV:41:GLU:C	43:DV:42:LEU:HD23	2.42	0.41
46:DY:48:ARG:O	46:DY:51:ALA:HB3	2.20	0.41
1:AA:252:U:O4	1:AA:253:A:N6	2.55	0.40
1:AA:422:C:H1'	1:AA:423:G:N2	2.36	0.40
1:AA:449:G:C6	1:AA:450:G:C6	3.09	0.40
1:AA:626:G:O2'	1:AA:627:G:H5'	2.21	0.40
1:AA:942:G:C2	1:AA:1342:C:C2	3.09	0.40
1:AA:957:U:O2	1:AA:959:A:H8	2.03	0.40
1:AA:1081:A:OP1	5:AE:21:VAL:HG23	2.21	0.40
1:AA:1317:C:OP1	14:AN:56:SER:OG	2.15	0.40
1:AA:1329:A:H5"	13:AM:26:GLY:N	2.36	0.40
1:AA:1379:G:C6	1:AA:1380:U:C5	3.09	0.40
1:AA:1385:G:H2'	1:AA:1386:G:O4'	2.21	0.40
1:AA:1480:A:C6	1:AA:1481:U:C4	3.09	0.40
2:AB:101:LEU:HD13	2:AB:101:LEU:HA	1.93	0.40
2:AB:148:LEU:CA	2:AB:151:ILE:HG22	2.51	0.40
6:AF:8:PHE:CZ	6:AF:60:VAL:HG11	2.56	0.40
8:AH:47:GLU:HG2	8:AH:64:LYS:HG2	2.03	0.40
11:AK:13:ARG:O	11:AK:14:LYS:O	2.39	0.40
14:AN:36:ALA:HB2	14:AN:41:ARG:NE	2.36	0.40
17:AQ:70:THR:HG22	17:AQ:71:LYS:N	2.34	0.40
20:AT:54:MET:HA	20:AT:57:ILE:HG22	2.03	0.40
22:BA:830:G:C6	22:BA:2448:A:C8	3.08	0.40
22:BA:1045:C:O5'	22:BA:1046:A:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1153:C:C4	22:BA:1154:G:C6	3.09	0.40
22:BA:1429:G:H2'	22:BA:1430:G:H8	1.85	0.40
22:BA:1494:A:C2	22:BA:1495:A:N9	2.89	0.40
22:BA:1695:G:N7	24:BC:14:ARG:NH2	2.70	0.40
22:BA:2304:G:N2	27:BF:153:ASP:OD1	2.53	0.40
23:BB:68:C:H2'	23:BB:69:G:O4'	2.21	0.40
29:BH:88:GLY:C	29:BH:125:THR:OG1	2.59	0.40
30:BI:116:ASP:O	30:BI:117:MET:CG	2.69	0.40
33:BL:112:LEU:HD22	33:BL:130:GLY:HA3	2.03	0.40
39:BR:51:VAL:HB	39:BR:52:PRO:CD	2.51	0.40
45:BX:18:ARG:CZ	45:BX:24:ALA:HB2	2.51	0.40
1:CA:76:G:N2	1:CA:95:C:N3	2.70	0.40
1:CA:517:G:C8	1:CA:531:U:C5	3.09	0.40
1:CA:960:U:C4	1:CA:1225:A:C8	3.09	0.40
1:CA:1458:G:O2'	20:CT:23:SER:HB3	2.21	0.40
2:CB:42:ASN:OD1	2:CB:44:GLU:HB2	2.21	0.40
9:CI:54:LEU:O	9:CI:55:VAL:HG13	2.21	0.40
11:CK:107:ILE:C	11:CK:107:ILE:HD13	2.42	0.40
17:CQ:65:ARG:HA	17:CQ:66:PRO:HD3	1.96	0.40
18:CR:48:ARG:N	18:CR:48:ARG:HD2	2.35	0.40
18:CR:51:TYR:C	18:CR:53:ARG:N	2.73	0.40
18:CR:67:LEU:O	18:CR:68:LEU:HG	2.21	0.40
20:CT:51:PHE:HA	20:CT:54:MET:HG2	2.03	0.40
21:CU:8:GLU:OE2	21:CU:12:PHE:CD2	2.73	0.40
21:CU:9:ASN:HB3	21:CU:10:GLU:HG3	2.02	0.40
22:DA:19:A:O2'	22:DA:553:G:H4'	2.21	0.40
22:DA:58:G:C4	22:DA:70:G:N2	2.89	0.40
22:DA:72:U:O2	46:DY:51:ALA:HB1	2.21	0.40
22:DA:223:A:H2'	22:DA:408:G:N3	2.36	0.40
22:DA:235:U:H2'	22:DA:236:C:H5'	2.03	0.40
22:DA:277:G:H3'	22:DA:277:G:N3	2.36	0.40
22:DA:282:A:C6	22:DA:283:G:C5	3.09	0.40
22:DA:327:G:H21	42:DU:68:SER:HB2	1.85	0.40
22:DA:362:A:C5	22:DA:363:G:N7	2.89	0.40
22:DA:581:C:H2'	22:DA:582:A:C8	2.57	0.40
22:DA:668:A:C2	22:DA:670:A:C4	3.09	0.40
22:DA:1286:A:C6	22:DA:1329:U:C2	3.08	0.40
22:DA:1360:G:H2'	22:DA:1361:G:H5'	2.02	0.40
22:DA:1485:U:H2'	22:DA:1486:U:C6	2.56	0.40
22:DA:1710:G:C6	22:DA:1749:A:C2	3.09	0.40
22:DA:1721:G:HO2'	22:DA:1722:A:P	2.45	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1865:U:C6	22:DA:1875:G:N2	2.90	0.40
22:DA:2114:A:C2	22:DA:2115:G:O4'	2.74	0.40
22:DA:2580:U:H5"	25:DD:135:GLY:O	2.21	0.40
22:DA:2592:G:OP1	58:DA:3461:HOH:O	2.22	0.40
22:DA:2659:G:C4	22:DA:2661:G:OP2	2.75	0.40
22:DA:2755:C:C4	52:D4:19:ARG:NH1	2.89	0.40
23:DB:37:C:C4	23:DB:38:C:C4	3.09	0.40
23:DB:37:C:C4	23:DB:38:C:N3	2.89	0.40
23:DB:111:U:H2'	23:DB:112:G:C8	2.57	0.40
24:DC:67:PHE:O	24:DC:151:GLY:O	2.39	0.40
25:DD:30:GLU:O	25:DD:31:ALA:C	2.59	0.40
25:DD:106:LYS:C	25:DD:107:VAL:HG13	2.41	0.40
25:DD:119:ALA:HB3	25:DD:165:MET:HB3	2.03	0.40
27:DF:8:TYR:OH	27:DF:30:ARG:HA	2.20	0.40
28:DG:87:LEU:HD23	28:DG:162:VAL:CG1	2.51	0.40
29:DH:96:THR:O	29:DH:98:ASP:N	2.54	0.40
30:DI:67:PHE:CD1	30:DI:67:PHE:N	2.89	0.40
31:DJ:36:LEU:HD23	31:DJ:121:LYS:HB2	2.03	0.40
32:DK:21:CYS:HA	32:DK:41:ILE:HG22	2.03	0.40
32:DK:104:THR:HA	32:DK:122:VAL:HB	2.04	0.40
34:DM:103:TYR:CD1	34:DM:103:TYR:N	2.89	0.40
39:DR:49:ILE:HG22	39:DR:53:PHE:C	2.41	0.40
39:DR:78:ARG:CB	39:DR:83:TYR:CD1	3.04	0.40
40:DS:17:VAL:HG12	40:DS:76:VAL:HG21	2.02	0.40
40:DS:19:LEU:O	48:D0:22:LEU:HD12	2.21	0.40
41:DT:65:GLY:HA3	41:DT:77:ARG:HB3	2.02	0.40
42:DU:96:PHE:HB2	42:DU:99:ASN:OD1	2.21	0.40
45:DX:65:ASP:O	45:DX:66:THR:C	2.58	0.40
46:DY:54:LYS:O	46:DY:55:THR:C	2.59	0.40
1:AA:75:G:N3	1:AA:75:G:H2'	2.35	0.40
1:AA:81:A:H2'	1:AA:82:G:H5"	2.03	0.40
1:AA:408:A:H2'	1:AA:409:U:O4'	2.21	0.40
1:AA:472:U:C4	1:AA:473:U:C4	3.09	0.40
1:AA:595:A:C5	1:AA:641:U:C5	3.09	0.40
1:AA:613:C:O2'	1:AA:614:C:H5'	2.21	0.40
1:AA:735:C:H2'	1:AA:736:C:C6	2.57	0.40
1:AA:864:A:C6	1:AA:865:A:N1	2.89	0.40
1:AA:1005:A:C8	1:AA:1024:G:N2	2.87	0.40
1:AA:1091:U:O2	1:AA:1095:U:C2	2.74	0.40
1:AA:1157:A:C2	1:AA:1181:G:C4	3.09	0.40
5:AE:15:LEU:O	5:AE:15:LEU:CD1	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:149:SER:HB2	5:AE:152:MET:CB	2.51	0.40
8:AH:49:PHE:HB3	8:AH:61:LEU:HD23	2.02	0.40
10:AJ:35:GLN:HG2	10:AJ:77:VAL:HB	2.03	0.40
11:AK:74:VAL:C	11:AK:76:GLU:H	2.23	0.40
12:AL:108:LYS:O	12:AL:109:ASP:HB2	2.21	0.40
13:AM:88:GLY:O	13:AM:91:HIS:N	2.54	0.40
15:AO:27:VAL:O	15:AO:28:GLN:C	2.59	0.40
21:AU:8:GLU:HB3	21:AU:12:PHE:CZ	2.56	0.40
22:BA:189:G:P	45:BX:26:LYS:HE3	2.62	0.40
22:BA:449:A:C6	22:BA:450:G:C5	3.09	0.40
22:BA:630:G:H5"	22:BA:631:A:OP2	2.21	0.40
22:BA:773:U:O2'	24:BC:48:ARG:HD3	2.22	0.40
22:BA:1380:G:N2	22:BA:1570:A:N1	2.66	0.40
22:BA:1449:G:C2'	22:BA:1450:G:O5'	2.68	0.40
22:BA:1467:U:C4	22:BA:1546:G:N2	2.90	0.40
22:BA:1490:A:N3	22:BA:1490:A:H2'	2.35	0.40
22:BA:1586:A:N7	22:BA:1587:G:C8	2.89	0.40
22:BA:1606:C:O2'	22:BA:1607:C:C5'	2.69	0.40
22:BA:1613:G:O2'	50:B2:3:ARG:HD2	2.20	0.40
22:BA:1912:A:OP1	22:BA:1913:A:OP1	2.39	0.40
22:BA:1972:G:C2	22:BA:1973:G:N7	2.89	0.40
22:BA:2308:G:C6	22:BA:2311:A:N7	2.89	0.40
23:BB:109:A:C5	23:BB:110:C:C4	3.09	0.40
25:BD:20:VAL:HG22	32:BK:72:PRO:HB2	2.02	0.40
27:BF:52:ASN:CG	27:BF:147:ASP:OD2	2.60	0.40
27:BF:171:ALA:C	27:BF:173:PHE:H	2.24	0.40
30:BI:34:ASN:CB	30:BI:37:GLU:HB2	2.51	0.40
37:BP:3:ASN:O	37:BP:4:ILE:C	2.58	0.40
37:BP:33:VAL:HA	37:BP:37:LYS:O	2.22	0.40
41:BT:2:ILE:HA	41:BT:3:ARG:O	2.21	0.40
44:BW:61:ALA:HB1	44:BW:82:ILE:CD1	2.52	0.40
1:CA:159:G:N2	1:CA:161:A:H3'	2.35	0.40
1:CA:213:G:C5	1:CA:214:C:C2	3.09	0.40
1:CA:437:U:C2'	1:CA:438:U:H5'	2.51	0.40
1:CA:676:A:H2'	1:CA:677:U:C6	2.57	0.40
1:CA:866:C:C4'	1:CA:919:A:H5'	2.52	0.40
1:CA:1195:C:H2'	1:CA:1197:A:O4'	2.20	0.40
1:CA:1306:A:H1'	1:CA:1332:A:N7	2.36	0.40
1:CA:1537:U:H2'	1:CA:1538:C:C6	2.56	0.40
3:CC:22:TRP:CH2	3:CC:32:ASN:HB3	2.56	0.40
3:CC:80:LYS:HE3	3:CC:80:LYS:HA	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:122:ALA:C	4:CD:123:ILE:HG12	2.41	0.40
5:CE:156:LYS:HA	5:CE:159:LYS:NZ	2.35	0.40
11:CK:112:ASP:HB3	21:CU:4:ILE:HG22	2.04	0.40
18:CR:25:ASP:HB3	18:CR:28:THR:HB	2.04	0.40
18:CR:34:THR:HG21	18:CR:38:LYS:HB2	2.04	0.40
22:DA:64:A:H5"	41:DT:77:ARG:HA	2.03	0.40
22:DA:236:C:H2'	22:DA:237:C:H6	1.86	0.40
22:DA:740:C:C4	22:DA:758:C:O2	2.74	0.40
22:DA:912:C:C4	22:DA:913:U:O4	2.74	0.40
22:DA:954:G:OP2	34:DM:16:ARG:NH2	2.53	0.40
22:DA:1142:A:C2	22:DA:1144:A:C1'	3.04	0.40
22:DA:1309:G:H4'	50:D2:7:PRO:HB2	2.03	0.40
22:DA:1312:U:C4	22:DA:1603:A:N6	2.90	0.40
22:DA:1324:G:C2	22:DA:1328:A:N6	2.89	0.40
22:DA:1640:A:H2'	22:DA:1641:A:C8	2.56	0.40
22:DA:1654:A:P	35:DN:1:MET:HA	2.61	0.40
22:DA:1858:A:C2	22:DA:1859:U:H1'	2.56	0.40
22:DA:1869:G:N2	22:DA:1871:A:O2'	2.55	0.40
22:DA:1969:A:O2'	22:DA:1972:G:N3	2.40	0.40
22:DA:2186:G:C6	22:DA:2187:U:C4	3.09	0.40
22:DA:2383:G:C6	22:DA:2384:U:O4	2.74	0.40
22:DA:2533:U:H2'	22:DA:2534:A:O4'	2.21	0.40
27:DF:83:TYR:CG	27:DF:84:PRO:HD2	2.56	0.40
30:DI:18:ALA:O	30:DI:19:ASN:CB	2.69	0.40
33:DL:110:VAL:CG2	33:DL:127:VAL:HG22	2.51	0.40
34:DM:31:PHE:CZ	34:DM:110:GLU:HA	2.56	0.40
38:DQ:78:LYS:HE2	38:DQ:117:LEU:HD21	2.02	0.40
39:DR:38:VAL:O	39:DR:53:PHE:HA	2.20	0.40
39:DR:76:LYS:HB2	39:DR:85:LYS:HB3	2.03	0.40
44:DW:75:LYS:O	44:DW:76:ASN:HB2	2.21	0.40
46:DY:31:GLN:HG2	46:DY:36:GLN:HB2	2.02	0.40
1:AA:97:G:H2'	1:AA:98:A:O4'	2.22	0.40
1:AA:168:G:C6	1:AA:169:C:N3	2.90	0.40
1:AA:626:G:C6	1:AA:627:G:C5	3.09	0.40
1:AA:1050:G:N2	1:AA:1051:C:C2	2.89	0.40
1:AA:1312:G:N7	19:AS:3:ARG:N	2.69	0.40
1:AA:1324:A:C5	1:AA:1325:C:C4	3.09	0.40
1:AA:1480:A:C5	1:AA:1481:U:C5	3.10	0.40
2:AB:78:GLU:C	2:AB:80:VAL:H	2.24	0.40
3:AC:60:PRO:HD2	3:AC:63:SER:O	2.21	0.40
3:AC:138:VAL:HG12	3:AC:170:GLU:OE2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:68:LEU:N	4:AD:68:LEU:CD2	2.83	0.40
4:AD:191:LEU:HD12	4:AD:192:SER:OG	2.22	0.40
4:AD:196:ASN:O	4:AD:197:GLU:C	2.59	0.40
5:AE:117:VAL:CG2	5:AE:118:ALA:N	2.83	0.40
6:AF:17:GLN:OE1	6:AF:24:ARG:NH2	2.54	0.40
6:AF:20:GLY:O	6:AF:24:ARG:HB2	2.21	0.40
9:AI:6:TYR:CD1	9:AI:89:GLU:CB	3.04	0.40
9:AI:118:LEU:HA	9:AI:125:PRO:HD3	2.03	0.40
12:AL:57:LEU:HD23	12:AL:57:LEU:HA	1.92	0.40
15:AO:3:LEU:HD12	15:AO:3:LEU:HA	1.93	0.40
17:AQ:46:VAL:HG22	17:AQ:73:TRP:HB2	2.02	0.40
20:AT:35:VAL:O	20:AT:39:ILE:HD12	2.22	0.40
22:BA:372:G:O2'	22:BA:400:G:O6	2.31	0.40
22:BA:435:C:C2'	22:BA:436:C:H5'	2.51	0.40
22:BA:721:A:H2'	22:BA:722:A:C8	2.56	0.40
22:BA:730:A:H3'	58:BA:3698:HOH:O	2.20	0.40
22:BA:802:A:C2	22:BA:803:U:C2	3.09	0.40
22:BA:847:U:O2	22:BA:934:U:H1'	2.20	0.40
22:BA:1056:G:O6	22:BA:1102:C:OP2	2.40	0.40
22:BA:1359:A:C5	22:BA:1373:A:C2	3.10	0.40
22:BA:1392:A:C6	22:BA:1393:A:C6	3.09	0.40
22:BA:1422:G:H1'	22:BA:1496:A:N1	2.36	0.40
22:BA:1501:G:O2'	22:BA:1502:A:H5'	2.21	0.40
22:BA:1837:C:N4	22:BA:1899:A:C8	2.89	0.40
22:BA:1873:G:N2	22:BA:1874:C:C2	2.90	0.40
22:BA:1881:C:H2'	22:BA:1882:U:O4'	2.22	0.40
22:BA:2112:G:H2'	22:BA:2112:G:N3	2.35	0.40
22:BA:2345:G:C4	22:BA:2381:A:C2	3.09	0.40
22:BA:2502:G:H5'	22:BA:2503:A:H5"	2.02	0.40
28:BG:153:ARG:O	28:BG:154:PRO:C	2.60	0.40
30:BI:55:ILE:HG12	30:BI:74:PRO:HA	2.04	0.40
34:BM:42:THR:O	34:BM:46:ILE:HG13	2.21	0.40
36:BO:33:ARG:O	36:BO:33:ARG:HG2	2.21	0.40
40:BS:19:LEU:HB3	48:B0:22:LEU:HD11	2.04	0.40
41:BT:1:MET:CB	41:BT:2:ILE:HD12	2.51	0.40
42:BU:102:THR:CG2	42:BU:103:ILE:N	2.83	0.40
44:BW:12:ASN:O	44:BW:14:ARG:NH1	2.54	0.40
1:CA:542:G:C2	1:CA:543:U:C5	3.10	0.40
1:CA:685:G:O2'	1:CA:686:U:H5'	2.22	0.40
1:CA:718:A:C6	11:CK:118:HIS:NE2	2.90	0.40
1:CA:790:A:N6	1:CA:791:G:N1	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1262:C:C2'	1:CA:1263:C:H5'	2.51	0.40
2:CB:140:GLU:O	2:CB:141:LEU:C	2.59	0.40
2:CB:161:LEU:HD23	2:CB:176:ALA:HB2	2.04	0.40
5:CE:94:VAL:CG1	5:CE:111:MET:HE3	2.51	0.40
6:CF:99:ALA:O	6:CF:100:SER:HB3	2.21	0.40
8:CH:21:ASN:O	8:CH:22:LYS:C	2.58	0.40
10:CJ:19:ASP:HA	10:CJ:22:THR:HG22	2.03	0.40
11:CK:127:ARG:CB	21:CU:34:ARG:NH1	2.82	0.40
12:CL:65:SER:HB2	12:CL:82:ILE:HD11	2.03	0.40
12:CL:84:GLY:HA2	12:CL:95:TYR:HD1	1.86	0.40
12:CL:94:ARG:C	12:CL:95:TYR:CG	2.95	0.40
15:CO:3:LEU:HD13	15:CO:35:GLN:HG2	2.02	0.40
16:CP:75:ILE:O	16:CP:78:VAL:HG12	2.21	0.40
17:CQ:7:THR:O	17:CQ:7:THR:HG23	2.21	0.40
22:DA:45:G:H5"	22:DA:46:G:H4'	2.03	0.40
22:DA:142:A:C5	22:DA:143:C:C4	3.09	0.40
22:DA:147:C:C4	22:DA:148:U:O4	2.74	0.40
22:DA:391:A:C5	22:DA:392:U:C6	3.09	0.40
22:DA:629:G:O6	22:DA:630:G:C6	2.75	0.40
22:DA:686:U:H2'	22:DA:788:A:N1	2.36	0.40
22:DA:727:A:C5	22:DA:728:G:C6	3.09	0.40
22:DA:1431:A:C2	22:DA:1432:G:N9	2.89	0.40
22:DA:1455:G:H1'	22:DA:2852:G:H4'	2.04	0.40
22:DA:1599:U:P	41:DT:40:LYS:HD2	2.61	0.40
22:DA:1680:U:H2'	22:DA:1681:G:O4'	2.21	0.40
22:DA:1757:A:N1	22:DA:1762:A:C2	2.89	0.40
22:DA:2057:G:H2'	22:DA:2058:A:O4'	2.21	0.40
22:DA:2114:A:C2	22:DA:2115:G:C1'	3.04	0.40
22:DA:2297:A:N7	22:DA:2320:U:C4	2.90	0.40
22:DA:2354:C:O2'	44:DW:35:SER:HA	2.22	0.40
22:DA:2429:G:N7	33:DL:55:MET:HE3	2.36	0.40
22:DA:2684:U:O4'	32:DK:70:ARG:NH1	2.54	0.40
22:DA:2820:A:O2'	25:DD:114:LYS:HD3	2.22	0.40
23:DB:55:U:O2'	27:DF:26:MET:HB2	2.21	0.40
23:DB:113:C:H1'	36:DO:46:GLU:HA	2.04	0.40
24:DC:166:ALA:HB3	24:DC:173:THR:HB	2.02	0.40
31:DJ:36:LEU:HD11	31:DJ:122:LEU:HD13	2.03	0.40
32:DK:10:VAL:HG12	32:DK:12:ASP:OD1	2.22	0.40
33:DL:81:ASP:OD1	33:DL:100:ILE:HD11	2.21	0.40
33:DL:121:THR:HA	33:DL:141:LYS:HB3	2.03	0.40
36:DO:31:THR:HG22	36:DO:33:ARG:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:96:VAL:HG23	39:DR:96:VAL:O	2.21	0.40
42:DU:59:VAL:CG1	42:DU:61:LYS:HD3	2.51	0.40
45:DX:64:ILE:HD11	45:DX:68:LEU:HD11	2.02	0.40
49:D1:10:LYS:O	49:D1:51:GLU:HG2	2.20	0.40
1:AA:181:A:H1'	1:AA:194:C:N4	2.36	0.40
1:AA:452:A:N6	1:AA:480:U:C2	2.84	0.40
1:AA:510:A:H5"	1:AA:511:C:OP1	2.22	0.40
1:AA:545:C:O2	1:AA:545:C:C2'	2.67	0.40
1:AA:575:G:O2'	1:AA:821:G:H5'	2.22	0.40
1:AA:722:G:N7	1:AA:724:G:H1'	2.36	0.40
1:AA:858:G:O2'	1:AA:859:G:C5'	2.69	0.40
1:AA:892:A:O2'	1:AA:1415:G:H4'	2.21	0.40
1:AA:946:A:N1	1:AA:947:G:C6	2.89	0.40
1:AA:949:A:O2'	1:AA:950:U:H5'	2.22	0.40
1:AA:1084:G:C4	1:AA:1085:U:C5	3.10	0.40
1:AA:1248:A:C5	1:AA:1249:C:C5	3.09	0.40
6:AF:98:GLU:HG2	6:AF:99:ALA:H	1.86	0.40
8:AH:95:VAL:CG1	8:AH:96:MET:N	2.84	0.40
10:AJ:92:LEU:O	10:AJ:93:ALA:HB3	2.22	0.40
15:AO:87:LEU:O	15:AO:88:ARG:HB3	2.20	0.40
17:AQ:22:VAL:HA	17:AQ:44:LEU:O	2.21	0.40
17:AQ:81:LYS:CA	17:AQ:81:LYS:HE2	2.51	0.40
20:AT:34:LYS:HE2	20:AT:34:LYS:N	2.36	0.40
22:BA:481:G:O2'	22:BA:507:A:N1	2.44	0.40
22:BA:585:G:H5"	22:BA:586:A:P	2.62	0.40
22:BA:626:A:H2'	33:BL:78:ARG:CZ	2.52	0.40
22:BA:934:U:H2'	22:BA:935:C:C6	2.57	0.40
22:BA:989:G:C8	47:BZ:14:ILE:HD11	2.57	0.40
22:BA:1050:A:C2	22:BA:2751:G:C4	3.09	0.40
22:BA:1171:G:N2	22:BA:1179:G:C6	2.89	0.40
22:BA:1343:G:C6	22:BA:1344:U:C4	3.10	0.40
22:BA:1355:G:C4	22:BA:1356:G:C8	3.09	0.40
22:BA:1817:G:H2'	22:BA:1818:U:H5'	2.03	0.40
22:BA:1871:A:N7	22:BA:1872:A:N1	2.70	0.40
22:BA:2187:U:C2'	22:BA:2188:U:O4'	2.69	0.40
22:BA:2360:G:H1'	33:BL:60:ARG:HD3	2.04	0.40
23:BB:114:C:H1'	36:BO:47:VAL:HG11	2.03	0.40
24:BC:146:MET:CG	24:BC:154:LEU:HD21	2.52	0.40
24:BC:168:ASP:O	24:BC:169:GLY:C	2.60	0.40
25:BD:103:ASP:OD1	25:BD:104:VAL:N	2.54	0.40
27:BF:67:ILE:O	27:BF:67:ILE:CG1	2.70	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:16:GLY:HA2	30:BI:51:LYS:HB3	2.04	0.40
30:BI:83:ALA:HB1	30:BI:109:ILE:CD1	2.52	0.40
40:BS:96:ILE:HD11	40:BS:98:LYS:HG3	2.03	0.40
41:BT:40:LYS:HD3	41:BT:58:VAL:O	2.21	0.40
48:B0:48:TYR:CE2	48:B0:53:LYS:HB2	2.56	0.40
49:B1:10:LYS:C	49:B1:11:LEU:HD23	2.41	0.40
50:B2:44:VAL:CG1	50:B2:44:VAL:O	2.70	0.40
53:B5:204:GLY:O	53:B5:205:ALA:HB3	2.21	0.40
1:CA:143:A:H5'	1:CA:144:G:O5'	2.21	0.40
1:CA:184:G:N2	1:CA:185:U:C2	2.89	0.40
1:CA:312:C:H2'	1:CA:313:A:O4'	2.21	0.40
1:CA:423:G:N2	1:CA:424:G:C8	2.90	0.40
1:CA:467:U:H3'	1:CA:468:A:H5"	2.04	0.40
1:CA:687:A:N3	1:CA:688:G:H1'	2.36	0.40
1:CA:773:G:C4	1:CA:807:A:N1	2.90	0.40
1:CA:821:G:H2'	1:CA:822:U:C6	2.56	0.40
1:CA:860:A:N6	1:CA:861:G:C2	2.90	0.40
1:CA:1458:G:H5'	20:CT:27:MET:HB3	2.02	0.40
1:CA:1515:G:C2	1:CA:1516:G:C5	3.10	0.40
2:CB:19:GLN:O	2:CB:38:VAL:HG23	2.21	0.40
4:CD:28:ILE:O	4:CD:29:ASP:O	2.39	0.40
4:CD:202:GLU:O	4:CD:203:LEU:C	2.60	0.40
5:CE:16:ILE:HD12	5:CE:16:ILE:N	2.37	0.40
5:CE:56:VAL:O	5:CE:59:ALA:HB3	2.21	0.40
6:CF:6:ILE:HG22	6:CF:7:VAL:N	2.36	0.40
10:CJ:83:THR:O	10:CJ:83:THR:HG23	2.21	0.40
20:CT:37:ALA:O	20:CT:40:GLU:HB3	2.22	0.40
20:CT:55:GLN:N	20:CT:56:PRO:CD	2.84	0.40
22:DA:35:G:C1'	22:DA:454:A:N3	2.85	0.40
22:DA:80:G:N2	22:DA:81:G:H1'	2.36	0.40
22:DA:82:U:H5'	22:DA:296:U:H5"	2.03	0.40
22:DA:89:A:N1	22:DA:90:U:N3	2.70	0.40
22:DA:116:C:C4	22:DA:117:G:C8	3.10	0.40
22:DA:117:G:N1	22:DA:119:A:N6	2.70	0.40
22:DA:136:G:C2	22:DA:144:A:C5	3.09	0.40
22:DA:167:A:C2	22:DA:168:G:H1'	2.57	0.40
22:DA:528:A:N1	22:DA:2043:C:O5'	2.53	0.40
22:DA:632:A:H4'	33:DL:68:SER:HB2	2.03	0.40
22:DA:782:A:H4'	22:DA:783:A:O5'	2.22	0.40
22:DA:833:A:OP2	33:DL:39:LYS:NZ	2.54	0.40
22:DA:1008:A:H4'	22:DA:1009:A:OP1	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1187:G:HO2'	22:DA:1188:U:P	2.45	0.40
22:DA:1351:C:O2'	22:DA:1571:A:H1'	2.21	0.40
22:DA:1431:A:C2	22:DA:1432:G:C4	3.09	0.40
22:DA:1464:G:C5	22:DA:1465:G:N7	2.90	0.40
22:DA:1682:G:C2	22:DA:1757:A:O4'	2.75	0.40
22:DA:1744:A:C4	22:DA:1745:A:C8	3.09	0.40
22:DA:2206:C:O2'	22:DA:2207:C:H5'	2.21	0.40
22:DA:2452:C:C4	22:DA:2453:A:C6	3.09	0.40
22:DA:2802:G:C6	22:DA:2803:G:C5	3.09	0.40
22:DA:2853:C:H2'	22:DA:2854:G:C8	2.56	0.40
24:DC:147:LYS:HB2	24:DC:150:LYS:CD	2.51	0.40
24:DC:221:ARG:NH1	24:DC:224:ALA:HB2	2.36	0.40
39:DR:34:GLU:HG2	39:DR:60:LYS:HG2	2.03	0.40
41:DT:21:SER:O	41:DT:24:MET:N	2.52	0.40
41:DT:39:THR:HG23	41:DT:42:GLU:H	1.85	0.40
41:DT:91:GLN:NE2	41:DT:91:GLN:O	2.54	0.40
1:AA:149:A:C5	1:AA:150:U:C5	3.09	0.40
1:AA:454:G:N2	1:AA:479:U:O2	2.54	0.40
1:AA:963:G:N3	1:AA:963:G:H2'	2.37	0.40
1:AA:1026:G:C2	1:AA:1027:C:C2	3.09	0.40
1:AA:1167:A:N7	1:AA:1169:A:C5	2.90	0.40
4:AD:23:SER:O	4:AD:24:GLY:C	2.60	0.40
7:AG:84:THR:O	7:AG:85:TYR:O	2.39	0.40
9:AI:84:THR:HG21	9:AI:103:PHE:CB	2.50	0.40
11:AK:87:LYS:HE3	11:AK:113:VAL:HG23	2.04	0.40
11:AK:91:PRO:C	11:AK:93:ARG:N	2.75	0.40
13:AM:3:ARG:HG2	13:AM:57:ARG:NH1	2.37	0.40
22:BA:43:G:C2'	22:BA:44:A:H5'	2.52	0.40
22:BA:498:G:O2'	42:BU:45:HIS:NE2	2.54	0.40
22:BA:571:U:C4	22:BA:575:A:C5	3.09	0.40
22:BA:666:A:H4'	33:BL:48:ARG:HD3	2.04	0.40
22:BA:858:G:O2'	22:BA:2268:A:H1'	2.21	0.40
22:BA:1056:G:C2	22:BA:1102:C:C5	3.10	0.40
22:BA:1068:G:H2'	22:BA:1069:A:H5'	2.03	0.40
22:BA:1157:G:N2	22:BA:1158:C:C2	2.89	0.40
22:BA:1232:G:C5	22:BA:1233:C:C5	3.09	0.40
22:BA:1588:G:C4	22:BA:1589:U:C5	3.10	0.40
22:BA:1674:G:N2	22:BA:1677:A:N1	2.59	0.40
22:BA:1799:G:O2'	24:BC:180:GLU:OE2	2.35	0.40
22:BA:2009:A:OP1	40:BS:41:LYS:HE2	2.21	0.40
22:BA:2020:A:H5'	48:B0:9:THR:HG21	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2447:G:C2	22:BA:2501:C:N4	2.89	0.40
22:BA:2461:A:H1'	22:BA:2492:U:C2	2.57	0.40
22:BA:2531:A:C6	22:BA:2532:G:C5	3.10	0.40
23:BB:109:A:C6	23:BB:110:C:C4	3.09	0.40
24:BC:76:ALA:HB2	24:BC:96:TYR:HA	2.04	0.40
27:BF:138:PHE:HA	27:BF:139:PRO:HD3	1.91	0.40
29:BH:120:GLY:HA2	29:BH:122:LEU:HA	2.04	0.40
32:BK:92:GLU:O	32:BK:93:GLN:HB2	2.21	0.40
48:B0:15:MET:O	48:B0:18:SER:HB3	2.21	0.40
53:B5:21:TYR:O	53:B5:22:THR:HG23	2.21	0.40
53:B5:73:VAL:HB	53:B5:75:VAL:HG23	2.02	0.40
1:CA:78:A:C6	1:CA:79:G:C5	3.09	0.40
1:CA:371:A:H1'	1:CA:482:A:H1'	2.02	0.40
1:CA:583:A:C6	1:CA:759:A:N7	2.90	0.40
1:CA:619:U:C2	4:CD:132:ILE:HD12	2.57	0.40
1:CA:717:U:O2'	1:CA:734:G:O4'	2.30	0.40
1:CA:741:G:C4	1:CA:742:G:C8	3.10	0.40
1:CA:815:A:H4'	1:CA:817:C:C4	2.56	0.40
1:CA:890:G:HO2'	1:CA:891:U:P	2.39	0.40
1:CA:896:C:H2'	1:CA:897:C:H5'	2.03	0.40
1:CA:1426:G:C4	1:CA:1475:G:C2	3.09	0.40
1:CA:1460:C:N4	1:CA:1461:G:C6	2.90	0.40
2:CB:10:LEU:HD21	2:CB:12:ALA:O	2.21	0.40
3:CC:167:TRP:C	3:CC:167:TRP:HE3	2.25	0.40
5:CE:156:LYS:CD	8:CH:71:VAL:HG13	2.51	0.40
6:CF:3:HIS:CE1	6:CF:65:GLU:HG3	2.56	0.40
6:CF:32:ALA:O	6:CF:34:GLY:N	2.53	0.40
10:CJ:91:ASP:O	10:CJ:92:LEU:HG	2.22	0.40
17:CQ:17:MET:SD	17:CQ:17:MET:N	2.94	0.40
17:CQ:21:ILE:O	17:CQ:21:ILE:HG23	2.20	0.40
18:CR:71:THR:OG1	18:CR:72:ASP:N	2.55	0.40
21:CU:26:ALA:HA	21:CU:29:LEU:HB3	2.03	0.40
22:DA:84:A:C2	22:DA:98:G:N3	2.90	0.40
22:DA:118:A:H1'	22:DA:178:G:O4'	2.21	0.40
22:DA:149:A:C5	22:DA:150:U:C5	3.09	0.40
22:DA:151:C:H2'	22:DA:152:A:C8	2.55	0.40
22:DA:190:A:C8	22:DA:204:A:N6	2.90	0.40
22:DA:290:U:C2	22:DA:291:G:N7	2.90	0.40
22:DA:478:A:C2	22:DA:480:A:C5	3.10	0.40
22:DA:649:G:H2'	22:DA:650:C:C6	2.57	0.40
22:DA:703:U:C5	22:DA:704:G:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1280:G:C6	22:DA:1281:G:C5	3.10	0.40
22:DA:1326:U:O4	22:DA:1647:U:H1'	2.20	0.40
22:DA:1373:A:C4	22:DA:1374:G:H1'	2.56	0.40
22:DA:1570:A:H5'	24:DC:36:LYS:HB3	2.04	0.40
22:DA:1776:G:C6	22:DA:1789:A:C2	3.10	0.40
22:DA:1779:U:C5	22:DA:1784:A:N7	2.85	0.40
22:DA:2311:A:HO2'	22:DA:2312:U:P	2.44	0.40
22:DA:2641:G:OP1	31:DJ:78:THR:HG22	2.21	0.40
22:DA:2704:C:H2'	22:DA:2705:A:O4'	2.21	0.40
23:DB:21:G:N2	23:DB:63:C:O2	2.55	0.40
23:DB:29:A:N3	23:DB:56:G:C2	2.89	0.40
26:DE:47:LYS:O	26:DE:83:VAL:HB	2.21	0.40
42:DU:103:ILE:HD12	42:DU:103:ILE:N	2.35	0.40
46:DY:16:THR:O	46:DY:19:LEU:HB2	2.21	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	216/218 (99%)	127 (59%)	39 (18%)	50 (23%)	0	0
2	CB	216/218 (99%)	137 (63%)	46 (21%)	33 (15%)	0	0
3	AC	204/206 (99%)	149 (73%)	34 (17%)	21 (10%)	0	1
3	CC	204/206 (99%)	149 (73%)	44 (22%)	11 (5%)	2	5
4	AD	203/205 (99%)	135 (66%)	38 (19%)	30 (15%)	0	0
4	CD	203/205 (99%)	150 (74%)	32 (16%)	21 (10%)	0	1
5	AE	148/150 (99%)	105 (71%)	23 (16%)	20 (14%)	0	0
5	CE	148/150 (99%)	92 (62%)	36 (24%)	20 (14%)	0	0
6	AF	98/100 (98%)	60 (61%)	25 (26%)	13 (13%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
6	CF	98/100 (98%)	66 (67%)	17 (17%)	15 (15%)	0 0
7	AG	149/151 (99%)	111 (74%)	25 (17%)	13 (9%)	1 1
7	CG	149/151 (99%)	119 (80%)	18 (12%)	12 (8%)	1 2
8	AH	127/129 (98%)	88 (69%)	32 (25%)	7 (6%)	2 5
8	CH	127/129 (98%)	102 (80%)	16 (13%)	9 (7%)	1 2
9	AI	125/127 (98%)	89 (71%)	20 (16%)	16 (13%)	0 1
9	CI	125/127 (98%)	86 (69%)	28 (22%)	11 (9%)	1 1
10	AJ	96/98 (98%)	63 (66%)	15 (16%)	18 (19%)	0 0
10	CJ	96/98 (98%)	70 (73%)	15 (16%)	11 (12%)	0 1
11	AK	115/117 (98%)	84 (73%)	20 (17%)	11 (10%)	0 1
11	CK	115/117 (98%)	81 (70%)	25 (22%)	9 (8%)	1 2
12	AL	121/123 (98%)	92 (76%)	20 (16%)	9 (7%)	1 2
12	CL	121/123 (98%)	88 (73%)	18 (15%)	15 (12%)	0 1
13	AM	112/114 (98%)	87 (78%)	12 (11%)	13 (12%)	0 1
13	CM	112/114 (98%)	81 (72%)	23 (20%)	8 (7%)	1 2
14	AN	92/100 (92%)	58 (63%)	19 (21%)	15 (16%)	0 0
14	CN	92/100 (92%)	60 (65%)	15 (16%)	17 (18%)	0 0
15	AO	86/88 (98%)	68 (79%)	15 (17%)	3 (4%)	3 12
15	CO	86/88 (98%)	72 (84%)	10 (12%)	4 (5%)	2 7
16	AP	80/82 (98%)	54 (68%)	13 (16%)	13 (16%)	0 0
16	CP	80/82 (98%)	61 (76%)	14 (18%)	5 (6%)	1 3
17	AQ	78/80 (98%)	52 (67%)	21 (27%)	5 (6%)	1 3
17	CQ	78/80 (98%)	56 (72%)	13 (17%)	9 (12%)	0 1
18	AR	53/55 (96%)	39 (74%)	12 (23%)	2 (4%)	3 10
18	CR	53/55 (96%)	34 (64%)	12 (23%)	7 (13%)	0 0
19	AS	77/79 (98%)	50 (65%)	18 (23%)	9 (12%)	0 1
19	CS	77/79 (98%)	60 (78%)	12 (16%)	5 (6%)	1 3
20	AT	83/85 (98%)	66 (80%)	11 (13%)	6 (7%)	1 2
20	CT	83/85 (98%)	62 (75%)	16 (19%)	5 (6%)	1 4
21	AU	49/51 (96%)	28 (57%)	8 (16%)	13 (26%)	0 0
21	CU	49/51 (96%)	24 (49%)	12 (24%)	13 (26%)	0 0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
24	BC	269/271 (99%)	217 (81%)	42 (16%)	10 (4%)	3 11
24	DC	269/271 (99%)	205 (76%)	47 (18%)	17 (6%)	1 3
25	BD	207/209 (99%)	180 (87%)	22 (11%)	5 (2%)	6 20
25	DD	207/209 (99%)	162 (78%)	33 (16%)	12 (6%)	1 4
26	BE	199/201 (99%)	172 (86%)	22 (11%)	5 (2%)	5 19
26	DE	199/201 (99%)	158 (79%)	30 (15%)	11 (6%)	2 5
27	BF	175/177 (99%)	144 (82%)	22 (13%)	9 (5%)	2 6
27	DF	175/177 (99%)	133 (76%)	29 (17%)	13 (7%)	1 2
28	BG	174/176 (99%)	150 (86%)	19 (11%)	5 (3%)	4 15
28	DG	174/176 (99%)	136 (78%)	30 (17%)	8 (5%)	2 7
29	BH	147/149 (99%)	89 (60%)	37 (25%)	21 (14%)	0 0
29	DH	147/149 (99%)	100 (68%)	32 (22%)	15 (10%)	0 1
30	BI	139/141 (99%)	82 (59%)	37 (27%)	20 (14%)	0 0
30	DI	139/141 (99%)	77 (55%)	47 (34%)	15 (11%)	0 1
31	BJ	140/142 (99%)	125 (89%)	14 (10%)	1 (1%)	22 53
31	DJ	140/142 (99%)	119 (85%)	13 (9%)	8 (6%)	1 5
32	BK	120/122 (98%)	97 (81%)	15 (12%)	8 (7%)	1 3
32	DK	120/122 (98%)	94 (78%)	19 (16%)	7 (6%)	1 4
33	BL	141/143 (99%)	110 (78%)	25 (18%)	6 (4%)	2 8
33	DL	141/143 (99%)	96 (68%)	33 (23%)	12 (8%)	1 1
34	BM	134/136 (98%)	124 (92%)	8 (6%)	2 (2%)	10 33
34	DM	134/136 (98%)	108 (81%)	18 (13%)	8 (6%)	1 4
35	BN	118/120 (98%)	106 (90%)	9 (8%)	3 (2%)	5 19
35	DN	118/120 (98%)	97 (82%)	13 (11%)	8 (7%)	1 3
36	BO	114/116 (98%)	93 (82%)	18 (16%)	3 (3%)	5 18
36	DO	114/116 (98%)	87 (76%)	20 (18%)	7 (6%)	1 4
37	BP	112/114 (98%)	100 (89%)	7 (6%)	5 (4%)	2 8
37	DP	112/114 (98%)	84 (75%)	15 (13%)	13 (12%)	0 1
38	BQ	115/117 (98%)	111 (96%)	1 (1%)	3 (3%)	5 18
38	DQ	115/117 (98%)	97 (84%)	16 (14%)	2 (2%)	9 29
39	BR	101/103 (98%)	86 (85%)	6 (6%)	9 (9%)	1 1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
39	DR	101/103 (98%)	74 (73%)	20 (20%)	7 (7%)	1 3
40	BS	108/110 (98%)	95 (88%)	10 (9%)	3 (3%)	5 17
40	DS	108/110 (98%)	84 (78%)	16 (15%)	8 (7%)	1 2
41	BT	91/93 (98%)	72 (79%)	13 (14%)	6 (7%)	1 3
41	DT	91/93 (98%)	54 (59%)	23 (25%)	14 (15%)	0 0
42	BU	100/102 (98%)	79 (79%)	12 (12%)	9 (9%)	1 1
42	DU	100/102 (98%)	68 (68%)	19 (19%)	13 (13%)	0 1
43	BV	92/94 (98%)	86 (94%)	6 (6%)	0	100 100
43	DV	92/94 (98%)	77 (84%)	13 (14%)	2 (2%)	6 22
44	BW	74/76 (97%)	69 (93%)	2 (3%)	3 (4%)	3 9
44	DW	73/76 (96%)	64 (88%)	7 (10%)	2 (3%)	5 17
45	BX	75/77 (97%)	70 (93%)	4 (5%)	1 (1%)	12 36
45	DX	75/77 (97%)	52 (69%)	16 (21%)	7 (9%)	0 1
46	BY	61/63 (97%)	42 (69%)	13 (21%)	6 (10%)	0 1
46	DY	61/63 (97%)	39 (64%)	18 (30%)	4 (7%)	1 3
47	BZ	56/58 (97%)	53 (95%)	3 (5%)	0	100 100
47	DZ	56/58 (97%)	48 (86%)	5 (9%)	3 (5%)	2 5
48	B0	54/56 (96%)	43 (80%)	9 (17%)	2 (4%)	3 11
48	D0	54/56 (96%)	36 (67%)	15 (28%)	3 (6%)	2 5
49	B1	48/50 (96%)	37 (77%)	9 (19%)	2 (4%)	3 9
49	D1	48/50 (96%)	37 (77%)	8 (17%)	3 (6%)	1 3
50	B2	44/46 (96%)	39 (89%)	4 (9%)	1 (2%)	6 21
50	D2	44/46 (96%)	35 (80%)	7 (16%)	2 (4%)	2 8
51	B3	62/64 (97%)	57 (92%)	4 (6%)	1 (2%)	9 31
51	D3	62/64 (97%)	46 (74%)	14 (23%)	2 (3%)	4 13
52	B4	36/38 (95%)	33 (92%)	3 (8%)	0	100 100
52	D4	36/38 (95%)	32 (89%)	3 (8%)	1 (3%)	5 17
53	B5	183/228 (80%)	100 (55%)	50 (27%)	33 (18%)	0 0
54	B6	2/7 (29%)	2 (100%)	0	0	100 100
54	D6	2/7 (29%)	0	1 (50%)	1 (50%)	0 0
All	All	11422/11686 (98%)	8617 (75%)	1868 (16%)	937 (8%)	1 2

All (937) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	16	PHE
2	AB	21	ARG
2	AB	22	TYR
2	AB	25	PRO
2	AB	34	ALA
2	AB	64	LYS
2	AB	73	LYS
2	AB	74	ARG
2	AB	75	ALA
2	AB	76	ALA
2	AB	107	VAL
2	AB	116	ASP
2	AB	120	GLN
2	AB	126	PHE
2	AB	129	LEU
2	AB	134	ALA
2	AB	148	LEU
2	AB	152	LYS
2	AB	155	GLY
2	AB	201	PRO
2	AB	210	VAL
2	AB	211	THR
2	AB	220	THR
3	AC	15	VAL
3	AC	18	TRP
3	AC	26	THR
3	AC	61	ALA
3	AC	101	ILE
3	AC	127	ARG
3	AC	140	ASN
3	AC	141	ALA
4	AD	23	SER
4	AD	24	GLY
4	AD	29	ASP
4	AD	33	LYS
4	AD	35	GLU
4	AD	125	VAL
4	AD	151	LYS
4	AD	154	ARG
4	AD	160	GLU
4	AD	168	PRO
4	AD	174	ASP

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Mol	Chain	Res	Type
4	AD	175	ALA
4	AD	191	LEU
4	AD	192	SER
5	AE	12	GLN
5	AE	100	SER
5	AE	158	GLY
6	AF	7	VAL
6	AF	68	GLN
6	AF	91	ARG
6	AF	92	THR
6	AF	98	GLU
6	AF	99	ALA
7	AG	5	ARG
7	AG	15	ASP
7	AG	56	LYS
7	AG	85	TYR
7	AG	130	ASN
8	AH	3	MET
8	AH	4	GLN
8	AH	67	GLN
9	AI	41	ARG
9	AI	44	ALA
9	AI	50	GLN
9	AI	72	ILE
9	AI	91	ASP
10	AJ	32	THR
10	AJ	34	ALA
10	AJ	36	VAL
10	AJ	57	VAL
10	AJ	61	ALA
10	AJ	92	LEU
10	AJ	101	SER
11	AK	14	LYS
11	AK	39	GLY
11	AK	41	ALA
11	AK	52	PHE
11	AK	73	ALA
12	AL	24	LEU
12	AL	26	ALA
12	AL	44	LYS
12	AL	123	LYS
13	AM	4	ILE

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Mol	Chain	Res	Type
13	AM	12	HIS
13	AM	112	PRO
14	AN	34	VAL
14	AN	45	VAL
14	AN	47	LYS
14	AN	52	PRO
14	AN	53	ARG
14	AN	62	ASN
14	AN	92	GLU
15	AO	20	ASN
15	AO	73	LYS
16	AP	11	ALA
16	AP	43	ALA
16	AP	46	LYS
16	AP	48	GLU
16	AP	50	THR
16	AP	53	ASP
16	AP	68	SER
17	AQ	18	GLU
17	AQ	51	ASN
19	AS	4	SER
19	AS	5	LEU
19	AS	29	LYS
19	AS	30	PRO
19	AS	65	GLU
20	AT	4	ILE
20	AT	6	SER
20	AT	70	ASN
21	AU	10	GLU
21	AU	24	GLU
21	AU	36	GLU
21	AU	38	TYR
21	AU	40	LYS
24	BC	71	LYS
24	BC	261	LYS
24	BC	265	LYS
25	BD	152	PRO
26	BE	8	ALA
27	BF	3	LYS
27	BF	41	GLY
27	BF	176	PRO
28	BG	119	ALA

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Mol	Chain	Res	Type
28	BG	175	LYS
29	BH	10	ALA
29	BH	34	GLY
29	BH	53	GLU
29	BH	87	GLU
29	BH	90	LEU
29	BH	118	PRO
29	BH	121	VAL
29	BH	140	ALA
30	BI	19	ASN
30	BI	45	LYS
30	BI	58	VAL
30	BI	63	ALA
30	BI	75	PRO
30	BI	83	ALA
30	BI	113	LYS
30	BI	117	MET
30	BI	134	ARG
32	BK	35	VAL
32	BK	75	SER
33	BL	69	ARG
33	BL	88	GLY
33	BL	94	THR
33	BL	115	GLU
34	BM	69	PRO
35	BN	118	ARG
37	BP	94	LYS
37	BP	114	LEU
38	BQ	7	GLY
38	BQ	25	TYR
38	BQ	102	ASP
39	BR	49	ILE
39	BR	51	VAL
39	BR	53	PHE
39	BR	57	GLY
41	BT	89	GLU
42	BU	8	ASP
46	BY	22	LEU
46	BY	23	ARG
46	BY	24	GLU
46	BY	36	GLN
46	BY	46	VAL

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Mol	Chain	Res	Type
49	B1	17	THR
50	B2	44	VAL
53	B5	51	ASP
53	B5	62	THR
53	B5	86	GLU
53	B5	126	SER
53	B5	134	PRO
53	B5	154	ILE
53	B5	174	ALA
53	B5	175	PRO
53	B5	181	PHE
53	B5	183	PRO
53	B5	205	ALA
53	B5	214	TYR
53	B5	215	VAL
53	B5	221	PRO
2	CB	16	PHE
2	CB	36	ASN
2	CB	124	GLY
2	CB	170	HIS
2	CB	193	PRO
2	CB	194	ASP
2	CB	207	ILE
2	CB	208	ARG
2	CB	220	THR
3	CC	66	VAL
3	CC	146	ALA
3	CC	156	ARG
4	CD	23	SER
4	CD	29	ASP
4	CD	32	CYS
4	CD	153	SER
5	CE	45	ARG
5	CE	98	PRO
5	CE	100	SER
5	CE	103	THR
5	CE	105	ILE
5	CE	123	VAL
5	CE	138	ARG
6	CF	55	HIS
6	CF	56	LYS
6	CF	86	ARG

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Mol	Chain	Res	Type
6	CF	91	ARG
6	CF	92	THR
6	CF	93	LYS
6	CF	98	GLU
7	CG	9	GLN
7	CG	56	LYS
7	CG	130	ASN
9	CI	41	ARG
9	CI	103	PHE
9	CI	120	LYS
10	CJ	35	GLN
10	CJ	38	GLY
10	CJ	57	VAL
10	CJ	89	ARG
10	CJ	92	LEU
11	CK	52	PHE
11	CK	127	ARG
12	CL	4	VAL
12	CL	15	LYS
12	CL	23	ALA
12	CL	24	LEU
12	CL	26	ALA
12	CL	43	LYS
12	CL	44	LYS
12	CL	76	GLU
12	CL	77	HIS
12	CL	89	ASP
12	CL	93	VAL
12	CL	117	TYR
13	CM	11	ASP
13	CM	41	GLU
14	CN	29	ALA
14	CN	34	VAL
14	CN	52	PRO
14	CN	53	ARG
14	CN	92	GLU
15	CO	73	LYS
17	CQ	13	VAL
17	CQ	51	ASN
17	CQ	52	GLU
18	CR	26	ILE
18	CR	47	THR

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Mol	Chain	Res	Type
19	CS	5	LEU
20	CT	4	ILE
20	CT	6	SER
20	CT	68	HIS
21	CU	9	ASN
21	CU	12	PHE
21	CU	24	GLU
21	CU	40	LYS
21	CU	53	VAL
24	DC	10	SER
24	DC	58	HIS
24	DC	71	LYS
24	DC	122	ALA
24	DC	239	ASN
24	DC	251	GLN
25	DD	105	LYS
25	DD	151	THR
25	DD	152	PRO
26	DE	83	VAL
26	DE	153	LEU
27	DF	9	LYS
27	DF	21	ASN
27	DF	123	ASP
28	DG	20	ASN
29	DH	3	VAL
29	DH	10	ALA
29	DH	33	GLN
29	DH	35	LYS
29	DH	41	LYS
29	DH	53	GLU
29	DH	54	LEU
29	DH	83	LYS
29	DH	109	GLU
30	DI	7	ALA
30	DI	101	ILE
30	DI	102	SER
30	DI	106	LEU
30	DI	115	ALA
31	DJ	25	LEU
31	DJ	42	ALA
31	DJ	81	ILE
31	DJ	95	ARG

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Mol	Chain	Res	Type
32	DK	35	VAL
32	DK	92	GLU
32	DK	108	ARG
33	DL	54	GLN
33	DL	115	GLU
34	DM	69	PRO
35	DN	2	ARG
35	DN	3	HIS
35	DN	88	ALA
35	DN	118	ARG
36	DO	34	HIS
36	DO	116	GLN
37	DP	36	SER
37	DP	66	ASN
37	DP	80	VAL
40	DS	29	VAL
40	DS	62	ASP
40	DS	67	ASP
40	DS	107	VAL
41	DT	18	GLU
41	DT	21	SER
41	DT	22	THR
41	DT	39	THR
41	DT	40	LYS
41	DT	77	ARG
42	DU	41	LEU
42	DU	55	PRO
42	DU	89	ASP
44	DW	20	ARG
45	DX	32	ASN
45	DX	62	LYS
46	DY	61	ALA
47	DZ	14	ILE
49	D1	16	GLY
50	D2	44	VAL
52	D4	20	ASP
2	AB	33	GLY
2	AB	68	LEU
2	AB	83	ALA
2	AB	117	LEU
2	AB	124	GLY
2	AB	150	GLY

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Mol	Chain	Res	Type
2	AB	183	VAL
2	AB	194	ASP
2	AB	207	ILE
2	AB	212	LEU
3	AC	3	GLN
3	AC	17	PRO
3	AC	139	GLN
3	AC	206	GLU
4	AD	10	LYS
4	AD	17	THR
4	AD	34	ILE
4	AD	161	LEU
4	AD	169	THR
5	AE	51	GLY
5	AE	101	GLU
5	AE	109	GLY
5	AE	110	ALA
5	AE	116	GLU
5	AE	138	ARG
5	AE	151	GLU
6	AF	6	ILE
6	AF	36	ILE
6	AF	69	GLU
7	AG	81	GLY
8	AH	50	LYS
8	AH	100	GLY
9	AI	13	LYS
9	AI	57	MET
9	AI	58	VAL
9	AI	59	GLU
9	AI	116	VAL
10	AJ	38	GLY
10	AJ	41	PRO
10	AJ	74	VAL
11	AK	72	ASP
11	AK	103	ALA
12	AL	25	GLU
12	AL	89	ASP
13	AM	7	ILE
13	AM	11	ASP
13	AM	47	GLU
14	AN	28	LYS

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Mol	Chain	Res	Type
14	AN	42	TRP
14	AN	48	LEU
14	AN	49	GLN
16	AP	80	LYS
17	AQ	68	SER
17	AQ	70	THR
18	AR	26	ILE
19	AS	35	SER
20	AT	5	LYS
20	AT	68	HIS
21	AU	26	ALA
21	AU	27	GLY
21	AU	35	ARG
21	AU	37	PHE
24	BC	38	SER
24	BC	122	ALA
24	BC	124	ILE
24	BC	205	LEU
24	BC	236	GLU
25	BD	105	LYS
26	BE	86	ALA
27	BF	172	ALA
28	BG	39	ASP
29	BH	3	VAL
29	BH	11	ASN
29	BH	14	SER
29	BH	15	LEU
29	BH	66	ASN
29	BH	119	ASN
30	BI	4	LYS
30	BI	24	VAL
30	BI	60	THR
30	BI	65	ARG
31	BJ	81	ILE
32	BK	91	SER
32	BK	108	ARG
33	BL	114	GLY
34	BM	58	LYS
35	BN	119	SER
36	BO	60	GLU
36	BO	87	ILE
37	BP	35	GLY

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Mol	Chain	Res	Type
37	BP	105	GLY
39	BR	31	GLU
39	BR	55	ASP
41	BT	18	GLU
41	BT	71	GLY
42	BU	9	ASP
42	BU	40	ASN
44	BW	54	GLY
46	BY	57	LEU
48	B0	55	ILE
53	B5	60	ARG
53	B5	67	HIS
53	B5	136	GLY
2	CB	13	GLY
2	CB	17	GLY
2	CB	34	ALA
2	CB	35	ARG
2	CB	41	ILE
2	CB	116	ASP
2	CB	120	GLN
2	CB	166	ALA
2	CB	222	ARG
3	CC	12	LEU
3	CC	127	ARG
3	CC	175	LEU
3	CC	192	THR
4	CD	4	TYR
4	CD	28	ILE
4	CD	35	GLU
4	CD	175	ALA
5	CE	12	GLN
5	CE	51	GLY
5	CE	99	ALA
5	CE	101	GLU
5	CE	142	ASP
6	CF	14	GLN
6	CF	15	SER
7	CG	84	THR
7	CG	146	GLU
8	CH	31	LYS
8	CH	89	LYS
9	CI	26	GLY

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Mol	Chain	Res	Type
10	CJ	36	VAL
10	CJ	41	PRO
11	CK	78	GLY
11	CK	92	GLY
12	CL	17	ALA
12	CL	34	CYS
13	CM	12	HIS
13	CM	25	VAL
13	CM	111	GLY
14	CN	22	ALA
14	CN	59	ARG
14	CN	62	ASN
15	CO	20	ASN
16	CP	24	SER
16	CP	77	GLU
16	CP	80	LYS
17	CQ	5	ILE
17	CQ	20	SER
17	CQ	76	VAL
18	CR	21	ILE
18	CR	71	THR
20	CT	67	ILE
21	CU	10	GLU
21	CU	13	ASP
21	CU	52	ALA
24	DC	29	PRO
24	DC	143	ASN
24	DC	158	ALA
24	DC	240	PHE
25	DD	31	ALA
25	DD	36	GLN
25	DD	57	ALA
25	DD	94	GLN
25	DD	195	GLY
26	DE	86	ALA
27	DF	31	VAL
27	DF	79	ILE
27	DF	143	TYR
27	DF	148	ARG
27	DF	176	PRO
28	DG	8	PRO
28	DG	119	ALA

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Mol	Chain	Res	Type
28	DG	159	GLY
28	DG	175	LYS
29	DH	31	VAL
29	DH	77	THR
29	DH	118	PRO
30	DI	15	ALA
30	DI	72	LYS
30	DI	84	ALA
31	DJ	127	GLY
33	DL	4	ASN
33	DL	29	LYS
33	DL	53	GLY
33	DL	111	ILE
34	DM	122	ALA
35	DN	70	THR
35	DN	104	ALA
36	DO	114	GLY
37	DP	24	ASP
37	DP	105	GLY
38	DQ	102	ASP
39	DR	50	GLY
39	DR	102	SER
40	DS	63	GLY
42	DU	9	ASP
42	DU	53	ASN
42	DU	57	GLY
42	DU	98	SER
42	DU	102	THR
44	DW	49	ALA
46	DY	57	LEU
47	DZ	53	PHE
48	D0	55	ILE
49	D1	52	ALA
50	D2	45	SER
2	AB	13	GLY
2	AB	43	LEU
2	AB	95	ARG
2	AB	128	LYS
2	AB	182	PRO
2	AB	193	PRO
3	AC	146	ALA
3	AC	166	GLU

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Mol	Chain	Res	Type
4	AD	43	ALA
4	AD	109	ALA
4	AD	182	PHE
4	AD	193	ALA
5	AE	45	ARG
5	AE	78	ASN
6	AF	56	LYS
6	AF	93	LYS
6	AF	95	ALA
8	AH	96	MET
9	AI	9	THR
10	AJ	29	ALA
10	AJ	43	PRO
10	AJ	75	ASP
11	AK	108	THR
13	AM	48	LEU
13	AM	114	LYS
14	AN	44	ALA
16	AP	12	LYS
16	AP	44	SER
16	AP	49	GLY
18	AR	50	LYS
19	AS	43	ASN
20	AT	7	ALA
26	BE	200	LEU
27	BF	45	ALA
28	BG	79	VAL
28	BG	152	ARG
29	BH	9	VAL
29	BH	30	LEU
29	BH	85	GLY
29	BH	93	SER
29	BH	105	ALA
30	BI	6	GLN
30	BI	7	ALA
30	BI	98	VAL
36	BO	88	LYS
39	BR	52	PRO
40	BS	64	ALA
40	BS	65	ASP
41	BT	17	SER
41	BT	52	GLU

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Mol	Chain	Res	Type
44	BW	11	ARG
53	B5	65	LEU
53	B5	66	PRO
53	B5	90	ALA
53	B5	180	SER
53	B5	182	PRO
2	CB	12	ALA
2	CB	19	GLN
2	CB	51	ASN
2	CB	126	PHE
2	CB	203	ASN
2	CB	209	ALA
3	CC	80	LYS
3	CC	89	LYS
4	CD	5	LEU
4	CD	36	GLN
4	CD	47	ARG
4	CD	148	LYS
4	CD	154	ARG
4	CD	174	ASP
5	CE	24	THR
5	CE	113	ALA
5	CE	122	ASN
5	CE	147	MET
6	CF	13	ASP
6	CF	17	GLN
7	CG	3	ARG
8	CH	54	ASP
8	CH	83	LEU
9	CI	23	PRO
9	CI	58	VAL
10	CJ	17	LEU
10	CJ	95	GLY
11	CK	15	GLN
12	CL	88	LYS
13	CM	7	ILE
13	CM	114	LYS
14	CN	13	ARG
14	CN	23	LYS
14	CN	58	SER
16	CP	79	ASN
19	CS	6	LYS

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Mol	Chain	Res	Type
19	CS	28	LYS
19	CS	32	ARG
24	DC	35	GLU
24	DC	203	ARG
24	DC	205	LEU
26	DE	18	THR
26	DE	24	ASN
26	DE	61	ARG
26	DE	62	GLN
26	DE	122	GLU
27	DF	103	LEU
27	DF	177	PHE
28	DG	12	PRO
28	DG	28	GLY
29	DH	16	GLY
29	DH	40	THR
30	DI	93	PRO
30	DI	100	LYS
32	DK	48	PRO
33	DL	69	ARG
34	DM	3	GLN
34	DM	58	LYS
34	DM	79	ALA
34	DM	110	GLU
36	DO	57	ALA
36	DO	77	ALA
37	DP	111	LYS
37	DP	114	LEU
40	DS	69	LEU
41	DT	7	LEU
41	DT	42	GLU
41	DT	73	ARG
42	DU	20	GLY
43	DV	84	PRO
45	DX	42	SER
45	DX	70	GLU
48	D0	32	LYS
2	AB	19	GLN
2	AB	53	ALA
2	AB	97	LEU
2	AB	166	ALA
3	AC	51	SER

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Mol	Chain	Res	Type
3	AC	84	VAL
3	AC	143	ARG
4	AD	25	VAL
4	AD	32	CYS
4	AD	153	SER
4	AD	167	LYS
5	AE	75	ALA
5	AE	115	LEU
5	AE	122	ASN
5	AE	157	ARG
7	AG	12	ILE
7	AG	77	SER
7	AG	78	ARG
7	AG	100	ALA
9	AI	25	ASN
9	AI	51	PRO
9	AI	88	MET
9	AI	120	LYS
10	AJ	17	LEU
10	AJ	33	GLY
10	AJ	35	GLN
10	AJ	42	LEU
11	AK	89	PRO
11	AK	127	ARG
13	AM	64	VAL
13	AM	67	GLY
14	AN	4	GLN
14	AN	91	GLY
15	AO	25	THR
19	AS	6	LYS
19	AS	9	PRO
21	AU	23	CYS
25	BD	102	ALA
26	BE	6	LYS
26	BE	18	THR
27	BF	71	ARG
27	BF	174	ASP
27	BF	175	PHE
29	BH	83	LYS
30	BI	72	LYS
32	BK	5	GLN
32	BK	93	GLN

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Mol	Chain	Res	Type
32	BK	119	ALA
35	BN	106	ASP
39	BR	24	LYS
40	BS	12	SER
41	BT	25	GLU
42	BU	17	LYS
42	BU	52	LEU
44	BW	33	ALA
45	BX	32	ASN
48	B0	26	THR
51	B3	28	ASN
53	B5	53	ARG
53	B5	151	GLY
53	B5	224	ARG
2	CB	63	ARG
2	CB	86	SER
2	CB	136	MET
2	CB	141	LEU
4	CD	30	THR
4	CD	165	ARG
4	CD	192	SER
5	CE	102	GLY
6	CF	63	ASN
7	CG	82	GLY
8	CH	67	GLN
9	CI	55	VAL
9	CI	129	LYS
10	CJ	90	LEU
11	CK	126	LYS
13	CM	24	GLY
14	CN	3	LYS
14	CN	81	ARG
15	CO	46	HIS
17	CQ	12	VAL
17	CQ	53	CYS
18	CR	34	THR
20	CT	7	ALA
21	CU	11	PRO
21	CU	36	GLU
25	DD	174	SER
26	DE	129	PRO
26	DE	199	MET

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Mol	Chain	Res	Type
27	DF	175	PHE
28	DG	46	ALA
29	DH	9	VAL
30	DI	134	ARG
32	DK	93	GLN
33	DL	25	SER
34	DM	23	GLY
36	DO	90	VAL
37	DP	84	ILE
37	DP	94	LYS
39	DR	7	SER
39	DR	31	GLU
39	DR	70	GLU
39	DR	81	LYS
40	DS	65	ASP
41	DT	28	ASN
41	DT	33	LYS
41	DT	41	ALA
42	DU	7	ARG
42	DU	99	ASN
45	DX	44	LYS
45	DX	51	VAL
46	DY	36	GLN
54	D6	4	PRO
2	AB	20	THR
2	AB	133	GLU
2	AB	161	LEU
3	AC	12	LEU
3	AC	54	ARG
4	AD	101	VAL
5	AE	24	THR
6	AF	54	LEU
7	AG	14	PRO
7	AG	140	ASP
9	AI	107	ASP
10	AJ	100	ILE
16	AP	79	ASN
21	AU	25	LYS
25	BD	2	ILE
30	BI	48	SER
32	BK	110	GLU
33	BL	86	GLU

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Mol	Chain	Res	Type
39	BR	50	GLY
42	BU	39	ILE
42	BU	98	SER
53	B5	176	VAL
53	B5	207	GLY
53	B5	210	LEU
53	B5	213	VAL
2	CB	76	ALA
2	CB	149	GLY
3	CC	7	PRO
3	CC	84	VAL
4	CD	10	LYS
4	CD	37	ALA
4	CD	85	ASN
6	CF	95	ALA
7	CG	8	GLY
7	CG	12	ILE
7	CG	113	ASP
7	CG	140	ASP
9	CI	13	LYS
10	CJ	42	LEU
14	CN	50	THR
14	CN	64	CYS
15	CO	18	ASP
17	CQ	17	MET
18	CR	25	ASP
18	CR	52	GLN
21	CU	51	SER
24	DC	253	LYS
25	DD	199	SER
26	DE	53	THR
27	DF	174	ASP
30	DI	13	VAL
31	DJ	39	LYS
32	DK	110	GLU
33	DL	94	THR
33	DL	112	LEU
33	DL	138	ALA
37	DP	95	ALA
39	DR	53	PHE
43	DV	81	PRO
46	DY	37	LEU

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Mol	Chain	Res	Type
2	AB	36	ASN
3	AC	66	VAL
3	AC	157	LEU
4	AD	37	ALA
5	AE	26	LYS
5	AE	88	VAL
7	AG	9	GLN
8	AH	78	VAL
12	AL	102	LEU
14	AN	31	ILE
16	AP	10	GLY
21	AU	31	GLU
21	AU	52	ALA
27	BF	146	VAL
29	BH	120	GLY
37	BP	4	ILE
49	B1	52	ALA
2	CB	33	GLY
2	CB	82	ASP
4	CD	167	LYS
5	CE	126	LYS
6	CF	18	VAL
8	CH	57	PRO
8	CH	97	ALA
14	CN	11	VAL
14	CN	27	LEU
21	CU	39	GLU
21	CU	41	PRO
24	DC	172	VAL
24	DC	238	ARG
25	DD	86	GLU
25	DD	194	PRO
27	DF	149	VAL
32	DK	120	PRO
33	DL	140	GLY
35	DN	86	ARG
35	DN	109	PRO
37	DP	79	PRO
38	DQ	87	SER
47	DZ	4	THR
48	D0	45	ALA
2	AB	80	VAL

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Mol	Chain	Res	Type
2	AB	224	GLY
13	AM	111	GLY
17	AQ	13	VAL
25	BD	104	VAL
53	B5	146	VAL
53	B5	204	GLY
9	CI	104	VAL
11	CK	120	GLY
16	CP	42	ILE
24	DC	247	PRO
31	DJ	46	PRO
34	DM	57	VAL
41	DT	65	GLY
42	DU	47	LYS
42	DU	58	ILE
49	D1	5	ILE
51	D3	20	GLY
2	AB	149	GLY
12	AL	22	PRO
53	B5	141	PRO
5	CE	158	GLY
8	CH	75	ILE
11	CK	91	PRO
31	DJ	64	VAL
36	DO	66	GLY
51	D3	58	VAL
12	AL	98	VAL
13	AM	6	GLY
6	CF	60	VAL
7	CG	14	PRO
8	CH	120	GLY
37	DP	5	ILE
37	DP	32	VAL
40	DS	66	ILE
5	AE	102	GLY
13	AM	10	PRO
30	BI	21	SER
42	BU	54	GLN
53	B5	104	ILE
2	CB	182	PRO
5	CE	150	PRO
9	CI	50	GLN

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Mol	Chain	Res	Type
19	CS	30	PRO
30	DI	5	VAL
30	DI	140	VAL
45	DX	7	VAL
4	AD	7	PRO
11	AK	16	VAL
24	BC	169	GLY
24	BC	234	GLY
30	BI	52	GLY
42	BU	50	PRO
11	CK	117	PRO
30	DI	86	ILE
41	DT	13	ALA

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	180/180 (100%)	134 (74%)	46 (26%)	0	1
2	CB	180/180 (100%)	131 (73%)	49 (27%)	0	1
3	AC	170/170 (100%)	128 (75%)	42 (25%)	0	2
3	CC	170/170 (100%)	136 (80%)	34 (20%)	1	4
4	AD	172/172 (100%)	135 (78%)	37 (22%)	1	3
4	CD	172/172 (100%)	140 (81%)	32 (19%)	1	5
5	AE	113/113 (100%)	82 (73%)	31 (27%)	0	1
5	CE	113/113 (100%)	86 (76%)	27 (24%)	0	2
6	AF	87/87 (100%)	64 (74%)	23 (26%)	0	1
6	CF	87/87 (100%)	63 (72%)	24 (28%)	0	1
7	AG	124/124 (100%)	91 (73%)	33 (27%)	0	1
7	CG	124/124 (100%)	86 (69%)	38 (31%)	0	1
8	AH	104/104 (100%)	84 (81%)	20 (19%)	1	4
8	CH	104/104 (100%)	82 (79%)	22 (21%)	1	3

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
9	AI	105/105 (100%)	71 (68%)	34 (32%)	0 0
9	CI	105/105 (100%)	73 (70%)	32 (30%)	0 1
10	AJ	86/86 (100%)	65 (76%)	21 (24%)	0 2
10	CJ	86/86 (100%)	68 (79%)	18 (21%)	1 3
11	AK	90/90 (100%)	70 (78%)	20 (22%)	1 2
11	CK	90/90 (100%)	65 (72%)	25 (28%)	0 1
12	AL	103/103 (100%)	86 (84%)	17 (16%)	2 7
12	CL	103/103 (100%)	81 (79%)	22 (21%)	1 3
13	AM	92/92 (100%)	70 (76%)	22 (24%)	0 2
13	CM	92/92 (100%)	66 (72%)	26 (28%)	0 1
14	AN	79/83 (95%)	64 (81%)	15 (19%)	1 4
14	CN	79/83 (95%)	67 (85%)	12 (15%)	3 8
15	AO	75/76 (99%)	61 (81%)	14 (19%)	1 5
15	CO	75/76 (99%)	59 (79%)	16 (21%)	1 3
16	AP	65/65 (100%)	50 (77%)	15 (23%)	1 2
16	CP	65/65 (100%)	49 (75%)	16 (25%)	0 2
17	AQ	74/74 (100%)	53 (72%)	21 (28%)	0 1
17	CQ	74/74 (100%)	49 (66%)	25 (34%)	0 0
18	AR	48/48 (100%)	36 (75%)	12 (25%)	0 2
18	CR	48/48 (100%)	38 (79%)	10 (21%)	1 3
19	AS	70/70 (100%)	56 (80%)	14 (20%)	1 4
19	CS	70/70 (100%)	57 (81%)	13 (19%)	1 5
20	AT	65/65 (100%)	49 (75%)	16 (25%)	0 2
20	CT	65/65 (100%)	48 (74%)	17 (26%)	0 1
21	AU	44/44 (100%)	25 (57%)	19 (43%)	0 0
21	CU	44/44 (100%)	27 (61%)	17 (39%)	0 0
24	BC	216/216 (100%)	189 (88%)	27 (12%)	4 14
24	DC	216/216 (100%)	180 (83%)	36 (17%)	2 6
25	BD	164/164 (100%)	152 (93%)	12 (7%)	14 38
25	DD	164/164 (100%)	147 (90%)	17 (10%)	7 21
26	BE	165/165 (100%)	139 (84%)	26 (16%)	2 8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
26	DE	165/165 (100%)	135 (82%)	30 (18%)	1 5
27	BF	148/148 (100%)	114 (77%)	34 (23%)	1 2
27	DF	148/148 (100%)	123 (83%)	25 (17%)	2 6
28	BG	137/137 (100%)	125 (91%)	12 (9%)	10 29
28	DG	137/137 (100%)	117 (85%)	20 (15%)	3 9
29	BH	114/114 (100%)	88 (77%)	26 (23%)	1 2
29	DH	114/114 (100%)	88 (77%)	26 (23%)	1 2
30	BI	109/109 (100%)	76 (70%)	33 (30%)	0 1
30	DI	109/109 (100%)	78 (72%)	31 (28%)	0 1
31	BJ	116/116 (100%)	103 (89%)	13 (11%)	6 18
31	DJ	116/116 (100%)	96 (83%)	20 (17%)	2 6
32	BK	103/103 (100%)	90 (87%)	13 (13%)	4 14
32	DK	103/103 (100%)	96 (93%)	7 (7%)	16 42
33	BL	102/102 (100%)	88 (86%)	14 (14%)	3 11
33	DL	102/102 (100%)	85 (83%)	17 (17%)	2 6
34	BM	109/109 (100%)	101 (93%)	8 (7%)	14 38
34	DM	109/109 (100%)	100 (92%)	9 (8%)	11 32
35	BN	100/100 (100%)	89 (89%)	11 (11%)	6 19
35	DN	100/100 (100%)	78 (78%)	22 (22%)	1 2
36	BO	86/86 (100%)	68 (79%)	18 (21%)	1 3
36	DO	86/86 (100%)	73 (85%)	13 (15%)	3 9
37	BP	99/99 (100%)	90 (91%)	9 (9%)	9 27
37	DP	99/99 (100%)	84 (85%)	15 (15%)	3 8
38	BQ	89/89 (100%)	81 (91%)	8 (9%)	9 28
38	DQ	89/89 (100%)	76 (85%)	13 (15%)	3 9
39	BR	84/84 (100%)	73 (87%)	11 (13%)	4 12
39	DR	84/84 (100%)	66 (79%)	18 (21%)	1 3
40	BS	93/93 (100%)	80 (86%)	13 (14%)	3 11
40	DS	93/93 (100%)	81 (87%)	12 (13%)	4 13
41	BT	80/80 (100%)	65 (81%)	15 (19%)	1 5
41	DT	80/80 (100%)	65 (81%)	15 (19%)	1 5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
42	BU	83/83 (100%)	70 (84%)	13 (16%)	2 8
42	DU	83/83 (100%)	65 (78%)	18 (22%)	1 3
43	BV	78/78 (100%)	69 (88%)	9 (12%)	5 17
43	DV	78/78 (100%)	64 (82%)	14 (18%)	2 5
44	BW	57/58 (98%)	52 (91%)	5 (9%)	10 29
44	DW	56/58 (97%)	51 (91%)	5 (9%)	9 28
45	BX	67/67 (100%)	55 (82%)	12 (18%)	2 5
45	DX	67/67 (100%)	54 (81%)	13 (19%)	1 4
46	BY	55/55 (100%)	47 (86%)	8 (14%)	3 9
46	DY	55/55 (100%)	40 (73%)	15 (27%)	0 1
47	BZ	48/48 (100%)	45 (94%)	3 (6%)	18 46
47	DZ	48/48 (100%)	38 (79%)	10 (21%)	1 3
48	B0	47/47 (100%)	43 (92%)	4 (8%)	10 31
48	D0	47/47 (100%)	43 (92%)	4 (8%)	10 31
49	B1	45/45 (100%)	40 (89%)	5 (11%)	6 19
49	D1	45/45 (100%)	40 (89%)	5 (11%)	6 19
50	B2	38/38 (100%)	34 (90%)	4 (10%)	7 20
50	D2	38/38 (100%)	30 (79%)	8 (21%)	1 3
51	B3	51/51 (100%)	48 (94%)	3 (6%)	19 49
51	D3	51/51 (100%)	44 (86%)	7 (14%)	3 11
52	B4	34/34 (100%)	27 (79%)	7 (21%)	1 3
52	D4	34/34 (100%)	29 (85%)	5 (15%)	3 9
53	B5	61/180 (34%)	46 (75%)	15 (25%)	0 2
54	B6	2/2 (100%)	2 (100%)	0	100 100
54	D6	2/2 (100%)	2 (100%)	0	100 100
All	All	9390/9522 (99%)	7602 (81%)	1788 (19%)	1 4

All (1788) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	14	VAL
2	AB	15	HIS
2	AB	16	PHE

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Mol	Chain	Res	Type
2	AB	21	ARG
2	AB	27	MET
2	AB	32	PHE
2	AB	41	ILE
2	AB	43	LEU
2	AB	50	PHE
2	AB	54	LEU
2	AB	56	GLU
2	AB	60	ILE
2	AB	64	LYS
2	AB	66	LYS
2	AB	68	LEU
2	AB	85	LEU
2	AB	88	ASP
2	AB	95	ARG
2	AB	100	MET
2	AB	101	LEU
2	AB	107	VAL
2	AB	111	ILE
2	AB	117	LEU
2	AB	122	GLN
2	AB	126	PHE
2	AB	129	LEU
2	AB	132	LYS
2	AB	133	GLU
2	AB	135	LEU
2	AB	136	MET
2	AB	140	GLU
2	AB	144	LEU
2	AB	148	LEU
2	AB	152	LYS
2	AB	153	ASP
2	AB	159	ASP
2	AB	161	LEU
2	AB	164	ILE
2	AB	186	ILE
2	AB	188	ASP
2	AB	199	VAL
2	AB	207	ILE
2	AB	208	ARG
2	AB	213	TYR
2	AB	225	ARG

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Mol	Chain	Res	Type
2	AB	226	SER
3	AC	3	GLN
3	AC	5	VAL
3	AC	14	ILE
3	AC	16	LYS
3	AC	18	TRP
3	AC	19	ASN
3	AC	20	SER
3	AC	21	THR
3	AC	25	ASN
3	AC	26	THR
3	AC	27	LYS
3	AC	28	GLU
3	AC	29	PHE
3	AC	33	LEU
3	AC	37	PHE
3	AC	38	LYS
3	AC	41	GLN
3	AC	52	VAL
3	AC	55	ILE
3	AC	58	GLU
3	AC	59	ARG
3	AC	69	HIS
3	AC	75	ILE
3	AC	88	ARG
3	AC	93	ASP
3	AC	107	ARG
3	AC	122	SER
3	AC	127	ARG
3	AC	131	ARG
3	AC	139	GLN
3	AC	142	MET
3	AC	143	ARG
3	AC	144	LEU
3	AC	151	VAL
3	AC	165	THR
3	AC	167	TRP
3	AC	168	TYR
3	AC	185	ASN
3	AC	186	THR
3	AC	191	THR
3	AC	202	ILE

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Mol	Chain	Res	Type
3	AC	207	ILE
4	AD	5	LEU
4	AD	13	ARG
4	AD	23	SER
4	AD	31	LYS
4	AD	32	CYS
4	AD	34	ILE
4	AD	35	GLU
4	AD	44	ARG
4	AD	47	ARG
4	AD	55	LEU
4	AD	58	LYS
4	AD	63	ARG
4	AD	69	GLU
4	AD	93	LEU
4	AD	103	TYR
4	AD	104	ARG
4	AD	111	ARG
4	AD	116	GLN
4	AD	119	SER
4	AD	123	ILE
4	AD	132	ILE
4	AD	142	VAL
4	AD	143	VAL
4	AD	148	LYS
4	AD	150	LYS
4	AD	151	LYS
4	AD	161	LEU
4	AD	163	GLU
4	AD	164	GLN
4	AD	172	GLU
4	AD	173	VAL
4	AD	177	LYS
4	AD	190	ASP
4	AD	195	ILE
4	AD	198	HIS
4	AD	205	SER
4	AD	206	LYS
5	AE	10	GLU
5	AE	14	LYS
5	AE	15	LEU
5	AE	18	VAL

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Mol	Chain	Res	Type
5	AE	19	ASN
5	AE	21	VAL
5	AE	25	VAL
5	AE	26	LYS
5	AE	37	THR
5	AE	38	VAL
5	AE	43	ASN
5	AE	46	VAL
5	AE	72	ILE
5	AE	73	ASN
5	AE	74	VAL
5	AE	83	HIS
5	AE	85	VAL
5	AE	100	SER
5	AE	115	LEU
5	AE	122	ASN
5	AE	123	VAL
5	AE	124	LEU
5	AE	126	LYS
5	AE	130	SER
5	AE	134	ILE
5	AE	136	VAL
5	AE	140	THR
5	AE	142	ASP
5	AE	147	MET
5	AE	149	SER
5	AE	153	VAL
6	AF	5	GLU
6	AF	7	VAL
6	AF	14	GLN
6	AF	15	SER
6	AF	17	GLN
6	AF	24	ARG
6	AF	35	LYS
6	AF	39	LEU
6	AF	51	ILE
6	AF	52	ASN
6	AF	53	LYS
6	AF	54	LEU
6	AF	55	HIS
6	AF	62	MET
6	AF	68	GLN

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Mol	Chain	Res	Type
6	AF	72	ASP
6	AF	84	VAL
6	AF	85	ILE
6	AF	86	ARG
6	AF	87	SER
6	AF	93	LYS
6	AF	96	VAL
6	AF	98	GLU
7	AG	4	ARG
7	AG	6	VAL
7	AG	10	ARG
7	AG	13	LEU
7	AG	22	LEU
7	AG	23	LEU
7	AG	32	VAL
7	AG	36	LYS
7	AG	43	VAL
7	AG	47	LEU
7	AG	48	GLU
7	AG	49	THR
7	AG	50	LEU
7	AG	56	LYS
7	AG	59	LEU
7	AG	63	GLU
7	AG	70	ARG
7	AG	76	LYS
7	AG	78	ARG
7	AG	79	ARG
7	AG	80	VAL
7	AG	83	SER
7	AG	90	GLU
7	AG	91	VAL
7	AG	111	ARG
7	AG	115	SER
7	AG	120	LEU
7	AG	125	SER
7	AG	135	VAL
7	AG	136	LYS
7	AG	138	ARG
7	AG	139	GLU
7	AG	142	HIS
8	AH	3	MET

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Mol	Chain	Res	Type
8	AH	7	ILE
8	AH	22	LYS
8	AH	38	ASN
8	AH	42	GLU
8	AH	46	ILE
8	AH	51	VAL
8	AH	54	ASP
8	AH	59	LEU
8	AH	60	GLU
8	AH	75	ILE
8	AH	77	ARG
8	AH	83	LEU
8	AH	89	LYS
8	AH	104	VAL
8	AH	108	LYS
8	AH	111	MET
8	AH	121	LEU
8	AH	125	ILE
8	AH	129	VAL
9	AI	14	SER
9	AI	22	LYS
9	AI	30	ILE
9	AI	36	GLU
9	AI	39	PHE
9	AI	43	THR
9	AI	46	MET
9	AI	47	VAL
9	AI	48	VAL
9	AI	49	ARG
9	AI	55	VAL
9	AI	57	MET
9	AI	60	LYS
9	AI	61	LEU
9	AI	63	LEU
9	AI	64	TYR
9	AI	65	ILE
9	AI	68	LYS
9	AI	85	ARG
9	AI	88	MET
9	AI	89	GLU
9	AI	90	TYR
9	AI	94	LEU

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Mol	Chain	Res	Type
9	AI	97	GLU
9	AI	99	ARG
9	AI	106	ARG
9	AI	111	VAL
9	AI	114	LYS
9	AI	115	LYS
9	AI	116	VAL
9	AI	119	ARG
9	AI	127	PHE
9	AI	129	LYS
9	AI	130	ARG
10	AJ	6	ILE
10	AJ	8	ILE
10	AJ	11	LYS
10	AJ	17	LEU
10	AJ	19	ASP
10	AJ	27	GLU
10	AJ	40	ILE
10	AJ	45	ARG
10	AJ	46	LYS
10	AJ	50	THR
10	AJ	52	LEU
10	AJ	57	VAL
10	AJ	59	LYS
10	AJ	63	ASP
10	AJ	69	THR
10	AJ	73	LEU
10	AJ	84	VAL
10	AJ	89	ARG
10	AJ	91	ASP
10	AJ	92	LEU
10	AJ	102	LEU
11	AK	16	VAL
11	AK	17	SER
11	AK	23	ILE
11	AK	31	ILE
11	AK	52	PHE
11	AK	58	SER
11	AK	65	VAL
11	AK	76	GLU
11	AK	81	ASN
11	AK	97	ILE

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Mol	Chain	Res	Type
11	AK	100	LEU
11	AK	108	THR
11	AK	111	THR
11	AK	112	ASP
11	AK	114	THR
11	AK	119	ASN
11	AK	126	LYS
11	AK	127	ARG
11	AK	128	ARG
11	AK	129	VAL
12	AL	10	LYS
12	AL	12	ARG
12	AL	15	LYS
12	AL	16	VAL
12	AL	29	GLN
12	AL	33	VAL
12	AL	36	ARG
12	AL	44	LYS
12	AL	54	ARG
12	AL	56	ARG
12	AL	58	THR
12	AL	62	GLU
12	AL	89	ASP
12	AL	102	LEU
12	AL	105	SER
12	AL	114	ARG
12	AL	121	ARG
13	AM	4	ILE
13	AM	11	ASP
13	AM	13	LYS
13	AM	16	VAL
13	AM	29	ARG
13	AM	34	LEU
13	AM	42	ASP
13	AM	44	LYS
13	AM	59	GLU
13	AM	63	PHE
13	AM	65	VAL
13	AM	71	ARG
13	AM	72	GLU
13	AM	75	MET
13	AM	79	ARG

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Mol	Chain	Res	Type
13	AM	80	LEU
13	AM	87	ARG
13	AM	90	ARG
13	AM	93	ARG
13	AM	103	LYS
13	AM	107	ARG
13	AM	113	ARG
14	AN	10	GLU
14	AN	14	VAL
14	AN	24	ARG
14	AN	26	GLU
14	AN	28	LYS
14	AN	31	ILE
14	AN	46	LEU
14	AN	49	GLN
14	AN	51	LEU
14	AN	59	ARG
14	AN	69	ARG
14	AN	81	ARG
14	AN	85	ARG
14	AN	98	LYS
14	AN	100	SER
15	AO	6	GLU
15	AO	17	ARG
15	AO	22	THR
15	AO	31	LEU
15	AO	35	GLN
15	AO	38	HIS
15	AO	39	LEU
15	AO	40	GLN
15	AO	67	LEU
15	AO	83	GLU
15	AO	85	LEU
15	AO	87	LEU
15	AO	88	ARG
15	AO	89	ARG
16	AP	1	MET
16	AP	2	VAL
16	AP	6	LEU
16	AP	8	ARG
16	AP	18	GLN
16	AP	19	VAL

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Mol	Chain	Res	Type
16	AP	20	VAL
16	AP	36	VAL
16	AP	46	LYS
16	AP	51	ARG
16	AP	63	GLN
16	AP	70	ARG
16	AP	75	ILE
16	AP	78	VAL
16	AP	80	LYS
17	AQ	4	LYS
17	AQ	13	VAL
17	AQ	17	MET
17	AQ	21	ILE
17	AQ	25	ILE
17	AQ	27	ARG
17	AQ	29	VAL
17	AQ	30	LYS
17	AQ	38	ILE
17	AQ	40	ARG
17	AQ	42	THR
17	AQ	51	ASN
17	AQ	52	GLU
17	AQ	55	ILE
17	AQ	59	VAL
17	AQ	61	ILE
17	AQ	68	SER
17	AQ	69	LYS
17	AQ	70	THR
17	AQ	75	LEU
17	AQ	81	LYS
18	AR	25	ASP
18	AR	29	LEU
18	AR	30	LYS
18	AR	31	ASN
18	AR	33	ILE
18	AR	34	THR
18	AR	43	ARG
18	AR	44	ILE
18	AR	48	ARG
18	AR	55	LEU
18	AR	61	ARG
18	AR	71	THR

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Mol	Chain	Res	Type
19	AS	6	LYS
19	AS	13	LEU
19	AS	21	LYS
19	AS	24	GLU
19	AS	27	ASP
19	AS	29	LYS
19	AS	33	THR
19	AS	51	VAL
19	AS	55	ARG
19	AS	58	VAL
19	AS	63	THR
19	AS	65	GLU
19	AS	70	LYS
19	AS	71	LEU
20	AT	3	ASN
20	AT	5	LYS
20	AT	6	SER
20	AT	8	LYS
20	AT	10	ARG
20	AT	12	ILE
20	AT	16	LYS
20	AT	24	ARG
20	AT	27	MET
20	AT	29	ARG
20	AT	34	LYS
20	AT	36	TYR
20	AT	54	MET
20	AT	69	LYS
20	AT	70	ASN
20	AT	74	ARG
21	AU	9	ASN
21	AU	10	GLU
21	AU	12	PHE
21	AU	13	ASP
21	AU	16	LEU
21	AU	18	ARG
21	AU	19	PHE
21	AU	20	LYS
21	AU	23	CYS
21	AU	25	LYS
21	AU	28	VAL
21	AU	33	ARG

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Mol	Chain	Res	Type
21	AU	34	ARG
21	AU	36	GLU
21	AU	37	PHE
21	AU	38	TYR
21	AU	46	LYS
21	AU	47	ARG
21	AU	54	LYS
24	BC	5	LYS
24	BC	13	ARG
24	BC	20	VAL
24	BC	24	LEU
24	BC	63	ARG
24	BC	64	ILE
24	BC	97	LYS
24	BC	105	LEU
24	BC	111	LYS
24	BC	121	ASP
24	BC	125	LYS
24	BC	147	LYS
24	BC	156	ARG
24	BC	164	ILE
24	BC	172	VAL
24	BC	174	LEU
24	BC	177	ARG
24	BC	182	ARG
24	BC	183	LYS
24	BC	195	VAL
24	BC	199	GLU
24	BC	203	ARG
24	BC	205	LEU
24	BC	225	MET
24	BC	258	ARG
24	BC	265	LYS
24	BC	268	VAL
25	BD	4	LEU
25	BD	12	THR
25	BD	14	ILE
25	BD	70	LYS
25	BD	89	GLU
25	BD	95	SER
25	BD	97	SER
25	BD	133	THR

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Mol	Chain	Res	Type
25	BD	141	ARG
25	BD	177	VAL
25	BD	183	GLU
25	BD	186	LEU
26	BE	9	GLN
26	BE	10	SER
26	BE	12	LEU
26	BE	44	ARG
26	BE	63	LYS
26	BE	88	ARG
26	BE	94	GLN
26	BE	107	SER
26	BE	108	ILE
26	BE	111	GLU
26	BE	115	GLN
26	BE	116	ASP
26	BE	120	VAL
26	BE	123	LYS
26	BE	131	THR
26	BE	136	GLN
26	BE	146	VAL
26	BE	149	ILE
26	BE	159	LEU
26	BE	176	ASP
26	BE	180	LEU
26	BE	185	LYS
26	BE	187	VAL
26	BE	194	LYS
26	BE	198	GLU
26	BE	200	LEU
27	BF	3	LYS
27	BF	14	LYS
27	BF	18	THR
27	BF	21	ASN
27	BF	23	ASN
27	BF	34	ILE
27	BF	35	THR
27	BF	36	LEU
27	BF	44	ILE
27	BF	48	LYS
27	BF	49	LEU
27	BF	66	LEU

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Mol	Chain	Res	Type
27	BF	81	GLN
27	BF	83	TYR
27	BF	85	ILE
27	BF	89	VAL
27	BF	95	ARG
27	BF	104	ILE
27	BF	105	THR
27	BF	106	ILE
27	BF	112	ARG
27	BF	113	ASP
27	BF	120	LYS
27	BF	133	ARG
27	BF	141	ILE
27	BF	147	ASP
27	BF	152	LEU
27	BF	153	ASP
27	BF	154	ILE
27	BF	157	THR
27	BF	158	THR
27	BF	161	LYS
27	BF	164	GLU
27	BF	174	ASP
28	BG	3	ARG
28	BG	11	VAL
28	BG	27	LYS
28	BG	30	ASN
28	BG	67	THR
28	BG	77	ILE
28	BG	87	LEU
28	BG	106	SER
28	BG	124	GLU
28	BG	152	ARG
28	BG	155	GLU
28	BG	170	ARG
29	BH	1	MET
29	BH	3	VAL
29	BH	6	LEU
29	BH	12	LEU
29	BH	15	LEU
29	BH	27	ARG
29	BH	50	ARG
29	BH	60	GLU

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Mol	Chain	Res	Type
29	BH	62	LEU
29	BH	66	ASN
29	BH	75	LEU
29	BH	77	THR
29	BH	79	THR
29	BH	86	ASP
29	BH	91	PHE
29	BH	112	LYS
29	BH	119	ASN
29	BH	122	LEU
29	BH	123	ARG
29	BH	125	THR
29	BH	129	GLU
29	BH	131	SER
29	BH	137	GLU
29	BH	142	VAL
29	BH	145	ASN
29	BH	146	VAL
30	BI	8	TYR
30	BI	9	VAL
30	BI	11	LEU
30	BI	17	MET
30	BI	24	VAL
30	BI	28	LEU
30	BI	31	GLN
30	BI	34	ASN
30	BI	38	PHE
30	BI	45	LYS
30	BI	48	SER
30	BI	50	GLU
30	BI	58	VAL
30	BI	60	THR
30	BI	62	TYR
30	BI	68	THR
30	BI	69	PHE
30	BI	72	LYS
30	BI	73	THR
30	BI	82	LYS
30	BI	86	ILE
30	BI	87	LYS
30	BI	95	LYS
30	BI	96	ASP

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Mol	Chain	Res	Type
30	BI	97	LYS
30	BI	100	LYS
30	BI	101	ILE
30	BI	103	ARG
30	BI	108	GLU
30	BI	123	GLU
30	BI	132	THR
30	BI	134	ARG
30	BI	141	GLU
31	BJ	1	MET
31	BJ	5	THR
31	BJ	23	LYS
31	BJ	30	THR
31	BJ	40	HIS
31	BJ	43	GLU
31	BJ	61	LYS
31	BJ	64	VAL
31	BJ	69	ARG
31	BJ	96	ARG
31	BJ	101	ILE
31	BJ	111	LYS
31	BJ	124	VAL
32	BK	21	CYS
32	BK	44	LYS
32	BK	45	GLU
32	BK	49	ARG
32	BK	58	LEU
32	BK	86	LEU
32	BK	88	ASN
32	BK	90	ASN
32	BK	91	SER
32	BK	92	GLU
32	BK	108	ARG
32	BK	117	SER
32	BK	121	GLU
33	BL	35	HIS
33	BL	40	SER
33	BL	60	ARG
33	BL	69	ARG
33	BL	82	LEU
33	BL	85	VAL
33	BL	86	GLU

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Mol	Chain	Res	Type
33	BL	89	VAL
33	BL	91	ASP
33	BL	93	ASN
33	BL	100	ILE
33	BL	115	GLU
33	BL	136	GLU
33	BL	144	GLU
34	BM	1	MET
34	BM	22	GLN
34	BM	24	THR
34	BM	55	ARG
34	BM	59	ARG
34	BM	70	ASP
34	BM	115	GLU
34	BM	126	ILE
35	BN	2	ARG
35	BN	8	ARG
35	BN	15	SER
35	BN	69	ARG
35	BN	70	THR
35	BN	71	ARG
35	BN	74	GLU
35	BN	76	VAL
35	BN	96	ARG
35	BN	118	ARG
35	BN	120	GLU
36	BO	3	LYS
36	BO	4	LYS
36	BO	9	ARG
36	BO	17	LYS
36	BO	18	LEU
36	BO	24	THR
36	BO	25	ARG
36	BO	31	THR
36	BO	36	TYR
36	BO	43	ASN
36	BO	45	SER
36	BO	47	VAL
36	BO	54	VAL
36	BO	56	LYS
36	BO	65	THR
36	BO	83	LEU

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Mol	Chain	Res	Type
36	BO	88	LYS
36	BO	89	ASP
37	BP	6	LYS
37	BP	29	LYS
37	BP	63	LYS
37	BP	68	GLU
37	BP	73	VAL
37	BP	93	ARG
37	BP	103	ARG
37	BP	110	ILE
37	BP	114	LEU
38	BQ	6	ARG
38	BQ	30	ARG
38	BQ	51	ARG
38	BQ	58	ARG
38	BQ	85	LYS
38	BQ	112	LYS
38	BQ	114	LYS
38	BQ	117	LEU
39	BR	10	LYS
39	BR	40	MET
39	BR	46	GLU
39	BR	48	LYS
39	BR	60	LYS
39	BR	64	VAL
39	BR	74	ILE
39	BR	84	ARG
39	BR	85	LYS
39	BR	94	THR
39	BR	102	SER
40	BS	7	HIS
40	BS	11	ARG
40	BS	19	LEU
40	BS	31	GLN
40	BS	53	SER
40	BS	59	GLU
40	BS	69	LEU
40	BS	74	ILE
40	BS	86	MET
40	BS	97	LEU
40	BS	107	VAL
40	BS	108	SER

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Mol	Chain	Res	Type
40	BS	109	ASP
41	BT	9	LYS
41	BT	11	LEU
41	BT	12	ARG
41	BT	18	GLU
41	BT	22	THR
41	BT	30	ILE
41	BT	33	LYS
41	BT	34	VAL
41	BT	36	LYS
41	BT	49	LYS
41	BT	54	GLU
41	BT	73	ARG
41	BT	76	ARG
41	BT	86	THR
41	BT	89	GLU
42	BU	7	ARG
42	BU	9	ASP
42	BU	26	LYS
42	BU	31	SER
42	BU	33	LYS
42	BU	36	VAL
42	BU	47	LYS
42	BU	52	LEU
42	BU	61	LYS
42	BU	68	SER
42	BU	77	THR
42	BU	91	LYS
42	BU	99	ASN
43	BV	1	MET
43	BV	10	LYS
43	BV	17	SER
43	BV	29	ILE
43	BV	34	LYS
43	BV	41	GLU
43	BV	61	LEU
43	BV	65	VAL
43	BV	70	ILE
44	BW	20	ARG
44	BW	38	VAL
44	BW	39	ARG
44	BW	55	ARG

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Mol	Chain	Res	Type
44	BW	72	LYS
45	BX	2	SER
45	BX	18	ARG
45	BX	25	THR
45	BX	28	ARG
45	BX	42	SER
45	BX	43	GLU
45	BX	45	ARG
45	BX	48	THR
45	BX	54	LYS
45	BX	64	ILE
45	BX	76	GLU
45	BX	77	LYS
46	BY	6	LEU
46	BY	16	THR
46	BY	22	LEU
46	BY	29	ARG
46	BY	37	LEU
46	BY	56	LEU
46	BY	58	ASN
46	BY	59	GLU
47	BZ	3	LYS
47	BZ	36	VAL
47	BZ	57	VAL
48	B0	23	THR
48	B0	29	SER
48	B0	40	ARG
48	B0	53	LYS
49	B1	8	LYS
49	B1	11	LEU
49	B1	25	LYS
49	B1	46	HIS
49	B1	51	GLU
50	B2	16	HIS
50	B2	21	ARG
50	B2	42	LEU
50	B2	45	SER
51	B3	15	LYS
51	B3	30	ARG
51	B3	31	HIS
52	B4	4	ARG
52	B4	6	SER

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Mol	Chain	Res	Type
52	B4	9	LYS
52	B4	18	LYS
52	B4	23	ILE
52	B4	26	ILE
52	B4	37	GLN
53	B5	21	TYR
53	B5	23	ILE
53	B5	35	THR
53	B5	38	PHE
53	B5	41	THR
53	B5	47	LYS
53	B5	48	LEU
53	B5	59	VAL
53	B5	62	THR
53	B5	64	SER
53	B5	65	LEU
53	B5	73	VAL
53	B5	76	LEU
53	B5	78	ILE
53	B5	88	GLU
2	CB	11	LYS
2	CB	15	HIS
2	CB	16	PHE
2	CB	20	THR
2	CB	21	ARG
2	CB	24	ASN
2	CB	27	MET
2	CB	40	ILE
2	CB	43	LEU
2	CB	49	MET
2	CB	50	PHE
2	CB	66	LYS
2	CB	67	ILE
2	CB	68	LEU
2	CB	77	SER
2	CB	78	GLU
2	CB	80	VAL
2	CB	85	LEU
2	CB	88	ASP
2	CB	94	HIS
2	CB	95	ARG
2	CB	96	TRP

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Mol	Chain	Res	Type
2	CB	102	THR
2	CB	103	ASN
2	CB	106	THR
2	CB	116	ASP
2	CB	117	LEU
2	CB	122	GLN
2	CB	125	THR
2	CB	126	PHE
2	CB	127	ASP
2	CB	130	THR
2	CB	142	GLU
2	CB	144	LEU
2	CB	145	GLU
2	CB	148	LEU
2	CB	157	LEU
2	CB	163	VAL
2	CB	174	LYS
2	CB	179	LEU
2	CB	187	VAL
2	CB	192	ASP
2	CB	205	ASP
2	CB	207	ILE
2	CB	210	VAL
2	CB	213	TYR
2	CB	220	THR
2	CB	222	ARG
2	CB	225	ARG
3	CC	3	GLN
3	CC	16	LYS
3	CC	18	TRP
3	CC	29	PHE
3	CC	32	ASN
3	CC	33	LEU
3	CC	36	ASP
3	CC	37	PHE
3	CC	38	LYS
3	CC	43	LEU
3	CC	45	LYS
3	CC	53	SER
3	CC	55	ILE
3	CC	70	THR
3	CC	80	LYS

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Mol	Chain	Res	Type
3	CC	103	ILE
3	CC	107	ARG
3	CC	110	GLU
3	CC	119	SER
3	CC	120	ILE
3	CC	121	THR
3	CC	131	ARG
3	CC	140	ASN
3	CC	151	VAL
3	CC	153	VAL
3	CC	167	TRP
3	CC	168	TYR
3	CC	170	GLU
3	CC	172	ARG
3	CC	175	LEU
3	CC	179	ARG
3	CC	192	THR
3	CC	193	TYR
3	CC	206	GLU
4	CD	8	LYS
4	CD	9	LEU
4	CD	10	LYS
4	CD	17	THR
4	CD	32	CYS
4	CD	48	LEU
4	CD	50	ASP
4	CD	54	GLN
4	CD	55	LEU
4	CD	56	ARG
4	CD	58	LYS
4	CD	59	GLN
4	CD	74	ASN
4	CD	75	TYR
4	CD	83	LYS
4	CD	104	ARG
4	CD	142	VAL
4	CD	148	LYS
4	CD	152	GLN
4	CD	155	VAL
4	CD	159	LEU
4	CD	160	GLU
4	CD	161	LEU

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Mol	Chain	Res	Type
4	CD	177	LYS
4	CD	183	LYS
4	CD	191	LEU
4	CD	192	SER
4	CD	195	ILE
4	CD	198	HIS
4	CD	200	ILE
4	CD	203	LEU
4	CD	206	LYS
5	CE	15	LEU
5	CE	18	VAL
5	CE	26	LYS
5	CE	29	ARG
5	CE	32	SER
5	CE	45	ARG
5	CE	52	LYS
5	CE	65	GLU
5	CE	66	LYS
5	CE	76	LEU
5	CE	77	ASN
5	CE	86	LYS
5	CE	96	MET
5	CE	97	GLN
5	CE	101	GLU
5	CE	105	ILE
5	CE	114	VAL
5	CE	115	LEU
5	CE	120	VAL
5	CE	121	HIS
5	CE	124	LEU
5	CE	131	THR
5	CE	137	VAL
5	CE	140	THR
5	CE	149	SER
5	CE	151	GLU
5	CE	156	LYS
6	CF	1	MET
6	CF	2	ARG
6	CF	9	MET
6	CF	15	SER
6	CF	24	ARG
6	CF	26	THR

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Mol	Chain	Res	Type
6	CF	30	THR
6	CF	35	LYS
6	CF	36	ILE
6	CF	38	ARG
6	CF	51	ILE
6	CF	53	LYS
6	CF	54	LEU
6	CF	55	HIS
6	CF	62	MET
6	CF	63	ASN
6	CF	64	VAL
6	CF	79	ARG
6	CF	80	PHE
6	CF	85	ILE
6	CF	87	SER
6	CF	89	VAL
6	CF	93	LYS
6	CF	97	THR
7	CG	3	ARG
7	CG	4	ARG
7	CG	6	VAL
7	CG	10	ARG
7	CG	11	LYS
7	CG	12	ILE
7	CG	22	LEU
7	CG	23	LEU
7	CG	30	LEU
7	CG	38	THR
7	CG	45	SER
7	CG	47	LEU
7	CG	48	GLU
7	CG	53	ARG
7	CG	59	LEU
7	CG	62	PHE
7	CG	67	GLU
7	CG	69	VAL
7	CG	70	ARG
7	CG	72	THR
7	CG	73	VAL
7	CG	75	VAL
7	CG	78	ARG
7	CG	84	THR

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Mol	Chain	Res	Type
7	CG	87	VAL
7	CG	91	VAL
7	CG	92	ARG
7	CG	94	VAL
7	CG	97	ASN
7	CG	120	LEU
7	CG	125	SER
7	CG	126	ASP
7	CG	129	GLU
7	CG	133	THR
7	CG	136	LYS
7	CG	140	ASP
7	CG	142	HIS
7	CG	146	GLU
8	CH	13	ARG
8	CH	22	LYS
8	CH	31	LYS
8	CH	47	GLU
8	CH	49	PHE
8	CH	54	ASP
8	CH	55	THR
8	CH	59	LEU
8	CH	67	GLN
8	CH	73	GLU
8	CH	74	SER
8	CH	75	ILE
8	CH	77	ARG
8	CH	83	LEU
8	CH	87	LYS
8	CH	89	LYS
8	CH	92	LEU
8	CH	104	VAL
8	CH	111	MET
8	CH	112	THR
8	CH	121	LEU
8	CH	125	ILE
9	CI	9	THR
9	CI	13	LYS
9	CI	18	ARG
9	CI	21	ILE
9	CI	28	ILE
9	CI	32	GLN

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Mol	Chain	Res	Type
9	CI	33	ARG
9	CI	36	GLU
9	CI	39	PHE
9	CI	43	THR
9	CI	45	ARG
9	CI	48	VAL
9	CI	49	ARG
9	CI	55	VAL
9	CI	57	MET
9	CI	61	LEU
9	CI	62	ASP
9	CI	63	LEU
9	CI	68	LYS
9	CI	80	ARG
9	CI	85	ARG
9	CI	88	MET
9	CI	89	GLU
9	CI	90	TYR
9	CI	94	LEU
9	CI	97	GLU
9	CI	99	ARG
9	CI	100	LYS
9	CI	105	THR
9	CI	115	LYS
9	CI	127	PHE
9	CI	129	LYS
10	CJ	5	ARG
10	CJ	16	ARG
10	CJ	22	THR
10	CJ	25	ILE
10	CJ	26	VAL
10	CJ	27	GLU
10	CJ	32	THR
10	CJ	59	LYS
10	CJ	63	ASP
10	CJ	77	VAL
10	CJ	80	THR
10	CJ	83	THR
10	CJ	84	VAL
10	CJ	87	LEU
10	CJ	89	ARG
10	CJ	91	ASP

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Mol	Chain	Res	Type
10	CJ	92	LEU
10	CJ	102	LEU
11	CK	14	LYS
11	CK	15	GLN
11	CK	17	SER
11	CK	31	ILE
11	CK	64	GLN
11	CK	65	VAL
11	CK	74	VAL
11	CK	77	TYR
11	CK	80	LYS
11	CK	81	ASN
11	CK	82	LEU
11	CK	83	GLU
11	CK	86	VAL
11	CK	93	ARG
11	CK	96	THR
11	CK	100	LEU
11	CK	101	ASN
11	CK	106	ARG
11	CK	107	ILE
11	CK	108	THR
11	CK	109	ASN
11	CK	110	ILE
11	CK	126	LYS
11	CK	127	ARG
11	CK	128	ARG
12	CL	3	THR
12	CL	4	VAL
12	CL	5	ASN
12	CL	10	LYS
12	CL	12	ARG
12	CL	16	VAL
12	CL	18	LYS
12	CL	20	ASN
12	CL	29	GLN
12	CL	34	CYS
12	CL	35	THR
12	CL	44	LYS
12	CL	58	THR
12	CL	59	ASN
12	CL	63	VAL

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Mol	Chain	Res	Type
12	CL	82	ILE
12	CL	86	ARG
12	CL	89	ASP
12	CL	94	ARG
12	CL	97	THR
12	CL	110	ARG
12	CL	121	ARG
13	CM	8	ASN
13	CM	14	HIS
13	CM	19	LEU
13	CM	29	ARG
13	CM	31	LYS
13	CM	41	GLU
13	CM	48	LEU
13	CM	53	ILE
13	CM	54	ASP
13	CM	58	ASP
13	CM	59	GLU
13	CM	60	VAL
13	CM	63	PHE
13	CM	66	GLU
13	CM	72	GLU
13	CM	74	SER
13	CM	76	SER
13	CM	80	LEU
13	CM	83	LEU
13	CM	90	ARG
13	CM	91	HIS
13	CM	92	ARG
13	CM	93	ARG
13	CM	100	GLN
13	CM	101	ARG
13	CM	102	THR
14	CN	4	GLN
14	CN	16	LEU
14	CN	18	ASP
14	CN	21	PHE
14	CN	23	LYS
14	CN	26	GLU
14	CN	28	LYS
14	CN	48	LEU
14	CN	49	GLN

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Mol	Chain	Res	Type
14	CN	60	GLN
14	CN	67	THR
14	CN	80	SER
15	CO	6	GLU
15	CO	10	LYS
15	CO	13	SER
15	CO	17	ARG
15	CO	18	ASP
15	CO	26	GLU
15	CO	35	GLN
15	CO	38	HIS
15	CO	39	LEU
15	CO	62	GLN
15	CO	64	ARG
15	CO	67	LEU
15	CO	70	LEU
15	CO	85	LEU
15	CO	87	LEU
15	CO	88	ARG
16	CP	1	MET
16	CP	2	VAL
16	CP	5	ARG
16	CP	18	GLN
16	CP	25	ARG
16	CP	29	ASN
16	CP	31	ARG
16	CP	36	VAL
16	CP	46	LYS
16	CP	48	GLU
16	CP	51	ARG
16	CP	57	ILE
16	CP	69	ASP
16	CP	74	LEU
16	CP	77	GLU
16	CP	80	LYS
17	CQ	4	LYS
17	CQ	5	ILE
17	CQ	12	VAL
17	CQ	13	VAL
17	CQ	14	SER
17	CQ	17	MET
17	CQ	23	VAL

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Mol	Chain	Res	Type
17	CQ	25	ILE
17	CQ	28	PHE
17	CQ	33	ILE
17	CQ	36	LYS
17	CQ	38	ILE
17	CQ	40	ARG
17	CQ	41	THR
17	CQ	48	ASP
17	CQ	50	ASN
17	CQ	52	GLU
17	CQ	55	ILE
17	CQ	57	ASP
17	CQ	62	ARG
17	CQ	65	ARG
17	CQ	69	LYS
17	CQ	75	LEU
17	CQ	79	VAL
17	CQ	81	LYS
18	CR	20	GLU
18	CR	26	ILE
18	CR	29	LEU
18	CR	33	ILE
18	CR	45	THR
18	CR	47	THR
18	CR	57	ARG
18	CR	61	ARG
18	CR	63	ARG
18	CR	67	LEU
19	CS	5	LEU
19	CS	6	LYS
19	CS	11	ILE
19	CS	14	HIS
19	CS	19	VAL
19	CS	21	LYS
19	CS	23	VAL
19	CS	33	THR
19	CS	36	ARG
19	CS	39	THR
19	CS	43	ASN
19	CS	49	ILE
19	CS	56	GLN
20	CT	6	SER

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Mol	Chain	Res	Type
20	CT	8	LYS
20	CT	12	ILE
20	CT	15	GLU
20	CT	23	SER
20	CT	24	ARG
20	CT	27	MET
20	CT	29	ARG
20	CT	36	TYR
20	CT	49	LYS
20	CT	54	MET
20	CT	58	VAL
20	CT	64	LYS
20	CT	67	ILE
20	CT	69	LYS
20	CT	70	ASN
20	CT	76	LYS
21	CU	5	LYS
21	CU	7	ARG
21	CU	10	GLU
21	CU	12	PHE
21	CU	14	VAL
21	CU	16	LEU
21	CU	19	PHE
21	CU	20	LYS
21	CU	24	GLU
21	CU	25	LYS
21	CU	28	VAL
21	CU	31	GLU
21	CU	34	ARG
21	CU	37	PHE
21	CU	38	TYR
21	CU	43	THR
21	CU	47	ARG
24	DC	20	VAL
24	DC	36	LYS
24	DC	39	LYS
24	DC	46	ASN
24	DC	54	ILE
24	DC	58	HIS
24	DC	64	ILE
24	DC	80	ARG
24	DC	88	SER

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Mol	Chain	Res	Type
24	DC	103	TYR
24	DC	110	LEU
24	DC	111	LYS
24	DC	115	GLN
24	DC	118	SER
24	DC	130	LEU
24	DC	147	LYS
24	DC	153	GLN
24	DC	156	ARG
24	DC	160	THR
24	DC	162	VAL
24	DC	167	ARG
24	DC	168	ASP
24	DC	174	LEU
24	DC	175	ARG
24	DC	178	SER
24	DC	182	ARG
24	DC	189	ARG
24	DC	195	VAL
24	DC	202	LEU
24	DC	204	VAL
24	DC	205	LEU
24	DC	245	VAL
24	DC	250	VAL
24	DC	255	LYS
24	DC	262	ARG
24	DC	267	ILE
25	DD	4	LEU
25	DD	12	THR
25	DD	18	ASP
25	DD	33	ARG
25	DD	39	ASP
25	DD	64	GLU
25	DD	73	VAL
25	DD	84	LEU
25	DD	86	GLU
25	DD	98	VAL
25	DD	103	ASP
25	DD	129	THR
25	DD	138	LEU
25	DD	150	GLN
25	DD	170	VAL

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Mol	Chain	Res	Type
25	DD	183	GLU
25	DD	189	VAL
26	DE	6	LYS
26	DE	22	ASP
26	DE	25	GLU
26	DE	40	ARG
26	DE	41	GLN
26	DE	58	LYS
26	DE	61	ARG
26	DE	69	ARG
26	DE	77	ILE
26	DE	83	VAL
26	DE	84	THR
26	DE	90	GLN
26	DE	105	LEU
26	DE	107	SER
26	DE	108	ILE
26	DE	114	ARG
26	DE	118	LEU
26	DE	126	VAL
26	DE	133	LEU
26	DE	145	ASP
26	DE	149	ILE
26	DE	159	LEU
26	DE	163	ASN
26	DE	164	LEU
26	DE	166	LYS
26	DE	170	ARG
26	DE	173	THR
26	DE	189	THR
26	DE	198	GLU
26	DE	199	MET
27	DF	4	LEU
27	DF	14	LYS
27	DF	21	ASN
27	DF	26	MET
27	DF	28	VAL
27	DF	35	THR
27	DF	36	LEU
27	DF	44	ILE
27	DF	46	ASP
27	DF	52	ASN

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Mol	Chain	Res	Type
27	DF	64	LYS
27	DF	67	ILE
27	DF	74	VAL
27	DF	81	GLN
27	DF	106	ILE
27	DF	110	ARG
27	DF	117	LEU
27	DF	125	ARG
27	DF	129	SER
27	DF	134	GLU
27	DF	149	VAL
27	DF	150	ARG
27	DF	152	LEU
27	DF	157	THR
27	DF	174	ASP
28	DG	11	VAL
28	DG	16	ASP
28	DG	29	LYS
28	DG	30	ASN
28	DG	33	LEU
28	DG	44	LYS
28	DG	45	HIS
28	DG	72	LEU
28	DG	89	LEU
28	DG	95	ARG
28	DG	117	LEU
28	DG	127	THR
28	DG	130	GLU
28	DG	137	ASP
28	DG	149	ARG
28	DG	151	TYR
28	DG	152	ARG
28	DG	155	GLU
28	DG	166	ASP
28	DG	167	GLU
29	DH	7	ASP
29	DH	12	LEU
29	DH	41	LYS
29	DH	42	LYS
29	DH	48	GLU
29	DH	50	ARG
29	DH	53	GLU

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Mol	Chain	Res	Type
29	DH	54	LEU
29	DH	57	LYS
29	DH	62	LEU
29	DH	77	THR
29	DH	78	VAL
29	DH	87	GLU
29	DH	89	LYS
29	DH	94	ILE
29	DH	109	GLU
29	DH	114	GLU
29	DH	116	ARG
29	DH	117	LEU
29	DH	119	ASN
29	DH	121	VAL
29	DH	124	THR
29	DH	125	THR
29	DH	129	GLU
29	DH	142	VAL
29	DH	149	GLU
30	DI	3	LYS
30	DI	4	LYS
30	DI	8	TYR
30	DI	11	LEU
30	DI	17	MET
30	DI	24	VAL
30	DI	31	GLN
30	DI	40	LYS
30	DI	49	ILE
30	DI	55	ILE
30	DI	68	THR
30	DI	69	PHE
30	DI	72	LYS
30	DI	79	LEU
30	DI	80	LEU
30	DI	86	ILE
30	DI	92	LYS
30	DI	96	ASP
30	DI	97	LYS
30	DI	102	SER
30	DI	105	GLN
30	DI	106	LEU
30	DI	117	MET

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Mol	Chain	Res	Type
30	DI	122	ILE
30	DI	123	GLU
30	DI	125	MET
30	DI	126	THR
30	DI	127	ARG
30	DI	128	SER
30	DI	134	ARG
30	DI	136	MET
31	DJ	17	VAL
31	DJ	30	THR
31	DJ	36	LEU
31	DJ	37	ARG
31	DJ	39	LYS
31	DJ	40	HIS
31	DJ	44	TYR
31	DJ	46	PRO
31	DJ	57	LEU
31	DJ	61	LYS
31	DJ	70	THR
31	DJ	76	HIS
31	DJ	81	ILE
31	DJ	86	GLN
31	DJ	109	LEU
31	DJ	118	MET
31	DJ	131	ASN
31	DJ	138	GLN
31	DJ	139	VAL
31	DJ	140	LEU
32	DK	1	MET
32	DK	49	ARG
32	DK	66	LYS
32	DK	86	LEU
32	DK	91	SER
32	DK	104	THR
32	DK	110	GLU
33	DL	2	ARG
33	DL	29	LYS
33	DL	42	SER
33	DL	47	ARG
33	DL	48	ARG
33	DL	59	ARG
33	DL	69	ARG

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Mol	Chain	Res	Type
33	DL	77	ILE
33	DL	78	ARG
33	DL	82	LEU
33	DL	94	THR
33	DL	100	ILE
33	DL	103	ILE
33	DL	118	THR
33	DL	120	VAL
33	DL	126	ARG
33	DL	132	ARG
34	DM	6	ARG
34	DM	60	GLN
34	DM	70	ASP
34	DM	74	THR
34	DM	100	LYS
34	DM	103	TYR
34	DM	108	VAL
34	DM	124	LEU
34	DM	128	THR
35	DN	1	MET
35	DN	2	ARG
35	DN	12	ARG
35	DN	14	SER
35	DN	15	SER
35	DN	18	GLN
35	DN	20	MET
35	DN	33	ILE
35	DN	48	VAL
35	DN	52	ILE
35	DN	53	THR
35	DN	63	ARG
35	DN	65	LEU
35	DN	69	ARG
35	DN	70	THR
35	DN	71	ARG
35	DN	73	ASN
35	DN	76	VAL
35	DN	90	ARG
35	DN	100	CYS
35	DN	114	GLU
35	DN	116	VAL
36	DO	9	ARG

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Mol	Chain	Res	Type
36	DO	18	LEU
36	DO	24	THR
36	DO	26	LEU
36	DO	28	VAL
36	DO	31	THR
36	DO	36	TYR
36	DO	48	LEU
36	DO	52	SER
36	DO	56	LYS
36	DO	78	VAL
36	DO	88	LYS
36	DO	103	VAL
37	DP	4	ILE
37	DP	7	GLN
37	DP	32	VAL
37	DP	34	GLU
37	DP	36	SER
37	DP	37	LYS
37	DP	66	ASN
37	DP	81	VAL
37	DP	83	SER
37	DP	89	ARG
37	DP	92	VAL
37	DP	94	LYS
37	DP	109	ARG
37	DP	110	ILE
37	DP	114	LEU
38	DQ	5	LYS
38	DQ	8	VAL
38	DQ	9	ILE
38	DQ	11	ARG
38	DQ	17	ILE
38	DQ	22	LYS
38	DQ	29	SER
38	DQ	30	ARG
38	DQ	41	LYS
38	DQ	51	ARG
38	DQ	52	GLN
38	DQ	59	GLN
38	DQ	104	VAL
39	DR	25	LEU
39	DR	31	GLU

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Mol	Chain	Res	Type
39	DR	39	LEU
39	DR	40	MET
39	DR	41	ILE
39	DR	43	ASN
39	DR	46	GLU
39	DR	48	LYS
39	DR	49	ILE
39	DR	58	VAL
39	DR	75	VAL
39	DR	79	ARG
39	DR	82	HIS
39	DR	85	LYS
39	DR	90	ARG
39	DR	94	THR
39	DR	97	LYS
39	DR	99	THR
40	DS	3	THR
40	DS	6	LYS
40	DS	19	LEU
40	DS	22	ASP
40	DS	24	ILE
40	DS	40	ASN
40	DS	53	SER
40	DS	67	ASP
40	DS	69	LEU
40	DS	86	MET
40	DS	96	ILE
40	DS	97	LEU
41	DT	3	ARG
41	DT	7	LEU
41	DT	16	VAL
41	DT	22	THR
41	DT	24	MET
41	DT	30	ILE
41	DT	31	VAL
41	DT	32	LEU
41	DT	44	LYS
41	DT	49	LYS
41	DT	52	GLU
41	DT	69	ARG
41	DT	73	ARG
41	DT	77	ARG

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Mol	Chain	Res	Type
41	DT	89	GLU
42	DU	7	ARG
42	DU	10	GLU
42	DU	11	VAL
42	DU	15	THR
42	DU	18	ASP
42	DU	30	SER
42	DU	34	VAL
42	DU	35	ILE
42	DU	40	ASN
42	DU	41	LEU
42	DU	45	HIS
42	DU	46	GLN
42	DU	49	VAL
42	DU	54	GLN
42	DU	61	LYS
42	DU	72	ILE
42	DU	81	ASP
42	DU	99	ASN
43	DV	1	MET
43	DV	2	PHE
43	DV	3	THR
43	DV	8	VAL
43	DV	29	ILE
43	DV	35	GLU
43	DV	42	LEU
43	DV	45	ASP
43	DV	49	ASN
43	DV	50	MET
43	DV	53	LYS
43	DV	61	LEU
43	DV	63	ILE
43	DV	65	VAL
44	DW	20	ARG
44	DW	30	SER
44	DW	38	VAL
44	DW	41	ARG
44	DW	72	LYS
45	DX	2	SER
45	DX	4	VAL
45	DX	5	CYS
45	DX	11	ARG

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Mol	Chain	Res	Type
45	DX	23	ASN
45	DX	25	THR
45	DX	33	LEU
45	DX	46	PHE
45	DX	47	VAL
45	DX	51	VAL
45	DX	58	VAL
45	DX	71	LEU
45	DX	76	GLU
46	DY	2	LYS
46	DY	5	GLU
46	DY	6	LEU
46	DY	9	LYS
46	DY	13	GLU
46	DY	14	LEU
46	DY	16	THR
46	DY	21	LEU
46	DY	25	GLN
46	DY	37	LEU
46	DY	38	GLN
46	DY	48	ARG
46	DY	49	ASP
46	DY	56	LEU
46	DY	58	ASN
47	DZ	3	LYS
47	DZ	4	THR
47	DZ	10	THR
47	DZ	25	LEU
47	DZ	31	ARG
47	DZ	39	GLU
47	DZ	41	THR
47	DZ	45	ARG
47	DZ	57	VAL
47	DZ	58	GLU
48	D0	28	LEU
48	D0	37	LYS
48	D0	46	ASP
48	D0	52	ARG
49	D1	5	ILE
49	D1	12	VAL
49	D1	45	GLN
49	D1	46	HIS

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Mol	Chain	Res	Type
49	D1	51	GLU
50	D2	4	THR
50	D2	10	LEU
50	D2	11	LYS
50	D2	24	THR
50	D2	25	LYS
50	D2	44	VAL
50	D2	45	SER
50	D2	46	LYS
51	D3	6	THR
51	D3	23	LYS
51	D3	30	ARG
51	D3	31	HIS
51	D3	34	THR
51	D3	45	ARG
51	D3	47	LYS
52	D4	2	LYS
52	D4	3	VAL
52	D4	12	ARG
52	D4	26	ILE
52	D4	37	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (41) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	39	HIS
3	AC	6	HIS
5	AE	70	ASN
5	AE	82	GLN
5	AE	89	HIS
9	AI	5	GLN
10	AJ	15	HIS
15	AO	46	HIS
19	AS	52	HIS
24	BC	53	HIS
24	BC	226	ASN
24	BC	251	GLN
29	BH	119	ASN
29	BH	135	HIS
33	BL	35	HIS
33	BL	99	ASN
34	BM	97	GLN

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Mol	Chain	Res	Type
36	BO	29	HIS
36	BO	100	HIS
39	BR	89	HIS
40	BS	15	GLN
45	BX	36	HIS
2	CB	15	HIS
2	CB	103	ASN
3	CC	176	HIS
4	CD	74	ASN
7	CG	130	ASN
10	CJ	70	HIS
18	CR	74	HIS
20	CT	68	HIS
24	DC	15	HIS
27	DF	63	GLN
29	DH	128	HIS
36	DO	100	HIS
40	DS	7	HIS
41	DT	15	HIS
42	DU	74	ASN
46	DY	15	ASN
46	DY	41	HIS
51	D3	31	HIS
52	D4	37	GLN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1537/1539 (99%)	344 (22%)	12 (0%)
1	CA	1538/1539 (99%)	340 (22%)	9 (0%)
22	BA	2895/2903 (99%)	542 (18%)	21 (0%)
22	DA	2895/2903 (99%)	673 (23%)	28 (0%)
23	BB	118/119 (99%)	19 (16%)	0
23	DB	117/119 (98%)	24 (20%)	0
All	All	9100/9122 (99%)	1942 (21%)	70 (0%)

All (1942) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	4	U
1	AA	5	U

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Mol	Chain	Res	Type
1	AA	6	G
1	AA	9	G
1	AA	13	U
1	AA	22	G
1	AA	28	A
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	70	U
1	AA	71	A
1	AA	72	A
1	AA	73	C
1	AA	74	A
1	AA	75	G
1	AA	76	G
1	AA	81	A
1	AA	82	G
1	AA	83	C
1	AA	84	U
1	AA	85	U
1	AA	86	G
1	AA	89	U
1	AA	90	C
1	AA	91	U
1	AA	94	G
1	AA	95	C
1	AA	97	G
1	AA	108	G
1	AA	110	C
1	AA	116	A
1	AA	117	G
1	AA	121	U
1	AA	122	G
1	AA	130	A
1	AA	131	A
1	AA	136	C
1	AA	137	U
1	AA	138	G
1	AA	141	G

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Mol	Chain	Res	Type
1	AA	143	A
1	AA	144	G
1	AA	149	A
1	AA	158	G
1	AA	162	A
1	AA	163	C
1	AA	168	G
1	AA	169	C
1	AA	181	A
1	AA	182	A
1	AA	183	C
1	AA	188	C
1	AA	195	A
1	AA	197	A
1	AA	204	G
1	AA	205	A
1	AA	210	C
1	AA	226	G
1	AA	240	G
1	AA	245	U
1	AA	247	G
1	AA	251	G
1	AA	260	G
1	AA	263	A
1	AA	266	G
1	AA	267	C
1	AA	281	G
1	AA	289	G
1	AA	292	G
1	AA	320	A
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	330	C
1	AA	331	G
1	AA	332	G
1	AA	340	U
1	AA	346	G
1	AA	347	G
1	AA	352	C
1	AA	353	A
1	AA	354	G

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Mol	Chain	Res	Type
1	AA	367	U
1	AA	372	C
1	AA	384	G
1	AA	398	U
1	AA	406	G
1	AA	408	A
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	421	U
1	AA	422	C
1	AA	429	U
1	AA	430	A
1	AA	435	A
1	AA	453	G
1	AA	454	G
1	AA	456	A
1	AA	457	G
1	AA	458	U
1	AA	463	U
1	AA	465	A
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	475	C
1	AA	479	U
1	AA	485	U
1	AA	486	U
1	AA	495	A
1	AA	498	A
1	AA	505	G
1	AA	509	A
1	AA	511	C
1	AA	518	C
1	AA	521	G
1	AA	527	G
1	AA	530	G
1	AA	532	A
1	AA	533	A
1	AA	545	C
1	AA	547	A

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Mol	Chain	Res	Type
1	AA	559	A
1	AA	562	U
1	AA	563	A
1	AA	564	C
1	AA	571	U
1	AA	573	A
1	AA	576	C
1	AA	577	G
1	AA	581	G
1	AA	589	U
1	AA	596	A
1	AA	615	G
1	AA	619	U
1	AA	620	C
1	AA	653	U
1	AA	661	G
1	AA	665	A
1	AA	687	A
1	AA	698	G
1	AA	702	A
1	AA	721	G
1	AA	723	U
1	AA	733	G
1	AA	734	G
1	AA	746	A
1	AA	748	G
1	AA	755	G
1	AA	773	G
1	AA	774	G
1	AA	777	A
1	AA	787	A
1	AA	788	U
1	AA	793	U
1	AA	794	A
1	AA	802	A
1	AA	814	A
1	AA	815	A
1	AA	817	C
1	AA	821	G
1	AA	825	A
1	AA	828	U
1	AA	829	G

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Mol	Chain	Res	Type
1	AA	832	G
1	AA	835	U
1	AA	836	G
1	AA	841	C
1	AA	842	U
1	AA	843	U
1	AA	845	A
1	AA	846	G
1	AA	859	G
1	AA	867	G
1	AA	870	U
1	AA	872	A
1	AA	876	C
1	AA	910	C
1	AA	914	A
1	AA	922	G
1	AA	926	G
1	AA	927	G
1	AA	932	C
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	964	A
1	AA	966	G
1	AA	969	A
1	AA	971	G
1	AA	972	C
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	983	A
1	AA	986	U
1	AA	987	G
1	AA	990	C
1	AA	992	U
1	AA	993	G
1	AA	1002	G
1	AA	1003	G
1	AA	1004	A
1	AA	1008	U
1	AA	1009	U
1	AA	1015	G

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Mol	Chain	Res	Type
1	AA	1016	A
1	AA	1022	A
1	AA	1025	U
1	AA	1026	G
1	AA	1027	C
1	AA	1028	C
1	AA	1030	U
1	AA	1031	C
1	AA	1032	G
1	AA	1033	G
1	AA	1034	G
1	AA	1036	A
1	AA	1037	C
1	AA	1042	A
1	AA	1043	G
1	AA	1044	A
1	AA	1047	G
1	AA	1050	G
1	AA	1053	G
1	AA	1054	C
1	AA	1055	A
1	AA	1056	U
1	AA	1061	G
1	AA	1065	U
1	AA	1066	C
1	AA	1086	U
1	AA	1090	U
1	AA	1091	U
1	AA	1092	A
1	AA	1094	G
1	AA	1098	C
1	AA	1101	A
1	AA	1124	G
1	AA	1125	U
1	AA	1127	G
1	AA	1133	G
1	AA	1135	U
1	AA	1136	C
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C

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Mol	Chain	Res	Type
1	AA	1141	C
1	AA	1142	G
1	AA	1143	G
1	AA	1145	A
1	AA	1146	A
1	AA	1149	C
1	AA	1151	A
1	AA	1152	A
1	AA	1154	G
1	AA	1159	U
1	AA	1160	G
1	AA	1161	C
1	AA	1167	A
1	AA	1168	U
1	AA	1171	A
1	AA	1181	G
1	AA	1183	U
1	AA	1184	G
1	AA	1186	G
1	AA	1196	A
1	AA	1197	A
1	AA	1198	G
1	AA	1199	U
1	AA	1200	C
1	AA	1201	A
1	AA	1202	U
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1215	G
1	AA	1227	A
1	AA	1228	C
1	AA	1238	A
1	AA	1239	A
1	AA	1240	U
1	AA	1250	A
1	AA	1253	G
1	AA	1256	A
1	AA	1257	A
1	AA	1258	G
1	AA	1263	C
1	AA	1280	A

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Mol	Chain	Res	Type
1	AA	1286	U
1	AA	1287	A
1	AA	1293	C
1	AA	1298	U
1	AA	1300	G
1	AA	1302	C
1	AA	1304	G
1	AA	1305	G
1	AA	1306	A
1	AA	1320	C
1	AA	1323	G
1	AA	1328	C
1	AA	1332	A
1	AA	1335	U
1	AA	1336	C
1	AA	1337	G
1	AA	1338	G
1	AA	1353	G
1	AA	1363	A
1	AA	1364	U
1	AA	1370	G
1	AA	1378	C
1	AA	1379	G
1	AA	1380	U
1	AA	1382	C
1	AA	1390	U
1	AA	1398	A
1	AA	1441	A
1	AA	1442	G
1	AA	1443	C
1	AA	1446	A
1	AA	1450	U
1	AA	1452	C
1	AA	1453	G
1	AA	1455	G
1	AA	1484	C
1	AA	1493	A
1	AA	1497	G
1	AA	1503	A
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G

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Mol	Chain	Res	Type
1	AA	1529	G
1	AA	1530	G
1	AA	1533	C
1	AA	1534	A
1	AA	1535	C
1	AA	1538	C
22	BA	10	A
22	BA	12	U
22	BA	13	A
22	BA	34	U
22	BA	39	G
22	BA	45	G
22	BA	46	G
22	BA	61	C
22	BA	63	A
22	BA	71	A
22	BA	74	A
22	BA	75	G
22	BA	87	U
22	BA	101	A
22	BA	102	U
22	BA	103	A
22	BA	118	A
22	BA	119	A
22	BA	120	U
22	BA	128	C
22	BA	131	A
22	BA	138	U
22	BA	139	U
22	BA	140	C
22	BA	141	G
22	BA	142	A
22	BA	166	U
22	BA	181	A
22	BA	196	A
22	BA	206	U
22	BA	207	A
22	BA	214	G
22	BA	215	G
22	BA	216	A
22	BA	221	A
22	BA	222	A

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Mol	Chain	Res	Type
22	BA	223	A
22	BA	245	G
22	BA	248	G
22	BA	250	G
22	BA	255	A
22	BA	265	A
22	BA	266	G
22	BA	272	A
22	BA	276	U
22	BA	277	G
22	BA	278	A
22	BA	279	A
22	BA	291	G
22	BA	302	C
22	BA	311	A
22	BA	325	G
22	BA	329	G
22	BA	330	A
22	BA	331	C
22	BA	352	A
22	BA	353	C
22	BA	355	U
22	BA	361	G
22	BA	362	A
22	BA	371	A
22	BA	372	G
22	BA	386	G
22	BA	389	G
22	BA	396	G
22	BA	404	A
22	BA	405	U
22	BA	411	G
22	BA	412	A
22	BA	420	C
22	BA	424	G
22	BA	443	A
22	BA	451	U
22	BA	455	C
22	BA	476	G
22	BA	481	G
22	BA	483	A
22	BA	491	G

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Mol	Chain	Res	Type
22	BA	492	A
22	BA	504	A
22	BA	505	A
22	BA	509	C
22	BA	510	C
22	BA	528	A
22	BA	532	A
22	BA	533	G
22	BA	546	U
22	BA	547	A
22	BA	548	G
22	BA	549	G
22	BA	550	C
22	BA	563	A
22	BA	573	U
22	BA	575	A
22	BA	586	A
22	BA	603	A
22	BA	613	A
22	BA	614	A
22	BA	615	U
22	BA	622	G
22	BA	627	A
22	BA	631	A
22	BA	637	A
22	BA	645	C
22	BA	647	G
22	BA	653	U
22	BA	654	A
22	BA	686	U
22	BA	730	A
22	BA	738	G
22	BA	747	U
22	BA	764	A
22	BA	765	C
22	BA	775	G
22	BA	776	G
22	BA	782	A
22	BA	784	G
22	BA	785	G
22	BA	789	A
22	BA	791	C

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Mol	Chain	Res	Type
22	BA	792	A
22	BA	802	A
22	BA	805	G
22	BA	812	C
22	BA	817	C
22	BA	819	A
22	BA	826	U
22	BA	827	U
22	BA	828	U
22	BA	845	A
22	BA	846	U
22	BA	847	U
22	BA	855	G
22	BA	858	G
22	BA	859	G
22	BA	866	A
22	BA	877	A
22	BA	878	A
22	BA	879	G
22	BA	885	C
22	BA	896	A
22	BA	900	A
22	BA	905	A
22	BA	907	G
22	BA	908	C
22	BA	910	A
22	BA	914	G
22	BA	915	C
22	BA	927	A
22	BA	931	U
22	BA	932	U
22	BA	941	A
22	BA	942	G
22	BA	946	C
22	BA	961	C
22	BA	963	U
22	BA	974	G
22	BA	982	C
22	BA	983	A
22	BA	995	C
22	BA	996	A
22	BA	1012	U

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Mol	Chain	Res	Type
22	BA	1013	C
22	BA	1022	G
22	BA	1026	G
22	BA	1027	A
22	BA	1028	A
22	BA	1033	U
22	BA	1038	G
22	BA	1046	A
22	BA	1047	G
22	BA	1054	A
22	BA	1057	A
22	BA	1058	U
22	BA	1060	U
22	BA	1061	U
22	BA	1062	G
22	BA	1063	G
22	BA	1066	U
22	BA	1067	A
22	BA	1068	G
22	BA	1070	A
22	BA	1071	G
22	BA	1072	C
22	BA	1073	A
22	BA	1074	G
22	BA	1075	C
22	BA	1077	A
22	BA	1078	U
22	BA	1079	C
22	BA	1081	U
22	BA	1088	A
22	BA	1089	A
22	BA	1092	C
22	BA	1097	U
22	BA	1098	A
22	BA	1100	C
22	BA	1103	A
22	BA	1104	C
22	BA	1112	G
22	BA	1128	G
22	BA	1132	U
22	BA	1133	A
22	BA	1135	C

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Mol	Chain	Res	Type
22	BA	1136	G
22	BA	1139	G
22	BA	1142	A
22	BA	1168	G
22	BA	1171	G
22	BA	1172	C
22	BA	1173	U
22	BA	1174	U
22	BA	1175	A
22	BA	1176	U
22	BA	1178	C
22	BA	1179	G
22	BA	1180	U
22	BA	1181	U
22	BA	1182	G
22	BA	1189	A
22	BA	1238	G
22	BA	1253	A
22	BA	1254	A
22	BA	1256	G
22	BA	1266	G
22	BA	1271	G
22	BA	1272	A
22	BA	1280	G
22	BA	1286	A
22	BA	1291	C
22	BA	1300	G
22	BA	1301	A
22	BA	1303	G
22	BA	1305	C
22	BA	1331	G
22	BA	1332	G
22	BA	1345	C
22	BA	1352	U
22	BA	1359	A
22	BA	1365	A
22	BA	1368	G
22	BA	1378	A
22	BA	1379	U
22	BA	1383	A
22	BA	1384	A
22	BA	1386	C

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Mol	Chain	Res	Type
22	BA	1406	U
22	BA	1415	U
22	BA	1416	G
22	BA	1419	A
22	BA	1420	A
22	BA	1427	A
22	BA	1428	C
22	BA	1435	G
22	BA	1450	G
22	BA	1452	G
22	BA	1453	A
22	BA	1461	C
22	BA	1482	G
22	BA	1493	C
22	BA	1495	A
22	BA	1504	A
22	BA	1508	A
22	BA	1510	G
22	BA	1515	A
22	BA	1519	G
22	BA	1523	U
22	BA	1532	A
22	BA	1533	C
22	BA	1534	U
22	BA	1535	A
22	BA	1536	C
22	BA	1554	U
22	BA	1555	G
22	BA	1560	G
22	BA	1564	C
22	BA	1565	C
22	BA	1569	A
22	BA	1578	U
22	BA	1583	A
22	BA	1584	U
22	BA	1585	C
22	BA	1606	C
22	BA	1607	C
22	BA	1608	A
22	BA	1613	G
22	BA	1632	A
22	BA	1634	A

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Mol	Chain	Res	Type
22	BA	1647	U
22	BA	1648	U
22	BA	1649	G
22	BA	1652	A
22	BA	1674	G
22	BA	1688	U
22	BA	1694	C
22	BA	1695	G
22	BA	1703	G
22	BA	1714	U
22	BA	1715	G
22	BA	1717	A
22	BA	1718	G
22	BA	1729	U
22	BA	1730	C
22	BA	1732	C
22	BA	1736	U
22	BA	1738	G
22	BA	1739	A
22	BA	1743	G
22	BA	1744	A
22	BA	1758	U
22	BA	1764	C
22	BA	1766	G
22	BA	1772	A
22	BA	1773	A
22	BA	1776	G
22	BA	1782	U
22	BA	1800	C
22	BA	1801	A
22	BA	1802	A
22	BA	1808	A
22	BA	1813	G
22	BA	1816	C
22	BA	1828	G
22	BA	1829	A
22	BA	1865	U
22	BA	1866	A
22	BA	1870	C
22	BA	1871	A
22	BA	1872	A
22	BA	1873	G

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Mol	Chain	Res	Type
22	BA	1876	A
22	BA	1884	G
22	BA	1885	A
22	BA	1890	A
22	BA	1906	G
22	BA	1909	C
22	BA	1912	A
22	BA	1913	A
22	BA	1914	C
22	BA	1915	U
22	BA	1916	A
22	BA	1917	U
22	BA	1923	U
22	BA	1925	C
22	BA	1926	U
22	BA	1927	A
22	BA	1929	G
22	BA	1930	G
22	BA	1931	U
22	BA	1932	A
22	BA	1937	A
22	BA	1938	A
22	BA	1955	U
22	BA	1963	U
22	BA	1964	G
22	BA	1965	C
22	BA	1967	C
22	BA	1970	A
22	BA	1972	G
22	BA	1991	U
22	BA	1992	G
22	BA	1993	U
22	BA	1997	C
22	BA	2009	A
22	BA	2010	G
22	BA	2022	U
22	BA	2023	C
22	BA	2031	A
22	BA	2032	G
22	BA	2033	A
22	BA	2038	G
22	BA	2043	C

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Mol	Chain	Res	Type
22	BA	2055	C
22	BA	2056	G
22	BA	2060	A
22	BA	2061	G
22	BA	2062	A
22	BA	2069	G
22	BA	2072	C
22	BA	2077	A
22	BA	2092	U
22	BA	2093	G
22	BA	2098	U
22	BA	2100	G
22	BA	2101	A
22	BA	2102	G
22	BA	2110	G
22	BA	2111	U
22	BA	2112	G
22	BA	2113	U
22	BA	2115	G
22	BA	2116	G
22	BA	2117	A
22	BA	2118	U
22	BA	2119	A
22	BA	2122	U
22	BA	2123	G
22	BA	2126	A
22	BA	2127	G
22	BA	2128	G
22	BA	2132	U
22	BA	2133	G
22	BA	2134	A
22	BA	2136	G
22	BA	2140	G
22	BA	2145	C
22	BA	2147	A
22	BA	2148	G
22	BA	2149	U
22	BA	2157	G
22	BA	2162	G
22	BA	2164	C
22	BA	2165	C
22	BA	2167	U

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Mol	Chain	Res	Type
22	BA	2169	A
22	BA	2170	A
22	BA	2171	A
22	BA	2172	U
22	BA	2173	A
22	BA	2178	C
22	BA	2179	C
22	BA	2181	U
22	BA	2187	U
22	BA	2189	U
22	BA	2190	G
22	BA	2192	U
22	BA	2198	A
22	BA	2204	G
22	BA	2211	A
22	BA	2212	A
22	BA	2220	U
22	BA	2225	A
22	BA	2226	C
22	BA	2238	G
22	BA	2239	G
22	BA	2248	C
22	BA	2255	G
22	BA	2258	C
22	BA	2268	A
22	BA	2269	G
22	BA	2273	A
22	BA	2278	A
22	BA	2283	C
22	BA	2287	A
22	BA	2296	U
22	BA	2297	A
22	BA	2305	U
22	BA	2308	G
22	BA	2309	A
22	BA	2322	A
22	BA	2324	U
22	BA	2325	G
22	BA	2327	A
22	BA	2335	A
22	BA	2340	A
22	BA	2345	G

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Mol	Chain	Res	Type
22	BA	2347	C
22	BA	2354	C
22	BA	2361	G
22	BA	2378	A
22	BA	2383	G
22	BA	2385	C
22	BA	2389	G
22	BA	2402	U
22	BA	2403	C
22	BA	2406	A
22	BA	2424	C
22	BA	2425	A
22	BA	2428	G
22	BA	2429	G
22	BA	2430	A
22	BA	2431	U
22	BA	2435	A
22	BA	2441	U
22	BA	2447	G
22	BA	2448	A
22	BA	2476	A
22	BA	2478	A
22	BA	2490	G
22	BA	2491	U
22	BA	2502	G
22	BA	2505	G
22	BA	2518	A
22	BA	2525	G
22	BA	2529	G
22	BA	2554	U
22	BA	2555	U
22	BA	2566	A
22	BA	2567	G
22	BA	2573	C
22	BA	2576	G
22	BA	2579	C
22	BA	2582	G
22	BA	2584	U
22	BA	2599	G
22	BA	2602	A
22	BA	2603	G
22	BA	2609	U

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Mol	Chain	Res	Type
22	BA	2613	U
22	BA	2615	U
22	BA	2616	C
22	BA	2621	G
22	BA	2629	U
22	BA	2632	A
22	BA	2689	U
22	BA	2690	U
22	BA	2714	G
22	BA	2726	A
22	BA	2729	G
22	BA	2732	G
22	BA	2733	A
22	BA	2744	G
22	BA	2748	A
22	BA	2757	A
22	BA	2760	C
22	BA	2765	A
22	BA	2778	A
22	BA	2791	G
22	BA	2798	U
22	BA	2799	A
22	BA	2800	A
22	BA	2806	C
22	BA	2811	G
22	BA	2814	A
22	BA	2820	A
22	BA	2821	A
22	BA	2825	G
22	BA	2835	A
22	BA	2840	C
22	BA	2858	C
22	BA	2867	G
22	BA	2873	A
22	BA	2874	C
22	BA	2880	C
22	BA	2883	A
22	BA	2884	U
22	BA	2885	G
22	BA	2886	A
22	BA	2887	A
22	BA	2891	U

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Mol	Chain	Res	Type
22	BA	2901	C
22	BA	2903	U
23	BB	9	G
23	BB	15	A
23	BB	16	G
23	BB	25	U
23	BB	35	C
23	BB	37	C
23	BB	41	G
23	BB	44	G
23	BB	45	A
23	BB	46	A
23	BB	56	G
23	BB	66	A
23	BB	67	G
23	BB	84	G
23	BB	89	U
23	BB	99	A
23	BB	105	G
23	BB	109	A
23	BB	119	A
1	CA	5	U
1	CA	6	G
1	CA	8	A
1	CA	9	G
1	CA	17	U
1	CA	19	A
1	CA	31	G
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	51	A
1	CA	56	U
1	CA	70	U
1	CA	71	A
1	CA	73	C
1	CA	74	A
1	CA	80	A
1	CA	83	C
1	CA	84	U
1	CA	85	U

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Mol	Chain	Res	Type
1	CA	87	C
1	CA	88	U
1	CA	91	U
1	CA	93	U
1	CA	94	G
1	CA	95	C
1	CA	97	G
1	CA	108	G
1	CA	116	A
1	CA	117	G
1	CA	120	A
1	CA	121	U
1	CA	122	G
1	CA	124	C
1	CA	130	A
1	CA	131	A
1	CA	137	U
1	CA	142	G
1	CA	143	A
1	CA	144	G
1	CA	154	U
1	CA	155	A
1	CA	156	C
1	CA	179	A
1	CA	182	A
1	CA	183	C
1	CA	189	A
1	CA	195	A
1	CA	197	A
1	CA	204	G
1	CA	207	C
1	CA	208	U
1	CA	210	C
1	CA	211	G
1	CA	212	G
1	CA	226	G
1	CA	240	G
1	CA	241	G
1	CA	245	U
1	CA	247	G
1	CA	251	G
1	CA	266	G

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Mol	Chain	Res	Type
1	CA	267	C
1	CA	280	C
1	CA	289	G
1	CA	294	U
1	CA	298	A
1	CA	315	A
1	CA	316	C
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	330	C
1	CA	331	G
1	CA	332	G
1	CA	338	A
1	CA	345	C
1	CA	348	G
1	CA	351	G
1	CA	352	C
1	CA	354	G
1	CA	357	G
1	CA	367	U
1	CA	372	C
1	CA	376	G
1	CA	378	G
1	CA	379	C
1	CA	384	G
1	CA	398	U
1	CA	399	G
1	CA	406	G
1	CA	412	A
1	CA	413	G
1	CA	418	C
1	CA	421	U
1	CA	422	C
1	CA	429	U
1	CA	430	A
1	CA	432	A
1	CA	441	A
1	CA	446	G
1	CA	452	A
1	CA	459	A
1	CA	463	U

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Mol	Chain	Res	Type
1	CA	466	A
1	CA	467	U
1	CA	468	A
1	CA	469	C
1	CA	477	C
1	CA	478	A
1	CA	479	U
1	CA	482	A
1	CA	483	C
1	CA	484	G
1	CA	485	U
1	CA	486	U
1	CA	498	A
1	CA	500	G
1	CA	505	G
1	CA	509	A
1	CA	510	A
1	CA	511	C
1	CA	517	G
1	CA	518	C
1	CA	519	C
1	CA	522	C
1	CA	527	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	536	C
1	CA	545	C
1	CA	547	A
1	CA	549	C
1	CA	550	G
1	CA	559	A
1	CA	564	C
1	CA	568	G
1	CA	571	U
1	CA	572	A
1	CA	573	A
1	CA	576	C
1	CA	577	G
1	CA	580	C
1	CA	581	G
1	CA	596	A

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Mol	Chain	Res	Type
1	CA	622	A
1	CA	628	G
1	CA	650	G
1	CA	653	U
1	CA	665	A
1	CA	666	G
1	CA	673	A
1	CA	683	G
1	CA	687	A
1	CA	702	A
1	CA	721	G
1	CA	723	U
1	CA	724	G
1	CA	733	G
1	CA	747	A
1	CA	755	G
1	CA	758	C
1	CA	760	G
1	CA	776	G
1	CA	777	A
1	CA	785	G
1	CA	787	A
1	CA	793	U
1	CA	794	A
1	CA	809	G
1	CA	812	G
1	CA	814	A
1	CA	815	A
1	CA	817	C
1	CA	819	A
1	CA	821	G
1	CA	828	U
1	CA	832	G
1	CA	841	C
1	CA	842	U
1	CA	843	U
1	CA	844	G
1	CA	845	A
1	CA	846	G
1	CA	859	G
1	CA	874	G
1	CA	880	C

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Mol	Chain	Res	Type
1	CA	885	G
1	CA	902	G
1	CA	914	A
1	CA	919	A
1	CA	922	G
1	CA	926	G
1	CA	934	C
1	CA	945	G
1	CA	960	U
1	CA	966	G
1	CA	967	C
1	CA	969	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	987	G
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	994	A
1	CA	995	C
1	CA	996	A
1	CA	1004	A
1	CA	1008	U
1	CA	1009	U
1	CA	1018	G
1	CA	1022	A
1	CA	1025	U
1	CA	1026	G
1	CA	1027	C
1	CA	1028	C
1	CA	1030	U
1	CA	1031	C
1	CA	1032	G
1	CA	1033	G
1	CA	1034	G
1	CA	1037	C
1	CA	1039	G
1	CA	1043	G
1	CA	1044	A
1	CA	1050	G
1	CA	1054	C

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Mol	Chain	Res	Type
1	CA	1065	U
1	CA	1066	C
1	CA	1070	U
1	CA	1071	C
1	CA	1072	G
1	CA	1073	U
1	CA	1080	A
1	CA	1086	U
1	CA	1088	G
1	CA	1091	U
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1104	G
1	CA	1124	G
1	CA	1125	U
1	CA	1126	U
1	CA	1129	C
1	CA	1133	G
1	CA	1134	G
1	CA	1136	C
1	CA	1137	C
1	CA	1139	G
1	CA	1140	C
1	CA	1141	C
1	CA	1142	G
1	CA	1145	A
1	CA	1154	G
1	CA	1155	A
1	CA	1157	A
1	CA	1159	U
1	CA	1160	G
1	CA	1161	C
1	CA	1168	U
1	CA	1178	G
1	CA	1184	G
1	CA	1186	G
1	CA	1193	G
1	CA	1196	A
1	CA	1202	U
1	CA	1212	U
1	CA	1213	A

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Mol	Chain	Res	Type
1	CA	1227	A
1	CA	1230	C
1	CA	1236	A
1	CA	1238	A
1	CA	1240	U
1	CA	1246	A
1	CA	1253	G
1	CA	1256	A
1	CA	1257	A
1	CA	1260	G
1	CA	1269	A
1	CA	1275	A
1	CA	1280	A
1	CA	1285	A
1	CA	1286	U
1	CA	1287	A
1	CA	1292	G
1	CA	1293	C
1	CA	1297	G
1	CA	1299	A
1	CA	1304	G
1	CA	1305	G
1	CA	1317	C
1	CA	1318	A
1	CA	1319	A
1	CA	1320	C
1	CA	1322	C
1	CA	1324	A
1	CA	1331	G
1	CA	1336	C
1	CA	1337	G
1	CA	1338	G
1	CA	1346	A
1	CA	1349	A
1	CA	1353	G
1	CA	1362	A
1	CA	1363	A
1	CA	1364	U
1	CA	1377	A
1	CA	1378	C
1	CA	1379	G
1	CA	1382	C

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Mol	Chain	Res	Type
1	CA	1398	A
1	CA	1418	A
1	CA	1429	A
1	CA	1441	A
1	CA	1442	G
1	CA	1446	A
1	CA	1448	C
1	CA	1452	C
1	CA	1454	G
1	CA	1455	G
1	CA	1475	G
1	CA	1492	A
1	CA	1493	A
1	CA	1497	G
1	CA	1503	A
1	CA	1505	G
1	CA	1506	U
1	CA	1507	A
1	CA	1509	C
1	CA	1517	G
1	CA	1529	G
1	CA	1530	G
1	CA	1533	C
1	CA	1535	C
1	CA	1536	C
22	DA	3	U
22	DA	10	A
22	DA	11	C
22	DA	12	U
22	DA	15	G
22	DA	23	G
22	DA	31	C
22	DA	34	U
22	DA	39	G
22	DA	41	C
22	DA	42	A
22	DA	46	G
22	DA	47	C
22	DA	55	G
22	DA	58	G
22	DA	61	C
22	DA	71	A

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Mol	Chain	Res	Type
22	DA	73	A
22	DA	74	A
22	DA	75	G
22	DA	80	G
22	DA	81	G
22	DA	82	U
22	DA	83	A
22	DA	84	A
22	DA	91	A
22	DA	96	C
22	DA	98	G
22	DA	101	A
22	DA	102	U
22	DA	118	A
22	DA	119	A
22	DA	120	U
22	DA	121	G
22	DA	138	U
22	DA	139	U
22	DA	140	C
22	DA	141	G
22	DA	142	A
22	DA	145	C
22	DA	146	A
22	DA	149	A
22	DA	150	U
22	DA	155	A
22	DA	162	U
22	DA	163	C
22	DA	166	U
22	DA	181	A
22	DA	196	A
22	DA	206	U
22	DA	215	G
22	DA	216	A
22	DA	222	A
22	DA	223	A
22	DA	225	C
22	DA	233	A
22	DA	245	G
22	DA	248	G
22	DA	249	C

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Mol	Chain	Res	Type
22	DA	253	C
22	DA	255	A
22	DA	256	A
22	DA	265	A
22	DA	266	G
22	DA	271	G
22	DA	272	A
22	DA	276	U
22	DA	279	A
22	DA	281	C
22	DA	282	A
22	DA	284	U
22	DA	285	G
22	DA	294	A
22	DA	311	A
22	DA	322	A
22	DA	328	U
22	DA	329	G
22	DA	330	A
22	DA	331	C
22	DA	361	G
22	DA	362	A
22	DA	367	G
22	DA	371	A
22	DA	372	G
22	DA	380	G
22	DA	385	C
22	DA	386	G
22	DA	387	U
22	DA	389	G
22	DA	392	U
22	DA	396	G
22	DA	405	U
22	DA	411	G
22	DA	417	C
22	DA	424	G
22	DA	426	C
22	DA	430	A
22	DA	432	A
22	DA	435	C
22	DA	448	U
22	DA	451	U

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Mol	Chain	Res	Type
22	DA	452	G
22	DA	453	A
22	DA	455	C
22	DA	478	A
22	DA	479	A
22	DA	480	A
22	DA	481	G
22	DA	490	C
22	DA	491	G
22	DA	504	A
22	DA	505	A
22	DA	508	A
22	DA	510	C
22	DA	519	U
22	DA	526	A
22	DA	528	A
22	DA	529	A
22	DA	531	C
22	DA	532	A
22	DA	533	G
22	DA	543	G
22	DA	544	C
22	DA	546	U
22	DA	547	A
22	DA	548	G
22	DA	549	G
22	DA	550	C
22	DA	563	A
22	DA	569	U
22	DA	573	U
22	DA	574	A
22	DA	575	A
22	DA	586	A
22	DA	603	A
22	DA	613	A
22	DA	614	A
22	DA	627	A
22	DA	628	G
22	DA	630	G
22	DA	631	A
22	DA	634	C
22	DA	637	A

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Mol	Chain	Res	Type
22	DA	642	U
22	DA	645	C
22	DA	646	U
22	DA	647	G
22	DA	648	G
22	DA	651	G
22	DA	654	A
22	DA	655	A
22	DA	662	G
22	DA	672	C
22	DA	677	A
22	DA	685	A
22	DA	686	U
22	DA	689	A
22	DA	695	G
22	DA	701	G
22	DA	702	U
22	DA	717	C
22	DA	726	G
22	DA	727	A
22	DA	728	G
22	DA	729	G
22	DA	730	A
22	DA	740	C
22	DA	747	U
22	DA	751	A
22	DA	752	A
22	DA	757	G
22	DA	764	A
22	DA	771	G
22	DA	775	G
22	DA	776	G
22	DA	782	A
22	DA	784	G
22	DA	785	G
22	DA	792	A
22	DA	798	G
22	DA	801	G
22	DA	802	A
22	DA	805	G
22	DA	808	G
22	DA	812	C

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Mol	Chain	Res	Type
22	DA	815	C
22	DA	819	A
22	DA	827	U
22	DA	828	U
22	DA	830	G
22	DA	844	A
22	DA	845	A
22	DA	846	U
22	DA	847	U
22	DA	858	G
22	DA	859	G
22	DA	865	C
22	DA	878	A
22	DA	881	G
22	DA	882	G
22	DA	885	C
22	DA	896	A
22	DA	897	C
22	DA	902	C
22	DA	906	U
22	DA	910	A
22	DA	913	U
22	DA	914	G
22	DA	915	C
22	DA	919	U
22	DA	931	U
22	DA	932	U
22	DA	941	A
22	DA	946	C
22	DA	953	G
22	DA	961	C
22	DA	963	U
22	DA	974	G
22	DA	983	A
22	DA	985	C
22	DA	995	C
22	DA	996	A
22	DA	1012	U
22	DA	1013	C
22	DA	1022	G
22	DA	1025	G
22	DA	1026	G

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Mol	Chain	Res	Type
22	DA	1028	A
22	DA	1033	U
22	DA	1041	G
22	DA	1046	A
22	DA	1047	G
22	DA	1048	A
22	DA	1053	C
22	DA	1058	U
22	DA	1060	U
22	DA	1061	U
22	DA	1062	G
22	DA	1065	U
22	DA	1066	U
22	DA	1068	G
22	DA	1070	A
22	DA	1071	G
22	DA	1072	C
22	DA	1074	G
22	DA	1075	C
22	DA	1077	A
22	DA	1079	C
22	DA	1082	U
22	DA	1088	A
22	DA	1089	A
22	DA	1092	C
22	DA	1094	U
22	DA	1096	A
22	DA	1097	U
22	DA	1098	A
22	DA	1100	C
22	DA	1101	U
22	DA	1104	C
22	DA	1110	G
22	DA	1111	A
22	DA	1112	G
22	DA	1115	G
22	DA	1116	G
22	DA	1119	U
22	DA	1127	A
22	DA	1128	G
22	DA	1130	U
22	DA	1132	U

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Mol	Chain	Res	Type
22	DA	1133	A
22	DA	1135	C
22	DA	1136	G
22	DA	1139	G
22	DA	1142	A
22	DA	1153	C
22	DA	1155	A
22	DA	1156	A
22	DA	1171	G
22	DA	1172	C
22	DA	1175	A
22	DA	1176	U
22	DA	1179	G
22	DA	1180	U
22	DA	1186	G
22	DA	1187	G
22	DA	1197	G
22	DA	1204	A
22	DA	1211	C
22	DA	1212	G
22	DA	1221	C
22	DA	1227	G
22	DA	1230	A
22	DA	1231	U
22	DA	1236	G
22	DA	1238	G
22	DA	1241	A
22	DA	1246	A
22	DA	1250	G
22	DA	1253	A
22	DA	1255	U
22	DA	1256	G
22	DA	1258	U
22	DA	1264	A
22	DA	1266	G
22	DA	1271	G
22	DA	1272	A
22	DA	1276	A
22	DA	1288	G
22	DA	1300	G
22	DA	1301	A
22	DA	1318	U

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Mol	Chain	Res	Type
22	DA	1321	A
22	DA	1345	C
22	DA	1352	U
22	DA	1355	G
22	DA	1359	A
22	DA	1365	A
22	DA	1368	G
22	DA	1372	U
22	DA	1376	C
22	DA	1378	A
22	DA	1379	U
22	DA	1380	G
22	DA	1383	A
22	DA	1384	A
22	DA	1386	C
22	DA	1387	A
22	DA	1391	U
22	DA	1395	A
22	DA	1411	U
22	DA	1416	G
22	DA	1419	A
22	DA	1426	G
22	DA	1428	C
22	DA	1434	A
22	DA	1446	C
22	DA	1451	C
22	DA	1452	G
22	DA	1455	G
22	DA	1456	G
22	DA	1458	U
22	DA	1462	C
22	DA	1471	G
22	DA	1478	G
22	DA	1482	G
22	DA	1483	G
22	DA	1493	C
22	DA	1495	A
22	DA	1504	A
22	DA	1509	A
22	DA	1510	G
22	DA	1511	G
22	DA	1515	A

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Mol	Chain	Res	Type
22	DA	1523	U
22	DA	1527	G
22	DA	1530	G
22	DA	1531	C
22	DA	1533	C
22	DA	1534	U
22	DA	1535	A
22	DA	1536	C
22	DA	1537	G
22	DA	1538	G
22	DA	1540	G
22	DA	1542	U
22	DA	1560	G
22	DA	1564	C
22	DA	1566	A
22	DA	1569	A
22	DA	1576	U
22	DA	1578	U
22	DA	1581	G
22	DA	1582	C
22	DA	1583	A
22	DA	1584	U
22	DA	1585	C
22	DA	1587	G
22	DA	1591	A
22	DA	1599	U
22	DA	1603	A
22	DA	1606	C
22	DA	1607	C
22	DA	1608	A
22	DA	1610	A
22	DA	1613	G
22	DA	1616	A
22	DA	1618	A
22	DA	1619	G
22	DA	1623	G
22	DA	1625	C
22	DA	1626	A
22	DA	1646	C
22	DA	1647	U
22	DA	1648	U
22	DA	1649	G

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Mol	Chain	Res	Type
22	DA	1651	G
22	DA	1660	G
22	DA	1664	A
22	DA	1674	G
22	DA	1694	C
22	DA	1695	G
22	DA	1715	G
22	DA	1722	A
22	DA	1728	C
22	DA	1729	U
22	DA	1730	C
22	DA	1731	G
22	DA	1732	C
22	DA	1733	G
22	DA	1735	A
22	DA	1738	G
22	DA	1739	A
22	DA	1740	G
22	DA	1744	A
22	DA	1750	G
22	DA	1756	G
22	DA	1758	U
22	DA	1764	C
22	DA	1773	A
22	DA	1787	A
22	DA	1791	A
22	DA	1800	C
22	DA	1802	A
22	DA	1808	A
22	DA	1809	A
22	DA	1811	G
22	DA	1814	G
22	DA	1816	C
22	DA	1822	C
22	DA	1829	A
22	DA	1848	A
22	DA	1858	A
22	DA	1869	G
22	DA	1870	C
22	DA	1871	A
22	DA	1872	A
22	DA	1873	G

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Mol	Chain	Res	Type
22	DA	1874	C
22	DA	1876	A
22	DA	1877	A
22	DA	1880	U
22	DA	1883	U
22	DA	1889	A
22	DA	1893	C
22	DA	1903	G
22	DA	1905	C
22	DA	1906	G
22	DA	1913	A
22	DA	1914	C
22	DA	1920	C
22	DA	1924	C
22	DA	1927	A
22	DA	1929	G
22	DA	1930	G
22	DA	1934	C
22	DA	1937	A
22	DA	1938	A
22	DA	1955	U
22	DA	1965	C
22	DA	1967	C
22	DA	1970	A
22	DA	1971	U
22	DA	1972	G
22	DA	1991	U
22	DA	1993	U
22	DA	1997	C
22	DA	2009	A
22	DA	2018	G
22	DA	2020	A
22	DA	2022	U
22	DA	2023	C
22	DA	2031	A
22	DA	2033	A
22	DA	2043	C
22	DA	2055	C
22	DA	2056	G
22	DA	2059	A
22	DA	2060	A
22	DA	2061	G

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Mol	Chain	Res	Type
22	DA	2062	A
22	DA	2069	G
22	DA	2072	C
22	DA	2080	A
22	DA	2083	G
22	DA	2091	C
22	DA	2092	U
22	DA	2093	G
22	DA	2095	A
22	DA	2108	A
22	DA	2110	G
22	DA	2111	U
22	DA	2112	G
22	DA	2113	U
22	DA	2115	G
22	DA	2116	G
22	DA	2117	A
22	DA	2118	U
22	DA	2119	A
22	DA	2125	G
22	DA	2126	A
22	DA	2127	G
22	DA	2128	G
22	DA	2131	U
22	DA	2132	U
22	DA	2133	G
22	DA	2135	A
22	DA	2137	U
22	DA	2146	C
22	DA	2147	A
22	DA	2149	U
22	DA	2158	A
22	DA	2162	G
22	DA	2163	A
22	DA	2164	C
22	DA	2165	C
22	DA	2166	U
22	DA	2169	A
22	DA	2170	A
22	DA	2171	A
22	DA	2172	U
22	DA	2173	A

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Mol	Chain	Res	Type
22	DA	2178	C
22	DA	2179	C
22	DA	2184	A
22	DA	2189	U
22	DA	2190	G
22	DA	2194	U
22	DA	2198	A
22	DA	2203	U
22	DA	2204	G
22	DA	2211	A
22	DA	2212	A
22	DA	2214	C
22	DA	2225	A
22	DA	2226	C
22	DA	2227	A
22	DA	2230	G
22	DA	2238	G
22	DA	2241	A
22	DA	2243	U
22	DA	2246	G
22	DA	2250	G
22	DA	2267	A
22	DA	2268	A
22	DA	2273	A
22	DA	2278	A
22	DA	2283	C
22	DA	2285	C
22	DA	2287	A
22	DA	2289	G
22	DA	2293	G
22	DA	2305	U
22	DA	2307	G
22	DA	2308	G
22	DA	2309	A
22	DA	2310	C
22	DA	2311	A
22	DA	2312	U
22	DA	2316	G
22	DA	2321	U
22	DA	2322	A
22	DA	2324	U
22	DA	2325	G

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Mol	Chain	Res	Type
22	DA	2327	A
22	DA	2333	A
22	DA	2344	U
22	DA	2347	C
22	DA	2350	C
22	DA	2354	C
22	DA	2357	G
22	DA	2361	G
22	DA	2383	G
22	DA	2385	C
22	DA	2388	A
22	DA	2402	U
22	DA	2403	C
22	DA	2406	A
22	DA	2407	A
22	DA	2410	G
22	DA	2422	C
22	DA	2423	U
22	DA	2424	C
22	DA	2425	A
22	DA	2428	G
22	DA	2429	G
22	DA	2430	A
22	DA	2431	U
22	DA	2435	A
22	DA	2441	U
22	DA	2446	G
22	DA	2448	A
22	DA	2449	U
22	DA	2457	U
22	DA	2470	G
22	DA	2474	U
22	DA	2476	A
22	DA	2484	G
22	DA	2491	U
22	DA	2502	G
22	DA	2503	A
22	DA	2504	U
22	DA	2505	G
22	DA	2518	A
22	DA	2525	G
22	DA	2529	G

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Mol	Chain	Res	Type
22	DA	2535	G
22	DA	2547	A
22	DA	2550	G
22	DA	2554	U
22	DA	2559	C
22	DA	2566	A
22	DA	2567	G
22	DA	2572	A
22	DA	2573	C
22	DA	2578	G
22	DA	2581	G
22	DA	2582	G
22	DA	2585	U
22	DA	2586	U
22	DA	2602	A
22	DA	2603	G
22	DA	2609	U
22	DA	2610	C
22	DA	2612	C
22	DA	2613	U
22	DA	2629	U
22	DA	2630	G
22	DA	2636	C
22	DA	2638	G
22	DA	2646	C
22	DA	2663	G
22	DA	2681	C
22	DA	2682	A
22	DA	2689	U
22	DA	2690	U
22	DA	2714	G
22	DA	2716	C
22	DA	2718	G
22	DA	2726	A
22	DA	2727	A
22	DA	2733	A
22	DA	2748	A
22	DA	2751	G
22	DA	2757	A
22	DA	2764	A
22	DA	2765	A
22	DA	2770	G

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Mol	Chain	Res	Type
22	DA	2776	A
22	DA	2778	A
22	DA	2781	A
22	DA	2782	G
22	DA	2791	G
22	DA	2794	C
22	DA	2798	U
22	DA	2799	A
22	DA	2803	G
22	DA	2807	U
22	DA	2809	A
22	DA	2812	G
22	DA	2820	A
22	DA	2823	A
22	DA	2826	A
22	DA	2834	G
22	DA	2861	U
22	DA	2865	U
22	DA	2867	G
22	DA	2873	A
22	DA	2879	A
22	DA	2880	C
22	DA	2883	A
22	DA	2886	A
22	DA	2891	U
22	DA	2903	U
23	DB	13	G
23	DB	15	A
23	DB	22	U
23	DB	24	G
23	DB	31	C
23	DB	35	C
23	DB	36	C
23	DB	44	G
23	DB	51	G
23	DB	56	G
23	DB	64	G
23	DB	66	A
23	DB	73	A
23	DB	88	C
23	DB	89	U
23	DB	90	C

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Mol	Chain	Res	Type
23	DB	91	C
23	DB	94	A
23	DB	98	G
23	DB	99	A
23	DB	105	G
23	DB	109	A
23	DB	110	C
23	DB	113	C

All (70) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	115	G
1	AA	209	U
1	AA	351	G
1	AA	429	U
1	AA	793	U
1	AA	1031	C
1	AA	1049	U
1	AA	1145	A
1	AA	1201	A
1	AA	1211	U
1	AA	1378	C
1	AA	1533	C
22	BA	70	G
22	BA	199	A
22	BA	271	G
22	BA	404	A
22	BA	764	A
22	BA	784	G
22	BA	846	U
22	BA	995	C
22	BA	1078	U
22	BA	1180	U
22	BA	1344	U
22	BA	1378	A
22	BA	1606	C
22	BA	1738	G
22	BA	1757	A
22	BA	2127	G
22	BA	2211	A
22	BA	2286	G

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Mol	Chain	Res	Type
22	BA	2326	C
22	BA	2583	G
22	BA	2873	A
1	CA	96	U
1	CA	115	G
1	CA	209	U
1	CA	429	U
1	CA	723	U
1	CA	1049	U
1	CA	1201	A
1	CA	1211	U
1	CA	1279	G
22	DA	83	A
22	DA	196	A
22	DA	271	G
22	DA	404	A
22	DA	479	A
22	DA	613	A
22	DA	800	A
22	DA	846	U
22	DA	982	C
22	DA	1240	U
22	DA	1275	A
22	DA	1344	U
22	DA	1378	A
22	DA	1606	C
22	DA	1721	G
22	DA	1738	G
22	DA	1847	A
22	DA	2109	U
22	DA	2127	G
22	DA	2146	C
22	DA	2162	G
22	DA	2211	A
22	DA	2225	A
22	DA	2286	G
22	DA	2308	G
22	DA	2326	C
22	DA	2602	A
22	DA	2873	A

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

10 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	$\#\|Z\| > 2$
54	004	D6	7	54	9,10,11	3.27	7 (77%)	9,12,14	2.11	3 (33%)
54	004	B6	7	54	9,10,11	3.96	7 (77%)	9,12,14	0.93	0
54	MHU	D6	5	54	14,15,16	2.75	7 (50%)	18,19,21	2.45	2 (11%)
54	MHW	B6	1	54	9,9,10	3.33	4 (44%)	10,11,13	2.29	6 (60%)
54	MHW	D6	1	54	9,9,10	3.31	4 (44%)	10,11,13	2.22	5 (50%)
54	DBB	D6	3	54	4,5,6	0.63	0	1,5,7	0.36	0
54	MHU	B6	5	54	14,15,16	2.81	8 (57%)	18,19,21	2.81	5 (27%)
54	04X	D6	6	54	14,16,17	1.17	1 (7%)	11,20,22	4.89	7 (63%)
54	DBB	B6	3	54	4,5,6	0.36	0	1,5,7	1.39	0
54	04X	B6	6	54	14,16,17	1.46	1 (7%)	11,20,22	4.75	6 (54%)

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
54	004	D6	7	54	-	4/4/6/8	0/1/1/1
54	004	B6	7	54	-	2/4/6/8	0/1/1/1
54	MHU	D6	5	54	-	2/9/12/14	0/1/1/1
54	MHW	B6	1	54	-	0/2/2/4	0/1/1/1
54	MHW	D6	1	54	-	0/2/2/4	0/1/1/1
54	DBB	D6	3	54	-	1/3/4/6	-
54	MHU	B6	5	54	-	0/9/12/14	0/1/1/1
54	04X	D6	6	54	-	3/4/24/26	0/2/2/2
54	DBB	B6	3	54	-	0/3/4/6	-
54	04X	B6	6	54	-	2/4/24/26	0/2/2/2

All (39) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	B6	7	004	CB-CA	-8.53	1.43	1.52
54	B6	1	MHW	CA-N	-6.09	1.27	1.35
54	D6	1	MHW	CA-N	-5.92	1.27	1.35
54	B6	5	MHU	CE1-CD1	5.79	1.49	1.38
54	D6	7	004	CB-CA	-5.67	1.46	1.52
54	D6	5	MHU	CE1-CD1	5.67	1.49	1.38
54	D6	1	MHW	CG2-CB	-5.28	1.30	1.39
54	B6	1	MHW	CG2-CB	-5.27	1.30	1.39
54	B6	7	004	CG1-CB	-4.74	1.31	1.39
54	B6	6	04X	CE-N	-4.66	1.40	1.46
54	B6	5	MHU	CM-N	-4.29	1.35	1.46
54	D6	1	MHW	CA-C	-4.23	1.44	1.48
54	D6	5	MHU	CD2-CG	4.16	1.47	1.38
54	B6	1	MHW	CA-C	-4.04	1.44	1.48
54	D6	5	MHU	CM-N	-3.95	1.36	1.46
54	B6	5	MHU	CD2-CG	3.95	1.47	1.38
54	D6	7	004	CG1-CB	-3.92	1.32	1.39
54	D6	7	004	CD2-CE	3.76	1.48	1.38
54	B6	5	MHU	CE2-CZ	3.67	1.46	1.39
54	B6	7	004	CD2-CE	3.55	1.47	1.38
54	D6	6	04X	CE-N	-3.32	1.42	1.46
54	D6	5	MHU	CE2-CZ	3.24	1.45	1.39
54	D6	7	004	CD2-CG2	-3.18	1.32	1.38
54	B6	1	MHW	OG1-CB	3.17	1.42	1.36
54	B6	7	004	CD2-CG2	-3.15	1.32	1.38
54	B6	7	004	CD1-CG1	3.11	1.45	1.38
54	D6	7	004	CD1-CG1	2.99	1.45	1.38
54	D6	1	MHW	OG1-CB	2.90	1.42	1.36
54	D6	5	MHU	CD2-CE2	-2.75	1.33	1.38
54	D6	5	MHU	CE1-CZ	-2.69	1.33	1.39
54	B6	5	MHU	CD2-CE2	-2.64	1.34	1.38
54	B6	7	004	CD1-CE	-2.63	1.31	1.38
54	D6	7	004	CD1-CE	-2.61	1.31	1.38
54	B6	5	MHU	CZ1-NZ	-2.56	1.39	1.45
54	B6	5	MHU	CZ2-NZ	-2.24	1.40	1.45
54	D6	5	MHU	CZ1-NZ	-2.19	1.40	1.45
54	D6	7	004	CA-C	-2.18	1.46	1.51
54	B6	5	MHU	CE1-CZ	-2.06	1.35	1.39
54	B6	7	004	CA-C	-2.04	1.46	1.51

All (34) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	D6	6	04X	C0-N1-C1	13.77	132.45	111.09
54	B6	6	04X	C0-N1-C1	13.33	131.77	111.09
54	B6	5	MHU	CB-CA-N	7.72	122.61	110.65
54	D6	5	MHU	CB-CA-N	7.49	122.26	110.65
54	B6	5	MHU	O-C-CA	-7.08	106.23	124.78
54	D6	5	MHU	O-C-CA	-5.94	109.21	124.78
54	D6	7	004	CB-CA-N	4.83	123.96	112.40
54	D6	6	04X	C2-C1-N1	-4.76	102.88	110.10
54	B6	6	04X	C0-N1-C4	-4.45	104.19	111.09
54	B6	6	04X	C2-C1-N1	-4.22	103.70	110.10
54	D6	6	04X	C3-C4-N1	-3.43	104.91	110.10
54	D6	6	04X	C3-O1-C2	3.39	121.21	109.89
54	B6	6	04X	C3-O1-C2	3.26	120.78	109.89
54	B6	6	04X	C4-N1-C1	3.23	116.11	108.83
54	D6	1	MHW	O-C-CA	-3.22	121.17	124.22
54	D6	6	04X	C4-N1-C1	3.20	116.03	108.83
54	B6	5	MHU	CB-CA-C	-3.09	105.78	111.65
54	B6	1	MHW	CD-CE-N	-3.02	118.49	123.43
54	D6	1	MHW	CB-CA-N	2.96	125.27	121.20
54	B6	1	MHW	O-C-CA	-2.85	121.53	124.22
54	B6	1	MHW	OG1-CB-CG2	2.79	126.92	119.33
54	D6	1	MHW	CD-CE-N	-2.72	118.98	123.43
54	D6	7	004	CG2-CB-CA	2.65	124.92	120.65
54	B6	5	MHU	CG-CB-CA	2.65	117.42	113.63
54	B6	1	MHW	C-CA-N	2.59	119.61	115.41
54	D6	1	MHW	OG1-CB-CG2	2.54	126.23	119.33
54	B6	1	MHW	CB-CA-N	2.48	124.60	121.20
54	D6	6	04X	C0-N1-C4	-2.40	107.37	111.09
54	D6	1	MHW	CG2-CD-CE	2.34	122.38	118.91
54	B6	1	MHW	CG2-CD-CE	2.33	122.36	118.91
54	B6	6	04X	O1-C3-C4	-2.27	106.79	111.80
54	D6	6	04X	O1-C2-C1	-2.09	107.20	111.80
54	B6	5	MHU	CE1-CZ-NZ	-2.06	118.84	121.63
54	D6	7	004	CG1-CB-CA	-2.01	117.42	120.65

There are no chirality outliers.

All (14) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
54	D6	3	DBB	O-C-CA-CB
54	B6	6	04X	CD-C0-N1-C1
54	D6	6	04X	CD-C0-N1-C1
54	D6	5	MHU	CA-CB-CG-CD2

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Mol	Chain	Res	Type	Atoms
54	D6	6	04X	O-C-CA-CB
54	D6	5	MHU	CA-CB-CG-CD1
54	B6	6	04X	N1-C0-CD-CG
54	D6	6	04X	N1-C0-CD-CG
54	D6	7	004	N-CA-CB-CG2
54	D6	7	004	C-CA-CB-CG1
54	D6	7	004	N-CA-CB-CG1
54	B6	7	004	C-CA-CB-CG1
54	B6	7	004	C-CA-CB-CG2
54	D6	7	004	C-CA-CB-CG2

There are no ring outliers.

6 monomers are involved in 19 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
54	D6	7	004	2	0
54	D6	5	MHU	5	0
54	B6	1	MHW	1	0
54	D6	1	MHW	6	0
54	D6	3	DBB	2	0
54	D6	6	04X	4	0

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 502 ligands modelled in this entry, 500 are monoatomic - leaving 2 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
56	VIF	BA	3001	-	35,40,40	2.34	15 (42%)	43,55,55	2.14	14 (32%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
56	VIF	DA	3001	-	35,40,40	2.34	14 (40%)	43,55,55	2.06	12 (27%)

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
56	VIF	BA	3001	-	-	3/42/58/58	0/2/3/3
56	VIF	DA	3001	-	-	5/42/58/58	0/2/3/3

All (29) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	BA	3001	VIF	O01-C06	-4.73	1.37	1.44
56	DA	3001	VIF	O01-C06	-4.48	1.38	1.44
56	BA	3001	VIF	O01-C08	-4.41	1.24	1.34
56	BA	3001	VIF	C11-C09	-4.40	1.43	1.53
56	DA	3001	VIF	O04-C22	-4.39	1.35	1.43
56	DA	3001	VIF	C15-N01	4.36	1.44	1.34
56	DA	3001	VIF	O01-C08	-4.33	1.24	1.34
56	DA	3001	VIF	C11-C09	-4.25	1.43	1.53
56	BA	3001	VIF	C03-N02	4.06	1.43	1.34
56	BA	3001	VIF	F-C07	-3.85	1.25	1.40
56	BA	3001	VIF	C15-N01	3.81	1.43	1.34
56	DA	3001	VIF	F-C07	-3.61	1.26	1.40
56	BA	3001	VIF	O04-C22	-3.32	1.37	1.43
56	DA	3001	VIF	C09-N01	-3.24	1.40	1.47
56	DA	3001	VIF	C03-N02	3.20	1.41	1.34
56	BA	3001	VIF	C09-N01	-3.16	1.40	1.47
56	BA	3001	VIF	C09-C08	-2.91	1.46	1.52
56	DA	3001	VIF	C23-N	-2.60	1.29	1.37
56	BA	3001	VIF	C26-C05	-2.52	1.46	1.53
56	DA	3001	VIF	C09-C08	-2.48	1.47	1.52
56	DA	3001	VIF	C26-C05	-2.47	1.46	1.53
56	BA	3001	VIF	C13-N01	-2.40	1.43	1.47
56	DA	3001	VIF	C14-C22	-2.31	1.47	1.52
56	BA	3001	VIF	C23-N	-2.28	1.30	1.37
56	DA	3001	VIF	C13-N01	-2.20	1.43	1.47
56	BA	3001	VIF	C12-C13	-2.09	1.44	1.51
56	DA	3001	VIF	C23-C15	-2.06	1.47	1.50
56	BA	3001	VIF	C16-C	-2.03	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	BA	3001	VIF	C14-C22	-2.01	1.48	1.52

All (26) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	BA	3001	VIF	C02-C01-C03	-6.39	106.72	122.69
56	DA	3001	VIF	C18-C10-C20	-6.01	116.82	125.89
56	DA	3001	VIF	C02-C01-C03	-5.99	107.71	122.69
56	BA	3001	VIF	O01-C08-C09	4.36	120.38	110.78
56	BA	3001	VIF	C18-C10-C20	-4.27	119.44	125.89
56	BA	3001	VIF	C07-C14-C22	-4.05	108.39	113.86
56	DA	3001	VIF	C06-O01-C08	3.85	124.39	117.78
56	DA	3001	VIF	O01-C08-C09	3.81	119.17	110.78
56	DA	3001	VIF	O01-C06-C05	3.51	112.94	107.09
56	BA	3001	VIF	C19-C-C16	-3.47	100.87	110.59
56	BA	3001	VIF	C24-C20-C10	3.04	122.86	118.08
56	DA	3001	VIF	C19-C-C16	-2.94	102.36	110.59
56	BA	3001	VIF	O03-C15-N01	-2.90	116.90	121.59
56	DA	3001	VIF	C24-C20-C10	2.83	122.53	118.08
56	DA	3001	VIF	C26-C05-C02	-2.76	103.32	109.99
56	BA	3001	VIF	O01-C08-O02	-2.66	118.96	123.94
56	BA	3001	VIF	C01-C03-N02	2.64	119.95	114.97
56	BA	3001	VIF	C26-C05-C02	-2.58	103.75	109.99
56	DA	3001	VIF	C06-C05-C02	2.38	117.22	109.52
56	BA	3001	VIF	C10-C20-C21	-2.38	111.59	119.42
56	BA	3001	VIF	C06-O01-C08	2.38	121.86	117.78
56	BA	3001	VIF	C26-C05-C06	2.33	115.42	111.11
56	DA	3001	VIF	O01-C08-O02	-2.31	119.63	123.94
56	DA	3001	VIF	C26-C05-C06	2.26	115.30	111.11
56	DA	3001	VIF	C10-C20-C21	-2.16	112.31	119.42
56	BA	3001	VIF	F-C07-C14	-2.12	105.02	108.63

There are no chirality outliers.

All (8) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
56	DA	3001	VIF	F-C07-C14-C22
56	BA	3001	VIF	C02-C01-C03-O
56	BA	3001	VIF	C02-C01-C03-N02
56	DA	3001	VIF	C05-C06-O01-C08
56	DA	3001	VIF	C-C06-O01-C08
56	BA	3001	VIF	C01-C02-C05-C26

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Mol	Chain	Res	Type	Atoms
56	DA	3001	VIF	N02-C17-C18-C10
56	DA	3001	VIF	C01-C02-C05-C26

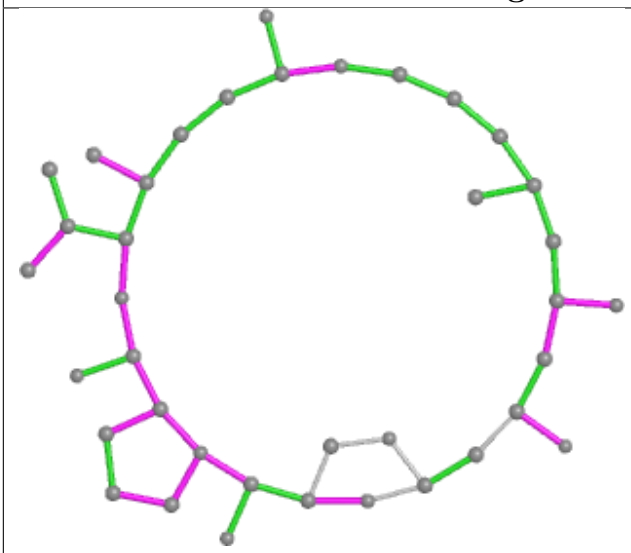
There are no ring outliers.

2 monomers are involved in 13 short contacts:

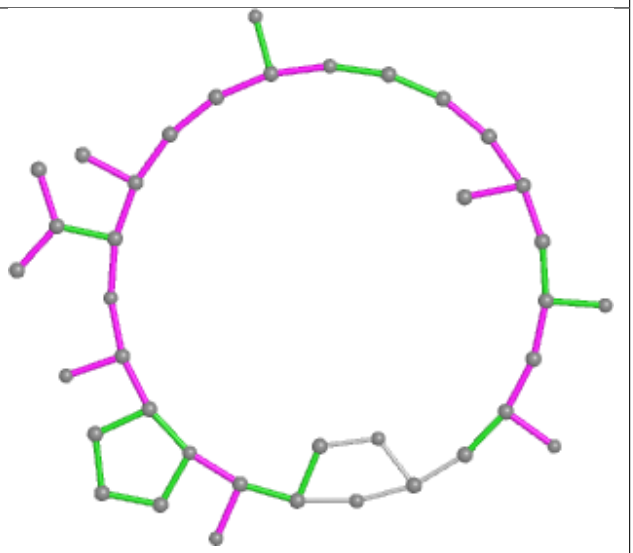
Mol	Chain	Res	Type	Clashes	Symm-Clashes
56	BA	3001	VIF	2	0
56	DA	3001	VIF	11	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

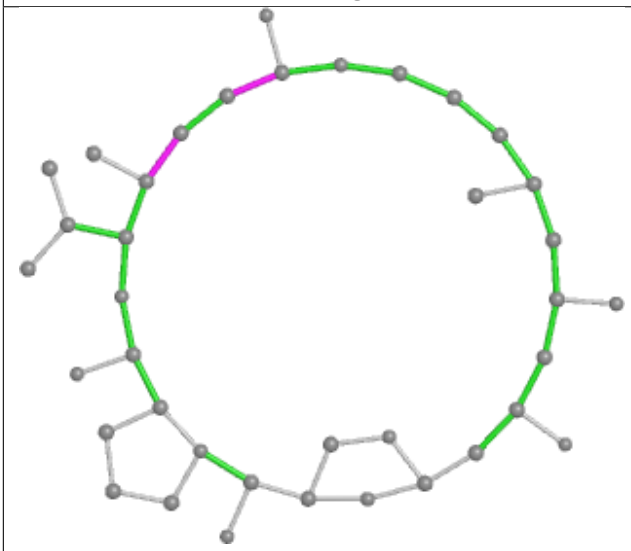
Ligand VIF BA 3001



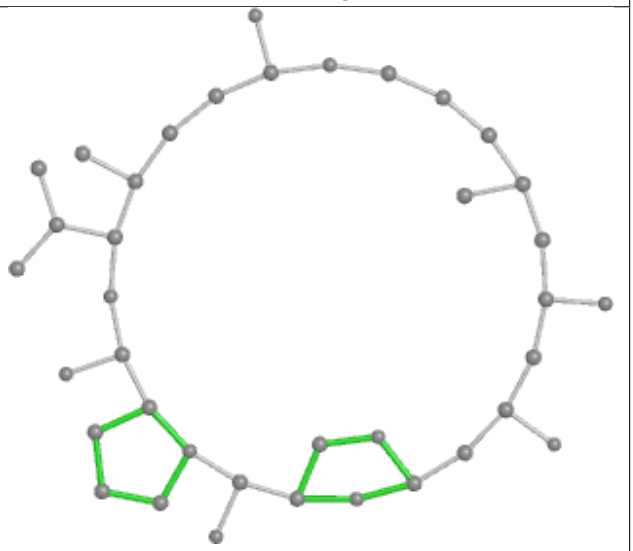
Bond lengths



Bond angles

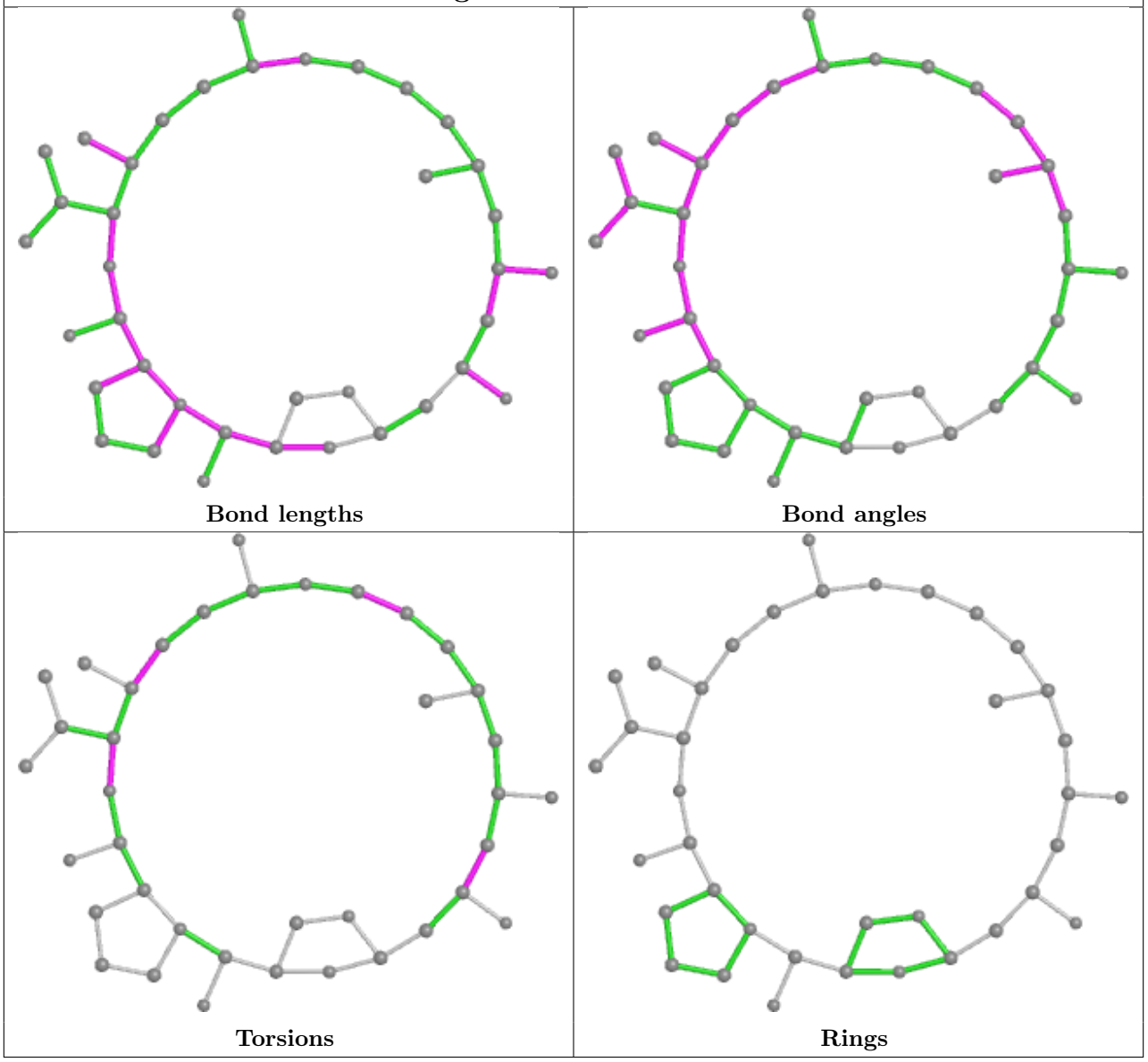


Torsions



Rings

Ligand VIF DA 3001



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	AA	1538/1539 (99%)	-0.21	26 (1%) 70 63	13, 50, 135, 180	0
1	CA	1539/1539 (100%)	0.02	56 (3%) 42 32	27, 70, 145, 177	0
2	AB	218/218 (100%)	0.65	19 (8%) 10 5	38, 73, 99, 121	0
2	CB	218/218 (100%)	1.06	55 (25%) 0 0	61, 87, 107, 125	0
3	AC	206/206 (100%)	-0.07	3 (1%) 73 68	33, 57, 78, 93	0
3	CC	206/206 (100%)	0.69	22 (10%) 6 3	48, 78, 95, 105	0
4	AD	205/205 (100%)	0.17	9 (4%) 34 24	32, 55, 79, 105	0
4	CD	205/205 (100%)	-0.16	4 (1%) 65 56	18, 38, 64, 88	0
5	AE	150/150 (100%)	-0.01	2 (1%) 77 72	30, 48, 79, 102	0
5	CE	150/150 (100%)	0.11	3 (2%) 65 56	32, 56, 82, 104	0
6	AF	100/100 (100%)	-0.15	1 (1%) 82 77	34, 58, 73, 86	0
6	CF	100/100 (100%)	-0.03	3 (3%) 50 40	44, 74, 93, 105	0
7	AG	151/151 (100%)	0.34	12 (7%) 12 7	54, 77, 96, 102	0
7	CG	151/151 (100%)	2.44	87 (57%) 0 0	81, 100, 109, 114	0
8	AH	129/129 (100%)	-0.12	1 (0%) 86 81	27, 48, 66, 76	0
8	CH	129/129 (100%)	0.17	5 (3%) 39 29	49, 65, 80, 90	0
9	AI	127/127 (100%)	0.88	15 (11%) 4 2	43, 73, 96, 109	0
9	CI	127/127 (100%)	1.38	36 (28%) 0 0	71, 93, 110, 122	0
10	AJ	98/98 (100%)	0.39	6 (6%) 21 13	40, 64, 92, 122	0
10	CJ	98/98 (100%)	2.18	47 (47%) 0 0	72, 93, 111, 125	0
11	AK	117/117 (100%)	0.55	11 (9%) 8 4	27, 65, 91, 115	0
11	CK	117/117 (100%)	0.14	4 (3%) 45 35	39, 66, 79, 93	0
12	AL	123/123 (100%)	0.05	5 (4%) 37 27	18, 35, 64, 96	0
12	CL	123/123 (100%)	0.23	6 (4%) 29 20	38, 52, 78, 98	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AM	114/114 (100%)	0.17	5 (4%) 34 24	45, 68, 92, 102	0
13	CM	114/114 (100%)	2.60	66 (57%) 0 0	96, 108, 116, 119	0
14	AN	96/100 (96%)	0.71	10 (10%) 6 3	37, 58, 94, 103	0
14	CN	96/100 (96%)	1.91	34 (35%) 0 0	69, 94, 111, 120	0
15	AO	88/88 (100%)	0.02	2 (2%) 60 51	28, 51, 65, 90	0
15	CO	88/88 (100%)	0.07	2 (2%) 60 51	40, 62, 80, 98	0
16	AP	82/82 (100%)	0.27	5 (6%) 21 13	31, 47, 85, 101	0
16	CP	82/82 (100%)	1.00	19 (23%) 0 0	44, 61, 87, 105	0
17	AQ	80/80 (100%)	0.25	3 (3%) 40 30	27, 49, 77, 122	0
17	CQ	80/80 (100%)	0.97	13 (16%) 1 1	44, 75, 97, 102	0
18	AR	55/55 (100%)	-0.14	3 (5%) 25 16	39, 52, 78, 108	0
18	CR	55/55 (100%)	0.09	3 (5%) 25 16	42, 55, 79, 111	0
19	AS	79/79 (100%)	0.71	11 (13%) 2 1	52, 68, 89, 102	0
19	CS	79/79 (100%)	3.58	58 (73%) 0 0	89, 108, 118, 124	0
20	AT	85/85 (100%)	0.32	2 (2%) 59 49	34, 48, 70, 103	0
20	CT	85/85 (100%)	1.13	16 (18%) 1 1	55, 73, 91, 97	0
21	AU	51/51 (100%)	1.34	17 (33%) 0 0	48, 74, 95, 106	0
21	CU	51/51 (100%)	0.67	6 (11%) 4 2	45, 71, 96, 105	0
22	BA	2897/2903 (99%)	0.04	107 (3%) 41 31	0, 13, 130, 195	0
22	DA	2897/2903 (99%)	0.19	103 (3%) 42 32	40, 82, 145, 181	0
23	BB	119/119 (100%)	-0.39	0 100 100	2, 23, 49, 85	0
23	DB	118/119 (99%)	0.03	1 (0%) 86 81	66, 112, 133, 143	0
24	BC	271/271 (100%)	-0.26	0 100 100	3, 19, 36, 51	0
24	DC	271/271 (100%)	0.48	20 (7%) 14 8	43, 61, 77, 89	0
25	BD	209/209 (100%)	-0.34	0 100 100	0, 10, 34, 68	0
25	DD	209/209 (100%)	0.76	24 (11%) 4 2	49, 68, 83, 96	0
26	BE	201/201 (100%)	-0.36	0 100 100	1, 23, 54, 90	0
26	DE	201/201 (100%)	1.41	71 (35%) 0 0	42, 84, 100, 108	0
27	BF	177/177 (100%)	0.02	3 (1%) 70 63	20, 41, 78, 90	0
27	DF	177/177 (100%)	2.94	127 (71%) 0 0	90, 107, 119, 125	0
28	BG	176/176 (100%)	-0.15	1 (0%) 89 86	17, 37, 62, 84	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	DG	176/176 (100%)	1.81	67 (38%) 0 0	72, 93, 105, 114	0
29	BH	149/149 (100%)	3.13	81 (54%) 0 0	25, 102, 121, 129	0
29	DH	149/149 (100%)	1.34	42 (28%) 0 0	25, 92, 107, 115	0
30	BI	141/141 (100%)	3.38	93 (65%) 0 0	90, 111, 122, 133	0
30	DI	141/141 (100%)	4.67	114 (80%) 0 0	101, 117, 127, 130	0
31	BJ	142/142 (100%)	-0.42	0 100 100	1, 6, 22, 36	0
31	DJ	142/142 (100%)	0.54	13 (9%) 9 5	50, 66, 79, 96	0
32	BK	122/122 (100%)	-0.49	0 100 100	4, 12, 32, 67	0
32	DK	122/122 (100%)	0.92	21 (17%) 1 1	46, 63, 82, 97	0
33	BL	143/143 (100%)	-0.31	0 100 100	1, 18, 43, 74	0
33	DL	143/143 (100%)	1.61	50 (34%) 0 0	46, 79, 94, 113	0
34	BM	136/136 (100%)	-0.45	0 100 100	1, 9, 29, 84	0
34	DM	136/136 (100%)	0.79	19 (13%) 2 1	45, 69, 82, 101	0
35	BN	120/120 (100%)	-0.35	0 100 100	2, 7, 16, 52	0
35	DN	120/120 (100%)	1.00	22 (18%) 1 1	56, 75, 88, 114	0
36	BO	116/116 (100%)	-0.29	0 100 100	13, 24, 42, 50	0
36	DO	116/116 (100%)	1.83	50 (43%) 0 0	80, 94, 105, 114	0
37	BP	114/114 (100%)	-0.37	0 100 100	6, 18, 42, 64	0
37	DP	114/114 (100%)	0.74	15 (13%) 3 2	57, 69, 86, 91	0
38	BQ	117/117 (100%)	-0.35	0 100 100	1, 4, 13, 31	0
38	DQ	117/117 (100%)	0.63	14 (11%) 4 2	52, 67, 78, 82	0
39	BR	103/103 (100%)	-0.43	0 100 100	0, 11, 33, 66	0
39	DR	103/103 (100%)	1.36	24 (23%) 0 0	51, 77, 88, 99	0
40	BS	110/110 (100%)	-0.36	1 (0%) 84 80	1, 4, 21, 80	0
40	DS	110/110 (100%)	1.60	37 (33%) 0 0	57, 74, 89, 100	0
41	BT	93/93 (100%)	0.03	2 (2%) 62 52	8, 26, 75, 103	0
41	DT	93/93 (100%)	2.46	49 (52%) 0 0	66, 85, 103, 117	0
42	BU	102/102 (100%)	-0.30	2 (1%) 65 56	12, 28, 63, 92	0
42	DU	102/102 (100%)	2.93	56 (54%) 0 0	75, 90, 109, 118	0
43	BV	94/94 (100%)	-0.44	0 100 100	5, 19, 41, 53	0
43	DV	94/94 (100%)	0.88	15 (15%) 1 1	69, 84, 95, 104	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	BW	76/76 (100%)	-0.33	0 100 100	4, 12, 27, 54	0
44	DW	75/76 (98%)	1.53	23 (30%) 0 0	60, 80, 90, 105	0
45	BX	77/77 (100%)	-0.31	0 100 100	6, 24, 51, 73	0
45	DX	77/77 (100%)	0.70	12 (15%) 2 1	51, 71, 84, 87	0
46	BY	63/63 (100%)	0.14	5 (7%) 12 7	20, 40, 73, 93	0
46	DY	63/63 (100%)	1.92	27 (42%) 0 0	78, 94, 100, 105	0
47	BZ	58/58 (100%)	-0.30	0 100 100	2, 6, 23, 42	0
47	DZ	58/58 (100%)	0.58	6 (10%) 6 3	58, 71, 81, 94	0
48	B0	56/56 (100%)	-0.36	0 100 100	0, 9, 36, 68	0
48	D0	56/56 (100%)	1.45	17 (30%) 0 0	56, 78, 92, 102	0
49	B1	50/50 (100%)	-0.16	2 (4%) 38 28	17, 29, 49, 77	0
49	D1	50/50 (100%)	1.46	12 (24%) 0 0	69, 84, 93, 103	0
50	B2	46/46 (100%)	-0.24	1 (2%) 62 52	3, 9, 16, 88	0
50	D2	46/46 (100%)	1.45	14 (30%) 0 0	56, 68, 79, 102	0
51	B3	64/64 (100%)	-0.25	0 100 100	4, 9, 16, 31	0
51	D3	64/64 (100%)	1.07	16 (25%) 0 0	57, 71, 80, 81	0
52	B4	38/38 (100%)	-0.24	0 100 100	8, 16, 35, 52	0
52	D4	38/38 (100%)	1.49	13 (34%) 0 0	58, 75, 87, 101	0
53	B5	191/228 (83%)	5.76	184 (96%) 0 0	99, 115, 127, 135	0
54	B6	2/7 (28%)	-0.26	0 100 100	1, 1, 1, 1	0
54	D6	2/7 (28%)	0.48	0 100 100	47, 47, 47, 57	0
All	All	20738/20808 (99%)	0.45	2289 (11%) 5 3	0, 62, 120, 195	0

All (2289) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
30	BI	53	LEU	20.9
29	BH	97	ARG	16.2
22	BA	2184	A	14.8
30	DI	3	LYS	14.3
30	DI	2	ALA	14.2
22	BA	2145	C	13.6
30	DI	60	THR	13.5
53	B5	111	PHE	13.5
22	BA	2144	G	13.4

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Mol	Chain	Res	Type	RSRZ
29	BH	96	THR	12.7
30	DI	59	ILE	12.7
53	B5	132	LEU	12.6
29	BH	136	SER	12.5
53	B5	55	SER	12.5
42	DU	60	GLU	12.2
30	BI	3	LYS	12.0
2	AB	155	GLY	11.9
30	BI	114	ALA	11.8
22	BA	2158	A	11.6
30	DI	68	THR	11.6
22	BA	2147	A	11.5
22	BA	2148	G	11.5
30	BI	2	ALA	11.4
53	B5	218	THR	11.4
29	BH	113	SER	11.3
53	B5	207	GLY	11.2
30	DI	7	ALA	11.1
53	B5	182	PRO	11.0
22	BA	2101	A	11.0
29	BH	130	VAL	11.0
29	BH	69	ALA	10.9
22	BA	2100	G	10.9
53	B5	225	ILE	10.9
53	B5	20	VAL	10.8
19	CS	71	LEU	10.8
53	B5	179	ALA	10.8
22	BA	2104	C	10.8
53	B5	48	LEU	10.7
22	BA	2102	G	10.5
30	DI	6	GLN	10.5
22	BA	2185	U	10.5
17	AQ	83	VAL	10.5
29	BH	110	VAL	10.5
30	DI	13	VAL	10.4
30	DI	58	VAL	10.4
53	B5	212	SER	10.3
22	BA	2114	A	10.3
53	B5	146	VAL	10.3
53	B5	141	PRO	10.3
53	B5	97	GLY	10.2
53	B5	110	ASP	10.2

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Mol	Chain	Res	Type	RSRZ
30	DI	4	LYS	10.2
7	CG	73	VAL	10.2
29	BH	105	ALA	10.0
29	BH	98	ASP	9.9
22	BA	2159	G	9.9
29	BH	54	LEU	9.8
10	AJ	102	LEU	9.8
53	B5	203	GLU	9.8
1	AA	1534	A	9.7
30	DI	70	VAL	9.7
29	BH	146	VAL	9.6
30	DI	69	PHE	9.6
53	B5	62	THR	9.6
2	AB	157	LEU	9.6
53	B5	157	ILE	9.6
22	BA	2178	C	9.6
30	DI	67	PHE	9.5
1	AA	1535	C	9.4
22	BA	2103	C	9.4
30	DI	66	SER	9.4
42	DU	26	LYS	9.4
10	CJ	77	VAL	9.4
29	BH	106	ALA	9.2
53	B5	199	ALA	9.2
53	B5	208	THR	9.1
53	B5	217	THR	9.0
7	CG	62	PHE	8.9
30	DI	61	VAL	8.9
22	BA	2183	A	8.9
30	BI	4	LYS	8.8
53	B5	67	HIS	8.8
9	CI	128	SER	8.8
53	B5	107	GLY	8.8
7	CG	66	LEU	8.7
53	B5	72	GLN	8.6
53	B5	183	PRO	8.6
53	B5	79	ALA	8.6
14	CN	36	ALA	8.6
30	BI	13	VAL	8.6
27	DF	122	PHE	8.6
22	BA	2135	A	8.6
53	B5	95	VAL	8.5

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Mol	Chain	Res	Type	RSRZ
30	DI	78	VAL	8.5
42	DU	36	VAL	8.5
53	B5	174	ALA	8.4
53	B5	156	GLU	8.4
53	B5	64	SER	8.4
19	CS	66	MET	8.4
30	BI	115	ALA	8.3
53	B5	42	VAL	8.3
53	B5	133	GLY	8.3
29	BH	148	ALA	8.3
22	BA	2165	C	8.3
22	BA	2139	U	8.2
14	CN	51	LEU	8.2
27	DF	35	THR	8.2
30	DI	53	LEU	8.2
22	BA	2112	G	8.1
19	CS	39	THR	8.1
1	AA	1536	C	8.1
29	BH	120	GLY	8.1
53	B5	84	ILE	8.1
19	CS	42	PRO	8.1
41	DT	34	VAL	8.1
30	DI	8	TYR	8.1
53	B5	109	MET	8.1
42	DU	48	PRO	8.1
29	BH	112	LYS	8.1
30	DI	11	LEU	8.0
33	DL	92	LEU	8.0
41	DT	36	LYS	8.0
30	DI	34	ASN	8.0
30	DI	54	PRO	8.0
53	B5	66	PRO	8.0
42	DU	12	ILE	8.0
22	BA	2113	U	7.9
53	B5	65	LEU	7.9
29	BH	102	ALA	7.9
30	BI	14	ALA	7.8
22	BA	2143	C	7.7
30	DI	25	GLY	7.7
9	AI	41	ARG	7.7
30	BI	5	VAL	7.7
53	B5	76	LEU	7.7

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Mol	Chain	Res	Type	RSRZ
29	BH	55	GLU	7.6
53	B5	122	GLY	7.6
19	CS	41	PHE	7.6
30	BI	54	PRO	7.6
30	DI	63	ALA	7.6
22	BA	2136	G	7.6
30	BI	79	LEU	7.6
53	B5	38	PHE	7.5
22	BA	2140	G	7.5
53	B5	202	PRO	7.5
42	DU	50	PRO	7.5
22	BA	2162	G	7.5
53	B5	59	VAL	7.5
53	B5	78	ILE	7.5
29	DH	12	LEU	7.5
1	AA	1538	C	7.4
22	BA	2127	G	7.4
53	B5	54	ARG	7.4
42	DU	58	ILE	7.4
1	CA	1535	C	7.4
20	CT	38	ALA	7.4
20	CT	4	ILE	7.4
27	DF	156	ILE	7.4
30	BI	12	GLN	7.4
53	B5	143	ALA	7.3
22	DA	1537	G	7.3
53	B5	164	PHE	7.3
30	DI	22	PRO	7.3
41	DT	10	VAL	7.3
10	CJ	76	ILE	7.3
1	CA	1032	G	7.3
26	DE	119	ILE	7.2
53	B5	165	ARG	7.2
53	B5	94	TYR	7.2
30	BI	55	ILE	7.2
27	DF	128	TYR	7.2
53	B5	121	MET	7.2
41	DT	55	VAL	7.2
22	BA	2163	A	7.2
7	CG	87	VAL	7.1
29	BH	91	PHE	7.1
30	BI	68	THR	7.1

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Mol	Chain	Res	Type	RSRZ
22	BA	2131	U	7.1
9	AI	43	THR	7.1
29	BH	124	THR	7.0
53	B5	223	VAL	7.0
42	DU	51	ALA	7.0
30	DI	28	LEU	7.0
53	B5	145	THR	7.0
19	CS	37	ARG	7.0
53	B5	63	VAL	7.0
53	B5	213	VAL	7.0
53	B5	147	GLY	7.0
22	BA	2138	G	6.9
35	DN	28	LEU	6.9
53	B5	222	SER	6.9
53	B5	82	GLU	6.9
1	CA	1536	C	6.9
21	AU	38	TYR	6.9
53	B5	53	ARG	6.9
22	BA	2117	A	6.9
19	CS	43	ASN	6.8
52	D4	10	LEU	6.8
53	B5	131	ILE	6.8
19	CS	29	LYS	6.8
50	D2	46	LYS	6.8
13	CM	86	TYR	6.8
53	B5	77	ALA	6.8
19	CS	30	PRO	6.8
30	BI	52	GLY	6.7
22	BA	2149	U	6.7
19	CS	40	ILE	6.7
4	CD	25	VAL	6.7
27	DF	133	ARG	6.7
29	BH	123	ARG	6.7
29	BH	119	ASN	6.7
27	DF	176	PRO	6.7
53	B5	173	HIS	6.7
53	B5	210	LEU	6.6
19	CS	15	LEU	6.6
53	B5	37	LYS	6.6
19	CS	72	GLY	6.6
53	B5	81	GLY	6.6
1	AA	78	A	6.6

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Mol	Chain	Res	Type	RSRZ
22	BA	2172	U	6.6
42	DU	77	THR	6.6
22	BA	2189	U	6.6
29	DH	15	LEU	6.6
22	BA	2099	U	6.5
29	BH	101	ASP	6.5
53	B5	104	ILE	6.5
53	B5	108	TRP	6.5
30	DI	47	ASP	6.5
13	CM	108	THR	6.5
22	BA	2155	U	6.5
28	DG	9	VAL	6.5
30	DI	85	GLY	6.4
53	B5	52	PRO	6.4
22	BA	2115	G	6.4
29	BH	72	ILE	6.4
27	DF	116	GLY	6.4
53	B5	50	ILE	6.4
40	DS	92	ARG	6.4
53	B5	200	HIS	6.4
1	CA	1539	C	6.4
10	CJ	74	VAL	6.4
29	BH	115	VAL	6.4
29	BH	144	VAL	6.4
53	B5	93	ASP	6.4
13	CM	10	PRO	6.4
53	B5	211	ARG	6.4
42	DU	35	ILE	6.3
1	AA	1539	C	6.3
19	CS	67	VAL	6.3
27	DF	130	MET	6.3
41	DT	76	ARG	6.3
50	B2	46	LYS	6.3
53	B5	39	ASP	6.3
22	BA	2142	A	6.3
22	BA	138	U	6.3
42	DU	52	LEU	6.3
30	DI	5	VAL	6.3
22	BA	2153	C	6.3
36	DO	24	THR	6.3
29	BH	58	LEU	6.3
30	BI	69	PHE	6.3

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Mol	Chain	Res	Type	RSRZ
53	B5	221	PRO	6.3
22	BA	2182	U	6.3
22	DA	1093	G	6.3
53	B5	61	GLY	6.2
19	CS	64	ASP	6.2
53	B5	106	ASP	6.2
53	B5	167	ASP	6.2
22	BA	2157	G	6.2
19	CS	38	SER	6.2
22	BA	2116	G	6.2
30	DI	35	ILE	6.2
29	DH	79	THR	6.2
53	B5	170	GLY	6.2
3	CC	79	LYS	6.1
53	B5	73	VAL	6.1
30	BI	41	ALA	6.1
13	CM	96	PRO	6.1
30	DI	30	GLN	6.1
53	B5	219	MET	6.1
30	BI	11	LEU	6.1
29	DH	142	VAL	6.1
30	BI	67	PHE	6.1
7	CG	151	PHE	6.1
53	B5	195	ARG	6.1
42	DU	57	GLY	6.1
42	DU	89	ASP	6.1
30	DI	29	GLY	6.0
30	DI	83	ALA	6.0
30	DI	64	ASP	6.0
22	BA	2121	G	6.0
27	DF	39	GLY	6.0
22	DA	1175	A	6.0
30	DI	24	VAL	6.0
16	CP	47	GLU	6.0
29	BH	68	ARG	6.0
44	DW	52	GLY	6.0
53	B5	98	GLU	6.0
30	DI	18	ALA	6.0
30	DI	79	LEU	6.0
46	BY	63	ALA	6.0
13	CM	84	GLY	6.0
53	B5	68	GLY	6.0

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Mol	Chain	Res	Type	RSRZ
48	D0	27	SER	5.9
41	DT	71	GLY	5.9
36	DO	40	ILE	5.9
22	BA	2177	C	5.9
53	B5	198	GLU	5.9
30	BI	82	LYS	5.9
42	DU	79	LYS	5.9
7	CG	18	PHE	5.9
10	CJ	72	ARG	5.9
46	DY	10	SER	5.9
33	DL	144	GLU	5.9
28	DG	105	LEU	5.9
29	BH	121	VAL	5.9
53	B5	161	ARG	5.9
53	B5	188	ASP	5.9
30	BI	20	PRO	5.9
42	DU	78	GLY	5.8
30	DI	45	LYS	5.8
42	DU	43	LYS	5.8
53	B5	220	GLY	5.8
30	DI	36	MET	5.8
53	B5	194	ILE	5.8
30	BI	101	ILE	5.8
19	CS	61	PHE	5.8
30	DI	17	MET	5.8
2	CB	9	MET	5.8
2	CB	32	PHE	5.8
29	BH	129	GLU	5.8
22	BA	2118	U	5.8
22	BA	2160	C	5.8
27	DF	79	ILE	5.7
33	DL	70	LYS	5.7
53	B5	71	LYS	5.7
53	B5	204	GLY	5.7
27	DF	114	PHE	5.7
30	DI	126	THR	5.7
3	CC	37	PHE	5.7
14	AN	21	PHE	5.7
2	AB	9	MET	5.7
30	DI	62	TYR	5.7
42	DU	27	ASN	5.7
46	DY	14	LEU	5.7

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Mol	Chain	Res	Type	RSRZ
14	CN	44	ALA	5.7
53	B5	134	PRO	5.7
27	DF	54	ALA	5.7
22	BA	2161	C	5.7
53	B5	150	ILE	5.7
22	BA	2124	G	5.7
2	CB	151	ILE	5.6
53	B5	100	ILE	5.6
33	DL	89	VAL	5.6
9	CI	130	ARG	5.6
53	B5	201	LYS	5.6
22	BA	2132	U	5.6
42	DU	13	VAL	5.6
13	CM	23	TYR	5.6
53	B5	180	SER	5.6
9	AI	40	GLY	5.6
28	DG	57	GLY	5.6
38	DQ	29	SER	5.6
2	CB	132	LYS	5.6
7	CG	103	TRP	5.6
41	DT	15	HIS	5.5
53	B5	60	ARG	5.5
30	DI	65	ARG	5.5
19	CS	44	MET	5.5
20	AT	68	HIS	5.5
53	B5	120	VAL	5.5
13	CM	64	VAL	5.5
28	DG	32	GLU	5.5
30	BI	40	LYS	5.5
32	DK	68	GLY	5.5
52	D4	8	LYS	5.5
22	BA	2150	C	5.5
53	B5	160	GLY	5.5
27	DF	65	PRO	5.5
53	B5	57	GLN	5.5
33	DL	101	ILE	5.5
28	DG	52	PHE	5.5
13	CM	95	LEU	5.5
42	DU	25	VAL	5.5
30	BI	8	TYR	5.5
19	CS	24	GLU	5.5
30	DI	96	ASP	5.5

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Mol	Chain	Res	Type	RSRZ
13	CM	69	LEU	5.5
9	CI	127	PHE	5.4
22	BA	2179	C	5.4
29	DH	6	LEU	5.4
7	CG	59	LEU	5.4
16	AP	80	LYS	5.4
2	CB	135	LEU	5.4
2	CB	148	LEU	5.4
30	BI	48	SER	5.4
30	DI	98	VAL	5.4
41	DT	8	LEU	5.4
22	BA	2123	G	5.4
27	DF	13	VAL	5.4
30	BI	80	LEU	5.4
36	DO	13	ARG	5.4
22	BA	2171	A	5.4
10	CJ	16	ARG	5.4
27	DF	170	LEU	5.4
29	BH	64	ALA	5.4
29	BH	95	GLY	5.3
7	CG	88	PRO	5.3
22	BA	2174	C	5.3
53	B5	148	PHE	5.3
45	DX	49	LEU	5.3
30	BI	133	ALA	5.3
49	D1	47	VAL	5.3
27	DF	157	THR	5.3
41	DT	6	ARG	5.3
53	B5	184	GLU	5.3
27	DF	89	VAL	5.3
22	BA	2175	C	5.3
10	CJ	71	LEU	5.3
28	DG	45	HIS	5.3
22	BA	2146	C	5.3
22	BA	2156	G	5.3
22	BA	2181	U	5.3
43	DV	94	ALA	5.3
53	B5	214	TYR	5.3
7	CG	72	THR	5.3
22	BA	2125	G	5.3
33	DL	106	GLU	5.2
28	DG	33	LEU	5.2

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Mol	Chain	Res	Type	RSRZ
30	DI	32	GLY	5.2
48	D0	23	THR	5.2
22	BA	2106	U	5.2
30	DI	15	ALA	5.2
13	CM	63	PHE	5.2
30	DI	38	PHE	5.2
53	B5	45	HIS	5.2
22	BA	2168	G	5.2
30	DI	33	VAL	5.2
44	DW	38	VAL	5.2
53	B5	169	THR	5.2
27	DF	76	GLY	5.2
13	CM	40	ALA	5.2
49	D1	53	LYS	5.2
22	BA	2122	U	5.2
29	BH	59	ALA	5.2
53	B5	27	ALA	5.2
53	B5	87	ALA	5.2
53	B5	187	ALA	5.2
10	CJ	26	VAL	5.2
30	DI	42	PHE	5.2
1	CA	82	G	5.2
22	BA	2120	G	5.1
9	CI	43	THR	5.1
14	CN	46	LEU	5.1
22	BA	2134	A	5.1
41	DT	35	ALA	5.1
13	CM	45	ILE	5.1
22	BA	2110	G	5.1
40	DS	36	LEU	5.1
28	DG	84	THR	5.1
14	CN	47	LYS	5.1
7	CG	54	SER	5.1
22	DA	546	U	5.1
53	B5	166	ASN	5.1
30	BI	39	CYS	5.1
53	B5	209	PHE	5.1
22	BA	2133	G	5.1
22	BA	2166	U	5.1
13	CM	85	CYS	5.1
21	CU	45	ARG	5.1
53	B5	181	PHE	5.1

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Mol	Chain	Res	Type	RSRZ
49	D1	52	ALA	5.1
25	DD	96	ILE	5.0
53	B5	49	GLY	5.0
30	DI	80	LEU	5.0
53	B5	85	LYS	5.0
30	DI	106	LEU	5.0
36	DO	117	PHE	5.0
2	CB	136	MET	5.0
18	CR	20	GLU	5.0
49	D1	36	LEU	5.0
30	DI	39	CYS	5.0
22	BA	2141	G	5.0
14	CN	30	ILE	5.0
12	AL	124	ALA	5.0
53	B5	92	ALA	5.0
28	DG	50	LEU	5.0
53	B5	162	ILE	5.0
9	CI	129	LYS	5.0
27	DF	112	ARG	5.0
53	B5	70	GLY	5.0
19	CS	48	THR	5.0
2	AB	156	GLY	5.0
31	DJ	47	HIS	5.0
33	DL	80	SER	5.0
1	CA	1031	C	4.9
28	DG	148	LEU	4.9
53	B5	96	GLY	4.9
10	AJ	89	ARG	4.9
12	CL	124	ALA	4.9
27	DF	21	ASN	4.9
26	DE	175	ILE	4.9
40	DS	84	ARG	4.9
28	DG	166	ASP	4.9
22	BA	2111	U	4.9
27	DF	155	THR	4.9
41	DT	1	MET	4.9
7	CG	79	ARG	4.9
27	DF	75	ALA	4.9
7	CG	152	ALA	4.9
19	CS	68	GLY	4.9
22	DA	1073	A	4.9
41	DT	81	LYS	4.9

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Mol	Chain	Res	Type	RSRZ
30	BI	22	PRO	4.9
30	DI	23	PRO	4.9
22	BA	2130	U	4.9
53	B5	149	ASN	4.9
53	B5	152	GLU	4.9
25	DD	27	ILE	4.9
53	B5	41	THR	4.8
22	DA	1536	C	4.8
4	AD	37	ALA	4.8
30	BI	116	ASP	4.8
42	DU	39	ILE	4.8
28	DG	20	ASN	4.8
30	BI	21	SER	4.8
29	BH	89	LYS	4.8
28	DG	92	VAL	4.8
42	DU	3	ALA	4.8
4	AD	28	ILE	4.8
30	DI	21	SER	4.8
50	D2	1	MET	4.8
7	CG	38	THR	4.8
30	BI	83	ALA	4.8
42	DU	71	ALA	4.8
53	B5	46	ALA	4.8
2	CB	129	LEU	4.8
1	AA	1030	U	4.8
53	B5	151	GLY	4.8
53	B5	185	LYS	4.8
17	CQ	13	VAL	4.8
46	DY	21	LEU	4.8
27	DF	38	MET	4.8
10	CJ	89	ARG	4.8
28	DG	102	VAL	4.8
30	BI	120	ALA	4.8
19	CS	80	TYR	4.8
22	DA	1171	G	4.8
36	DO	2	ASP	4.8
19	CS	60	VAL	4.7
41	DT	43	ILE	4.7
30	DI	57	VAL	4.7
10	CJ	87	LEU	4.7
31	DJ	119	PHE	4.7
32	DK	89	ASN	4.7

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Mol	Chain	Res	Type	RSRZ
22	BA	2169	A	4.7
22	BA	2173	A	4.7
2	CB	139	ARG	4.7
14	CN	48	LEU	4.7
29	BH	73	ASN	4.7
42	DU	31	SER	4.7
30	BI	17	MET	4.7
30	DI	112	THR	4.7
14	CN	24	ARG	4.7
10	CJ	90	LEU	4.7
30	DI	130	GLU	4.7
42	DU	80	ALA	4.7
16	CP	80	LYS	4.7
30	DI	90	SER	4.7
30	DI	9	VAL	4.7
30	DI	46	THR	4.7
7	CG	52	GLN	4.7
35	DN	38	LEU	4.7
28	DG	174	ALA	4.7
27	DF	37	ASN	4.7
39	DR	27	ILE	4.7
7	CG	112	GLY	4.7
50	D2	33	ARG	4.7
53	B5	216	THR	4.7
44	DW	70	GLU	4.7
36	DO	51	ALA	4.6
29	BH	116	ARG	4.6
53	B5	126	SER	4.6
27	DF	36	LEU	4.6
30	DI	55	ILE	4.6
1	CA	1540	U	4.6
14	CN	53	ARG	4.6
19	CS	18	LYS	4.6
29	BH	85	GLY	4.6
44	DW	83	GLU	4.6
7	CG	84	THR	4.6
39	DR	29	THR	4.6
53	B5	215	VAL	4.6
19	CS	31	LEU	4.6
27	DF	132	VAL	4.6
53	B5	43	GLU	4.6
53	B5	99	GLU	4.6

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Mol	Chain	Res	Type	RSRZ
1	CA	211	G	4.6
29	DH	13	GLY	4.6
40	DS	47	VAL	4.6
29	BH	67	ALA	4.6
51	D3	37	ALA	4.6
53	B5	192	ALA	4.6
27	DF	142	ASP	4.6
30	BI	100	LYS	4.6
31	DJ	74	TYR	4.6
30	DI	12	GLN	4.6
53	B5	142	LYS	4.6
27	DF	86	GLY	4.6
29	BH	86	ASP	4.5
27	DF	173	PHE	4.5
22	BA	139	U	4.5
29	BH	83	LYS	4.5
53	B5	56	ASP	4.5
53	B5	74	ARG	4.5
14	CN	52	PRO	4.5
2	CB	67	ILE	4.5
7	CG	68	ASN	4.5
29	BH	87	GLU	4.5
35	DN	76	VAL	4.5
10	CJ	41	PRO	4.5
32	DK	101	GLY	4.5
52	D4	1	MET	4.5
1	CA	1312	G	4.5
19	CS	51	VAL	4.5
13	CM	115	PRO	4.5
1	CA	94	G	4.5
7	CG	60	GLU	4.5
29	BH	122	LEU	4.5
1	AA	1537	U	4.5
13	AM	114	LYS	4.5
29	BH	139	PHE	4.5
27	DF	22	TYR	4.5
10	CJ	86	ALA	4.4
26	DE	150	THR	4.4
9	CI	44	ALA	4.4
46	DY	33	ALA	4.4
42	DU	32	GLY	4.4
14	CN	43	ASN	4.4

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Mol	Chain	Res	Type	RSRZ
40	DS	40	ASN	4.4
26	DE	17	THR	4.4
53	B5	101	ILE	4.4
19	CS	74	PHE	4.4
30	DI	120	ALA	4.4
53	B5	144	GLY	4.4
22	BA	2107	G	4.4
27	DF	147	ASP	4.4
3	CC	193	TYR	4.4
19	CS	63	THR	4.4
28	DG	43	VAL	4.4
53	B5	44	VAL	4.4
7	CG	65	ALA	4.4
27	DF	23	ASN	4.4
22	DA	1172	C	4.4
7	CG	85	TYR	4.4
29	BH	118	PRO	4.4
13	CM	8	ASN	4.4
27	DF	151	GLY	4.4
20	AT	36	TYR	4.4
27	DF	12	VAL	4.4
41	DT	2	ILE	4.4
30	BI	84	ALA	4.4
53	B5	155	ARG	4.4
22	DA	2796	U	4.4
53	B5	83	LYS	4.4
42	DU	87	PHE	4.3
27	DF	55	ALA	4.3
30	DI	77	ALA	4.3
22	DA	1535	A	4.3
30	BI	87	LYS	4.3
40	DS	16	LYS	4.3
30	BI	99	GLY	4.3
7	CG	83	SER	4.3
53	B5	105	LEU	4.3
29	DH	47	PHE	4.3
33	DL	77	ILE	4.3
46	DY	29	ARG	4.3
30	BI	81	LYS	4.3
29	BH	93	SER	4.3
14	AN	30	ILE	4.3
22	DA	2402	U	4.3

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Mol	Chain	Res	Type	RSRZ
2	CB	83	ALA	4.3
29	DH	100	ALA	4.3
44	DW	63	ALA	4.3
1	CA	1538	C	4.3
2	CB	92	VAL	4.3
7	CG	5	ARG	4.3
8	AH	2	SER	4.3
19	CS	33	THR	4.3
44	DW	23	VAL	4.3
26	DE	164	LEU	4.3
27	DF	174	ASP	4.3
50	D2	42	LEU	4.3
53	B5	191	ARG	4.3
30	BI	71	THR	4.3
16	AP	81	ALA	4.3
19	CS	28	LYS	4.3
14	CN	45	VAL	4.3
30	BI	78	VAL	4.3
35	DN	97	ILE	4.3
27	DF	115	ARG	4.3
22	DA	1067	A	4.3
21	CU	38	TYR	4.3
14	CN	32	SER	4.3
30	DI	122	ILE	4.3
40	DS	54	ALA	4.3
30	DI	52	GLY	4.2
34	DM	124	LEU	4.2
13	CM	109	ARG	4.2
47	DZ	2	ALA	4.2
41	DT	60	THR	4.2
53	B5	89	GLU	4.2
27	DF	66	LEU	4.2
39	DR	35	PHE	4.2
26	DE	172	ALA	4.2
27	DF	32	GLU	4.2
28	DG	106	SER	4.2
53	B5	91	GLY	4.2
29	BH	132	PHE	4.2
18	CR	74	HIS	4.2
27	DF	154	ILE	4.2
7	CG	67	GLU	4.2
30	BI	15	ALA	4.2

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Mol	Chain	Res	Type	RSRZ
53	B5	51	ASP	4.2
40	DS	85	ILE	4.2
22	BA	2164	C	4.2
28	DG	56	ASP	4.2
7	CG	91	VAL	4.2
35	DN	120	GLU	4.2
11	CK	43	GLY	4.2
22	BA	2180	U	4.2
22	DA	2126	A	4.2
26	DE	144	GLU	4.2
42	DU	20	GLY	4.2
53	B5	80	LYS	4.2
53	B5	140	ASN	4.2
41	DT	40	LYS	4.2
42	DU	28	VAL	4.2
3	CC	78	GLY	4.2
7	CG	39	ALA	4.1
9	CI	64	TYR	4.2
30	DI	51	LYS	4.2
36	DO	106	LEU	4.1
21	CU	47	ARG	4.1
53	B5	159	ALA	4.1
13	CM	98	ARG	4.1
13	CM	46	SER	4.1
48	D0	55	ILE	4.1
30	DI	95	LYS	4.1
41	DT	80	TRP	4.1
27	DF	106	ILE	4.1
30	DI	43	ASN	4.1
13	CM	48	LEU	4.1
21	CU	35	ARG	4.1
1	CA	1537	U	4.1
2	CB	161	LEU	4.1
19	CS	59	PRO	4.1
22	DA	653	U	4.1
30	BI	75	PRO	4.1
30	DI	72	LYS	4.1
1	CA	1021	A	4.1
29	BH	142	VAL	4.1
30	DI	86	ILE	4.1
19	CS	6	LYS	4.1
22	DA	846	U	4.1

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Mol	Chain	Res	Type	RSRZ
26	DE	190	ALA	4.1
1	AA	87	C	4.1
30	BI	38	PHE	4.1
32	DK	112	PHE	4.1
24	DC	27	GLY	4.1
42	DU	42	VAL	4.1
53	B5	158	LYS	4.1
10	CJ	99	GLN	4.1
9	AI	90	TYR	4.1
21	AU	35	ARG	4.1
35	DN	46	ARG	4.1
27	DF	99	PHE	4.1
30	DI	133	ALA	4.1
2	CB	213	TYR	4.1
19	CS	49	ILE	4.1
27	DF	103	LEU	4.1
48	D0	39	LEU	4.1
53	B5	130	ARG	4.0
30	BI	142	ASP	4.0
9	CI	58	VAL	4.0
53	B5	75	VAL	4.0
16	CP	39	PHE	4.0
26	DE	104	ALA	4.0
52	D4	23	ILE	4.0
19	CS	13	LEU	4.0
33	DL	126	ARG	4.0
53	B5	125	GLY	4.0
13	AM	92	ARG	4.0
30	DI	31	GLN	4.0
42	DU	62	GLU	4.0
35	DN	24	MET	4.0
1	CA	209	U	4.0
30	DI	121	ASP	4.0
29	BH	5	LEU	4.0
39	DR	32	THR	4.0
25	DD	55	LYS	4.0
13	CM	29	ARG	4.0
30	DI	48	SER	4.0
41	DT	12	ARG	4.0
19	CS	11	ILE	4.0
22	BA	2154	A	4.0
27	DF	64	LYS	4.0

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Mol	Chain	Res	Type	RSRZ
33	DL	90	VAL	4.0
53	B5	21	TYR	4.0
27	DF	117	LEU	4.0
30	DI	27	ALA	4.0
22	BA	2109	U	4.0
13	CM	33	ILE	4.0
13	CM	114	LYS	4.0
20	CT	39	ILE	4.0
40	DS	19	LEU	4.0
53	B5	136	GLY	4.0
1	AA	86	G	4.0
30	DI	140	VAL	4.0
13	CM	89	LEU	4.0
53	B5	28	ARG	4.0
2	AB	136	MET	4.0
13	CM	80	LEU	3.9
19	CS	47	LEU	3.9
30	BI	88	SER	3.9
43	DV	57	TYR	3.9
53	B5	163	GLU	3.9
1	AA	1492	A	3.9
14	CN	9	ARG	3.9
17	CQ	21	ILE	3.9
30	DI	139	VAL	3.9
28	DG	132	VAL	3.9
36	DO	25	ARG	3.9
7	CG	17	LYS	3.9
39	DR	20	VAL	3.9
22	DA	2903	U	3.9
28	DG	27	LYS	3.9
28	DG	58	TYR	3.9
38	DQ	15	LYS	3.9
53	B5	103	LYS	3.9
22	BA	2098	U	3.9
53	B5	154	ILE	3.9
13	CM	94	GLY	3.9
37	DP	97	LEU	3.9
42	DU	41	LEU	3.9
19	CS	73	GLU	3.9
27	DF	113	ASP	3.9
41	DT	50	LEU	3.9
51	D3	14	PHE	3.9

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Mol	Chain	Res	Type	RSRZ
6	CF	79	ARG	3.9
30	DI	37	GLU	3.9
36	DO	52	SER	3.9
30	BI	16	GLY	3.9
30	BI	49	ILE	3.9
38	DQ	23	GLY	3.9
53	B5	69	LEU	3.9
1	CA	1030	U	3.8
41	DT	3	ARG	3.8
41	DT	16	VAL	3.8
42	DU	49	VAL	3.8
9	AI	39	PHE	3.8
27	DF	91	LEU	3.8
33	DL	57	LEU	3.8
39	DR	37	GLU	3.8
9	CI	48	VAL	3.8
22	DA	138	U	3.8
29	BH	61	VAL	3.8
22	BA	2152	G	3.8
7	CG	30	LEU	3.8
14	CN	29	ALA	3.8
10	CJ	40	ILE	3.8
14	CN	6	MET	3.8
30	BI	109	ILE	3.8
25	DD	188	LEU	3.8
48	D0	34	SER	3.8
36	DO	88	LYS	3.8
48	D0	37	LYS	3.8
29	DH	18	GLN	3.8
30	BI	25	GLY	3.8
29	BH	39	ALA	3.8
7	CG	148	ASN	3.8
9	CI	4	ASN	3.8
27	DF	67	ILE	3.8
29	BH	4	ILE	3.8
36	DO	65	THR	3.8
44	DW	78	LYS	3.8
19	AS	3	ARG	3.8
25	DD	60	VAL	3.8
42	DU	29	LEU	3.8
30	BI	91	GLY	3.8
51	D3	21	GLY	3.8

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Mol	Chain	Res	Type	RSRZ
26	DE	148	ILE	3.8
27	DF	175	PHE	3.8
41	BT	2	ILE	3.8
22	BA	2176	A	3.8
33	DL	15	ALA	3.8
13	CM	60	VAL	3.8
27	DF	85	ILE	3.8
1	CA	999	C	3.7
30	DI	16	GLY	3.7
30	DI	131	GLY	3.7
27	DF	20	PHE	3.7
32	DK	69	VAL	3.7
28	DG	167	GLU	3.7
1	CA	1028	C	3.7
27	DF	40	VAL	3.7
27	DF	153	ASP	3.7
28	DG	72	LEU	3.7
29	DH	135	HIS	3.7
42	DU	37	GLU	3.7
17	AQ	20	SER	3.7
17	CQ	66	PRO	3.7
22	DA	1870	C	3.7
27	DF	25	VAL	3.7
27	DF	150	ARG	3.7
44	DW	50	ASN	3.7
30	DI	114	ALA	3.7
2	AB	135	LEU	3.7
30	DI	56	PRO	3.7
29	DH	82	SER	3.7
12	CL	123	LYS	3.7
27	DF	152	LEU	3.7
30	BI	24	VAL	3.7
1	CA	1302	C	3.7
22	BA	2170	A	3.7
39	DR	50	GLY	3.7
30	BI	30	GLN	3.7
49	D1	34	LEU	3.7
16	CP	17	TYR	3.7
17	AQ	5	ILE	3.7
53	B5	22	THR	3.7
40	DS	68	ASP	3.7
22	BA	1175	A	3.7

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Mol	Chain	Res	Type	RSRZ
29	BH	63	ALA	3.7
24	DC	245	VAL	3.7
29	DH	134	VAL	3.7
44	DW	71	VAL	3.7
47	DZ	48	ILE	3.7
27	DF	129	SER	3.7
30	BI	112	THR	3.7
4	AD	36	GLN	3.6
53	B5	40	GLU	3.6
53	B5	193	PHE	3.6
2	AB	131	LYS	3.6
13	CM	65	VAL	3.6
22	DA	345	A	3.6
26	DE	129	PRO	3.6
30	DI	49	ILE	3.6
51	D3	64	TYR	3.6
4	CD	36	GLN	3.6
26	DE	1	MET	3.6
5	CE	110	ALA	3.6
7	CG	70	ARG	3.6
30	BI	23	PRO	3.6
45	DX	11	ARG	3.6
22	DA	1094	U	3.6
35	DN	119	SER	3.6
14	AN	48	LEU	3.6
19	CS	5	LEU	3.6
24	DC	49	ILE	3.6
7	CG	44	TYR	3.6
36	DO	64	TYR	3.6
29	BH	76	GLU	3.6
32	DK	110	GLU	3.6
19	AS	56	GLN	3.6
33	DL	71	ALA	3.6
10	CJ	73	LEU	3.6
28	DG	103	ILE	3.6
48	D0	26	THR	3.6
7	AG	150	ALA	3.6
41	DT	88	LYS	3.6
42	DU	5	ILE	3.6
9	AI	20	PHE	3.6
11	AK	43	GLY	3.6
29	BH	147	VAL	3.6

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Mol	Chain	Res	Type	RSRZ
33	DL	82	LEU	3.6
1	AA	88	U	3.6
22	BA	846	U	3.6
13	CM	76	SER	3.6
16	CP	57	ILE	3.6
2	AB	18	HIS	3.6
53	B5	224	ARG	3.6
22	BA	2167	U	3.5
7	CG	26	PHE	3.5
13	CM	83	LEU	3.5
29	BH	84	ALA	3.5
29	BH	90	LEU	3.5
40	DS	20	VAL	3.5
52	D4	12	ARG	3.5
9	CI	68	LYS	3.5
40	DS	48	LYS	3.5
46	DY	30	MET	3.5
7	CG	78	ARG	3.5
27	DF	121	SER	3.5
27	DF	74	VAL	3.5
14	CN	54	ASP	3.5
14	CN	26	GLU	3.5
19	CS	46	GLY	3.5
7	CG	50	LEU	3.5
13	CM	103	LYS	3.5
42	DU	75	ALA	3.5
29	BH	19	VAL	3.5
30	BI	122	ILE	3.5
9	CI	20	PHE	3.5
29	BH	109	GLU	3.5
36	DO	9	ARG	3.5
40	DS	110	ARG	3.5
42	DU	38	GLY	3.5
26	DE	138	LEU	3.5
26	DE	180	LEU	3.5
10	CJ	8	ILE	3.5
13	CM	62	LYS	3.5
24	DC	18	LYS	3.5
39	DR	66	HIS	3.5
22	BA	1847	A	3.5
7	CG	61	ALA	3.5
43	DV	42	LEU	3.5

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Mol	Chain	Res	Type	RSRZ
7	CG	69	VAL	3.5
9	CI	67	VAL	3.5
46	DY	45	GLN	3.5
53	B5	86	GLU	3.5
7	CG	131	LYS	3.5
7	CG	133	THR	3.5
9	AI	130	ARG	3.5
20	CT	3	ASN	3.5
30	DI	99	GLY	3.5
16	CP	81	ALA	3.5
53	B5	197	LEU	3.5
13	CM	47	GLU	3.5
30	BI	58	VAL	3.5
53	B5	176	VAL	3.5
6	CF	91	ARG	3.5
9	CI	39	PHE	3.5
11	AK	82	LEU	3.5
16	CP	52	LEU	3.5
1	CA	1314	C	3.5
2	CB	210	VAL	3.5
7	CG	27	VAL	3.5
27	DF	101	GLU	3.5
27	DF	172	ALA	3.5
41	DT	83	ALA	3.5
53	B5	196	ALA	3.5
48	D0	30	VAL	3.5
27	DF	177	PHE	3.5
22	DA	1065	U	3.5
40	DS	37	THR	3.5
2	CB	225	ARG	3.5
22	BA	1925	C	3.5
19	CS	10	PHE	3.5
22	BA	2108	A	3.5
22	DA	549	G	3.5
7	CG	111	ARG	3.4
10	CJ	17	LEU	3.4
14	CN	35	ASN	3.4
34	DM	136	MET	3.4
46	DY	59	GLU	3.4
49	D1	23	THR	3.4
28	DG	11	VAL	3.4
44	DW	60	PHE	3.4

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Mol	Chain	Res	Type	RSRZ
7	CG	8	GLY	3.4
43	DV	67	GLY	3.4
53	B5	19	LYS	3.4
26	DE	55	SER	3.4
14	AN	52	PRO	3.4
30	DI	20	PRO	3.4
27	DF	136	ILE	3.4
30	DI	110	ALA	3.4
10	CJ	82	LYS	3.4
30	DI	87	LYS	3.4
27	DF	140	GLU	3.4
28	DG	10	VAL	3.4
28	DG	151	TYR	3.4
35	DN	29	VAL	3.4
22	BA	1926	U	3.4
27	DF	57	LEU	3.4
48	D0	57	LYS	3.4
2	AB	90	PHE	3.4
10	CJ	66	GLU	3.4
27	DF	80	ARG	3.4
31	DJ	95	ARG	3.4
27	DF	118	SER	3.4
9	CI	21	ILE	3.4
13	CM	75	MET	3.4
29	DH	130	VAL	3.4
30	BI	98	VAL	3.4
46	DY	16	THR	3.4
53	B5	177	GLY	3.4
40	DS	94	ASP	3.4
42	DU	44	LYS	3.4
22	DA	2109	U	3.4
10	CJ	101	SER	3.4
22	DA	896	A	3.4
10	CJ	10	LEU	3.4
30	BI	6	GLN	3.4
30	DI	44	ALA	3.4
41	DT	42	GLU	3.4
1	AA	412	A	3.4
26	DE	102	ARG	3.4
10	CJ	27	GLU	3.4
29	DH	144	VAL	3.4
1	CA	1022	A	3.3

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Mol	Chain	Res	Type	RSRZ
21	CU	44	GLU	3.3
26	DE	143	LEU	3.3
8	CH	130	ALA	3.3
30	BI	26	PRO	3.3
30	DI	75	PRO	3.3
26	DE	103	GLY	3.3
14	AN	55	SER	3.3
9	CI	38	TYR	3.3
34	DM	129	THR	3.3
14	CN	27	LEU	3.3
22	DA	2172	U	3.3
1	CA	1534	A	3.3
13	CM	39	ILE	3.3
13	CM	97	VAL	3.3
20	CT	42	GLY	3.3
30	DI	41	ALA	3.3
31	DJ	118	MET	3.3
7	AG	5	ARG	3.3
10	AJ	90	LEU	3.3
13	CM	77	ILE	3.3
35	DN	26	GLY	3.3
19	CS	58	VAL	3.3
42	DU	47	LYS	3.3
10	CJ	102	LEU	3.3
30	DI	138	LEU	3.3
30	BI	59	ILE	3.3
30	DI	129	ILE	3.3
53	B5	23	ILE	3.3
3	CC	127	ARG	3.3
10	CJ	15	HIS	3.3
3	CC	42	TYR	3.3
30	BI	138	LEU	3.3
11	CK	126	LYS	3.3
22	DA	2168	G	3.3
52	D4	15	LYS	3.3
11	AK	52	PHE	3.3
39	DR	92	TRP	3.3
29	BH	137	GLU	3.3
46	DY	37	LEU	3.3
22	BA	1065	U	3.3
29	BH	13	GLY	3.3
17	CQ	23	VAL	3.3

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Mol	Chain	Res	Type	RSRZ
27	DF	31	VAL	3.3
7	CG	74	GLU	3.3
10	CJ	20	GLN	3.3
13	CM	68	ASP	3.3
44	DW	32	LEU	3.3
40	DS	3	THR	3.3
2	AB	88	ASP	3.3
27	DF	102	ARG	3.3
41	DT	69	ARG	3.3
36	DO	26	LEU	3.3
22	DA	2797	U	3.3
25	DD	74	GLU	3.3
41	DT	62	VAL	3.3
16	CP	60	TRP	3.3
2	AB	65	GLY	3.3
33	DL	124	GLY	3.3
24	DC	104	ILE	3.2
7	CG	64	VAL	3.2
36	DO	82	ALA	3.2
32	DK	108	ARG	3.2
26	DE	153	LEU	3.2
19	CS	65	GLU	3.2
36	DO	85	LYS	3.2
28	DG	40	ALA	3.2
41	DT	47	VAL	3.2
53	B5	102	GLN	3.2
13	CM	19	LEU	3.2
27	DF	78	LYS	3.2
30	DI	82	LYS	3.2
25	DD	140	HIS	3.2
1	CA	1025	U	3.2
30	BI	66	SER	3.2
27	DF	43	ALA	3.2
22	DA	2165	C	3.2
32	DK	111	LYS	3.2
1	CA	208	U	3.2
29	BH	128	HIS	3.2
4	AD	27	ALA	3.2
21	AU	50	ALA	3.2
25	DD	139	SER	3.2
26	DE	128	ALA	3.2
36	DO	90	VAL	3.2

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Mol	Chain	Res	Type	RSRZ
53	B5	178	LYS	3.2
36	DO	116	GLN	3.2
25	DD	6	GLY	3.2
32	DK	104	THR	3.2
9	CI	19	VAL	3.2
17	CQ	20	SER	3.2
30	BI	7	ALA	3.2
4	CD	24	GLY	3.2
46	BY	62	GLY	3.2
17	CQ	8	LEU	3.2
1	AA	82	G	3.2
35	DN	25	ALA	3.2
36	DO	46	GLU	3.2
28	DG	44	LYS	3.2
22	DA	361	G	3.2
7	CG	75	VAL	3.2
48	D0	54	VAL	3.2
29	DH	136	SER	3.2
2	CB	152	LYS	3.2
26	DE	12	LEU	3.2
27	DF	51	ASP	3.2
40	DS	24	ILE	3.2
25	DD	25	THR	3.2
53	B5	123	ALA	3.2
40	DS	31	GLN	3.2
11	AK	50	SER	3.2
26	DE	200	LEU	3.2
26	DE	158	PHE	3.2
27	DF	100	PHE	3.2
27	DF	138	PHE	3.2
3	CC	77	ILE	3.1
36	DO	60	GLU	3.2
43	DV	70	ILE	3.1
20	CT	85	LYS	3.1
27	DF	120	LYS	3.1
7	CG	109	ARG	3.1
13	CM	113	ARG	3.1
41	DT	73	ARG	3.1
49	D1	48	ILE	3.1
41	DT	70	HIS	3.1
11	CK	42	LEU	3.1
22	BA	2126	A	3.1

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Mol	Chain	Res	Type	RSRZ
28	DG	48	ASN	3.1
18	AR	20	GLU	3.1
27	DF	29	PRO	3.1
30	BI	47	ASP	3.1
30	BI	65	ARG	3.1
16	AP	22	ALA	3.1
22	DA	228	C	3.1
7	AG	143	ARG	3.1
27	DF	87	CYS	3.1
34	DM	41	LEU	3.1
40	DS	98	LYS	3.1
41	DT	33	LYS	3.1
46	DY	4	LYS	3.1
14	CN	34	VAL	3.1
35	DN	111	ALA	3.1
38	DQ	39	VAL	3.1
36	DO	19	GLN	3.1
19	AS	13	LEU	3.1
13	CM	4	ILE	3.1
19	AS	49	ILE	3.1
42	DU	76	ALA	3.1
12	CL	44	LYS	3.1
1	CA	1132	C	3.1
33	DL	3	LEU	3.1
7	AG	151	PHE	3.1
24	DC	239	ASN	3.1
29	BH	11	ASN	3.1
53	B5	58	ASN	3.1
31	DJ	97	PRO	3.1
13	CM	67	GLY	3.1
17	CQ	53	CYS	3.1
46	DY	24	GLU	3.1
25	DD	84	LEU	3.1
28	DG	133	LEU	3.1
43	DV	56	PHE	3.1
44	DW	79	PHE	3.1
8	CH	2	SER	3.1
2	CB	133	GLU	3.1
9	CI	5	GLN	3.1
27	DF	95	ARG	3.1
6	CF	39	LEU	3.1
30	DI	71	THR	3.1

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Mol	Chain	Res	Type	RSRZ
37	DP	104	THR	3.1
28	DG	12	PRO	3.1
30	DI	91	GLY	3.1
22	BA	546	U	3.1
16	CP	54	LEU	3.1
22	DA	2163	A	3.1
26	DE	134	LEU	3.1
29	DH	58	LEU	3.1
46	DY	28	LEU	3.1
51	D3	61	CYS	3.1
2	CB	93	ASN	3.1
26	DE	13	THR	3.1
37	DP	110	ILE	3.1
27	DF	135	GLN	3.1
20	CT	66	LEU	3.0
33	DL	114	GLY	3.0
46	DY	62	GLY	3.0
49	D1	24	THR	3.0
22	DA	277	G	3.0
39	DR	102	SER	3.0
26	DE	118	LEU	3.0
44	DW	85	GLU	3.0
22	BA	2119	A	3.0
49	D1	18	GLY	3.0
32	DK	67	LYS	3.0
49	D1	21	TYR	3.0
26	DE	131	THR	3.0
29	BH	66	ASN	3.0
11	AK	42	LEU	3.0
21	AU	7	ARG	3.0
29	BH	62	LEU	3.0
13	CM	99	GLY	3.0
33	DL	81	ASP	3.0
13	CM	52	GLN	3.0
29	BH	94	ILE	3.0
29	BH	143	ILE	3.0
22	DA	2173	A	3.0
7	CG	102	ARG	3.0
36	DO	107	ALA	3.0
36	DO	62	LEU	3.0
1	AA	79	G	3.0
13	CM	3	ARG	3.0

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Mol	Chain	Res	Type	RSRZ
25	DD	31	ALA	3.0
1	CA	4	U	3.0
24	DC	26	LYS	3.0
40	DS	46	LEU	3.0
48	D0	28	LEU	3.0
1	CA	1020	G	3.0
2	CB	108	ARG	3.0
27	DF	107	ALA	3.0
28	DG	62	TRP	3.0
30	BI	63	ALA	3.0
22	DA	613	A	3.0
22	DA	1170	C	3.0
22	DA	1174	U	3.0
10	CJ	28	THR	3.0
16	CP	3	THR	3.0
7	CG	10	ARG	3.0
9	AI	79	ILE	3.0
33	DL	78	ARG	3.0
45	DX	3	ARG	3.0
29	DH	137	GLU	3.0
33	DL	62	PRO	3.0
7	CG	130	ASN	3.0
13	CM	56	LEU	3.0
22	DA	2602	A	3.0
14	CN	63	ARG	3.0
19	CS	36	ARG	3.0
27	DF	26	MET	3.0
40	DS	71	VAL	3.0
51	D3	24	HIS	3.0
30	BI	18	ALA	3.0
22	BA	2137	U	3.0
46	DY	56	LEU	3.0
2	AB	74	ARG	3.0
45	DX	50	ARG	3.0
41	DT	68	LYS	3.0
2	CB	164	ILE	3.0
40	DS	35	ILE	3.0
26	DE	165	HIS	3.0
10	CJ	94	ALA	2.9
20	CT	87	ALA	2.9
9	CI	41	ARG	2.9
29	BH	145	ASN	2.9

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Mol	Chain	Res	Type	RSRZ
41	BT	69	ARG	2.9
51	D3	16	LYS	2.9
28	DG	22	GLN	2.9
39	DR	101	ILE	2.9
22	DA	101	A	2.9
11	AK	14	LYS	2.9
29	BH	71	LYS	2.9
51	D3	22	PHE	2.9
9	CI	66	THR	2.9
19	AS	74	PHE	2.9
22	DA	1095	A	2.9
24	DC	94	VAL	2.9
53	B5	168	LYS	2.9
30	DI	14	ALA	2.9
7	CG	16	PRO	2.9
28	DG	104	ASN	2.9
36	DO	80	GLU	2.9
14	CN	33	ASP	2.9
7	CG	76	LYS	2.9
10	CJ	45	ARG	2.9
26	DE	15	SER	2.9
26	DE	50	ALA	2.9
43	DV	54	ALA	2.9
27	DF	83	TYR	2.9
27	DF	111	ILE	2.9
25	DD	26	VAL	2.9
7	CG	23	LEU	2.9
28	DG	150	ALA	2.9
30	DI	84	ALA	2.9
23	DB	18	G	2.9
3	AC	193	TYR	2.9
30	BI	61	VAL	2.9
30	DI	118	THR	2.9
7	CG	129	GLU	2.9
13	CM	12	HIS	2.9
52	D4	9	LYS	2.9
22	DA	2169	A	2.9
7	CG	134	ALA	2.9
10	CJ	30	LYS	2.9
26	DE	11	ALA	2.9
27	DF	93	GLY	2.9
34	DM	132	THR	2.9

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Mol	Chain	Res	Type	RSRZ
42	DU	63	ALA	2.9
17	CQ	50	ASN	2.9
27	DF	33	LYS	2.9
32	DK	35	VAL	2.9
2	CB	206	ALA	2.9
7	CG	57	SER	2.9
36	DO	53	THR	2.9
22	BA	2105	U	2.9
46	DY	36	GLN	2.9
16	AP	4	ILE	2.9
30	BI	95	LYS	2.9
26	DE	24	ASN	2.9
40	DS	109	ASP	2.9
14	CN	21	PHE	2.9
26	DE	147	LEU	2.9
41	DT	87	LEU	2.9
53	B5	90	ALA	2.9
19	CS	35	SER	2.8
22	DA	1100	C	2.8
30	DI	105	GLN	2.8
10	CJ	100	ILE	2.8
19	CS	27	ASP	2.8
20	CT	25	ARG	2.8
29	DH	19	VAL	2.8
9	CI	98	LEU	2.8
27	DF	4	LEU	2.8
9	AI	27	LYS	2.8
33	DL	86	GLU	2.8
7	CG	53	ARG	2.8
21	AU	4	ILE	2.8
33	DL	107	PHE	2.8
42	DU	90	GLY	2.8
9	AI	19	VAL	2.8
14	CN	11	VAL	2.8
27	DF	50	LEU	2.8
29	BH	75	LEU	2.8
30	BI	125	MET	2.8
36	DO	79	ALA	2.8
2	CB	138	THR	2.8
28	DG	95	ARG	2.8
33	DL	132	ARG	2.8
35	DN	101	GLY	2.8

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Mol	Chain	Res	Type	RSRZ
41	DT	53	VAL	2.8
37	DP	95	ALA	2.8
1	AA	1032	G	2.8
3	CC	80	LYS	2.8
28	DG	107	LEU	2.8
29	DH	122	LEU	2.8
1	CA	1286	U	2.8
13	CM	9	ILE	2.8
7	CG	15	ASP	2.8
27	DF	90	THR	2.8
53	B5	153	ILE	2.8
42	DU	59	VAL	2.8
14	CN	2	ALA	2.8
26	DE	88	ARG	2.8
26	DE	155	GLU	2.8
53	B5	36	ALA	2.8
26	DE	89	PRO	2.8
19	CS	52	HIS	2.8
30	BI	96	ASP	2.8
50	D2	18	PHE	2.8
7	CG	13	LEU	2.8
25	DD	73	VAL	2.8
12	AL	25	GLU	2.8
27	DF	8	TYR	2.8
7	CG	51	ALA	2.8
7	CG	108	ALA	2.8
14	CN	60	GLN	2.8
7	CG	101	MET	2.8
43	DV	48	MET	2.8
7	CG	37	SER	2.8
43	DV	58	SER	2.8
3	CC	195	VAL	2.8
16	CP	45	GLU	2.8
33	DL	122	VAL	2.8
50	D2	34	ARG	2.8
19	CS	21	LYS	2.8
22	DA	1057	A	2.8
22	DA	1077	A	2.8
22	DA	1084	A	2.8
22	DA	1103	A	2.8
1	CA	1247	U	2.8
30	BI	42	PHE	2.8

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Mol	Chain	Res	Type	RSRZ
30	DI	81	LYS	2.8
37	DP	102	GLU	2.8
16	CP	20	VAL	2.8
19	AS	71	LEU	2.8
19	CS	16	LEU	2.8
37	DP	17	VAL	2.8
39	DR	6	GLN	2.8
7	CG	144	MET	2.7
34	DM	99	GLY	2.7
36	DO	87	ILE	2.7
2	CB	191	SER	2.7
7	AG	80	VAL	2.7
26	DE	92	HIS	2.7
2	CB	130	THR	2.7
30	BI	76	ALA	2.7
22	DA	2174	C	2.7
39	DR	40	MET	2.7
22	DA	1066	U	2.7
30	DI	92	LYS	2.7
31	DJ	13	ARG	2.7
7	CG	71	PRO	2.7
7	CG	141	VAL	2.7
19	CS	14	HIS	2.7
30	BI	135	SER	2.7
46	DY	40	SER	2.7
13	CM	2	ALA	2.7
13	CM	55	THR	2.7
13	CM	70	ARG	2.7
25	DD	105	LYS	2.7
27	BF	80	ARG	2.7
30	BI	97	LYS	2.7
30	BI	113	LYS	2.7
32	DK	98	ARG	2.7
29	DH	11	ASN	2.7
36	DO	58	ILE	2.7
7	CG	43	VAL	2.7
29	DH	147	VAL	2.7
2	CB	128	LYS	2.7
41	DT	49	LYS	2.7
45	DX	20	HIS	2.7
35	DN	63	ARG	2.7
36	DO	57	ALA	2.7

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Mol	Chain	Res	Type	RSRZ
12	CL	25	GLU	2.7
14	CN	20	TYR	2.7
14	CN	50	THR	2.7
36	DO	112	GLU	2.7
53	B5	25	GLU	2.7
30	DI	101	ILE	2.7
19	CS	34	TRP	2.7
14	CN	7	LYS	2.7
40	BS	110	ARG	2.7
53	B5	171	ALA	2.7
22	DA	1068	G	2.7
28	DG	24	ILE	2.7
20	CT	34	LYS	2.7
27	DF	149	VAL	2.7
28	DG	41	VAL	2.7
42	DU	14	LEU	2.7
26	DE	122	GLU	2.7
24	DC	47	GLY	2.7
33	DL	108	ALA	2.7
37	DP	35	GLY	2.7
11	AK	111	THR	2.7
22	DA	2106	U	2.7
27	DF	105	THR	2.7
27	DF	52	ASN	2.7
42	DU	40	ASN	2.7
7	CG	124	LEU	2.7
10	CJ	19	ASP	2.7
26	DE	191	ASP	2.7
26	DE	193	VAL	2.7
29	BH	18	GLN	2.7
53	B5	186	LEU	2.7
3	CC	92	ALA	2.7
51	D3	65	ALA	2.7
28	DG	86	LYS	2.7
53	B5	206	LYS	2.7
40	DS	38	TYR	2.7
26	DE	173	THR	2.7
28	DG	25	THR	2.7
24	DC	154	LEU	2.7
26	DE	28	VAL	2.7
26	DE	121	VAL	2.7
43	DV	43	ASP	2.7

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Mol	Chain	Res	Type	RSRZ
42	DU	55	PRO	2.7
46	DY	13	GLU	2.7
33	DL	28	GLY	2.7
38	DQ	22	LYS	2.7
41	DT	13	ALA	2.7
22	DA	654	A	2.7
12	CL	14	ARG	2.7
22	DA	1078	U	2.7
41	DT	74	ILE	2.7
42	DU	54	GLN	2.7
46	BY	6	LEU	2.7
41	DT	41	ALA	2.7
1	CA	1043	G	2.7
5	AE	159	LYS	2.6
7	CG	47	LEU	2.6
34	DM	26	VAL	2.6
27	DF	110	ARG	2.6
46	DY	7	ARG	2.6
46	DY	41	HIS	2.6
2	CB	226	SER	2.6
22	DA	2124	G	2.6
44	DW	62	LYS	2.6
2	CB	107	VAL	2.6
10	CJ	80	THR	2.6
13	CM	61	ALA	2.6
2	AB	69	PHE	2.6
31	DJ	76	HIS	2.6
34	DM	8	LYS	2.6
44	DW	68	LYS	2.6
48	D0	42	HIS	2.6
9	AI	63	LEU	2.6
22	DA	291	G	2.6
27	BF	83	TYR	2.6
27	DF	10	ASP	2.6
27	DF	46	ASP	2.6
30	BI	64	ASP	2.6
33	DL	26	GLY	2.6
39	DR	47	VAL	2.6
46	BY	23	ARG	2.6
33	DL	75	ALA	2.6
42	DU	21	LYS	2.6
33	DL	73	ILE	2.6

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Mol	Chain	Res	Type	RSRZ
19	CS	25	SER	2.6
39	DR	96	VAL	2.6
22	DA	289	G	2.6
32	DK	90	ASN	2.6
46	DY	54	LYS	2.6
7	CG	90	GLU	2.6
22	DA	267	C	2.6
19	AS	32	ARG	2.6
19	CS	3	ARG	2.6
26	DE	188	MET	2.6
27	DF	104	ILE	2.6
21	AU	51	SER	2.6
42	DU	30	SER	2.6
53	B5	137	LEU	2.6
27	DF	161	LYS	2.6
30	BI	89	GLY	2.6
30	DI	119	GLY	2.6
28	BG	166	ASP	2.6
36	DO	63	LYS	2.6
27	DF	45	ALA	2.6
28	DG	101	ASN	2.6
22	DA	1099	G	2.6
26	DE	9	GLN	2.6
37	DP	84	ILE	2.6
1	CA	85	U	2.6
9	CI	87	LEU	2.6
25	DD	201	LEU	2.6
33	DL	79	LEU	2.6
33	DL	102	GLY	2.6
51	D3	57	LEU	2.6
40	DS	106	VAL	2.6
33	DL	121	THR	2.6
47	DZ	8	THR	2.6
1	CA	1033	G	2.6
7	CG	137	LYS	2.6
27	DF	60	ILE	2.6
1	CA	83	C	2.6
1	CA	207	C	2.6
27	DF	96	MET	2.6
35	DN	83	LEU	2.6
36	DO	74	VAL	2.6
2	AB	139	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
13	CM	31	LYS	2.6
25	DD	154	LYS	2.6
27	DF	127	ASN	2.6
40	DS	93	ALA	2.6
42	DU	95	PHE	2.6
2	CB	212	LEU	2.6
21	AU	27	GLY	2.6
27	DF	17	MET	2.6
29	BH	12	LEU	2.6
9	AI	89	GLU	2.6
26	DE	127	GLU	2.6
2	CB	96	TRP	2.6
7	CG	63	GLU	2.5
14	AN	16	LEU	2.5
22	BA	1094	U	2.5
22	DA	288	U	2.5
12	AL	18	LYS	2.5
27	DF	28	VAL	2.5
38	DQ	31	VAL	2.5
50	D2	2	LYS	2.5
2	CB	126	PHE	2.5
13	CM	105	ASN	2.5
27	DF	97	TRP	2.5
42	BU	53	ASN	2.5
42	DU	53	ASN	2.5
3	CC	196	ILE	2.5
48	D0	35	GLY	2.5
13	AM	95	LEU	2.5
51	D3	44	LEU	2.5
10	CJ	59	LYS	2.5
26	DE	141	MET	2.5
44	DW	75	LYS	2.5
1	AA	1001	C	2.5
22	DA	2300	C	2.5
29	BH	82	SER	2.5
31	DJ	117	ALA	2.5
35	DN	102	PHE	2.5
36	DO	113	ALA	2.5
7	CG	139	GLU	2.5
27	DF	63	GLN	2.5
30	DI	26	PRO	2.5
27	DF	41	GLY	2.5

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Mol	Chain	Res	Type	RSRZ
19	AS	5	LEU	2.5
22	BA	2192	U	2.5
25	DD	180	VAL	2.5
30	BI	140	VAL	2.5
37	DP	74	PHE	2.5
29	DH	81	ALA	2.5
29	DH	140	ALA	2.5
30	DI	76	ALA	2.5
42	DU	98	SER	2.5
43	DV	74	ALA	2.5
53	B5	88	GLU	2.5
22	BA	2186	G	2.5
26	DE	21	ARG	2.5
13	CM	43	VAL	2.5
26	DE	14	VAL	2.5
26	DE	126	VAL	2.5
2	AB	32	PHE	2.5
9	AI	129	LYS	2.5
20	CT	36	TYR	2.5
30	BI	72	LYS	2.5
22	DA	2164	C	2.5
30	DI	104	ALA	2.5
53	B5	26	ALA	2.5
1	CA	81	A	2.5
3	CC	155	GLY	2.5
3	CC	33	LEU	2.5
7	CG	120	LEU	2.5
39	DR	25	LEU	2.5
1	CA	1017	U	2.5
1	CA	1026	G	2.5
14	CN	42	TRP	2.5
13	CM	78	LYS	2.5
27	DF	11	GLU	2.5
26	DE	114	ARG	2.5
33	DL	83	ALA	2.5
1	AA	1019	A	2.5
24	DC	74	ILE	2.5
9	CI	63	LEU	2.5
26	DE	157	LEU	2.5
22	DA	139	U	2.5
1	CA	1024	G	2.5
22	BA	277	G	2.5

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Mol	Chain	Res	Type	RSRZ
26	DE	23	PHE	2.5
30	BI	118	THR	2.5
31	DJ	96	ARG	2.5
33	DL	117	THR	2.5
16	CP	76	LYS	2.5
10	CJ	98	VAL	2.5
2	AB	35	ARG	2.5
2	CB	88	ASP	2.5
19	CS	69	HIS	2.5
1	AA	844	G	2.5
1	CA	79	G	2.5
22	DA	2125	G	2.5
40	DS	100	THR	2.5
9	CI	90	TYR	2.5
27	BF	72	LYS	2.5
38	DQ	84	LYS	2.5
27	DF	16	LEU	2.5
30	DI	128	SER	2.5
11	CK	13	ARG	2.5
22	BA	2402	U	2.5
49	D1	39	PHE	2.5
27	DF	27	GLN	2.5
40	DS	4	ILE	2.5
2	CB	110	SER	2.4
24	DC	28	LYS	2.4
2	CB	84	ALA	2.4
19	CS	22	ALA	2.4
48	D0	38	HIS	2.4
53	B5	205	ALA	2.4
3	AC	168	TYR	2.4
14	AN	24	ARG	2.4
21	AU	24	GLU	2.4
28	DG	164	TYR	2.4
53	B5	128	LEU	2.4
37	DP	19	SER	2.4
29	DH	21	VAL	2.4
29	BH	111	ALA	2.4
36	DO	61	GLN	2.4
1	CA	1441	A	2.4
20	CT	68	HIS	2.4
22	DA	1532	A	2.4
2	CB	114	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
3	CC	192	THR	2.4
16	CP	4	ILE	2.4
32	DK	87	LEU	2.4
27	DF	84	PRO	2.4
42	DU	33	LYS	2.4
10	AJ	74	VAL	2.4
21	AU	32	VAL	2.4
33	DL	120	VAL	2.4
2	CB	224	GLY	2.4
22	DA	544	C	2.4
35	DN	73	ASN	2.4
36	DO	16	ARG	2.4
40	DS	44	ALA	2.4
43	DV	23	ALA	2.4
7	CG	123	GLU	2.4
13	CM	22	ILE	2.4
14	AN	12	LYS	2.4
48	D0	43	ILE	2.4
7	AG	18	PHE	2.4
28	DG	169	VAL	2.4
29	DH	78	VAL	2.4
45	DX	7	VAL	2.4
2	CB	62	SER	2.4
1	CA	210	C	2.4
21	AU	23	CYS	2.4
39	DR	26	ASP	2.4
49	B1	4	GLY	2.4
1	CA	1305	G	2.4
9	AI	17	ALA	2.4
24	DC	92	ALA	2.4
36	DO	105	ALA	2.4
37	DP	42	ALA	2.4
33	DL	14	LYS	2.4
7	CG	12	ILE	2.4
9	CI	30	ILE	2.4
42	BU	52	LEU	2.4
2	AB	221	VAL	2.4
3	AC	37	PHE	2.4
14	AN	57	PRO	2.4
39	DR	75	VAL	2.4
9	AI	33	ARG	2.4
13	CM	30	SER	2.4

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Mol	Chain	Res	Type	RSRZ
33	DL	91	ASP	2.4
53	B5	129	GLY	2.4
22	DA	2175	C	2.4
3	CC	124	LEU	2.4
22	DA	2110	G	2.4
53	B5	124	VAL	2.4
22	DA	1584	U	2.4
28	DG	124	GLU	2.4
37	DP	112	GLU	2.4
44	DW	72	LYS	2.4
29	DH	119	ASN	2.4
2	CB	34	ALA	2.4
1	CA	844	G	2.4
17	CQ	11	ARG	2.4
4	AD	25	VAL	2.4
7	CG	48	GLU	2.4
11	AK	19	GLY	2.4
21	AU	11	PRO	2.4
28	DG	8	PRO	2.4
21	AU	42	THR	2.4
30	BI	29	GLY	2.4
34	DM	29	GLY	2.4
19	CS	12	ASP	2.4
51	D3	48	ALA	2.4
25	DD	14	ILE	2.4
34	DM	133	LYS	2.4
52	D4	24	ARG	2.4
38	DQ	101	PHE	2.4
7	CG	81	GLY	2.4
10	CJ	38	GLY	2.4
30	DI	89	GLY	2.4
22	DA	290	U	2.4
22	DA	931	U	2.4
26	DE	30	GLN	2.4
32	DK	65	THR	2.4
29	BH	74	ALA	2.4
30	DI	88	SER	2.4
12	AL	15	LYS	2.4
16	CP	33	ILE	2.4
29	DH	54	LEU	2.4
46	DY	47	ARG	2.4
1	AA	1031	C	2.4

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Mol	Chain	Res	Type	RSRZ
15	CO	15	PHE	2.3
41	DT	58	VAL	2.3
13	CM	42	ASP	2.3
20	CT	43	ASP	2.3
30	DI	73	THR	2.3
40	DS	39	THR	2.3
11	AK	13	ARG	2.3
24	DC	112	ALA	2.3
26	DE	161	ALA	2.3
30	BI	103	ARG	2.3
1	CA	1016	A	2.3
1	CA	1044	A	2.3
22	DA	1090	A	2.3
33	DL	19	LEU	2.3
40	DS	103	ILE	2.3
22	DA	1064	C	2.3
30	BI	119	GLY	2.3
39	DR	67	GLY	2.3
40	DS	7	HIS	2.3
41	DT	75	GLY	2.3
46	DY	26	PHE	2.3
38	DQ	71	GLN	2.3
46	DY	31	GLN	2.3
10	CJ	97	ASP	2.3
30	BI	62	TYR	2.3
33	DL	58	TYR	2.3
36	DO	108	ASP	2.3
53	B5	135	ARG	2.3
18	AR	68	LEU	2.3
29	DH	80	ILE	2.3
21	CU	37	PHE	2.3
50	D2	5	PHE	2.3
22	BA	885	C	2.3
22	DA	1045	C	2.3
26	DE	178	VAL	2.3
38	DQ	19	LYS	2.3
44	DW	44	LYS	2.3
49	B1	53	LYS	2.3
21	AU	21	ARG	2.3
26	DE	40	ARG	2.3
30	DI	127	ARG	2.3
33	DL	119	PRO	2.3

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Mol	Chain	Res	Type	RSRZ
34	DM	40	ARG	2.3
2	CB	154	MET	2.3
35	DN	68	ALA	2.3
26	DE	149	ILE	2.3
29	DH	117	LEU	2.3
32	DK	107	LEU	2.3
2	CB	90	PHE	2.3
12	AL	123	LYS	2.3
29	DH	83	LYS	2.3
33	DL	87	GLY	2.3
45	DX	46	PHE	2.3
3	CC	131	ARG	2.3
22	DA	213	A	2.3
41	DT	91	GLN	2.3
10	CJ	91	ASP	2.3
18	CR	51	TYR	2.3
24	DC	103	TYR	2.3
7	CG	128	ALA	2.3
10	CJ	81	GLU	2.3
4	AD	151	LYS	2.3
9	CI	83	ILE	2.3
28	DG	80	THR	2.3
26	DE	124	PHE	2.3
37	DP	66	ASN	2.3
27	DF	178	ARG	2.3
1	AA	842	U	2.3
1	CA	1325	C	2.3
22	BA	2128	G	2.3
2	CB	167	ASP	2.3
7	AG	88	PRO	2.3
22	BA	2129	C	2.3
22	DA	268	C	2.3
21	AU	31	GLU	2.3
17	CQ	82	ALA	2.3
29	DH	10	ALA	2.3
38	DQ	35	ALA	2.3
28	DG	55	ARG	2.3
29	DH	16	GLY	2.3
29	DH	20	ASN	2.3
36	DO	111	ARG	2.3
44	DW	25	ARG	2.3
7	CG	80	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
1	CA	1313	U	2.3
24	DC	36	LYS	2.3
53	B5	47	LYS	2.3
10	CJ	23	ALA	2.3
22	DA	1530	G	2.3
9	CI	65	ILE	2.3
21	AU	29	LEU	2.3
30	BI	28	LEU	2.3
15	AO	89	ARG	2.3
19	AS	6	LYS	2.3
22	DA	280	U	2.3
29	BH	17	ASP	2.3
16	CP	56	ARG	2.3
28	DG	87	LEU	2.3
33	DL	61	LEU	2.3
34	DM	105	MET	2.3
22	DA	1087	G	2.3
25	DD	115	GLY	2.3
27	DF	158	THR	2.3
29	DH	112	LYS	2.3
29	BH	131	SER	2.3
1	CA	89	U	2.3
19	AS	9	PRO	2.3
28	DG	136	ALA	2.3
1	CA	206	C	2.3
22	DA	1278	C	2.3
1	CA	988	G	2.3
35	DN	82	GLU	2.3
16	CP	29	ASN	2.2
26	DE	186	VAL	2.2
27	DF	146	VAL	2.2
34	DM	80	VAL	2.2
39	DR	33	VAL	2.2
50	D2	13	ASN	2.2
3	CC	126	ARG	2.2
10	CJ	37	ARG	2.2
24	DC	99	GLY	2.2
37	DP	18	PRO	2.2
28	DG	19	ILE	2.2
33	DL	84	LYS	2.2
22	DA	1092	C	2.2
9	CI	126	GLN	2.2

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Mol	Chain	Res	Type	RSRZ
15	AO	2	SER	2.2
44	DW	58	THR	2.2
1	AA	1008	U	2.2
22	BA	2188	U	2.2
41	DT	9	LYS	2.2
10	AJ	87	LEU	2.2
13	CM	106	ALA	2.2
39	DR	88	GLY	2.2
7	AG	144	MET	2.2
34	DM	73	ILE	2.2
5	CE	10	GLU	2.2
49	D1	45	GLN	2.2
2	AB	63	ARG	2.2
28	DG	168	VAL	2.2
42	DU	82	ARG	2.2
1	AA	81	A	2.2
22	DA	892	A	2.2
30	BI	34	ASN	2.2
9	CI	84	THR	2.2
22	DA	1176	U	2.2
22	DA	2181	U	2.2
28	DG	53	GLY	2.2
40	DS	26	GLY	2.2
2	CB	160	ALA	2.2
9	CI	53	GLU	2.2
14	AN	22	ALA	2.2
16	CP	48	GLU	2.2
30	BI	108	GLU	2.2
9	CI	32	GLN	2.2
9	CI	124	ARG	2.2
14	CN	23	LYS	2.2
19	CS	19	VAL	2.2
36	DO	47	VAL	2.2
32	DK	82	ASN	2.2
4	AD	24	GLY	2.2
22	DA	279	A	2.2
7	CG	99	LEU	2.2
27	DF	61	SER	2.2
44	DW	81	SER	2.2
28	DG	65	ALA	2.2
29	BH	80	ILE	2.2
30	DI	115	ALA	2.2

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Mol	Chain	Res	Type	RSRZ
41	DT	46	ALA	2.2
20	CT	24	ARG	2.2
50	D2	22	MET	2.2
22	DA	1606	C	2.2
13	CM	38	GLY	2.2
13	CM	51	GLY	2.2
24	DC	235	GLY	2.2
3	CC	144	LEU	2.2
29	BH	149	GLU	2.2
7	AG	12	ILE	2.2
13	CM	35	ALA	2.2
19	CS	50	ALA	2.2
26	DE	189	THR	2.2
33	DL	27	LEU	2.2
51	D3	55	LEU	2.2
28	DG	6	LYS	2.2
36	DO	76	LYS	2.2
40	DS	96	ILE	2.2
8	CH	123	GLY	2.2
22	DA	1211	C	2.2
26	DE	2	GLU	2.2
13	AM	48	LEU	2.2
26	DE	98	LYS	2.2
35	DN	115	LEU	2.2
44	DW	59	LEU	2.2
29	BH	100	ALA	2.2
29	DH	67	ALA	2.2
50	D2	25	LYS	2.2
7	CG	77	SER	2.2
3	CC	173	VAL	2.2
16	AP	20	VAL	2.2
27	DF	7	TYR	2.2
19	AS	24	GLU	2.2
2	CB	37	LYS	2.2
7	CG	19	GLY	2.2
22	DA	880	G	2.2
11	AK	126	LYS	2.2
36	DO	92	PHE	2.2
46	DY	3	ALA	2.2
19	CS	4	SER	2.2
28	DG	49	THR	2.2
28	DG	112	PRO	2.2

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Mol	Chain	Res	Type	RSRZ
34	DM	24	THR	2.2
22	BA	2191	A	2.2
16	CP	2	VAL	2.2
29	DH	141	LYS	2.2
36	DO	99	TYR	2.2
10	CJ	31	ARG	2.2
43	DV	34	LYS	2.2
22	DA	143	C	2.2
22	DA	275	C	2.2
25	DD	200	ASP	2.2
47	DZ	24	LEU	2.2
1	AA	85	U	2.2
3	CC	14	ILE	2.2
5	CE	72	ILE	2.2
28	DG	46	ALA	2.2
30	BI	35	ILE	2.2
9	CI	92	GLU	2.2
29	BH	8	LYS	2.2
36	DO	56	LYS	2.2
40	DS	73	LYS	2.2
47	DZ	56	LYS	2.2
26	DE	32	VAL	2.2
41	DT	67	VAL	2.2
36	DO	114	GLY	2.1
5	AE	31	PHE	2.1
27	DF	144	ASP	2.1
47	DZ	29	LEU	2.1
36	DO	14	ALA	2.1
13	CM	72	GLU	2.1
26	DE	199	MET	2.1
52	D4	19	ARG	2.1
2	CB	215	GLY	2.1
26	DE	33	VAL	2.1
26	DE	54	GLY	2.1
40	DS	33	LEU	2.1
30	BI	44	ALA	2.1
34	DM	92	TRP	2.1
46	BY	2	LYS	2.1
1	CA	1209	C	2.1
2	CB	36	ASN	2.1
24	DC	37	ASN	2.1
27	DF	139	PRO	2.1

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Mol	Chain	Res	Type	RSRZ
22	DA	2157	G	2.1
37	DP	65	SER	2.1
52	D4	6	SER	2.1
2	CB	163	VAL	2.1
7	CG	82	GLY	2.1
11	AK	96	THR	2.1
33	DL	118	THR	2.1
2	CB	115	LYS	2.1
2	CB	117	LEU	2.1
4	AD	117	LEU	2.1
29	DH	132	PHE	2.1
7	AG	7	ILE	2.1
7	CG	4	ARG	2.1
13	CM	5	ALA	2.1
36	DO	50	ALA	2.1
52	D4	16	ILE	2.1
46	DY	27	ASN	2.1
25	DD	97	SER	2.1
30	BI	128	SER	2.1
19	CS	70	LYS	2.1
22	BA	2885	G	2.1
22	DA	882	G	2.1
22	DA	1112	G	2.1
22	DA	2116	G	2.1
2	CB	144	LEU	2.1
7	CG	118	LEU	2.1
39	DR	22	LEU	2.1
41	DT	11	LEU	2.1
13	CM	71	ARG	2.1
17	CQ	5	ILE	2.1
32	DK	99	ILE	2.1
41	DT	72	GLN	2.1
4	AD	22	LYS	2.1
27	DF	108	VAL	2.1
28	DG	17	VAL	2.1
51	D3	52	LYS	2.1
2	CB	35	ARG	2.1
6	AF	91	ARG	2.1
21	AU	47	ARG	2.1
1	CA	86	G	2.1
2	CB	159	ASP	2.1
12	CL	76	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
25	DD	186	LEU	2.1
50	D2	3	ARG	2.1
22	DA	1538	G	2.1
27	DF	42	GLU	2.1
1	CA	1235	U	2.1
29	DH	74	ALA	2.1
38	DQ	2	ALA	2.1
22	DA	2309	A	2.1
31	DJ	111	LYS	2.1
42	DU	56	GLY	2.1
7	AG	27	VAL	2.1
22	DA	2150	C	2.1
2	CB	74	ARG	2.1
14	CN	80	SER	2.1
29	DH	14	SER	2.1
33	DL	18	ARG	2.1
46	DY	22	LEU	2.1
32	DK	37	ASP	2.1
38	DQ	44	GLN	2.1
52	D4	35	GLN	2.1
3	CC	120	ILE	2.1
9	CI	16	ALA	2.1
20	CT	72	ALA	2.1
22	DA	1173	U	2.1
22	DA	2833	U	2.1
26	DE	201	ALA	2.1
29	BH	44	ILE	2.1
30	BI	92	LYS	2.1
39	DR	28	ALA	2.1
1	AA	1020	G	2.1
40	DS	49	LYS	2.1
48	D0	6	ASN	2.1
7	AG	73	VAL	2.1
9	CI	18	ARG	2.1
22	DA	1614	A	2.1
9	CI	89	GLU	2.1
33	DL	10	GLU	2.1
39	DR	46	GLU	2.1
41	DT	56	GLU	2.1
17	CQ	44	LEU	2.1
7	CG	11	LYS	2.1
20	CT	64	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
35	DN	9	GLN	2.1
32	DK	2	ILE	2.1
22	DA	1228	G	2.1
28	DG	162	VAL	2.1
36	DO	39	VAL	2.1
43	DV	72	VAL	2.1
1	AA	1042	A	2.1
28	DG	177	LYS	2.1
10	CJ	75	ASP	2.1
34	DM	63	ILE	2.1
35	DN	36	THR	2.1
42	DU	72	ILE	2.1
44	DW	43	THR	2.1
7	CG	143	ARG	2.1
28	DG	78	GLY	2.1
29	DH	68	ARG	2.1
45	DX	18	ARG	2.1
7	CG	122	ASN	2.1
29	DH	61	VAL	2.1
43	DV	92	VAL	2.1
45	DX	4	VAL	2.1
10	CJ	49	PHE	2.1
45	DX	22	LEU	2.0
51	D3	26	HIS	2.0
1	CA	87	C	2.0
2	CB	23	TRP	2.0
10	CJ	67	ILE	2.0
41	DT	30	ILE	2.0
41	DT	37	ASP	2.0
13	CM	37	ALA	2.0
18	AR	73	ARG	2.0
28	DG	96	ALA	2.0
36	DO	66	GLY	2.0
26	DE	196	VAL	2.0
51	D3	49	MET	2.0
1	CA	1018	G	2.0
2	CB	40	ILE	2.0
15	CO	17	ARG	2.0
22	DA	343	C	2.0
22	DA	2112	G	2.0
27	DF	24	SER	2.0
31	DJ	142	ILE	2.0

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Mol	Chain	Res	Type	RSRZ
34	DM	106	ASP	2.0
14	CN	17	ALA	2.0
34	DM	56	ALA	2.0
52	D4	26	ILE	2.0
27	DF	68	THR	2.0
27	DF	69	LYS	2.0
27	DF	164	GLU	2.0
28	DG	18	LYS	2.0
2	AB	154	MET	2.0
8	CH	3	MET	2.0
36	DO	49	VAL	2.0
45	DX	47	VAL	2.0
27	DF	77	PHE	2.0
45	DX	17	ASN	2.0
4	CD	47	ARG	2.0
27	DF	71	ARG	2.0
50	D2	28	ARG	2.0
17	CQ	39	LYS	2.0
27	DF	88	LYS	2.0
31	DJ	106	LYS	2.0
48	D0	53	LYS	2.0
2	CB	55	ALA	2.0
10	AJ	34	ALA	2.0
10	CJ	93	ALA	2.0
22	BA	1179	G	2.0
22	DA	1076	C	2.0
28	DG	13	ALA	2.0
38	DQ	21	ALA	2.0
10	CJ	36	VAL	2.0
10	CJ	9	ARG	2.0
3	CC	206	GLU	2.0
8	CH	75	ILE	2.0
13	AM	4	ILE	2.0
21	AU	44	GLU	2.0
26	DE	116	ASP	2.0
26	DE	171	ASP	2.0
28	DG	28	GLY	2.0
32	DK	60	ALA	2.0
22	DA	12	U	2.0
1	CA	1013	G	2.0
1	CA	1492	A	2.0
22	DA	1048	A	2.0

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Mol	Chain	Res	Type	RSRZ
29	DH	104	THR	2.0
33	DL	30	THR	2.0
36	DO	78	VAL	2.0
24	DC	24	LEU	2.0
27	DF	47	LYS	2.0
29	BH	47	PHE	2.0
41	DT	24	MET	2.0
33	DL	6	LEU	2.0
33	DL	8	PRO	2.0
25	DD	185	ASN	2.0
30	DI	94	ASN	2.0
50	D2	26	ASN	2.0

6.2 Non-standard residues in protein, DNA, RNA chains (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MHU	D6	5	15/16	0.87	0.27	45,56,65,65	0
54	MHW	D6	1	9/10	0.92	0.19	36,47,54,54	0
54	DBB	D6	3	6/7	0.94	0.28	45,52,56,63	0
54	04X	D6	6	15/16	0.94	0.15	46,56,70,73	0
54	004	D6	7	10/11	0.95	0.18	40,51,56,56	0
54	DBB	B6	3	6/7	0.97	0.19	0,1,1,4	0
54	04X	B6	6	15/16	0.97	0.14	1,3,15,15	0
54	MHW	B6	1	9/10	0.97	0.16	0,1,2,9	0
54	004	B6	7	10/11	0.97	0.22	0,0,1,2	0
54	MHU	B6	5	15/16	0.97	0.21	0,1,3,6	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, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	DA	3049	1/1	0.28	0.29	109,109,109,109	0
55	MG	DA	3045	1/1	0.37	0.26	95,95,95,95	0
55	MG	DA	3137	1/1	0.37	0.11	88,88,88,88	0
55	MG	DA	3005	1/1	0.39	0.28	94,94,94,94	0
55	MG	DA	3072	1/1	0.43	0.16	80,80,80,80	0
55	MG	DA	3120	1/1	0.45	0.31	97,97,97,97	0
55	MG	DA	3101	1/1	0.45	0.27	78,78,78,78	0
55	MG	CA	1630	1/1	0.47	0.21	105,105,105,105	0
55	MG	DA	3042	1/1	0.47	0.33	68,68,68,68	0
55	MG	DA	3093	1/1	0.49	0.43	101,101,101,101	0
55	MG	CA	1649	1/1	0.50	0.18	71,71,71,71	0
55	MG	DA	3114	1/1	0.55	0.28	80,80,80,80	0
55	MG	DA	3094	1/1	0.55	0.14	93,93,93,93	0
55	MG	DA	3132	1/1	0.55	0.42	89,89,89,89	0
55	MG	BA	3099	1/1	0.55	0.37	64,64,64,64	0
55	MG	DA	3017	1/1	0.56	0.13	84,84,84,84	0
55	MG	CA	1621	1/1	0.56	0.07	71,71,71,71	0
55	MG	DA	3027	1/1	0.58	0.98	96,96,96,96	0
55	MG	DA	3061	1/1	0.58	0.17	80,80,80,80	0
55	MG	CA	1629	1/1	0.61	0.08	80,80,80,80	0
55	MG	DA	3063	1/1	0.61	0.74	93,93,93,93	0
55	MG	DA	3058	1/1	0.62	0.17	73,73,73,73	0
55	MG	DA	3165	1/1	0.62	0.51	68,68,68,68	0
55	MG	DA	3149	1/1	0.63	0.26	54,54,54,54	0
55	MG	CA	1615	1/1	0.66	0.09	55,55,55,55	0
55	MG	BA	3048	1/1	0.66	0.11	53,53,53,53	0
55	MG	DA	3007	1/1	0.66	0.21	101,101,101,101	0
55	MG	CA	1646	1/1	0.67	0.34	65,65,65,65	0
55	MG	DA	3014	1/1	0.67	0.16	80,80,80,80	0
55	MG	BA	3003	1/1	0.68	0.11	23,23,23,23	0
55	MG	DA	3016	1/1	0.69	0.42	78,78,78,78	0
55	MG	DA	3080	1/1	0.70	0.10	101,101,101,101	0
55	MG	AA	1660	1/1	0.70	1.03	70,70,70,70	0
55	MG	D2	101	1/1	0.70	0.12	77,77,77,77	0
55	MG	DA	3148	1/1	0.71	0.14	58,58,58,58	0
55	MG	AA	1653	1/1	0.71	0.28	51,51,51,51	0
55	MG	DA	3150	1/1	0.71	0.20	61,61,61,61	0
55	MG	DA	3134	1/1	0.71	0.64	100,100,100,100	0
55	MG	DA	3020	1/1	0.71	0.19	83,83,83,83	0
55	MG	DA	3136	1/1	0.72	0.27	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	DA	3006	1/1	0.72	0.11	98,98,98,98	0
55	MG	CA	1632	1/1	0.72	0.12	74,74,74,74	0
55	MG	CA	1628	1/1	0.72	0.24	98,98,98,98	0
55	MG	DA	3043	1/1	0.72	0.11	82,82,82,82	0
55	MG	AA	1658	1/1	0.72	0.44	72,72,72,72	0
55	MG	CA	1604	1/1	0.72	0.06	89,89,89,89	0
55	MG	CA	1605	1/1	0.73	0.17	88,88,88,88	0
55	MG	DA	3008	1/1	0.73	0.41	100,100,100,100	0
55	MG	DA	3003	1/1	0.73	0.29	92,92,92,92	0
55	MG	DA	3028	1/1	0.74	0.23	83,83,83,83	0
55	MG	DA	3022	1/1	0.74	0.13	62,62,62,62	0
55	MG	CA	1638	1/1	0.74	0.18	84,84,84,84	0
55	MG	DA	3057	1/1	0.75	0.27	88,88,88,88	0
55	MG	AA	1672	1/1	0.75	0.48	49,49,49,49	0
55	MG	DA	3073	1/1	0.75	0.09	72,72,72,72	0
55	MG	DA	3154	1/1	0.75	0.34	70,70,70,70	0
55	MG	DA	3112	1/1	0.75	0.08	70,70,70,70	0
55	MG	DA	3019	1/1	0.75	0.17	85,85,85,85	0
55	MG	DA	3100	1/1	0.76	0.33	81,81,81,81	0
55	MG	DA	3128	1/1	0.76	0.13	71,71,71,71	0
55	MG	DA	3113	1/1	0.76	0.62	77,77,77,77	0
55	MG	AA	1667	1/1	0.76	0.36	54,54,54,54	0
55	MG	DA	3059	1/1	0.77	0.24	70,70,70,70	0
55	MG	DA	3074	1/1	0.77	0.11	68,68,68,68	0
55	MG	DA	3107	1/1	0.77	0.14	48,48,48,48	0
55	MG	CA	1609	1/1	0.77	0.12	77,77,77,77	0
55	MG	BA	3016	1/1	0.77	0.36	59,59,59,59	0
55	MG	CA	1617	1/1	0.77	0.09	40,40,40,40	0
55	MG	DA	3030	1/1	0.78	0.19	72,72,72,72	0
55	MG	DA	3138	1/1	0.78	0.43	52,52,52,52	0
55	MG	DA	3146	1/1	0.78	0.08	84,84,84,84	0
55	MG	BA	3037	1/1	0.78	0.15	35,35,35,35	0
55	MG	CA	1650	1/1	0.78	0.26	44,44,44,44	0
55	MG	CA	1635	1/1	0.78	0.25	120,120,120,120	0
55	MG	DA	3153	1/1	0.78	0.34	62,62,62,62	0
55	MG	DA	3047	1/1	0.78	0.10	80,80,80,80	0
55	MG	AA	1616	1/1	0.78	0.12	50,50,50,50	0
55	MG	DB	203	1/1	0.78	0.07	83,83,83,83	0
55	MG	BA	3002	1/1	0.78	0.07	15,15,15,15	0
55	MG	BA	3089	1/1	0.79	0.09	22,22,22,22	0
55	MG	CA	1636	1/1	0.79	0.19	113,113,113,113	0
55	MG	AA	1662	1/1	0.79	0.54	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	CA	1656	1/1	0.79	0.75	53,53,53,53	0
55	MG	DA	3110	1/1	0.80	0.23	48,48,48,48	0
55	MG	DA	3055	1/1	0.80	0.10	41,41,41,41	0
55	MG	AA	1668	1/1	0.80	0.20	58,58,58,58	0
55	MG	BA	3084	1/1	0.80	0.25	49,49,49,49	0
55	MG	DA	3033	1/1	0.81	0.16	71,71,71,71	0
55	MG	DA	3108	1/1	0.81	0.12	72,72,72,72	0
55	MG	CA	1647	1/1	0.81	0.22	45,45,45,45	0
55	MG	BA	3174	1/1	0.81	0.22	27,27,27,27	0
55	MG	BA	3189	1/1	0.81	0.27	44,44,44,44	0
55	MG	BA	3077	1/1	0.81	0.25	61,61,61,61	0
55	MG	BA	3081	1/1	0.81	0.12	16,16,16,16	0
55	MG	AA	1614	1/1	0.81	0.12	55,55,55,55	0
55	MG	AA	1647	1/1	0.81	0.25	58,58,58,58	0
55	MG	AA	1649	1/1	0.81	0.18	46,46,46,46	0
55	MG	BA	3100	1/1	0.81	0.09	14,14,14,14	0
55	MG	CA	1625	1/1	0.82	0.13	43,43,43,43	0
55	MG	BA	3049	1/1	0.82	0.07	13,13,13,13	0
55	MG	BA	3102	1/1	0.82	0.19	10,10,10,10	0
55	MG	BA	3133	1/1	0.82	0.07	37,37,37,37	0
55	MG	DA	3125	1/1	0.82	0.45	92,92,92,92	0
55	MG	BA	3006	1/1	0.82	0.08	51,51,51,51	0
55	MG	DA	3104	1/1	0.82	0.15	67,67,67,67	0
55	MG	AA	1638	1/1	0.82	0.06	77,77,77,77	0
55	MG	CA	1602	1/1	0.82	0.15	69,69,69,69	0
55	MG	DA	3076	1/1	0.82	0.15	70,70,70,70	0
55	MG	CA	1626	1/1	0.83	0.06	43,43,43,43	0
55	MG	AA	1644	1/1	0.83	0.52	58,58,58,58	0
55	MG	AA	1670	1/1	0.83	0.34	56,56,56,56	0
55	MG	BA	3058	1/1	0.83	0.24	45,45,45,45	0
55	MG	DA	3041	1/1	0.84	0.11	92,92,92,92	0
55	MG	AA	1652	1/1	0.84	0.36	56,56,56,56	0
55	MG	DA	3092	1/1	0.84	0.10	77,77,77,77	0
55	MG	DA	3025	1/1	0.84	0.39	56,56,56,56	0
55	MG	BA	3151	1/1	0.84	0.24	49,49,49,49	0
55	MG	DA	3096	1/1	0.84	0.18	75,75,75,75	0
55	MG	DA	3097	1/1	0.84	0.15	51,51,51,51	0
55	MG	AA	1630	1/1	0.84	0.13	63,63,63,63	0
55	MG	AA	1645	1/1	0.84	0.37	53,53,53,53	0
55	MG	BA	3112	1/1	0.84	0.17	8,8,8,8	0
55	MG	DA	3056	1/1	0.84	0.07	66,66,66,66	0
55	MG	DA	3071	1/1	0.85	0.08	96,96,96,96	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	CA	1633	1/1	0.85	0.34	78,78,78,78	0
55	MG	BA	3173	1/1	0.85	0.20	32,32,32,32	0
55	MG	CA	1622	1/1	0.85	0.10	51,51,51,51	0
55	MG	DA	3116	1/1	0.85	0.34	96,96,96,96	0
55	MG	BA	3136	1/1	0.85	0.11	34,34,34,34	0
55	MG	DA	3021	1/1	0.85	0.08	64,64,64,64	0
55	MG	DA	3085	1/1	0.85	0.08	78,78,78,78	0
55	MG	DA	3086	1/1	0.85	0.08	72,72,72,72	0
55	MG	DA	3157	1/1	0.85	0.49	63,63,63,63	0
55	MG	DA	3133	1/1	0.85	0.11	53,53,53,53	0
55	MG	DB	202	1/1	0.85	0.08	65,65,65,65	0
55	MG	BA	3154	1/1	0.85	0.17	34,34,34,34	0
55	MG	DA	3135	1/1	0.85	0.11	53,53,53,53	0
55	MG	DA	3011	1/1	0.86	0.08	60,60,60,60	0
55	MG	CA	1624	1/1	0.86	0.11	47,47,47,47	0
55	MG	CA	1655	1/1	0.86	0.13	51,51,51,51	0
55	MG	DA	3036	1/1	0.86	0.08	70,70,70,70	0
55	MG	BA	3168	1/1	0.86	0.23	35,35,35,35	0
55	MG	AA	1651	1/1	0.86	0.25	40,40,40,40	0
55	MG	DA	3070	1/1	0.86	0.19	86,86,86,86	0
55	MG	DA	3004	1/1	0.86	0.10	65,65,65,65	0
55	MG	AA	1605	1/1	0.86	0.15	33,33,33,33	0
55	MG	BA	3020	1/1	0.86	0.18	8,8,8,8	0
55	MG	DB	201	1/1	0.86	0.06	97,97,97,97	0
55	MG	BA	3026	1/1	0.86	0.14	36,36,36,36	0
55	MG	AA	1627	1/1	0.86	0.13	58,58,58,58	0
55	MG	DA	3079	1/1	0.86	0.12	92,92,92,92	0
55	MG	BA	3137	1/1	0.87	0.69	66,66,66,66	0
55	MG	DA	3121	1/1	0.87	0.27	78,78,78,78	0
55	MG	DA	3002	1/1	0.87	0.08	65,65,65,65	0
55	MG	DA	3126	1/1	0.87	0.17	59,59,59,59	0
55	MG	BA	3171	1/1	0.87	0.21	24,24,24,24	0
55	MG	DA	3064	1/1	0.87	0.19	48,48,48,48	0
55	MG	DA	3068	1/1	0.87	0.10	47,47,47,47	0
55	MG	DA	3160	1/1	0.87	0.11	74,74,74,74	0
55	MG	BA	3148	1/1	0.87	0.45	24,24,24,24	0
55	MG	BA	3075	1/1	0.87	0.07	29,29,29,29	0
55	MG	BA	3083	1/1	0.87	0.13	20,20,20,20	0
55	MG	CA	1651	1/1	0.87	0.29	50,50,50,50	0
55	MG	BA	3190	1/1	0.87	0.21	39,39,39,39	0
55	MG	AA	1664	1/1	0.88	0.33	42,42,42,42	0
55	MG	AA	1613	1/1	0.88	0.11	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	DA	3026	1/1	0.88	0.24	67,67,67,67	0
55	MG	DA	3050	1/1	0.88	0.15	83,83,83,83	0
55	MG	BA	3055	1/1	0.88	0.12	6,6,6,6	0
55	MG	DA	3012	1/1	0.88	0.20	74,74,74,74	0
55	MG	AA	1624	1/1	0.88	0.09	35,35,35,35	0
55	MG	DA	3032	1/1	0.88	0.10	63,63,63,63	0
55	MG	DA	3151	1/1	0.88	0.27	49,49,49,49	0
55	MG	BA	3145	1/1	0.88	0.39	41,41,41,41	0
55	MG	DA	3091	1/1	0.88	0.07	76,76,76,76	0
55	MG	DA	3034	1/1	0.88	0.11	62,62,62,62	0
55	MG	BA	3062	1/1	0.88	0.83	57,57,57,57	0
55	MG	DA	3161	1/1	0.88	0.19	49,49,49,49	0
55	MG	BA	3065	1/1	0.88	0.17	0,0,0,0	0
55	MG	DA	3095	1/1	0.88	0.12	80,80,80,80	0
55	MG	BA	3070	1/1	0.88	0.07	50,50,50,50	0
55	MG	DA	3069	1/1	0.88	0.08	60,60,60,60	0
55	MG	AA	1601	1/1	0.88	0.07	41,41,41,41	0
55	MG	AA	1639	1/1	0.89	0.06	60,60,60,60	0
55	MG	BA	3103	1/1	0.89	0.11	13,13,13,13	0
55	MG	BA	3159	1/1	0.89	0.14	21,21,21,21	0
55	MG	DA	3109	1/1	0.89	0.17	50,50,50,50	0
55	MG	CA	1631	1/1	0.89	0.14	92,92,92,92	0
55	MG	CA	1614	1/1	0.89	0.09	49,49,49,49	0
55	MG	DA	3089	1/1	0.89	0.07	78,78,78,78	0
55	MG	DA	3090	1/1	0.89	0.18	80,80,80,80	0
55	MG	DA	3040	1/1	0.89	0.14	60,60,60,60	0
55	MG	AA	1634	1/1	0.89	0.12	42,42,42,42	0
55	MG	BA	3121	1/1	0.89	0.07	7,7,7,7	0
55	MG	BA	3074	1/1	0.89	0.13	14,14,14,14	0
55	MG	BA	3086	1/1	0.89	0.11	5,5,5,5	0
55	MG	AA	1612	1/1	0.89	0.14	37,37,37,37	0
55	MG	DA	3167	1/1	0.89	0.40	43,43,43,43	0
55	MG	AA	1666	1/1	0.89	0.57	41,41,41,41	0
55	MG	DA	3098	1/1	0.89	0.14	73,73,73,73	0
55	MG	BA	3079	1/1	0.89	0.08	37,37,37,37	0
55	MG	DA	3029	1/1	0.89	0.12	65,65,65,65	0
55	MG	DA	3018	1/1	0.90	0.15	51,51,51,51	0
55	MG	DA	3145	1/1	0.90	0.38	67,67,67,67	0
55	MG	BA	3119	1/1	0.90	0.09	14,14,14,14	0
55	MG	BA	3053	1/1	0.90	0.12	6,6,6,6	0
55	MG	BA	3177	1/1	0.90	0.19	29,29,29,29	0
55	MG	BA	3186	1/1	0.90	0.14	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	AA	1607	1/1	0.90	0.14	41,41,41,41	0
55	MG	DA	3046	1/1	0.90	0.10	77,77,77,77	0
55	MG	CA	1637	1/1	0.90	0.11	64,64,64,64	0
55	MG	DA	3156	1/1	0.90	0.11	42,42,42,42	0
55	MG	BA	3157	1/1	0.90	0.26	27,27,27,27	0
55	MG	DA	3158	1/1	0.90	0.20	49,49,49,49	0
55	MG	DA	3127	1/1	0.90	0.15	86,86,86,86	0
55	MG	CA	1601	1/1	0.90	0.10	45,45,45,45	0
55	MG	DA	3075	1/1	0.90	0.08	63,63,63,63	0
55	MG	AA	1636	1/1	0.90	0.09	42,42,42,42	0
55	MG	CA	1627	1/1	0.90	0.11	76,76,76,76	0
55	MG	AA	1650	1/1	0.90	0.16	37,37,37,37	0
55	MG	BA	3170	1/1	0.90	0.15	33,33,33,33	0
55	MG	AA	1632	1/1	0.90	0.11	54,54,54,54	0
55	MG	DA	3141	1/1	0.91	0.37	41,41,41,41	0
55	MG	BA	3182	1/1	0.91	0.21	20,20,20,20	0
55	MG	BA	3150	1/1	0.91	0.14	45,45,45,45	0
55	MG	AA	1665	1/1	0.91	0.07	48,48,48,48	0
55	MG	AA	1669	1/1	0.91	0.32	51,51,51,51	0
55	MG	CA	1641	1/1	0.91	0.45	67,67,67,67	0
55	MG	BA	3115	1/1	0.91	0.14	17,17,17,17	0
55	MG	DA	3124	1/1	0.91	0.16	51,51,51,51	0
55	MG	DA	3048	1/1	0.91	0.09	53,53,53,53	0
55	MG	DA	3010	1/1	0.91	0.09	68,68,68,68	0
55	MG	BA	3047	1/1	0.91	0.15	9,9,9,9	0
55	MG	AA	1602	1/1	0.91	0.10	46,46,46,46	0
55	MG	DA	3159	1/1	0.91	0.37	61,61,61,61	0
55	MG	BA	3088	1/1	0.91	0.15	37,37,37,37	0
55	MG	BA	3015	1/1	0.91	0.12	6,6,6,6	0
55	MG	AA	1671	1/1	0.91	0.47	47,47,47,47	0
55	MG	DA	3084	1/1	0.91	0.20	72,72,72,72	0
55	MG	BA	3054	1/1	0.91	0.15	2,2,2,2	0
55	MG	AA	1661	1/1	0.91	0.11	53,53,53,53	0
55	MG	DA	3087	1/1	0.91	0.10	69,69,69,69	0
55	MG	DA	3139	1/1	0.91	0.43	49,49,49,49	0
55	MG	BA	3080	1/1	0.92	0.14	17,17,17,17	0
55	MG	AA	1663	1/1	0.92	0.13	41,41,41,41	0
55	MG	BA	3180	1/1	0.92	0.23	40,40,40,40	0
55	MG	AA	1609	1/1	0.92	0.09	35,35,35,35	0
55	MG	BA	3032	1/1	0.92	0.08	5,5,5,5	0
55	MG	BA	3060	1/1	0.92	0.12	9,9,9,9	0
55	MG	BA	3004	1/1	0.92	0.12	25,25,25,25	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	BA	3149	1/1	0.92	0.15	27,27,27,27	0
55	MG	BA	3044	1/1	0.92	0.04	19,19,19,19	0
55	MG	BA	3092	1/1	0.92	0.04	55,55,55,55	0
55	MG	DA	3111	1/1	0.92	0.15	43,43,43,43	0
55	MG	BA	3005	1/1	0.92	0.08	42,42,42,42	0
55	MG	CA	1608	1/1	0.92	0.13	63,63,63,63	0
55	MG	BA	3156	1/1	0.92	0.23	23,23,23,23	0
55	MG	BA	3073	1/1	0.92	0.18	2,2,2,2	0
55	MG	DA	3117	1/1	0.92	0.57	73,73,73,73	0
55	MG	AA	1631	1/1	0.92	0.10	48,48,48,48	0
55	MG	BA	3160	1/1	0.92	0.22	29,29,29,29	0
55	MG	DA	3054	1/1	0.92	0.12	41,41,41,41	0
55	MG	CA	1619	1/1	0.92	0.09	40,40,40,40	0
55	MG	DA	3164	1/1	0.92	0.21	57,57,57,57	0
55	MG	DA	3024	1/1	0.92	0.07	61,61,61,61	0
55	MG	DA	3166	1/1	0.92	0.20	57,57,57,57	0
55	MG	AA	1623	1/1	0.92	0.07	46,46,46,46	0
55	MG	DA	3168	1/1	0.92	0.10	47,47,47,47	0
55	MG	BA	3050	1/1	0.92	0.19	6,6,6,6	0
55	MG	BA	3078	1/1	0.92	0.08	31,31,31,31	0
55	MG	AA	1655	1/1	0.92	0.25	45,45,45,45	0
55	MG	DA	3062	1/1	0.92	1.19	104,104,104,104	0
55	MG	BA	3193	1/1	0.93	0.15	42,42,42,42	0
55	MG	DA	3143	1/1	0.93	0.20	39,39,39,39	0
55	MG	CA	1652	1/1	0.93	0.07	62,62,62,62	0
55	MG	CA	1654	1/1	0.93	0.24	58,58,58,58	0
55	MG	BA	3166	1/1	0.93	0.17	36,36,36,36	0
55	MG	BA	3061	1/1	0.93	0.25	28,28,28,28	0
55	MG	DA	3081	1/1	0.93	0.12	84,84,84,84	0
55	MG	DA	3052	1/1	0.93	0.09	49,49,49,49	0
55	MG	BA	3147	1/1	0.93	0.19	39,39,39,39	0
55	MG	AA	1604	1/1	0.93	0.05	58,58,58,58	0
55	MG	BA	3172	1/1	0.93	0.17	32,32,32,32	0
55	MG	BA	3063	1/1	0.93	0.17	6,6,6,6	0
55	MG	CA	1610	1/1	0.93	0.10	64,64,64,64	0
55	MG	AA	1610	1/1	0.93	0.19	63,63,63,63	0
55	MG	BA	3091	1/1	0.93	0.10	23,23,23,23	0
55	MG	DA	3009	1/1	0.93	0.20	81,81,81,81	0
55	MG	DA	3162	1/1	0.93	0.12	35,35,35,35	0
55	MG	DA	3163	1/1	0.93	0.42	71,71,71,71	0
55	MG	AA	1656	1/1	0.93	0.22	36,36,36,36	0
55	MG	BA	3094	1/1	0.93	0.06	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	DA	3067	1/1	0.93	0.08	42,42,42,42	0
55	MG	DA	3038	1/1	0.93	0.08	75,75,75,75	0
55	MG	CA	1620	1/1	0.93	0.04	65,65,65,65	0
55	MG	AA	1626	1/1	0.93	0.15	19,19,19,19	0
55	MG	BA	3038	1/1	0.93	0.25	0,0,0,0	0
55	MG	BA	3141	1/1	0.93	0.18	26,26,26,26	0
55	MG	BA	3191	1/1	0.93	0.16	20,20,20,20	0
55	MG	BA	3120	1/1	0.94	0.18	32,32,32,32	0
55	MG	BA	3095	1/1	0.94	0.06	20,20,20,20	0
55	MG	BA	3185	1/1	0.94	0.25	25,25,25,25	0
55	MG	BA	3152	1/1	0.94	0.15	18,18,18,18	0
55	MG	BA	3187	1/1	0.94	0.13	25,25,25,25	0
55	MG	BA	3122	1/1	0.94	0.08	39,39,39,39	0
55	MG	BA	3125	1/1	0.94	0.14	20,20,20,20	0
55	MG	DA	3031	1/1	0.94	0.07	57,57,57,57	0
55	MG	BA	3129	1/1	0.94	0.14	5,5,5,5	0
55	MG	DA	3142	1/1	0.94	0.27	40,40,40,40	0
55	MG	DA	3065	1/1	0.94	0.21	43,43,43,43	0
55	MG	DA	3066	1/1	0.94	0.15	39,39,39,39	0
55	MG	BA	3076	1/1	0.94	0.17	4,4,4,4	0
55	MG	DA	3102	1/1	0.94	0.08	58,58,58,58	0
55	MG	BA	3134	1/1	0.94	0.34	47,47,47,47	0
55	MG	DA	3105	1/1	0.94	0.08	67,67,67,67	0
55	MG	DA	3106	1/1	0.94	0.19	72,72,72,72	0
55	MG	DA	3152	1/1	0.94	0.16	47,47,47,47	0
55	MG	AA	1640	1/1	0.94	0.05	45,45,45,45	0
55	MG	DA	3037	1/1	0.94	0.09	54,54,54,54	0
55	MG	AA	1635	1/1	0.94	0.19	65,65,65,65	0
55	MG	BA	3138	1/1	0.94	0.38	4,4,4,4	0
55	MG	CA	1606	1/1	0.94	0.15	70,70,70,70	0
55	MG	CA	1607	1/1	0.94	0.09	47,47,47,47	0
55	MG	BA	3018	1/1	0.94	0.17	0,0,0,0	0
55	MG	BA	3111	1/1	0.94	0.08	24,24,24,24	0
55	MG	CA	1639	1/1	0.94	0.09	49,49,49,49	0
55	MG	BA	3008	1/1	0.94	0.04	22,22,22,22	0
55	MG	CA	1643	1/1	0.94	0.25	56,56,56,56	0
55	MG	DA	3083	1/1	0.94	0.12	49,49,49,49	0
55	MG	BA	3041	1/1	0.94	0.38	2,2,2,2	0
55	MG	BA	3043	1/1	0.94	0.14	11,11,11,11	0
55	MG	BA	3178	1/1	0.94	0.14	13,13,13,13	0
55	MG	BA	3179	1/1	0.94	0.20	34,34,34,34	0
55	MG	DA	3088	1/1	0.94	0.07	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	DA	3130	1/1	0.94	0.18	39,39,39,39	0
55	MG	DA	3131	1/1	0.94	0.07	67,67,67,67	0
56	VIF	DA	3001	38/38	0.94	0.23	34,47,57,61	0
55	MG	DA	3099	1/1	0.95	0.16	50,50,50,50	0
55	MG	CA	1634	1/1	0.95	0.11	52,52,52,52	0
55	MG	BA	3135	1/1	0.95	0.15	2,2,2,2	0
55	MG	DA	3039	1/1	0.95	0.12	63,63,63,63	0
55	MG	DA	3103	1/1	0.95	0.31	83,83,83,83	0
55	MG	BA	3097	1/1	0.95	0.16	5,5,5,5	0
55	MG	AA	1659	1/1	0.95	0.32	61,61,61,61	0
55	MG	AA	1606	1/1	0.95	0.10	41,41,41,41	0
55	MG	AA	1620	1/1	0.95	0.07	59,59,59,59	0
55	MG	DA	3015	1/1	0.95	0.05	44,44,44,44	0
55	MG	AA	1621	1/1	0.95	0.06	35,35,35,35	0
55	MG	DA	3078	1/1	0.95	0.24	83,83,83,83	0
55	MG	BA	3104	1/1	0.95	0.06	18,18,18,18	0
55	MG	CA	1644	1/1	0.95	0.49	55,55,55,55	0
55	MG	CA	1645	1/1	0.95	0.19	40,40,40,40	0
55	MG	DA	3082	1/1	0.95	0.08	66,66,66,66	0
55	MG	BA	3066	1/1	0.95	0.14	1,1,1,1	0
55	MG	DA	3051	1/1	0.95	0.13	54,54,54,54	0
55	MG	DA	3118	1/1	0.95	0.10	66,66,66,66	0
55	MG	BA	3068	1/1	0.95	0.20	0,0,0,0	0
55	MG	BA	3085	1/1	0.95	0.08	16,16,16,16	0
55	MG	BA	3024	1/1	0.95	0.14	4,4,4,4	0
55	MG	BA	3072	1/1	0.95	0.08	23,23,23,23	0
55	MG	BA	3014	1/1	0.95	0.19	0,0,0,0	0
55	MG	BA	3155	1/1	0.95	0.16	26,26,26,26	0
55	MG	BA	3090	1/1	0.95	0.14	1,1,1,1	0
55	MG	BA	3057	1/1	0.95	0.06	3,3,3,3	0
55	MG	BA	3126	1/1	0.95	0.15	4,4,4,4	0
55	MG	BB	203	1/1	0.95	0.06	15,15,15,15	0
55	MG	BA	3045	1/1	0.95	0.10	21,21,21,21	0
55	MG	BA	3059	1/1	0.95	0.05	13,13,13,13	0
55	MG	BA	3030	1/1	0.95	0.05	12,12,12,12	0
55	MG	BA	3169	1/1	0.95	0.09	34,34,34,34	0
55	MG	BA	3131	1/1	0.96	0.19	0,0,0,0	0
55	MG	BA	3132	1/1	0.96	0.28	50,50,50,50	0
55	MG	AA	1625	1/1	0.96	0.11	33,33,33,33	0
55	MG	BA	3158	1/1	0.96	0.20	15,15,15,15	0
55	MG	BA	3033	1/1	0.96	0.15	4,4,4,4	0
55	MG	DA	3013	1/1	0.96	0.16	34,34,34,34	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	BA	3192	1/1	0.96	0.22	34,34,34,34	0
55	MG	BA	3105	1/1	0.96	0.19	0,0,0,0	0
55	MG	BB	202	1/1	0.96	0.10	2,2,2,2	0
55	MG	BA	3163	1/1	0.96	0.12	31,31,31,31	0
55	MG	BB	204	1/1	0.96	0.39	21,21,21,21	0
55	MG	BD	301	1/1	0.96	0.17	27,27,27,27	0
55	MG	BA	3165	1/1	0.96	0.17	5,5,5,5	0
55	MG	BA	3034	1/1	0.96	0.21	0,0,0,0	0
55	MG	DA	3147	1/1	0.96	0.10	60,60,60,60	0
55	MG	BA	3167	1/1	0.96	0.12	21,21,21,21	0
55	MG	DA	3023	1/1	0.96	0.13	42,42,42,42	0
55	MG	CA	1640	1/1	0.96	0.08	31,31,31,31	0
55	MG	AA	1619	1/1	0.96	0.15	37,37,37,37	0
55	MG	CA	1642	1/1	0.96	0.24	29,29,29,29	0
55	MG	BA	3052	1/1	0.96	0.15	3,3,3,3	0
55	MG	BA	3116	1/1	0.96	0.22	50,50,50,50	0
55	MG	DA	3155	1/1	0.96	0.15	45,45,45,45	0
55	MG	BA	3118	1/1	0.96	0.13	1,1,1,1	0
55	MG	BA	3146	1/1	0.96	0.26	15,15,15,15	0
55	MG	BA	3093	1/1	0.96	0.04	38,38,38,38	0
55	MG	CA	1611	1/1	0.96	0.21	82,82,82,82	0
55	MG	CA	1612	1/1	0.96	0.07	44,44,44,44	0
55	MG	CA	1613	1/1	0.96	0.11	24,24,24,24	0
55	MG	DA	3115	1/1	0.96	0.11	51,51,51,51	0
55	MG	BA	3022	1/1	0.96	0.15	0,0,0,0	0
55	MG	BA	3176	1/1	0.96	0.11	13,13,13,13	0
55	MG	CA	1616	1/1	0.96	0.11	33,33,33,33	0
55	MG	BA	3039	1/1	0.96	0.14	0,0,0,0	0
55	MG	AA	1633	1/1	0.96	0.10	41,41,41,41	0
55	MG	AA	1654	1/1	0.96	0.23	30,30,30,30	0
55	MG	BA	3027	1/1	0.96	0.09	4,4,4,4	0
55	MG	BA	3181	1/1	0.96	0.18	19,19,19,19	0
55	MG	DA	3044	1/1	0.96	0.13	47,47,47,47	0
55	MG	BA	3153	1/1	0.96	0.28	11,11,11,11	0
55	MG	AA	1637	1/1	0.96	0.11	16,16,16,16	0
55	MG	DA	3060	1/1	0.97	0.10	43,43,43,43	0
55	MG	BA	3114	1/1	0.97	0.22	0,0,0,0	0
55	MG	BA	3087	1/1	0.97	0.20	1,1,1,1	0
55	MG	AA	1643	1/1	0.97	0.12	25,25,25,25	0
55	MG	BA	3117	1/1	0.97	0.10	3,3,3,3	0
55	MG	CA	1618	1/1	0.97	0.12	45,45,45,45	0
55	MG	DA	3140	1/1	0.97	0.29	28,28,28,28	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	BA	3069	1/1	0.97	0.18	0,0,0,0	0
55	MG	CA	1653	1/1	0.97	0.10	42,42,42,42	0
55	MG	AA	1603	1/1	0.97	0.13	48,48,48,48	0
55	MG	DA	3144	1/1	0.97	0.21	30,30,30,30	0
55	MG	BA	3019	1/1	0.97	0.15	12,12,12,12	0
55	MG	BA	3035	1/1	0.97	0.19	47,47,47,47	0
55	MG	CA	1623	1/1	0.97	0.10	35,35,35,35	0
55	MG	BA	3188	1/1	0.97	0.17	16,16,16,16	0
55	MG	BA	3036	1/1	0.97	0.14	0,0,0,0	0
55	MG	BA	3123	1/1	0.97	0.20	0,0,0,0	0
55	MG	BA	3124	1/1	0.97	0.15	5,5,5,5	0
55	MG	AA	1617	1/1	0.97	0.05	51,51,51,51	0
55	MG	DA	3077	1/1	0.97	0.13	65,65,65,65	0
55	MG	BA	3056	1/1	0.97	0.14	29,29,29,29	0
55	MG	BA	3128	1/1	0.97	0.13	0,0,0,0	0
55	MG	BA	3162	1/1	0.97	0.13	37,37,37,37	0
55	MG	BA	3021	1/1	0.97	0.07	2,2,2,2	0
55	MG	AA	1615	1/1	0.97	0.07	50,50,50,50	0
55	MG	BA	3040	1/1	0.97	0.17	3,3,3,3	0
55	MG	DA	3119	1/1	0.97	0.07	46,46,46,46	0
55	MG	BA	3101	1/1	0.97	0.09	2,2,2,2	0
55	MG	BA	3010	1/1	0.97	0.13	0,0,0,0	0
55	MG	DA	3122	1/1	0.97	0.08	44,44,44,44	0
55	MG	DA	3123	1/1	0.97	0.17	37,37,37,37	0
55	MG	BA	3013	1/1	0.97	0.17	0,0,0,0	0
55	MG	AA	1648	1/1	0.97	0.11	57,57,57,57	0
55	MG	BA	3028	1/1	0.97	0.06	15,15,15,15	0
55	MG	BA	3106	1/1	0.97	0.26	0,0,0,0	0
55	MG	BA	3140	1/1	0.97	0.36	3,3,3,3	0
55	MG	BA	3110	1/1	0.97	0.22	0,0,0,0	0
55	MG	BA	3175	1/1	0.97	0.13	33,33,33,33	0
55	MG	BA	3029	1/1	0.97	0.15	2,2,2,2	0
56	VIF	BA	3001	38/38	0.97	0.20	0,2,7,10	0
55	MG	AA	1641	1/1	0.97	0.14	15,15,15,15	0
55	MG	BA	3007	1/1	0.98	0.09	17,17,17,17	0
55	MG	BA	3017	1/1	0.98	0.06	1,1,1,1	0
55	MG	BA	3042	1/1	0.98	0.14	11,11,11,11	0
55	MG	BA	3142	1/1	0.98	0.39	5,5,5,5	0
55	MG	BQ	201	1/1	0.98	0.26	1,1,1,1	0
55	MG	AA	1618	1/1	0.98	0.09	41,41,41,41	0
55	MG	BA	3031	1/1	0.98	0.15	2,2,2,2	0
55	MG	CA	1603	1/1	0.98	0.12	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	BA	3009	1/1	0.98	0.14	5,5,5,5	0
55	MG	AA	1628	1/1	0.98	0.05	35,35,35,35	0
55	MG	BA	3098	1/1	0.98	0.14	2,2,2,2	0
55	MG	BA	3011	1/1	0.98	0.18	1,1,1,1	0
55	MG	BA	3012	1/1	0.98	0.09	25,25,25,25	0
55	MG	BA	3064	1/1	0.98	0.20	0,0,0,0	0
55	MG	BA	3082	1/1	0.98	0.17	0,0,0,0	0
55	MG	BA	3023	1/1	0.98	0.17	0,0,0,0	0
55	MG	DA	3053	1/1	0.98	0.07	45,45,45,45	0
55	MG	BA	3127	1/1	0.98	0.20	6,6,6,6	0
55	MG	BA	3051	1/1	0.98	0.08	5,5,5,5	0
55	MG	BA	3183	1/1	0.98	0.21	24,24,24,24	0
55	MG	BA	3184	1/1	0.98	0.17	10,10,10,10	0
55	MG	BA	3067	1/1	0.98	0.17	1,1,1,1	0
55	MG	CA	1648	1/1	0.98	0.21	30,30,30,30	0
55	MG	AA	1642	1/1	0.98	0.15	15,15,15,15	0
55	MG	DA	3129	1/1	0.98	0.14	75,75,75,75	0
55	MG	BA	3108	1/1	0.98	0.14	9,9,9,9	0
55	MG	BA	3109	1/1	0.98	0.20	1,1,1,1	0
55	MG	BA	3161	1/1	0.98	0.13	13,13,13,13	0
55	MG	AA	1622	1/1	0.98	0.20	17,17,17,17	0
55	MG	AA	1657	1/1	0.98	0.21	46,46,46,46	0
55	MG	BA	3071	1/1	0.98	0.09	5,5,5,5	0
55	MG	BA	3113	1/1	0.98	0.08	13,13,13,13	0
55	MG	BA	3194	1/1	0.98	0.08	32,32,32,32	0
55	MG	DA	3035	1/1	0.98	0.09	41,41,41,41	0
55	MG	BB	201	1/1	0.98	0.08	29,29,29,29	0
55	MG	BA	3025	1/1	0.99	0.15	0,0,0,0	0
55	MG	BA	3046	1/1	0.99	0.12	2,2,2,2	0
55	MG	AA	1629	1/1	0.99	0.05	54,54,54,54	0
55	MG	BA	3096	1/1	0.99	0.05	10,10,10,10	0
55	MG	AA	1611	1/1	0.99	0.10	19,19,19,19	0
55	MG	AA	1646	1/1	0.99	0.16	55,55,55,55	0
55	MG	BA	3139	1/1	0.99	0.40	0,0,0,0	0
55	MG	BA	3164	1/1	0.99	0.31	19,19,19,19	0
55	MG	BA	3130	1/1	0.99	0.15	0,0,0,0	0
55	MG	AA	1608	1/1	0.99	0.19	16,16,16,16	0
55	MG	BA	3107	1/1	0.99	0.24	0,0,0,0	0
55	MG	BA	3143	1/1	0.99	0.30	14,14,14,14	0
55	MG	BA	3144	1/1	0.99	0.28	8,8,8,8	0
57	ZN	D4	101	1/1	0.99	0.10	86,86,86,86	0
57	ZN	B4	101	1/1	1.00	0.14	24,24,24,24	0

6.5 Other polymers (i)

There are no such residues in this entry.