Full wwPDB X-ray Structure Validation Report ⓘ

Mar 18, 2026 – 12:47 AM UTC

PDB ID	:	4WWW / pdb_00004www
Title	:	Crystal structure of the E. coli ribosome bound to CEM-101
Authors	:	Dunkle, J.A.; Zhang, W.; Cate, J.H.D.; Mankin, A.S.
Deposited on	:	2014-11-12
Resolution	:	3.10 Å(reported)

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

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

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

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

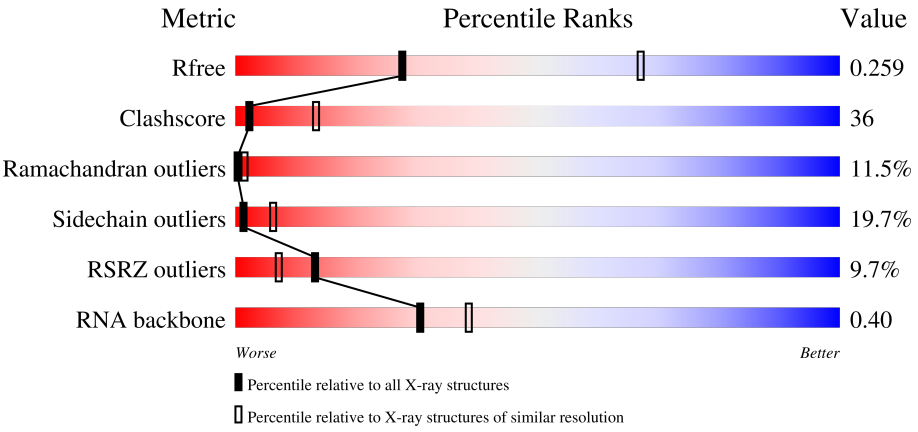
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

1 Overall quality at a glance

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

The reported resolution of this entry is 3.10 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1456 (3.10-3.10)
Clashscore	190562	1539 (3.10-3.10)
Ramachandran outliers	187476	1467 (3.10-3.10)
Sidechain outliers	187428	1467 (3.10-3.10)
RSRZ outliers	180081	1456 (3.10-3.10)
RNA backbone	3983	1022 (3.32-2.88)

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	RA	2904	41% 43% 14%
1	YA	2904	11% 19% 52% 27%
2	RB	118	44% 46% 10%
2	YB	118	21% 53% 25%

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Mol	Chain	Length	Quality of chain
3	RC	271	5% 35% 40% 22%
3	YC	271	21% 28% 52% 18%
4	RD	209	% 29% 48% 21%
4	YD	209	22% 24% 51% 22%
5	RE	201	26% 49% 22%
5	YE	201	33% 24% 57% 17%
6	RF	178	2% 37% 45% 15%
6	YF	178	3% 24% 50% 22%
7	RG	176	3% 31% 44% 22%
7	YG	176	11% 30% 45% 22%
8	RH	149	12% 28% 48% 17% 7%
8	YH	149	19% 28% 48% 22%
9	RI	141	14% 35% 50% 13%
9	YI	141	22% 38% 48% 13%
10	RJ	142	2% 25% 51% 18% 6%
10	YJ	142	24% 31% 50% 17%
11	RK	122	3% 29% 37% 32%
11	YK	122	7% 25% 48% 27%
12	RL	143	% 36% 40% 20%
12	YL	143	49% 31% 48% 17%
13	RM	136	32% 45% 19%
13	YM	136	15% 33% 51% 15%
14	RN	120	% 34% 48% 17%
14	YN	120	32% 28% 44% 27%
15	RO	116	2% 40% 45% 16%

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Mol	Chain	Length	Quality of chain
15	YO	116	13% 40% 47% 12%
16	RP	114	3% 32% 40% 21% 6%
16	YP	114	14% 28% 50% 19%
17	RQ	117	3% 29% 53% 17%
17	YQ	117	38% 36% 44% 20%
18	RR	103	2% 31% 49% 18%
18	YR	103	26% 33% 46% 21%
19	RS	110	% 37% 36% 22% 5%
19	YS	110	29% 31% 50% 17%
20	RT	93	5% 27% 41% 26% 6%
20	YT	93	67% 23% 49% 24%
21	RU	102	7% 25% 47% 25%
21	YU	102	68% 25% 47% 24% 5%
22	RV	94	39% 46% 14%
22	YV	94	5% 32% 54% 13%
23	RW	79	11% 11% 37% 41% 11%
23	YW	79	44% 27% 38% 30% 5%
24	RX	77	25% 53% 21%
24	YX	77	49% 17% 60% 17% 6%
25	RY	63	5% 30% 44% 22%
25	YY	63	62% 27% 59% 14%
26	RZ	58	40% 40% 16% 5%
26	YZ	58	17% 16% 64% 17%
27	R0	56	2% 36% 54% 11%
27	Y0	56	25% 34% 43% 18% 5%

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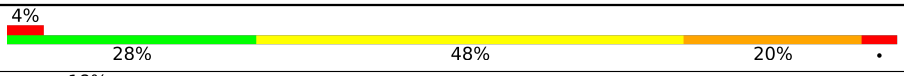
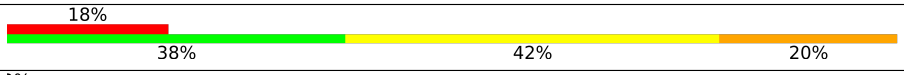
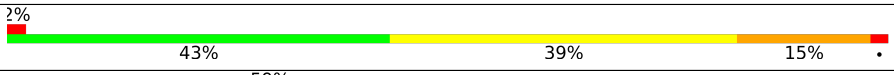
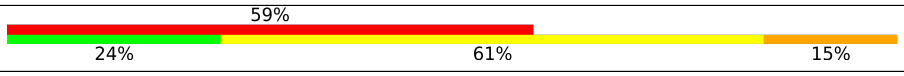
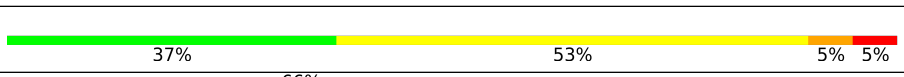
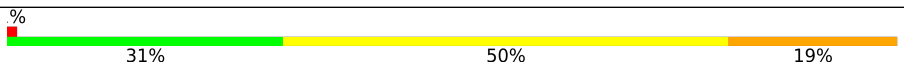
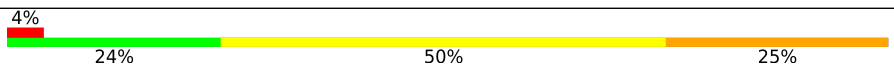
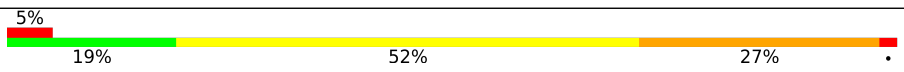
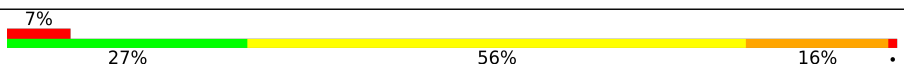
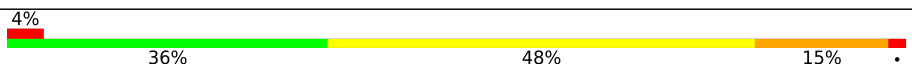
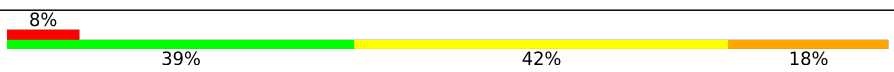
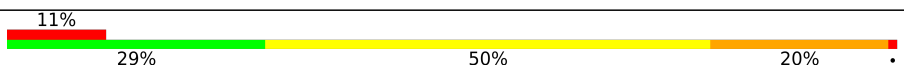
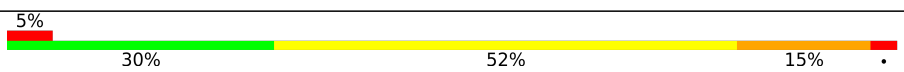
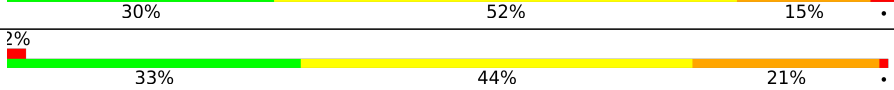
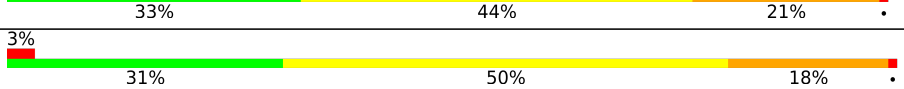
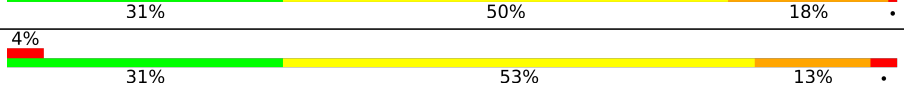
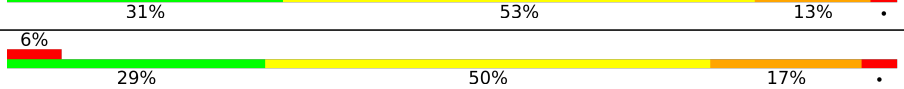
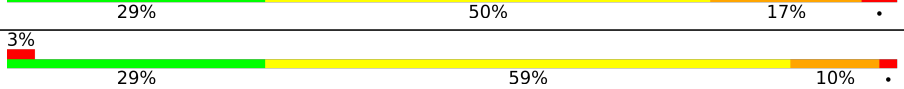
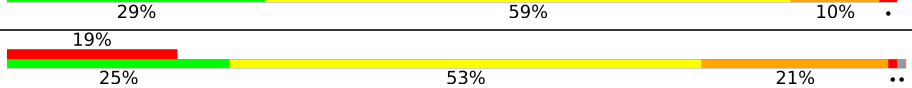
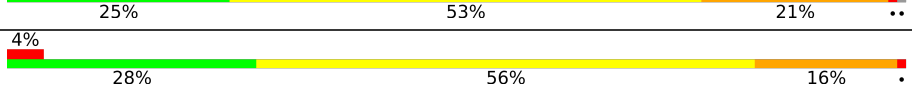
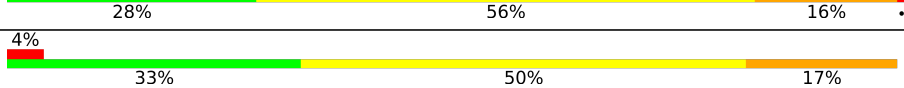
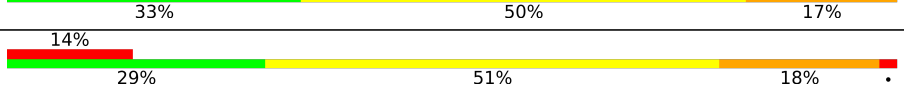
Mol	Chain	Length	Quality of chain
28	R1	50	
28	Y1	50	
29	R2	46	
29	Y2	46	
30	R3	64	
30	Y3	64	
31	R4	38	
31	Y4	38	
32	QA	1533	
32	XA	1533	
33	QB	218	
33	XB	218	
34	QC	206	
34	XC	206	
35	QD	205	
35	XD	205	
36	QE	150	
36	XE	150	
37	QF	100	
37	XF	100	
38	QG	151	
38	XG	151	
39	QH	129	
39	XH	129	
40	QI	127	

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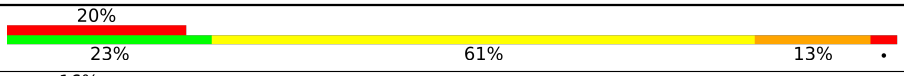
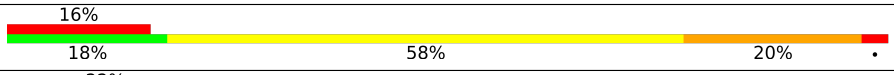
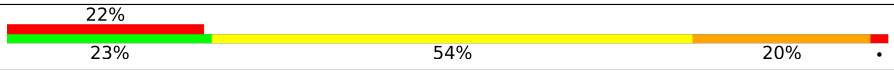
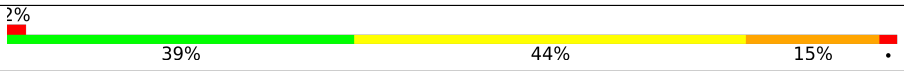
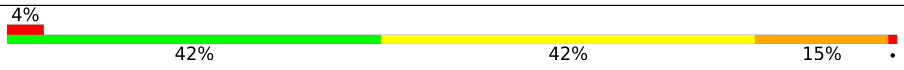
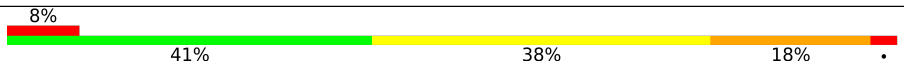
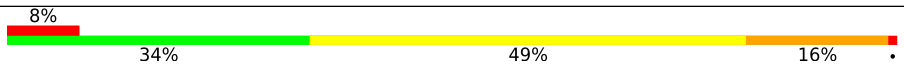
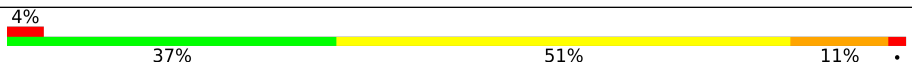
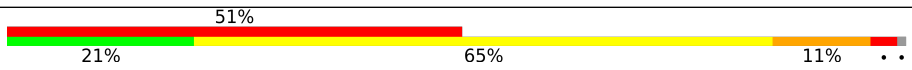
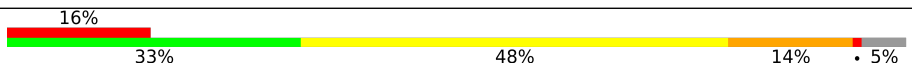
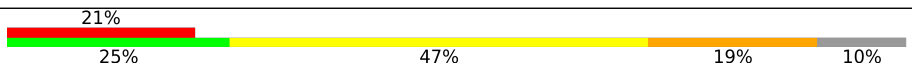
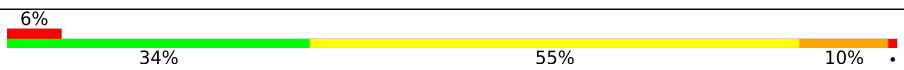
Mol	Chain	Length	Quality of chain
40	XI	127	
41	QJ	98	
41	XJ	98	
42	QK	117	
42	XK	117	
43	QL	123	
43	XL	123	
44	QM	114	
44	XM	114	
45	QN	101	
45	XN	101	
46	QO	88	
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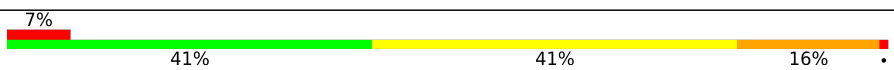
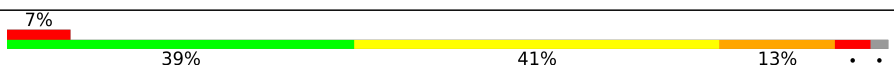
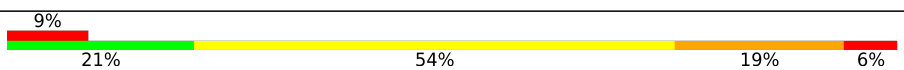
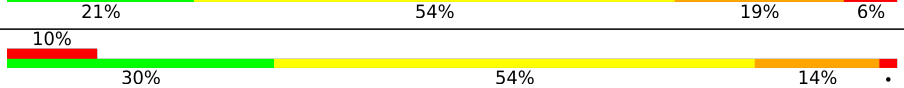
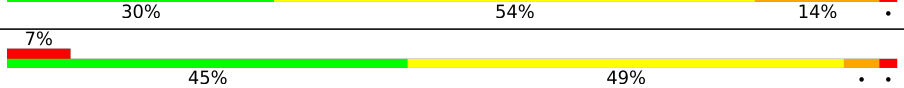
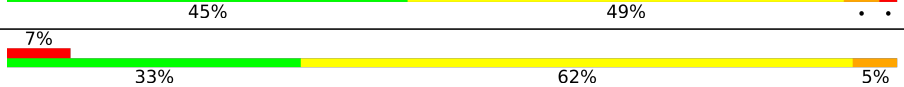
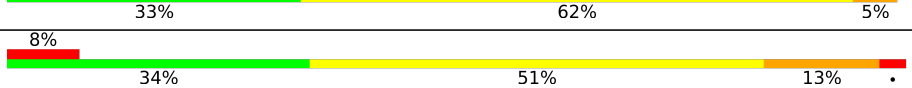
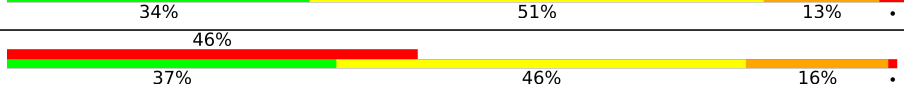
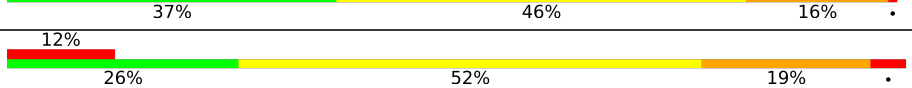
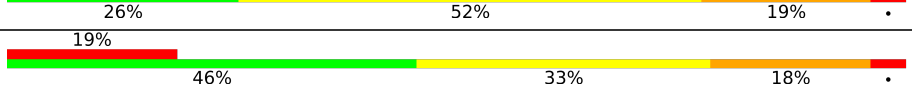
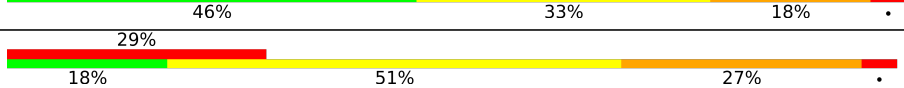
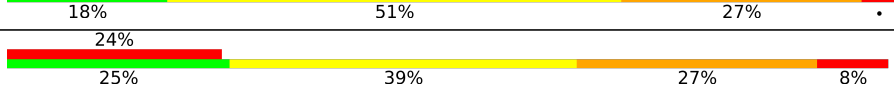
47	QP	82	
47	XP	82	
48	QQ	80	
48	XQ	80	
49	QR	55	
49	XR	55	
50	QS	79	
50	XS	79	
51	QT	85	
51	XT	85	
52	QU	51	
52	XU	51	

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
53	MG	YA	3026	-	-	-	X

2 Entry composition

There are 56 unique types of molecules in this entry. The entry contains 284464 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 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	RA	2854	Total	C	N	O	P	0	0	0
			61274	27334	11279	19807	2854			
1	YA	2841	Total	C	N	O	P	0	0	0
			60995	27210	11229	19715	2841			

- Molecule 2 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	RB	118	Total	C	N	O	P	0	0	0
			2529	1126	464	821	118			
2	YB	117	Total	C	N	O	P	0	0	0
			2507	1116	459	815	117			

- Molecule 3 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	RC	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	7			
3	YC	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	7			

- Molecule 4 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	RD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			
4	YD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			

- Molecule 5 is a protein called 50S ribosomal protein L4.

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

- Molecule 6 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	RF	177	Total	C	N	O	S	0	0	0
			1410	899	249	256	6			
6	YF	178	Total	C	N	O	S	0	0	0
			1420	905	251	258	6			

- Molecule 7 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	RG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			
7	YG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			

- Molecule 8 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	RH	149	Total	C	N	O	S	0	0	0
			1111	699	197	214	1			
8	YH	149	Total	C	N	O	S	0	0	0
			1111	699	197	214	1			

- Molecule 9 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	RI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			
9	YI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			

- Molecule 10 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	RJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	YJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			

- Molecule 11 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	RK	122	Total	C	N	O	S	0	0	0
			938	587	180	165	6			
11	YK	122	Total	C	N	O	S	0	0	0
			938	587	180	165	6			

- Molecule 12 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	RL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			
12	YL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			

- Molecule 13 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	RM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			
13	YM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			

- Molecule 14 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	RN	120	Total	C	N	O	S	0	0	0
			960	593	196	166	5			
14	YN	120	Total	C	N	O	S	0	0	0
			960	593	196	166	5			

- Molecule 15 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
15	RO	116	Total	C	N	O	0	0	0
			892	552	178	162			
15	YO	116	Total	C	N	O	0	0	0
			892	552	178	162			

- Molecule 16 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	RP	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			
16	YP	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			

- Molecule 17 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
17	RQ	117	Total	C	N	O	0	0	0
			947	604	192	151			
17	YQ	117	Total	C	N	O	0	0	0
			947	604	192	151			

- Molecule 18 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	RR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			
18	YR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			

- Molecule 19 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	RS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			
19	YS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			

- Molecule 20 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	RT	93	Total	C	N	O	S	0	0	0
			738	466	139	131	2			
20	YT	93	Total	C	N	O	S	0	0	0
			738	466	139	131	2			

- Molecule 21 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	RU	102	Total 779	C 492	N 146	O 141	0	0	0
21	YU	102	Total 779	C 492	N 146	O 141	0	0	0

- Molecule 22 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	RV	94	Total 753	C 479	N 137	O 134	S 3	0	0	0
22	YV	94	Total 753	C 479	N 137	O 134	S 3	0	0	0

- Molecule 23 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	RW	79	Total 596	C 367	N 120	O 108	S 1	0	0	0
23	YW	79	Total 596	C 367	N 120	O 108	S 1	0	0	0

- Molecule 24 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	RX	77	Total 625	C 388	N 129	O 106	S 2	0	0	0
24	YX	77	Total 625	C 388	N 129	O 106	S 2	0	0	0

- Molecule 25 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	RY	63	Total 509	C 313	N 99	O 95	S 2	0	0	0
25	YY	63	Total 509	C 313	N 99	O 95	S 2	0	0	0

- Molecule 26 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	RZ	58	Total 449	C 281	N 87	O 79	S 2	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	YZ	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			

- Molecule 27 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	R0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			
27	Y0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			

- Molecule 28 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
28	R1	50	Total	C	N	O	0	0	0
			409	263	75	71			
28	Y1	50	Total	C	N	O	0	0	0
			409	263	75	71			

- Molecule 29 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	R2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			
29	Y2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			

- Molecule 30 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	R3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			
30	Y3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			

- Molecule 31 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	R4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			
31	Y4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			

- Molecule 32 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	QA	1533	Total	C	N	O	P	0	0	0
			32895	14671	6036	10655	1533			
32	XA	1530	Total	C	N	O	P	0	0	0
			32831	14642	6024	10635	1530			

- Molecule 33 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	QB	218	Total	C	N	O	S	0	0	0
			1704	1081	305	311	7			
33	XB	218	Total	C	N	O	S	0	0	0
			1704	1081	305	311	7			

- Molecule 34 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	QC	206	Total	C	N	O	S	0	0	0
			1624	1028	305	288	3			
34	XC	206	Total	C	N	O	S	0	0	0
			1624	1028	305	288	3			

- Molecule 35 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	QD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			
35	XD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			

- Molecule 36 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	QE	150	Total	C	N	O	S	0	0	0
			1105	687	211	201	6			
36	XE	150	Total	C	N	O	S	0	0	0
			1105	687	211	201	6			

- Molecule 37 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	QF	100	Total	C	N	O	S	0	0	0
			817	515	148	148	6			
37	XF	100	Total	C	N	O	S	0	0	0
			817	515	148	148	6			

- Molecule 38 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	QG	151	Total	C	N	O	S	0	0	0
			1181	735	227	215	4			
38	XG	150	Total	C	N	O	S	0	0	0
			1174	730	226	214	4			

- Molecule 39 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	QH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			
39	XH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			

- Molecule 40 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	QI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			
40	XI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			

- Molecule 41 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	QJ	98	Total	C	N	O	S	0	0	0
			786	493	150	142	1			
41	XJ	98	Total	C	N	O	S	0	0	0
			786	493	150	142	1			

- Molecule 42 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	QK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	XK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

- Molecule 43 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	QL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			
43	XL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			

- Molecule 44 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	QM	114	Total	C	N	O	S	0	0	0
			883	546	178	156	3			
44	XM	113	Total	C	N	O	S	0	0	0
			876	541	177	155	3			

- Molecule 45 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	QN	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			
45	XN	91	Total	C	N	O	S	0	0	0
			735	461	151	120	3			

- Molecule 46 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	QO	88	Total	C	N	O	S	0	0	0
			714	439	144	130	1			
46	XO	88	Total	C	N	O	S	0	0	0
			714	439	144	130	1			

- Molecule 47 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	QP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			
47	XP	80	Total	C	N	O	S	0	0	0
			638	400	126	111	1			

- Molecule 48 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	QQ	80	Total	C	N	O	S	0	0	0
			648	411	121	113	3			
48	XQ	80	Total	C	N	O	S	0	0	0
			648	411	121	113	3			

- Molecule 49 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	QR	55	Total	C	N	O	0	0	0
			455	288	86	81			
49	XR	55	Total	C	N	O	0	0	0
			455	288	86	81			

- Molecule 50 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	QS	79	Total	C	N	O	S	0	0	0
			637	408	120	107	2			
50	XS	79	Total	C	N	O	S	0	0	0
			637	408	120	107	2			

- Molecule 51 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	QT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			
51	XT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			

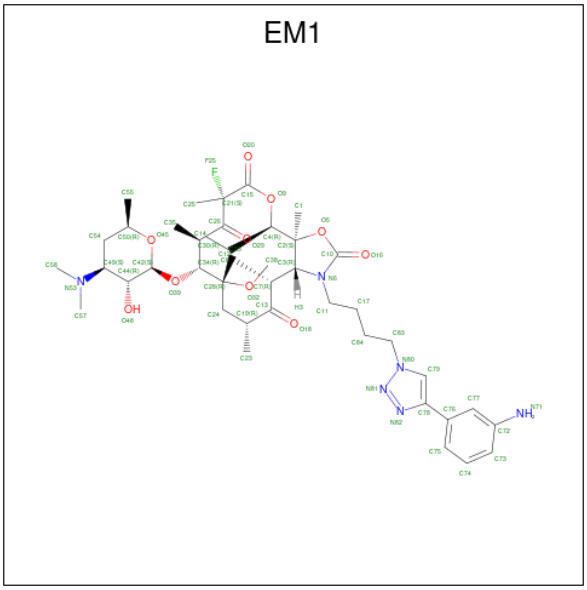
- Molecule 52 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	QU	51	Total	C	N	O	S	0	0	0
			425	265	86	73	1			
52	XU	51	Total	C	N	O	S	0	0	0
			425	265	86	73	1			

- Molecule 53 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
53	RA	135	Total Mg 135 135	0	0
53	RB	4	Total Mg 4 4	0	0
53	QA	43	Total Mg 43 43	0	0
53	XA	42	Total Mg 42 42	0	0
53	YA	134	Total Mg 134 134	0	0
53	YB	1	Total Mg 1 1	0	0
53	YE	1	Total Mg 1 1	0	0
53	YJ	1	Total Mg 1 1	0	0

- Molecule 54 is (3aS,4R,7S,9R,10R,11R,13R,15R,15aR)-1-{4-[4-(3-aminophenyl)-1H-1,2,3-triazol-1-yl]butyl}-4-ethyl-7-fluoro-11-methoxy-3a ,7,9,11,13,15-hexamethyl-2,6,8,14-tetraoxotetradecahydro-2H-oxacyclotetradecino[4,3-d][1,3]oxazol-10-yl 3,4,6-trideoxy-3-(dimethylamino)-beta-D-xylo-hexopyranoside (CCD ID: EM1) (formula: $C_{43}H_{65}FN_6O_{10}$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
54	RA	1	Total C F N O 60 43 1 6 10	0	0

- Molecule 55 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
55	R4	1	Total Zn 1 1	0	0
55	Y4	1	Total Zn 1 1	0	0

- Molecule 56 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	RA	606	Total O 606 606	0	0
56	RB	20	Total O 20 20	0	0
56	RC	9	Total O 9 9	0	0
56	RD	1	Total O 1 1	0	0
56	RL	4	Total O 4 4	0	0
56	RN	3	Total O 3 3	0	0
56	RT	2	Total O 2 2	0	0
56	R2	1	Total O 1 1	0	0
56	R3	2	Total O 2 2	0	0
56	R4	2	Total O 2 2	0	0
56	QA	200	Total O 200 200	0	0
56	QL	1	Total O 1 1	0	0
56	QN	5	Total O 5 5	0	0
56	QT	1	Total O 1 1	0	0
56	QU	1	Total O 1 1	0	0
56	XA	194	Total O 194 194	0	0
56	XE	5	Total O 5 5	0	0
56	XI	1	Total O 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
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56	XN	3	Total O 3 3	0	0
56	XT	2	Total O 2 2	0	0
56	XU	1	Total O 1 1	0	0
56	YA	605	Total O 605 605	0	0
56	YB	4	Total O 4 4	0	0
56	YC	8	Total O 8 8	0	0
56	YD	3	Total O 3 3	0	0
56	YE	3	Total O 3 3	0	0
56	YJ	3	Total O 3 3	0	0
56	YL	4	Total O 4 4	0	0
56	YN	1	Total O 1 1	0	0
56	YT	2	Total O 2 2	0	0
56	YU	2	Total O 2 2	0	0
56	YV	1	Total O 1 1	0	0
56	Y2	1	Total O 1 1	0	0
56	Y3	1	Total O 1 1	0	0
56	Y4	5	Total O 5 5	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: 23S rRNA

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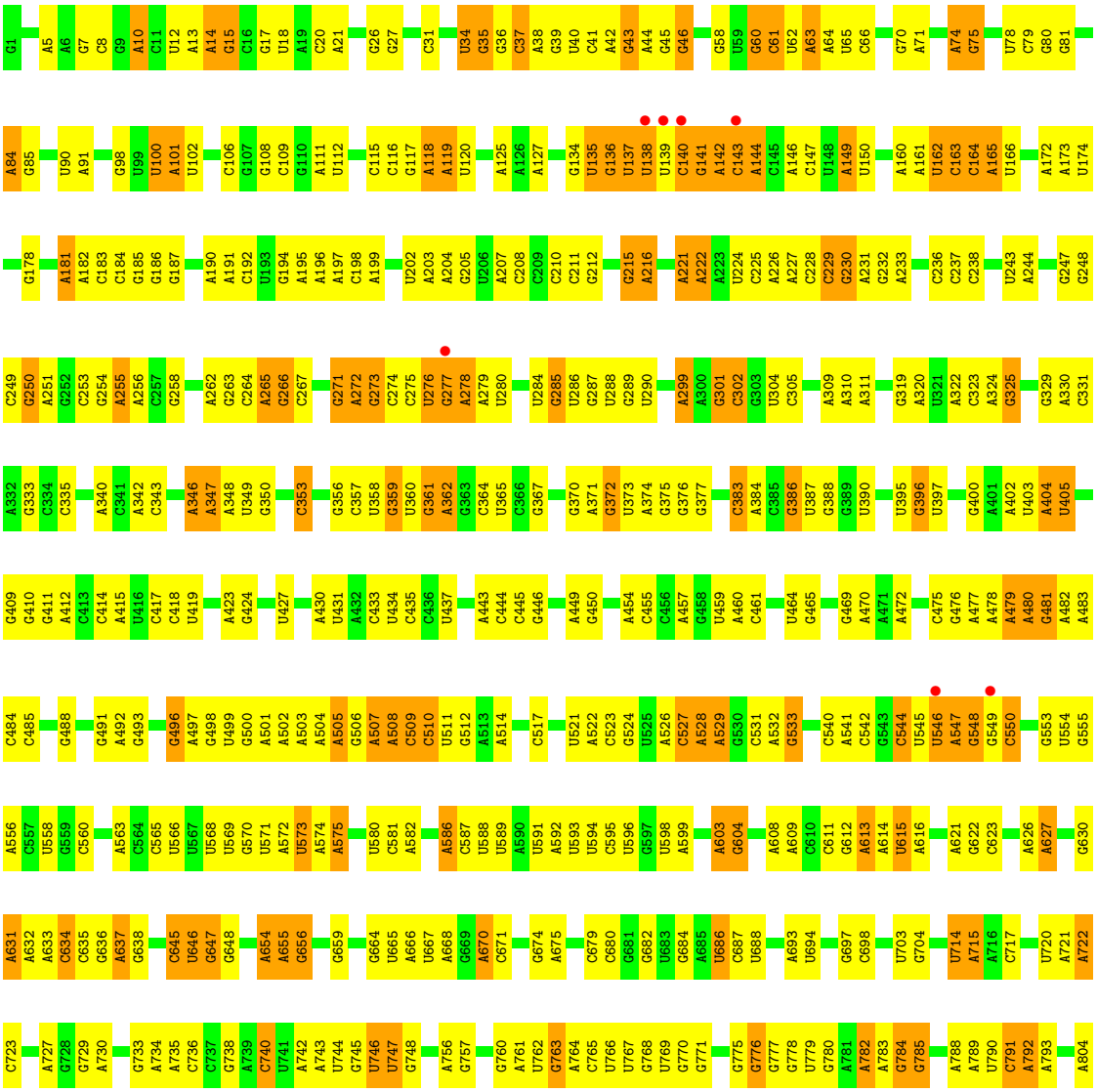

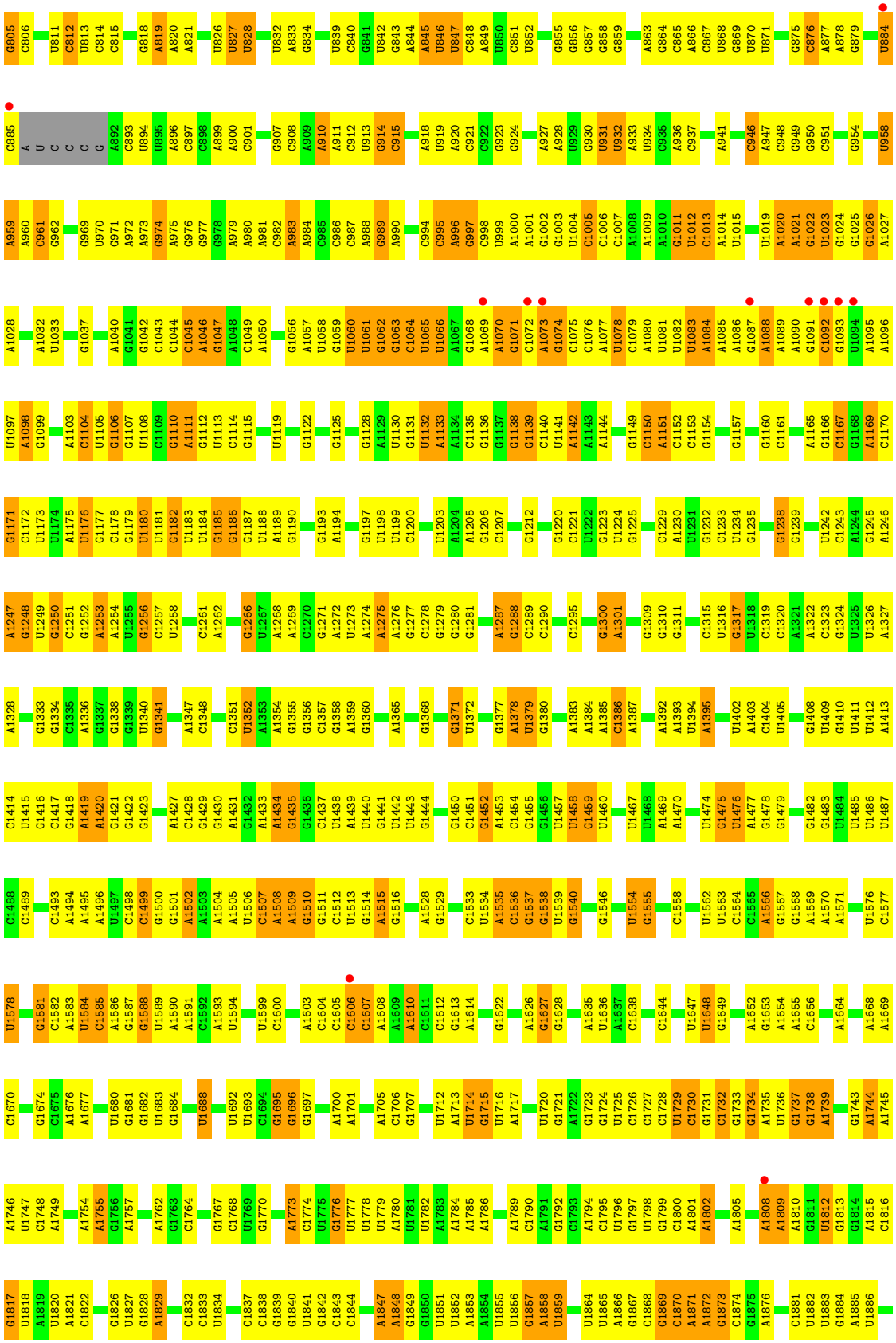

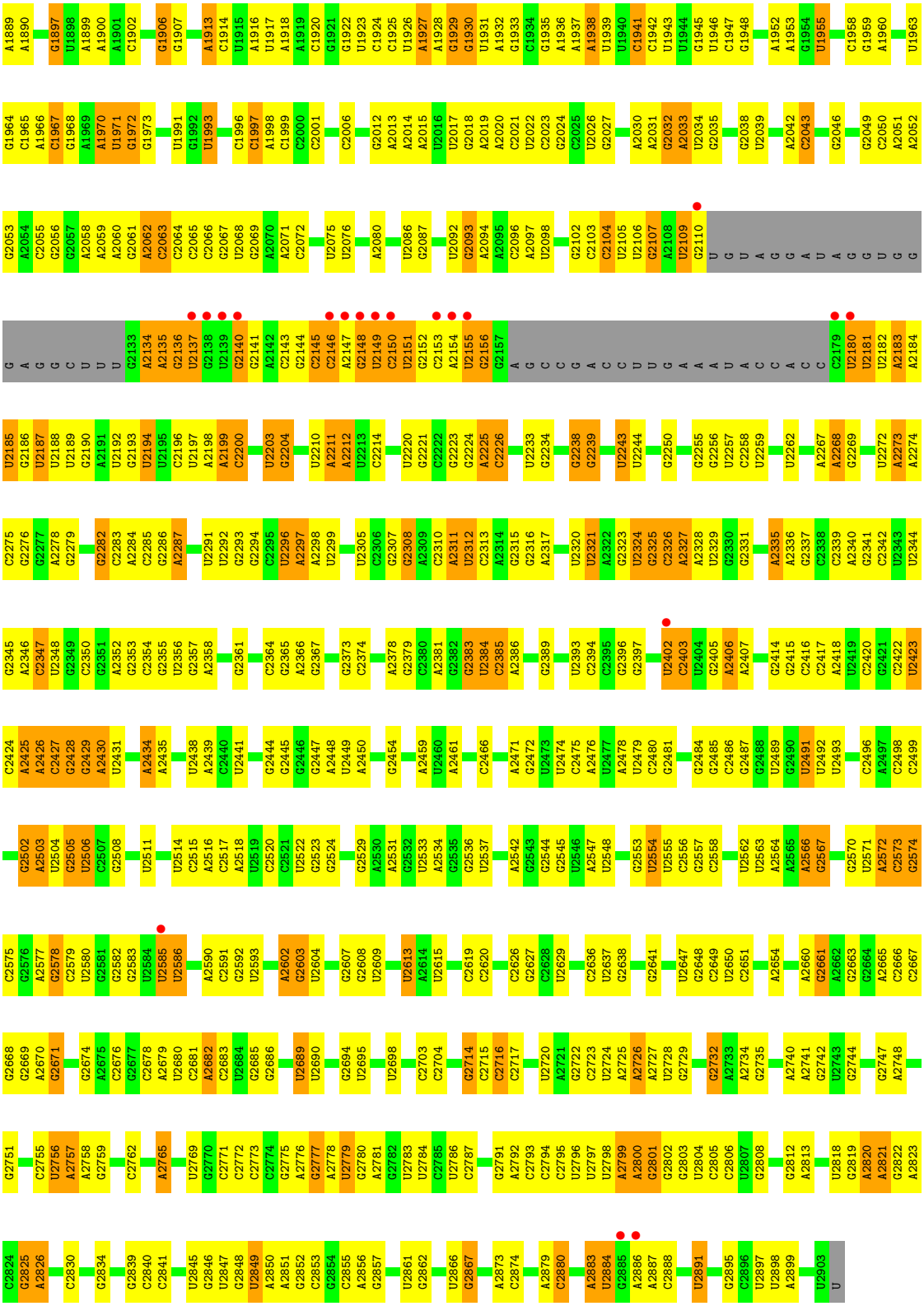

• Molecule 1: 23S rRNA

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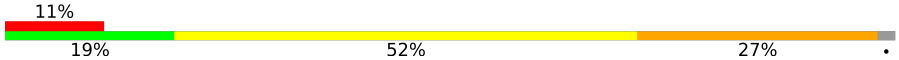

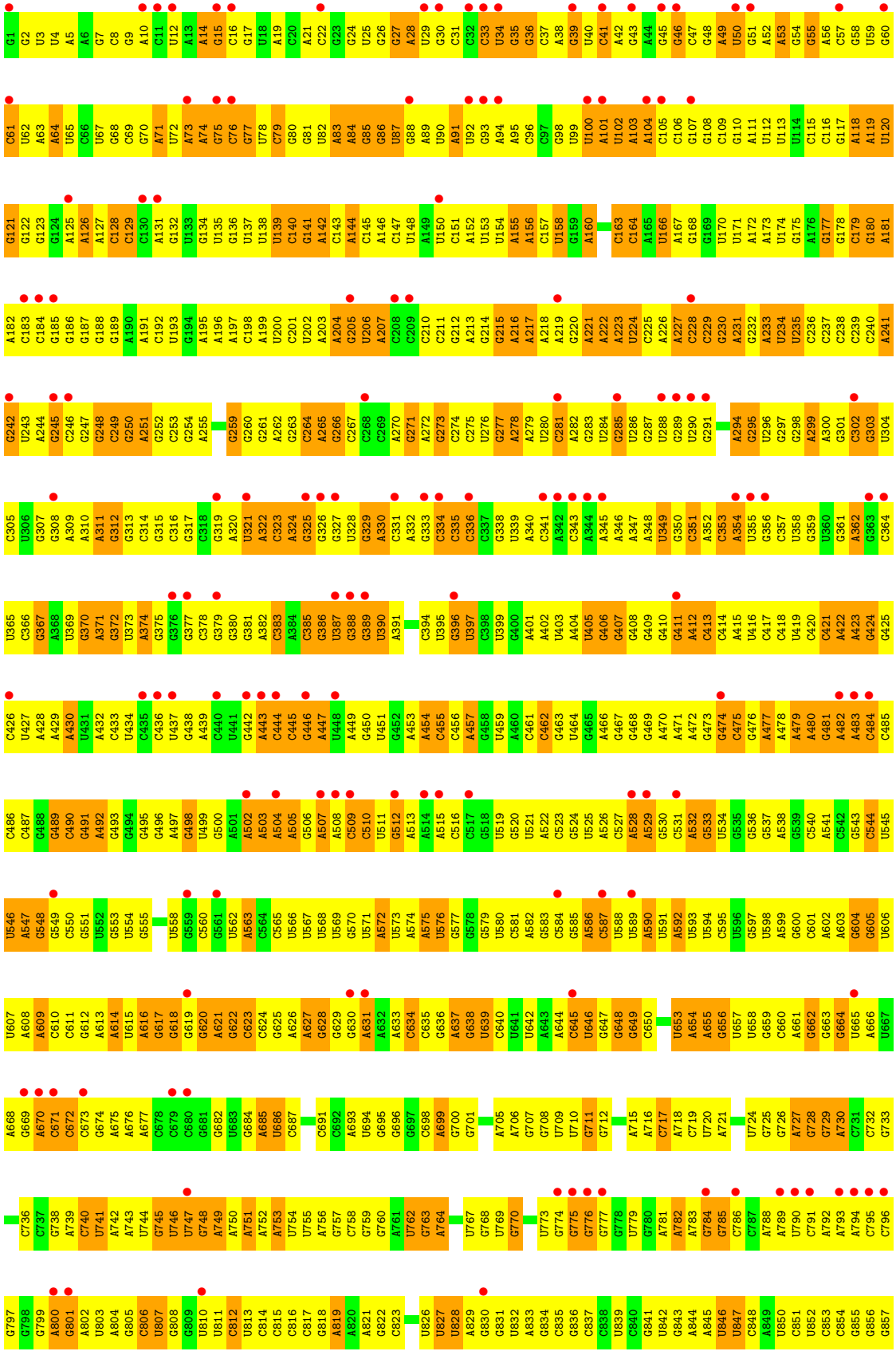
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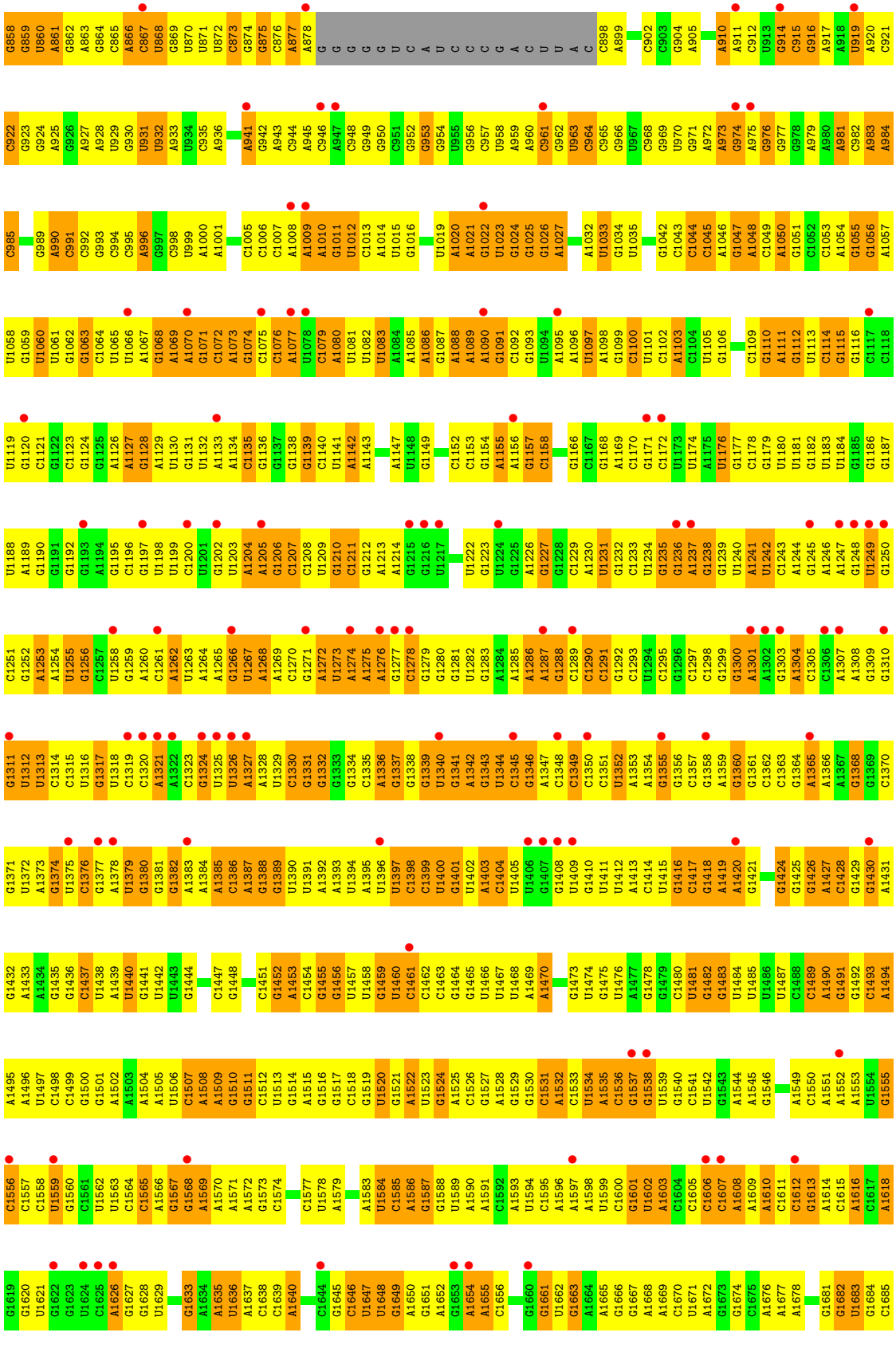
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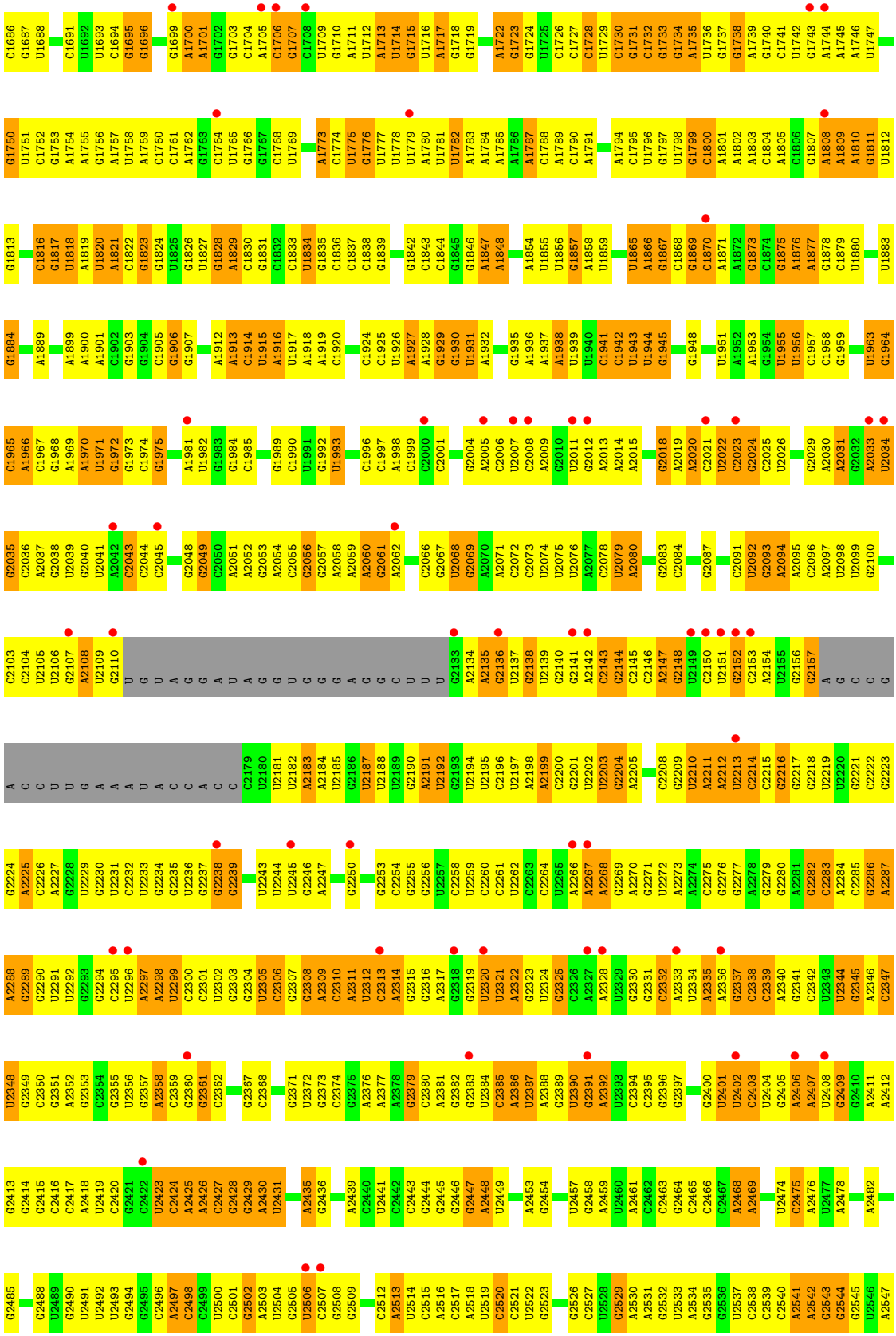
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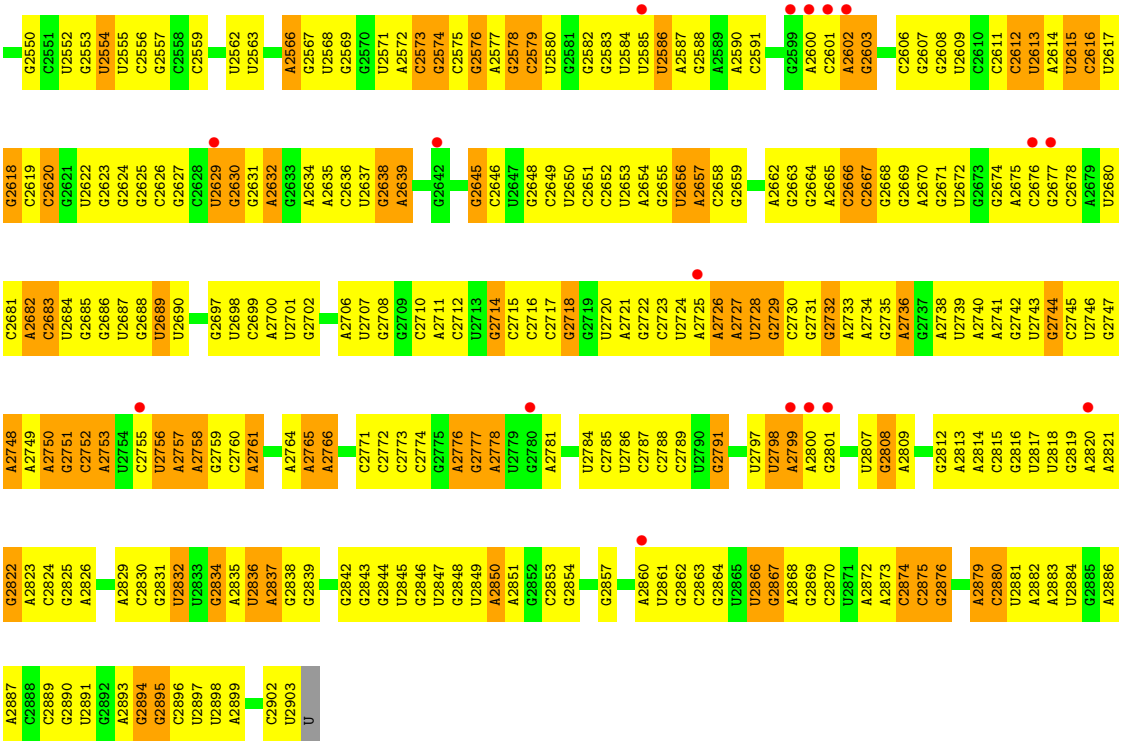

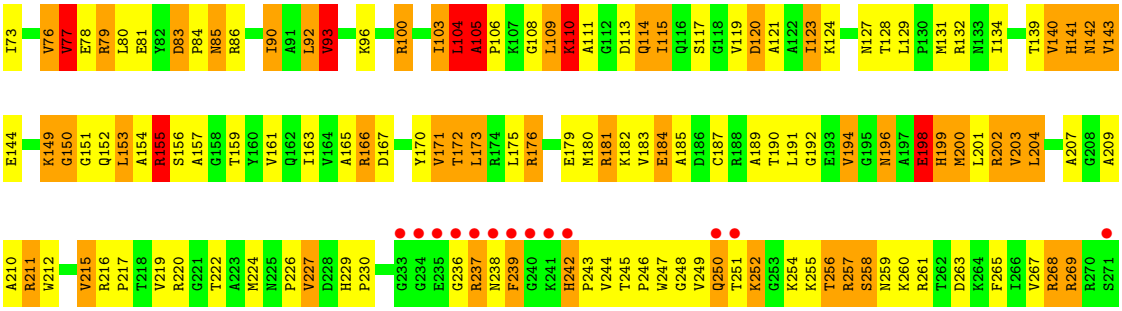

• Molecule 3: 50S ribosomal protein L2

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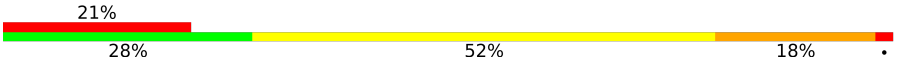
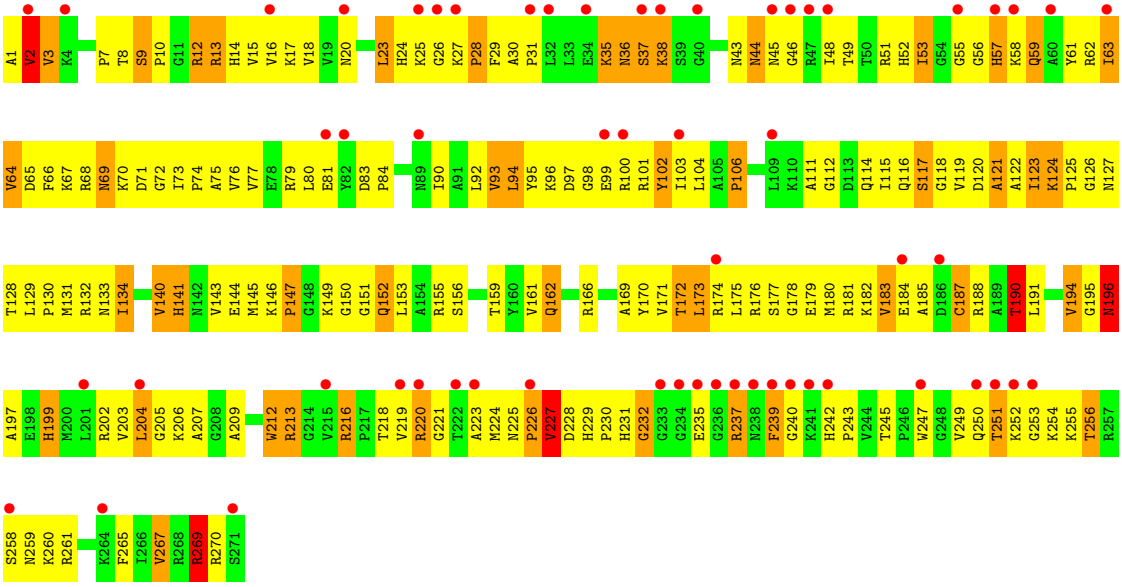
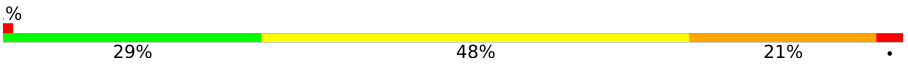
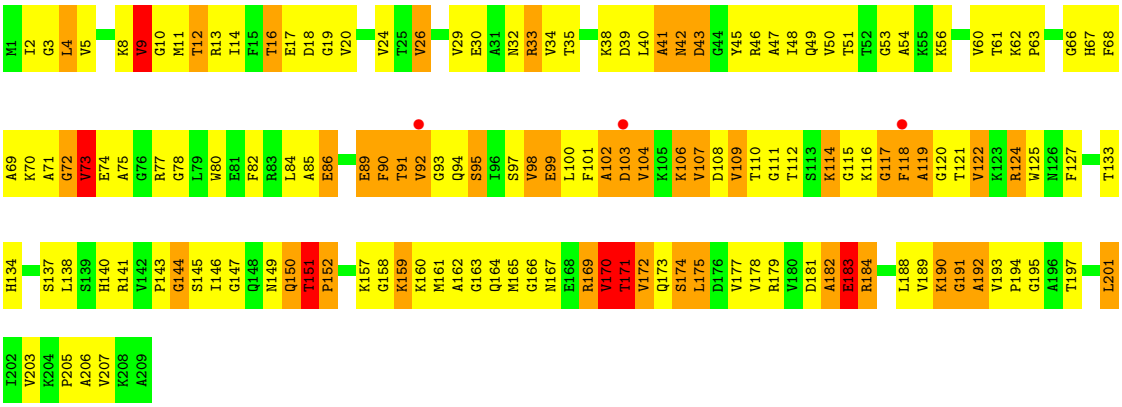




• Molecule 4: 50S ribosomal protein L3

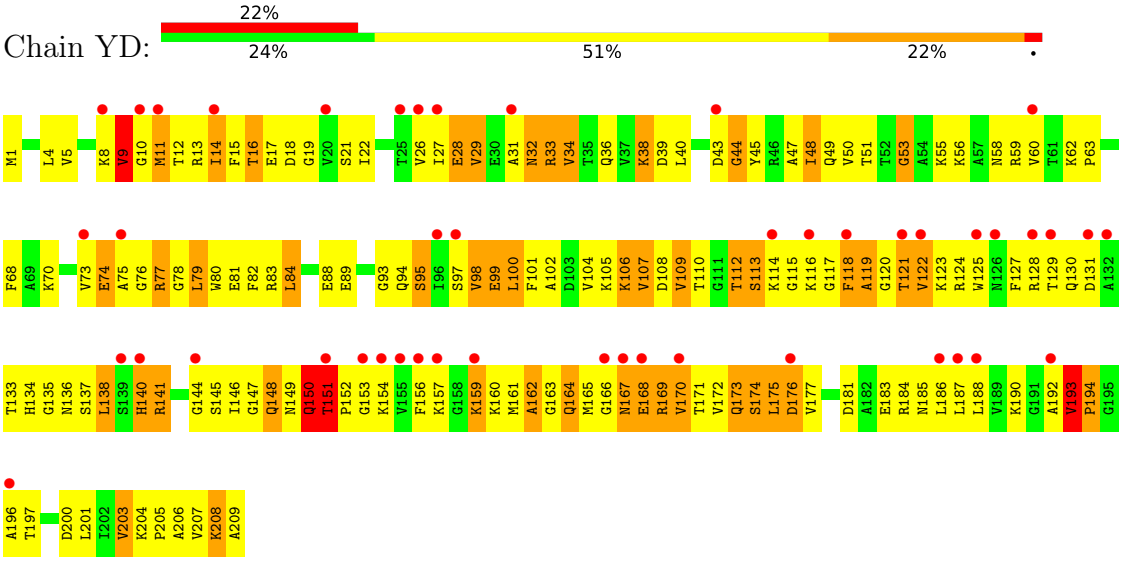
Chain RD:





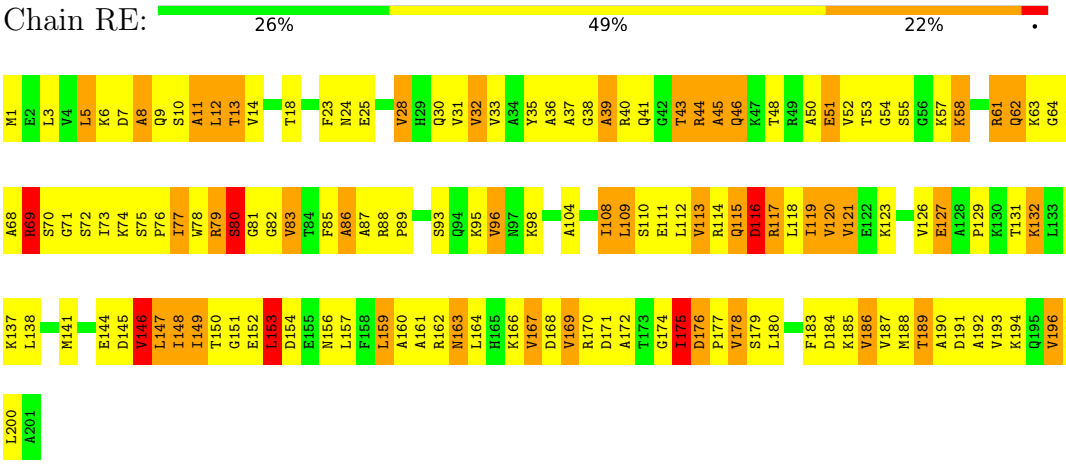
• Molecule 4: 50S ribosomal protein L3

Chain YD:



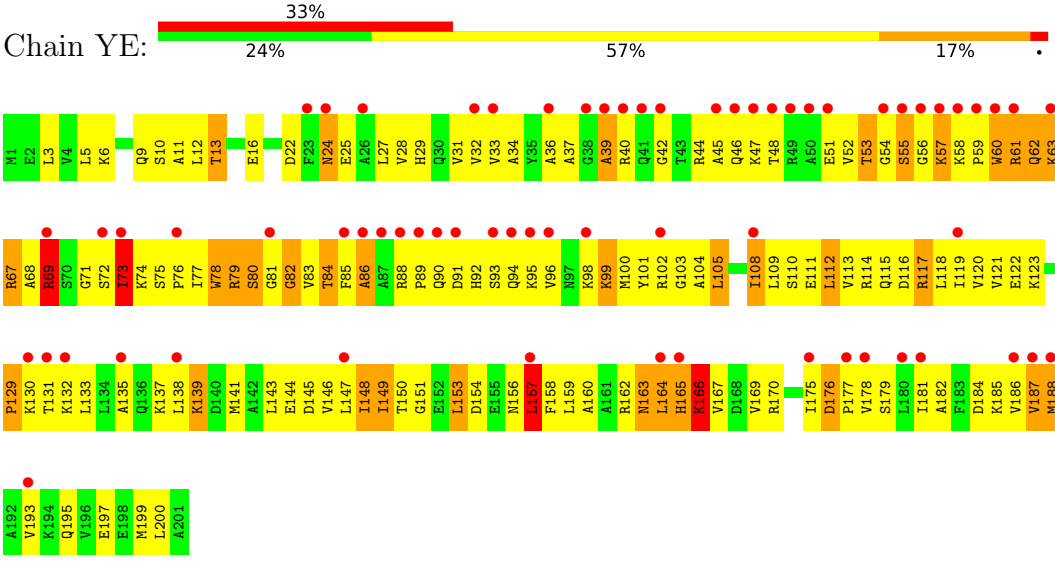
• Molecule 5: 50S ribosomal protein L4

Chain RE:



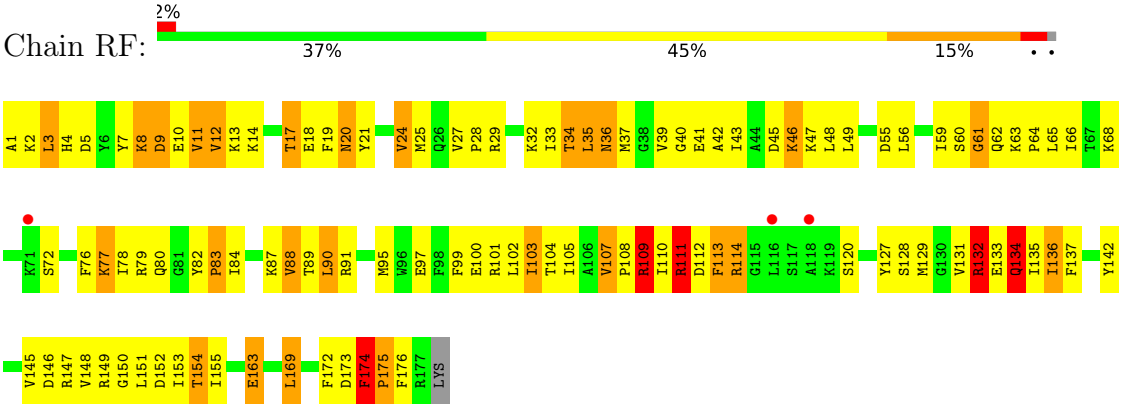
• Molecule 5: 50S ribosomal protein L4

Chain YE:



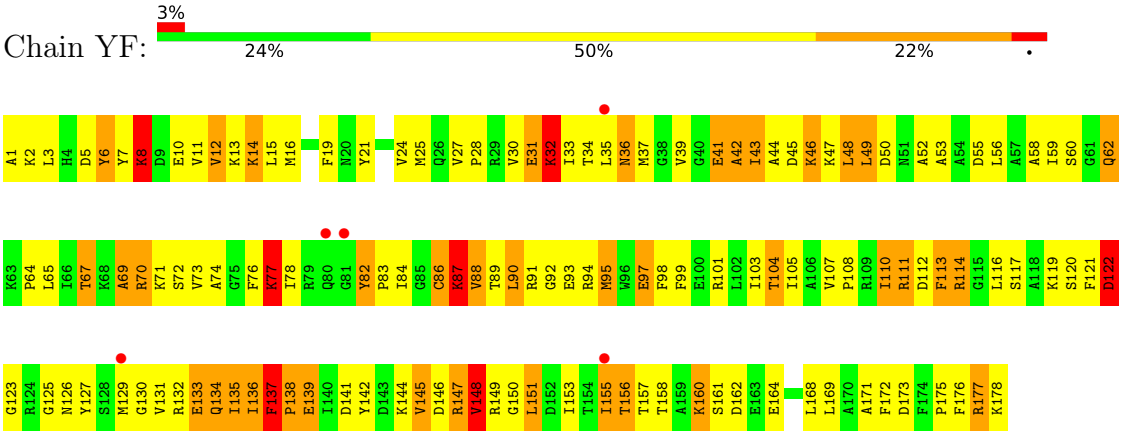
• Molecule 6: 50S ribosomal protein L5

Chain RF:



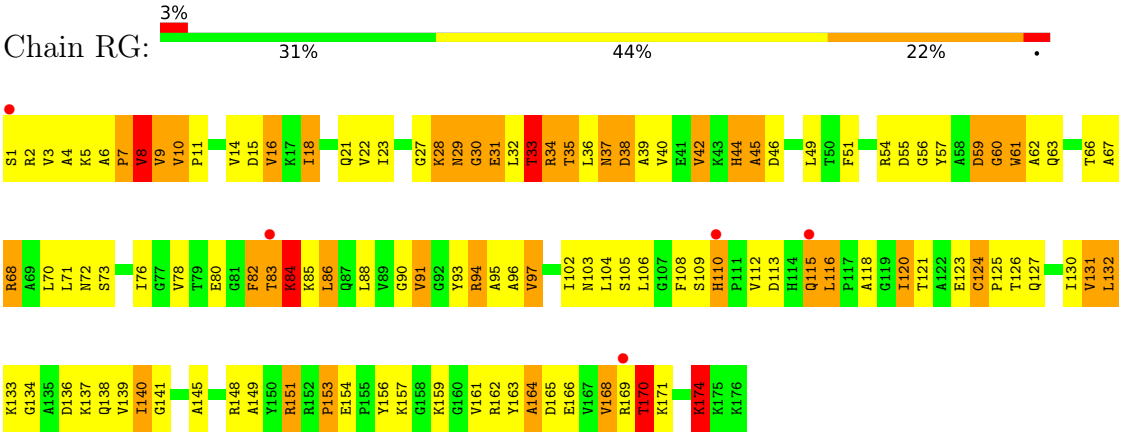
• Molecule 6: 50S ribosomal protein L5

Chain YF:



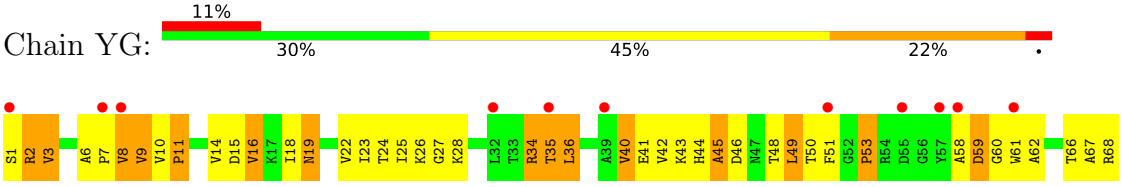
• Molecule 7: 50S ribosomal protein L6

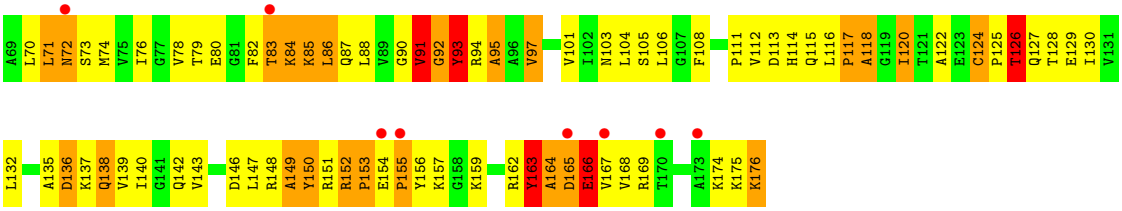
Chain RG:



• Molecule 7: 50S ribosomal protein L6

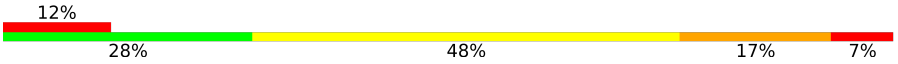
Chain YG:

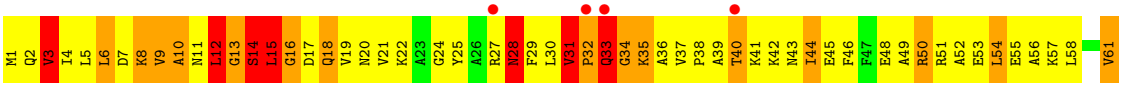


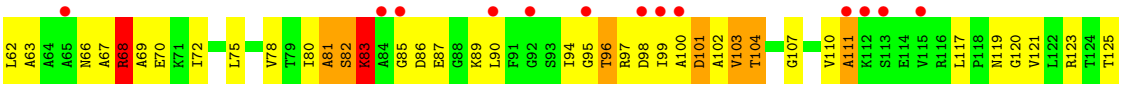


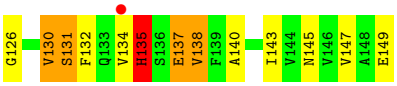
• Molecule 8: 50S ribosomal protein L9

Chain RH:



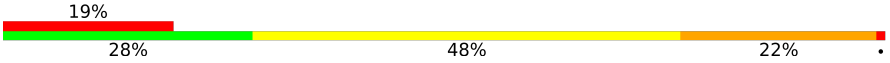


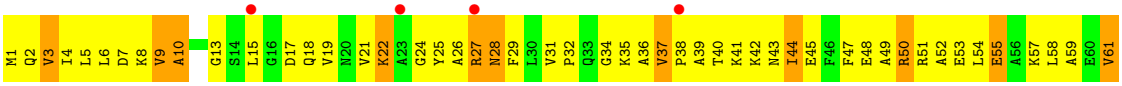


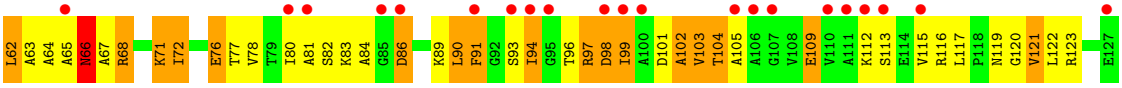


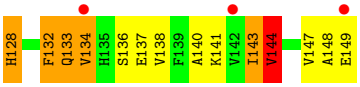
• Molecule 8: 50S ribosomal protein L9

Chain YH:



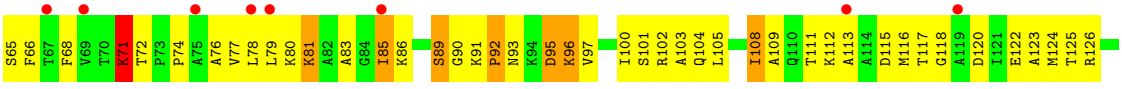


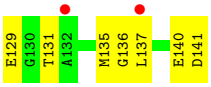




• Molecule 9: 50S ribosomal protein L11

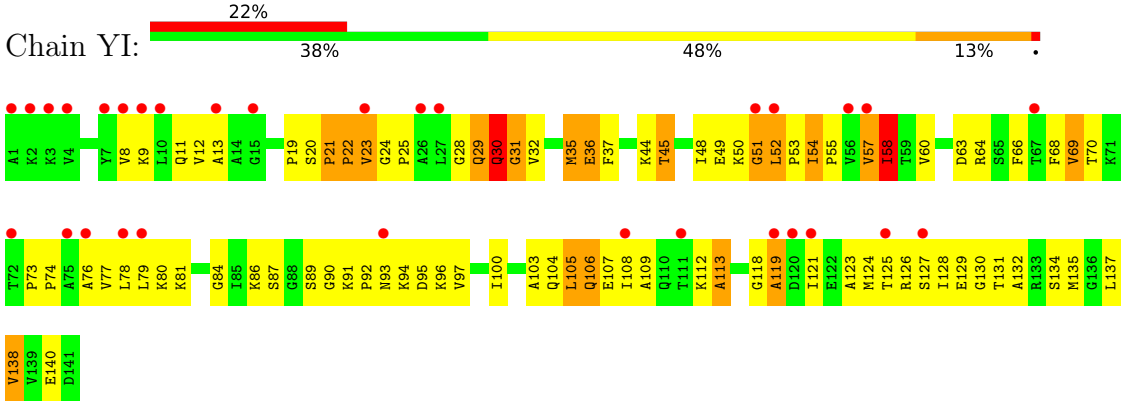
Chain RI:





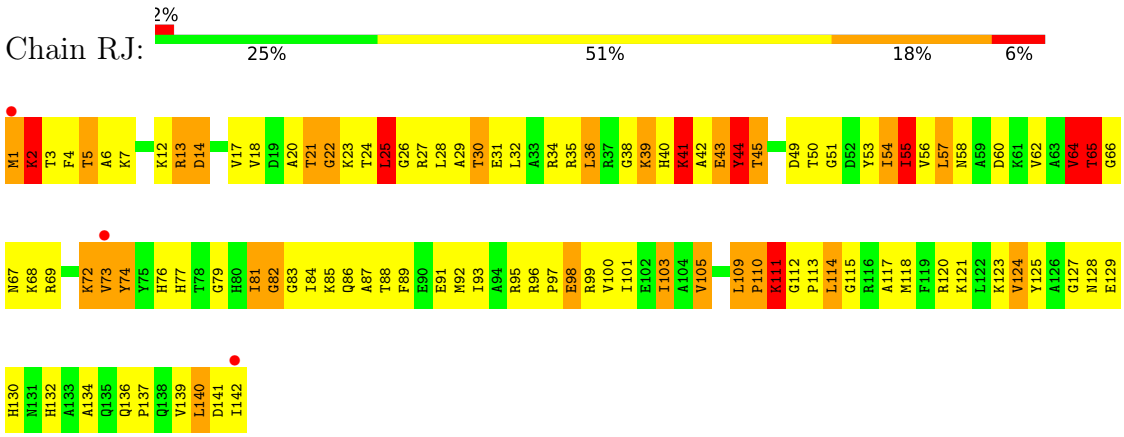
• Molecule 9: 50S ribosomal protein L11

Chain YI:



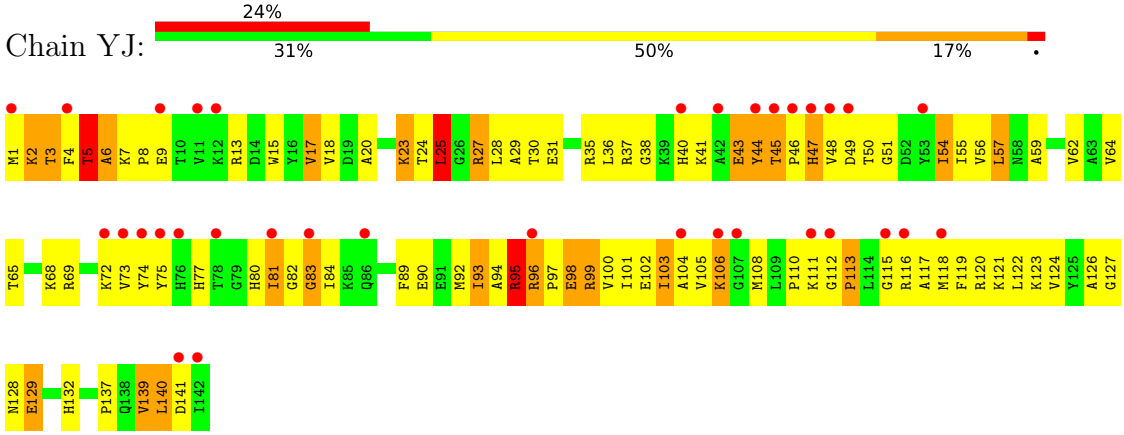
• Molecule 10: 50S ribosomal protein L13

Chain RJ:



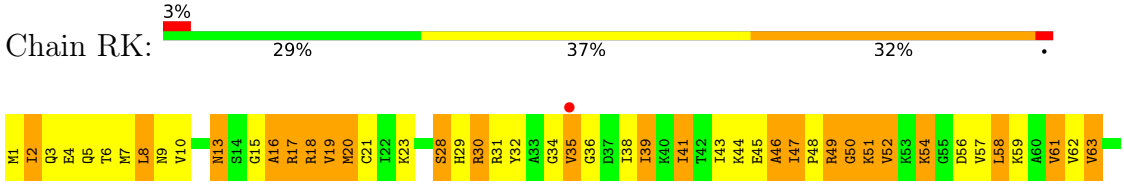
• Molecule 10: 50S ribosomal protein L13

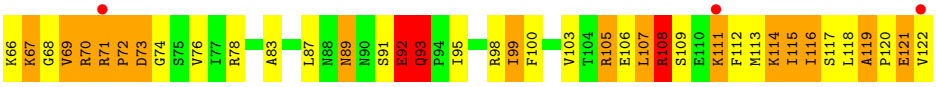
Chain YJ:



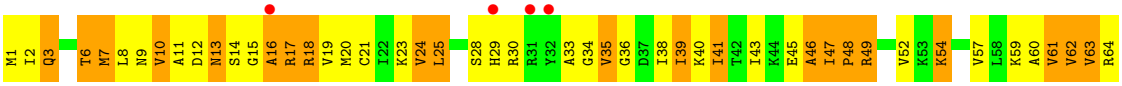
• Molecule 11: 50S ribosomal protein L14

Chain RK:

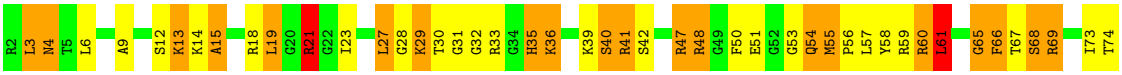




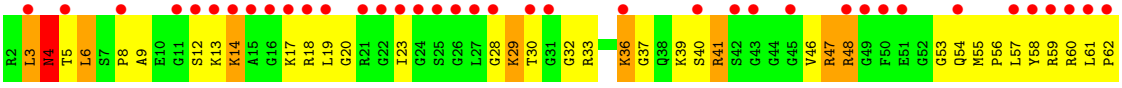
• Molecule 11: 50S ribosomal protein L14

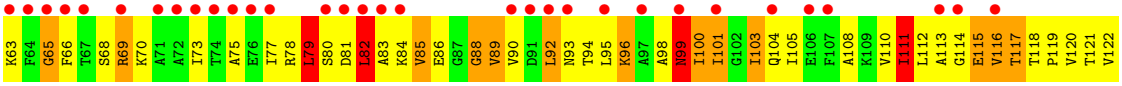


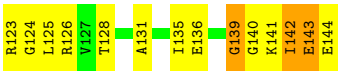
• Molecule 12: 50S ribosomal protein L15



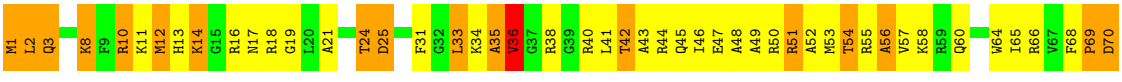
• Molecule 12: 50S ribosomal protein L15

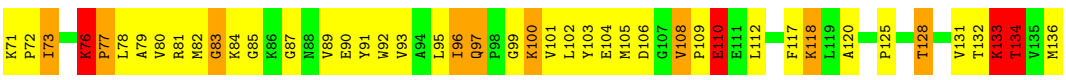




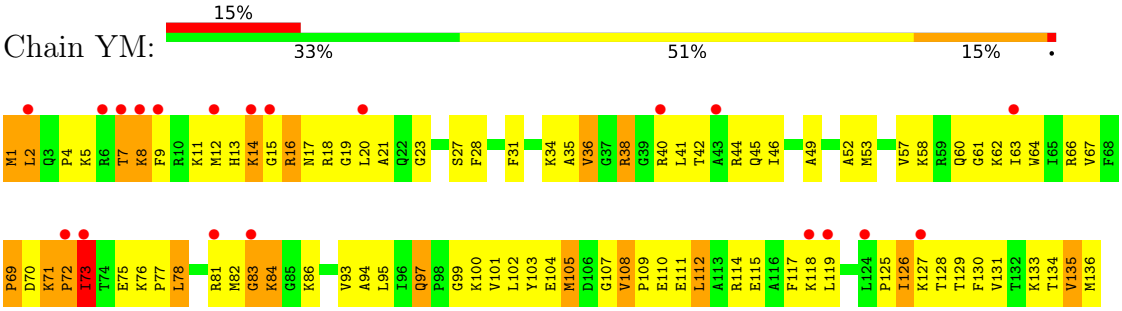


• Molecule 13: 50S ribosomal protein L16

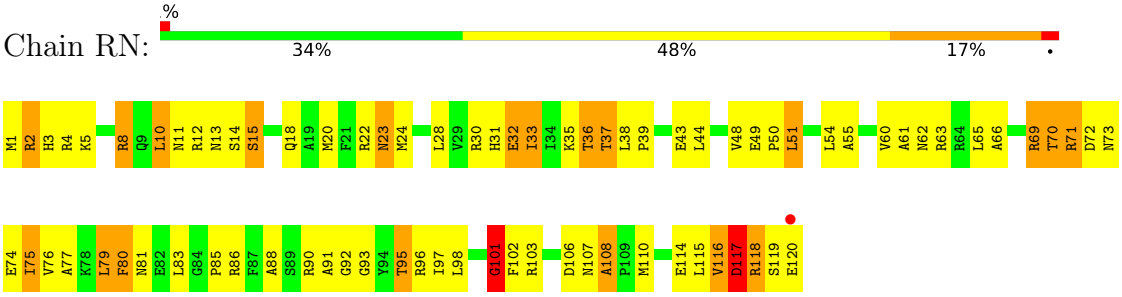




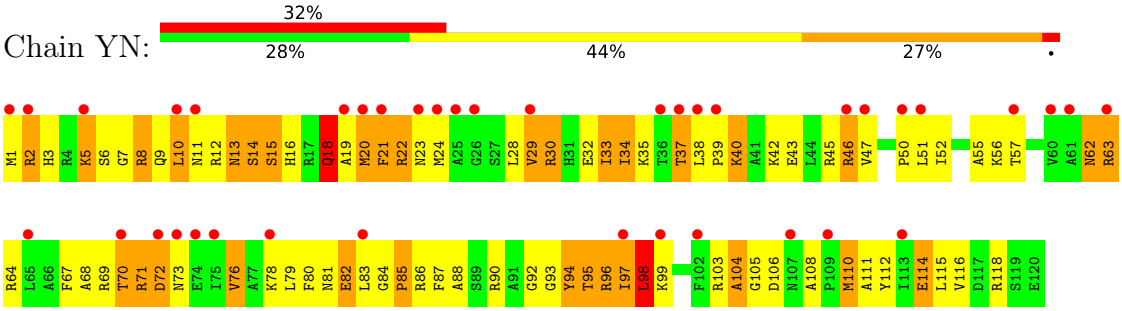
• Molecule 13: 50S ribosomal protein L16



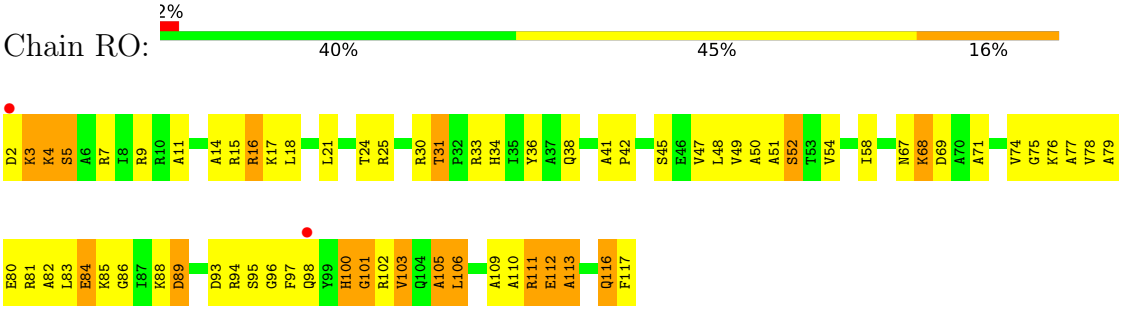
• Molecule 14: 50S ribosomal protein L17



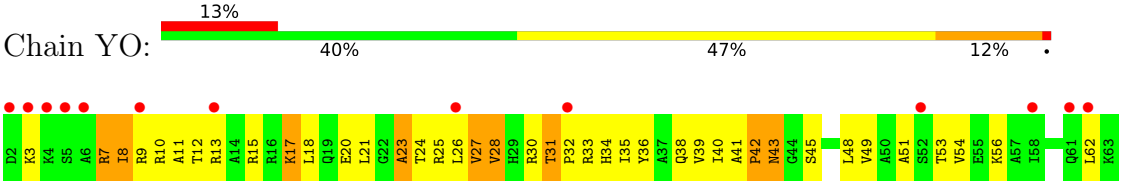
• Molecule 14: 50S ribosomal protein L17

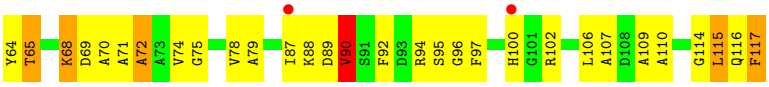


• Molecule 15: 50S ribosomal protein L18

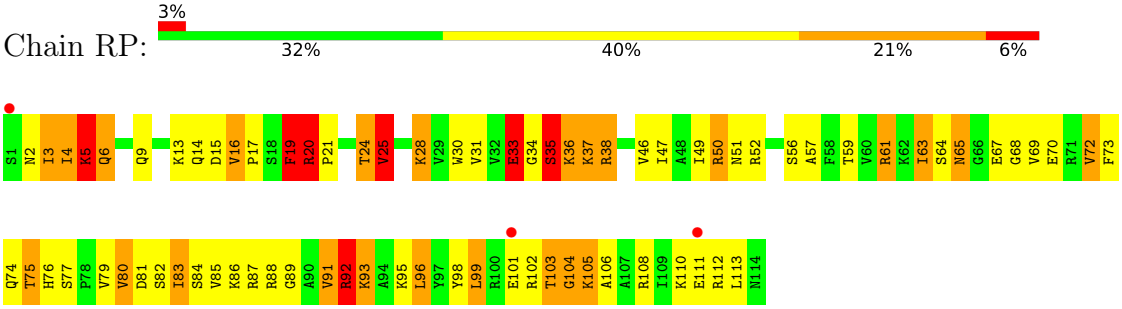


• Molecule 15: 50S ribosomal protein L18

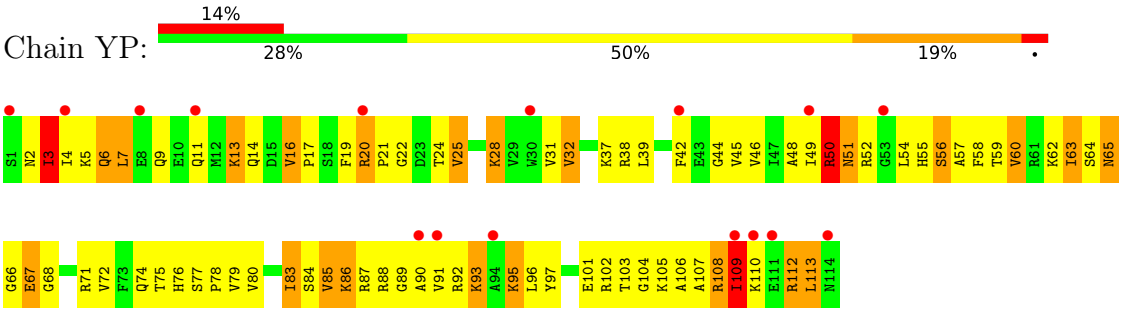




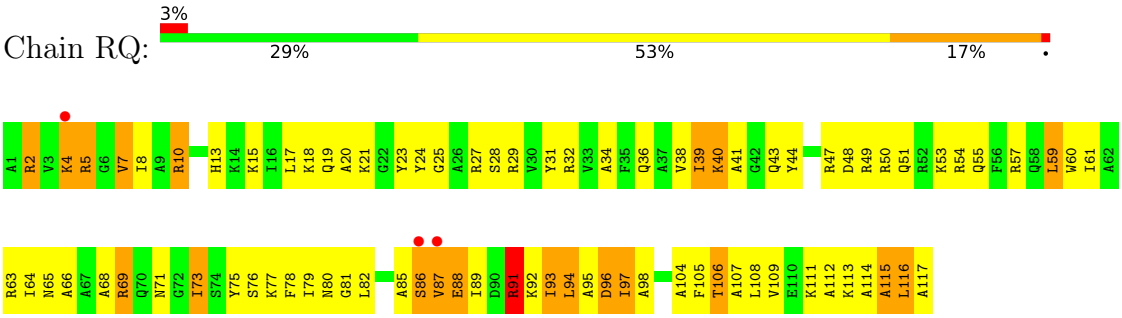
• Molecule 16: 50S ribosomal protein L19



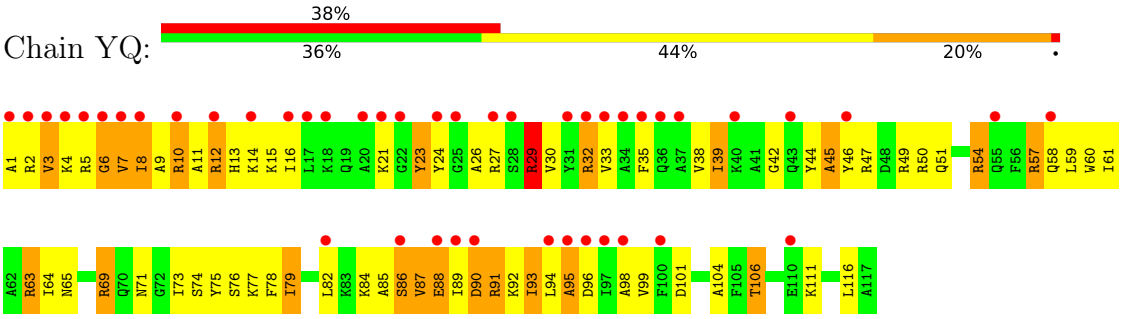
• Molecule 16: 50S ribosomal protein L19



• Molecule 17: 50S ribosomal protein L20

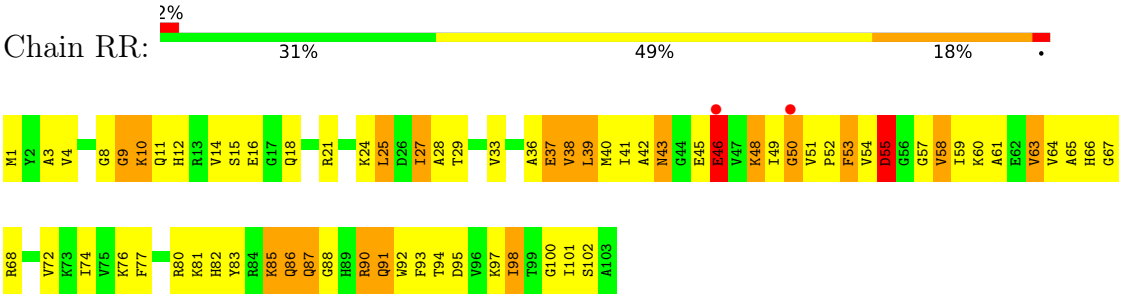


• Molecule 17: 50S ribosomal protein L20



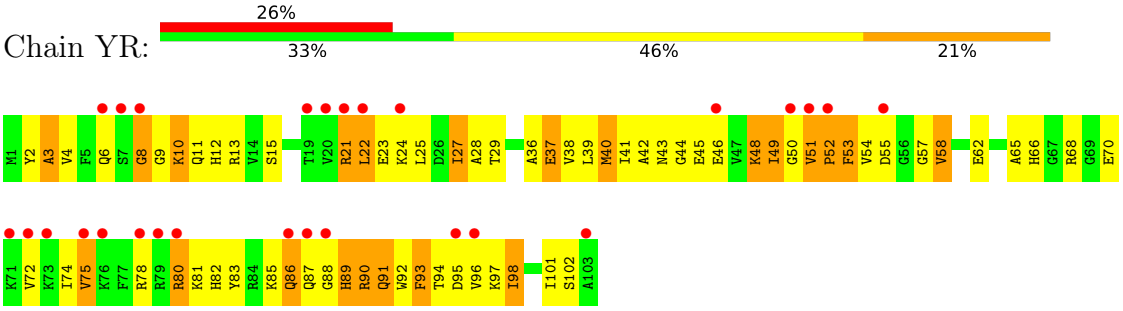
• Molecule 18: 50S ribosomal protein L21

Chain RR:



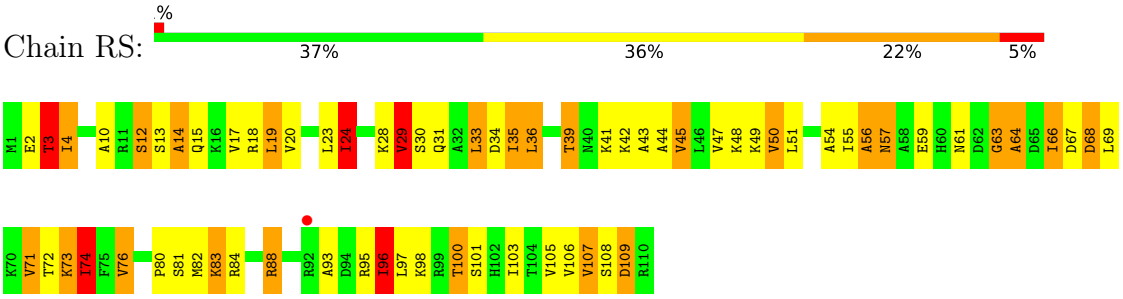
- Molecule 18: 50S ribosomal protein L21

Chain YR:



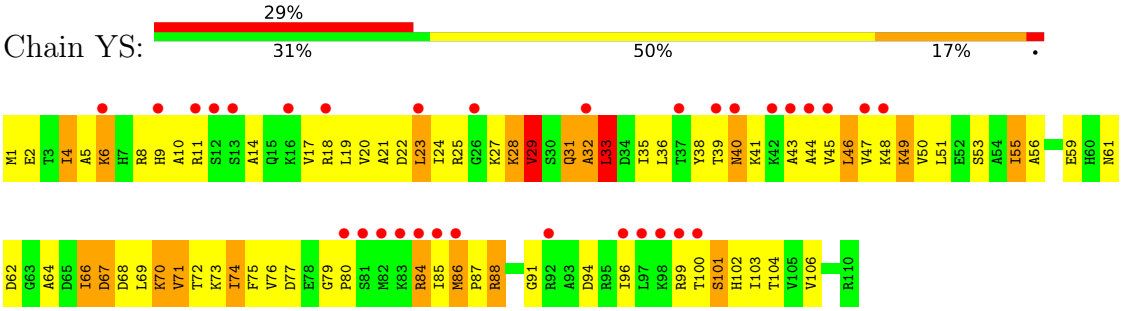
- Molecule 19: 50S ribosomal protein L22

Chain RS:



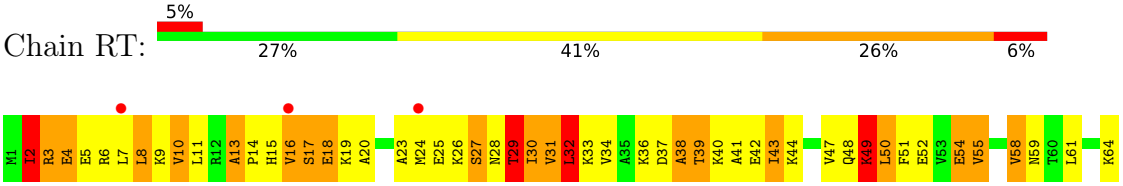
- Molecule 19: 50S ribosomal protein L22

Chain YS:

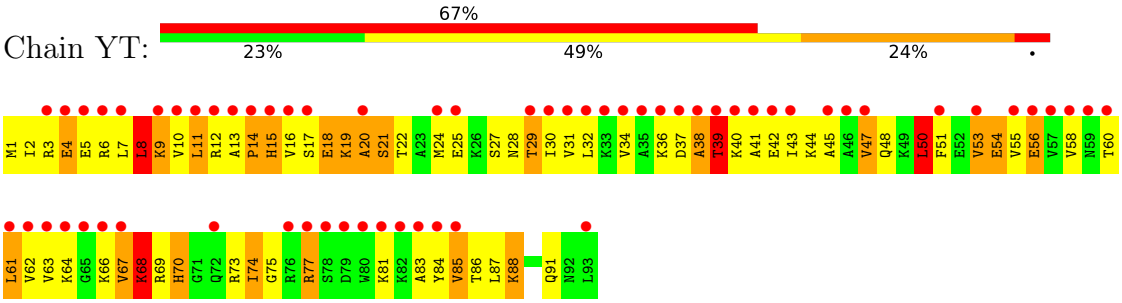


- Molecule 20: 50S ribosomal protein L23

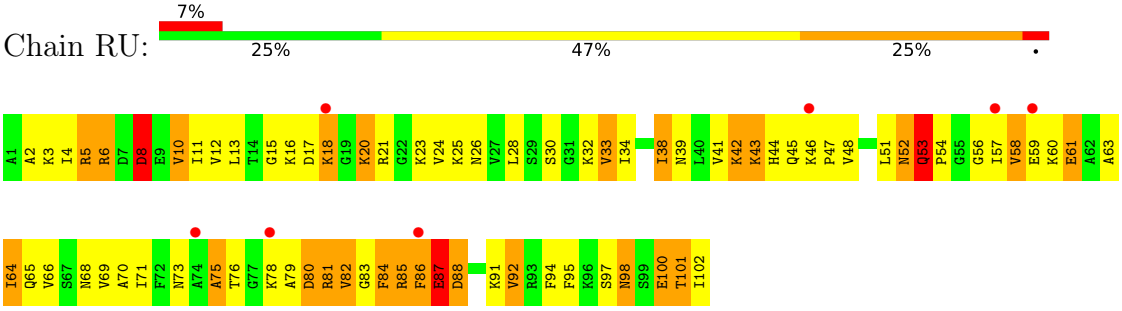
Chain RT:



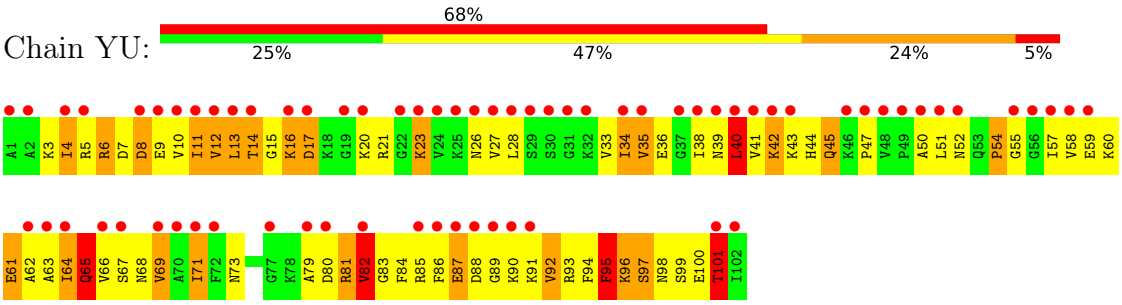
• Molecule 20: 50S ribosomal protein L23



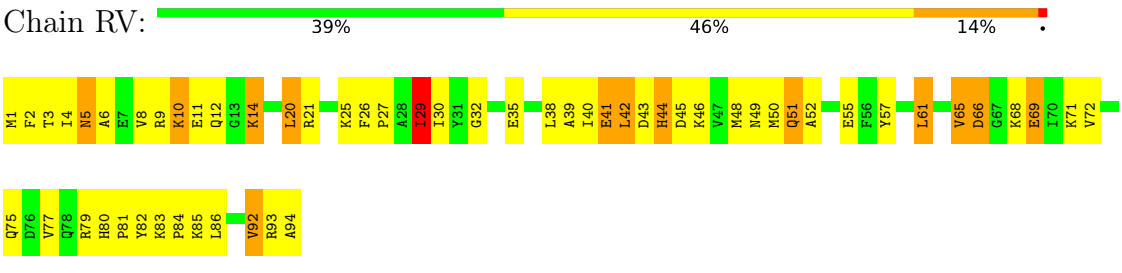
• Molecule 21: 50S ribosomal protein L24



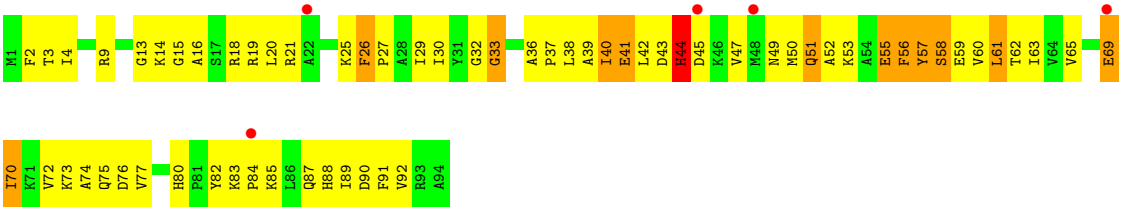
• Molecule 21: 50S ribosomal protein L24



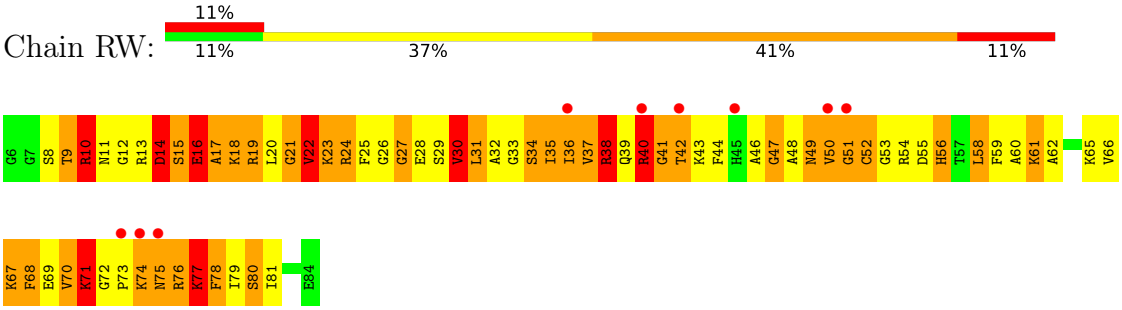
• Molecule 22: 50S ribosomal protein L25



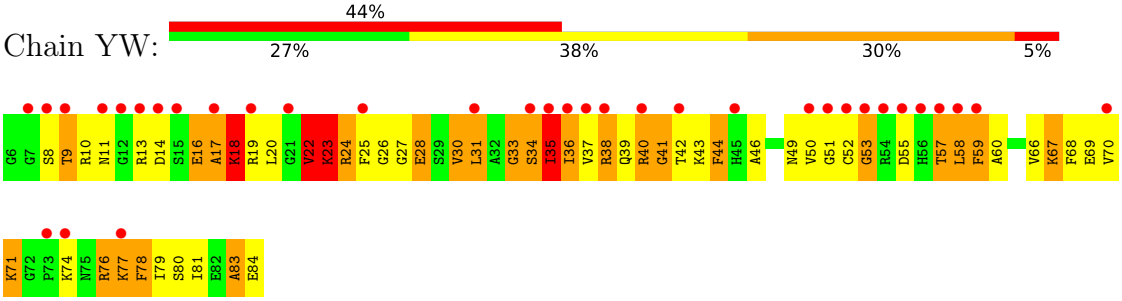
• Molecule 22: 50S ribosomal protein L25



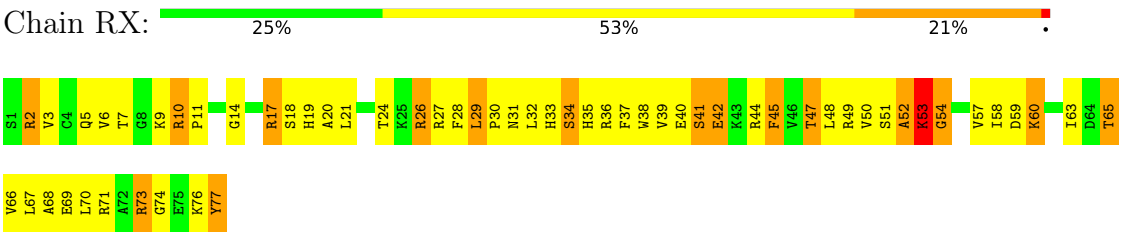
• Molecule 23: 50S ribosomal protein L27



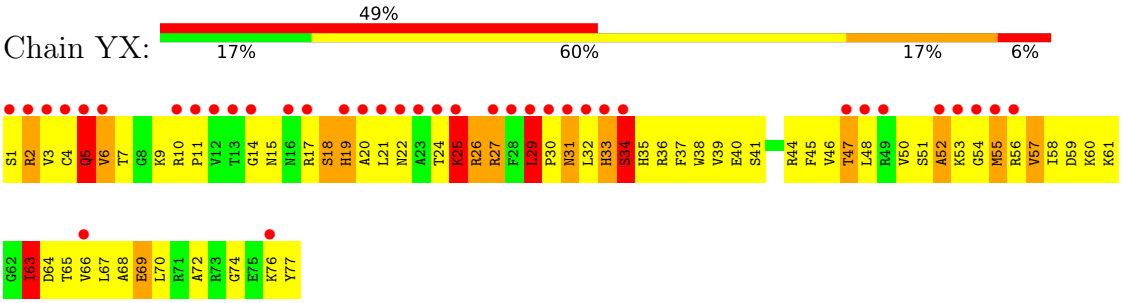
• Molecule 23: 50S ribosomal protein L27



• Molecule 24: 50S ribosomal protein L28

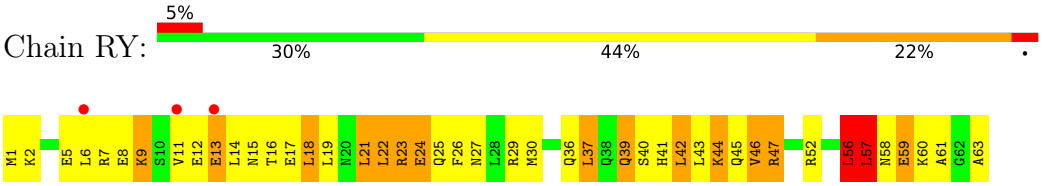


• Molecule 24: 50S ribosomal protein L28



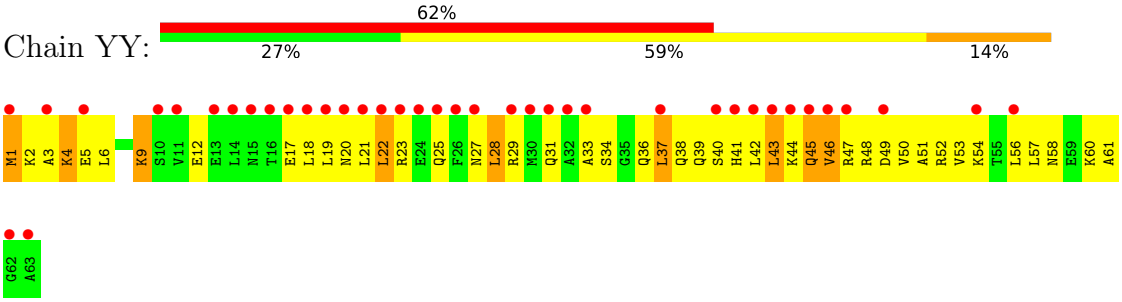
• Molecule 25: 50S ribosomal protein L29

Chain RY:



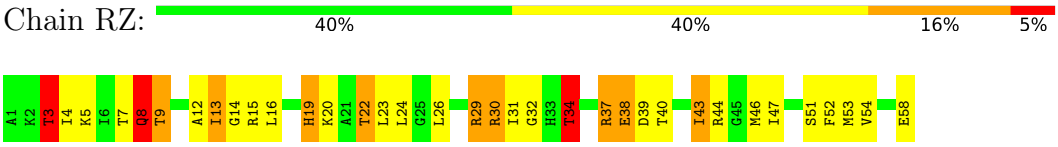
• Molecule 25: 50S ribosomal protein L29

Chain YY:



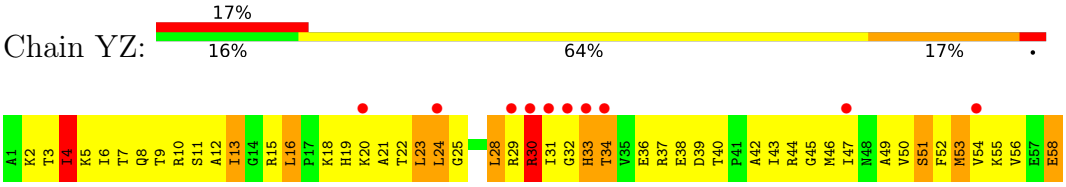
• Molecule 26: 50S ribosomal protein L30

Chain RZ:



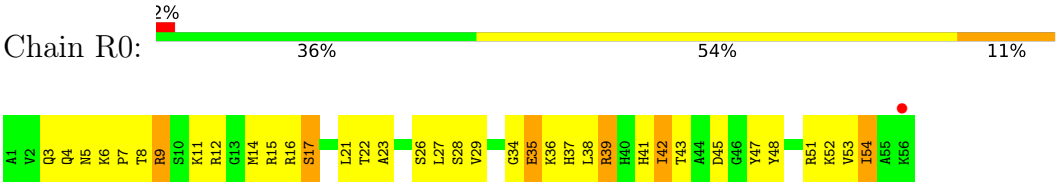
• Molecule 26: 50S ribosomal protein L30

Chain YZ:



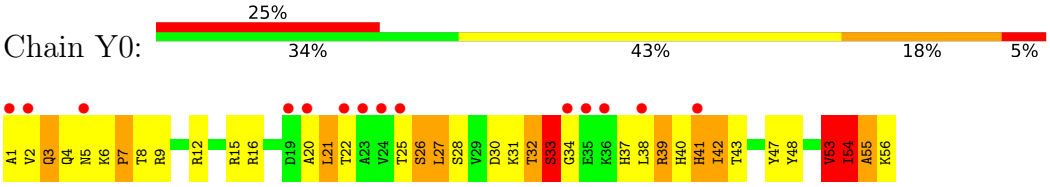
• Molecule 27: 50S ribosomal protein L32

Chain R0:



• Molecule 27: 50S ribosomal protein L32

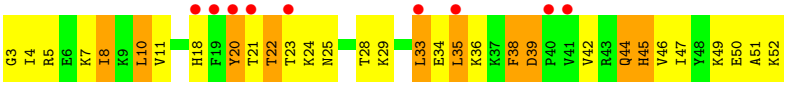
Chain Y0:



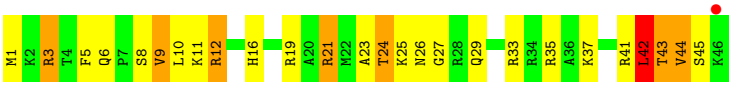
• Molecule 28: 50S ribosomal protein L33

Chain R1:

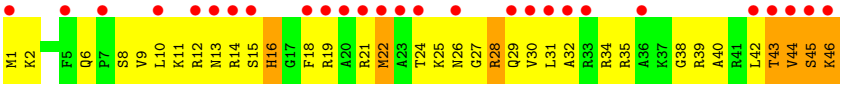
• Molecule 28: 50S ribosomal protein L33



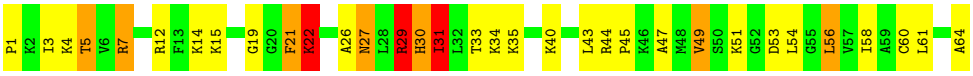
• Molecule 29: 50S ribosomal protein L34



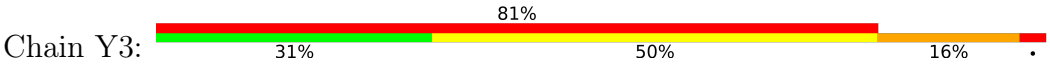
• Molecule 29: 50S ribosomal protein L34

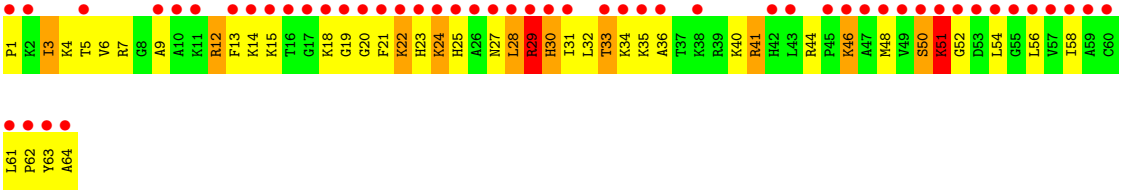


• Molecule 30: 50S ribosomal protein L35

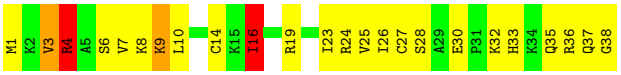


• Molecule 30: 50S ribosomal protein L35



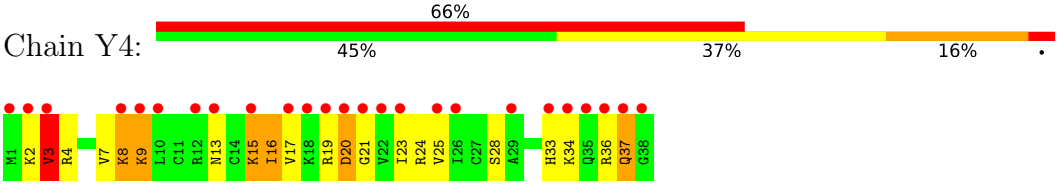


• Molecule 31: 50S ribosomal protein L36



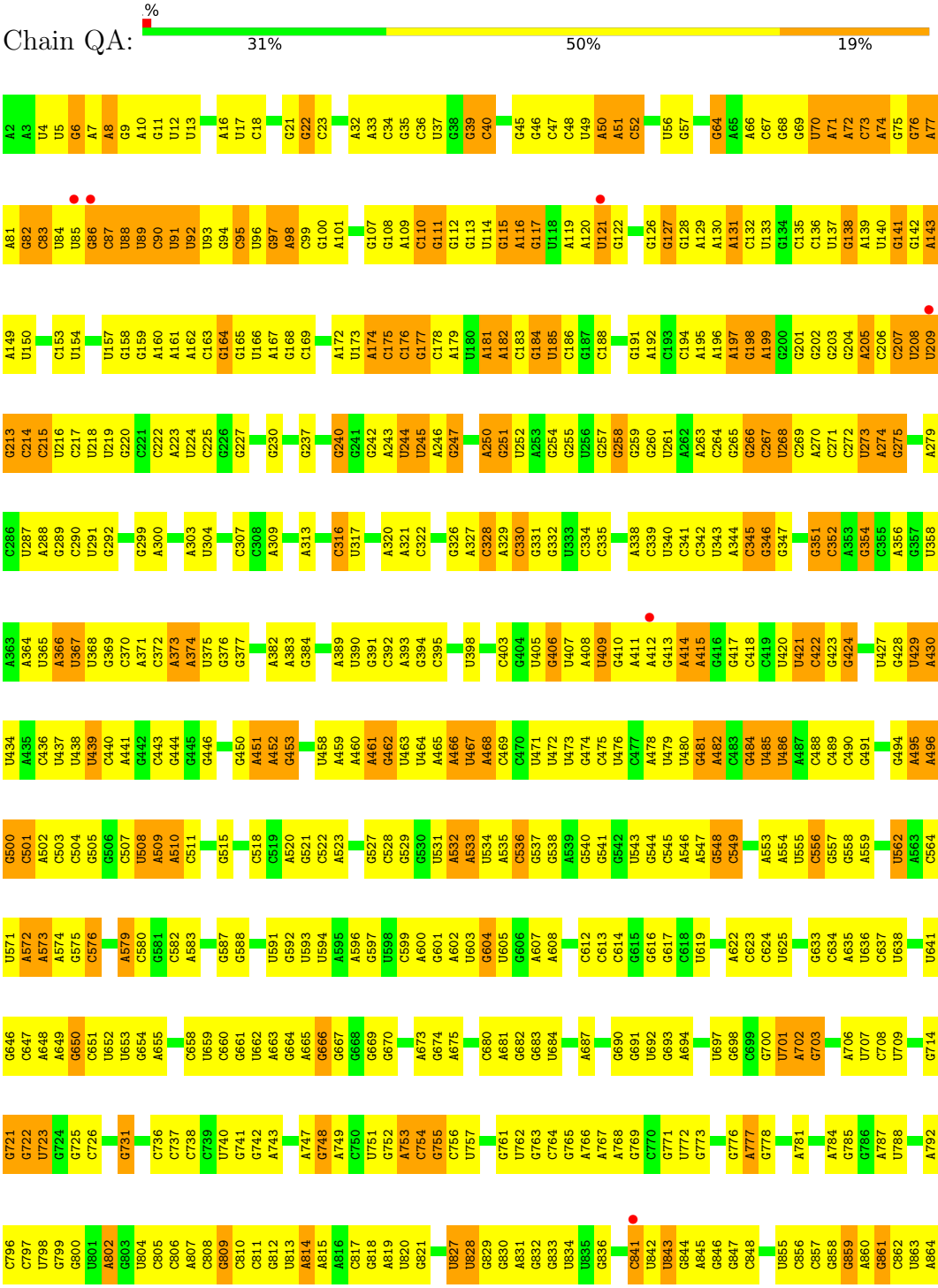
• Molecule 31: 50S ribosomal protein L36

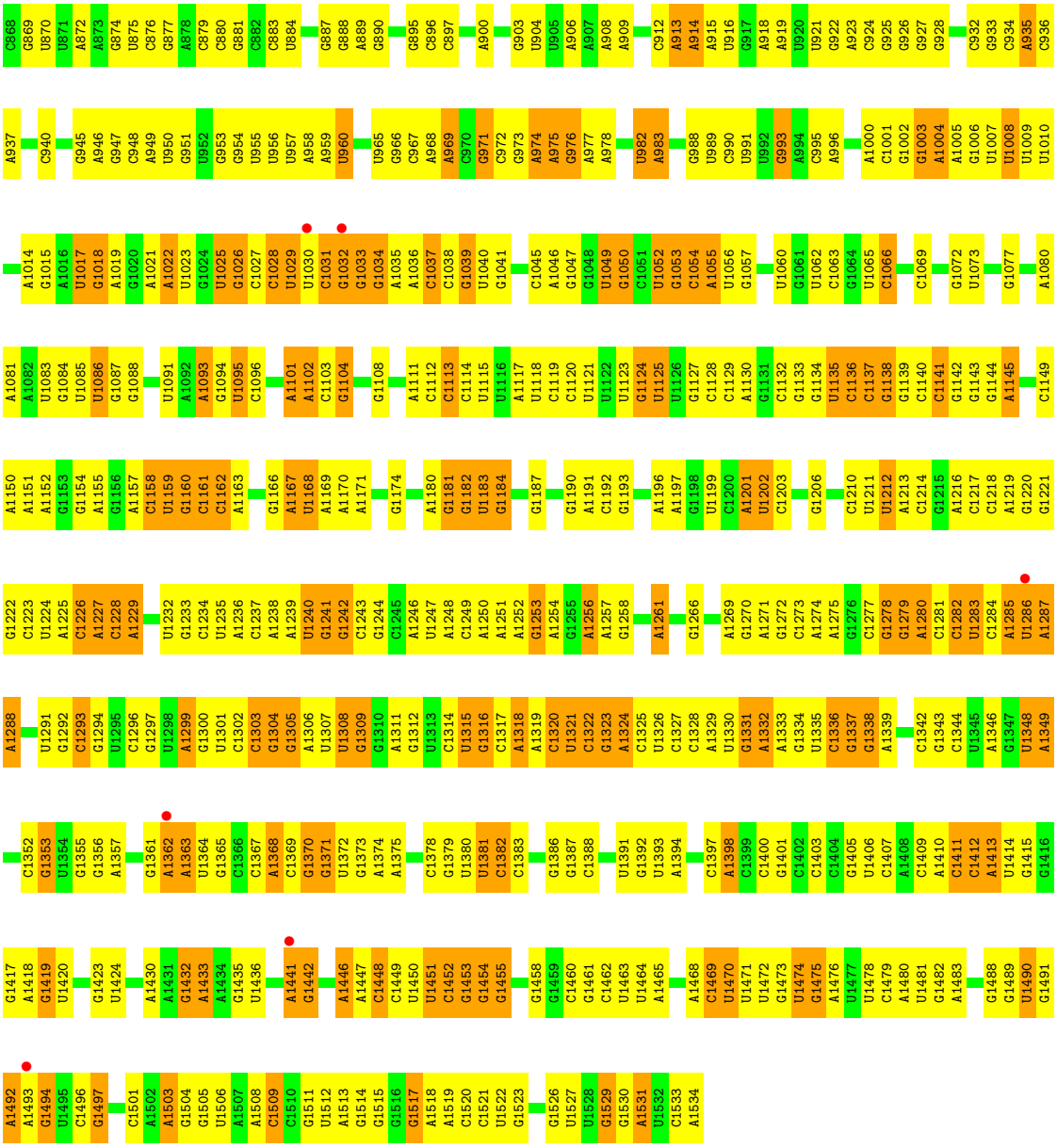
Chain Y4:



• Molecule 32: 16S rRNA

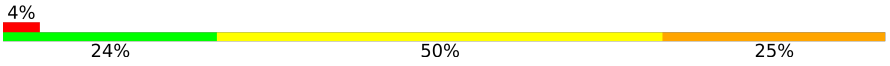
Chain QA:

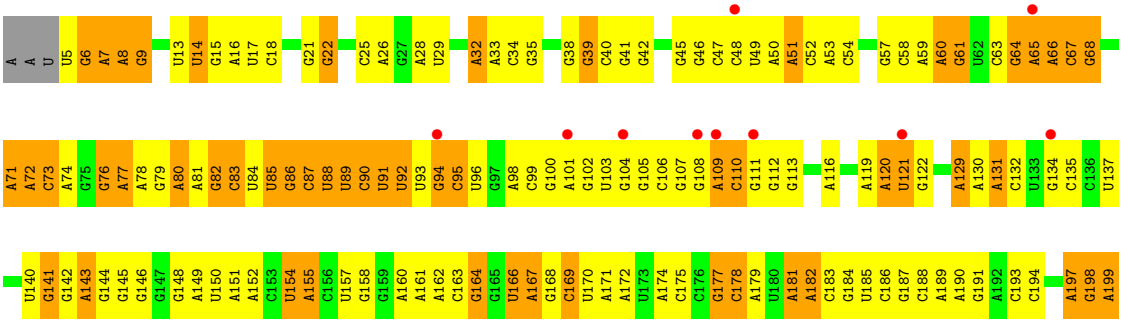


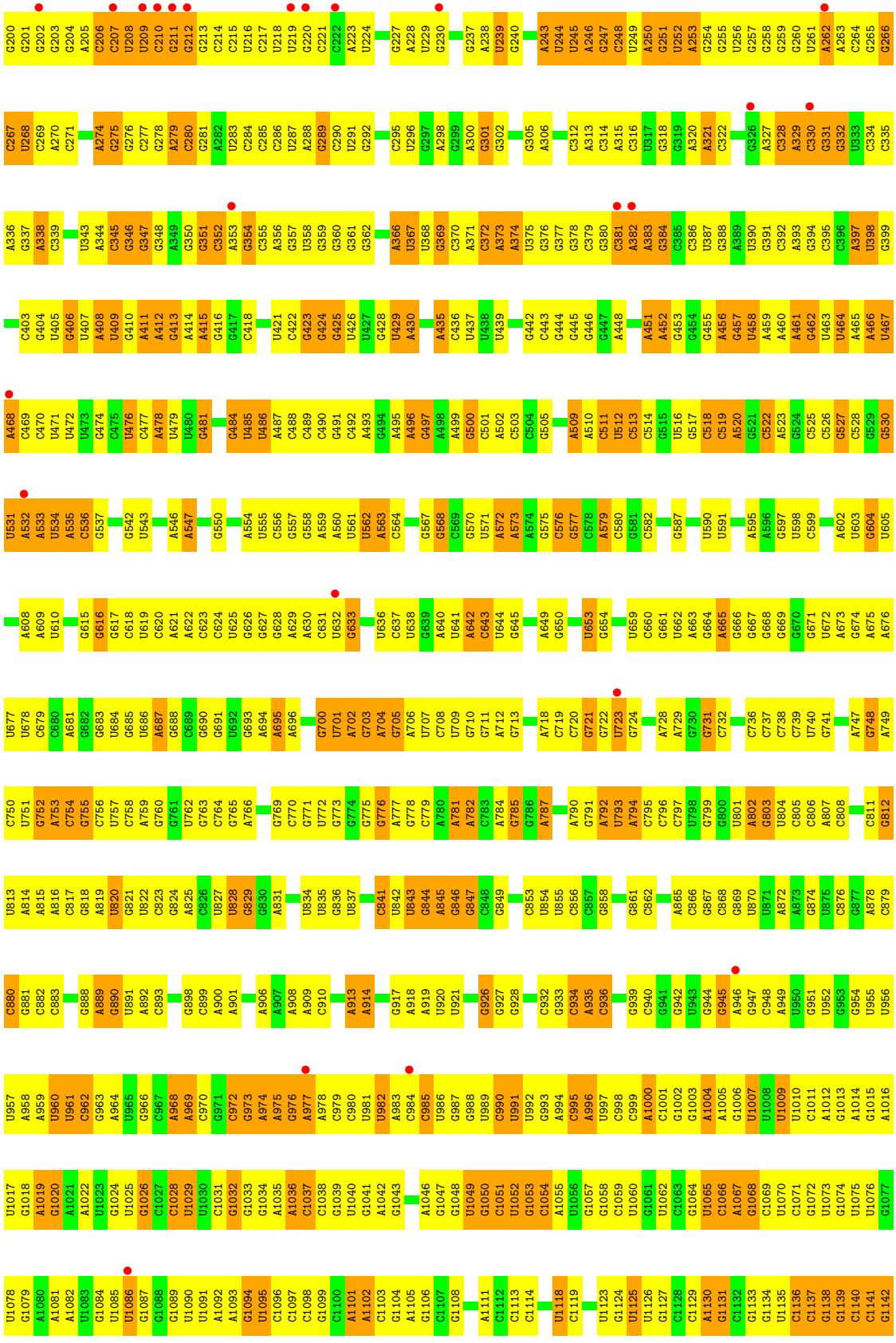


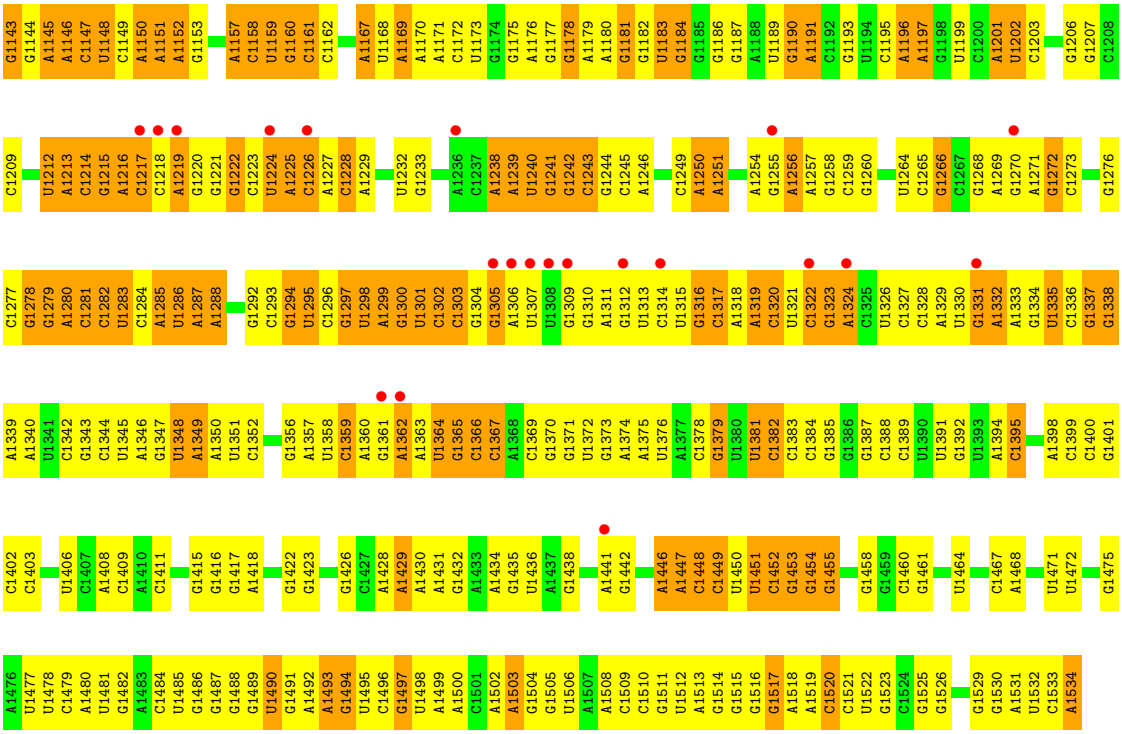
• Molecule 32: 16S rRNA

Chain XA:



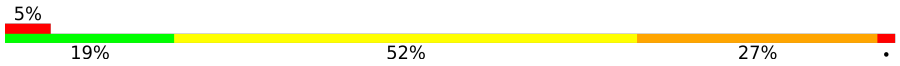


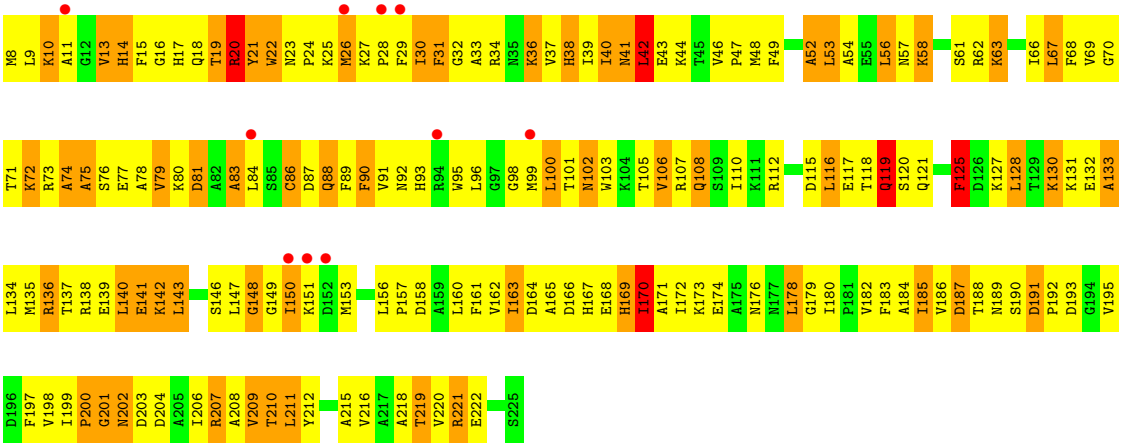




• Molecule 33: 30S ribosomal protein S2

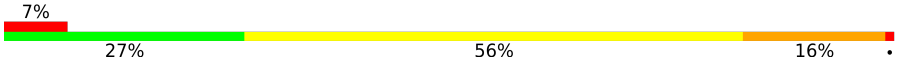
Chain QB:

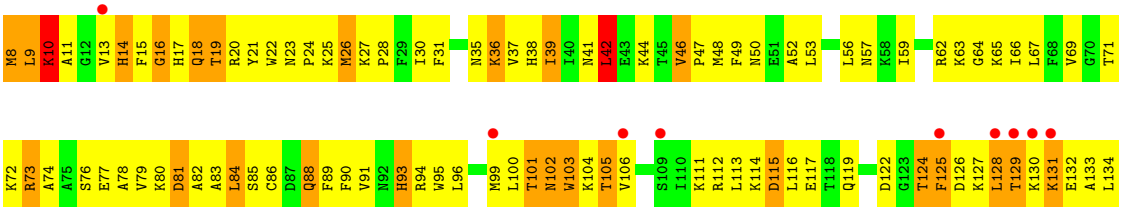


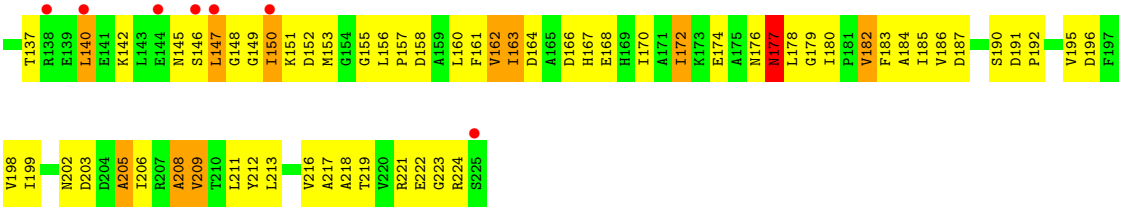


• Molecule 33: 30S ribosomal protein S2

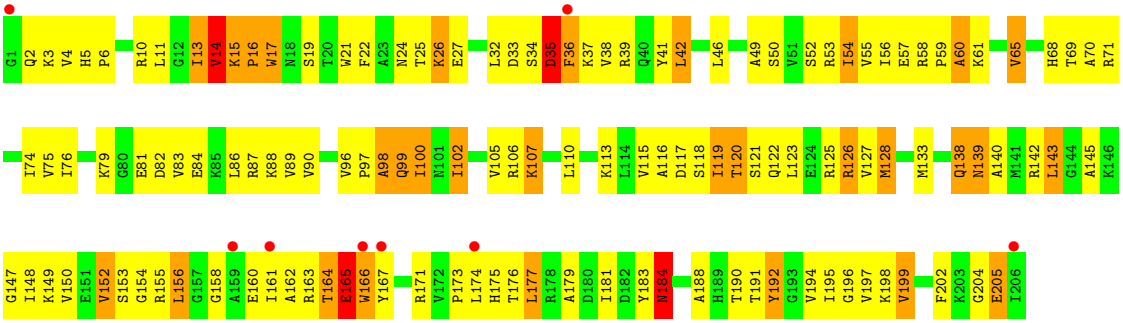
Chain XB:



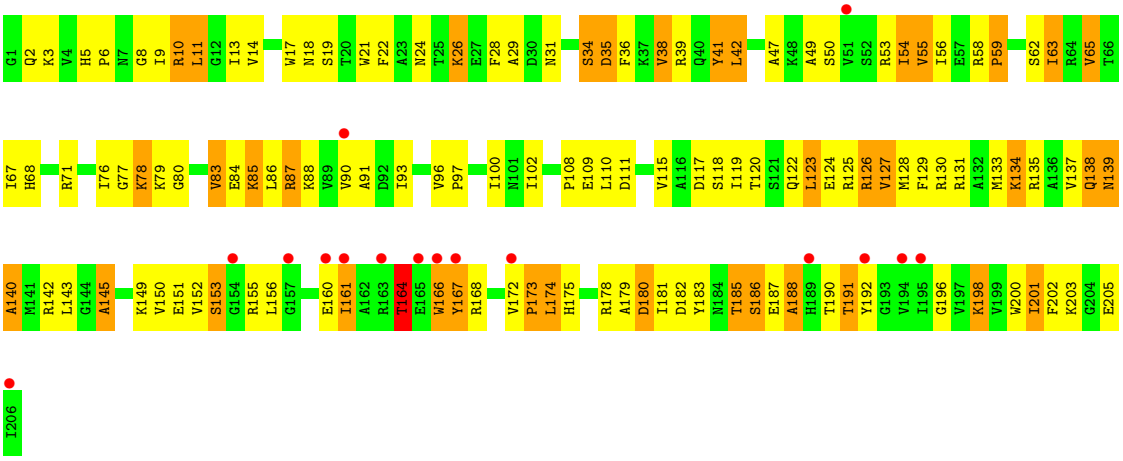




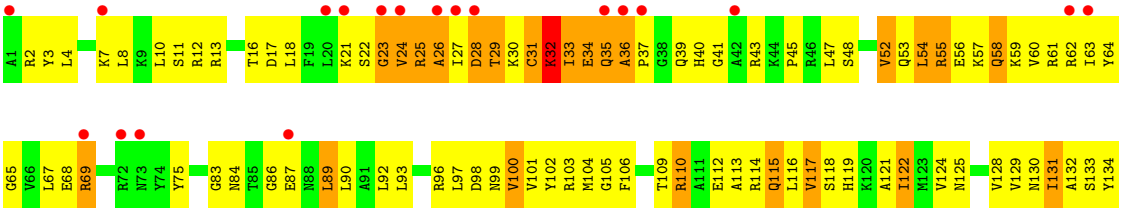
• Molecule 34: 30S ribosomal protein S3

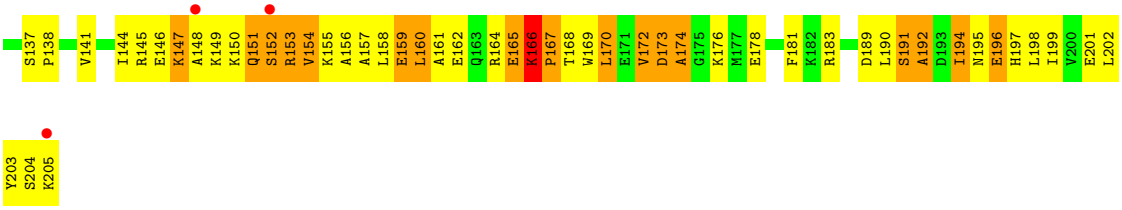


• Molecule 34: 30S ribosomal protein S3

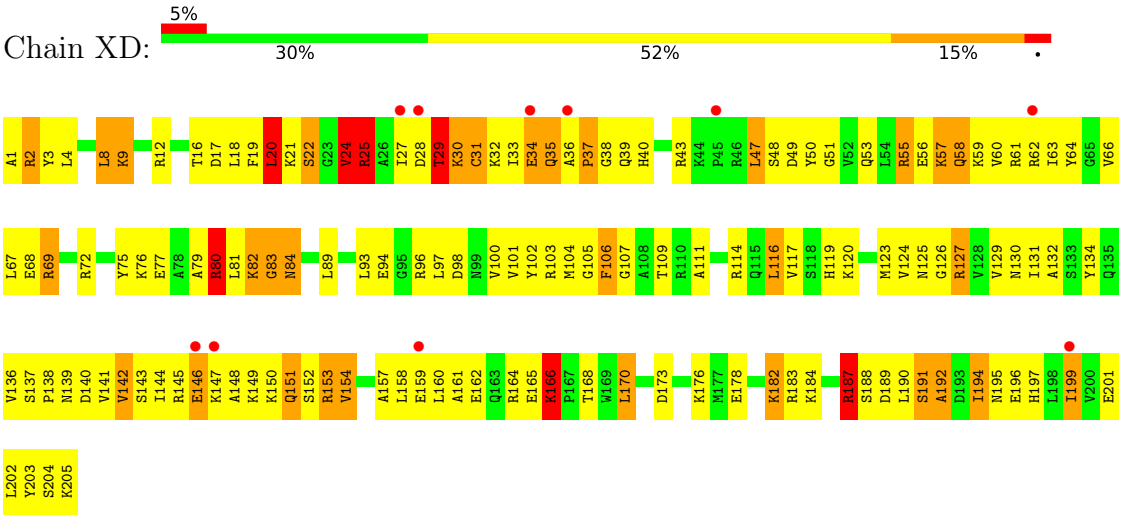


• Molecule 35: 30S ribosomal protein S4

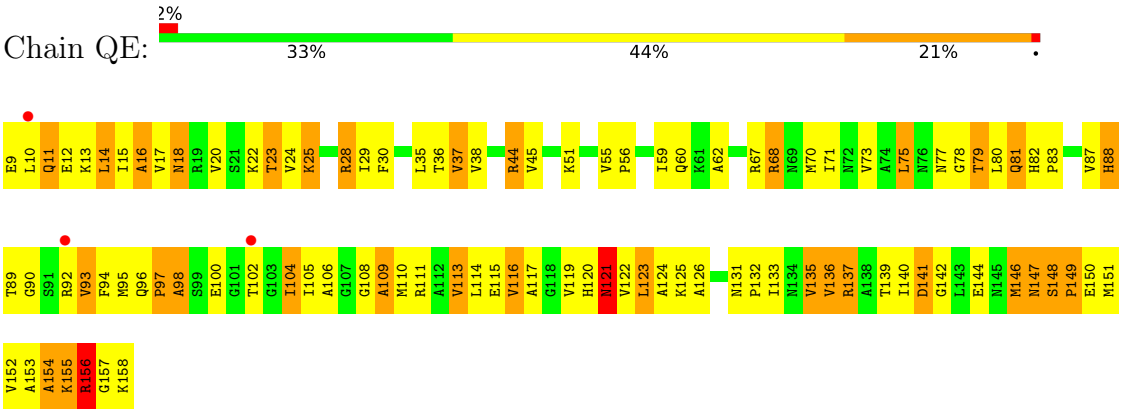




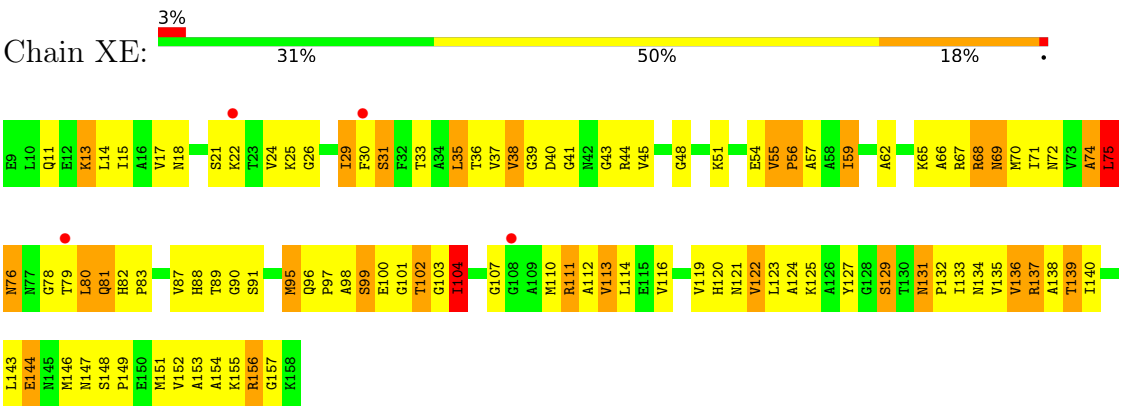
• Molecule 35: 30S ribosomal protein S4



• Molecule 36: 30S ribosomal protein S5

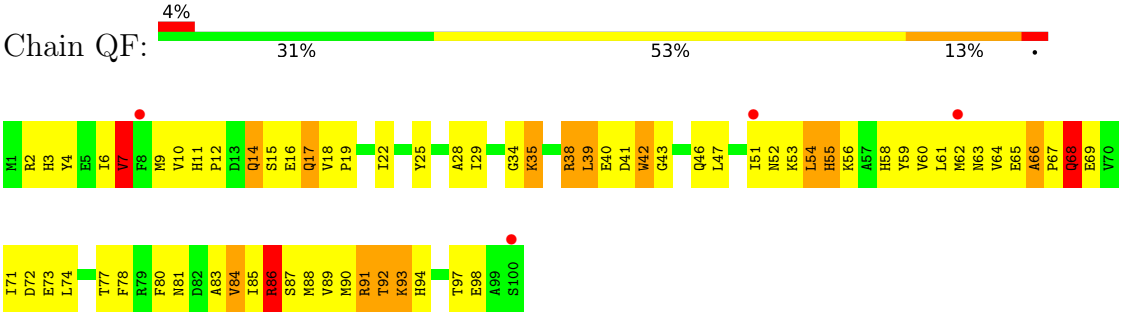


• Molecule 36: 30S ribosomal protein S5



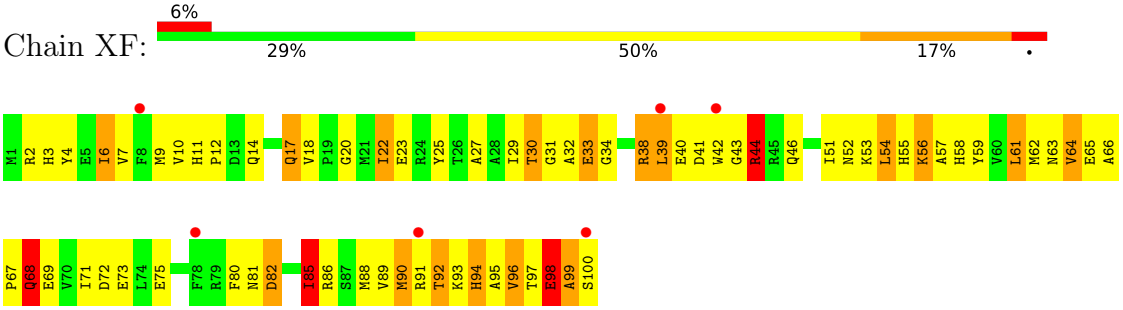
• Molecule 37: 30S ribosomal protein S6

Chain QF:



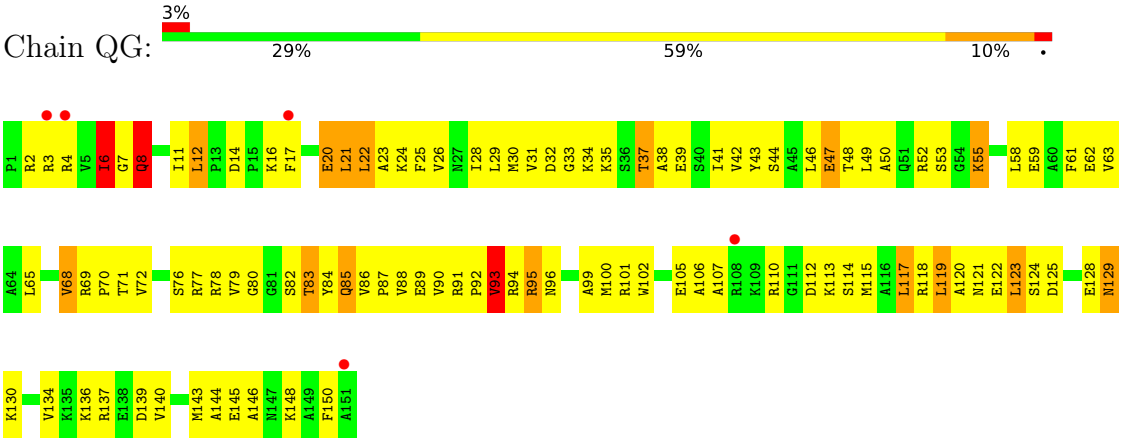
• Molecule 37: 30S ribosomal protein S6

Chain XF:



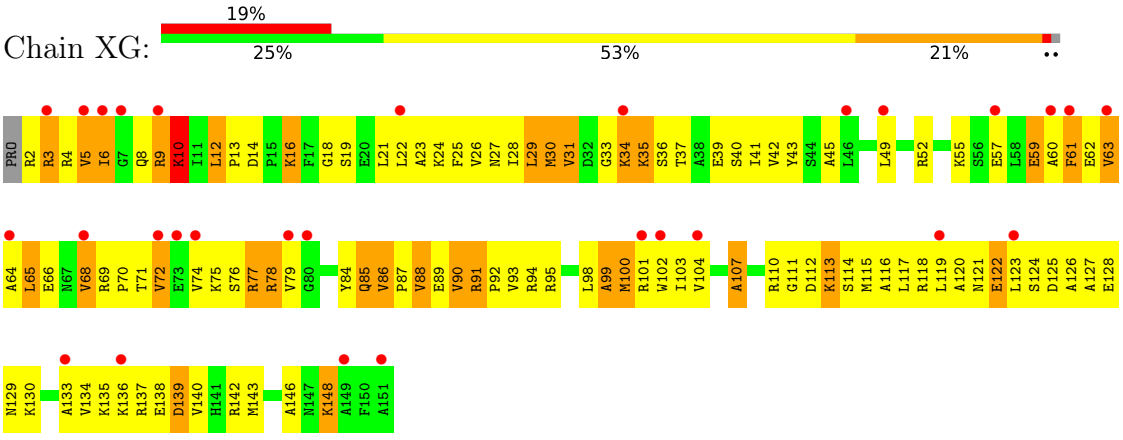
• Molecule 38: 30S ribosomal protein S7

Chain QG:



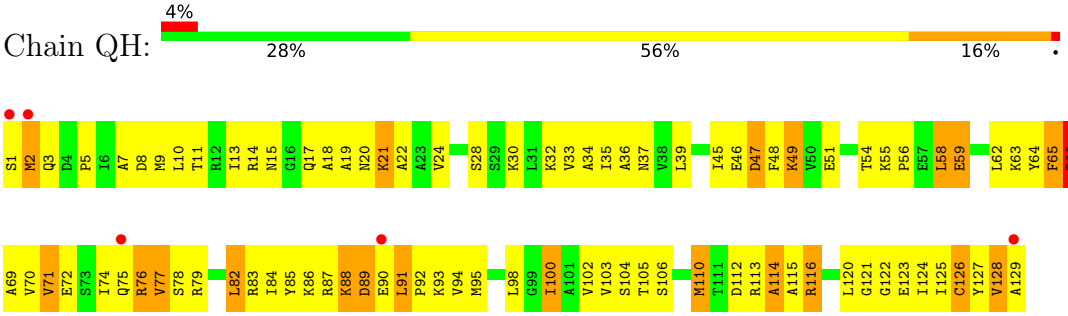
• Molecule 38: 30S ribosomal protein S7

Chain XG:



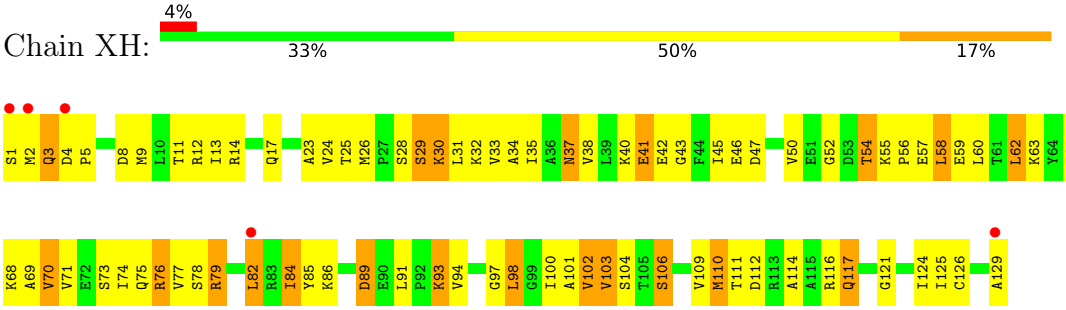
• Molecule 39: 30S ribosomal protein S8

Chain QH:



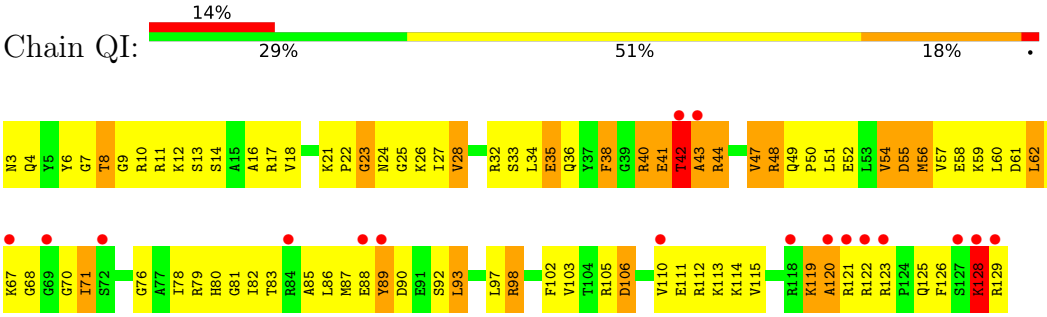
• Molecule 39: 30S ribosomal protein S8

Chain XH:



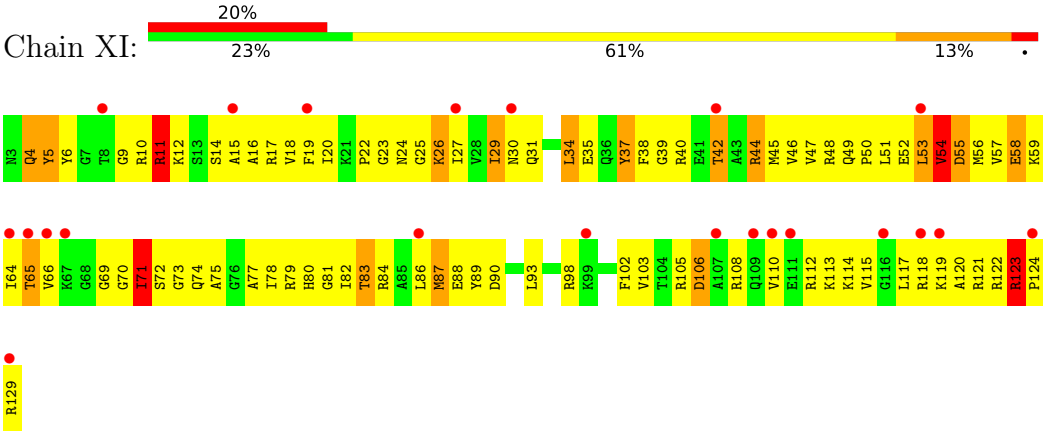
• Molecule 40: 30S ribosomal protein S9

Chain QI:



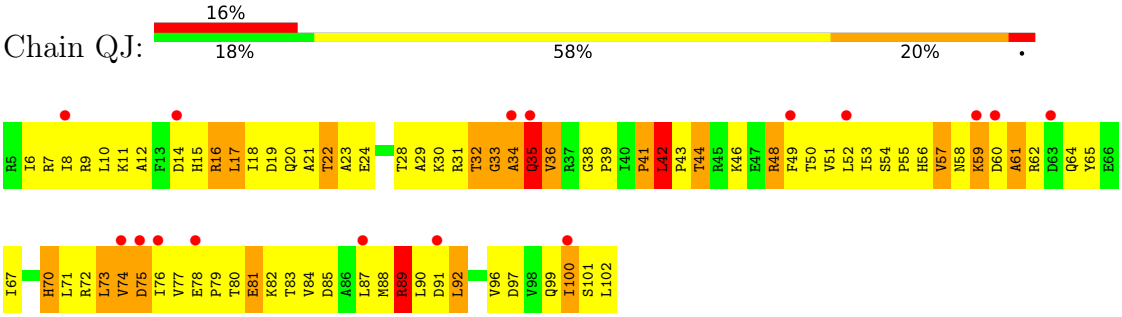
• Molecule 40: 30S ribosomal protein S9

Chain XI:



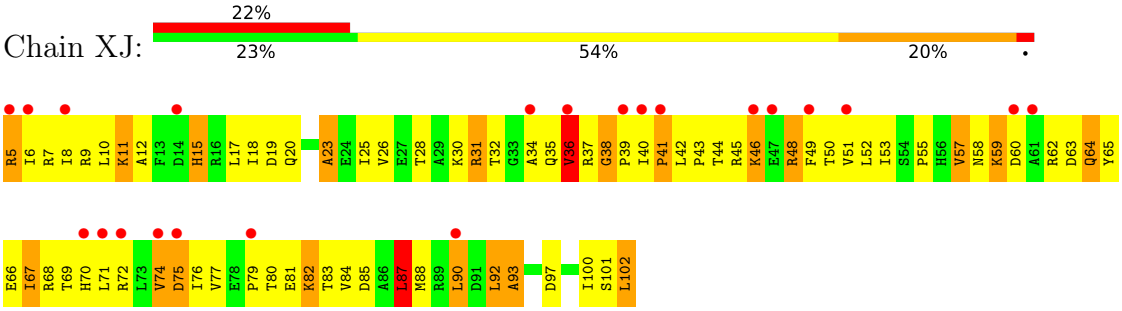
• Molecule 41: 30S ribosomal protein S10

Chain QJ:



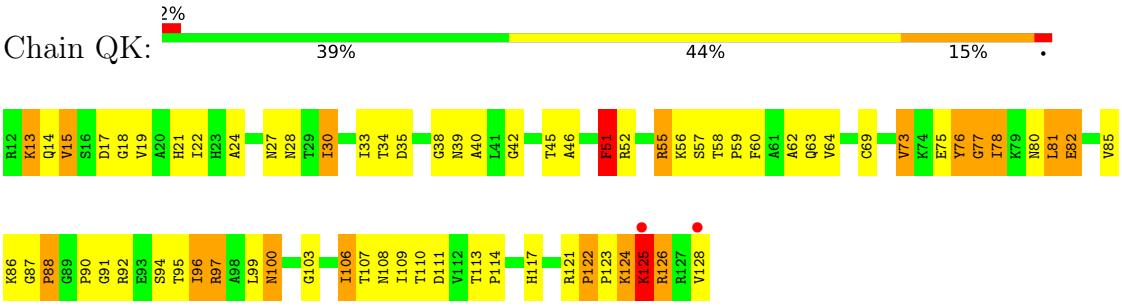
• Molecule 41: 30S ribosomal protein S10

Chain XJ:



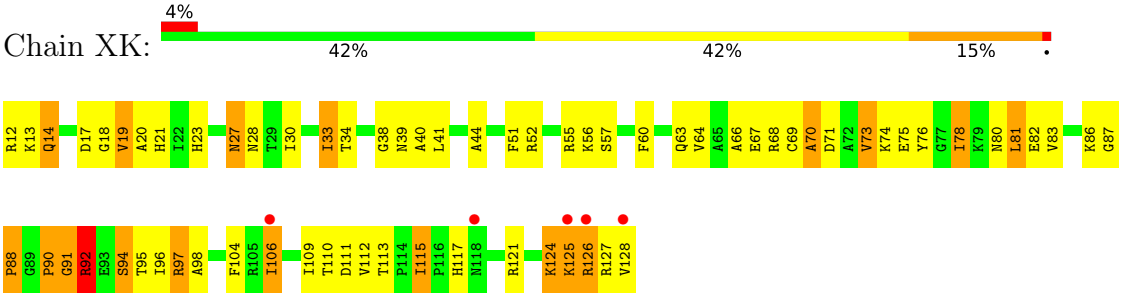
• Molecule 42: 30S ribosomal protein S11

Chain QK:



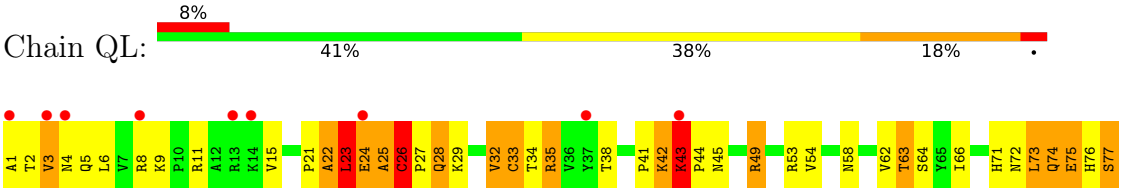
• Molecule 42: 30S ribosomal protein S11

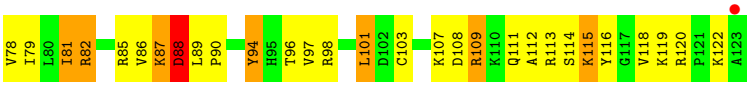
Chain XK:



• Molecule 43: 30S ribosomal protein S12

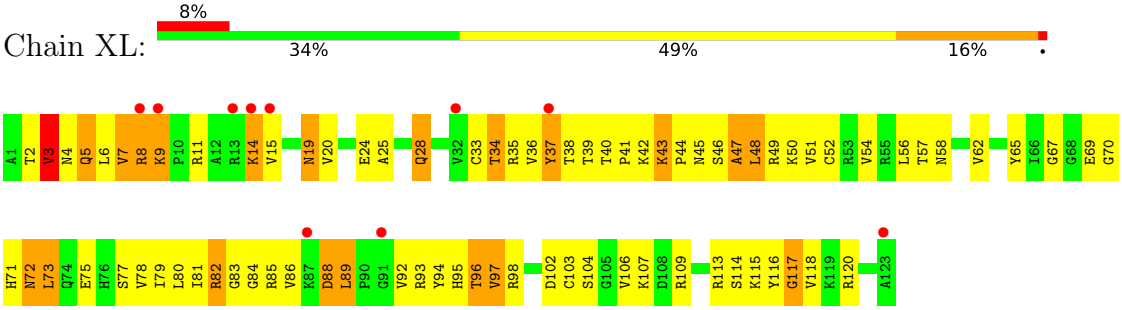
Chain QL:





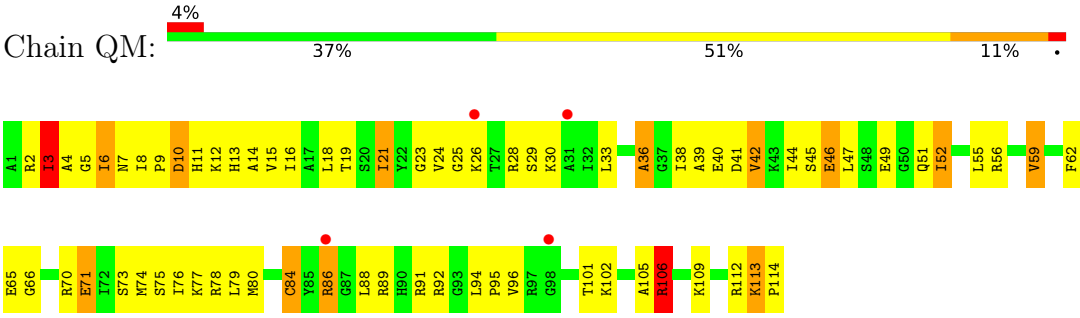
• Molecule 43: 30S ribosomal protein S12

Chain XL:



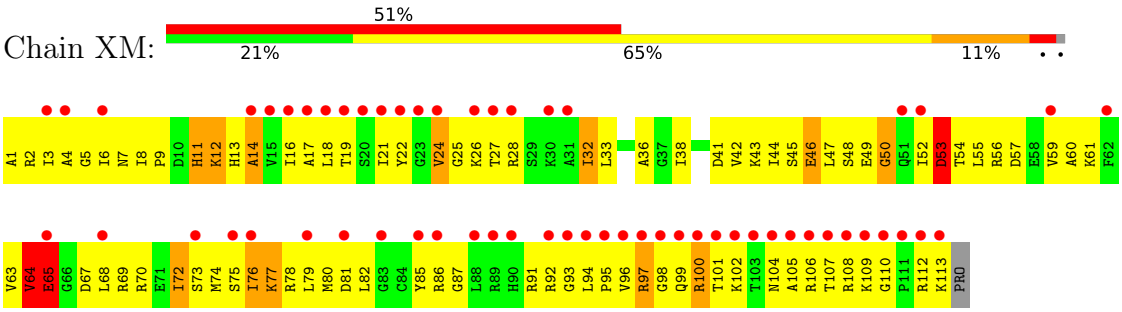
• Molecule 44: 30S ribosomal protein S13

Chain QM:



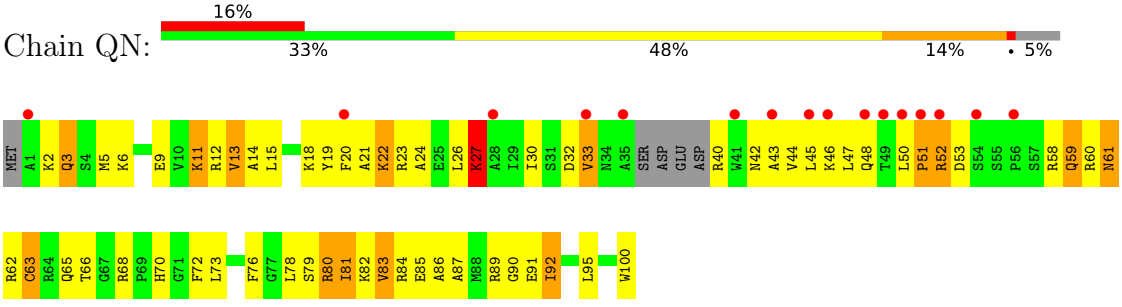
• Molecule 44: 30S ribosomal protein S13

Chain XM:



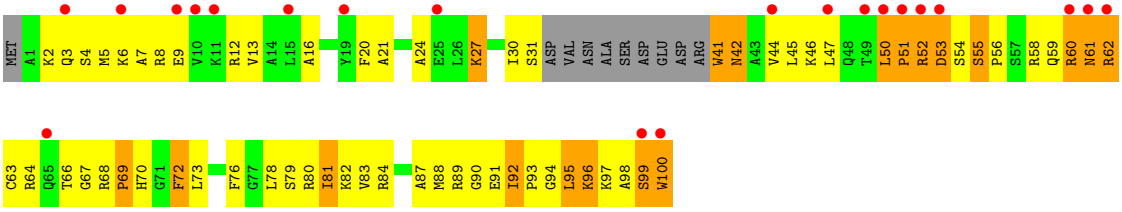
• Molecule 45: 30S ribosomal protein S14

Chain QN:



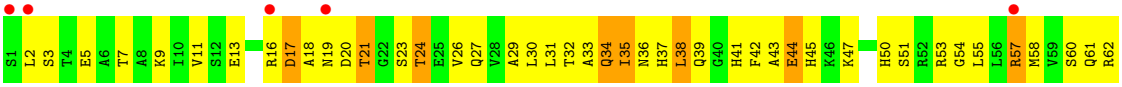
• Molecule 45: 30S ribosomal protein S14

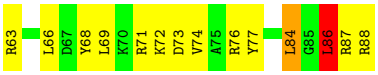
Chain XN:



• Molecule 46: 30S ribosomal protein S15

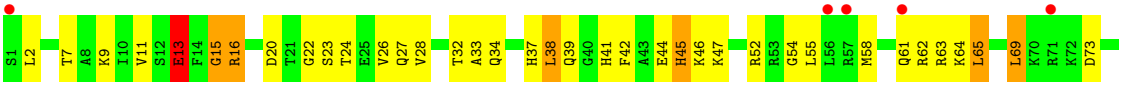
Chain QO:

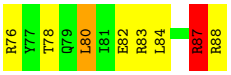




• Molecule 46: 30S ribosomal protein S15

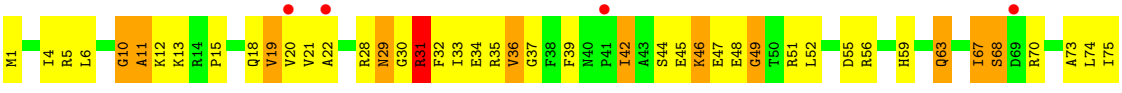
Chain XO:

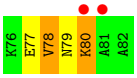




• Molecule 47: 30S ribosomal protein S16

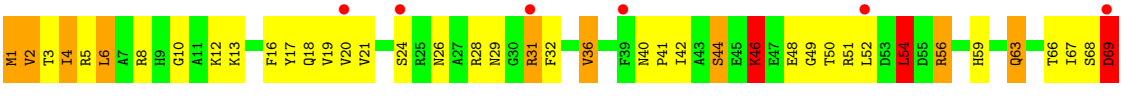
Chain QP:

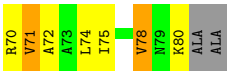




• Molecule 47: 30S ribosomal protein S16

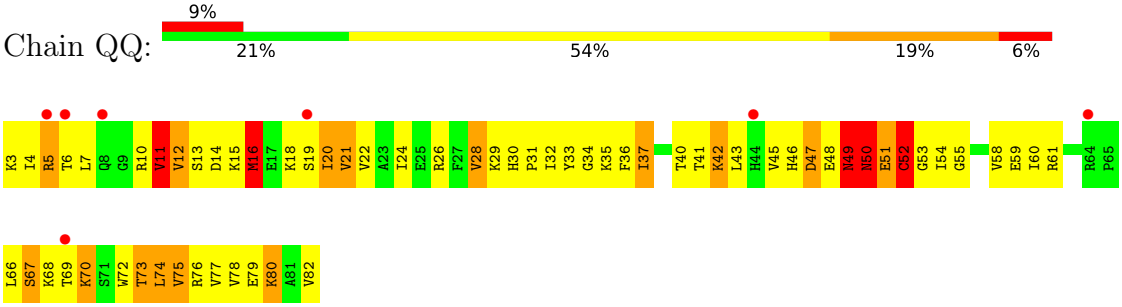
Chain XP:





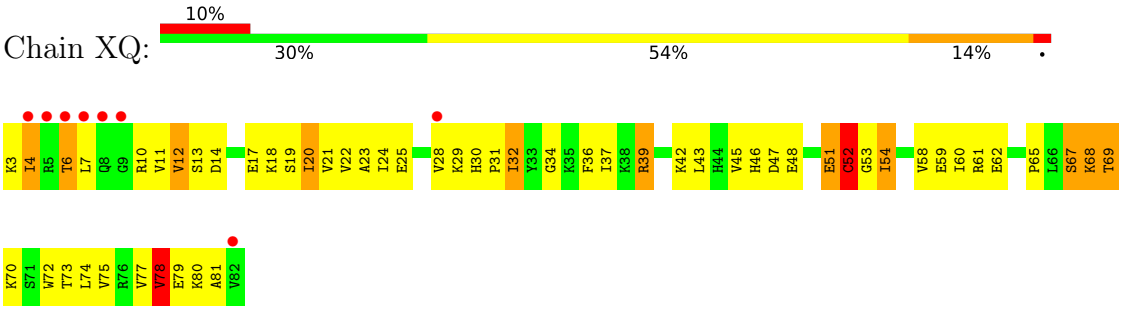
• Molecule 48: 30S ribosomal protein S17

Chain QQ:



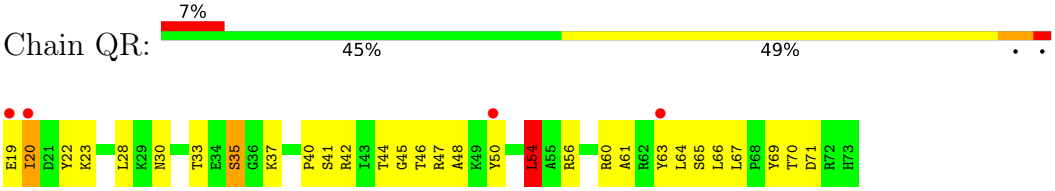
• Molecule 48: 30S ribosomal protein S17

Chain XQ:



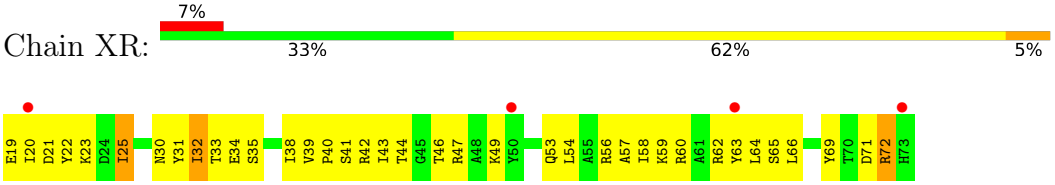
• Molecule 49: 30S ribosomal protein S18

Chain QR:



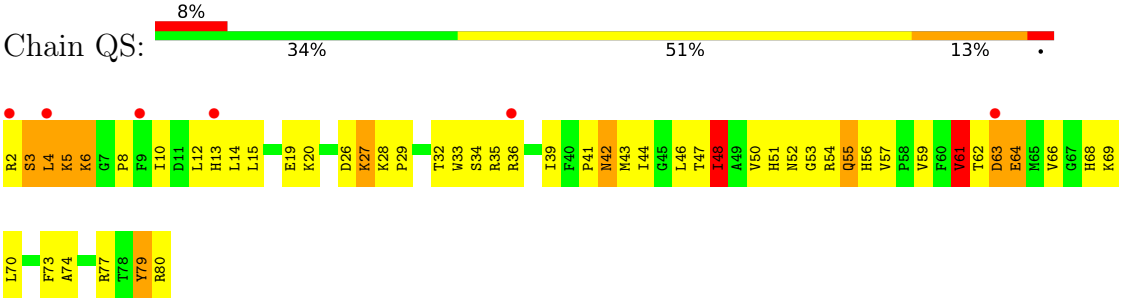
• Molecule 49: 30S ribosomal protein S18

Chain XR:



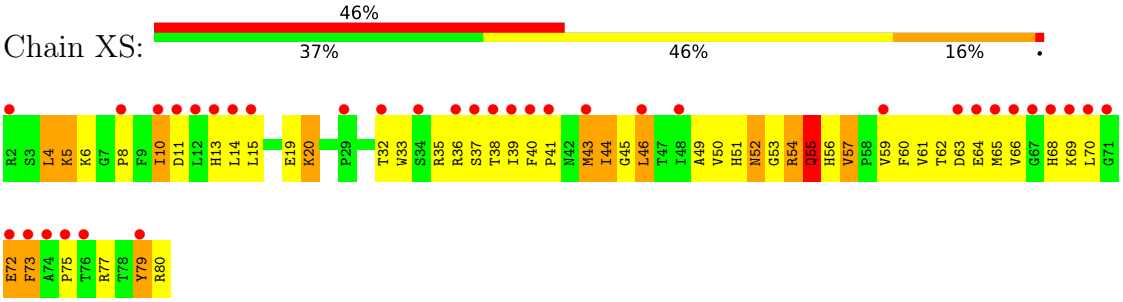
• Molecule 50: 30S ribosomal protein S19

Chain QS:



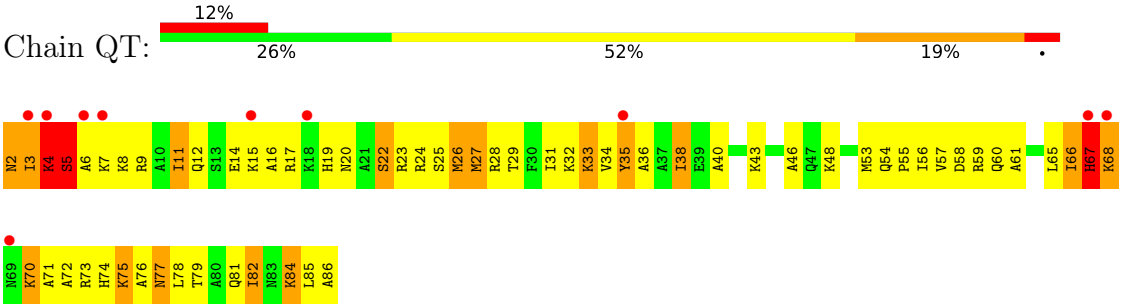
• Molecule 50: 30S ribosomal protein S19

Chain XS:



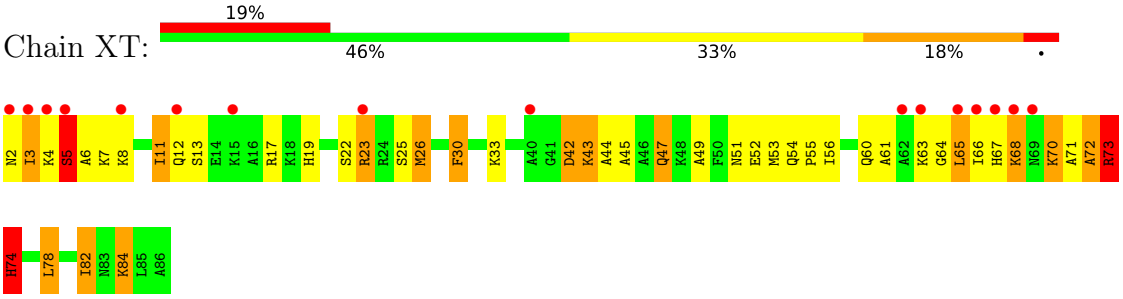
• Molecule 51: 30S ribosomal protein S20

Chain QT:



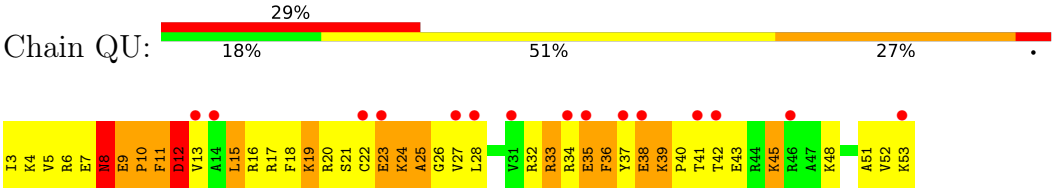
• Molecule 51: 30S ribosomal protein S20

Chain XT:



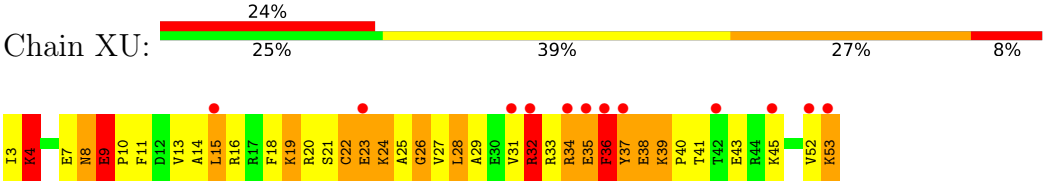
• Molecule 52: 30S ribosomal protein S21

Chain QU:



• Molecule 52: 30S ribosomal protein S21

Chain XU:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	210.76Å 433.27Å 618.86Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	69.78 – 3.10 69.78 – 3.10	Depositor EDS
% Data completeness (in resolution range)	95.8 (69.78-3.10) 95.8 (69.78-3.10)	Depositor EDS
R_{merge}	0.11	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.51 (at 3.13Å)	Xtriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.200 , 0.252 0.210 , 0.259	Depositor DCC
R_{free} test set	19579 reflections (1.00%)	wwPDB-VP
Wilson B-factor (Å^2)	68.1	Xtriage
Anisotropy	0.435	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.25 , 90.1	EDS
L-test for twinning[2]	$< \|L\| > = 0.48$, $< L^2 > = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	284464	wwPDB-VP
Average B, all atoms (Å^2)	117.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.42% 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

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: EM1, MG, ZN

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	RA	0.42	0/68626	0.46	0/107056
1	YA	0.23	0/68314	0.46	0/106569
2	RB	0.37	0/2828	0.41	0/4410
2	YB	0.18	0/2803	0.47	0/4371
3	RC	0.60	0/2121	1.15	18/2852 (0.6%)
3	YC	0.42	0/2121	0.92	6/2852 (0.2%)
4	RD	0.75	0/1586	1.18	11/2134 (0.5%)
4	YD	0.40	0/1586	0.90	6/2134 (0.3%)
5	RE	0.57	0/1571	0.99	7/2113 (0.3%)
5	YE	0.35	0/1571	0.85	4/2113 (0.2%)
6	RF	0.41	0/1434	0.87	4/1926 (0.2%)
6	YF	0.33	0/1444	0.84	3/1937 (0.2%)
7	RG	0.54	0/1343	1.01	4/1816 (0.2%)
7	YG	0.33	0/1343	0.84	4/1816 (0.2%)
8	RH	0.44	0/1122	0.91	3/1515 (0.2%)
8	YH	0.41	0/1122	0.84	2/1515 (0.1%)
9	RI	0.35	0/1046	0.90	1/1410 (0.1%)
9	YI	0.36	0/1046	0.90	4/1410 (0.3%)
10	RJ	0.79	1/1152 (0.1%)	1.30	17/1551 (1.1%)
10	YJ	0.40	0/1152	0.89	1/1551 (0.1%)
11	RK	0.69	0/947	1.09	3/1268 (0.2%)
11	YK	0.44	0/947	0.92	2/1268 (0.2%)
12	RL	0.63	1/1054 (0.1%)	1.14	6/1403 (0.4%)
12	YL	0.38	0/1054	0.85	1/1403 (0.1%)
13	RM	0.65	0/1093	1.09	7/1460 (0.5%)
13	YM	0.37	0/1093	0.90	5/1460 (0.3%)
14	RN	0.66	0/973	1.03	3/1301 (0.2%)
14	YN	0.40	0/973	0.92	5/1301 (0.4%)
15	RO	0.56	0/902	0.91	1/1209 (0.1%)
15	YO	0.32	0/902	0.73	0/1209
16	RP	0.63	0/929	1.10	6/1242 (0.5%)
16	YP	0.40	0/929	0.87	5/1242 (0.4%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	RQ	0.78	0/960	1.06	2/1278 (0.2%)
17	YQ	0.39	0/960	0.79	1/1278 (0.1%)
18	RR	0.70	0/829	1.11	4/1107 (0.4%)
18	YR	0.38	0/829	0.78	0/1107
19	RS	0.74	0/864	1.06	1/1156 (0.1%)
19	YS	0.42	0/864	0.83	1/1156 (0.1%)
20	RT	0.63	0/744	1.11	5/994 (0.5%)
20	YT	0.36	0/744	0.86	1/994 (0.1%)
21	RU	0.56	0/787	1.06	8/1051 (0.8%)
21	YU	0.37	0/787	0.81	0/1051
22	RV	0.57	0/766	0.92	2/1025 (0.2%)
22	YV	0.33	0/766	0.76	0/1025
23	RW	0.88	2/603 (0.3%)	1.26	5/797 (0.6%)
23	YW	0.38	0/603	0.82	0/797
24	RX	0.59	0/635	0.99	2/848 (0.2%)
24	YX	0.39	0/635	0.98	4/848 (0.5%)
25	RY	0.47	0/510	0.87	3/677 (0.4%)
25	YY	0.29	0/510	0.78	0/677
26	RZ	0.86	2/453 (0.4%)	1.14	1/605 (0.2%)
26	YZ	0.38	0/453	0.87	1/605 (0.2%)
27	R0	0.63	0/450	0.96	0/599
27	Y0	0.35	0/450	0.78	0/599
28	R1	0.48	0/416	0.91	0/554
28	Y1	0.39	0/416	0.76	2/554 (0.4%)
29	R2	0.70	0/380	1.05	1/498 (0.2%)
29	Y2	0.39	0/380	0.92	2/498 (0.4%)
30	R3	0.61	0/513	1.04	1/676 (0.1%)
30	Y3	0.39	0/513	0.89	0/676
31	R4	0.75	0/303	1.12	2/397 (0.5%)
31	Y4	0.60	1/303 (0.3%)	0.73	0/397
32	QA	0.26	0/36834	0.43	0/57462
32	XA	0.24	0/36762	0.44	0/57350
33	QB	0.38	0/1735	0.87	6/2338 (0.3%)
33	XB	0.34	0/1735	0.83	3/2338 (0.1%)
34	QC	0.39	0/1651	0.88	5/2225 (0.2%)
34	XC	0.35	0/1651	0.80	0/2225
35	QD	0.39	0/1665	0.84	4/2227 (0.2%)
35	XD	0.51	0/1665	0.93	4/2227 (0.2%)
36	QE	0.49	0/1118	0.95	3/1504 (0.2%)
36	XE	0.47	0/1118	0.99	5/1504 (0.3%)
37	QF	0.40	0/835	0.77	2/1128 (0.2%)
37	XF	0.40	0/835	0.82	1/1128 (0.1%)
38	QG	0.36	0/1195	0.81	0/1602

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	XG	0.32	0/1187	0.87	4/1591 (0.3%)
39	QH	0.45	0/989	0.94	8/1326 (0.6%)
39	XH	0.39	0/989	0.85	3/1326 (0.2%)
40	QI	0.35	0/1034	0.82	1/1375 (0.1%)
40	XI	0.34	0/1034	0.85	2/1375 (0.1%)
41	QJ	0.40	0/796	0.82	0/1077
41	XJ	0.38	0/796	0.86	1/1077 (0.1%)
42	QK	0.40	0/893	0.91	2/1205 (0.2%)
42	XK	0.39	0/893	0.92	1/1205 (0.1%)
43	QL	0.46	0/969	1.00	6/1300 (0.5%)
43	XL	0.44	0/969	0.94	5/1300 (0.4%)
44	QM	0.36	0/892	0.82	1/1193 (0.1%)
44	XM	0.29	0/884	0.73	0/1181
45	QN	0.36	0/785	0.80	2/1043 (0.2%)
45	XN	0.30	0/746	0.79	2/990 (0.2%)
46	QO	0.40	0/722	0.75	0/964
46	XO	0.37	0/722	0.76	0/964
47	QP	0.38	0/659	0.84	0/884
47	XP	0.40	0/648	0.80	0/870
48	QQ	0.47	0/657	0.88	0/881
48	XQ	0.43	0/657	0.85	0/881
49	QR	0.39	0/462	0.84	0/621
49	XR	0.41	0/462	0.81	0/621
50	QS	0.34	0/652	0.78	1/877 (0.1%)
50	XS	0.28	0/652	0.81	1/877 (0.1%)
51	QT	0.47	0/671	0.94	3/888 (0.3%)
51	XT	0.34	0/671	0.92	4/888 (0.5%)
52	QU	0.43	0/430	0.88	0/570
52	XU	0.45	0/430	0.97	0/570
All	All	0.37	7/306703 (0.0%)	0.61	268/458519 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
4	RD	0	1
10	RJ	0	1
14	RN	0	1
30	R3	0	1
All	All	0	4

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	RZ	19	HIS	CG-ND1	6.69	1.45	1.38
23	RW	32	ALA	CA-CB	6.43	1.64	1.53
10	RJ	55	ILE	CA-CB	6.18	1.61	1.54
31	Y4	33	HIS	CE1-NE2	-6.04	1.26	1.32
26	RZ	19	HIS	ND1-CE1	-6.02	1.26	1.32
12	RL	110	VAL	CA-CB	-5.24	1.50	1.55
23	RW	17	ALA	CA-CB	5.21	1.62	1.53

All (268) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	QC	204	GLY	N-CA-C	12.13	126.21	110.20
10	RJ	64	VAL	N-CA-C	11.46	121.75	112.12
21	RU	82	VAL	N-CA-C	11.01	122.13	111.67
4	RD	151	THR	CA-C-N	-10.94	108.51	119.56
4	RD	151	THR	C-N-CA	-10.94	108.51	119.56
10	RJ	43	GLU	N-CA-C	-10.71	98.25	111.11
3	RC	93	VAL	N-CA-C	9.53	119.14	111.62
20	RT	85	VAL	N-CA-C	9.52	119.61	111.90
18	RR	9	GLY	N-CA-C	-9.30	102.32	115.43
3	RC	242	HIS	CA-C-N	8.97	131.06	119.84
3	RC	242	HIS	C-N-CA	8.97	131.06	119.84
42	QK	122	PRO	CA-C-N	8.67	130.68	119.84
42	QK	122	PRO	C-N-CA	8.67	130.68	119.84
4	RD	117	GLY	N-CA-C	8.56	125.15	114.37
3	RC	105	ALA	CA-C-N	8.29	128.17	120.21
3	RC	105	ALA	C-N-CA	8.29	128.17	120.21
4	RD	172	VAL	N-CA-C	8.09	118.51	111.56
6	RF	62	GLN	N-CA-C	8.05	118.59	108.45
51	QT	7	LYS	N-CA-C	-7.91	103.78	113.50
13	YM	71	LYS	CA-C-N	7.85	129.66	119.84
13	YM	71	LYS	C-N-CA	7.85	129.66	119.84
42	XK	125	LYS	N-CA-C	7.85	119.62	108.00
33	QB	191	ASP	CA-C-N	7.78	127.44	119.82
33	QB	191	ASP	C-N-CA	7.78	127.44	119.82
4	YD	193	VAL	CA-C-N	7.66	129.42	119.84
4	YD	193	VAL	C-N-CA	7.66	129.42	119.84
36	XE	131	ASN	CA-C-N	7.66	129.41	119.84
36	XE	131	ASN	C-N-CA	7.66	129.41	119.84
30	R3	21	PHE	N-CA-C	7.48	123.13	113.18
14	YN	18	GLN	N-CA-C	-7.47	106.11	114.62
5	RE	117	ARG	N-CA-C	-7.43	103.34	113.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	XD	20	LEU	N-CA-C	-7.35	100.81	110.43
41	XJ	88	MET	N-CA-C	-7.21	104.36	113.01
12	RL	68	SER	N-CA-C	7.21	118.92	111.14
21	RU	84	PHE	N-CA-C	7.18	119.83	109.14
12	RL	61	LEU	CA-C-N	7.09	127.66	120.14
12	RL	61	LEU	C-N-CA	7.09	127.66	120.14
5	RE	39	ALA	N-CA-C	-7.05	104.15	112.89
18	RR	46	GLU	N-CA-C	7.03	120.09	109.41
5	YE	176	ASP	CA-C-N	7.03	126.73	119.56
5	YE	176	ASP	C-N-CA	7.03	126.73	119.56
6	RF	174	PHE	CA-C-N	6.99	128.58	119.84
6	RF	174	PHE	C-N-CA	6.99	128.58	119.84
8	RH	85	GLY	N-CA-C	6.96	119.20	110.29
23	RW	71	LYS	N-CA-C	6.96	120.01	109.63
36	XE	102	THR	N-CA-C	-6.96	106.69	114.62
10	RJ	7	LYS	CA-C-N	6.96	126.58	119.56
10	RJ	7	LYS	C-N-CA	6.96	126.58	119.56
38	XG	86	VAL	CA-C-N	6.93	127.34	119.92
38	XG	86	VAL	C-N-CA	6.93	127.34	119.92
34	QC	184	ASN	N-CA-C	6.90	118.26	108.74
24	YX	19	HIS	N-CA-C	-6.75	101.59	110.43
24	RX	54	GLY	N-CA-C	-6.74	104.49	112.64
3	YC	44	ASN	N-CA-C	-6.71	103.90	111.14
14	RN	79	LEU	N-CA-C	-6.68	101.27	110.35
13	YM	118	LYS	N-CA-C	-6.65	105.80	114.04
10	YJ	27	ARG	N-CA-C	-6.64	104.99	113.23
26	YZ	33	HIS	N-CA-C	-6.54	105.41	113.19
45	XN	92	ILE	CA-C-N	6.50	126.85	119.83
45	XN	92	ILE	C-N-CA	6.50	126.85	119.83
16	RP	49	ILE	N-CA-C	6.50	117.48	108.12
36	QE	111	ARG	N-CA-C	-6.50	105.27	113.72
16	YP	60	VAL	N-CA-C	6.49	117.03	106.72
10	RJ	82	GLY	N-CA-C	-6.47	97.85	113.18
33	QB	83	ALA	N-CA-C	-6.44	104.47	112.90
24	RX	52	ALA	N-CA-C	-6.43	101.60	110.35
11	YK	47	ILE	CA-C-N	6.41	127.86	119.84
11	YK	47	ILE	C-N-CA	6.41	127.86	119.84
4	YD	113	SER	N-CA-C	6.39	118.01	107.73
23	RW	38	ARG	N-CA-C	-6.37	102.45	111.56
21	RU	5	ARG	N-CA-C	6.33	118.81	108.55
26	RZ	8	GLN	N-CA-C	6.31	117.95	111.14
7	RG	82	PHE	N-CA-C	6.29	119.66	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	XT	5	SER	N-CA-C	-6.25	105.52	113.02
3	RC	12	ARG	N-CA-C	-6.22	105.59	113.43
21	RU	80	ASP	N-CA-C	6.22	122.59	114.75
3	YC	63	ILE	N-CA-C	6.22	116.26	110.42
35	XD	166	LYS	CA-C-N	6.21	127.60	119.84
35	XD	166	LYS	C-N-CA	6.21	127.60	119.84
13	RM	108	VAL	CA-C-N	6.20	126.53	119.83
13	RM	108	VAL	C-N-CA	6.20	126.53	119.83
18	RR	90	ARG	N-CA-C	6.17	120.39	112.12
5	RE	146	VAL	N-CA-C	6.15	119.11	108.90
37	QF	17	GLN	N-CA-C	-6.14	106.05	112.93
13	RM	83	GLY	N-CA-C	6.13	122.22	114.25
5	YE	39	ALA	N-CA-C	-6.12	105.80	113.20
10	RJ	27	ARG	N-CA-C	-6.11	104.90	112.90
3	RC	63	ILE	N-CA-C	6.10	116.26	110.53
50	QS	4	LEU	N-CA-C	6.09	119.54	111.75
10	RJ	25	LEU	CA-C-N	-6.06	116.88	123.30
10	RJ	25	LEU	C-N-CA	-6.06	116.88	123.30
4	YD	151	THR	CA-C-N	-6.04	112.30	119.84
4	YD	151	THR	C-N-CA	-6.04	112.30	119.84
10	RJ	96	ARG	CA-C-N	6.01	125.72	119.05
10	RJ	96	ARG	C-N-CA	6.01	125.72	119.05
39	QH	2	MET	N-CA-C	-6.01	105.66	112.87
37	QF	66	ALA	N-CA-C	5.95	113.57	108.22
43	QL	23	LEU	N-CA-C	5.94	123.46	110.80
20	RT	72	GLN	N-CA-C	-5.94	106.17	113.41
8	YH	109	GLU	N-CA-C	5.92	119.61	108.65
8	RH	13	GLY	N-CA-C	5.92	118.28	111.36
17	RQ	24	TYR	N-CA-C	5.91	118.83	109.96
13	RM	76	LYS	CA-C-N	5.88	127.19	119.84
13	RM	76	LYS	C-N-CA	5.88	127.19	119.84
51	XT	33	LYS	N-CA-C	-5.88	105.20	112.90
25	RY	56	LEU	N-CA-C	-5.87	102.23	110.50
23	RW	21	GLY	N-CA-C	-5.86	102.23	112.55
20	RT	32	LEU	N-CA-C	5.85	117.30	108.46
14	YN	5	LYS	N-CA-C	-5.84	103.23	110.41
8	RH	98	ASP	N-CA-C	5.81	117.88	110.61
16	RP	77	SER	CA-C-N	5.81	125.67	119.28
16	RP	77	SER	C-N-CA	5.81	125.67	119.28
51	QT	70	LYS	N-CA-C	-5.81	104.86	111.14
34	QC	5	HIS	CA-C-N	5.80	125.48	119.56
34	QC	5	HIS	C-N-CA	5.80	125.48	119.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	RP	19	PHE	CB-CA-C	-5.79	103.64	115.28
13	YM	76	LYS	CA-C-N	5.78	127.07	119.84
13	YM	76	LYS	C-N-CA	5.78	127.07	119.84
16	RP	25	VAL	N-CA-C	5.78	121.35	109.34
51	XT	74	HIS	N-CA-C	-5.76	106.17	113.43
23	RW	77	LYS	N-CA-C	5.76	120.37	111.56
13	RM	42	THR	N-CA-C	5.71	117.29	110.44
16	RP	35	SER	N-CA-C	-5.69	105.99	114.64
51	QT	66	ILE	N-CA-C	-5.69	107.73	113.47
12	RL	101	ILE	N-CA-C	5.68	116.82	111.48
33	XB	10	LYS	N-CA-C	-5.67	104.89	113.51
35	QD	194	ILE	N-CA-C	5.67	115.76	107.37
10	RJ	41	LYS	N-CA-C	5.67	122.87	110.80
22	RV	29	ILE	N-CA-C	5.67	115.80	107.75
3	RC	20	ASN	CA-C-N	5.66	125.77	119.32
3	RC	20	ASN	C-N-CA	5.66	125.77	119.32
38	XG	86	VAL	N-CA-C	5.65	112.70	107.56
9	YI	54	ILE	CA-C-N	5.65	125.62	120.03
9	YI	54	ILE	C-N-CA	5.65	125.62	120.03
39	QH	47	ASP	N-CA-C	5.64	117.11	108.42
10	RJ	124	VAL	N-CA-C	5.64	121.07	109.34
9	YI	21	PRO	N-CA-C	5.64	117.58	110.70
11	RK	121	GLU	N-CA-C	5.63	117.53	109.14
43	XL	40	THR	CA-C-N	5.63	125.95	119.92
43	XL	40	THR	C-N-CA	5.63	125.95	119.92
15	RO	105	ALA	N-CA-C	-5.61	103.08	110.43
24	YX	29	LEU	N-CA-C	5.59	113.25	108.22
35	QD	166	LYS	CA-C-N	5.58	126.82	119.84
35	QD	166	LYS	C-N-CA	5.58	126.82	119.84
16	YP	3	ILE	N-CA-C	-5.58	108.06	113.53
29	Y2	6	GLN	CA-C-N	5.57	125.33	119.76
29	Y2	6	GLN	C-N-CA	5.57	125.33	119.76
38	XG	122	GLU	N-CA-C	-5.56	107.74	114.75
35	QD	89	LEU	N-CA-C	-5.55	105.23	111.28
33	QB	136	ARG	N-CA-C	-5.55	106.21	114.64
39	QH	55	LYS	CA-C-N	5.55	126.77	119.84
39	QH	55	LYS	C-N-CA	5.55	126.77	119.84
20	RT	54	GLU	N-CA-C	5.54	118.17	111.40
45	QN	92	ILE	CA-C-N	5.54	125.47	119.76
45	QN	92	ILE	C-N-CA	5.54	125.47	119.76
5	RE	58	LYS	CA-C-N	5.53	126.76	119.84
5	RE	58	LYS	C-N-CA	5.53	126.76	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
40	XI	123	ARG	CA-C-N	5.50	125.44	119.78
40	XI	123	ARG	C-N-CA	5.50	125.44	119.78
51	XT	45	ALA	N-CA-C	-5.50	106.34	113.16
24	YX	52	ALA	N-CA-C	-5.50	102.75	110.50
3	RC	83	ASP	CA-C-N	5.49	125.58	119.87
3	RC	83	ASP	C-N-CA	5.49	125.58	119.87
43	XL	89	LEU	CA-C-N	5.49	126.98	120.23
43	XL	89	LEU	C-N-CA	5.49	126.98	120.23
25	RY	16	THR	N-CA-C	-5.48	105.20	111.07
37	XF	30	THR	N-CA-C	-5.48	106.57	113.20
17	RQ	39	ILE	N-CA-C	5.48	116.11	110.36
10	RJ	109	LEU	CA-C-N	5.47	125.47	119.89
10	RJ	109	LEU	C-N-CA	5.47	125.47	119.89
33	QB	79	VAL	N-CA-C	-5.46	107.50	112.96
8	YH	112	LYS	N-CA-C	5.45	118.58	109.96
43	QL	22	ALA	CA-C-N	5.44	131.93	121.54
43	QL	22	ALA	C-N-CA	5.44	131.93	121.54
5	RE	38	GLY	N-CA-C	-5.42	108.25	115.40
12	YL	53	GLY	N-CA-C	-5.41	107.79	113.58
20	RT	13	ALA	N-CA-C	5.41	113.00	108.13
21	RU	100	GLU	N-CA-C	5.40	118.08	111.82
4	RD	109	VAL	N-CA-C	5.39	120.56	109.34
19	YS	46	LEU	N-CA-C	-5.39	105.82	112.72
50	XS	20	LYS	N-CA-C	-5.38	107.37	114.31
43	QL	26	CYS	CA-C-N	5.37	126.56	119.84
43	QL	26	CYS	C-N-CA	5.37	126.56	119.84
9	YI	105	LEU	N-CA-C	-5.37	106.50	113.16
6	YF	53	ALA	N-CA-C	-5.37	106.56	113.01
19	RS	24	ILE	N-CA-C	-5.37	107.58	113.43
10	RJ	111	LYS	N-CA-C	5.36	122.22	110.80
16	YP	16	VAL	CA-C-N	5.35	126.53	119.84
16	YP	16	VAL	C-N-CA	5.35	126.53	119.84
14	YN	22	ARG	N-CA-C	-5.34	105.82	114.09
4	RD	171	THR	CA-C-N	-5.33	117.69	123.08
4	RD	171	THR	C-N-CA	-5.33	117.69	123.08
3	RC	198	GLU	N-CA-C	-5.33	106.28	112.89
35	XD	22	SER	N-CA-C	5.31	117.95	110.14
23	RW	75	ASN	CB-CA-C	-5.31	110.43	116.54
6	RF	163	GLU	N-CA-C	-5.31	104.74	111.11
29	R2	43	THR	N-CA-C	5.31	122.11	110.80
6	YF	137	PHE	CA-C-N	5.31	126.47	119.84
6	YF	137	PHE	C-N-CA	5.31	126.47	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	YG	3	VAL	N-CA-C	-5.31	108.67	113.71
4	RD	54	ALA	N-CA-C	-5.30	100.46	108.46
9	RI	56	VAL	N-CA-C	5.29	114.16	107.70
10	RJ	72	LYS	N-CA-C	5.29	118.31	110.48
4	RD	10	GLY	N-CA-C	5.28	125.69	113.18
11	RK	2	ILE	N-CA-C	5.28	120.33	109.34
36	XE	122	VAL	N-CA-C	5.28	115.50	108.11
5	YE	157	LEU	N-CA-C	-5.28	105.70	111.82
4	YD	153	GLY	N-CA-C	-5.27	107.97	115.30
4	RD	152	PRO	N-CA-C	-5.27	107.27	113.86
10	RJ	42	ALA	N-CA-C	-5.27	99.58	110.80
17	YQ	95	ALA	N-CA-C	-5.27	106.72	112.72
36	QE	16	ALA	N-CA-C	5.26	116.95	108.32
3	RC	143	VAL	CB-CA-C	-5.25	103.79	110.98
43	XL	73	LEU	N-CA-C	5.25	117.78	109.96
14	YN	98	LEU	N-CA-C	5.25	117.05	110.91
31	R4	28	SER	N-CA-C	-5.24	106.73	113.23
33	QB	106	VAL	N-CA-C	-5.24	108.73	113.71
13	RM	89	VAL	CB-CA-C	-5.24	104.31	111.33
22	RV	32	GLY	N-CA-C	-5.24	106.42	112.29
11	RK	68	GLY	N-CA-C	5.24	117.89	111.45
7	YG	163	TYR	N-CA-C	5.24	116.60	107.49
3	YC	93	VAL	N-CA-C	5.23	116.64	111.67
39	XH	4	ASP	CA-C-N	5.22	124.72	119.19
39	XH	4	ASP	C-N-CA	5.22	124.72	119.19
40	QI	97	LEU	N-CA-C	-5.19	106.45	112.89
14	YN	76	VAL	N-CA-C	-5.18	105.30	112.50
28	Y1	22	THR	N-CA-C	5.18	114.97	108.45
39	QH	126	CYS	N-CA-C	5.17	115.36	108.38
16	YP	49	ILE	N-CA-C	5.17	115.41	108.17
24	YX	55	MET	N-CA-C	-5.17	106.06	112.93
34	QC	98	ALA	N-CA-C	5.16	116.59	107.61
3	RC	155	ARG	N-CA-C	-5.16	106.91	114.39
36	XE	156	ARG	N-CA-C	-5.16	102.83	110.46
3	RC	211	ARG	N-CA-C	-5.14	105.58	111.14
21	RU	53	GLN	CA-C-N	-5.14	113.41	119.84
21	RU	53	GLN	C-N-CA	-5.14	113.41	119.84
12	RL	21	ARG	N-CA-C	5.13	116.60	110.44
33	XB	115	ASP	N-CA-C	-5.13	106.97	113.18
18	RR	86	GLN	N-CA-C	-5.12	101.81	109.95
39	XH	3	GLN	N-CA-C	-5.11	105.89	111.82
12	RL	35	HIS	N-CA-C	5.11	116.96	108.02

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	YC	216	ARG	CA-C-N	5.11	126.23	119.84
3	YC	216	ARG	C-N-CA	5.11	126.23	119.84
31	R4	4	ARG	N-CA-C	5.11	121.67	110.80
36	QE	92	ARG	N-CA-C	-5.11	101.37	109.59
7	RG	56	GLY	N-CA-C	-5.09	107.63	114.25
14	RN	108	ALA	CA-C-N	5.08	125.87	119.98
14	RN	108	ALA	C-N-CA	5.08	125.87	119.98
7	RG	124	CYS	CA-C-N	5.07	124.86	119.28
7	RG	124	CYS	C-N-CA	5.07	124.86	119.28
21	RU	75	ALA	N-CA-C	-5.07	106.44	113.18
39	QH	91	LEU	CA-C-N	5.07	125.86	120.13
39	QH	91	LEU	C-N-CA	5.07	125.86	120.13
7	YG	124	CYS	CA-C-N	5.07	126.17	119.84
7	YG	124	CYS	C-N-CA	5.07	126.17	119.84
3	RC	92	LEU	CA-C-N	-5.07	117.79	123.16
3	RC	92	LEU	C-N-CA	-5.07	117.79	123.16
5	RE	115	GLN	N-CA-C	-5.07	106.94	113.02
3	RC	58	LYS	N-CA-C	5.06	117.77	111.24
43	QL	115	LYS	N-CA-C	-5.05	103.00	110.48
39	QH	100	ILE	N-CA-C	5.05	116.17	108.80
20	YT	85	VAL	N-CA-C	5.05	115.28	110.53
44	QM	106	ARG	N-CA-C	5.04	117.50	111.71
25	RY	11	VAL	N-CA-C	-5.03	105.94	110.82
3	YC	199	HIS	N-CA-C	-5.03	108.42	114.75
28	Y1	39	ASP	N-CA-C	5.01	112.73	108.22
33	XB	104	LYS	N-CA-C	-5.01	106.27	112.38
4	RD	30	GLU	N-CA-C	-5.00	103.93	110.53

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
30	R3	29	ARG	Peptide
4	RD	9	VAL	Peptide
10	RJ	110	PRO	Peptide
14	RN	101	GLY	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	RA	61274	0	30819	1808	0
1	YA	60995	0	30679	3670	0
2	RB	2529	0	1281	58	0
2	YB	2507	0	1270	166	0
3	RC	2082	0	2157	212	0
3	YC	2082	0	2157	232	0
4	RD	1565	0	1616	211	0
4	YD	1565	0	1616	210	0
5	RE	1552	0	1619	159	0
5	YE	1552	0	1619	197	0
6	RF	1410	0	1447	133	0
6	YF	1420	0	1460	170	0
7	RG	1323	0	1374	144	0
7	YG	1323	0	1374	149	0
8	RH	1111	0	1148	105	0
8	YH	1111	0	1148	128	0
9	RI	1032	0	1088	113	0
9	YI	1032	0	1088	86	0
10	RJ	1129	0	1162	157	0
10	YJ	1129	0	1162	137	0
11	RK	938	0	1012	99	0
11	YK	938	0	1012	112	0
12	RL	1045	0	1117	115	0
12	YL	1045	0	1117	147	0
13	RM	1074	0	1157	101	0
13	YM	1074	0	1157	101	0
14	RN	960	0	1000	81	0
14	YN	960	0	1000	148	0
15	RO	892	0	923	53	0
15	YO	892	0	923	79	0
16	RP	917	0	965	128	0
16	YP	917	0	965	126	0
17	RQ	947	0	1022	145	0
17	YQ	947	0	1022	127	0
18	RR	816	0	839	105	0
18	YR	816	0	839	97	0
19	RS	857	0	922	84	0
19	YS	857	0	922	70	0
20	RT	738	0	807	113	0
20	YT	738	0	807	109	0
21	RU	779	0	834	65	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
21	YU	779	0	834	101	0
22	RV	753	0	780	53	0
22	YV	753	0	780	70	0
23	RW	596	0	610	196	0
23	YW	596	0	610	132	0
24	RX	625	0	655	57	0
24	YX	625	0	655	81	0
25	RY	509	0	543	45	0
25	YY	509	0	543	82	0
26	RZ	449	0	491	37	0
26	YZ	449	0	491	50	0
27	R0	444	0	461	30	0
27	Y0	444	0	461	56	0
28	R1	409	0	440	47	0
28	Y1	409	0	440	41	0
29	R2	377	0	418	28	0
29	Y2	377	0	418	53	0
30	R3	504	0	574	43	0
30	Y3	504	0	574	57	0
31	R4	302	0	340	29	0
31	Y4	302	0	342	24	0
32	QA	32895	0	16553	1244	0
32	XA	32831	0	16521	1591	0
33	QB	1704	0	1732	236	0
33	XB	1704	0	1732	177	0
34	QC	1624	0	1699	117	0
34	XC	1624	0	1699	130	0
35	QD	1643	0	1710	160	0
35	XD	1643	0	1710	162	0
36	QE	1105	0	1148	144	0
36	XE	1105	0	1148	108	0
37	QF	817	0	808	89	0
37	XF	817	0	808	93	0
38	QG	1181	0	1240	101	0
38	XG	1174	0	1230	133	0
39	QH	979	0	1034	96	0
39	XH	979	0	1034	101	0
40	QI	1022	0	1070	107	0
40	XI	1022	0	1070	134	0
41	QJ	786	0	828	99	0
41	XJ	786	0	828	97	0
42	QK	877	0	887	89	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
42	XK	877	0	887	78	0
43	QL	955	0	1019	90	0
43	XL	955	0	1019	91	0
44	QM	883	0	944	71	0
44	XM	876	0	937	109	0
45	QN	774	0	827	83	0
45	XN	735	0	790	102	0
46	QO	714	0	737	59	0
46	XO	714	0	737	47	0
47	QP	649	0	666	51	0
47	XP	638	0	656	49	0
48	QQ	648	0	691	92	0
48	XQ	648	0	691	54	0
49	QR	455	0	478	25	0
49	XR	455	0	478	43	0
50	QS	637	0	665	61	0
50	XS	637	0	665	88	0
51	QT	665	0	714	87	0
51	XT	665	0	714	47	0
52	QU	425	0	449	82	0
52	XU	425	0	449	82	0
53	QA	43	0	0	0	0
53	RA	135	0	0	0	0
53	RB	4	0	0	0	0
53	XA	42	0	0	0	0
53	YA	134	0	0	0	0
53	YB	1	0	0	0	0
53	YE	1	0	0	0	0
53	YJ	1	0	0	0	0
54	RA	60	0	65	4	0
55	R4	1	0	0	0	0
55	Y4	1	0	0	0	0
56	QA	200	0	0	4	0
56	QL	1	0	0	0	0
56	QN	5	0	0	1	0
56	QT	1	0	0	0	0
56	QU	1	0	0	0	0
56	R2	1	0	0	0	0
56	R3	2	0	0	0	0
56	R4	2	0	0	0	0
56	RA	606	0	0	39	0
56	RB	20	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	RC	9	0	0	0	0
56	RD	1	0	0	0	0
56	RL	4	0	0	0	0
56	RN	3	0	0	0	0
56	RT	2	0	0	0	0
56	XA	194	0	0	7	0
56	XE	5	0	0	1	0
56	XI	1	0	0	0	0
56	XL	1	0	0	0	0
56	XN	3	0	0	0	0
56	XT	2	0	0	0	0
56	XU	1	0	0	0	0
56	Y2	1	0	0	1	0
56	Y3	1	0	0	0	0
56	Y4	5	0	0	0	0
56	YA	605	0	0	35	0
56	YB	4	0	0	1	0
56	YC	8	0	0	0	0
56	YD	3	0	0	0	0
56	YE	3	0	0	0	0
56	YJ	3	0	0	0	0
56	YL	4	0	0	0	0
56	YN	1	0	0	0	0
56	YT	2	0	0	0	0
56	YU	2	0	0	0	0
56	YV	1	0	0	0	0
All	All	284464	0	190873	16909	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 36.

All (16909) 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)
17:RQ:63:ARG:NH1	17:RQ:96:ASP:HA	1.42	1.33
43:XL:43:LYS:HB3	43:XL:44:PRO:HD2	1.18	1.17
1:RA:1073:A:H3'	1:RA:1074:G:H5"	1.20	1.17
32:XA:120:A:C3'	32:XA:121:U:H5"	1.75	1.17
37:QF:16:GLU:HG2	35:XD:191:SER:HB2	1.20	1.17
35:XD:2:ARG:HH21	35:XD:114:ARG:HD3	1.05	1.16
32:QA:1468:A:H2'	32:QA:1469:C:H5"	1.25	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:216:A:O2'	1:YA:217:A:H8	1.31	1.14
8:RH:31:VAL:HB	8:RH:32:PRO:HD2	1.30	1.13
16:RP:50:ARG:HB3	16:RP:57:ALA:H	1.12	1.13
32:QA:982:U:H4'	32:QA:983:A:O5'	1.35	1.13
43:QL:49:ARG:HH11	43:QL:49:ARG:HG2	1.06	1.12
1:YA:397:U:OP1	24:YX:30:PRO:HA	1.48	1.12
17:RQ:63:ARG:HH12	17:RQ:96:ASP:CA	1.63	1.12
6:RF:35:LEU:HB3	6:RF:153:ILE:HG22	1.26	1.11
17:YQ:87:VAL:HG21	18:YR:52:PRO:HD3	1.32	1.11
10:RJ:81:ILE:HG23	10:RJ:82:GLY:H	1.09	1.11
23:RW:76:ARG:HH21	23:RW:76:ARG:HG3	1.15	1.11
1:YA:1565:C:H3'	3:YC:17:LYS:HE2	1.29	1.11
18:RR:49:ILE:HD12	18:RR:52:PRO:HA	1.33	1.11
2:YB:12:C:H4'	2:YB:13:G:OP1	1.33	1.11
37:QF:38:ARG:HH11	37:QF:38:ARG:HG2	1.14	1.10
10:RJ:44:TYR:HB2	17:RQ:63:ARG:HB3	1.27	1.10
32:XA:1278:G:H4'	32:XA:1279:G:O5'	1.46	1.10
23:RW:18:LYS:HA	23:RW:36:ILE:HG13	1.30	1.10
52:XU:16:ARG:HG3	52:XU:19:LYS:HG2	1.32	1.10
37:XF:86:ARG:NH1	49:XR:63:TYR:HB3	1.64	1.09
1:YA:454:A:H4'	1:YA:455:C:OP2	1.47	1.09
32:XA:1183:U:H3'	32:XA:1184:G:H5"	1.23	1.09
16:RP:4:ILE:HG22	16:RP:5:LYS:H	1.06	1.09
46:QO:63:ARG:HG2	46:QO:87:ARG:HH12	1.18	1.08
32:XA:6:G:N3	32:XA:6:G:H2'	1.53	1.08
1:RA:271:G:H4'	1:RA:272:A:OP1	1.44	1.08
1:YA:1489:C:H4'	1:YA:1490:A:OP1	1.36	1.08
1:RA:2800:A:H4'	1:RA:2801:G:OP2	1.31	1.07
30:R3:31:ILE:HD11	30:R3:34:LYS:HD2	1.36	1.07
1:YA:1817:G:O2'	1:YA:1818:U:H5'	1.53	1.07
2:YB:56:G:H4'	2:YB:57:A:O5'	1.48	1.07
40:XI:71:ILE:HD12	40:XI:72:SER:H	1.20	1.07
16:RP:50:ARG:CB	16:RP:57:ALA:H	1.67	1.07
33:QB:185:ILE:HD11	33:QB:203:ASP:HA	1.35	1.06
36:XE:29:ILE:HG23	36:XE:30:PHE:N	1.68	1.06
46:QO:63:ARG:HD3	46:QO:87:ARG:HH22	1.15	1.06
43:XL:43:LYS:HB3	43:XL:44:PRO:CD	1.85	1.06
10:RJ:6:ALA:HB3	10:RJ:45:THR:HG21	1.36	1.06
10:RJ:111:LYS:HD3	10:RJ:112:GLY:H	1.18	1.05
32:XA:120:A:H3'	32:XA:121:U:H5"	1.34	1.05
32:XA:1224:U:H5'	32:XA:1225:A:OP2	1.56	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1552:A:O2'	1:YA:1553:A:H5'	1.54	1.05
17:YQ:4:LYS:HE3	17:YQ:7:VAL:HG13	1.36	1.05
7:RG:84:LYS:HG3	7:RG:132:LEU:H	1.18	1.05
3:YC:144:GLU:HA	3:YC:151:GLY:HA2	1.36	1.05
4:RD:106:LYS:HB3	4:RD:206:ALA:HB3	1.35	1.05
23:RW:28:GLU:HB3	23:RW:31:LEU:HD21	1.35	1.05
23:YW:40:ARG:HH11	23:YW:40:ARG:HG2	0.92	1.05
28:Y1:7:LYS:HD3	30:Y3:33:THR:HG21	1.28	1.05
1:YA:1032:A:H1'	31:Y4:23:ILE:HD13	1.38	1.04
1:YA:2346:A:H3'	1:YA:2347:C:H5"	1.35	1.04
6:YF:28:PRO:HB2	6:YF:168:LEU:HD21	1.37	1.04
1:RA:1179:G:H3'	1:RA:1180:U:H4'	1.32	1.04
1:YA:249:C:H5'	1:YA:2394:C:O2'	1.58	1.04
1:YA:975:A:O2'	1:YA:976:G:H8	1.38	1.04
18:YR:39:LEU:HA	18:YR:49:ILE:HG21	1.39	1.04
32:QA:1129:C:H5"	40:QI:17:ARG:HH22	0.94	1.04
51:QT:43:LYS:HB3	51:QT:86:ALA:HB1	1.37	1.04
32:XA:701:U:O2'	32:XA:702:A:OP2	1.73	1.04
11:RK:18:ARG:HH11	11:RK:18:ARG:HG3	1.16	1.04
1:RA:1060:U:H4'	1:RA:1061:U:H5'	1.33	1.04
32:XA:1157:A:H4'	32:XA:1158:C:O5'	1.53	1.04
32:XA:1329:A:H5"	44:XM:25:GLY:H	1.18	1.04
1:YA:227:A:H4'	1:YA:228:C:OP1	1.54	1.03
1:YA:1537:G:C2'	1:YA:1538:G:H4'	1.88	1.03
32:QA:484:G:H4'	32:QA:485:U:O5'	1.58	1.03
3:YC:128:THR:HG22	3:YC:188:ARG:HB3	1.40	1.03
7:RG:84:LYS:HG3	7:RG:132:LEU:N	1.73	1.03
5:RE:44:ARG:HG3	5:RE:44:ARG:HH21	1.24	1.03
1:YA:1913:A:H4'	1:YA:1914:C:OP1	1.52	1.03
1:RA:1458:U:H4'	1:RA:1459:G:O5'	1.56	1.02
36:XE:29:ILE:HG23	36:XE:30:PHE:H	0.90	1.02
51:XT:73:ARG:HH11	51:XT:73:ARG:HG2	1.24	1.02
1:YA:1237:A:C2	1:YA:1238:G:H1'	1.94	1.02
1:YA:1385:A:H4'	1:YA:1386:C:OP1	1.52	1.02
32:QA:1101:A:H4'	32:QA:1102:A:O5'	1.54	1.02
1:YA:197:A:H62	1:YA:2430:A:H2'	1.17	1.02
1:YA:2023:C:HO2'	1:YA:2024:G:H8	1.07	1.02
1:YA:2838:G:H1'	14:YN:45:ARG:HH22	1.20	1.02
1:RA:335:C:H5"	21:RU:81:ARG:HD3	1.37	1.02
1:RA:2577:A:H5"	1:RA:2578:G:H5'	1.40	1.02
1:RA:1179:G:C6	1:RA:1180:U:H1'	1.94	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:RJ:111:LYS:CD	10:RJ:112:GLY:H	1.72	1.02
41:QJ:53:ILE:HG22	41:QJ:61:ALA:HB1	1.40	1.02
1:RA:1179:G:C5	1:RA:1180:U:H1'	1.95	1.01
1:RA:1509:A:H1'	1:RA:1510:G:H5'	1.41	1.01
32:QA:1468:A:C2'	32:QA:1469:C:H5"	1.90	1.01
32:QA:204:G:H3'	32:QA:205:A:H5"	1.36	1.01
32:QA:486:U:C6	32:QA:486:U:H5"	1.94	1.01
35:QD:25:ARG:HH11	35:QD:30:LYS:HE3	1.20	1.01
52:QU:33:ARG:HE	52:QU:34:ARG:HG3	1.24	1.01
1:YA:2216:G:H2'	1:YA:2217:G:H8	1.24	1.01
3:YC:145:MET:HE3	3:YC:181:ARG:HH22	1.24	1.01
5:YE:108:ILE:HD11	5:YE:181:ILE:HB	1.38	1.01
14:YN:37:THR:HG22	14:YN:39:PRO:HD2	1.41	1.01
23:YW:28:GLU:H	23:YW:31:LEU:HD21	1.19	1.01
10:RJ:130:HIS:HD2	10:RJ:132:HIS:H	1.06	1.01
17:RQ:69:ARG:HH21	17:RQ:69:ARG:HB2	1.22	1.01
32:XA:1182:G:H4'	32:XA:1183:U:H5'	1.42	1.01
44:XM:78:ARG:HH21	44:XM:79:LEU:HD23	1.26	1.01
1:YA:297:G:H5"	21:YU:84:PHE:HB2	1.37	1.01
1:YA:1808:A:H3'	1:YA:1809:A:H8	1.23	1.01
18:RR:42:ALA:HA	18:RR:46:GLU:HB2	1.39	1.01
22:RV:80:HIS:HD2	22:RV:83:LYS:HB2	1.25	1.01
3:YC:146:LYS:HB2	3:YC:149:LYS:HB2	1.42	1.01
1:RA:1073:A:H3'	1:RA:1074:G:C5'	1.90	1.01
1:RA:2355:G:H4'	23:RW:20:LEU:HD13	1.42	1.01
1:YA:996:A:H4'	17:YQ:91:ARG:HD2	1.42	1.01
1:YA:1809:A:O2'	1:YA:1810:A:H8	1.43	1.01
17:YQ:61:ILE:HD11	17:YQ:92:LYS:HD3	1.42	1.01
14:RN:103:ARG:HD3	14:RN:110:MET:HE3	1.41	1.00
37:XF:86:ARG:HH11	49:XR:63:TYR:HB3	1.26	1.00
1:YA:2822:G:H5"	4:YD:164:GLN:HE22	1.25	1.00
5:YE:130:LYS:HB3	5:YE:133:LEU:HB3	1.43	1.00
10:YJ:44:TYR:HB2	17:YQ:63:ARG:CZ	1.89	1.00
50:QS:28:LYS:HB3	50:QS:29:PRO:HD2	1.40	1.00
1:YA:1537:G:H2'	1:YA:1538:G:H4'	1.37	1.00
32:XA:1074:G:H4'	33:XB:101:THR:O	1.60	1.00
36:QE:81:GLN:NE2	36:QE:81:GLN:H	1.60	1.00
32:XA:202:G:HO2'	32:XA:468:A:H8	1.05	1.00
32:QA:975:A:H4'	32:QA:976:G:H5'	1.43	0.99
1:YA:1458:U:O3'	1:YA:1459:G:H4'	1.60	0.99
23:RW:39:GLN:HG2	23:RW:41:GLY:H	1.24	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:XK:74:LYS:HA	42:XK:78:ILE:HD11	1.44	0.99
12:RL:93:ASN:HD22	12:RL:94:THR:N	1.59	0.99
33:QB:209:VAL:HG23	33:QB:210:THR:H	1.28	0.99
33:XB:114:LYS:HA	33:XB:117:GLU:HG2	1.44	0.99
32:QA:486:U:H5"	32:QA:486:U:H6	1.22	0.99
32:QA:841:C:C2	32:QA:843:U:H5'	1.98	0.99
36:QE:158:LYS:HE2	39:QH:63:LYS:HZ1	1.22	0.99
41:QJ:57:VAL:HG22	41:QJ:58:ASN:H	1.27	0.99
1:YA:1056:G:H1'	1:YA:1103:A:H61	1.28	0.99
32:XA:330:C:O2'	32:XA:331:G:H8	1.41	0.99
38:QG:114:SER:HB3	38:QG:117:LEU:HG	1.44	0.99
1:YA:1447:C:H2'	1:YA:1448:G:C8	1.98	0.99
36:XE:76:ASN:O	36:XE:79:THR:HG22	1.62	0.99
42:XK:70:ALA:HA	42:XK:73:VAL:HG22	1.44	0.98
27:Y0:28:SER:HB3	27:Y0:39:ARG:HE	1.27	0.98
1:RA:2352:A:C2	23:RW:30:VAL:HG11	1.98	0.98
13:RM:1:MET:HE3	13:RM:2:LEU:H	1.26	0.98
32:XA:532:A:C8	34:XC:192:TYR:HE2	1.81	0.98
2:YB:57:A:O2'	2:YB:58:A:H8	1.45	0.98
16:YP:91:VAL:HG22	16:YP:109:ILE:HG21	1.41	0.98
47:QP:4:ILE:HG12	47:QP:21:VAL:HG22	1.44	0.98
32:XA:209:U:H5"	32:XA:210:C:OP2	1.63	0.98
2:YB:42:C:O2'	2:YB:43:C:H5'	1.63	0.98
1:YA:2297:A:O2'	1:YA:2298:A:H8	1.43	0.98
12:YL:48:ARG:HH11	12:YL:48:ARG:HG3	1.28	0.98
1:YA:491:G:H2'	1:YA:492:A:C8	1.98	0.98
1:RA:1654:A:O2'	4:RD:118:PHE:CG	2.16	0.97
1:RA:2346:A:H3'	1:RA:2347:C:H5"	1.44	0.97
48:QQ:18:LYS:HA	48:QQ:47:ASP:HB2	1.46	0.97
35:XD:2:ARG:NH2	35:XD:114:ARG:HD3	1.77	0.97
31:R4:9:LYS:HD3	31:R4:9:LYS:H	1.28	0.97
32:QA:978:A:HO2'	32:QA:1322:C:H5	1.09	0.97
23:YW:37:VAL:HG23	23:YW:38:ARG:HD2	1.46	0.97
1:YA:2267:A:H61	1:YA:2272:U:H3	1.11	0.97
1:YA:2776:A:H4'	1:YA:2777:G:O5'	1.60	0.97
32:QA:451:A:H4'	32:QA:452:A:O5'	1.58	0.97
1:YA:49:A:H4'	1:YA:50:U:O5'	1.63	0.97
1:YA:483:A:H2'	1:YA:484:C:H6	1.24	0.97
1:YA:867:C:O2'	1:YA:868:U:H6	1.46	0.97
9:YI:52:LEU:HD12	9:YI:53:PRO:HD2	1.44	0.97
23:YW:18:LYS:HD3	23:YW:19:ARG:H	1.29	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1079:C:H41	1:YA:1088:A:H5"	1.24	0.96
1:RA:243:U:OP1	30:R3:5:THR:HG21	1.64	0.96
10:RJ:55:ILE:HD11	10:RJ:57:LEU:HD22	1.44	0.96
17:RQ:65:ASN:HD21	17:RQ:69:ARG:HH22	1.11	0.96
32:XA:702:A:H8	32:XA:702:A:OP1	1.47	0.96
1:YA:647:G:H2'	1:YA:648:G:H8	1.30	0.96
7:YG:93:TYR:HD2	7:YG:93:TYR:H	1.04	0.96
39:XH:103:VAL:HG12	39:XH:124:ILE:HA	1.46	0.96
32:XA:1151:A:O2'	32:XA:1152:A:H8	1.46	0.96
1:YA:873:C:H4'	13:YM:64:TRP:HE1	1.31	0.96
21:YU:14:THR:HG23	21:YU:15:GLY:H	1.29	0.96
32:QA:1129:C:H5"	40:QI:17:ARG:NH2	1.79	0.96
1:YA:2311:A:H5'	1:YA:2312:U:C6	2.00	0.96
1:RA:265:A:H4'	1:RA:266:G:OP1	1.62	0.96
1:YA:1662:U:H2'	1:YA:1663:G:H5"	1.45	0.96
5:RE:119:ILE:HD11	5:RE:187:VAL:HG22	1.47	0.96
22:YV:77:VAL:HA	22:YV:89:ILE:HG22	1.48	0.96
1:RA:636:G:C5	12:RL:111:ILE:HD11	2.00	0.96
1:RA:780:G:H21	1:RA:783:A:H62	1.09	0.96
1:RA:1535:A:H4'	1:RA:1536:C:OP2	1.66	0.96
1:YA:627:A:H2'	12:YL:78:ARG:HH11	1.31	0.96
1:YA:1847:A:HO2'	1:YA:1848:A:H8	1.10	0.96
1:YA:215:G:H4'	1:YA:216:A:OP1	1.62	0.95
4:RD:118:PHE:HD2	4:RD:119:ALA:H	1.05	0.95
1:YA:2216:G:H2'	1:YA:2217:G:C8	1.99	0.95
1:RA:1073:A:C3'	1:RA:1074:G:H5"	1.96	0.95
32:XA:82:G:H2'	32:XA:83:C:H4'	1.49	0.95
36:QE:11:GLN:HE21	36:QE:11:GLN:HA	1.29	0.95
48:XQ:30:HIS:HE1	48:XQ:32:ILE:HG13	1.29	0.95
1:YA:310:A:O2'	1:YA:311:A:H8	1.49	0.95
1:YA:508:A:H62	19:YS:9:HIS:CE1	1.85	0.95
1:YA:1021:A:O2'	1:YA:1022:G:H4'	1.66	0.95
1:YA:1808:A:H3'	1:YA:1809:A:C8	2.00	0.95
3:YC:59:GLN:HE21	3:YC:84:PRO:HB2	1.28	0.95
13:YM:27:SER:H	13:YM:66:ARG:NH2	1.65	0.95
1:RA:161:A:H3'	1:RA:162:U:H5"	1.48	0.95
4:RD:169:ARG:O	4:RD:170:VAL:HG13	1.67	0.95
32:QA:1279:G:H1'	32:QA:1282:C:N4	1.81	0.95
1:YA:445:C:H2'	1:YA:446:G:C8	2.01	0.95
1:RA:855:G:N3	23:RW:23:LYS:HD3	1.82	0.95
6:RF:134:GLN:H	6:RF:134:GLN:HE21	1.04	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:XG:22:LEU:HA	38:XG:25:PHE:HB3	1.47	0.95
9:RI:23:VAL:HB	9:RI:27:LEU:HB3	1.48	0.95
22:RV:10:LYS:HD3	22:RV:10:LYS:H	1.31	0.95
33:QB:163:ILE:HG23	33:QB:164:ASP:H	1.31	0.95
1:YA:2389:G:H5"	1:YA:2390:U:H5'	1.48	0.95
3:YC:16:VAL:H	3:YC:203:VAL:HG12	1.27	0.95
3:RC:12:ARG:HH11	3:RC:12:ARG:CG	1.80	0.94
13:RM:35:ALA:O	13:RM:36:VAL:HB	1.65	0.94
44:QM:10:ASP:CG	44:QM:11:HIS:H	1.75	0.94
48:QQ:45:VAL:HG21	48:QQ:60:ILE:HD13	1.46	0.94
32:XA:820:U:H4'	32:XA:821:G:OP2	1.67	0.94
14:YN:90:ARG:NH2	14:YN:116:VAL:HG11	1.82	0.94
18:YR:27:ILE:HG22	18:YR:28:ALA:H	1.31	0.94
24:YX:53:LYS:HA	24:YX:56:ARG:HB3	1.49	0.94
1:YA:740:C:H5'	1:YA:1784:A:H3'	1.48	0.94
1:YA:479:A:H4'	1:YA:480:A:OP1	1.64	0.94
7:RG:83:THR:HA	7:RG:84:LYS:HZ3	1.28	0.94
32:XA:961:U:O2'	32:XA:962:C:H6	1.49	0.94
23:YW:40:ARG:HG2	23:YW:40:ARG:NH1	1.72	0.94
17:RQ:48:ASP:HA	17:RQ:51:GLN:HB2	1.49	0.94
50:XS:5:LYS:HE3	50:XS:6:LYS:H	1.32	0.94
1:YA:483:A:H2'	1:YA:484:C:C6	2.02	0.94
4:YD:11:MET:HE1	4:YD:192:ALA:HA	1.45	0.94
27:Y0:12:ARG:HG3	27:Y0:15:ARG:HH11	1.33	0.94
23:RW:8:SER:O	23:RW:9:THR:HG22	1.68	0.94
1:YA:2344:U:H4'	1:YA:2345:G:OP1	1.64	0.94
1:RA:1993:U:H4'	4:RD:133:THR:HG21	1.49	0.94
32:XA:60:A:H4'	32:XA:61:G:O5'	1.67	0.94
33:XB:130:LYS:HA	33:XB:133:ALA:HB3	1.46	0.94
35:XD:25:ARG:NH1	35:XD:30:LYS:HG2	1.83	0.94
1:YA:33:C:H4'	1:YA:34:U:OP1	1.65	0.94
25:YY:20:ASN:HD22	25:YY:50:VAL:HG22	1.29	0.94
9:RI:100:ILE:HG22	9:RI:101:SER:H	1.33	0.93
32:XA:1217:C:H2'	32:XA:1218:C:H6	1.31	0.93
50:XS:40:PHE:HB3	50:XS:41:PRO:HD2	1.49	0.93
1:YA:870:U:H2'	1:YA:871:U:H5'	1.49	0.93
1:YA:2466:C:OP1	31:Y4:4:ARG:HB3	1.67	0.93
1:YA:2666:C:O2'	1:YA:2667:C:H5'	1.69	0.93
4:YD:53:GLY:HA3	4:YD:77:ARG:HG3	1.48	0.93
9:RI:15:GLY:HA2	9:RI:50:LYS:HB3	1.50	0.93
1:YA:1935:G:H1'	1:YA:1964:G:N2	1.83	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:YE:148:ILE:HD13	5:YE:187:VAL:HG21	1.50	0.93
33:XB:146:SER:HB2	33:XB:147:LEU:HD12	1.49	0.93
1:YA:674:G:O2'	5:YE:69:ARG:HG2	1.67	0.93
32:QA:1123:U:H4'	41:QJ:39:PRO:HD2	1.47	0.93
35:QD:109:THR:HG23	35:QD:112:GLU:H	1.34	0.93
32:XA:1299:A:H2'	32:XA:1299:A:N3	1.80	0.93
1:YA:138:U:H2'	1:YA:140:C:H1'	1.50	0.93
32:XA:245:U:O2'	32:XA:246:A:H5'	1.69	0.93
39:XH:68:LYS:HD3	39:XH:69:ALA:H	1.34	0.93
1:YA:241:A:H4'	1:YA:242:G:OP1	1.67	0.93
35:QD:25:ARG:NH1	35:QD:30:LYS:HE3	1.82	0.93
32:XA:1239:A:H5"	38:XG:118:ARG:HH12	1.34	0.93
6:RF:134:GLN:H	6:RF:134:GLN:NE2	1.66	0.93
17:RQ:63:ARG:HH12	17:RQ:96:ASP:HA	0.80	0.93
36:QE:80:LEU:HD23	36:QE:122:VAL:HG11	1.51	0.93
41:XJ:5:ARG:HH21	41:XJ:77:VAL:HG13	1.29	0.93
1:YA:2387:U:H1'	23:YW:38:ARG:HH12	1.34	0.93
1:YA:668:A:H2'	1:YA:670:A:H62	1.32	0.92
32:QA:1138:G:N3	32:QA:1138:G:H2'	1.84	0.92
47:XP:70:ARG:O	47:XP:74:LEU:HG	1.69	0.92
12:RL:93:ASN:HD22	12:RL:94:THR:H	1.14	0.92
39:QH:74:ILE:HD13	39:QH:128:VAL:HG13	1.50	0.92
32:XA:239:U:OP1	32:XA:239:U:H4'	1.68	0.92
1:YA:1846:G:H5"	1:YA:1847:A:OP2	1.69	0.92
1:YA:2060:A:H62	5:YE:69:ARG:HH12	1.17	0.92
1:RA:855:G:H21	23:RW:23:LYS:HG2	1.34	0.92
1:RA:1733:G:HO2'	1:RA:1734:G:H8	1.10	0.92
41:XJ:84:VAL:HG23	41:XJ:85:ASP:H	1.35	0.92
10:RJ:17:VAL:HG23	10:RJ:137:PRO:HB2	1.52	0.92
32:XA:330:C:HO2'	32:XA:331:G:H8	0.94	0.92
2:YB:13:G:H5"	2:YB:13:G:H8	1.34	0.92
41:QJ:65:TYR:HB3	45:QN:95:LEU:HD11	1.50	0.92
26:YZ:30:ARG:NH2	26:YZ:33:HIS:HB2	1.83	0.92
4:RD:90:PHE:HB2	4:RD:92:VAL:HG23	1.52	0.92
8:RH:89:LYS:HG2	8:RH:90:LEU:H	1.34	0.92
32:QA:86:G:N2	32:QA:87:C:H41	1.67	0.92
9:YI:74:PRO:HB2	9:YI:77:VAL:HG22	1.49	0.92
32:QA:1239:A:H62	32:QA:1299:A:N6	1.68	0.92
1:YA:873:C:H4'	13:YM:64:TRP:NE1	1.84	0.92
11:YK:7:MET:HA	11:YK:7:MET:HE3	1.50	0.92
11:YK:71:ARG:HB3	11:YK:72:PRO:HD3	1.52	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:RW:37:VAL:HG12	23:RW:38:ARG:H	1.33	0.92
32:QA:667:G:H4'	46:QO:50:HIS:CE1	2.05	0.92
1:YA:503:A:H4'	1:YA:504:A:O5'	1.70	0.92
1:YA:2748:A:H1'	7:YG:66:THR:HG22	1.50	0.92
1:YA:206:U:H2'	1:YA:207:A:H8	1.33	0.91
32:QA:1021:A:H2'	32:QA:1022:A:H5"	1.51	0.91
39:QH:21:LYS:HE2	39:QH:22:ALA:H	1.32	0.91
32:QA:975:A:H4'	32:QA:976:G:C5'	2.00	0.91
32:QA:1441:A:N6	32:QA:1461:G:H21	1.68	0.91
1:YA:811:U:H5"	1:YA:812:C:OP2	1.71	0.91
16:RP:4:ILE:HG22	16:RP:5:LYS:N	1.85	0.91
36:QE:155:LYS:HA	36:QE:158:LYS:NZ	1.84	0.91
32:XA:664:G:H22	32:XA:741:G:H1	1.19	0.91
1:YA:784:G:C2	3:YC:227:VAL:HG21	2.05	0.91
4:YD:13:ARG:HH12	16:YP:74:GLN:HE21	1.16	0.91
3:RC:81:GLU:HB2	3:RC:90:ILE:HG22	1.53	0.91
23:RW:51:GLY:HA3	23:RW:59:PHE:CE2	2.05	0.91
28:R1:47:ILE:HD12	28:R1:47:ILE:H	1.34	0.91
4:YD:106:LYS:HB3	4:YD:206:ALA:HB3	1.52	0.91
12:RL:30:THR:O	12:RL:33:ARG:HG2	1.69	0.91
37:QF:3:HIS:H	37:QF:92:THR:HG23	1.32	0.91
32:XA:1129:C:H1'	32:XA:1146:A:H61	1.35	0.91
36:XE:29:ILE:CG2	36:XE:30:PHE:H	1.77	0.91
1:YA:1274:A:O2'	1:YA:1275:A:H5"	1.71	0.91
1:YA:2875:C:O2'	1:YA:2876:G:H8	1.53	0.91
20:YT:60:THR:HG22	20:YT:83:ALA:HA	1.52	0.91
41:XJ:15:HIS:HA	41:XJ:18:ILE:HG22	1.51	0.91
24:YX:31:ASN:H	24:YX:31:ASN:ND2	1.69	0.91
1:RA:1734:G:H2'	1:RA:1735:A:H8	1.34	0.91
1:YA:1024:G:H3'	1:YA:1025:G:H5"	1.53	0.91
3:YC:52:HIS:HA	3:YC:216:ARG:HB2	1.51	0.91
23:RW:17:ALA:HA	23:RW:35:ILE:HG23	1.52	0.90
32:XA:135:C:O2	47:XP:1:MET:HB2	1.71	0.90
49:XR:72:ARG:H	49:XR:72:ARG:HE	1.15	0.90
1:YA:249:C:H3'	1:YA:2394:C:H4'	1.51	0.90
1:YA:492:A:N1	19:YS:49:LYS:HE2	1.86	0.90
1:YA:1447:C:H2'	1:YA:1448:G:H8	1.32	0.90
2:YB:57:A:HO2'	2:YB:58:A:H8	0.94	0.90
4:YD:29:VAL:HB	4:YD:98:VAL:HG12	1.52	0.90
14:YN:28:LEU:HD21	14:YN:115:LEU:HD21	1.49	0.90
32:XA:279:A:H5"	32:XA:280:C:H3'	1.53	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:YK:61:VAL:HG11	11:YK:112:PHE:HE2	1.36	0.90
1:RA:276:U:O2'	1:RA:278:A:N7	2.04	0.90
33:QB:22:TRP:CZ3	33:QB:24:PRO:HA	2.06	0.90
45:QN:60:ARG:O	45:QN:61:ASN:HB2	1.70	0.90
23:YW:18:LYS:H	23:YW:36:ILE:HG12	1.35	0.90
12:RL:110:VAL:O	12:RL:111:ILE:HB	1.71	0.90
22:RV:72:VAL:HG12	22:RV:93:ARG:HA	1.54	0.90
37:QF:86:ARG:NH1	49:QR:63:TYR:HB3	1.86	0.90
32:XA:814:A:H5'	32:XA:1511:G:H4'	1.52	0.90
32:XA:973:G:O2'	32:XA:974:A:H5'	1.72	0.90
4:YD:184:ARG:HH22	16:YP:6:GLN:HE21	1.18	0.90
1:RA:1340:U:H4'	1:RA:1341:G:OP2	1.71	0.90
1:YA:762:U:H4'	1:YA:763:G:O5'	1.69	0.90
1:RA:574:A:P	56:RA:3268:HOH:O	2.30	0.90
32:XA:976:G:H5'	32:XA:977:A:OP2	1.70	0.90
36:XE:103:GLY:O	36:XE:104:ILE:HG22	1.71	0.90
1:YA:1387:A:H5'	1:YA:1469:A:H1'	1.50	0.90
24:YX:31:ASN:HD22	24:YX:31:ASN:N	1.67	0.90
7:RG:8:VAL:HG11	7:RG:49:LEU:HB2	1.51	0.90
20:RT:32:LEU:H	20:RT:83:ALA:HB3	1.34	0.90
32:QA:507:C:H3'	32:QA:508:U:H5"	1.52	0.90
35:QD:10:LEU:HD22	35:QD:62:ARG:HG3	1.53	0.90
1:YA:96:C:H4'	25:YY:41:HIS:CD2	2.07	0.90
1:YA:1359:A:C2	1:YA:1360:G:H1'	2.06	0.90
16:YP:50:ARG:HB3	16:YP:57:ALA:N	1.85	0.90
18:RR:60:LYS:H	18:RR:100:GLY:HA3	1.37	0.90
1:YA:1341:G:O2'	1:YA:1398:C:H5'	1.72	0.90
12:RL:29:LYS:HG2	12:RL:30:THR:HG23	1.54	0.90
1:YA:118:A:N3	1:YA:178:G:H1'	1.87	0.90
32:QA:747:A:H5'	32:QA:748:G:OP2	1.72	0.89
32:QA:1441:A:H62	32:QA:1461:G:H21	1.19	0.89
32:QA:198:G:HO2'	32:QA:199:A:H8	1.15	0.89
35:QD:172:VAL:HG22	35:QD:173:ASP:H	1.37	0.89
1:YA:302:C:O2'	1:YA:303:G:H8	1.54	0.89
11:RK:18:ARG:H	11:RK:45:GLU:HB2	1.37	0.89
23:YW:18:LYS:HD3	23:YW:19:ARG:N	1.86	0.89
10:RJ:21:THR:O	10:RJ:23:LYS:N	2.04	0.89
32:XA:439:U:H4'	35:XD:120:LYS:HD2	1.53	0.89
5:YE:128:ALA:HB1	5:YE:129:PRO:HD2	1.55	0.89
32:XA:429:U:H3'	35:XD:8:LEU:HD23	1.52	0.89
38:XG:88:VAL:HG22	38:XG:89:GLU:H	1.33	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:616:A:O2'	1:YA:617:G:H8	1.53	0.89
3:YC:70:LYS:HD3	3:YC:101:ARG:HH12	1.37	0.89
37:QF:38:ARG:HG2	37:QF:38:ARG:NH1	1.84	0.89
43:QL:72:ASN:ND2	43:QL:73:LEU:H	1.71	0.89
32:XA:752:G:H1'	32:XA:754:C:N4	1.88	0.89
40:XI:51:LEU:HB2	40:XI:56:MET:SD	2.11	0.89
3:RC:108:GLY:O	3:RC:109:LEU:HD22	1.72	0.89
10:RJ:81:ILE:CG2	10:RJ:82:GLY:H	1.84	0.89
32:XA:1195:C:H5"	32:XA:1196:A:OP2	1.72	0.89
48:XQ:46:HIS:HB2	48:XQ:70:LYS:HE3	1.54	0.89
1:YA:1474:U:H2'	1:YA:1475:G:H5'	1.54	0.89
4:RD:151:THR:HG22	4:RD:152:PRO:CD	2.03	0.89
16:RP:61:ARG:HG2	16:RP:70:GLU:HG2	1.55	0.89
33:QB:42:LEU:HG	33:QB:43:GLU:HG3	1.55	0.89
32:XA:1134:G:C6	32:XA:1135:U:H1'	2.07	0.89
12:RL:27:LEU:H	12:RL:27:LEU:HD12	1.38	0.89
32:XA:913:A:H4'	32:XA:914:A:O5'	1.71	0.89
35:XD:137:SER:HB2	35:XD:138:PRO:HD2	1.55	0.89
8:YH:115:VAL:HG12	8:YH:132:PHE:HB2	1.55	0.89
2:RB:54:G:H21	6:RF:25:MET:HE3	1.34	0.88
3:RC:140:VAL:CG1	3:RC:189:ALA:HB1	2.03	0.88
4:RD:125:TRP:CE3	4:RD:160:LYS:HD3	2.09	0.88
4:RD:151:THR:HG22	4:RD:152:PRO:HD3	1.55	0.88
43:QL:49:ARG:HG2	43:QL:49:ARG:NH1	1.81	0.88
32:XA:1279:G:H5'	41:XJ:9:ARG:HH12	1.36	0.88
8:RH:67:ALA:HA	8:RH:138:VAL:HB	1.55	0.88
21:RU:38:ILE:HG22	21:RU:39:ASN:N	1.87	0.88
28:R1:33:LEU:H	28:R1:51:ALA:HB3	1.37	0.88
33:XB:49:PHE:HA	33:XB:52:ALA:HB3	1.53	0.88
37:XF:18:VAL:O	37:XF:22:ILE:HG12	1.73	0.88
1:YA:2356:U:H4'	23:YW:16:GLU:HG3	1.54	0.88
26:YZ:30:ARG:HH21	26:YZ:33:HIS:HB2	1.38	0.88
1:RA:1082:U:H5'	9:RI:117:THR:O	1.73	0.88
7:RG:83:THR:HA	7:RG:84:LYS:NZ	1.88	0.88
8:RH:32:PRO:HB3	24:RX:38:TRP:HB3	1.54	0.88
10:RJ:21:THR:HG22	10:RJ:22:GLY:N	1.87	0.88
17:RQ:4:LYS:HG3	17:RQ:5:ARG:H	1.37	0.88
34:QC:152:VAL:HG12	34:QC:197:VAL:HG13	1.56	0.88
48:QQ:12:VAL:HG11	48:QQ:21:VAL:HG13	1.54	0.88
52:QU:9:GLU:HG3	52:QU:10:PRO:HD3	1.56	0.88
1:YA:674:G:H1'	5:YE:69:ARG:HE	1.38	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:822:G:O6	1:YA:943:A:H2	1.55	0.88
40:QI:128:LYS:HD2	40:QI:129:ARG:H	1.35	0.88
48:QQ:78:VAL:HG12	48:QQ:79:GLU:HG3	1.52	0.88
32:XA:1101:A:H4'	32:XA:1102:A:O5'	1.74	0.88
1:YA:1205:A:H5"	1:YA:1206:G:C8	2.08	0.88
16:YP:28:LYS:HZ2	16:YP:28:LYS:HB2	1.39	0.88
50:QS:50:VAL:HG21	50:QS:70:LEU:HB3	1.53	0.88
13:YM:27:SER:H	13:YM:66:ARG:HH22	1.22	0.88
20:YT:13:ALA:O	20:YT:32:LEU:HB2	1.72	0.88
1:RA:1605:C:H5"	1:RA:1606:C:OP2	1.74	0.88
1:RA:2134:A:HO2'	1:RA:2135:A:H8	0.94	0.88
9:RI:7:TYR:HA	9:RI:58:ILE:HB	1.54	0.88
32:QA:1469:C:H5'	32:QA:1469:C:H6	1.37	0.88
33:XB:127:LYS:HE3	33:XB:132:GLU:HG3	1.56	0.88
1:YA:2313:C:HO2'	1:YA:2314:A:H8	0.93	0.88
1:RA:137:U:O5'	1:RA:137:U:H6	1.57	0.88
16:RP:50:ARG:HD3	16:RP:56:SER:HB3	1.54	0.88
38:XG:134:VAL:HB	38:XG:137:ARG:HH21	1.38	0.88
1:YA:616:A:HO2'	1:YA:617:G:H8	0.88	0.88
1:YA:2389:G:C5'	1:YA:2390:U:H5'	2.04	0.88
33:QB:40:ILE:HD13	33:QB:201:GLY:HA2	1.54	0.88
38:XG:91:ARG:HG2	38:XG:92:PRO:HD2	1.55	0.88
3:YC:68:ARG:HD3	3:YC:103:ILE:HD13	1.55	0.88
4:YD:16:THR:HG23	4:YD:18:ASP:H	1.39	0.88
13:YM:35:ALA:HB3	13:YM:99:GLY:H	1.37	0.88
1:RA:84:A:H4'	1:RA:85:G:O5'	1.73	0.87
32:XA:522:C:H41	43:XL:49:ARG:HH22	1.20	0.87
1:YA:1049:C:HO2'	1:YA:1050:A:H8	0.92	0.87
1:YA:1965:C:H5"	1:YA:1965:C:H6	1.39	0.87
1:RA:1779:U:H5	1:RA:1784:A:N7	1.71	0.87
30:R3:26:ALA:O	30:R3:27:ASN:HB2	1.73	0.87
1:YA:627:A:H2'	12:YL:78:ARG:NH1	1.89	0.87
2:YB:42:C:H2'	2:YB:43:C:C6	2.07	0.87
2:YB:112:G:H21	15:YO:45:SER:HA	1.37	0.87
7:YG:86:LEU:HA	7:YG:163:TYR:HB3	1.55	0.87
7:RG:115:GLN:CD	7:RG:115:GLN:H	1.82	0.87
16:RP:50:ARG:HG2	16:RP:57:ALA:N	1.89	0.87
1:YA:286:U:H2'	1:YA:287:G:H8	1.40	0.87
1:YA:491:G:H2'	1:YA:492:A:H8	1.36	0.87
9:RI:126:ARG:HA	9:RI:129:GLU:HB2	1.57	0.87
1:YA:320:A:H4'	1:YA:322:A:N7	1.90	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:RD:13:ARG:HH12	16:RP:74:GLN:HE21	1.20	0.87
32:XA:1268:G:H21	32:XA:1327:C:H1'	1.39	0.87
1:YA:644:A:O2'	1:YA:645:C:H5'	1.73	0.87
6:YF:137:PHE:HB2	6:YF:138:PRO:HD2	1.55	0.87
26:YZ:16:LEU:HD22	26:YZ:16:LEU:H	1.37	0.87
1:RA:2180:U:H2'	1:RA:2181:U:H5	1.39	0.87
4:RD:68:PHE:HB3	4:RD:73:VAL:HG12	1.56	0.87
43:QL:33:CYS:HA	43:QL:54:VAL:HA	1.55	0.87
50:QS:51:HIS:CD2	50:QS:53:GLY:H	1.92	0.87
32:XA:451:A:H4'	32:XA:452:A:O5'	1.74	0.87
32:XA:940:C:H5'	38:XG:101:ARG:HH22	1.39	0.87
35:XD:25:ARG:HH11	35:XD:25:ARG:HG2	1.40	0.87
1:YA:240:C:H3'	1:YA:241:A:H5"	1.57	0.87
3:RC:140:VAL:HG11	3:RC:189:ALA:HB1	1.56	0.86
7:RG:22:VAL:HG22	7:RG:36:LEU:HD11	1.57	0.86
44:XM:12:LYS:HB3	44:XM:17:ALA:HB2	1.56	0.86
15:RO:31:THR:HG22	15:RO:34:HIS:H	1.38	0.86
41:XJ:57:VAL:HG22	41:XJ:58:ASN:H	1.39	0.86
44:XM:12:LYS:HA	44:XM:12:LYS:HE3	1.55	0.86
5:RE:119:ILE:HD11	5:RE:187:VAL:CG2	2.06	0.86
32:QA:204:G:H3'	32:QA:205:A:C5'	2.03	0.86
33:XB:89:PHE:HE2	33:XB:152:ASP:HB2	1.38	0.86
35:XD:153:ARG:HG2	35:XD:154:VAL:N	1.87	0.86
1:YA:2214:C:O2'	1:YA:2215:C:H5'	1.76	0.86
24:YX:31:ASN:H	24:YX:31:ASN:HD22	0.89	0.86
11:RK:108:ARG:HH11	11:RK:108:ARG:CG	1.88	0.86
19:RS:73:LYS:HE3	19:RS:74:ILE:H	1.40	0.86
19:RS:88:ARG:HH21	19:RS:88:ARG:CG	1.88	0.86
48:QQ:12:VAL:HG13	48:QQ:13:SER:H	1.41	0.86
1:YA:332:A:H61	21:YU:68:ASN:HD21	1.22	0.86
28:Y1:8:ILE:HD11	28:Y1:52:LYS:HE3	1.58	0.86
32:QA:974:A:H4'	32:QA:975:A:H5'	1.58	0.86
34:QC:166:TRP:H	34:QC:166:TRP:HE3	1.22	0.86
32:QA:243:A:H4'	32:QA:244:U:H5"	1.58	0.86
47:XP:74:LEU:O	47:XP:78:VAL:HG23	1.75	0.86
17:RQ:65:ASN:ND2	17:RQ:69:ARG:HH22	1.74	0.86
27:R0:42:ILE:HD12	27:R0:48:TYR:HB2	1.57	0.86
32:QA:71:A:O2'	32:QA:72:A:H5"	1.75	0.86
1:YA:915:C:H2'	1:YA:916:G:H8	1.39	0.86
1:YA:1606:C:O2	1:YA:1606:C:H5'	1.75	0.86
7:YG:112:VAL:HG12	7:YG:114:HIS:H	1.40	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:RT:39:THR:HB	20:RT:42:GLU:HB2	1.58	0.86
32:QA:414:A:H2'	32:QA:415:A:H8	1.40	0.86
32:XA:120:A:C2'	32:XA:121:U:H5"	2.05	0.86
1:YA:1847:A:O2'	1:YA:1848:A:H8	1.58	0.86
4:RD:174:SER:O	4:RD:175:LEU:HB2	1.74	0.86
32:QA:49:U:O4	32:QA:365:U:H5	1.58	0.86
41:XJ:35:GLN:HG2	41:XJ:76:ILE:HG23	1.57	0.86
9:RI:33:ASN:HD22	9:RI:64:ARG:HH22	1.23	0.85
10:RJ:110:PRO:HB2	10:RJ:111:LYS:HG3	1.56	0.85
1:RA:2148:G:H2'	1:RA:2149:U:O4'	1.75	0.85
8:RH:31:VAL:HG13	8:RH:36:ALA:O	1.74	0.85
13:RM:42:THR:HG22	13:RM:93:VAL:HG23	1.57	0.85
32:QA:1303:C:H2'	32:QA:1304:G:C8	2.10	0.85
32:XA:1493:A:H8	1:YA:1913:A:H61	1.22	0.85
1:YA:972:A:H3'	1:YA:973:A:H5"	1.55	0.85
1:YA:990:A:O2'	1:YA:991:C:H5"	1.76	0.85
4:RD:5:VAL:H	4:RD:32:ASN:HD21	1.22	0.85
1:RA:1309:G:OP1	29:R2:9:VAL:HG12	1.76	0.85
32:XA:1299:A:C8	32:XA:1301:U:H1'	2.12	0.85
1:YA:279:A:C2	1:YA:362:A:H4'	2.11	0.85
1:YA:648:G:HO2'	1:YA:649:G:H8	0.91	0.85
32:XA:642:A:HO2'	32:XA:643:C:H6	1.21	0.85
37:XF:43:GLY:HA2	37:XF:58:HIS:CE1	2.10	0.85
1:YA:810:U:O4	12:YL:30:THR:HG22	1.77	0.85
33:QB:108:GLN:HE21	33:QB:108:GLN:H	1.22	0.85
32:XA:120:A:H3'	32:XA:121:U:C5'	2.07	0.85
1:YA:204:A:H4'	1:YA:205:G:OP1	1.75	0.85
3:YC:144:GLU:HB3	3:YC:187:CYS:HB2	1.55	0.85
32:QA:654:G:H4'	39:QH:2:MET:HE1	1.59	0.85
51:QT:26:MET:HE1	51:QT:56:ILE:HD11	1.56	0.85
32:XA:247:G:O6	32:XA:278:G:C6	2.30	0.85
33:XB:74:ALA:HB1	33:XB:206:ILE:HD11	1.57	0.85
1:YA:1639:C:H2'	1:YA:1640:A:H5"	1.59	0.85
12:YL:9:ALA:HB3	12:YL:12:SER:HB3	1.58	0.85
1:RA:1110:G:O2'	1:RA:1111:A:H8	1.60	0.85
10:RJ:130:HIS:CD2	10:RJ:132:HIS:H	1.95	0.85
22:RV:80:HIS:CD2	22:RV:83:LYS:HB2	2.11	0.85
32:QA:923:A:H5"	36:QE:25:LYS:HE2	1.58	0.85
39:QH:76:ARG:HH11	39:QH:76:ARG:HG3	1.41	0.85
38:XG:110:ARG:HG3	38:XG:111:GLY:H	1.41	0.85
6:YF:31:GLU:HG3	6:YF:95:MET:HE1	1.59	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:RG:96:ALA:HB3	7:RG:103:ASN:HB3	1.56	0.85
32:QA:496:A:H2'	32:QA:496:A:N3	1.90	0.85
1:YA:1417:C:H2'	1:YA:1418:G:C8	2.12	0.85
1:YA:2612:C:H5"	1:YA:2613:U:OP1	1.75	0.85
3:YC:147:PRO:HD3	3:YC:184:GLU:HG3	1.59	0.85
31:R4:36:ARG:HG2	31:R4:37:GLN:H	1.41	0.85
32:QA:1183:U:H3'	32:QA:1184:G:H5"	1.57	0.85
44:XM:64:VAL:HG12	44:XM:65:GLU:H	1.41	0.85
1:RA:65:U:H2'	1:RA:66:C:H6	1.42	0.84
5:RE:149:ILE:HD11	5:RE:172:ALA:HA	1.59	0.84
18:RR:51:VAL:HB	18:RR:52:PRO:HD2	1.56	0.84
32:QA:205:A:OP1	32:QA:205:A:H4'	1.73	0.84
32:QA:1373:G:H5"	38:QG:35:LYS:HD2	1.59	0.84
48:QQ:22:VAL:HG21	48:QQ:60:ILE:HD11	1.56	0.84
1:YA:286:U:H2'	1:YA:287:G:C8	2.12	0.84
16:RP:3:ILE:O	16:RP:3:ILE:HD13	1.76	0.84
39:QH:17:GLN:NE2	39:QH:71:VAL:HG23	1.92	0.84
1:YA:617:G:HO2'	1:YA:618:G:H8	0.84	0.84
1:YA:1080:A:H2'	1:YA:1081:U:C6	2.12	0.84
23:YW:23:LYS:HD2	23:YW:24:ARG:N	1.91	0.84
1:RA:1180:U:H2'	1:RA:1181:U:C6	2.12	0.84
10:RJ:21:THR:HG22	10:RJ:22:GLY:H	1.41	0.84
25:RY:47:ARG:HH21	25:RY:47:ARG:HG3	1.41	0.84
33:XB:99:MET:HA	33:XB:106:VAL:HG21	1.59	0.84
32:QA:922:G:H4'	36:QE:24:VAL:HA	1.59	0.84
1:YA:197:A:N6	1:YA:2430:A:H2'	1.91	0.84
2:YB:54:G:H21	6:YF:25:MET:HE2	1.41	0.84
17:RQ:63:ARG:HD2	17:RQ:64:ILE:N	1.93	0.84
34:QC:38:VAL:O	34:QC:42:LEU:HB2	1.76	0.84
36:QE:81:GLN:H	36:QE:81:GLN:HE21	1.25	0.84
39:QH:28:SER:HB2	39:QH:58:LEU:HB2	1.59	0.84
32:XA:90:C:O2'	32:XA:91:U:C6	2.31	0.84
1:YA:1135:C:N4	1:YA:1139:G:C6	2.45	0.84
1:RA:1084:A:H2'	1:RA:1085:A:C8	2.12	0.84
4:RD:114:LYS:O	4:RD:114:LYS:HE3	1.77	0.84
2:YB:24:G:H1'	2:YB:27:C:H42	1.43	0.84
17:YQ:57:ARG:NH1	17:YQ:92:LYS:HE2	1.92	0.84
40:XI:90:ASP:HB3	40:XI:93:LEU:HD23	1.60	0.84
1:YA:649:G:H2'	1:YA:650:C:C6	2.12	0.84
4:YD:13:ARG:HH12	16:YP:74:GLN:NE2	1.74	0.84
6:YF:39:VAL:HA	6:YF:49:LEU:HG	1.60	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:YT:44:LYS:O	20:YT:48:GLN:HG2	1.77	0.84
1:RA:1063:G:H2'	1:RA:1064:C:O4'	1.77	0.84
1:YA:45:G:H5'	1:YA:46:G:H5'	1.58	0.84
1:YA:1303:G:HO2'	1:YA:1304:A:H8	0.89	0.84
1:RA:784:G:C6	3:RC:227:VAL:HG11	2.13	0.84
17:RQ:91:ARG:NH2	17:RQ:93:ILE:HD13	1.92	0.84
1:YA:876:C:H3'	1:YA:877:A:H8	1.41	0.84
1:YA:1706:C:H4'	1:YA:1707:G:OP2	1.75	0.84
3:YC:83:ASP:HB2	3:YC:90:ILE:HD12	1.59	0.84
17:RQ:97:ILE:HD11	17:RQ:105:PHE:HA	1.59	0.84
32:QA:731:G:OP1	32:QA:766:A:H1'	1.77	0.84
32:QA:982:U:C4'	32:QA:983:A:O5'	2.23	0.84
32:XA:519:C:H2'	32:XA:520:A:C8	2.13	0.84
47:XP:52:LEU:HD21	47:XP:75:ILE:HG12	1.60	0.84
1:YA:1989:G:H2'	1:YA:1990:C:H5'	1.59	0.84
3:RC:251:THR:HG22	3:RC:252:LYS:H	1.43	0.83
4:RD:91:THR:O	4:RD:93:GLY:N	2.11	0.83
11:RK:71:ARG:HG3	11:RK:106:GLU:OE2	1.78	0.83
16:RP:50:ARG:CD	16:RP:51:ASN:H	1.91	0.83
46:QO:63:ARG:HD3	46:QO:87:ARG:NH2	1.93	0.83
32:XA:1225:A:H4'	50:XS:77:ARG:NH1	1.93	0.83
1:YA:834:G:H1'	1:YA:2358:A:N3	1.93	0.83
7:RG:104:LEU:HB2	7:RG:112:VAL:CG2	2.08	0.83
8:RH:8:LYS:O	8:RH:9:VAL:HB	1.77	0.83
17:RQ:65:ASN:HD21	17:RQ:69:ARG:NH2	1.76	0.83
29:R2:3:ARG:HH21	29:R2:3:ARG:HG2	1.43	0.83
32:QA:1055:A:H1'	34:QC:155:ARG:HH21	1.42	0.83
11:YK:17:ARG:HH11	11:YK:18:ARG:HG2	1.41	0.83
1:YA:15:G:OP1	27:Y0:20:ALA:HB2	1.78	0.83
1:YA:1127:A:O2'	1:YA:1128:G:H5'	1.77	0.83
1:YA:1716:U:O2'	1:YA:1717:A:H8	1.60	0.83
10:RJ:6:ALA:CB	10:RJ:45:THR:HG21	2.06	0.83
11:RK:113:MET:O	11:RK:116:ILE:HG13	1.77	0.83
32:XA:94:G:H4'	32:XA:95:C:OP1	1.76	0.83
32:XA:245:U:H6	32:XA:245:U:H5"	1.44	0.83
13:YM:19:GLY:H	13:YM:38:ARG:NH2	1.77	0.83
1:RA:2225:A:H4'	1:RA:2226:C:O5'	1.79	0.83
3:RC:210:ALA:O	3:RC:215:VAL:HG23	1.77	0.83
1:YA:1303:G:O2'	1:YA:1304:A:H8	1.61	0.83
1:YA:1352:U:H5	1:YA:1377:G:C6	1.96	0.83
2:YB:24:G:H1'	2:YB:27:C:N4	1.92	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1110:G:HO2'	1:RA:1111:A:H8	0.84	0.83
8:RH:31:VAL:HB	8:RH:32:PRO:CD	2.08	0.83
28:R1:13:SER:HB3	28:R1:47:ILE:O	1.76	0.83
31:R4:9:LYS:H	31:R4:9:LYS:CD	1.87	0.83
32:XA:372:C:H1'	32:XA:373:A:OP2	1.77	0.83
1:YA:1568:G:H21	3:YC:57:HIS:CE1	1.96	0.83
11:YK:35:VAL:HG23	11:YK:36:GLY:H	1.43	0.83
30:Y3:41:ARG:HH21	30:Y3:41:ARG:HG3	1.42	0.83
1:RA:1238:G:O2'	1:RA:1239:G:H5'	1.77	0.83
1:RA:1654:A:O2'	4:RD:118:PHE:CD2	2.31	0.83
11:RK:76:VAL:HB	16:RP:72:VAL:CG2	2.09	0.83
1:YA:654:A:H2'	1:YA:655:A:H5"	1.60	0.83
32:QA:619:U:H3	35:QD:130:ASN:HB3	1.43	0.83
1:RA:100:U:H4'	1:RA:101:A:O5'	1.78	0.83
1:RA:1056:G:H5"	1:RA:1057:A:H5'	1.61	0.83
17:RQ:85:ALA:O	17:RQ:86:SER:C	2.21	0.83
32:QA:1299:A:N3	32:QA:1299:A:H2'	1.94	0.83
32:XA:704:A:O2'	32:XA:705:G:H8	1.62	0.83
37:XF:92:THR:HG22	37:XF:94:HIS:H	1.43	0.83
1:YA:2060:A:H62	5:YE:69:ARG:NH1	1.77	0.83
8:YH:27:ARG:NH1	24:YX:59:ASP:HA	1.92	0.83
17:YQ:69:ARG:HH21	17:YQ:69:ARG:HB2	1.43	0.83
1:RA:2813:A:H2	1:RA:2887:A:N6	1.76	0.82
3:RC:230:PRO:HD2	3:RC:246:PRO:HA	1.61	0.82
7:RG:73:SER:HA	7:RG:76:ILE:HG22	1.61	0.82
44:XM:33:LEU:HB3	44:XM:38:ILE:HB	1.59	0.82
52:XU:35:GLU:O	52:XU:36:PHE:HD2	1.59	0.82
1:YA:2720:U:H5"	16:YP:52:ARG:HH21	1.42	0.82
20:YT:50:LEU:HD23	20:YT:51:PHE:H	1.44	0.82
7:RG:84:LYS:CG	7:RG:132:LEU:H	1.92	0.82
38:QG:86:VAL:HG22	38:QG:150:PHE:HB3	1.59	0.82
32:XA:496:A:H2'	32:XA:496:A:N3	1.94	0.82
38:XG:142:ARG:O	38:XG:146:ALA:HB3	1.79	0.82
1:YA:489:G:HO2'	1:YA:491:G:H8	1.28	0.82
1:YA:604:G:O2'	1:YA:605:G:H5'	1.80	0.82
1:YA:2836:U:O2'	1:YA:2837:A:H8	1.60	0.82
20:YT:14:PRO:O	20:YT:15:HIS:HB2	1.79	0.82
5:RE:44:ARG:HH21	5:RE:44:ARG:CG	1.92	0.82
12:RL:93:ASN:ND2	12:RL:94:THR:N	2.27	0.82
20:RT:61:LEU:C	20:RT:61:LEU:HD12	2.03	0.82
33:XB:209:VAL:O	33:XB:213:LEU:HB2	1.78	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1126:A:H4'	1:YA:1127:A:O5'	1.79	0.82
4:YD:119:ALA:HB3	4:YD:163:GLY:H	1.44	0.82
26:YZ:4:ILE:HD12	26:YZ:58:GLU:HA	1.61	0.82
1:YA:593:U:H2'	1:YA:594:U:C6	2.14	0.82
1:YA:647:G:H2'	1:YA:648:G:C8	2.13	0.82
1:YA:2458:G:H8	1:YA:2459:A:H62	1.27	0.82
3:YC:159:THR:O	3:YC:194:VAL:HG12	1.79	0.82
8:YH:93:SER:HB3	8:YH:121:VAL:HG21	1.60	0.82
1:RA:1475:G:H1'	1:RA:1476:U:OP2	1.79	0.82
48:QQ:16:MET:HB2	48:QQ:19:SER:HB3	1.58	0.82
32:XA:129:A:O2'	32:XA:130:A:C8	2.33	0.82
48:XQ:30:HIS:CE1	48:XQ:32:ILE:HG13	2.13	0.82
1:YA:226:A:H2'	1:YA:227:A:H8	1.43	0.82
1:YA:2197:U:O2'	1:YA:2198:A:C8	2.32	0.82
20:YT:39:THR:HG21	20:YT:42:GLU:HB2	1.59	0.82
21:YU:95:PHE:H	21:YU:95:PHE:HD1	1.23	0.82
32:QA:464:U:C2	32:QA:466:A:H5'	2.14	0.82
1:YA:78:U:O2'	1:YA:79:C:H5'	1.79	0.82
1:YA:2800:A:H2'	1:YA:2801:G:H4'	1.58	0.82
2:YB:57:A:O2'	2:YB:58:A:C8	2.24	0.82
2:RB:90:C:H6	2:RB:90:C:H5"	1.43	0.82
1:YA:1714:U:H3'	1:YA:1715:G:H5'	1.61	0.82
23:RW:24:ARG:HD2	23:RW:25:PHE:N	1.95	0.82
32:QA:484:G:C4'	32:QA:485:U:O5'	2.28	0.82
35:QD:43:ARG:O	35:QD:45:PRO:HD3	1.79	0.82
36:XE:55:VAL:O	36:XE:59:ILE:HG22	1.80	0.82
1:YA:126:A:O5'	29:Y2:19:ARG:HG3	1.80	0.82
1:YA:915:C:H2'	1:YA:916:G:C8	2.15	0.82
15:RO:49:VAL:HG21	15:RO:82:ALA:HA	1.61	0.82
16:RP:63:ILE:HA	16:RP:68:GLY:HA2	1.61	0.82
11:YK:13:ASN:H	11:YK:13:ASN:HD22	1.25	0.82
4:RD:97:SER:O	4:RD:99:GLU:HG2	1.79	0.82
34:XC:140:ALA:O	34:XC:145:ALA:HB3	1.80	0.82
1:RA:1813:G:N3	3:RC:49:THR:HG21	1.94	0.81
18:RR:39:LEU:HD23	18:RR:39:LEU:N	1.94	0.81
1:YA:1965:C:H5'	1:YA:1966:A:H5"	1.61	0.81
1:YA:2056:G:N2	27:Y0:1:ALA:H1	1.77	0.81
1:YA:2336:A:N7	23:YW:40:ARG:CZ	2.42	0.81
11:YK:76:VAL:HB	16:YP:72:VAL:HG22	1.61	0.81
23:YW:40:ARG:HH11	23:YW:40:ARG:CG	1.84	0.81
1:RA:509:C:H5"	1:RA:510:C:OP2	1.80	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1150:C:O2'	1:RA:1151:A:O5'	1.98	0.81
1:RA:1605:C:H3'	1:RA:1606:C:H5"	1.60	0.81
17:RQ:97:ILE:HD11	17:RQ:105:PHE:CA	2.10	0.81
44:QM:10:ASP:CG	44:QM:11:HIS:N	2.36	0.81
35:XD:58:GLN:O	35:XD:62:ARG:HG2	1.80	0.81
38:XG:74:VAL:HG13	38:XG:140:VAL:HG13	1.62	0.81
51:XT:23:ARG:HB3	51:XT:60:GLN:NE2	1.95	0.81
1:YA:181:A:H2	1:YA:434:U:H1'	1.43	0.81
2:YB:75:G:H1	2:YB:102:G:H22	1.26	0.81
11:YK:87:LEU:HD12	11:YK:92:GLU:HA	1.62	0.81
6:RF:134:GLN:HE21	6:RF:134:GLN:N	1.78	0.81
23:RW:37:VAL:HG12	23:RW:38:ARG:N	1.94	0.81
34:QC:156:LEU:HD12	34:QC:156:LEU:H	1.45	0.81
32:XA:1183:U:H3'	32:XA:1184:G:C5'	2.09	0.81
40:XI:44:ARG:HH21	40:XI:48:ARG:NH1	1.77	0.81
48:XQ:3:LYS:NZ	48:XQ:6:THR:HG21	1.94	0.81
1:YA:1126:A:H4'	1:YA:1127:A:C5'	2.09	0.81
1:YA:1197:G:H5'	1:YA:1227:G:O2'	1.81	0.81
1:YA:1489:C:C4'	1:YA:1490:A:OP1	2.26	0.81
1:YA:1716:U:HO2'	1:YA:1717:A:H8	0.87	0.81
4:YD:114:LYS:HD2	4:YD:116:LYS:HZ2	1.43	0.81
12:YL:117:THR:HG22	12:YL:118:THR:H	1.43	0.81
3:RC:70:LYS:HE2	3:RC:73:ILE:HD12	1.61	0.81
11:RK:21:CYS:HA	11:RK:41:ILE:HD12	1.60	0.81
46:QO:63:ARG:CG	46:QO:87:ARG:HH12	1.93	0.81
32:XA:109:A:H4'	32:XA:110:C:OP2	1.79	0.81
1:YA:1493:C:O2	1:YA:1493:C:H2'	1.81	0.81
1:YA:1915:U:H2'	1:YA:1916:A:C8	2.15	0.81
1:YA:2838:G:H1'	14:YN:45:ARG:NH2	1.94	0.81
11:RK:21:CYS:HB2	11:RK:39:ILE:HD11	1.62	0.81
16:RP:50:ARG:HB3	16:RP:57:ALA:N	1.95	0.81
18:RR:49:ILE:HD12	18:RR:52:PRO:CA	2.11	0.81
32:XA:279:A:H4'	32:XA:280:C:O5'	1.78	0.81
34:XC:110:LEU:O	34:XC:110:LEU:HD23	1.80	0.81
42:XK:111:ASP:H	52:XU:3:ILE:N	1.77	0.81
3:RC:123:ILE:HG12	3:RC:123:ILE:O	1.78	0.81
9:RI:89:SER:HB3	9:RI:92:PRO:HG3	1.63	0.81
1:YA:12:U:H2'	1:YA:12:U:O2	1.81	0.81
1:YA:1714:U:H3'	1:YA:1715:G:C5'	2.11	0.81
1:YA:2266:A:H4'	1:YA:2267:A:O5'	1.81	0.81
1:YA:2291:U:H2'	1:YA:2292:U:C6	2.16	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:YQ:87:VAL:HG11	18:YR:52:PRO:HG3	1.62	0.81
1:RA:1392:A:H61	20:RT:18:GLU:CD	1.89	0.81
32:QA:1062:U:H2'	32:QA:1063:C:C6	2.16	0.81
32:XA:471:U:H2'	32:XA:472:U:H6	1.46	0.81
32:XA:668:G:O2'	46:XO:45:HIS:HB3	1.79	0.81
1:YA:1056:G:H1'	1:YA:1103:A:N6	1.95	0.81
1:RA:994:C:H1'	18:RR:10:LYS:HZ3	1.45	0.81
16:RP:36:LYS:HE3	32:QA:344:A:O3'	1.81	0.81
24:RX:5:GLN:NE2	24:RX:49:ARG:H	1.79	0.81
32:QA:250:A:H4'	32:QA:251:G:O5'	1.79	0.81
51:QT:67:HIS:HB3	51:QT:68:LYS:NZ	1.94	0.81
33:XB:96:LEU:H	33:XB:99:MET:HE3	1.45	0.81
1:YA:2836:U:HO2'	1:YA:2837:A:H8	0.82	0.81
20:YT:3:ARG:HD2	20:YT:42:GLU:HG2	1.62	0.81
18:RR:49:ILE:CD1	18:RR:52:PRO:HA	2.11	0.81
43:QL:23:LEU:O	43:QL:25:ALA:N	2.14	0.81
34:XC:56:ILE:HG12	34:XC:65:VAL:HG22	1.63	0.81
1:YA:1847:A:O2'	1:YA:1848:A:C8	2.31	0.81
1:RA:2135:A:HO2'	1:RA:2136:G:H8	1.29	0.81
1:RA:2427:C:H5"	1:RA:2428:G:OP1	1.80	0.81
32:XA:960:U:H4'	32:XA:961:U:H5"	1.60	0.81
32:XA:1278:G:C4'	32:XA:1279:G:O5'	2.28	0.81
1:YA:206:U:H5'	1:YA:206:U:H6	1.46	0.81
1:YA:2887:A:H1'	27:Y0:39:ARG:HH22	1.44	0.81
14:RN:79:LEU:O	14:RN:80:PHE:HB2	1.81	0.80
33:QB:127:LYS:HG3	33:QB:128:LEU:H	1.46	0.80
33:QB:137:THR:HA	33:QB:140:LEU:HD13	1.61	0.80
1:YA:1381:G:H2'	1:YA:1382:G:H5"	1.63	0.80
1:YA:1552:A:N3	1:YA:1552:A:H2'	1.95	0.80
26:YZ:16:LEU:H	26:YZ:16:LEU:CD2	1.93	0.80
1:RA:931:U:H4'	1:RA:932:U:OP2	1.81	0.80
32:QA:1277:C:O2'	32:QA:1279:G:H8	1.63	0.80
47:QP:10:GLY:HA3	47:QP:15:PRO:HA	1.63	0.80
32:XA:1129:C:O2'	32:XA:1130:A:C8	2.34	0.80
32:XA:1182:G:C4'	32:XA:1183:U:H5'	2.10	0.80
37:XF:92:THR:O	37:XF:93:LYS:HG2	1.81	0.80
38:XG:75:LYS:HE3	38:XG:76:SER:H	1.46	0.80
1:YA:230:G:HO2'	1:YA:231:A:H8	1.28	0.80
1:YA:1989:G:C2'	1:YA:1990:C:H5'	2.11	0.80
1:YA:2829:A:H2'	1:YA:2830:C:H5'	1.62	0.80
1:RA:1287:A:H5'	14:RN:103:ARG:HD2	1.64	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:RC:250:GLN:N	3:RC:250:GLN:HE21	1.80	0.80
6:RF:134:GLN:HG2	6:RF:135:ILE:H	1.46	0.80
32:QA:1279:G:H2'	32:QA:1279:G:N3	1.96	0.80
48:QQ:12:VAL:HG13	48:QQ:13:SER:N	1.95	0.80
32:XA:1492:A:H2'	1:YA:1913:A:N7	1.96	0.80
35:XD:55:ARG:HA	35:XD:55:ARG:HH11	1.46	0.80
43:XL:43:LYS:CB	43:XL:44:PRO:HD2	2.06	0.80
1:YA:95:A:H1'	25:YY:40:SER:HB2	1.60	0.80
1:YA:627:A:H5"	12:YL:78:ARG:HH12	1.43	0.80
4:YD:114:LYS:HD2	4:YD:116:LYS:NZ	1.96	0.80
29:Y2:34:ARG:HB3	29:Y2:42:LEU:HD11	1.63	0.80
1:RA:762:U:H4'	1:RA:763:G:O5'	1.82	0.80
1:RA:1747:U:H2'	1:RA:1748:C:C6	2.16	0.80
34:QC:56:ILE:HG12	34:QC:65:VAL:HG22	1.64	0.80
40:QI:83:THR:HG21	40:QI:102:PHE:HB3	1.63	0.80
32:XA:154:U:H2'	32:XA:155:A:H5'	1.63	0.80
34:XC:190:THR:HG22	34:XC:191:THR:H	1.46	0.80
37:XF:41:ASP:OD2	37:XF:58:HIS:HE1	1.65	0.80
1:YA:2808:G:HO2'	1:YA:2809:A:H8	1.29	0.80
15:YO:23:ALA:HB1	15:YO:90:VAL:HG12	1.64	0.80
1:RA:1733:G:O2'	1:RA:1734:G:H8	1.65	0.80
36:QE:14:LEU:HD13	36:QE:14:LEU:O	1.81	0.80
8:YH:77:THR:HG22	8:YH:143:ILE:HD11	1.62	0.80
14:YN:97:ILE:HG13	14:YN:98:LEU:N	1.97	0.80
23:YW:27:GLY:CA	23:YW:31:LEU:HD11	2.11	0.80
1:RA:636:G:C6	12:RL:111:ILE:HD11	2.16	0.80
1:RA:2502:G:H5'	1:RA:2503:A:H5"	1.63	0.80
3:RC:109:LEU:HD23	3:RC:110:LYS:H	1.44	0.80
24:RX:58:ILE:HG13	24:RX:66:VAL:HG21	1.64	0.80
35:XD:2:ARG:HH21	35:XD:114:ARG:CD	1.92	0.80
50:XS:52:ASN:ND2	50:XS:54:ARG:HG2	1.96	0.80
1:YA:322:A:H3'	5:YE:163:ASN:ND2	1.96	0.80
1:YA:364:C:H2'	1:YA:365:U:C6	2.17	0.80
20:RT:64:LYS:HA	20:RT:79:ASP:OD1	1.81	0.80
32:QA:1277:C:HO2'	32:QA:1279:G:H8	0.82	0.80
32:QA:1411:C:C2'	32:QA:1412:C:H5'	2.12	0.80
34:QC:142:ARG:HB3	34:QC:143:LEU:HD13	1.60	0.80
1:YA:1913:A:C4'	1:YA:1914:C:OP1	2.29	0.80
16:YP:50:ARG:HB3	16:YP:57:ALA:H	1.44	0.80
1:RA:923:G:N3	23:RW:23:LYS:HE2	1.95	0.80
10:RJ:43:GLU:O	10:RJ:45:THR:HG22	1.81	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:RT:50:LEU:H	20:RT:50:LEU:HD12	1.46	0.80
35:QD:145:ARG:HH11	35:QD:147:LYS:HE3	1.45	0.80
45:QN:19:TYR:O	45:QN:22:LYS:HB3	1.80	0.80
1:YA:1870:C:H5"	1:YA:1871:A:H2	1.46	0.80
10:YJ:99:ARG:HA	10:YJ:102:GLU:HB3	1.62	0.80
19:YS:14:ALA:O	19:YS:18:ARG:HB2	1.81	0.80
1:RA:923:G:H1'	23:RW:23:LYS:HE2	1.63	0.80
1:RA:1019:U:C4	1:RA:1020:A:N6	2.50	0.80
9:RI:115:ASP:O	9:RI:116:MET:HG2	1.82	0.80
1:YA:1255:U:H3'	1:YA:1256:G:H5"	1.61	0.80
17:YQ:91:ARG:NH1	18:YR:10:LYS:HB3	1.97	0.80
1:RA:2720:U:OP1	16:RP:52:ARG:NH2	2.15	0.80
32:QA:1007:U:H2'	32:QA:1008:U:H5"	1.64	0.80
32:XA:702:A:OP1	32:XA:702:A:C8	2.34	0.80
34:XC:110:LEU:HD21	34:XC:203:LYS:HD2	1.62	0.80
1:RA:137:U:O2'	1:RA:138:U:P	2.40	0.79
29:R2:42:LEU:HD22	29:R2:42:LEU:H	1.47	0.79
36:QE:155:LYS:HA	36:QE:158:LYS:HZ3	1.47	0.79
1:YA:1079:C:N4	1:YA:1088:A:H5"	1.95	0.79
28:Y1:25:ASN:HB3	28:Y1:28:THR:OG1	1.82	0.79
10:RJ:77:HIS:CD2	10:RJ:79:GLY:H	1.99	0.79
32:QA:92:U:H2'	32:QA:93:U:C6	2.17	0.79
36:QE:155:LYS:HD2	36:QE:156:ARG:H	1.45	0.79
48:QQ:51:GLU:HG2	48:QQ:52:CYS:SG	2.22	0.79
32:XA:643:C:H5"	39:XH:31:LEU:HD22	1.62	0.79
32:XA:1348:U:H4'	40:XI:121:ARG:HG3	1.64	0.79
34:XC:179:ALA:HB1	34:XC:202:PHE:CE1	2.18	0.79
1:YA:2387:U:H1'	23:YW:38:ARG:NH1	1.97	0.79
1:YA:2577:A:H2	27:Y0:1:ALA:H2	1.29	0.79
2:YB:40:U:O2	2:YB:43:C:H2'	1.81	0.79
8:YH:116:ARG:O	8:YH:117:LEU:HG	1.81	0.79
1:RA:1605:C:C3'	1:RA:1606:C:H5"	2.12	0.79
5:RE:44:ARG:HG3	5:RE:44:ARG:NH2	1.92	0.79
17:RQ:71:ASN:OD1	17:RQ:106:THR:HG23	1.82	0.79
46:QO:9:LYS:O	46:QO:13:GLU:HG3	1.83	0.79
32:XA:243:A:H4'	32:XA:244:U:H5'	1.65	0.79
41:XJ:67:ILE:HG23	45:XN:95:LEU:H	1.46	0.79
1:YA:67:U:H2'	1:YA:68:G:H8	1.47	0.79
23:YW:37:VAL:HG12	23:YW:55:ASP:HB2	1.62	0.79
6:RF:104:THR:HG22	6:RF:105:ILE:HG23	1.65	0.79
33:QB:13:VAL:HG23	33:QB:207:ARG:HH22	1.48	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1322:C:H2'	32:XA:1322:C:O2	1.82	0.79
36:XE:104:ILE:H	36:XE:122:VAL:H	1.26	0.79
17:YQ:60:TRP:O	17:YQ:64:ILE:HG12	1.82	0.79
1:RA:289:G:H2'	1:RA:290:U:O4'	1.82	0.79
8:YH:68:ARG:HD2	8:YH:71:LYS:HB2	1.64	0.79
33:QB:110:ILE:HD12	33:QB:147:LEU:HD13	1.65	0.79
34:QC:96:VAL:HB	34:QC:97:PRO:HD2	1.65	0.79
32:XA:990:C:H2'	32:XA:991:U:O4'	1.83	0.79
1:YA:83:A:H61	1:YA:101:A:H5'	1.45	0.79
12:YL:124:GLY:H	12:YL:143:GLU:HG3	1.48	0.79
1:RA:228:C:H4'	1:RA:229:C:H5"	1.64	0.79
28:R1:7:LYS:HA	28:R1:23:THR:HG22	1.63	0.79
36:QE:114:LEU:HG	36:QE:119:VAL:HG21	1.65	0.79
32:XA:1287:A:O2'	32:XA:1288:A:C8	2.34	0.79
45:XN:76:PHE:HE2	45:XN:92:ILE:HG21	1.47	0.79
1:YA:1157:G:H2'	1:YA:1158:C:C6	2.17	0.79
33:QB:89:PHE:HB3	33:QB:149:GLY:HA2	1.63	0.79
32:XA:87:C:O2'	32:XA:88:U:H4'	1.82	0.79
32:XA:1135:U:H5'	32:XA:1136:C:OP2	1.83	0.79
36:XE:38:VAL:HG12	36:XE:39:GLY:N	1.98	0.79
1:YA:2771:C:H2'	1:YA:2772:C:H6	1.48	0.79
1:RA:1161:C:H1'	18:RR:8:GLY:O	1.83	0.79
1:RA:2324:U:H3'	1:RA:2325:G:H5"	1.64	0.79
4:RD:172:VAL:O	4:RD:173:GLN:HB2	1.80	0.79
32:XA:1013:G:N2	32:XA:1015:G:H3'	1.98	0.79
1:YA:617:G:O2'	1:YA:618:G:H8	1.64	0.79
1:YA:1258:U:H2'	1:YA:1259:G:C8	2.17	0.79
1:YA:1607:C:H4'	1:YA:1608:A:C8	2.18	0.79
4:YD:112:THR:HG22	4:YD:113:SER:N	1.98	0.79
6:YF:49:LEU:H	6:YF:49:LEU:HD22	1.47	0.79
1:RA:479:A:H4'	1:RA:480:A:OP1	1.83	0.78
1:RA:1019:U:H3	1:RA:1142:A:H62	1.30	0.78
30:R3:31:ILE:CD1	30:R3:34:LYS:HD2	2.12	0.78
36:QE:83:PRO:HB3	36:QE:96:GLN:NE2	1.98	0.78
32:XA:6:G:N3	32:XA:6:G:C2'	2.40	0.78
32:XA:1329:A:H5"	44:XM:25:GLY:N	1.97	0.78
38:XG:14:ASP:HB3	38:XG:18:GLY:H	1.46	0.78
1:YA:1854:A:H2'	1:YA:1855:U:H5'	1.65	0.78
1:YA:2468:A:O2'	1:YA:2469:A:H8	1.67	0.78
7:YG:124:CYS:HB3	7:YG:130:ILE:HA	1.65	0.78
1:RA:733:G:C8	1:RA:761:A:N6	2.51	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1714:U:H2'	1:RA:1714:U:O2	1.81	0.78
25:RY:9:LYS:HB3	25:RY:12:GLU:HG3	1.65	0.78
33:QB:76:SER:HB2	33:QB:92:ASN:HB2	1.65	0.78
49:QR:56:ARG:O	49:QR:60:ARG:HB2	1.82	0.78
32:XA:1224:U:C5'	32:XA:1225:A:OP2	2.31	0.78
32:XA:1241:G:H2'	32:XA:1242:G:H8	1.47	0.78
32:XA:1299:A:O2'	32:XA:1300:G:H4'	1.82	0.78
33:XB:114:LYS:CA	33:XB:117:GLU:HG2	2.12	0.78
1:YA:634:C:H2'	1:YA:635:C:C6	2.19	0.78
1:YA:1467:U:H2'	1:YA:1468:U:H5'	1.64	0.78
1:YA:2304:G:H22	1:YA:2312:U:H3	1.29	0.78
6:YF:42:ALA:HB2	6:YF:49:LEU:HD21	1.65	0.78
10:YJ:73:VAL:HG23	10:YJ:74:TYR:H	1.46	0.78
3:YC:16:VAL:N	3:YC:203:VAL:HG12	1.98	0.78
23:YW:9:THR:HG23	23:YW:10:ARG:HG3	1.64	0.78
32:QA:548:G:H2'	32:QA:549:C:H6	1.47	0.78
23:YW:13:ARG:HG3	23:YW:14:ASP:H	1.47	0.78
1:RA:1071:G:H8	1:RA:1071:G:OP2	1.66	0.78
32:QA:6:G:O6	36:QE:98:ALA:HB1	1.83	0.78
45:QN:44:VAL:HG23	45:QN:45:LEU:H	1.47	0.78
33:XB:31:PHE:HB2	33:XB:41:ASN:HB2	1.65	0.78
46:XO:61:GLN:O	46:XO:65:LEU:HD12	1.84	0.78
1:YA:1586:A:H2'	1:YA:1587:G:H8	1.49	0.78
11:YK:38:ILE:HG12	11:YK:61:VAL:HG12	1.64	0.78
18:YR:87:GLN:HG2	18:YR:88:GLY:H	1.48	0.78
1:RA:2180:U:H2'	1:RA:2181:U:C5	2.19	0.78
5:RE:112:LEU:HD13	5:RE:186:VAL:HG11	1.66	0.78
10:RJ:44:TYR:O	10:RJ:45:THR:HB	1.82	0.78
26:RZ:29:ARG:HH21	26:RZ:29:ARG:HG3	1.49	0.78
32:QA:473:U:H2'	32:QA:474:G:H8	1.46	0.78
32:XA:66:A:N3	32:XA:66:A:H2'	1.98	0.78
32:XA:464:U:O4	32:XA:466:A:H4'	1.82	0.78
32:XA:1422:G:H5"	11:YK:48:PRO:HB3	1.66	0.78
52:XU:35:GLU:HG3	52:XU:36:PHE:H	1.47	0.78
1:YA:1210:G:H4'	1:YA:1211:C:O5'	1.83	0.78
1:YA:1307:A:H62	1:YA:1606:C:H6	1.30	0.78
10:YJ:55:ILE:HG22	10:YJ:123:LYS:HB2	1.64	0.78
12:YL:48:ARG:HH11	12:YL:48:ARG:CG	1.95	0.78
11:RK:18:ARG:HG3	11:RK:18:ARG:NH1	1.96	0.78
22:RV:80:HIS:HD2	22:RV:83:LYS:CB	1.95	0.78
32:QA:374:A:OP1	32:QA:452:A:N1	2.17	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:XC:126:ARG:HA	34:XC:126:ARG:HE	1.47	0.78
1:YA:2023:C:O2'	1:YA:2024:G:H8	1.65	0.78
6:YF:46:LYS:HE2	6:YF:83:PRO:HG3	1.64	0.78
9:RI:79:LEU:HD13	9:RI:135:MET:SD	2.23	0.78
16:RP:4:ILE:O	16:RP:6:GLN:N	2.15	0.78
32:QA:464:U:N3	32:QA:466:A:H5'	1.99	0.78
6:YF:103:ILE:HA	6:YF:107:VAL:HG21	1.64	0.78
1:RA:819:A:OP2	1:RA:1187:G:N2	2.15	0.78
1:RA:1069:A:O2'	1:RA:1070:A:H5"	1.83	0.78
10:RJ:111:LYS:CD	10:RJ:112:GLY:N	2.47	0.78
19:RS:88:ARG:HH21	19:RS:88:ARG:HG3	1.46	0.78
31:R4:10:LEU:HD12	31:R4:33:HIS:CD2	2.19	0.78
43:QL:43:LYS:HB2	43:QL:44:PRO:HD3	1.64	0.78
33:XB:79:VAL:HA	33:XB:213:LEU:HD21	1.66	0.78
1:YA:287:G:O2'	1:YA:288:U:H5'	1.84	0.78
1:YA:2882:A:H4'	14:YN:97:ILE:HG12	1.64	0.78
2:YB:110:C:O2'	2:YB:111:U:H5'	1.84	0.78
20:YT:1:MET:HG2	20:YT:4:GLU:HA	1.65	0.78
1:RA:1078:U:H4'	1:RA:1079:C:H6	1.48	0.78
1:RA:1590:A:H2'	1:RA:1591:A:C8	2.19	0.78
32:QA:1103:C:H2'	32:QA:1104:G:O4'	1.84	0.78
32:XA:977:A:O2'	32:XA:978:A:H5"	1.81	0.78
32:XA:1493:A:C8	1:YA:1913:A:N6	2.51	0.78
37:XF:18:VAL:HG21	37:XF:58:HIS:CD2	2.19	0.78
1:YA:963:U:OP1	1:YA:2497:A:H5"	1.84	0.78
1:YA:1051:G:H5'	1:YA:2752:C:H1'	1.66	0.78
1:YA:1231:U:H2'	1:YA:1232:G:C8	2.19	0.78
1:YA:1652:A:H62	14:YN:11:ASN:HD21	1.30	0.78
1:YA:2716:C:H2'	1:YA:2717:C:H6	1.47	0.78
14:YN:90:ARG:HH21	14:YN:116:VAL:HG11	1.48	0.78
1:RA:2800:A:C2	1:RA:2895:G:H1'	2.18	0.77
2:RB:30:C:H2'	2:RB:31:C:H5'	1.66	0.77
32:QA:188:C:H2'	32:QA:188:C:O2	1.83	0.77
33:QB:32:GLY:HA3	33:QB:39:ILE:H	1.49	0.77
48:QQ:18:LYS:CA	48:QQ:47:ASP:HB2	2.13	0.77
32:XA:533:A:O2'	32:XA:535:A:OP2	2.02	0.77
2:YB:86:G:H2'	2:YB:87:U:H5"	1.66	0.77
5:YE:47:LYS:HB3	5:YE:51:GLU:HB2	1.65	0.77
35:QD:31:CYS:O	35:QD:32:LYS:HB2	1.82	0.77
35:XD:30:LYS:N	35:XD:30:LYS:HD3	1.99	0.77
36:XE:103:GLY:HA3	36:XE:121:ASN:HA	1.64	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:XF:11:HIS:HD2	37:XF:12:PRO:HD2	1.50	0.77
52:XU:15:LEU:HD12	52:XU:15:LEU:O	1.84	0.77
1:YA:412:A:N6	1:YA:2412:A:O4'	2.17	0.77
1:RA:84:A:H62	1:RA:101:A:H2	1.33	0.77
1:RA:2135:A:O2'	1:RA:2136:G:H8	1.67	0.77
23:RW:23:LYS:O	23:RW:66:VAL:HB	1.85	0.77
24:RX:7:THR:OG1	24:RX:9:LYS:HG3	1.84	0.77
32:QA:409:U:H2'	32:QA:410:G:H8	1.47	0.77
32:QA:1370:G:O5'	40:QI:110:VAL:HG21	1.85	0.77
42:QK:108:ASN:HB3	52:QU:6:ARG:HG2	1.67	0.77
32:XA:532:A:C8	34:XC:192:TYR:CE2	2.70	0.77
32:XA:876:C:H1'	39:XH:11:THR:HG21	1.64	0.77
32:XA:1221:G:H4'	50:XS:35:ARG:NH2	1.99	0.77
1:YA:2286:G:H4'	1:YA:2287:A:O4'	1.83	0.77
3:YC:224:MET:SD	3:YC:229:HIS:HB2	2.25	0.77
6:YF:5:ASP:C	6:YF:7:TYR:H	1.90	0.77
1:RA:2269:G:H4'	23:RW:18:LYS:HE2	1.64	0.77
10:RJ:81:ILE:HG23	10:RJ:82:GLY:N	1.93	0.77
38:QG:3:ARG:HG3	38:QG:4:ARG:H	1.48	0.77
32:XA:822:U:H2'	32:XA:823:C:H6	1.48	0.77
39:XH:1:SER:HB3	39:XH:3:GLN:HG3	1.65	0.77
1:YA:320:A:H2'	5:YE:131:THR:OG1	1.84	0.77
1:YA:1071:G:N7	1:YA:1089:A:C6	2.53	0.77
1:RA:588:U:H1'	5:RE:85:PHE:CD1	2.19	0.77
18:RR:3:ALA:HB3	18:RR:59:ILE:HD11	1.64	0.77
31:R4:10:LEU:HD12	31:R4:33:HIS:HD2	1.49	0.77
32:QA:8:A:H62	35:QD:204:SER:HB2	1.48	0.77
32:XA:266:G:O2'	32:XA:267:C:H3'	1.83	0.77
38:XG:35:LYS:O	40:XI:42:THR:HG21	1.84	0.77
1:YA:1490:A:H8	3:YC:73:ILE:HD12	1.50	0.77
1:YA:2311:A:H5'	1:YA:2312:U:C5	2.19	0.77
26:YZ:10:ARG:HB2	26:YZ:53:MET:HB3	1.65	0.77
4:RD:11:MET:HE1	4:RD:192:ALA:HA	1.67	0.77
4:RD:133:THR:HG23	4:RD:134:HIS:CD2	2.18	0.77
14:RN:71:ARG:HH21	14:RN:71:ARG:CG	1.98	0.77
32:QA:721:G:H4'	32:QA:722:G:O5'	1.84	0.77
49:XR:62:ARG:HB3	49:XR:69:TYR:CE1	2.19	0.77
51:XT:23:ARG:HB3	51:XT:60:GLN:HE22	1.50	0.77
1:YA:834:G:H5'	30:Y3:56:LEU:HD11	1.65	0.77
1:YA:855:G:N3	23:YW:23:LYS:HE3	1.99	0.77
2:YB:50:A:C2	2:YB:51:G:H1'	2.20	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:YC:75:ALA:HB2	3:YC:95:TYR:CD1	2.20	0.77
18:RR:48:LYS:H	18:RR:48:LYS:HD2	1.47	0.77
32:QA:1320:C:OP1	50:QS:69:LYS:HE2	1.84	0.77
1:YA:2544:G:H5'	1:YA:2645:G:N7	1.99	0.77
21:YU:58:VAL:HG12	21:YU:60:LYS:H	1.49	0.77
3:RC:166:ARG:O	3:RC:166:ARG:HG3	1.85	0.77
11:RK:108:ARG:HH11	11:RK:108:ARG:HG2	1.50	0.77
23:RW:76:ARG:HG3	23:RW:76:ARG:NH2	1.93	0.77
32:QA:452:A:H2'	32:QA:453:G:O4'	1.84	0.77
1:YA:1060:U:O4'	1:YA:1061:U:H2'	1.85	0.77
2:YB:12:C:C4'	2:YB:13:G:OP1	2.25	0.77
14:YN:103:ARG:HD3	14:YN:110:MET:SD	2.25	0.77
24:YX:58:ILE:HG12	24:YX:66:VAL:HG21	1.67	0.77
1:RA:137:U:O2'	1:RA:138:U:OP1	2.02	0.77
1:RA:528:A:C2	1:RA:2043:C:H4'	2.19	0.77
4:RD:9:VAL:HG22	4:RD:26:VAL:HB	1.67	0.77
10:RJ:73:VAL:HG23	10:RJ:74:TYR:H	1.48	0.77
32:QA:94:G:H4'	32:QA:95:C:H5"	1.67	0.77
32:XA:374:A:H5"	32:XA:452:A:N1	2.00	0.77
1:YA:1231:U:H2'	1:YA:1232:G:H8	1.49	0.77
3:RC:20:ASN:HD21	3:RC:22:GLU:HG2	1.49	0.77
14:RN:116:VAL:HG22	14:RN:116:VAL:O	1.85	0.77
36:QE:23:THR:HA	36:QE:28:ARG:HA	1.67	0.77
32:XA:961:U:HO2'	32:XA:962:C:H6	0.78	0.77
41:XJ:44:THR:OG1	41:XJ:70:HIS:CE1	2.38	0.77
52:XU:8:ASN:ND2	52:XU:9:GLU:H	1.82	0.77
1:YA:184:C:H2'	1:YA:185:G:C8	2.20	0.77
14:YN:97:ILE:HG13	14:YN:98:LEU:H	1.50	0.77
1:RA:826:U:O2'	12:RL:53:GLY:HA3	1.85	0.76
1:RA:1062:G:OP1	1:RA:1070:A:H4'	1.85	0.76
6:RF:40:GLY:CA	6:RF:84:ILE:HD11	2.15	0.76
10:RJ:64:VAL:O	10:RJ:65:THR:HB	1.83	0.76
20:RT:44:LYS:HG3	20:RT:55:VAL:HG11	1.67	0.76
32:XA:166:U:H2'	32:XA:167:A:H5'	1.67	0.76
1:YA:624:C:O2'	1:YA:657:U:H5"	1.85	0.76
12:YL:17:LYS:NZ	12:YL:19:LEU:HD22	2.00	0.76
13:RM:40:ARG:HB2	13:RM:93:VAL:CG2	2.15	0.76
32:QA:721:G:H4'	32:QA:722:G:C5'	2.14	0.76
33:QB:9:LEU:HD12	33:QB:42:LEU:HD13	1.65	0.76
33:QB:131:LYS:O	33:QB:135:MET:HB2	1.86	0.76
36:QE:156:ARG:O	36:QE:158:LYS:N	2.18	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1225:A:H4'	50:XS:77:ARG:HH12	1.50	0.76
32:XA:1305:G:H22	32:XA:1331:G:H2'	1.49	0.76
1:YA:1379:U:H2'	1:YA:1379:U:O2	1.86	0.76
8:YH:72:ILE:HD11	8:YH:141:LYS:H	1.51	0.76
14:YN:38:LEU:HB3	14:YN:39:PRO:HD3	1.67	0.76
6:RF:37:MET:HE3	6:RF:151:LEU:HB3	1.67	0.76
32:QA:73:C:O2'	32:QA:74:A:O4'	2.02	0.76
32:QA:214:C:O2'	32:QA:215:C:C6	2.39	0.76
32:QA:1066:C:H6	32:QA:1066:C:H5"	1.49	0.76
43:QL:49:ARG:HH11	43:QL:49:ARG:CG	1.95	0.76
44:QM:2:ARG:O	44:QM:3:ILE:HG12	1.85	0.76
32:XA:1138:G:N2	32:XA:1140:C:C4	2.54	0.76
40:XI:48:ARG:C	40:XI:50:PRO:HD2	2.10	0.76
41:XJ:26:VAL:O	41:XJ:30:LYS:HB3	1.84	0.76
1:YA:228:C:H5"	1:YA:229:C:C5	2.21	0.76
1:YA:482:A:N6	1:YA:506:G:C4	2.52	0.76
1:YA:2757:A:N1	7:YG:66:THR:HG21	2.00	0.76
1:YA:2847:U:H2'	1:YA:2848:G:H5'	1.67	0.76
4:YD:159:LYS:HE2	4:YD:160:LYS:H	1.48	0.76
19:YS:27:LYS:O	19:YS:71:VAL:HG12	1.86	0.76
20:YT:29:THR:H	20:YT:87:LEU:HB2	1.51	0.76
23:YW:17:ALA:O	23:YW:18:LYS:HB3	1.85	0.76
1:RA:2203:U:H5"	1:RA:2204:G:OP1	1.85	0.76
3:RC:20:ASN:HB3	3:RC:23:LEU:HD23	1.65	0.76
6:RF:134:GLN:HG2	6:RF:135:ILE:N	1.98	0.76
9:RI:76:ALA:HB2	9:RI:131:THR:HG22	1.67	0.76
32:XA:1242:G:O2'	32:XA:1243:C:O5'	2.04	0.76
33:XB:185:ILE:HG22	33:XB:199:ILE:HG13	1.66	0.76
1:YA:2142:A:H2'	1:YA:2144:G:P	2.24	0.76
11:YK:61:VAL:HG11	11:YK:112:PHE:CE2	2.21	0.76
28:Y1:5:ARG:HD2	28:Y1:25:ASN:HB2	1.67	0.76
12:RL:95:LEU:HD22	12:RL:100:ILE:HD11	1.67	0.76
32:QA:409:U:H2'	32:QA:410:G:C8	2.21	0.76
43:QL:62:VAL:HG21	43:QL:94:TYR:CE2	2.19	0.76
32:XA:563:A:H2'	32:XA:563:A:N3	1.99	0.76
32:XA:1215:G:O2'	32:XA:1216:A:H8	1.69	0.76
32:XA:1296:C:C4	32:XA:1297:G:N2	2.53	0.76
42:XK:44:ALA:HB3	42:XK:69:CYS:HB2	1.67	0.76
1:YA:1238:G:O2'	1:YA:1239:G:H5'	1.84	0.76
2:YB:24:G:H5'	2:YB:25:U:C5	2.21	0.76
1:RA:1820:U:OP1	3:RC:176:ARG:HG2	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:RT:51:PHE:O	20:RT:52:GLU:HG2	1.86	0.76
37:QF:16:GLU:CG	35:XD:191:SER:HB2	2.10	0.76
40:QI:28:VAL:HB	40:QI:63:TYR:HD2	1.51	0.76
42:QK:14:GLN:HA	42:QK:76:TYR:O	1.84	0.76
46:QO:63:ARG:HG2	46:QO:87:ARG:NH1	2.00	0.76
32:XA:1239:A:O2'	32:XA:1241:G:C5	2.38	0.76
35:XD:34:GLU:O	35:XD:37:PRO:HD3	1.85	0.76
1:YA:226:A:C2	1:YA:230:G:O6	2.38	0.76
1:YA:686:U:O4	29:Y2:12:ARG:HG3	1.85	0.76
1:YA:921:C:C2'	1:YA:922:C:H5'	2.16	0.76
1:YA:1237:A:H2	1:YA:1238:G:H1'	1.46	0.76
1:YA:1799:G:H4'	1:YA:1800:C:O5'	1.85	0.76
1:YA:2746:U:H5"	7:YG:137:LYS:HG2	1.65	0.76
1:YA:2822:G:H2'	1:YA:2823:A:H5"	1.68	0.76
1:RA:729:G:H4'	1:RA:763:G:H5'	1.65	0.76
3:RC:100:ARG:HH11	3:RC:100:ARG:CG	1.98	0.76
4:RD:12:THR:HG22	4:RD:13:ARG:N	1.99	0.76
10:RJ:77:HIS:HD2	10:RJ:79:GLY:H	1.34	0.76
10:RJ:117:ALA:HA	10:RJ:120:ARG:NH2	2.01	0.76
29:R2:43:THR:O	29:R2:44:VAL:HB	1.84	0.76
32:QA:1138:G:O2'	32:QA:1139:G:H4'	1.86	0.76
34:QC:10:ARG:HH21	34:QC:181:ILE:HG13	1.51	0.76
32:XA:1147:C:H4'	40:XI:6:TYR:CE1	2.21	0.76
51:XT:73:ARG:HH11	51:XT:73:ARG:CG	1.99	0.76
1:YA:1300:G:H4'	1:YA:1301:A:O5'	1.85	0.76
1:YA:2503:A:H4'	1:YA:2504:U:OP1	1.84	0.76
1:YA:2619:C:H5'	4:YD:157:LYS:HA	1.67	0.76
1:RA:508:A:H4'	1:RA:509:C:OP2	1.85	0.76
1:RA:1454:C:H41	14:RN:73:ASN:HD21	1.34	0.76
1:RA:1936:A:H2	1:RA:1943:U:C5	2.04	0.76
32:XA:728:A:H2'	32:XA:729:A:C8	2.21	0.76
34:XC:34:SER:O	34:XC:38:VAL:HG13	1.85	0.76
52:XU:33:ARG:NH1	52:XU:34:ARG:HD3	2.01	0.76
1:YA:221:A:H5"	1:YA:222:A:OP1	1.86	0.76
1:YA:922:C:H1'	23:YW:22:VAL:HG21	1.68	0.76
1:YA:1056:G:N2	1:YA:1102:C:H5	1.83	0.76
1:YA:2136:G:H2'	1:YA:2137:U:C6	2.21	0.76
10:RJ:111:LYS:HD3	10:RJ:112:GLY:N	2.00	0.76
23:RW:39:GLN:HG3	23:RW:42:THR:H	1.50	0.76
1:YA:762:U:C4'	1:YA:763:G:O5'	2.33	0.76
1:YA:2093:G:O6	1:YA:2225:A:C8	2.38	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:YM:17:ASN:O	13:YM:18:ARG:HG2	1.86	0.76
16:YP:56:SER:O	16:YP:75:THR:HG22	1.85	0.76
1:RA:682:G:H5'	29:R2:26:ASN:OD1	1.86	0.76
1:RA:2557:G:H2'	1:RA:2558:C:C6	2.21	0.76
32:XA:994:A:HO2'	32:XA:995:C:H6	1.31	0.76
35:XD:109:THR:HG22	35:XD:111:ALA:H	1.50	0.76
35:XD:195:ASN:HB3	35:XD:197:HIS:CD2	2.21	0.76
1:YA:2143:C:H3'	1:YA:2144:G:C8	2.21	0.76
15:RO:88:LYS:O	15:RO:89:ASP:HB2	1.84	0.75
22:RV:80:HIS:ND1	22:RV:81:PRO:HD2	2.01	0.75
32:QA:1191:A:H5"	34:QC:3:LYS:HE3	1.68	0.75
32:XA:1159:U:H5	32:XA:1182:G:HO2'	1.34	0.75
1:YA:45:G:H5'	1:YA:46:G:OP1	1.86	0.75
1:YA:95:A:H4'	25:YY:38:GLN:O	1.85	0.75
1:YA:300:A:OP2	21:YU:96:LYS:HD3	1.84	0.75
1:YA:614:A:H4'	1:YA:616:A:H62	1.49	0.75
1:YA:1339:G:H5'	1:YA:1393:A:N1	2.01	0.75
1:YA:1780:A:OP1	56:YA:3679:HOH:O	2.04	0.75
1:YA:2346:A:H3'	1:YA:2347:C:C5'	2.14	0.75
3:RC:246:PRO:HG2	3:RC:247:TRP:CZ3	2.20	0.75
34:QC:76:ILE:HA	34:QC:83:VAL:HG23	1.66	0.75
42:QK:88:PRO:HD3	52:QU:28:LEU:HD13	1.68	0.75
43:QL:23:LEU:HG	43:QL:24:GLU:H	1.50	0.75
32:XA:328:C:H1'	32:XA:329:A:OP2	1.86	0.75
1:YA:806:C:H2'	1:YA:807:U:H6	1.51	0.75
1:YA:942:G:H2'	1:YA:943:A:H5'	1.68	0.75
1:YA:995:C:O2	10:YJ:3:THR:HG23	1.86	0.75
1:YA:1476:U:H1'	1:YA:1732:C:C2	2.21	0.75
16:YP:88:ARG:HE	16:YP:112:ARG:HH21	1.34	0.75
21:YU:35:VAL:HG12	21:YU:36:GLU:H	1.51	0.75
1:RA:1778:U:H2'	1:RA:1784:A:N6	2.01	0.75
4:RD:107:VAL:H	4:RD:206:ALA:H	1.32	0.75
32:QA:1227:A:H2'	32:QA:1227:A:N3	2.00	0.75
32:QA:1239:A:H62	32:QA:1299:A:H62	1.33	0.75
32:XA:374:A:H5"	32:XA:452:A:C2	2.21	0.75
33:XB:46:VAL:HG13	33:XB:47:PRO:HD3	1.67	0.75
1:YA:942:G:C2'	1:YA:943:A:H5'	2.16	0.75
1:RA:1415:U:H2'	1:RA:1415:U:O2	1.85	0.75
3:RC:12:ARG:HH11	3:RC:12:ARG:HG3	1.51	0.75
8:RH:6:LEU:O	8:RH:15:LEU:HA	1.86	0.75
10:RJ:40:HIS:HD2	10:RJ:41:LYS:HG2	1.51	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:RS:18:ARG:O	19:RS:19:LEU:HB2	1.85	0.75
32:QA:94:G:H4'	32:QA:95:C:C5'	2.16	0.75
32:XA:77:A:H2'	32:XA:78:A:C8	2.22	0.75
1:YA:84:A:C5	1:YA:103:A:N6	2.55	0.75
1:YA:616:A:C2'	1:YA:617:G:H8	1.99	0.75
1:YA:729:G:H3'	1:YA:730:A:C5'	2.17	0.75
5:YE:133:LEU:O	5:YE:137:LYS:HB2	1.86	0.75
9:YI:45:THR:HG23	9:YI:54:ILE:HD13	1.69	0.75
1:RA:1287:A:O2'	1:RA:1288:G:H5'	1.86	0.75
1:RA:2602:A:H4'	1:RA:2603:G:C5'	2.17	0.75
32:QA:210:C:H4'	32:QA:211:G:N2	2.02	0.75
32:QA:475:C:H2'	32:QA:476:U:H6	1.52	0.75
32:QA:807:A:H2'	32:QA:808:C:H6	1.50	0.75
33:QB:185:ILE:HA	33:QB:199:ILE:HB	1.67	0.75
35:QD:34:GLU:O	35:QD:37:PRO:HD3	1.86	0.75
36:QE:106:ALA:HB2	36:QE:124:ALA:HB3	1.68	0.75
36:QE:109:ALA:O	36:QE:110:MET:HG2	1.86	0.75
42:QK:28:ASN:OD1	42:QK:46:ALA:HB3	1.86	0.75
32:XA:14:U:H2'	32:XA:16:A:OP2	1.85	0.75
32:XA:202:G:O2'	32:XA:468:A:H8	1.69	0.75
32:XA:597:G:H2'	32:XA:598:U:H5'	1.69	0.75
32:XA:1091:U:O2	32:XA:1093:A:H8	1.70	0.75
1:YA:1312:U:H4'	1:YA:1313:U:O5'	1.85	0.75
1:RA:481:G:C4	1:RA:507:A:C2	2.75	0.75
3:RC:219:VAL:HG12	3:RC:224:MET:HE2	1.68	0.75
32:QA:322:C:O2'	51:QT:17:ARG:HG2	1.87	0.75
36:QE:80:LEU:HD12	36:QE:146:MET:HE1	1.68	0.75
38:QG:12:LEU:HD22	38:QG:12:LEU:H	1.51	0.75
48:QQ:42:LYS:O	48:QQ:43:LEU:HD23	1.87	0.75
32:XA:1070:U:H2'	32:XA:1071:C:H6	1.51	0.75
32:XA:1239:A:H1'	32:XA:1241:G:C4	2.21	0.75
33:XB:9:LEU:HB2	33:XB:11:ALA:H	1.51	0.75
52:XU:19:LYS:HB3	52:XU:24:LYS:HB2	1.66	0.75
1:YA:1056:G:C1'	1:YA:1103:A:H61	2.00	0.75
1:YA:1469:A:H2'	1:YA:1470:A:C8	2.22	0.75
2:YB:42:C:H2'	2:YB:43:C:H6	1.49	0.75
8:RH:2:GLN:O	8:RH:3:VAL:HG22	1.86	0.75
10:RJ:4:PHE:O	10:RJ:44:TYR:CE1	2.39	0.75
17:RQ:88:GLU:OE1	17:RQ:88:GLU:C	2.28	0.75
32:QA:86:G:H21	32:QA:87:C:H41	1.33	0.75
32:QA:174:A:H2'	32:QA:175:C:H5'	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:QD:29:THR:HG22	35:QD:30:LYS:HD3	1.68	0.75
32:XA:181:A:H4'	32:XA:182:A:OP1	1.85	0.75
32:XA:1167:A:N7	32:XA:1169:A:N6	2.35	0.75
32:XA:1201:A:H4'	32:XA:1202:U:O5'	1.86	0.75
34:XC:84:GLU:C	34:XC:86:LEU:H	1.91	0.75
36:XE:80:LEU:HD22	36:XE:146:MET:HE1	1.69	0.75
52:XU:3:ILE:CG2	52:XU:19:LYS:HZ1	2.00	0.75
1:YA:172:A:H2'	1:YA:173:A:H8	1.49	0.75
1:YA:1364:G:N7	24:YX:1:SER:HB2	2.02	0.75
1:YA:1387:A:C5'	1:YA:1469:A:H1'	2.16	0.75
8:YH:32:PRO:HA	24:YX:38:TRP:HD1	1.52	0.75
10:YJ:5:THR:HA	10:YJ:44:TYR:CD2	2.21	0.75
19:YS:73:LYS:HB2	19:YS:106:VAL:HB	1.69	0.75
21:YU:10:VAL:HG12	21:YU:71:ILE:HA	1.68	0.75
1:RA:284:U:H2'	1:RA:285:G:H8	1.50	0.75
1:RA:2415:G:H4'	12:RL:66:PHE:HB2	1.68	0.75
7:RG:126:THR:HG22	7:RG:127:GLN:H	1.51	0.75
8:RH:96:THR:O	8:RH:97:ARG:HG3	1.87	0.75
10:RJ:44:TYR:CD2	17:RQ:63:ARG:HG2	2.21	0.75
20:RT:73:ARG:CZ	20:RT:73:ARG:HB3	2.16	0.75
42:QK:21:HIS:CE1	42:QK:34:THR:HG21	2.22	0.75
32:XA:120:A:C3'	32:XA:121:U:C5'	2.62	0.75
41:XJ:52:LEU:HD21	41:XJ:59:LYS:HA	1.67	0.75
1:YA:184:C:H2'	1:YA:185:G:H8	1.50	0.75
1:YA:1606:C:O2'	1:YA:1607:C:OP2	2.04	0.75
5:YE:6:LYS:HB2	5:YE:121:VAL:HG12	1.69	0.75
20:YT:29:THR:HB	20:YT:87:LEU:H	1.52	0.75
5:RE:41:GLN:OE1	5:RE:43:THR:HG21	1.87	0.75
28:R1:24:LYS:HE2	28:R1:52:LYS:HB2	1.68	0.75
37:QF:3:HIS:H	37:QF:92:THR:CG2	1.99	0.75
39:QH:86:LYS:HG3	39:QH:90:GLU:HB3	1.69	0.75
45:QN:42:ASN:C	45:QN:44:VAL:H	1.95	0.75
49:QR:40:PRO:HB2	49:QR:42:ARG:HG2	1.66	0.75
32:XA:1493:A:H8	1:YA:1913:A:N6	1.85	0.75
38:XG:137:ARG:CZ	38:XG:138:GLU:HG2	2.17	0.75
1:YA:75:G:H4'	25:YY:48:ARG:NH2	2.02	0.75
1:YA:230:G:O2'	1:YA:231:A:H8	1.70	0.75
1:YA:2142:A:C3'	1:YA:2143:C:H4'	2.17	0.75
1:YA:2190:G:H5'	1:YA:2191:A:OP2	1.85	0.75
5:YE:143:LEU:HG	5:YE:185:LYS:HD3	1.68	0.75
7:YG:78:VAL:HG23	7:YG:79:THR:HG23	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2320:U:H4'	1:RA:2321:U:H5"	1.67	0.74
4:RD:48:ILE:HG23	4:RD:84:LEU:HD21	1.69	0.74
6:RF:34:THR:HG23	6:RF:89:THR:HG23	1.69	0.74
45:QN:22:LYS:HG3	45:QN:23:ARG:N	2.02	0.74
35:XD:66:VAL:HG22	35:XD:96:ARG:NH1	2.02	0.74
9:YI:76:ALA:HB2	9:YI:131:THR:HB	1.69	0.74
15:RO:51:ALA:HB3	15:RO:78:VAL:HG13	1.67	0.74
32:QA:1387:G:H2'	32:QA:1388:C:C6	2.22	0.74
35:XD:143:SER:HB3	35:XD:178:GLU:HG3	1.68	0.74
39:XH:9:MET:O	39:XH:13:ILE:HG13	1.86	0.74
1:YA:2056:G:C2	1:YA:2057:G:C8	2.74	0.74
3:YC:59:GLN:NE2	3:YC:84:PRO:HB2	2.00	0.74
1:RA:962:G:OP1	56:RA:3355:HOH:O	2.05	0.74
1:RA:2648:G:H2'	1:RA:2649:C:C6	2.21	0.74
3:RC:14:HIS:O	3:RC:203:VAL:HG11	1.87	0.74
4:RD:8:LYS:HB2	4:RD:201:LEU:HD22	1.69	0.74
7:RG:60:GLY:O	7:RG:61:TRP:HB2	1.84	0.74
9:RI:53:PRO:HD2	9:RI:77:VAL:HG21	1.70	0.74
32:QA:113:G:H1'	32:QA:354:G:H5'	1.69	0.74
32:QA:204:G:H1'	32:QA:465:A:C2	2.22	0.74
52:QU:39:LYS:H	52:QU:40:PRO:HD2	1.52	0.74
32:XA:1366:C:O2'	32:XA:1367:C:C6	2.39	0.74
1:YA:320:A:N7	5:YE:132:LYS:HB2	2.02	0.74
1:YA:1324:G:H1'	1:YA:1616:A:N6	2.01	0.74
2:YB:13:G:H5"	2:YB:13:G:C8	2.21	0.74
20:YT:20:ALA:HB1	20:YT:31:VAL:HG11	1.68	0.74
1:RA:2136:G:O2'	1:RA:2137:U:C6	2.39	0.74
6:RF:76:PHE:O	6:RF:77:LYS:HB2	1.87	0.74
13:RM:1:MET:O	13:RM:2:LEU:HB2	1.87	0.74
42:QK:87:GLY:H	42:QK:113:THR:HG22	1.51	0.74
32:XA:346:G:H2'	32:XA:346:G:N3	1.99	0.74
32:XA:1361:G:H2'	32:XA:1362:A:H5'	1.69	0.74
1:YA:1387:A:N6	1:YA:1401:G:C6	2.54	0.74
1:YA:1870:C:H5"	1:YA:1871:A:C2	2.21	0.74
4:YD:33:ARG:H	4:YD:33:ARG:HD2	1.52	0.74
1:RA:2353:G:H1'	23:RW:30:VAL:HG13	1.69	0.74
1:RA:2793:C:H2'	1:RA:2794:C:H6	1.53	0.74
33:QB:207:ARG:O	33:QB:211:LEU:HB2	1.86	0.74
39:QH:110:MET:HE2	39:QH:114:ALA:HB1	1.70	0.74
32:XA:1151:A:HO2'	32:XA:1152:A:H8	0.77	0.74
32:XA:1218:C:H2'	32:XA:1219:A:C8	2.23	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1276:G:H21	32:XA:1282:C:H1'	1.51	0.74
1:YA:118:A:C8	1:YA:119:A:C8	2.76	0.74
1:YA:163:C:O2'	1:YA:164:C:O4'	2.05	0.74
1:YA:312:G:H5'	1:YA:331:C:O2'	1.86	0.74
1:YA:1695:G:H2'	1:YA:1696:G:O4'	1.87	0.74
1:YA:2261:C:C2	1:YA:2280:G:N2	2.56	0.74
16:YP:63:ILE:HA	16:YP:68:GLY:HA2	1.68	0.74
1:RA:1469:A:H2'	1:RA:1470:A:C8	2.21	0.74
1:RA:1871:A:O2'	1:RA:1872:A:C8	2.41	0.74
32:QA:1049:U:H4'	32:QA:1050:G:OP2	1.87	0.74
50:XS:10:ILE:HG22	50:XS:14:LEU:HD11	1.69	0.74
51:XT:26:MET:HE1	51:XT:56:ILE:HD13	1.68	0.74
2:YB:54:G:N2	6:YF:25:MET:HE2	2.02	0.74
4:YD:106:LYS:HB3	4:YD:206:ALA:CB	2.17	0.74
8:YH:8:LYS:HD2	8:YH:9:VAL:N	2.02	0.74
32:QA:548:G:H2'	32:QA:549:C:C6	2.22	0.74
32:XA:373:A:H2'	32:XA:374:A:H8	1.52	0.74
32:XA:704:A:O2'	32:XA:705:G:C8	2.39	0.74
32:XA:995:C:N3	32:XA:1046:A:O2'	2.20	0.74
1:YA:27:G:N2	1:YA:512:G:H2'	2.02	0.74
1:YA:506:G:H4'	1:YA:507:A:H5'	1.70	0.74
1:YA:1783:A:H5'	1:YA:2608:G:H4'	1.70	0.74
4:YD:137:SER:HB3	4:YD:138:LEU:HD22	1.67	0.74
25:YY:19:LEU:HG	25:YY:22:LEU:HD22	1.70	0.74
1:RA:2092:U:H4'	1:RA:2093:G:O5'	1.87	0.74
4:RD:118:PHE:HD2	4:RD:119:ALA:N	1.83	0.74
23:RW:39:GLN:HG3	23:RW:42:THR:N	2.02	0.74
26:RZ:7:THR:HG23	26:RZ:34:THR:N	2.02	0.74
32:QA:110:C:H2'	32:QA:111:G:C8	2.23	0.74
35:QD:169:TRP:CD1	35:QD:170:LEU:HG	2.22	0.74
39:QH:104:SER:O	39:QH:122:GLY:HA3	1.86	0.74
43:QL:24:GLU:HB2	43:QL:26:CYS:SG	2.28	0.74
45:QN:51:PRO:O	45:QN:52:ARG:HB2	1.88	0.74
32:XA:330:C:O2'	32:XA:331:G:C8	2.25	0.74
32:XA:701:U:O2'	32:XA:702:A:P	2.46	0.74
44:XM:78:ARG:NH2	44:XM:79:LEU:HD23	2.03	0.74
44:XM:81:ASP:HB3	44:XM:82:LEU:HD12	1.70	0.74
52:XU:38:GLU:N	52:XU:40:PRO:HD2	2.02	0.74
1:YA:870:U:C2'	1:YA:871:U:H5'	2.18	0.74
1:YA:962:G:OP1	1:YA:962:G:H3'	1.88	0.74
1:YA:1324:G:H1	1:YA:1330:C:H42	1.35	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1857:G:O2'	1:YA:1884:G:N2	2.19	0.74
1:YA:2267:A:N6	1:YA:2272:U:H3	1.85	0.74
4:YD:149:ASN:O	4:YD:152:PRO:HD2	1.87	0.74
15:YO:94:ARG:HD2	15:YO:97:PHE:O	1.87	0.74
1:RA:995:C:H5'	1:RA:995:C:H6	1.51	0.74
32:QA:202:G:H21	32:QA:466:A:H61	1.35	0.74
32:QA:214:C:O2'	32:QA:215:C:H6	1.71	0.74
32:QA:338:A:N1	32:QA:351:G:O6	2.21	0.74
45:XN:16:ALA:HA	45:XN:20:PHE:HD1	1.52	0.74
1:YA:335:C:HO2'	1:YA:336:C:H6	1.34	0.74
1:YA:1210:G:C6	1:YA:1237:A:N7	2.56	0.74
1:YA:1453:A:H4'	1:YA:1454:C:OP2	1.87	0.74
1:YA:2423:U:O2'	1:YA:2425:A:H2'	1.88	0.74
1:YA:2750:A:H4'	1:YA:2751:G:OP2	1.87	0.74
4:YD:124:ARG:HD3	4:YD:125:TRP:NE1	2.03	0.74
1:RA:1455:G:OP2	56:RA:3413:HOH:O	2.04	0.74
35:QD:11:SER:HA	35:QD:18:LEU:HD12	1.69	0.74
40:QI:90:ASP:OD2	40:QI:93:LEU:HG	1.87	0.74
38:XG:110:ARG:CG	38:XG:111:GLY:H	2.01	0.74
44:XM:77:LYS:HA	44:XM:80:MET:HE2	1.68	0.74
1:YA:335:C:O2'	1:YA:336:C:C6	2.40	0.74
1:YA:1558:C:H4'	1:YA:1559:U:H5'	1.70	0.74
1:YA:2269:G:O3'	23:YW:18:LYS:HE2	1.88	0.74
1:YA:2333:A:C2	1:YA:2335:A:N6	2.55	0.74
5:YE:147:LEU:HB3	5:YE:186:VAL:HG23	1.69	0.74
1:RA:506:G:H4'	1:RA:507:A:H5'	1.70	0.73
1:RA:933:A:H5'	1:RA:934:U:OP2	1.88	0.73
1:RA:1371:G:N7	56:RA:3402:HOH:O	2.21	0.73
17:RQ:69:ARG:HH21	17:RQ:69:ARG:CB	1.99	0.73
38:XG:68:VAL:HG22	38:XG:134:VAL:HG12	1.70	0.73
1:YA:41:C:H2'	1:YA:42:A:C8	2.23	0.73
14:YN:71:ARG:NH2	14:YN:71:ARG:HB2	2.03	0.73
1:RA:430:A:H5"	1:RA:431:U:OP2	1.88	0.73
1:RA:1131:G:OP1	10:RJ:82:GLY:HA2	1.88	0.73
33:QB:13:VAL:CG2	33:QB:207:ARG:HH22	2.00	0.73
32:XA:373:A:C8	32:XA:373:A:H5'	2.23	0.73
1:YA:1080:A:H2'	1:YA:1081:U:H6	1.49	0.73
1:YA:1645:G:OP1	1:YA:1646:C:H5'	1.89	0.73
6:YF:110:ILE:HA	6:YF:111:ARG:HH11	1.52	0.73
12:YL:79:LEU:HB2	12:YL:113:ALA:H	1.51	0.73
1:RA:1022:G:N2	1:RA:1142:A:C2	2.56	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2636:C:H2'	1:RA:2637:U:C6	2.22	0.73
11:RK:63:VAL:HG22	11:RK:107:LEU:HD21	1.69	0.73
12:RL:109:LYS:HG2	12:RL:126:ARG:HB3	1.69	0.73
43:QL:27:PRO:HB2	43:QL:28:GLN:OE1	1.87	0.73
43:QL:86:VAL:HG11	43:QL:89:LEU:HD23	1.68	0.73
32:XA:381:C:H2'	32:XA:381:C:O2	1.87	0.73
32:XA:701:U:HO2'	32:XA:702:A:P	2.11	0.73
1:YA:223:A:N6	1:YA:422:A:N6	2.37	0.73
1:YA:2316:G:H2'	1:YA:2317:A:H8	1.51	0.73
4:YD:68:PHE:HB3	4:YD:73:VAL:HA	1.70	0.73
7:YG:43:LYS:O	7:YG:49:LEU:HD12	1.88	0.73
10:YJ:59:ALA:O	10:YJ:62:VAL:HG12	1.88	0.73
14:YN:98:LEU:HD21	27:Y0:53:VAL:HG21	1.67	0.73
25:YY:18:LEU:O	25:YY:22:LEU:HD13	1.88	0.73
16:RP:50:ARG:CG	16:RP:57:ALA:H	2.00	0.73
20:RT:32:LEU:N	20:RT:83:ALA:HB3	2.03	0.73
32:QA:86:G:N2	32:QA:87:C:N4	2.36	0.73
32:QA:601:G:H2'	32:QA:602:A:C8	2.23	0.73
36:QE:82:HIS:HB2	36:QE:83:PRO:HD2	1.70	0.73
37:XF:3:HIS:HD2	37:XF:65:GLU:HG2	1.53	0.73
47:XP:36:VAL:O	47:XP:36:VAL:HG13	1.87	0.73
5:YE:166:LYS:HE2	5:YE:166:LYS:HA	1.70	0.73
17:YQ:91:ARG:HG3	18:YR:11:GLN:CD	2.14	0.73
1:RA:2352:A:N1	23:RW:30:VAL:HG11	2.03	0.73
5:RE:46:GLN:HG3	5:RE:87:ALA:H	1.53	0.73
23:RW:73:PRO:HG2	23:RW:76:ARG:HB2	1.71	0.73
38:QG:69:ARG:HG3	38:QG:95:ARG:HG2	1.69	0.73
45:QN:22:LYS:HG3	45:QN:23:ARG:H	1.54	0.73
1:YA:242:G:H8	30:Y3:3:ILE:O	1.71	0.73
1:YA:1255:U:H2'	5:YE:68:ALA:HB2	1.70	0.73
1:YA:1394:U:H4'	1:YA:1603:A:H4'	1.69	0.73
1:RA:856:G:H1'	23:RW:23:LYS:HB3	1.69	0.73
32:QA:858:G:O2'	32:QA:859:G:H5'	1.87	0.73
42:QK:30:ILE:HB	42:QK:45:THR:HG22	1.71	0.73
43:QL:113:ARG:HB3	43:QL:118:VAL:HB	1.71	0.73
32:XA:876:C:C1'	39:XH:11:THR:HG21	2.19	0.73
33:XB:103:TRP:HB2	33:XB:106:VAL:HB	1.69	0.73
4:YD:49:GLN:HE21	4:YD:79:LEU:HB3	1.53	0.73
11:YK:13:ASN:HD21	11:YK:97:THR:H	1.35	0.73
11:YK:70:ARG:HB3	11:YK:76:VAL:HG22	1.71	0.73
25:YY:31:GLN:HE22	25:YY:37:LEU:HD12	1.54	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y0:12:ARG:HG3	27:Y0:15:ARG:NH1	2.01	0.73
9:RI:79:LEU:HA	9:RI:83:ALA:HB3	1.70	0.73
17:RQ:63:ARG:CZ	17:RQ:96:ASP:HA	2.16	0.73
34:QC:75:VAL:O	34:QC:82:ASP:HB3	1.88	0.73
36:QE:114:LEU:HG	36:QE:119:VAL:CG2	2.17	0.73
32:XA:560:A:H4'	32:XA:561:U:H5"	1.71	0.73
32:XA:1138:G:O2'	32:XA:1139:G:OP1	2.07	0.73
32:XA:1242:G:N2	32:XA:1243:C:H1'	2.03	0.73
33:XB:48:MET:O	33:XB:199:ILE:HG22	1.87	0.73
33:XB:103:TRP:HA	33:XB:106:VAL:HB	1.70	0.73
1:YA:1070:A:H5'	1:YA:1071:G:H5"	1.71	0.73
1:YA:1929:G:H4'	1:YA:1930:G:OP1	1.86	0.73
5:YE:130:LYS:CB	5:YE:133:LEU:HB3	2.18	0.73
6:YF:91:ARG:HB3	6:YF:91:ARG:HH21	1.51	0.73
20:YT:38:ALA:HB1	20:YT:81:LYS:NZ	2.04	0.73
1:RA:927:A:H2'	1:RA:928:A:C8	2.24	0.73
1:RA:2199:A:C8	1:RA:2199:A:H5'	2.24	0.73
4:RD:12:THR:CG2	4:RD:13:ARG:H	2.02	0.73
5:RE:108:ILE:HD13	5:RE:109:LEU:N	2.04	0.73
17:RQ:63:ARG:NH1	17:RQ:96:ASP:CA	2.35	0.73
17:RQ:93:ILE:HG23	17:RQ:94:LEU:N	2.04	0.73
19:RS:20:VAL:HA	19:RS:23:LEU:HD12	1.71	0.73
23:RW:41:GLY:HA2	23:RW:44:PHE:CE2	2.24	0.73
23:RW:47:GLY:O	23:RW:49:ASN:N	2.20	0.73
32:QA:111:G:O6	32:QA:330:C:N4	2.21	0.73
32:QA:206:C:H2'	32:QA:207:C:O4'	1.89	0.73
40:QI:98:ARG:HG2	40:QI:103:VAL:HG21	1.69	0.73
48:QQ:79:GLU:C	48:QQ:80:LYS:HD3	2.14	0.73
52:QU:33:ARG:NE	52:QU:34:ARG:HG3	2.02	0.73
32:XA:1279:G:H5"	41:XJ:9:ARG:HH22	1.53	0.73
43:XL:49:ARG:HG2	43:XL:89:LEU:HD21	1.71	0.73
1:YA:27:G:H1'	1:YA:513:A:N6	2.04	0.73
1:YA:846:U:O2'	1:YA:847:U:H5"	1.88	0.73
1:YA:2056:G:N2	27:Y0:1:ALA:N	2.36	0.73
4:YD:133:THR:HG23	4:YD:134:HIS:H	1.53	0.73
25:YY:31:GLN:OE1	25:YY:37:LEU:HB2	1.88	0.73
32:QA:373:A:O2'	32:QA:374:A:H5'	1.88	0.73
48:QQ:55:GLY:HA3	48:QQ:82:VAL:HG11	1.69	0.73
32:XA:1183:U:C3'	32:XA:1184:G:H5"	2.12	0.73
46:XO:7:THR:O	46:XO:11:VAL:HG23	1.89	0.73
1:YA:1062:G:H8	1:YA:1070:A:OP2	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1654:A:H2'	1:YA:1655:A:H8	1.53	0.73
1:YA:1912:A:H62	1:YA:1917:U:H3	1.37	0.73
1:YA:2331:G:O2'	23:YW:40:ARG:HB3	1.88	0.73
16:YP:20:ARG:HD2	16:YP:21:PRO:HD2	1.70	0.73
19:YS:8:ARG:O	19:YS:9:HIS:HB2	1.88	0.73
27:Y0:38:LEU:HB2	27:Y0:41:HIS:NE2	2.04	0.73
21:RU:73:ASN:ND2	21:RU:76:THR:HG23	2.03	0.73
32:QA:49:U:O4	32:QA:365:U:C5	2.42	0.73
32:QA:1101:A:C4'	32:QA:1102:A:O5'	2.35	0.73
33:QB:22:TRP:O	33:QB:22:TRP:CG	2.41	0.73
32:XA:1242:G:C2	32:XA:1243:C:H1'	2.23	0.73
38:XG:112:ASP:HB3	38:XG:117:LEU:HB3	1.70	0.73
42:XK:55:ARG:HD2	42:XK:55:ARG:H	1.54	0.73
43:XL:19:ASN:HD22	43:XL:19:ASN:H	1.34	0.73
43:XL:82:ARG:HH11	43:XL:82:ARG:HG2	1.54	0.73
52:XU:16:ARG:CG	52:XU:19:LYS:HG2	2.14	0.73
1:YA:984:A:O2'	1:YA:985:C:OP1	2.06	0.73
2:YB:38:C:H4'	15:YO:100:HIS:NE2	2.03	0.73
8:YH:83:LYS:HE2	8:YH:149:GLU:HB3	1.68	0.73
1:RA:1256:G:C2'	5:RE:77:ILE:HD11	2.19	0.72
7:RG:73:SER:HA	7:RG:76:ILE:CG2	2.18	0.72
10:RJ:2:LYS:HD3	10:RJ:2:LYS:N	2.02	0.72
13:RM:72:PRO:O	13:RM:91:TYR:O	2.06	0.72
32:QA:202:G:N2	32:QA:466:A:H61	1.87	0.72
32:QA:1338:G:H2'	32:QA:1339:A:C8	2.25	0.72
32:QA:1441:A:H62	32:QA:1461:G:N2	1.87	0.72
33:QB:9:LEU:HB2	33:QB:42:LEU:HD13	1.70	0.72
34:XC:22:PHE:CD2	41:XJ:97:ASP:HB2	2.24	0.72
34:XC:166:TRP:H	34:XC:166:TRP:HE3	1.35	0.72
1:YA:1351:C:H4'	1:YA:1572:A:O4'	1.89	0.72
1:YA:1917:U:H2'	1:YA:1918:A:H5'	1.71	0.72
14:YN:97:ILE:HD11	14:YN:99:LYS:HZ2	1.54	0.72
19:YS:14:ALA:HB1	19:YS:18:ARG:NH2	2.03	0.72
1:RA:545:U:H2'	1:RA:546:U:O3'	1.89	0.72
1:RA:2135:A:O2'	1:RA:2136:G:C8	2.41	0.72
1:RA:2428:G:H5"	1:RA:2429:G:OP1	1.89	0.72
3:RC:12:ARG:HH11	3:RC:12:ARG:HG2	1.52	0.72
21:RU:38:ILE:HG22	21:RU:39:ASN:H	1.54	0.72
32:XA:932:C:H5"	38:XG:2:ARG:HD3	1.69	0.72
32:XA:982:U:H4'	32:XA:983:A:H5'	1.71	0.72
36:XE:14:LEU:HD13	36:XE:59:ILE:HD12	1.69	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:XI:75:ALA:HA	40:XI:78:ILE:HD12	1.69	0.72
1:YA:249:C:C3'	1:YA:2394:C:H4'	2.19	0.72
12:YL:23:ILE:HG13	18:YR:82:HIS:CE1	2.24	0.72
27:Y0:28:SER:HB3	27:Y0:39:ARG:NE	2.03	0.72
1:RA:372:G:H5"	24:RX:60:LYS:HE3	1.69	0.72
1:RA:2276:G:OP2	13:RM:83:GLY:O	2.07	0.72
5:RE:5:LEU:HD12	5:RE:10:SER:HB3	1.71	0.72
7:RG:104:LEU:HB2	7:RG:112:VAL:HG22	1.71	0.72
10:RJ:2:LYS:HD3	10:RJ:2:LYS:H	1.53	0.72
32:QA:184:G:H2'	32:QA:185:U:C6	2.24	0.72
32:QA:423:G:H2'	32:QA:424:G:O4'	1.89	0.72
34:QC:10:ARG:NH2	34:QC:181:ILE:HG13	2.04	0.72
51:QT:4:LYS:HE2	51:QT:5:SER:HB3	1.70	0.72
51:QT:27:MET:HE2	51:QT:31:ILE:HD11	1.70	0.72
32:XA:205:A:C6	32:XA:206:C:N4	2.57	0.72
1:YA:128:C:O2'	1:YA:129:C:C6	2.42	0.72
1:YA:185:G:H2'	1:YA:186:G:C8	2.23	0.72
1:YA:379:G:C6	1:YA:396:G:O6	2.42	0.72
1:YA:389:G:C8	1:YA:2413:G:H4'	2.25	0.72
1:YA:528:A:C2	1:YA:2043:C:H4'	2.25	0.72
1:YA:686:U:H3	29:Y2:12:ARG:HB2	1.54	0.72
1:YA:784:G:N1	3:YC:227:VAL:HG21	2.04	0.72
1:YA:845:A:N6	1:YA:932:U:H3	1.87	0.72
11:YK:60:ALA:HA	11:YK:87:LEU:HD23	1.69	0.72
3:RC:16:VAL:HB	3:RC:203:VAL:HB	1.70	0.72
10:RJ:44:TYR:C	10:RJ:44:TYR:HD1	1.96	0.72
10:RJ:74:TYR:HB2	10:RJ:87:ALA:O	1.88	0.72
18:RR:42:ALA:HA	18:RR:46:GLU:CB	2.17	0.72
23:RW:37:VAL:CG1	23:RW:38:ARG:H	2.02	0.72
32:QA:1183:U:H3'	32:QA:1184:G:C5'	2.17	0.72
45:QN:50:LEU:HB3	45:QN:51:PRO:HD2	1.72	0.72
1:YA:480:A:H5'	21:YU:43:LYS:HD2	1.69	0.72
1:YA:729:G:H3'	1:YA:730:A:H5"	1.71	0.72
1:YA:1521:G:C6	1:YA:1522:A:N6	2.57	0.72
1:YA:1723:G:H2'	1:YA:1724:G:H8	1.53	0.72
1:YA:2286:G:H5"	1:YA:2287:A:H1'	1.70	0.72
1:YA:2358:A:H61	12:YL:54:GLN:HE22	1.37	0.72
5:YE:149:ILE:O	5:YE:188:MET:HA	1.89	0.72
1:RA:1319:C:O2'	1:RA:1320:C:H5'	1.89	0.72
3:RC:16:VAL:H	3:RC:203:VAL:HG12	1.53	0.72
5:RE:189:THR:OG1	5:RE:191:ASP:HB3	1.88	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:RQ:91:ARG:NH1	18:RR:10:LYS:HB3	2.04	0.72
18:RR:16:GLU:HA	18:RR:98:ILE:HG22	1.70	0.72
32:QA:940:C:OP1	38:QG:101:ARG:HD3	1.89	0.72
47:QP:59:HIS:CE1	47:QP:63:GLN:HE22	2.08	0.72
32:XA:157:U:O2'	32:XA:158:G:H5'	1.88	0.72
1:YA:83:A:N6	1:YA:101:A:H5'	2.04	0.72
1:YA:464:U:H1'	1:YA:686:U:H5	1.54	0.72
1:YA:616:A:H4'	5:YE:101:TYR:CZ	2.24	0.72
1:YA:642:U:H4'	1:YA:2349:G:O2'	1.89	0.72
1:YA:2468:A:HO2'	1:YA:2469:A:H8	1.35	0.72
3:YC:79:ARG:HD3	3:YC:81:GLU:OE1	1.90	0.72
24:YX:52:ALA:O	24:YX:53:LYS:HB3	1.89	0.72
1:RA:572:A:C2	1:RA:2033:A:C2	2.78	0.72
1:RA:2188:U:H2'	1:RA:2189:U:H6	1.54	0.72
9:RI:104:GLN:O	9:RI:105:LEU:HB2	1.90	0.72
10:RJ:44:TYR:C	10:RJ:44:TYR:CD1	2.66	0.72
32:XA:1301:U:O2	32:XA:1301:U:H2'	1.87	0.72
33:XB:114:LYS:HE3	33:XB:151:LYS:HB2	1.70	0.72
34:XC:39:ARG:HG2	34:XC:54:ILE:HD13	1.72	0.72
1:YA:1439:A:H1'	1:YA:1553:A:N6	2.05	0.72
4:YD:118:PHE:CD1	4:YD:119:ALA:N	2.58	0.72
25:YY:21:LEU:HA	25:YY:25:GLN:HB3	1.71	0.72
1:RA:1746:A:H2'	1:RA:1747:U:C6	2.25	0.72
4:RD:120:GLY:HA2	4:RD:162:ALA:CB	2.20	0.72
14:RN:2:ARG:HA	14:RN:5:LYS:HD2	1.71	0.72
24:RX:67:LEU:HD13	24:RX:77:TYR:CE1	2.24	0.72
33:QB:187:ASP:HB2	33:QB:203:ASP:CG	2.14	0.72
36:QE:105:ILE:HD11	36:QE:123:LEU:HD23	1.70	0.72
32:XA:142:G:C2	32:XA:143:A:H1'	2.25	0.72
32:XA:1264:U:H2'	32:XA:1265:C:C6	2.24	0.72
40:XI:58:GLU:HG3	40:XI:59:LYS:H	1.55	0.72
1:YA:301:G:H3'	21:YU:81:ARG:NH1	2.05	0.72
1:YA:1275:A:N7	14:YN:16:HIS:HB2	2.04	0.72
2:YB:5:U:H2'	2:YB:6:G:C8	2.24	0.72
11:YK:13:ASN:HD21	11:YK:97:THR:N	1.88	0.72
13:YM:126:ILE:O	13:YM:128:THR:HG23	1.88	0.72
20:RT:48:GLN:HB2	20:RT:49:LYS:HE3	1.71	0.72
22:RV:51:GLN:HE22	22:RV:79:ARG:HH12	1.38	0.72
32:XA:471:U:H2'	32:XA:472:U:C6	2.23	0.72
1:YA:181:A:C2	1:YA:434:U:H1'	2.25	0.72
2:YB:18:G:C2	2:YB:67:G:O6	2.43	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:YH:97:ARG:O	8:YH:98:ASP:HB2	1.88	0.72
16:RP:83:ILE:HD13	16:RP:83:ILE:C	2.15	0.72
23:RW:23:LYS:HG3	23:RW:24:ARG:O	1.89	0.72
32:QA:358:U:H2'	32:QA:359:G:H8	1.55	0.72
32:QA:390:U:H2'	32:QA:391:G:C8	2.24	0.72
35:QD:100:VAL:HG12	35:QD:100:VAL:O	1.89	0.72
36:QE:152:VAL:O	36:QE:156:ARG:HB2	1.90	0.72
32:XA:764:C:H2'	32:XA:765:G:H5'	1.71	0.72
1:YA:232:G:H4'	1:YA:233:A:OP1	1.90	0.72
1:YA:352:A:C4	1:YA:353:C:H1'	2.25	0.72
1:YA:1206:G:H2'	1:YA:1207:C:C6	2.25	0.72
1:YA:2311:A:H3'	1:YA:2312:U:O4'	1.90	0.72
7:YG:162:ARG:HD2	7:YG:162:ARG:H	1.54	0.72
15:YO:26:LEU:HB3	15:YO:92:PHE:HD1	1.55	0.72
1:RA:2591:C:OP1	3:RC:237:ARG:HG3	1.89	0.72
7:RG:11:PRO:O	7:RG:14:VAL:HG22	1.89	0.72
16:RP:51:ASN:C	16:RP:52:ARG:HG2	2.13	0.72
16:RP:112:ARG:C	16:RP:113:LEU:HD23	2.15	0.72
26:RZ:13:ILE:HG22	26:RZ:14:GLY:N	2.02	0.72
32:QA:266:G:H3'	48:QQ:68:LYS:HB2	1.71	0.72
32:XA:1136:C:C5	32:XA:1138:G:O6	2.42	0.72
32:XA:1337:G:H5"	32:XA:1338:G:OP1	1.89	0.72
50:XS:52:ASN:HD21	50:XS:54:ARG:HG2	1.52	0.72
14:RN:31:HIS:O	14:RN:33:ILE:HD12	1.88	0.71
28:R1:8:ILE:HG23	28:R1:51:ALA:HA	1.71	0.71
35:QD:99:ASN:O	35:QD:103:ARG:HB2	1.90	0.71
45:QN:15:LEU:HD12	45:QN:53:ASP:HB2	1.70	0.71
38:XG:76:SER:HA	38:XG:85:GLN:HA	1.70	0.71
38:XG:135:LYS:O	38:XG:139:ASP:HB2	1.90	0.71
52:XU:24:LYS:HG3	52:XU:25:ALA:H	1.55	0.71
1:YA:867:C:HO2'	1:YA:868:U:H6	0.73	0.71
1:YA:1097:U:H2'	1:YA:1098:A:O4'	1.89	0.71
1:YA:2230:G:H2'	1:YA:2231:U:C6	2.25	0.71
1:YA:2571:U:C4	1:YA:2574:G:C8	2.78	0.71
15:YO:70:ALA:O	15:YO:74:VAL:HG23	1.90	0.71
29:Y2:22:MET:HG2	29:Y2:22:MET:O	1.90	0.71
9:RI:20:SER:HB3	9:RI:21:PRO:HD3	1.72	0.71
32:QA:761:G:H2'	32:QA:762:U:H6	1.55	0.71
33:QB:211:LEU:O	33:QB:215:ALA:HB2	1.90	0.71
42:QK:126:ARG:HB2	52:QU:33:ARG:NH1	2.05	0.71
47:QP:20:VAL:HG21	47:QP:32:PHE:CG	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:66:A:N6	32:XA:67:C:N4	2.38	0.71
32:XA:1268:G:N2	32:XA:1327:C:H1'	2.06	0.71
1:YA:422:A:O2'	1:YA:423:A:C8	2.43	0.71
1:YA:1343:G:C5	1:YA:1597:A:N6	2.58	0.71
1:YA:1437:C:H2'	1:YA:1438:U:C6	2.25	0.71
1:YA:2619:C:H4'	4:YD:156:PHE:O	1.90	0.71
2:YB:58:A:H2'	2:YB:59:A:H8	1.53	0.71
5:YE:178:VAL:HG13	5:YE:179:SER:H	1.55	0.71
7:YG:112:VAL:HG13	7:YG:150:TYR:HE1	1.55	0.71
9:YI:106:GLN:HA	9:YI:109:ALA:HB3	1.71	0.71
19:YS:86:MET:SD	19:YS:87:PRO:HD2	2.29	0.71
1:RA:1178:C:H2'	1:RA:1179:G:N7	2.05	0.71
30:R3:22:LYS:HA	30:R3:47:ALA:O	1.90	0.71
37:QF:81:ASN:HB3	37:QF:84:VAL:HG12	1.73	0.71
38:QG:61:PHE:HE1	38:QG:65:LEU:HD22	1.55	0.71
32:XA:108:G:H5'	32:XA:109:A:H5"	1.72	0.71
32:XA:252:U:H5'	32:XA:252:U:H6	1.54	0.71
32:XA:1217:C:H2'	32:XA:1218:C:C6	2.21	0.71
1:YA:273:G:H2'	1:YA:274:C:O4'	1.90	0.71
1:YA:1345:C:H3'	1:YA:1345:C:OP2	1.91	0.71
1:YA:1416:G:C6	1:YA:1417:C:N4	2.57	0.71
1:YA:1816:C:H2'	3:YC:61:TYR:CZ	2.24	0.71
1:YA:2135:A:H2'	1:YA:2136:G:C8	2.24	0.71
19:YS:6:LYS:HD2	19:YS:8:ARG:HD2	1.71	0.71
1:RA:1779:U:C5	1:RA:1784:A:N7	2.56	0.71
1:RA:2420:C:OP1	30:R3:33:THR:HB	1.91	0.71
13:RM:40:ARG:HB2	13:RM:93:VAL:HG21	1.71	0.71
15:RO:76:LYS:O	15:RO:80:GLU:HG3	1.91	0.71
21:RU:46:LYS:HG2	21:RU:47:PRO:HD2	1.71	0.71
32:QA:143:A:H5'	32:QA:144:G:H5'	1.72	0.71
37:QF:38:ARG:HG3	37:QF:39:LEU:N	2.03	0.71
32:XA:268:U:H2'	32:XA:269:C:C6	2.25	0.71
32:XA:1011:C:H2'	32:XA:1012:A:H8	1.54	0.71
32:XA:1226:C:H41	44:XM:102:LYS:HG2	1.56	0.71
34:XC:18:ASN:HD21	34:XC:53:ARG:NH1	1.88	0.71
50:XS:35:ARG:HH21	50:XS:51:HIS:CD2	2.08	0.71
1:YA:410:G:C6	1:YA:2407:A:N6	2.58	0.71
1:RA:1498:C:O2'	1:RA:1499:C:H6	1.72	0.71
4:RD:12:THR:CG2	4:RD:13:ARG:N	2.53	0.71
4:RD:106:LYS:HB3	4:RD:206:ALA:CB	2.16	0.71
4:RD:114:LYS:HE3	4:RD:114:LYS:N	2.06	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:RD:118:PHE:CD2	4:RD:119:ALA:N	2.56	0.71
8:RH:18:GLN:HE21	8:RH:18:GLN:HA	1.54	0.71
15:RO:105:ALA:O	15:RO:106:LEU:HB3	1.88	0.71
23:RW:18:LYS:HA	23:RW:36:ILE:CG1	2.16	0.71
32:QA:76:G:H2'	32:QA:76:G:N3	2.05	0.71
32:QA:1003:G:N2	32:QA:1005:A:H5'	2.06	0.71
33:QB:66:ILE:HB	33:QB:88:GLN:HB3	1.71	0.71
32:XA:1081:A:H5'	36:XE:22:LYS:HD2	1.72	0.71
32:XA:1322:C:O2'	32:XA:1323:G:H5'	1.89	0.71
35:XD:151:GLN:HB3	35:XD:154:VAL:HG12	1.71	0.71
1:YA:226:A:H2'	1:YA:227:A:C8	2.25	0.71
1:YA:568:U:H2'	1:YA:570:G:OP2	1.91	0.71
1:YA:1056:G:N2	1:YA:1102:C:C5	2.58	0.71
1:YA:1314:C:OP1	1:YA:1332:G:H5"	1.90	0.71
1:YA:2051:A:H4'	1:YA:2052:A:OP1	1.90	0.71
11:YK:69:VAL:HG11	11:YK:106:GLU:HG2	1.72	0.71
1:RA:2615:U:C2	27:R0:3:GLN:HA	2.26	0.71
3:RC:68:ARG:HD3	3:RC:103:ILE:HD11	1.72	0.71
3:RC:141:HIS:HB2	3:RC:190:THR:HB	1.73	0.71
6:RF:131:VAL:HG22	6:RF:151:LEU:O	1.91	0.71
14:RN:65:LEU:HD11	14:RN:69:ARG:NH2	2.04	0.71
21:RU:97:SER:O	21:RU:98:ASN:HB3	1.89	0.71
32:QA:86:G:H21	32:QA:87:C:N4	1.87	0.71
32:QA:409:U:OP1	35:QD:23:GLY:HA3	1.91	0.71
37:QF:92:THR:O	37:QF:93:LYS:HG2	1.90	0.71
32:XA:328:C:O2	32:XA:328:C:H2'	1.89	0.71
32:XA:1024:G:H2'	32:XA:1025:U:O4'	1.91	0.71
32:XA:1450:U:H4'	32:XA:1451:U:H5	1.55	0.71
37:XF:61:LEU:HD13	37:XF:62:MET:H	1.54	0.71
39:XH:86:LYS:HB2	39:XH:124:ILE:HD11	1.72	0.71
41:XJ:84:VAL:HG23	41:XJ:85:ASP:N	2.04	0.71
21:YU:58:VAL:HG13	21:YU:60:LYS:HG2	1.71	0.71
1:RA:141:G:H5'	1:RA:142:A:C8	2.25	0.71
1:RA:1060:U:O4'	1:RA:1062:G:H5"	1.90	0.71
1:RA:1929:G:H4'	1:RA:1930:G:OP1	1.90	0.71
1:RA:2793:C:H2'	1:RA:2794:C:C6	2.25	0.71
9:RI:109:ALA:HB1	9:RI:124:MET:HE1	1.71	0.71
23:RW:28:GLU:HB3	23:RW:31:LEU:CD2	2.19	0.71
34:QC:150:VAL:HG12	34:QC:199:VAL:HB	1.71	0.71
37:QF:3:HIS:N	37:QF:92:THR:HG23	2.04	0.71
32:XA:239:U:H6	32:XA:239:U:C5'	2.04	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:983:A:O2'	32:XA:984:C:H5'	1.89	0.71
33:XB:89:PHE:CE2	33:XB:152:ASP:HB2	2.22	0.71
36:XE:74:ALA:O	36:XE:75:LEU:HB2	1.91	0.71
44:XM:95:PRO:HD3	44:XM:108:ARG:HG2	1.72	0.71
48:XQ:46:HIS:HE2	48:XQ:48:GLU:HG2	1.54	0.71
1:YA:132:G:N2	1:YA:148:U:C2	2.58	0.71
1:YA:969:G:H2'	1:YA:970:U:C6	2.25	0.71
1:YA:1060:U:C4'	1:YA:1061:U:H2'	2.21	0.71
1:YA:2147:A:H4'	1:YA:2147:A:OP1	1.90	0.71
8:YH:80:ILE:HB	8:YH:101:ASP:CB	2.20	0.71
9:YI:32:VAL:HG22	9:YI:58:ILE:HG21	1.73	0.71
18:YR:4:VAL:HG23	18:YR:39:LEU:HG	1.72	0.71
3:RC:251:THR:HG22	3:RC:252:LYS:N	2.04	0.71
19:RS:73:LYS:HE3	19:RS:74:ILE:N	2.04	0.71
32:QA:389:A:C6	32:QA:390:U:H1'	2.26	0.71
34:XC:178:ARG:O	34:XC:178:ARG:HD2	1.90	0.71
40:XI:26:LYS:O	40:XI:62:LEU:HB2	1.90	0.71
51:XT:2:ASN:N	51:XT:7:LYS:HZ3	1.88	0.71
1:YA:923:G:H1'	23:YW:23:LYS:NZ	2.05	0.71
3:YC:15:VAL:HG22	3:YC:205:GLY:HA3	1.73	0.71
4:RD:13:ARG:HH12	16:RP:74:GLN:NE2	1.88	0.71
15:RO:74:VAL:O	15:RO:78:VAL:HG22	1.90	0.71
23:RW:39:GLN:C	23:RW:41:GLY:N	2.46	0.71
32:QA:1491:G:H5'	32:QA:1492:A:OP1	1.90	0.71
33:QB:14:HIS:O	33:QB:14:HIS:CG	2.44	0.71
34:QC:21:TRP:HB3	34:QC:58:ARG:H	1.56	0.71
35:QD:61:ARG:NH1	35:QD:68:GLU:HG2	2.05	0.71
35:XD:34:GLU:O	35:XD:36:ALA:N	2.24	0.71
40:XI:10:ARG:HG3	40:XI:14:SER:O	1.91	0.71
1:YA:1281:G:C6	1:YA:1290:C:N4	2.58	0.71
1:YA:2258:C:H4'	1:YA:2259:U:OP2	1.90	0.71
10:YJ:20:ALA:HA	10:YJ:23:LYS:HG3	1.73	0.71
10:YJ:117:ALA:HA	10:YJ:120:ARG:HD2	1.72	0.71
12:YL:81:ASP:O	12:YL:83:ALA:N	2.23	0.71
14:YN:63:ARG:O	14:YN:67:PHE:HB2	1.89	0.71
18:YR:27:ILE:HG22	18:YR:28:ALA:N	2.04	0.71
1:RA:2336:A:N6	23:RW:40:ARG:HD2	2.05	0.71
3:RC:244:VAL:HG12	3:RC:250:GLN:HA	1.73	0.71
6:RF:132:ARG:O	6:RF:133:GLU:HB3	1.91	0.71
11:RK:18:ARG:N	11:RK:45:GLU:HB2	2.06	0.71
19:RS:14:ALA:O	19:RS:18:ARG:HG3	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:RW:30:VAL:HG22	23:RW:30:VAL:O	1.91	0.71
32:QA:267:C:H2'	32:QA:268:U:C6	2.26	0.71
48:QQ:7:LEU:HD23	48:QQ:24:ILE:CD1	2.21	0.71
36:XE:29:ILE:CG2	36:XE:30:PHE:N	2.42	0.71
1:YA:68:G:N2	1:YA:74:A:OP2	2.24	0.71
1:YA:1324:G:O2'	1:YA:1616:A:C6	2.44	0.71
13:YM:36:VAL:HG22	22:YV:82:TYR:HB2	1.72	0.71
14:YN:12:ARG:HG3	14:YN:13:ASN:H	1.55	0.71
1:RA:2321:U:H5"	1:RA:2321:U:H6	1.56	0.70
35:QD:60:VAL:O	35:QD:63:ILE:HG22	1.91	0.70
43:QL:34:THR:HG22	43:QL:35:ARG:NE	2.04	0.70
32:XA:1038:C:H2'	32:XA:1039:G:C8	2.26	0.70
32:XA:1129:C:O2'	32:XA:1130:A:H8	1.74	0.70
37:XF:14:GLN:HB3	37:XF:17:GLN:NE2	2.06	0.70
38:XG:10:LYS:O	38:XG:10:LYS:HD2	1.91	0.70
4:YD:49:GLN:NE2	4:YD:79:LEU:HB3	2.04	0.70
6:YF:90:LEU:O	6:YF:95:MET:HE3	1.90	0.70
7:YG:1:SER:HB2	7:YG:61:TRP:HB3	1.73	0.70
10:YJ:106:LYS:HB2	10:YJ:119:PHE:HE2	1.56	0.70
13:YM:136:MET:HE2	22:YV:57:TYR:CD2	2.26	0.70
1:RA:137:U:H5"	1:RA:140:C:C5	2.25	0.70
1:RA:1450:G:C6	1:RA:1451:C:N4	2.59	0.70
1:RA:1590:A:H2'	1:RA:1591:A:H8	1.57	0.70
3:RC:106:PRO:HB3	3:RC:141:HIS:CE1	2.26	0.70
6:RF:105:ILE:O	6:RF:109:ARG:HD3	1.90	0.70
14:RN:8:ARG:HB3	14:RN:10:LEU:HD22	1.73	0.70
32:QA:1307:U:H2'	32:QA:1308:U:C6	2.25	0.70
32:XA:1143:G:H2'	32:XA:1144:G:H8	1.55	0.70
35:XD:144:ILE:CD1	35:XD:154:VAL:HG21	2.21	0.70
1:YA:502:A:C5	1:YA:505:A:N7	2.59	0.70
1:YA:1310:G:H2'	1:YA:1311:G:O4'	1.91	0.70
1:YA:1340:U:OP1	1:YA:1340:U:H4'	1.89	0.70
1:YA:1639:C:C2'	1:YA:1640:A:H5"	2.21	0.70
4:YD:34:VAL:HG12	4:YD:48:ILE:HD11	1.73	0.70
4:YD:106:LYS:O	4:YD:107:VAL:HB	1.91	0.70
11:RK:71:ARG:HB2	11:RK:72:PRO:HD3	1.73	0.70
22:RV:44:HIS:HE1	22:RV:86:LEU:H	1.37	0.70
52:XU:24:LYS:CG	52:XU:25:ALA:H	2.04	0.70
52:XU:35:GLU:O	52:XU:36:PHE:CD2	2.43	0.70
1:YA:246:C:H2'	1:YA:247:G:H5'	1.73	0.70
1:YA:301:G:C6	1:YA:302:C:N4	2.59	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:664:G:H4'	1:YA:941:A:OP1	1.91	0.70
1:YA:1352:U:C5	1:YA:1377:G:C6	2.79	0.70
4:YD:4:LEU:HD23	4:YD:101:PHE:CE1	2.26	0.70
6:YF:43:ILE:HG23	6:YF:44:ALA:H	1.56	0.70
8:YH:90:LEU:HB2	8:YH:123:ARG:HB3	1.73	0.70
10:YJ:74:TYR:CE2	10:YJ:103:ILE:HD11	2.26	0.70
1:RA:2199:A:C8	1:RA:2199:A:C5'	2.74	0.70
7:RG:3:VAL:O	7:RG:68:ARG:HG3	1.91	0.70
10:RJ:13:ARG:O	10:RJ:14:ASP:HB2	1.90	0.70
33:QB:133:ALA:O	33:QB:137:THR:HG23	1.90	0.70
35:QD:62:ARG:NE	35:QD:62:ARG:HA	2.07	0.70
43:XL:98:ARG:HB2	43:XL:116:TYR:HA	1.73	0.70
51:XT:22:SER:O	51:XT:26:MET:HB2	1.91	0.70
1:YA:422:A:O2'	1:YA:423:A:H8	1.73	0.70
1:YA:745:G:H5"	1:YA:746:U:OP2	1.91	0.70
1:YA:1049:C:O2'	1:YA:1050:A:H8	1.71	0.70
1:YA:1797:G:O3'	3:YC:255:LYS:O	2.09	0.70
3:YC:9:SER:O	3:YC:12:ARG:HB2	1.91	0.70
5:YE:60:TRP:CZ2	5:YE:71:GLY:HA2	2.26	0.70
7:YG:117:PRO:HG2	7:YG:143:VAL:HG11	1.72	0.70
13:RM:136:MET:HE2	22:RV:57:TYR:CD2	2.26	0.70
28:R1:47:ILE:HD12	28:R1:47:ILE:N	2.07	0.70
33:QB:187:ASP:HB2	33:QB:203:ASP:HB3	1.73	0.70
38:QG:114:SER:HB3	38:QG:117:LEU:CG	2.22	0.70
42:QK:35:ASP:OD2	42:QK:39:ASN:HB2	1.91	0.70
51:QT:27:MET:HE1	51:QT:57:VAL:HG22	1.73	0.70
32:XA:1304:G:H1'	32:XA:1333:A:H61	1.56	0.70
32:XA:1451:U:O2'	32:XA:1452:C:OP1	2.09	0.70
35:XD:25:ARG:HH12	35:XD:30:LYS:HG2	1.56	0.70
40:XI:118:ARG:HH21	40:XI:122:ARG:HE	1.36	0.70
1:YA:1682:G:O2'	1:YA:1683:U:C6	2.43	0.70
10:YJ:74:TYR:HE2	10:YJ:103:ILE:HD11	1.55	0.70
6:RF:131:VAL:CG2	6:RF:151:LEU:H	2.05	0.70
13:RM:42:THR:O	13:RM:44:ARG:N	2.24	0.70
23:RW:9:THR:OG1	23:RW:10:ARG:N	2.20	0.70
23:RW:40:ARG:H	23:RW:56:HIS:HB3	1.56	0.70
23:RW:41:GLY:O	23:RW:42:THR:C	2.34	0.70
33:QB:69:VAL:HB	33:QB:162:VAL:HG12	1.73	0.70
34:QC:156:LEU:HD13	34:QC:163:ARG:HB2	1.72	0.70
47:QP:51:ARG:C	47:QP:52:LEU:HD12	2.16	0.70
32:XA:412:A:H4'	32:XA:413:G:OP1	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:831:A:OP1	33:XB:20:ARG:HG3	1.90	0.70
32:XA:1239:A:H62	32:XA:1299:A:H61	1.37	0.70
32:XA:1450:U:H4'	32:XA:1451:U:C5	2.25	0.70
43:XL:19:ASN:H	43:XL:19:ASN:ND2	1.89	0.70
1:YA:758:C:H2'	1:YA:758:C:O2	1.90	0.70
1:YA:1439:A:H1'	1:YA:1553:A:H61	1.57	0.70
4:YD:123:LYS:HG2	4:YD:165:MET:SD	2.32	0.70
11:YK:118:LEU:C	11:YK:120:PRO:HD2	2.17	0.70
18:YR:39:LEU:O	18:YR:40:MET:HB2	1.92	0.70
21:YU:45:GLN:HE21	21:YU:45:GLN:HA	1.56	0.70
1:RA:2136:G:H2'	1:RA:2137:U:H5	1.56	0.70
32:QA:222:C:H2'	32:QA:223:A:H8	1.54	0.70
32:XA:17:U:H2'	32:XA:18:C:C6	2.26	0.70
32:XA:1033:G:O2'	32:XA:1034:G:H5"	1.92	0.70
34:XC:8:GLY:HA3	45:XN:88:MET:SD	2.31	0.70
35:XD:25:ARG:NH1	35:XD:25:ARG:HG2	2.06	0.70
4:YD:159:LYS:HE2	4:YD:160:LYS:N	2.06	0.70
9:YI:106:GLN:O	9:YI:106:GLN:HG3	1.91	0.70
9:YI:113:ALA:HB1	9:YI:124:MET:SD	2.31	0.70
18:YR:62:GLU:HB3	18:YR:97:LYS:HB3	1.73	0.70
1:RA:947:A:O2'	1:RA:984:A:H2	1.75	0.70
1:RA:2352:A:N1	23:RW:30:VAL:HG21	2.07	0.70
1:RA:2577:A:H5"	1:RA:2578:G:C5'	2.20	0.70
10:RJ:43:GLU:O	10:RJ:44:TYR:C	2.34	0.70
16:RP:33:GLU:CB	16:RP:38:ARG:HH11	2.04	0.70
36:QE:59:ILE:O	36:QE:62:ALA:HB3	1.92	0.70
36:QE:81:GLN:HE21	36:QE:81:GLN:N	1.89	0.70
41:XJ:40:ILE:HG22	41:XJ:42:LEU:HD12	1.72	0.70
41:XJ:64:GLN:HB2	45:XN:98:ALA:HB3	1.74	0.70
1:YA:5:A:C2	1:YA:2899:A:C2	2.79	0.70
1:YA:935:C:H2'	1:YA:936:A:H8	1.56	0.70
1:YA:2458:G:H8	1:YA:2459:A:N6	1.90	0.70
4:YD:51:THR:HG21	4:YD:75:ALA:O	1.91	0.70
6:YF:74:ALA:HB3	6:YF:78:ILE:HB	1.73	0.70
14:YN:33:ILE:HA	14:YN:114:GLU:HB2	1.73	0.70
1:RA:1498:C:O2'	1:RA:1499:C:C6	2.45	0.70
10:RJ:18:VAL:HG23	10:RJ:54:ILE:HD13	1.74	0.70
10:RJ:18:VAL:HG22	10:RJ:140:LEU:CD1	2.22	0.70
10:RJ:73:VAL:HG23	10:RJ:74:TYR:N	2.05	0.70
10:RJ:105:VAL:HG23	10:RJ:109:LEU:HD11	1.73	0.70
32:QA:1038:C:H2'	32:QA:1039:G:H8	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:QF:6:ILE:HG12	37:QF:89:VAL:HG23	1.72	0.70
32:XA:210:C:H2'	32:XA:210:C:O2	1.91	0.70
32:XA:701:U:H4'	32:XA:702:A:H5"	1.72	0.70
51:XT:4:LYS:HB3	51:XT:6:ALA:H	1.57	0.70
52:XU:39:LYS:N	52:XU:40:PRO:HD2	2.06	0.70
1:YA:77:G:N2	1:YA:110:G:H1'	2.07	0.70
1:YA:279:A:H61	1:YA:361:G:H1'	1.57	0.70
1:YA:319:G:OP2	5:YE:132:LYS:HD2	1.91	0.70
1:YA:1059:G:H1	1:YA:1088:A:H2	1.40	0.70
2:YB:42:C:H41	6:YF:87:LYS:NZ	1.90	0.70
3:YC:140:VAL:CG2	3:YC:161:VAL:HB	2.22	0.70
15:YO:115:LEU:HD13	15:YO:115:LEU:H	1.55	0.70
16:YP:25:VAL:HA	16:YP:85:VAL:HA	1.74	0.70
35:QD:145:ARG:NH1	35:QD:147:LYS:HE3	2.06	0.70
36:QE:79:THR:HB	36:QE:121:ASN:ND2	2.06	0.70
41:QJ:81:GLU:O	41:QJ:85:ASP:HB2	1.92	0.70
32:XA:93:U:H2'	32:XA:95:C:C5	2.27	0.70
32:XA:1278:G:H4'	32:XA:1279:G:C5'	2.22	0.70
1:YA:443:A:H61	5:YE:36:ALA:HB1	1.57	0.70
1:YA:648:G:O2'	1:YA:649:G:H8	1.71	0.70
1:YA:982:C:H5"	1:YA:983:A:OP1	1.92	0.70
1:YA:1695:G:H8	3:YC:7:PRO:O	1.75	0.70
1:RA:2887:A:H5'	1:RA:2888:C:OP2	1.92	0.69
5:RE:146:VAL:HG23	5:RE:167:VAL:HG23	1.73	0.69
20:RT:10:VAL:HG23	20:RT:11:LEU:HD23	1.74	0.69
51:QT:67:HIS:HB3	51:QT:68:LYS:HZ2	1.57	0.69
32:XA:54:C:H41	32:XA:352:C:H2'	1.55	0.69
32:XA:491:G:O2'	32:XA:492:C:H5'	1.91	0.69
32:XA:994:A:O2'	32:XA:995:C:H6	1.74	0.69
39:XH:5:PRO:O	39:XH:8:ASP:HB3	1.92	0.69
1:YA:247:G:H4'	1:YA:386:G:C5	2.27	0.69
1:YA:675:A:OP1	5:YE:60:TRP:CZ2	2.45	0.69
1:YA:1204:A:H4'	1:YA:1205:A:O5'	1.91	0.69
1:YA:1345:C:H5"	1:YA:1396:U:O4	1.93	0.69
1:YA:1440:U:O2'	1:YA:1441:G:H5'	1.91	0.69
1:YA:1809:A:C2	1:YA:1810:A:C4	2.80	0.69
1:YA:2707:U:H2'	1:YA:2708:G:C8	2.27	0.69
4:YD:133:THR:HG23	4:YD:134:HIS:N	2.06	0.69
10:YJ:55:ILE:CG2	10:YJ:123:LYS:HB2	2.21	0.69
14:YN:71:ARG:HB2	14:YN:71:ARG:HH21	1.57	0.69
17:YQ:27:ARG:HA	17:YQ:33:VAL:HG12	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:YT:87:LEU:HD23	20:YT:88:LYS:N	2.06	0.69
26:YZ:16:LEU:HD22	26:YZ:16:LEU:N	2.07	0.69
1:RA:1076:C:H2'	1:RA:1077:A:H8	1.57	0.69
6:RF:129:MET:HG2	6:RF:153:ILE:HD11	1.74	0.69
7:RG:22:VAL:HG22	7:RG:36:LEU:CD1	2.22	0.69
11:RK:61:VAL:HG22	11:RK:87:LEU:HD11	1.72	0.69
12:RL:114:GLY:C	12:RL:115:GLU:HG3	2.16	0.69
13:RM:133:LYS:O	13:RM:134:THR:HB	1.91	0.69
22:RV:10:LYS:H	22:RV:10:LYS:CD	1.95	0.69
32:QA:479:U:O2'	32:QA:480:U:H5'	1.92	0.69
32:QA:807:A:H2'	32:QA:808:C:C6	2.26	0.69
48:QQ:45:VAL:HG22	48:QQ:72:TRP:HB2	1.74	0.69
32:XA:1319:A:N6	32:XA:1323:G:C2	2.60	0.69
35:XD:61:ARG:HH21	35:XD:67:LEU:HA	1.57	0.69
36:XE:98:ALA:HB2	36:XE:123:LEU:HG	1.73	0.69
42:XK:51:PHE:O	42:XK:52:ARG:HD2	1.91	0.69
1:YA:956:G:O4'	13:YM:82:MET:HE1	1.92	0.69
1:YA:1490:A:C8	3:YC:73:ILE:HD12	2.26	0.69
4:YD:107:VAL:H	4:YD:206:ALA:H	1.38	0.69
31:Y4:19:ARG:O	31:Y4:20:ASP:HB2	1.92	0.69
1:RA:1780:A:OP1	56:RA:3691:HOH:O	2.10	0.69
6:RF:40:GLY:HA2	6:RF:84:ILE:HD11	1.74	0.69
17:RQ:86:SER:O	17:RQ:88:GLU:N	2.25	0.69
20:RT:39:THR:O	20:RT:40:LYS:HB2	1.92	0.69
23:RW:51:GLY:HA3	23:RW:59:PHE:CZ	2.26	0.69
32:QA:1160:G:O6	32:QA:1181:G:C6	2.45	0.69
32:QA:1307:U:H2'	32:QA:1308:U:H6	1.56	0.69
33:QB:20:ARG:HA	33:QB:20:ARG:NH1	2.08	0.69
33:QB:67:LEU:HB3	33:QB:160:LEU:CD1	2.23	0.69
50:QS:14:LEU:HD13	50:QS:32:THR:HG21	1.74	0.69
32:XA:351:G:H4'	32:XA:352:C:OP2	1.93	0.69
32:XA:464:U:C4	32:XA:466:A:H4'	2.27	0.69
38:XG:94:ARG:HB3	38:XG:98:LEU:HG	1.74	0.69
1:YA:747:U:H3'	1:YA:748:G:C5'	2.21	0.69
2:YB:83:G:OP1	26:YZ:16:LEU:HD21	1.92	0.69
3:YC:177:SER:O	3:YC:270:ARG:HG3	1.91	0.69
5:YE:126:VAL:HG13	5:YE:127:GLU:N	2.05	0.69
9:YI:60:VAL:HG22	9:YI:66:PHE:HE2	1.57	0.69
22:YV:16:ALA:HA	22:YV:19:ARG:CZ	2.22	0.69
22:YV:30:ILE:HG12	22:YV:91:PHE:HB2	1.73	0.69
31:Y4:16:ILE:HG12	31:Y4:25:VAL:HG22	1.72	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1078:U:H4'	1:RA:1079:C:C6	2.27	0.69
1:RA:1150:C:O2'	1:RA:1151:A:O4'	2.11	0.69
1:RA:2310:C:H2'	6:RF:76:PHE:HE1	1.55	0.69
5:RE:76:PRO:HA	5:RE:82:GLY:HA3	1.74	0.69
5:RE:151:GLY:HA2	5:RE:192:ALA:HB2	1.74	0.69
10:RJ:21:THR:C	10:RJ:23:LYS:H	1.98	0.69
16:RP:51:ASN:O	16:RP:52:ARG:HG2	1.92	0.69
32:QA:246:A:H4'	32:QA:247:G:OP1	1.93	0.69
42:QK:126:ARG:C	52:QU:33:ARG:HH12	1.99	0.69
38:XG:59:GLU:HG3	38:XG:60:ALA:N	2.06	0.69
40:XI:35:GLU:HA	40:XI:39:GLY:HA3	1.74	0.69
1:YA:116:C:H5"	1:YA:128:C:H41	1.57	0.69
1:YA:321:U:H5'	5:YE:129:PRO:HB3	1.73	0.69
1:YA:1597:A:O3'	1:YA:1598:A:H8	1.76	0.69
1:YA:2212:A:C8	1:YA:2214:C:N4	2.61	0.69
4:YD:148:GLN:HG2	4:YD:152:PRO:HG2	1.75	0.69
1:RA:572:A:OP2	18:RR:80:ARG:NH2	2.24	0.69
1:RA:1378:A:H4'	1:RA:1379:U:OP1	1.91	0.69
1:RA:1941:C:H5'	1:RA:1941:C:H6	1.57	0.69
21:RU:73:ASN:ND2	21:RU:75:ALA:HB3	2.07	0.69
34:QC:55:VAL:O	34:QC:65:VAL:HA	1.92	0.69
38:QG:3:ARG:HG3	38:QG:4:ARG:N	2.08	0.69
42:QK:21:HIS:HE1	42:QK:34:THR:HG21	1.58	0.69
48:QQ:11:VAL:HG21	48:QQ:53:GLY:O	1.93	0.69
37:XF:59:TYR:HE2	49:XR:66:LEU:HD21	1.58	0.69
39:XH:76:ARG:HD3	39:XH:77:VAL:N	2.08	0.69
1:YA:481:G:H1'	1:YA:506:G:H21	1.55	0.69
1:YA:614:A:C4'	1:YA:616:A:H62	2.04	0.69
1:YA:1259:G:H2'	1:YA:1260:A:H8	1.57	0.69
1:YA:1311:G:H1'	1:YA:1313:U:O4	1.92	0.69
1:YA:1700:A:H2'	1:YA:1701:A:O4'	1.92	0.69
1:YA:1938:A:OP2	56:YA:3717:HOH:O	2.11	0.69
2:YB:44:G:H5"	6:YF:91:ARG:CZ	2.22	0.69
6:YF:16:MET:HA	6:YF:21:TYR:HB2	1.74	0.69
12:YL:17:LYS:HE2	12:YL:19:LEU:HD13	1.74	0.69
17:YQ:57:ARG:O	17:YQ:61:ILE:HD13	1.92	0.69
1:RA:1731:G:H2'	1:RA:1732:C:H5"	1.74	0.69
1:RA:2636:C:H2'	1:RA:2637:U:H6	1.58	0.69
20:RT:40:LYS:H	20:RT:43:ILE:HG23	1.55	0.69
37:QF:71:ILE:HD11	37:QF:89:VAL:HG21	1.75	0.69
32:XA:373:A:H5'	32:XA:373:A:H8	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:335:C:O2'	1:YA:336:C:H6	1.74	0.69
1:YA:508:A:H3'	1:YA:509:C:H5'	1.73	0.69
1:YA:532:A:N1	1:YA:2020:A:O2'	2.21	0.69
1:YA:1156:A:C8	17:YQ:50:ARG:HG2	2.27	0.69
1:YA:2415:G:H4'	12:YL:66:PHE:HB2	1.74	0.69
5:YE:110:SER:O	5:YE:113:VAL:HG12	1.92	0.69
6:YF:134:GLN:HG3	6:YF:149:ARG:O	1.92	0.69
11:YK:54:LYS:HD2	11:YK:54:LYS:H	1.58	0.69
1:RA:1654:A:O2'	4:RD:118:PHE:CD1	2.45	0.69
11:RK:59:LYS:HE2	11:RK:89:ASN:O	1.93	0.69
32:QA:17:U:H2'	32:QA:18:C:C6	2.28	0.69
32:QA:87:C:H2'	32:QA:88:U:H6	1.56	0.69
32:QA:1285:A:H5'	32:QA:1286:U:C4	2.27	0.69
43:QL:33:CYS:HB3	43:QL:54:VAL:HG22	1.75	0.69
32:XA:1241:G:C2	32:XA:1242:G:N7	2.61	0.69
36:XE:132:PRO:O	36:XE:136:VAL:HG12	1.92	0.69
1:YA:455:C:H42	1:YA:473:G:H5'	1.58	0.69
1:YA:649:G:H2'	1:YA:650:C:H6	1.58	0.69
1:YA:1590:A:H2'	1:YA:1591:A:C8	2.28	0.69
1:YA:1809:A:O2'	1:YA:1810:A:C8	2.26	0.69
1:YA:2138:G:H8	1:YA:2138:G:OP2	1.75	0.69
1:YA:2798:U:H5'	1:YA:2800:A:C6	2.27	0.69
7:YG:93:TYR:CD2	7:YG:93:TYR:N	2.55	0.69
1:RA:74:A:H4'	1:RA:75:G:O5'	1.93	0.69
1:RA:996:A:H4'	17:RQ:91:ARG:HG2	1.74	0.69
1:RA:2591:C:H2'	1:RA:2592:G:C8	2.27	0.69
3:RC:81:GLU:HB2	3:RC:90:ILE:CG2	2.22	0.69
3:RC:170:TYR:CD2	3:RC:184:GLU:HA	2.28	0.69
4:RD:106:LYS:H	4:RD:106:LYS:HD2	1.56	0.69
12:RL:87:GLY:O	12:RL:89:VAL:N	2.25	0.69
16:RP:50:ARG:CG	16:RP:57:ALA:N	2.56	0.69
23:RW:49:ASN:HA	23:RW:61:LYS:HB2	1.74	0.69
32:QA:6:G:HO2'	32:QA:7:A:H8	1.40	0.69
32:QA:1228:C:H2'	32:QA:1229:A:C8	2.28	0.69
32:QA:1409:C:O2'	32:QA:1410:A:H5'	1.93	0.69
36:QE:152:VAL:HG12	36:QE:155:LYS:HZ1	1.57	0.69
43:QL:23:LEU:C	43:QL:25:ALA:H	2.00	0.69
44:QM:26:LYS:O	44:QM:30:LYS:HG3	1.92	0.69
32:XA:16:A:C2'	32:XA:17:U:H5'	2.23	0.69
32:XA:1067:A:H4'	32:XA:1068:G:O5'	1.92	0.69
32:XA:1172:C:O2'	32:XA:1173:U:H5'	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1249:C:H2'	32:XA:1250:A:H5"	1.72	0.69
40:XI:12:LYS:H	40:XI:105:ARG:HH12	1.41	0.69
42:XK:110:THR:HG22	52:XU:4:LYS:HA	1.74	0.69
1:YA:125:A:H3'	29:Y2:19:ARG:CD	2.23	0.69
1:YA:201:C:C5	1:YA:202:U:H5	2.10	0.69
1:YA:226:A:C4	1:YA:227:A:N7	2.61	0.69
1:YA:332:A:C4	1:YA:335:C:N4	2.61	0.69
1:YA:784:G:O2'	1:YA:785:G:H8	1.75	0.69
1:YA:1181:U:H2'	1:YA:1182:G:H8	1.58	0.69
1:YA:1205:A:H5"	1:YA:1206:G:N7	2.08	0.69
1:YA:1308:A:H2'	1:YA:1309:G:O4'	1.92	0.69
1:YA:1391:U:H4'	20:YT:19:LYS:NZ	2.08	0.69
1:YA:1722:A:N6	1:YA:1739:A:C8	2.61	0.69
1:YA:1941:C:H2'	1:YA:1942:C:C6	2.28	0.69
1:YA:2800:A:C4	1:YA:2801:G:H1'	2.28	0.69
4:YD:4:LEU:HD12	4:YD:32:ASN:OD1	1.93	0.69
4:YD:12:THR:HG22	4:YD:13:ARG:O	1.93	0.69
6:YF:104:THR:HG22	6:YF:105:ILE:HG13	1.75	0.69
6:YF:147:ARG:HG2	6:YF:149:ARG:HH12	1.57	0.69
12:YL:117:THR:HG22	12:YL:118:THR:N	2.07	0.69
14:YN:16:HIS:CE1	14:YN:20:MET:HE2	2.28	0.69
16:YP:48:ALA:HB3	16:YP:59:THR:OG1	1.93	0.69
17:YQ:4:LYS:NZ	17:YQ:6:GLY:HA3	2.07	0.69
23:YW:39:GLN:HG2	23:YW:42:THR:HB	1.75	0.69
25:YY:28:LEU:HG	25:YY:42:LEU:HD22	1.74	0.69
1:RA:1090:A:O2'	1:RA:1091:G:H5'	1.92	0.69
1:RA:1867:G:C2'	1:RA:1868:C:H5'	2.23	0.69
4:RD:97:SER:C	4:RD:99:GLU:HG2	2.18	0.69
4:RD:182:ALA:C	4:RD:183:GLU:HG3	2.18	0.69
9:RI:105:LEU:HD23	9:RI:108:ILE:HG21	1.75	0.69
17:RQ:63:ARG:HH22	17:RQ:96:ASP:N	1.91	0.69
23:RW:21:GLY:C	23:RW:22:VAL:HG12	2.17	0.69
23:RW:39:GLN:HG3	23:RW:42:THR:HB	1.74	0.69
32:QA:1452:C:H5'	32:QA:1453:G:C6	2.28	0.69
33:QB:101:THR:HG22	33:QB:174:GLU:OE1	1.93	0.69
35:QD:10:LEU:CD2	35:QD:62:ARG:HG3	2.23	0.69
39:QH:87:ARG:O	39:QH:121:GLY:HA3	1.93	0.69
45:QN:78:LEU:HB2	45:QN:83:VAL:HG23	1.73	0.69
46:QO:72:LYS:HA	46:QO:72:LYS:HE2	1.75	0.69
32:XA:1366:C:HO2'	32:XA:1367:C:H6	1.37	0.69
42:XK:23:HIS:HB3	42:XK:30:ILE:HB	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:XN:52:ARG:CZ	45:XN:52:ARG:HA	2.23	0.69
1:YA:139:U:O2	1:YA:139:U:H2'	1.92	0.69
1:YA:303:G:H2'	1:YA:304:U:C6	2.28	0.69
1:YA:354:A:H2'	1:YA:355:U:O4'	1.92	0.69
1:YA:2336:A:N7	23:YW:40:ARG:NH2	2.40	0.69
1:YA:2563:U:H1'	1:YA:2566:A:N6	2.07	0.69
5:YE:75:SER:O	5:YE:78:TRP:HB2	1.92	0.69
7:YG:83:THR:C	7:YG:84:LYS:HD3	2.18	0.69
29:Y2:15:SER:O	29:Y2:16:HIS:CD2	2.45	0.69
1:RA:356:G:O2'	1:RA:357:C:H5'	1.93	0.69
4:RD:182:ALA:C	4:RD:184:ARG:N	2.49	0.69
5:RE:196:VAL:HG13	5:RE:200:LEU:HD23	1.73	0.69
14:RN:32:GLU:HA	14:RN:115:LEU:HD12	1.74	0.69
18:RR:39:LEU:HD23	18:RR:39:LEU:H	1.55	0.69
24:RX:65:THR:O	24:RX:68:ALA:HB3	1.93	0.69
30:R3:54:LEU:O	30:R3:58:ILE:HG13	1.93	0.69
32:QA:115:G:H4'	32:QA:116:A:O5'	1.93	0.69
33:QB:17:HIS:CD2	33:QB:202:ASN:HD21	2.10	0.69
33:QB:20:ARG:HA	33:QB:20:ARG:CZ	2.23	0.69
39:QH:21:LYS:HE2	39:QH:22:ALA:N	2.07	0.69
40:XI:71:ILE:CD1	40:XI:72:SER:H	2.02	0.69
43:XL:72:ASN:H	43:XL:72:ASN:HD22	1.40	0.69
44:XM:13:HIS:HD1	44:XM:43:LYS:HE2	1.57	0.69
50:XS:39:ILE:HG12	50:XS:68:HIS:O	1.92	0.69
1:YA:2355:G:H5"	23:YW:20:LEU:HD22	1.74	0.69
1:YA:2788:C:H2'	1:YA:2789:C:H6	1.57	0.69
1:YA:2800:A:H2'	1:YA:2801:G:C4'	2.23	0.69
15:YO:53:THR:HB	15:YO:65:THR:HG22	1.74	0.69
1:RA:404:A:H1'	1:RA:405:U:OP2	1.93	0.68
1:RA:2104:C:H2'	1:RA:2105:U:O4'	1.93	0.68
4:RD:29:VAL:HB	4:RD:98:VAL:HG22	1.74	0.68
10:RJ:31:GLU:HG3	10:RJ:142:ILE:HG21	1.75	0.68
10:RJ:88:THR:HG22	10:RJ:91:GLU:CD	2.17	0.68
19:RS:88:ARG:CG	19:RS:88:ARG:NH2	2.51	0.68
34:QC:119:ILE:HG21	34:QC:197:VAL:HG11	1.75	0.68
36:QE:155:LYS:HA	36:QE:158:LYS:HZ2	1.57	0.68
46:QO:18:ALA:O	46:QO:19:ASN:HB2	1.91	0.68
32:XA:1328:C:H5"	44:XM:27:THR:HG21	1.76	0.68
1:YA:475:C:H2'	1:YA:476:G:C8	2.28	0.68
1:YA:727:A:H2'	1:YA:728:G:C8	2.28	0.68
1:YA:1241:A:N3	1:YA:1241:A:H5'	2.08	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1666:G:O3'	11:YK:6:THR:HG23	1.93	0.68
1:YA:1998:A:H2'	1:YA:1999:C:H6	1.58	0.68
1:YA:2902:C:H2'	1:YA:2903:U:O4'	1.93	0.68
16:YP:88:ARG:HH11	16:YP:112:ARG:HH21	1.39	0.68
17:YQ:79:ILE:C	17:YQ:79:ILE:HD13	2.18	0.68
21:YU:95:PHE:O	21:YU:97:SER:N	2.26	0.68
23:YW:37:VAL:C	23:YW:39:GLN:H	2.01	0.68
24:YX:4:CYS:HA	24:YX:32:LEU:HD11	1.74	0.68
1:RA:2648:G:H2'	1:RA:2649:C:H6	1.56	0.68
3:RC:15:VAL:HA	3:RC:203:VAL:HG11	1.75	0.68
7:RG:82:PHE:CE2	7:RG:137:LYS:HB2	2.29	0.68
16:RP:50:ARG:CD	16:RP:56:SER:HB3	2.23	0.68
16:RP:92:ARG:O	16:RP:93:LYS:HB2	1.91	0.68
28:R1:33:LEU:N	28:R1:51:ALA:HB3	2.07	0.68
38:QG:61:PHE:CE1	38:QG:65:LEU:HD22	2.28	0.68
32:XA:120:A:O2'	32:XA:121:U:H4'	1.94	0.68
32:XA:413:G:C6	35:XD:32:LYS:HE3	2.27	0.68
32:XA:728:A:H2'	32:XA:729:A:H8	1.58	0.68
32:XA:977:A:H8	32:XA:1223:C:C4	2.11	0.68
37:XF:80:PHE:CE2	3:YC:123:ILE:HG21	2.29	0.68
48:XQ:59:GLU:O	48:XQ:75:VAL:HG22	1.93	0.68
50:XS:40:PHE:CB	50:XS:41:PRO:HD2	2.23	0.68
1:YA:125:A:H4'	1:YA:126:A:OP2	1.93	0.68
1:YA:1311:G:H21	1:YA:1603:A:H62	1.39	0.68
1:YA:1388:G:N1	1:YA:1400:U:N3	2.40	0.68
1:YA:1742:U:H2'	1:YA:1743:G:C8	2.28	0.68
1:RA:1098:A:H5'	1:RA:1099:G:OP2	1.92	0.68
1:RA:1829:A:N3	3:RC:14:HIS:HE1	1.92	0.68
1:RA:1867:G:O2'	1:RA:1868:C:H5'	1.92	0.68
6:RF:129:MET:CG	6:RF:153:ILE:HD11	2.22	0.68
9:RI:102:ARG:HH21	9:RI:103:ALA:HB2	1.58	0.68
14:RN:71:ARG:HH21	14:RN:71:ARG:HG3	1.57	0.68
14:RN:103:ARG:CD	14:RN:110:MET:HE3	2.21	0.68
25:RY:2:LYS:HG3	25:RY:52:ARG:HD3	1.74	0.68
42:QK:124:LYS:CE	52:QU:33:ARG:HH21	2.06	0.68
32:XA:67:C:OP1	32:XA:199:A:H5"	1.93	0.68
32:XA:495:A:C6	32:XA:496:A:N6	2.62	0.68
32:XA:1151:A:O2'	32:XA:1152:A:C8	2.30	0.68
34:XC:149:LYS:HG3	34:XC:168:ARG:HB2	1.75	0.68
35:XD:123:MET:HE2	35:XD:126:GLY:O	1.93	0.68
39:XH:68:LYS:HD3	39:XH:69:ALA:N	2.09	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:142:A:O2'	1:YA:143:C:C6	2.46	0.68
1:YA:675:A:OP1	5:YE:60:TRP:HZ2	1.76	0.68
1:YA:1326:U:O2'	1:YA:1327:A:H8	1.76	0.68
16:YP:20:ARG:HG2	16:YP:112:ARG:HH12	1.57	0.68
1:RA:558:U:OP1	10:RJ:111:LYS:HE3	1.92	0.68
2:RB:7:G:O2'	15:RO:38:GLN:NE2	2.27	0.68
3:RC:104:LEU:O	3:RC:105:ALA:HB2	1.93	0.68
3:RC:131:MET:HA	3:RC:134:ILE:HD12	1.74	0.68
9:RI:105:LEU:HA	9:RI:108:ILE:HB	1.76	0.68
16:RP:91:VAL:HG11	16:RP:96:LEU:HD21	1.76	0.68
40:QI:27:ILE:HG13	40:QI:62:LEU:HD21	1.75	0.68
42:QK:22:ILE:HD13	42:QK:95:THR:HG21	1.75	0.68
48:QQ:20:ILE:H	48:QQ:47:ASP:CG	2.02	0.68
32:XA:765:G:C5	32:XA:812:G:C5	2.81	0.68
39:XH:17:GLN:NE2	39:XH:69:ALA:HB1	2.09	0.68
39:XH:54:THR:HG23	39:XH:55:LYS:H	1.58	0.68
41:XJ:12:ALA:HB3	41:XJ:18:ILE:HB	1.75	0.68
41:XJ:44:THR:HG22	41:XJ:45:ARG:H	1.58	0.68
1:YA:1032:A:H1'	31:Y4:23:ILE:CD1	2.21	0.68
12:YL:92:LEU:HD22	12:YL:124:GLY:HA3	1.75	0.68
17:YQ:27:ARG:HA	17:YQ:33:VAL:CG1	2.23	0.68
1:RA:1238:G:C2'	1:RA:1239:G:H5'	2.22	0.68
3:RC:259:ASN:C	3:RC:261:ARG:H	2.02	0.68
13:RM:108:VAL:HG13	13:RM:109:PRO:HD2	1.76	0.68
20:RT:18:GLU:HA	20:RT:18:GLU:OE2	1.93	0.68
28:R1:33:LEU:H	28:R1:51:ALA:CB	2.06	0.68
29:R2:3:ARG:HG2	29:R2:3:ARG:NH2	2.04	0.68
52:QU:39:LYS:N	52:QU:40:PRO:HD2	2.08	0.68
32:XA:373:A:O2'	32:XA:374:A:H5'	1.93	0.68
32:XA:518:C:H2'	32:XA:530:G:N7	2.07	0.68
33:XB:184:ALA:O	33:XB:199:ILE:HG12	1.94	0.68
37:XF:6:ILE:HD12	37:XF:6:ILE:N	2.09	0.68
1:YA:53:A:C2	1:YA:179:C:H4'	2.28	0.68
1:YA:229:C:O2'	1:YA:230:G:O4'	2.10	0.68
7:YG:68:ARG:O	7:YG:72:ASN:HB3	1.94	0.68
29:Y2:19:ARG:NH2	29:Y2:19:ARG:HB3	2.08	0.68
1:RA:276:U:H2'	1:RA:276:U:O2	1.93	0.68
1:RA:1818:U:OP2	3:RC:155:ARG:NH1	2.27	0.68
20:RT:38:ALA:HB1	20:RT:43:ILE:CG2	2.22	0.68
32:QA:414:A:N6	32:QA:431:A:N3	2.42	0.68
32:QA:967:C:H1'	40:QI:129:ARG:HH22	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:QI:6:TYR:HE2	40:QI:17:ARG:HB2	1.59	0.68
32:XA:1130:A:C5	32:XA:1146:A:C6	2.81	0.68
35:XD:2:ARG:HE	35:XD:114:ARG:CD	2.07	0.68
35:XD:84:ASN:C	35:XD:84:ASN:HD22	2.02	0.68
1:YA:989:G:H4'	1:YA:990:A:OP1	1.94	0.68
1:YA:1240:U:O2'	1:YA:1241:A:H5"	1.93	0.68
13:RM:73:ILE:HG21	13:RM:91:TYR:CZ	2.29	0.68
22:RV:25:LYS:HD3	22:RV:43:ASP:HA	1.76	0.68
48:QQ:16:MET:HE2	48:QQ:20:ILE:HA	1.76	0.68
32:XA:1014:A:C2	50:XS:33:TRP:HB2	2.28	0.68
32:XA:1141:C:HO2'	32:XA:1142:G:H8	1.40	0.68
32:XA:1363:A:C6	32:XA:1365:G:O6	2.45	0.68
40:XI:74:GLN:O	40:XI:78:ILE:HG13	1.93	0.68
1:YA:1012:U:O4	10:YJ:30:THR:HG21	1.93	0.68
1:YA:1315:C:OP2	56:YA:3745:HOH:O	2.12	0.68
1:YA:2345:G:H4'	1:YA:2346:A:H5"	1.74	0.68
1:YA:2623:G:H4'	1:YA:2825:G:C8	2.28	0.68
20:YT:67:VAL:HG23	20:YT:75:GLY:O	1.92	0.68
1:RA:78:U:H2'	1:RA:79:C:C6	2.29	0.68
1:RA:1179:G:H3'	1:RA:1180:U:C4'	2.19	0.68
1:RA:2641:G:OP1	10:RJ:76:HIS:HE1	1.77	0.68
1:RA:2674:G:H4'	11:RK:30:ARG:HG3	1.74	0.68
5:RE:24:ASN:O	5:RE:28:VAL:HG12	1.94	0.68
5:RE:119:ILE:O	5:RE:119:ILE:HG12	1.92	0.68
9:RI:71:LYS:HG2	9:RI:72:THR:H	1.59	0.68
9:RI:126:ARG:HA	9:RI:129:GLU:CB	2.24	0.68
10:RJ:54:ILE:C	10:RJ:54:ILE:HD12	2.19	0.68
13:RM:71:LYS:HD3	13:RM:95:LEU:CD1	2.24	0.68
18:RR:51:VAL:HB	18:RR:52:PRO:CD	2.22	0.68
20:RT:4:GLU:HG3	20:RT:6:ARG:NE	2.09	0.68
22:RV:61:LEU:O	22:RV:71:LYS:HA	1.94	0.68
24:RX:50:VAL:HG12	24:RX:51:SER:O	1.94	0.68
32:QA:194:C:O2'	32:QA:195:A:H5'	1.93	0.68
36:QE:110:MET:HE2	36:QE:124:ALA:HB1	1.76	0.68
39:XH:54:THR:O	39:XH:56:PRO:HD3	1.94	0.68
43:XL:80:LEU:HD23	43:XL:97:VAL:HG21	1.76	0.68
52:XU:39:LYS:N	52:XU:40:PRO:CD	2.57	0.68
1:YA:118:A:H1'	1:YA:178:G:O4'	1.92	0.68
1:YA:2822:G:C5'	4:YD:164:GLN:HE22	2.05	0.68
2:YB:116:G:H2'	2:YB:117:G:H8	1.58	0.68
11:YK:7:MET:HE1	11:YK:20:MET:HB2	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:YO:24:THR:HG22	15:YO:41:ALA:HA	1.76	0.68
21:YU:90:LYS:HE2	21:YU:92:VAL:HG12	1.73	0.68
23:YW:49:ASN:ND2	23:YW:81:ILE:HG23	2.08	0.68
1:RA:1153:C:OP2	56:RA:3360:HOH:O	2.12	0.68
1:RA:2051:A:H8	1:RA:2051:A:OP2	1.77	0.68
7:RG:140:ILE:HD12	7:RG:141:GLY:N	2.08	0.68
7:RG:174:LYS:HD2	7:RG:174:LYS:C	2.19	0.68
17:RQ:65:ASN:ND2	17:RQ:69:ARG:NH2	2.38	0.68
18:RR:48:LYS:HD2	18:RR:48:LYS:N	2.09	0.68
20:RT:40:LYS:N	20:RT:43:ILE:HG23	2.09	0.68
32:QA:485:U:O2'	32:QA:486:U:OP1	2.12	0.68
40:QI:90:ASP:CG	40:QI:92:SER:HB3	2.19	0.68
41:QJ:80:THR:HB	41:QJ:83:THR:HG22	1.75	0.68
32:XA:1135:U:H2'	32:XA:1135:U:O2	1.93	0.68
37:XF:41:ASP:OD2	37:XF:58:HIS:CE1	2.47	0.68
44:XM:68:LEU:O	44:XM:72:ILE:HG22	1.94	0.68
1:YA:333:G:O2'	1:YA:334:C:H6	1.77	0.68
1:YA:1062:G:O2'	1:YA:1063:G:H8	1.77	0.68
3:YC:52:HIS:HB3	3:YC:216:ARG:O	1.93	0.68
4:YD:112:THR:HG22	4:YD:113:SER:H	1.57	0.68
6:YF:58:ALA:HB1	6:YF:139:GLU:HG2	1.75	0.68
15:YO:30:ARG:HA	15:YO:35:ILE:HD13	1.75	0.68
18:YR:39:LEU:O	18:YR:49:ILE:HG12	1.94	0.68
23:YW:8:SER:O	23:YW:9:THR:HB	1.93	0.68
2:RB:42:C:OP1	6:RF:63:LYS:HE2	1.94	0.68
7:RG:86:LEU:HB3	7:RG:162:ARG:O	1.94	0.68
12:RL:74:THR:HG22	12:RL:107:PHE:HB2	1.73	0.68
20:RT:28:ASN:HA	20:RT:91:GLN:NE2	2.09	0.68
32:QA:116:A:H2'	32:QA:117:G:H8	1.58	0.68
32:QA:259:G:H2'	32:QA:260:G:H8	1.59	0.68
32:QA:1021:A:C2'	32:QA:1022:A:H5"	2.23	0.68
36:QE:81:GLN:HE22	36:QE:146:MET:CE	2.07	0.68
40:QI:21:LYS:HG2	40:QI:22:PRO:HD2	1.75	0.68
43:QL:86:VAL:CG1	43:QL:89:LEU:HD23	2.24	0.68
32:XA:1054:C:O2'	32:XA:1055:A:H5"	1.94	0.68
52:XU:36:PHE:HD1	52:XU:40:PRO:HB3	1.59	0.68
1:YA:45:G:C5'	1:YA:46:G:H5'	2.23	0.68
1:YA:70:G:H4'	1:YA:71:A:OP1	1.91	0.68
1:YA:396:G:O2'	1:YA:397:U:C6	2.43	0.68
1:YA:574:A:H4'	1:YA:575:A:H5'	1.76	0.68
1:YA:1439:A:N7	1:YA:1440:U:C1'	2.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1555:G:H2'	1:YA:1556:C:C6	2.28	0.68
1:YA:1734:G:HO2'	1:YA:1735:A:H8	1.41	0.68
1:YA:1774:C:O2	3:YC:10:PRO:HB2	1.93	0.68
1:YA:2788:C:O2'	1:YA:2809:A:N3	2.25	0.68
3:YC:94:LEU:HB2	3:YC:100:ARG:HD2	1.75	0.68
12:YL:17:LYS:HZ1	12:YL:19:LEU:HD22	1.59	0.68
21:YU:95:PHE:HD1	21:YU:95:PHE:N	1.92	0.68
25:YY:49:ASP:HA	25:YY:52:ARG:HD2	1.76	0.68
1:RA:204:A:H4'	1:RA:205:G:OP1	1.94	0.67
1:RA:977:G:O6	56:RA:3586:HOH:O	2.12	0.67
1:RA:1092:C:H2'	1:RA:1093:G:O4'	1.92	0.67
1:RA:2052:A:O4'	4:RD:147:GLY:HA3	1.93	0.67
3:RC:153:LEU:HD23	3:RC:153:LEU:N	2.09	0.67
11:RK:5:GLN:O	11:RK:6:THR:HB	1.92	0.67
16:RP:50:ARG:CB	16:RP:57:ALA:N	2.51	0.67
31:R4:25:VAL:HB	31:R4:35:GLN:HB2	1.75	0.67
32:QA:443:C:O2'	32:QA:444:G:H5'	1.94	0.67
32:QA:973:G:H3'	32:QA:974:A:H5"	1.76	0.67
32:QA:1168:U:C6	32:QA:1168:U:OP1	2.48	0.67
32:QA:1411:C:H2'	32:QA:1412:C:H5'	1.76	0.67
35:QD:33:ILE:O	35:QD:34:GLU:HB3	1.94	0.67
40:QI:51:LEU:HB3	40:QI:56:MET:HG2	1.75	0.67
44:XM:79:LEU:HD13	44:XM:86:ARG:HG2	1.76	0.67
1:YA:27:G:H22	1:YA:512:G:H2'	1.58	0.67
1:YA:244:A:H2'	1:YA:245:G:O4'	1.93	0.67
1:YA:804:A:H2'	1:YA:806:C:C4	2.29	0.67
1:YA:806:C:H2'	1:YA:807:U:C6	2.28	0.67
1:YA:956:G:C2	1:YA:962:G:O6	2.47	0.67
1:YA:959:A:H2'	1:YA:960:A:C8	2.29	0.67
1:YA:973:A:OP1	1:YA:973:A:H8	1.78	0.67
20:YT:29:THR:CB	20:YT:86:THR:H	2.08	0.67
23:YW:27:GLY:HA3	23:YW:31:LEU:HD11	1.76	0.67
1:RA:271:G:C4'	1:RA:272:A:OP1	2.35	0.67
1:RA:1141:U:H4'	1:RA:1142:A:O4'	1.93	0.67
7:RG:132:LEU:N	7:RG:132:LEU:HD23	2.10	0.67
10:RJ:56:VAL:HG12	10:RJ:57:LEU:N	2.09	0.67
11:RK:7:MET:HE1	11:RK:44:LYS:HG3	1.76	0.67
13:RM:49:ALA:HB1	13:RM:120:ALA:HB1	1.77	0.67
17:RQ:91:ARG:CZ	18:RR:11:GLN:H	2.06	0.67
20:RT:27:SER:O	20:RT:28:ASN:CG	2.36	0.67
32:QA:198:G:O2'	32:QA:199:A:H8	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:QE:158:LYS:HE2	39:QH:63:LYS:NZ	2.04	0.67
32:XA:13:U:O2'	32:XA:14:U:H5'	1.94	0.67
32:XA:765:G:C8	32:XA:812:G:C2	2.82	0.67
34:XC:166:TRP:HE3	34:XC:166:TRP:N	1.92	0.67
50:XS:59:VAL:HB	50:XS:73:PHE:HD2	1.59	0.67
1:YA:251:A:H4'	12:YL:47:ARG:NH2	2.08	0.67
1:YA:874:G:H5'	1:YA:875:G:OP2	1.93	0.67
1:YA:1662:U:C2'	1:YA:1663:G:H5"	2.21	0.67
12:YL:63:LYS:HB3	30:Y3:12:ARG:HD3	1.76	0.67
20:YT:24:MET:HE2	20:YT:24:MET:HA	1.76	0.67
22:YV:30:ILE:HG13	22:YV:40:ILE:HD11	1.76	0.67
1:RA:948:C:OP1	56:RA:3355:HOH:O	2.12	0.67
1:RA:2197:U:OP1	35:XD:150:LYS:HE3	1.94	0.67
9:RI:42:ASN:HA	9:RI:45:THR:HB	1.74	0.67
42:QK:95:THR:O	42:QK:99:LEU:HB2	1.94	0.67
32:XA:256:U:H2'	32:XA:257:G:O4'	1.94	0.67
32:XA:718:A:C5	42:XK:117:HIS:CD2	2.82	0.67
1:YA:21:A:C2	1:YA:520:G:C2	2.82	0.67
1:YA:128:C:H6	1:YA:128:C:H5"	1.59	0.67
1:YA:782:A:H5'	1:YA:783:A:C2	2.28	0.67
1:YA:1605:C:C3'	1:YA:1606:C:H5"	2.25	0.67
1:YA:2348:U:H2'	1:YA:2349:G:H8	1.58	0.67
1:YA:2353:G:H21	23:YW:30:VAL:HG21	1.59	0.67
12:YL:79:LEU:HD12	12:YL:112:LEU:HA	1.76	0.67
13:YM:72:PRO:O	13:YM:73:ILE:HB	1.93	0.67
1:RA:1190:G:OP1	12:RL:32:GLY:HA2	1.94	0.67
1:RA:1385:A:H1'	1:RA:1386:C:C6	2.30	0.67
1:RA:2757:A:N1	7:RG:66:THR:HG21	2.10	0.67
32:QA:1052:U:H5"	32:QA:1053:G:OP2	1.95	0.67
32:QA:1411:C:O2'	32:QA:1412:C:H5'	1.95	0.67
51:QT:66:ILE:HD11	51:QT:70:LYS:HE3	1.76	0.67
52:QU:35:GLU:O	52:QU:36:PHE:HB2	1.93	0.67
33:XB:10:LYS:HE3	33:XB:10:LYS:HA	1.76	0.67
1:YA:304:U:H2'	1:YA:305:C:C6	2.30	0.67
6:YF:64:PRO:HA	6:YF:88:VAL:HG22	1.74	0.67
11:YK:18:ARG:HB2	11:YK:45:GLU:HB2	1.76	0.67
1:RA:580:U:H2'	1:RA:581:C:H6	1.58	0.67
1:RA:740:C:H5'	1:RA:1784:A:H3'	1.77	0.67
8:RH:68:ARG:NH2	8:RH:72:ILE:HG21	2.08	0.67
32:QA:414:A:H2'	32:QA:415:A:C8	2.27	0.67
32:QA:495:A:H4'	32:QA:496:A:OP1	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:QH:9:MET:HE2	39:QH:32:LYS:HG2	1.76	0.67
44:QM:106:ARG:HH21	44:QM:112:ARG:HB3	1.59	0.67
37:XF:42:TRP:HB2	37:XF:59:TYR:HB2	1.75	0.67
41:XJ:48:ARG:HB3	45:XN:100:TRP:HZ2	1.60	0.67
44:XM:13:HIS:HB3	44:XM:16:ILE:HD13	1.76	0.67
1:YA:1258:U:H2'	1:YA:1259:G:H8	1.59	0.67
1:YA:1357:C:C5	56:YA:3417:HOH:O	2.47	0.67
1:YA:1693:U:H4'	1:YA:1694:C:OP2	1.93	0.67
1:YA:1905:C:O2'	1:YA:1929:G:H1'	1.94	0.67
1:YA:2331:G:N1	1:YA:2385:C:N4	2.43	0.67
6:YF:91:ARG:HB3	6:YF:91:ARG:NH2	2.09	0.67
8:YH:32:PRO:HA	24:YX:38:TRP:CD1	2.28	0.67
22:YV:59:GLU:HG2	22:YV:60:VAL:H	1.57	0.67
4:RD:90:PHE:C	4:RD:92:VAL:H	2.03	0.67
7:RG:86:LEU:HD12	7:RG:86:LEU:N	2.09	0.67
18:RR:48:LYS:H	18:RR:48:LYS:CD	2.04	0.67
18:RR:97:LYS:O	18:RR:98:ILE:HB	1.94	0.67
32:QA:198:G:C2'	32:QA:199:A:H8	2.06	0.67
32:QA:373:A:H2'	32:QA:374:A:H8	1.60	0.67
32:QA:461:A:H3'	32:QA:461:A:N3	2.10	0.67
41:QJ:48:ARG:NH2	45:QN:100:TRP:CD2	2.63	0.67
32:XA:1387:G:H2'	32:XA:1388:C:C6	2.30	0.67
33:XB:47:PRO:HA	33:XB:50:ASN:HB2	1.77	0.67
35:XD:57:LYS:HG3	35:XD:58:GLN:N	2.10	0.67
37:XF:54:LEU:HD12	37:XF:56:LYS:O	1.95	0.67
40:XI:9:GLY:HA3	40:XI:16:ALA:HB3	1.77	0.67
1:YA:298:G:H2'	1:YA:339:U:O4	1.95	0.67
1:YA:626:A:H2'	12:YL:78:ARG:NH2	2.09	0.67
1:YA:1153:C:H2'	1:YA:1154:G:C8	2.30	0.67
1:YA:1635:A:O2'	1:YA:1636:U:H5'	1.93	0.67
2:YB:8:C:H5'	15:YO:27:VAL:HG11	1.75	0.67
5:YE:149:ILE:HG23	5:YE:188:MET:CA	2.23	0.67
7:YG:117:PRO:HD2	7:YG:120:ILE:CG2	2.24	0.67
21:YU:35:VAL:HG12	21:YU:36:GLU:N	2.10	0.67
1:RA:319:G:C4	1:RA:333:G:N2	2.63	0.67
1:RA:574:A:OP1	56:RA:3268:HOH:O	2.10	0.67
1:RA:923:G:N3	23:RW:23:LYS:CE	2.57	0.67
1:RA:1277:G:H5'	14:RN:20:MET:CE	2.25	0.67
1:RA:2502:G:H5'	1:RA:2503:A:C5'	2.24	0.67
18:RR:54:VAL:HG23	18:RR:57:GLY:H	1.57	0.67
32:QA:299:G:H2'	32:QA:300:A:C8	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:667:G:H4'	46:QO:50:HIS:ND1	2.08	0.67
34:QC:54:ILE:C	34:QC:54:ILE:HD12	2.19	0.67
36:QE:81:GLN:HG2	36:QE:149:PRO:HB3	1.76	0.67
37:QF:55:HIS:O	37:QF:56:LYS:HB2	1.93	0.67
32:XA:372:C:C1'	32:XA:373:A:OP2	2.42	0.67
32:XA:736:C:H2'	32:XA:737:C:C6	2.29	0.67
32:XA:1201:A:H1'	32:XA:1202:U:OP2	1.94	0.67
1:YA:1055:G:H2'	1:YA:1055:G:N3	2.10	0.67
1:YA:1273:U:H4'	1:YA:1275:A:OP2	1.95	0.67
1:YA:1490:A:H8	3:YC:73:ILE:CD1	2.07	0.67
1:YA:2758:A:H2'	1:YA:2759:G:H5'	1.76	0.67
2:YB:44:G:H3'	6:YF:91:ARG:NE	2.10	0.67
6:YF:45:ASP:C	6:YF:47:LYS:H	2.03	0.67
6:YF:136:ILE:O	6:YF:137:PHE:O	2.13	0.67
7:YG:115:GLN:HG2	7:YG:116:LEU:N	2.10	0.67
13:YM:28:PHE:HB2	13:YM:104:GLU:OE1	1.95	0.67
19:YS:22:ASP:HA	19:YS:25:ARG:HH12	1.60	0.67
1:RA:460:A:OP1	29:R2:41:ARG:NH1	2.28	0.67
1:RA:1300:G:H5"	1:RA:1301:A:H5'	1.77	0.67
3:RC:109:LEU:CD2	3:RC:110:LYS:H	2.08	0.67
6:RF:68:LYS:HD2	6:RF:68:LYS:H	1.58	0.67
6:RF:82:TYR:HD2	6:RF:83:PRO:HD2	1.59	0.67
32:QA:113:G:C1'	32:QA:354:G:H5'	2.24	0.67
32:QA:658:C:H1'	46:QO:21:THR:HG21	1.75	0.67
44:QM:10:ASP:CG	44:QM:44:ILE:HB	2.20	0.67
32:XA:632:U:O2	32:XA:632:U:H2'	1.94	0.67
32:XA:642:A:O2'	32:XA:643:C:H6	1.78	0.67
38:XG:45:ALA:HB1	38:XG:120:ALA:HB2	1.76	0.67
49:XR:59:LYS:O	49:XR:63:TYR:CD1	2.48	0.67
1:YA:223:A:C4	1:YA:408:G:H1'	2.30	0.67
1:YA:454:A:C4'	1:YA:455:C:OP2	2.36	0.67
1:YA:857:G:H1'	23:YW:19:ARG:NE	2.09	0.67
1:YA:1063:G:C6	1:YA:1064:C:N4	2.63	0.67
1:YA:2384:U:H3'	1:YA:2385:C:H3'	1.77	0.67
1:YA:2880:C:H1'	14:YN:93:GLY:H	1.60	0.67
7:YG:120:ILE:HG13	7:YG:140:ILE:HG22	1.76	0.67
12:YL:100:ILE:O	12:YL:101:ILE:HB	1.95	0.67
16:YP:88:ARG:NE	16:YP:112:ARG:HH21	1.93	0.67
23:YW:36:ILE:HG22	23:YW:39:GLN:HB2	1.77	0.67
1:RA:386:G:H4'	1:RA:387:U:OP2	1.95	0.67
1:RA:545:U:H2'	1:RA:546:U:H4'	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:995:C:H5'	1:RA:995:C:C6	2.29	0.67
3:RC:100:ARG:HH11	3:RC:100:ARG:HG2	1.59	0.67
10:RJ:99:ARG:O	10:RJ:103:ILE:HG23	1.95	0.67
20:RT:4:GLU:HG3	20:RT:6:ARG:HE	1.60	0.67
32:QA:1219:A:H2'	32:QA:1220:G:C8	2.30	0.67
32:QA:1453:G:H2'	32:QA:1453:G:N3	2.08	0.67
33:QB:36:LYS:HE3	33:QB:36:LYS:HA	1.76	0.67
34:QC:41:TYR:OH	34:QC:89:VAL:HG21	1.94	0.67
36:QE:148:SER:O	36:QE:152:VAL:HG13	1.95	0.67
32:XA:93:U:H2'	32:XA:95:C:H5	1.58	0.67
32:XA:976:G:C5'	32:XA:977:A:OP2	2.41	0.67
32:XA:1049:U:H4'	32:XA:1050:G:OP2	1.94	0.67
32:XA:1150:A:N6	32:XA:1151:A:N6	2.42	0.67
35:XD:69:ARG:HH11	35:XD:69:ARG:HG3	1.59	0.67
1:YA:275:C:H2'	1:YA:276:U:O4'	1.95	0.67
1:YA:388:G:N7	1:YA:390:U:H2'	2.10	0.67
3:YC:181:ARG:HE	3:YC:265:PHE:HB2	1.60	0.67
4:YD:51:THR:CG2	4:YD:76:GLY:HA3	2.25	0.67
10:YJ:110:PRO:HG2	10:YJ:111:LYS:HG2	1.77	0.67
1:RA:2188:U:H2'	1:RA:2189:U:C6	2.29	0.67
2:RB:116:G:H4'	15:RO:54:VAL:HG22	1.77	0.67
12:RL:61:LEU:O	30:R3:12:ARG:HD3	1.95	0.67
19:RS:95:ARG:O	19:RS:96:ILE:HG12	1.94	0.67
20:RT:37:ASP:O	20:RT:38:ALA:O	2.13	0.67
23:RW:23:LYS:HE3	23:RW:24:ARG:HG3	1.77	0.67
32:QA:433:G:C2'	32:QA:434:U:H5'	2.25	0.67
32:QA:1181:G:O2'	32:QA:1182:G:C5	2.48	0.67
33:QB:58:LYS:HZ2	33:QB:62:ARG:HG3	1.60	0.67
35:XD:2:ARG:NH2	35:XD:114:ARG:HH11	1.92	0.67
38:XG:110:ARG:HG3	38:XG:111:GLY:N	2.04	0.67
41:XJ:25:ILE:HG22	41:XJ:25:ILE:O	1.94	0.67
1:YA:206:U:H5'	1:YA:206:U:C6	2.28	0.67
14:YN:22:ARG:HG3	14:YN:70:THR:HA	1.77	0.67
17:YQ:24:TYR:O	17:YQ:27:ARG:HB3	1.95	0.67
21:RU:42:LYS:HA	21:RU:58:VAL:O	1.95	0.66
23:RW:23:LYS:CE	23:RW:24:ARG:HG3	2.26	0.66
23:RW:39:GLN:HE21	23:RW:43:LYS:N	1.92	0.66
25:RY:57:LEU:HA	25:RY:60:LYS:HB3	1.77	0.66
28:R1:8:ILE:HD11	28:R1:24:LYS:HG2	1.77	0.66
32:QA:865:A:H2'	32:QA:866:C:H6	1.60	0.66
35:QD:166:LYS:HB3	35:QD:166:LYS:HZ2	1.59	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:QG:53:SER:C	38:QG:55:LYS:H	2.02	0.66
39:QH:105:THR:HG21	39:QH:120:LEU:HD13	1.76	0.66
40:QI:51:LEU:HA	40:QI:54:VAL:HG23	1.78	0.66
52:QU:9:GLU:CG	52:QU:10:PRO:HD3	2.25	0.66
40:XI:11:ARG:HH22	40:XI:108:ARG:NH2	1.93	0.66
1:YA:489:G:H4'	1:YA:490:C:OP1	1.95	0.66
1:YA:594:U:H2'	1:YA:595:C:C6	2.30	0.66
7:YG:103:ASN:HD22	7:YG:111:PRO:HB2	1.59	0.66
10:YJ:20:ALA:HA	10:YJ:23:LYS:CG	2.25	0.66
12:YL:93:ASN:CG	12:YL:94:THR:H	2.02	0.66
13:YM:42:THR:HB	13:YM:45:GLN:HG3	1.76	0.66
16:YP:88:ARG:HH11	16:YP:112:ARG:NH2	1.92	0.66
20:YT:39:THR:CG2	20:YT:42:GLU:HB2	2.26	0.66
21:YU:3:LYS:HD3	21:YU:82:VAL:HG21	1.77	0.66
1:RA:284:U:H2'	1:RA:285:G:C8	2.30	0.66
1:RA:1152:C:H3'	56:RA:3360:HOH:O	1.94	0.66
1:RA:1188:U:O2'	1:RA:1189:A:H5'	1.95	0.66
1:RA:2063:C:O2	1:RA:2450:A:N1	2.28	0.66
1:RA:2503:A:H4'	1:RA:2504:U:OP1	1.94	0.66
16:RP:4:ILE:CG2	16:RP:5:LYS:H	1.94	0.66
17:RQ:4:LYS:HG3	17:RQ:5:ARG:N	2.10	0.66
21:RU:15:GLY:O	21:RU:17:ASP:N	2.28	0.66
32:QA:430:A:OP1	35:QD:8:LEU:HB2	1.95	0.66
32:QA:723:U:OP1	52:QU:48:LYS:HD3	1.94	0.66
32:QA:740:U:O2'	32:QA:741:G:H5'	1.95	0.66
33:QB:119:GLN:C	33:QB:119:GLN:HE21	2.02	0.66
41:QJ:65:TYR:CB	45:QN:95:LEU:HD11	2.25	0.66
32:XA:649:A:H2'	32:XA:650:G:O4'	1.95	0.66
47:XP:1:MET:HE2	47:XP:2:VAL:O	1.94	0.66
52:XU:33:ARG:HH12	52:XU:34:ARG:HD3	1.59	0.66
1:YA:187:G:C2	1:YA:210:C:C2	2.84	0.66
1:YA:270:A:N1	1:YA:369:U:H1'	2.10	0.66
1:YA:397:U:OP2	24:YX:9:LYS:HE2	1.95	0.66
1:YA:447:A:H5'	1:YA:449:A:C5	2.30	0.66
1:YA:1951:U:H2'	1:YA:1953:A:OP2	1.95	0.66
1:YA:2305:U:OP1	6:YF:132:ARG:HG3	1.95	0.66
4:YD:10:GLY:O	4:YD:11:MET:HB2	1.96	0.66
20:YT:28:ASN:HB2	20:YT:87:LEU:HB3	1.77	0.66
21:YU:82:VAL:O	21:YU:96:LYS:HG3	1.96	0.66
22:YV:42:LEU:HD13	22:YV:47:VAL:HG21	1.77	0.66
1:RA:134:G:H5'	1:RA:135:U:OP2	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:924:G:H4'	23:RW:24:ARG:HH21	1.60	0.66
1:RA:994:C:H3'	17:RQ:53:LYS:HE2	1.78	0.66
1:RA:1688:U:H1'	1:RA:1701:A:C6	2.31	0.66
1:RA:2021:C:OP1	27:R0:8:THR:HG21	1.95	0.66
4:RD:53:GLY:HA3	4:RD:77:ARG:HB2	1.76	0.66
6:RF:7:TYR:O	6:RF:12:VAL:HG12	1.96	0.66
7:RG:115:GLN:CD	7:RG:115:GLN:N	2.51	0.66
32:QA:1281:C:O2'	32:QA:1282:C:H5'	1.95	0.66
32:XA:1279:G:N2	32:XA:1279:G:OP2	2.29	0.66
33:XB:163:ILE:HG23	33:XB:185:ILE:HD11	1.77	0.66
38:XG:27:ASN:O	38:XG:30:MET:HB2	1.95	0.66
45:XN:89:ARG:HG3	45:XN:91:GLU:HG3	1.77	0.66
52:XU:35:GLU:CG	52:XU:36:PHE:H	2.09	0.66
1:YA:682:G:H5'	29:Y2:26:ASN:OD1	1.95	0.66
1:YA:1474:U:C2'	1:YA:1475:G:H5'	2.23	0.66
1:YA:1973:G:C6	1:YA:1974:C:C4	2.83	0.66
1:YA:2540:C:C2	1:YA:2541:A:C8	2.83	0.66
1:YA:2752:C:H2'	1:YA:2753:A:C8	2.29	0.66
3:YC:103:ILE:HD12	3:YC:104:LEU:H	1.60	0.66
4:YD:125:TRP:CG	4:YD:160:LYS:HB3	2.30	0.66
6:YF:56:LEU:O	6:YF:60:SER:HB3	1.95	0.66
10:YJ:24:THR:HB	10:YJ:27:ARG:HB2	1.78	0.66
13:YM:66:ARG:CZ	13:YM:101:VAL:HG11	2.25	0.66
14:RN:66:ALA:O	14:RN:69:ARG:O	2.13	0.66
20:RT:25:GLU:C	20:RT:27:SER:H	2.03	0.66
34:QC:139:ASN:HA	34:QC:142:ARG:HB2	1.76	0.66
51:QT:27:MET:CE	51:QT:57:VAL:HG22	2.26	0.66
34:XC:109:GLU:HG2	34:XC:139:ASN:HB2	1.77	0.66
40:XI:11:ARG:HH22	40:XI:108:ARG:HH21	1.44	0.66
1:YA:639:U:H2'	1:YA:640:C:H6	1.60	0.66
1:YA:2286:G:H4'	1:YA:2287:A:C1'	2.25	0.66
1:YA:2403:C:H2'	1:YA:2404:U:H6	1.60	0.66
1:YA:2876:G:H4'	16:YP:2:ASN:HD21	1.60	0.66
2:YB:65:U:H3'	2:YB:108:A:N6	2.11	0.66
14:YN:24:MET:HE1	14:YN:40:LYS:HD2	1.77	0.66
18:YR:43:ASN:ND2	18:YR:44:GLY:H	1.92	0.66
1:RA:1252:G:N3	17:RQ:32:ARG:HG2	2.10	0.66
3:RC:159:THR:O	3:RC:194:VAL:HG12	1.95	0.66
6:RF:9:ASP:O	6:RF:10:GLU:HB2	1.95	0.66
10:RJ:3:THR:HB	10:RJ:44:TYR:OH	1.94	0.66
20:RT:39:THR:HB	20:RT:42:GLU:CB	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:RT:39:THR:O	20:RT:39:THR:HG22	1.94	0.66
35:QD:105:GLY:HA3	35:QD:161:ALA:HB1	1.78	0.66
37:QF:86:ARG:HH12	49:QR:63:TYR:HB3	1.59	0.66
44:QM:45:SER:O	44:QM:46:GLU:HB2	1.94	0.66
47:QP:73:ALA:O	47:QP:77:GLU:HB2	1.95	0.66
52:QU:16:ARG:NH1	52:QU:19:LYS:HG3	2.11	0.66
34:XC:84:GLU:HA	34:XC:87:ARG:HB2	1.76	0.66
36:XE:55:VAL:N	36:XE:56:PRO:HD2	2.11	0.66
43:XL:34:THR:HG22	43:XL:35:ARG:HG2	1.76	0.66
46:XO:73:ASP:OD2	46:XO:76:ARG:HD3	1.96	0.66
48:XQ:3:LYS:HZ3	48:XQ:6:THR:HG21	1.60	0.66
48:XQ:46:HIS:NE2	48:XQ:48:GLU:HG2	2.10	0.66
1:YA:339:U:H2'	1:YA:340:A:C8	2.31	0.66
1:YA:797:G:OP1	5:YE:57:LYS:HG2	1.96	0.66
1:YA:917:A:H2	2:YB:79:G:H21	1.38	0.66
16:YP:86:LYS:HZ2	16:YP:86:LYS:HA	1.60	0.66
30:Y3:41:ARG:HH21	30:Y3:41:ARG:CG	2.09	0.66
1:RA:446:G:OP1	17:RQ:2:ARG:HD2	1.96	0.66
1:RA:533:G:H5'	17:RQ:23:TYR:CD2	2.30	0.66
1:RA:1411:U:O2'	1:RA:1412:U:H5'	1.96	0.66
1:RA:1653:G:H1	14:RN:11:ASN:ND2	1.92	0.66
3:RC:7:PRO:HB3	3:RC:13:ARG:HB2	1.76	0.66
8:RH:82:SER:O	8:RH:83:LYS:HB2	1.95	0.66
17:RQ:40:LYS:HG2	17:RQ:44:TYR:CD1	2.31	0.66
23:RW:39:GLN:O	23:RW:41:GLY:N	2.29	0.66
32:QA:254:G:O2'	32:QA:255:G:H5'	1.95	0.66
35:QD:166:LYS:HB3	35:QD:166:LYS:NZ	2.10	0.66
35:QD:167:PRO:HB2	35:QD:170:LEU:HD11	1.76	0.66
42:QK:42:GLY:HA3	42:QK:73:VAL:HG12	1.77	0.66
52:QU:17:ARG:HH11	52:QU:17:ARG:HG3	1.60	0.66
32:XA:1105:A:H2'	32:XA:1106:G:H8	1.59	0.66
38:XG:100:MET:HE2	38:XG:100:MET:H	1.60	0.66
1:YA:1400:U:O2'	1:YA:1401:G:O4'	2.13	0.66
1:YA:2324:U:H5'	1:YA:2325:G:C5'	2.25	0.66
1:YA:2665:A:H2'	1:YA:2666:C:O2	1.96	0.66
1:YA:2893:A:H4'	1:YA:2894:G:O5'	1.95	0.66
5:YE:48:THR:O	5:YE:52:VAL:HG23	1.95	0.66
8:YH:5:LEU:HD11	8:YH:13:GLY:HA3	1.77	0.66
11:YK:60:ALA:HA	11:YK:87:LEU:CD2	2.25	0.66
12:YL:56:PRO:O	12:YL:60:ARG:HG3	1.95	0.66
1:RA:1459:G:O2'	1:RA:1460:U:H3'	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2897:U:H2'	1:RA:2898:U:C6	2.30	0.66
11:RK:105:ARG:HD3	11:RK:105:ARG:H	1.60	0.66
25:RY:56:LEU:O	25:RY:57:LEU:HB3	1.95	0.66
33:QB:212:TYR:O	33:QB:216:VAL:HG23	1.95	0.66
36:QE:147:ASN:OD1	39:QH:95:MET:HE1	1.96	0.66
32:XA:663:A:O2'	32:XA:664:G:H5'	1.96	0.66
32:XA:693:G:OP1	42:XK:126:ARG:NH1	2.29	0.66
32:XA:1239:A:H62	32:XA:1299:A:N6	1.93	0.66
36:XE:79:THR:HG23	36:XE:81:GLN:H	1.61	0.66
38:XG:63:VAL:HG11	38:XG:127:ALA:HB2	1.76	0.66
1:YA:1510:G:N2	1:YA:1511:G:C4	2.63	0.66
1:YA:2264:C:C2	1:YA:2277:G:N2	2.64	0.66
1:YA:2636:C:H2'	1:YA:2637:U:C6	2.31	0.66
7:YG:85:LYS:HD3	7:YG:164:ALA:HB3	1.77	0.66
8:YH:93:SER:CB	8:YH:121:VAL:HG21	2.25	0.66
17:YQ:8:ILE:HG12	17:YQ:8:ILE:O	1.95	0.66
19:YS:20:VAL:HG23	19:YS:23:LEU:HD12	1.78	0.66
21:YU:83:GLY:O	21:YU:93:ARG:HA	1.96	0.66
28:Y1:10:LEU:HB2	28:Y1:20:TYR:HB2	1.77	0.66
1:RA:611:C:C2'	1:RA:612:G:H5'	2.25	0.66
3:RC:78:GLU:OE1	3:RC:100:ARG:NE	2.28	0.66
28:R1:8:ILE:HG22	28:R1:9:LYS:N	2.09	0.66
39:QH:9:MET:HE1	39:QH:32:LYS:HA	1.78	0.66
41:QJ:41:PRO:O	41:QJ:42:LEU:HB2	1.94	0.66
43:QL:21:PRO:O	43:QL:23:LEU:N	2.28	0.66
32:XA:708:C:H2'	32:XA:709:U:H6	1.61	0.66
32:XA:1430:A:H2'	32:XA:1431:A:O4'	1.95	0.66
1:YA:241:A:C8	1:YA:243:U:C4	2.84	0.66
1:YA:636:G:H5'	1:YA:639:U:OP1	1.96	0.66
14:YN:62:ASN:O	14:YN:63:ARG:HB2	1.95	0.66
1:RA:1070:A:H2'	1:RA:1097:U:OP1	1.95	0.66
1:RA:1734:G:H2'	1:RA:1735:A:C8	2.24	0.66
9:RI:23:VAL:HG23	9:RI:24:GLY:H	1.60	0.66
10:RJ:56:VAL:O	10:RJ:124:VAL:O	2.14	0.66
20:RT:28:ASN:HA	20:RT:91:GLN:OE1	1.96	0.66
32:QA:358:U:H2'	32:QA:359:G:C8	2.31	0.66
32:QA:408:A:OP1	35:QD:109:THR:HG21	1.95	0.66
32:QA:428:G:H4'	32:QA:429:U:OP1	1.95	0.66
39:QH:93:LYS:HE3	39:QH:116:ARG:HH12	1.61	0.66
47:QP:19:VAL:HG13	47:QP:37:GLY:C	2.20	0.66
32:XA:350:G:C6	32:XA:351:G:C6	2.84	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1245:C:H2'	32:XA:1246:A:H8	1.61	0.66
36:XE:45:VAL:O	36:XE:71:ILE:HG22	1.96	0.66
37:XF:14:GLN:HB3	37:XF:17:GLN:HE22	1.61	0.66
1:YA:851:C:H4'	26:YZ:46:MET:HG2	1.78	0.66
1:YA:873:C:H4'	13:YM:64:TRP:CD1	2.30	0.66
15:YO:31:THR:HG21	15:YO:36:TYR:HE2	1.59	0.66
18:YR:81:LYS:HD3	18:YR:81:LYS:N	2.10	0.66
1:RA:1813:G:N3	3:RC:49:THR:CG2	2.58	0.66
1:RA:1964:G:H4'	1:RA:1965:C:OP2	1.96	0.66
1:RA:2328:A:H2'	1:RA:2329:U:C6	2.31	0.66
1:RA:2394:C:OP2	30:R3:29:ARG:HD3	1.95	0.66
8:RH:117:LEU:HD11	8:RH:130:VAL:HG11	1.78	0.66
23:RW:24:ARG:HD2	23:RW:24:ARG:C	2.20	0.66
32:QA:1454:G:H2'	32:QA:1455:G:H8	1.61	0.66
33:QB:49:PHE:CG	33:QB:212:TYR:OH	2.48	0.66
35:QD:147:LYS:HE2	35:QD:147:LYS:H	1.61	0.66
32:XA:456:A:H2'	32:XA:457:G:H8	1.60	0.66
1:YA:532:A:N1	1:YA:2020:A:H1'	2.11	0.66
1:YA:538:A:H5"	10:YJ:7:LYS:NZ	2.11	0.66
1:YA:593:U:H2'	1:YA:594:U:H6	1.60	0.66
1:YA:1245:G:OP1	12:YL:8:PRO:HG3	1.95	0.66
1:YA:1965:C:H5"	1:YA:1965:C:C6	2.28	0.66
1:YA:2305:U:O2'	6:YF:132:ARG:HA	1.95	0.66
1:YA:2667:C:O2'	1:YA:2668:G:C8	2.48	0.66
1:YA:2798:U:H5'	1:YA:2800:A:C5	2.31	0.66
3:YC:68:ARG:HH12	3:YC:115:ILE:HD12	1.61	0.66
8:YH:5:LEU:O	8:YH:6:LEU:HD12	1.96	0.66
3:RC:15:VAL:HA	3:RC:203:VAL:CG1	2.25	0.65
3:RC:259:ASN:O	3:RC:261:ARG:N	2.27	0.65
8:RH:45:GLU:O	8:RH:49:ALA:N	2.27	0.65
14:RN:33:ILE:HD11	14:RN:118:ARG:NH2	2.11	0.65
24:RX:34:SER:HA	24:RX:49:ARG:HA	1.78	0.65
32:QA:265:G:N2	32:QA:267:C:H5"	2.10	0.65
38:QG:115:MET:HA	38:QG:118:ARG:HD3	1.78	0.65
39:QH:76:ARG:NE	39:QH:78:SER:O	2.29	0.65
32:XA:963:G:C6	32:XA:973:G:O6	2.48	0.65
32:XA:1249:C:H4'	40:XI:74:GLN:HE22	1.61	0.65
36:XE:154:ALA:HB1	39:XH:65:PHE:HE2	1.60	0.65
41:XJ:80:THR:O	41:XJ:84:VAL:HG22	1.96	0.65
50:XS:79:TYR:O	50:XS:80:ARG:HB2	1.95	0.65
51:XT:73:ARG:HG2	51:XT:73:ARG:NH1	2.03	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2430:A:H5'	1:YA:2431:U:OP2	1.96	0.65
10:YJ:57:LEU:HD11	10:YJ:129:GLU:H	1.60	0.65
16:YP:91:VAL:HG11	16:YP:96:LEU:HD11	1.77	0.65
17:YQ:60:TRP:CZ2	17:YQ:93:ILE:HB	2.31	0.65
28:Y1:51:ALA:O	28:Y1:52:LYS:HB2	1.96	0.65
1:RA:780:G:N2	1:RA:783:A:H62	1.91	0.65
1:RA:2017:U:H4'	27:R0:4:GLN:O	1.95	0.65
1:RA:2134:A:O2'	1:RA:2135:A:H8	1.71	0.65
6:RF:43:ILE:HG22	6:RF:82:TYR:CE1	2.31	0.65
6:RF:45:ASP:HB3	6:RF:48:LEU:HB2	1.76	0.65
8:RH:24:GLY:O	8:RH:28:ASN:HB2	1.96	0.65
10:RJ:65:THR:HG22	10:RJ:68:LYS:HE3	1.77	0.65
11:RK:18:ARG:HH11	11:RK:18:ARG:CG	2.02	0.65
15:RO:31:THR:HG22	15:RO:34:HIS:N	2.11	0.65
46:QO:34:GLN:NE2	46:QO:38:LEU:HD21	2.10	0.65
50:XS:52:ASN:HD21	50:XS:55:GLN:N	1.94	0.65
1:YA:185:G:H2'	1:YA:186:G:H8	1.59	0.65
1:YA:1313:U:H2'	1:YA:1313:U:O2	1.94	0.65
1:YA:1364:G:C5	24:YX:1:SER:HB2	2.31	0.65
1:YA:1429:G:HO2'	1:YA:1430:G:H8	1.43	0.65
1:YA:1598:A:H2'	1:YA:1599:U:C6	2.31	0.65
1:YA:2135:A:H2'	1:YA:2136:G:H8	1.59	0.65
1:YA:2311:A:H1'	6:YF:78:ILE:HD11	1.78	0.65
2:YB:13:G:N2	2:YB:16:G:C4	2.64	0.65
6:YF:58:ALA:HB1	6:YF:139:GLU:CG	2.25	0.65
1:RA:2339:C:H2'	1:RA:2340:A:C8	2.31	0.65
5:RE:61:ARG:NH1	5:RE:64:GLY:HA3	2.10	0.65
40:QI:51:LEU:HB3	40:QI:56:MET:CG	2.26	0.65
48:QQ:13:SER:O	48:QQ:20:ILE:HD11	1.96	0.65
32:XA:973:G:C2'	32:XA:974:A:H5'	2.26	0.65
32:XA:1298:U:H5	38:XG:113:LYS:HA	1.61	0.65
38:XG:136:LYS:O	38:XG:140:VAL:HG23	1.96	0.65
40:XI:11:ARG:HD3	40:XI:106:ASP:OD1	1.95	0.65
47:XP:78:VAL:HG12	47:XP:78:VAL:O	1.95	0.65
1:YA:636:G:H3'	12:YL:128:THR:HG21	1.77	0.65
1:YA:1568:G:N2	3:YC:57:HIS:CE1	2.64	0.65
11:YK:71:ARG:HB3	11:YK:72:PRO:CD	2.26	0.65
17:YQ:42:GLY:HA3	18:YR:75:VAL:HG21	1.78	0.65
30:Y3:3:ILE:HG21	30:Y3:62:PRO:HG2	1.76	0.65
2:RB:28:C:C2'	2:RB:29:A:H5'	2.26	0.65
2:RB:48:U:H2'	2:RB:49:C:C6	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:RG:83:THR:C	7:RG:84:LYS:HD3	2.20	0.65
32:QA:475:C:H2'	32:QA:476:U:C6	2.31	0.65
33:QB:40:ILE:HG21	33:QB:201:GLY:H	1.61	0.65
35:QD:145:ARG:HD2	35:QD:147:LYS:CE	2.27	0.65
39:QH:76:ARG:HH11	39:QH:76:ARG:CG	2.09	0.65
41:QJ:28:THR:HG22	41:QJ:28:THR:O	1.96	0.65
40:XI:51:LEU:HG	40:XI:86:LEU:HD22	1.79	0.65
1:YA:781:A:H5"	1:YA:782:A:OP1	1.96	0.65
1:YA:1249:U:H3'	1:YA:1249:U:OP1	1.97	0.65
1:YA:1281:G:H2'	1:YA:1282:U:O4'	1.95	0.65
1:YA:2631:G:H2'	1:YA:2632:A:H5"	1.78	0.65
3:YC:38:LYS:HE2	3:YC:55:GLY:H	1.61	0.65
10:YJ:44:TYR:HB2	17:YQ:63:ARG:NH1	2.10	0.65
26:YZ:4:ILE:CD1	26:YZ:58:GLU:HA	2.26	0.65
29:Y2:45:SER:C	29:Y2:46:LYS:HD2	2.22	0.65
24:RX:34:SER:HB3	24:RX:49:ARG:HG3	1.78	0.65
32:QA:452:A:H5"	32:QA:452:A:H8	1.60	0.65
32:QA:1472:U:O2'	32:QA:1473:G:H5'	1.96	0.65
33:QB:75:ALA:O	33:QB:79:VAL:HG23	1.95	0.65
36:QE:67:ARG:HB2	36:QE:68:ARG:HE	1.61	0.65
32:XA:119:A:H4'	32:XA:120:A:O5'	1.97	0.65
32:XA:461:A:P	32:XA:462:G:OP2	2.55	0.65
32:XA:1323:G:H2'	32:XA:1324:A:C8	2.31	0.65
42:XK:74:LYS:HD2	42:XK:104:PHE:HE1	1.60	0.65
1:YA:1109:C:C5	1:YA:1110:G:C6	2.84	0.65
1:YA:1494:A:H2'	1:YA:1495:A:C8	2.31	0.65
5:YE:59:PRO:HB2	5:YE:67:ARG:NH2	2.12	0.65
5:YE:145:ASP:OD1	5:YE:166:LYS:HG3	1.97	0.65
1:RA:1747:U:H2'	1:RA:1748:C:H6	1.58	0.65
17:RQ:94:LEU:C	17:RQ:96:ASP:H	2.04	0.65
27:R0:29:VAL:HG13	27:R0:34:GLY:O	1.97	0.65
36:QE:136:VAL:O	36:QE:137:ARG:HB2	1.97	0.65
38:QG:23:ALA:O	38:QG:26:VAL:HG22	1.95	0.65
38:QG:145:GLU:HA	38:QG:148:LYS:HB2	1.76	0.65
40:QI:3:ASN:CG	40:QI:4:GLN:H	2.05	0.65
47:QP:22:ALA:HA	47:QP:33:ILE:HG13	1.78	0.65
32:XA:170:U:O2'	32:XA:171:A:H5'	1.96	0.65
32:XA:251:G:H21	32:XA:253:A:H62	1.45	0.65
32:XA:738:C:H2'	32:XA:739:C:H6	1.60	0.65
32:XA:961:U:O4	32:XA:983:A:C6	2.50	0.65
36:XE:14:LEU:HD22	36:XE:59:ILE:HD13	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:63:A:N6	1:YA:91:A:N6	2.44	0.65
1:YA:74:A:H4'	1:YA:75:G:O5'	1.97	0.65
1:YA:90:U:H3'	1:YA:91:A:H5"	1.77	0.65
1:YA:223:A:C5	1:YA:422:A:N7	2.65	0.65
1:YA:247:G:H4'	1:YA:386:G:C4	2.31	0.65
1:YA:587:C:H1'	1:YA:671:C:H5'	1.78	0.65
1:YA:1441:G:H2'	1:YA:1442:U:C6	2.32	0.65
1:YA:1838:C:H4'	1:YA:1839:G:C8	2.32	0.65
1:YA:2197:U:O2'	1:YA:2198:A:H2'	1.96	0.65
1:YA:2324:U:H5'	1:YA:2325:G:H5"	1.78	0.65
1:YA:2353:G:H21	23:YW:30:VAL:CG2	2.10	0.65
1:YA:2529:G:H4'	7:YG:174:LYS:CD	2.27	0.65
3:YC:145:MET:HE3	3:YC:181:ARG:NH2	2.06	0.65
7:YG:167:VAL:HG23	7:YG:168:VAL:H	1.61	0.65
16:YP:50:ARG:CB	16:YP:57:ALA:H	2.09	0.65
18:YR:87:GLN:HG2	18:YR:88:GLY:N	2.11	0.65
1:RA:31:C:OP1	56:RA:3701:HOH:O	2.15	0.65
1:RA:1179:G:C5	1:RA:1180:U:C1'	2.77	0.65
1:RA:2346:A:H3'	1:RA:2347:C:C5'	2.22	0.65
1:RA:2887:A:H2'	1:RA:2887:A:N3	2.10	0.65
8:RH:68:ARG:HH12	8:RH:140:ALA:HB2	1.60	0.65
8:RH:90:LEU:HB2	8:RH:123:ARG:HB3	1.78	0.65
17:RQ:68:ALA:HB1	17:RQ:73:ILE:HG23	1.79	0.65
17:RQ:114:ALA:C	17:RQ:116:LEU:H	2.02	0.65
21:RU:43:LYS:O	21:RU:57:ILE:HA	1.97	0.65
23:RW:11:ASN:HD22	23:RW:12:GLY:H	1.43	0.65
32:QA:198:G:C6	32:QA:220:G:C2	2.85	0.65
32:QA:596:A:N6	32:QA:645:G:C6	2.65	0.65
33:QB:186:VAL:HG23	33:QB:186:VAL:O	1.95	0.65
37:QF:97:THR:O	37:QF:98:GLU:HG2	1.96	0.65
39:QH:21:LYS:CE	39:QH:22:ALA:H	2.06	0.65
43:QL:78:VAL:O	43:QL:101:LEU:HB3	1.96	0.65
48:QQ:46:HIS:HB2	48:QQ:66:LEU:HD12	1.78	0.65
50:QS:3:SER:O	50:QS:5:LYS:HG3	1.97	0.65
32:XA:456:A:H2'	32:XA:457:G:C8	2.32	0.65
32:XA:976:G:O5'	32:XA:1358:U:O2'	2.14	0.65
32:XA:1011:C:H2'	32:XA:1012:A:C8	2.31	0.65
1:YA:502:A:H5'	1:YA:503:A:OP2	1.97	0.65
1:YA:615:U:O4	5:YE:39:ALA:HB2	1.96	0.65
1:YA:1023:U:H5'	1:YA:1023:U:C6	2.32	0.65
1:YA:2617:U:C2'	1:YA:2618:G:H5'	2.27	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:YH:41:LYS:HA	8:YH:44:ILE:HG12	1.79	0.65
29:Y2:19:ARG:HB3	29:Y2:19:ARG:HH21	1.62	0.65
1:RA:229:C:H2'	1:RA:230:G:O4'	1.97	0.65
1:RA:2151:U:H2'	1:RA:2152:G:O4'	1.95	0.65
7:RG:15:ASP:CG	7:RG:16:VAL:N	2.55	0.65
32:QA:89:U:O2'	32:QA:90:C:H5"	1.96	0.65
40:QI:23:GLY:H	40:QI:60:LEU:HA	1.62	0.65
40:QI:32:ARG:HG2	40:QI:36:GLN:HB3	1.79	0.65
32:XA:372:C:H4'	32:XA:373:A:C5'	2.26	0.65
32:XA:920:U:H2'	32:XA:921:U:C6	2.32	0.65
32:XA:1145:A:H4'	32:XA:1146:A:OP1	1.95	0.65
32:XA:1160:G:C6	32:XA:1181:G:O6	2.49	0.65
38:XG:28:ILE:HG21	38:XG:100:MET:HG3	1.78	0.65
41:XJ:15:HIS:CE1	41:XJ:68:ARG:HD3	2.32	0.65
1:YA:2147:A:OP1	1:YA:2147:A:C4'	2.45	0.65
1:YA:2285:C:H5	28:Y1:5:ARG:NH2	1.95	0.65
1:YA:2537:U:H2'	1:YA:2538:C:C6	2.32	0.65
6:YF:59:ILE:HD13	6:YF:137:PHE:HZ	1.62	0.65
9:YI:35:MET:C	9:YI:37:PHE:H	2.03	0.65
10:YJ:64:VAL:HG22	10:YJ:68:LYS:HE2	1.79	0.65
14:YN:99:LYS:O	27:Y0:41:HIS:HB2	1.96	0.65
20:YT:67:VAL:O	20:YT:68:LYS:HG3	1.97	0.65
22:YV:73:LYS:HD3	22:YV:74:ALA:N	2.12	0.65
25:YY:4:LYS:HB2	25:YY:4:LYS:NZ	2.12	0.65
1:RA:45:G:H5"	1:RA:46:G:H5'	1.79	0.65
1:RA:2466:C:OP1	31:R4:4:ARG:HB2	1.97	0.65
1:RA:2573:C:H3'	56:RA:3712:HOH:O	1.97	0.65
4:RD:92:VAL:HG12	4:RD:92:VAL:O	1.95	0.65
13:RM:35:ALA:O	13:RM:128:THR:HA	1.97	0.65
23:RW:24:ARG:HB2	23:RW:65:LYS:HD3	1.79	0.65
32:QA:1469:C:H6	32:QA:1469:C:C5'	2.09	0.65
33:QB:95:TRP:HZ2	33:QB:100:LEU:HD23	1.61	0.65
37:QF:61:LEU:HD12	37:QF:62:MET:H	1.61	0.65
50:QS:44:ILE:HA	50:QS:61:VAL:HB	1.78	0.65
50:XS:35:ARG:HA	50:XS:70:LEU:HB2	1.78	0.65
5:YE:88:ARG:HB3	5:YE:89:PRO:HD2	1.79	0.65
8:YH:72:ILE:HD11	8:YH:141:LYS:N	2.12	0.65
9:YI:30:GLN:HG3	9:YI:31:GLY:H	1.62	0.65
11:YK:61:VAL:HG13	11:YK:87:LEU:CD2	2.27	0.65
21:YU:26:ASN:O	21:YU:34:ILE:HB	1.97	0.65
1:RA:65:U:H2'	1:RA:66:C:C6	2.28	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:320:A:H4'	1:RA:322:A:N7	2.12	0.65
4:RD:13:ARG:NH1	16:RP:74:GLN:HE21	1.93	0.65
5:RE:131:THR:HG22	5:RE:160:ALA:HA	1.78	0.65
7:RG:59:ASP:HB2	7:RG:63:GLN:HG2	1.77	0.65
32:QA:1470:U:O2'	32:QA:1471:U:H5'	1.97	0.65
35:QD:55:ARG:HH12	35:QD:58:GLN:HG2	1.62	0.65
52:QU:11:PHE:O	52:QU:12:ASP:HB2	1.96	0.65
32:XA:160:A:H2'	32:XA:161:A:O4'	1.97	0.65
32:XA:414:A:H2'	32:XA:415:A:H5"	1.77	0.65
32:XA:981:U:H2'	32:XA:982:U:C5	2.31	0.65
32:XA:1003:G:N2	32:XA:1005:A:H5"	2.12	0.65
43:XL:42:LYS:HG2	43:XL:43:LYS:N	2.12	0.65
52:XU:14:ALA:O	52:XU:15:LEU:O	2.15	0.65
1:YA:172:A:H2'	1:YA:173:A:C8	2.30	0.65
3:YC:67:LYS:HB3	3:YC:150:GLY:HA2	1.78	0.65
7:YG:139:VAL:HA	7:YG:142:GLN:HB3	1.79	0.65
1:RA:587:C:OP2	12:RL:21:ARG:NH1	2.30	0.64
3:RC:43:ASN:HB3	3:RC:45:ASN:H	1.61	0.64
13:RM:17:ASN:O	13:RM:38:ARG:HD3	1.97	0.64
32:QA:721:G:H4'	32:QA:722:G:H5"	1.78	0.64
32:QA:1069:C:H4'	32:QA:1192:C:O2	1.97	0.64
38:QG:145:GLU:CA	38:QG:148:LYS:HB2	2.27	0.64
41:QJ:8:ILE:HG12	41:QJ:100:ILE:HG22	1.78	0.64
32:XA:1348:U:H2'	32:XA:1349:A:H8	1.62	0.64
40:XI:12:LYS:H	40:XI:105:ARG:NH1	1.95	0.64
50:XS:36:ARG:O	50:XS:69:LYS:HD2	1.97	0.64
1:YA:206:U:H2'	1:YA:207:A:C8	2.25	0.64
1:YA:769:U:C4	1:YA:770:G:N7	2.65	0.64
1:YA:992:C:H4'	18:YR:74:ILE:HD13	1.79	0.64
1:YA:1255:U:H5'	1:YA:2502:G:H22	1.61	0.64
1:YA:1605:C:H4'	1:YA:1610:A:C6	2.31	0.64
1:YA:2332:C:O2'	23:YW:40:ARG:NH2	2.30	0.64
1:RA:137:U:O5'	1:RA:137:U:C6	2.46	0.64
1:RA:2425:A:H5"	1:RA:2427:C:O4'	1.98	0.64
11:RK:1:MET:HG3	11:RK:67:LYS:HG3	1.77	0.64
12:RL:77:ILE:CD1	12:RL:108:ALA:HB1	2.27	0.64
30:R3:40:LYS:HA	30:R3:43:LEU:HD12	1.79	0.64
39:QH:15:ASN:O	39:QH:18:ALA:HB3	1.98	0.64
40:QI:25:GLY:N	40:QI:58:GLU:HA	2.13	0.64
38:XG:117:LEU:HG	38:XG:121:ASN:HD22	1.60	0.64
1:YA:170:U:H2'	1:YA:171:U:H6	1.61	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:628:G:H2'	1:YA:629:G:C8	2.32	0.64
1:YA:804:A:H2'	1:YA:806:C:N4	2.12	0.64
1:YA:1358:G:N2	1:YA:1374:G:C6	2.65	0.64
1:YA:1364:G:C8	24:YX:1:SER:HB2	2.32	0.64
1:YA:1507:C:H5'	1:YA:1508:A:OP2	1.96	0.64
1:YA:1973:G:C6	1:YA:1974:C:N4	2.66	0.64
1:YA:2788:C:H2'	1:YA:2789:C:C6	2.32	0.64
10:YJ:44:TYR:O	10:YJ:45:THR:HB	1.95	0.64
15:YO:23:ALA:O	15:YO:42:PRO:HG3	1.97	0.64
17:RQ:39:ILE:O	17:RQ:43:GLN:HG3	1.97	0.64
32:QA:1219:A:H2'	32:QA:1220:G:H8	1.61	0.64
32:XA:1038:C:H2'	32:XA:1039:G:H8	1.62	0.64
32:XA:1382:C:O2'	32:XA:1383:C:H5'	1.97	0.64
38:XG:91:ARG:CG	38:XG:92:PRO:HD2	2.25	0.64
40:XI:24:ASN:O	40:XI:61:ASP:HA	1.98	0.64
45:XN:89:ARG:HG3	45:XN:91:GLU:CG	2.27	0.64
1:YA:747:U:O2	1:YA:2014:A:H1'	1.98	0.64
1:YA:1264:A:H5'	27:Y0:7:PRO:HG2	1.79	0.64
1:YA:1744:A:H3'	1:YA:1745:A:H8	1.62	0.64
6:YF:147:ARG:O	6:YF:148:VAL:HG22	1.97	0.64
7:YG:154:GLU:C	7:YG:156:TYR:H	2.06	0.64
21:YU:39:ASN:HB3	21:YU:62:ALA:HB3	1.79	0.64
1:RA:1720:U:H2'	1:RA:1721:G:O4'	1.97	0.64
4:RD:98:VAL:O	4:RD:99:GLU:C	2.41	0.64
5:RE:95:LYS:O	5:RE:96:VAL:HB	1.97	0.64
6:RF:55:ASP:O	6:RF:59:ILE:HG13	1.97	0.64
8:RH:42:LYS:HG2	8:RH:43:ASN:HD22	1.62	0.64
12:RL:68:SER:O	12:RL:69:ARG:HB2	1.97	0.64
32:QA:548:G:H8	32:QA:548:G:H5"	1.61	0.64
32:QA:601:G:H2'	32:QA:602:A:H8	1.62	0.64
32:QA:1201:A:H1'	32:QA:1202:U:OP2	1.97	0.64
33:QB:187:ASP:HB2	33:QB:203:ASP:CB	2.28	0.64
34:QC:13:ILE:O	34:QC:15:LYS:N	2.30	0.64
48:QQ:16:MET:HE2	48:QQ:20:ILE:HD12	1.80	0.64
32:XA:312:C:H2'	32:XA:313:A:H8	1.63	0.64
32:XA:679:C:O2	32:XA:712:A:C2	2.50	0.64
32:XA:1095:U:H2'	32:XA:1096:C:C6	2.32	0.64
33:XB:116:LEU:HA	33:XB:119:GLN:HB3	1.78	0.64
34:XC:22:PHE:HD2	41:XJ:97:ASP:HB2	1.62	0.64
40:XI:23:GLY:H	40:XI:60:LEU:HA	1.61	0.64
43:XL:42:LYS:HG2	43:XL:43:LYS:HG2	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:54:G:H2'	1:YA:55:G:O4'	1.97	0.64
1:YA:71:A:H5"	1:YA:73:A:C8	2.32	0.64
1:YA:456:C:O2'	20:YT:73:ARG:HG3	1.97	0.64
1:YA:1286:A:H5"	14:YN:104:ALA:HB2	1.79	0.64
1:YA:1416:G:C4	1:YA:1417:C:C5	2.86	0.64
1:YA:1429:G:O2'	1:YA:1430:G:H8	1.79	0.64
1:YA:1519:G:H5'	1:YA:1520:U:OP2	1.98	0.64
1:YA:2093:G:N2	1:YA:2094:A:C4	2.66	0.64
1:YA:2716:C:H2'	1:YA:2717:C:C6	2.32	0.64
11:YK:7:MET:HA	11:YK:7:MET:CE	2.25	0.64
11:YK:97:THR:O	11:YK:98:ARG:HB2	1.96	0.64
23:YW:19:ARG:HA	23:YW:34:SER:HA	1.78	0.64
1:RA:611:C:H2'	1:RA:612:G:H5'	1.78	0.64
1:RA:2557:G:H2'	1:RA:2558:C:H6	1.61	0.64
8:RH:67:ALA:HA	8:RH:138:VAL:CB	2.23	0.64
11:RK:111:LYS:HE2	11:RK:111:LYS:H	1.60	0.64
19:RS:17:VAL:HG12	19:RS:76:VAL:HG11	1.78	0.64
30:R3:44:ARG:N	30:R3:45:PRO:HD2	2.12	0.64
32:QA:16:A:O2'	32:QA:17:U:H5'	1.97	0.64
32:QA:84:U:O2	32:QA:84:U:H2'	1.97	0.64
32:XA:1035:A:H2	32:XA:1036:A:H62	1.46	0.64
32:XA:1250:A:N3	32:XA:1287:A:N6	2.46	0.64
37:XF:3:HIS:HB2	37:XF:92:THR:HA	1.78	0.64
38:XG:4:ARG:HD2	38:XG:5:VAL:H	1.63	0.64
38:XG:107:ALA:O	38:XG:118:ARG:HB3	1.98	0.64
43:XL:109:ARG:HB2	43:XL:118:VAL:HG21	1.78	0.64
44:XM:95:PRO:HG2	44:XM:99:GLN:HB3	1.80	0.64
1:YA:109:C:H4'	1:YA:348:A:H4'	1.78	0.64
1:YA:621:A:H3'	1:YA:621:A:OP2	1.97	0.64
1:YA:2727:A:O2'	1:YA:2728:U:H5'	1.98	0.64
2:YB:109:A:C2	2:YB:110:C:C2	2.86	0.64
8:YH:1:MET:HB3	8:YH:21:VAL:O	1.97	0.64
11:YK:24:VAL:HG13	11:YK:33:ALA:HB2	1.78	0.64
1:RA:1996:C:H4'	1:RA:1997:C:OP1	1.96	0.64
1:RA:2136:G:H2'	1:RA:2137:U:C5	2.33	0.64
1:RA:2680:U:OP1	4:RD:114:LYS:HG3	1.98	0.64
7:RG:59:ASP:HB2	7:RG:63:GLN:CG	2.28	0.64
20:RT:43:ILE:O	20:RT:47:VAL:HG23	1.98	0.64
20:RT:51:PHE:C	20:RT:52:GLU:HG2	2.22	0.64
23:RW:18:LYS:HG3	23:RW:19:ARG:N	2.12	0.64
32:QA:1348:U:HO2'	32:QA:1349:A:H8	1.44	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:QD:53:GLN:HE21	35:QD:202:LEU:HA	1.62	0.64
32:XA:93:U:H6	32:XA:93:U:O5'	1.81	0.64
32:XA:465:A:H8	32:XA:467:U:OP1	1.80	0.64
32:XA:808:C:OP1	46:XO:47:LYS:HE2	1.97	0.64
1:YA:764:A:C2	1:YA:781:A:C2	2.85	0.64
1:YA:976:G:H5'	1:YA:1156:A:C6	2.32	0.64
1:YA:1281:G:C2	1:YA:1290:C:N3	2.65	0.64
1:YA:1343:G:O2'	1:YA:1344:U:C6	2.41	0.64
1:YA:1654:A:O2'	1:YA:1655:A:O4'	2.15	0.64
1:YA:1695:G:C8	3:YC:7:PRO:HB2	2.33	0.64
1:YA:2735:G:H2'	1:YA:2736:A:H8	1.63	0.64
1:YA:2773:C:H2'	1:YA:2774:C:H6	1.63	0.64
1:YA:2829:A:C2'	1:YA:2830:C:H5'	2.27	0.64
3:YC:125:PRO:HA	3:YC:191:LEU:HB2	1.79	0.64
3:YC:206:LYS:HG3	3:YC:209:ALA:H	1.63	0.64
5:YE:61:ARG:HD2	5:YE:61:ARG:O	1.98	0.64
5:YE:108:ILE:HD13	5:YE:108:ILE:O	1.98	0.64
10:YJ:111:LYS:HB2	10:YJ:115:GLY:N	2.13	0.64
16:YP:88:ARG:NH1	16:YP:112:ARG:HH21	1.95	0.64
23:YW:67:LYS:HB3	23:YW:80:SER:HB2	1.79	0.64
31:Y4:7:VAL:HG13	31:Y4:8:LYS:N	2.13	0.64
1:RA:141:G:H5'	1:RA:142:A:N7	2.13	0.64
1:RA:2680:U:P	4:RD:114:LYS:HE2	2.38	0.64
1:RA:2849:U:O4	16:RP:20:ARG:NH1	2.31	0.64
6:RF:114:ARG:HD2	6:RF:114:ARG:H	1.62	0.64
6:RF:134:GLN:HE22	6:RF:150:GLY:H	1.45	0.64
10:RJ:40:HIS:CD2	10:RJ:41:LYS:HG2	2.33	0.64
17:RQ:40:LYS:HG2	17:RQ:44:TYR:CE1	2.32	0.64
26:RZ:39:ASP:CG	26:RZ:44:ARG:HH11	2.06	0.64
32:QA:121:U:H6	32:QA:121:U:H5"	1.63	0.64
32:QA:203:G:N2	32:QA:215:C:C2	2.66	0.64
36:QE:80:LEU:HD23	36:QE:122:VAL:CG1	2.25	0.64
36:QE:81:GLN:HG2	36:QE:149:PRO:HG3	1.78	0.64
43:QL:2:THR:HB	43:QL:5:GLN:HG3	1.78	0.64
43:QL:43:LYS:HB2	43:QL:44:PRO:CD	2.27	0.64
32:XA:86:G:O2'	32:XA:87:C:P	2.54	0.64
49:XR:21:ASP:HB3	49:XR:23:LYS:HG2	1.79	0.64
1:YA:616:A:H2'	1:YA:617:G:C8	2.32	0.64
4:YD:45:TYR:HE2	4:YD:47:ALA:HB3	1.62	0.64
25:YY:48:ARG:HH11	25:YY:48:ARG:HG3	1.61	0.64
1:RA:780:G:H21	1:RA:783:A:N6	1.89	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2148:G:C2'	1:RA:2149:U:O4'	2.45	0.64
1:RA:2514:U:H2'	1:RA:2515:C:C6	2.32	0.64
7:RG:96:ALA:O	7:RG:97:VAL:HB	1.98	0.64
11:RK:38:ILE:HD11	11:RK:112:PHE:HZ	1.61	0.64
12:RL:82:LEU:HD23	12:RL:83:ALA:N	2.13	0.64
20:RT:44:LYS:O	20:RT:48:GLN:HG2	1.96	0.64
23:RW:18:LYS:CA	23:RW:36:ILE:HG13	2.19	0.64
32:QA:198:G:H2'	32:QA:199:A:C8	2.33	0.64
32:QA:406:G:C8	32:QA:495:A:C2	2.86	0.64
32:QA:769:G:H4'	32:QA:1513:A:H4'	1.80	0.64
32:QA:1123:U:O3'	41:QJ:38:GLY:HA3	1.97	0.64
33:QB:19:THR:HB	33:QB:37:VAL:HB	1.80	0.64
33:QB:40:ILE:HG21	33:QB:201:GLY:HA2	1.78	0.64
33:QB:90:PHE:HE2	33:QB:148:GLY:HA3	1.62	0.64
52:QU:10:PRO:O	52:QU:11:PHE:HB3	1.98	0.64
32:XA:268:U:H2'	32:XA:269:C:H6	1.62	0.64
32:XA:1135:U:H3'	32:XA:1137:C:O2	1.98	0.64
35:XD:53:GLN:HB3	35:XD:202:LEU:HD12	1.78	0.64
35:XD:195:ASN:HB3	35:XD:197:HIS:NE2	2.12	0.64
37:XF:11:HIS:CD2	37:XF:12:PRO:HD2	2.31	0.64
1:YA:303:G:C2	1:YA:304:U:C2	2.86	0.64
1:YA:851:C:C4'	26:YZ:46:MET:HG2	2.28	0.64
1:YA:876:C:H3'	1:YA:877:A:C8	2.29	0.64
1:YA:1545:A:H2'	1:YA:1546:G:O4'	1.98	0.64
6:YF:131:VAL:C	6:YF:133:GLU:H	2.06	0.64
11:YK:15:GLY:O	11:YK:16:ALA:O	2.16	0.64
14:YN:56:LYS:HA	14:YN:84:GLY:HA2	1.80	0.64
21:YU:14:THR:HG23	21:YU:15:GLY:N	2.10	0.64
21:YU:81:ARG:HB2	21:YU:96:LYS:HD2	1.80	0.64
1:RA:783:A:H8	1:RA:784:G:H4'	1.63	0.64
1:RA:876:C:H2'	1:RA:877:A:O4'	1.98	0.64
1:RA:1028:A:N6	1:RA:1125:G:H2'	2.13	0.64
1:RA:1958:C:H2'	1:RA:1959:G:H5'	1.79	0.64
4:RD:149:ASN:CG	4:RD:150:GLN:H	2.05	0.64
12:RL:76:GLU:C	12:RL:77:ILE:HD12	2.22	0.64
32:QA:215:C:O2'	32:QA:216:U:H5'	1.98	0.64
32:QA:481:G:O2'	32:QA:482:A:H8	1.80	0.64
37:QF:19:PRO:HA	37:QF:22:ILE:HD12	1.80	0.64
47:QP:56:ARG:O	47:QP:59:HIS:HB3	1.98	0.64
32:XA:79:G:H2'	32:XA:80:A:H8	1.63	0.64
32:XA:1350:A:C2	38:XG:33:GLY:HA3	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:XD:116:LEU:HD21	35:XD:153:ARG:HD3	1.79	0.64
1:YA:1023:U:H5'	1:YA:1023:U:H6	1.63	0.64
1:YA:1207:C:H2'	1:YA:1208:C:H6	1.63	0.64
1:YA:1648:U:O2'	1:YA:1649:G:O4'	2.08	0.64
6:YF:65:LEU:HD23	6:YF:65:LEU:H	1.63	0.64
9:YI:12:VAL:HG12	9:YI:13:ALA:N	2.13	0.64
20:YT:29:THR:H	20:YT:87:LEU:CB	2.10	0.64
1:RA:1256:G:H2'	5:RE:77:ILE:HD11	1.80	0.64
1:RA:1315:C:OP2	56:RA:3763:HOH:O	2.15	0.64
1:RA:2796:U:H3	1:RA:2799:A:H61	1.45	0.64
4:RD:119:ALA:HB2	4:RD:165:MET:HB2	1.80	0.64
15:RO:41:ALA:HB2	15:RO:48:LEU:HD21	1.80	0.64
18:RR:39:LEU:HA	18:RR:49:ILE:HG21	1.79	0.64
19:RS:13:SER:O	19:RS:14:ALA:HB2	1.97	0.64
23:RW:8:SER:O	23:RW:9:THR:CG2	2.44	0.64
29:R2:43:THR:O	29:R2:44:VAL:CB	2.46	0.64
32:QA:374:A:H5"	32:QA:452:A:N1	2.13	0.64
32:QA:918:A:H2'	32:QA:919:A:C8	2.32	0.64
43:QL:87:LYS:O	43:QL:88:ASP:HB2	1.98	0.64
45:QN:26:LEU:HD23	45:QN:30:ILE:HD11	1.80	0.64
32:XA:824:G:O2'	32:XA:825:A:H5'	1.97	0.64
32:XA:1381:U:C4	38:XG:77:ARG:NH1	2.66	0.64
33:XB:20:ARG:HA	33:XB:20:ARG:NE	2.13	0.64
34:XC:120:THR:HG23	34:XC:187:GLU:O	1.97	0.64
40:XI:118:ARG:NH2	40:XI:122:ARG:HE	1.96	0.64
1:YA:319:G:C6	1:YA:333:G:N1	2.66	0.64
1:YA:533:G:H5'	17:YQ:23:TYR:CE2	2.33	0.64
1:YA:845:A:N6	1:YA:932:U:N3	2.45	0.64
1:YA:1709:U:H2'	1:YA:1710:G:C8	2.33	0.64
3:YC:68:ARG:HH21	3:YC:190:THR:HG23	1.63	0.64
4:YD:94:GLN:O	4:YD:94:GLN:HG2	1.98	0.64
5:YE:98:LYS:O	5:YE:99:LYS:HB2	1.98	0.64
5:YE:139:LYS:HB2	5:YE:139:LYS:NZ	2.13	0.64
9:YI:109:ALA:HB1	9:YI:125:THR:HG22	1.79	0.64
10:YJ:73:VAL:HG23	10:YJ:74:TYR:N	2.13	0.64
10:YJ:80:HIS:HB3	10:YJ:81:ILE:HG13	1.80	0.64
26:YZ:4:ILE:HG23	26:YZ:56:VAL:HG13	1.80	0.64
1:RA:545:U:H2'	1:RA:546:U:C4'	2.28	0.63
1:RA:842:U:O4	56:RA:3584:HOH:O	2.12	0.63
1:RA:1475:G:O2'	1:RA:1476:U:P	2.55	0.63
9:RI:126:ARG:HA	9:RI:129:GLU:CG	2.27	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:RL:28:GLY:O	12:RL:29:LYS:HB3	1.99	0.63
20:RT:9:LYS:O	20:RT:9:LYS:HG3	1.98	0.63
20:RT:28:ASN:HA	20:RT:91:GLN:HE22	1.61	0.63
20:RT:28:ASN:OD1	20:RT:29:THR:HG22	1.98	0.63
41:QJ:57:VAL:HG22	41:QJ:58:ASN:N	2.04	0.63
43:QL:88:ASP:HB3	43:QL:89:LEU:HD22	1.80	0.63
50:QS:50:VAL:CG2	50:QS:70:LEU:HB3	2.27	0.63
32:XA:537:G:H5"	43:XL:109:ARG:NH1	2.12	0.63
36:XE:131:ASN:O	36:XE:135:VAL:HG23	1.98	0.63
44:XM:21:ILE:HB	44:XM:24:VAL:HG23	1.80	0.63
1:YA:279:A:N6	1:YA:361:G:O2'	2.31	0.63
1:YA:533:G:H21	17:YQ:44:TYR:HD1	1.46	0.63
1:YA:1590:A:H2'	1:YA:1591:A:H8	1.61	0.63
1:YA:2135:A:C2'	1:YA:2136:G:O4'	2.46	0.63
1:YA:2285:C:OP2	28:Y1:5:ARG:HD3	1.98	0.63
17:YQ:4:LYS:HZ2	17:YQ:6:GLY:HA3	1.61	0.63
1:RA:1079:C:C4	1:RA:1088:A:H2	2.16	0.63
2:RB:49:C:OP1	15:RO:101:GLY:HA3	1.98	0.63
3:RC:16:VAL:H	3:RC:203:VAL:CG1	2.11	0.63
20:RT:19:LYS:O	20:RT:20:ALA:C	2.40	0.63
27:R0:9:ARG:HH21	27:R0:9:ARG:HG3	1.63	0.63
32:QA:500:G:H2'	32:QA:501:C:C6	2.34	0.63
33:QB:148:GLY:O	33:QB:151:LYS:HG2	1.97	0.63
34:QC:156:LEU:HD12	34:QC:156:LEU:N	2.12	0.63
42:QK:122:PRO:HG2	52:QU:33:ARG:O	1.99	0.63
45:QN:9:GLU:OE1	45:QN:60:ARG:HB3	1.98	0.63
46:QO:26:VAL:HG12	46:QO:30:LEU:HD11	1.80	0.63
32:XA:51:A:H4'	32:XA:52:C:C5'	2.29	0.63
32:XA:377:G:H2'	32:XA:378:G:H8	1.63	0.63
40:XI:30:ASN:O	40:XI:31:GLN:HG2	1.98	0.63
52:XU:35:GLU:HA	52:XU:35:GLU:OE2	1.97	0.63
1:YA:565:C:H4'	1:YA:1253:A:N6	2.13	0.63
1:YA:1338:G:H4'	20:YT:18:GLU:CG	2.29	0.63
1:YA:1728:C:H2'	1:YA:1730:C:O2	1.98	0.63
1:YA:1993:U:H4'	4:YD:133:THR:CG2	2.28	0.63
1:YA:2376:A:H2	15:YO:92:PHE:HD2	1.46	0.63
3:YC:51:ARG:O	3:YC:53:ILE:HG22	1.96	0.63
7:YG:154:GLU:O	7:YG:156:TYR:N	2.30	0.63
18:YR:78:ARG:HB3	18:YR:83:TYR:CD1	2.33	0.63
21:YU:12:VAL:HG21	21:YU:38:ILE:HG12	1.80	0.63
31:Y4:36:ARG:HG2	31:Y4:37:GLN:N	2.12	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:714:U:H5'	1:RA:715:A:OP2	1.98	0.63
1:RA:2086:U:H2'	1:RA:2087:G:C8	2.34	0.63
18:RR:1:MET:O	18:RR:1:MET:HG3	1.97	0.63
19:RS:74:ILE:HD13	19:RS:105:VAL:HG22	1.79	0.63
19:RS:84:ARG:HB2	19:RS:96:ILE:HD11	1.79	0.63
21:RU:13:LEU:HD11	21:RU:70:ALA:HB2	1.80	0.63
32:QA:1329:A:H5"	44:QM:25:GLY:H	1.63	0.63
32:QA:1447:A:H5'	32:QA:1448:C:OP2	1.99	0.63
33:QB:103:TRP:HE1	33:QB:150:ILE:HD11	1.62	0.63
37:QF:52:ASN:O	37:QF:53:LYS:HB3	1.98	0.63
50:QS:4:LEU:HD12	50:QS:4:LEU:H	1.62	0.63
51:QT:68:LYS:NZ	51:QT:68:LYS:HB2	2.14	0.63
33:XB:212:TYR:O	33:XB:212:TYR:HD2	1.82	0.63
33:XB:216:VAL:C	33:XB:218:ALA:H	2.07	0.63
34:XC:84:GLU:C	34:XC:86:LEU:N	2.57	0.63
1:YA:774:G:O2'	1:YA:775:G:H8	1.82	0.63
1:YA:857:G:H2'	1:YA:858:G:H4'	1.80	0.63
1:YA:1309:G:OP1	29:Y2:9:VAL:HG12	1.98	0.63
3:YC:196:ASN:OD1	3:YC:199:HIS:HB2	1.99	0.63
12:YL:20:GLY:HA2	12:YL:28:GLY:HA2	1.80	0.63
16:YP:50:ARG:HA	16:YP:57:ALA:O	1.99	0.63
16:YP:92:ARG:HG2	16:YP:92:ARG:O	1.98	0.63
1:RA:1059:G:C6	1:RA:1060:U:C4	2.86	0.63
1:RA:1509:A:O2'	1:RA:1510:G:P	2.57	0.63
7:RG:83:THR:HA	7:RG:84:LYS:CE	2.28	0.63
12:RL:55:MET:HA	12:RL:55:MET:CE	2.29	0.63
32:QA:109:A:H2'	32:QA:326:G:N2	2.12	0.63
32:QA:1316:G:N2	32:QA:1318:A:H3'	2.13	0.63
51:QT:82:ILE:O	51:QT:86:ALA:HB3	1.98	0.63
1:YA:308:G:H21	1:YA:329:G:H21	1.45	0.63
1:YA:616:A:H2'	1:YA:617:G:H8	1.63	0.63
1:YA:1827:U:H2'	1:YA:1828:G:O4'	1.97	0.63
1:YA:2550:G:C2	1:YA:2559:C:O2	2.51	0.63
4:YD:107:VAL:CG1	4:YD:109:VAL:HG23	2.28	0.63
10:YJ:23:LYS:HB3	10:YJ:28:LEU:HD13	1.80	0.63
22:YV:75:GLN:HB2	22:YV:90:ASP:O	1.98	0.63
1:RA:580:U:H2'	1:RA:581:C:C6	2.33	0.63
1:RA:1509:A:O2'	1:RA:1510:G:OP2	2.13	0.63
3:RC:18:VAL:O	3:RC:18:VAL:HG13	1.98	0.63
5:RE:154:ASP:OD2	5:RE:157:LEU:HB3	1.98	0.63
10:RJ:140:LEU:HD13	10:RJ:140:LEU:C	2.24	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:RN:98:LEU:HD22	27:R0:42:ILE:HD11	1.79	0.63
19:RS:73:LYS:HB2	19:RS:106:VAL:HB	1.79	0.63
40:QI:24:ASN:H	40:QI:61:ASP:HB2	1.63	0.63
42:QK:19:VAL:HG22	42:QK:82:GLU:HG2	1.80	0.63
52:QU:36:PHE:HD1	52:QU:39:LYS:HB3	1.63	0.63
32:XA:238:A:H2'	32:XA:239:U:H5"	1.81	0.63
32:XA:444:G:O2'	32:XA:445:G:H5'	1.97	0.63
39:XH:1:SER:C	39:XH:3:GLN:H	2.05	0.63
43:XL:79:ILE:HD12	43:XL:96:THR:HG21	1.80	0.63
1:YA:128:C:HO2'	1:YA:129:C:H6	1.42	0.63
1:YA:301:G:H3'	21:YU:81:ARG:HH12	1.64	0.63
1:YA:310:A:O2'	1:YA:311:A:C8	2.35	0.63
1:YA:622:G:H2'	1:YA:623:C:C6	2.34	0.63
1:YA:755:U:O2'	1:YA:756:A:H5'	1.99	0.63
1:YA:1021:A:C2'	1:YA:1022:G:H4'	2.28	0.63
1:YA:2886:A:H62	27:Y0:39:ARG:HD3	1.64	0.63
4:YD:124:ARG:HD3	4:YD:125:TRP:CD1	2.33	0.63
18:YR:49:ILE:HG22	18:YR:54:VAL:N	2.14	0.63
30:Y3:15:LYS:NZ	30:Y3:19:GLY:HA2	2.14	0.63
1:RA:90:U:H2'	1:RA:91:A:C8	2.34	0.63
1:RA:627:A:C6	1:RA:637:A:C8	2.87	0.63
1:RA:1958:C:C2'	1:RA:1959:G:H5'	2.28	0.63
1:RA:2324:U:H3'	1:RA:2325:G:C5'	2.27	0.63
1:RA:2649:C:H2'	1:RA:2650:U:H6	1.64	0.63
1:RA:2800:A:C4'	1:RA:2801:G:OP2	2.25	0.63
10:RJ:130:HIS:HD2	10:RJ:132:HIS:N	1.88	0.63
16:RP:33:GLU:OE1	32:QA:346:G:OP1	2.17	0.63
23:RW:73:PRO:CG	23:RW:76:ARG:HD2	2.29	0.63
23:RW:76:ARG:HH21	23:RW:76:ARG:CG	2.01	0.63
32:QA:212:G:H2'	32:QA:213:G:H8	1.63	0.63
32:QA:1049:U:C4'	32:QA:1050:G:OP2	2.46	0.63
32:QA:1225:A:H2'	32:QA:1226:C:C5	2.33	0.63
32:QA:1430:A:C2	32:QA:1471:U:C2	2.87	0.63
33:QB:163:ILE:HG23	33:QB:164:ASP:N	2.09	0.63
40:QI:25:GLY:H	40:QI:58:GLU:HA	1.63	0.63
32:XA:1239:A:N6	32:XA:1299:A:N6	2.46	0.63
32:XA:1250:A:H2'	32:XA:1251:A:O4'	1.98	0.63
35:XD:8:LEU:HD22	35:XD:21:LYS:HD2	1.80	0.63
41:XJ:84:VAL:CG2	41:XJ:85:ASP:H	2.11	0.63
42:XK:63:GLN:HB2	42:XK:98:ALA:HB2	1.79	0.63
43:XL:6:LEU:HA	43:XL:9:LYS:O	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:151:C:H2'	1:YA:152:A:C8	2.34	0.63
1:YA:223:A:N6	1:YA:422:A:C6	2.67	0.63
1:YA:1081:U:H4'	9:YI:123:ALA:HA	1.81	0.63
1:YA:1998:A:H4'	1:YA:2724:U:O2'	1.98	0.63
3:YC:77:VAL:CG2	3:YC:112:GLY:H	2.12	0.63
4:YD:10:GLY:HA3	4:YD:26:VAL:HB	1.80	0.63
9:YI:36:GLU:O	9:YI:36:GLU:HG2	1.98	0.63
14:YN:97:ILE:HD11	14:YN:99:LYS:NZ	2.12	0.63
15:YO:17:LYS:O	15:YO:17:LYS:HE3	1.99	0.63
20:YT:62:VAL:HG12	20:YT:63:VAL:N	2.13	0.63
21:YU:81:ARG:CB	21:YU:96:LYS:HD2	2.29	0.63
1:RA:1023:U:H5'	1:RA:1023:U:H6	1.64	0.63
1:RA:1188:U:C2'	1:RA:1189:A:H5'	2.29	0.63
1:RA:2703:C:H2'	1:RA:2704:C:H6	1.64	0.63
3:RC:203:VAL:O	3:RC:204:LEU:HB2	1.99	0.63
6:RF:131:VAL:HG21	6:RF:151:LEU:HG	1.81	0.63
23:RW:19:ARG:HA	23:RW:34:SER:HA	1.81	0.63
30:R3:56:LEU:HD22	30:R3:56:LEU:H	1.64	0.63
32:QA:1239:A:N6	32:QA:1299:A:H62	1.97	0.63
47:QP:22:ALA:HB2	47:QP:32:PHE:HA	1.80	0.63
34:XC:63:ILE:HG12	34:XC:65:VAL:HG23	1.81	0.63
43:XL:97:VAL:HG23	43:XL:97:VAL:O	1.98	0.63
45:XN:76:PHE:CE2	45:XN:92:ILE:HG21	2.31	0.63
49:XR:19:GLU:CD	49:XR:20:ILE:H	2.06	0.63
52:XU:31:VAL:O	52:XU:32:ARG:C	2.41	0.63
1:YA:217:A:H2'	1:YA:218:A:O4'	1.99	0.63
1:YA:230:G:N2	1:YA:231:A:C5	2.67	0.63
1:YA:740:C:H5'	1:YA:1784:A:C3'	2.26	0.63
1:YA:774:G:HO2'	1:YA:775:G:H8	1.45	0.63
1:YA:857:G:N7	1:YA:858:G:C8	2.66	0.63
1:YA:960:A:H2'	1:YA:962:G:H5'	1.81	0.63
1:YA:2337:G:H2'	1:YA:2337:G:N3	2.13	0.63
3:YC:71:ASP:HA	3:YC:117:SER:O	1.99	0.63
5:YE:122:GLU:HA	5:YE:190:ALA:HB2	1.79	0.63
6:YF:8:LYS:HG3	6:YF:12:VAL:HG21	1.81	0.63
29:Y2:46:LYS:HD2	29:Y2:46:LYS:N	2.13	0.63
3:RC:229:HIS:CD2	3:RC:246:PRO:HB3	2.33	0.63
5:RE:153:LEU:HB3	5:RE:171:ASP:HB3	1.81	0.63
22:RV:10:LYS:HD3	22:RV:10:LYS:N	2.04	0.63
32:QA:116:A:H2'	32:QA:117:G:C8	2.33	0.63
32:QA:569:C:H5"	32:QA:570:G:OP1	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:QB:19:THR:HA	33:QB:37:VAL:HG23	1.81	0.63
33:QB:105:THR:HG22	33:QB:105:THR:O	1.97	0.63
40:QI:48:ARG:C	40:QI:50:PRO:HD2	2.23	0.63
41:QJ:8:ILE:HA	41:QJ:99:GLN:O	1.99	0.63
33:XB:78:ALA:O	33:XB:213:LEU:HD23	1.99	0.63
36:XE:79:THR:HA	36:XE:121:ASN:CG	2.24	0.63
50:XS:38:THR:HA	50:XS:69:LYS:HA	1.80	0.63
1:YA:137:U:C4	1:YA:138:U:C2	2.86	0.63
1:YA:1313:U:O2	1:YA:1313:U:C2'	2.46	0.63
1:YA:1364:G:H1'	1:YA:1368:G:N2	2.14	0.63
1:YA:2815:C:O2	27:Y0:40:HIS:CE1	2.52	0.63
14:YN:37:THR:HB	14:YN:40:LYS:HB2	1.81	0.63
17:YQ:61:ILE:CD1	17:YQ:92:LYS:HD3	2.26	0.63
1:RA:1026:G:H2'	1:RA:1027:A:C8	2.33	0.63
1:RA:2149:U:O2'	1:RA:2150:C:O4'	2.15	0.63
3:RC:123:ILE:O	3:RC:123:ILE:CG1	2.47	0.63
8:RH:3:VAL:HB	8:RH:37:VAL:O	1.99	0.63
14:RN:24:MET:HG2	14:RN:44:LEU:HD22	1.79	0.63
19:RS:96:ILE:HG13	19:RS:96:ILE:O	1.97	0.63
30:R3:53:ASP:HA	30:R3:56:LEU:HD23	1.80	0.63
32:QA:272:C:H2'	32:QA:273:U:H6	1.63	0.63
32:QA:1458:G:H5'	51:QT:26:MET:HB3	1.81	0.63
36:QE:152:VAL:HB	36:QE:155:LYS:HZ2	1.63	0.63
40:QI:112:ARG:HH22	41:QJ:64:GLN:HE22	1.46	0.63
42:QK:87:GLY:N	42:QK:113:THR:HG22	2.14	0.63
43:QL:43:LYS:HB2	43:QL:43:LYS:NZ	2.14	0.63
49:QR:50:TYR:O	49:QR:54:LEU:HB2	1.98	0.63
52:QU:19:LYS:N	52:QU:19:LYS:HE2	2.14	0.63
32:XA:624:C:H2'	32:XA:625:U:O4'	1.99	0.63
32:XA:1013:G:H22	32:XA:1015:G:H3'	1.62	0.63
47:XP:78:VAL:C	47:XP:80:LYS:H	2.06	0.63
1:YA:152:A:C2	1:YA:175:G:C2	2.87	0.63
1:YA:200:U:C5	1:YA:201:C:C4	2.87	0.63
1:YA:1307:A:N6	1:YA:1606:C:H6	1.96	0.63
1:YA:1339:G:H21	1:YA:1603:A:H1'	1.63	0.63
1:YA:2332:C:H5"	1:YA:2333:A:OP2	1.99	0.63
1:YA:2760:C:H2'	1:YA:2760:C:O2	1.99	0.63
6:YF:36:ASN:O	6:YF:37:MET:HB3	1.99	0.63
8:YH:94:ILE:HB	8:YH:98:ASP:HB2	1.81	0.63
17:YQ:6:GLY:C	17:YQ:8:ILE:H	2.07	0.63
19:YS:9:HIS:H	19:YS:102:HIS:CE1	2.17	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:727:A:H2	3:RC:8:THR:HG21	1.63	0.62
1:RA:1045:C:O5'	1:RA:1046:A:H5'	1.99	0.62
1:RA:1993:U:H4'	4:RD:133:THR:CG2	2.25	0.62
1:RA:2325:G:C6	1:RA:2326:C:N4	2.66	0.62
4:RD:151:THR:HG22	4:RD:152:PRO:N	2.13	0.62
7:RG:126:THR:HG22	7:RG:127:GLN:N	2.13	0.62
10:RJ:43:GLU:O	10:RJ:45:THR:N	2.31	0.62
10:RJ:44:TYR:CB	17:RQ:63:ARG:HB3	2.18	0.62
11:RK:21:CYS:CB	11:RK:39:ILE:HD11	2.29	0.62
13:RM:31:PHE:CE2	13:RM:110:GLU:HG2	2.34	0.62
18:RR:4:VAL:HG23	18:RR:39:LEU:HG	1.80	0.62
20:RT:31:VAL:C	20:RT:32:LEU:HD23	2.23	0.62
32:QA:451:A:C4'	32:QA:452:A:O5'	2.41	0.62
32:QA:1002:G:H2'	32:QA:1003:G:O4'	1.99	0.62
32:QA:1038:C:H2'	32:QA:1039:G:C8	2.34	0.62
36:QE:81:GLN:NE2	36:QE:81:GLN:N	2.42	0.62
42:QK:85:VAL:HG11	42:QK:92:ARG:HG3	1.81	0.62
50:QS:10:ILE:HD11	50:QS:15:LEU:HB2	1.80	0.62
32:XA:270:A:H2'	32:XA:271:C:H6	1.64	0.62
32:XA:1052:U:H5"	32:XA:1053:G:OP2	1.99	0.62
32:XA:1134:G:C5	32:XA:1135:U:H1'	2.33	0.62
32:XA:1268:G:H21	32:XA:1327:C:C1'	2.10	0.62
32:XA:1375:A:O2'	38:XG:101:ARG:NH2	2.32	0.62
50:XS:45:GLY:H	50:XS:61:VAL:HB	1.64	0.62
50:XS:50:VAL:HG11	50:XS:70:LEU:HB3	1.81	0.62
52:XU:3:ILE:HG22	52:XU:19:LYS:HZ1	1.64	0.62
1:YA:647:G:O2'	1:YA:648:G:H5'	1.99	0.62
1:YA:1608:A:N7	1:YA:1611:C:N4	2.46	0.62
1:YA:1956:U:O2	1:YA:1985:C:H4'	1.97	0.62
1:YA:2147:A:H2'	1:YA:2147:A:N3	2.13	0.62
1:YA:2288:A:H4'	1:YA:2289:G:OP2	1.99	0.62
1:YA:2423:U:H5"	1:YA:2424:C:OP1	1.99	0.62
1:YA:2617:U:H2'	1:YA:2618:G:H5'	1.81	0.62
6:YF:110:ILE:HD13	6:YF:110:ILE:H	1.64	0.62
6:YF:122:ASP:HB2	6:YF:126:ASN:HB2	1.80	0.62
9:YI:91:LYS:HB3	9:YI:94:LYS:HB2	1.81	0.62
14:YN:42:LYS:HA	14:YN:45:ARG:HD3	1.80	0.62
16:YP:54:LEU:HA	16:YP:76:HIS:CD2	2.33	0.62
1:RA:815:C:OP1	18:RR:85:LYS:HE2	2.00	0.62
1:RA:869:G:O2'	13:RM:8:LYS:HD3	1.99	0.62
1:RA:1798:U:OP1	3:RC:255:LYS:O	2.17	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1820:U:O2	3:RC:199:HIS:HB3	2.00	0.62
3:RC:71:ASP:HA	3:RC:117:SER:O	1.99	0.62
6:RF:131:VAL:HG22	6:RF:151:LEU:H	1.64	0.62
6:RF:175:PRO:O	6:RF:176:PHE:HB2	1.98	0.62
10:RJ:44:TYR:O	10:RJ:45:THR:CB	2.47	0.62
36:QE:149:PRO:O	36:QE:152:VAL:HG22	1.98	0.62
47:QP:67:ILE:HG23	47:QP:68:SER:O	1.98	0.62
51:QT:38:ILE:HD11	51:QT:82:ILE:HG22	1.81	0.62
32:XA:39:G:H2'	32:XA:40:C:H6	1.63	0.62
32:XA:344:A:H5"	32:XA:345:C:C5	2.35	0.62
32:XA:500:G:H8	32:XA:500:G:H5"	1.62	0.62
32:XA:575:G:H4'	32:XA:576:C:O5'	1.99	0.62
32:XA:1066:C:H2'	32:XA:1067:A:C8	2.34	0.62
32:XA:1183:U:O2'	32:XA:1184:G:OP1	2.17	0.62
32:XA:1255:G:O2'	32:XA:1258:G:H1'	1.99	0.62
44:XM:36:ALA:HB3	44:XM:55:LEU:HD11	1.79	0.62
1:YA:622:G:H2'	1:YA:623:C:C5	2.34	0.62
1:YA:1734:G:O2'	1:YA:1735:A:H8	1.82	0.62
1:YA:1830:C:H5'	3:YC:14:HIS:CE1	2.34	0.62
2:YB:5:U:H2'	2:YB:6:G:H8	1.63	0.62
2:YB:52:A:O2'	2:YB:53:A:C8	2.51	0.62
4:YD:208:LYS:O	4:YD:209:ALA:HB2	1.98	0.62
14:YN:63:ARG:HH12	14:YN:81:ASN:HD21	1.46	0.62
16:YP:48:ALA:HB3	16:YP:59:THR:CB	2.29	0.62
18:YR:43:ASN:HD22	18:YR:44:GLY:H	1.45	0.62
20:YT:10:VAL:HG23	20:YT:11:LEU:HD12	1.80	0.62
21:YU:26:ASN:OD1	21:YU:34:ILE:HD12	1.99	0.62
23:YW:37:VAL:HG23	23:YW:38:ARG:HH11	1.63	0.62
25:YY:1:MET:H2	25:YY:5:GLU:CG	2.12	0.62
25:YY:48:ARG:O	25:YY:51:ALA:HB3	2.00	0.62
1:RA:1176:U:H2'	1:RA:1177:G:C4	2.34	0.62
9:RI:116:MET:HE2	9:RI:116:MET:HA	1.82	0.62
12:RL:93:ASN:ND2	12:RL:94:THR:H	1.92	0.62
18:RR:90:ARG:O	18:RR:91:GLN:HB3	2.00	0.62
21:RU:52:ASN:C	21:RU:54:PRO:HD2	2.24	0.62
32:QA:284:C:H2'	32:QA:285:C:H6	1.63	0.62
32:QA:896:C:H2'	32:QA:897:C:H6	1.63	0.62
32:QA:1234:C:O2'	32:QA:1235:U:H5'	1.99	0.62
33:QB:139:GLU:O	33:QB:143:LEU:HD23	1.99	0.62
35:QD:158:LEU:O	35:QD:161:ALA:HB3	2.00	0.62
43:QL:29:LYS:O	43:QL:81:ILE:HG22	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:500:G:H5”	32:XA:500:G:C8	2.33	0.62
32:XA:702:A:H5’	32:XA:703:G:N7	2.14	0.62
32:XA:765:G:N7	32:XA:812:G:C4	2.67	0.62
1:YA:511:U:H5”	1:YA:512:G:OP2	2.00	0.62
1:YA:991:C:O5’	1:YA:991:C:H6	1.82	0.62
1:YA:1059:G:N1	1:YA:1088:A:C2	2.67	0.62
1:YA:1393:A:N6	20:YT:19:LYS:HB2	2.14	0.62
4:YD:116:LYS:HD3	14:YN:1:MET:HE1	1.81	0.62
8:YH:59:ALA:HA	8:YH:63:ALA:HB3	1.80	0.62
15:YO:13:ARG:O	15:YO:17:LYS:HB2	1.99	0.62
16:YP:88:ARG:HE	16:YP:112:ARG:NH2	1.96	0.62
22:YV:61:LEU:HD23	22:YV:61:LEU:H	1.65	0.62
31:Y4:7:VAL:HG13	31:Y4:8:LYS:H	1.64	0.62
1:RA:893:C:H2’	1:RA:894:U:O4’	2.00	0.62
4:RD:182:ALA:O	4:RD:184:ARG:N	2.31	0.62
11:RK:69:VAL:O	11:RK:76:VAL:HA	2.00	0.62
29:R2:35:ARG:HG2	29:R2:42:LEU:HD11	1.80	0.62
48:QQ:80:LYS:HB2	48:QQ:80:LYS:NZ	2.13	0.62
32:XA:748:G:H2’	32:XA:749:A:H8	1.63	0.62
33:XB:66:ILE:H	33:XB:88:GLN:HB3	1.64	0.62
38:XG:140:VAL:C	38:XG:142:ARG:H	2.06	0.62
43:XL:19:ASN:HD22	43:XL:19:ASN:N	1.96	0.62
1:YA:706:A:H2’	1:YA:707:G:O4’	2.00	0.62
1:YA:957:C:O2’	1:YA:959:A:H5”	1.99	0.62
1:YA:2345:G:C8	1:YA:2347:C:C5	2.87	0.62
1:YA:2401:U:H5”	1:YA:2402:U:OP2	1.99	0.62
1:YA:2822:G:H5”	4:YD:164:GLN:NE2	2.08	0.62
2:YB:75:G:H1	2:YB:102:G:N2	1.97	0.62
5:YE:29:HIS:HA	5:YE:32:VAL:HG22	1.81	0.62
1:RA:118:A:C8	1:RA:119:A:C8	2.87	0.62
1:RA:666:A:H2’	1:RA:667:U:H6	1.65	0.62
1:RA:1045:C:C3’	1:RA:1046:A:H5’	2.29	0.62
1:RA:2021:C:P	27:R0:8:THR:HG21	2.39	0.62
9:RI:15:GLY:CA	9:RI:50:LYS:HB3	2.28	0.62
17:RQ:63:ARG:HD2	17:RQ:64:ILE:H	1.64	0.62
18:RR:49:ILE:O	18:RR:49:ILE:HG13	2.00	0.62
19:RS:59:GLU:HA	19:RS:64:ALA:HB2	1.81	0.62
26:RZ:29:ARG:HH21	26:RZ:29:ARG:CG	2.12	0.62
32:XA:1073:U:H2’	32:XA:1074:G:H8	1.64	0.62
32:XA:1363:A:C6	32:XA:1365:G:C6	2.88	0.62
34:XC:179:ALA:HB1	34:XC:202:PHE:HE1	1.60	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:XI:114:LYS:HB2	40:XI:117:LEU:HD12	1.80	0.62
50:XS:59:VAL:HG21	50:XS:73:PHE:HB3	1.80	0.62
1:YA:185:G:C6	1:YA:212:G:C2	2.87	0.62
1:YA:1024:G:C3'	1:YA:1025:G:H5"	2.29	0.62
1:YA:1398:C:O2'	1:YA:1399:C:O4'	2.18	0.62
1:YA:1605:C:H3'	1:YA:1606:C:C5'	2.30	0.62
1:YA:1865:U:H2'	1:YA:1866:A:H8	1.64	0.62
1:YA:2244:U:H2'	1:YA:2245:U:O4'	1.99	0.62
1:YA:2622:U:O2'	1:YA:2825:G:N7	2.32	0.62
1:YA:2812:G:N2	1:YA:2889:C:C2	2.67	0.62
6:YF:12:VAL:HA	6:YF:15:LEU:HB2	1.81	0.62
10:YJ:89:PHE:HE2	10:YJ:100:VAL:HG11	1.65	0.62
15:YO:26:LEU:HB3	15:YO:92:PHE:CD1	2.34	0.62
15:YO:51:ALA:HB3	15:YO:78:VAL:CG2	2.30	0.62
23:YW:20:LEU:HD12	23:YW:20:LEU:N	2.13	0.62
26:YZ:18:LYS:O	26:YZ:22:THR:HG23	1.98	0.62
1:RA:875:G:C2'	1:RA:876:C:H5'	2.29	0.62
5:RE:36:ALA:O	5:RE:39:ALA:HB3	2.00	0.62
17:RQ:91:ARG:HH12	18:RR:10:LYS:HB3	1.65	0.62
17:RQ:91:ARG:NE	18:RR:11:GLN:HB2	2.14	0.62
19:RS:2:GLU:O	19:RS:107:VAL:O	2.16	0.62
33:QB:89:PHE:CZ	33:QB:153:MET:HB2	2.35	0.62
32:XA:109:A:C6	32:XA:327:A:C6	2.88	0.62
32:XA:204:G:H2'	32:XA:205:A:H8	1.64	0.62
32:XA:1502:A:H5'	32:XA:1504:G:N7	2.15	0.62
35:XD:196:GLU:O	35:XD:199:ILE:HG12	2.00	0.62
36:XE:147:ASN:HA	36:XE:151:MET:HE3	1.82	0.62
44:XM:93:GLY:O	44:XM:109:LYS:HG3	1.98	0.62
1:YA:311:A:O2'	1:YA:312:G:OP1	2.17	0.62
1:YA:397:U:OP1	24:YX:30:PRO:CA	2.39	0.62
1:YA:503:A:C4	1:YA:506:G:N7	2.67	0.62
1:YA:1534:U:H6	1:YA:1538:G:N1	1.98	0.62
1:YA:2226:C:H2'	1:YA:2227:A:O4'	1.99	0.62
1:YA:2401:U:H3'	1:YA:2402:U:H5"	1.81	0.62
4:YD:141:ARG:HH11	4:YD:141:ARG:HB3	1.64	0.62
5:YE:5:LEU:HA	5:YE:120:VAL:HG13	1.81	0.62
13:YM:35:ALA:HB3	13:YM:99:GLY:N	2.12	0.62
25:YY:60:LYS:HG2	25:YY:60:LYS:O	1.99	0.62
1:RA:64:A:H2'	1:RA:65:U:C6	2.34	0.62
1:RA:675:A:OP1	5:RE:58:LYS:HE2	2.00	0.62
1:RA:2286:G:C8	1:RA:2286:G:H5'	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2308:G:N7	6:RF:76:PHE:HE2	1.97	0.62
2:RB:90:C:H5"	2:RB:90:C:C6	2.31	0.62
10:RJ:65:THR:HG23	10:RJ:66:GLY:N	2.14	0.62
10:RJ:77:HIS:HD2	10:RJ:79:GLY:N	1.96	0.62
13:RM:77:PRO:HD2	13:RM:80:VAL:HG11	1.82	0.62
32:QA:662:U:H2'	32:QA:663:A:C8	2.35	0.62
33:QB:212:TYR:HA	33:QB:215:ALA:HB3	1.82	0.62
45:QN:60:ARG:O	45:QN:61:ASN:CB	2.47	0.62
51:QT:53:MET:HE3	51:QT:57:VAL:HG21	1.80	0.62
32:XA:1146:A:O2'	32:XA:1147:C:H5'	2.00	0.62
33:XB:89:PHE:HB3	33:XB:149:GLY:O	1.99	0.62
39:XH:28:SER:HA	39:XH:58:LEU:HD12	1.81	0.62
47:XP:44:SER:H	47:XP:46:LYS:HZ2	1.47	0.62
1:YA:1361:G:C2'	1:YA:1362:C:H5'	2.30	0.62
1:YA:1511:G:O2'	1:YA:1512:C:H5'	2.00	0.62
1:YA:2195:U:H2'	1:YA:2196:C:H6	1.63	0.62
1:YA:2297:A:HO2'	1:YA:2298:A:H8	0.69	0.62
9:YI:57:VAL:O	9:YI:58:ILE:HG13	1.99	0.62
32:QA:414:A:O2'	32:QA:415:A:O4'	2.12	0.62
32:QA:467:U:O2'	32:QA:468:A:O5'	2.11	0.62
32:QA:674:G:H2'	32:QA:675:A:H8	1.65	0.62
35:QD:24:VAL:HG12	35:QD:25:ARG:N	2.13	0.62
36:QE:89:THR:HG22	36:QE:90:GLY:N	2.15	0.62
44:QM:5:GLY:HA3	44:QM:65:GLU:HG3	1.81	0.62
50:QS:46:LEU:H	50:QS:61:VAL:HG23	1.65	0.62
51:QT:14:GLU:HA	51:QT:17:ARG:HB2	1.82	0.62
51:QT:25:SER:O	51:QT:28:ARG:HG3	1.99	0.62
32:XA:980:C:O3'	45:XN:12:ARG:NH2	2.33	0.62
32:XA:1287:A:HO2'	32:XA:1288:A:H8	1.38	0.62
32:XA:1309:G:H2'	32:XA:1310:G:H8	1.64	0.62
35:XD:191:SER:O	35:XD:192:ALA:HB2	2.00	0.62
1:YA:529:A:C8	1:YA:2023:C:N4	2.68	0.62
1:YA:558:U:OP1	10:YJ:113:PRO:HD2	1.99	0.62
1:YA:2414:G:H2'	1:YA:2415:G:H5'	1.80	0.62
1:YA:2626:C:O2'	1:YA:2627:G:H5'	1.99	0.62
1:YA:2798:U:H5'	1:YA:2800:A:N6	2.14	0.62
4:YD:110:THR:OG1	4:YD:171:THR:HG22	1.99	0.62
6:YF:47:LYS:HA	6:YF:50:ASP:HB3	1.82	0.62
12:YL:98:ALA:O	12:YL:100:ILE:HG22	1.99	0.62
23:YW:18:LYS:HD3	23:YW:19:ARG:HG2	1.81	0.62
23:YW:28:GLU:N	23:YW:31:LEU:HD21	2.03	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1105:U:H2'	1:RA:1106:G:H8	1.65	0.62
7:RG:102:ILE:HD13	7:RG:130:ILE:HD13	1.82	0.62
11:RK:57:VAL:C	11:RK:58:LEU:HD23	2.24	0.62
12:RL:57:LEU:HD22	30:R3:53:ASP:HB3	1.81	0.62
14:RN:49:GLU:OE2	14:RN:95:THR:HG22	2.00	0.62
17:RQ:63:ARG:NH2	17:RQ:96:ASP:N	2.48	0.62
20:RT:29:THR:HB	20:RT:86:THR:CG2	2.29	0.62
25:RY:23:ARG:O	25:RY:24:GLU:C	2.42	0.62
32:QA:74:A:H1'	32:QA:97:G:N2	2.15	0.62
32:QA:554:A:H5"	43:QL:25:ALA:HB1	1.82	0.62
32:QA:1247:U:O2'	32:QA:1248:A:H5'	2.00	0.62
35:QD:16:THR:HG22	35:QD:17:ASP:N	2.14	0.62
38:QG:24:LYS:O	38:QG:28:ILE:HG12	1.99	0.62
41:QJ:91:ASP:O	41:QJ:92:LEU:O	2.18	0.62
32:XA:451:A:H61	32:XA:481:G:H5'	1.64	0.62
32:XA:1388:C:H2'	32:XA:1389:C:H6	1.64	0.62
32:XA:1494:G:N2	32:XA:1495:U:C2	2.68	0.62
33:XB:206:ILE:HA	33:XB:209:VAL:HG22	1.82	0.62
37:XF:11:HIS:HD2	37:XF:12:PRO:CD	2.11	0.62
44:XM:36:ALA:HB2	44:XM:55:LEU:HD21	1.82	0.62
47:XP:4:ILE:HD12	47:XP:4:ILE:N	2.14	0.62
51:XT:49:ALA:O	51:XT:52:GLU:HB3	2.00	0.62
1:YA:9:G:H1	1:YA:2629:U:H2'	1.63	0.62
1:YA:770:G:H1'	1:YA:1379:U:C4	2.35	0.62
1:YA:942:G:H4'	1:YA:1190:G:H5'	1.81	0.62
1:YA:1248:G:H2'	17:YQ:1:ALA:O	2.00	0.62
1:YA:1388:G:H2'	1:YA:1389:G:H8	1.62	0.62
1:YA:1417:C:C2'	1:YA:1418:G:C8	2.82	0.62
4:YD:73:VAL:O	4:YD:74:GLU:HB2	2.00	0.62
25:YY:28:LEU:HD11	25:YY:43:LEU:HD13	1.82	0.62
1:RA:979:A:H2'	1:RA:982:C:H42	1.65	0.62
1:RA:1045:C:C4'	1:RA:1046:A:H5'	2.29	0.62
1:RA:2014:A:H2'	1:RA:2015:A:C8	2.35	0.62
3:RC:77:VAL:HG22	3:RC:77:VAL:O	2.00	0.62
7:RG:120:ILE:HD13	7:RG:121:THR:N	2.15	0.62
8:RH:5:LEU:HD13	8:RH:13:GLY:HA2	1.80	0.62
12:RL:127:VAL:HG11	12:RL:142:ILE:HG21	1.81	0.62
13:RM:136:MET:HE2	22:RV:57:TYR:CE2	2.34	0.62
15:RO:67:ASN:O	15:RO:69:ASP:N	2.32	0.62
16:RP:104:GLY:O	16:RP:106:ALA:N	2.33	0.62
29:R2:12:ARG:CZ	29:R2:12:ARG:HB2	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:830:G:H2'	32:QA:831:A:H8	1.65	0.62
34:QC:174:LEU:O	34:QC:174:LEU:HD12	2.00	0.62
36:QE:155:LYS:HD2	36:QE:156:ARG:N	2.14	0.62
44:QM:84:CYS:HA	50:QS:73:PHE:HD2	1.65	0.62
32:XA:166:U:C2'	32:XA:167:A:H5'	2.29	0.62
32:XA:631:C:H3'	32:XA:632:U:H5'	1.81	0.62
32:XA:1160:G:O6	32:XA:1181:G:C6	2.53	0.62
36:XE:38:VAL:HG12	36:XE:39:GLY:H	1.63	0.62
41:XJ:15:HIS:HA	41:XJ:18:ILE:CG2	2.27	0.62
1:YA:302:C:HO2'	1:YA:303:G:H8	0.73	0.62
1:YA:533:G:H5'	17:YQ:23:TYR:CD2	2.35	0.62
1:YA:910:A:H62	13:YM:12:MET:HA	1.65	0.62
1:YA:2093:G:H5"	8:YH:24:GLY:HA3	1.82	0.62
1:YA:2260:C:H2'	1:YA:2261:C:H6	1.65	0.62
2:YB:49:C:OP1	15:YO:102:ARG:N	2.33	0.62
10:YJ:43:GLU:O	10:YJ:45:THR:N	2.33	0.62
11:YK:104:THR:OG1	11:YK:106:GLU:HB2	2.00	0.62
14:YN:35:LYS:HZ2	14:YN:112:TYR:HE1	1.46	0.62
1:RA:544:C:N3	1:RA:548:G:OP1	2.33	0.61
1:RA:613:A:H8	1:RA:616:A:N1	1.98	0.61
1:RA:654:A:H5'	1:RA:654:A:N3	2.15	0.61
3:RC:257:ARG:NE	3:RC:269:ARG:HH22	1.99	0.61
9:RI:56:VAL:HG11	9:RI:68:PHE:CD2	2.35	0.61
14:RN:73:ASN:O	14:RN:76:VAL:HG12	1.99	0.61
17:RQ:82:LEU:O	17:RQ:88:GLU:HB3	2.00	0.61
22:RV:2:PHE:CD1	22:RV:50:MET:HE2	2.34	0.61
33:QB:58:LYS:NZ	33:QB:62:ARG:HG3	2.14	0.61
40:QI:40:ARG:HA	40:QI:44:ARG:HB3	1.82	0.61
44:QM:86:ARG:HH21	44:QM:96:VAL:HG12	1.65	0.61
48:QQ:18:LYS:HA	48:QQ:47:ASP:CB	2.28	0.61
52:QU:4:LYS:O	52:QU:4:LYS:HD2	1.99	0.61
32:XA:1304:G:H1'	32:XA:1333:A:N6	2.14	0.61
37:XF:91:ARG:O	37:XF:93:LYS:HE3	2.00	0.61
38:XG:64:ALA:HB2	38:XG:126:ALA:HB1	1.81	0.61
38:XG:117:LEU:HA	38:XG:121:ASN:HB2	1.81	0.61
38:XG:148:LYS:HB2	38:XG:148:LYS:NZ	2.15	0.61
44:XM:93:GLY:O	44:XM:94:LEU:HG	2.00	0.61
1:YA:8:C:O2'	1:YA:9:G:H5'	2.00	0.61
1:YA:63:A:N6	1:YA:91:A:H62	1.97	0.61
1:YA:104:A:H2'	1:YA:105:C:O4'	2.00	0.61
1:YA:192:C:OP1	56:YA:3724:HOH:O	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1345:C:C5'	1:YA:1396:U:O4	2.48	0.61
1:YA:1358:G:C5	56:YA:3417:HOH:O	2.53	0.61
1:YA:2236:U:H2'	1:YA:2237:G:O4'	2.00	0.61
1:YA:2298:A:O2'	1:YA:2299:U:C6	2.44	0.61
1:YA:2506:U:H6	1:YA:2506:U:H3'	1.65	0.61
1:YA:2746:U:H2'	1:YA:2747:G:H5'	1.81	0.61
5:YE:5:LEU:HD23	5:YE:120:VAL:HG22	1.82	0.61
8:YH:37:VAL:HG23	8:YH:38:PRO:HD2	1.82	0.61
14:YN:67:PHE:HE2	14:YN:73:ASN:OD1	1.82	0.61
18:YR:49:ILE:HB	18:YR:51:VAL:O	2.00	0.61
24:YX:19:HIS:C	24:YX:21:LEU:H	2.08	0.61
1:RA:1936:A:C2	1:RA:1943:U:H5	2.18	0.61
1:RA:2296:U:H4'	1:RA:2297:A:OP1	2.00	0.61
4:RD:62:LYS:HB2	4:RD:63:PRO:HD3	1.81	0.61
5:RE:45:ALA:C	5:RE:46:GLN:HG2	2.24	0.61
5:RE:108:ILE:HD11	5:RE:180:LEU:HD13	1.81	0.61
6:RF:151:LEU:C	6:RF:151:LEU:HD12	2.24	0.61
8:RH:62:LEU:HD12	8:RH:63:ALA:N	2.14	0.61
16:RP:80:VAL:O	16:RP:81:ASP:HB3	2.01	0.61
18:RR:39:LEU:HA	18:RR:49:ILE:CG2	2.30	0.61
19:RS:66:ILE:HD13	19:RS:67:ASP:N	2.16	0.61
21:RU:13:LEU:HD12	21:RU:69:VAL:C	2.25	0.61
32:QA:261:U:OP2	51:QT:73:ARG:NH2	2.34	0.61
32:QA:841:C:H3'	32:QA:843:U:OP2	2.00	0.61
32:QA:1003:G:H22	32:QA:1005:A:H5'	1.65	0.61
32:QA:1136:C:O2	32:QA:1136:C:H2'	1.99	0.61
35:QD:196:GLU:C	35:QD:198:LEU:H	2.08	0.61
43:QL:85:ARG:NH2	43:QL:87:LYS:HD2	2.15	0.61
32:XA:252:U:H2'	32:XA:253:A:C8	2.34	0.61
32:XA:935:A:HO2'	32:XA:936:C:H6	1.43	0.61
32:XA:940:C:H5'	38:XG:101:ARG:NH2	2.13	0.61
33:XB:44:LYS:O	33:XB:48:MET:HG3	2.00	0.61
35:XD:29:THR:C	35:XD:30:LYS:HD3	2.25	0.61
47:XP:8:ARG:HB3	47:XP:28:ARG:NH1	2.15	0.61
50:XS:5:LYS:HE3	50:XS:6:LYS:N	2.09	0.61
1:YA:655:A:H4'	1:YA:656:G:H5'	1.83	0.61
1:YA:763:G:O2'	1:YA:764:A:H3'	2.00	0.61
1:YA:975:A:O2'	1:YA:976:G:O5'	2.17	0.61
1:YA:1157:G:H2'	1:YA:1158:C:H6	1.64	0.61
1:YA:1388:G:HO2'	1:YA:1389:G:H8	1.47	0.61
1:YA:1796:U:H2'	1:YA:1797:G:C8	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2093:G:C5'	8:YH:24:GLY:HA3	2.31	0.61
4:YD:117:GLY:O	4:YD:119:ALA:N	2.32	0.61
13:YM:40:ARG:HB2	13:YM:93:VAL:HG21	1.82	0.61
19:YS:32:ALA:O	19:YS:33:LEU:HB2	2.00	0.61
1:RA:419:U:H5"	56:RA:3233:HOH:O	2.00	0.61
1:RA:819:A:C4	1:RA:1189:A:C2	2.88	0.61
1:RA:1199:U:H2'	1:RA:1200:C:C6	2.35	0.61
1:RA:2291:U:H2'	1:RA:2292:U:C6	2.35	0.61
1:RA:2680:U:OP1	4:RD:114:LYS:HE2	2.01	0.61
3:RC:171:VAL:HG23	3:RC:185:ALA:HA	1.83	0.61
4:RD:182:ALA:C	4:RD:184:ARG:H	2.07	0.61
17:RQ:109:VAL:HG12	17:RQ:113:LYS:HD2	1.81	0.61
18:RR:54:VAL:CG2	18:RR:57:GLY:HA3	2.30	0.61
20:RT:28:ASN:HA	20:RT:91:GLN:CD	2.25	0.61
23:RW:17:ALA:O	23:RW:18:LYS:HB3	2.00	0.61
32:QA:1161:C:O2'	32:QA:1162:C:C6	2.52	0.61
36:QE:79:THR:OG1	36:QE:80:LEU:N	2.33	0.61
39:QH:9:MET:CE	39:QH:32:LYS:HA	2.30	0.61
32:XA:206:C:H2'	32:XA:207:C:H4'	1.81	0.61
32:XA:1078:U:C5	32:XA:1079:G:C5	2.88	0.61
32:XA:1206:G:H4'	34:XC:191:THR:O	2.00	0.61
32:XA:1533:C:H2'	32:XA:1534:A:H5"	1.82	0.61
34:XC:120:THR:HG22	34:XC:120:THR:O	2.01	0.61
1:YA:201:C:C4	1:YA:202:U:C5	2.88	0.61
1:YA:617:G:H21	1:YA:618:G:H1'	1.65	0.61
1:YA:674:G:O3'	5:YE:60:TRP:HH2	1.82	0.61
1:YA:826:U:H5'	1:YA:2428:G:O2'	1.99	0.61
1:YA:1439:A:C2	1:YA:1553:A:N7	2.68	0.61
1:YA:1769:U:H1'	1:YA:1984:G:N2	2.15	0.61
1:YA:2662:A:H2'	1:YA:2663:G:O4'	2.00	0.61
8:YH:84:ALA:H	8:YH:148:ALA:HA	1.65	0.61
11:YK:108:ARG:HA	11:YK:116:ILE:HD13	1.82	0.61
14:YN:28:LEU:O	14:YN:32:GLU:N	2.30	0.61
1:RA:744:U:H2'	1:RA:745:G:O4'	2.00	0.61
1:RA:2097:A:H2'	1:RA:2098:U:C6	2.34	0.61
6:RF:72:SER:HB2	6:RF:80:GLN:H	1.65	0.61
7:RG:30:GLY:HA3	7:RG:78:VAL:HG12	1.83	0.61
15:RO:11:ALA:HB2	15:RO:96:GLY:N	2.15	0.61
16:RP:33:GLU:OE1	16:RP:33:GLU:C	2.44	0.61
16:RP:102:ARG:O	16:RP:103:THR:HG22	2.00	0.61
23:RW:39:GLN:HE21	23:RW:43:LYS:H	1.48	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:991:U:HO2'	32:QA:1212:U:H6	1.47	0.61
32:QA:1356:G:H2'	32:QA:1357:A:C8	2.36	0.61
33:QB:48:MET:HA	33:QB:48:MET:HE3	1.81	0.61
33:QB:67:LEU:HD21	33:QB:91:VAL:HG23	1.82	0.61
47:QP:79:ASN:O	47:QP:80:LYS:HB2	2.00	0.61
32:XA:312:C:H2'	32:XA:313:A:C8	2.34	0.61
32:XA:425:G:H2'	32:XA:426:U:O4'	2.00	0.61
32:XA:512:U:O2'	32:XA:513:C:H6	1.83	0.61
32:XA:1272:G:H2'	32:XA:1273:C:H5'	1.81	0.61
32:XA:1492:A:C8	1:YA:1913:A:C8	2.88	0.61
44:XM:22:TYR:HB2	44:XM:65:GLU:HG2	1.83	0.61
49:XR:72:ARG:H	49:XR:72:ARG:NE	1.93	0.61
52:XU:41:THR:O	52:XU:45:LYS:HB2	2.00	0.61
1:YA:74:A:H5'	25:YY:48:ARG:HH22	1.66	0.61
1:YA:127:A:N7	29:Y2:46:LYS:HE3	2.16	0.61
1:YA:240:C:C3'	1:YA:241:A:H5"	2.29	0.61
1:YA:627:A:H5"	12:YL:78:ARG:NH1	2.15	0.61
1:YA:1508:A:H4'	1:YA:1509:A:OP1	2.00	0.61
1:YA:2520:C:H2'	1:YA:2521:C:H6	1.65	0.61
3:YC:94:LEU:HD13	3:YC:100:ARG:HD3	1.81	0.61
9:YI:12:VAL:HG12	9:YI:13:ALA:H	1.64	0.61
9:YI:50:LYS:HE2	9:YI:50:LYS:HA	1.82	0.61
20:YT:5:GLU:HA	20:YT:8:LEU:HB2	1.82	0.61
1:RA:1132:U:H3'	1:RA:1133:A:H5"	1.82	0.61
1:RA:1182:G:H2'	1:RA:1183:U:O4'	1.99	0.61
1:RA:1414:C:C4	1:RA:1415:U:H5	2.17	0.61
3:RC:245:THR:OG1	3:RC:249:VAL:HB	2.00	0.61
6:RF:36:ASN:HB2	6:RF:87:LYS:HB2	1.83	0.61
10:RJ:117:ALA:HA	10:RJ:120:ARG:HH21	1.64	0.61
12:RL:100:ILE:HD12	12:RL:101:ILE:HD13	1.82	0.61
19:RS:83:LYS:O	19:RS:84:ARG:HD3	2.00	0.61
24:RX:53:LYS:O	24:RX:57:VAL:HG23	2.00	0.61
32:QA:128:G:O2'	32:QA:129:A:H5'	1.99	0.61
32:QA:428:G:O4'	32:QA:430:A:C8	2.54	0.61
32:QA:1236:A:H4'	32:QA:1304:G:H4'	1.82	0.61
35:QD:116:LEU:C	35:QD:122:ILE:HD11	2.26	0.61
39:QH:17:GLN:NE2	39:QH:71:VAL:H	1.99	0.61
50:QS:6:LYS:HE2	50:QS:6:LYS:HA	1.82	0.61
32:XA:106:C:O2	32:XA:379:C:H4'	2.00	0.61
32:XA:252:U:H6	32:XA:252:U:C5'	2.11	0.61
32:XA:263:A:P	51:XT:73:ARG:HH12	2.24	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1029:U:H1'	32:XA:1033:G:O6	1.99	0.61
36:XE:59:ILE:O	36:XE:59:ILE:HG13	2.00	0.61
40:XI:112:ARG:HH22	41:XJ:64:GLN:NE2	1.98	0.61
41:XJ:51:VAL:HB	45:XN:80:ARG:HB2	1.83	0.61
44:XM:52:ILE:C	44:XM:54:THR:H	2.09	0.61
1:YA:311:A:C2	1:YA:328:U:O4	2.53	0.61
1:YA:749:A:C5	1:YA:750:A:N7	2.68	0.61
4:YD:11:MET:HE1	4:YD:192:ALA:CA	2.27	0.61
4:YD:19:GLY:O	11:YK:72:PRO:HB2	1.99	0.61
4:YD:137:SER:C	4:YD:138:LEU:HD22	2.25	0.61
4:YD:181:ASP:C	4:YD:183:GLU:H	2.08	0.61
5:YE:28:VAL:O	5:YE:32:VAL:HG13	2.00	0.61
7:YG:95:ALA:HB3	7:YG:127:GLN:HA	1.82	0.61
13:YM:112:LEU:HD13	13:YM:112:LEU:O	2.01	0.61
17:YQ:91:ARG:NH2	17:YQ:93:ILE:HD13	2.15	0.61
1:RA:1062:G:HO2'	1:RA:1063:G:H8	1.46	0.61
1:RA:1103:A:H2'	1:RA:1104:C:H5'	1.82	0.61
1:RA:1179:G:C3'	1:RA:1180:U:H4'	2.18	0.61
1:RA:2298:A:C2	1:RA:2321:U:N3	2.68	0.61
19:RS:18:ARG:HG2	19:RS:76:VAL:HG13	1.82	0.61
27:R0:42:ILE:CD1	27:R0:48:TYR:HB2	2.30	0.61
31:R4:3:VAL:O	31:R4:4:ARG:O	2.19	0.61
33:QB:218:ALA:HA	33:QB:221:ARG:HH21	1.66	0.61
48:QQ:10:ARG:O	48:QQ:22:VAL:HG13	2.01	0.61
51:QT:53:MET:O	51:QT:56:ILE:HG22	1.99	0.61
51:QT:55:PRO:O	51:QT:59:ARG:HB3	2.01	0.61
32:XA:1140:C:HO2'	32:XA:1141:C:H6	1.44	0.61
32:XA:1298:U:C5	38:XG:113:LYS:HA	2.35	0.61
34:XC:39:ARG:HE	34:XC:54:ILE:HG23	1.64	0.61
52:XU:3:ILE:HG21	52:XU:19:LYS:HZ1	1.65	0.61
1:YA:64:A:OP1	20:YT:77:ARG:HA	2.00	0.61
1:YA:228:C:H5"	1:YA:229:C:C6	2.36	0.61
1:YA:686:U:OP2	56:YA:3708:HOH:O	2.16	0.61
1:YA:852:U:H2'	1:YA:853:C:C6	2.35	0.61
1:YA:969:G:H2'	1:YA:970:U:H6	1.64	0.61
1:YA:1255:U:O2'	1:YA:1256:G:OP1	2.18	0.61
1:YA:2223:G:H2'	1:YA:2224:G:H5'	1.81	0.61
1:YA:2353:G:H1'	23:YW:30:VAL:HG13	1.81	0.61
1:YA:2734:A:C2'	1:YA:2735:G:H5'	2.30	0.61
2:YB:16:G:O6	2:YB:69:G:C5	2.53	0.61
5:YE:130:LYS:HB3	5:YE:133:LEU:CB	2.26	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:14:A:H5"	1:RA:15:G:OP2	2.01	0.61
1:RA:533:G:H5'	17:RQ:23:TYR:CE2	2.36	0.61
1:RA:994:C:H1'	18:RR:10:LYS:NZ	2.15	0.61
3:RC:80:LEU:HD11	3:RC:109:LEU:HG	1.83	0.61
3:RC:230:PRO:CD	3:RC:246:PRO:HA	2.29	0.61
4:RD:121:THR:O	4:RD:122:VAL:HB	2.01	0.61
8:RH:18:GLN:HE21	8:RH:18:GLN:CA	2.14	0.61
16:RP:25:VAL:HG11	16:RP:46:VAL:HG23	1.83	0.61
23:RW:31:LEU:N	23:RW:31:LEU:HD23	2.16	0.61
23:RW:39:GLN:O	23:RW:40:ARG:C	2.43	0.61
23:RW:73:PRO:HG3	23:RW:76:ARG:HD2	1.82	0.61
32:QA:433:G:H2'	32:QA:434:U:H5'	1.83	0.61
33:QB:26:MET:HA	33:QB:26:MET:HE3	1.82	0.61
33:QB:209:VAL:HG23	33:QB:210:THR:N	2.08	0.61
34:QC:69:THR:O	34:QC:105:VAL:HG23	2.00	0.61
44:QM:113:LYS:H	44:QM:114:PRO:CD	2.14	0.61
32:XA:162:A:H2'	32:XA:163:C:O4'	2.00	0.61
32:XA:704:A:O2'	32:XA:705:G:O5'	2.17	0.61
38:XG:27:ASN:HA	38:XG:30:MET:HG3	1.82	0.61
44:XM:77:LYS:HD3	44:XM:77:LYS:O	2.01	0.61
52:XU:33:ARG:HH22	52:XU:34:ARG:HH11	1.49	0.61
1:YA:414:C:H5"	1:YA:1879:C:O2'	2.00	0.61
1:YA:1076:C:O2	9:YI:92:PRO:HG2	2.00	0.61
1:YA:1398:C:HO2'	1:YA:1399:C:H6	1.46	0.61
1:YA:2316:G:H2'	1:YA:2317:A:C8	2.34	0.61
1:YA:2339:C:H2'	1:YA:2340:A:C8	2.35	0.61
1:YA:2406:A:C2	12:YL:69:ARG:NH2	2.68	0.61
4:YD:56:LYS:NZ	4:YD:58:ASN:HD22	1.99	0.61
10:YJ:97:PRO:C	10:YJ:99:ARG:H	2.08	0.61
15:YO:51:ALA:HB3	15:YO:78:VAL:HG22	1.83	0.61
21:YU:73:ASN:HB2	21:YU:95:PHE:HE2	1.66	0.61
29:Y2:28:ARG:C	29:Y2:30:VAL:H	2.08	0.61
29:Y2:35:ARG:HG3	29:Y2:42:LEU:HD21	1.83	0.61
1:RA:272:A:O2'	1:RA:273:G:H8	1.82	0.61
1:RA:1475:G:HO2'	1:RA:1476:U:P	2.23	0.61
1:RA:2602:A:H4'	1:RA:2603:G:O5'	1.99	0.61
8:RH:50:ARG:O	8:RH:54:LEU:HB2	2.01	0.61
13:RM:43:ALA:H	13:RM:46:ILE:HG23	1.65	0.61
32:QA:182:A:C2	32:QA:184:G:C8	2.89	0.61
32:QA:604:G:C2	32:QA:635:A:C2	2.89	0.61
49:QR:35:SER:HA	49:QR:71:ASP:HB3	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:216:U:H4'	32:XA:464:U:H4'	1.82	0.61
32:XA:227:G:H2'	32:XA:228:A:O4'	2.00	0.61
33:XB:74:ALA:CB	33:XB:206:ILE:HD11	2.30	0.61
42:XK:27:ASN:HA	42:XK:57:SER:HB3	1.83	0.61
51:XT:26:MET:HE2	51:XT:26:MET:C	2.26	0.61
1:YA:364:C:H2'	1:YA:365:U:H6	1.62	0.61
1:YA:425:G:H2'	1:YA:426:C:H6	1.66	0.61
1:YA:1054:A:C4	1:YA:1055:G:H1'	2.36	0.61
1:YA:1706:C:H2'	1:YA:1757:A:OP2	2.01	0.61
1:YA:2733:A:O2'	1:YA:2734:A:H5'	2.00	0.61
1:YA:2808:G:O2'	1:YA:2809:A:H8	1.82	0.61
10:YJ:4:PHE:O	10:YJ:44:TYR:CZ	2.53	0.61
11:YK:10:VAL:HG13	11:YK:12:ASP:OD1	2.01	0.61
14:YN:37:THR:HA	14:YN:110:MET:HE2	1.82	0.61
31:Y4:7:VAL:CG1	31:Y4:8:LYS:H	2.13	0.61
1:RA:31:C:O3'	1:RA:1238:G:H5"	2.01	0.61
1:RA:287:G:H2'	1:RA:288:U:C6	2.36	0.61
7:RG:8:VAL:HG12	7:RG:49:LEU:H	1.64	0.61
11:RK:2:ILE:O	11:RK:3:GLN:HB3	2.00	0.61
18:RR:9:GLY:C	18:RR:10:LYS:HD2	2.25	0.61
32:QA:204:G:C1'	32:QA:465:A:C2	2.83	0.61
32:QA:982:U:H4'	32:QA:983:A:C5'	2.29	0.61
41:QJ:35:GLN:HG2	41:QJ:77:VAL:HB	1.83	0.61
45:QN:89:ARG:O	45:QN:91:GLU:HG2	1.99	0.61
32:XA:251:G:H4'	32:XA:252:U:H5"	1.81	0.61
33:XB:114:LYS:CE	33:XB:151:LYS:HB2	2.31	0.61
41:XJ:11:LYS:HB3	41:XJ:71:LEU:HD13	1.83	0.61
41:XJ:31:ARG:NH2	41:XJ:32:THR:HB	2.16	0.61
1:YA:125:A:H3'	29:Y2:19:ARG:HD2	1.82	0.61
1:YA:321:U:O4'	5:YE:159:LEU:HG	2.00	0.61
1:YA:379:G:C6	1:YA:396:G:C6	2.89	0.61
1:YA:1007:C:O3'	10:YJ:110:PRO:HB3	2.01	0.61
1:YA:1280:G:H2'	1:YA:1281:G:H5'	1.82	0.61
1:YA:2038:G:H2'	1:YA:2039:U:O4'	2.00	0.61
1:YA:2839:G:H21	14:YN:92:GLY:HA3	1.65	0.61
5:YE:128:ALA:HB1	5:YE:129:PRO:CD	2.28	0.61
10:YJ:110:PRO:O	10:YJ:115:GLY:HA3	2.00	0.61
10:YJ:111:LYS:HB2	10:YJ:115:GLY:CA	2.31	0.61
18:YR:9:GLY:H	18:YR:10:LYS:HD2	1.63	0.61
1:RA:1062:G:O2'	1:RA:1063:G:C8	2.53	0.61
4:RD:53:GLY:HA3	4:RD:77:ARG:H	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:RE:119:ILE:CD1	5:RE:187:VAL:HG22	2.27	0.61
5:RE:187:VAL:O	5:RE:188:MET:HB3	1.99	0.61
11:RK:15:GLY:O	11:RK:46:ALA:HA	2.01	0.61
16:RP:50:ARG:HD3	16:RP:56:SER:CB	2.31	0.61
32:QA:390:U:H2'	32:QA:391:G:H8	1.63	0.61
32:QA:847:G:H2'	32:QA:848:C:C6	2.36	0.61
34:QC:15:LYS:HG3	34:QC:16:PRO:HD2	1.81	0.61
43:QL:28:GLN:HB2	43:QL:81:ILE:O	2.01	0.61
43:QL:85:ARG:CZ	43:QL:87:LYS:HB3	2.31	0.61
44:QM:84:CYS:HB3	50:QS:73:PHE:HE2	1.66	0.61
32:XA:748:G:H2'	32:XA:749:A:C8	2.35	0.61
32:XA:935:A:O2'	32:XA:936:C:H6	1.82	0.61
32:XA:1451:U:C2	32:XA:1453:G:O6	2.54	0.61
32:XA:1513:A:H2'	32:XA:1514:G:C8	2.36	0.61
39:XH:100:ILE:C	39:XH:100:ILE:HD12	2.25	0.61
1:YA:78:U:C2'	1:YA:79:C:H5'	2.30	0.61
1:YA:202:U:O2	1:YA:202:U:H2'	2.00	0.61
1:YA:225:C:H2'	1:YA:226:A:O4'	2.00	0.61
1:YA:1399:C:O2'	1:YA:1400:U:H5'	2.00	0.61
1:YA:1616:A:OP1	1:YA:1616:A:H8	1.83	0.61
1:YA:1884:G:H8	1:YA:1884:G:OP2	1.84	0.61
1:YA:2721:A:H2'	1:YA:2722:G:O4'	2.01	0.61
3:YC:77:VAL:HG23	3:YC:112:GLY:H	1.65	0.61
5:YE:79:ARG:HG2	5:YE:80:SER:H	1.65	0.61
6:YF:33:ILE:HB	6:YF:90:LEU:HB2	1.83	0.61
7:YG:8:VAL:O	7:YG:9:VAL:HB	1.99	0.61
7:YG:16:VAL:HG11	7:YG:44:HIS:ND1	2.16	0.61
1:RA:1057:A:C2	1:RA:1082:U:C2	2.88	0.60
1:RA:1079:C:C4	1:RA:1088:A:C2	2.89	0.60
1:RA:1098:A:H3'	1:RA:1099:G:C8	2.35	0.60
1:RA:1429:G:O2'	1:RA:1430:G:H5'	2.01	0.60
4:RD:35:THR:OG1	4:RD:49:GLN:HG2	2.01	0.60
10:RJ:53:TYR:CE1	10:RJ:121:LYS:HG2	2.36	0.60
21:RU:42:LYS:HB3	21:RU:57:ILE:HG23	1.81	0.60
23:RW:37:VAL:CG1	23:RW:38:ARG:N	2.62	0.60
25:RY:43:LEU:O	25:RY:47:ARG:HB2	2.01	0.60
32:QA:1160:G:O6	32:QA:1181:G:O6	2.19	0.60
39:QH:75:GLN:O	39:QH:126:CYS:HB2	2.01	0.60
43:QL:33:CYS:HA	43:QL:53:ARG:O	2.01	0.60
48:QQ:6:THR:C	48:QQ:7:LEU:HD12	2.26	0.60
32:XA:1242:G:O2'	32:XA:1243:C:O4'	2.18	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:XE:131:ASN:C	36:XE:135:VAL:HG23	2.25	0.60
41:XJ:38:GLY:O	41:XJ:40:ILE:HD12	2.00	0.60
1:YA:21:A:H2'	1:YA:22:C:C6	2.36	0.60
1:YA:1071:G:N7	1:YA:1089:A:C5	2.69	0.60
1:YA:1915:U:O2'	1:YA:1916:A:H5'	2.01	0.60
1:YA:1965:C:H3'	1:YA:1966:A:C5'	2.30	0.60
1:YA:2022:U:O2'	1:YA:2616:C:O2'	2.18	0.60
5:YE:119:ILE:O	5:YE:119:ILE:HG13	2.01	0.60
12:YL:73:ILE:O	12:YL:105:ILE:HG23	2.00	0.60
1:RA:2199:A:C5'	1:RA:2199:A:H8	2.14	0.60
9:RI:80:LYS:HA	9:RI:85:ILE:O	2.01	0.60
18:RR:49:ILE:C	18:RR:51:VAL:O	2.44	0.60
19:RS:63:GLY:O	19:RS:64:ALA:CB	2.49	0.60
30:R3:21:PHE:HB2	30:R3:49:VAL:CG1	2.30	0.60
32:QA:198:G:H2'	32:QA:199:A:H8	1.63	0.60
32:QA:269:C:H2'	32:QA:270:A:C8	2.36	0.60
32:QA:328:C:O2	32:QA:328:C:H2'	2.01	0.60
33:QB:168:GLU:O	33:QB:169:HIS:C	2.43	0.60
35:QD:160:LEU:H	35:QD:160:LEU:HD13	1.65	0.60
39:QH:76:ARG:HD3	39:QH:77:VAL:N	2.16	0.60
39:QH:88:LYS:HA	39:QH:91:LEU:HD12	1.82	0.60
48:QQ:12:VAL:CG1	48:QQ:13:SER:H	2.13	0.60
32:XA:39:G:H2'	32:XA:40:C:C6	2.37	0.60
32:XA:90:C:O2'	32:XA:91:U:H5'	2.02	0.60
32:XA:476:U:C6	32:XA:476:U:OP2	2.54	0.60
32:XA:640:A:O2'	39:XH:106:SER:HB2	2.01	0.60
32:XA:1350:A:H2	38:XG:33:GLY:HA3	1.65	0.60
49:XR:22:TYR:HA	49:XR:57:ALA:HB1	1.83	0.60
49:XR:59:LYS:O	49:XR:63:TYR:HD1	1.83	0.60
1:YA:151:C:OP1	1:YA:1359:A:O2'	2.19	0.60
1:YA:394:C:H2'	1:YA:395:U:H5'	1.83	0.60
1:YA:742:A:H2'	1:YA:743:A:C8	2.36	0.60
1:YA:867:C:O2'	1:YA:868:U:O5'	2.18	0.60
1:YA:1439:A:N7	1:YA:1440:U:H1'	2.17	0.60
1:YA:1533:C:C2'	1:YA:1534:U:H5'	2.30	0.60
1:YA:2332:C:H4'	23:YW:40:ARG:NH2	2.16	0.60
1:YA:2667:C:O2'	1:YA:2668:G:H8	1.84	0.60
1:YA:2716:C:O2'	1:YA:2717:C:H5'	2.00	0.60
2:YB:12:C:O2'	23:YW:74:LYS:HA	2.00	0.60
5:YE:42:GLY:HA3	5:YE:90:GLN:O	2.00	0.60
6:YF:28:PRO:HB2	6:YF:168:LEU:CD2	2.23	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:YJ:5:THR:HA	10:YJ:44:TYR:CE2	2.36	0.60
15:YO:30:ARG:HG2	15:YO:31:THR:N	2.15	0.60
21:YU:17:ASP:HB2	21:YU:38:ILE:HA	1.82	0.60
1:RA:357:C:H2'	1:RA:358:U:C6	2.36	0.60
1:RA:545:U:O4'	1:RA:545:U:O2	2.18	0.60
1:RA:1071:G:OP2	1:RA:1071:G:C8	2.53	0.60
1:RA:1154:G:OP2	17:RQ:57:ARG:NH1	2.33	0.60
1:RA:2065:C:H2'	1:RA:2066:C:H6	1.66	0.60
1:RA:2320:U:H4'	1:RA:2321:U:C5'	2.31	0.60
3:RC:77:VAL:O	3:RC:77:VAL:CG2	2.48	0.60
13:RM:54:THR:O	13:RM:56:ALA:N	2.33	0.60
32:QA:439:U:C2'	32:QA:440:C:H5'	2.31	0.60
37:QF:4:TYR:O	37:QF:63:ASN:HA	2.01	0.60
32:XA:465:A:C8	32:XA:467:U:OP1	2.55	0.60
32:XA:675:A:H1'	42:XK:117:HIS:ND1	2.16	0.60
32:XA:769:G:H4'	32:XA:1513:A:H4'	1.82	0.60
32:XA:1241:G:C4	32:XA:1242:G:N7	2.69	0.60
33:XB:20:ARG:C	33:XB:21:TYR:HD1	2.09	0.60
38:XG:88:VAL:HG22	38:XG:89:GLU:N	2.13	0.60
1:YA:125:A:H5"	29:Y2:19:ARG:HD3	1.82	0.60
1:YA:243:U:O2'	1:YA:244:A:H8	1.84	0.60
1:YA:1341:G:H3'	1:YA:1397:U:O2	2.00	0.60
1:YA:2135:A:H2'	1:YA:2136:G:O4'	2.02	0.60
1:YA:2345:G:C6	1:YA:2347:C:N4	2.67	0.60
1:YA:2591:C:OP1	3:YC:237:ARG:HD2	2.01	0.60
7:YG:10:VAL:HB	7:YG:14:VAL:HG21	1.83	0.60
7:YG:84:LYS:O	7:YG:85:LYS:HB3	1.99	0.60
11:YK:113:MET:HA	11:YK:116:ILE:HD11	1.83	0.60
15:YO:7:ARG:HA	15:YO:10:ARG:NH2	2.16	0.60
22:YV:56:PHE:C	22:YV:58:SER:H	2.09	0.60
1:RA:1075:C:C4	1:RA:1076:C:N4	2.69	0.60
12:RL:66:PHE:C	12:RL:66:PHE:CD1	2.77	0.60
12:RL:77:ILE:HD13	12:RL:108:ALA:HB1	1.83	0.60
23:RW:37:VAL:HG13	23:RW:56:HIS:HB2	1.83	0.60
23:RW:50:VAL:C	23:RW:52:CYS:H	2.09	0.60
32:QA:174:A:C2'	32:QA:175:C:H5'	2.30	0.60
32:QA:601:G:O2'	32:QA:602:A:H5'	2.00	0.60
32:QA:1349:A:OP1	40:QI:122:ARG:N	2.29	0.60
40:QI:26:LYS:C	40:QI:27:ILE:HD12	2.25	0.60
43:QL:73:LEU:HD11	43:QL:79:ILE:HG21	1.82	0.60
32:XA:972:C:H4'	41:XJ:59:LYS:HG2	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1140:C:O2'	32:XA:1141:C:C6	2.51	0.60
52:XU:38:GLU:HA	52:XU:41:THR:OG1	2.01	0.60
1:YA:81:G:H2'	1:YA:82:U:O4'	2.02	0.60
1:YA:142:A:O2'	1:YA:143:C:H6	1.83	0.60
1:YA:538:A:N6	1:YA:555:G:O2'	2.34	0.60
1:YA:601:C:H4'	5:YE:99:LYS:HE2	1.83	0.60
1:YA:660:C:H5"	5:YE:94:GLN:OE1	2.02	0.60
1:YA:665:U:H2'	1:YA:666:A:H8	1.66	0.60
1:YA:716:A:C3'	1:YA:717:C:H5"	2.31	0.60
1:YA:1499:C:H2'	1:YA:1500:G:H5'	1.83	0.60
1:YA:2020:A:H5'	27:Y0:8:THR:HG22	1.82	0.60
1:YA:2059:A:O3'	5:YE:64:GLY:HA2	2.01	0.60
1:YA:2091:C:OP2	1:YA:2092:U:H3'	2.01	0.60
1:YA:2305:U:H4'	6:YF:132:ARG:HG2	1.82	0.60
1:YA:2577:A:H5"	1:YA:2578:G:H5'	1.83	0.60
4:YD:120:GLY:O	4:YD:124:ARG:HB2	2.01	0.60
4:YD:169:ARG:O	4:YD:170:VAL:HG22	2.01	0.60
14:YN:73:ASN:HD22	14:YN:76:VAL:HG21	1.65	0.60
17:YQ:50:ARG:N	17:YQ:50:ARG:HD2	2.17	0.60
1:RA:2471:A:H2'	1:RA:2472:G:H5'	1.82	0.60
3:RC:139:THR:O	3:RC:161:VAL:O	2.19	0.60
4:RD:33:ARG:NH2	4:RD:51:THR:HG23	2.17	0.60
4:RD:107:VAL:O	4:RD:174:SER:O	2.19	0.60
11:RK:51:LYS:O	11:RK:51:LYS:HD2	2.01	0.60
14:RN:75:ILE:C	14:RN:75:ILE:HD12	2.27	0.60
21:RU:38:ILE:CG2	21:RU:39:ASN:N	2.62	0.60
21:RU:82:VAL:O	21:RU:94:PHE:O	2.20	0.60
24:RX:38:TRP:HB2	24:RX:45:PHE:HE2	1.66	0.60
25:RY:9:LYS:HA	25:RY:9:LYS:NZ	2.17	0.60
32:QA:107:G:H2'	32:QA:108:G:H5'	1.82	0.60
32:QA:206:C:C2	32:QA:207:C:H1'	2.35	0.60
32:QA:344:A:H4'	32:QA:345:C:OP2	2.00	0.60
32:QA:1001:C:H2'	32:QA:1002:G:H8	1.65	0.60
32:QA:1025:U:H5"	32:QA:1026:G:OP1	2.02	0.60
32:QA:1031:C:O2'	32:QA:1032:G:H5"	2.02	0.60
33:QB:110:ILE:CD1	33:QB:147:LEU:HD13	2.31	0.60
35:QD:25:ARG:O	35:QD:26:ALA:HB2	2.01	0.60
50:QS:51:HIS:HD2	50:QS:53:GLY:H	1.46	0.60
52:QU:48:LYS:HA	52:QU:51:ALA:HB3	1.82	0.60
32:XA:968:A:C4	32:XA:1062:U:H4'	2.37	0.60
32:XA:1316:G:N2	32:XA:1318:A:H3'	2.15	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1514:G:H2'	32:XA:1515:G:H8	1.65	0.60
37:XF:97:THR:O	37:XF:98:GLU:HG3	2.02	0.60
38:XG:22:LEU:O	38:XG:26:VAL:HG22	2.00	0.60
1:YA:467:G:H4'	1:YA:796:C:O2'	2.01	0.60
1:YA:1210:G:H4'	1:YA:1211:C:C5'	2.32	0.60
1:YA:1232:G:H2'	1:YA:1233:C:C6	2.36	0.60
1:YA:1480:C:H2'	1:YA:1481:U:O4'	2.01	0.60
1:YA:1551:A:C4	1:YA:1552:A:C8	2.89	0.60
1:YA:1665:A:C2'	1:YA:1666:G:H5'	2.32	0.60
1:YA:2094:A:H2'	1:YA:2095:A:O4'	2.00	0.60
7:YG:117:PRO:CG	7:YG:143:VAL:HG11	2.30	0.60
10:YJ:35:ARG:NH1	10:YJ:140:LEU:HD11	2.16	0.60
11:YK:2:ILE:HG22	11:YK:3:GLN:N	2.17	0.60
16:YP:44:GLY:HA3	16:YP:60:VAL:HG12	1.84	0.60
1:RA:470:A:H61	20:RT:72:GLN:HE22	1.49	0.60
1:RA:2358:A:H61	12:RL:54:GLN:HE22	1.48	0.60
4:RD:169:ARG:C	4:RD:170:VAL:CG1	2.74	0.60
10:RJ:13:ARG:HD3	10:RJ:51:GLY:O	2.01	0.60
23:RW:51:GLY:O	23:RW:52:CYS:C	2.45	0.60
26:RZ:7:THR:HG23	26:RZ:34:THR:H	1.67	0.60
32:QA:737:C:H2'	32:QA:738:C:H6	1.65	0.60
32:QA:1314:C:C5	50:QS:5:LYS:HD3	2.36	0.60
32:QA:1492:A:H2'	32:QA:1493:A:H5"	1.84	0.60
38:QG:121:ASN:O	38:QG:125:ASP:HB2	2.00	0.60
51:QT:43:LYS:CB	51:QT:86:ALA:HB1	2.24	0.60
32:XA:374:A:OP1	32:XA:452:A:N1	2.34	0.60
32:XA:458:U:H2'	32:XA:459:A:C8	2.37	0.60
32:XA:1400:C:H4'	32:XA:1401:G:OP2	2.02	0.60
33:XB:164:ASP:HB3	33:XB:167:HIS:HB3	1.83	0.60
38:XG:30:MET:O	38:XG:31:VAL:HB	2.01	0.60
41:XJ:30:LYS:CG	41:XJ:36:VAL:HG22	2.32	0.60
45:XN:13:VAL:HG22	45:XN:59:GLN:NE2	2.17	0.60
45:XN:60:ARG:NH2	45:XN:70:HIS:HB3	2.17	0.60
1:YA:234:U:H2'	1:YA:235:U:C6	2.37	0.60
1:YA:379:G:C6	1:YA:380:G:C5	2.90	0.60
1:YA:1404:C:O2'	1:YA:1405:U:H5'	2.02	0.60
1:YA:1568:G:H21	3:YC:57:HIS:HE1	1.47	0.60
1:YA:2414:G:C2'	1:YA:2415:G:H5'	2.31	0.60
2:YB:42:C:H41	6:YF:87:LYS:HZ3	1.50	0.60
13:YM:136:MET:HE2	22:YV:57:TYR:HD2	1.67	0.60
14:YN:35:LYS:NZ	14:YN:112:TYR:HE1	1.98	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:YR:89:HIS:NE2	18:YR:91:GLN:HB2	2.17	0.60
22:YV:4:ILE:HB	22:YV:63:ILE:HG13	1.83	0.60
28:Y1:5:ARG:NH2	28:Y1:23:THR:HB	2.17	0.60
30:Y3:22:LYS:H	30:Y3:48:MET:CB	2.15	0.60
1:RA:1110:G:O2'	1:RA:1111:A:C8	2.44	0.60
1:RA:1149:G:O2'	1:RA:1150:C:H5'	2.01	0.60
1:RA:1150:C:HO2'	1:RA:1151:A:C5'	2.15	0.60
8:RH:14:SER:O	8:RH:16:GLY:N	2.34	0.60
8:RH:32:PRO:O	8:RH:33:GLN:HB2	2.00	0.60
12:RL:109:LYS:CG	12:RL:126:ARG:HB3	2.31	0.60
19:RS:4:ILE:CG2	19:RS:106:VAL:HG22	2.31	0.60
32:QA:259:G:H2'	32:QA:260:G:C8	2.36	0.60
32:QA:603:U:H3'	32:QA:603:U:H6	1.66	0.60
36:QE:44:ARG:HA	36:QE:71:ILE:O	2.02	0.60
37:QF:38:ARG:HB3	37:QF:63:ASN:HB2	1.83	0.60
37:QF:40:GLU:CB	37:QF:42:TRP:HE1	2.15	0.60
40:QI:56:MET:HE2	40:QI:57:VAL:H	1.66	0.60
41:QJ:22:THR:HG22	41:QJ:23:ALA:N	2.17	0.60
32:XA:1141:C:O2'	32:XA:1142:G:H8	1.85	0.60
32:XA:1336:C:H1'	32:XA:1337:G:C2	2.37	0.60
36:XE:24:VAL:HG23	36:XE:26:GLY:H	1.67	0.60
36:XE:79:THR:HA	36:XE:121:ASN:OD1	2.01	0.60
40:XI:17:ARG:HB2	40:XI:65:THR:HB	1.84	0.60
47:XP:8:ARG:HB3	47:XP:28:ARG:HH11	1.66	0.60
50:XS:40:PHE:HB3	50:XS:41:PRO:CD	2.29	0.60
1:YA:2:G:C6	1:YA:3:U:C4	2.90	0.60
1:YA:492:A:H2'	1:YA:493:G:O4'	2.02	0.60
1:YA:620:G:H8	1:YA:622:G:O6	1.83	0.60
1:YA:2060:A:H2'	5:YE:63:LYS:NZ	2.17	0.60
1:YA:2638:G:O2'	1:YA:2639:A:C8	2.55	0.60
1:YA:2873:A:H4'	56:YA:3801:HOH:O	2.01	0.60
5:YE:179:SER:HA	5:YE:182:ALA:HB3	1.83	0.60
7:YG:48:THR:O	7:YG:49:LEU:HB2	2.01	0.60
14:YN:1:MET:O	14:YN:2:ARG:HB2	2.01	0.60
27:Y0:37:HIS:CG	27:Y0:43:THR:HG22	2.37	0.60
1:RA:1936:A:C2	1:RA:1943:U:C5	2.87	0.60
3:RC:250:GLN:HE21	3:RC:250:GLN:H	1.47	0.60
4:RD:97:SER:H	4:RD:99:GLU:CD	2.10	0.60
5:RE:146:VAL:HG23	5:RE:167:VAL:CG2	2.32	0.60
12:RL:55:MET:HE2	12:RL:56:PRO:HD3	1.84	0.60
20:RT:32:LEU:O	20:RT:83:ALA:HB2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:135:C:H2'	32:QA:136:C:H5'	1.82	0.60
32:QA:181:A:N6	32:QA:195:A:C8	2.70	0.60
32:QA:1212:U:H2'	32:QA:1212:U:O2	2.02	0.60
33:QB:89:PHE:HB3	33:QB:149:GLY:CA	2.31	0.60
43:QL:72:ASN:HD22	43:QL:73:LEU:H	1.50	0.60
32:XA:71:A:O2'	32:XA:72:A:O4'	2.16	0.60
32:XA:1365:G:O2'	32:XA:1366:C:C6	2.55	0.60
33:XB:76:SER:O	33:XB:79:VAL:HG12	2.00	0.60
39:XH:41:GLU:C	39:XH:43:GLY:H	2.09	0.60
39:XH:85:TYR:CE1	48:XQ:36:PHE:HE2	2.20	0.60
49:XR:19:GLU:CD	49:XR:20:ILE:N	2.60	0.60
1:YA:226:A:N6	1:YA:227:A:N6	2.50	0.60
1:YA:1521:G:C6	1:YA:1522:A:C6	2.89	0.60
1:YA:1635:A:H2'	1:YA:1636:U:H6	1.66	0.60
1:YA:2234:G:C5	1:YA:2235:G:C8	2.89	0.60
3:YC:173:LEU:HD22	3:YC:173:LEU:H	1.66	0.60
6:YF:34:THR:O	6:YF:35:LEU:HB2	2.00	0.60
8:YH:62:LEU:C	8:YH:64:ALA:H	2.08	0.60
11:YK:35:VAL:HG23	11:YK:36:GLY:N	2.16	0.60
14:YN:82:GLU:C	14:YN:85:PRO:HD2	2.27	0.60
1:RA:194:G:C8	56:RA:3760:HOH:O	2.52	0.60
1:RA:1062:G:O2'	1:RA:1063:G:O4'	2.20	0.60
1:RA:1501:G:O2'	1:RA:1502:A:H5'	2.02	0.60
1:RA:1738:G:HO2'	1:RA:1739:A:H8	1.50	0.60
1:RA:2356:U:H4'	23:RW:16:GLU:HG3	1.84	0.60
3:RC:20:ASN:HD22	3:RC:20:ASN:C	2.10	0.60
6:RF:134:GLN:CG	6:RF:135:ILE:H	2.09	0.60
19:RS:84:ARG:HB2	19:RS:96:ILE:CG1	2.31	0.60
20:RT:29:THR:HB	20:RT:86:THR:HG22	1.84	0.60
32:QA:1218:C:H2'	32:QA:1219:A:C8	2.37	0.60
32:QA:1287:A:H2'	32:QA:1288:A:C8	2.37	0.60
36:QE:114:LEU:HD21	36:QE:122:VAL:HG21	1.82	0.60
32:XA:1118:U:H1'	32:XA:1179:A:C4	2.36	0.60
32:XA:1327:C:N4	32:XA:1328:C:N4	2.49	0.60
38:XG:92:PRO:HA	38:XG:95:ARG:HB2	1.82	0.60
45:XN:68:ARG:HG3	45:XN:69:PRO:HD2	1.82	0.60
1:YA:128:C:O2'	1:YA:129:C:H6	1.81	0.60
1:YA:478:A:N1	1:YA:480:A:C4	2.70	0.60
1:YA:1083:U:H1'	1:YA:1086:A:C2	2.37	0.60
1:YA:1286:A:O2'	1:YA:1288:G:N2	2.35	0.60
1:YA:2729:G:H5"	4:YD:190:LYS:NZ	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:YH:57:LYS:O	8:YH:57:LYS:HD2	2.02	0.60
8:YH:84:ALA:HA	8:YH:89:LYS:O	2.00	0.60
15:YO:18:LEU:HD13	15:YO:25:ARG:HG2	1.82	0.60
17:YQ:10:ARG:HA	17:YQ:13:HIS:HB2	1.82	0.60
17:YQ:46:TYR:CZ	17:YQ:50:ARG:NH1	2.70	0.60
1:RA:973:A:O4'	1:RA:1188:U:C6	2.55	0.60
1:RA:1585:C:H2'	1:RA:1586:A:O4'	2.01	0.60
1:RA:1794:A:H2'	1:RA:1795:C:C6	2.37	0.60
6:RF:134:GLN:O	6:RF:136:ILE:N	2.30	0.60
9:RI:18:ASN:HB2	9:RI:38:CYS:HB3	1.84	0.60
14:RN:72:ASP:OD1	14:RN:75:ILE:HG23	2.02	0.60
15:RO:75:GLY:HA3	15:RO:109:ALA:HB3	1.84	0.60
24:RX:52:ALA:O	24:RX:53:LYS:CB	2.49	0.60
32:QA:1005:A:C2	32:QA:1006:G:H1'	2.37	0.60
36:QE:55:VAL:N	36:QE:56:PRO:HD2	2.17	0.60
36:QE:81:GLN:HG2	36:QE:149:PRO:CB	2.32	0.60
42:QK:124:LYS:HE2	52:QU:33:ARG:HH21	1.66	0.60
43:QL:33:CYS:H	43:QL:54:VAL:HG13	1.66	0.60
45:QN:90:GLY:O	45:QN:92:ILE:N	2.32	0.60
34:XC:14:VAL:O	34:XC:14:VAL:HG12	2.00	0.60
38:XG:19:SER:HB3	38:XG:22:LEU:HB3	1.81	0.60
39:XH:73:SER:HB2	39:XH:129:ALA:HB3	1.84	0.60
47:XP:1:MET:HA	47:XP:1:MET:HE3	1.84	0.60
1:YA:120:U:H4'	1:YA:121:G:H5'	1.84	0.60
1:YA:785:G:O2'	1:YA:1779:U:H5"	2.01	0.60
1:YA:1844:C:O3'	3:YC:255:LYS:NZ	2.34	0.60
2:YB:11:C:C5	2:YB:12:C:H5	2.20	0.60
4:YD:108:ASP:OD1	4:YD:207:VAL:HG23	2.02	0.60
5:YE:79:ARG:HG2	5:YE:80:SER:N	2.17	0.60
5:YE:170:ARG:HH22	5:YE:176:ASP:HB2	1.67	0.60
8:YH:117:LEU:HD22	8:YH:122:LEU:HB2	1.83	0.60
10:YJ:77:HIS:CE1	10:YJ:83:GLY:HA3	2.37	0.60
10:YJ:84:ILE:O	10:YJ:84:ILE:HG23	2.00	0.60
25:YY:19:LEU:HA	25:YY:22:LEU:HB2	1.83	0.60
27:Y0:30:ASP:OD1	27:Y0:47:TYR:HB3	2.02	0.60
1:RA:962:G:H21	1:RA:2250:G:H1	1.50	0.59
3:RC:251:THR:CG2	3:RC:252:LYS:H	2.14	0.59
8:RH:41:LYS:HA	8:RH:44:ILE:HG12	1.83	0.59
13:RM:31:PHE:CZ	13:RM:110:GLU:HG2	2.35	0.59
14:RN:71:ARG:HG3	14:RN:71:ARG:NH2	2.15	0.59
17:RQ:86:SER:O	17:RQ:87:VAL:C	2.45	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RV:21:ARG:HA	22:RV:25:LYS:O	2.01	0.59
23:RW:39:GLN:NE2	23:RW:43:LYS:H	2.00	0.59
32:QA:1124:G:H2'	32:QA:1145:A:H61	1.67	0.59
32:QA:1304:G:H1'	32:QA:1334:G:N2	2.17	0.59
42:QK:57:SER:O	42:QK:90:PRO:HG3	2.02	0.59
42:QK:60:PHE:O	42:QK:63:GLN:HB3	2.01	0.59
45:QN:87:ALA:HB2	45:QN:92:ILE:HD12	1.84	0.59
48:QQ:60:ILE:HG22	48:QQ:72:TRP:HE3	1.66	0.59
38:XG:42:VAL:O	38:XG:43:TYR:HB2	2.00	0.59
40:XI:114:LYS:HD2	40:XI:120:ALA:O	2.02	0.59
46:XO:34:GLN:OE1	46:XO:38:LEU:HD22	2.02	0.59
48:XQ:3:LYS:HZ2	48:XQ:6:THR:HG21	1.66	0.59
1:YA:125:A:C5'	29:Y2:19:ARG:HD3	2.32	0.59
1:YA:247:G:N7	1:YA:249:C:C2	2.70	0.59
1:YA:1607:C:H4'	1:YA:1608:A:H8	1.66	0.59
1:YA:1608:A:C8	1:YA:1611:C:N4	2.70	0.59
1:YA:2448:A:H61	12:YL:36:LYS:NZ	1.99	0.59
1:YA:2765:A:H3'	1:YA:2766:A:H5'	1.83	0.59
2:YB:86:G:C2'	2:YB:87:U:H5"	2.31	0.59
4:YD:140:HIS:N	4:YD:140:HIS:CD2	2.69	0.59
6:YF:105:ILE:C	6:YF:108:PRO:HD2	2.27	0.59
8:YH:94:ILE:HG13	8:YH:98:ASP:CB	2.32	0.59
1:RA:26:G:H1'	1:RA:514:A:N6	2.17	0.59
1:RA:285:G:N3	1:RA:285:G:H2'	2.16	0.59
1:RA:790:U:O2'	1:RA:791:C:O5'	2.20	0.59
1:RA:1157:G:O2'	26:RZ:31:ILE:HD11	2.01	0.59
12:RL:77:ILE:HD11	12:RL:101:ILE:HD11	1.83	0.59
13:RM:35:ALA:O	13:RM:36:VAL:CB	2.46	0.59
15:RO:31:THR:CG2	15:RO:34:HIS:H	2.10	0.59
25:RY:39:GLN:HB2	25:RY:41:HIS:CD2	2.37	0.59
26:RZ:40:THR:HG23	26:RZ:43:ILE:H	1.67	0.59
33:QB:24:PRO:C	33:QB:26:MET:H	2.09	0.59
39:QH:58:LEU:HD13	39:QH:59:GLU:N	2.17	0.59
32:XA:54:C:N4	32:XA:352:C:H2'	2.17	0.59
32:XA:1046:A:H2'	32:XA:1047:G:O4'	2.03	0.59
32:XA:1049:U:H4'	32:XA:1050:G:C5'	2.33	0.59
32:XA:1124:G:H1'	32:XA:1125:U:H5	1.65	0.59
1:YA:80:G:O2'	1:YA:346:A:C2	2.55	0.59
1:YA:481:G:O2'	1:YA:507:A:N6	2.35	0.59
1:YA:532:A:C4	1:YA:2021:C:O2	2.55	0.59
1:YA:558:U:OP2	10:YJ:113:PRO:HG2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:638:G:H2'	1:YA:639:U:C6	2.37	0.59
1:YA:784:G:HO2'	1:YA:785:G:H8	1.48	0.59
1:YA:1232:G:H2'	1:YA:1233:C:H6	1.67	0.59
1:YA:1843:C:O2'	3:YC:253:GLY:HA3	2.03	0.59
1:YA:2191:A:H5"	1:YA:2192:U:OP2	2.03	0.59
4:YD:114:LYS:HB2	4:YD:116:LYS:HE3	1.84	0.59
8:YH:24:GLY:O	8:YH:28:ASN:HB2	2.00	0.59
13:YM:57:VAL:O	13:YM:58:LYS:HB2	2.02	0.59
1:RA:568:U:OP1	12:RL:36:LYS:HE3	2.02	0.59
1:RA:811:U:C2	1:RA:1251:C:C5	2.90	0.59
1:RA:1014:A:H2'	1:RA:1015:U:C6	2.37	0.59
1:RA:1180:U:H2'	1:RA:1181:U:C5	2.37	0.59
1:RA:1931:U:O2'	1:RA:1932:A:H5'	2.01	0.59
5:RE:161:ALA:HA	5:RE:164:LEU:HB2	1.83	0.59
10:RJ:55:ILE:O	10:RJ:55:ILE:HG13	2.01	0.59
11:RK:10:VAL:HB	11:RK:16:ALA:HB1	1.85	0.59
12:RL:132:ARG:HG3	12:RL:142:ILE:HD12	1.84	0.59
14:RN:73:ASN:HD22	14:RN:76:VAL:HG11	1.66	0.59
15:RO:111:ARG:O	15:RO:113:ALA:N	2.32	0.59
32:QA:330:C:C6	32:QA:330:C:H5"	2.37	0.59
32:QA:1314:C:O2'	32:QA:1315:U:H5'	2.02	0.59
34:QC:156:LEU:C	34:QC:158:GLY:H	2.09	0.59
35:QD:151:GLN:O	35:QD:152:SER:C	2.45	0.59
41:QJ:32:THR:HG23	41:QJ:33:GLY:H	1.68	0.59
46:QO:86:LEU:C	46:QO:88:ARG:H	2.08	0.59
32:XA:87:C:O2'	32:XA:88:U:C4'	2.49	0.59
32:XA:356:A:H2'	32:XA:357:G:O4'	2.01	0.59
35:XD:190:LEU:O	35:XD:191:SER:O	2.20	0.59
35:XD:191:SER:O	35:XD:192:ALA:CB	2.51	0.59
42:XK:60:PHE:O	42:XK:64:VAL:HG13	2.02	0.59
1:YA:84:A:H2	1:YA:98:G:N3	2.00	0.59
1:YA:327:G:H21	21:YU:67:SER:HB2	1.66	0.59
1:YA:1338:G:H5"	20:YT:17:SER:HB3	1.83	0.59
1:YA:2680:U:OP2	4:YD:114:LYS:HD3	2.02	0.59
1:YA:2898:U:H2'	1:YA:2899:A:C8	2.37	0.59
13:YM:8:LYS:HD2	13:YM:8:LYS:N	2.16	0.59
28:Y1:5:ARG:CD	28:Y1:25:ASN:HB2	2.30	0.59
1:RA:1047:G:N2	1:RA:1110:G:C4	2.71	0.59
4:RD:107:VAL:N	4:RD:206:ALA:H	1.99	0.59
8:RH:67:ALA:C	8:RH:69:ALA:H	2.09	0.59
17:RQ:69:ARG:HB2	17:RQ:69:ARG:NH2	2.06	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:1256:A:H5"	34:QC:26:LYS:HE2	1.84	0.59
33:QB:103:TRP:NE1	33:QB:150:ILE:HD11	2.17	0.59
33:QB:211:LEU:O	33:QB:215:ALA:CB	2.49	0.59
36:QE:110:MET:H	36:QE:113:VAL:HG13	1.66	0.59
36:QE:114:LEU:HD21	36:QE:122:VAL:CG2	2.32	0.59
40:QI:18:VAL:HA	40:QI:64:ILE:HG23	1.84	0.59
32:XA:671:G:N2	32:XA:736:C:C2	2.70	0.59
33:XB:168:GLU:O	33:XB:172:ILE:HG12	2.02	0.59
35:XD:125:ASN:N	35:XD:141:VAL:O	2.35	0.59
48:XQ:25:GLU:HA	48:XQ:39:ARG:O	2.03	0.59
1:YA:79:C:H2'	1:YA:80:G:O4'	2.01	0.59
1:YA:90:U:H3'	1:YA:91:A:C5'	2.32	0.59
1:YA:246:C:H4'	1:YA:385:C:O2'	2.02	0.59
1:YA:370:G:N1	1:YA:424:G:C5	2.70	0.59
1:YA:410:G:N1	1:YA:2407:A:N6	2.49	0.59
1:YA:503:A:C4'	1:YA:504:A:O5'	2.47	0.59
1:YA:536:G:C2'	1:YA:537:G:H5'	2.33	0.59
1:YA:647:G:C5	1:YA:648:G:N7	2.70	0.59
1:YA:813:U:H2'	1:YA:814:C:C6	2.36	0.59
1:YA:850:U:O2'	26:YZ:22:THR:HG22	2.02	0.59
1:YA:1998:A:H2'	1:YA:1999:C:C6	2.36	0.59
1:YA:2286:G:H4'	1:YA:2287:A:C4	2.37	0.59
1:YA:2478:A:N7	1:YA:2529:G:C6	2.69	0.59
1:YA:2627:G:O2'	1:YA:2781:A:N1	2.31	0.59
1:YA:2816:G:O3'	14:YN:99:LYS:HE3	2.00	0.59
4:YD:149:ASN:O	4:YD:151:THR:N	2.35	0.59
5:YE:79:ARG:CG	5:YE:80:SER:H	2.14	0.59
10:YJ:6:ALA:HB3	10:YJ:45:THR:HB	1.84	0.59
14:YN:12:ARG:HA	14:YN:12:ARG:NE	2.17	0.59
14:YN:14:SER:C	14:YN:16:HIS:H	2.08	0.59
26:YZ:23:LEU:HD12	26:YZ:28:LEU:HD21	1.83	0.59
1:RA:459:U:O2'	1:RA:460:A:H5'	2.03	0.59
1:RA:573:U:O2'	1:RA:574:A:H3'	2.03	0.59
1:RA:893:C:O2'	1:RA:894:U:H5'	2.03	0.59
1:RA:1076:C:H2'	1:RA:1077:A:C8	2.37	0.59
1:RA:1731:G:C4	1:RA:1733:G:N7	2.71	0.59
1:RA:1731:G:O2'	1:RA:1732:C:H3'	2.02	0.59
7:RG:8:VAL:CG1	7:RG:9:VAL:N	2.64	0.59
8:RH:4:ILE:HG23	8:RH:17:ASP:O	2.02	0.59
8:RH:99:ILE:HG22	8:RH:99:ILE:O	2.01	0.59
14:RN:74:GLU:O	14:RN:77:ALA:HB3	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:RN:85:PRO:HA	14:RN:88:ALA:HB2	1.84	0.59
14:RN:102:PHE:HD1	14:RN:107:ASN:HD21	1.50	0.59
17:RQ:85:ALA:O	17:RQ:86:SER:O	2.21	0.59
18:RR:24:LYS:HA	18:RR:94:THR:HG23	1.84	0.59
18:RR:27:ILE:N	18:RR:27:ILE:HD13	2.15	0.59
21:RU:86:PHE:CE1	21:RU:101:THR:HG21	2.37	0.59
31:R4:9:LYS:HB3	31:R4:14:CYS:HB2	1.82	0.59
32:QA:1257:A:H4'	32:QA:1258:G:OP2	2.02	0.59
32:QA:1319:A:C8	32:QA:1323:G:C6	2.90	0.59
33:QB:49:PHE:O	33:QB:52:ALA:HB3	2.02	0.59
41:QJ:65:TYR:HB3	45:QN:95:LEU:CD1	2.27	0.59
44:QM:10:ASP:OD1	44:QM:44:ILE:HB	2.02	0.59
48:QQ:11:VAL:HG12	48:QQ:12:VAL:HG12	1.85	0.59
50:QS:79:TYR:O	50:QS:80:ARG:HB3	2.02	0.59
32:XA:457:G:C8	32:XA:457:G:OP2	2.56	0.59
32:XA:522:C:H41	43:XL:49:ARG:NH2	1.96	0.59
32:XA:1365:G:C2	32:XA:1366:C:C2	2.91	0.59
38:XG:4:ARG:HD2	38:XG:5:VAL:N	2.16	0.59
52:XU:3:ILE:O	52:XU:4:LYS:HG2	2.01	0.59
1:YA:263:G:H4'	1:YA:430:A:O4'	2.03	0.59
1:YA:560:C:O2	17:YQ:47:ARG:NH1	2.35	0.59
1:YA:1327:A:H2'	1:YA:1328:A:O4'	2.02	0.59
1:YA:1522:A:H1'	1:YA:1524:G:C4	2.38	0.59
1:YA:2305:U:P	6:YF:132:ARG:HE	2.25	0.59
2:YB:38:C:O2'	2:YB:39:A:H5'	2.02	0.59
5:YE:162:ARG:C	5:YE:164:LEU:H	2.10	0.59
8:YH:4:ILE:HG23	8:YH:17:ASP:O	2.02	0.59
9:YI:51:GLY:O	9:YI:52:LEU:HB2	2.01	0.59
1:RA:322:A:H5'	1:RA:340:A:H1'	1.84	0.59
1:RA:603:A:H4'	1:RA:604:G:H5'	1.84	0.59
1:RA:813:U:H2'	1:RA:814:C:C6	2.38	0.59
1:RA:1567:G:H2'	3:RC:84:PRO:HG3	1.84	0.59
13:RM:13:HIS:O	13:RM:14:LYS:CB	2.50	0.59
15:RO:75:GLY:HA3	15:RO:106:LEU:HA	1.83	0.59
16:RP:87:ARG:NH2	16:RP:111:GLU:HG3	2.17	0.59
18:RR:45:GLU:OE2	18:RR:45:GLU:HA	2.02	0.59
20:RT:29:THR:N	20:RT:91:GLN:HE22	2.00	0.59
21:RU:100:GLU:O	21:RU:101:THR:HB	2.02	0.59
32:QA:70:U:O2'	32:QA:71:A:C8	2.56	0.59
32:QA:575:G:O3'	56:QA:1740:HOH:O	2.17	0.59
32:QA:1469:C:H5'	32:QA:1469:C:C6	2.29	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:1489:G:C2'	32:QA:1490:U:H5'	2.32	0.59
34:QC:46:LEU:HB3	34:QC:49:ALA:HB3	1.84	0.59
41:QJ:33:GLY:O	41:QJ:34:ALA:HB2	2.03	0.59
43:QL:42:LYS:O	43:QL:44:PRO:HD2	2.01	0.59
49:QR:44:THR:OG1	49:QR:46:THR:HG22	2.02	0.59
32:XA:140:U:H2'	32:XA:141:G:O4'	2.02	0.59
32:XA:1014:A:H4'	50:XS:13:HIS:ND1	2.17	0.59
32:XA:1037:C:H2'	32:XA:1037:C:O2	2.00	0.59
34:XC:88:LYS:HA	34:XC:91:ALA:HB3	1.84	0.59
34:XC:166:TRP:N	34:XC:166:TRP:CE3	2.70	0.59
36:XE:157:GLY:HA3	39:XH:63:LYS:NZ	2.17	0.59
50:XS:35:ARG:NH2	50:XS:53:GLY:H	2.00	0.59
1:YA:301:G:C5	1:YA:302:C:N4	2.71	0.59
1:YA:386:G:H4'	1:YA:387:U:OP2	2.01	0.59
1:YA:483:A:C8	21:YU:44:HIS:CG	2.90	0.59
1:YA:1255:U:H3'	1:YA:1256:G:C5'	2.31	0.59
1:YA:1413:A:C6	1:YA:1414:C:N4	2.71	0.59
1:YA:2515:C:H42	1:YA:2569:G:H1	1.48	0.59
1:YA:2846:G:OP1	16:YP:51:ASN:HB2	2.03	0.59
8:YH:82:SER:O	8:YH:90:LEU:HD11	2.03	0.59
9:YI:95:ASP:CG	9:YI:96:LYS:H	2.09	0.59
18:YR:24:LYS:HA	18:YR:94:THR:HG23	1.84	0.59
24:YX:39:VAL:HG22	24:YX:44:ARG:O	2.03	0.59
1:RA:343:C:O2	1:RA:343:C:H2'	2.03	0.59
1:RA:527:C:H4'	1:RA:528:A:O5'	2.02	0.59
20:RT:38:ALA:HB1	20:RT:43:ILE:HG22	1.83	0.59
22:RV:5:ASN:ND2	22:RV:5:ASN:H	2.01	0.59
33:QB:15:PHE:O	33:QB:40:ILE:HG12	2.03	0.59
44:QM:3:ILE:HA	44:QM:56:ARG:NH1	2.18	0.59
32:XA:457:G:H2'	32:XA:457:G:N3	2.18	0.59
32:XA:951:G:H1'	32:XA:970:C:O2'	2.02	0.59
32:XA:1170:A:H2'	32:XA:1171:A:O4'	2.02	0.59
36:XE:154:ALA:HB1	39:XH:65:PHE:CE2	2.38	0.59
40:XI:49:GLN:N	40:XI:50:PRO:HD2	2.17	0.59
47:XP:67:ILE:HG12	47:XP:72:ALA:HB2	1.84	0.59
48:XQ:13:SER:HB3	48:XQ:21:VAL:HB	1.85	0.59
1:YA:84:A:C4	1:YA:103:A:N6	2.71	0.59
1:YA:553:G:H2'	1:YA:554:U:O4'	2.03	0.59
1:YA:637:A:OP2	12:YL:128:THR:HG21	2.02	0.59
1:YA:1062:G:O4'	1:YA:1088:A:N7	2.35	0.59
1:YA:1079:C:O2'	1:YA:1080:A:O4'	2.20	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1259:G:H2'	1:YA:1260:A:C8	2.38	0.59
1:YA:1388:G:H2'	1:YA:1389:G:C8	2.38	0.59
1:YA:1574:C:O5'	1:YA:1574:C:H6	1.85	0.59
2:YB:42:C:N4	6:YF:87:LYS:HD2	2.18	0.59
2:YB:69:G:H3'	2:YB:70:C:H6	1.66	0.59
3:YC:20:ASN:HB2	3:YC:23:LEU:HD22	1.84	0.59
13:YM:19:GLY:H	13:YM:38:ARG:HH21	1.51	0.59
19:YS:71:VAL:O	19:YS:71:VAL:HG13	2.03	0.59
25:YY:4:LYS:HB2	25:YY:4:LYS:HZ3	1.68	0.59
1:RA:1734:G:C4	1:RA:1735:A:C8	2.91	0.59
1:RA:2449:U:H4'	1:RA:2450:A:OP1	2.03	0.59
3:RC:30:ALA:HB3	3:RC:31:PRO:HD3	1.83	0.59
3:RC:259:ASN:O	3:RC:260:LYS:HB2	2.03	0.59
4:RD:66:GLY:O	4:RD:69:ALA:HB3	2.03	0.59
10:RJ:114:LEU:O	10:RJ:117:ALA:HB3	2.02	0.59
13:RM:78:LEU:HD23	13:RM:79:ALA:N	2.16	0.59
26:RZ:8:GLN:O	26:RZ:53:MET:O	2.21	0.59
28:R1:46:VAL:HG12	28:R1:47:ILE:H	1.68	0.59
31:R4:7:VAL:HG23	31:R4:8:LYS:H	1.68	0.59
32:QA:255:G:H4'	48:QQ:18:LYS:HE3	1.83	0.59
32:QA:636:U:H5"	48:QQ:5:ARG:HG2	1.83	0.59
33:QB:9:LEU:HB2	33:QB:42:LEU:CD1	2.32	0.59
33:QB:49:PHE:CB	33:QB:212:TYR:OH	2.50	0.59
32:XA:376:G:H5"	47:XP:5:ARG:HB2	1.84	0.59
32:XA:987:G:H2'	32:XA:988:G:C8	2.38	0.59
32:XA:1372:U:H5"	40:XI:71:ILE:HD11	1.84	0.59
32:XA:1458:G:O2'	51:XT:22:SER:HB3	2.02	0.59
34:XC:187:GLU:O	34:XC:188:ALA:HB2	2.03	0.59
39:XH:104:SER:HA	39:XH:109:VAL:HG22	1.85	0.59
1:YA:353:C:N4	1:YA:354:A:N6	2.51	0.59
1:YA:686:U:H6	1:YA:788:A:N1	2.01	0.59
1:YA:1551:A:C4	1:YA:1552:A:H8	2.20	0.59
1:YA:1553:A:N7	1:YA:1555:G:C6	2.71	0.59
1:YA:2310:C:O2'	1:YA:2311:A:C4'	2.50	0.59
1:YA:2725:A:C4	1:YA:2727:A:N7	2.71	0.59
5:YE:147:LEU:O	5:YE:148:ILE:HB	2.02	0.59
1:RA:39:G:H2'	1:RA:40:U:C6	2.38	0.59
1:RA:747:U:C5	1:RA:2613:U:C5	2.91	0.59
10:RJ:39:LYS:HA	10:RJ:43:GLU:HG3	1.83	0.59
10:RJ:124:VAL:O	10:RJ:125:TYR:HB2	2.03	0.59
21:RU:6:ARG:O	21:RU:24:VAL:HB	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:64:G:C8	32:QA:99:C:N4	2.71	0.59
32:QA:707:U:OP1	42:QK:86:LYS:HE3	2.03	0.59
32:QA:865:A:H2'	32:QA:866:C:C6	2.37	0.59
35:QD:96:ARG:HB3	35:QD:98:ASP:OD1	2.03	0.59
41:QJ:7:ARG:HD3	41:QJ:75:ASP:OD1	2.03	0.59
32:XA:86:G:HO2'	32:XA:87:C:P	2.26	0.59
32:XA:963:G:O2'	32:XA:964:A:H5'	2.03	0.59
32:XA:984:C:O2'	32:XA:985:C:C6	2.55	0.59
32:XA:1134:G:N1	32:XA:1135:U:H1'	2.18	0.59
32:XA:1169:A:H2'	32:XA:1170:A:H8	1.68	0.59
33:XB:90:PHE:CE2	33:XB:149:GLY:HA3	2.37	0.59
43:XL:41:PRO:HD2	43:XL:47:ALA:O	2.03	0.59
1:YA:67:U:H2'	1:YA:68:G:C8	2.33	0.59
1:YA:226:A:C5	1:YA:227:A:N7	2.71	0.59
1:YA:464:U:C1'	1:YA:686:U:H5	2.14	0.59
1:YA:590:A:H2'	1:YA:591:U:H6	1.67	0.59
1:YA:976:G:H2'	1:YA:977:G:H8	1.68	0.59
1:YA:1252:G:H5"	56:YA:3286:HOH:O	2.02	0.59
1:YA:1593:A:C6	1:YA:1594:U:C4	2.91	0.59
4:YD:97:SER:HB2	4:YD:99:GLU:HG2	1.84	0.59
6:YF:160:LYS:HD3	6:YF:161:SER:N	2.18	0.59
7:YG:44:HIS:HA	7:YG:49:LEU:HA	1.84	0.59
8:YH:120:GLY:O	8:YH:121:VAL:HB	2.02	0.59
1:RA:1935:G:H1'	1:RA:1964:G:N2	2.17	0.59
3:RC:12:ARG:CG	3:RC:12:ARG:NH1	2.51	0.59
9:RI:90:GLY:O	9:RI:92:PRO:HD3	2.03	0.59
11:RK:34:GLY:O	11:RK:35:VAL:C	2.45	0.59
16:RP:105:LYS:HA	16:RP:108:ARG:HD3	1.84	0.59
23:RW:23:LYS:HD2	23:RW:24:ARG:N	2.18	0.59
32:QA:1331:G:O2'	32:QA:1332:A:P	2.61	0.59
33:QB:143:LEU:HD23	33:QB:143:LEU:H	1.67	0.59
35:QD:173:ASP:O	35:QD:174:ALA:HB2	2.03	0.59
42:QK:100:ASN:HD22	42:QK:106:ILE:HG22	1.67	0.59
51:QT:79:THR:O	51:QT:82:ILE:HG13	2.02	0.59
32:XA:659:U:H2'	32:XA:660:C:H6	1.67	0.59
32:XA:822:U:H2'	32:XA:823:C:C6	2.35	0.59
32:XA:1254:A:H2'	32:XA:1255:G:C8	2.38	0.59
35:XD:170:LEU:HA	35:XD:182:LYS:HB2	1.84	0.59
45:XN:27:LYS:HB2	45:XN:45:LEU:CD2	2.32	0.59
1:YA:27:G:H1'	1:YA:513:A:H62	1.66	0.59
1:YA:78:U:H2'	1:YA:79:C:C6	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:321:U:C2	5:YE:159:LEU:HD21	2.38	0.59
1:YA:394:C:C2'	1:YA:395:U:H5'	2.32	0.59
1:YA:459:U:C5	1:YA:469:G:N2	2.71	0.59
1:YA:621:A:O2'	1:YA:622:G:O4'	2.21	0.59
1:YA:711:G:C2	1:YA:721:A:C2	2.90	0.59
1:YA:1062:G:OP1	1:YA:1070:A:OP2	2.20	0.59
1:YA:1178:C:H2'	1:YA:1179:G:O4'	2.03	0.59
1:YA:1808:A:N7	24:YX:27:ARG:NH1	2.51	0.59
1:YA:1866:A:H2'	1:YA:1867:G:O4'	2.03	0.59
13:YM:41:LEU:HD23	13:YM:46:ILE:HG22	1.85	0.59
13:YM:42:THR:HG22	13:YM:44:ARG:H	1.68	0.59
16:YP:62:LYS:O	16:YP:63:ILE:HB	2.03	0.59
20:YT:14:PRO:O	20:YT:32:LEU:HA	2.02	0.59
1:RA:693:A:H2'	1:RA:694:U:O4'	2.03	0.58
1:RA:900:A:H2'	1:RA:901:C:O4'	2.02	0.58
1:RA:1073:A:N7	1:RA:1074:G:H8	2.02	0.58
1:RA:1079:C:N4	1:RA:1088:A:C2	2.71	0.58
1:RA:1185:G:H5"	1:RA:1186:G:P	2.43	0.58
1:RA:1315:C:O2'	1:RA:1316:U:H5'	2.03	0.58
4:RD:133:THR:HG23	4:RD:134:HIS:HD2	1.66	0.58
5:RE:23:PHE:CD1	5:RE:111:GLU:HG3	2.37	0.58
5:RE:48:THR:HG22	5:RE:86:ALA:HB3	1.85	0.58
7:RG:10:VAL:HB	7:RG:14:VAL:HG21	1.84	0.58
15:RO:52:SER:HB2	15:RO:54:VAL:HG12	1.85	0.58
16:RP:33:GLU:CA	16:RP:38:ARG:HH11	2.15	0.58
23:RW:23:LYS:HE3	23:RW:24:ARG:O	2.02	0.58
24:RX:34:SER:HA	24:RX:48:LEU:O	2.03	0.58
32:QA:82:G:N2	32:QA:84:U:N3	2.51	0.58
32:QA:481:G:O2'	32:QA:482:A:C8	2.56	0.58
32:QA:843:U:H2'	32:QA:844:G:H5'	1.85	0.58
32:QA:1461:G:O2'	32:QA:1462:C:H5'	2.04	0.58
35:QD:57:LYS:NZ	35:QD:68:GLU:OE2	2.35	0.58
35:QD:75:TYR:C	35:QD:75:TYR:CD1	2.81	0.58
38:QG:136:LYS:O	38:QG:140:VAL:HG23	2.03	0.58
32:XA:261:U:H2'	32:XA:263:A:OP2	2.02	0.58
32:XA:784:A:N6	32:XA:799:G:C6	2.70	0.58
32:XA:1084:G:H5'	32:XA:1102:A:OP2	2.03	0.58
34:XC:129:PHE:CE1	34:XC:156:LEU:HB3	2.37	0.58
35:XD:2:ARG:CZ	35:XD:114:ARG:HD3	2.32	0.58
41:XJ:30:LYS:HG3	41:XJ:36:VAL:HG22	1.85	0.58
50:XS:38:THR:N	50:XS:69:LYS:HD3	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:37:C:H2'	1:YA:38:A:O4'	2.03	0.58
1:YA:1378:A:O2'	1:YA:1379:U:H3'	2.03	0.58
1:YA:1475:G:O2'	1:YA:1476:U:C6	2.55	0.58
1:YA:1924:C:O2'	1:YA:1925:C:H5'	2.03	0.58
1:YA:2066:C:O2'	1:YA:2067:G:H5'	2.02	0.58
1:YA:2345:G:H4'	1:YA:2346:A:C5'	2.32	0.58
7:YG:148:ARG:HB2	7:YG:152:ARG:NH2	2.18	0.58
7:YG:162:ARG:HB2	7:YG:166:GLU:CB	2.32	0.58
21:YU:47:PRO:HB3	21:YU:54:PRO:HG2	1.85	0.58
4:RD:121:THR:HB	4:RD:127:PHE:CD1	2.38	0.58
7:RG:93:TYR:O	7:RG:94:ARG:O	2.21	0.58
9:RI:100:ILE:HG22	9:RI:101:SER:N	2.11	0.58
22:RV:44:HIS:CE1	22:RV:85:LYS:HB2	2.38	0.58
24:RX:31:ASN:O	24:RX:51:SER:HA	2.03	0.58
32:QA:439:U:H1'	35:QD:118:SER:O	2.03	0.58
32:QA:1279:G:H1'	32:QA:1282:C:H42	1.63	0.58
33:QB:148:GLY:C	33:QB:150:ILE:H	2.11	0.58
37:QF:85:ILE:O	37:QF:86:ARG:C	2.45	0.58
41:QJ:44:THR:HG23	41:QJ:70:HIS:HA	1.85	0.58
46:QO:23:SER:O	46:QO:24:THR:C	2.46	0.58
46:QO:35:ILE:HG22	46:QO:36:ASN:N	2.18	0.58
32:XA:33:A:H2'	32:XA:34:C:H6	1.66	0.58
32:XA:204:G:H2'	32:XA:205:A:C8	2.38	0.58
32:XA:322:C:O2'	51:XT:17:ARG:HG3	2.02	0.58
32:XA:723:U:H6	32:XA:723:U:O5'	1.86	0.58
32:XA:754:C:H2'	32:XA:754:C:O2	2.03	0.58
32:XA:1206:G:C6	32:XA:1207:G:C5	2.90	0.58
33:XB:133:ALA:HA	33:XB:137:THR:HG21	1.85	0.58
43:XL:2:THR:HB	43:XL:5:GLN:HB2	1.83	0.58
47:XP:44:SER:H	47:XP:46:LYS:NZ	2.01	0.58
1:YA:167:A:H2'	1:YA:168:G:O4'	2.03	0.58
1:YA:1733:G:H5'	1:YA:1733:G:C8	2.38	0.58
1:YA:2718:G:OP1	16:YP:97:TYR:HD1	1.86	0.58
3:YC:143:VAL:HB	3:YC:153:LEU:HB3	1.83	0.58
3:YC:147:PRO:CD	3:YC:184:GLU:HG3	2.32	0.58
1:RA:475:C:C4	1:RA:481:G:O6	2.56	0.58
1:RA:2292:U:H2'	1:RA:2293:G:H8	1.68	0.58
1:RA:2813:A:C2	1:RA:2887:A:N6	2.66	0.58
3:RC:144:GLU:HA	3:RC:151:GLY:HA2	1.85	0.58
4:RD:42:ASN:C	4:RD:42:ASN:HD22	2.11	0.58
10:RJ:44:TYR:O	10:RJ:44:TYR:CD1	2.57	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:RS:88:ARG:NH2	19:RS:88:ARG:HG2	2.17	0.58
32:QA:507:C:C3'	32:QA:508:U:H5"	2.31	0.58
32:QA:1028:C:C2	32:QA:1034:G:C2	2.91	0.58
32:QA:1286:U:O2	32:QA:1286:U:H2'	2.02	0.58
34:QC:21:TRP:CD1	34:QC:58:ARG:HG2	2.38	0.58
37:QF:38:ARG:HH11	37:QF:38:ARG:CG	2.01	0.58
48:QQ:21:VAL:HA	48:QQ:43:LEU:O	2.04	0.58
48:QQ:37:ILE:H	48:QQ:37:ILE:HD12	1.67	0.58
50:QS:28:LYS:HB3	50:QS:29:PRO:CD	2.19	0.58
51:QT:53:MET:HE3	51:QT:57:VAL:CG2	2.34	0.58
32:XA:410:G:OP1	35:XD:25:ARG:HD2	2.03	0.58
32:XA:618:C:H5"	32:XA:619:U:H5"	1.86	0.58
32:XA:1416:G:N2	32:XA:1485:U:H1'	2.18	0.58
33:XB:153:MET:HE3	33:XB:155:GLY:O	2.04	0.58
35:XD:58:GLN:HA	35:XD:58:GLN:OE1	2.02	0.58
37:XF:98:GLU:O	37:XF:99:ALA:HB3	2.04	0.58
38:XG:78:ARG:HA	38:XG:84:TYR:HB2	1.85	0.58
39:XH:38:VAL:HA	39:XH:41:GLU:HG3	1.85	0.58
42:XK:126:ARG:HB2	52:XU:33:ARG:HD2	1.84	0.58
43:XL:33:CYS:HB3	43:XL:77:SER:O	2.02	0.58
48:XQ:23:ALA:C	48:XQ:24:ILE:HD12	2.28	0.58
1:YA:172:A:O2'	1:YA:173:A:H5'	2.02	0.58
1:YA:716:A:H2'	1:YA:717:C:H5"	1.85	0.58
1:YA:989:G:OP2	26:YZ:11:SER:HB2	2.04	0.58
1:YA:1062:G:H22	1:YA:1077:A:H2	1.50	0.58
1:YA:1200:C:H6	1:YA:1200:C:O5'	1.86	0.58
1:YA:1303:G:O2'	1:YA:1304:A:O5'	2.21	0.58
1:YA:1349:C:H2'	1:YA:1350:C:C5	2.39	0.58
1:YA:1635:A:H8	1:YA:1635:A:H5'	1.67	0.58
1:YA:2415:G:C6	1:YA:2416:C:C4	2.90	0.58
1:YA:2516:A:O2'	1:YA:2517:C:H5'	2.04	0.58
2:YB:109:A:O2'	2:YB:110:C:C6	2.53	0.58
6:YF:8:LYS:NZ	6:YF:8:LYS:HB2	2.18	0.58
7:YG:7:PRO:O	7:YG:8:VAL:HB	2.03	0.58
7:YG:85:LYS:O	7:YG:86:LEU:HG	2.03	0.58
11:YK:2:ILE:HB	11:YK:33:ALA:HB3	1.85	0.58
15:YO:117:PHE:CD2	15:YO:117:PHE:C	2.81	0.58
17:YQ:71:ASN:ND2	17:YQ:106:THR:HA	2.18	0.58
19:YS:84:ARG:HB3	19:YS:96:ILE:HG23	1.85	0.58
21:YU:94:PHE:O	21:YU:94:PHE:HD2	1.87	0.58
25:YY:1:MET:H1	25:YY:1:MET:HE2	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:613:A:C8	1:RA:616:A:N1	2.71	0.58
1:RA:2052:A:C2	1:RA:2053:G:C8	2.92	0.58
1:RA:2311:A:H1'	6:RF:78:ILE:HD13	1.86	0.58
1:RA:2637:U:C2'	1:RA:2638:G:H5'	2.34	0.58
6:RF:33:ILE:O	6:RF:90:LEU:HB2	2.03	0.58
11:RK:105:ARG:HD3	11:RK:105:ARG:N	2.17	0.58
30:R3:26:ALA:O	30:R3:27:ASN:CB	2.47	0.58
32:QA:1282:C:H2'	32:QA:1283:U:C6	2.38	0.58
32:QA:1299:A:O2'	32:QA:1300:G:H4'	2.03	0.58
32:QA:1343:G:O3'	40:QI:123:ARG:HB3	2.03	0.58
38:QG:113:LYS:HB2	38:QG:117:LEU:HD12	1.85	0.58
39:QH:8:ASP:O	39:QH:9:MET:C	2.47	0.58
41:QJ:53:ILE:HG13	45:QN:84:ARG:CZ	2.33	0.58
41:QJ:57:VAL:CG2	41:QJ:58:ASN:H	2.08	0.58
41:QJ:74:VAL:HG12	41:QJ:75:ASP:N	2.17	0.58
41:QJ:80:THR:HG22	41:QJ:82:LYS:H	1.68	0.58
32:XA:263:A:OP1	51:XT:73:ARG:NH1	2.33	0.58
32:XA:423:G:H2'	32:XA:424:G:O4'	2.04	0.58
32:XA:1130:A:N7	32:XA:1146:A:N6	2.52	0.58
35:XD:18:LEU:HD22	35:XD:63:ILE:HG12	1.85	0.58
39:XH:28:SER:HB3	39:XH:56:PRO:HB2	1.84	0.58
42:XK:34:THR:HA	42:XK:41:LEU:HG	1.85	0.58
47:XP:68:SER:HB3	47:XP:71:VAL:HG13	1.86	0.58
1:YA:1048:A:N6	1:YA:1111:A:C4	2.71	0.58
1:YA:1612:C:O2'	1:YA:1613:G:O5'	2.21	0.58
1:YA:2758:A:C2'	1:YA:2759:G:H5'	2.32	0.58
3:YC:56:GLY:HA3	3:YC:213:ARG:O	2.03	0.58
4:YD:9:VAL:HG22	16:YP:4:ILE:HD11	1.86	0.58
10:YJ:3:THR:HG21	17:YQ:60:TRP:HE1	1.69	0.58
24:YX:6:VAL:HG22	24:YX:7:THR:HG23	1.84	0.58
1:RA:783:A:C8	1:RA:784:G:H4'	2.38	0.58
1:RA:1223:G:OP2	18:RR:68:ARG:NH1	2.37	0.58
1:RA:1266:G:H5"	19:RS:15:GLN:HE22	1.68	0.58
1:RA:1506:U:H2'	1:RA:1507:C:C6	2.38	0.58
1:RA:1786:A:C5	1:RA:1938:A:C2	2.92	0.58
1:RA:1826:G:H2'	1:RA:1827:U:H6	1.69	0.58
1:RA:2354:C:C4'	23:RW:31:LEU:HD22	2.32	0.58
2:RB:54:G:N2	6:RF:25:MET:HE3	2.13	0.58
4:RD:169:ARG:C	4:RD:170:VAL:HG13	2.28	0.58
8:RH:137:GLU:HG3	8:RH:138:VAL:N	2.19	0.58
9:RI:3:LYS:CD	9:RI:4:VAL:HG23	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:RL:91:ASP:CB	12:RL:94:THR:HB	2.34	0.58
12:RL:91:ASP:HB3	12:RL:94:THR:HB	1.85	0.58
16:RP:33:GLU:HB2	16:RP:38:ARG:HH11	1.67	0.58
17:RQ:18:LYS:O	17:RQ:21:LYS:HG3	2.03	0.58
20:RT:24:MET:HG3	20:RT:29:THR:HG23	1.84	0.58
32:QA:723:U:H5'	52:QU:48:LYS:HE2	1.85	0.58
32:QA:978:A:OP2	32:QA:1362:A:N6	2.23	0.58
32:QA:1006:G:H2'	32:QA:1007:U:O4'	2.03	0.58
32:QA:1022:A:H2'	32:QA:1023:U:O4'	2.04	0.58
32:QA:1072:G:H2'	32:QA:1073:U:C6	2.39	0.58
32:QA:1452:C:H4'	32:QA:1453:G:C4	2.38	0.58
34:QC:22:PHE:C	34:QC:22:PHE:CD2	2.81	0.58
37:QF:91:ARG:HG3	37:QF:92:THR:H	1.69	0.58
38:QG:96:ASN:O	38:QG:100:MET:HG3	2.02	0.58
39:QH:17:GLN:HE21	39:QH:71:VAL:HG23	1.66	0.58
47:QP:5:ARG:HA	47:QP:68:SER:OG	2.03	0.58
52:QU:38:GLU:CD	52:QU:41:THR:HG21	2.29	0.58
32:XA:814:A:C5'	32:XA:1511:G:H4'	2.30	0.58
33:XB:84:LEU:O	33:XB:84:LEU:HG	2.03	0.58
44:XM:106:ARG:HA	44:XM:110:GLY:O	2.02	0.58
1:YA:35:G:N2	1:YA:36:G:H1'	2.19	0.58
1:YA:600:G:C5'	5:YE:27:LEU:HD22	2.33	0.58
1:YA:708:G:H2'	1:YA:709:U:H6	1.68	0.58
1:YA:921:C:H2'	1:YA:922:C:H5'	1.85	0.58
1:YA:1358:G:C6	56:YA:3417:HOH:O	2.52	0.58
1:YA:2386:A:O2'	1:YA:2387:U:C6	2.56	0.58
1:YA:2808:G:O2'	1:YA:2809:A:C8	2.55	0.58
3:YC:77:VAL:HG23	3:YC:111:ALA:HA	1.86	0.58
3:YC:83:ASP:CB	3:YC:90:ILE:HD12	2.33	0.58
12:YL:123:ARG:HG2	12:YL:143:GLU:HB3	1.85	0.58
13:YM:8:LYS:HA	13:YM:8:LYS:HE3	1.86	0.58
13:YM:27:SER:N	13:YM:66:ARG:HH22	1.97	0.58
15:YO:31:THR:HG23	15:YO:34:HIS:C	2.28	0.58
18:YR:51:VAL:HB	18:YR:52:PRO:HD2	1.85	0.58
29:Y2:11:LYS:NZ	56:Y2:101:HOH:O	2.37	0.58
1:RA:914:G:C8	1:RA:914:G:H5"	2.38	0.58
1:RA:1820:U:H4'	1:RA:1821:A:OP2	2.04	0.58
1:RA:1857:G:N2	1:RA:1884:G:O2'	2.37	0.58
5:RE:45:ALA:O	5:RE:46:GLN:HG2	2.03	0.58
5:RE:48:THR:C	5:RE:50:ALA:H	2.12	0.58
14:RN:96:ARG:HH22	14:RN:116:VAL:HG23	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:QH:34:ALA:O	39:QH:37:ASN:HB3	2.03	0.58
32:XA:218:U:H2'	32:XA:219:U:O4'	2.04	0.58
32:XA:238:A:H2'	32:XA:239:U:C4'	2.33	0.58
32:XA:254:G:O2'	32:XA:255:G:H5'	2.03	0.58
32:XA:512:U:O2'	32:XA:513:C:C6	2.55	0.58
32:XA:960:U:H4'	32:XA:961:U:C5'	2.30	0.58
32:XA:1219:A:OP1	45:XN:52:ARG:HG3	2.03	0.58
1:YA:324:A:O2'	1:YA:325:G:O4'	2.16	0.58
1:YA:478:A:C6	1:YA:480:A:C5	2.92	0.58
1:YA:860:U:O4	1:YA:2268:A:C5	2.57	0.58
1:YA:1048:A:C6	1:YA:1111:A:C2	2.90	0.58
4:YD:36:GLN:HE21	4:YD:38:LYS:HZ1	1.51	0.58
5:YE:149:ILE:HG23	5:YE:188:MET:N	2.17	0.58
7:YG:103:ASN:O	7:YG:104:LEU:HD23	2.03	0.58
8:YH:2:GLN:O	8:YH:3:VAL:O	2.22	0.58
17:YQ:111:LYS:HE2	18:YR:48:LYS:HD3	1.86	0.58
21:YU:14:THR:HB	21:YU:68:ASN:HB3	1.84	0.58
30:Y3:29:ARG:HH21	30:Y3:29:ARG:HG2	1.68	0.58
1:RA:588:U:H2'	1:RA:589:U:C6	2.39	0.58
1:RA:2267:A:H5"	1:RA:2268:A:H5'	1.84	0.58
8:RH:104:THR:HG23	8:RH:104:THR:O	2.03	0.58
11:RK:108:ARG:HG2	11:RK:108:ARG:NH1	2.19	0.58
17:RQ:91:ARG:HH21	17:RQ:93:ILE:HD13	1.66	0.58
18:RR:39:LEU:N	18:RR:39:LEU:CD2	2.65	0.58
23:RW:37:VAL:C	23:RW:38:ARG:CG	2.77	0.58
32:QA:1138:G:N3	32:QA:1138:G:C2'	2.64	0.58
32:QA:1248:A:H2	40:QI:71:ILE:HD11	1.69	0.58
35:QD:21:LYS:O	35:QD:21:LYS:HD3	2.03	0.58
35:QD:28:ASP:C	35:QD:29:THR:O	2.46	0.58
36:QE:80:LEU:HD12	36:QE:146:MET:CE	2.34	0.58
36:QE:148:SER:HB2	36:QE:151:MET:HB2	1.85	0.58
48:QQ:12:VAL:HG13	48:QQ:16:MET:HE1	1.85	0.58
32:XA:223:A:C6	32:XA:224:U:C4	2.92	0.58
32:XA:1050:G:O2'	32:XA:1051:C:C6	2.56	0.58
42:XK:81:LEU:HD11	42:XK:104:PHE:CD2	2.38	0.58
1:YA:631:A:O2'	12:YL:66:PHE:HB3	2.04	0.58
1:YA:684:G:C2	1:YA:794:A:C2	2.92	0.58
1:YA:845:A:N1	1:YA:932:U:O2	2.37	0.58
1:YA:1140:C:O2'	1:YA:1141:U:H5'	2.04	0.58
1:YA:1287:A:H5'	14:YN:103:ARG:NH1	2.19	0.58
1:YA:1773:A:H2'	1:YA:1774:C:O4'	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1807:G:H2'	1:YA:1808:A:H5'	1.85	0.58
1:YA:1826:G:C6	1:YA:1827:U:C4	2.92	0.58
1:YA:2001:C:H4'	1:YA:2689:U:O2'	2.04	0.58
1:YA:2720:U:H5"	16:YP:52:ARG:NH2	2.16	0.58
2:YB:58:A:H2'	2:YB:59:A:C8	2.38	0.58
3:YC:146:LYS:HG3	3:YC:149:LYS:HD3	1.85	0.58
19:YS:39:THR:HG22	19:YS:40:ASN:N	2.17	0.58
22:YV:73:LYS:HD3	22:YV:74:ALA:H	1.68	0.58
1:RA:1419:A:N7	1:RA:1421:G:C6	2.72	0.58
6:RF:24:VAL:O	6:RF:27:VAL:HG12	2.04	0.58
16:RP:33:GLU:HA	16:RP:38:ARG:HH11	1.69	0.58
23:RW:23:LYS:HD2	23:RW:24:ARG:H	1.67	0.58
32:QA:591:U:H2'	32:QA:592:G:H8	1.68	0.58
32:QA:1034:G:H2'	32:QA:1035:A:C8	2.38	0.58
51:QT:24:ARG:O	51:QT:28:ARG:HG2	2.03	0.58
51:QT:28:ARG:HA	51:QT:31:ILE:HD12	1.86	0.58
32:XA:68:G:H5'	32:XA:171:A:H1'	1.85	0.58
32:XA:243:A:H4'	32:XA:244:U:OP2	2.04	0.58
36:XE:80:LEU:HD13	36:XE:80:LEU:O	2.03	0.58
36:XE:152:VAL:HG21	39:XH:98:LEU:HD22	1.84	0.58
37:XF:3:HIS:CE1	37:XF:95:ALA:H	2.22	0.58
40:XI:128:LYS:O	40:XI:129:ARG:HB2	2.04	0.58
1:YA:35:G:H21	1:YA:36:G:H1'	1.68	0.58
1:YA:46:G:C2	1:YA:47:C:C5	2.91	0.58
1:YA:858:G:C4	1:YA:2268:A:C2	2.92	0.58
1:YA:1249:U:O2'	1:YA:1250:G:OP2	2.19	0.58
1:YA:1494:A:C2	1:YA:1495:A:C4	2.92	0.58
1:YA:1669:A:OP2	56:YA:3711:HOH:O	2.17	0.58
1:YA:2310:C:O2'	1:YA:2311:A:C5'	2.52	0.58
1:YA:2443:C:O2'	1:YA:2444:G:H5'	2.04	0.58
1:YA:2714:G:H2'	1:YA:2715:C:H6	1.68	0.58
1:YA:2732:G:H5"	1:YA:2733:A:O4'	2.04	0.58
1:YA:2788:C:H1'	1:YA:2809:A:H2	1.69	0.58
2:YB:81:G:C6	2:YB:82:U:C4	2.92	0.58
4:YD:148:GLN:CD	4:YD:148:GLN:N	2.62	0.58
5:YE:58:LYS:HB3	5:YE:60:TRP:HE1	1.68	0.58
7:YG:94:ARG:CZ	7:YG:105:SER:HB2	2.33	0.58
11:YK:101:GLY:O	11:YK:120:PRO:HB3	2.04	0.58
30:Y3:32:LEU:HD23	30:Y3:35:LYS:HE2	1.86	0.58
1:RA:1050:A:C2	1:RA:2751:G:C4	2.92	0.58
1:RA:1508:A:O2'	1:RA:1509:A:OP2	2.20	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2149:U:O2'	1:RA:2150:C:O5'	2.20	0.58
4:RD:9:VAL:HG13	4:RD:26:VAL:O	2.04	0.58
10:RJ:40:HIS:C	10:RJ:41:LYS:CG	2.75	0.58
11:RK:59:LYS:HG3	11:RK:89:ASN:HD22	1.69	0.58
11:RK:71:ARG:CB	11:RK:72:PRO:HD3	2.33	0.58
15:RO:2:ASP:OD1	15:RO:3:LYS:HG2	2.04	0.58
32:QA:1387:G:H2'	32:QA:1388:C:H6	1.64	0.58
32:QA:1417:G:C6	32:QA:1482:G:C6	2.92	0.58
33:QB:67:LEU:HA	33:QB:89:PHE:O	2.04	0.58
33:QB:221:ARG:HH11	33:QB:221:ARG:HG2	1.67	0.58
41:QJ:36:VAL:HG22	41:QJ:76:ILE:HG23	1.86	0.58
48:QQ:13:SER:O	48:QQ:16:MET:SD	2.62	0.58
51:QT:29:THR:HA	51:QT:32:LYS:HG2	1.85	0.58
32:XA:392:C:C2	32:XA:393:A:C8	2.91	0.58
32:XA:1241:G:N3	32:XA:1242:G:N7	2.52	0.58
32:XA:1270:G:H2'	32:XA:1271:A:H8	1.69	0.58
37:XF:51:ILE:O	37:XF:54:LEU:HB2	2.03	0.58
38:XG:12:LEU:HD22	38:XG:13:PRO:O	2.03	0.58
42:XK:40:ALA:O	42:XK:41:LEU:HD23	2.04	0.58
1:YA:211:C:H2'	1:YA:212:G:O4'	2.04	0.58
1:YA:259:G:C6	1:YA:260:G:N7	2.72	0.58
1:YA:307:G:N2	1:YA:310:A:C8	2.72	0.58
1:YA:647:G:C8	1:YA:648:G:N7	2.72	0.58
1:YA:1510:G:N2	1:YA:1511:G:N3	2.50	0.58
1:YA:1739:A:C6	1:YA:1740:G:C5	2.92	0.58
7:YG:163:TYR:N	7:YG:163:TYR:CD2	2.71	0.58
11:YK:7:MET:CG	11:YK:17:ARG:HH12	2.17	0.58
13:YM:67:VAL:HG21	13:YM:102:LEU:HD12	1.84	0.58
1:RA:959:A:N6	13:RM:82:MET:HE3	2.19	0.58
1:RA:2262:U:H4'	1:RA:2328:A:H2	1.69	0.58
12:RL:131:ALA:O	12:RL:135:ILE:HD12	2.04	0.58
13:RM:71:LYS:HD3	13:RM:95:LEU:HD11	1.86	0.58
15:RO:31:THR:HG23	15:RO:33:ARG:H	1.69	0.58
17:RQ:97:ILE:HD11	17:RQ:105:PHE:N	2.18	0.58
32:QA:666:G:H5'	32:QA:726:C:H1'	1.86	0.58
32:QA:957:U:O2	32:QA:959:A:H8	1.87	0.58
32:QA:1055:A:H8	32:QA:1055:A:O5'	1.86	0.58
32:QA:1361:G:C3'	32:QA:1362:A:H5"	2.34	0.58
32:QA:1418:A:C2	32:QA:1483:A:C2	2.92	0.58
33:QB:22:TRP:CE3	33:QB:24:PRO:HA	2.38	0.58
38:QG:68:VAL:HB	38:QG:99:ALA:HB1	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:QH:88:LYS:HG3	39:QH:89:ASP:H	1.68	0.58
45:QN:11:LYS:O	45:QN:15:LEU:HG	2.04	0.58
45:QN:48:GLN:HA	45:QN:48:GLN:NE2	2.19	0.58
32:XA:747:A:H2'	32:XA:748:G:O4'	2.03	0.58
33:XB:132:GLU:C	33:XB:134:LEU:H	2.10	0.58
1:YA:85:G:HO2'	1:YA:86:G:H8	1.51	0.58
1:YA:453:A:H4'	1:YA:472:A:H62	1.69	0.58
1:YA:1807:G:C2'	1:YA:1808:A:H5'	2.33	0.58
1:YA:1866:A:O2'	1:YA:1867:G:H5'	2.04	0.58
1:YA:2298:A:C6	1:YA:2321:U:C5	2.92	0.58
18:YR:82:HIS:O	18:YR:82:HIS:CG	2.57	0.58
1:RA:2340:A:H2'	1:RA:2341:G:H8	1.69	0.57
1:RA:2393:U:H5'	12:RL:60:ARG:O	2.04	0.57
1:RA:2681:C:C2	1:RA:2724:U:O4	2.57	0.57
8:RH:68:ARG:HH21	8:RH:72:ILE:HG21	1.69	0.57
10:RJ:64:VAL:HG13	10:RJ:65:THR:O	2.04	0.57
13:RM:43:ALA:O	13:RM:46:ILE:HG13	2.03	0.57
13:RM:46:ILE:C	13:RM:46:ILE:HD12	2.28	0.57
19:RS:20:VAL:HG21	19:RS:43:ALA:HB3	1.86	0.57
32:QA:182:A:N3	32:QA:184:G:C8	2.71	0.57
32:QA:1251:A:H2'	32:QA:1252:A:C8	2.39	0.57
32:XA:5:U:H4'	32:XA:6:G:H5'	1.84	0.57
32:XA:112:G:C2	32:XA:330:C:N4	2.72	0.57
35:XD:2:ARG:NH2	35:XD:114:ARG:NH1	2.51	0.57
43:XL:14:LYS:HE2	43:XL:15:VAL:C	2.29	0.57
1:YA:2344:U:H2'	28:Y1:35:LEU:O	2.04	0.57
1:YA:2392:A:H2	12:YL:55:MET:SD	2.26	0.57
1:YA:2400:G:H2'	1:YA:2401:U:O4'	2.04	0.57
8:YH:3:VAL:H	8:YH:39:ALA:HB2	1.68	0.57
14:YN:67:PHE:HE2	14:YN:73:ASN:CG	2.12	0.57
1:RA:100:U:C4'	1:RA:101:A:O5'	2.51	0.57
1:RA:569:U:H1'	1:RA:947:A:O4'	2.04	0.57
1:RA:1110:G:O2'	1:RA:1111:A:O5'	2.22	0.57
1:RA:1268:A:C2	1:RA:2013:A:C4	2.92	0.57
1:RA:1858:A:H2'	1:RA:1859:U:C6	2.40	0.57
1:RA:2134:A:OP1	1:RA:2134:A:H8	1.86	0.57
1:RA:2678:C:H2'	1:RA:2679:A:O4'	2.04	0.57
10:RJ:56:VAL:CG1	10:RJ:57:LEU:N	2.67	0.57
14:RN:28:LEU:HD23	14:RN:48:VAL:HG11	1.86	0.57
18:RR:46:GLU:OE1	18:RR:46:GLU:O	2.22	0.57
20:RT:32:LEU:H	20:RT:83:ALA:CB	2.11	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:RT:38:ALA:HB1	20:RT:43:ILE:HG21	1.86	0.57
25:RY:17:GLU:HG3	25:RY:18:LEU:N	2.19	0.57
26:RZ:8:GLN:HB3	26:RZ:31:ILE:HA	1.86	0.57
27:R0:11:LYS:HA	27:R0:14:MET:HG3	1.86	0.57
29:R2:42:LEU:H	29:R2:42:LEU:CD2	2.16	0.57
32:QA:211:G:C6	32:QA:212:G:H1'	2.38	0.57
32:QA:1234:C:C2'	32:QA:1235:U:H5'	2.33	0.57
32:XA:615:G:H2'	32:XA:616:G:H8	1.70	0.57
32:XA:791:G:C2'	32:XA:792:A:H5'	2.34	0.57
50:XS:60:PHE:CG	50:XS:61:VAL:N	2.72	0.57
1:YA:254:G:N7	30:Y3:4:LYS:HE2	2.19	0.57
1:YA:591:U:H1'	30:Y3:1:PRO:HD2	1.85	0.57
1:YA:779:U:OP1	3:YC:48:ILE:HG13	2.05	0.57
1:YA:995:C:O2'	17:YQ:93:ILE:HD12	2.03	0.57
1:YA:1510:G:O2'	1:YA:1511:G:O4'	2.22	0.57
1:YA:2544:G:H2'	1:YA:2545:G:H8	1.69	0.57
2:YB:30:C:O2	2:YB:30:C:H2'	2.03	0.57
3:YC:120:ASP:CG	3:YC:121:ALA:H	2.12	0.57
7:YG:116:LEU:HD13	7:YG:120:ILE:O	2.04	0.57
10:YJ:25:LEU:HB2	10:YJ:62:VAL:HG21	1.85	0.57
17:YQ:26:ALA:O	17:YQ:30:VAL:HB	2.04	0.57
17:YQ:101:ASP:HB2	18:YR:2:TYR:OH	2.03	0.57
28:Y1:25:ASN:OD1	28:Y1:28:THR:HG23	2.03	0.57
1:RA:923:G:H5'	23:RW:25:PHE:CZ	2.39	0.57
1:RA:2649:C:H2'	1:RA:2650:U:C6	2.39	0.57
5:RE:154:ASP:OD2	5:RE:154:ASP:C	2.47	0.57
6:RF:4:HIS:O	6:RF:7:TYR:HB3	2.04	0.57
7:RG:88:LEU:HD11	7:RG:95:ALA:HB2	1.85	0.57
7:RG:154:GLU:OE1	7:RG:157:LYS:HB2	2.04	0.57
8:RH:46:PHE:O	8:RH:46:PHE:HD2	1.87	0.57
9:RI:52:LEU:HD11	9:RI:81:LYS:HE2	1.86	0.57
32:QA:818:G:O2'	32:QA:819:A:H5'	2.04	0.57
32:QA:1314:C:OP2	50:QS:5:LYS:HD2	2.03	0.57
32:QA:1324:A:H2'	32:QA:1325:C:C6	2.39	0.57
35:QD:69:ARG:HA	35:QD:69:ARG:HE	1.69	0.57
37:QF:40:GLU:HB2	37:QF:42:TRP:HE1	1.69	0.57
41:QJ:53:ILE:CG2	41:QJ:61:ALA:HB1	2.24	0.57
32:XA:328:C:C1'	32:XA:329:A:OP2	2.52	0.57
32:XA:666:G:C6	32:XA:741:G:C6	2.92	0.57
32:XA:765:G:C6	32:XA:812:G:C5	2.92	0.57
32:XA:801:U:H2'	32:XA:802:A:H8	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:XD:84:ASN:CG	36:XE:101:GLY:HA3	2.28	0.57
36:XE:35:LEU:HD11	36:XE:136:VAL:HG11	1.86	0.57
36:XE:157:GLY:HA3	39:XH:63:LYS:HZ2	1.69	0.57
41:XJ:10:LEU:HB2	41:XJ:72:ARG:HB2	1.86	0.57
46:XO:28:VAL:HG13	46:XO:62:ARG:HG3	1.86	0.57
50:XS:35:ARG:NH2	50:XS:51:HIS:CD2	2.73	0.57
52:XU:16:ARG:HG3	52:XU:19:LYS:CG	2.21	0.57
1:YA:777:G:N7	1:YA:793:A:H2	2.02	0.57
1:YA:1071:G:O2'	1:YA:1072:C:O5'	2.21	0.57
1:YA:1320:C:HO2'	1:YA:1321:A:H8	1.52	0.57
1:YA:1676:A:H2'	1:YA:1677:A:O4'	2.04	0.57
1:YA:1965:C:H3'	1:YA:1966:A:H5"	1.86	0.57
1:YA:2629:U:H5"	1:YA:2630:G:OP1	2.04	0.57
5:YE:178:VAL:HG13	5:YE:179:SER:N	2.17	0.57
6:YF:111:ARG:HG3	6:YF:135:ILE:HG12	1.86	0.57
11:YK:61:VAL:HG13	11:YK:87:LEU:HD21	1.86	0.57
13:YM:53:MET:HE1	13:YM:103:TYR:CG	2.38	0.57
20:YT:40:LYS:HE3	20:YT:58:VAL:O	2.04	0.57
1:RA:511:U:O4	1:RA:512:G:C2	2.57	0.57
1:RA:1068:G:H2'	1:RA:1069:A:H5'	1.86	0.57
1:RA:1568:G:H4'	3:RC:58:LYS:CG	2.34	0.57
1:RA:2062:A:O2'	1:RA:2063:C:H5'	2.05	0.57
3:RC:257:ARG:NE	3:RC:269:ARG:NH2	2.53	0.57
4:RD:90:PHE:C	4:RD:92:VAL:N	2.61	0.57
6:RF:68:LYS:HD2	6:RF:68:LYS:N	2.18	0.57
10:RJ:40:HIS:C	10:RJ:41:LYS:HG2	2.29	0.57
23:RW:49:ASN:ND2	23:RW:49:ASN:C	2.61	0.57
32:QA:1181:G:O2'	32:QA:1182:G:N7	2.37	0.57
36:QE:14:LEU:CB	36:QE:36:THR:HG22	2.34	0.57
37:QF:93:LYS:O	37:QF:94:HIS:HB2	2.03	0.57
43:QL:81:ILE:HD11	43:QL:94:TYR:CG	2.39	0.57
32:XA:330:C:O2'	32:XA:331:G:O5'	2.21	0.57
32:XA:818:G:O2'	32:XA:819:A:H5'	2.04	0.57
32:XA:974:A:H5"	45:XN:70:HIS:CE1	2.38	0.57
32:XA:977:A:H1'	32:XA:1223:C:H42	1.69	0.57
32:XA:1143:G:H2'	32:XA:1144:G:C8	2.39	0.57
34:XC:21:TRP:CH2	45:XN:93:PRO:HG2	2.40	0.57
38:XG:30:MET:HE1	38:XG:33:GLY:HA2	1.86	0.57
40:XI:88:GLU:CD	40:XI:88:GLU:H	2.12	0.57
44:XM:94:LEU:HD22	44:XM:101:THR:HG22	1.85	0.57
52:XU:24:LYS:CG	52:XU:25:ALA:N	2.67	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:82:U:N3	1:YA:83:A:C8	2.72	0.57
1:YA:246:C:C2'	1:YA:247:G:H5'	2.34	0.57
1:YA:489:G:C4	1:YA:491:G:C8	2.92	0.57
1:YA:1131:G:O6	1:YA:2024:G:O2'	2.22	0.57
1:YA:1176:U:H2'	1:YA:1177:G:C8	2.39	0.57
1:YA:1320:C:H5	1:YA:1329:U:H5"	1.70	0.57
1:YA:1338:G:H4'	20:YT:18:GLU:HG3	1.86	0.57
1:YA:1342:A:C5	1:YA:1345:C:N4	2.73	0.57
1:YA:1609:A:N6	1:YA:1616:A:C2	2.72	0.57
1:YA:1830:C:C4'	3:YC:14:HIS:HE1	2.18	0.57
1:YA:2847:U:C2'	1:YA:2848:G:H5'	2.33	0.57
7:YG:163:TYR:N	7:YG:163:TYR:HD2	2.02	0.57
8:YH:41:LYS:H	8:YH:44:ILE:HG23	1.69	0.57
8:YH:67:ALA:HA	8:YH:138:VAL:HG22	1.87	0.57
12:YL:94:THR:O	12:YL:98:ALA:N	2.38	0.57
13:YM:40:ARG:HB2	13:YM:93:VAL:CG2	2.34	0.57
29:Y2:34:ARG:HB3	29:Y2:42:LEU:CD1	2.34	0.57
30:Y3:33:THR:HG23	30:Y3:34:LYS:N	2.20	0.57
1:RA:299:A:OP2	1:RA:299:A:H8	1.87	0.57
1:RA:1006:C:O2'	1:RA:1007:C:H5'	2.04	0.57
1:RA:2355:G:H4'	23:RW:20:LEU:CD1	2.28	0.57
1:RA:2572:A:N7	4:RD:150:GLN:HB3	2.20	0.57
3:RC:77:VAL:HA	3:RC:93:VAL:HA	1.85	0.57
5:RE:176:ASP:OD1	5:RE:176:ASP:C	2.47	0.57
23:RW:72:GLY:N	23:RW:73:PRO:HD2	2.20	0.57
32:QA:240:G:OP1	32:QA:240:G:H4'	2.05	0.57
32:QA:439:U:H2'	32:QA:440:C:H5'	1.86	0.57
32:QA:1159:U:O4'	32:QA:1159:U:O2	2.22	0.57
32:QA:1320:C:N3	50:QS:35:ARG:NH1	2.53	0.57
32:QA:1370:G:P	40:QI:110:VAL:HG21	2.44	0.57
35:QD:145:ARG:HD2	35:QD:147:LYS:HE2	1.85	0.57
41:QJ:59:LYS:HD2	41:QJ:60:ASP:N	2.19	0.57
43:QL:98:ARG:HD2	43:QL:103:CYS:SG	2.43	0.57
45:QN:46:LYS:HD2	50:QS:12:LEU:HD21	1.86	0.57
51:QT:53:MET:CE	51:QT:57:VAL:HG21	2.34	0.57
32:XA:570:G:H1'	32:XA:820:U:C4	2.39	0.57
32:XA:822:U:C2	32:XA:823:C:C5	2.92	0.57
32:XA:1009:U:H2'	32:XA:1010:U:C6	2.39	0.57
32:XA:1339:A:H2'	32:XA:1340:A:O4'	2.04	0.57
32:XA:1382:C:H2'	32:XA:1383:C:H6	1.70	0.57
32:XA:1496:C:H2'	32:XA:1497:G:O4'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1514:G:H2'	32:XA:1515:G:C8	2.39	0.57
33:XB:66:ILE:O	33:XB:88:GLN:HB2	2.05	0.57
43:XL:3:VAL:HG23	43:XL:4:ASN:H	1.70	0.57
45:XN:63:CYS:HB3	45:XN:67:GLY:H	1.70	0.57
1:YA:443:A:H2'	5:YE:40:ARG:NE	2.19	0.57
1:YA:483:A:O2'	1:YA:484:C:H5'	2.03	0.57
1:YA:813:U:H2'	1:YA:814:C:H6	1.69	0.57
1:YA:2638:G:O2'	1:YA:2639:A:H8	1.88	0.57
1:YA:2734:A:H2'	1:YA:2735:G:H5'	1.87	0.57
5:YE:42:GLY:HA2	5:YE:92:HIS:HE1	1.68	0.57
10:YJ:5:THR:HG23	10:YJ:7:LYS:HE2	1.87	0.57
11:YK:113:MET:O	11:YK:116:ILE:HG13	2.05	0.57
14:YN:56:LYS:HE2	14:YN:87:PHE:O	2.03	0.57
16:YP:48:ALA:HB3	16:YP:59:THR:HB	1.86	0.57
16:YP:59:THR:HG23	16:YP:72:VAL:HG12	1.86	0.57
18:YR:90:ARG:O	18:YR:91:GLN:HB3	2.04	0.57
23:YW:18:LYS:H	23:YW:36:ILE:CG1	2.12	0.57
25:YY:22:LEU:HG	25:YY:23:ARG:NH1	2.19	0.57
28:Y1:46:VAL:HG22	28:Y1:47:ILE:N	2.19	0.57
1:RA:397:U:O5'	1:RA:397:U:H6	1.88	0.57
1:RA:969:G:H2'	1:RA:970:U:C6	2.38	0.57
1:RA:1014:A:H2'	1:RA:1015:U:H6	1.70	0.57
1:RA:1853:A:N1	1:RA:2087:G:H1'	2.20	0.57
3:RC:143:VAL:HG12	3:RC:144:GLU:O	2.04	0.57
3:RC:151:GLY:C	3:RC:152:GLN:HG3	2.30	0.57
3:RC:250:GLN:H	3:RC:250:GLN:NE2	2.02	0.57
5:RE:88:ARG:HB3	5:RE:89:PRO:HD2	1.86	0.57
10:RJ:65:THR:HG22	10:RJ:68:LYS:CE	2.34	0.57
33:QB:117:GLU:HA	33:QB:120:SER:HB2	1.86	0.57
40:QI:28:VAL:HB	40:QI:63:TYR:CD2	2.36	0.57
41:QJ:42:LEU:HB3	41:QJ:43:PRO:HD2	1.86	0.57
48:QQ:58:VAL:HG22	48:QQ:59:GLU:N	2.20	0.57
52:QU:24:LYS:HG2	52:QU:25:ALA:H	1.68	0.57
32:XA:1018:G:H2'	32:XA:1019:A:O4'	2.04	0.57
32:XA:1446:A:H2'	32:XA:1447:A:C5'	2.35	0.57
34:XC:133:MET:HB2	34:XC:150:VAL:HG21	1.85	0.57
35:XD:127:ARG:CZ	35:XD:127:ARG:HB2	2.35	0.57
40:XI:17:ARG:NH1	40:XI:65:THR:HG21	2.19	0.57
47:XP:1:MET:O	47:XP:1:MET:HG3	2.04	0.57
1:YA:100:U:C6	1:YA:100:U:OP1	2.57	0.57
1:YA:323:C:H3'	5:YE:163:ASN:HD21	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1156:A:P	17:YQ:54:ARG:HE	2.28	0.57
1:YA:2666:C:O2'	1:YA:2667:C:C5'	2.46	0.57
3:YC:245:THR:C	3:YC:247:TRP:H	2.13	0.57
10:YJ:25:LEU:HD12	10:YJ:64:VAL:HA	1.87	0.57
13:YM:62:LYS:C	13:YM:63:ILE:HD12	2.29	0.57
18:YR:70:GLU:CD	18:YR:70:GLU:H	2.13	0.57
1:RA:1040:A:H2	1:RA:1115:G:H22	1.53	0.57
1:RA:1510:G:H2'	1:RA:1511:G:O4'	2.05	0.57
1:RA:2547:A:H2'	1:RA:2548:U:C6	2.39	0.57
10:RJ:21:THR:CG2	10:RJ:22:GLY:N	2.62	0.57
16:RP:50:ARG:CG	16:RP:57:ALA:O	2.53	0.57
20:RT:59:ASN:O	20:RT:83:ALA:O	2.22	0.57
21:RU:41:VAL:O	21:RU:59:GLU:HA	2.05	0.57
32:QA:267:C:O2'	32:QA:268:U:H5'	2.05	0.57
32:QA:538:G:OP2	43:QL:111:GLN:HB2	2.04	0.57
32:QA:1151:A:H5'	41:QJ:42:LEU:O	2.05	0.57
33:QB:20:ARG:O	33:QB:21:TYR:C	2.47	0.57
41:QJ:51:VAL:HB	45:QN:80:ARG:HB2	1.85	0.57
45:QN:51:PRO:O	45:QN:52:ARG:CB	2.53	0.57
52:QU:32:ARG:HG2	52:QU:32:ARG:O	2.04	0.57
32:XA:51:A:H4'	32:XA:52:C:H5"	1.85	0.57
32:XA:86:G:O2'	32:XA:87:C:OP2	2.22	0.57
32:XA:269:C:H2'	32:XA:270:A:C8	2.39	0.57
32:XA:513:C:H2'	32:XA:514:C:H6	1.69	0.57
32:XA:888:G:H3'	32:XA:889:A:H5"	1.87	0.57
32:XA:978:A:H8	32:XA:978:A:O5'	1.88	0.57
34:XC:124:GLU:CD	34:XC:124:GLU:H	2.12	0.57
35:XD:25:ARG:NH1	35:XD:30:LYS:HE2	2.19	0.57
43:XL:97:VAL:O	43:XL:97:VAL:CG2	2.53	0.57
51:XT:26:MET:HE3	51:XT:30:PHE:HD1	1.68	0.57
1:YA:110:G:N2	1:YA:111:A:H1'	2.20	0.57
1:YA:203:A:O5'	1:YA:204:A:H2'	2.05	0.57
1:YA:1259:G:C4	1:YA:1260:A:C8	2.93	0.57
1:YA:1475:G:O2'	1:YA:1476:U:H6	1.87	0.57
1:YA:1914:C:O2'	1:YA:1915:U:O4'	2.21	0.57
1:YA:2313:C:O2'	1:YA:2314:A:C8	2.54	0.57
5:YE:105:LEU:HD12	5:YE:200:LEU:HD11	1.86	0.57
6:YF:35:LEU:O	6:YF:87:LYS:HA	2.05	0.57
6:YF:107:VAL:N	6:YF:108:PRO:CD	2.68	0.57
8:YH:48:GLU:HG2	8:YH:51:ARG:HH21	1.69	0.57
15:YO:11:ALA:O	15:YO:15:ARG:HG3	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:YQ:4:LYS:CE	17:YQ:7:VAL:H	2.17	0.57
21:YU:54:PRO:HG2	21:YU:55:GLY:H	1.70	0.57
21:YU:58:VAL:CG1	21:YU:60:LYS:HG2	2.35	0.57
27:Y0:54:ILE:O	27:Y0:55:ALA:HB2	2.05	0.57
28:Y1:24:LYS:HE2	28:Y1:29:LYS:O	2.05	0.57
30:Y3:22:LYS:H	30:Y3:48:MET:HB3	1.69	0.57
1:RA:510:C:H2'	1:RA:511:U:O4'	2.05	0.57
1:RA:1256:G:H21	5:RE:77:ILE:HG13	1.70	0.57
1:RA:2196:C:O3'	35:XD:150:LYS:HD2	2.05	0.57
8:RH:101:ASP:O	8:RH:104:THR:HB	2.04	0.57
17:RQ:82:LEU:CD2	17:RQ:112:ALA:HB2	2.35	0.57
18:RR:21:ARG:NH2	18:RR:93:PHE:CE1	2.73	0.57
22:RV:80:HIS:CD2	22:RV:83:LYS:H	2.22	0.57
32:QA:1435:G:H2'	32:QA:1436:U:C6	2.40	0.57
34:QC:14:VAL:O	34:QC:15:LYS:HD2	2.05	0.57
35:QD:172:VAL:HG22	35:QD:173:ASP:N	2.15	0.57
38:QG:101:ARG:O	38:QG:105:GLU:HB3	2.04	0.57
38:QG:137:ARG:C	38:QG:139:ASP:H	2.13	0.57
41:QJ:81:GLU:HA	41:QJ:84:VAL:CG1	2.35	0.57
43:QL:2:THR:HG22	43:QL:4:ASN:H	1.70	0.57
32:XA:1161:C:O2	32:XA:1176:A:C2	2.58	0.57
32:XA:1446:A:H2'	32:XA:1447:A:H5"	1.85	0.57
34:XC:161:ILE:H	34:XC:161:ILE:HD13	1.70	0.57
35:XD:29:THR:C	35:XD:31:CYS:H	2.13	0.57
37:XF:2:ARG:HG2	37:XF:4:TYR:CZ	2.39	0.57
49:XR:63:TYR:CD2	49:XR:69:TYR:OH	2.57	0.57
50:XS:54:ARG:HG2	50:XS:55:GLN:H	1.70	0.57
1:YA:7:G:H4'	10:YJ:15:TRP:CH2	2.40	0.57
1:YA:17:G:H4'	17:YQ:24:TYR:HE1	1.70	0.57
1:YA:265:A:N7	1:YA:427:U:O2'	2.37	0.57
1:YA:489:G:O2'	1:YA:491:G:H8	1.85	0.57
1:YA:738:G:H2'	1:YA:739:A:C8	2.40	0.57
1:YA:1090:A:H3'	1:YA:1091:G:H5"	1.87	0.57
1:YA:1157:G:C8	1:YA:1157:G:H5'	2.40	0.57
1:YA:1467:U:C2'	1:YA:1468:U:H5'	2.34	0.57
1:YA:1537:G:H2'	1:YA:1538:G:C4'	2.23	0.57
1:YA:2223:G:C2'	1:YA:2224:G:H5'	2.34	0.57
1:YA:2287:A:O2'	1:YA:2288:A:H2'	2.04	0.57
1:YA:2310:C:O2'	1:YA:2311:A:H4'	2.05	0.57
1:YA:2620:C:O4'	4:YD:161:MET:HG3	2.04	0.57
1:YA:2683:C:OP1	16:YP:55:HIS:HB3	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:YD:184:ARG:NH2	16:YP:6:GLN:HE21	1.97	0.57
14:YN:20:MET:C	14:YN:22:ARG:H	2.11	0.57
14:YN:96:ARG:HG3	14:YN:97:ILE:H	1.68	0.57
19:YS:66:ILE:O	19:YS:68:ASP:N	2.38	0.57
26:YZ:46:MET:O	26:YZ:49:ALA:HB3	2.04	0.57
1:RA:38:A:N3	5:RE:43:THR:HB	2.19	0.57
1:RA:221:A:H4'	1:RA:222:A:O5'	2.04	0.57
1:RA:1515:A:H2'	1:RA:1516:G:O4'	2.04	0.57
1:RA:2531:A:OP1	7:RG:174:LYS:HG3	2.05	0.57
4:RD:120:GLY:HA2	4:RD:162:ALA:HB2	1.86	0.57
9:RI:78:LEU:HD13	9:RI:108:ILE:HG12	1.86	0.57
10:RJ:45:THR:HG23	10:RJ:45:THR:O	2.05	0.57
30:R3:30:HIS:O	30:R3:31:ILE:C	2.48	0.57
32:QA:771:G:H2'	32:QA:772:U:C6	2.40	0.57
32:QA:1040:U:H2'	32:QA:1041:G:C8	2.39	0.57
32:QA:1348:U:O2'	32:QA:1349:A:H8	1.88	0.57
35:QD:36:ALA:HA	35:QD:41:GLY:HA3	1.87	0.57
35:QD:147:LYS:O	35:QD:149:LYS:N	2.37	0.57
43:QL:74:GLN:HG3	43:QL:75:GLU:HG2	1.86	0.57
45:QN:42:ASN:O	45:QN:44:VAL:N	2.38	0.57
46:XO:2:LEU:HD13	46:XO:34:GLN:HG2	1.86	0.57
1:YA:154:U:H2'	1:YA:155:A:O4'	2.04	0.57
1:YA:612:G:N2	1:YA:614:A:O2'	2.38	0.57
1:YA:617:G:O2'	1:YA:618:G:O4'	2.23	0.57
1:YA:1275:A:C4	14:YN:16:HIS:HD2	2.23	0.57
2:YB:23:G:N2	2:YB:61:G:C2	2.73	0.57
3:YC:212:TRP:C	3:YC:212:TRP:CD1	2.82	0.57
4:YD:12:THR:HG22	4:YD:13:ARG:N	2.20	0.57
5:YE:147:LEU:CB	5:YE:186:VAL:HG23	2.35	0.57
16:YP:22:GLY:HA3	16:YP:91:VAL:CG2	2.35	0.57
23:YW:37:VAL:CG2	23:YW:38:ARG:HH11	2.17	0.57
27:Y0:42:ILE:HD11	27:Y0:48:TYR:HB2	1.87	0.57
1:RA:1107:G:H2'	1:RA:1108:U:C6	2.40	0.57
1:RA:1833:C:C4	1:RA:1834:U:C5	2.93	0.57
2:RB:112:G:H2'	2:RB:113:C:C6	2.40	0.57
7:RG:163:TYR:O	7:RG:164:ALA:HB2	2.04	0.57
11:RK:91:SER:O	11:RK:92:GLU:C	2.48	0.57
11:RK:108:ARG:HH11	11:RK:108:ARG:HG3	1.68	0.57
13:RM:40:ARG:HB2	13:RM:93:VAL:HG22	1.86	0.57
16:RP:59:THR:HG23	16:RP:72:VAL:HG13	1.87	0.57
17:RQ:82:LEU:HD23	17:RQ:112:ALA:HB2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:8:A:N6	35:QD:201:GLU:O	2.38	0.57
33:QB:103:TRP:C	33:QB:105:THR:H	2.13	0.57
35:QD:86:GLY:O	35:QD:89:LEU:HB3	2.05	0.57
42:QK:125:LYS:O	42:QK:126:ARG:HB2	2.05	0.57
45:QN:20:PHE:C	45:QN:22:LYS:H	2.13	0.57
32:XA:65:A:C5	32:XA:200:G:O2'	2.58	0.57
32:XA:79:G:H2'	32:XA:80:A:C8	2.40	0.57
32:XA:371:A:O2'	32:XA:372:C:H5'	2.05	0.57
32:XA:858:G:O6	56:XA:1822:HOH:O	2.17	0.57
32:XA:1123:U:H4'	41:XJ:39:PRO:HD2	1.86	0.57
32:XA:1133:G:C6	32:XA:1134:G:N7	2.73	0.57
32:XA:1492:A:C8	1:YA:1913:A:H8	2.22	0.57
35:XD:187:ARG:CZ	35:XD:191:SER:OG	2.53	0.57
36:XE:103:GLY:HA3	36:XE:121:ASN:CA	2.34	0.57
40:XI:16:ALA:HA	40:XI:65:THR:O	2.04	0.57
40:XI:66:VAL:HG21	40:XI:74:GLN:HB3	1.86	0.57
43:XL:79:ILE:HD12	43:XL:96:THR:CG2	2.35	0.57
43:XL:113:ARG:HB3	43:XL:118:VAL:HB	1.86	0.57
1:YA:28:A:C6	1:YA:29:U:O2	2.58	0.57
1:YA:329:G:H4'	1:YA:330:A:OP2	2.05	0.57
1:YA:446:G:H4'	1:YA:447:A:OP1	2.04	0.57
1:YA:864:G:C6	1:YA:865:C:N4	2.72	0.57
1:YA:1499:C:C2'	1:YA:1500:G:H5'	2.35	0.57
1:YA:1555:G:N2	1:YA:1556:C:C2	2.73	0.57
1:YA:2502:G:H5'	1:YA:2503:A:H5"	1.85	0.57
1:YA:2552:U:C2	1:YA:2554:U:H5'	2.39	0.57
8:YH:84:ALA:HB3	8:YH:148:ALA:HB2	1.87	0.57
19:YS:8:ARG:HA	19:YS:102:HIS:ND1	2.19	0.57
20:YT:9:LYS:O	20:YT:9:LYS:HG2	2.05	0.57
21:YU:13:LEU:H	21:YU:13:LEU:HD12	1.70	0.57
24:YX:53:LYS:HA	24:YX:56:ARG:CB	2.28	0.57
1:RA:137:U:H5	1:RA:137:U:OP2	1.88	0.56
1:RA:194:G:N7	56:RA:3760:HOH:O	2.38	0.56
1:RA:1061:U:H3'	1:RA:1062:G:H5"	1.86	0.56
1:RA:1288:G:C4	1:RA:1327:A:C2	2.92	0.56
1:RA:2058:A:H5"	1:RA:2059:A:OP2	2.05	0.56
5:RE:175:ILE:O	5:RE:175:ILE:HG23	2.04	0.56
9:RI:126:ARG:CA	9:RI:129:GLU:HB2	2.30	0.56
12:RL:47:ARG:NH2	12:RL:47:ARG:HG2	2.18	0.56
20:RT:70:HIS:HB2	20:RT:73:ARG:O	2.05	0.56
23:RW:49:ASN:HB2	23:RW:60:ALA:HA	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:49:U:H5	32:QA:365:U:O4	1.88	0.56
33:QB:71:THR:HG22	33:QB:72:LYS:H	1.70	0.56
45:QN:63:CYS:HB2	45:QN:79:SER:OG	2.05	0.56
47:QP:36:VAL:O	47:QP:36:VAL:HG13	2.05	0.56
50:QS:41:PRO:O	50:QS:44:ILE:HG13	2.04	0.56
32:XA:1032:G:N2	32:XA:1033:G:C5	2.73	0.56
32:XA:1151:A:O2'	32:XA:1152:A:O5'	2.23	0.56
40:XI:61:ASP:C	40:XI:62:LEU:HD22	2.30	0.56
42:XK:57:SER:C	42:XK:90:PRO:HG3	2.29	0.56
48:XQ:22:VAL:HG21	48:XQ:58:VAL:HG21	1.86	0.56
1:YA:308:G:C6	1:YA:309:A:C6	2.93	0.56
1:YA:466:A:P	29:Y2:34:ARG:HH21	2.27	0.56
1:YA:819:A:OP2	1:YA:1187:G:N2	2.38	0.56
1:YA:831:G:H5"	12:YL:37:GLY:HA2	1.86	0.56
1:YA:974:G:H1'	1:YA:975:A:C8	2.40	0.56
1:YA:1044:C:H2'	1:YA:1044:C:O2	2.04	0.56
1:YA:2259:U:H1'	1:YA:2427:C:C2	2.40	0.56
1:YA:2428:G:H4'	1:YA:2429:G:C5	2.40	0.56
1:YA:2738:A:H2	1:YA:2766:A:H61	1.50	0.56
1:YA:2850:A:OP2	1:YA:2866:U:N3	2.35	0.56
5:YE:79:ARG:O	5:YE:80:SER:C	2.47	0.56
6:YF:49:LEU:HA	6:YF:52:ALA:HB3	1.87	0.56
7:YG:28:LYS:HG3	7:YG:79:THR:HG22	1.87	0.56
9:YI:57:VAL:HG12	9:YI:58:ILE:H	1.70	0.56
13:YM:114:ARG:HA	13:YM:130:PHE:CE1	2.39	0.56
19:YS:8:ARG:HB3	19:YS:102:HIS:CE1	2.40	0.56
1:RA:142:A:O2'	1:RA:143:C:O5'	2.23	0.56
1:RA:1061:U:H1'	1:RA:1070:A:O4'	2.05	0.56
1:RA:1421:G:C2	1:RA:1422:G:C8	2.92	0.56
4:RD:24:VAL:HA	4:RD:191:GLY:H	1.69	0.56
5:RE:132:LYS:NZ	5:RE:132:LYS:HB3	2.20	0.56
7:RG:8:VAL:HG12	7:RG:9:VAL:N	2.20	0.56
7:RG:54:ARG:HD3	7:RG:54:ARG:C	2.29	0.56
7:RG:109:SER:O	7:RG:110:HIS:HB3	2.05	0.56
8:RH:8:LYS:O	8:RH:13:GLY:HA3	2.06	0.56
9:RI:48:ILE:HG13	9:RI:49:GLU:H	1.70	0.56
16:RP:31:VAL:O	16:RP:31:VAL:HG13	2.05	0.56
16:RP:50:ARG:HB2	16:RP:56:SER:HA	1.87	0.56
20:RT:87:LEU:O	20:RT:88:LYS:C	2.48	0.56
21:RU:42:LYS:HD3	21:RU:42:LYS:N	2.21	0.56
27:R0:35:GLU:OE1	27:R0:45:ASP:HB2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:R1:47:ILE:H	28:R1:47:ILE:CD1	2.09	0.56
32:QA:1449:C:C2'	32:QA:1450:U:H5'	2.35	0.56
33:QB:40:ILE:HG21	33:QB:201:GLY:N	2.20	0.56
33:QB:67:LEU:HD22	33:QB:69:VAL:HG22	1.87	0.56
33:QB:70:GLY:HA2	33:QB:163:ILE:HG22	1.86	0.56
35:QD:190:LEU:C	35:QD:190:LEU:HD12	2.30	0.56
38:QG:112:ASP:HB2	38:QG:118:ARG:HG2	1.86	0.56
32:XA:238:A:H2'	32:XA:239:U:C5'	2.34	0.56
32:XA:502:A:H2'	32:XA:503:C:O4'	2.04	0.56
32:XA:775:G:C2'	32:XA:776:G:H5'	2.35	0.56
33:XB:35:ASN:O	33:XB:36:LYS:HD2	2.05	0.56
33:XB:59:ILE:C	33:XB:59:ILE:HD12	2.29	0.56
34:XC:29:ALA:HB1	45:XN:64:ARG:NH1	2.20	0.56
38:XG:117:LEU:HG	38:XG:121:ASN:ND2	2.20	0.56
1:YA:570:G:H2'	1:YA:571:U:H5'	1.87	0.56
1:YA:1181:U:H2'	1:YA:1182:G:C8	2.38	0.56
1:YA:1401:G:C5	1:YA:1402:U:C4	2.93	0.56
1:YA:1553:A:C8	1:YA:1555:G:C6	2.92	0.56
1:YA:2097:A:H2'	1:YA:2098:U:C6	2.40	0.56
1:YA:2506:U:H3'	1:YA:2506:U:C6	2.39	0.56
1:YA:2815:C:H2'	1:YA:2816:G:H8	1.70	0.56
1:YA:2842:G:H2'	1:YA:2843:G:O4'	2.05	0.56
3:YC:74:PRO:HA	3:YC:116:GLN:HG3	1.87	0.56
16:YP:22:GLY:HA3	16:YP:91:VAL:HG21	1.87	0.56
25:YY:39:GLN:O	25:YY:42:LEU:HB2	2.04	0.56
1:RA:41:C:H2'	1:RA:42:A:O5'	2.05	0.56
1:RA:565:C:H4'	56:RA:3332:HOH:O	2.05	0.56
1:RA:1310:G:C2'	1:RA:1311:G:H5'	2.35	0.56
1:RA:1327:A:H2'	1:RA:1328:A:O4'	2.05	0.56
1:RA:1733:G:N3	1:RA:1734:G:C8	2.73	0.56
1:RA:1885:A:H2'	1:RA:1886:U:O4'	2.06	0.56
3:RC:229:HIS:HD2	3:RC:246:PRO:HB3	1.69	0.56
3:RC:259:ASN:C	3:RC:261:ARG:N	2.59	0.56
4:RD:169:ARG:O	4:RD:170:VAL:CG1	2.48	0.56
5:RE:46:GLN:HE21	5:RE:87:ALA:H	1.54	0.56
9:RI:74:PRO:O	9:RI:77:VAL:HG22	2.05	0.56
10:RJ:97:PRO:O	10:RJ:98:GLU:C	2.48	0.56
11:RK:111:LYS:H	11:RK:111:LYS:CE	2.18	0.56
17:RQ:63:ARG:HH22	17:RQ:96:ASP:CA	2.18	0.56
17:RQ:91:ARG:HD3	18:RR:11:GLN:HG3	1.87	0.56
18:RR:66:HIS:CD2	18:RR:94:THR:HG22	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:RT:19:LYS:O	20:RT:23:ALA:N	2.29	0.56
23:RW:24:ARG:HD3	23:RW:65:LYS:CD	2.35	0.56
25:RY:61:ALA:C	25:RY:63:ALA:H	2.14	0.56
28:R1:49:LYS:O	28:R1:50:GLU:HB3	2.04	0.56
32:QA:903:G:C5	32:QA:904:U:C5	2.93	0.56
32:QA:1108:G:H5"	34:QC:175:HIS:ND1	2.19	0.56
33:QB:40:ILE:HG21	33:QB:201:GLY:CA	2.35	0.56
33:QB:90:PHE:H	33:QB:149:GLY:HA2	1.70	0.56
35:QD:113:ALA:O	35:QD:116:LEU:HB2	2.05	0.56
35:QD:121:ALA:C	35:QD:122:ILE:HD13	2.29	0.56
37:QF:92:THR:HG22	37:QF:93:LYS:N	2.20	0.56
41:QJ:15:HIS:C	41:QJ:17:LEU:H	2.11	0.56
44:QM:21:ILE:HB	44:QM:24:VAL:HG22	1.86	0.56
48:QQ:6:THR:O	48:QQ:7:LEU:HD12	2.05	0.56
32:XA:16:A:H2'	32:XA:17:U:H5'	1.85	0.56
32:XA:209:U:C5'	32:XA:210:C:OP2	2.48	0.56
32:XA:315:A:C5	32:XA:330:C:H5"	2.40	0.56
32:XA:629:A:H2'	32:XA:630:A:O4'	2.05	0.56
32:XA:1319:A:C2'	32:XA:1320:C:OP2	2.53	0.56
36:XE:135:VAL:O	36:XE:139:THR:HG23	2.06	0.56
38:XG:110:ARG:HG2	38:XG:112:ASP:OD1	2.05	0.56
41:XJ:41:PRO:O	41:XJ:42:LEU:HB2	2.05	0.56
43:XL:3:VAL:O	43:XL:7:VAL:HG23	2.06	0.56
44:XM:12:LYS:HA	44:XM:12:LYS:CE	2.30	0.56
48:XQ:45:VAL:HG21	48:XQ:60:ILE:HD12	1.87	0.56
1:YA:111:A:C2	1:YA:112:U:C2	2.93	0.56
1:YA:120:U:O4	1:YA:177:G:C8	2.58	0.56
1:YA:242:G:C8	30:Y3:3:ILE:O	2.55	0.56
1:YA:309:A:N3	1:YA:329:G:H1'	2.19	0.56
1:YA:646:U:OP2	1:YA:646:U:H6	1.87	0.56
1:YA:676:A:H2	1:YA:2069:G:N3	2.02	0.56
1:YA:748:G:O2'	1:YA:749:A:H3'	2.04	0.56
1:YA:972:A:C3'	1:YA:973:A:H5"	2.32	0.56
1:YA:1059:G:N1	1:YA:1088:A:H2	2.03	0.56
1:YA:1266:G:O2'	1:YA:2012:G:O6	2.21	0.56
1:YA:1301:A:C4	1:YA:1303:G:N7	2.73	0.56
1:YA:1373:A:C5'	1:YA:2212:A:H1'	2.35	0.56
1:YA:1378:A:H2'	1:YA:1380:G:N7	2.19	0.56
1:YA:1469:A:H2'	1:YA:1470:A:H8	1.70	0.56
1:YA:1525:A:H2'	1:YA:1526:C:O4'	2.05	0.56
1:YA:1651:G:N2	1:YA:2007:U:C2	2.72	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1734:G:H2'	1:YA:1735:A:C8	2.40	0.56
1:YA:1799:G:H8	3:YC:179:GLU:OE1	1.88	0.56
1:YA:1809:A:N3	1:YA:1810:A:C8	2.73	0.56
1:YA:1992:G:N2	1:YA:1996:C:O2'	2.39	0.56
1:YA:2725:A:C4	1:YA:2727:A:C8	2.93	0.56
1:YA:2771:C:H2'	1:YA:2772:C:C6	2.35	0.56
1:YA:2815:C:H2'	1:YA:2816:G:C8	2.40	0.56
2:YB:78:A:C2	2:YB:99:A:C4	2.93	0.56
3:YC:8:THR:O	3:YC:9:SER:HB3	2.05	0.56
3:YC:144:GLU:HG3	3:YC:151:GLY:N	2.20	0.56
3:YC:173:LEU:HD22	3:YC:181:ARG:O	2.04	0.56
6:YF:1:ALA:HA	6:YF:97:GLU:HB3	1.87	0.56
6:YF:11:VAL:O	6:YF:12:VAL:HB	2.04	0.56
7:YG:97:VAL:HG21	7:YG:124:CYS:H	1.71	0.56
8:YH:8:LYS:HD2	8:YH:8:LYS:C	2.30	0.56
8:YH:31:VAL:HB	8:YH:32:PRO:HD3	1.87	0.56
19:YS:22:ASP:HA	19:YS:25:ARG:NH1	2.20	0.56
19:YS:47:VAL:HG12	19:YS:103:ILE:HG12	1.87	0.56
22:YV:36:ALA:HB1	22:YV:37:PRO:HD2	1.86	0.56
23:YW:22:VAL:O	23:YW:23:LYS:HG3	2.05	0.56
25:YY:50:VAL:HA	25:YY:53:VAL:HG23	1.86	0.56
26:YZ:10:ARG:HD2	26:YZ:52:PHE:O	2.05	0.56
1:RA:34:U:H1'	1:RA:35:G:OP1	2.05	0.56
1:RA:278:A:C2	1:RA:362:A:C8	2.93	0.56
1:RA:560:C:O2	17:RQ:47:ARG:NH1	2.38	0.56
1:RA:1847:A:H4'	1:RA:1848:A:OP2	2.05	0.56
1:RA:2199:A:H8	1:RA:2199:A:H5"	1.70	0.56
1:RA:2496:C:OP1	13:RM:82:MET:HB2	2.05	0.56
5:RE:146:VAL:HA	5:RE:185:LYS:O	2.05	0.56
10:RJ:140:LEU:CD1	10:RJ:140:LEU:C	2.77	0.56
15:RO:24:THR:HG22	15:RO:42:PRO:HD3	1.88	0.56
15:RO:75:GLY:HA2	15:RO:106:LEU:CD1	2.35	0.56
31:R4:9:LYS:O	31:R4:10:LEU:HD23	2.05	0.56
32:QA:71:A:N7	32:QA:100:G:C6	2.73	0.56
38:QG:144:ALA:C	38:QG:146:ALA:H	2.13	0.56
41:QJ:53:ILE:HD11	45:QN:84:ARG:NH2	2.20	0.56
41:QJ:81:GLU:HA	41:QJ:84:VAL:HG12	1.87	0.56
47:QP:77:GLU:C	47:QP:79:ASN:H	2.13	0.56
32:XA:423:G:H2'	32:XA:423:G:N3	2.20	0.56
32:XA:888:G:H4'	32:XA:1488:G:O2'	2.05	0.56
32:XA:1190:G:H5'	34:XC:175:HIS:NE2	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1448:C:O2'	32:XA:1449:C:C6	2.58	0.56
34:XC:76:ILE:HA	34:XC:83:VAL:CG1	2.34	0.56
37:XF:41:ASP:O	37:XF:42:TRP:C	2.48	0.56
1:YA:447:A:H5'	1:YA:449:A:C4	2.41	0.56
1:YA:504:A:O2'	1:YA:505:A:P	2.63	0.56
1:YA:620:G:C8	1:YA:622:G:O6	2.59	0.56
1:YA:846:U:HO2'	1:YA:847:U:H5"	1.70	0.56
1:YA:1409:U:O5'	1:YA:1409:U:H6	1.89	0.56
1:YA:1586:A:H2'	1:YA:1587:G:C8	2.35	0.56
1:YA:1831:G:N2	1:YA:1975:G:C4	2.73	0.56
2:YB:116:G:H4'	15:YO:54:VAL:HG22	1.87	0.56
4:YD:112:THR:O	4:YD:113:SER:HB2	2.04	0.56
7:YG:143:VAL:HA	7:YG:146:ASP:OD2	2.05	0.56
15:YO:62:LEU:HD11	15:YO:65:THR:N	2.20	0.56
16:YP:107:ALA:O	16:YP:108:ARG:C	2.48	0.56
19:YS:39:THR:O	19:YS:40:ASN:HB3	2.05	0.56
20:YT:40:LYS:HA	20:YT:43:ILE:HG22	1.86	0.56
23:YW:16:GLU:HA	23:YW:16:GLU:OE2	2.05	0.56
24:YX:48:LEU:O	24:YX:50:VAL:HG13	2.05	0.56
1:RA:1554:U:H4'	1:RA:1555:G:OP2	2.05	0.56
1:RA:1585:C:C2'	1:RA:1586:A:H5'	2.36	0.56
1:RA:1605:C:H3'	1:RA:1606:C:C5'	2.34	0.56
1:RA:2813:A:H2	1:RA:2887:A:H62	1.51	0.56
6:RF:7:TYR:OH	6:RF:29:ARG:HB3	2.06	0.56
7:RG:33:THR:C	7:RG:34:ARG:HD3	2.30	0.56
7:RG:174:LYS:HD2	7:RG:174:LYS:O	2.05	0.56
21:RU:70:ALA:CB	21:RU:79:ALA:HB1	2.35	0.56
32:QA:418:C:N4	56:QA:1718:HOH:O	2.39	0.56
32:QA:675:A:H1'	42:QK:117:HIS:CD2	2.41	0.56
32:QA:862:C:C2'	32:QA:863:U:H5'	2.35	0.56
32:QA:1125:U:OP2	32:QA:1145:A:N6	2.39	0.56
34:QC:21:TRP:CG	34:QC:58:ARG:HG2	2.41	0.56
35:QD:117:VAL:N	35:QD:122:ILE:HD11	2.20	0.56
36:QE:82:HIS:CE1	39:QH:95:MET:HE3	2.41	0.56
38:QG:34:LYS:HB3	38:QG:37:THR:HG23	1.88	0.56
39:QH:63:LYS:C	39:QH:64:TYR:HD1	2.14	0.56
40:QI:6:TYR:CE2	40:QI:17:ARG:HB2	2.41	0.56
32:XA:243:A:C4'	32:XA:244:U:OP2	2.53	0.56
32:XA:659:U:H2'	32:XA:660:C:C6	2.41	0.56
32:XA:994:A:N3	32:XA:995:C:C6	2.73	0.56
32:XA:1191:A:H5"	34:XC:3:LYS:HE3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:XG:24:LYS:O	38:XG:28:ILE:HG12	2.05	0.56
41:XJ:15:HIS:ND1	41:XJ:15:HIS:N	2.53	0.56
43:XL:50:LYS:N	43:XL:50:LYS:HD2	2.19	0.56
43:XL:82:ARG:HG2	43:XL:82:ARG:NH1	2.19	0.56
1:YA:85:G:OP2	21:YU:6:ARG:HB2	2.06	0.56
1:YA:233:A:H61	1:YA:428:A:H61	1.54	0.56
1:YA:234:U:H2'	1:YA:235:U:H6	1.70	0.56
1:YA:320:A:H62	5:YE:132:LYS:HG3	1.71	0.56
1:YA:834:G:C5'	30:Y3:56:LEU:HD11	2.36	0.56
1:YA:1651:G:C2	1:YA:2007:U:C2	2.94	0.56
1:YA:2093:G:H4'	8:YH:24:GLY:HA3	1.88	0.56
1:YA:2135:A:O2'	1:YA:2136:G:O4'	2.23	0.56
1:YA:2232:C:P	24:YX:26:ARG:NH1	2.79	0.56
1:YA:2336:A:C8	23:YW:40:ARG:NH2	2.73	0.56
1:YA:2415:G:H2'	1:YA:2416:C:H6	1.71	0.56
1:YA:2615:U:C2	27:Y0:3:GLN:HA	2.40	0.56
1:YA:2645:G:H4'	1:YA:2732:G:H2'	1.88	0.56
1:YA:2745:C:N4	1:YA:2759:G:H1	2.04	0.56
2:YB:90:C:H4'	13:YM:38:ARG:NH1	2.20	0.56
3:YC:196:ASN:O	3:YC:197:ALA:HB3	2.05	0.56
10:YJ:2:LYS:HB2	10:YJ:2:LYS:NZ	2.21	0.56
14:YN:2:ARG:HG2	14:YN:5:LYS:HD3	1.87	0.56
14:YN:37:THR:OG1	14:YN:40:LYS:HE2	2.05	0.56
19:YS:4:ILE:CG2	19:YS:106:VAL:HG22	2.35	0.56
22:YV:69:GLU:HG2	22:YV:70:ILE:N	2.19	0.56
25:YY:1:MET:HE2	25:YY:1:MET:N	2.21	0.56
1:RA:545:U:C2'	1:RA:546:U:O3'	2.54	0.56
1:RA:804:A:H5"	1:RA:805:G:OP1	2.06	0.56
1:RA:1528:A:H2'	1:RA:1529:G:O4'	2.06	0.56
1:RA:2134:A:N6	1:RA:2135:A:N6	2.53	0.56
3:RC:100:ARG:CG	3:RC:100:ARG:NH1	2.66	0.56
11:RK:43:ILE:HG21	11:RK:46:ALA:HB2	1.87	0.56
12:RL:35:HIS:O	12:RL:36:LYS:HB2	2.06	0.56
16:RP:3:ILE:HD13	16:RP:3:ILE:C	2.30	0.56
18:RR:25:LEU:H	18:RR:94:THR:CG2	2.18	0.56
20:RT:40:LYS:H	20:RT:43:ILE:CG2	2.18	0.56
32:QA:1451:U:H2'	32:QA:1451:U:O2	2.04	0.56
35:QD:105:GLY:HA3	35:QD:161:ALA:CB	2.35	0.56
40:QI:8:THR:O	40:QI:81:GLY:HA3	2.06	0.56
42:QK:109:ILE:HB	52:QU:5:VAL:CG2	2.36	0.56
48:QQ:18:LYS:C	48:QQ:47:ASP:OD2	2.49	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:QR:19:GLU:HG3	49:QR:54:LEU:HD22	1.87	0.56
50:QS:46:LEU:H	50:QS:61:VAL:CG2	2.17	0.56
52:QU:18:PHE:HB3	52:QU:19:LYS:HE2	1.87	0.56
32:XA:245:U:H6	32:XA:245:U:C5'	2.16	0.56
32:XA:328:C:O2	32:XA:328:C:C2'	2.53	0.56
32:XA:636:U:H2'	32:XA:637:C:C6	2.40	0.56
32:XA:1113:C:H2'	32:XA:1114:C:H6	1.70	0.56
32:XA:1124:G:H4'	32:XA:1125:U:OP1	2.05	0.56
32:XA:1151:A:C2	32:XA:1152:A:C5	2.94	0.56
36:XE:81:GLN:OE1	36:XE:149:PRO:HD3	2.06	0.56
40:XI:11:ARG:NH2	40:XI:108:ARG:HH21	2.02	0.56
40:XI:45:MET:HE3	40:XI:48:ARG:HG3	1.87	0.56
1:YA:526:A:N6	1:YA:2626:C:H4'	2.21	0.56
1:YA:1126:A:H4'	1:YA:1127:A:H5"	1.87	0.56
1:YA:1275:A:O3'	1:YA:1276:A:O4'	2.24	0.56
1:YA:1360:G:H2'	1:YA:1361:G:H5'	1.88	0.56
1:YA:1688:U:O2	1:YA:1700:A:H5'	2.06	0.56
1:YA:1742:U:H2'	1:YA:1743:G:H8	1.70	0.56
1:YA:1794:A:H2'	1:YA:1795:C:H6	1.70	0.56
1:YA:2200:C:N4	1:YA:2224:G:N2	2.52	0.56
1:YA:2345:G:C6	1:YA:2381:A:C6	2.94	0.56
1:YA:2345:G:C4	1:YA:2347:C:H5	2.23	0.56
1:YA:2583:G:C2'	1:YA:2584:U:H5'	2.36	0.56
2:YB:8:C:O2'	15:YO:40:ILE:HD13	2.06	0.56
2:YB:116:G:H2'	2:YB:117:G:C8	2.40	0.56
4:YD:22:ILE:HD12	4:YD:190:LYS:HD2	1.88	0.56
4:YD:105:LYS:HA	4:YD:177:VAL:HG22	1.88	0.56
7:YG:167:VAL:HG23	7:YG:168:VAL:N	2.20	0.56
29:Y2:31:LEU:HA	29:Y2:34:ARG:HB2	1.86	0.56
30:Y3:22:LYS:HG2	30:Y3:46:LYS:HE2	1.87	0.56
1:RA:469:G:O6	29:R2:37:LYS:HE2	2.06	0.56
1:RA:545:U:H6	1:RA:546:U:HO2'	1.54	0.56
1:RA:697:G:H2'	1:RA:698:C:C6	2.40	0.56
1:RA:1458:U:C4'	1:RA:1459:G:O5'	2.42	0.56
1:RA:1778:U:H2'	1:RA:1784:A:H62	1.70	0.56
1:RA:2292:U:H2'	1:RA:2293:G:C8	2.41	0.56
2:RB:66:A:H4'	2:RB:67:G:OP1	2.06	0.56
3:RC:242:HIS:O	3:RC:244:VAL:HG13	2.06	0.56
5:RE:153:LEU:HD12	5:RE:154:ASP:O	2.05	0.56
11:RK:10:VAL:CB	11:RK:16:ALA:HB1	2.36	0.56
16:RP:64:SER:O	16:RP:65:ASN:C	2.48	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:RQ:8:ILE:C	17:RQ:8:ILE:HD12	2.30	0.56
23:RW:47:GLY:C	23:RW:49:ASN:H	2.14	0.56
32:QA:82:G:N2	32:QA:84:U:H3	2.02	0.56
33:QB:103:TRP:CH2	33:QB:107:ARG:HD3	2.41	0.56
41:QJ:11:LYS:HG3	41:QJ:97:ASP:HB3	1.86	0.56
42:QK:51:PHE:HB2	42:QK:55:ARG:HB3	1.86	0.56
47:QP:18:GLN:HE21	47:QP:35:ARG:HD2	1.70	0.56
52:QU:8:ASN:N	52:QU:8:ASN:HD22	2.03	0.56
32:XA:212:G:O2'	32:XA:213:G:OP2	2.21	0.56
32:XA:653:U:H5'	39:XH:55:LYS:NZ	2.21	0.56
32:XA:812:G:OP1	32:XA:812:G:H4'	2.06	0.56
32:XA:1086:U:O5'	32:XA:1086:U:H6	1.88	0.56
32:XA:1097:C:H2'	32:XA:1098:C:H6	1.71	0.56
34:XC:166:TRP:O	34:XC:167:TYR:HB2	2.05	0.56
36:XE:89:THR:OG1	36:XE:90:GLY:N	2.35	0.56
45:XN:60:ARG:HG2	45:XN:61:ASN:H	1.71	0.56
45:XN:100:TRP:C	45:XN:100:TRP:CD1	2.84	0.56
1:YA:216:A:O2'	1:YA:217:A:C8	2.20	0.56
1:YA:226:A:H2	1:YA:230:G:O6	1.88	0.56
1:YA:850:U:HO2'	26:YZ:46:MET:HE3	1.69	0.56
1:YA:1102:C:OP2	1:YA:1102:C:H6	1.89	0.56
1:YA:1341:G:HO2'	1:YA:1398:C:H5'	1.69	0.56
1:YA:1427:A:H4'	1:YA:1428:C:OP1	2.05	0.56
1:YA:1731:G:H4'	1:YA:1732:C:OP1	2.03	0.56
1:YA:2212:A:N7	1:YA:2214:C:N4	2.54	0.56
1:YA:2314:A:C2	1:YA:2315:G:C5	2.93	0.56
1:YA:2314:A:H5"	6:YF:34:THR:OG1	2.06	0.56
2:YB:67:G:HO2'	2:YB:68:C:H6	1.53	0.56
8:YH:80:ILE:HB	8:YH:101:ASP:HB2	1.88	0.56
8:YH:82:SER:O	8:YH:83:LYS:HB3	2.06	0.56
11:YK:17:ARG:CG	11:YK:18:ARG:H	2.17	0.56
1:RA:1032:A:H1'	31:R4:23:ILE:HD13	1.88	0.56
1:RA:1063:G:OP1	9:RI:76:ALA:HB3	2.06	0.56
3:RC:219:VAL:CG1	3:RC:224:MET:HE2	2.35	0.56
5:RE:152:GLU:HA	5:RE:152:GLU:OE2	2.06	0.56
18:RR:27:ILE:HG13	18:RR:33:VAL:HG12	1.86	0.56
20:RT:29:THR:HA	20:RT:86:THR:HA	1.88	0.56
25:RY:47:ARG:HG3	25:RY:47:ARG:NH2	2.18	0.56
32:QA:131:A:H2'	32:QA:132:C:C6	2.41	0.56
32:QA:1361:G:H2'	32:QA:1362:A:H5"	1.87	0.56
33:QB:13:VAL:HG23	33:QB:207:ARG:NH2	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:QD:28:ASP:OD1	35:QD:33:ILE:HG12	2.05	0.56
48:QQ:12:VAL:HG12	48:QQ:21:VAL:O	2.06	0.56
32:XA:313:A:H2'	32:XA:314:C:C6	2.41	0.56
32:XA:637:C:H2'	32:XA:638:U:C6	2.41	0.56
32:XA:1169:A:H2'	32:XA:1170:A:C8	2.39	0.56
40:XI:58:GLU:HG3	40:XI:59:LYS:N	2.20	0.56
43:XL:24:GLU:O	43:XL:25:ALA:HB3	2.05	0.56
44:XM:75:SER:C	44:XM:77:LYS:H	2.12	0.56
1:YA:59:U:H1'	1:YA:73:A:O2'	2.05	0.56
1:YA:221:A:C2	1:YA:233:A:C5	2.94	0.56
1:YA:453:A:N3	1:YA:457:A:O2'	2.39	0.56
1:YA:507:A:OP2	1:YA:507:A:H2'	2.05	0.56
1:YA:677:A:O2'	1:YA:2071:A:H5'	2.06	0.56
1:YA:1993:U:H4'	4:YD:133:THR:HG22	1.87	0.56
1:YA:2403:C:O2'	1:YA:2404:U:H5'	2.06	0.56
2:YB:16:G:H2'	2:YB:17:C:C6	2.41	0.56
2:YB:85:G:O2'	2:YB:86:G:H5'	2.05	0.56
4:YD:149:ASN:OD1	4:YD:150:GLN:N	2.39	0.56
6:YF:1:ALA:HB2	6:YF:93:GLU:O	2.05	0.56
7:YG:94:ARG:NH2	7:YG:111:PRO:HB3	2.20	0.56
10:YJ:95:ARG:O	10:YJ:96:ARG:C	2.49	0.56
22:YV:2:PHE:CD1	22:YV:50:MET:HE3	2.41	0.56
25:YY:1:MET:H2	25:YY:5:GLU:HG3	1.70	0.56
28:Y1:46:VAL:HG22	28:Y1:47:ILE:H	1.71	0.56
1:RA:39:G:H2'	1:RA:40:U:H6	1.70	0.56
1:RA:225:C:H2'	1:RA:226:A:O4'	2.06	0.56
1:RA:1000:A:H62	1:RA:1154:G:H2'	1.71	0.56
1:RA:1014:A:O2'	1:RA:1015:U:H5'	2.06	0.56
1:RA:1319:C:C2'	1:RA:1320:C:H5'	2.34	0.56
1:RA:1434:A:OP1	1:RA:1434:A:H4'	2.05	0.56
1:RA:2093:G:C2'	1:RA:2094:A:H5'	2.36	0.56
1:RA:2344:U:H4'	1:RA:2345:G:OP1	2.04	0.56
1:RA:2515:C:O2'	1:RA:2516:A:H5'	2.05	0.56
6:RF:39:VAL:HG11	6:RF:49:LEU:HD13	1.88	0.56
6:RF:142:TYR:O	6:RF:145:VAL:HG22	2.06	0.56
13:RM:71:LYS:HD3	13:RM:95:LEU:HD13	1.85	0.56
14:RN:33:ILE:HG12	14:RN:118:ARG:CZ	2.35	0.56
19:RS:63:GLY:O	19:RS:64:ALA:HB3	2.06	0.56
23:RW:22:VAL:HG13	23:RW:25:PHE:CE2	2.41	0.56
32:QA:1057:G:O3'	34:QC:196:GLY:HA3	2.05	0.56
32:QA:1239:A:N6	32:QA:1299:A:N6	2.47	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:QB:163:ILE:CG2	33:QB:164:ASP:H	2.14	0.56
38:QG:77:ARG:HB2	38:QG:84:TYR:O	2.06	0.56
46:QO:74:VAL:O	46:QO:77:TYR:HB3	2.06	0.56
48:QQ:49:ASN:O	48:QQ:50:ASN:C	2.48	0.56
50:QS:19:GLU:HA	50:QS:19:GLU:OE2	2.06	0.56
52:QU:7:GLU:HB2	52:QU:11:PHE:CE1	2.40	0.56
32:XA:982:U:H4'	32:XA:983:A:C5'	2.34	0.56
39:XH:78:SER:HB2	39:XH:124:ILE:O	2.06	0.56
40:XI:44:ARG:O	40:XI:48:ARG:HG2	2.06	0.56
41:XJ:66:GLU:HG3	45:XN:100:TRP:HZ3	1.71	0.56
50:XS:49:ALA:HB1	50:XS:56:HIS:HB3	1.86	0.56
52:XU:24:LYS:HG3	52:XU:25:ALA:N	2.18	0.56
1:YA:261:G:H2'	1:YA:262:A:H8	1.71	0.56
1:YA:279:A:N6	1:YA:361:G:H1'	2.21	0.56
1:YA:402:A:H2'	1:YA:403:U:O4'	2.06	0.56
1:YA:674:G:H4'	5:YE:69:ARG:HB3	1.88	0.56
1:YA:732:C:H2'	1:YA:733:G:O4'	2.06	0.56
1:YA:781:A:H2'	1:YA:1777:U:H1'	1.88	0.56
1:YA:1071:G:O2'	1:YA:1072:C:C5'	2.54	0.56
1:YA:1413:A:H2'	1:YA:1414:C:C6	2.41	0.56
1:YA:1567:G:H1'	1:YA:1568:G:C6	2.40	0.56
1:YA:2638:G:H1'	1:YA:2778:A:N6	2.21	0.56
5:YE:59:PRO:HB2	5:YE:67:ARG:HH22	1.70	0.56
8:YH:24:GLY:O	8:YH:25:TYR:C	2.48	0.56
9:YI:74:PRO:HB2	9:YI:77:VAL:CG2	2.30	0.56
9:YI:118:GLY:O	9:YI:119:ALA:HB3	2.05	0.56
12:YL:18:ARG:HA	12:YL:18:ARG:HE	1.71	0.56
17:YQ:4:LYS:HE3	17:YQ:7:VAL:H	1.70	0.56
17:YQ:10:ARG:O	17:YQ:14:LYS:HB2	2.06	0.56
26:YZ:7:THR:O	26:YZ:54:VAL:HA	2.06	0.56
1:RA:1185:G:H5"	1:RA:1186:G:OP2	2.06	0.56
1:RA:2311:A:O3'	1:RA:2312:U:O4'	2.24	0.56
1:RA:2340:A:H2'	1:RA:2341:G:C8	2.40	0.56
5:RE:149:ILE:O	5:RE:188:MET:HA	2.06	0.56
5:RE:196:VAL:HG13	5:RE:200:LEU:CD2	2.36	0.56
11:RK:43:ILE:HG13	11:RK:56:ASP:HB2	1.88	0.56
32:QA:87:C:H2'	32:QA:88:U:C6	2.40	0.56
32:QA:795:C:H5"	32:QA:796:C:OP2	2.06	0.56
32:QA:806:C:O2'	32:QA:807:A:H5'	2.06	0.56
33:QB:209:VAL:HG23	33:QB:210:THR:HG23	1.88	0.56
34:QC:179:ALA:HB1	34:QC:202:PHE:HE1	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:QD:68:GLU:O	35:QD:69:ARG:C	2.47	0.56
39:QH:85:TYR:CE2	39:QH:123:GLU:HB2	2.41	0.56
32:XA:490:C:O2'	32:XA:491:G:H5'	2.06	0.56
32:XA:571:U:H5"	32:XA:572:A:OP2	2.06	0.56
32:XA:644:U:H2'	32:XA:645:G:H8	1.71	0.56
32:XA:983:A:O2'	32:XA:984:C:C5'	2.54	0.56
32:XA:1146:A:O2'	32:XA:1147:C:C5'	2.54	0.56
32:XA:1513:A:H2'	32:XA:1514:G:H8	1.70	0.56
35:XD:66:VAL:HG22	35:XD:96:ARG:HH11	1.68	0.56
38:XG:89:GLU:O	38:XG:90:VAL:HG13	2.06	0.56
38:XG:100:MET:HA	38:XG:103:ILE:HB	1.87	0.56
47:XP:44:SER:HB2	47:XP:46:LYS:CG	2.36	0.56
1:YA:83:A:N6	1:YA:101:A:C5'	2.69	0.56
1:YA:270:A:H2	1:YA:369:U:H4'	1.70	0.56
1:YA:499:U:H5"	21:YU:42:LYS:NZ	2.21	0.56
1:YA:571:U:C4	1:YA:2030:A:C6	2.93	0.56
1:YA:923:G:H1'	23:YW:23:LYS:HZ1	1.69	0.56
1:YA:1392:A:H62	1:YA:1393:A:N6	2.04	0.56
1:YA:1717:A:H2'	1:YA:1718:G:O4'	2.06	0.56
1:YA:2391:G:HO2'	1:YA:2392:A:P	2.29	0.56
1:YA:2415:G:C5	1:YA:2416:C:C4	2.94	0.56
3:YC:95:TYR:C	3:YC:97:ASP:H	2.13	0.56
4:YD:17:GLU:CD	4:YD:17:GLU:H	2.14	0.56
4:YD:110:THR:HA	4:YD:171:THR:HA	1.86	0.56
4:YD:133:THR:O	4:YD:134:HIS:C	2.49	0.56
7:YG:120:ILE:O	7:YG:120:ILE:HD13	2.06	0.56
11:YK:63:VAL:HG12	11:YK:64:ARG:HD3	1.88	0.56
14:YN:62:ASN:O	14:YN:63:ARG:CB	2.54	0.56
15:YO:39:VAL:HB	15:YO:49:VAL:O	2.05	0.56
19:YS:17:VAL:HG11	19:YS:103:ILE:HG13	1.88	0.56
1:RA:528:A:H3'	1:RA:528:A:H8	1.70	0.55
1:RA:1090:A:C2'	1:RA:1091:G:H5'	2.36	0.55
1:RA:2648:G:O2'	1:RA:2649:C:H5'	2.06	0.55
1:RA:2786:U:O2'	1:RA:2787:C:H5'	2.06	0.55
4:RD:92:VAL:O	4:RD:93:GLY:C	2.48	0.55
5:RE:7:ASP:O	5:RE:9:GLN:N	2.40	0.55
5:RE:72:SER:C	5:RE:74:LYS:H	2.14	0.55
12:RL:55:MET:HE2	12:RL:56:PRO:CD	2.35	0.55
23:RW:35:ILE:O	23:RW:37:VAL:N	2.39	0.55
32:QA:546:A:P	35:QD:68:GLU:HB2	2.46	0.55
32:QA:968:A:H4'	32:QA:969:A:OP2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:1261:A:C2	32:QA:1274:A:C2	2.94	0.55
41:QJ:91:ASP:C	41:QJ:92:LEU:HD23	2.31	0.55
44:QM:52:ILE:O	44:QM:55:LEU:HB2	2.05	0.55
32:XA:1309:G:H2'	32:XA:1310:G:C8	2.40	0.55
32:XA:1409:C:H5'	1:YA:1916:A:N1	2.21	0.55
39:XH:52:GLY:HA3	39:XH:56:PRO:HA	1.86	0.55
41:XJ:63:ASP:OD2	45:XN:84:ARG:NH1	2.39	0.55
44:XM:76:ILE:HG22	44:XM:76:ILE:O	2.06	0.55
52:XU:35:GLU:HG3	52:XU:36:PHE:N	2.20	0.55
1:YA:73:A:H8	1:YA:73:A:O5'	1.89	0.55
1:YA:294:A:N1	1:YA:346:A:N1	2.54	0.55
1:YA:352:A:C6	1:YA:353:C:C2	2.94	0.55
1:YA:570:G:C2'	1:YA:571:U:H5'	2.36	0.55
1:YA:602:A:H1'	1:YA:656:G:N2	2.20	0.55
1:YA:811:U:C5'	1:YA:812:C:OP2	2.51	0.55
1:YA:1087:G:C5	1:YA:1089:A:C2	2.94	0.55
1:YA:1275:A:C8	14:YN:16:HIS:CD2	2.94	0.55
1:YA:1277:G:H5'	14:YN:20:MET:SD	2.46	0.55
1:YA:1324:G:C2	1:YA:1328:A:N6	2.74	0.55
1:YA:1352:U:H5	1:YA:1377:G:C5	2.23	0.55
1:YA:1462:C:C1'	1:YA:2702:G:H21	2.19	0.55
1:YA:1555:G:C2	1:YA:1556:C:C2	2.94	0.55
1:YA:1663:G:C6	1:YA:1998:A:N6	2.74	0.55
1:YA:1797:G:H4'	3:YC:254:LYS:O	2.06	0.55
1:YA:2544:G:H5'	1:YA:2645:G:C8	2.40	0.55
1:YA:2623:G:C4'	1:YA:2825:G:H8	2.19	0.55
4:YD:15:PHE:CE2	16:YP:77:SER:HA	2.40	0.55
6:YF:5:ASP:C	6:YF:7:TYR:N	2.59	0.55
13:YM:17:ASN:OD1	13:YM:95:LEU:HB3	2.06	0.55
17:YQ:60:TRP:CH2	17:YQ:93:ILE:HB	2.42	0.55
23:YW:36:ILE:CG2	23:YW:39:GLN:HB2	2.36	0.55
1:RA:574:A:H4'	1:RA:575:A:O5'	2.06	0.55
1:RA:675:A:H4'	5:RE:62:GLN:NE2	2.20	0.55
1:RA:1224:U:C4	1:RA:1225:G:C6	2.94	0.55
1:RA:1245:G:OP1	12:RL:13:LYS:HE3	2.05	0.55
1:RA:1394:U:H4'	1:RA:1603:A:H4'	1.88	0.55
1:RA:2097:A:H2'	1:RA:2098:U:H6	1.70	0.55
1:RA:2103:C:H2'	1:RA:2104:C:H5'	1.88	0.55
1:RA:2425:A:H4'	1:RA:2426:A:O5'	2.06	0.55
1:RA:2819:G:H5"	56:RA:3806:HOH:O	2.07	0.55
4:RD:110:THR:HG23	4:RD:171:THR:HG22	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:RF:142:TYR:HA	6:RF:145:VAL:HG13	1.89	0.55
7:RG:85:LYS:HA	7:RG:130:ILE:O	2.06	0.55
8:RH:137:GLU:HG3	8:RH:138:VAL:HG13	1.88	0.55
9:RI:57:VAL:HG12	9:RI:58:ILE:N	2.21	0.55
9:RI:61:TYR:N	9:RI:61:TYR:CD2	2.74	0.55
10:RJ:93:ILE:O	10:RJ:97:PRO:HG3	2.07	0.55
12:RL:23:ILE:HG12	18:RR:82:HIS:CE1	2.42	0.55
15:RO:84:GLU:C	15:RO:86:GLY:H	2.14	0.55
16:RP:50:ARG:HD2	16:RP:51:ASN:H	1.69	0.55
19:RS:13:SER:O	19:RS:14:ALA:CB	2.54	0.55
20:RT:61:LEU:C	20:RT:61:LEU:CD1	2.78	0.55
32:QA:112:G:C6	32:QA:330:C:N4	2.74	0.55
32:QA:376:G:H2'	32:QA:377:G:H8	1.70	0.55
32:QA:1303:C:H2'	32:QA:1304:G:H8	1.63	0.55
32:QA:1449:C:H2'	32:QA:1450:U:H5'	1.89	0.55
32:QA:1453:G:H2'	32:QA:1454:G:O4'	2.05	0.55
32:XA:91:U:C4	32:XA:92:U:C4	2.94	0.55
32:XA:512:U:O2'	32:XA:513:C:O5'	2.23	0.55
32:XA:1363:A:C5	32:XA:1365:G:C6	2.94	0.55
36:XE:95:MET:HB3	36:XE:124:ALA:HB2	1.88	0.55
37:XF:67:PRO:O	37:XF:68:GLN:C	2.49	0.55
40:XI:40:ARG:H	40:XI:44:ARG:HD3	1.72	0.55
41:XJ:37:ARG:HB3	41:XJ:74:VAL:O	2.06	0.55
44:XM:106:ARG:HH21	44:XM:112:ARG:CZ	2.19	0.55
50:XS:5:LYS:CE	50:XS:6:LYS:H	2.14	0.55
51:XT:60:GLN:HB3	51:XT:65:LEU:HD12	1.89	0.55
1:YA:145:C:H6	1:YA:145:C:O5'	1.89	0.55
1:YA:855:G:O2'	23:YW:23:LYS:HD3	2.07	0.55
1:YA:1016:G:C2	1:YA:1147:A:C2	2.94	0.55
1:YA:1056:G:H3'	1:YA:1056:G:OP2	2.06	0.55
1:YA:1605:C:H5"	1:YA:1606:C:OP2	2.06	0.55
1:YA:1856:U:O4	1:YA:1857:G:C2	2.59	0.55
1:YA:2213:U:O2'	1:YA:2214:C:H5'	2.06	0.55
7:YG:162:ARG:HG3	7:YG:166:GLU:HG3	1.88	0.55
8:YH:78:VAL:HB	8:YH:144:VAL:HA	1.88	0.55
13:YM:57:VAL:HA	13:YM:112:LEU:HD11	1.89	0.55
17:YQ:84:LYS:C	17:YQ:86:SER:H	2.15	0.55
29:Y2:43:THR:HG23	29:Y2:45:SER:OG	2.05	0.55
1:RA:142:A:O2'	1:RA:143:C:O4'	2.24	0.55
1:RA:571:U:C5	1:RA:575:A:C6	2.95	0.55
1:RA:1248:G:OP2	5:RE:44:ARG:NH1	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:RC:165:ALA:HB3	3:RC:172:THR:HG23	1.89	0.55
6:RF:3:LEU:HD23	6:RF:100:GLU:HB2	1.88	0.55
12:RL:77:ILE:O	12:RL:110:VAL:O	2.24	0.55
13:RM:21:ALA:HA	13:RM:97:GLN:HG2	1.88	0.55
15:RO:103:VAL:O	15:RO:105:ALA:O	2.25	0.55
16:RP:50:ARG:HD3	16:RP:51:ASN:H	1.71	0.55
20:RT:10:VAL:CG2	20:RT:11:LEU:HD23	2.36	0.55
28:R1:8:ILE:CG2	28:R1:9:LYS:N	2.69	0.55
32:QA:71:A:N6	32:QA:100:G:N7	2.54	0.55
32:QA:616:G:O2'	32:QA:617:G:H5'	2.06	0.55
32:QA:674:G:H2'	32:QA:675:A:C8	2.41	0.55
32:QA:1471:U:O2'	32:QA:1472:U:H5'	2.07	0.55
33:QB:16:GLY:HA2	33:QB:202:ASN:HB2	1.87	0.55
36:QE:81:GLN:HG2	36:QE:149:PRO:CG	2.36	0.55
40:QI:83:THR:HG21	40:QI:102:PHE:CB	2.33	0.55
44:QM:19:THR:HA	44:QM:24:VAL:HG23	1.88	0.55
44:QM:55:LEU:O	44:QM:59:VAL:HG12	2.06	0.55
44:QM:84:CYS:HB3	50:QS:73:PHE:CE2	2.41	0.55
45:QN:15:LEU:HD23	45:QN:18:LYS:HE3	1.87	0.55
46:QO:31:LEU:O	46:QO:32:THR:C	2.49	0.55
49:QR:22:TYR:CZ	49:QR:23:LYS:HE3	2.41	0.55
32:XA:247:G:C6	32:XA:278:G:C2	2.94	0.55
32:XA:667:G:C2	32:XA:740:U:O2	2.59	0.55
32:XA:1280:A:H5"	41:XJ:43:PRO:CG	2.36	0.55
37:XF:99:ALA:O	37:XF:100:SER:HB2	2.06	0.55
39:XH:11:THR:HG22	39:XH:14:ARG:NH1	2.21	0.55
52:XU:33:ARG:CZ	52:XU:34:ARG:HD3	2.36	0.55
1:YA:503:A:N3	1:YA:505:A:H2'	2.21	0.55
1:YA:571:U:C5	1:YA:575:A:C6	2.94	0.55
1:YA:1181:U:O2'	1:YA:1182:G:H5'	2.06	0.55
1:YA:1208:C:N3	1:YA:1209:U:C5	2.75	0.55
1:YA:1553:A:N7	1:YA:1555:G:C5	2.74	0.55
1:YA:1709:U:H2'	1:YA:1710:G:H8	1.72	0.55
1:YA:2096:C:H2'	1:YA:2097:A:C8	2.41	0.55
1:YA:2287:A:N7	1:YA:2289:G:C8	2.74	0.55
1:YA:2657:A:O3'	7:YG:159:LYS:NZ	2.40	0.55
2:YB:58:A:C8	2:YB:59:A:N7	2.75	0.55
3:YC:71:ASP:O	3:YC:73:ILE:HG12	2.07	0.55
3:YC:129:LEU:HB2	3:YC:130:PRO:HD2	1.87	0.55
8:YH:21:VAL:HG22	8:YH:22:LYS:H	1.70	0.55
10:YJ:62:VAL:HG11	10:YJ:101:ILE:HD11	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:YN:73:ASN:HA	14:YN:76:VAL:HG22	1.87	0.55
20:YT:14:PRO:O	20:YT:15:HIS:CB	2.53	0.55
20:YT:29:THR:N	20:YT:87:LEU:HB2	2.21	0.55
25:YY:23:ARG:HB3	25:YY:27:ASN:OD1	2.07	0.55
1:RA:997:G:OP1	17:RQ:92:LYS:HD2	2.06	0.55
2:RB:34:A:H2'	2:RB:35:C:OP2	2.06	0.55
5:RE:28:VAL:O	5:RE:32:VAL:HG13	2.07	0.55
5:RE:48:THR:C	5:RE:50:ALA:N	2.62	0.55
7:RG:8:VAL:O	7:RG:9:VAL:HG12	2.06	0.55
13:RM:108:VAL:HG13	13:RM:112:LEU:HB3	1.89	0.55
15:RO:79:ALA:HB2	15:RO:110:ALA:HA	1.87	0.55
20:RT:40:LYS:O	20:RT:44:LYS:N	2.39	0.55
32:QA:192:A:C2'	51:QT:54:GLN:HE22	2.18	0.55
32:QA:217:C:O2'	32:QA:218:U:H5'	2.07	0.55
32:QA:834:U:OP1	49:QR:48:ALA:HB2	2.06	0.55
33:QB:71:THR:HG22	33:QB:72:LYS:N	2.20	0.55
33:QB:138:ARG:HG3	33:QB:139:GLU:N	2.21	0.55
38:QG:4:ARG:HA	38:QG:4:ARG:NE	2.21	0.55
39:QH:17:GLN:HE21	39:QH:71:VAL:H	1.51	0.55
40:QI:88:GLU:HG3	40:QI:89:TYR:H	1.70	0.55
42:QK:126:ARG:CA	52:QU:33:ARG:HH12	2.19	0.55
47:QP:59:HIS:CE1	47:QP:63:GLN:NE2	2.73	0.55
48:QQ:80:LYS:HB2	48:QQ:80:LYS:HZ3	1.70	0.55
32:XA:33:A:H2'	32:XA:34:C:C6	2.41	0.55
32:XA:35:G:H21	43:XL:114:SER:HB3	1.70	0.55
32:XA:270:A:H2'	32:XA:271:C:C6	2.40	0.55
32:XA:796:C:H4'	42:XK:126:ARG:NH2	2.20	0.55
32:XA:1303:C:H42	32:XA:1334:G:H1	1.52	0.55
32:XA:1342:C:H2'	32:XA:1343:G:C8	2.41	0.55
32:XA:1452:C:H4'	32:XA:1453:G:O5'	2.06	0.55
33:XB:164:ASP:HB3	33:XB:167:HIS:CB	2.37	0.55
36:XE:110:MET:HG2	36:XE:139:THR:HG21	1.89	0.55
50:XS:52:ASN:C	50:XS:54:ARG:H	2.15	0.55
1:YA:565:C:H2'	1:YA:566:U:O4'	2.06	0.55
1:YA:674:G:H2'	1:YA:804:A:H61	1.70	0.55
1:YA:1019:U:O2'	1:YA:1021:A:N1	2.34	0.55
1:YA:1055:G:H2'	1:YA:1056:G:H5'	1.89	0.55
1:YA:1139:G:N2	1:YA:1140:C:C2	2.74	0.55
1:YA:1520:U:O4	1:YA:1521:G:C6	2.59	0.55
1:YA:1535:A:H5"	1:YA:1536:C:OP2	2.06	0.55
1:YA:1733:G:H5'	1:YA:1733:G:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1965:C:H5”	1:YA:1966:A:H2’	1.89	0.55
1:YA:2574:G:O2’	4:YD:148:GLN:HB2	2.06	0.55
1:YA:2651:C:O2’	1:YA:2652:C:H5’	2.06	0.55
1:YA:2746:U:C2	1:YA:2759:G:N2	2.75	0.55
1:YA:2850:A:N7	1:YA:2868:A:O2’	2.25	0.55
3:YC:68:ARG:HH12	3:YC:115:ILE:CD1	2.19	0.55
3:YC:131:MET:HG2	3:YC:134:ILE:HD11	1.87	0.55
4:YD:105:LYS:HA	4:YD:177:VAL:CG2	2.37	0.55
5:YE:105:LEU:HB3	5:YE:200:LEU:HD11	1.88	0.55
14:YN:70:THR:HG22	14:YN:70:THR:O	2.06	0.55
28:Y1:34:GLU:HG3	28:Y1:49:LYS:HB2	1.88	0.55
1:RA:161:A:C3’	1:RA:162:U:H5”	2.32	0.55
1:RA:322:A:H3’	5:RE:163:ASN:HD21	1.72	0.55
1:RA:1794:A:H2’	1:RA:1795:C:H6	1.70	0.55
1:RA:1856:U:C2’	1:RA:1857:G:H5’	2.37	0.55
1:RA:2262:U:H4’	1:RA:2328:A:C2	2.42	0.55
1:RA:2308:G:N7	6:RF:76:PHE:CE2	2.74	0.55
3:RC:140:VAL:HA	3:RC:190:THR:O	2.07	0.55
4:RD:34:VAL:HG22	4:RD:94:GLN:H	1.71	0.55
7:RG:1:SER:O	7:RG:3:VAL:N	2.37	0.55
8:RH:2:GLN:HA	8:RH:20:ASN:HA	1.88	0.55
13:RM:1:MET:HE3	13:RM:2:LEU:N	2.09	0.55
18:RR:28:ALA:O	18:RR:63:VAL:HG21	2.06	0.55
29:R2:12:ARG:HB2	29:R2:12:ARG:NH2	2.21	0.55
30:R3:60:CYS:O	30:R3:61:LEU:HD23	2.07	0.55
40:QI:24:ASN:HA	40:QI:58:GLU:O	2.06	0.55
50:QS:3:SER:HB2	50:QS:4:LEU:HD12	1.89	0.55
32:XA:93:U:C2	32:XA:95:C:N4	2.74	0.55
32:XA:664:G:N2	32:XA:666:G:C8	2.74	0.55
33:XB:133:ALA:HA	33:XB:137:THR:CG2	2.36	0.55
34:XC:35:ASP:OD1	34:XC:56:ILE:HG21	2.07	0.55
34:XC:133:MET:O	34:XC:137:VAL:HG23	2.07	0.55
37:XF:6:ILE:HD12	37:XF:6:ILE:H	1.71	0.55
40:XI:44:ARG:HH21	40:XI:48:ARG:HH11	1.50	0.55
44:XM:95:PRO:HG3	44:XM:99:GLN:CD	2.31	0.55
48:XQ:19:SER:HB3	48:XQ:70:LYS:NZ	2.20	0.55
1:YA:142:A:H2’	1:YA:143:C:C6	2.42	0.55
1:YA:183:C:H2’	1:YA:184:C:H5’	1.87	0.55
1:YA:299:A:C2	1:YA:319:G:N3	2.75	0.55
1:YA:1213:A:H1’	1:YA:1237:A:C2	2.41	0.55
1:YA:1249:U:H4’	17:YQ:3:VAL:HG21	1.86	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2093:G:O2'	1:YA:2094:A:P	2.64	0.55
1:YA:2721:A:C2	1:YA:2873:A:C5	2.94	0.55
3:YC:70:LYS:HD3	3:YC:101:ARG:NH1	2.16	0.55
7:YG:104:LEU:H	7:YG:112:VAL:HG23	1.71	0.55
18:YR:80:ARG:HB3	18:YR:81:LYS:HD3	1.88	0.55
24:YX:30:PRO:HG2	24:YX:32:LEU:CD2	2.37	0.55
26:YZ:4:ILE:CG2	26:YZ:56:VAL:HG13	2.36	0.55
1:RA:250:G:H2'	1:RA:251:A:C8	2.42	0.55
1:RA:975:A:H1'	1:RA:990:A:C2	2.42	0.55
1:RA:1009:A:H8	1:RA:1009:A:O5'	1.89	0.55
1:RA:1084:A:H2'	1:RA:1085:A:H8	1.69	0.55
1:RA:1945:G:C4	1:RA:1946:U:C5	2.94	0.55
1:RA:1947:C:O2'	1:RA:1948:G:H5'	2.06	0.55
1:RA:2520:C:C6	1:RA:2567:G:H1'	2.41	0.55
4:RD:91:THR:C	4:RD:93:GLY:H	2.07	0.55
10:RJ:43:GLU:O	10:RJ:45:THR:CG2	2.54	0.55
21:RU:52:ASN:C	21:RU:54:PRO:CD	2.79	0.55
21:RU:66:VAL:C	21:RU:68:ASN:H	2.15	0.55
30:R3:31:ILE:O	30:R3:31:ILE:HG13	2.05	0.55
32:QA:367:U:OP1	32:QA:395:C:H1'	2.07	0.55
32:QA:486:U:C6	32:QA:486:U:C5'	2.82	0.55
32:QA:914:A:H2'	32:QA:915:A:H8	1.72	0.55
32:QA:923:A:OP1	36:QE:25:LYS:HG2	2.07	0.55
32:QA:957:U:O2	32:QA:959:A:C8	2.59	0.55
32:QA:1190:G:OP1	34:QC:4:VAL:HG12	2.06	0.55
32:QA:1329:A:H5"	44:QM:25:GLY:N	2.20	0.55
33:QB:49:PHE:HB2	33:QB:53:LEU:HD23	1.87	0.55
38:QG:92:PRO:O	38:QG:93:VAL:HG13	2.06	0.55
48:QQ:28:VAL:O	48:QQ:36:PHE:HA	2.07	0.55
32:XA:72:A:N6	32:XA:99:C:H1'	2.22	0.55
32:XA:239:U:H6	32:XA:239:U:H5'	1.72	0.55
32:XA:274:A:N3	32:XA:275:G:C8	2.75	0.55
32:XA:555:U:H2'	32:XA:556:C:C6	2.41	0.55
32:XA:794:A:H2'	32:XA:795:C:C6	2.41	0.55
32:XA:935:A:O2'	32:XA:936:C:C6	2.55	0.55
32:XA:981:U:OP2	32:XA:982:U:H3'	2.06	0.55
32:XA:998:C:H2'	32:XA:999:C:H6	1.70	0.55
32:XA:1074:G:H2'	32:XA:1075:U:H6	1.72	0.55
32:XA:1139:G:H4'	32:XA:1140:C:O5'	2.07	0.55
32:XA:1269:A:H2	32:XA:1312:G:H21	1.54	0.55
32:XA:1366:C:O2'	32:XA:1367:C:H6	1.82	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:XB:119:GLN:HG3	33:XB:124:THR:HG21	1.88	0.55
36:XE:68:ARG:O	36:XE:70:MET:HG2	2.06	0.55
37:XF:3:HIS:ND1	37:XF:92:THR:HG23	2.20	0.55
37:XF:43:GLY:O	37:XF:44:ARG:C	2.49	0.55
40:XI:38:PHE:CE2	40:XI:71:ILE:HG22	2.42	0.55
48:XQ:11:VAL:HG12	48:XQ:12:VAL:N	2.22	0.55
51:XT:71:ALA:O	51:XT:74:HIS:HB2	2.07	0.55
1:YA:191:A:H2'	1:YA:192:C:C6	2.42	0.55
1:YA:1178:C:C2	1:YA:1179:G:C8	2.94	0.55
1:YA:1188:U:O2'	1:YA:1189:A:H5'	2.07	0.55
2:YB:32:U:C2	2:YB:51:G:N2	2.74	0.55
3:YC:140:VAL:HG23	3:YC:141:HIS:H	1.71	0.55
8:YH:80:ILE:HB	8:YH:101:ASP:OD2	2.06	0.55
10:YJ:51:GLY:O	10:YJ:121:LYS:HE3	2.06	0.55
12:YL:73:ILE:O	12:YL:105:ILE:HA	2.06	0.55
15:YO:62:LEU:HD11	15:YO:65:THR:HG23	1.89	0.55
18:YR:39:LEU:HB2	18:YR:49:ILE:HG12	1.87	0.55
21:YU:92:VAL:HB	21:YU:101:THR:CG2	2.36	0.55
25:YY:4:LYS:HD3	25:YY:4:LYS:H	1.70	0.55
1:RA:615:U:C4	5:RE:35:TYR:CE1	2.94	0.55
1:RA:2140:G:C6	1:RA:2141:G:C6	2.95	0.55
2:RB:112:G:H2'	2:RB:113:C:H6	1.71	0.55
4:RD:40:LEU:O	4:RD:41:ALA:C	2.50	0.55
4:RD:98:VAL:O	4:RD:100:LEU:N	2.39	0.55
7:RG:162:ARG:NH1	7:RG:168:VAL:HG21	2.22	0.55
13:RM:13:HIS:O	13:RM:14:LYS:HB2	2.06	0.55
13:RM:42:THR:CG2	13:RM:93:VAL:HG23	2.31	0.55
16:RP:111:GLU:CD	16:RP:111:GLU:N	2.65	0.55
20:RT:39:THR:HG22	20:RT:41:ALA:HB3	1.89	0.55
23:RW:39:GLN:HG2	23:RW:41:GLY:N	2.08	0.55
32:QA:71:A:C2	32:QA:72:A:C8	2.94	0.55
32:QA:138:G:O2'	32:QA:139:A:H5'	2.07	0.55
32:QA:1112:C:N4	34:QC:177:LEU:HD22	2.22	0.55
32:QA:1285:A:H5'	32:QA:1286:U:O4	2.06	0.55
39:QH:49:LYS:HB3	39:QH:51:GLU:OE2	2.06	0.55
32:XA:145:G:C2	32:XA:146:G:C8	2.95	0.55
32:XA:360:G:O2'	32:XA:361:G:H5'	2.07	0.55
32:XA:367:U:OP1	32:XA:395:C:H1'	2.06	0.55
32:XA:1067:A:H1'	32:XA:1068:G:C8	2.42	0.55
32:XA:1160:G:O6	32:XA:1181:G:O6	2.25	0.55
33:XB:49:PHE:O	33:XB:53:LEU:N	2.31	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:XD:29:THR:HG22	35:XD:30:LYS:HD3	1.88	0.55
44:XM:59:VAL:HG13	44:XM:60:ALA:N	2.22	0.55
44:XM:67:ASP:O	44:XM:70:ARG:HB3	2.07	0.55
44:XM:105:ALA:HB1	44:XM:109:LYS:HB2	1.89	0.55
1:YA:457:A:N1	1:YA:470:A:H5"	2.21	0.55
1:YA:1019:U:O4	1:YA:1020:A:N6	2.39	0.55
1:YA:1179:G:H2'	1:YA:1180:U:H6	1.71	0.55
1:YA:1286:A:H5"	14:YN:104:ALA:CB	2.36	0.55
1:YA:1392:A:N6	1:YA:1393:A:N6	2.54	0.55
1:YA:1412:U:H2'	1:YA:1413:A:O4'	2.06	0.55
1:YA:1551:A:C6	1:YA:1552:A:N7	2.74	0.55
1:YA:1635:A:H5'	1:YA:1635:A:C8	2.41	0.55
1:YA:2407:A:C2	1:YA:2408:U:N3	2.75	0.55
1:YA:2750:A:H1'	1:YA:2752:C:H41	1.72	0.55
5:YE:44:ARG:HB2	5:YE:88:ARG:O	2.07	0.55
5:YE:130:LYS:HG3	5:YE:133:LEU:HD13	1.88	0.55
15:YO:39:VAL:HG12	15:YO:48:LEU:HB2	1.88	0.55
24:YX:63:ILE:O	24:YX:67:LEU:HD12	2.07	0.55
25:YY:23:ARG:O	25:YY:27:ASN:HB2	2.07	0.55
27:Y0:37:HIS:CD2	27:Y0:43:THR:HG22	2.42	0.55
1:RA:172:A:O2'	1:RA:173:A:H5'	2.06	0.55
1:RA:784:G:O6	3:RC:227:VAL:HG11	2.06	0.55
1:RA:848:C:H2'	1:RA:849:A:C8	2.42	0.55
1:RA:974:G:H8	1:RA:990:A:H62	1.55	0.55
1:RA:1171:G:C6	1:RA:1172:C:C4	2.95	0.55
3:RC:255:LYS:O	3:RC:257:ARG:N	2.35	0.55
9:RI:56:VAL:HG11	9:RI:68:PHE:HD2	1.70	0.55
23:RW:67:LYS:HB3	23:RW:80:SER:H	1.72	0.55
24:RX:10:ARG:HB2	24:RX:11:PRO:CD	2.36	0.55
32:QA:1533:C:H3'	32:QA:1534:A:H5"	1.89	0.55
33:QB:148:GLY:HA2	33:QB:151:LYS:HB3	1.88	0.55
34:QC:84:GLU:HA	34:QC:87:ARG:HE	1.72	0.55
45:QN:12:ARG:HG2	45:QN:53:ASP:HB3	1.89	0.55
48:QQ:51:GLU:CD	48:QQ:51:GLU:H	2.15	0.55
52:QU:24:LYS:CG	52:QU:25:ALA:H	2.18	0.55
32:XA:409:U:H2'	32:XA:410:G:O4'	2.06	0.55
32:XA:437:U:O2'	35:XD:119:HIS:HD2	1.90	0.55
32:XA:1011:C:N3	32:XA:1019:A:C2	2.75	0.55
32:XA:1503:A:C8	32:XA:1531:A:H1'	2.42	0.55
34:XC:26:LYS:HA	34:XC:26:LYS:HE3	1.88	0.55
37:XF:90:MET:HE2	49:XR:60:ARG:HD3	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:XH:89:ASP:OD1	39:XH:89:ASP:N	2.38	0.55
39:XH:114:ALA:O	39:XH:117:GLN:HB3	2.07	0.55
47:XP:12:LYS:HG2	47:XP:13:LYS:HG2	1.88	0.55
1:YA:61:C:N3	1:YA:94:A:C2	2.75	0.55
1:YA:82:U:H5"	1:YA:296:U:H5"	1.89	0.55
1:YA:116:C:H2'	1:YA:117:G:H8	1.72	0.55
1:YA:303:G:C6	1:YA:315:G:O6	2.60	0.55
1:YA:491:G:N2	1:YA:492:A:H1'	2.22	0.55
1:YA:752:A:O2'	1:YA:753:A:OP2	2.15	0.55
1:YA:1340:U:C4	1:YA:1603:A:C8	2.95	0.55
1:YA:1593:A:C5	1:YA:1594:U:C4	2.95	0.55
1:YA:2748:A:H1'	7:YG:66:THR:CG2	2.31	0.55
10:YJ:25:LEU:C	10:YJ:27:ARG:H	2.14	0.55
16:YP:32:VAL:O	16:YP:32:VAL:HG13	2.06	0.55
16:YP:50:ARG:CA	16:YP:57:ALA:H	2.19	0.55
24:YX:63:ILE:HD12	24:YX:64:ASP:H	1.71	0.55
30:Y3:41:ARG:O	30:Y3:41:ARG:HD2	2.06	0.55
1:RA:370:G:OP2	56:RA:3560:HOH:O	2.18	0.55
1:RA:1032:A:H1'	31:R4:23:ILE:CD1	2.37	0.55
1:RA:2339:C:H2'	1:RA:2340:A:H8	1.69	0.55
1:RA:2820:A:OP1	14:RN:2:ARG:NH2	2.39	0.55
3:RC:141:HIS:HD2	3:RC:192:GLY:O	1.88	0.55
4:RD:100:LEU:HD23	4:RD:101:PHE:HE1	1.71	0.55
4:RD:101:PHE:N	4:RD:101:PHE:CD1	2.75	0.55
10:RJ:38:GLY:C	10:RJ:40:HIS:H	2.14	0.55
16:RP:67:GLU:HG3	16:RP:68:GLY:H	1.71	0.55
19:RS:73:LYS:CB	19:RS:106:VAL:HB	2.36	0.55
32:QA:537:G:H5"	43:QL:109:ARG:HH12	1.72	0.55
34:QC:153:SER:CB	34:QC:164:THR:HA	2.37	0.55
35:QD:16:THR:HG22	35:QD:17:ASP:H	1.72	0.55
36:QE:79:THR:HB	36:QE:121:ASN:CG	2.32	0.55
40:QI:9:GLY:HA2	40:QI:80:HIS:HD2	1.71	0.55
42:QK:13:LYS:O	42:QK:14:GLN:HB3	2.06	0.55
43:QL:74:GLN:O	43:QL:75:GLU:C	2.49	0.55
44:QM:18:LEU:O	44:QM:24:VAL:HG21	2.07	0.55
47:QP:48:GLU:HG3	47:QP:49:GLY:N	2.22	0.55
32:XA:71:A:C6	32:XA:100:G:C5	2.95	0.55
32:XA:182:A:O2'	32:XA:183:C:H2'	2.06	0.55
32:XA:437:U:H4'	35:XD:151:GLN:OE1	2.07	0.55
32:XA:920:U:O2'	32:XA:921:U:H5'	2.07	0.55
32:XA:973:G:HO2'	32:XA:974:A:H5'	1.66	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1005:A:C5	32:XA:1006:G:H1'	2.42	0.55
32:XA:1238:A:OP1	32:XA:1336:C:H5	1.90	0.55
32:XA:1303:C:H2'	32:XA:1303:C:O2	2.07	0.55
33:XB:156:LEU:H	33:XB:156:LEU:HD23	1.71	0.55
39:XH:11:THR:CG2	39:XH:14:ARG:HH22	2.20	0.55
43:XL:98:ARG:HD3	43:XL:103:CYS:SG	2.47	0.55
50:XS:54:ARG:CG	50:XS:55:GLN:H	2.20	0.55
1:YA:156:A:H2'	1:YA:157:C:H6	1.71	0.55
1:YA:202:U:H3'	1:YA:203:A:C8	2.41	0.55
1:YA:224:U:C4	1:YA:225:C:C5	2.94	0.55
1:YA:479:A:C2	1:YA:480:A:C6	2.94	0.55
1:YA:607:U:O4	1:YA:619:G:H2'	2.07	0.55
1:YA:663:G:O6	1:YA:664:G:C6	2.59	0.55
1:YA:807:U:H1'	1:YA:2445:G:H5'	1.89	0.55
1:YA:1438:U:O2'	1:YA:1439:A:H5'	2.06	0.55
1:YA:2015:A:C4	27:Y0:2:VAL:HG11	2.42	0.55
1:YA:2295:C:O2'	1:YA:2296:U:H5'	2.07	0.55
1:YA:2799:A:H2'	1:YA:2799:A:N3	2.22	0.55
4:YD:8:LYS:HB2	4:YD:201:LEU:HD11	1.89	0.55
4:YD:184:ARG:HH22	16:YP:6:GLN:NE2	1.97	0.55
6:YF:92:GLY:O	6:YF:95:MET:HB3	2.07	0.55
16:YP:20:ARG:HG2	16:YP:112:ARG:NH1	2.21	0.55
22:YV:44:HIS:CE1	22:YV:85:LYS:HD3	2.42	0.55
22:YV:70:ILE:N	22:YV:70:ILE:HD13	2.22	0.55
1:RA:655:A:H4'	1:RA:656:G:OP1	2.05	0.55
1:RA:855:G:H21	23:RW:23:LYS:CG	2.14	0.55
1:RA:1452:G:H2'	1:RA:1457:U:O4	2.07	0.55
1:RA:1731:G:C2	1:RA:1733:G:C5	2.95	0.55
1:RA:2145:C:OP1	1:RA:2148:G:C5	2.60	0.55
3:RC:28:PRO:HG2	3:RC:33:LEU:HD11	1.88	0.55
3:RC:131:MET:HA	3:RC:134:ILE:CD1	2.37	0.55
6:RF:72:SER:HB2	6:RF:80:GLN:N	2.21	0.55
9:RI:64:ARG:HG3	9:RI:65:SER:N	2.22	0.55
11:RK:107:LEU:C	11:RK:109:SER:H	2.15	0.55
14:RN:18:GLN:HE21	14:RN:22:ARG:NH1	2.05	0.55
18:RR:61:ALA:HB2	18:RR:98:ILE:HA	1.89	0.55
31:R4:37:GLN:O	31:R4:37:GLN:HG2	2.06	0.55
32:QA:4:U:O2	32:QA:4:U:H2'	2.06	0.55
32:QA:1337:G:H5"	32:QA:1338:G:OP1	2.06	0.55
42:QK:42:GLY:HA3	42:QK:73:VAL:CG1	2.37	0.55
32:XA:266:G:HO2'	32:XA:267:C:H3'	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1033:G:HO2'	32:XA:1034:G:H5"	1.72	0.55
34:XC:118:SER:O	34:XC:122:GLN:HG2	2.07	0.55
35:XD:137:SER:HB2	35:XD:138:PRO:CD	2.33	0.55
42:XK:87:GLY:H	42:XK:113:THR:HG23	1.72	0.55
51:XT:3:ILE:O	51:XT:4:LYS:HG2	2.07	0.55
1:YA:481:G:H1'	1:YA:506:G:N2	2.22	0.55
1:YA:531:C:H4'	1:YA:532:A:C8	2.42	0.55
1:YA:1197:G:H2'	1:YA:1198:U:C6	2.41	0.55
1:YA:1240:U:O2	1:YA:1240:U:H2'	2.06	0.55
1:YA:1286:A:C6	1:YA:1289:C:N3	2.75	0.55
1:YA:1737:G:C5	1:YA:1738:G:C6	2.95	0.55
1:YA:2350:C:H2'	1:YA:2351:G:O4'	2.07	0.55
1:YA:2882:A:H5"	14:YN:96:ARG:HD3	1.89	0.55
3:YC:147:PRO:HA	3:YC:187:CYS:HB3	1.89	0.55
5:YE:149:ILE:HG23	5:YE:188:MET:HA	1.89	0.55
12:YL:68:SER:O	12:YL:69:ARG:HB2	2.06	0.55
22:YV:56:PHE:CE1	22:YV:61:LEU:HD13	2.42	0.55
24:YX:44:ARG:HB3	24:YX:44:ARG:NH1	2.22	0.55
1:RA:17:G:H2'	1:RA:18:U:H6	1.72	0.54
1:RA:1153:C:OP2	56:RA:3358:HOH:O	2.18	0.54
1:RA:1171:G:C5	1:RA:1172:C:C5	2.96	0.54
1:RA:2383:G:H2'	1:RA:2384:U:C6	2.42	0.54
3:RC:29:PHE:CE2	3:RC:31:PRO:HG2	2.42	0.54
3:RC:199:HIS:O	3:RC:202:ARG:HG3	2.06	0.54
5:RE:46:GLN:HG3	5:RE:87:ALA:N	2.19	0.54
23:RW:24:ARG:HD3	23:RW:65:LYS:HE2	1.89	0.54
23:RW:28:GLU:HG3	23:RW:29:SER:H	1.71	0.54
32:QA:761:G:H2'	32:QA:762:U:C6	2.40	0.54
32:QA:842:U:H2'	32:QA:844:G:P	2.47	0.54
32:QA:1468:A:C3'	32:QA:1469:C:H5"	2.37	0.54
36:QE:94:PHE:CZ	36:QE:96:GLN:HG2	2.42	0.54
45:QN:20:PHE:HA	45:QN:24:ALA:HB3	1.89	0.54
52:QU:36:PHE:HB3	52:QU:40:PRO:HD3	1.89	0.54
32:XA:8:A:C5	35:XD:205:LYS:HG3	2.41	0.54
32:XA:510:A:H5"	32:XA:511:C:OP2	2.06	0.54
32:XA:749:A:C2	32:XA:750:C:C2	2.96	0.54
32:XA:791:G:H2'	32:XA:792:A:H5'	1.89	0.54
32:XA:920:U:C2	32:XA:921:U:C5	2.95	0.54
32:XA:1070:U:H2'	32:XA:1071:C:C6	2.36	0.54
32:XA:1181:G:O2'	32:XA:1182:G:O4'	2.25	0.54
32:XA:1391:U:H2'	32:XA:1392:G:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:XB:119:GLN:HG3	33:XB:124:THR:CG2	2.37	0.54
34:XC:76:ILE:HD11	34:XC:102:ILE:HD11	1.89	0.54
35:XD:20:LEU:O	35:XD:21:LYS:C	2.50	0.54
36:XE:68:ARG:O	36:XE:69:ASN:C	2.48	0.54
40:XI:35:GLU:HA	40:XI:39:GLY:CA	2.37	0.54
41:XJ:80:THR:C	41:XJ:84:VAL:HG22	2.32	0.54
41:XJ:87:LEU:HD22	41:XJ:90:LEU:HD13	1.89	0.54
1:YA:1056:G:H1'	1:YA:1103:A:C6	2.42	0.54
1:YA:1358:G:N7	1:YA:1371:G:C6	2.75	0.54
1:YA:1394:U:H6	1:YA:1394:U:H3'	1.72	0.54
1:YA:2100:G:N2	1:YA:2190:G:H1'	2.22	0.54
1:YA:2310:C:C2'	1:YA:2311:A:H5"	2.36	0.54
1:YA:2556:C:H2'	1:YA:2557:G:O4'	2.07	0.54
1:YA:2623:G:H4'	1:YA:2825:G:H8	1.70	0.54
5:YE:149:ILE:HD12	5:YE:175:ILE:HD13	1.88	0.54
10:YJ:111:LYS:HB2	10:YJ:115:GLY:HA3	1.87	0.54
11:YK:104:THR:C	11:YK:106:GLU:H	2.15	0.54
11:YK:119:ALA:N	11:YK:120:PRO:HD2	2.21	0.54
18:YR:38:VAL:N	18:YR:53:PHE:HB3	2.21	0.54
24:YX:1:SER:O	24:YX:3:VAL:N	2.40	0.54
1:RA:207:A:H2'	1:RA:208:C:O4'	2.06	0.54
1:RA:215:G:H4'	1:RA:216:A:OP1	2.08	0.54
1:RA:2808:G:N2	1:RA:2891:U:C6	2.76	0.54
4:RD:50:VAL:HG22	4:RD:80:TRP:O	2.07	0.54
5:RE:127:GLU:CD	5:RE:127:GLU:H	2.14	0.54
5:RE:132:LYS:O	5:RE:135:ALA:HB3	2.07	0.54
6:RF:19:PHE:O	6:RF:20:ASN:C	2.50	0.54
8:RH:18:GLN:O	8:RH:18:GLN:HG3	2.06	0.54
9:RI:46:ASP:HA	9:RI:50:LYS:HD2	1.88	0.54
9:RI:49:GLU:HG2	9:RI:50:LYS:N	2.22	0.54
18:RR:27:ILE:HD13	18:RR:27:ILE:H	1.71	0.54
19:RS:73:LYS:CE	19:RS:73:LYS:HA	2.33	0.54
25:RY:5:GLU:O	25:RY:8:GLU:HB2	2.07	0.54
32:QA:100:G:C6	32:QA:101:A:C5	2.95	0.54
32:QA:174:A:C5	32:QA:175:C:C5	2.96	0.54
32:QA:600:A:H2'	32:QA:601:G:C8	2.42	0.54
33:QB:102:ASN:O	33:QB:106:VAL:HG23	2.08	0.54
33:QB:161:PHE:HA	33:QB:183:PHE:O	2.06	0.54
43:QL:6:LEU:HB3	48:QQ:33:TYR:CE1	2.42	0.54
44:QM:3:ILE:O	44:QM:5:GLY:N	2.40	0.54
51:QT:55:PRO:O	51:QT:59:ARG:CB	2.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:45:G:O2'	32:XA:46:G:H5'	2.08	0.54
32:XA:295:C:H2'	32:XA:296:U:H6	1.71	0.54
32:XA:1451:U:C2'	32:XA:1452:C:OP1	2.54	0.54
32:XA:1533:C:H6	32:XA:1533:C:H3'	1.72	0.54
33:XB:103:TRP:CA	33:XB:106:VAL:HB	2.36	0.54
34:XC:122:GLN:O	34:XC:127:VAL:HG13	2.07	0.54
45:XN:87:ALA:HB2	45:XN:92:ILE:HD12	1.89	0.54
1:YA:17:G:H4'	17:YQ:24:TYR:CE1	2.42	0.54
1:YA:82:U:H2'	1:YA:83:A:O4'	2.06	0.54
1:YA:227:A:C4'	1:YA:228:C:OP1	2.42	0.54
1:YA:1196:C:H1'	1:YA:1226:A:C4	2.41	0.54
1:YA:1356:G:N2	1:YA:1357:C:H1'	2.22	0.54
1:YA:1370:C:H2'	1:YA:1371:G:C8	2.43	0.54
1:YA:1475:G:H2'	1:YA:1475:G:N3	2.23	0.54
1:YA:1493:C:O2	1:YA:1493:C:C2'	2.54	0.54
1:YA:1519:G:C6	1:YA:1520:U:N3	2.76	0.54
1:YA:2586:U:H2'	1:YA:2587:A:O4'	2.07	0.54
4:YD:119:ALA:HB3	4:YD:163:GLY:N	2.19	0.54
5:YE:61:ARG:HE	5:YE:65:THR:HB	1.71	0.54
7:YG:70:LEU:O	7:YG:74:MET:HB2	2.07	0.54
11:YK:39:ILE:HD11	11:YK:62:VAL:CG2	2.38	0.54
13:YM:34:LYS:HB3	13:YM:129:THR:HG22	1.89	0.54
13:YM:38:ARG:O	13:YM:126:ILE:HG21	2.07	0.54
25:YY:28:LEU:HD22	25:YY:28:LEU:O	2.07	0.54
1:RA:1131:G:H4'	1:RA:1132:U:OP1	2.07	0.54
1:RA:2134:A:O2'	1:RA:2135:A:C8	2.53	0.54
1:RA:2149:U:O2'	1:RA:2150:C:C4'	2.55	0.54
4:RD:117:GLY:C	4:RD:118:PHE:CG	2.82	0.54
6:RF:84:ILE:O	6:RF:84:ILE:HG13	2.08	0.54
9:RI:33:ASN:ND2	9:RI:64:ARG:HH22	2.00	0.54
10:RJ:44:TYR:HA	17:RQ:59:LEU:CD2	2.37	0.54
10:RJ:97:PRO:O	10:RJ:99:ARG:N	2.40	0.54
13:RM:36:VAL:HG23	22:RV:82:TYR:HB2	1.89	0.54
17:RQ:91:ARG:HD3	18:RR:11:GLN:CG	2.38	0.54
17:RQ:93:ILE:CG2	17:RQ:94:LEU:N	2.71	0.54
30:R3:31:ILE:HD11	30:R3:34:LYS:CD	2.24	0.54
32:QA:975:A:H4'	32:QA:976:G:H5"	1.85	0.54
32:QA:1127:G:C2'	32:QA:1128:C:H5'	2.37	0.54
32:QA:1323:G:O2'	32:QA:1324:A:O4'	2.25	0.54
32:QA:1394:A:C5	32:QA:1501:C:H4'	2.42	0.54
33:QB:86:CYS:HB2	33:QB:88:GLN:HG3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:QD:25:ARG:HH12	35:QD:30:LYS:HG2	1.72	0.54
40:QI:33:SER:OG	40:QI:35:GLU:HG2	2.06	0.54
41:QJ:51:VAL:O	41:QJ:62:ARG:HA	2.07	0.54
45:QN:15:LEU:HD23	45:QN:18:LYS:HD2	1.89	0.54
32:XA:982:U:H5"	45:XN:5:MET:HE2	1.90	0.54
32:XA:1054:C:OP2	32:XA:1197:A:OP2	2.26	0.54
32:XA:1133:G:C2	32:XA:1142:G:C5	2.94	0.54
32:XA:1299:A:N3	32:XA:1299:A:C2'	2.62	0.54
32:XA:1365:G:O2'	32:XA:1366:C:C5'	2.56	0.54
32:XA:1365:G:O2'	32:XA:1366:C:H6	1.90	0.54
33:XB:17:HIS:CG	33:XB:18:GLN:N	2.72	0.54
33:XB:81:ASP:CG	33:XB:82:ALA:H	2.14	0.54
35:XD:64:TYR:CE2	35:XD:93:LEU:HB3	2.43	0.54
46:XO:88:ARG:HH21	1:YA:715:A:H4'	1.72	0.54
1:YA:288:U:H2'	1:YA:289:G:C8	2.42	0.54
1:YA:976:G:H5'	1:YA:1156:A:N6	2.22	0.54
1:YA:1197:G:H2'	1:YA:1198:U:H6	1.72	0.54
1:YA:1626:A:C2'	1:YA:1627:G:OP2	2.55	0.54
1:YA:2624:G:C2	1:YA:2625:G:H1'	2.42	0.54
1:YA:2669:G:H2'	1:YA:2670:A:C8	2.42	0.54
4:YD:89:GLU:HG2	4:YD:94:GLN:NE2	2.22	0.54
4:YD:99:GLU:HG3	4:YD:100:LEU:N	2.23	0.54
4:YD:173:GLN:HA	4:YD:173:GLN:HE21	1.72	0.54
10:YJ:4:PHE:HB3	17:YQ:63:ARG:NH2	2.23	0.54
10:YJ:4:PHE:HB3	17:YQ:63:ARG:HH22	1.72	0.54
18:YR:10:LYS:HD2	18:YR:10:LYS:N	2.22	0.54
1:RA:514:A:H1'	1:RA:581:C:O2'	2.08	0.54
1:RA:1062:G:O2'	1:RA:1063:G:O5'	2.25	0.54
1:RA:1203:U:H1'	12:RL:4:ASN:HB3	1.90	0.54
1:RA:1872:A:H2'	1:RA:1873:G:O4'	2.08	0.54
1:RA:2272:U:H5"	1:RA:2273:A:OP1	2.07	0.54
1:RA:2887:A:H3'	1:RA:2888:C:H6	1.72	0.54
2:RB:28:C:O2'	2:RB:29:A:H5'	2.07	0.54
3:RC:106:PRO:CB	3:RC:141:HIS:CE1	2.90	0.54
4:RD:90:PHE:HB2	4:RD:92:VAL:CG2	2.33	0.54
8:RH:58:LEU:HA	8:RH:61:VAL:HB	1.89	0.54
13:RM:109:PRO:O	13:RM:110:GLU:C	2.51	0.54
23:RW:11:ASN:HD22	23:RW:12:GLY:N	2.06	0.54
32:QA:438:U:C4	32:QA:494:G:C5	2.95	0.54
32:QA:652:U:C5	32:QA:752:G:C2	2.95	0.54
32:QA:1015:G:H1'	32:QA:1218:C:O2'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:1386:G:H2'	32:QA:1387:G:H8	1.70	0.54
33:QB:53:LEU:HA	33:QB:56:LEU:HB3	1.88	0.54
35:QD:29:THR:C	35:QD:30:LYS:HD3	2.32	0.54
36:QE:11:GLN:HA	36:QE:11:GLN:NE2	2.10	0.54
32:XA:533:A:OP1	56:XA:1852:HOH:O	2.17	0.54
34:XC:126:ARG:HE	34:XC:126:ARG:CA	2.19	0.54
34:XC:139:ASN:HB3	34:XC:142:ARG:NH2	2.23	0.54
36:XE:54:GLU:C	36:XE:56:PRO:HD2	2.32	0.54
37:XF:38:ARG:HD2	37:XF:63:ASN:OD1	2.08	0.54
49:XR:33:THR:C	49:XR:35:SER:H	2.16	0.54
50:XS:10:ILE:CG2	50:XS:14:LEU:HD11	2.36	0.54
50:XS:35:ARG:HH22	50:XS:53:GLY:H	1.54	0.54
1:YA:38:A:C2	1:YA:442:G:C6	2.94	0.54
1:YA:357:C:H2'	1:YA:358:U:H6	1.71	0.54
1:YA:417:C:O5'	1:YA:417:C:H6	1.90	0.54
1:YA:630:G:N2	1:YA:633:A:OP2	2.31	0.54
1:YA:716:A:H3'	1:YA:717:C:H5"	1.89	0.54
1:YA:2542:A:H4'	1:YA:2543:G:H5'	1.88	0.54
1:YA:2668:G:O2'	1:YA:2669:G:H5'	2.07	0.54
2:YB:17:C:O2'	2:YB:18:G:H5'	2.07	0.54
2:YB:18:G:C2	2:YB:19:C:C2	2.96	0.54
6:YF:42:ALA:CB	6:YF:49:LEU:HD21	2.37	0.54
7:YG:117:PRO:HG2	7:YG:143:VAL:CG1	2.38	0.54
11:YK:43:ILE:HG22	11:YK:54:LYS:HA	1.89	0.54
12:YL:122:VAL:HG23	12:YL:122:VAL:O	2.07	0.54
20:YT:61:LEU:C	20:YT:61:LEU:HD12	2.33	0.54
24:YX:70:LEU:O	24:YX:74:GLY:N	2.39	0.54
1:RA:500:G:N2	1:RA:502:A:H3'	2.22	0.54
1:RA:742:A:H2'	1:RA:743:A:C8	2.42	0.54
1:RA:1415:U:O2	1:RA:1415:U:C2'	2.55	0.54
1:RA:2511:U:O4	1:RA:2575:C:N3	2.41	0.54
4:RD:4:LEU:HD23	4:RD:29:VAL:HG11	1.89	0.54
5:RE:187:VAL:O	5:RE:188:MET:CB	2.55	0.54
6:RF:66:ILE:HG13	6:RF:66:ILE:O	2.07	0.54
9:RI:90:GLY:C	9:RI:92:PRO:HD3	2.31	0.54
10:RJ:21:THR:C	10:RJ:23:LYS:N	2.61	0.54
17:RQ:60:TRP:O	17:RQ:61:ILE:C	2.51	0.54
19:RS:73:LYS:HE3	19:RS:73:LYS:CA	2.38	0.54
26:RZ:3:THR:HA	26:RZ:37:ARG:O	2.07	0.54
32:QA:184:G:H2'	32:QA:185:U:H6	1.71	0.54
32:QA:807:A:C5	32:QA:808:C:C5	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:QH:78:SER:OG	39:QH:83:ARG:HA	2.08	0.54
41:QJ:88:MET:C	41:QJ:90:LEU:H	2.16	0.54
42:QK:33:ILE:HG12	42:QK:69:CYS:SG	2.48	0.54
44:QM:89:ARG:HH11	44:QM:94:LEU:HB3	1.72	0.54
45:QN:27:LYS:HA	45:QN:30:ILE:HB	1.89	0.54
48:QQ:33:TYR:O	48:QQ:35:LYS:N	2.40	0.54
52:QU:16:ARG:HH11	52:QU:19:LYS:HG3	1.72	0.54
32:XA:68:G:H5'	32:XA:171:A:O2'	2.07	0.54
32:XA:513:C:H2'	32:XA:514:C:C6	2.43	0.54
32:XA:519:C:O2'	32:XA:520:A:C5'	2.56	0.54
32:XA:994:A:N6	32:XA:1216:A:H5'	2.22	0.54
33:XB:103:TRP:CB	33:XB:106:VAL:HB	2.36	0.54
33:XB:208:ALA:HA	33:XB:211:LEU:HB3	1.90	0.54
39:XH:97:GLY:O	39:XH:98:LEU:HB2	2.08	0.54
40:XI:46:VAL:O	40:XI:79:ARG:HG3	2.07	0.54
42:XK:126:ARG:N	52:XU:33:ARG:HE	2.06	0.54
44:XM:13:HIS:HB3	44:XM:16:ILE:HB	1.88	0.54
49:XR:44:THR:OG1	49:XR:46:THR:HG22	2.07	0.54
51:XT:11:ILE:C	51:XT:13:SER:H	2.16	0.54
52:XU:8:ASN:CG	52:XU:9:GLU:H	2.14	0.54
1:YA:78:U:H2'	1:YA:79:C:H6	1.71	0.54
1:YA:315:G:H2'	1:YA:316:C:O4'	2.08	0.54
1:YA:343:C:H2'	1:YA:343:C:O2	2.06	0.54
1:YA:449:A:H2'	1:YA:450:G:H5'	1.90	0.54
1:YA:482:A:N6	1:YA:506:G:N9	2.54	0.54
1:YA:657:U:C2	1:YA:658:U:C5	2.95	0.54
1:YA:1182:G:H2'	1:YA:1183:U:O4'	2.07	0.54
1:YA:1387:A:O2'	1:YA:1388:G:H8	1.89	0.54
1:YA:1655:A:H5'	4:YD:118:PHE:CE1	2.43	0.54
1:YA:1723:G:H2'	1:YA:1724:G:C8	2.40	0.54
1:YA:2230:G:H2'	1:YA:2231:U:H6	1.70	0.54
1:YA:2654:A:H4'	1:YA:2655:G:OP1	2.08	0.54
2:YB:42:C:C5	6:YF:65:LEU:HD13	2.42	0.54
4:YD:79:LEU:N	4:YD:79:LEU:HD22	2.22	0.54
17:YQ:9:ALA:O	17:YQ:12:ARG:HG2	2.06	0.54
18:YR:49:ILE:HG22	18:YR:54:VAL:HB	1.88	0.54
21:YU:60:LYS:HD2	21:YU:60:LYS:N	2.21	0.54
23:YW:25:PHE:O	23:YW:27:GLY:N	2.37	0.54
1:RA:10:A:H2	1:RA:2800:A:H2'	1.73	0.54
1:RA:526:A:H5"	1:RA:527:C:OP1	2.08	0.54
1:RA:1433:A:H2'	1:RA:1434:A:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2327:A:H2'	1:RA:2328:A:C8	2.42	0.54
4:RD:68:PHE:CB	4:RD:73:VAL:HG12	2.34	0.54
10:RJ:38:GLY:O	10:RJ:43:GLU:HB2	2.08	0.54
16:RP:105:LYS:HA	16:RP:108:ARG:HH21	1.73	0.54
17:RQ:85:ALA:O	17:RQ:88:GLU:HB2	2.07	0.54
17:RQ:96:ASP:C	17:RQ:98:ALA:N	2.63	0.54
19:RS:107:VAL:O	19:RS:107:VAL:HG12	2.06	0.54
28:R1:31:GLU:HG2	28:R1:31:GLU:O	2.07	0.54
31:R4:7:VAL:O	31:R4:8:LYS:HB2	2.08	0.54
32:QA:473:U:H2'	32:QA:474:G:C8	2.36	0.54
34:QC:6:PRO:HG2	34:QC:183:TYR:CG	2.43	0.54
35:QD:129:VAL:HG13	35:QD:131:ILE:HD12	1.88	0.54
43:QL:72:ASN:CG	43:QL:73:LEU:H	2.12	0.54
44:QM:94:LEU:HB3	44:QM:95:PRO:HD2	1.88	0.54
32:XA:1137:C:H4'	32:XA:1138:G:C2	2.42	0.54
32:XA:1159:U:H5	32:XA:1182:G:O2'	1.88	0.54
32:XA:1176:A:H2'	32:XA:1177:G:O4'	2.08	0.54
32:XA:1316:G:H22	32:XA:1318:A:H3'	1.73	0.54
33:XB:112:ARG:HG3	33:XB:112:ARG:O	2.08	0.54
36:XE:131:ASN:HD22	36:XE:132:PRO:HD2	1.72	0.54
37:XF:67:PRO:O	37:XF:69:GLU:N	2.41	0.54
1:YA:182:A:H2'	1:YA:183:C:C6	2.43	0.54
1:YA:201:C:C5	1:YA:202:U:C5	2.95	0.54
1:YA:324:A:C2	1:YA:325:G:H1'	2.43	0.54
1:YA:515:A:H2'	1:YA:516:C:H5'	1.88	0.54
1:YA:563:A:C4	1:YA:2018:G:C2	2.96	0.54
1:YA:569:U:H5"	1:YA:821:A:C2	2.41	0.54
1:YA:699:A:C8	1:YA:700:G:C8	2.95	0.54
1:YA:954:G:C2	1:YA:964:C:O2	2.61	0.54
1:YA:1588:G:H2'	1:YA:1589:U:C6	2.43	0.54
1:YA:1608:A:C5	1:YA:1611:C:N4	2.75	0.54
1:YA:1819:A:H4'	1:YA:1820:U:H5'	1.89	0.54
1:YA:1823:G:H5"	56:YA:3767:HOH:O	2.06	0.54
1:YA:2282:G:H4'	1:YA:2283:C:OP2	2.08	0.54
1:YA:2286:G:H5"	1:YA:2287:A:C1'	2.36	0.54
1:YA:2372:U:H1'	28:Y1:45:HIS:CE1	2.42	0.54
1:YA:2415:G:H2'	1:YA:2416:C:C6	2.42	0.54
3:YC:226:PRO:O	3:YC:227:VAL:C	2.51	0.54
14:YN:19:ALA:HA	14:YN:22:ARG:HB3	1.89	0.54
14:YN:73:ASN:HA	14:YN:76:VAL:HG13	1.89	0.54
14:YN:94:TYR:CD1	14:YN:94:TYR:N	2.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:YQ:74:SER:O	17:YQ:78:PHE:HB2	2.08	0.54
20:YT:69:ARG:HD2	20:YT:70:HIS:H	1.72	0.54
22:YV:80:HIS:CD2	22:YV:83:LYS:N	2.76	0.54
22:YV:80:HIS:HD2	22:YV:83:LYS:N	2.05	0.54
1:RA:558:U:H5"	10:RJ:111:LYS:HE3	1.90	0.54
1:RA:635:C:H3'	12:RL:109:LYS:HZ1	1.72	0.54
1:RA:983:A:C6	1:RA:984:A:C2	2.96	0.54
1:RA:1680:U:H2'	1:RA:1681:G:O4'	2.08	0.54
1:RA:2562:U:H2'	1:RA:2563:U:H5'	1.89	0.54
6:RF:33:ILE:HG12	6:RF:155:ILE:HG12	1.88	0.54
9:RI:105:LEU:HD23	9:RI:108:ILE:HD13	1.90	0.54
10:RJ:54:ILE:HD12	10:RJ:55:ILE:N	2.23	0.54
11:RK:58:LEU:HD23	11:RK:58:LEU:N	2.22	0.54
18:RR:54:VAL:O	18:RR:55:ASP:C	2.50	0.54
32:QA:168:G:C6	32:QA:169:C:C4	2.96	0.54
33:QB:165:ALA:HA	33:QB:172:ILE:HD11	1.89	0.54
35:QD:3:TYR:O	35:QD:4:LEU:HB2	2.08	0.54
36:QE:13:LYS:HD3	36:QE:115:GLU:OE2	2.07	0.54
36:QE:106:ALA:CB	36:QE:124:ALA:HB3	2.38	0.54
44:QM:29:SER:O	44:QM:33:LEU:HD12	2.07	0.54
46:QO:44:GLU:O	46:QO:45:HIS:HB2	2.07	0.54
46:QO:44:GLU:HG3	46:QO:45:HIS:N	2.23	0.54
32:XA:197:A:C6	32:XA:221:C:H4'	2.43	0.54
32:XA:1072:G:H2'	32:XA:1073:U:O4'	2.08	0.54
32:XA:1256:A:O5'	32:XA:1278:G:N2	2.41	0.54
38:XG:4:ARG:NH2	38:XG:6:ILE:HB	2.23	0.54
38:XG:71:THR:HG23	38:XG:72:VAL:HG23	1.88	0.54
38:XG:128:GLU:HG3	38:XG:130:LYS:H	1.73	0.54
42:XK:74:LYS:HA	42:XK:78:ILE:CD1	2.29	0.54
1:YA:81:G:H2'	1:YA:82:U:C6	2.43	0.54
1:YA:104:A:N7	1:YA:105:C:C4	2.75	0.54
1:YA:545:U:H2'	1:YA:547:A:OP1	2.07	0.54
1:YA:1166:G:N2	1:YA:1184:U:H1'	2.23	0.54
1:YA:1190:G:OP1	12:YL:32:GLY:HA2	2.08	0.54
1:YA:1338:G:H4'	20:YT:18:GLU:OE2	2.08	0.54
1:YA:1905:C:O4'	1:YA:1928:A:C2	2.61	0.54
1:YA:2008:C:H2'	1:YA:2009:A:H8	1.73	0.54
1:YA:2015:A:C5	27:Y0:2:VAL:HG11	2.42	0.54
1:YA:2544:G:H2'	1:YA:2545:G:C8	2.42	0.54
1:YA:2745:C:H42	1:YA:2759:G:H1	1.56	0.54
4:YD:27:ILE:HG12	4:YD:201:LEU:HD12	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:YD:148:GLN:CG	4:YD:152:PRO:HG2	2.38	0.54
6:YF:101:ARG:HH11	6:YF:138:PRO:HB3	1.73	0.54
7:YG:62:ALA:O	7:YG:66:THR:HG23	2.07	0.54
11:YK:19:VAL:HG12	11:YK:41:ILE:HG13	1.89	0.54
16:YP:67:GLU:CD	16:YP:68:GLY:H	2.16	0.54
19:YS:79:GLY:HA3	19:YS:100:THR:OG1	2.07	0.54
25:YY:31:GLN:C	25:YY:33:ALA:H	2.15	0.54
1:RA:511:U:C5	1:RA:512:G:C5	2.95	0.54
1:RA:1079:C:N4	1:RA:1088:A:H2	2.05	0.54
1:RA:1475:G:C1’	1:RA:1476:U:OP2	2.53	0.54
1:RA:1913:A:OP1	1:RA:1913:A:H4’	2.08	0.54
5:RE:79:ARG:CG	5:RE:80:SER:H	2.20	0.54
7:RG:23:ILE:HG21	7:RG:71:LEU:HD11	1.89	0.54
10:RJ:56:VAL:CG1	10:RJ:57:LEU:H	2.21	0.54
16:RP:88:ARG:HG2	16:RP:112:ARG:NH1	2.22	0.54
17:RQ:111:LYS:CE	18:RR:50:GLY:HA2	2.38	0.54
18:RR:41:ILE:O	18:RR:46:GLU:HB2	2.08	0.54
23:RW:28:GLU:CG	23:RW:29:SER:H	2.20	0.54
32:QA:89:U:O2’	32:QA:90:C:C5’	2.55	0.54
32:QA:489:C:O2’	32:QA:490:C:H5’	2.08	0.54
32:QA:633:G:H2’	32:QA:634:C:H6	1.73	0.54
33:QB:20:ARG:O	33:QB:22:TRP:HB3	2.07	0.54
35:QD:109:THR:HG23	35:QD:112:GLU:N	2.15	0.54
51:QT:4:LYS:O	51:QT:5:SER:C	2.51	0.54
51:QT:23:ARG:O	51:QT:26:MET:HG3	2.07	0.54
51:QT:43:LYS:HD3	51:QT:86:ALA:O	2.07	0.54
32:XA:204:G:H2’	32:XA:205:A:O4’	2.08	0.54
32:XA:245:U:H5”	32:XA:245:U:C6	2.35	0.54
32:XA:280:C:H4’	32:XA:281:G:OP2	2.08	0.54
32:XA:338:A:N1	32:XA:351:G:N2	2.55	0.54
32:XA:397:A:H5’	32:XA:398:U:OP1	2.08	0.54
32:XA:764:C:N4	32:XA:812:G:H1	2.06	0.54
32:XA:982:U:C4	32:XA:983:A:N6	2.76	0.54
32:XA:991:U:C5	32:XA:1212:U:H1’	2.43	0.54
32:XA:1072:G:C6	32:XA:1073:U:C4	2.96	0.54
33:XB:137:THR:O	33:XB:140:LEU:HB3	2.07	0.54
34:XC:125:ARG:HH11	34:XC:125:ARG:HG3	1.73	0.54
37:XF:2:ARG:HG2	37:XF:4:TYR:OH	2.08	0.54
38:XG:74:VAL:CG1	38:XG:143:MET:HB2	2.37	0.54
40:XI:48:ARG:HH21	40:XI:57:VAL:HG21	1.73	0.54
42:XK:124:LYS:O	52:XU:34:ARG:HB2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:XM:53:ASP:HA	44:XM:56:ARG:CZ	2.38	0.54
1:YA:30:G:C5	1:YA:31:C:C4	2.95	0.54
1:YA:389:G:O2'	1:YA:390:U:H5'	2.07	0.54
1:YA:1008:A:H4'	1:YA:1009:A:OP1	2.08	0.54
1:YA:1156:A:OP1	1:YA:1156:A:H8	1.91	0.54
1:YA:1206:G:C2	1:YA:1207:C:C2	2.96	0.54
1:YA:1286:A:C4	1:YA:1289:C:N4	2.76	0.54
1:YA:1439:A:C8	1:YA:1440:U:O4'	2.61	0.54
1:YA:1537:G:O2'	1:YA:1538:G:H4'	2.07	0.54
1:YA:1598:A:H2'	1:YA:1599:U:H6	1.72	0.54
1:YA:1857:G:N3	1:YA:1884:G:N1	2.55	0.54
1:YA:1998:A:O3'	1:YA:2724:U:H4'	2.08	0.54
1:YA:2420:C:OP1	30:Y3:33:THR:HB	2.07	0.54
1:YA:2666:C:H2'	1:YA:2667:C:H6	1.72	0.54
2:YB:62:C:H2'	2:YB:63:C:O4'	2.08	0.54
7:YG:139:VAL:HA	7:YG:142:GLN:CB	2.37	0.54
10:YJ:94:ALA:O	10:YJ:95:ARG:CB	2.56	0.54
20:YT:29:THR:HB	20:YT:86:THR:N	2.23	0.54
22:YV:30:ILE:HB	22:YV:38:LEU:HB3	1.90	0.54
29:Y2:28:ARG:O	29:Y2:30:VAL:N	2.41	0.54
1:RA:17:G:H2'	1:RA:18:U:C6	2.43	0.54
1:RA:27:G:N2	1:RA:512:G:H1'	2.22	0.54
1:RA:304:U:H2'	1:RA:305:C:C6	2.43	0.54
1:RA:528:A:H2	1:RA:2043:C:H5'	1.73	0.54
1:RA:1419:A:C6	1:RA:1421:G:C4	2.96	0.54
1:RA:1936:A:H2	1:RA:1943:U:C4	2.25	0.54
4:RD:114:LYS:HE3	4:RD:114:LYS:C	2.32	0.54
7:RG:104:LEU:HB2	7:RG:112:VAL:HG21	1.87	0.54
32:QA:267:C:H5'	32:QA:267:C:C6	2.43	0.54
32:QA:613:C:H2'	32:QA:614:C:H6	1.73	0.54
32:QA:1053:G:O6	32:QA:1199:U:H2'	2.08	0.54
32:QA:1054:C:O4'	32:QA:1054:C:O2	2.26	0.54
32:QA:1361:G:C2'	32:QA:1362:A:H5"	2.38	0.54
40:QI:128:LYS:CD	40:QI:129:ARG:H	2.15	0.54
42:QK:108:ASN:CB	52:QU:6:ARG:HG2	2.37	0.54
32:XA:344:A:H5"	32:XA:345:C:H5	1.71	0.54
32:XA:920:U:H2'	32:XA:921:U:H6	1.71	0.54
32:XA:946:A:H2'	32:XA:947:G:C8	2.42	0.54
32:XA:1012:A:C5	32:XA:1013:G:N7	2.75	0.54
32:XA:1025:U:O2'	32:XA:1026:G:OP2	2.26	0.54
32:XA:1279:G:OP2	32:XA:1279:G:C2	2.61	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1387:G:C6	32:XA:1388:C:N4	2.75	0.54
33:XB:20:ARG:HA	33:XB:20:ARG:HE	1.72	0.54
42:XK:27:ASN:O	42:XK:28:ASN:HB2	2.07	0.54
42:XK:106:ILE:O	42:XK:106:ILE:HG12	2.08	0.54
52:XU:25:ALA:O	52:XU:29:ALA:N	2.39	0.54
1:YA:95:A:O2'	25:YY:41:HIS:CD2	2.60	0.54
1:YA:141:G:H2'	1:YA:142:A:O4'	2.08	0.54
1:YA:301:G:C6	1:YA:317:G:C6	2.95	0.54
1:YA:438:G:C6	1:YA:439:A:C6	2.96	0.54
1:YA:454:A:H3'	1:YA:455:C:H5"	1.88	0.54
1:YA:628:G:C6	1:YA:636:G:C2	2.96	0.54
1:YA:822:G:O6	1:YA:943:A:C2	2.48	0.54
1:YA:1168:G:C2	1:YA:1182:G:C2	2.96	0.54
1:YA:1275:A:C5	14:YN:16:HIS:HD2	2.26	0.54
1:YA:1285:A:N6	1:YA:1329:U:C5	2.76	0.54
1:YA:1317:G:C6	1:YA:1318:U:N3	2.75	0.54
1:YA:1320:C:O2'	1:YA:1321:A:C8	2.60	0.54
1:YA:1351:C:O2'	1:YA:1571:A:H1'	2.08	0.54
1:YA:1391:U:H4'	20:YT:19:LYS:HZ1	1.71	0.54
1:YA:1536:C:OP2	1:YA:1536:C:C2	2.61	0.54
1:YA:1635:A:H2'	1:YA:1636:U:O4'	2.07	0.54
1:YA:2195:U:O2'	1:YA:2196:C:H5'	2.08	0.54
1:YA:2285:C:C5	28:Y1:5:ARG:NH2	2.75	0.54
1:YA:2286:G:H4'	1:YA:2287:A:N9	2.23	0.54
1:YA:2468:A:O2'	1:YA:2469:A:C8	2.50	0.54
1:YA:2519:U:C6	1:YA:2542:A:N6	2.76	0.54
2:YB:63:C:H2'	2:YB:63:C:O2	2.08	0.54
4:YD:78:GLY:C	4:YD:80:TRP:CZ3	2.86	0.54
5:YE:154:ASP:C	5:YE:156:ASN:H	2.15	0.54
6:YF:46:LYS:HD3	6:YF:50:ASP:HB2	1.89	0.54
10:YJ:45:THR:HG21	10:YJ:50:THR:HG23	1.89	0.54
11:YK:2:ILE:O	11:YK:3:GLN:HG2	2.07	0.54
14:YN:96:ARG:HG3	14:YN:97:ILE:N	2.23	0.54
16:YP:102:ARG:HD2	16:YP:106:ALA:O	2.06	0.54
21:YU:9:GLU:OE1	21:YU:23:LYS:HA	2.07	0.54
1:RA:163:C:O2'	1:RA:164:C:H5"	2.08	0.54
1:RA:492:A:H2'	1:RA:493:G:O4'	2.08	0.54
1:RA:930:G:H1'	26:RZ:24:LEU:HD21	1.90	0.54
1:RA:1419:A:C5	1:RA:1421:G:C5	2.95	0.54
1:RA:1537:G:H2'	1:RA:1538:G:O4'	2.06	0.54
1:RA:1856:U:O2'	1:RA:1857:G:H5'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2006:C:H6	1:RA:2006:C:O5'	1.91	0.54
1:RA:2013:A:OP1	19:RS:96:ILE:HA	2.09	0.54
4:RD:111:GLY:O	4:RD:169:ARG:O	2.26	0.54
11:RK:61:VAL:CG2	11:RK:87:LEU:HD11	2.36	0.54
17:RQ:40:LYS:O	17:RQ:41:ALA:C	2.49	0.54
23:RW:23:LYS:NZ	23:RW:24:ARG:HG3	2.22	0.54
28:R1:49:LYS:HG2	28:R1:50:GLU:H	1.73	0.54
32:QA:71:A:O2'	32:QA:72:A:C5'	2.51	0.54
32:QA:114:U:O2'	32:QA:115:G:H5'	2.08	0.54
32:QA:212:G:H2'	32:QA:213:G:C8	2.42	0.54
32:QA:1084:G:C5	32:QA:1085:U:C4	2.96	0.54
32:QA:1381:U:HO2'	32:QA:1382:C:H6	1.52	0.54
35:QD:190:LEU:HD12	35:QD:190:LEU:O	2.08	0.54
37:QF:90:MET:HE1	49:QR:22:TYR:CZ	2.43	0.54
40:QI:11:ARG:NH1	40:QI:106:ASP:HB3	2.23	0.54
42:QK:110:THR:HG22	52:QU:4:LYS:CB	2.37	0.54
51:QT:77:ASN:N	51:QT:77:ASN:HD22	2.05	0.54
52:QU:16:ARG:HH11	52:QU:19:LYS:CG	2.20	0.54
32:XA:704:A:H2'	32:XA:705:G:C8	2.43	0.54
32:XA:719:C:H3'	32:XA:720:C:C6	2.42	0.54
32:XA:802:A:H2'	32:XA:803:G:O5'	2.08	0.54
32:XA:888:G:O3'	32:XA:1488:G:H4'	2.06	0.54
32:XA:1074:G:H2'	32:XA:1075:U:C6	2.42	0.54
34:XC:53:ARG:HG3	34:XC:68:HIS:CD2	2.43	0.54
34:XC:124:GLU:CD	34:XC:124:GLU:N	2.66	0.54
35:XD:24:VAL:HG23	35:XD:25:ARG:HB2	1.90	0.54
41:XJ:57:VAL:HG22	41:XJ:58:ASN:N	2.18	0.54
41:XJ:92:LEU:HD22	41:XJ:93:ALA:N	2.23	0.54
42:XK:12:ARG:HD3	42:XK:12:ARG:N	2.23	0.54
45:XN:59:GLN:O	45:XN:60:ARG:HB2	2.06	0.54
51:XT:54:GLN:N	51:XT:55:PRO:HD2	2.22	0.54
1:YA:818:G:O2'	1:YA:819:A:H5"	2.07	0.54
1:YA:1210:G:H5"	1:YA:1211:C:H3'	1.89	0.54
1:YA:1536:C:H4'	1:YA:1537:G:C5'	2.38	0.54
1:YA:2043:C:H2'	1:YA:2043:C:O2	2.08	0.54
1:YA:2221:G:C5	1:YA:2222:C:C5	2.96	0.54
1:YA:2635:A:H5'	4:YD:79:LEU:HB2	1.90	0.54
1:YA:2746:U:C5'	7:YG:137:LYS:HG2	2.37	0.54
4:YD:150:GLN:HG3	4:YD:151:THR:N	2.23	0.54
9:YI:23:VAL:HG21	9:YI:37:PHE:HE2	1.73	0.54
9:YI:55:PRO:HG2	9:YI:70:THR:HG23	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:YP:3:ILE:O	16:YP:7:LEU:HB2	2.08	0.54
19:YS:4:ILE:O	19:YS:4:ILE:HG13	2.08	0.54
21:YU:7:ASP:O	21:YU:8:ASP:HB2	2.08	0.54
30:Y3:15:LYS:HZ1	30:Y3:19:GLY:HA2	1.71	0.54
1:RA:632:A:H2'	1:RA:633:A:C8	2.43	0.53
1:RA:996:A:H4'	17:RQ:91:ARG:CG	2.37	0.53
1:RA:1654:A:H2'	1:RA:1655:A:H8	1.73	0.53
1:RA:1789:A:OP2	3:RC:220:ARG:NH1	2.42	0.53
1:RA:2553:G:C2	1:RA:2554:U:O2	2.61	0.53
3:RC:199:HIS:O	3:RC:201:LEU:N	2.40	0.53
10:RJ:54:ILE:HD12	10:RJ:55:ILE:C	2.33	0.53
32:QA:107:G:C2'	32:QA:108:G:H5'	2.37	0.53
32:QA:600:A:H2'	32:QA:601:G:H8	1.73	0.53
32:QA:1055:A:H1'	34:QC:155:ARG:NH2	2.20	0.53
42:QK:30:ILE:O	42:QK:30:ILE:HG13	2.08	0.53
42:QK:87:GLY:H	42:QK:113:THR:CG2	2.20	0.53
51:QT:71:ALA:O	51:QT:74:HIS:HB2	2.08	0.53
32:XA:933:G:OP1	38:XG:3:ARG:NH1	2.41	0.53
32:XA:957:U:C5	32:XA:959:A:OP2	2.61	0.53
32:XA:1387:G:H2'	32:XA:1388:C:H6	1.71	0.53
35:XD:25:ARG:HH11	35:XD:25:ARG:CG	2.16	0.53
40:XI:51:LEU:C	40:XI:53:LEU:H	2.16	0.53
41:XJ:48:ARG:NH1	41:XJ:48:ARG:HB2	2.24	0.53
44:XM:13:HIS:NE2	44:XM:41:ASP:HA	2.23	0.53
48:XQ:42:LYS:NZ	48:XQ:42:LYS:HB3	2.23	0.53
1:YA:41:C:H2'	1:YA:42:A:H8	1.72	0.53
1:YA:158:U:H2'	1:YA:158:U:O2	2.08	0.53
1:YA:445:C:O2'	1:YA:449:A:N3	2.41	0.53
1:YA:729:G:C2'	1:YA:729:G:N3	2.70	0.53
1:YA:749:A:C6	1:YA:750:A:N7	2.76	0.53
1:YA:995:C:O2'	17:YQ:60:TRP:CZ2	2.61	0.53
1:YA:1050:A:C2	1:YA:2751:G:N3	2.76	0.53
1:YA:1059:G:N3	9:YI:131:THR:HG22	2.23	0.53
1:YA:1066:U:H2'	1:YA:1068:G:OP2	2.08	0.53
1:YA:1234:U:H2'	1:YA:1235:G:C8	2.43	0.53
1:YA:1317:G:C2	1:YA:1336:A:C2	2.96	0.53
1:YA:1424:G:O6	1:YA:1425:G:C2	2.61	0.53
2:YB:96:G:O2'	2:YB:97:C:H5'	2.08	0.53
5:YE:146:VAL:O	5:YE:167:VAL:HA	2.08	0.53
9:YI:49:GLU:HG3	9:YI:54:ILE:HD11	1.89	0.53
11:YK:24:VAL:CG1	11:YK:33:ALA:HB2	2.37	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:YK:69:VAL:HG12	11:YK:70:ARG:H	1.72	0.53
18:YR:3:ALA:HB2	18:YR:101:ILE:HD13	1.90	0.53
20:YT:74:ILE:HG13	20:YT:75:GLY:H	1.72	0.53
23:YW:11:ASN:O	23:YW:11:ASN:ND2	2.41	0.53
29:Y2:10:LEU:HD21	29:Y2:14:ARG:HH11	1.73	0.53
1:RA:1019:U:O4	1:RA:1020:A:N6	2.41	0.53
1:RA:1967:C:C2'	1:RA:1968:G:H5'	2.38	0.53
1:RA:2220:U:H2'	1:RA:2221:G:H8	1.71	0.53
1:RA:2703:C:O5'	1:RA:2703:C:H6	1.91	0.53
8:RH:75:LEU:HD22	8:RH:143:ILE:HG23	1.89	0.53
24:RX:36:ARG:HG2	24:RX:47:THR:HB	1.91	0.53
32:QA:740:U:OP1	46:QO:37:HIS:HE1	1.91	0.53
35:QD:146:GLU:HB3	35:QD:147:LYS:NZ	2.23	0.53
35:QD:191:SER:O	35:QD:192:ALA:HB2	2.09	0.53
36:QE:77:ASN:CG	36:QE:78:GLY:N	2.65	0.53
39:QH:39:LEU:HB2	39:QH:45:ILE:HD11	1.89	0.53
40:QI:6:TYR:CG	40:QI:7:GLY:N	2.76	0.53
42:QK:90:PRO:C	42:QK:92:ARG:H	2.16	0.53
32:XA:796:C:H4'	42:XK:126:ARG:HH21	1.72	0.53
32:XA:1073:U:C2	32:XA:1074:G:C8	2.95	0.53
32:XA:1152:A:H2'	32:XA:1153:G:C8	2.43	0.53
32:XA:1296:C:N4	32:XA:1297:G:H22	2.06	0.53
33:XB:115:ASP:O	33:XB:119:GLN:HB2	2.09	0.53
33:XB:161:PHE:HA	33:XB:183:PHE:O	2.08	0.53
38:XG:2:ARG:HG2	38:XG:3:ARG:N	2.23	0.53
38:XG:116:ALA:O	38:XG:120:ALA:HB3	2.08	0.53
43:XL:42:LYS:HG2	43:XL:43:LYS:H	1.73	0.53
50:XS:44:ILE:HA	50:XS:61:VAL:CG1	2.38	0.53
51:XT:71:ALA:O	51:XT:72:ALA:C	2.51	0.53
1:YA:95:A:O2'	25:YY:41:HIS:HD2	1.91	0.53
1:YA:108:G:H2'	1:YA:109:C:C6	2.43	0.53
1:YA:223:A:H61	1:YA:422:A:N6	2.06	0.53
1:YA:311:A:O2'	1:YA:332:A:H5'	2.09	0.53
1:YA:764:A:N3	1:YA:781:A:C6	2.77	0.53
1:YA:1339:G:N2	1:YA:1603:A:H1'	2.22	0.53
1:YA:2330:G:N1	1:YA:2386:A:C6	2.76	0.53
1:YA:2571:U:O4	1:YA:2574:G:C8	2.61	0.53
2:YB:42:C:O2'	2:YB:43:C:C5'	2.46	0.53
4:YD:39:ASP:CG	4:YD:40:LEU:H	2.16	0.53
5:YE:135:ALA:C	5:YE:137:LYS:H	2.15	0.53
6:YF:103:ILE:HG22	6:YF:103:ILE:O	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:YJ:93:ILE:HA	10:YJ:97:PRO:HB3	1.89	0.53
12:YL:103:ILE:N	12:YL:103:ILE:HD12	2.24	0.53
14:YN:1:MET:O	14:YN:2:ARG:CB	2.57	0.53
23:YW:13:ARG:HG3	23:YW:14:ASP:N	2.22	0.53
1:RA:455:C:N3	1:RA:472:A:H2'	2.23	0.53
1:RA:1057:A:N6	1:RA:1087:G:OP2	2.29	0.53
1:RA:1169:A:C2	1:RA:1181:U:O2	2.61	0.53
1:RA:2267:A:H5"	1:RA:2268:A:C5'	2.38	0.53
1:RA:2345:G:N3	1:RA:2381:A:H2'	2.23	0.53
2:RB:33:G:O2'	2:RB:34:A:H5'	2.09	0.53
7:RG:35:THR:C	7:RG:36:LEU:HD22	2.34	0.53
9:RI:61:TYR:N	9:RI:61:TYR:HD2	2.07	0.53
12:RL:57:LEU:C	12:RL:59:ARG:H	2.16	0.53
12:RL:95:LEU:HD22	12:RL:100:ILE:CD1	2.36	0.53
13:RM:47:GLU:O	13:RM:48:ALA:C	2.51	0.53
15:RO:75:GLY:HA2	15:RO:106:LEU:HD13	1.88	0.53
18:RR:29:THR:HG22	18:RR:29:THR:O	2.07	0.53
23:RW:46:ALA:HB3	23:RW:79:ILE:O	2.09	0.53
32:QA:1007:U:C2'	32:QA:1008:U:H5"	2.37	0.53
32:QA:1279:G:N3	32:QA:1279:G:C2'	2.70	0.53
32:QA:1323:G:O2'	32:QA:1324:A:C8	2.60	0.53
33:QB:14:HIS:HB2	33:QB:208:ALA:HB2	1.91	0.53
35:QD:137:SER:HB3	35:QD:138:PRO:HD2	1.89	0.53
41:QJ:71:LEU:O	41:QJ:72:ARG:HD3	2.08	0.53
52:QU:3:ILE:HD13	52:QU:19:LYS:NZ	2.23	0.53
32:XA:89:U:O2'	32:XA:90:C:O4'	2.26	0.53
32:XA:223:A:H2'	32:XA:224:U:C6	2.43	0.53
32:XA:961:U:O4	32:XA:983:A:N6	2.42	0.53
32:XA:1091:U:O2	32:XA:1093:A:C8	2.57	0.53
32:XA:1114:C:O2	45:XN:99:SER:HB3	2.08	0.53
32:XA:1417:G:C6	32:XA:1482:G:C6	2.97	0.53
33:XB:100:LEU:C	33:XB:102:ASN:H	2.16	0.53
35:XD:28:ASP:O	35:XD:29:THR:O	2.26	0.53
37:XF:3:HIS:ND1	37:XF:95:ALA:N	2.56	0.53
37:XF:43:GLY:HA2	37:XF:58:HIS:ND1	2.23	0.53
48:XQ:46:HIS:HB2	48:XQ:70:LYS:CE	2.31	0.53
1:YA:30:G:C6	1:YA:31:C:N3	2.77	0.53
1:YA:56:A:C2	1:YA:115:C:C2	2.97	0.53
1:YA:847:U:H5'	1:YA:848:C:OP2	2.08	0.53
1:YA:1179:G:H2'	1:YA:1180:U:C6	2.43	0.53
1:YA:1726:C:H2'	1:YA:1727:C:H6	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1794:A:H2'	1:YA:1795:C:C6	2.44	0.53
1:YA:2741:A:C8	1:YA:2742:G:C8	2.96	0.53
6:YF:113:PHE:O	6:YF:114:ARG:CB	2.56	0.53
6:YF:155:ILE:H	6:YF:155:ILE:HD12	1.73	0.53
8:YH:41:LYS:HA	8:YH:44:ILE:CG1	2.38	0.53
14:YN:12:ARG:HA	14:YN:12:ARG:HE	1.74	0.53
15:YO:48:LEU:HD13	15:YO:87:ILE:HD12	1.89	0.53
18:YR:66:HIS:CD2	18:YR:94:THR:HG22	2.43	0.53
18:YR:97:LYS:HG2	18:YR:97:LYS:O	2.07	0.53
19:YS:70:LYS:H	19:YS:70:LYS:HE3	1.73	0.53
20:YT:38:ALA:HB1	20:YT:81:LYS:HZ2	1.70	0.53
24:YX:44:ARG:HB3	24:YX:44:ARG:HH11	1.73	0.53
1:RA:31:C:O3'	1:RA:1238:G:C5'	2.56	0.53
1:RA:142:A:O2'	1:RA:143:C:C6	2.61	0.53
1:RA:923:G:N3	23:RW:23:LYS:NZ	2.56	0.53
1:RA:2046:G:OP1	27:R0:11:LYS:HE3	2.09	0.53
1:RA:2109:U:C4	1:RA:2181:U:O4	2.61	0.53
1:RA:2331:G:O2'	1:RA:2336:A:N1	2.42	0.53
1:RA:2783:U:H2'	1:RA:2784:U:C6	2.43	0.53
5:RE:169:VAL:O	5:RE:170:ARG:HD2	2.07	0.53
8:RH:81:ALA:O	8:RH:102:ALA:HB2	2.09	0.53
12:RL:19:LEU:C	12:RL:19:LEU:HD23	2.33	0.53
13:RM:40:ARG:HD3	13:RM:93:VAL:HG21	1.89	0.53
16:RP:13:LYS:HE3	16:RP:76:HIS:HA	1.91	0.53
17:RQ:81:GLY:HA2	17:RQ:116:LEU:HD13	1.89	0.53
21:RU:48:VAL:O	21:RU:48:VAL:HG13	2.08	0.53
23:RW:37:VAL:CG2	23:RW:55:ASP:O	2.57	0.53
23:RW:72:GLY:N	23:RW:73:PRO:CD	2.72	0.53
32:QA:692:U:O2	32:QA:694:A:C8	2.61	0.53
32:QA:1251:A:H2'	32:QA:1252:A:H8	1.72	0.53
32:QA:1321:U:H5"	32:QA:1322:C:OP2	2.09	0.53
34:QC:10:ARG:O	34:QC:13:ILE:O	2.26	0.53
34:QC:143:LEU:H	34:QC:143:LEU:HD22	1.72	0.53
35:QD:173:ASP:O	35:QD:174:ALA:CB	2.56	0.53
37:QF:17:GLN:HG2	35:XD:188:SER:HB2	1.90	0.53
37:QF:47:LEU:HB3	49:QR:65:SER:OG	2.08	0.53
47:QP:44:SER:O	47:QP:46:LYS:HG3	2.08	0.53
32:XA:154:U:C2'	32:XA:155:A:H5'	2.34	0.53
32:XA:275:G:HO2'	32:XA:276:G:H8	1.55	0.53
32:XA:519:C:O2'	32:XA:520:A:H5'	2.09	0.53
32:XA:764:C:N4	32:XA:812:G:C6	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:844:G:O2'	32:XA:845:A:H5"	2.07	0.53
32:XA:1046:A:O2'	32:XA:1047:G:H5'	2.08	0.53
32:XA:1239:A:N3	32:XA:1241:G:C2	2.76	0.53
34:XC:9:ILE:HG23	34:XC:10:ARG:HG2	1.90	0.53
36:XE:79:THR:OG1	36:XE:121:ASN:ND2	2.41	0.53
37:XF:46:GLN:OE1	37:XF:55:HIS:O	2.25	0.53
44:XM:13:HIS:HB2	44:XM:43:LYS:HE2	1.91	0.53
45:XN:46:LYS:NZ	50:XS:10:ILE:HD13	2.23	0.53
45:XN:88:MET:HE1	45:XN:97:LYS:HD2	1.89	0.53
47:XP:46:LYS:NZ	47:XP:46:LYS:H	2.06	0.53
1:YA:64:A:H2'	1:YA:65:U:O4'	2.09	0.53
1:YA:142:A:H2'	1:YA:143:C:C5	2.43	0.53
1:YA:270:A:C2	1:YA:369:U:H4'	2.44	0.53
1:YA:418:C:H2'	1:YA:419:U:H6	1.74	0.53
1:YA:502:A:N6	1:YA:505:A:C6	2.76	0.53
1:YA:1537:G:H2'	1:YA:1537:G:N3	2.22	0.53
1:YA:1551:A:C5	1:YA:1552:A:N7	2.76	0.53
1:YA:1654:A:H2'	1:YA:1655:A:C8	2.39	0.53
1:YA:1736:U:H2'	1:YA:1737:G:O4'	2.09	0.53
1:YA:2008:C:H2'	1:YA:2009:A:C8	2.42	0.53
1:YA:2142:A:C2'	1:YA:2143:C:H4'	2.38	0.53
1:YA:2636:C:H4'	4:YD:81:GLU:OE1	2.08	0.53
2:YB:15:A:C8	2:YB:109:A:N6	2.76	0.53
6:YF:103:ILE:HG21	6:YF:173:ASP:O	2.09	0.53
7:YG:149:ALA:O	7:YG:151:ARG:N	2.41	0.53
10:YJ:45:THR:C	10:YJ:47:HIS:H	2.15	0.53
10:YJ:99:ARG:HG3	10:YJ:102:GLU:CD	2.32	0.53
12:YL:55:MET:SD	12:YL:59:ARG:HB3	2.48	0.53
14:YN:7:GLY:O	14:YN:8:ARG:HB2	2.08	0.53
16:YP:28:LYS:HB2	16:YP:28:LYS:NZ	2.16	0.53
16:YP:88:ARG:CZ	16:YP:112:ARG:HH21	2.21	0.53
20:YT:39:THR:HG21	20:YT:42:GLU:CD	2.33	0.53
21:YU:4:ILE:HD13	21:YU:69:VAL:HG12	1.91	0.53
22:YV:44:HIS:NE2	22:YV:85:LYS:HB2	2.24	0.53
25:YY:57:LEU:O	25:YY:60:LYS:HE3	2.08	0.53
1:RA:202:U:H2'	1:RA:203:A:C8	2.43	0.53
1:RA:304:U:H2'	1:RA:305:C:H6	1.73	0.53
1:RA:1568:G:H4'	3:RC:58:LYS:HG2	1.90	0.53
1:RA:1610:A:H8	1:RA:1610:A:H5'	1.74	0.53
1:RA:1728:C:O2'	1:RA:1729:U:H6	1.91	0.53
1:RA:1731:G:N1	1:RA:1733:G:C6	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1784:A:H4'	1:RA:1785:A:O5'	2.08	0.53
1:RA:2776:A:H4'	1:RA:2777:G:H5"	1.89	0.53
13:RM:96:ILE:C	13:RM:96:ILE:HD12	2.33	0.53
17:RQ:104:ALA:O	17:RQ:107:ALA:HB3	2.08	0.53
21:RU:25:LYS:O	21:RU:26:ASN:HB3	2.08	0.53
30:R3:49:VAL:HG23	30:R3:53:ASP:HB2	1.91	0.53
32:QA:217:C:C2'	32:QA:218:U:H5'	2.38	0.53
32:QA:1118:U:OP1	40:QI:10:ARG:HD2	2.09	0.53
32:QA:1248:A:C2	40:QI:71:ILE:HD11	2.44	0.53
33:QB:166:ASP:OD1	33:QB:167:HIS:N	2.41	0.53
35:QD:65:GLY:HA3	35:QD:114:ARG:HH22	1.74	0.53
42:QK:100:ASN:HB2	42:QK:106:ILE:HG21	1.91	0.53
44:QM:10:ASP:OD1	44:QM:11:HIS:N	2.30	0.53
48:QQ:45:VAL:HG22	48:QQ:72:TRP:CB	2.39	0.53
52:QU:3:ILE:N	52:QU:19:LYS:HZ1	2.06	0.53
32:XA:109:A:C6	32:XA:327:A:C5	2.97	0.53
32:XA:109:A:C8	32:XA:327:A:O4'	2.61	0.53
32:XA:377:G:H2'	32:XA:378:G:C8	2.43	0.53
32:XA:892:A:O2'	32:XA:1415:G:H4'	2.09	0.53
32:XA:1258:G:O2'	32:XA:1259:C:H5'	2.08	0.53
37:XF:38:ARG:HG3	37:XF:63:ASN:HB2	1.89	0.53
47:XP:54:LEU:HD23	47:XP:54:LEU:H	1.74	0.53
52:XU:24:LYS:CD	52:XU:25:ALA:H	2.21	0.53
1:YA:180:G:P	29:Y2:35:ARG:HH12	2.31	0.53
1:YA:319:G:O6	1:YA:333:G:C6	2.61	0.53
1:YA:413:C:H4'	1:YA:1880:U:H4'	1.89	0.53
1:YA:605:G:H2'	1:YA:606:U:C6	2.43	0.53
1:YA:1287:A:O2'	1:YA:1288:G:H5'	2.08	0.53
1:YA:1432:G:O2'	1:YA:1433:A:H5'	2.08	0.53
1:YA:1465:G:H2'	1:YA:1466:U:H6	1.74	0.53
1:YA:2235:G:C6	1:YA:2236:U:C4	2.97	0.53
1:YA:2307:G:H1'	1:YA:2308:G:C5	2.43	0.53
1:YA:2577:A:C2	27:Y0:1:ALA:N	2.75	0.53
4:YD:21:SER:H	11:YK:73:ASP:HA	1.74	0.53
6:YF:42:ALA:HB1	6:YF:46:LYS:HA	1.91	0.53
7:YG:25:ILE:HG22	7:YG:78:VAL:HG11	1.90	0.53
14:YN:55:ALA:HA	14:YN:80:PHE:CE1	2.44	0.53
22:YV:40:ILE:HD13	22:YV:40:ILE:N	2.24	0.53
24:YX:29:LEU:HB2	24:YX:30:PRO:CD	2.38	0.53
1:RA:1113:U:H2'	1:RA:1114:C:H6	1.72	0.53
1:RA:1322:A:H2'	1:RA:1323:C:H5'	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2821:A:H2'	1:RA:2822:G:O4'	2.09	0.53
4:RD:70:LYS:O	4:RD:71:ALA:HB3	2.09	0.53
4:RD:99:GLU:CG	4:RD:100:LEU:N	2.72	0.53
10:RJ:32:LEU:O	10:RJ:36:LEU:HB2	2.09	0.53
11:RK:113:MET:O	11:RK:114:LYS:C	2.52	0.53
15:RO:11:ALA:HB2	15:RO:96:GLY:CA	2.39	0.53
18:RR:37:GLU:CD	18:RR:37:GLU:N	2.65	0.53
20:RT:28:ASN:CA	20:RT:91:GLN:HE22	2.21	0.53
20:RT:87:LEU:HB2	20:RT:91:GLN:HG2	1.89	0.53
23:RW:16:GLU:OE2	23:RW:16:GLU:CA	2.56	0.53
23:RW:16:GLU:OE2	23:RW:16:GLU:HA	2.09	0.53
26:RZ:38:GLU:O	26:RZ:43:ILE:HG12	2.08	0.53
32:QA:659:U:O2'	32:QA:660:C:H5'	2.09	0.53
32:QA:1397:C:OP2	36:QE:28:ARG:NH2	2.41	0.53
32:QA:1489:G:O2'	32:QA:1490:U:H5'	2.09	0.53
32:QA:1496:C:H2'	32:QA:1497:G:O4'	2.08	0.53
34:QC:190:THR:C	34:QC:192:TYR:H	2.17	0.53
37:QF:41:ASP:C	37:QF:43:GLY:H	2.17	0.53
39:QH:17:GLN:NE2	39:QH:69:ALA:HB1	2.24	0.53
40:QI:49:GLN:N	40:QI:50:PRO:HD2	2.23	0.53
46:QO:16:ARG:HD3	46:QO:20:ASP:OD2	2.09	0.53
50:QS:46:LEU:HB2	50:QS:61:VAL:HG21	1.89	0.53
32:XA:157:U:C2'	32:XA:158:G:H5'	2.38	0.53
32:XA:260:G:H2'	32:XA:261:U:C6	2.44	0.53
32:XA:523:A:H61	43:XL:49:ARG:HH12	1.56	0.53
32:XA:752:G:C1'	32:XA:754:C:N4	2.67	0.53
32:XA:981:U:O4	32:XA:1222:G:O6	2.27	0.53
32:XA:1072:G:C5	32:XA:1073:U:C4	2.97	0.53
32:XA:1136:C:H5	32:XA:1138:G:O6	1.89	0.53
41:XJ:5:ARG:HG2	41:XJ:79:PRO:HG3	1.91	0.53
43:XL:42:LYS:HD3	43:XL:43:LYS:HZ2	1.73	0.53
47:XP:28:ARG:HG2	47:XP:29:ASN:OD1	2.09	0.53
1:YA:40:U:C4	1:YA:41:C:N4	2.77	0.53
1:YA:53:A:H2	1:YA:179:C:H4'	1.71	0.53
1:YA:374:A:H2'	1:YA:375:G:O4'	2.07	0.53
1:YA:418:C:H2'	1:YA:419:U:C6	2.44	0.53
1:YA:917:A:H2	2:YB:79:G:N2	2.04	0.53
1:YA:919:U:H2'	1:YA:920:A:C8	2.44	0.53
1:YA:1327:A:C6	1:YA:1328:A:C4	2.97	0.53
1:YA:1378:A:C8	1:YA:1380:G:C6	2.96	0.53
1:YA:1936:A:C2	1:YA:1945:G:C4	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1957:C:H5'	1:YA:1984:G:O2'	2.09	0.53
1:YA:2053:G:H2'	1:YA:2054:A:O4'	2.09	0.53
1:YA:2093:G:N7	1:YA:2225:A:C4	2.77	0.53
1:YA:2863:C:O2'	1:YA:2864:G:H5'	2.09	0.53
4:YD:33:ARG:HB3	4:YD:95:SER:OG	2.08	0.53
4:YD:117:GLY:HA2	4:YD:164:GLN:OE1	2.09	0.53
4:YD:118:PHE:CG	4:YD:119:ALA:N	2.76	0.53
5:YE:153:LEU:HD21	5:YE:157:LEU:HG	1.90	0.53
6:YF:65:LEU:O	6:YF:86:CYS:HB3	2.08	0.53
9:YI:89:SER:HB3	9:YI:97:VAL:HG11	1.89	0.53
10:YJ:44:TYR:CD2	10:YJ:44:TYR:C	2.86	0.53
20:YT:63:VAL:C	20:YT:64:LYS:HD2	2.33	0.53
23:YW:8:SER:O	23:YW:9:THR:CB	2.57	0.53
24:YX:39:VAL:O	24:YX:40:GLU:HB2	2.08	0.53
1:RA:146:A:H2'	1:RA:147:C:C6	2.44	0.53
1:RA:923:G:C1'	23:RW:23:LYS:HE2	2.35	0.53
1:RA:946:C:O2'	1:RA:947:A:H5'	2.09	0.53
1:RA:1882:U:O2'	1:RA:1883:U:H5'	2.08	0.53
4:RD:133:THR:CG2	4:RD:134:HIS:HD2	2.22	0.53
5:RE:121:VAL:O	5:RE:189:THR:HA	2.08	0.53
5:RE:193:VAL:O	5:RE:197:GLU:HB2	2.08	0.53
10:RJ:26:GLY:HA2	10:RJ:29:ALA:HB3	1.90	0.53
14:RN:32:GLU:OE1	14:RN:118:ARG:HA	2.08	0.53
17:RQ:87:VAL:HB	18:RR:52:PRO:HD3	1.90	0.53
17:RQ:97:ILE:CD1	17:RQ:105:PHE:N	2.71	0.53
19:RS:42:LYS:O	19:RS:45:VAL:HG13	2.09	0.53
32:QA:1381:U:O2'	32:QA:1382:C:O5'	2.26	0.53
32:QA:1522:U:O2'	32:QA:1523:G:H5'	2.09	0.53
33:QB:165:ALA:HB3	33:QB:190:SER:HB3	1.90	0.53
36:QE:80:LEU:HD12	36:QE:146:MET:SD	2.49	0.53
50:QS:62:THR:HG22	50:QS:63:ASP:N	2.24	0.53
51:QT:66:ILE:CD1	51:QT:70:LYS:HE3	2.39	0.53
32:XA:332:G:OP2	51:XT:4:LYS:HG3	2.09	0.53
32:XA:704:A:C2'	32:XA:705:G:C8	2.92	0.53
32:XA:764:C:C2'	32:XA:765:G:H5'	2.38	0.53
32:XA:972:C:H4'	41:XJ:59:LYS:HE2	1.90	0.53
32:XA:1304:G:C1'	32:XA:1333:A:H61	2.19	0.53
32:XA:1317:C:OP1	45:XN:56:PRO:HD2	2.08	0.53
33:XB:128:LEU:O	33:XB:129:THR:C	2.52	0.53
33:XB:205:ALA:O	33:XB:209:VAL:HG13	2.09	0.53
42:XK:91:GLY:O	42:XK:92:ARG:C	2.51	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:XK:92:ARG:HH22	52:XU:19:LYS:HD2	1.72	0.53
44:XM:57:ASP:O	44:XM:61:LYS:HG3	2.06	0.53
49:XR:57:ALA:O	49:XR:60:ARG:N	2.41	0.53
1:YA:105:C:H2'	1:YA:106:C:C6	2.44	0.53
1:YA:249:C:H3'	1:YA:2394:C:C4'	2.33	0.53
1:YA:538:A:H5"	10:YJ:7:LYS:HZ3	1.74	0.53
1:YA:836:G:C6	1:YA:837:C:N3	2.76	0.53
1:YA:857:G:H2'	1:YA:858:G:C4'	2.38	0.53
1:YA:1666:G:O2'	1:YA:1667:G:H5'	2.09	0.53
1:YA:1821:A:H5'	3:YC:156:SER:OG	2.09	0.53
1:YA:1936:A:H2	1:YA:1943:U:C5	2.27	0.53
1:YA:1965:C:H6	1:YA:1965:C:C5'	2.17	0.53
3:YC:166:ARG:O	3:YC:166:ARG:HG3	2.07	0.53
10:YJ:35:ARG:HG2	10:YJ:40:HIS:CD2	2.44	0.53
12:YL:48:ARG:CG	12:YL:48:ARG:NH1	2.64	0.53
13:YM:71:LYS:HG3	13:YM:72:PRO:HD2	1.90	0.53
17:YQ:50:ARG:O	17:YQ:54:ARG:HD3	2.09	0.53
18:YR:23:GLU:O	18:YR:25:LEU:HD22	2.08	0.53
20:YT:9:LYS:HG3	25:YY:21:LEU:HD13	1.90	0.53
21:YU:3:LYS:O	21:YU:4:ILE:C	2.52	0.53
23:YW:37:VAL:C	23:YW:39:GLN:N	2.67	0.53
1:RA:108:G:C2'	1:RA:109:C:H5'	2.39	0.53
1:RA:503:A:H5'	1:RA:505:A:OP1	2.07	0.53
3:RC:76:VAL:HG23	3:RC:76:VAL:O	2.08	0.53
3:RC:103:ILE:O	3:RC:104:LEU:O	2.26	0.53
4:RD:157:LYS:HD2	10:RJ:79:GLY:O	2.09	0.53
13:RM:105:MET:HE3	13:RM:117:PHE:CE1	2.43	0.53
16:RP:67:GLU:HA	16:RP:67:GLU:OE1	2.09	0.53
20:RT:25:GLU:C	20:RT:27:SER:N	2.67	0.53
32:QA:259:G:C4	32:QA:260:G:C8	2.97	0.53
32:QA:376:G:H5"	47:QP:5:ARG:HB2	1.91	0.53
33:QB:40:ILE:O	33:QB:41:ASN:HB2	2.09	0.53
33:QB:95:TRP:O	33:QB:95:TRP:HE3	1.92	0.53
33:QB:153:MET:SD	33:QB:157:PRO:HD3	2.49	0.53
36:QE:14:LEU:HB2	36:QE:36:THR:HG22	1.90	0.53
36:QE:29:ILE:HD12	36:QE:30:PHE:H	1.73	0.53
41:QJ:35:GLN:HE21	41:QJ:35:GLN:HA	1.72	0.53
47:QP:11:ALA:O	47:QP:12:LYS:C	2.51	0.53
50:QS:4:LEU:HD12	50:QS:4:LEU:N	2.24	0.53
32:XA:274:A:H4'	32:XA:275:G:OP1	2.08	0.53
32:XA:781:A:H2'	32:XA:782:A:H5'	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1130:A:C6	32:XA:1131:G:N7	2.77	0.53
32:XA:1343:G:C5	32:XA:1344:C:C4	2.96	0.53
32:XA:1508:A:H2'	32:XA:1509:C:C6	2.43	0.53
33:XB:95:TRP:CZ3	33:XB:174:GLU:OE2	2.61	0.53
39:XH:85:TYR:HE1	48:XQ:36:PHE:CE2	2.27	0.53
41:XJ:7:ARG:HG3	41:XJ:75:ASP:OD1	2.09	0.53
43:XL:51:VAL:HG12	43:XL:52:CYS:N	2.24	0.53
43:XL:81:ILE:HD11	43:XL:94:TYR:CB	2.39	0.53
50:XS:35:ARG:HH21	50:XS:51:HIS:HD2	1.57	0.53
1:YA:179:C:H2'	1:YA:180:G:O4'	2.09	0.53
1:YA:380:G:O3'	24:YX:15:ASN:HB2	2.08	0.53
1:YA:412:A:N7	1:YA:2412:A:H1'	2.23	0.53
1:YA:432:A:O2'	1:YA:433:C:H5'	2.09	0.53
1:YA:532:A:H4'	1:YA:533:G:C8	2.43	0.53
1:YA:813:U:H1'	1:YA:1226:A:N3	2.24	0.53
1:YA:850:U:O2'	26:YZ:46:MET:HE3	2.09	0.53
1:YA:1072:C:O2'	1:YA:1093:G:O6	2.26	0.53
1:YA:1351:C:C2	1:YA:1381:G:C2	2.96	0.53
1:YA:1387:A:N3	1:YA:1388:G:C8	2.77	0.53
1:YA:1544:A:N1	1:YA:1545:A:C2	2.77	0.53
1:YA:1596:A:N6	1:YA:1597:A:N6	2.57	0.53
1:YA:1684:G:C6	1:YA:1685:C:C4	2.96	0.53
1:YA:1809:A:C2	1:YA:1810:A:C5	2.96	0.53
1:YA:2426:A:H3'	1:YA:2427:C:C5'	2.37	0.53
1:YA:2728:U:HO2'	1:YA:2729:G:H8	1.56	0.53
20:YT:7:LEU:O	20:YT:7:LEU:HD23	2.08	0.53
22:YV:20:LEU:HD22	22:YV:25:LYS:HD2	1.88	0.53
22:YV:41:GLU:HG2	22:YV:42:LEU:N	2.22	0.53
1:RA:571:U:H3'	18:RR:80:ARG:NH2	2.24	0.53
1:RA:574:A:OP2	56:RA:3268:HOH:O	2.18	0.53
1:RA:954:G:OP2	13:RM:16:ARG:NH2	2.35	0.53
1:RA:2773:C:OP1	4:RD:171:THR:CG2	2.57	0.53
1:RA:2834:G:O6	1:RA:2879:A:H2'	2.08	0.53
6:RF:133:GLU:H	6:RF:150:GLY:HA3	1.74	0.53
9:RI:111:THR:O	9:RI:113:ALA:N	2.40	0.53
10:RJ:73:VAL:CG2	10:RJ:74:TYR:H	2.17	0.53
11:RK:98:ARG:O	11:RK:99:ILE:HD12	2.08	0.53
16:RP:37:LYS:HD3	16:RP:37:LYS:H	1.74	0.53
32:QA:36:C:O2'	32:QA:501:C:OP1	2.26	0.53
32:QA:373:A:H2'	32:QA:374:A:C8	2.44	0.53
32:QA:420:U:O2'	32:QA:421:U:H5"	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:502:A:H2'	32:QA:503:C:C6	2.44	0.53
32:QA:1170:A:H2'	32:QA:1171:A:O4'	2.08	0.53
44:QM:15:VAL:HA	44:QM:33:LEU:CD1	2.39	0.53
48:QQ:20:ILE:N	48:QQ:47:ASP:OD1	2.40	0.53
48:QQ:67:SER:OG	48:QQ:70:LYS:HB3	2.09	0.53
52:QU:17:ARG:HG3	52:QU:17:ARG:NH1	2.22	0.53
32:XA:185:U:O5'	32:XA:185:U:H6	1.91	0.53
32:XA:653:U:C2	39:XH:55:LYS:HG2	2.44	0.53
32:XA:878:A:OP1	39:XH:79:ARG:HB2	2.08	0.53
34:XC:142:ARG:HG2	34:XC:143:LEU:HD12	1.90	0.53
35:XD:20:LEU:N	35:XD:20:LEU:HD23	2.24	0.53
43:XL:37:TYR:O	43:XL:38:THR:HG23	2.09	0.53
46:XO:23:SER:O	46:XO:26:VAL:HB	2.09	0.53
50:XS:10:ILE:HD12	50:XS:10:ILE:N	2.23	0.53
1:YA:100:U:OP1	1:YA:100:U:H2'	2.08	0.53
1:YA:332:A:O2'	1:YA:333:G:H3'	2.08	0.53
1:YA:637:A:O5'	12:YL:112:LEU:HD21	2.08	0.53
1:YA:659:G:H4'	5:YE:95:LYS:CD	2.39	0.53
1:YA:1062:G:OP1	1:YA:1070:A:H4'	2.09	0.53
1:YA:1324:G:O2'	1:YA:1616:A:N6	2.42	0.53
1:YA:1335:C:H2'	1:YA:1336:A:C1'	2.39	0.53
1:YA:1605:C:H3'	1:YA:1606:C:H5"	1.91	0.53
1:YA:1723:G:H2'	1:YA:1724:G:O4'	2.09	0.53
1:YA:2097:A:H2'	1:YA:2098:U:H6	1.73	0.53
1:YA:2106:U:C4	1:YA:2107:G:N7	2.77	0.53
1:YA:2269:G:O2'	23:YW:18:LYS:HG2	2.09	0.53
1:YA:2282:G:C4	1:YA:2425:A:N6	2.77	0.53
3:YC:179:GLU:HA	3:YC:269:ARG:O	2.09	0.53
5:YE:126:VAL:CG1	5:YE:127:GLU:N	2.72	0.53
23:YW:23:LYS:HD2	23:YW:24:ARG:H	1.72	0.53
1:RA:1020:A:H4'	1:RA:1021:A:O5'	2.10	0.53
1:RA:1417:C:H2'	1:RA:1418:G:O4'	2.09	0.53
1:RA:1501:G:C2'	1:RA:1502:A:H5'	2.38	0.53
1:RA:1965:C:H5"	1:RA:1966:A:H2'	1.91	0.53
1:RA:2747:G:O2'	7:RG:66:THR:HG22	2.09	0.53
5:RE:145:ASP:HB3	5:RE:184:ASP:HB2	1.89	0.53
7:RG:23:ILE:H	7:RG:23:ILE:HD12	1.74	0.53
8:RH:31:VAL:O	8:RH:32:PRO:C	2.51	0.53
10:RJ:64:VAL:O	10:RJ:65:THR:CB	2.55	0.53
12:RL:93:ASN:O	12:RL:95:LEU:N	2.40	0.53
20:RT:15:HIS:HB3	20:RT:31:VAL:HG22	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RV:39:ALA:C	22:RV:40:ILE:HD13	2.34	0.53
24:RX:30:PRO:O	24:RX:32:LEU:HD12	2.09	0.53
32:QA:80:A:C2	32:QA:90:C:N3	2.77	0.53
32:QA:149:A:C2	32:QA:150:U:C2	2.96	0.53
32:QA:633:G:O2'	32:QA:634:C:H5'	2.08	0.53
32:QA:1338:G:H2'	32:QA:1339:A:H8	1.74	0.53
34:QC:154:GLY:O	34:QC:195:ILE:HG12	2.08	0.53
36:QE:83:PRO:HB3	36:QE:96:GLN:HE22	1.69	0.53
38:QG:38:ALA:O	38:QG:42:VAL:HG23	2.08	0.53
39:QH:88:LYS:HG3	39:QH:89:ASP:N	2.24	0.53
42:QK:100:ASN:HB2	42:QK:106:ILE:CG2	2.39	0.53
46:QO:77:TYR:OH	46:QO:87:ARG:HG2	2.09	0.53
32:XA:254:G:H5"	48:XQ:70:LYS:HD3	1.91	0.53
32:XA:267:C:OP2	48:XQ:68:LYS:HD2	2.09	0.53
32:XA:495:A:N1	32:XA:496:A:N6	2.57	0.53
32:XA:644:U:H2'	32:XA:645:G:C8	2.44	0.53
32:XA:763:G:H2'	32:XA:764:C:H6	1.74	0.53
32:XA:1147:C:HO2'	32:XA:1148:U:H6	1.53	0.53
32:XA:1202:U:O2	45:XN:81:ILE:HD13	2.09	0.53
32:XA:1346:A:C8	32:XA:1348:U:N3	2.76	0.53
32:XA:1484:C:H2'	32:XA:1485:U:O4'	2.09	0.53
35:XD:57:LYS:HE2	35:XD:61:ARG:HD3	1.91	0.53
38:XG:37:THR:HA	38:XG:40:SER:HB2	1.91	0.53
50:XS:52:ASN:HD22	50:XS:54:ARG:H	1.56	0.53
51:XT:72:ALA:C	51:XT:74:HIS:H	2.17	0.53
1:YA:214:G:O2'	1:YA:216:A:O3'	2.26	0.53
1:YA:222:A:H3'	1:YA:421:C:H5'	1.91	0.53
1:YA:265:A:C5	1:YA:428:A:C8	2.96	0.53
1:YA:1085:A:H2'	1:YA:1086:A:N3	2.24	0.53
1:YA:1665:A:H2'	1:YA:1666:G:H5'	1.91	0.53
1:YA:1739:A:N6	1:YA:1740:G:C6	2.77	0.53
1:YA:1799:G:N7	3:YC:175:LEU:HD13	2.23	0.53
1:YA:2428:G:C2	12:YL:54:GLN:NE2	2.77	0.53
1:YA:2756:U:H4'	1:YA:2757:A:O5'	2.08	0.53
3:YC:93:VAL:CG1	3:YC:101:ARG:H	2.22	0.53
14:YN:82:GLU:O	14:YN:86:ARG:HG3	2.09	0.53
21:YU:11:ILE:HG12	21:YU:11:ILE:O	2.09	0.53
21:YU:35:VAL:HB	21:YU:38:ILE:HD13	1.91	0.53
23:YW:31:LEU:C	23:YW:33:GLY:H	2.17	0.53
25:YY:34:SER:O	25:YY:36:GLN:HG3	2.09	0.53
1:RA:26:G:H1'	1:RA:514:A:H61	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:864:G:O2'	1:RA:865:C:H5'	2.08	0.52
1:RA:2742:G:OP1	31:R4:36:ARG:HD3	2.09	0.52
3:RC:257:ARG:NH1	3:RC:263:ASP:OD2	2.42	0.52
4:RD:47:ALA:N	4:RD:84:LEU:HD12	2.24	0.52
12:RL:55:MET:HA	12:RL:55:MET:HE3	1.91	0.52
17:RQ:44:TYR:O	17:RQ:47:ARG:HB3	2.10	0.52
26:RZ:43:ILE:C	26:RZ:43:ILE:HD12	2.33	0.52
32:QA:254:G:H2'	32:QA:255:G:H8	1.74	0.52
32:QA:408:A:P	35:QD:109:THR:HG21	2.49	0.52
32:QA:820:U:H4'	32:QA:821:G:OP2	2.09	0.52
32:QA:1472:U:H2'	32:QA:1473:G:H8	1.74	0.52
33:QB:24:PRO:C	33:QB:26:MET:N	2.67	0.52
34:QC:166:TRP:HE3	34:QC:166:TRP:N	1.99	0.52
39:QH:105:THR:HG21	39:QH:120:LEU:CD1	2.38	0.52
43:QL:54:VAL:HG21	43:QL:79:ILE:HD11	1.91	0.52
43:QL:115:LYS:O	43:QL:116:TYR:HB2	2.07	0.52
44:QM:10:ASP:OD1	44:QM:44:ILE:HD13	2.09	0.52
44:QM:47:LEU:HD23	44:QM:51:GLN:HB3	1.91	0.52
48:QQ:30:HIS:HE1	48:QQ:32:ILE:HD12	1.74	0.52
32:XA:60:A:C4'	32:XA:61:G:O5'	2.50	0.52
35:XD:137:SER:O	35:XD:140:ASP:HB2	2.08	0.52
37:XF:68:GLN:O	37:XF:71:ILE:HG22	2.08	0.52
38:XG:124:SER:C	38:XG:126:ALA:H	2.17	0.52
40:XI:78:ILE:O	40:XI:82:ILE:HG13	2.09	0.52
40:XI:118:ARG:HG3	40:XI:124:PRO:HG3	1.90	0.52
41:XJ:81:GLU:O	41:XJ:83:THR:N	2.41	0.52
50:XS:68:HIS:HB3	50:XS:72:GLU:HG3	1.91	0.52
1:YA:3:U:C4	1:YA:4:U:C5	2.97	0.52
1:YA:136:G:H8	1:YA:136:G:O5'	1.93	0.52
1:YA:422:A:C2	1:YA:423:A:C5	2.96	0.52
1:YA:484:C:O2'	1:YA:485:C:H5'	2.09	0.52
1:YA:567:U:O4	1:YA:568:U:C4	2.62	0.52
1:YA:604:G:C6	1:YA:625:G:C6	2.97	0.52
1:YA:612:G:C2	1:YA:614:A:H1'	2.44	0.52
1:YA:638:G:O2'	1:YA:639:U:H5'	2.09	0.52
1:YA:1290:C:C6	1:YA:1291:C:H5	2.27	0.52
1:YA:1665:A:N7	56:YA:3439:HOH:O	2.33	0.52
1:YA:1812:U:H2'	1:YA:1813:G:C8	2.44	0.52
1:YA:1835:G:H2'	1:YA:1836:C:H6	1.73	0.52
1:YA:1875:G:H8	1:YA:1875:G:OP2	1.92	0.52
1:YA:2191:A:C5'	1:YA:2192:U:OP2	2.56	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2276:G:O2'	1:YA:2277:G:H5'	2.09	0.52
1:YA:2355:G:C5'	23:YW:20:LEU:HD22	2.39	0.52
1:YA:2576:G:C8	1:YA:2580:U:O4	2.63	0.52
1:YA:2741:A:H2'	1:YA:2742:G:O4'	2.09	0.52
1:YA:2889:C:N4	1:YA:2890:G:C6	2.76	0.52
2:YB:16:G:C6	2:YB:69:G:C4	2.97	0.52
6:YF:32:LYS:NZ	6:YF:32:LYS:HB2	2.24	0.52
8:YH:2:GLN:O	8:YH:19:VAL:O	2.27	0.52
11:YK:76:VAL:O	16:YP:71:ARG:HG3	2.09	0.52
14:YN:21:PHE:N	14:YN:21:PHE:CD1	2.77	0.52
20:YT:64:LYS:HD2	20:YT:64:LYS:N	2.24	0.52
22:YV:55:GLU:O	22:YV:57:TYR:N	2.42	0.52
31:Y4:19:ARG:O	31:Y4:20:ASP:CB	2.56	0.52
1:RA:45:G:H5"	1:RA:46:G:OP1	2.09	0.52
1:RA:273:G:N2	1:RA:365:U:C2	2.78	0.52
1:RA:665:U:O2'	1:RA:666:A:H5'	2.08	0.52
1:RA:875:G:H2'	1:RA:876:C:H5'	1.92	0.52
1:RA:1229:C:H2'	1:RA:1230:A:C8	2.44	0.52
1:RA:1420:A:C8	1:RA:2211:A:N6	2.78	0.52
1:RA:1474:U:C2'	1:RA:1475:G:H5'	2.40	0.52
1:RA:1786:A:C4	1:RA:1938:A:C6	2.97	0.52
1:RA:2486:C:H2'	1:RA:2487:G:O5'	2.09	0.52
1:RA:2572:A:C8	4:RD:149:ASN:ND2	2.78	0.52
6:RF:107:VAL:HG13	6:RF:113:PHE:CZ	2.44	0.52
7:RG:59:ASP:O	7:RG:60:GLY:C	2.51	0.52
7:RG:162:ARG:CZ	7:RG:168:VAL:HG21	2.39	0.52
13:RM:66:ARG:NH1	13:RM:104:GLU:OE1	2.40	0.52
15:RO:49:VAL:HG12	15:RO:50:ALA:N	2.24	0.52
18:RR:90:ARG:O	18:RR:91:GLN:CB	2.56	0.52
32:QA:501:C:H1'	32:QA:549:C:H1'	1.90	0.52
32:QA:554:A:C5'	43:QL:25:ALA:HB1	2.38	0.52
32:QA:572:A:H5'	32:QA:573:A:OP2	2.08	0.52
32:QA:579:A:H2'	32:QA:580:C:H6	1.74	0.52
32:QA:978:A:N7	32:QA:1318:A:N6	2.56	0.52
32:QA:1134:G:H2'	32:QA:1135:U:H1'	1.91	0.52
32:QA:1240:U:H3'	32:QA:1241:G:H5'	1.90	0.52
33:QB:52:ALA:O	33:QB:54:ALA:N	2.42	0.52
35:QD:157:ALA:O	35:QD:161:ALA:HB2	2.09	0.52
36:QE:121:ASN:N	36:QE:121:ASN:HD22	2.06	0.52
40:QI:11:ARG:HA	40:QI:105:ARG:NH1	2.24	0.52
41:QJ:73:LEU:O	41:QJ:74:VAL:HB	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:QL:1:ALA:HB3	43:QL:5:GLN:OE1	2.09	0.52
47:QP:10:GLY:HA3	47:QP:15:PRO:CA	2.38	0.52
32:XA:1126:U:C4	41:XJ:42:LEU:HD21	2.44	0.52
32:XA:1182:G:C3'	32:XA:1183:U:H5'	2.38	0.52
32:XA:1343:G:C6	32:XA:1344:C:C4	2.98	0.52
32:XA:1346:A:N6	38:XG:9:ARG:HH12	2.07	0.52
33:XB:221:ARG:O	33:XB:224:ARG:HG2	2.09	0.52
35:XD:84:ASN:C	35:XD:84:ASN:ND2	2.64	0.52
47:XP:41:PRO:O	47:XP:42:ILE:HD13	2.09	0.52
1:YA:45:G:C5'	1:YA:46:G:OP1	2.55	0.52
1:YA:469:G:OP2	5:YE:54:GLY:O	2.26	0.52
1:YA:686:U:N3	29:Y2:12:ARG:HB2	2.23	0.52
1:YA:1060:U:H1'	1:YA:1062:G:OP2	2.10	0.52
1:YA:1650:A:O2'	14:YN:108:ALA:HB1	2.09	0.52
1:YA:2353:G:N3	23:YW:30:VAL:HG13	2.23	0.52
1:YA:2669:G:H2'	1:YA:2670:A:H8	1.74	0.52
1:YA:2746:U:C2'	1:YA:2747:G:H5'	2.39	0.52
2:YB:52:A:N6	15:YO:33:ARG:HE	2.06	0.52
3:YC:24:HIS:CG	3:YC:25:LYS:H	2.26	0.52
4:YD:40:LEU:HA	4:YD:44:GLY:HA2	1.90	0.52
6:YF:116:LEU:HG	6:YF:117:SER:H	1.73	0.52
6:YF:122:ASP:HB3	6:YF:126:ASN:ND2	2.23	0.52
9:YI:86:LYS:O	9:YI:87:SER:HB2	2.09	0.52
10:YJ:45:THR:O	10:YJ:45:THR:HG23	2.08	0.52
10:YJ:74:TYR:OH	10:YJ:100:VAL:HG13	2.09	0.52
13:YM:57:VAL:HG23	13:YM:58:LYS:O	2.09	0.52
17:YQ:57:ARG:C	17:YQ:59:LEU:H	2.15	0.52
22:YV:29:ILE:HG22	22:YV:39:ALA:HA	1.91	0.52
22:YV:69:GLU:C	22:YV:70:ILE:HD13	2.33	0.52
26:YZ:40:THR:C	26:YZ:42:ALA:H	2.16	0.52
1:RA:591:U:H1'	30:R3:1:PRO:N	2.24	0.52
3:RC:69:ASN:O	3:RC:70:LYS:C	2.52	0.52
6:RF:110:ILE:O	6:RF:111:ARG:C	2.52	0.52
13:RM:132:THR:HG22	13:RM:133:LYS:N	2.23	0.52
20:RT:39:THR:O	20:RT:41:ALA:N	2.43	0.52
32:QA:36:C:OP1	43:QL:119:LYS:HE3	2.09	0.52
32:QA:100:G:O6	32:QA:101:A:C6	2.61	0.52
32:QA:1157:A:C5	32:QA:1180:A:C6	2.97	0.52
34:QC:183:TYR:HA	34:QC:199:VAL:O	2.09	0.52
36:QE:15:ILE:HG22	36:QE:16:ALA:N	2.23	0.52
36:QE:114:LEU:O	36:QE:119:VAL:HG22	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:QE:153:ALA:O	36:QE:154:ALA:C	2.52	0.52
38:QG:20:GLU:HB3	38:QG:24:LYS:HE2	1.89	0.52
39:QH:5:PRO:O	39:QH:8:ASP:HB3	2.09	0.52
40:QI:80:HIS:HE1	40:QI:103:VAL:O	1.93	0.52
46:QO:16:ARG:O	46:QO:17:ASP:HB3	2.09	0.52
32:XA:1071:C:H2'	32:XA:1072:G:C8	2.44	0.52
35:XD:2:ARG:HE	35:XD:114:ARG:HD3	1.73	0.52
40:XI:22:PRO:HA	40:XI:60:LEU:HB3	1.91	0.52
50:XS:38:THR:CA	50:XS:69:LYS:HD3	2.38	0.52
52:XU:19:LYS:C	52:XU:21:SER:H	2.17	0.52
1:YA:150:U:H2'	1:YA:151:C:C6	2.44	0.52
1:YA:505:A:O2'	1:YA:506:G:H5'	2.08	0.52
1:YA:623:C:H2'	1:YA:624:C:C6	2.45	0.52
1:YA:708:G:H2'	1:YA:709:U:C6	2.44	0.52
1:YA:709:U:O2'	1:YA:710:U:H5'	2.08	0.52
1:YA:921:C:O2'	1:YA:922:C:H5'	2.08	0.52
1:YA:1319:C:O2	1:YA:1334:G:C2	2.63	0.52
1:YA:1494:A:H2'	1:YA:1495:A:H8	1.71	0.52
1:YA:1666:G:H4'	11:YK:6:THR:HG23	1.90	0.52
1:YA:2107:G:C2	1:YA:2183:A:C2	2.98	0.52
1:YA:2415:G:H4'	12:YL:65:GLY:O	2.09	0.52
1:YA:2425:A:H4'	1:YA:2426:A:O5'	2.09	0.52
1:YA:2529:G:H4'	7:YG:174:LYS:HD3	1.91	0.52
6:YF:111:ARG:NE	6:YF:111:ARG:H	2.07	0.52
12:YL:3:LEU:O	12:YL:4:ASN:C	2.52	0.52
24:YX:57:VAL:CG1	24:YX:58:ILE:N	2.71	0.52
1:RA:243:U:OP1	30:R3:5:THR:CG2	2.48	0.52
1:RA:527:C:N3	1:RA:2779:U:H2'	2.25	0.52
1:RA:671:C:H3'	12:RL:42:SER:OG	2.09	0.52
1:RA:1392:A:N6	1:RA:1393:A:N6	2.57	0.52
1:RA:1537:G:H5"	1:RA:1537:G:N3	2.25	0.52
1:RA:2414:G:C2'	1:RA:2415:G:H5'	2.40	0.52
4:RD:99:GLU:HG3	4:RD:100:LEU:N	2.24	0.52
7:RG:84:LYS:CB	7:RG:132:LEU:H	2.22	0.52
7:RG:85:LYS:HG2	7:RG:131:VAL:HG12	1.91	0.52
18:RR:37:GLU:CD	18:RR:37:GLU:H	2.18	0.52
20:RT:50:LEU:HD12	20:RT:50:LEU:N	2.20	0.52
32:QA:211:G:C2	32:QA:212:G:H1'	2.44	0.52
38:QG:102:TRP:O	38:QG:106:ALA:HB2	2.08	0.52
41:QJ:54:SER:OG	41:QJ:55:PRO:HD2	2.09	0.52
47:QP:30:GLY:O	47:QP:31:ARG:C	2.52	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:64:G:H5”	32:XA:65:A:OP1	2.08	0.52
32:XA:665:A:N3	32:XA:732:C:H2’	2.23	0.52
32:XA:1051:C:O2’	32:XA:1052:U:O5’	2.27	0.52
33:XB:17:HIS:CE1	33:XB:18:GLN:HG3	2.44	0.52
34:XC:19:SER:O	45:XN:93:PRO:HG3	2.10	0.52
34:XC:24:ASN:O	34:XC:28:PHE:HB2	2.10	0.52
36:XE:96:GLN:HG2	36:XE:97:PRO:HD2	1.91	0.52
36:XE:131:ASN:ND2	36:XE:132:PRO:HD2	2.24	0.52
40:XI:11:ARG:HH12	40:XI:108:ARG:HE	1.58	0.52
40:XI:119:LYS:O	40:XI:119:LYS:HG3	2.09	0.52
44:XM:52:ILE:HG13	44:XM:56:ARG:HH21	1.74	0.52
46:XO:47:LYS:H	46:XO:47:LYS:HD2	1.75	0.52
49:XR:58:ILE:O	49:XR:62:ARG:HG3	2.09	0.52
1:YA:749:A:C4	1:YA:750:A:C8	2.97	0.52
1:YA:1061:U:O2’	1:YA:1062:G:H5”	2.10	0.52
1:YA:1087:G:C6	1:YA:1089:A:C2	2.98	0.52
1:YA:1204:A:H1’	1:YA:1205:A:OP2	2.10	0.52
1:YA:1313:U:OP2	1:YA:1314:C:H5	1.92	0.52
1:YA:1868:C:N4	1:YA:1869:G:O6	2.42	0.52
1:YA:1943:U:H4’	1:YA:1944:U:OP1	2.08	0.52
1:YA:2033:A:H2’	1:YA:2033:A:OP1	2.10	0.52
1:YA:2543:G:C6	1:YA:2765:A:C5	2.97	0.52
5:YE:128:ALA:O	5:YE:130:LYS:HG2	2.09	0.52
7:YG:84:LYS:O	7:YG:85:LYS:CB	2.57	0.52
7:YG:112:VAL:HG12	7:YG:114:HIS:N	2.19	0.52
8:YH:84:ALA:N	8:YH:148:ALA:HA	2.24	0.52
9:YI:104:GLN:HA	9:YI:107:GLU:CB	2.40	0.52
12:YL:79:LEU:HB3	12:YL:114:GLY:H	1.73	0.52
14:YN:57:THR:O	14:YN:80:PHE:HD1	1.92	0.52
23:YW:13:ARG:CG	23:YW:14:ASP:H	2.18	0.52
23:YW:77:LYS:O	23:YW:78:PHE:HB2	2.10	0.52
24:YX:51:SER:OG	24:YX:54:GLY:HA3	2.08	0.52
1:RA:184:C:H2’	1:RA:185:G:C8	2.45	0.52
1:RA:263:G:H1’	1:RA:430:A:N3	2.24	0.52
1:RA:679:C:H2’	1:RA:680:C:H6	1.75	0.52
1:RA:756:A:N7	56:RA:3298:HOH:O	2.34	0.52
1:RA:1050:A:C2	1:RA:2751:G:C5	2.97	0.52
1:RA:1171:G:N2	1:RA:1179:G:C6	2.78	0.52
1:RA:2341:G:H2’	1:RA:2342:C:C6	2.44	0.52
1:RA:2406:A:OP2	1:RA:2406:A:H2’	2.09	0.52
3:RC:20:ASN:CB	3:RC:23:LEU:HD23	2.36	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:RD:159:LYS:HZ3	4:RD:159:LYS:HA	1.74	0.52
6:RF:32:LYS:HD3	6:RF:91:ARG:NH1	2.24	0.52
6:RF:107:VAL:N	6:RF:108:PRO:CD	2.73	0.52
6:RF:120:SER:HB2	6:RF:127:TYR:CE1	2.44	0.52
7:RG:120:ILE:HD13	7:RG:120:ILE:C	2.34	0.52
13:RM:11:LYS:HE2	13:RM:87:GLY:O	2.09	0.52
23:RW:19:ARG:CZ	23:RW:22:VAL:HB	2.39	0.52
23:RW:24:ARG:HD3	23:RW:65:LYS:CE	2.40	0.52
32:QA:291:U:O2'	32:QA:292:G:H5'	2.10	0.52
32:QA:330:C:H5"	32:QA:330:C:H6	1.73	0.52
32:QA:451:A:H5"	47:QP:70:ARG:HH22	1.75	0.52
32:QA:510:A:N3	32:QA:543:U:H1'	2.25	0.52
32:QA:582:C:C2	32:QA:583:A:C8	2.97	0.52
32:QA:633:G:H2'	32:QA:634:C:C6	2.44	0.52
32:QA:1134:G:H2'	32:QA:1135:U:C1'	2.39	0.52
32:QA:1202:U:C1'	45:QN:68:ARG:HD2	2.40	0.52
33:QB:53:LEU:HD21	33:QB:212:TYR:OH	2.10	0.52
33:QB:89:PHE:CE1	33:QB:153:MET:HB2	2.45	0.52
40:QI:41:GLU:O	40:QI:44:ARG:HG2	2.08	0.52
51:QT:60:GLN:HA	51:QT:60:GLN:NE2	2.23	0.52
32:XA:78:A:H2'	32:XA:79:G:C8	2.45	0.52
32:XA:183:C:H2'	32:XA:183:C:O2	2.08	0.52
32:XA:491:G:C2'	32:XA:492:C:H5'	2.40	0.52
32:XA:704:A:C2'	32:XA:705:G:H8	2.22	0.52
32:XA:1004:A:N7	32:XA:1025:U:O2'	2.41	0.52
32:XA:1094:G:C2'	32:XA:1095:U:OP2	2.56	0.52
32:XA:1130:A:N7	32:XA:1146:A:C6	2.78	0.52
32:XA:1408:A:C2	32:XA:1494:G:C4	2.98	0.52
33:XB:26:MET:HE1	33:XB:192:PRO:HB3	1.92	0.52
33:XB:30:ILE:HG23	33:XB:39:ILE:O	2.10	0.52
35:XD:106:PHE:N	35:XD:106:PHE:CD1	2.77	0.52
43:XL:75:GLU:C	43:XL:77:SER:H	2.16	0.52
45:XN:52:ARG:HA	45:XN:52:ARG:NE	2.25	0.52
51:XT:11:ILE:C	51:XT:13:SER:N	2.67	0.52
1:YA:528:A:N1	1:YA:2043:C:O5'	2.42	0.52
1:YA:614:A:H4'	1:YA:616:A:N6	2.20	0.52
1:YA:1208:C:C2	1:YA:1209:U:C5	2.98	0.52
1:YA:1373:A:H2'	1:YA:1374:G:O4'	2.10	0.52
1:YA:1917:U:C2'	1:YA:1918:A:H5'	2.39	0.52
1:YA:2034:U:O2'	1:YA:2035:G:O5'	2.25	0.52
1:YA:2093:G:C2	1:YA:2094:A:C5	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2563:U:C1'	1:YA:2566:A:N6	2.72	0.52
4:YD:186:LEU:HD21	16:YP:3:ILE:HD11	1.90	0.52
8:YH:49:ALA:O	8:YH:53:GLU:HB2	2.10	0.52
8:YH:61:VAL:HG13	8:YH:62:LEU:N	2.25	0.52
9:YI:52:LEU:O	9:YI:54:ILE:HD12	2.10	0.52
10:YJ:56:VAL:CG2	10:YJ:124:VAL:HG23	2.40	0.52
13:YM:136:MET:HE2	22:YV:57:TYR:CE2	2.44	0.52
16:YP:50:ARG:CB	16:YP:56:SER:HB3	2.39	0.52
18:YR:58:VAL:HG13	18:YR:102:SER:OG	2.09	0.52
1:RA:118:A:N3	1:RA:178:G:H1'	2.24	0.52
1:RA:163:C:O2'	1:RA:164:C:P	2.66	0.52
1:RA:1107:G:H2'	1:RA:1108:U:H6	1.74	0.52
1:RA:2250:G:H8	1:RA:2250:G:O5'	1.93	0.52
8:RH:25:TYR:HE1	8:RH:29:PHE:CD2	2.28	0.52
8:RH:125:THR:HG23	8:RH:126:GLY:H	1.75	0.52
12:RL:47:ARG:HH21	12:RL:47:ARG:CG	2.23	0.52
14:RN:116:VAL:O	14:RN:116:VAL:CG2	2.55	0.52
17:RQ:63:ARG:HH12	17:RQ:96:ASP:CB	2.23	0.52
32:QA:67:C:H4'	32:QA:172:A:O4'	2.10	0.52
32:QA:1331:G:O2'	32:QA:1332:A:OP2	2.25	0.52
32:QA:1352:C:H2'	32:QA:1353:G:C8	2.43	0.52
33:QB:72:LYS:HZ1	33:QB:204:ASP:HA	1.75	0.52
43:QL:111:GLN:O	43:QL:112:ALA:HB3	2.10	0.52
51:QT:54:GLN:HB3	51:QT:55:PRO:HD3	1.92	0.52
52:QU:21:SER:C	52:QU:22:CYS:SG	2.93	0.52
32:XA:197:A:H4'	32:XA:198:G:O5'	2.08	0.52
32:XA:246:A:N3	32:XA:279:A:N6	2.58	0.52
32:XA:542:G:H2'	32:XA:543:U:H6	1.74	0.52
32:XA:1004:A:N3	32:XA:1026:G:C5	2.77	0.52
32:XA:1299:A:HO2'	32:XA:1300:G:H4'	1.75	0.52
33:XB:111:LYS:C	33:XB:113:LEU:H	2.17	0.52
33:XB:162:VAL:HG13	33:XB:184:ALA:HB2	1.92	0.52
38:XG:27:ASN:OD1	38:XG:35:LYS:HD2	2.10	0.52
40:XI:18:VAL:HG11	40:XI:82:ILE:HA	1.91	0.52
41:XJ:42:LEU:HB3	41:XJ:43:PRO:HD2	1.91	0.52
44:XM:100:ARG:CZ	44:XM:102:LYS:HD3	2.39	0.52
45:XN:63:CYS:HA	45:XN:78:LEU:HA	1.91	0.52
1:YA:311:A:O2'	1:YA:332:A:O4'	2.21	0.52
1:YA:696:G:C2	1:YA:767:U:O2	2.63	0.52
1:YA:748:G:OP2	19:YS:88:ARG:HG3	2.08	0.52
1:YA:1349:C:H2'	1:YA:1350:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1596:A:C6	1:YA:1597:A:C6	2.98	0.52
1:YA:1611:C:C2	1:YA:1612:C:H5	2.27	0.52
1:YA:1744:A:H3'	1:YA:1745:A:C8	2.44	0.52
1:YA:1857:G:C4	1:YA:1884:G:N1	2.77	0.52
1:YA:1963:U:O2'	1:YA:1964:G:H5'	2.10	0.52
1:YA:2197:U:HO2'	1:YA:2198:A:H8	1.45	0.52
1:YA:2751:G:H5'	7:YG:2:ARG:HH21	1.75	0.52
4:YD:151:THR:HG22	4:YD:152:PRO:HD3	1.91	0.52
5:YE:16:GLU:O	5:YE:16:GLU:HG3	2.09	0.52
7:YG:87:GLN:HA	7:YG:129:GLU:HA	1.91	0.52
15:YO:79:ALA:HB1	15:YO:114:GLY:HA3	1.91	0.52
15:YO:88:LYS:O	15:YO:89:ASP:HB3	2.10	0.52
18:YR:49:ILE:HG22	18:YR:54:VAL:H	1.74	0.52
23:YW:39:GLN:HE22	23:YW:58:LEU:HD23	1.75	0.52
1:RA:41:C:C2'	1:RA:42:A:O5'	2.57	0.52
1:RA:449:A:H2'	1:RA:450:G:H5'	1.91	0.52
1:RA:996:A:H4'	17:RQ:91:ARG:CD	2.39	0.52
1:RA:1277:G:H4'	14:RN:20:MET:HE2	1.91	0.52
1:RA:1593:A:H2'	1:RA:1594:U:O4'	2.09	0.52
1:RA:2199:A:H3'	1:RA:2200:C:C6	2.44	0.52
2:RB:35:C:H2'	2:RB:36:C:O4'	2.10	0.52
4:RD:72:GLY:O	4:RD:73:VAL:O	2.27	0.52
4:RD:104:VAL:O	4:RD:177:VAL:HG21	2.08	0.52
5:RE:57:LYS:HG3	5:RE:58:LYS:N	2.25	0.52
6:RF:39:VAL:CG2	6:RF:48:LEU:HD23	2.39	0.52
11:RK:36:GLY:HA2	11:RK:62:VAL:O	2.10	0.52
16:RP:99:LEU:HA	16:RP:102:ARG:HG3	1.92	0.52
20:RT:50:LEU:O	20:RT:51:PHE:HB2	2.08	0.52
21:RU:71:ILE:HD13	21:RU:82:VAL:HG22	1.89	0.52
23:RW:22:VAL:HG13	23:RW:25:PHE:CD2	2.45	0.52
23:RW:37:VAL:HG22	23:RW:55:ASP:O	2.09	0.52
28:R1:10:LEU:O	28:R1:19:PHE:HB2	2.10	0.52
32:QA:393:A:OP2	47:QP:12:LYS:HD2	2.10	0.52
32:QA:624:C:H4'	47:QP:10:GLY:O	2.08	0.52
32:QA:697:U:H2'	32:QA:698:G:H5'	1.90	0.52
32:QA:723:U:O2	32:QA:855:U:H4'	2.10	0.52
32:QA:880:C:O2'	32:QA:881:G:H5'	2.10	0.52
32:QA:1060:U:H4'	41:QJ:53:ILE:HG23	1.90	0.52
32:QA:1127:G:O2'	32:QA:1128:C:H5'	2.10	0.52
33:QB:34:ARG:O	33:QB:37:VAL:O	2.28	0.52
34:QC:86:LEU:O	34:QC:87:ARG:C	2.53	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:QD:194:ILE:O	35:QD:194:ILE:HG13	2.10	0.52
36:QE:108:GLY:O	36:QE:109:ALA:HB3	2.10	0.52
36:QE:132:PRO:HA	36:QE:135:VAL:CG1	2.40	0.52
38:QG:4:ARG:HA	38:QG:4:ARG:HE	1.74	0.52
41:QJ:29:ALA:C	41:QJ:31:ARG:H	2.18	0.52
43:QL:4:ASN:ND2	43:QL:8:ARG:HH12	2.08	0.52
47:QP:20:VAL:CG2	47:QP:32:PHE:HB2	2.40	0.52
32:XA:764:C:N4	32:XA:812:G:N1	2.57	0.52
32:XA:978:A:C6	32:XA:1319:A:C5	2.98	0.52
32:XA:1026:G:H1	32:XA:1036:A:N6	2.08	0.52
32:XA:1086:U:H6	32:XA:1086:U:C5'	2.23	0.52
32:XA:1152:A:OP2	41:XJ:70:HIS:CE1	2.62	0.52
32:XA:1492:A:H2'	1:YA:1913:A:C8	2.44	0.52
35:XD:3:TYR:O	35:XD:4:LEU:HB2	2.10	0.52
45:XN:27:LYS:HD2	45:XN:27:LYS:C	2.34	0.52
50:XS:46:LEU:HD23	50:XS:46:LEU:H	1.75	0.52
51:XT:2:ASN:O	51:XT:3:ILE:C	2.53	0.52
1:YA:7:G:HO2'	10:YJ:15:TRP:HZ2	1.58	0.52
1:YA:106:C:O2'	1:YA:294:A:O2'	2.27	0.52
1:YA:476:G:O2'	1:YA:477:A:H5"	2.10	0.52
1:YA:571:U:C4	1:YA:575:A:C5	2.97	0.52
1:YA:589:U:O2'	1:YA:590:A:OP2	2.27	0.52
1:YA:836:G:C5	1:YA:837:C:C4	2.97	0.52
1:YA:1071:G:O6	1:YA:1089:A:C2	2.63	0.52
1:YA:1314:C:OP1	1:YA:1332:G:OP1	2.26	0.52
1:YA:1326:U:O2'	1:YA:1327:A:C8	2.61	0.52
1:YA:2259:U:H4'	1:YA:2427:C:O2'	2.09	0.52
1:YA:2304:G:H2'	1:YA:2305:U:H5"	1.92	0.52
1:YA:2355:G:H4'	23:YW:20:LEU:HD22	1.92	0.52
4:YD:28:GLU:HA	4:YD:185:ASN:O	2.09	0.52
4:YD:88:GLU:O	4:YD:89:GLU:HG3	2.10	0.52
8:YH:132:PHE:CD1	8:YH:133:GLN:N	2.77	0.52
10:YJ:106:LYS:HE2	10:YJ:106:LYS:HA	1.92	0.52
13:YM:119:LEU:HD23	13:YM:119:LEU:O	2.09	0.52
22:YV:75:GLN:HG3	22:YV:92:VAL:HG13	1.91	0.52
27:Y0:32:THR:HG21	27:Y0:47:TYR:CE2	2.44	0.52
30:Y3:33:THR:HG23	30:Y3:34:LYS:H	1.74	0.52
1:RA:342:A:C6	1:RA:343:C:C5	2.98	0.52
1:RA:1458:U:H5'	1:RA:1459:G:N3	2.24	0.52
6:RF:129:MET:HE2	6:RF:153:ILE:HD11	1.92	0.52
6:RF:133:GLU:H	6:RF:150:GLY:CA	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:RK:39:ILE:HD13	11:RK:41:ILE:HD13	1.92	0.52
12:RL:82:LEU:HD23	12:RL:82:LEU:C	2.35	0.52
12:RL:101:ILE:CG2	12:RL:102:GLY:N	2.73	0.52
13:RM:53:MET:O	13:RM:56:ALA:HB3	2.10	0.52
20:RT:50:LEU:H	20:RT:50:LEU:CD1	2.18	0.52
24:RX:39:VAL:HG22	24:RX:44:ARG:O	2.09	0.52
32:QA:49:U:C5	32:QA:365:U:O4	2.62	0.52
32:QA:508:U:H4'	32:QA:509:A:OP1	2.10	0.52
32:QA:1253:G:N1	32:QA:1285:A:N6	2.57	0.52
43:QL:71:HIS:ND1	43:QL:71:HIS:C	2.68	0.52
44:QM:7:ASN:O	44:QM:9:PRO:HD3	2.10	0.52
44:QM:24:VAL:HG23	44:QM:24:VAL:O	2.10	0.52
48:QQ:40:THR:HG22	48:QQ:41:THR:N	2.25	0.52
38:XG:98:LEU:O	38:XG:99:ALA:C	2.53	0.52
42:XK:124:LYS:HE3	52:XU:34:ARG:CZ	2.40	0.52
49:XR:32:ILE:O	49:XR:32:ILE:HG13	2.09	0.52
51:XT:73:ARG:CG	51:XT:73:ARG:NH1	2.61	0.52
1:YA:116:C:H2'	1:YA:117:G:C8	2.45	0.52
1:YA:186:G:N2	1:YA:211:C:O2	2.43	0.52
1:YA:305:C:H1'	1:YA:313:G:N2	2.25	0.52
1:YA:323:C:H2'	5:YE:163:ASN:CG	2.35	0.52
1:YA:623:C:H2'	1:YA:624:C:H6	1.74	0.52
1:YA:1063:G:N2	1:YA:1076:C:C2	2.78	0.52
1:YA:1076:C:O2'	1:YA:1077:A:C8	2.63	0.52
1:YA:1552:A:N3	1:YA:1552:A:C2'	2.69	0.52
1:YA:1833:C:C4	1:YA:1834:U:C5	2.98	0.52
1:YA:2271:G:H2'	1:YA:2272:U:C6	2.45	0.52
1:YA:2310:C:H2'	1:YA:2311:A:H5"	1.90	0.52
1:YA:2747:G:O6	1:YA:2755:C:H5"	2.10	0.52
2:YB:91:C:OP1	13:YM:19:GLY:HA3	2.10	0.52
2:YB:94:A:OP1	22:YV:19:ARG:HD3	2.09	0.52
3:YC:93:VAL:HG13	3:YC:94:LEU:N	2.25	0.52
3:YC:147:PRO:HD3	3:YC:184:GLU:CG	2.36	0.52
6:YF:19:PHE:HB3	6:YF:21:TYR:CE2	2.44	0.52
7:YG:112:VAL:CG1	7:YG:114:HIS:HB3	2.40	0.52
10:YJ:46:PRO:HD2	10:YJ:47:HIS:CE1	2.45	0.52
12:YL:93:ASN:CG	12:YL:94:THR:N	2.64	0.52
18:YR:51:VAL:HB	18:YR:52:PRO:CD	2.40	0.52
26:YZ:40:THR:C	26:YZ:42:ALA:N	2.67	0.52
1:RA:565:C:C2'	1:RA:566:U:H5'	2.40	0.52
1:RA:1205:A:H4'	1:RA:1206:G:OP2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1635:A:C6	1:RA:1636:U:C2	2.98	0.52
2:RB:2:G:C6	2:RB:119:A:C2	2.98	0.52
3:RC:106:PRO:CA	3:RC:141:HIS:CE1	2.92	0.52
5:RE:117:ARG:HA	5:RE:185:LYS:HD3	1.91	0.52
5:RE:145:ASP:OD1	5:RE:183:PHE:HD2	1.92	0.52
11:RK:8:LEU:HD23	11:RK:8:LEU:N	2.24	0.52
16:RP:33:GLU:CD	32:QA:345:C:H4'	2.35	0.52
16:RP:33:GLU:OE2	16:RP:38:ARG:NH1	2.42	0.52
19:RS:74:ILE:CD1	19:RS:105:VAL:HG22	2.39	0.52
32:QA:181:A:N6	32:QA:195:A:OP2	2.43	0.52
32:QA:654:G:H2'	32:QA:655:A:H8	1.75	0.52
32:QA:965:U:O2	32:QA:969:A:C2	2.63	0.52
32:QA:1277:C:H2'	32:QA:1278:G:H5"	1.92	0.52
33:QB:77:GLU:HB2	33:QB:80:LYS:HE2	1.92	0.52
46:QO:62:ARG:HG2	46:QO:66:LEU:HD12	1.92	0.52
32:XA:369:G:OP2	32:XA:388:G:N2	2.42	0.52
32:XA:496:A:C2	32:XA:497:G:C5	2.98	0.52
32:XA:994:A:C6	32:XA:1216:A:H5"	2.45	0.52
32:XA:1418:A:H2	1:YA:1948:G:N3	2.07	0.52
32:XA:1454:G:HO2'	32:XA:1455:G:H8	1.55	0.52
32:XA:1477:U:H2'	32:XA:1478:U:C6	2.44	0.52
33:XB:174:GLU:O	33:XB:178:LEU:HB2	2.09	0.52
37:XF:43:GLY:HA2	37:XF:58:HIS:HE1	1.71	0.52
38:XG:59:GLU:C	38:XG:61:PHE:H	2.16	0.52
52:XU:3:ILE:HG21	52:XU:18:PHE:HB3	1.91	0.52
1:YA:192:C:N4	1:YA:193:U:C2	2.78	0.52
1:YA:223:A:H2	1:YA:407:G:N3	2.08	0.52
1:YA:406:G:O2'	1:YA:407:G:O4'	2.27	0.52
1:YA:616:A:C2'	1:YA:617:G:C8	2.86	0.52
1:YA:668:A:H2'	1:YA:670:A:N6	2.13	0.52
1:YA:724:U:H2'	1:YA:725:G:O4'	2.09	0.52
1:YA:729:G:N3	1:YA:729:G:H2'	2.25	0.52
1:YA:808:G:O2'	1:YA:1254:A:H4'	2.10	0.52
1:YA:1069:A:O2'	1:YA:1072:C:OP2	2.26	0.52
1:YA:1281:G:C2'	1:YA:1282:U:H5'	2.40	0.52
1:YA:1451:C:N4	1:YA:1461:C:H42	2.08	0.52
1:YA:1490:A:H5'	1:YA:1490:A:N3	2.25	0.52
1:YA:2562:U:H1'	11:YK:23:LYS:HE2	1.92	0.52
1:YA:2656:U:H2'	1:YA:2657:A:H8	1.75	0.52
1:YA:2853:C:H2'	1:YA:2854:G:H8	1.74	0.52
5:YE:5:LEU:HD12	5:YE:10:SER:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:YJ:37:ARG:HG3	10:YJ:118:MET:SD	2.49	0.52
12:YL:47:ARG:HG2	12:YL:47:ARG:HH21	1.74	0.52
20:YT:13:ALA:HB1	20:YT:14:PRO:HD2	1.92	0.52
21:YU:58:VAL:CG1	21:YU:60:LYS:H	2.19	0.52
31:Y4:7:VAL:CG1	31:Y4:8:LYS:N	2.71	0.52
1:RA:301:G:OP2	21:RU:81:ARG:NH1	2.43	0.52
1:RA:998:C:OP2	17:RQ:57:ARG:NH2	2.37	0.52
1:RA:1277:G:H5'	14:RN:20:MET:HE1	1.92	0.52
1:RA:2097:A:C2	1:RA:2193:G:C2	2.98	0.52
1:RA:2638:G:O2'	1:RA:2775:G:N2	2.38	0.52
11:RK:18:ARG:HB2	11:RK:45:GLU:CG	2.40	0.52
23:RW:37:VAL:HG13	23:RW:55:ASP:C	2.35	0.52
25:RY:26:PHE:HD1	25:RY:27:ASN:HD22	1.58	0.52
32:QA:708:C:O2'	32:QA:709:U:H5'	2.09	0.52
32:QA:725:G:H2'	32:QA:726:C:H6	1.74	0.52
32:QA:821:G:H4'	56:QA:1742:HOH:O	2.10	0.52
32:QA:953:G:H2'	32:QA:954:G:O4'	2.10	0.52
32:QA:1053:G:N2	32:QA:1056:U:C4	2.78	0.52
32:QA:1060:U:H5"	41:QJ:53:ILE:HD13	1.92	0.52
32:QA:1414:U:H2'	32:QA:1415:G:C8	2.44	0.52
33:QB:22:TRP:HA	33:QB:189:ASN:HA	1.92	0.52
38:QG:44:SER:O	38:QG:48:THR:HG23	2.10	0.52
39:QH:74:ILE:CD1	39:QH:128:VAL:HG22	2.40	0.52
43:QL:3:VAL:HG23	43:QL:4:ASN:H	1.75	0.52
43:QL:53:ARG:HA	43:QL:63:THR:HA	1.91	0.52
44:QM:28:ARG:NH2	44:QM:62:PHE:HB2	2.25	0.52
32:XA:86:G:H1'	32:XA:87:C:O5'	2.10	0.52
32:XA:598:U:H4'	39:XH:85:TYR:CD1	2.45	0.52
32:XA:695:A:H61	32:XA:797:C:H1'	1.75	0.52
32:XA:1040:U:C2'	32:XA:1041:G:H5'	2.40	0.52
32:XA:1124:G:N2	32:XA:1127:G:N2	2.57	0.52
32:XA:1287:A:O2'	32:XA:1288:A:H8	1.84	0.52
33:XB:11:ALA:C	33:XB:13:VAL:H	2.17	0.52
33:XB:102:ASN:O	33:XB:102:ASN:CG	2.50	0.52
33:XB:103:TRP:HA	33:XB:106:VAL:H	1.74	0.52
33:XB:124:THR:C	33:XB:126:ASP:H	2.18	0.52
35:XD:72:ARG:HD2	35:XD:203:TYR:CE1	2.45	0.52
38:XG:4:ARG:CZ	38:XG:6:ILE:HB	2.40	0.52
39:XH:33:VAL:C	39:XH:35:ILE:H	2.18	0.52
44:XM:64:VAL:HG12	44:XM:65:GLU:HG3	1.92	0.52
1:YA:35:G:C8	1:YA:454:A:C2	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:351:C:N4	1:YA:352:A:H62	2.08	0.52
1:YA:468:G:H5'	1:YA:797:G:OP1	2.09	0.52
1:YA:827:U:H5'	1:YA:828:U:O5'	2.10	0.52
1:YA:1055:G:C3'	1:YA:1056:G:H5'	2.40	0.52
1:YA:1330:C:O2'	1:YA:1331:G:O5'	2.27	0.52
1:YA:1515:A:H4'	1:YA:1556:C:O2'	2.10	0.52
1:YA:1532:A:C5	1:YA:1533:C:C4	2.98	0.52
1:YA:1588:G:H2'	1:YA:1589:U:H6	1.74	0.52
1:YA:1968:G:H5'	56:YA:3484:HOH:O	2.10	0.52
1:YA:2345:G:C5	1:YA:2347:C:N4	2.78	0.52
1:YA:2583:G:H2'	1:YA:2584:U:H5'	1.92	0.52
2:YB:28:C:OP1	15:YO:31:THR:HG21	2.10	0.52
3:YC:191:LEU:N	3:YC:191:LEU:HD22	2.25	0.52
4:YD:36:GLN:NE2	4:YD:38:LYS:HZ1	2.07	0.52
7:YG:138:GLN:HG2	7:YG:138:GLN:O	2.09	0.52
7:YG:164:ALA:O	7:YG:165:ASP:HB2	2.10	0.52
13:YM:62:LYS:HG2	13:YM:64:TRP:CZ2	2.45	0.52
14:YN:103:ARG:HG3	14:YN:104:ALA:H	1.75	0.52
15:YO:72:ALA:HA	15:YO:106:LEU:HA	1.91	0.52
16:YP:54:LEU:HD12	16:YP:76:HIS:CB	2.40	0.52
24:YX:1:SER:C	24:YX:3:VAL:N	2.68	0.52
26:YZ:32:GLY:C	26:YZ:34:THR:H	2.17	0.52
1:RA:2373:G:H2'	1:RA:2374:C:C6	2.44	0.51
1:RA:2563:U:H1'	1:RA:2566:A:N6	2.25	0.51
1:RA:2852:G:H2'	1:RA:2853:C:O4'	2.10	0.51
14:RN:65:LEU:O	14:RN:65:LEU:HD12	2.10	0.51
20:RT:4:GLU:OE1	20:RT:6:ARG:HG3	2.10	0.51
22:RV:40:ILE:HG22	22:RV:41:GLU:N	2.25	0.51
23:RW:76:ARG:NH2	23:RW:76:ARG:CG	2.65	0.51
30:R3:56:LEU:H	30:R3:56:LEU:CD2	2.22	0.51
32:QA:751:U:C5	32:QA:752:G:C6	2.98	0.51
32:QA:1055:A:C6	32:QA:1206:G:C5	2.98	0.51
32:QA:1261:A:N1	32:QA:1274:A:C2	2.78	0.51
32:QA:1311:A:C2	32:QA:1327:C:N3	2.78	0.51
32:QA:1381:U:O2'	32:QA:1382:C:O4'	2.27	0.51
33:QB:86:CYS:SG	33:QB:221:ARG:HB2	2.50	0.51
37:QF:71:ILE:HG23	37:QF:72:ASP:N	2.25	0.51
43:QL:87:LYS:O	43:QL:88:ASP:CB	2.58	0.51
32:XA:151:A:H2'	32:XA:152:A:O4'	2.11	0.51
32:XA:597:G:C2'	32:XA:598:U:H5'	2.38	0.51
32:XA:988:G:H2'	32:XA:989:U:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1394:A:H4'	32:XA:1395:C:OP2	2.08	0.51
33:XB:95:TRP:CZ3	33:XB:170:ILE:HG22	2.45	0.51
33:XB:125:PHE:CD1	33:XB:137:THR:HG22	2.45	0.51
35:XD:96:ARG:O	35:XD:100:VAL:HG23	2.10	0.51
35:XD:98:ASP:OD2	35:XD:132:ALA:HB1	2.10	0.51
35:XD:149:LYS:NZ	35:XD:176:LYS:NZ	2.58	0.51
1:YA:68:G:C2	1:YA:69:C:C2	2.98	0.51
1:YA:183:C:H6	1:YA:183:C:O5'	1.93	0.51
1:YA:810:U:C4	12:YL:30:THR:HG22	2.43	0.51
1:YA:1139:G:O2'	1:YA:1140:C:H5'	2.09	0.51
1:YA:1311:G:H21	1:YA:1603:A:N6	2.08	0.51
1:YA:1320:C:O2'	1:YA:1321:A:H8	1.93	0.51
1:YA:1437:C:H2'	1:YA:1438:U:H6	1.75	0.51
1:YA:1531:C:H2'	1:YA:1532:A:O4'	2.10	0.51
1:YA:1638:C:H5"	1:YA:2710:C:O2'	2.11	0.51
1:YA:1716:U:O2'	1:YA:1717:A:C8	2.47	0.51
1:YA:1809:A:C2'	1:YA:1810:A:C8	2.93	0.51
1:YA:2013:A:N6	1:YA:2014:A:C2	2.79	0.51
1:YA:2142:A:O3'	1:YA:2143:C:H4'	2.10	0.51
1:YA:2197:U:O2'	1:YA:2198:A:H8	1.91	0.51
1:YA:2352:A:C6	23:YW:30:VAL:HG11	2.45	0.51
3:YC:72:GLY:O	3:YC:73:ILE:HD13	2.11	0.51
5:YE:5:LEU:CD2	5:YE:120:VAL:HG22	2.40	0.51
5:YE:9:GLN:O	5:YE:9:GLN:HG3	2.10	0.51
5:YE:85:PHE:O	5:YE:86:ALA:C	2.53	0.51
6:YF:32:LYS:HB3	6:YF:156:THR:HB	1.92	0.51
7:YG:76:ILE:HG22	7:YG:76:ILE:O	2.10	0.51
9:YI:48:ILE:HG13	9:YI:49:GLU:N	2.24	0.51
19:YS:55:ILE:O	19:YS:59:GLU:HG2	2.10	0.51
21:YU:44:HIS:HD2	21:YU:57:ILE:HG21	1.74	0.51
31:Y4:36:ARG:HG2	31:Y4:37:GLN:H	1.75	0.51
1:RA:31:C:O2'	1:RA:1238:G:H5'	2.10	0.51
1:RA:232:G:H4'	1:RA:233:A:OP1	2.09	0.51
1:RA:364:C:H2'	1:RA:365:U:C6	2.45	0.51
1:RA:372:G:O2'	1:RA:400:G:O6	2.21	0.51
1:RA:454:A:H4'	1:RA:455:C:OP2	2.10	0.51
1:RA:571:U:C5	1:RA:575:A:C5	2.98	0.51
1:RA:1378:A:O2'	56:RA:3754:HOH:O	2.18	0.51
1:RA:2414:G:O2'	1:RA:2415:G:H5'	2.10	0.51
17:RQ:23:TYR:O	17:RQ:28:SER:HB3	2.10	0.51
17:RQ:114:ALA:C	17:RQ:116:LEU:N	2.68	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:R1:24:LYS:NZ	28:R1:51:ALA:O	2.40	0.51
32:QA:82:G:H2'	32:QA:83:C:H4'	1.91	0.51
32:QA:271:C:O2'	32:QA:272:C:H5'	2.10	0.51
32:QA:579:A:O2'	46:QO:53:ARG:NH1	2.43	0.51
32:QA:1181:G:O2'	32:QA:1182:G:C8	2.63	0.51
32:QA:1405:G:O4'	32:QA:1519:A:H4'	2.11	0.51
33:QB:32:GLY:CA	33:QB:39:ILE:H	2.20	0.51
37:QF:29:ILE:HG12	37:QF:64:VAL:HG11	1.92	0.51
37:QF:41:ASP:O	37:QF:43:GLY:N	2.43	0.51
40:QI:119:LYS:O	40:QI:119:LYS:HG3	2.09	0.51
51:QT:67:HIS:HB3	51:QT:68:LYS:HZ1	1.71	0.51
32:XA:337:G:H2'	32:XA:338:A:C8	2.45	0.51
32:XA:455:G:N2	32:XA:478:A:C2	2.77	0.51
32:XA:858:G:O6	32:XA:869:G:C8	2.64	0.51
32:XA:1213:A:C8	32:XA:1215:G:C5	2.98	0.51
34:XC:183:TYR:HE1	34:XC:198:LYS:HB3	1.74	0.51
35:XD:60:VAL:HG22	35:XD:194:ILE:HG21	1.92	0.51
35:XD:138:PRO:O	35:XD:139:ASN:HB2	2.10	0.51
43:XL:98:ARG:HA	43:XL:103:CYS:SG	2.50	0.51
47:XP:56:ARG:O	47:XP:59:HIS:HB3	2.10	0.51
48:XQ:61:ARG:HG2	48:XQ:75:VAL:CG1	2.40	0.51
50:XS:45:GLY:N	50:XS:61:VAL:HB	2.25	0.51
1:YA:379:G:C5	1:YA:396:G:C6	2.97	0.51
1:YA:425:G:H2'	1:YA:426:C:C6	2.43	0.51
1:YA:484:C:N4	1:YA:497:A:C2	2.78	0.51
1:YA:498:G:C2	1:YA:499:U:C6	2.99	0.51
1:YA:628:G:O2'	1:YA:629:G:H5'	2.10	0.51
1:YA:727:A:C2'	1:YA:728:G:C8	2.94	0.51
1:YA:769:U:HO2'	1:YA:1379:U:H6	1.56	0.51
1:YA:777:G:N7	1:YA:793:A:C2	2.77	0.51
1:YA:1157:G:H2'	1:YA:1158:C:C5	2.45	0.51
1:YA:1299:G:H22	1:YA:1640:A:H5'	1.74	0.51
1:YA:1340:U:O2'	1:YA:1602:U:H2'	2.09	0.51
1:YA:1545:A:N6	1:YA:1546:G:N2	2.58	0.51
1:YA:1628:G:H2'	1:YA:1629:U:H6	1.74	0.51
1:YA:2060:A:H2'	5:YE:63:LYS:HZ1	1.76	0.51
1:YA:2092:U:H4'	1:YA:2093:G:H5"	1.93	0.51
4:YD:115:GLY:O	14:YN:3:HIS:HE1	1.93	0.51
9:YI:52:LEU:CD1	9:YI:53:PRO:HD2	2.30	0.51
9:YI:103:ALA:O	9:YI:107:GLU:HB2	2.09	0.51
11:YK:39:ILE:HB	11:YK:41:ILE:HD13	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:YL:83:ALA:CB	12:YL:117:THR:HB	2.40	0.51
12:YL:101:ILE:HG23	12:YL:105:ILE:HG13	1.92	0.51
18:YR:39:LEU:CA	18:YR:49:ILE:HG21	2.25	0.51
18:YR:80:ARG:HG2	18:YR:81:LYS:NZ	2.24	0.51
20:YT:29:THR:HB	20:YT:86:THR:CA	2.39	0.51
26:YZ:52:PHE:CD2	26:YZ:53:MET:HG2	2.46	0.51
27:Y0:12:ARG:O	27:Y0:16:ARG:HG3	2.10	0.51
1:RA:544:C:H3'	1:RA:545:U:O2	2.09	0.51
1:RA:1441:G:H2'	1:RA:1442:U:C6	2.45	0.51
8:RH:89:LYS:HG2	8:RH:90:LEU:N	2.14	0.51
9:RI:52:LEU:HD12	9:RI:52:LEU:N	2.25	0.51
14:RN:23:ASN:N	14:RN:23:ASN:HD22	2.08	0.51
18:RR:11:GLN:C	18:RR:12:HIS:ND1	2.68	0.51
19:RS:84:ARG:HB2	19:RS:96:ILE:CD1	2.40	0.51
23:RW:40:ARG:HG3	23:RW:52:CYS:SG	2.50	0.51
23:RW:50:VAL:O	23:RW:52:CYS:N	2.35	0.51
32:QA:11:G:C5	32:QA:12:U:C5	2.98	0.51
32:QA:612:C:O2'	32:QA:613:C:H5'	2.10	0.51
32:QA:652:U:C5	32:QA:752:G:C4	2.98	0.51
32:QA:872:A:C4	32:QA:874:G:N7	2.78	0.51
32:QA:996:A:C2	32:QA:1046:A:H5'	2.46	0.51
32:QA:1108:G:OP1	34:QC:175:HIS:HB2	2.11	0.51
32:QA:1241:G:N2	32:QA:1242:G:C4	2.79	0.51
33:QB:72:LYS:O	33:QB:74:ALA:N	2.42	0.51
36:QE:136:VAL:O	36:QE:136:VAL:HG22	2.10	0.51
37:QF:81:ASN:HB3	37:QF:84:VAL:CG1	2.40	0.51
39:QH:94:VAL:HG12	39:QH:95:MET:HG3	1.92	0.51
42:QK:75:GLU:C	42:QK:77:GLY:H	2.17	0.51
44:QM:39:ALA:HB3	44:QM:42:VAL:HG22	1.92	0.51
48:QQ:20:ILE:HG22	48:QQ:47:ASP:OD1	2.10	0.51
51:QT:78:LEU:O	51:QT:82:ILE:HG23	2.10	0.51
32:XA:279:A:C4'	32:XA:280:C:O5'	2.57	0.51
32:XA:291:U:O2'	32:XA:292:G:H5'	2.09	0.51
32:XA:444:G:C2'	32:XA:445:G:H5'	2.40	0.51
32:XA:461:A:H2'	32:XA:461:A:N3	2.25	0.51
32:XA:681:A:C2	32:XA:710:G:C2	2.99	0.51
32:XA:1050:G:O2'	32:XA:1051:C:H6	1.92	0.51
32:XA:1057:G:H4'	34:XC:196:GLY:H	1.75	0.51
32:XA:1226:C:O2'	32:XA:1227:A:H5'	2.10	0.51
32:XA:1326:U:H2'	32:XA:1327:C:C6	2.46	0.51
32:XA:1370:G:H5"	40:XI:110:VAL:HG21	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:XB:88:GLN:C	33:XB:89:PHE:CG	2.88	0.51
33:XB:176:ASN:C	33:XB:178:LEU:H	2.18	0.51
34:XC:5:HIS:CD2	34:XC:183:TYR:HE2	2.29	0.51
34:XC:134:LYS:HD3	34:XC:138:GLN:OE1	2.10	0.51
43:XL:2:THR:O	43:XL:3:VAL:C	2.51	0.51
43:XL:89:LEU:HB3	43:XL:92:VAL:HG21	1.91	0.51
1:YA:83:A:P	21:YU:91:LYS:HZ2	2.33	0.51
1:YA:686:U:C6	1:YA:788:A:N1	2.77	0.51
1:YA:874:G:C2	1:YA:904:G:C2	2.99	0.51
1:YA:1678:A:C8	56:YA:3453:HOH:O	2.54	0.51
1:YA:2021:C:H4'	1:YA:2022:U:OP2	2.10	0.51
1:YA:2282:G:N3	1:YA:2425:A:N6	2.58	0.51
1:YA:2347:C:O2'	1:YA:2348:U:O5'	2.29	0.51
1:YA:2531:A:H5'	7:YG:156:TYR:CZ	2.45	0.51
1:YA:2894:G:OP2	1:YA:2894:G:H2'	2.10	0.51
3:YC:122:ALA:HB3	3:YC:127:ASN:ND2	2.24	0.51
3:YC:145:MET:HB2	3:YC:152:GLN:HE22	1.75	0.51
4:YD:108:ASP:N	4:YD:204:LYS:O	2.35	0.51
5:YE:34:ALA:HB1	5:YE:94:GLN:HB2	1.91	0.51
8:YH:68:ARG:HD2	8:YH:71:LYS:HD3	1.92	0.51
8:YH:132:PHE:CZ	8:YH:134:VAL:HB	2.45	0.51
11:YK:40:LYS:NZ	11:YK:89:ASN:HD21	2.07	0.51
14:YN:90:ARG:CZ	14:YN:116:VAL:HG11	2.39	0.51
16:YP:32:VAL:HA	16:YP:37:LYS:HA	1.91	0.51
19:YS:27:LYS:O	19:YS:28:LYS:O	2.28	0.51
20:YT:14:PRO:HA	20:YT:32:LEU:HB3	1.91	0.51
20:YT:34:VAL:HG21	20:YT:43:ILE:HD12	1.91	0.51
22:YV:51:GLN:HA	22:YV:56:PHE:CD2	2.45	0.51
1:RA:84:A:N6	1:RA:101:A:H2	2.05	0.51
1:RA:323:C:N4	1:RA:333:G:C5	2.78	0.51
1:RA:833:A:H2'	1:RA:834:G:C8	2.46	0.51
1:RA:1786:A:H1'	1:RA:1938:A:N6	2.25	0.51
1:RA:2415:G:H2'	1:RA:2416:C:C6	2.45	0.51
4:RD:125:TRP:CD2	4:RD:160:LYS:HD3	2.45	0.51
7:RG:109:SER:O	7:RG:110:HIS:CB	2.59	0.51
9:RI:102:ARG:HB2	9:RI:141:ASP:OD2	2.11	0.51
13:RM:43:ALA:HA	13:RM:46:ILE:HG13	1.91	0.51
19:RS:73:LYS:HE3	19:RS:73:LYS:HA	1.92	0.51
23:RW:50:VAL:HB	23:RW:61:LYS:NZ	2.26	0.51
25:RY:1:MET:HG2	25:RY:5:GLU:OE1	2.09	0.51
30:R3:61:LEU:HB3	30:R3:64:ALA:HB2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:56:U:H2'	32:QA:57:G:C8	2.46	0.51
32:QA:316:C:C2	32:QA:317:U:C5	2.98	0.51
32:QA:430:A:OP2	35:QD:7:LYS:HG2	2.11	0.51
32:QA:531:U:H5"	34:QC:160:GLU:OE2	2.11	0.51
32:QA:1441:A:N7	32:QA:1442:G:N7	2.59	0.51
33:QB:81:ASP:OD1	33:QB:83:ALA:N	2.38	0.51
34:QC:86:LEU:O	34:QC:90:VAL:HG23	2.11	0.51
34:QC:110:LEU:HD21	34:QC:143:LEU:HD23	1.90	0.51
36:QE:77:ASN:CG	36:QE:78:GLY:H	2.17	0.51
38:QG:146:ALA:C	38:QG:148:LYS:H	2.17	0.51
43:QL:76:HIS:O	43:QL:77:SER:HB2	2.10	0.51
32:XA:66:A:C6	32:XA:67:C:C4	2.99	0.51
32:XA:335:C:H2'	32:XA:336:A:C8	2.46	0.51
32:XA:666:G:N2	32:XA:667:G:H1'	2.25	0.51
32:XA:1108:G:H5"	34:XC:175:HIS:CE1	2.45	0.51
32:XA:1258:G:H2'	32:XA:1259:C:C6	2.45	0.51
32:XA:1280:A:H5"	41:XJ:43:PRO:HG2	1.91	0.51
32:XA:1327:C:C4	32:XA:1328:C:N4	2.79	0.51
33:XB:91:VAL:HG11	33:XB:95:TRP:HD1	1.75	0.51
44:XM:11:HIS:HA	44:XM:44:ILE:HB	1.92	0.51
52:XU:24:LYS:CE	52:XU:25:ALA:H	2.23	0.51
1:YA:118:A:N7	1:YA:119:A:C8	2.78	0.51
1:YA:195:A:C6	1:YA:198:C:C5	2.98	0.51
1:YA:279:A:H8	1:YA:279:A:P	2.33	0.51
1:YA:301:G:C4	1:YA:302:C:C4	2.98	0.51
1:YA:305:C:C2	1:YA:313:G:C2	2.97	0.51
1:YA:468:G:H5"	5:YE:55:SER:CB	2.40	0.51
1:YA:590:A:C5	1:YA:591:U:C5	2.97	0.51
1:YA:669:G:C2	1:YA:801:G:C6	2.98	0.51
1:YA:852:U:H5'	26:YZ:45:GLY:HA3	1.92	0.51
1:YA:860:U:C4	1:YA:2268:A:C5	2.99	0.51
1:YA:1297:C:H2'	1:YA:1298:C:H6	1.75	0.51
1:YA:1411:U:H2'	1:YA:1412:U:C6	2.45	0.51
1:YA:1526:C:H2'	1:YA:1527:G:O4'	2.11	0.51
1:YA:1974:C:H2'	1:YA:1975:G:H8	1.75	0.51
1:YA:2331:G:H1	1:YA:2385:C:N4	2.08	0.51
1:YA:2543:G:H2'	1:YA:2544:G:C8	2.46	0.51
1:YA:2887:A:C1'	27:Y0:39:ARG:HH22	2.18	0.51
2:YB:78:A:H2'	2:YB:79:G:O4'	2.10	0.51
5:YE:53:THR:OG1	5:YE:54:GLY:N	2.43	0.51
5:YE:90:GLN:HG3	5:YE:92:HIS:NE2	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:YF:129:MET:HG3	6:YF:153:ILE:HD12	1.92	0.51
8:YH:9:VAL:CG1	8:YH:10:ALA:N	2.73	0.51
10:YJ:30:THR:HG23	10:YJ:31:GLU:N	2.25	0.51
14:YN:56:LYS:HD3	14:YN:88:ALA:HA	1.92	0.51
20:YT:29:THR:HB	20:YT:87:LEU:N	2.21	0.51
1:RA:125:A:OP2	29:R2:19:ARG:NH2	2.43	0.51
1:RA:480:A:H2'	1:RA:481:G:OP1	2.10	0.51
1:RA:684:G:OP1	29:R2:21:ARG:NH1	2.43	0.51
1:RA:2714:G:P	56:RA:3546:HOH:O	2.68	0.51
4:RD:114:LYS:N	4:RD:114:LYS:CE	2.72	0.51
9:RI:96:LYS:N	9:RI:96:LYS:HD2	2.25	0.51
17:RQ:96:ASP:C	17:RQ:96:ASP:OD2	2.54	0.51
19:RS:74:ILE:O	19:RS:74:ILE:HG23	2.09	0.51
21:RU:12:VAL:O	21:RU:18:LYS:O	2.28	0.51
23:RW:22:VAL:O	23:RW:25:PHE:HD2	1.94	0.51
30:R3:31:ILE:CG1	30:R3:34:LYS:HD2	2.40	0.51
32:QA:365:U:H5"	32:QA:366:A:OP1	2.11	0.51
32:QA:890:G:O2'	32:QA:906:A:N6	2.43	0.51
32:QA:908:A:C2	32:QA:909:A:C4	2.98	0.51
32:QA:1371:G:H5"	32:QA:1372:U:OP2	2.10	0.51
33:QB:63:LYS:HD3	33:QB:63:LYS:C	2.35	0.51
38:QG:134:VAL:O	38:QG:137:ARG:HB3	2.11	0.51
47:QP:20:VAL:HG23	47:QP:34:GLU:O	2.11	0.51
32:XA:620:C:H1'	35:XD:131:ILE:HG21	1.93	0.51
32:XA:1270:G:H2'	32:XA:1271:A:C8	2.45	0.51
32:XA:1346:A:C8	32:XA:1348:U:C2	2.99	0.51
32:XA:1422:G:O2'	32:XA:1423:G:H5'	2.11	0.51
39:XH:11:THR:HG23	39:XH:14:ARG:HH22	1.73	0.51
1:YA:56:A:C2	1:YA:57:C:C2	2.97	0.51
1:YA:99:U:H5'	1:YA:100:U:H2'	1.91	0.51
1:YA:396:G:O2'	1:YA:397:U:O5'	2.28	0.51
1:YA:412:A:O2'	1:YA:413:C:H5'	2.11	0.51
1:YA:453:A:H4'	1:YA:472:A:N6	2.24	0.51
1:YA:612:G:C2	1:YA:617:G:O6	2.64	0.51
1:YA:818:G:C2'	1:YA:819:A:H5"	2.40	0.51
1:YA:836:G:C6	1:YA:837:C:C4	2.99	0.51
1:YA:856:G:O4'	23:YW:23:LYS:HB3	2.10	0.51
1:YA:1282:U:O4	1:YA:1283:G:C6	2.64	0.51
1:YA:1417:C:H4'	1:YA:1587:G:H21	1.75	0.51
1:YA:2093:G:N3	1:YA:2094:A:C8	2.78	0.51
1:YA:2267:A:N6	1:YA:2272:U:N3	2.53	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2298:A:O2'	1:YA:2299:U:O5'	2.28	0.51
1:YA:2492:U:H2'	1:YA:2493:U:C6	2.44	0.51
1:YA:2508:G:H2'	1:YA:2509:G:H8	1.75	0.51
1:YA:2729:G:H5"	4:YD:190:LYS:HZ3	1.75	0.51
1:YA:2729:G:H2'	1:YA:2730:C:C6	2.46	0.51
3:YC:127:ASN:O	3:YC:190:THR:HA	2.10	0.51
5:YE:170:ARG:NH2	5:YE:176:ASP:HB2	2.25	0.51
6:YF:137:PHE:CB	6:YF:138:PRO:HD2	2.35	0.51
18:YR:39:LEU:HD23	18:YR:39:LEU:H	1.76	0.51
24:YX:10:ARG:HB3	24:YX:11:PRO:HD2	1.92	0.51
25:YY:57:LEU:O	25:YY:60:LYS:HB3	2.11	0.51
29:Y2:25:LYS:HG2	29:Y2:25:LYS:O	2.11	0.51
1:RA:528:A:H3'	1:RA:528:A:C8	2.45	0.51
1:RA:528:A:H2'	1:RA:529:A:H5"	1.91	0.51
1:RA:1496:A:H2'	1:RA:1498:C:N4	2.26	0.51
1:RA:2075:U:H2'	1:RA:2238:G:N2	2.26	0.51
1:RA:2210:U:C2	1:RA:2212:A:N7	2.79	0.51
1:RA:2430:A:N3	1:RA:2430:A:H2'	2.26	0.51
3:RC:33:LEU:CD2	3:RC:62:ARG:HD3	2.40	0.51
4:RD:5:VAL:N	4:RD:32:ASN:HD21	1.99	0.51
4:RD:45:TYR:N	4:RD:45:TYR:CD1	2.78	0.51
7:RG:29:ASN:CG	7:RG:30:GLY:N	2.68	0.51
9:RI:27:LEU:HD12	9:RI:27:LEU:O	2.11	0.51
16:RP:21:PRO:HA	16:RP:46:VAL:CG1	2.41	0.51
32:QA:132:C:H2'	32:QA:133:U:O4'	2.11	0.51
32:QA:553:A:O2'	32:QA:554:A:H5'	2.11	0.51
33:QB:72:LYS:HZ2	33:QB:204:ASP:HB3	1.76	0.51
33:QB:156:LEU:O	33:QB:156:LEU:HG	2.09	0.51
33:QB:183:PHE:CE1	33:QB:197:PHE:CD2	2.99	0.51
43:QL:43:LYS:HB2	43:QL:43:LYS:HZ2	1.76	0.51
44:QM:49:GLU:O	44:QM:52:ILE:HG22	2.10	0.51
46:QO:68:TYR:O	46:QO:69:LEU:C	2.54	0.51
50:QS:39:ILE:HD11	50:QS:70:LEU:HD23	1.93	0.51
32:XA:486:U:O2	32:XA:486:U:H2'	2.10	0.51
32:XA:642:A:O2'	32:XA:643:C:C6	2.54	0.51
32:XA:861:G:C6	32:XA:862:C:C4	2.99	0.51
32:XA:880:C:C2'	32:XA:881:G:H5'	2.40	0.51
32:XA:892:A:C6	32:XA:893:C:C4	2.99	0.51
33:XB:164:ASP:CG	33:XB:203:ASP:HB2	2.36	0.51
34:XC:29:ALA:HB1	45:XN:64:ARG:HH12	1.75	0.51
38:XG:124:SER:C	38:XG:126:ALA:N	2.69	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:XJ:45:ARG:O	41:XJ:46:LYS:C	2.53	0.51
45:XN:20:PHE:CA	45:XN:24:ALA:HB2	2.40	0.51
50:XS:35:ARG:HH22	50:XS:53:GLY:N	2.09	0.51
1:YA:321:U:O2	5:YE:159:LEU:HD11	2.11	0.51
1:YA:782:A:N7	3:YC:219:VAL:HG21	2.26	0.51
1:YA:833:A:H2'	1:YA:834:G:C8	2.45	0.51
1:YA:1131:G:N7	1:YA:2025:C:H4'	2.26	0.51
1:YA:1202:G:N7	1:YA:1203:U:C5	2.78	0.51
1:YA:1566:A:C2	3:YC:212:TRP:HB2	2.45	0.51
1:YA:2021:C:O2	1:YA:2021:C:C2'	2.58	0.51
1:YA:2744:G:C6	1:YA:2761:A:C6	2.99	0.51
2:YB:42:C:H5	6:YF:65:LEU:HD13	1.75	0.51
13:YM:34:LYS:O	13:YM:128:THR:HB	2.11	0.51
16:YP:90:ALA:HB3	16:YP:110:LYS:HB2	1.92	0.51
26:YZ:40:THR:H	26:YZ:43:ILE:HD11	1.74	0.51
27:Y0:27:LEU:HD22	27:Y0:27:LEU:N	2.26	0.51
30:Y3:23:HIS:ND1	30:Y3:24:LYS:O	2.43	0.51
31:Y4:15:LYS:O	31:Y4:16:ILE:HB	2.10	0.51
1:RA:164:C:H2'	1:RA:165:A:O4'	2.11	0.51
1:RA:1275:A:C2	1:RA:1295:C:O2	2.64	0.51
2:RB:89:U:H3'	2:RB:90:C:C5'	2.40	0.51
10:RJ:17:VAL:CG2	10:RJ:137:PRO:HB2	2.34	0.51
32:QA:176:C:H2'	32:QA:177:G:N3	2.26	0.51
32:QA:222:C:H2'	32:QA:223:A:C8	2.40	0.51
32:QA:575:G:H4'	32:QA:576:C:OP1	2.11	0.51
32:QA:636:U:O2'	32:QA:637:C:H5'	2.11	0.51
38:QG:22:LEU:O	38:QG:25:PHE:HB3	2.10	0.51
38:QG:83:THR:O	38:QG:84:TYR:C	2.53	0.51
41:QJ:67:ILE:HG13	45:QN:95:LEU:HD13	1.92	0.51
43:QL:23:LEU:C	43:QL:25:ALA:N	2.63	0.51
32:XA:38:G:C2	32:XA:397:A:C2	2.99	0.51
32:XA:64:G:H4'	32:XA:65:A:H5"	1.93	0.51
32:XA:189:A:H3'	32:XA:190:A:C8	2.46	0.51
32:XA:624:C:O2'	47:XP:10:GLY:HA2	2.10	0.51
32:XA:642:A:N7	39:XH:106:SER:HA	2.26	0.51
32:XA:708:C:H2'	32:XA:709:U:C6	2.44	0.51
32:XA:977:A:H8	32:XA:1223:C:N3	2.08	0.51
32:XA:1042:A:H2'	32:XA:1043:G:O4'	2.11	0.51
32:XA:1351:U:O2'	32:XA:1352:C:H5'	2.11	0.51
32:XA:1408:A:C2	32:XA:1492:A:N6	2.78	0.51
33:XB:103:TRP:HA	33:XB:106:VAL:CB	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XS:15:LEU:O	50:XS:19:GLU:HB2	2.10	0.51
50:XS:52:ASN:C	50:XS:52:ASN:HD22	2.18	0.51
51:XT:26:MET:CE	51:XT:30:PHE:HD1	2.24	0.51
1:YA:329:G:O6	21:YU:16:LYS:HB2	2.10	0.51
1:YA:597:G:H2'	1:YA:598:U:O4'	2.11	0.51
1:YA:609:A:H2'	1:YA:610:C:O4'	2.11	0.51
1:YA:927:A:C6	1:YA:928:A:C6	2.99	0.51
1:YA:1079:C:N4	1:YA:1088:A:N3	2.59	0.51
1:YA:1092:C:C2'	1:YA:1093:G:H5'	2.40	0.51
1:YA:1384:A:H1'	1:YA:1405:U:H1'	1.92	0.51
1:YA:1722:A:O2'	1:YA:1723:G:C8	2.62	0.51
1:YA:1734:G:C2'	1:YA:1735:A:H8	2.24	0.51
1:YA:1775:U:H2'	1:YA:1776:G:O5'	2.10	0.51
1:YA:2360:G:H1'	12:YL:60:ARG:HH21	1.74	0.51
1:YA:2435:A:H2'	1:YA:2436:G:O5'	2.10	0.51
6:YF:49:LEU:HD22	6:YF:49:LEU:N	2.21	0.51
18:YR:68:ARG:CZ	18:YR:90:ARG:HG2	2.41	0.51
20:YT:38:ALA:HB1	20:YT:81:LYS:HZ3	1.75	0.51
20:YT:39:THR:HG21	20:YT:42:GLU:CB	2.34	0.51
30:Y3:36:ALA:O	30:Y3:40:LYS:HG3	2.10	0.51
1:RA:195:A:C6	1:RA:198:C:C5	2.98	0.51
1:RA:659:G:H4'	5:RE:95:LYS:HD3	1.92	0.51
1:RA:915:C:H6	1:RA:915:C:H5"	1.76	0.51
1:RA:2182:U:C2'	1:RA:2183:A:OP1	2.58	0.51
1:RA:2813:A:H2	1:RA:2887:A:H61	1.57	0.51
2:RB:98:G:H1	22:RV:14:LYS:HB3	1.76	0.51
6:RF:7:TYR:HD2	6:RF:11:VAL:HG11	1.75	0.51
9:RI:17:ALA:HB1	9:RI:42:ASN:HD21	1.76	0.51
9:RI:56:VAL:HG22	9:RI:68:PHE:HB2	1.92	0.51
11:RK:21:CYS:SG	11:RK:39:ILE:HD11	2.51	0.51
12:RL:53:GLY:O	12:RL:54:GLN:C	2.53	0.51
19:RS:59:GLU:HA	19:RS:64:ALA:CB	2.41	0.51
23:RW:14:ASP:OD2	23:RW:16:GLU:OE1	2.29	0.51
32:QA:157:U:O2'	32:QA:158:G:H5'	2.11	0.51
32:QA:211:G:N1	32:QA:212:G:H1'	2.25	0.51
32:QA:267:C:H5'	32:QA:267:C:H6	1.75	0.51
32:QA:622:A:C8	32:QA:623:C:C6	2.99	0.51
32:QA:912:C:O2'	32:QA:913:A:H5'	2.10	0.51
32:QA:956:U:H2'	32:QA:957:U:H6	1.75	0.51
32:QA:1017:U:OP2	32:QA:1017:U:H6	1.93	0.51
35:QD:56:GLU:O	35:QD:59:LYS:HB3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:QJ:11:LYS:CG	41:QJ:97:ASP:HB3	2.40	0.51
48:QQ:12:VAL:HG21	48:QQ:21:VAL:HG13	1.93	0.51
48:QQ:18:LYS:O	48:QQ:47:ASP:OD2	2.29	0.51
52:QU:19:LYS:C	52:QU:21:SER:H	2.19	0.51
32:XA:672:U:H2'	32:XA:673:A:H8	1.76	0.51
32:XA:711:G:O2'	32:XA:712:A:H5'	2.11	0.51
32:XA:765:G:C5	32:XA:812:G:C6	2.99	0.51
32:XA:765:G:C6	32:XA:812:G:N7	2.79	0.51
32:XA:827:U:H2'	32:XA:870:U:O4	2.10	0.51
32:XA:1049:U:H4'	32:XA:1050:G:H5'	1.92	0.51
32:XA:1178:G:OP2	40:XI:98:ARG:NH2	2.44	0.51
32:XA:1244:G:H2'	32:XA:1245:C:C6	2.45	0.51
32:XA:1453:G:H2'	32:XA:1454:G:O4'	2.11	0.51
43:XL:109:ARG:NH2	43:XL:116:TYR:HE2	2.09	0.51
44:XM:56:ARG:C	44:XM:59:VAL:HG12	2.36	0.51
1:YA:508:A:H3'	1:YA:509:C:C5'	2.41	0.51
1:YA:617:G:N3	1:YA:618:G:C8	2.79	0.51
1:YA:666:A:H4'	12:YL:48:ARG:HD3	1.93	0.51
1:YA:1188:U:H2'	1:YA:1189:A:H8	1.76	0.51
1:YA:1229:C:H2'	1:YA:1230:A:C8	2.45	0.51
1:YA:1497:U:C5	1:YA:1578:U:O5'	2.64	0.51
1:YA:1854:A:C2'	1:YA:1855:U:H5'	2.40	0.51
1:YA:1965:C:H2'	1:YA:1966:A:C8	2.46	0.51
1:YA:2072:C:C2'	1:YA:2073:C:H5'	2.40	0.51
1:YA:2305:U:H4'	6:YF:132:ARG:CG	2.41	0.51
1:YA:2324:U:HO2'	1:YA:2385:C:H5	1.59	0.51
1:YA:2512:C:H2'	1:YA:2513:A:O4'	2.11	0.51
1:YA:2727:A:O2'	1:YA:2728:U:C5'	2.58	0.51
1:YA:2788:C:H1'	1:YA:2809:A:C2	2.46	0.51
3:YC:70:LYS:HB2	3:YC:101:ARG:HH22	1.75	0.51
3:YC:131:MET:HA	3:YC:134:ILE:HD11	1.92	0.51
3:YC:149:LYS:HE3	3:YC:152:GLN:CD	2.36	0.51
4:YD:29:VAL:HB	4:YD:98:VAL:CG1	2.31	0.51
5:YE:73:ILE:HG13	5:YE:78:TRP:HE1	1.75	0.51
7:YG:1:SER:C	7:YG:3:VAL:H	2.18	0.51
8:YH:58:LEU:HA	8:YH:61:VAL:HG12	1.93	0.51
9:YI:132:ALA:HA	9:YI:137:LEU:HD12	1.92	0.51
11:YK:21:CYS:SG	11:YK:39:ILE:CG2	2.99	0.51
12:YL:79:LEU:HA	12:YL:82:LEU:HD11	1.93	0.51
12:YL:90:VAL:O	12:YL:90:VAL:HG12	2.09	0.51
18:YR:21:ARG:HB2	18:YR:93:PHE:HD1	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:YU:81:ARG:O	21:YU:82:VAL:HG13	2.10	0.51
25:YY:47:ARG:O	25:YY:50:VAL:N	2.39	0.51
1:RA:191:A:H2'	1:RA:192:C:C6	2.46	0.51
1:RA:987:C:H2'	1:RA:988:A:H5'	1.93	0.51
1:RA:1394:U:H2'	1:RA:1395:A:O5'	2.11	0.51
1:RA:1906:G:H2'	1:RA:1907:G:O5'	2.10	0.51
1:RA:2193:G:H2'	1:RA:2194:U:C6	2.45	0.51
1:RA:2196:C:O2'	1:RA:2197:U:H5'	2.10	0.51
1:RA:2405:G:O2'	1:RA:2406:A:OP1	2.26	0.51
1:RA:2492:U:H2'	1:RA:2493:U:H6	1.76	0.51
3:RC:79:ARG:HG3	3:RC:92:LEU:HB3	1.92	0.51
4:RD:193:VAL:HB	4:RD:194:PRO:HD2	1.93	0.51
6:RF:107:VAL:HG11	6:RF:175:PRO:HG2	1.92	0.51
12:RL:101:ILE:HG22	12:RL:102:GLY:N	2.25	0.51
16:RP:21:PRO:HA	16:RP:46:VAL:HG12	1.93	0.51
16:RP:37:LYS:HD3	16:RP:37:LYS:N	2.25	0.51
16:RP:80:VAL:HG12	16:RP:81:ASP:N	2.25	0.51
19:RS:103:ILE:H	19:RS:103:ILE:HD12	1.76	0.51
22:RV:10:LYS:NZ	22:RV:11:GLU:HG3	2.26	0.51
32:QA:186:C:O4'	51:QT:75:LYS:HD2	2.11	0.51
32:QA:928:G:O2'	32:QA:1533:C:OP1	2.29	0.51
32:QA:1053:G:C6	32:QA:1199:U:C2	2.99	0.51
32:QA:1152:A:OP1	41:QJ:70:HIS:ND1	2.42	0.51
33:QB:49:PHE:CD1	33:QB:53:LEU:HD23	2.46	0.51
33:QB:71:THR:HG23	33:QB:93:HIS:C	2.36	0.51
35:QD:190:LEU:O	35:QD:191:SER:HB2	2.10	0.51
39:QH:1:SER:C	39:QH:3:GLN:H	2.19	0.51
43:QL:2:THR:HG22	43:QL:4:ASN:N	2.26	0.51
43:QL:23:LEU:HB3	43:QL:58:ASN:HD22	1.76	0.51
48:QQ:13:SER:O	48:QQ:20:ILE:CD1	2.59	0.51
48:QQ:22:VAL:HG21	48:QQ:60:ILE:CD1	2.36	0.51
32:XA:17:U:H2'	32:XA:18:C:H6	1.73	0.51
32:XA:32:A:C2	32:XA:33:A:C5	2.99	0.51
32:XA:407:U:H2'	32:XA:408:A:C8	2.45	0.51
32:XA:496:A:N3	32:XA:496:A:C2'	2.71	0.51
32:XA:701:U:C2'	32:XA:702:A:OP2	2.57	0.51
32:XA:1408:A:N1	32:XA:1494:G:C6	2.79	0.51
32:XA:1435:G:H2'	32:XA:1436:U:C6	2.45	0.51
33:XB:20:ARG:HH21	33:XB:38:HIS:CE1	2.28	0.51
33:XB:147:LEU:HD12	33:XB:147:LEU:N	2.25	0.51
34:XC:185:THR:O	34:XC:186:SER:HB2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:XE:79:THR:HA	36:XE:121:ASN:ND2	2.26	0.51
37:XF:3:HIS:O	37:XF:4:TYR:CG	2.63	0.51
40:XI:63:TYR:C	40:XI:64:ILE:HD12	2.36	0.51
42:XK:74:LYS:HG2	42:XK:74:LYS:O	2.10	0.51
1:YA:260:G:C6	1:YA:261:G:C5	2.99	0.51
1:YA:600:G:H1'	5:YE:100:MET:HG2	1.91	0.51
1:YA:608:A:C6	1:YA:621:A:C8	2.99	0.51
1:YA:694:U:OP1	1:YA:1569:A:H1'	2.11	0.51
1:YA:1027:A:N7	1:YA:1126:A:C2	2.79	0.51
1:YA:1295:C:H1'	14:YN:23:ASN:HD21	1.76	0.51
1:YA:1403:A:C2	1:YA:1404:C:C2	2.99	0.51
1:YA:1417:C:O2'	1:YA:1418:G:O4'	2.29	0.51
1:YA:2019:A:H4'	17:YQ:33:VAL:HG21	1.93	0.51
1:YA:2584:U:H2'	1:YA:2585:U:H5'	1.92	0.51
1:YA:2818:U:H2'	1:YA:2819:G:C8	2.46	0.51
4:YD:161:MET:O	4:YD:162:ALA:O	2.29	0.51
6:YF:12:VAL:CG1	6:YF:16:MET:HG3	2.40	0.51
10:YJ:44:TYR:O	10:YJ:45:THR:CB	2.59	0.51
14:YN:12:ARG:HG2	14:YN:16:HIS:CG	2.46	0.51
14:YN:35:LYS:HG2	14:YN:112:TYR:CE1	2.45	0.51
16:YP:13:LYS:HD2	16:YP:13:LYS:H	1.75	0.51
16:YP:24:THR:O	16:YP:25:VAL:C	2.54	0.51
21:YU:73:ASN:CB	21:YU:95:PHE:HE2	2.24	0.51
21:YU:95:PHE:N	21:YU:95:PHE:CD1	2.64	0.51
22:YV:27:PRO:O	22:YV:88:HIS:HA	2.11	0.51
24:YX:29:LEU:HB2	24:YX:30:PRO:HD2	1.93	0.51
29:Y2:28:ARG:C	29:Y2:30:VAL:N	2.69	0.51
1:RA:137:U:OP2	1:RA:137:U:C5	2.64	0.51
1:RA:276:U:O2'	1:RA:277:G:O5'	2.28	0.51
1:RA:1386:C:H2'	1:RA:1387:A:C8	2.45	0.51
1:RA:2461:A:H1'	1:RA:2492:U:C2	2.45	0.51
1:RA:2779:U:C6	1:RA:2781:A:C2	2.99	0.51
3:RC:251:THR:CG2	3:RC:252:LYS:N	2.72	0.51
4:RD:97:SER:HB3	4:RD:99:GLU:OE1	2.11	0.51
4:RD:101:PHE:O	4:RD:102:ALA:C	2.54	0.51
5:RE:189:THR:OG1	5:RE:191:ASP:CB	2.58	0.51
7:RG:83:THR:O	7:RG:84:LYS:HD3	2.09	0.51
8:RH:42:LYS:HG2	8:RH:43:ASN:ND2	2.26	0.51
16:RP:19:PHE:CE2	16:RP:83:ILE:HD12	2.45	0.51
17:RQ:13:HIS:HD2	17:RQ:31:TYR:CE1	2.28	0.51
21:RU:48:VAL:O	21:RU:53:GLN:HB3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:RU:87:GLU:O	21:RU:88:ASP:O	2.29	0.51
23:RW:39:GLN:CG	23:RW:41:GLY:H	2.11	0.51
24:RX:10:ARG:HB2	24:RX:11:PRO:HD2	1.92	0.51
28:R1:34:GLU:HG2	28:R1:49:LYS:HG3	1.93	0.51
32:QA:51:A:H4'	32:QA:52:C:C5'	2.41	0.51
32:QA:1261:A:N1	32:QA:1274:A:N3	2.58	0.51
32:QA:1378:C:N4	32:QA:1379:G:C4	2.79	0.51
33:QB:17:HIS:CE1	33:QB:202:ASN:HD21	2.29	0.51
33:QB:79:VAL:O	33:QB:83:ALA:HB3	2.10	0.51
34:QC:106:ARG:O	34:QC:106:ARG:HG2	2.12	0.51
34:QC:156:LEU:H	34:QC:156:LEU:CD1	2.17	0.51
35:QD:33:ILE:O	35:QD:33:ILE:HG23	2.11	0.51
42:QK:22:ILE:O	42:QK:22:ILE:HG13	2.10	0.51
46:QO:23:SER:HB3	46:QO:26:VAL:HG23	1.92	0.51
32:XA:83:C:H2'	32:XA:83:C:O2	2.11	0.51
32:XA:216:U:C4	32:XA:217:C:N4	2.79	0.51
32:XA:343:U:HO2'	32:XA:344:A:H8	1.59	0.51
32:XA:373:A:H8	32:XA:373:A:C5'	2.23	0.51
32:XA:429:U:H1'	32:XA:430:A:H5"	1.93	0.51
32:XA:511:C:C2	32:XA:512:U:C5	2.99	0.51
32:XA:801:U:H2'	32:XA:802:A:C8	2.46	0.51
32:XA:1447:A:O3'	32:XA:1448:C:H6	1.94	0.51
33:XB:73:ARG:HG3	33:XB:74:ALA:N	2.26	0.51
33:XB:125:PHE:HD1	33:XB:137:THR:HG22	1.75	0.51
41:XJ:65:TYR:HB3	45:XN:95:LEU:CD1	2.41	0.51
44:XM:69:ARG:O	44:XM:73:SER:HB3	2.10	0.51
44:XM:78:ARG:HH21	44:XM:79:LEU:CD2	2.09	0.51
1:YA:84:A:H5'	21:YU:5:ARG:HD2	1.93	0.51
1:YA:249:C:C5'	1:YA:2394:C:O2'	2.45	0.51
1:YA:295:G:C2	1:YA:296:U:C6	2.99	0.51
1:YA:322:A:H3'	5:YE:163:ASN:HD21	1.72	0.51
1:YA:520:G:H2'	1:YA:521:U:C6	2.46	0.51
1:YA:545:U:C4	1:YA:547:A:H4'	2.46	0.51
1:YA:668:A:C5	1:YA:670:A:C8	2.99	0.51
1:YA:842:U:C4	1:YA:843:G:N7	2.79	0.51
1:YA:1140:C:OP2	10:YJ:68:LYS:HE3	2.11	0.51
1:YA:1245:G:H4'	5:YE:33:VAL:HG11	1.93	0.51
1:YA:1278:C:O2'	1:YA:1279:G:H5'	2.11	0.51
1:YA:1337:G:N2	1:YA:1338:G:H1'	2.26	0.51
1:YA:1417:C:O2'	1:YA:1418:G:C8	2.64	0.51
1:YA:1817:G:C2'	1:YA:1818:U:H5'	2.38	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2215:C:O2'	1:YA:2216:G:H8	1.94	0.51
1:YA:2324:U:C5'	1:YA:2325:G:H5"	2.40	0.51
1:YA:2330:G:H2'	1:YA:2331:G:H5'	1.92	0.51
1:YA:2667:C:HO2'	1:YA:2668:G:H8	1.44	0.51
1:YA:2751:G:N3	7:YG:2:ARG:NH2	2.59	0.51
2:YB:104:A:H2'	2:YB:105:G:O4'	2.11	0.51
4:YD:208:LYS:O	4:YD:209:ALA:CB	2.59	0.51
9:YI:74:PRO:O	9:YI:78:LEU:HG	2.11	0.51
13:YM:69:PRO:O	13:YM:70:ASP:HB3	2.11	0.51
18:YR:49:ILE:CG2	18:YR:54:VAL:H	2.24	0.51
19:YS:2:GLU:OE2	19:YS:2:GLU:HA	2.10	0.51
22:YV:4:ILE:HD11	22:YV:50:MET:HE1	1.92	0.51
23:YW:33:GLY:O	23:YW:34:SER:CB	2.59	0.51
23:YW:36:ILE:O	23:YW:39:GLN:CB	2.60	0.51
1:RA:594:U:H2'	1:RA:595:C:C6	2.46	0.50
1:RA:635:C:H3'	12:RL:109:LYS:NZ	2.26	0.50
1:RA:743:A:O3'	56:RA:3653:HOH:O	2.19	0.50
1:RA:1060:U:O4'	1:RA:1062:G:C5'	2.57	0.50
1:RA:1188:U:H2'	1:RA:1189:A:H5'	1.92	0.50
1:RA:1224:U:H4'	18:RR:88:GLY:O	2.11	0.50
1:RA:1266:G:O2'	1:RA:2012:G:O6	2.23	0.50
1:RA:1385:A:C4	1:RA:1386:C:C5	2.99	0.50
1:RA:1767:G:C2	1:RA:1768:C:C5	2.98	0.50
1:RA:2052:A:OP1	4:RD:145:SER:HA	2.11	0.50
1:RA:2134:A:C6	1:RA:2135:A:N6	2.79	0.50
1:RA:2474:U:H5"	1:RA:2475:C:OP2	2.11	0.50
1:RA:2564:A:C2	1:RA:2647:U:H4'	2.45	0.50
3:RC:180:MET:HG3	3:RC:268:ARG:NH1	2.25	0.50
10:RJ:65:THR:CG2	10:RJ:68:LYS:HE3	2.40	0.50
13:RM:65:ILE:HG12	13:RM:103:TYR:CE2	2.47	0.50
13:RM:132:THR:CG2	13:RM:133:LYS:N	2.75	0.50
17:RQ:60:TRP:CH2	17:RQ:93:ILE:HB	2.46	0.50
17:RQ:75:TYR:C	17:RQ:75:TYR:CD2	2.88	0.50
21:RU:70:ALA:HB3	21:RU:79:ALA:HB1	1.93	0.50
25:RY:5:GLU:O	25:RY:6:LEU:C	2.54	0.50
32:QA:266:G:H4'	32:QA:267:C:OP1	2.10	0.50
32:QA:429:U:H4'	32:QA:430:A:OP1	2.11	0.50
32:QA:683:G:H2'	32:QA:684:U:O4'	2.10	0.50
32:QA:1009:U:O2'	32:QA:1010:U:H5'	2.11	0.50
32:QA:1112:C:H2'	32:QA:1113:C:O5'	2.11	0.50
32:QA:1478:U:H2'	32:QA:1479:C:C6	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:QC:119:ILE:HA	34:QC:122:GLN:HG3	1.93	0.50
39:QH:1:SER:C	39:QH:3:GLN:N	2.68	0.50
46:QO:17:ASP:O	46:QO:20:ASP:HB3	2.11	0.50
48:QQ:45:VAL:O	48:QQ:47:ASP:OD1	2.29	0.50
32:XA:8:A:C6	35:XD:205:LYS:HG3	2.46	0.50
32:XA:841:C:H3'	32:XA:843:U:OP2	2.11	0.50
32:XA:1014:A:C6	50:XS:33:TRP:CE3	2.98	0.50
32:XA:1058:G:C6	32:XA:1059:C:C4	2.99	0.50
32:XA:1105:A:H2'	32:XA:1106:G:C8	2.44	0.50
36:XE:82:HIS:HB2	36:XE:83:PRO:HD2	1.92	0.50
37:XF:32:ALA:O	37:XF:33:GLU:HB2	2.11	0.50
1:YA:223:A:C6	1:YA:422:A:N7	2.79	0.50
1:YA:477:A:H2'	1:YA:478:A:H8	1.76	0.50
1:YA:581:C:P	17:YQ:32:ARG:HE	2.33	0.50
1:YA:684:G:OP1	29:Y2:16:HIS:CE1	2.64	0.50
1:YA:748:G:H2'	1:YA:750:A:OP2	2.12	0.50
1:YA:851:C:H2'	1:YA:852:U:C6	2.46	0.50
1:YA:924:G:O2'	1:YA:925:A:H5'	2.11	0.50
1:YA:931:U:H2'	1:YA:931:U:O2	2.11	0.50
1:YA:935:C:H2'	1:YA:936:A:C8	2.44	0.50
1:YA:1045:C:H4'	1:YA:1047:G:C4	2.46	0.50
1:YA:1056:G:C2	1:YA:1102:C:H5	2.29	0.50
1:YA:1062:G:C8	1:YA:1088:A:C8	2.99	0.50
1:YA:1244:A:O2'	5:YE:29:HIS:CE1	2.65	0.50
1:YA:1344:U:H5'	1:YA:1384:A:C6	2.46	0.50
1:YA:1652:A:H62	14:YN:11:ASN:ND2	2.05	0.50
1:YA:2044:C:N3	1:YA:2045:C:C5	2.79	0.50
1:YA:2232:C:OP1	24:YX:26:ARG:NH1	2.44	0.50
1:YA:2308:G:C2'	1:YA:2309:A:OP1	2.58	0.50
1:YA:2636:C:H4'	4:YD:81:GLU:CD	2.36	0.50
1:YA:2819:G:H5"	56:YA:3802:HOH:O	2.11	0.50
5:YE:150:THR:HA	5:YE:189:THR:OG1	2.11	0.50
5:YE:153:LEU:HD12	5:YE:170:ARG:O	2.09	0.50
8:YH:103:VAL:HG23	8:YH:105:ALA:O	2.11	0.50
17:YQ:87:VAL:HG12	17:YQ:88:GLU:H	1.76	0.50
18:YR:38:VAL:O	18:YR:53:PHE:HA	2.12	0.50
23:YW:36:ILE:O	23:YW:39:GLN:HB3	2.12	0.50
26:YZ:31:ILE:O	26:YZ:31:ILE:HG13	2.11	0.50
1:RA:143:C:H2'	1:RA:144:A:H8	1.77	0.50
1:RA:478:A:C6	1:RA:480:A:C6	2.99	0.50
1:RA:1857:G:H1'	1:RA:1858:A:OP2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:RE:24:ASN:C	5:RE:24:ASN:HD22	2.19	0.50
5:RE:151:GLY:CA	5:RE:192:ALA:HB2	2.40	0.50
8:RH:96:THR:C	8:RH:97:ARG:HG3	2.36	0.50
12:RL:77:ILE:HG12	12:RL:95:LEU:HD13	1.94	0.50
12:RL:95:LEU:HB3	12:RL:100:ILE:HD11	1.93	0.50
18:RR:4:VAL:HA	18:RR:12:HIS:O	2.12	0.50
19:RS:18:ARG:O	19:RS:19:LEU:CB	2.58	0.50
20:RT:55:VAL:O	20:RT:55:VAL:HG12	2.11	0.50
23:RW:44:PHE:O	23:RW:78:PHE:HA	2.10	0.50
32:QA:243:A:C2	32:QA:245:U:H2'	2.47	0.50
32:QA:272:C:H2'	32:QA:273:U:C6	2.43	0.50
32:QA:687:A:C5	32:QA:701:U:H5	2.29	0.50
32:QA:1135:U:OP2	32:QA:1135:U:H6	1.95	0.50
32:QA:1331:G:C2'	32:QA:1332:A:OP2	2.59	0.50
32:QA:1464:U:O2'	32:QA:1465:A:H5'	2.11	0.50
32:QA:1474:U:H2'	32:QA:1475:G:H5"	1.92	0.50
33:QB:98:GLY:HA2	33:QB:101:THR:HG22	1.92	0.50
35:QD:64:TYR:CD1	35:QD:93:LEU:HD13	2.46	0.50
36:QE:12:GLU:CB	36:QE:38:VAL:HG12	2.41	0.50
42:QK:125:LYS:O	52:QU:33:ARG:CZ	2.59	0.50
51:QT:29:THR:O	51:QT:33:LYS:HE2	2.12	0.50
32:XA:68:G:N2	32:XA:152:A:H1'	2.26	0.50
32:XA:205:A:C5	32:XA:206:C:N4	2.79	0.50
32:XA:464:U:O4	32:XA:466:A:C4'	2.58	0.50
32:XA:1007:U:H2'	32:XA:1007:U:O2	2.11	0.50
32:XA:1349:A:OP1	40:XI:121:ARG:HB2	2.12	0.50
32:XA:1489:G:C6	32:XA:1490:U:C4	2.99	0.50
33:XB:146:SER:HB2	33:XB:147:LEU:CD1	2.30	0.50
34:XC:8:GLY:HA2	34:XC:11:LEU:HG	1.93	0.50
37:XF:62:MET:O	37:XF:63:ASN:HB2	2.11	0.50
44:XM:47:LEU:HD23	44:XM:48:SER:N	2.26	0.50
1:YA:55:G:N2	1:YA:116:C:C2	2.80	0.50
1:YA:319:G:C6	1:YA:333:G:C6	2.99	0.50
1:YA:323:C:H3'	5:YE:163:ASN:ND2	2.26	0.50
1:YA:1391:U:H4'	20:YT:19:LYS:HZ2	1.75	0.50
1:YA:1491:G:O6	1:YA:1500:G:C2	2.64	0.50
1:YA:2530:A:C8	7:YG:156:TYR:OH	2.64	0.50
1:YA:2831:G:OP2	4:YD:59:ARG:NE	2.44	0.50
3:YC:29:PHE:CE2	3:YC:31:PRO:HG2	2.46	0.50
4:YD:13:ARG:NH1	16:YP:74:GLN:NE2	2.53	0.50
4:YD:94:GLN:O	4:YD:95:SER:C	2.53	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:YF:135:ILE:O	6:YF:137:PHE:N	2.45	0.50
6:YF:147:ARG:HD3	6:YF:149:ARG:HH22	1.75	0.50
9:YI:28:GLY:O	9:YI:29:GLN:C	2.53	0.50
10:YJ:111:LYS:HB2	10:YJ:115:GLY:H	1.74	0.50
15:YO:75:GLY:HA3	15:YO:109:ALA:O	2.11	0.50
18:YR:49:ILE:CG2	18:YR:54:VAL:N	2.74	0.50
19:YS:44:ALA:O	19:YS:48:LYS:HB2	2.10	0.50
21:YU:34:ILE:HG12	21:YU:63:ALA:HA	1.93	0.50
21:YU:91:LYS:O	21:YU:92:VAL:HG22	2.11	0.50
23:YW:83:ALA:O	23:YW:84:GLU:HB2	2.11	0.50
30:Y3:18:LYS:HD2	30:Y3:19:GLY:H	1.76	0.50
1:RA:1197:G:H2'	1:RA:1198:U:C6	2.46	0.50
1:RA:2438:U:O2'	1:RA:2439:A:H5"	2.12	0.50
2:RB:12:C:H4'	2:RB:13:G:OP1	2.12	0.50
5:RE:119:ILE:O	5:RE:187:VAL:O	2.28	0.50
6:RF:35:LEU:HD12	6:RF:35:LEU:O	2.11	0.50
6:RF:60:SER:O	6:RF:61:GLY:C	2.54	0.50
9:RI:15:GLY:HA2	9:RI:50:LYS:CB	2.34	0.50
9:RI:115:ASP:OD1	9:RI:115:ASP:C	2.54	0.50
9:RI:123:ALA:HA	9:RI:126:ARG:CZ	2.42	0.50
11:RK:72:PRO:O	11:RK:74:GLY:N	2.41	0.50
13:RM:43:ALA:HA	13:RM:46:ILE:CG1	2.42	0.50
15:RO:54:VAL:HG22	15:RO:54:VAL:O	2.11	0.50
15:RO:116:GLN:O	15:RO:117:PHE:HB3	2.11	0.50
18:RR:49:ILE:HB	18:RR:51:VAL:O	2.10	0.50
23:RW:51:GLY:HA3	23:RW:59:PHE:HE2	1.71	0.50
32:QA:771:G:H2'	32:QA:772:U:H6	1.77	0.50
32:QA:895:G:C6	32:QA:896:C:C4	2.99	0.50
33:QB:71:THR:O	33:QB:72:LYS:HG2	2.11	0.50
35:QD:34:GLU:C	35:QD:36:ALA:H	2.19	0.50
38:QG:29:LEU:C	38:QG:29:LEU:HD23	2.36	0.50
42:QK:124:LYS:O	52:QU:33:ARG:NE	2.45	0.50
45:QN:13:VAL:HG23	45:QN:59:GLN:HG2	1.93	0.50
46:QO:26:VAL:O	46:QO:27:GLN:C	2.54	0.50
52:QU:11:PHE:O	52:QU:12:ASP:CB	2.59	0.50
32:XA:149:A:C2	32:XA:150:U:C2	2.99	0.50
32:XA:802:A:C2'	32:XA:803:G:O5'	2.59	0.50
32:XA:1092:A:C2	32:XA:1183:U:N3	2.75	0.50
32:XA:1150:A:N6	32:XA:1151:A:H62	2.08	0.50
33:XB:9:LEU:O	33:XB:10:LYS:CB	2.59	0.50
34:XC:119:ILE:O	34:XC:123:LEU:HB2	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:XD:2:ARG:NE	35:XD:114:ARG:HD3	2.26	0.50
37:XF:92:THR:HG22	37:XF:93:LYS:N	2.26	0.50
37:XF:98:GLU:O	37:XF:99:ALA:CB	2.59	0.50
39:XH:11:THR:HG22	39:XH:14:ARG:HH12	1.76	0.50
40:XI:51:LEU:HG	40:XI:86:LEU:CD2	2.41	0.50
52:XU:38:GLU:OE1	52:XU:41:THR:OG1	2.28	0.50
1:YA:141:G:H3'	1:YA:142:A:C8	2.46	0.50
1:YA:264:C:H4'	1:YA:264:C:OP1	2.12	0.50
1:YA:455:C:N3	1:YA:473:G:H4'	2.26	0.50
1:YA:584:C:N4	1:YA:585:G:C6	2.79	0.50
1:YA:758:C:O2	1:YA:758:C:C2'	2.57	0.50
1:YA:976:G:N2	1:YA:1155:A:C2	2.80	0.50
1:YA:1060:U:H4'	1:YA:1061:U:O5'	2.11	0.50
1:YA:1525:A:C6	1:YA:1526:C:C2	2.99	0.50
1:YA:1936:A:C2	1:YA:1943:U:C5	2.98	0.50
1:YA:1944:U:O4'	1:YA:1955:U:H1'	2.11	0.50
1:YA:2048:G:C6	1:YA:2049:G:C5	2.99	0.50
1:YA:2184:A:H2'	1:YA:2185:U:O4'	2.11	0.50
1:YA:2492:U:H2'	1:YA:2493:U:H6	1.77	0.50
1:YA:2857:G:N2	1:YA:2860:A:OP2	2.36	0.50
3:YC:144:GLU:HB3	3:YC:187:CYS:CB	2.33	0.50
8:YH:5:LEU:C	8:YH:6:LEU:HD12	2.35	0.50
8:YH:27:ARG:CZ	24:YX:59:ASP:HA	2.41	0.50
8:YH:54:LEU:HA	8:YH:57:LYS:HG3	1.94	0.50
12:YL:77:ILE:HD11	12:YL:108:ALA:HB1	1.93	0.50
15:YO:71:ALA:CB	15:YO:102:ARG:HB3	2.41	0.50
23:YW:37:VAL:CG2	23:YW:38:ARG:NH1	2.74	0.50
1:RA:186:G:O2'	1:RA:187:G:H5'	2.10	0.50
1:RA:276:U:O2	1:RA:276:U:C2'	2.60	0.50
1:RA:361:G:O2'	1:RA:362:A:O5'	2.28	0.50
1:RA:414:C:H1'	1:RA:1864:U:O2'	2.12	0.50
1:RA:686:U:H2'	1:RA:788:A:N1	2.27	0.50
1:RA:885:C:H6	1:RA:885:C:O5'	1.93	0.50
1:RA:1340:U:C5	1:RA:1603:A:C8	2.99	0.50
1:RA:1419:A:N7	1:RA:1421:G:C5	2.80	0.50
1:RA:1486:U:H2'	1:RA:1487:U:C6	2.44	0.50
1:RA:1499:C:H2'	1:RA:1500:G:H8	1.77	0.50
1:RA:1735:A:C2	1:RA:1736:U:C2	2.99	0.50
1:RA:1826:G:C5	1:RA:1827:U:C5	2.99	0.50
1:RA:2032:G:C8	56:RA:3532:HOH:O	2.54	0.50
4:RD:16:THR:O	4:RD:19:GLY:N	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:RF:87:LYS:HG3	6:RF:88:VAL:N	2.27	0.50
7:RG:1:SER:HB3	7:RG:5:LYS:HZ3	1.76	0.50
7:RG:116:LEU:HD13	7:RG:116:LEU:H	1.75	0.50
7:RG:163:TYR:O	7:RG:164:ALA:CB	2.59	0.50
8:RH:9:VAL:O	8:RH:13:GLY:N	2.41	0.50
10:RJ:97:PRO:C	10:RJ:99:ARG:N	2.68	0.50
13:RM:97:GLN:CD	13:RM:97:GLN:N	2.69	0.50
20:RT:18:GLU:O	20:RT:19:LYS:C	2.54	0.50
31:R4:30:GLU:OE2	31:R4:32:LYS:HG3	2.12	0.50
32:QA:624:C:C2	32:QA:625:U:C6	2.99	0.50
32:QA:953:G:C2	32:QA:954:G:H1'	2.47	0.50
32:QA:967:C:C1'	40:QI:129:ARG:HH22	2.24	0.50
32:QA:1182:G:H4'	32:QA:1183:U:H5'	1.93	0.50
33:QB:108:GLN:HE21	33:QB:108:GLN:N	2.01	0.50
33:QB:132:GLU:O	33:QB:132:GLU:HG3	2.11	0.50
39:QH:104:SER:HB2	39:QH:125:ILE:HD11	1.93	0.50
45:QN:45:LEU:O	45:QN:45:LEU:HG	2.12	0.50
51:QT:81:GLN:HA	51:QT:84:LYS:HB2	1.93	0.50
32:XA:338:A:H61	32:XA:351:G:H1	1.60	0.50
32:XA:672:U:H2'	32:XA:673:A:C8	2.45	0.50
32:XA:977:A:C8	32:XA:1223:C:N3	2.80	0.50
34:XC:181:ILE:HA	34:XC:201:ILE:O	2.11	0.50
38:XG:100:MET:H	38:XG:100:MET:CE	2.22	0.50
40:XI:70:GLY:O	40:XI:73:GLY:N	2.41	0.50
46:XO:52:ARG:O	46:XO:55:LEU:HB3	2.11	0.50
47:XP:5:ARG:HA	47:XP:71:VAL:HG11	1.92	0.50
1:YA:108:G:H2'	1:YA:109:C:H6	1.75	0.50
1:YA:466:A:P	29:Y2:34:ARG:NH2	2.84	0.50
1:YA:716:A:C2'	1:YA:717:C:H5"	2.40	0.50
1:YA:945:A:C8	1:YA:2448:A:C2	2.99	0.50
1:YA:981:A:H5"	1:YA:982:C:OP2	2.11	0.50
1:YA:998:C:OP2	17:YQ:57:ARG:NH2	2.43	0.50
1:YA:1023:U:H6	1:YA:1023:U:C5'	2.23	0.50
1:YA:1210:G:C4'	1:YA:1211:C:O5'	2.57	0.50
1:YA:1348:C:OP2	1:YA:1349:C:N4	2.45	0.50
1:YA:1973:G:O6	1:YA:1974:C:N4	2.44	0.50
1:YA:2201:G:C4	1:YA:2202:U:C6	3.00	0.50
1:YA:2435:A:C2'	1:YA:2436:G:O5'	2.59	0.50
1:YA:2615:U:H2'	1:YA:2616:C:C6	2.46	0.50
3:YC:212:TRP:C	3:YC:212:TRP:HD1	2.19	0.50
11:YK:61:VAL:HG13	11:YK:87:LEU:HD22	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:YL:61:LEU:O	30:Y3:12:ARG:NH2	2.43	0.50
14:YN:12:ARG:HB3	14:YN:16:HIS:ND1	2.27	0.50
17:YQ:93:ILE:O	17:YQ:96:ASP:HB3	2.12	0.50
18:YR:98:ILE:HG22	18:YR:98:ILE:O	2.12	0.50
19:YS:53:SER:O	19:YS:56:ALA:HB3	2.11	0.50
24:YX:19:HIS:O	24:YX:20:ALA:HB3	2.12	0.50
28:Y1:10:LEU:HB2	28:Y1:20:TYR:CB	2.41	0.50
1:RA:5:A:C2	1:RA:2899:A:C2	2.99	0.50
1:RA:1409:U:O2'	1:RA:1410:G:H5'	2.12	0.50
3:RC:20:ASN:ND2	3:RC:22:GLU:HG2	2.24	0.50
5:RE:1:MET:HG3	5:RE:14:VAL:HG23	1.93	0.50
8:RH:117:LEU:CD1	8:RH:130:VAL:HG11	2.41	0.50
10:RJ:25:LEU:HD13	10:RJ:25:LEU:O	2.12	0.50
10:RJ:44:TYR:CE1	17:RQ:59:LEU:HD11	2.47	0.50
14:RN:108:ALA:O	14:RN:110:MET:HG2	2.12	0.50
16:RP:113:LEU:O	16:RP:113:LEU:HG	2.12	0.50
20:RT:14:PRO:HA	20:RT:32:LEU:HB3	1.92	0.50
21:RU:12:VAL:HG22	21:RU:69:VAL:HG12	1.93	0.50
24:RX:67:LEU:O	24:RX:69:GLU:O	2.30	0.50
32:QA:6:G:O2'	32:QA:7:A:H8	1.94	0.50
32:QA:76:G:N1	32:QA:95:C:N4	2.58	0.50
32:QA:143:A:H2'	32:QA:143:A:N3	2.24	0.50
32:QA:178:C:O2'	32:QA:179:A:H5'	2.12	0.50
32:QA:374:A:H5"	32:QA:452:A:C2	2.47	0.50
33:QB:22:TRP:O	33:QB:22:TRP:CD2	2.65	0.50
33:QB:103:TRP:CD1	33:QB:150:ILE:HD11	2.46	0.50
33:QB:137:THR:O	33:QB:140:LEU:HB2	2.11	0.50
33:QB:179:GLY:O	33:QB:180:ILE:HD13	2.10	0.50
41:QJ:17:LEU:HD23	41:QJ:17:LEU:C	2.36	0.50
45:QN:27:LYS:CA	45:QN:30:ILE:HB	2.42	0.50
51:QT:82:ILE:C	51:QT:82:ILE:HD12	2.36	0.50
32:XA:109:A:H8	32:XA:327:A:H5'	1.77	0.50
32:XA:239:U:H5'	32:XA:239:U:C6	2.46	0.50
32:XA:262:A:H5'	51:XT:68:LYS:HD3	1.93	0.50
32:XA:382:A:O2'	32:XA:383:A:O4'	2.28	0.50
32:XA:676:A:H2'	32:XA:677:U:C6	2.47	0.50
32:XA:676:A:H2'	32:XA:677:U:H6	1.76	0.50
32:XA:696:A:H8	32:XA:696:A:O5'	1.93	0.50
32:XA:974:A:O2'	32:XA:975:A:OP1	2.23	0.50
32:XA:1133:G:C2	32:XA:1142:G:C6	2.99	0.50
32:XA:1304:G:C2'	32:XA:1333:A:H61	2.24	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1388:C:C2	32:XA:1389:C:C5	3.00	0.50
35:XD:19:PHE:O	35:XD:22:SER:HB2	2.11	0.50
35:XD:102:TYR:C	35:XD:104:MET:H	2.19	0.50
37:XF:9:MET:HE2	37:XF:59:TYR:CZ	2.46	0.50
40:XI:5:TYR:HD2	40:XI:5:TYR:N	2.09	0.50
40:XI:49:GLN:N	40:XI:50:PRO:CD	2.74	0.50
45:XN:47:LEU:O	45:XN:50:LEU:HG	2.11	0.50
46:XO:62:ARG:NH2	46:XO:88:ARG:HH21	2.09	0.50
1:YA:58:G:N3	1:YA:73:A:H2	2.10	0.50
1:YA:71:A:H5"	1:YA:73:A:C5	2.46	0.50
1:YA:249:C:O2'	1:YA:250:G:OP2	2.26	0.50
1:YA:604:G:O6	1:YA:625:G:C6	2.64	0.50
1:YA:611:C:H2'	1:YA:612:G:O4'	2.10	0.50
1:YA:834:G:H2'	1:YA:835:C:O4'	2.11	0.50
1:YA:858:G:C6	1:YA:2268:A:C6	3.00	0.50
1:YA:1056:G:H1'	1:YA:1103:A:N1	2.27	0.50
1:YA:1655:A:C6	1:YA:1656:C:C2	2.99	0.50
1:YA:1918:A:O2'	1:YA:1920:C:N4	2.44	0.50
1:YA:1973:G:C5	1:YA:1974:C:C4	2.99	0.50
1:YA:2051:A:C2	1:YA:2052:A:N6	2.79	0.50
1:YA:2093:G:O2'	1:YA:2094:A:H8	1.95	0.50
1:YA:2108:A:H8	1:YA:2108:A:OP2	1.95	0.50
1:YA:2373:G:C6	1:YA:2374:C:C4	3.00	0.50
1:YA:2742:G:OP1	31:Y4:36:ARG:HD3	2.10	0.50
1:YA:2869:G:H2'	1:YA:2870:C:C6	2.46	0.50
3:YC:79:ARG:C	3:YC:80:LEU:HD12	2.36	0.50
5:YE:148:ILE:HA	5:YE:187:VAL:HB	1.93	0.50
9:YI:48:ILE:HG13	9:YI:49:GLU:H	1.77	0.50
9:YI:76:ALA:O	9:YI:135:MET:HE1	2.12	0.50
10:YJ:18:VAL:HG13	10:YJ:56:VAL:HA	1.94	0.50
11:YK:28:SER:O	11:YK:29:HIS:HB3	2.12	0.50
11:YK:111:LYS:H	11:YK:111:LYS:HE3	1.77	0.50
18:YR:37:GLU:HB2	18:YR:53:PHE:CD2	2.47	0.50
19:YS:33:LEU:HD12	19:YS:51:LEU:HD23	1.94	0.50
20:YT:14:PRO:HA	20:YT:32:LEU:CB	2.41	0.50
20:YT:48:GLN:HE21	20:YT:48:GLN:HA	1.77	0.50
22:YV:80:HIS:CD2	22:YV:83:LYS:HB2	2.46	0.50
1:RA:523:C:O2'	1:RA:524:G:H5'	2.12	0.50
1:RA:572:A:H5"	1:RA:573:U:OP2	2.11	0.50
1:RA:869:G:H4'	13:RM:8:LYS:HE2	1.93	0.50
1:RA:1013:C:H2'	1:RA:1014:A:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1046:A:H3'	1:RA:1047:G:H5'	1.94	0.50
1:RA:1173:U:O2	1:RA:1173:U:H2'	2.11	0.50
1:RA:1310:G:H2'	1:RA:1311:G:H5'	1.93	0.50
1:RA:1494:A:C2	1:RA:1495:A:C4	2.99	0.50
1:RA:1714:U:H5'	1:RA:1715:G:H5'	1.94	0.50
1:RA:1857:G:N3	1:RA:1884:G:C2	2.80	0.50
1:RA:2336:A:H61	23:RW:40:ARG:HB3	1.76	0.50
1:RA:2472:G:H2'	1:RA:2475:C:H42	1.76	0.50
1:RA:2682:A:C8	4:RD:11:MET:CG	2.95	0.50
3:RC:124:LYS:HB3	3:RC:127:ASN:ND2	2.27	0.50
4:RD:40:LEU:H	4:RD:40:LEU:HD12	1.76	0.50
5:RE:108:ILE:HD13	5:RE:108:ILE:C	2.36	0.50
10:RJ:111:LYS:HE2	10:RJ:115:GLY:H	1.75	0.50
11:RK:70:ARG:CD	11:RK:76:VAL:HG22	2.41	0.50
12:RL:40:SER:O	12:RL:41:ARG:O	2.30	0.50
12:RL:78:ARG:HB3	12:RL:113:ALA:CB	2.42	0.50
20:RT:39:THR:O	20:RT:39:THR:CG2	2.58	0.50
22:RV:29:ILE:HG12	22:RV:30:ILE:N	2.27	0.50
32:QA:279:A:H8	32:QA:279:A:H5'	1.76	0.50
32:QA:707:U:H2'	32:QA:708:C:C6	2.47	0.50
37:QF:41:ASP:OD2	37:QF:58:HIS:NE2	2.44	0.50
39:QH:74:ILE:O	39:QH:74:ILE:HG23	2.11	0.50
51:QT:67:HIS:C	51:QT:68:LYS:HZ2	2.20	0.50
32:XA:108:G:H5'	32:XA:109:A:C5'	2.40	0.50
32:XA:239:U:C5'	32:XA:239:U:C6	2.91	0.50
32:XA:599:C:H4'	39:XH:121:GLY:C	2.37	0.50
33:XB:96:LEU:H	33:XB:99:MET:CE	2.20	0.50
34:XC:96:VAL:HB	34:XC:97:PRO:HD2	1.94	0.50
37:XF:12:PRO:HD2	37:XF:54:LEU:HD11	1.94	0.50
42:XK:17:ASP:HA	42:XK:80:ASN:O	2.11	0.50
48:XQ:24:ILE:HD12	48:XQ:24:ILE:N	2.27	0.50
50:XS:11:ASP:O	50:XS:14:LEU:HG	2.11	0.50
52:XU:24:LYS:HE3	52:XU:25:ALA:HB2	1.94	0.50
52:XU:35:GLU:OE1	52:XU:37:TYR:CD1	2.64	0.50
1:YA:502:A:H62	1:YA:505:A:N6	2.10	0.50
1:YA:729:G:O6	3:YC:207:ALA:N	2.37	0.50
1:YA:768:G:C2'	1:YA:769:U:H5'	2.42	0.50
1:YA:841:G:C2'	1:YA:842:U:H5'	2.42	0.50
1:YA:859:G:OP2	1:YA:859:G:C8	2.65	0.50
1:YA:860:U:O2'	1:YA:861:A:H8	1.95	0.50
1:YA:1053:C:N4	1:YA:1054:A:N6	2.58	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1229:C:H2'	1:YA:1230:A:H8	1.76	0.50
1:YA:1342:A:C4	1:YA:1345:C:N4	2.79	0.50
1:YA:1438:U:H2'	1:YA:1439:A:O4'	2.12	0.50
1:YA:1525:A:C6	1:YA:1526:C:N3	2.79	0.50
1:YA:1535:A:N3	1:YA:1535:A:H2'	2.27	0.50
1:YA:2144:G:C2	1:YA:2148:G:O6	2.64	0.50
1:YA:2297:A:N3	1:YA:2298:A:C8	2.79	0.50
1:YA:2315:G:C2	1:YA:2316:G:C4	2.99	0.50
1:YA:2461:A:H1'	1:YA:2492:U:C2	2.47	0.50
1:YA:2823:A:H2'	1:YA:2824:C:H5'	1.94	0.50
2:YB:69:G:H3'	2:YB:70:C:C6	2.45	0.50
3:YC:144:GLU:CA	3:YC:151:GLY:HA2	2.25	0.50
6:YF:7:TYR:O	6:YF:8:LYS:HG3	2.11	0.50
8:YH:43:ASN:O	8:YH:47:PHE:HD2	1.94	0.50
10:YJ:45:THR:H	10:YJ:46:PRO:HD3	1.75	0.50
15:YO:41:ALA:O	15:YO:43:ASN:N	2.44	0.50
16:YP:50:ARG:HA	16:YP:57:ALA:H	1.76	0.50
22:YV:9:ARG:HG2	22:YV:39:ALA:O	2.11	0.50
1:RA:747:U:C4	1:RA:2613:U:C5	3.00	0.50
1:RA:988:A:H8	1:RA:988:A:O5'	1.95	0.50
1:RA:996:A:C2	1:RA:997:G:C8	2.99	0.50
1:RA:1172:C:N3	1:RA:1173:U:H1'	2.27	0.50
1:RA:1535:A:C4'	1:RA:1536:C:OP2	2.50	0.50
1:RA:1539:U:H2'	1:RA:1540:G:H8	1.76	0.50
1:RA:1941:C:H6	1:RA:1941:C:C5'	2.25	0.50
1:RA:2308:G:C5	6:RF:76:PHE:HE2	2.29	0.50
4:RD:114:LYS:NZ	4:RD:116:LYS:HE2	2.27	0.50
6:RF:68:LYS:H	6:RF:68:LYS:CD	2.25	0.50
7:RG:61:TRP:CE3	7:RG:61:TRP:HA	2.46	0.50
10:RJ:74:TYR:CG	10:RJ:92:MET:HE2	2.47	0.50
16:RP:25:VAL:CG1	16:RP:46:VAL:HG23	2.42	0.50
21:RU:5:ARG:O	21:RU:6:ARG:C	2.54	0.50
27:R0:9:ARG:HH21	27:R0:9:ARG:CG	2.25	0.50
32:QA:91:U:C5	32:QA:92:U:C2	3.00	0.50
32:QA:652:U:C5	32:QA:752:G:N3	2.79	0.50
32:QA:991:U:O2'	32:QA:1212:U:H6	1.92	0.50
32:QA:1062:U:H2'	32:QA:1063:C:C5	2.46	0.50
32:QA:1111:A:N1	34:QC:176:THR:HG23	2.27	0.50
32:QA:1123:U:H5"	32:QA:1124:G:OP2	2.11	0.50
32:QA:1157:A:C4	32:QA:1181:G:C6	2.99	0.50
32:QA:1240:U:H3'	32:QA:1241:G:C5'	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:1273:C:H2'	32:QA:1274:A:O4'	2.11	0.50
32:QA:1392:G:C2'	32:QA:1393:U:H5'	2.42	0.50
33:QB:66:ILE:HB	33:QB:88:GLN:CB	2.41	0.50
35:QD:167:PRO:HB2	35:QD:170:LEU:CD1	2.41	0.50
36:QE:29:ILE:HD12	36:QE:30:PHE:N	2.26	0.50
36:QE:120:HIS:O	36:QE:121:ASN:HB3	2.10	0.50
38:QG:14:ASP:CG	38:QG:17:PHE:HB2	2.36	0.50
39:QH:93:LYS:HE3	39:QH:116:ARG:NH1	2.27	0.50
52:QU:40:PRO:HA	52:QU:43:GLU:HB2	1.93	0.50
32:XA:250:A:H1'	32:XA:252:U:C4	2.47	0.50
32:XA:300:A:H2'	32:XA:301:G:O4'	2.12	0.50
32:XA:706:A:C5	32:XA:707:U:C5	2.99	0.50
32:XA:957:U:O2'	32:XA:958:A:N7	2.40	0.50
32:XA:1053:G:O6	32:XA:1199:U:H2'	2.12	0.50
32:XA:1511:G:C5	32:XA:1512:U:C5	3.00	0.50
35:XD:154:VAL:O	35:XD:157:ALA:HB3	2.11	0.50
35:XD:161:ALA:O	35:XD:164:ARG:HB2	2.11	0.50
38:XG:91:ARG:NH2	38:XG:92:PRO:HB2	2.27	0.50
41:XJ:77:VAL:O	41:XJ:79:PRO:HD3	2.12	0.50
47:XP:66:THR:HG22	47:XP:67:ILE:N	2.27	0.50
1:YA:1062:G:C8	1:YA:1088:A:H8	2.30	0.50
1:YA:1211:C:H5"	1:YA:1212:G:C8	2.47	0.50
1:YA:1272:A:C5	1:YA:1618:A:H1'	2.47	0.50
1:YA:1385:A:N6	1:YA:1403:A:C5	2.80	0.50
1:YA:1628:G:H2'	1:YA:1629:U:C6	2.47	0.50
1:YA:1783:A:C2	1:YA:2588:G:O4'	2.64	0.50
1:YA:1906:G:C8	1:YA:1929:G:H2'	2.46	0.50
1:YA:1993:U:H4'	4:YD:133:THR:HG21	1.94	0.50
1:YA:2094:A:C4	1:YA:2095:A:C8	3.00	0.50
1:YA:2261:C:N4	23:YW:10:ARG:HB3	2.27	0.50
1:YA:2337:G:OP1	1:YA:2385:C:OP2	2.29	0.50
2:YB:7:G:O2'	15:YO:38:GLN:NE2	2.45	0.50
2:YB:15:A:OP1	2:YB:108:A:H5'	2.12	0.50
2:YB:23:G:C2	2:YB:61:G:C2	3.00	0.50
2:YB:65:U:C4	2:YB:108:A:C4	3.00	0.50
3:YC:140:VAL:HG23	3:YC:141:HIS:N	2.27	0.50
3:YC:166:ARG:HA	3:YC:171:VAL:HA	1.93	0.50
3:YC:184:GLU:HB2	3:YC:187:CYS:SG	2.52	0.50
4:YD:193:VAL:HB	4:YD:194:PRO:HD2	1.94	0.50
8:YH:50:ARG:C	8:YH:52:ALA:H	2.20	0.50
10:YJ:54:ILE:O	10:YJ:122:LEU:HD12	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:YJ:120:ARG:O	10:YJ:123:LYS:NZ	2.43	0.50
16:YP:64:SER:O	16:YP:66:GLY:N	2.43	0.50
17:YQ:87:VAL:HG11	18:YR:52:PRO:CG	2.38	0.50
18:YR:62:GLU:CD	18:YR:97:LYS:HD2	2.37	0.50
18:YR:81:LYS:O	18:YR:82:HIS:C	2.55	0.50
20:YT:19:LYS:O	20:YT:20:ALA:HB2	2.12	0.50
24:YX:57:VAL:HG12	24:YX:58:ILE:N	2.27	0.50
28:Y1:7:LYS:C	28:Y1:8:ILE:HD13	2.37	0.50
1:RA:388:G:N7	1:RA:390:U:H2'	2.26	0.50
1:RA:484:C:H2'	1:RA:485:C:H6	1.77	0.50
1:RA:621:A:OP2	12:RL:99:ASN:OD1	2.30	0.50
1:RA:747:U:C4	1:RA:2613:U:C4	2.99	0.50
1:RA:856:G:H21	23:RW:19:ARG:HH22	1.58	0.50
1:RA:960:A:H5"	1:RA:961:C:OP2	2.12	0.50
1:RA:1338:G:O2'	20:RT:18:GLU:HG2	2.12	0.50
1:RA:1477:A:H2'	1:RA:1478:G:O4'	2.12	0.50
56:RA:3242:HOH:O	5:RE:81:GLY:HA2	2.12	0.50
5:RE:37:ALA:C	5:RE:39:ALA:H	2.20	0.50
9:RI:56:VAL:HG22	9:RI:57:VAL:N	2.27	0.50
10:RJ:88:THR:HG22	10:RJ:91:GLU:CG	2.42	0.50
12:RL:47:ARG:HG2	12:RL:47:ARG:HH21	1.77	0.50
16:RP:4:ILE:CG2	16:RP:5:LYS:N	2.60	0.50
16:RP:33:GLU:OE1	32:QA:345:C:H3'	2.12	0.50
19:RS:12:SER:OG	19:RS:13:SER:N	2.45	0.50
19:RS:29:VAL:HG13	19:RS:55:ILE:HD11	1.92	0.50
26:RZ:8:GLN:O	26:RZ:9:THR:HG22	2.12	0.50
28:R1:3:GLY:O	28:R1:4:ILE:HG12	2.11	0.50
32:QA:579:A:H2'	32:QA:580:C:C6	2.47	0.50
32:QA:974:A:P	45:QN:68:ARG:HH22	2.34	0.50
32:QA:1001:C:H2'	32:QA:1002:G:C8	2.46	0.50
32:QA:1141:C:C2	32:QA:1142:G:C8	3.00	0.50
35:QD:2:ARG:CZ	35:QD:114:ARG:HD3	2.41	0.50
35:QD:133:SER:O	35:QD:134:TYR:C	2.53	0.50
37:QF:40:GLU:HB2	37:QF:42:TRP:NE1	2.26	0.50
45:QN:20:PHE:C	45:QN:22:LYS:N	2.70	0.50
46:QO:5:GLU:O	46:QO:9:LYS:HG3	2.12	0.50
32:XA:223:A:C5	32:XA:224:U:C5	3.00	0.50
32:XA:251:G:N2	32:XA:253:A:H62	2.07	0.50
32:XA:721:G:H4'	32:XA:722:G:O5'	2.12	0.50
32:XA:811:C:H4'	32:XA:900:A:N6	2.26	0.50
32:XA:961:U:C4	32:XA:983:A:C6	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1072:G:H2'	32:XA:1073:U:C6	2.47	0.50
32:XA:1301:U:H5"	32:XA:1302:C:OP2	2.12	0.50
32:XA:1453:G:O2'	32:XA:1454:G:H4'	2.12	0.50
33:XB:19:THR:HG22	33:XB:37:VAL:HG23	1.93	0.50
41:XJ:81:GLU:C	41:XJ:83:THR:H	2.18	0.50
44:XM:7:ASN:C	44:XM:9:PRO:HD3	2.37	0.50
44:XM:75:SER:HB2	44:XM:79:LEU:CD1	2.42	0.50
46:XO:88:ARG:CZ	1:YA:715:A:O3'	2.60	0.50
48:XQ:77:VAL:HG12	48:XQ:78:VAL:O	2.11	0.50
1:YA:81:G:H2'	1:YA:82:U:H6	1.77	0.50
1:YA:234:U:O2'	1:YA:235:U:H5'	2.12	0.50
1:YA:377:G:C6	1:YA:378:C:C4	2.99	0.50
1:YA:479:A:C4'	1:YA:480:A:OP1	2.47	0.50
1:YA:565:C:H1'	1:YA:577:G:N2	2.26	0.50
1:YA:570:G:C5	1:YA:2030:A:N7	2.80	0.50
1:YA:600:G:H5'	5:YE:27:LEU:HD13	1.94	0.50
1:YA:608:A:C5	1:YA:621:A:N7	2.80	0.50
1:YA:931:U:H4'	1:YA:932:U:OP2	2.11	0.50
1:YA:1205:A:H5"	1:YA:1206:G:H8	1.71	0.50
1:YA:1500:G:N1	1:YA:1501:G:C5	2.80	0.50
1:YA:1620:G:C6	1:YA:1621:U:C4	3.00	0.50
1:YA:2751:G:N3	1:YA:2751:G:H2'	2.27	0.50
11:YK:92:GLU:O	11:YK:93:GLN:O	2.30	0.50
12:YL:111:ILE:HA	12:YL:128:THR:OG1	2.12	0.50
16:YP:45:VAL:O	16:YP:60:VAL:HA	2.11	0.50
21:YU:39:ASN:CB	21:YU:62:ALA:HB3	2.41	0.50
22:YV:56:PHE:C	22:YV:56:PHE:CD1	2.90	0.50
23:YW:27:GLY:HA2	23:YW:31:LEU:HD11	1.90	0.50
25:YY:5:GLU:O	25:YY:6:LEU:HG	2.12	0.50
25:YY:28:LEU:HD23	25:YY:42:LEU:HD13	1.94	0.50
1:RA:477:A:C6	1:RA:478:A:C6	3.00	0.50
1:RA:997:G:O2'	1:RA:998:C:H5'	2.11	0.50
1:RA:1413:A:C6	1:RA:1414:C:N3	2.80	0.50
1:RA:1945:G:H2'	1:RA:1946:U:H6	1.77	0.50
1:RA:1955:U:H5	1:RA:2557:G:N2	2.10	0.50
1:RA:2148:G:O2'	1:RA:2149:U:C4'	2.60	0.50
1:RA:2186:G:C6	1:RA:2187:U:C2	3.00	0.50
1:RA:2199:A:H3'	1:RA:2200:C:H6	1.76	0.50
2:RB:65:U:C4	2:RB:108:A:C4	3.00	0.50
3:RC:247:TRP:C	3:RC:249:VAL:H	2.17	0.50
8:RH:131:SER:O	8:RH:132:PHE:HB3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:RJ:38:GLY:O	10:RJ:40:HIS:N	2.45	0.50
10:RJ:95:ARG:O	10:RJ:95:ARG:HG3	2.10	0.50
12:RL:120:VAL:O	12:RL:140:GLY:HA2	2.12	0.50
23:RW:17:ALA:CA	23:RW:35:ILE:HG23	2.35	0.50
23:RW:39:GLN:NE2	23:RW:43:LYS:N	2.57	0.50
27:R0:53:VAL:O	27:R0:54:ILE:O	2.30	0.50
32:QA:983:A:H2	32:QA:1222:G:H22	1.60	0.50
32:QA:1163:A:C2	32:QA:1174:G:C2	3.00	0.50
32:QA:1319:A:C4	32:QA:1323:G:C8	3.00	0.50
40:QI:32:ARG:HG2	40:QI:36:GLN:CB	2.42	0.50
41:QJ:28:THR:O	41:QJ:28:THR:CG2	2.59	0.50
47:QP:10:GLY:O	47:QP:11:ALA:HB2	2.11	0.50
32:XA:243:A:H2	32:XA:245:U:H2'	1.77	0.50
32:XA:663:A:H5'	32:XA:836:G:OP1	2.11	0.50
32:XA:1014:A:H4'	50:XS:13:HIS:CE1	2.47	0.50
32:XA:1089:G:H2'	32:XA:1090:U:O4'	2.12	0.50
32:XA:1221:G:N2	32:XA:1222:G:H1'	2.27	0.50
32:XA:1497:G:H2'	32:XA:1498:U:H5'	1.93	0.50
32:XA:1499:A:H1'	32:XA:1520:C:H5'	1.94	0.50
32:XA:1533:C:C2'	32:XA:1534:A:H5"	2.42	0.50
38:XG:114:SER:O	38:XG:118:ARG:HG3	2.12	0.50
39:XH:1:SER:C	39:XH:3:GLN:N	2.70	0.50
41:XJ:40:ILE:HG22	41:XJ:42:LEU:CD1	2.42	0.50
42:XK:90:PRO:O	42:XK:91:GLY:C	2.55	0.50
1:YA:117:G:C2	1:YA:119:A:N6	2.80	0.50
1:YA:142:A:O2'	1:YA:143:C:O4'	2.29	0.50
1:YA:146:A:C6	1:YA:147:C:C4	3.00	0.50
1:YA:280:U:C5	1:YA:281:C:C4	3.00	0.50
1:YA:412:A:O2'	1:YA:413:C:C5'	2.60	0.50
1:YA:607:U:H5	1:YA:619:G:C2	2.30	0.50
1:YA:1042:G:C6	1:YA:1043:C:C4	3.00	0.50
1:YA:1049:C:O2'	1:YA:1050:A:O5'	2.30	0.50
1:YA:1180:U:C4	1:YA:1181:U:C4	3.00	0.50
1:YA:1378:A:C8	1:YA:1380:G:C5	3.00	0.50
1:YA:1388:G:C2'	1:YA:1389:G:H8	2.23	0.50
1:YA:1416:G:C2	1:YA:1417:C:C4	3.00	0.50
1:YA:1460:U:OP2	1:YA:1460:U:C6	2.64	0.50
1:YA:1759:A:O2'	1:YA:2714:G:H1'	2.12	0.50
1:YA:2408:U:O2'	1:YA:2409:G:C8	2.64	0.50
1:YA:2415:G:C5	1:YA:2416:C:C5	3.00	0.50
1:YA:2415:G:C2	1:YA:2416:C:C2	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2757:A:O2'	1:YA:2758:A:H5'	2.12	0.50
2:YB:50:A:OP1	15:YO:68:LYS:HB2	2.12	0.50
2:YB:94:A:OP1	22:YV:19:ARG:CD	2.60	0.50
6:YF:74:ALA:HB1	6:YF:76:PHE:CD2	2.47	0.50
6:YF:104:THR:H	6:YF:107:VAL:HG22	1.77	0.50
6:YF:127:TYR:O	6:YF:155:ILE:HD11	2.12	0.50
8:YH:68:ARG:CZ	8:YH:68:ARG:HB3	2.37	0.50
8:YH:136:SER:C	8:YH:137:GLU:HG3	2.37	0.50
11:YK:28:SER:O	11:YK:29:HIS:CB	2.60	0.50
16:YP:91:VAL:HG21	16:YP:96:LEU:HD21	1.94	0.50
17:YQ:6:GLY:C	17:YQ:8:ILE:N	2.69	0.50
24:YX:67:LEU:O	24:YX:77:TYR:OH	2.28	0.50
25:YY:31:GLN:NE2	25:YY:37:LEU:HD12	2.25	0.50
25:YY:40:SER:C	25:YY:42:LEU:H	2.19	0.50
1:RA:237:C:O2'	1:RA:238:C:H5'	2.12	0.49
1:RA:603:A:H4'	1:RA:604:G:C5'	2.41	0.49
1:RA:1496:A:C4	1:RA:1498:C:N4	2.80	0.49
1:RA:2192:U:O2'	1:RA:2193:G:H5'	2.12	0.49
1:RA:2378:A:N7	1:RA:2379:G:H1'	2.26	0.49
1:RA:2415:G:H2'	1:RA:2416:C:H6	1.77	0.49
1:RA:2516:A:O2'	1:RA:2517:C:H5'	2.12	0.49
1:RA:2772:C:H2'	1:RA:2773:C:H6	1.76	0.49
1:RA:2856:A:C2'	1:RA:2857:G:H5'	2.42	0.49
5:RE:153:LEU:O	5:RE:153:LEU:HG	2.11	0.49
6:RF:134:GLN:NE2	6:RF:150:GLY:H	2.10	0.49
8:RH:66:ASN:C	8:RH:68:ARG:N	2.70	0.49
9:RI:135:MET:HG2	9:RI:137:LEU:HG	1.93	0.49
14:RN:33:ILE:HD11	14:RN:118:ARG:HH21	1.77	0.49
14:RN:33:ILE:CD1	14:RN:118:ARG:NH2	2.75	0.49
14:RN:77:ALA:O	14:RN:81:ASN:HB2	2.12	0.49
16:RP:111:GLU:CD	16:RP:111:GLU:H	2.20	0.49
32:QA:174:A:C6	32:QA:175:C:C4	3.00	0.49
32:QA:833:G:O2'	32:QA:834:U:H5'	2.12	0.49
32:QA:1160:G:O2'	32:QA:1161:C:O5'	2.28	0.49
32:QA:1480:A:C6	32:QA:1481:U:C4	3.00	0.49
34:QC:153:SER:HB3	34:QC:164:THR:HA	1.93	0.49
38:QG:77:ARG:HB3	38:QG:79:VAL:HG23	1.93	0.49
39:QH:88:LYS:O	39:QH:91:LEU:HB2	2.12	0.49
40:QI:57:VAL:O	40:QI:58:GLU:HG2	2.12	0.49
50:QS:41:PRO:C	50:QS:43:MET:H	2.20	0.49
51:QT:6:ALA:HA	51:QT:8:LYS:HG2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:590:U:O2'	32:XA:591:U:H5'	2.12	0.49
32:XA:602:A:O2'	32:XA:603:U:H5'	2.11	0.49
32:XA:892:A:C5	32:XA:893:C:C5	3.00	0.49
32:XA:1095:U:H2'	32:XA:1096:C:H6	1.77	0.49
32:XA:1356:G:H2'	32:XA:1357:A:C8	2.47	0.49
34:XC:17:TRP:CD1	45:XN:90:GLY:HA2	2.47	0.49
39:XH:85:TYR:CE1	48:XQ:36:PHE:CE2	3.00	0.49
50:XS:38:THR:HB	50:XS:69:LYS:NZ	2.27	0.49
1:YA:118:A:O5'	1:YA:119:A:H5"	2.12	0.49
1:YA:373:U:O2	1:YA:374:A:C8	2.65	0.49
1:YA:600:G:H5"	5:YE:27:LEU:HD22	1.94	0.49
1:YA:659:G:H4'	5:YE:95:LYS:HD2	1.93	0.49
1:YA:670:A:H4'	1:YA:671:C:H3'	1.94	0.49
1:YA:867:C:O2'	1:YA:868:U:C6	2.35	0.49
1:YA:948:C:O5'	1:YA:948:C:H6	1.95	0.49
1:YA:1207:C:H2'	1:YA:1208:C:C6	2.45	0.49
1:YA:1361:G:H2'	1:YA:1362:C:H5'	1.93	0.49
1:YA:1719:G:C2	1:YA:1742:U:O2	2.65	0.49
1:YA:1809:A:C2'	1:YA:1810:A:H8	2.24	0.49
1:YA:2056:G:H21	27:Y0:1:ALA:N	2.08	0.49
1:YA:2371:G:O3'	28:Y1:44:GLN:NE2	2.46	0.49
1:YA:2384:U:OP2	1:YA:2384:U:H6	1.95	0.49
1:YA:2429:G:H3'	1:YA:2429:G:OP2	2.12	0.49
5:YE:165:HIS:O	5:YE:167:VAL:N	2.45	0.49
11:YK:6:THR:O	11:YK:8:LEU:HD12	2.11	0.49
13:YM:41:LEU:HB3	13:YM:46:ILE:HG23	1.94	0.49
13:YM:69:PRO:HA	13:YM:94:ALA:HB2	1.94	0.49
14:YN:14:SER:C	14:YN:16:HIS:N	2.69	0.49
25:YY:21:LEU:HD23	25:YY:25:GLN:HG2	1.92	0.49
1:RA:271:G:C6	1:RA:272:A:N6	2.80	0.49
1:RA:528:A:C2	1:RA:2042:A:H2'	2.47	0.49
1:RA:646:U:H3'	1:RA:647:G:H5"	1.94	0.49
1:RA:687:C:H2'	1:RA:688:U:O4'	2.12	0.49
1:RA:870:U:C2'	1:RA:871:U:H5'	2.42	0.49
1:RA:1253:A:N7	56:RA:3332:HOH:O	2.35	0.49
1:RA:1869:G:N2	1:RA:1873:G:C6	2.79	0.49
1:RA:2336:A:N6	23:RW:40:ARG:HB3	2.28	0.49
3:RC:170:TYR:HD2	3:RC:183:VAL:C	2.21	0.49
5:RE:147:LEU:HD23	5:RE:183:PHE:CD1	2.46	0.49
7:RG:116:LEU:HD13	7:RG:116:LEU:N	2.27	0.49
10:RJ:124:VAL:HG23	10:RJ:125:TYR:H	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:RK:76:VAL:HB	16:RP:72:VAL:HG23	1.90	0.49
18:RR:54:VAL:HG23	18:RR:57:GLY:N	2.27	0.49
21:RU:73:ASN:HD22	21:RU:75:ALA:HB3	1.77	0.49
23:RW:30:VAL:HA	23:RW:60:ALA:O	2.11	0.49
24:RX:5:GLN:HE21	24:RX:49:ARG:CB	2.25	0.49
24:RX:29:LEU:HB2	24:RX:30:PRO:HD3	1.94	0.49
32:QA:35:G:H2'	32:QA:36:C:C6	2.47	0.49
32:QA:536:C:OP1	56:QA:1889:HOH:O	2.20	0.49
32:QA:784:A:O2'	32:QA:785:G:H5'	2.13	0.49
32:QA:1066:C:H6	32:QA:1066:C:C5'	2.21	0.49
33:QB:74:ALA:O	33:QB:75:ALA:HB2	2.12	0.49
35:QD:100:VAL:O	35:QD:100:VAL:CG1	2.60	0.49
36:QE:15:ILE:HG21	36:QE:35:LEU:HD23	1.92	0.49
38:QG:129:ASN:HA	38:QG:134:VAL:HG11	1.94	0.49
46:QO:86:LEU:C	46:QO:88:ARG:N	2.70	0.49
32:XA:373:A:C8	32:XA:373:A:C5'	2.95	0.49
32:XA:754:C:O2'	32:XA:755:G:H5'	2.11	0.49
32:XA:973:G:H2'	32:XA:974:A:H2'	1.94	0.49
32:XA:1066:C:H2'	32:XA:1067:A:N7	2.28	0.49
35:XD:94:GLU:OE1	35:XD:103:ARG:NE	2.38	0.49
36:XE:37:VAL:HG12	36:XE:38:VAL:H	1.76	0.49
36:XE:56:PRO:O	36:XE:59:ILE:HG23	2.12	0.49
39:XH:91:LEU:HD12	39:XH:116:ARG:HG3	1.94	0.49
40:XI:45:MET:HA	40:XI:48:ARG:CG	2.42	0.49
48:XQ:3:LYS:O	48:XQ:3:LYS:HG3	2.11	0.49
48:XQ:11:VAL:HG12	48:XQ:12:VAL:H	1.76	0.49
50:XS:11:ASP:H	50:XS:14:LEU:HD21	1.76	0.49
1:YA:348:A:H2'	1:YA:349:U:H6	1.76	0.49
1:YA:464:U:H1'	1:YA:686:U:C5	2.43	0.49
1:YA:480:A:H3'	1:YA:481:G:H5"	1.94	0.49
1:YA:617:G:O2'	1:YA:618:G:C8	2.48	0.49
1:YA:674:G:O3'	5:YE:60:TRP:CH2	2.64	0.49
1:YA:1009:A:O2'	1:YA:1010:A:C8	2.59	0.49
1:YA:1131:G:C5	1:YA:2025:C:H4'	2.47	0.49
1:YA:2140:G:C6	1:YA:2152:G:C6	3.00	0.49
1:YA:2663:G:H2'	1:YA:2664:G:C8	2.46	0.49
1:YA:2712:C:OP1	1:YA:2714:G:H4'	2.12	0.49
1:YA:2823:A:C5	1:YA:2824:C:C5	2.99	0.49
3:YC:77:VAL:CG2	3:YC:111:ALA:HA	2.41	0.49
4:YD:121:THR:HG21	4:YD:127:PHE:CD1	2.47	0.49
5:YE:72:SER:C	5:YE:74:LYS:H	2.20	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:YE:126:VAL:HG13	5:YE:127:GLU:H	1.74	0.49
6:YF:59:ILE:HD13	6:YF:137:PHE:CZ	2.46	0.49
7:YG:41:GLU:O	7:YG:43:LYS:HG3	2.12	0.49
8:YH:83:LYS:HZ1	8:YH:91:PHE:HD2	1.60	0.49
10:YJ:8:PRO:HG2	10:YJ:9:GLU:H	1.77	0.49
12:YL:3:LEU:C	12:YL:3:LEU:HD12	2.36	0.49
12:YL:40:SER:OG	12:YL:41:ARG:N	2.45	0.49
21:YU:6:ARG:HG2	21:YU:7:ASP:N	2.26	0.49
30:Y3:31:ILE:HG21	30:Y3:34:LYS:HZ3	1.77	0.49
1:RA:37:C:O2'	5:RE:45:ALA:HA	2.13	0.49
1:RA:323:C:C4	1:RA:333:G:C8	3.01	0.49
1:RA:1277:G:C5'	14:RN:20:MET:CE	2.89	0.49
1:RA:2136:G:O2'	1:RA:2137:U:H6	1.90	0.49
1:RA:2257:U:O2'	1:RA:2258:C:H5'	2.13	0.49
1:RA:2849:U:H1'	1:RA:2866:U:O2	2.10	0.49
2:RB:28:C:OP1	15:RO:31:THR:HG21	2.12	0.49
2:RB:90:C:H5'	13:RM:18:ARG:HG2	1.94	0.49
3:RC:12:ARG:HG2	3:RC:12:ARG:NH1	2.23	0.49
3:RC:181:ARG:HH21	3:RC:181:ARG:CG	2.24	0.49
8:RH:9:VAL:O	8:RH:9:VAL:HG12	2.12	0.49
18:RR:39:LEU:HB3	18:RR:49:ILE:HD13	1.94	0.49
20:RT:39:THR:HB	20:RT:42:GLU:H	1.77	0.49
20:RT:44:LYS:HG3	20:RT:55:VAL:CG1	2.41	0.49
28:R1:29:LYS:HB3	28:R1:29:LYS:NZ	2.27	0.49
32:QA:237:G:H5"	48:QQ:26:ARG:NH2	2.27	0.49
32:QA:1142:G:H2'	32:QA:1143:G:O4'	2.12	0.49
32:QA:1224:U:O2'	32:QA:1322:C:OP1	2.31	0.49
33:QB:49:PHE:CD1	33:QB:49:PHE:C	2.90	0.49
36:QE:87:VAL:O	36:QE:88:HIS:HB2	2.11	0.49
37:QF:62:MET:O	37:QF:63:ASN:HB2	2.12	0.49
32:XA:83:C:C2	32:XA:87:C:N4	2.79	0.49
32:XA:1159:U:O4'	32:XA:1182:G:N2	2.45	0.49
32:XA:1161:C:O2	32:XA:1176:A:H2	1.95	0.49
32:XA:1460:C:H6	32:XA:1460:C:O5'	1.95	0.49
36:XE:55:VAL:N	36:XE:56:PRO:CD	2.75	0.49
41:XJ:67:ILE:HG23	45:XN:95:LEU:N	2.22	0.49
44:XM:11:HIS:N	44:XM:44:ILE:HD12	2.27	0.49
44:XM:47:LEU:HD23	44:XM:48:SER:C	2.38	0.49
52:XU:20:ARG:NH1	52:XU:24:LYS:HG2	2.26	0.49
1:YA:88:G:C2	1:YA:89:A:C8	3.00	0.49
1:YA:170:U:H2'	1:YA:171:U:C6	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:322:A:H3'	5:YE:163:ASN:CG	2.37	0.49
1:YA:642:U:H2'	1:YA:644:A:OP2	2.12	0.49
1:YA:670:A:H4'	1:YA:671:C:O5'	2.12	0.49
1:YA:705:A:H2'	1:YA:706:A:C8	2.47	0.49
1:YA:857:G:H1'	23:YW:19:ARG:HE	1.77	0.49
1:YA:1060:U:H4'	1:YA:1061:U:H2'	1.95	0.49
1:YA:1251:C:C5	17:YQ:5:ARG:NH1	2.81	0.49
1:YA:1425:G:H2'	1:YA:1426:G:C8	2.46	0.49
1:YA:1757:A:N1	1:YA:1762:A:H2	2.10	0.49
1:YA:2290:G:C6	1:YA:2291:U:C4	3.00	0.49
3:YC:17:LYS:HD3	3:YC:18:VAL:N	2.26	0.49
3:YC:68:ARG:NE	3:YC:128:THR:OG1	2.46	0.49
6:YF:37:MET:HE3	6:YF:56:LEU:HD23	1.93	0.49
6:YF:45:ASP:C	6:YF:47:LYS:N	2.69	0.49
9:YI:79:LEU:C	9:YI:81:LYS:H	2.19	0.49
10:YJ:99:ARG:HA	10:YJ:102:GLU:CB	2.37	0.49
12:YL:48:ARG:HG3	12:YL:48:ARG:NH1	2.08	0.49
15:YO:62:LEU:CD1	15:YO:65:THR:HG23	2.43	0.49
16:YP:50:ARG:CA	16:YP:57:ALA:O	2.60	0.49
19:YS:1:MET:HE2	19:YS:1:MET:HA	1.94	0.49
19:YS:20:VAL:HG11	19:YS:43:ALA:HB1	1.95	0.49
21:YU:47:PRO:HB3	21:YU:54:PRO:CG	2.42	0.49
1:RA:884:U:O2	1:RA:884:U:H2'	2.12	0.49
1:RA:1851:U:C4	1:RA:1852:U:C4	3.00	0.49
1:RA:2298:A:C2	1:RA:2321:U:C4	3.00	0.49
1:RA:2489:U:O2	1:RA:2491:U:C4	2.66	0.49
2:RB:77:U:C2'	2:RB:78:A:H5'	2.43	0.49
3:RC:39:SER:C	3:RC:41:GLY:H	2.19	0.49
4:RD:34:VAL:HG21	4:RD:90:PHE:O	2.13	0.49
4:RD:108:ASP:CG	4:RD:206:ALA:HA	2.36	0.49
6:RF:79:ARG:O	6:RF:82:TYR:HB2	2.13	0.49
8:RH:72:ILE:O	8:RH:72:ILE:HG23	2.11	0.49
9:RI:32:VAL:HG13	9:RI:66:PHE:CE2	2.47	0.49
9:RI:33:ASN:HD22	9:RI:64:ARG:NH2	2.02	0.49
16:RP:24:THR:CG2	16:RP:86:LYS:HB2	2.43	0.49
17:RQ:60:TRP:O	17:RQ:63:ARG:HG3	2.11	0.49
17:RQ:63:ARG:NH2	17:RQ:95:ALA:C	2.70	0.49
23:RW:30:VAL:O	23:RW:30:VAL:CG2	2.60	0.49
28:R1:9:LYS:O	28:R1:50:GLU:HG2	2.11	0.49
32:QA:116:A:C2'	32:QA:117:G:O5'	2.60	0.49
32:QA:191:G:C4	32:QA:192:A:C8	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:405:U:OP1	32:QA:406:G:O2'	2.28	0.49
32:QA:450:G:N7	32:QA:481:G:O6	2.45	0.49
32:QA:1283:U:H2'	32:QA:1284:C:C6	2.47	0.49
33:QB:172:ILE:HG23	33:QB:182:VAL:HG11	1.93	0.49
34:QC:39:ARG:CZ	34:QC:54:ILE:HD11	2.42	0.49
36:QE:153:ALA:HA	36:QE:156:ARG:HB2	1.94	0.49
43:QL:107:LYS:O	43:QL:108:ASP:HB2	2.12	0.49
44:QM:15:VAL:HG13	44:QM:40:GLU:O	2.13	0.49
32:XA:168:G:H2'	32:XA:169:C:H5'	1.94	0.49
32:XA:408:A:C2	32:XA:435:A:C2	3.00	0.49
32:XA:1239:A:N7	32:XA:1298:U:N3	2.54	0.49
32:XA:1378:C:H3'	32:XA:1379:G:H5"	1.93	0.49
38:XG:14:ASP:HB3	38:XG:18:GLY:N	2.22	0.49
44:XM:12:LYS:H	44:XM:44:ILE:HG13	1.76	0.49
45:XN:30:ILE:HG22	45:XN:41:TRP:N	2.26	0.49
49:XR:63:TYR:CE2	49:XR:69:TYR:OH	2.64	0.49
1:YA:280:U:H5	1:YA:281:C:C4	2.30	0.49
1:YA:309:A:N7	1:YA:330:A:N6	2.60	0.49
1:YA:382:A:H2'	1:YA:383:C:H5"	1.94	0.49
1:YA:584:C:C4	1:YA:585:G:C5	3.00	0.49
1:YA:653:U:O2	1:YA:653:U:H2'	2.13	0.49
1:YA:923:G:H1'	23:YW:23:LYS:HZ2	1.78	0.49
1:YA:942:G:H2'	1:YA:943:A:C5'	2.39	0.49
1:YA:992:C:H4'	18:YR:74:ILE:CD1	2.42	0.49
1:YA:1139:G:N3	1:YA:1143:A:H2	2.10	0.49
1:YA:1292:G:C6	1:YA:1293:C:N4	2.80	0.49
1:YA:1312:U:N3	1:YA:1603:A:C6	2.81	0.49
1:YA:1313:U:OP1	56:YA:3407:HOH:O	2.18	0.49
1:YA:1440:U:H2'	1:YA:1441:G:H8	1.75	0.49
1:YA:1476:U:H1'	1:YA:1732:C:O2	2.11	0.49
1:YA:1594:U:H2'	1:YA:1595:C:C6	2.47	0.49
1:YA:1607:C:C4'	1:YA:1608:A:C8	2.92	0.49
1:YA:1705:A:C5	1:YA:1706:C:C4	3.00	0.49
1:YA:1817:G:HO2'	1:YA:1818:U:H5'	1.69	0.49
1:YA:2056:G:N2	1:YA:2057:G:N9	2.60	0.49
1:YA:2290:G:H4'	1:YA:2381:A:O2'	2.12	0.49
1:YA:2331:G:N1	1:YA:2385:C:C4	2.80	0.49
1:YA:2667:C:O2'	1:YA:2668:G:O4'	2.30	0.49
3:YC:131:MET:HA	3:YC:134:ILE:CD1	2.43	0.49
4:YD:106:LYS:HD3	4:YD:106:LYS:N	2.27	0.49
5:YE:5:LEU:HD22	5:YE:122:GLU:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:YG:94:ARG:O	7:YG:95:ALA:HB2	2.13	0.49
7:YG:95:ALA:HB1	7:YG:124:CYS:SG	2.53	0.49
14:YN:67:PHE:CE2	14:YN:73:ASN:OD1	2.65	0.49
21:YU:3:LYS:HD3	21:YU:82:VAL:CG2	2.42	0.49
28:Y1:42:VAL:HG12	28:Y1:42:VAL:O	2.11	0.49
1:RA:254:G:N7	30:R3:4:LYS:HE2	2.27	0.49
1:RA:353:C:H2'	1:RA:353:C:O2	2.11	0.49
1:RA:357:C:H2'	1:RA:358:U:H6	1.76	0.49
1:RA:987:C:C2'	1:RA:988:A:H5'	2.43	0.49
1:RA:1443:U:H2'	1:RA:1444:G:C8	2.48	0.49
1:RA:1669:A:H5"	1:RA:1670:C:OP2	2.13	0.49
1:RA:1867:G:H2'	1:RA:1868:C:H5'	1.95	0.49
1:RA:2517:C:C2	1:RA:2542:A:N6	2.80	0.49
1:RA:2886:A:C2	1:RA:2887:A:H1'	2.47	0.49
2:RB:94:A:O2'	2:RB:95:U:H5'	2.12	0.49
5:RE:79:ARG:O	5:RE:80:SER:C	2.56	0.49
6:RF:105:ILE:C	6:RF:108:PRO:HD2	2.37	0.49
8:RH:39:ALA:C	8:RH:41:LYS:H	2.20	0.49
9:RI:8:VAL:HG23	9:RI:9:LYS:N	2.26	0.49
12:RL:14:LYS:CG	12:RL:15:ALA:N	2.75	0.49
23:RW:8:SER:C	23:RW:9:THR:HG22	2.36	0.49
23:RW:13:ARG:O	23:RW:14:ASP:C	2.55	0.49
23:RW:35:ILE:O	23:RW:37:VAL:HG23	2.13	0.49
25:RY:9:LYS:HA	25:RY:9:LYS:HZ1	1.78	0.49
25:RY:42:LEU:O	25:RY:45:GLN:O	2.30	0.49
32:QA:73:C:O2'	32:QA:74:A:C5'	2.61	0.49
32:QA:222:C:O2'	32:QA:223:A:H5'	2.12	0.49
32:QA:562:U:H1'	43:QL:11:ARG:HB3	1.93	0.49
32:QA:748:G:C6	32:QA:749:A:C6	3.00	0.49
32:QA:903:G:H2'	32:QA:904:U:H6	1.78	0.49
32:QA:1117:A:O3'	40:QI:105:ARG:NE	2.46	0.49
32:QA:1379:G:C6	32:QA:1380:U:C4	2.99	0.49
33:QB:22:TRP:HA	33:QB:188:THR:O	2.13	0.49
33:QB:61:SER:C	33:QB:63:LYS:H	2.20	0.49
33:QB:164:ASP:CG	33:QB:203:ASP:OD1	2.56	0.49
35:QD:109:THR:HG22	35:QD:112:GLU:HB2	1.93	0.49
36:QE:67:ARG:O	36:QE:70:MET:HE3	2.12	0.49
45:QN:50:LEU:O	45:QN:51:PRO:C	2.56	0.49
32:XA:86:G:O2'	32:XA:87:C:O5'	2.30	0.49
32:XA:386:C:H2'	32:XA:387:U:H5'	1.94	0.49
32:XA:731:G:OP1	32:XA:766:A:H1'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:752:G:H1'	32:XA:754:C:H41	1.70	0.49
32:XA:878:A:O2'	32:XA:879:C:H5'	2.13	0.49
32:XA:1014:A:C2	32:XA:1219:A:H1'	2.47	0.49
40:XI:29:ILE:HA	40:XI:64:ILE:O	2.12	0.49
44:XM:18:LEU:N	44:XM:18:LEU:HD12	2.28	0.49
1:YA:19:A:C2	1:YA:522:A:C2	2.99	0.49
1:YA:49:A:C8	1:YA:51:G:C2	3.00	0.49
1:YA:192:C:OP1	1:YA:2243:U:OP1	2.31	0.49
1:YA:345:A:O2'	1:YA:346:A:C2	2.61	0.49
1:YA:546:U:H5'	1:YA:547:A:OP1	2.12	0.49
1:YA:784:G:C2	3:YC:227:VAL:CG2	2.90	0.49
1:YA:860:U:C4	1:YA:2268:A:C4	3.01	0.49
1:YA:1054:A:C2	1:YA:1106:G:C2	3.00	0.49
1:YA:1056:G:O5'	1:YA:1085:A:C2	2.64	0.49
1:YA:1069:A:C2	1:YA:1072:C:O2'	2.66	0.49
1:YA:1237:A:N3	1:YA:1238:G:H1'	2.26	0.49
1:YA:1455:G:N7	14:YN:64:ARG:NH1	2.60	0.49
1:YA:1491:G:N2	1:YA:1492:G:C4	2.80	0.49
1:YA:1553:A:C8	1:YA:1555:G:C5	3.00	0.49
1:YA:1779:U:H5	1:YA:1784:A:N7	2.10	0.49
1:YA:2049:G:N2	4:YD:161:MET:HE2	2.27	0.49
1:YA:2142:A:H2'	1:YA:2143:C:H4'	1.95	0.49
1:YA:2232:C:P	24:YX:26:ARG:HH12	2.35	0.49
1:YA:2376:A:H2'	1:YA:2377:A:O4'	2.13	0.49
1:YA:2428:G:OP1	1:YA:2428:G:H3'	2.12	0.49
1:YA:2485:G:H5"	13:YM:45:GLN:NE2	2.28	0.49
1:YA:2758:A:H2'	1:YA:2759:G:C5'	2.42	0.49
3:YC:75:ALA:HA	3:YC:95:TYR:HA	1.93	0.49
3:YC:255:LYS:C	3:YC:256:THR:HG23	2.36	0.49
4:YD:99:GLU:HG3	4:YD:100:LEU:H	1.78	0.49
5:YE:105:LEU:HD12	5:YE:200:LEU:HD21	1.95	0.49
7:YG:132:LEU:HD12	7:YG:132:LEU:N	2.27	0.49
9:YI:100:ILE:HD11	9:YI:137:LEU:HD22	1.93	0.49
11:YK:20:MET:HG2	11:YK:21:CYS:O	2.13	0.49
15:YO:9:ARG:HA	15:YO:12:THR:OG1	2.13	0.49
17:YQ:63:ARG:O	17:YQ:64:ILE:C	2.54	0.49
20:YT:29:THR:OG1	20:YT:85:VAL:HB	2.12	0.49
28:Y1:8:ILE:CD1	28:Y1:52:LYS:HG3	2.43	0.49
31:Y4:3:VAL:O	31:Y4:4:ARG:HB2	2.12	0.49
1:RA:182:A:H2'	1:RA:183:C:C6	2.48	0.49
1:RA:373:U:O2'	1:RA:423:A:H1'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:517:C:OP2	27:R0:9:ARG:NH2	2.41	0.49
1:RA:770:G:O2'	1:RA:771:G:H5'	2.12	0.49
1:RA:1106:G:N2	1:RA:1107:G:H1'	2.27	0.49
1:RA:1252:G:C2	17:RQ:32:ARG:HG2	2.48	0.49
1:RA:1496:A:H2'	1:RA:1498:C:C4	2.48	0.49
1:RA:1926:U:H2'	1:RA:1928:A:N7	2.27	0.49
2:RB:46:A:C5	2:RB:47:C:C5	3.00	0.49
2:RB:78:A:H2'	2:RB:79:G:O4'	2.12	0.49
3:RC:196:ASN:C	3:RC:198:GLU:H	2.19	0.49
5:RE:112:LEU:HD13	5:RE:186:VAL:CG1	2.41	0.49
6:RF:147:ARG:HG3	6:RF:148:VAL:N	2.28	0.49
8:RH:52:ALA:C	8:RH:54:LEU:H	2.20	0.49
8:RH:101:ASP:OD2	8:RH:102:ALA:N	2.44	0.49
13:RM:117:PHE:O	13:RM:118:LYS:C	2.54	0.49
14:RN:92:GLY:O	14:RN:93:GLY:C	2.54	0.49
15:RO:16:ARG:C	15:RO:18:LEU:H	2.21	0.49
20:RT:11:LEU:HD23	20:RT:11:LEU:N	2.27	0.49
23:RW:19:ARG:NH2	23:RW:22:VAL:HG21	2.27	0.49
23:RW:28:GLU:HA	23:RW:28:GLU:OE2	2.12	0.49
24:RX:52:ALA:O	24:RX:53:LYS:HB3	2.12	0.49
32:QA:714:G:H2'	32:QA:715:A:C8	2.47	0.49
32:QA:842:U:H3'	32:QA:843:U:C5'	2.42	0.49
32:QA:1095:U:O2'	32:QA:1096:C:H5'	2.12	0.49
32:QA:1128:C:C2'	32:QA:1129:C:H5'	2.42	0.49
32:QA:1149:C:H2'	32:QA:1150:A:C8	2.47	0.49
32:QA:1410:A:C2'	32:QA:1411:C:O5'	2.61	0.49
32:QA:1521:C:C2	32:QA:1522:U:C5	3.00	0.49
33:QB:162:VAL:HG22	33:QB:184:ALA:HB2	1.93	0.49
37:QF:25:TYR:O	37:QF:28:ALA:HB3	2.12	0.49
38:QG:94:ARG:O	38:QG:95:ARG:C	2.55	0.49
41:QJ:10:LEU:HD22	41:QJ:22:THR:OG1	2.12	0.49
51:QT:33:LYS:HE2	51:QT:33:LYS:N	2.27	0.49
52:QU:38:GLU:OE2	52:QU:41:THR:HG21	2.12	0.49
32:XA:252:U:H5'	32:XA:252:U:C6	2.42	0.49
32:XA:279:A:H4'	32:XA:280:C:C5'	2.41	0.49
32:XA:407:U:H2'	32:XA:408:A:H8	1.77	0.49
32:XA:1255:G:N1	32:XA:1279:G:N7	2.60	0.49
32:XA:1297:G:O2'	32:XA:1298:U:OP2	2.28	0.49
33:XB:153:MET:SD	33:XB:157:PRO:HD3	2.53	0.49
37:XF:86:ARG:HD3	49:XR:63:TYR:O	2.12	0.49
37:XF:88:MET:HG2	37:XF:90:MET:SD	2.53	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:XG:29:LEU:O	38:XG:30:MET:O	2.30	0.49
42:XK:12:ARG:NH1	42:XK:76:TYR:HE1	2.10	0.49
42:XK:115:ILE:HG12	42:XK:115:ILE:O	2.11	0.49
43:XL:89:LEU:HB3	43:XL:92:VAL:CG2	2.42	0.49
44:XM:13:HIS:O	44:XM:14:ALA:C	2.55	0.49
51:XT:3:ILE:H	51:XT:3:ILE:HD12	1.77	0.49
52:XU:22:CYS:O	52:XU:23:GLU:O	2.30	0.49
1:YA:277:G:O2'	1:YA:278:A:C4	2.66	0.49
1:YA:470:A:C2	1:YA:471:A:C4	3.00	0.49
1:YA:607:U:H5	1:YA:619:G:C4	2.31	0.49
1:YA:628:G:H2'	1:YA:629:G:H8	1.74	0.49
1:YA:646:U:OP2	1:YA:646:U:C6	2.65	0.49
1:YA:999:U:O2'	1:YA:1000:A:H5'	2.13	0.49
1:YA:1157:G:H5'	1:YA:1157:G:H8	1.75	0.49
1:YA:1314:C:OP1	1:YA:1332:G:C5'	2.60	0.49
1:YA:2051:A:N3	1:YA:2052:A:N6	2.56	0.49
1:YA:2054:A:C2	1:YA:2616:C:C2	3.00	0.49
1:YA:2197:U:C5	1:YA:2224:G:C6	3.00	0.49
1:YA:2335:A:C4	1:YA:2337:G:N7	2.81	0.49
1:YA:2356:U:C4'	23:YW:16:GLU:HG3	2.35	0.49
3:YC:149:LYS:HE3	3:YC:152:GLN:NE2	2.28	0.49
5:YE:139:LYS:HB2	5:YE:139:LYS:HZ3	1.77	0.49
6:YF:43:ILE:HG12	6:YF:77:LYS:HD3	1.93	0.49
7:YG:88:LEU:HD11	7:YG:128:THR:HA	1.95	0.49
9:YI:35:MET:C	9:YI:37:PHE:N	2.70	0.49
9:YI:52:LEU:HD11	9:YI:78:LEU:HD21	1.93	0.49
10:YJ:43:GLU:O	10:YJ:44:TYR:C	2.56	0.49
10:YJ:65:THR:O	10:YJ:68:LYS:NZ	2.38	0.49
10:YJ:97:PRO:C	10:YJ:99:ARG:N	2.69	0.49
10:YJ:140:LEU:HD22	10:YJ:141:ASP:H	1.76	0.49
11:YK:7:MET:HG3	11:YK:17:ARG:HH12	1.78	0.49
11:YK:13:ASN:H	11:YK:13:ASN:ND2	2.03	0.49
20:YT:34:VAL:O	20:YT:34:VAL:HG12	2.12	0.49
20:YT:39:THR:C	20:YT:41:ALA:H	2.19	0.49
27:Y0:4:GLN:O	27:Y0:4:GLN:HG2	2.13	0.49
27:Y0:26:SER:O	27:Y0:27:LEU:HD13	2.12	0.49
1:RA:1469:A:H2'	1:RA:1470:A:H8	1.73	0.49
1:RA:1790:C:O2'	3:RC:207:ALA:HB2	2.12	0.49
1:RA:2562:U:C2'	1:RA:2563:U:H5'	2.42	0.49
1:RA:2848:G:N3	1:RA:2867:G:C2	2.81	0.49
4:RD:101:PHE:N	4:RD:101:PHE:HD1	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:RE:5:LEU:CD1	5:RE:10:SER:HB3	2.41	0.49
7:RG:164:ALA:C	7:RG:166:GLU:H	2.20	0.49
10:RJ:12:LYS:O	10:RJ:13:ARG:HB2	2.11	0.49
15:RO:15:ARG:NE	15:RO:93:ASP:OD1	2.43	0.49
20:RT:30:ILE:HG23	20:RT:85:VAL:HB	1.94	0.49
23:RW:26:GLY:O	23:RW:27:GLY:C	2.55	0.49
32:QA:115:G:C6	32:QA:313:A:C2	3.00	0.49
32:QA:290:C:C2'	32:QA:291:U:H5'	2.43	0.49
32:QA:420:U:C2'	32:QA:421:U:H5"	2.43	0.49
32:QA:1040:U:H2'	32:QA:1041:G:H8	1.78	0.49
32:QA:1118:U:H2'	32:QA:1119:C:C6	2.47	0.49
32:QA:1508:A:H2'	32:QA:1509:C:O4'	2.12	0.49
33:QB:17:HIS:CD2	33:QB:202:ASN:ND2	2.80	0.49
34:QC:152:VAL:O	34:QC:164:THR:O	2.30	0.49
38:QG:80:GLY:C	38:QG:82:SER:H	2.21	0.49
43:QL:120:ARG:C	43:QL:122:LYS:H	2.21	0.49
50:QS:34:SER:C	50:QS:36:ARG:H	2.19	0.49
51:QT:2:ASN:O	51:QT:3:ILE:C	2.55	0.49
51:QT:28:ARG:O	51:QT:32:LYS:HG2	2.13	0.49
32:XA:40:C:H2'	32:XA:41:G:O4'	2.12	0.49
32:XA:673:A:H2'	32:XA:674:G:C8	2.47	0.49
32:XA:752:G:H1'	32:XA:754:C:H42	1.72	0.49
32:XA:1148:U:H2'	32:XA:1149:C:O4'	2.12	0.49
32:XA:1158:C:O2	32:XA:1158:C:H2'	2.12	0.49
32:XA:1202:U:H2'	32:XA:1203:C:C5'	2.43	0.49
34:XC:21:TRP:CZ3	45:XN:93:PRO:HG2	2.47	0.49
35:XD:29:THR:C	35:XD:31:CYS:N	2.70	0.49
38:XG:21:LEU:O	38:XG:25:PHE:N	2.45	0.49
39:XH:23:ALA:HB1	39:XH:60:LEU:O	2.12	0.49
44:XM:8:ILE:N	44:XM:9:PRO:HD3	2.28	0.49
47:XP:32:PHE:C	47:XP:32:PHE:CD1	2.91	0.49
1:YA:85:G:O2'	1:YA:86:G:H8	1.95	0.49
1:YA:475:C:O2'	1:YA:476:G:H5'	2.13	0.49
1:YA:655:A:H4'	1:YA:656:G:OP1	2.12	0.49
1:YA:712:G:C2	1:YA:720:U:O2	2.65	0.49
1:YA:750:A:H5"	1:YA:751:A:OP2	2.12	0.49
1:YA:815:C:P	18:YR:85:LYS:HE2	2.53	0.49
1:YA:858:G:H2'	1:YA:2268:A:N3	2.27	0.49
1:YA:1816:C:O2'	1:YA:1817:G:P	2.70	0.49
1:YA:1857:G:H1'	1:YA:1884:G:H22	1.77	0.49
1:YA:2634:A:C2	1:YA:2635:A:C4	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2875:C:O2'	1:YA:2876:G:O5'	2.30	0.49
4:YD:129:THR:HG22	4:YD:130:GLN:O	2.13	0.49
7:YG:84:LYS:HB3	7:YG:132:LEU:O	2.13	0.49
8:YH:45:GLU:C	8:YH:47:PHE:H	2.21	0.49
14:YN:98:LEU:HG	27:Y0:42:ILE:HG13	1.94	0.49
16:YP:87:ARG:HG2	16:YP:88:ARG:H	1.77	0.49
17:YQ:65:ASN:O	17:YQ:69:ARG:HB2	2.13	0.49
19:YS:24:ILE:HG21	19:YS:36:LEU:HD21	1.95	0.49
22:YV:63:ILE:O	22:YV:70:ILE:HD11	2.13	0.49
1:RA:244:A:OP2	30:R3:7:ARG:NH2	2.46	0.49
1:RA:277:G:H4'	1:RA:278:A:N7	2.28	0.49
1:RA:364:C:H2'	1:RA:365:U:H6	1.78	0.49
1:RA:745:G:H2'	1:RA:746:U:H5'	1.95	0.49
1:RA:870:U:O2'	1:RA:871:U:H5'	2.12	0.49
1:RA:1085:A:H2'	1:RA:1086:A:N3	2.28	0.49
1:RA:1266:G:H5"	19:RS:15:GLN:NE2	2.27	0.49
1:RA:1467:U:C5	1:RA:1546:G:N3	2.81	0.49
56:RA:3780:HOH:O	10:RJ:39:LYS:HE3	2.12	0.49
4:RD:149:ASN:OD1	4:RD:150:GLN:N	2.46	0.49
7:RG:38:ASP:OD1	7:RG:38:ASP:N	2.46	0.49
9:RI:58:ILE:HG22	9:RI:58:ILE:O	2.12	0.49
10:RJ:13:ARG:O	10:RJ:14:ASP:CB	2.57	0.49
11:RK:16:ALA:O	11:RK:17:ARG:HB2	2.12	0.49
11:RK:59:LYS:HG3	11:RK:89:ASN:ND2	2.27	0.49
13:RM:35:ALA:HB3	13:RM:99:GLY:H	1.77	0.49
18:RR:38:VAL:HG11	18:RR:59:ILE:HG13	1.93	0.49
24:RX:34:SER:CA	24:RX:49:ARG:HA	2.43	0.49
25:RY:22:LEU:O	25:RY:23:ARG:O	2.30	0.49
28:R1:27:ARG:O	28:R1:30:PRO:HD3	2.12	0.49
32:QA:201:G:H2'	32:QA:202:G:O4'	2.13	0.49
32:QA:955:U:O5'	32:QA:955:U:H6	1.95	0.49
32:QA:1005:A:H4'	32:QA:1037:C:O2	2.12	0.49
32:QA:1111:A:O2'	32:QA:1112:C:H5'	2.13	0.49
32:QA:1423:G:O2'	32:QA:1424:U:H5'	2.12	0.49
33:QB:9:LEU:HD23	33:QB:11:ALA:N	2.28	0.49
33:QB:84:LEU:O	33:QB:84:LEU:HG	2.13	0.49
33:QB:221:ARG:CZ	33:QB:221:ARG:HB3	2.43	0.49
35:QD:3:TYR:HB2	35:QD:62:ARG:NH2	2.27	0.49
42:QK:17:ASP:HB3	42:QK:80:ASN:OD1	2.13	0.49
42:QK:121:ARG:CZ	52:QU:35:GLU:HG3	2.42	0.49
47:QP:20:VAL:HG22	47:QP:21:VAL:N	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:QQ:12:VAL:HG11	48:QQ:21:VAL:H	1.77	0.49
32:XA:6:G:H1	36:XE:102:THR:HG21	1.78	0.49
32:XA:484:G:H4'	32:XA:485:U:OP1	2.09	0.49
32:XA:737:C:OP1	37:XF:91:ARG:HD2	2.13	0.49
32:XA:872:A:C5	32:XA:874:G:C8	3.01	0.49
32:XA:979:C:OP2	32:XA:981:U:O4	2.31	0.49
32:XA:1138:G:H5"	32:XA:1138:G:N3	2.28	0.49
32:XA:1486:G:H2'	32:XA:1487:G:O4'	2.13	0.49
36:XE:154:ALA:C	36:XE:156:ARG:H	2.20	0.49
40:XI:5:TYR:N	40:XI:5:TYR:CD2	2.80	0.49
1:YA:64:A:O2'	1:YA:65:U:H5'	2.12	0.49
1:YA:141:G:H3'	1:YA:142:A:H8	1.78	0.49
1:YA:160:A:N6	1:YA:167:A:H1'	2.28	0.49
1:YA:229:C:O2'	1:YA:230:G:O5'	2.31	0.49
1:YA:311:A:H1'	1:YA:332:A:C8	2.48	0.49
1:YA:534:U:O5'	1:YA:534:U:H6	1.96	0.49
1:YA:626:A:H2'	12:YL:78:ARG:HH22	1.77	0.49
1:YA:752:A:C6	1:YA:1781:U:H1'	2.48	0.49
1:YA:870:U:H2'	1:YA:871:U:C5'	2.33	0.49
1:YA:949:G:C6	1:YA:950:G:N7	2.80	0.49
1:YA:983:A:N6	1:YA:984:A:C2	2.81	0.49
1:YA:1906:G:H5"	1:YA:1929:G:O2'	2.13	0.49
1:YA:2356:U:H4'	23:YW:16:GLU:CG	2.36	0.49
1:YA:2392:A:C8	1:YA:2429:G:C2	3.00	0.49
1:YA:2392:A:C2	12:YL:55:MET:SD	3.04	0.49
1:YA:2773:C:C2	1:YA:2774:C:C5	3.01	0.49
3:YC:28:PRO:HG3	3:YC:62:ARG:NH1	2.28	0.49
5:YE:127:GLU:H	5:YE:127:GLU:CD	2.21	0.49
7:YG:154:GLU:C	7:YG:156:TYR:N	2.71	0.49
8:YH:50:ARG:C	8:YH:52:ALA:N	2.69	0.49
10:YJ:43:GLU:O	10:YJ:45:THR:HG22	2.12	0.49
11:YK:13:ASN:HD22	11:YK:13:ASN:N	1.96	0.49
11:YK:19:VAL:HG12	11:YK:41:ILE:CG1	2.42	0.49
13:YM:52:ALA:HB1	13:YM:119:LEU:CD2	2.43	0.49
29:Y2:1:MET:HG3	29:Y2:2:LYS:N	2.27	0.49
1:RA:1140:C:P	10:RJ:68:LYS:HZ3	2.36	0.49
1:RA:1584:U:O2	1:RA:1584:U:H2'	2.13	0.49
1:RA:1733:G:N2	1:RA:1734:G:C4	2.81	0.49
1:RA:2353:G:H1'	23:RW:30:VAL:CG1	2.39	0.49
1:RA:2579:C:H2'	1:RA:2580:U:O4'	2.13	0.49
4:RD:68:PHE:CE2	4:RD:75:ALA:HA	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:RE:127:GLU:CD	5:RE:127:GLU:N	2.71	0.49
6:RF:45:ASP:CB	6:RF:48:LEU:HB2	2.43	0.49
12:RL:65:GLY:O	12:RL:66:PHE:CB	2.60	0.49
14:RN:79:LEU:O	14:RN:80:PHE:CB	2.56	0.49
17:RQ:20:ALA:HA	17:RQ:23:TYR:CE1	2.48	0.49
17:RQ:63:ARG:NH2	17:RQ:96:ASP:CA	2.76	0.49
19:RS:82:MET:HB2	19:RS:98:LYS:HB2	1.94	0.49
32:QA:97:G:H2'	32:QA:98:A:O4'	2.13	0.49
32:QA:198:G:O2'	32:QA:199:A:C5'	2.61	0.49
32:QA:1005:A:H2'	32:QA:1006:G:O4'	2.13	0.49
32:QA:1226:C:N4	44:QM:102:LYS:HG3	2.27	0.49
33:QB:95:TRP:HZ3	33:QB:98:GLY:N	2.11	0.49
33:QB:195:VAL:HG11	33:QB:198:VAL:HA	1.95	0.49
35:QD:191:SER:O	35:QD:192:ALA:CB	2.61	0.49
39:QH:5:PRO:HB2	39:QH:32:LYS:NZ	2.28	0.49
39:QH:85:TYR:CD2	39:QH:123:GLU:HB2	2.47	0.49
40:QI:50:PRO:HG3	40:QI:82:ILE:HD12	1.94	0.49
45:QN:47:LEU:O	45:QN:47:LEU:HD23	2.13	0.49
50:QS:4:LEU:HD22	50:QS:8:PRO:HA	1.95	0.49
51:QT:32:LYS:O	51:QT:35:TYR:CD2	2.66	0.49
52:QU:10:PRO:C	52:QU:11:PHE:HD2	2.20	0.49
32:XA:9:G:OP2	36:XE:125:LYS:HG3	2.12	0.49
32:XA:64:G:C8	32:XA:99:C:N4	2.81	0.49
32:XA:243:A:C2	32:XA:246:A:C8	3.01	0.49
32:XA:484:G:H4'	32:XA:485:U:O5'	2.09	0.49
32:XA:519:C:O2'	32:XA:520:A:O4'	2.22	0.49
32:XA:1134:G:C6	32:XA:1141:C:N4	2.81	0.49
32:XA:1522:U:H2'	32:XA:1523:G:H8	1.78	0.49
33:XB:83:ALA:O	33:XB:85:SER:N	2.45	0.49
36:XE:37:VAL:HG12	36:XE:38:VAL:N	2.28	0.49
37:XF:42:TRP:HB2	37:XF:59:TYR:CB	2.41	0.49
38:XG:16:LYS:HG2	40:XI:45:MET:SD	2.53	0.49
46:XO:54:GLY:O	46:XO:58:MET:HG3	2.13	0.49
46:XO:63:ARG:C	46:XO:65:LEU:H	2.21	0.49
49:XR:53:GLN:O	49:XR:56:ARG:HB2	2.12	0.49
1:YA:54:G:C4	1:YA:55:G:C8	3.01	0.49
1:YA:142:A:C2'	1:YA:143:C:C6	2.96	0.49
1:YA:246:C:O2'	1:YA:385:C:H4'	2.13	0.49
1:YA:410:G:N2	1:YA:418:C:C2	2.81	0.49
1:YA:785:G:O2'	1:YA:1779:U:C5'	2.61	0.49
1:YA:931:U:O2	1:YA:931:U:C2'	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1361:G:C6	1:YA:1371:G:N2	2.81	0.49
1:YA:1635:A:H2'	1:YA:1636:U:C6	2.45	0.49
1:YA:1760:C:H2'	1:YA:1761:C:H5'	1.94	0.49
1:YA:1789:A:H2'	1:YA:1790:C:C6	2.48	0.49
1:YA:1869:G:N1	1:YA:1873:G:C6	2.81	0.49
1:YA:1926:U:H2'	1:YA:1928:A:N7	2.28	0.49
1:YA:2023:C:O2'	1:YA:2024:G:O5'	2.31	0.49
1:YA:2345:G:C5	1:YA:2381:A:C2	3.01	0.49
1:YA:2590:A:H4'	3:YC:237:ARG:NH2	2.27	0.49
4:YD:113:SER:HB3	4:YD:168:GLU:H	1.78	0.49
9:YI:69:VAL:O	9:YI:69:VAL:HG13	2.12	0.49
12:YL:83:ALA:HB2	12:YL:117:THR:HB	1.93	0.49
13:YM:108:VAL:HG21	13:YM:112:LEU:HB3	1.94	0.49
14:YN:81:ASN:O	14:YN:82:GLU:HB2	2.13	0.49
14:YN:83:LEU:HD11	14:YN:86:ARG:HH21	1.78	0.49
27:Y0:42:ILE:CD1	27:Y0:48:TYR:HB2	2.43	0.49
30:Y3:28:LEU:HD23	30:Y3:32:LEU:HD21	1.93	0.49
1:RA:920:A:C6	1:RA:921:C:C4	3.01	0.49
1:RA:962:G:N2	1:RA:2250:G:H1	2.11	0.49
1:RA:1006:C:C2'	1:RA:1007:C:H5'	2.43	0.49
1:RA:2196:C:H5"	35:XD:150:LYS:HD2	1.95	0.49
1:RA:2269:G:O2'	23:RW:18:LYS:HG2	2.13	0.49
1:RA:2321:U:H5"	1:RA:2321:U:C6	2.44	0.49
1:RA:2683:C:O2	11:RK:70:ARG:NH2	2.44	0.49
5:RE:8:ALA:O	5:RE:9:GLN:C	2.56	0.49
8:RH:54:LEU:O	8:RH:56:ALA:N	2.46	0.49
10:RJ:77:HIS:HD2	10:RJ:79:GLY:CA	2.25	0.49
11:RK:47:ILE:HG13	11:RK:48:PRO:HD3	1.94	0.49
13:RM:50:ARG:NH2	13:RM:50:ARG:HG2	2.28	0.49
14:RN:33:ILE:HG23	14:RN:114:GLU:HB3	1.93	0.49
14:RN:93:GLY:C	14:RN:95:THR:H	2.21	0.49
14:RN:98:LEU:HB3	27:R0:42:ILE:HG12	1.95	0.49
16:RP:56:SER:O	16:RP:75:THR:HG23	2.13	0.49
32:QA:133:U:H1'	32:QA:230:G:N2	2.28	0.49
32:QA:351:G:H4'	32:QA:352:C:OP2	2.11	0.49
32:QA:406:G:C8	32:QA:495:A:N3	2.81	0.49
32:QA:797:C:O2'	32:QA:798:U:H5'	2.13	0.49
32:QA:995:C:N3	32:QA:1046:A:O2'	2.46	0.49
32:QA:1304:G:H1'	32:QA:1334:G:H22	1.77	0.49
32:QA:1414:U:H2'	32:QA:1415:G:H8	1.76	0.49
33:QB:134:LEU:HA	33:QB:137:THR:OG1	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:QE:150:GLU:HG3	36:QE:151:MET:HE2	1.94	0.49
42:QK:110:THR:HA	52:QU:4:LYS:HA	1.95	0.49
44:QM:45:SER:O	44:QM:46:GLU:CB	2.60	0.49
45:QN:86:ALA:O	45:QN:91:GLU:HB2	2.12	0.49
51:QT:61:ALA:HA	51:QT:66:ILE:HG22	1.95	0.49
32:XA:197:A:H4'	32:XA:198:G:OP1	2.10	0.49
32:XA:996:A:N1	32:XA:1046:A:H5'	2.28	0.49
32:XA:1133:G:C5	32:XA:1134:G:N7	2.81	0.49
32:XA:1226:C:C5'	44:XM:94:LEU:HD21	2.43	0.49
38:XG:116:ALA:C	38:XG:120:ALA:HB3	2.38	0.49
45:XN:61:ASN:OD1	45:XN:61:ASN:N	2.45	0.49
1:YA:71:A:H5"	1:YA:73:A:C4	2.48	0.49
1:YA:108:G:C6	1:YA:109:C:C4	3.01	0.49
1:YA:117:G:N1	1:YA:119:A:N6	2.60	0.49
1:YA:416:U:H2'	1:YA:417:C:C6	2.48	0.49
1:YA:485:C:C4	1:YA:496:G:N1	2.81	0.49
1:YA:747:U:H3'	1:YA:748:G:H5'	1.95	0.49
1:YA:1287:A:H5'	14:YN:103:ARG:CZ	2.43	0.49
1:YA:1361:G:O2'	1:YA:1362:C:H5'	2.13	0.49
1:YA:1377:G:H8	1:YA:1377:G:O5'	1.96	0.49
1:YA:1517:G:N2	1:YA:1732:C:C6	2.81	0.49
1:YA:1819:A:H4'	1:YA:1820:U:C5'	2.43	0.49
1:YA:2024:G:N2	1:YA:2040:G:H1'	2.27	0.49
1:YA:2286:G:C8	28:Y1:33:LEU:HD21	2.48	0.49
1:YA:2303:G:H5'	6:YF:121:PHE:CE1	2.47	0.49
1:YA:2311:A:H3'	1:YA:2312:U:H6	1.78	0.49
1:YA:2600:A:C6	1:YA:2601:C:N4	2.81	0.49
3:YC:120:ASP:CG	3:YC:121:ALA:N	2.71	0.49
8:YH:53:GLU:C	8:YH:55:GLU:H	2.20	0.49
10:YJ:106:LYS:HB2	10:YJ:119:PHE:CE2	2.42	0.49
11:YK:38:ILE:C	11:YK:39:ILE:HD13	2.38	0.49
11:YK:57:VAL:HG13	11:YK:57:VAL:O	2.11	0.49
24:YX:65:THR:O	24:YX:68:ALA:HB3	2.13	0.49
1:RA:149:A:H2'	1:RA:150:U:H6	1.77	0.48
1:RA:528:A:H2	1:RA:2043:C:C5'	2.26	0.48
1:RA:545:U:H6	1:RA:546:U:O2'	1.95	0.48
1:RA:675:A:H4'	5:RE:62:GLN:HE22	1.77	0.48
1:RA:832:U:H2'	1:RA:833:A:C8	2.48	0.48
1:RA:996:A:N6	1:RA:1160:G:C6	2.81	0.48
1:RA:1392:A:C6	1:RA:1393:A:C6	3.00	0.48
1:RA:1576:U:O2'	1:RA:1577:C:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1856:U:H2'	1:RA:1857:G:H5'	1.94	0.48
1:RA:2103:C:C2'	1:RA:2104:C:H5'	2.42	0.48
1:RA:2820:A:C2'	1:RA:2821:A:OP1	2.61	0.48
5:RE:134:LEU:HD12	5:RE:134:LEU:O	2.13	0.48
8:RH:43:ASN:HD22	8:RH:43:ASN:N	2.11	0.48
11:RK:116:ILE:HD12	11:RK:117:SER:N	2.28	0.48
14:RN:73:ASN:HA	14:RN:76:VAL:HG12	1.95	0.48
16:RP:89:GLY:O	16:RP:112:ARG:HD3	2.13	0.48
19:RS:10:ALA:O	19:RS:100:THR:HB	2.12	0.48
19:RS:29:VAL:HG22	19:RS:51:LEU:HD11	1.94	0.48
32:QA:451:A:O4'	32:QA:452:A:C8	2.66	0.48
32:QA:1157:A:C6	32:QA:1180:A:C5	3.00	0.48
33:QB:165:ALA:HB2	33:QB:186:VAL:HG12	1.94	0.48
44:QM:75:SER:O	44:QM:78:ARG:HB3	2.12	0.48
47:QP:12:LYS:O	47:QP:13:LYS:HB2	2.13	0.48
32:XA:254:G:HO2'	32:XA:255:G:H5'	1.77	0.48
32:XA:321:A:N7	32:XA:328:C:C2	2.81	0.48
32:XA:383:A:C8	32:XA:384:G:H1'	2.48	0.48
32:XA:579:A:H2'	32:XA:580:C:C6	2.48	0.48
32:XA:956:U:O2	32:XA:1225:A:C2	2.66	0.48
32:XA:1108:G:H5"	34:XC:175:HIS:ND1	2.28	0.48
32:XA:1130:A:C6	32:XA:1146:A:C5	3.00	0.48
32:XA:1201:A:C4'	32:XA:1202:U:O5'	2.58	0.48
33:XB:186:VAL:HG23	33:XB:186:VAL:O	2.13	0.48
36:XE:48:GLY:HA3	36:XE:66:ALA:HB2	1.94	0.48
38:XG:9:ARG:HD3	38:XG:24:LYS:HZ1	1.78	0.48
39:XH:91:LEU:HB3	39:XH:112:ASP:OD2	2.13	0.48
40:XI:86:LEU:O	40:XI:86:LEU:HG	2.12	0.48
52:XU:38:GLU:CA	52:XU:40:PRO:HD2	2.43	0.48
1:YA:263:G:H2'	1:YA:264:C:O4'	2.13	0.48
1:YA:312:G:C2	1:YA:313:G:C8	3.00	0.48
1:YA:396:G:O2'	1:YA:397:U:H6	1.91	0.48
1:YA:469:G:OP2	5:YE:55:SER:HB3	2.13	0.48
1:YA:593:U:C2	1:YA:594:U:C5	3.01	0.48
1:YA:1026:G:H2'	1:YA:1027:A:C8	2.48	0.48
1:YA:1361:G:C2	1:YA:1362:C:C6	3.00	0.48
1:YA:1533:C:H2'	1:YA:1534:U:H5'	1.95	0.48
1:YA:1905:C:O4'	1:YA:1928:A:H2	1.94	0.48
1:YA:2461:A:H1'	1:YA:2492:U:O2	2.13	0.48
1:YA:2474:U:O2	1:YA:2474:U:O4'	2.30	0.48
1:YA:2540:C:H2'	1:YA:2541:A:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2868:A:C6	1:YA:2869:G:C6	3.01	0.48
3:YC:176:ARG:C	3:YC:178:GLY:H	2.21	0.48
7:YG:135:ALA:O	7:YG:136:ASP:HB2	2.11	0.48
13:YM:35:ALA:O	13:YM:128:THR:HA	2.12	0.48
15:YO:8:ILE:H	15:YO:8:ILE:HD12	1.77	0.48
15:YO:62:LEU:HD13	15:YO:62:LEU:C	2.38	0.48
27:Y0:6:LYS:HG2	27:Y0:7:PRO:O	2.13	0.48
28:Y1:8:ILE:HG12	28:Y1:24:LYS:HB3	1.95	0.48
1:RA:264:C:O2'	1:RA:265:A:H2'	2.13	0.48
1:RA:346:A:C2	1:RA:347:A:H1'	2.48	0.48
1:RA:445:C:H5"	17:RQ:2:ARG:HB2	1.95	0.48
1:RA:1020:A:H8	1:RA:1020:A:O5'	1.97	0.48
1:RA:1812:U:H2'	1:RA:1813:G:H8	1.78	0.48
1:RA:1857:G:C1'	1:RA:1858:A:OP2	2.61	0.48
3:RC:12:ARG:HG3	3:RC:12:ARG:NH1	2.22	0.48
5:RE:187:VAL:HG12	5:RE:188:MET:N	2.27	0.48
6:RF:109:ARG:O	6:RF:136:ILE:HG22	2.12	0.48
6:RF:128:SER:OG	6:RF:154:THR:HB	2.13	0.48
7:RG:27:GLY:O	7:RG:28:LYS:C	2.56	0.48
7:RG:83:THR:C	7:RG:84:LYS:CD	2.85	0.48
9:RI:120:ASP:HB3	9:RI:123:ALA:HB3	1.94	0.48
11:RK:18:ARG:HB2	11:RK:45:GLU:HG2	1.94	0.48
16:RP:50:ARG:HG3	16:RP:57:ALA:O	2.13	0.48
17:RQ:88:GLU:OE1	17:RQ:88:GLU:O	2.31	0.48
18:RR:18:GLN:O	18:RR:97:LYS:O	2.31	0.48
21:RU:44:HIS:O	21:RU:45:GLN:C	2.57	0.48
21:RU:73:ASN:HA	21:RU:95:PHE:CE2	2.48	0.48
29:R2:24:THR:O	29:R2:25:LYS:C	2.55	0.48
32:QA:34:C:H2'	32:QA:35:G:H8	1.77	0.48
32:QA:51:A:H4'	32:QA:52:C:O5'	2.13	0.48
32:QA:188:C:O2	32:QA:188:C:C2'	2.60	0.48
32:QA:471:U:H2'	32:QA:472:U:O4'	2.13	0.48
32:QA:830:G:H2'	32:QA:831:A:C8	2.46	0.48
32:QA:1282:C:H2'	32:QA:1283:U:H6	1.76	0.48
36:QE:121:ASN:CG	36:QE:122:VAL:N	2.71	0.48
37:QF:6:ILE:HB	37:QF:62:MET:HB3	1.95	0.48
40:QI:57:VAL:C	40:QI:58:GLU:HG2	2.37	0.48
41:QJ:70:HIS:H	41:QJ:70:HIS:CD2	2.31	0.48
42:QK:21:HIS:CE1	42:QK:34:THR:CG2	2.94	0.48
42:QK:76:TYR:CD1	42:QK:76:TYR:N	2.81	0.48
48:QQ:51:GLU:O	48:QQ:52:CYS:O	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:QT:33:LYS:O	51:QT:36:ALA:HB3	2.13	0.48
32:XA:177:G:O2'	32:XA:1448:C:H4'	2.12	0.48
32:XA:858:G:C6	56:XA:1822:HOH:O	2.65	0.48
38:XG:148:LYS:HB2	38:XG:148:LYS:HZ2	1.78	0.48
40:XI:53:LEU:O	40:XI:54:VAL:HG13	2.13	0.48
40:XI:127:SER:O	40:XI:128:LYS:HB3	2.13	0.48
41:XJ:49:PHE:CE2	45:XN:73:LEU:HD13	2.48	0.48
42:XK:27:ASN:OD1	42:XK:27:ASN:N	2.46	0.48
45:XN:12:ARG:HD3	45:XN:58:ARG:O	2.13	0.48
50:XS:44:ILE:HD12	50:XS:63:ASP:HB2	1.95	0.48
50:XS:50:VAL:CG1	50:XS:70:LEU:HB3	2.43	0.48
1:YA:28:A:C6	1:YA:29:U:C2	3.01	0.48
1:YA:183:C:N4	1:YA:184:C:C4	2.81	0.48
1:YA:1324:G:C2	1:YA:1328:A:C6	3.01	0.48
1:YA:1351:C:H2'	1:YA:1352:U:O4'	2.13	0.48
1:YA:1663:G:C6	1:YA:1992:G:N7	2.81	0.48
1:YA:1667:G:H8	1:YA:1667:G:O5'	1.97	0.48
1:YA:2360:G:C1'	12:YL:60:ARG:HH21	2.27	0.48
1:YA:2384:U:H5"	1:YA:2386:A:OP1	2.13	0.48
1:YA:2637:U:C2'	1:YA:2638:G:H5'	2.42	0.48
1:YA:2748:A:C2	1:YA:2749:A:C4	3.02	0.48
5:YE:165:HIS:C	5:YE:167:VAL:H	2.22	0.48
6:YF:12:VAL:HG12	6:YF:16:MET:HG3	1.95	0.48
7:YG:84:LYS:HB2	7:YG:132:LEU:H	1.78	0.48
8:YH:24:GLY:O	8:YH:26:ALA:O	2.31	0.48
9:YI:52:LEU:HD12	9:YI:53:PRO:CD	2.31	0.48
11:YK:107:LEU:C	11:YK:109:SER:H	2.19	0.48
12:YL:57:LEU:HA	12:YL:60:ARG:HG3	1.93	0.48
12:YL:103:ILE:HD12	12:YL:103:ILE:H	1.77	0.48
18:YR:2:TYR:O	18:YR:3:ALA:HB2	2.13	0.48
18:YR:49:ILE:HG22	18:YR:54:VAL:CB	2.43	0.48
21:YU:11:ILE:HG21	21:YU:79:ALA:HB2	1.96	0.48
22:YV:44:HIS:NE2	22:YV:85:LYS:HD3	2.28	0.48
29:Y2:43:THR:O	29:Y2:44:VAL:C	2.56	0.48
1:RA:112:U:H5'	25:RY:58:ASN:ND2	2.28	0.48
1:RA:415:A:N6	1:RA:2407:A:H61	2.11	0.48
1:RA:996:A:H4'	17:RQ:91:ARG:HD2	1.95	0.48
1:RA:1025:G:H4'	1:RA:1026:G:OP2	2.13	0.48
1:RA:1777:U:O2'	1:RA:1778:U:H5'	2.13	0.48
2:RB:30:C:C2'	2:RB:31:C:H5'	2.39	0.48
2:RB:46:A:C5	2:RB:47:C:C4	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:RC:16:VAL:N	3:RC:203:VAL:CG1	2.76	0.48
4:RD:12:THR:HG22	4:RD:13:ARG:H	1.64	0.48
5:RE:132:LYS:HB3	5:RE:132:LYS:HZ2	1.78	0.48
7:RG:166:GLU:OE2	7:RG:166:GLU:C	2.57	0.48
12:RL:79:LEU:O	12:RL:81:ASP:O	2.31	0.48
21:RU:3:LYS:HD3	21:RU:82:VAL:HB	1.94	0.48
25:RY:6:LEU:O	25:RY:7:ARG:HB3	2.12	0.48
26:RZ:19:HIS:O	26:RZ:22:THR:HB	2.14	0.48
32:QA:471:U:O2'	32:QA:472:U:H5'	2.13	0.48
32:QA:921:U:H2'	32:QA:922:G:O4'	2.13	0.48
32:QA:1203:C:H4'	45:QN:66:THR:HG22	1.95	0.48
32:QA:1226:C:C5	44:QM:102:LYS:HA	2.48	0.48
33:QB:103:TRP:C	33:QB:105:THR:N	2.69	0.48
36:QE:132:PRO:HA	36:QE:135:VAL:HG13	1.95	0.48
39:QH:7:ALA:H	39:QH:76:ARG:HH12	1.61	0.48
41:QJ:36:VAL:HG13	41:QJ:76:ILE:HG12	1.95	0.48
42:QK:22:ILE:HD11	42:QK:85:VAL:HG13	1.94	0.48
52:QU:45:LYS:HA	52:QU:45:LYS:HE3	1.95	0.48
32:XA:223:A:H2'	32:XA:224:U:H6	1.78	0.48
32:XA:286:C:H2'	32:XA:287:U:O4'	2.13	0.48
32:XA:865:A:H2	32:XA:918:A:H4'	1.79	0.48
32:XA:1213:A:C4	32:XA:1215:G:C8	3.01	0.48
34:XC:11:LEU:HD23	34:XC:11:LEU:HA	1.59	0.48
35:XD:8:LEU:O	35:XD:9:LYS:C	2.54	0.48
35:XD:82:LYS:O	35:XD:83:GLY:O	2.31	0.48
36:XE:107:GLY:O	36:XE:111:ARG:HB2	2.12	0.48
39:XH:41:GLU:C	39:XH:43:GLY:N	2.70	0.48
41:XJ:48:ARG:HB2	41:XJ:48:ARG:CZ	2.43	0.48
1:YA:54:G:C5	1:YA:55:G:C8	3.02	0.48
1:YA:300:A:H1'	1:YA:333:G:N2	2.29	0.48
1:YA:480:A:H3'	1:YA:481:G:C5'	2.43	0.48
1:YA:767:U:O2'	1:YA:768:G:H5'	2.14	0.48
1:YA:1019:U:OP1	1:YA:1035:U:O2'	2.24	0.48
1:YA:1346:G:H2'	1:YA:1347:A:C8	2.49	0.48
1:YA:1609:A:C6	1:YA:1616:A:C4	3.00	0.48
1:YA:1682:G:HO2'	1:YA:1683:U:H6	1.46	0.48
1:YA:1865:U:C4	1:YA:1875:G:C2	3.01	0.48
1:YA:2209:G:C2	1:YA:2216:G:C2	3.02	0.48
1:YA:2217:G:C4	1:YA:2218:G:C8	3.01	0.48
1:YA:2298:A:H5'	1:YA:2322:A:O2'	2.13	0.48
1:YA:2772:C:O2	1:YA:2772:C:H2'	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2845:U:H5”	16:YP:51:ASN:O	2.13	0.48
3:YC:74:PRO:HG2	3:YC:96:LYS:HB2	1.94	0.48
6:YF:67:THR:O	6:YF:84:ILE:HG22	2.13	0.48
6:YF:111:ARG:HE	6:YF:111:ARG:N	2.11	0.48
8:YH:80:ILE:HG13	8:YH:81:ALA:H	1.78	0.48
8:YH:128:HIS:HB2	8:YH:144:VAL:HG22	1.94	0.48
10:YJ:105:VAL:HG22	10:YJ:105:VAL:O	2.14	0.48
10:YJ:140:LEU:HD22	10:YJ:141:ASP:N	2.28	0.48
16:YP:63:ILE:HG22	16:YP:63:ILE:O	2.11	0.48
16:YP:91:VAL:HG11	16:YP:96:LEU:HD21	1.94	0.48
25:YY:44:LYS:NZ	25:YY:48:ARG:NE	2.61	0.48
26:YZ:28:LEU:N	26:YZ:28:LEU:HD23	2.28	0.48
27:Y0:55:ALA:HB3	27:Y0:56:LYS:NZ	2.28	0.48
1:RA:38:A:O2’	5:RE:43:THR:HA	2.13	0.48
1:RA:1106:G:C2	1:RA:1107:G:C8	3.01	0.48
1:RA:1789:A:OP1	3:RC:220:ARG:HD3	2.13	0.48
1:RA:2223:G:C2’	1:RA:2224:G:H5’	2.43	0.48
1:RA:2233:U:H2’	1:RA:2234:G:C8	2.49	0.48
1:RA:2383:G:H2’	1:RA:2384:U:H6	1.78	0.48
1:RA:2454:G:H1’	56:RA:3532:HOH:O	2.13	0.48
56:RA:3654:HOH:O	4:RD:140:HIS:CE1	2.64	0.48
2:RB:109:A:C6	2:RB:110:C:C4	3.02	0.48
4:RD:119:ALA:HB2	4:RD:165:MET:CB	2.42	0.48
4:RD:177:VAL:O	4:RD:177:VAL:HG23	2.13	0.48
6:RF:39:VAL:C	6:RF:41:GLU:H	2.21	0.48
6:RF:128:SER:HA	6:RF:154:THR:HA	1.95	0.48
8:RH:86:ASP:O	8:RH:87:GLU:C	2.56	0.48
12:RL:80:SER:C	12:RL:81:ASP:O	2.54	0.48
18:RR:49:ILE:HG21	18:RR:53:PHE:H	1.79	0.48
20:RT:73:ARG:HB3	20:RT:73:ARG:NH2	2.28	0.48
23:RW:35:ILE:O	23:RW:35:ILE:HG12	2.13	0.48
24:RX:44:ARG:HG2	24:RX:45:PHE:N	2.28	0.48
32:QA:77:A:N6	32:QA:90:C:C4	2.81	0.48
32:QA:95:C:H5”	32:QA:95:C:H6	1.78	0.48
32:QA:407:U:H2’	32:QA:408:A:H8	1.77	0.48
32:QA:488:C:O2’	32:QA:489:C:H5’	2.13	0.48
32:QA:545:C:H5’	35:QD:68:GLU:CG	2.44	0.48
32:QA:575:G:C6	32:QA:821:G:N7	2.82	0.48
32:QA:674:G:OP1	37:QF:51:ILE:HG13	2.13	0.48
32:QA:1052:U:C5’	32:QA:1053:G:OP2	2.61	0.48
33:QB:146:SER:O	33:QB:147:LEU:HD23	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:QC:188:ALA:O	34:QC:194:VAL:HA	2.12	0.48
38:QG:114:SER:CB	38:QG:117:LEU:HG	2.30	0.48
39:QH:9:MET:HE1	39:QH:35:ILE:HD12	1.95	0.48
42:QK:76:TYR:N	42:QK:76:TYR:HD1	2.11	0.48
42:QK:124:LYS:O	52:QU:33:ARG:CZ	2.61	0.48
45:QN:26:LEU:HA	45:QN:30:ILE:HD13	1.95	0.48
45:QN:50:LEU:O	45:QN:52:ARG:N	2.47	0.48
46:QO:73:ASP:CG	46:QO:76:ARG:HG3	2.38	0.48
50:QS:64:GLU:CD	50:QS:64:GLU:N	2.70	0.48
32:XA:265:G:H5'	48:XQ:65:PRO:O	2.14	0.48
32:XA:390:U:O2'	32:XA:391:G:H5'	2.13	0.48
32:XA:677:U:H3	32:XA:713:G:H22	1.60	0.48
32:XA:946:A:H2'	32:XA:947:G:H8	1.78	0.48
32:XA:960:U:O2	32:XA:960:U:H2'	2.14	0.48
32:XA:1071:C:H2'	32:XA:1072:G:H8	1.78	0.48
32:XA:1133:G:N2	32:XA:1142:G:C5	2.82	0.48
35:XD:154:VAL:O	35:XD:158:LEU:HD12	2.13	0.48
36:XE:125:LYS:HB2	36:XE:125:LYS:HE3	1.54	0.48
38:XG:30:MET:SD	38:XG:35:LYS:HB2	2.53	0.48
1:YA:46:G:N2	1:YA:47:C:C2	2.82	0.48
1:YA:55:G:C2	1:YA:116:C:C2	3.01	0.48
1:YA:112:U:H5'	25:YY:58:ASN:HD21	1.77	0.48
1:YA:141:G:H3'	1:YA:142:A:O4'	2.12	0.48
1:YA:192:C:C4	1:YA:193:U:C2	3.01	0.48
1:YA:379:G:N1	1:YA:380:G:C4	2.82	0.48
1:YA:492:A:C2	19:YS:49:LYS:HE2	2.46	0.48
1:YA:543:G:N2	1:YA:551:G:C4	2.81	0.48
1:YA:575:A:C2	1:YA:576:U:C5	3.01	0.48
1:YA:712:G:N2	1:YA:720:U:H1'	2.29	0.48
1:YA:754:U:H2'	1:YA:755:U:H6	1.77	0.48
1:YA:852:U:H2'	1:YA:853:C:H6	1.78	0.48
1:YA:990:A:H61	18:YR:78:ARG:NH1	2.11	0.48
1:YA:1011:G:H4'	1:YA:1012:U:OP2	2.10	0.48
1:YA:1275:A:C5	14:YN:16:HIS:CD2	3.00	0.48
1:YA:1573:G:H2'	1:YA:1574:C:H5'	1.95	0.48
1:YA:1614:A:H2'	1:YA:1615:C:H5'	1.94	0.48
1:YA:1833:C:H2'	1:YA:1834:U:H6	1.77	0.48
1:YA:2201:G:C5	1:YA:2202:U:C5	3.01	0.48
1:YA:2331:G:C2	1:YA:2385:C:N3	2.81	0.48
1:YA:2582:G:N3	1:YA:2582:G:H2'	2.28	0.48
2:YB:77:U:C2'	2:YB:78:A:H5'	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:YD:122:VAL:HA	4:YD:127:PHE:H	1.78	0.48
6:YF:39:VAL:HG22	6:YF:49:LEU:HG	1.94	0.48
7:YG:90:GLY:HA3	7:YG:93:TYR:CZ	2.48	0.48
7:YG:162:ARG:NH1	7:YG:168:VAL:HG21	2.27	0.48
8:YH:62:LEU:C	8:YH:64:ALA:N	2.72	0.48
14:YN:15:SER:HA	14:YN:18:GLN:HB3	1.95	0.48
17:YQ:91:ARG:HG3	18:YR:11:GLN:NE2	2.28	0.48
19:YS:49:LYS:NZ	19:YS:49:LYS:HB3	2.29	0.48
21:YU:33:VAL:O	21:YU:34:ILE:HG13	2.12	0.48
22:YV:32:GLY:O	22:YV:33:GLY:C	2.56	0.48
23:YW:25:PHE:CD1	23:YW:25:PHE:C	2.92	0.48
23:YW:37:VAL:HG23	23:YW:38:ARG:NH1	2.29	0.48
25:YY:18:LEU:O	25:YY:18:LEU:HD13	2.13	0.48
30:Y3:31:ILE:HG21	30:Y3:34:LYS:NZ	2.28	0.48
1:RA:1071:G:C8	1:RA:1089:A:N6	2.80	0.48
1:RA:2109:U:N3	1:RA:2181:U:C4	2.81	0.48
1:RA:2676:C:O2	1:RA:2732:G:N2	2.46	0.48
1:RA:2756:U:H5”	31:R4:19:ARG:HG2	1.96	0.48
2:RB:77:U:H2’	2:RB:78:A:H5’	1.96	0.48
4:RD:39:ASP:OD2	4:RD:40:LEU:HD12	2.14	0.48
4:RD:107:VAL:HG13	4:RD:203:VAL:HG23	1.95	0.48
4:RD:151:THR:CG2	4:RD:152:PRO:HD3	2.36	0.48
4:RD:201:LEU:HD12	4:RD:201:LEU:HA	1.61	0.48
6:RF:13:LYS:O	6:RF:17:THR:HG23	2.13	0.48
6:RF:35:LEU:HD12	6:RF:88:VAL:HB	1.96	0.48
6:RF:42:ALA:HA	6:RF:45:ASP:O	2.13	0.48
7:RG:23:ILE:HD12	7:RG:23:ILE:N	2.28	0.48
8:RH:100:ALA:O	8:RH:101:ASP:C	2.56	0.48
9:RI:53:PRO:O	9:RI:74:PRO:HD2	2.14	0.48
9:RI:104:GLN:O	9:RI:105:LEU:CB	2.61	0.48
10:RJ:105:VAL:HG23	10:RJ:109:LEU:CD1	2.41	0.48
13:RM:8:LYS:N	13:RM:8:LYS:HD2	2.19	0.48
17:RQ:86:SER:HB3	18:RR:51:VAL:HA	1.95	0.48
22:RV:66:ASP:O	22:RV:66:ASP:CG	2.57	0.48
32:QA:444:G:N2	32:QA:491:G:C4	2.81	0.48
32:QA:489:C:C2’	32:QA:490:C:H5’	2.43	0.48
32:QA:548:G:H5”	32:QA:548:G:C8	2.46	0.48
32:QA:922:G:H2’	32:QA:923:A:C8	2.49	0.48
32:QA:1319:A:C8	32:QA:1323:G:C5	3.01	0.48
32:QA:1329:A:C2’	32:QA:1330:U:H5’	2.44	0.48
34:QC:96:VAL:HG23	34:QC:97:PRO:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:QG:88:VAL:HG22	38:QG:89:GLU:N	2.27	0.48
39:QH:74:ILE:HD12	39:QH:127:TYR:O	2.14	0.48
39:QH:124:ILE:O	39:QH:124:ILE:HG13	2.13	0.48
42:QK:27:ASN:O	42:QK:56:LYS:HE3	2.14	0.48
46:QO:41:HIS:CD2	46:QO:42:PHE:CE2	3.00	0.48
32:XA:976:G:N2	32:XA:1363:A:C4	2.81	0.48
32:XA:1123:U:O3'	41:XJ:38:GLY:HA3	2.14	0.48
32:XA:1330:U:H5'	44:XM:69:ARG:HH22	1.79	0.48
33:XB:46:VAL:HG13	33:XB:47:PRO:CD	2.42	0.48
33:XB:96:LEU:N	33:XB:99:MET:HE3	2.22	0.48
33:XB:221:ARG:C	33:XB:223:GLY:H	2.20	0.48
34:XC:36:PHE:CE1	45:XN:91:GLU:HB3	2.48	0.48
35:XD:8:LEU:CD2	35:XD:21:LYS:HD2	2.43	0.48
37:XF:97:THR:C	37:XF:98:GLU:HG3	2.38	0.48
47:XP:48:GLU:CD	47:XP:51:ARG:HB2	2.37	0.48
1:YA:185:G:C5	1:YA:212:G:N2	2.81	0.48
1:YA:204:A:C5	1:YA:206:U:O4	2.66	0.48
1:YA:240:C:H5"	1:YA:623:C:OP1	2.13	0.48
1:YA:295:G:H2'	1:YA:295:G:N3	2.28	0.48
1:YA:370:G:C6	1:YA:424:G:N7	2.81	0.48
1:YA:510:C:H2'	1:YA:511:U:C6	2.49	0.48
1:YA:727:A:O2'	1:YA:728:G:C8	2.63	0.48
1:YA:1099:G:C6	1:YA:1100:C:C2	3.01	0.48
1:YA:1358:G:H2'	1:YA:1372:U:O4	2.14	0.48
1:YA:1526:C:N4	1:YA:1527:G:C6	2.81	0.48
1:YA:1737:G:C6	1:YA:1738:G:N1	2.82	0.48
1:YA:2049:G:H21	4:YD:161:MET:HE2	1.78	0.48
1:YA:2294:G:OP1	15:YO:10:ARG:HD3	2.13	0.48
1:YA:2371:G:C2	1:YA:2372:U:C6	3.02	0.48
1:YA:2886:A:N7	27:Y0:39:ARG:NE	2.61	0.48
3:YC:16:VAL:N	3:YC:203:VAL:CG1	2.73	0.48
4:YD:16:THR:HG23	4:YD:18:ASP:N	2.20	0.48
15:YO:34:HIS:CD2	15:YO:65:THR:HG21	2.48	0.48
18:YR:49:ILE:C	18:YR:51:VAL:N	2.71	0.48
22:YV:3:THR:HA	22:YV:62:THR:O	2.13	0.48
24:YX:30:PRO:HG2	24:YX:32:LEU:HD21	1.94	0.48
30:Y3:23:HIS:O	30:Y3:46:LYS:HE3	2.13	0.48
1:RA:277:G:H4'	1:RA:278:A:C8	2.49	0.48
1:RA:286:U:H2'	1:RA:287:G:O4'	2.13	0.48
1:RA:1013:C:H2'	1:RA:1014:A:H8	1.78	0.48
1:RA:1419:A:C5	1:RA:1421:G:C4	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1733:G:O2'	1:RA:1734:G:O5'	2.32	0.48
1:RA:1754:A:C6	1:RA:1755:A:C6	3.02	0.48
1:RA:2311:A:H1'	6:RF:78:ILE:CD1	2.44	0.48
4:RD:120:GLY:HA2	4:RD:162:ALA:HB1	1.95	0.48
5:RE:95:LYS:O	5:RE:96:VAL:CB	2.59	0.48
6:RF:97:GLU:O	6:RF:101:ARG:HG2	2.14	0.48
6:RF:174:PHE:CD1	6:RF:176:PHE:CE1	3.02	0.48
7:RG:139:VAL:C	7:RG:141:GLY:N	2.71	0.48
9:RI:109:ALA:HB1	9:RI:124:MET:CE	2.39	0.48
15:RO:106:LEU:C	15:RO:106:LEU:HD12	2.38	0.48
16:RP:33:GLU:OE1	32:QA:345:C:C3'	2.62	0.48
17:RQ:27:ARG:HG3	17:RQ:27:ARG:HH11	1.79	0.48
19:RS:42:LYS:O	19:RS:42:LYS:HD3	2.13	0.48
19:RS:69:LEU:HG	19:RS:107:VAL:HG13	1.94	0.48
24:RX:29:LEU:CD2	24:RX:29:LEU:N	2.76	0.48
32:QA:77:A:N6	32:QA:90:C:C5	2.81	0.48
32:QA:95:C:O2'	32:QA:96:U:H5'	2.14	0.48
32:QA:211:G:N1	32:QA:212:G:N3	2.62	0.48
32:QA:1124:G:H2'	32:QA:1145:A:N6	2.27	0.48
32:QA:1221:G:H2'	32:QA:1222:G:H8	1.79	0.48
32:QA:1253:G:H2'	32:QA:1254:A:H8	1.79	0.48
32:QA:1323:G:H2'	32:QA:1324:A:C8	2.49	0.48
33:QB:49:PHE:HB2	33:QB:53:LEU:CD2	2.43	0.48
33:QB:139:GLU:O	33:QB:143:LEU:CD2	2.62	0.48
35:QD:2:ARG:CZ	35:QD:114:ARG:CD	2.91	0.48
35:QD:117:VAL:HA	35:QD:122:ILE:CG1	2.43	0.48
40:QI:56:MET:CE	40:QI:57:VAL:H	2.27	0.48
42:QK:86:LYS:HA	42:QK:113:THR:HG22	1.95	0.48
45:QN:14:ALA:O	45:QN:18:LYS:HG3	2.13	0.48
45:QN:83:VAL:HG12	45:QN:84:ARG:N	2.28	0.48
46:QO:34:GLN:O	46:QO:35:ILE:C	2.56	0.48
46:QO:41:HIS:HD2	46:QO:42:PHE:CE2	2.32	0.48
51:QT:5:SER:OG	51:QT:6:ALA:N	2.45	0.48
32:XA:134:G:H2'	32:XA:135:C:O4'	2.14	0.48
32:XA:216:U:H2'	32:XA:217:C:C6	2.48	0.48
32:XA:919:A:C2	32:XA:920:U:C5	3.02	0.48
32:XA:1048:G:C2	32:XA:1050:G:N7	2.82	0.48
32:XA:1068:G:C2'	32:XA:1069:C:H5'	2.44	0.48
32:XA:1239:A:H1'	32:XA:1241:G:N3	2.27	0.48
32:XA:1295:U:H2'	32:XA:1296:C:C6	2.48	0.48
33:XB:8:MET:SD	33:XB:9:LEU:HG	2.54	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:XB:176:ASN:C	33:XB:178:LEU:N	2.71	0.48
35:XD:77:GLU:HG3	35:XD:81:LEU:HD11	1.96	0.48
35:XD:104:MET:SD	35:XD:142:VAL:HG13	2.53	0.48
38:XG:70:PRO:HG2	38:XG:98:LEU:HB2	1.96	0.48
46:XO:62:ARG:HH22	46:XO:88:ARG:HH21	1.61	0.48
46:XO:78:THR:O	46:XO:82:GLU:HB2	2.13	0.48
1:YA:53:A:C8	1:YA:54:G:C8	3.01	0.48
1:YA:102:U:H3	25:YY:2:LYS:HB3	1.77	0.48
1:YA:301:G:C2	1:YA:317:G:C4	3.01	0.48
1:YA:540:C:O2'	1:YA:541:A:H5'	2.14	0.48
1:YA:672:C:C6	1:YA:672:C:H3'	2.49	0.48
1:YA:855:G:H21	23:YW:23:LYS:HZ2	1.61	0.48
1:YA:996:A:OP2	17:YQ:91:ARG:NH1	2.47	0.48
1:YA:1059:G:O2'	9:YI:131:THR:HG21	2.13	0.48
1:YA:1092:C:H2'	1:YA:1093:G:H5'	1.94	0.48
1:YA:1153:C:H2'	1:YA:1154:G:H8	1.75	0.48
1:YA:1319:C:H1'	1:YA:1334:G:N2	2.28	0.48
1:YA:1394:U:H3'	1:YA:1394:U:C6	2.48	0.48
1:YA:2067:G:H4'	1:YA:2068:U:OP2	2.12	0.48
1:YA:2230:G:O3'	24:YX:29:LEU:HD12	2.13	0.48
1:YA:2285:C:O4'	1:YA:2288:A:C2	2.66	0.48
1:YA:2626:C:H2'	1:YA:2627:G:O4'	2.13	0.48
1:YA:2797:U:O2	1:YA:2797:U:H2'	2.13	0.48
3:YC:92:LEU:HD13	3:YC:102:TYR:CE1	2.48	0.48
4:YD:107:VAL:HG13	4:YD:203:VAL:HG23	1.95	0.48
7:YG:122:ALA:HB2	7:YG:132:LEU:HA	1.95	0.48
13:YM:1:MET:O	13:YM:2:LEU:C	2.55	0.48
15:YO:89:ASP:O	15:YO:90:VAL:HG13	2.13	0.48
17:YQ:77:LYS:CE	17:YQ:116:LEU:HD11	2.44	0.48
23:YW:49:ASN:HB3	23:YW:81:ILE:HG12	1.96	0.48
28:Y1:8:ILE:O	28:Y1:21:THR:HA	2.13	0.48
30:Y3:5:THR:O	30:Y3:7:ARG:N	2.47	0.48
1:RA:26:G:C6	1:RA:27:G:N1	2.81	0.48
1:RA:1485:U:C2	1:RA:1505:A:C2	3.01	0.48
1:RA:2151:U:C4	1:RA:2152:G:N7	2.82	0.48
1:RA:2667:C:H2'	1:RA:2668:G:O4'	2.13	0.48
1:RA:2772:C:H2'	1:RA:2773:C:C6	2.49	0.48
2:RB:24:G:C6	2:RB:56:G:C2	3.01	0.48
2:RB:94:A:C2'	2:RB:95:U:H5'	2.43	0.48
4:RD:106:LYS:HD2	4:RD:106:LYS:N	2.28	0.48
4:RD:124:ARG:HG2	4:RD:125:TRP:CD1	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:RK:51:LYS:HE2	11:RK:95:ILE:HG12	1.95	0.48
18:RR:46:GLU:CD	18:RR:46:GLU:C	2.82	0.48
18:RR:76:LYS:HD2	18:RR:85:LYS:HD2	1.95	0.48
20:RT:8:LEU:N	20:RT:8:LEU:HD23	2.27	0.48
22:RV:65:VAL:HG22	22:RV:65:VAL:O	2.13	0.48
32:QA:167:A:H2'	32:QA:168:G:O4'	2.13	0.48
32:QA:1449:C:H2'	32:QA:1450:U:C5'	2.44	0.48
35:QD:83:GLY:O	35:QD:84:ASN:C	2.57	0.48
35:QD:176:LYS:N	35:QD:176:LYS:HD3	2.28	0.48
36:QE:10:LEU:HD23	36:QE:10:LEU:H	1.79	0.48
36:QE:155:LYS:HD2	36:QE:155:LYS:N	2.28	0.48
37:QF:97:THR:O	37:QF:98:GLU:CG	2.61	0.48
32:XA:345:C:H4'	32:XA:346:G:H5"	1.95	0.48
32:XA:373:A:N3	32:XA:374:A:C8	2.81	0.48
32:XA:752:G:C2'	32:XA:753:A:OP2	2.62	0.48
32:XA:1073:U:H2'	32:XA:1074:G:C8	2.47	0.48
34:XC:85:LYS:O	34:XC:86:LEU:HD23	2.14	0.48
41:XJ:8:ILE:HG22	41:XJ:100:ILE:HG12	1.95	0.48
42:XK:33:ILE:HD11	42:XK:69:CYS:O	2.12	0.48
44:XM:2:ARG:O	44:XM:3:ILE:HB	2.14	0.48
45:XN:61:ASN:HB2	45:XN:72:PHE:CZ	2.48	0.48
51:XT:4:LYS:HE3	51:XT:5:SER:H	1.79	0.48
52:XU:19:LYS:HZ3	52:XU:19:LYS:N	2.12	0.48
1:YA:16:C:O2'	1:YA:17:G:H5'	2.14	0.48
1:YA:226:A:C6	1:YA:227:A:N6	2.82	0.48
1:YA:303:G:C6	1:YA:315:G:C6	3.01	0.48
1:YA:349:U:H2'	1:YA:350:G:H8	1.78	0.48
1:YA:728:G:C2	1:YA:730:A:C4	3.01	0.48
1:YA:736:C:H6	1:YA:736:C:O5'	1.97	0.48
1:YA:1335:C:N4	56:YA:3409:HOH:O	2.40	0.48
1:YA:1649:G:O2'	14:YN:106:ASP:OD2	2.31	0.48
1:YA:1716:U:C6	1:YA:1743:G:N2	2.82	0.48
1:YA:1754:A:C6	1:YA:1755:A:C6	3.01	0.48
1:YA:2408:U:O2'	1:YA:2409:G:H8	1.97	0.48
1:YA:2663:G:H2'	1:YA:2664:G:H8	1.78	0.48
1:YA:2808:G:N2	1:YA:2891:U:C6	2.81	0.48
2:YB:63:C:C4	2:YB:64:G:N7	2.82	0.48
5:YE:25:GLU:HG2	12:YL:6:LEU:HD23	1.96	0.48
5:YE:58:LYS:O	5:YE:60:TRP:HD1	1.97	0.48
6:YF:27:VAL:HG23	6:YF:27:VAL:O	2.13	0.48
6:YF:71:LYS:HG3	6:YF:73:VAL:H	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:YG:175:LYS:C	7:YG:175:LYS:HD3	2.39	0.48
8:YH:35:LYS:O	8:YH:36:ALA:HB2	2.13	0.48
10:YJ:94:ALA:O	10:YJ:95:ARG:HB3	2.14	0.48
13:YM:15:GLY:O	13:YM:16:ARG:HB3	2.14	0.48
14:YN:73:ASN:O	14:YN:76:VAL:HG22	2.14	0.48
16:YP:37:LYS:O	16:YP:38:ARG:HB3	2.13	0.48
29:Y2:18:PHE:O	29:Y2:19:ARG:C	2.57	0.48
1:RA:262:A:C2'	1:RA:263:G:H5'	2.43	0.48
1:RA:376:G:O2'	1:RA:377:G:H5'	2.14	0.48
1:RA:569:U:C4	1:RA:570:G:C6	3.01	0.48
1:RA:1081:U:O2'	9:RI:117:THR:O	2.26	0.48
1:RA:1274:A:H2	1:RA:1644:C:O2	1.97	0.48
1:RA:2136:G:C2'	1:RA:2137:U:C5	2.97	0.48
1:RA:2667:C:O2	7:RG:108:PHE:HB3	2.13	0.48
1:RA:2747:G:C2	1:RA:2756:U:C5	3.02	0.48
4:RD:140:HIS:CD2	4:RD:140:HIS:N	2.81	0.48
7:RG:10:VAL:O	7:RG:10:VAL:CG2	2.62	0.48
7:RG:96:ALA:O	7:RG:97:VAL:CB	2.61	0.48
9:RI:95:ASP:O	9:RI:97:VAL:HG23	2.13	0.48
10:RJ:136:GLN:N	10:RJ:137:PRO:CD	2.76	0.48
23:RW:40:ARG:HB2	23:RW:56:HIS:ND1	2.27	0.48
23:RW:42:THR:HG22	23:RW:43:LYS:HZ2	1.78	0.48
25:RY:21:LEU:HD23	25:RY:21:LEU:N	2.29	0.48
26:RZ:29:ARG:C	26:RZ:30:ARG:HG3	2.39	0.48
32:QA:153:C:C2'	32:QA:154:U:H5'	2.44	0.48
32:QA:322:C:HO2'	51:QT:17:ARG:HG2	1.79	0.48
32:QA:1004:A:H2'	32:QA:1005:A:O4'	2.13	0.48
33:QB:95:TRP:CH2	33:QB:99:MET:HG2	2.49	0.48
36:QE:131:ASN:O	36:QE:135:VAL:HG12	2.13	0.48
40:QI:54:VAL:O	40:QI:55:ASP:O	2.31	0.48
42:QK:124:LYS:HE3	52:QU:34:ARG:HG2	1.96	0.48
49:QR:67:LEU:HD23	49:QR:67:LEU:HA	1.70	0.48
32:XA:29:U:H5'	32:XA:296:U:OP1	2.13	0.48
32:XA:288:A:H2'	32:XA:289:G:H4'	1.94	0.48
32:XA:495:A:H4'	32:XA:496:A:O5'	2.12	0.48
32:XA:787:A:C2	32:XA:796:C:N3	2.82	0.48
32:XA:952:U:H5	44:XM:102:LYS:HZ1	1.57	0.48
32:XA:1319:A:N6	32:XA:1323:G:N3	2.62	0.48
33:XB:19:THR:HB	33:XB:37:VAL:HA	1.95	0.48
34:XC:38:VAL:O	34:XC:42:LEU:HD23	2.13	0.48
34:XC:67:ILE:H	34:XC:102:ILE:HA	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:XE:157:GLY:HA3	39:XH:63:LYS:HE3	1.96	0.48
39:XH:102:VAL:CG2	39:XH:125:ILE:HB	2.44	0.48
42:XK:126:ARG:O	52:XU:33:ARG:NH2	2.47	0.48
46:XO:62:ARG:HH22	46:XO:88:ARG:NH2	2.12	0.48
1:YA:39:G:C2	1:YA:40:U:C4	3.02	0.48
1:YA:49:A:C8	1:YA:51:G:N2	2.82	0.48
1:YA:204:A:C4	1:YA:206:U:O4	2.67	0.48
1:YA:237:C:N3	1:YA:238:C:C5	2.82	0.48
1:YA:254:G:N7	30:Y3:4:LYS:CE	2.77	0.48
1:YA:320:A:H8	1:YA:320:A:O5'	1.97	0.48
1:YA:348:A:H2'	1:YA:349:U:C6	2.49	0.48
1:YA:443:A:N6	5:YE:36:ALA:HB1	2.27	0.48
1:YA:508:A:N6	19:YS:9:HIS:CE1	2.68	0.48
1:YA:511:U:H3'	1:YA:512:G:O4'	2.14	0.48
1:YA:536:G:H2'	1:YA:537:G:H5'	1.94	0.48
1:YA:740:C:O2'	1:YA:741:U:H5'	2.13	0.48
1:YA:868:U:C4	1:YA:869:G:N7	2.81	0.48
1:YA:1058:U:H2'	1:YA:1059:G:O4'	2.13	0.48
1:YA:1062:G:O2'	1:YA:1063:G:C8	2.56	0.48
1:YA:2337:G:C3'	1:YA:2338:C:H5'	2.43	0.48
1:YA:2700:A:C2	1:YA:2708:G:C2	3.02	0.48
2:YB:14:U:H3'	2:YB:15:A:H5"	1.95	0.48
2:YB:16:G:O6	2:YB:69:G:C6	2.66	0.48
2:YB:29:A:C6	2:YB:30:C:N4	2.82	0.48
4:YD:4:LEU:HD23	4:YD:101:PHE:CZ	2.47	0.48
5:YE:24:ASN:HB3	5:YE:27:LEU:HB3	1.95	0.48
6:YF:3:LEU:O	6:YF:6:TYR:HB3	2.14	0.48
6:YF:93:GLU:C	6:YF:95:MET:H	2.22	0.48
6:YF:103:ILE:HG12	6:YF:175:PRO:HD3	1.95	0.48
6:YF:146:ASP:HB3	6:YF:147:ARG:H	1.50	0.48
7:YG:53:PRO:HB3	7:YG:61:TRP:H	1.78	0.48
7:YG:58:ALA:O	7:YG:59:ASP:C	2.57	0.48
12:YL:9:ALA:HB3	12:YL:12:SER:CB	2.34	0.48
12:YL:123:ARG:HA	12:YL:143:GLU:HB3	1.95	0.48
14:YN:21:PHE:HE2	14:YN:43:GLU:HB3	1.78	0.48
1:RA:271:G:C4	1:RA:272:A:N7	2.82	0.48
1:RA:1714:U:O2	1:RA:1714:U:C2'	2.57	0.48
1:RA:2592:G:C6	1:RA:2593:U:C4	3.01	0.48
1:RA:2667:C:C2'	1:RA:2668:G:H5'	2.44	0.48
2:RB:66:A:C2	2:RB:108:A:C2	3.01	0.48
3:RC:104:LEU:O	3:RC:105:ALA:CB	2.58	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:RC:190:THR:CG2	3:RC:191:LEU:N	2.76	0.48
3:RC:219:VAL:HG12	3:RC:224:MET:CE	2.41	0.48
5:RE:48:THR:O	5:RE:50:ALA:N	2.47	0.48
9:RI:78:LEU:C	9:RI:79:LEU:HG	2.39	0.48
9:RI:95:ASP:O	9:RI:97:VAL:N	2.46	0.48
13:RM:97:GLN:CD	13:RM:97:GLN:H	2.22	0.48
14:RN:38:LEU:O	14:RN:38:LEU:HD12	2.13	0.48
19:RS:39:THR:HG22	19:RS:44:ALA:HB2	1.95	0.48
23:RW:39:GLN:HG2	23:RW:40:ARG:N	2.28	0.48
32:QA:192:A:H2'	51:QT:54:GLN:HE22	1.79	0.48
32:QA:393:A:O2'	32:QA:394:G:H5'	2.14	0.48
32:QA:436:C:O2'	32:QA:437:U:H5'	2.14	0.48
32:QA:725:G:O2'	32:QA:726:C:H5'	2.13	0.48
32:QA:763:G:H2'	32:QA:764:C:C6	2.48	0.48
32:QA:1018:G:N3	32:QA:1018:G:H2'	2.28	0.48
32:QA:1088:G:H21	32:QA:1167:A:H62	1.62	0.48
32:QA:1348:U:O2'	32:QA:1349:A:O4'	2.32	0.48
32:QA:1371:G:OP1	40:QI:13:SER:HB3	2.13	0.48
32:QA:1374:A:H2'	32:QA:1375:A:H8	1.79	0.48
32:QA:1453:G:N2	32:QA:1454:G:C8	2.82	0.48
32:QA:1520:C:H2'	32:QA:1521:C:H6	1.79	0.48
35:QD:11:SER:HA	35:QD:18:LEU:CD1	2.41	0.48
40:QI:129:ARG:NH1	40:QI:129:ARG:HA	2.29	0.48
41:QJ:10:LEU:O	41:QJ:71:LEU:HA	2.13	0.48
47:QP:28:ARG:HE	47:QP:29:ASN:HD21	1.60	0.48
32:XA:391:G:H5"	47:XP:8:ARG:CD	2.44	0.48
32:XA:530:G:H5"	32:XA:531:U:H5"	1.96	0.48
32:XA:770:C:H1'	32:XA:899:C:H42	1.79	0.48
32:XA:821:G:H2'	32:XA:822:U:C6	2.49	0.48
32:XA:1137:C:H4'	32:XA:1138:G:N1	2.28	0.48
32:XA:1297:G:OP2	32:XA:1297:G:C8	2.67	0.48
34:XC:36:PHE:HE1	45:XN:91:GLU:OE1	1.96	0.48
36:XE:121:ASN:ND2	36:XE:121:ASN:O	2.46	0.48
37:XF:20:GLY:HA2	37:XF:23:GLU:HG2	1.94	0.48
46:XO:69:LEU:HD13	46:XO:69:LEU:O	2.14	0.48
52:XU:35:GLU:CG	52:XU:36:PHE:N	2.77	0.48
1:YA:237:C:C4	1:YA:238:C:H5	2.31	0.48
1:YA:382:A:H2'	1:YA:383:C:C5'	2.44	0.48
1:YA:420:C:H2'	1:YA:421:C:H6	1.78	0.48
1:YA:743:A:OP1	4:YD:135:GLY:HA2	2.13	0.48
1:YA:834:G:H1'	1:YA:2358:A:C2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:966:G:H5'	1:YA:2272:U:O2	2.14	0.48
1:YA:1385:A:C6	1:YA:1403:A:C5	3.01	0.48
1:YA:1387:A:C4	1:YA:1388:G:N7	2.81	0.48
1:YA:1439:A:N7	1:YA:1440:U:N1	2.62	0.48
1:YA:1465:G:H2'	1:YA:1466:U:C6	2.49	0.48
1:YA:1568:G:N3	3:YC:57:HIS:HE1	2.11	0.48
1:YA:1612:C:C2'	1:YA:1613:G:O5'	2.62	0.48
1:YA:1737:G:N7	1:YA:1738:G:O6	2.46	0.48
1:YA:1788:C:C2'	1:YA:1789:A:H5'	2.43	0.48
1:YA:1798:U:C5	3:YC:270:ARG:NH1	2.82	0.48
1:YA:1930:G:HO2'	1:YA:1968:G:H1	1.57	0.48
1:YA:2298:A:N1	1:YA:2321:U:C5	2.82	0.48
2:YB:109:A:C2	2:YB:110:C:N3	2.82	0.48
3:YC:202:ARG:HE	3:YC:204:LEU:HD21	1.79	0.48
5:YE:149:ILE:O	5:YE:149:ILE:HG12	2.14	0.48
7:YG:19:ASN:N	7:YG:19:ASN:HD22	2.11	0.48
7:YG:24:THR:C	7:YG:25:ILE:HD12	2.39	0.48
8:YH:84:ALA:HB3	8:YH:148:ALA:CB	2.43	0.48
13:YM:34:LYS:HB2	13:YM:131:VAL:CG2	2.44	0.48
14:YN:35:LYS:NZ	14:YN:112:TYR:CE1	2.75	0.48
26:YZ:43:ILE:HD12	26:YZ:44:ARG:N	2.29	0.48
1:RA:190:A:C4	1:RA:207:A:C2	3.02	0.48
1:RA:197:A:N6	1:RA:2430:A:O2'	2.41	0.48
1:RA:460:A:P	29:R2:41:ARG:HH12	2.37	0.48
1:RA:1414:C:C4	1:RA:1415:U:C5	3.00	0.48
1:RA:2243:U:O2	1:RA:2434:A:C2	2.66	0.48
1:RA:2848:G:H1'	1:RA:2867:G:N2	2.29	0.48
4:RD:151:THR:CG2	4:RD:152:PRO:N	2.76	0.48
4:RD:166:GLY:O	4:RD:167:ASN:HB3	2.13	0.48
4:RD:182:ALA:O	4:RD:183:GLU:C	2.57	0.48
7:RG:45:ALA:O	7:RG:46:ASP:CB	2.62	0.48
9:RI:93:ASN:OD1	9:RI:136:GLY:HA2	2.13	0.48
11:RK:17:ARG:HB3	11:RK:45:GLU:HB3	1.96	0.48
16:RP:103:THR:O	16:RP:103:THR:HG23	2.14	0.48
23:RW:67:LYS:O	23:RW:67:LYS:HE2	2.13	0.48
26:RZ:7:THR:HG22	26:RZ:32:GLY:HA2	1.96	0.48
32:QA:186:C:H4'	51:QT:75:LYS:HG3	1.95	0.48
32:QA:706:A:O2'	42:QK:30:ILE:HD11	2.14	0.48
32:QA:1136:C:O2	32:QA:1136:C:C2'	2.61	0.48
32:QA:1346:A:N1	32:QA:1374:A:H5"	2.29	0.48
32:QA:1381:U:O2'	32:QA:1382:C:H6	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:1533:C:H3'	32:QA:1534:A:C5'	2.43	0.48
34:QC:71:ARG:O	34:QC:74:ILE:HG22	2.13	0.48
34:QC:119:ILE:O	34:QC:123:LEU:HG	2.14	0.48
35:QD:34:GLU:O	35:QD:36:ALA:N	2.43	0.48
36:QE:136:VAL:O	36:QE:137:ARG:CB	2.62	0.48
36:QE:152:VAL:C	36:QE:156:ARG:HB2	2.39	0.48
32:XA:350:G:C6	32:XA:351:G:O6	2.67	0.48
32:XA:510:A:H5"	32:XA:511:C:P	2.54	0.48
32:XA:707:U:H4'	42:XK:21:HIS:CD2	2.48	0.48
32:XA:949:A:C2	32:XA:1233:G:C2	3.02	0.48
32:XA:951:G:H2'	32:XA:952:U:C6	2.49	0.48
32:XA:981:U:O2'	45:XN:60:ARG:NH1	2.46	0.48
32:XA:1140:C:O2'	32:XA:1141:C:H6	1.93	0.48
32:XA:1361:G:H2'	32:XA:1362:A:C5'	2.39	0.48
35:XD:69:ARG:HG3	35:XD:69:ARG:NH1	2.28	0.48
37:XF:72:ASP:O	37:XF:75:GLU:HB2	2.14	0.48
39:XH:37:ASN:O	39:XH:41:GLU:HG2	2.14	0.48
43:XL:36:VAL:O	43:XL:36:VAL:HG23	2.13	0.48
43:XL:86:VAL:C	43:XL:88:ASP:H	2.21	0.48
44:XM:32:ILE:HD13	44:XM:32:ILE:O	2.14	0.48
46:XO:63:ARG:O	46:XO:65:LEU:N	2.46	0.48
49:XR:40:PRO:HB2	49:XR:42:ARG:HG3	1.95	0.48
1:YA:3:U:C4	1:YA:4:U:C4	3.02	0.48
1:YA:138:U:H2'	1:YA:140:C:C1'	2.34	0.48
1:YA:155:A:H2'	1:YA:156:A:C8	2.49	0.48
1:YA:301:G:O5'	21:YU:81:ARG:NH1	2.46	0.48
1:YA:364:C:H2'	1:YA:365:U:O4'	2.14	0.48
1:YA:503:A:N3	1:YA:506:G:C8	2.82	0.48
1:YA:504:A:HO2'	1:YA:505:A:P	2.36	0.48
1:YA:526:A:C6	1:YA:2626:C:H4'	2.49	0.48
1:YA:1430:G:H2'	1:YA:1431:A:C8	2.48	0.48
1:YA:1647:U:H3'	1:YA:1647:U:OP2	2.14	0.48
1:YA:2443:C:C2	1:YA:2444:G:C8	3.02	0.48
1:YA:2531:A:H4'	7:YG:156:TYR:CE1	2.49	0.48
1:YA:2766:A:N3	1:YA:2766:A:H2'	2.29	0.48
8:YH:94:ILE:HG13	8:YH:98:ASP:CG	2.39	0.48
13:YM:27:SER:N	13:YM:66:ARG:NH2	2.49	0.48
15:YO:56:LYS:O	15:YO:56:LYS:HD3	2.13	0.48
17:YQ:90:ASP:O	17:YQ:94:LEU:HB2	2.13	0.48
19:YS:36:LEU:C	19:YS:38:TYR:N	2.69	0.48
19:YS:74:ILE:O	19:YS:74:ILE:HG12	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:36:G:O2'	1:RA:450:G:H2'	2.14	0.47
1:RA:499:U:O4	1:RA:500:G:C6	2.67	0.47
1:RA:634:C:H6	1:RA:634:C:O5'	1.97	0.47
1:RA:1070:A:C2	1:RA:1097:U:H4'	2.49	0.47
1:RA:1079:C:C4	1:RA:1080:A:N7	2.82	0.47
1:RA:1434:A:H2'	1:RA:1435:G:C8	2.49	0.47
1:RA:1728:C:O2'	1:RA:1729:U:C6	2.67	0.47
1:RA:1959:G:H2'	1:RA:1960:A:O5'	2.14	0.47
2:RB:34:A:C2'	2:RB:35:C:OP2	2.61	0.47
7:RG:66:THR:O	7:RG:70:LEU:HG	2.14	0.47
10:RJ:31:GLU:O	10:RJ:32:LEU:C	2.54	0.47
10:RJ:56:VAL:HG12	10:RJ:57:LEU:H	1.75	0.47
12:RL:59:ARG:HA	30:R3:12:ARG:NH2	2.28	0.47
12:RL:110:VAL:HG12	12:RL:111:ILE:N	2.29	0.47
14:RN:65:LEU:HD12	14:RN:65:LEU:C	2.38	0.47
15:RO:67:ASN:O	15:RO:68:LYS:C	2.57	0.47
20:RT:70:HIS:HB2	20:RT:73:ARG:C	2.39	0.47
23:RW:26:GLY:O	23:RW:27:GLY:O	2.32	0.47
30:R3:35:LYS:O	30:R3:40:LYS:HE2	2.14	0.47
32:QA:433:G:O2'	32:QA:434:U:H5'	2.13	0.47
32:QA:587:G:H4'	39:QH:3:GLN:HA	1.96	0.47
32:QA:650:G:N2	32:QA:651:C:H1'	2.28	0.47
32:QA:691:G:H2'	32:QA:692:U:C6	2.49	0.47
32:QA:858:G:C2'	32:QA:859:G:H5'	2.44	0.47
32:QA:1331:G:HO2'	32:QA:1332:A:P	2.36	0.47
32:QA:1409:C:C2'	32:QA:1410:A:H5'	2.44	0.47
33:QB:112:ARG:HG2	33:QB:116:LEU:HD23	1.95	0.47
35:QD:29:THR:HG22	35:QD:30:LYS:N	2.29	0.47
35:QD:61:ARG:HH21	35:QD:67:LEU:HD23	1.79	0.47
36:QE:81:GLN:H	36:QE:81:GLN:CD	2.13	0.47
36:QE:153:ALA:HA	36:QE:156:ARG:CB	2.44	0.47
38:QG:21:LEU:HD23	38:QG:24:LYS:HD2	1.95	0.47
39:QH:20:ASN:HA	39:QH:64:TYR:OH	2.14	0.47
43:QL:85:ARG:HH21	43:QL:87:LYS:HD2	1.77	0.47
45:QN:44:VAL:HG23	45:QN:45:LEU:N	2.24	0.47
32:XA:59:A:H2'	32:XA:59:A:N3	2.29	0.47
32:XA:112:G:N3	32:XA:330:C:N4	2.62	0.47
32:XA:678:U:H2'	32:XA:679:C:C6	2.49	0.47
32:XA:983:A:OP1	45:XN:8:ARG:NH2	2.47	0.47
32:XA:1017:U:H2'	32:XA:1017:U:O2	2.13	0.47
32:XA:1060:U:H5'	41:XJ:53:ILE:HG12	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1133:G:N1	32:XA:1142:G:C6	2.82	0.47
32:XA:1157:A:C4'	32:XA:1158:C:O5'	2.43	0.47
34:XC:55:VAL:O	34:XC:56:ILE:HG13	2.14	0.47
36:XE:39:GLY:HA2	36:XE:44:ARG:O	2.14	0.47
37:XF:80:PHE:N	37:XF:80:PHE:CD1	2.81	0.47
41:XJ:65:TYR:HD2	45:XN:96:LYS:O	1.97	0.47
42:XK:34:THR:HG1	42:XK:39:ASN:C	2.21	0.47
42:XK:92:ARG:HH11	42:XK:92:ARG:HG3	1.77	0.47
43:XL:33:CYS:HA	43:XL:54:VAL:HA	1.96	0.47
43:XL:72:ASN:HD21	43:XL:104:SER:H	1.61	0.47
1:YA:160:A:H1'	1:YA:2208:C:O2'	2.14	0.47
1:YA:202:U:H5"	1:YA:203:A:OP2	2.14	0.47
1:YA:389:G:C6	1:YA:2413:G:O2'	2.66	0.47
1:YA:419:U:H5"	56:YA:3233:HOH:O	2.12	0.47
1:YA:478:A:N6	1:YA:480:A:C6	2.82	0.47
1:YA:583:G:C6	1:YA:584:C:C4	3.02	0.47
1:YA:841:G:O2'	1:YA:842:U:H5'	2.13	0.47
1:YA:963:U:O2'	1:YA:964:C:P	2.72	0.47
1:YA:1400:U:HO2'	1:YA:1401:G:C1'	2.26	0.47
1:YA:1515:A:H2'	1:YA:1516:G:O4'	2.14	0.47
1:YA:1519:G:N1	1:YA:1520:U:C2	2.82	0.47
1:YA:1550:C:O2'	1:YA:1551:A:H5'	2.13	0.47
1:YA:1865:U:O4	1:YA:1875:G:C2	2.67	0.47
1:YA:1969:A:H2'	1:YA:1972:G:H21	1.79	0.47
1:YA:2306:C:H42	6:YF:150:GLY:N	2.12	0.47
1:YA:2319:G:O2'	1:YA:2320:U:O5'	2.32	0.47
1:YA:2417:C:H2'	1:YA:2418:A:C8	2.49	0.47
1:YA:2464:G:H2'	1:YA:2465:C:O4'	2.14	0.47
1:YA:2497:A:H8	1:YA:2497:A:O5'	1.97	0.47
1:YA:2550:G:N2	1:YA:2559:C:O2	2.47	0.47
1:YA:2728:U:O2'	1:YA:2729:G:H8	1.97	0.47
2:YB:65:U:H3'	2:YB:108:A:H62	1.77	0.47
4:YD:181:ASP:C	4:YD:183:GLU:N	2.70	0.47
5:YE:184:ASP:O	5:YE:185:LYS:HG3	2.14	0.47
8:YH:103:VAL:C	8:YH:105:ALA:H	2.21	0.47
14:YN:56:LYS:HA	14:YN:84:GLY:CA	2.44	0.47
15:YO:11:ALA:HB2	15:YO:96:GLY:N	2.29	0.47
15:YO:34:HIS:O	15:YO:35:ILE:HG12	2.13	0.47
16:YP:104:GLY:O	16:YP:105:LYS:HB2	2.14	0.47
17:YQ:87:VAL:CG2	18:YR:52:PRO:HD3	2.23	0.47
17:YQ:111:LYS:CE	18:YR:48:LYS:HD3	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:YT:18:GLU:HA	20:YT:22:THR:HG21	1.95	0.47
20:YT:50:LEU:HD23	20:YT:51:PHE:N	2.21	0.47
25:YY:1:MET:H2	25:YY:5:GLU:HG2	1.76	0.47
25:YY:58:ASN:O	25:YY:61:ALA:HB2	2.14	0.47
1:RA:622:G:H2'	1:RA:623:C:C6	2.49	0.47
1:RA:877:A:C6	1:RA:899:A:C6	3.02	0.47
1:RA:1820:U:C2	3:RC:200:MET:HB2	2.49	0.47
1:RA:2471:A:C2'	1:RA:2472:G:H5'	2.43	0.47
1:RA:2480:C:C2'	1:RA:2481:G:H5'	2.44	0.47
1:RA:2531:A:P	7:RG:174:LYS:HG3	2.53	0.47
4:RD:189:VAL:O	4:RD:191:GLY:N	2.40	0.47
5:RE:31:VAL:HG21	5:RE:104:ALA:HB2	1.95	0.47
6:RF:46:LYS:HD2	6:RF:46:LYS:N	2.29	0.47
9:RI:89:SER:OG	9:RI:135:MET:HA	2.15	0.47
11:RK:13:ASN:O	11:RK:15:GLY:N	2.47	0.47
11:RK:70:ARG:HD2	11:RK:76:VAL:HG22	1.96	0.47
23:RW:41:GLY:C	23:RW:43:LYS:N	2.68	0.47
24:RX:70:LEU:O	24:RX:74:GLY:N	2.47	0.47
32:QA:429:U:H1'	32:QA:430:A:H5"	1.95	0.47
32:QA:1018:G:H5'	32:QA:1019:A:OP2	2.13	0.47
32:QA:1460:C:N4	32:QA:1461:G:C6	2.82	0.47
36:QE:153:ALA:CA	36:QE:156:ARG:HB2	2.43	0.47
38:QG:86:VAL:HG13	38:QG:87:PRO:HD2	1.95	0.47
45:QN:15:LEU:HD23	45:QN:18:LYS:CE	2.44	0.47
48:QQ:46:HIS:HB2	48:QQ:66:LEU:CD1	2.43	0.47
32:XA:472:U:H2'	32:XA:472:U:O2	2.13	0.47
32:XA:573:A:N3	32:XA:883:C:O2'	2.44	0.47
32:XA:952:U:C5	44:XM:102:LYS:NZ	2.81	0.47
32:XA:1189:U:O2'	34:XC:175:HIS:CD2	2.67	0.47
32:XA:1221:G:H5'	50:XS:35:ARG:NE	2.29	0.47
32:XA:1271:A:H5'	32:XA:1314:C:H5"	1.96	0.47
32:XA:1454:G:O2'	32:XA:1455:G:O4'	2.31	0.47
34:XC:149:LYS:CG	34:XC:168:ARG:HB2	2.42	0.47
35:XD:53:GLN:CB	35:XD:202:LEU:HD12	2.42	0.47
36:XE:56:PRO:HG2	36:XE:57:ALA:H	1.79	0.47
38:XG:59:GLU:HG3	38:XG:60:ALA:H	1.75	0.47
40:XI:90:ASP:CB	40:XI:93:LEU:HD23	2.37	0.47
49:XR:32:ILE:HD12	49:XR:33:THR:O	2.14	0.47
1:YA:53:A:N7	1:YA:54:G:C5	2.82	0.47
1:YA:273:G:N2	1:YA:365:U:O2	2.45	0.47
1:YA:335:C:O2'	1:YA:336:C:O5'	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:671:C:O2'	1:YA:672:C:P	2.72	0.47
1:YA:1649:G:N1	1:YA:2009:A:C6	2.82	0.47
1:YA:1734:G:H2'	1:YA:1735:A:H8	1.78	0.47
1:YA:2255:G:H2'	1:YA:2256:G:O4'	2.14	0.47
1:YA:2457:U:C2'	1:YA:2458:G:H5'	2.44	0.47
1:YA:2506:U:C6	1:YA:2506:U:C3'	2.96	0.47
1:YA:2571:U:C4	1:YA:2574:G:H8	2.29	0.47
2:YB:6:G:H4'	2:YB:28:C:H4'	1.95	0.47
4:YD:118:PHE:O	4:YD:119:ALA:HB3	2.13	0.47
5:YE:37:ALA:HA	5:YE:40:ARG:HB3	1.95	0.47
6:YF:30:VAL:HG13	6:YF:168:LEU:HD23	1.96	0.47
8:YH:4:ILE:HG22	8:YH:5:LEU:N	2.29	0.47
10:YJ:80:HIS:O	10:YJ:81:ILE:C	2.57	0.47
17:YQ:86:SER:O	17:YQ:87:VAL:C	2.58	0.47
19:YS:33:LEU:HA	19:YS:36:LEU:HD23	1.96	0.47
22:YV:80:HIS:NE2	22:YV:83:LYS:HB2	2.30	0.47
24:YX:33:HIS:O	24:YX:34:SER:O	2.32	0.47
25:YY:9:LYS:HB3	25:YY:12:GLU:HG3	1.96	0.47
25:YY:50:VAL:C	25:YY:52:ARG:H	2.22	0.47
27:Y0:32:THR:HG21	27:Y0:47:TYR:CD2	2.49	0.47
1:RA:477:A:H2'	1:RA:478:A:C8	2.49	0.47
1:RA:499:U:C4	1:RA:500:G:C5	3.02	0.47
1:RA:923:G:N2	23:RW:23:LYS:HZ3	2.12	0.47
1:RA:1090:A:N1	1:RA:1091:G:C5	2.82	0.47
1:RA:1817:G:OP1	3:RC:86:ARG:NH2	2.47	0.47
1:RA:2102:G:N2	1:RA:2103:C:C2	2.83	0.47
1:RA:2365:G:H4'	23:RW:59:PHE:CZ	2.48	0.47
3:RC:20:ASN:C	3:RC:20:ASN:ND2	2.72	0.47
3:RC:109:LEU:HD23	3:RC:110:LYS:N	2.21	0.47
3:RC:209:ALA:HA	3:RC:212:TRP:CE2	2.49	0.47
4:RD:121:THR:O	4:RD:122:VAL:CB	2.61	0.47
6:RF:33:ILE:HD12	6:RF:95:MET:HG3	1.97	0.47
7:RG:174:LYS:C	7:RG:174:LYS:CD	2.87	0.47
11:RK:9:ASN:O	11:RK:83:ALA:HA	2.14	0.47
13:RM:10:ARG:HB3	13:RM:11:LYS:HG3	1.95	0.47
16:RP:5:LYS:O	16:RP:9:GLN:HG2	2.15	0.47
16:RP:35:SER:OG	32:QA:345:C:OP1	2.27	0.47
19:RS:20:VAL:HG11	19:RS:47:VAL:HG11	1.96	0.47
19:RS:29:VAL:O	19:RS:33:LEU:HD22	2.14	0.47
25:RY:59:GLU:HG3	25:RY:60:LYS:N	2.29	0.47
32:QA:414:A:N3	32:QA:415:A:C8	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:452:A:H5”	32:QA:452:A:C8	2.44	0.47
32:QA:772:U:C2’	32:QA:773:G:H5’	2.44	0.47
32:QA:1202:U:O2’	45:QN:68:ARG:HB2	2.14	0.47
32:QA:1521:C:O2’	32:QA:1522:U:H5’	2.14	0.47
33:QB:32:GLY:HA3	33:QB:39:ILE:HG12	1.95	0.47
35:QD:189:ASP:O	35:QD:190:LEU:HB3	2.14	0.47
37:QF:10:VAL:HG12	37:QF:11:HIS:N	2.29	0.47
37:QF:42:TRP:HZ2	37:QF:61:LEU:HD22	1.79	0.47
38:QG:68:VAL:HG12	38:QG:102:TRP:HE3	1.80	0.47
41:QJ:14:ASP:HB3	41:QJ:17:LEU:HB3	1.96	0.47
41:QJ:15:HIS:HB3	41:QJ:70:HIS:CE1	2.49	0.47
42:QK:22:ILE:HG12	42:QK:85:VAL:HG22	1.96	0.47
43:QL:3:VAL:HG23	43:QL:4:ASN:N	2.29	0.47
51:QT:34:VAL:O	51:QT:38:ILE:HG12	2.14	0.47
32:XA:239:U:H6	32:XA:239:U:H5”	1.78	0.47
32:XA:406:G:H5’	35:XD:4:LEU:HD22	1.95	0.47
32:XA:668:G:O2’	32:XA:669:G:H5’	2.14	0.47
32:XA:772:U:O2’	32:XA:773:G:H5’	2.14	0.47
32:XA:778:G:C2	32:XA:779:C:O2	2.67	0.47
32:XA:784:A:H2’	32:XA:785:G:C8	2.49	0.47
32:XA:794:A:H2’	32:XA:795:C:H6	1.80	0.47
32:XA:908:A:H2’	32:XA:909:A:H8	1.78	0.47
32:XA:954:G:H1	32:XA:1228:C:N4	2.12	0.47
33:XB:59:ILE:HA	33:XB:62:ARG:HD3	1.96	0.47
33:XB:151:LYS:HG3	33:XB:152:ASP:OD1	2.14	0.47
34:XC:76:ILE:HA	34:XC:83:VAL:HG13	1.96	0.47
37:XF:59:TYR:CE2	49:XR:66:LEU:HD21	2.45	0.47
38:XG:91:ARG:HG2	38:XG:92:PRO:CD	2.36	0.47
40:XI:4:GLN:C	40:XI:5:TYR:HD2	2.22	0.47
44:XM:17:ALA:HB3	44:XM:18:LEU:HD12	1.95	0.47
44:XM:75:SER:HB2	44:XM:79:LEU:HG	1.95	0.47
46:XO:87:ARG:HD2	46:XO:87:ARG:HA	1.68	0.47
49:XR:64:LEU:O	49:XR:66:LEU:HD23	2.14	0.47
51:XT:30:PHE:HE2	51:XT:52:GLU:HG2	1.79	0.47
1:YA:98:G:O2’	1:YA:103:A:C8	2.67	0.47
1:YA:499:U:H5”	21:YU:42:LYS:HZ2	1.79	0.47
1:YA:860:U:O2’	1:YA:861:A:O5’	2.27	0.47
1:YA:1019:U:O2’	1:YA:1021:A:C2	2.65	0.47
1:YA:1441:G:C2	1:YA:1551:A:C2	3.02	0.47
1:YA:1606:C:O2’	1:YA:1607:C:P	2.72	0.47
1:YA:1633:G:C5	1:YA:1635:A:C5	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1833:C:C4	1:YA:1834:U:C4	3.02	0.47
1:YA:2056:G:H2'	1:YA:2056:G:N3	2.30	0.47
1:YA:2744:G:N2	1:YA:2745:C:C2	2.82	0.47
2:YB:55:U:H2'	2:YB:56:G:C8	2.49	0.47
3:YC:144:GLU:HG3	3:YC:151:GLY:CA	2.44	0.47
4:YD:125:TRP:CE3	4:YD:160:LYS:HD3	2.49	0.47
5:YE:79:ARG:CG	5:YE:80:SER:N	2.77	0.47
5:YE:126:VAL:HG22	5:YE:127:GLU:OE2	2.14	0.47
7:YG:91:VAL:N	7:YG:93:TYR:CD2	2.81	0.47
7:YG:162:ARG:HB2	7:YG:166:GLU:HB3	1.95	0.47
10:YJ:73:VAL:HB	10:YJ:75:TYR:CE2	2.49	0.47
11:YK:64:ARG:HD2	11:YK:102:PRO:O	2.14	0.47
14:YN:52:ILE:HA	14:YN:55:ALA:HB3	1.95	0.47
24:YX:15:ASN:C	24:YX:26:ARG:HG2	2.39	0.47
1:RA:480:A:C2'	1:RA:481:G:OP1	2.63	0.47
1:RA:851:C:H2'	1:RA:852:U:C6	2.50	0.47
1:RA:923:G:H21	23:RW:23:LYS:HZ3	1.61	0.47
1:RA:1411:U:C2'	1:RA:1412:U:H5'	2.45	0.47
1:RA:1588:G:C4	1:RA:1589:U:C5	3.02	0.47
1:RA:2352:A:C6	23:RW:30:VAL:HG11	2.50	0.47
3:RC:32:LEU:HA	3:RC:32:LEU:HD23	1.65	0.47
4:RD:159:LYS:NZ	4:RD:160:LYS:H	2.11	0.47
4:RD:191:GLY:O	4:RD:192:ALA:HB3	2.14	0.47
5:RE:196:VAL:O	5:RE:197:GLU:C	2.57	0.47
7:RG:85:LYS:HG2	7:RG:131:VAL:CG1	2.44	0.47
7:RG:139:VAL:O	7:RG:140:ILE:C	2.57	0.47
8:RH:16:GLY:C	8:RH:51:ARG:HH21	2.22	0.47
12:RL:110:VAL:O	12:RL:111:ILE:CB	2.49	0.47
19:RS:43:ALA:O	19:RS:47:VAL:HG12	2.14	0.47
28:R1:16:THR:HG21	28:R1:41:VAL:HG22	1.95	0.47
32:QA:797:C:OP2	42:QK:125:LYS:HG3	2.14	0.47
32:QA:1083:U:C5	32:QA:1084:G:C5	3.02	0.47
32:QA:1124:G:H3'	32:QA:1145:A:N6	2.29	0.47
32:QA:1355:G:O2'	32:QA:1356:G:H5'	2.14	0.47
38:QG:143:MET:HA	38:QG:143:MET:HE3	1.95	0.47
40:QI:3:ASN:CG	40:QI:4:GLN:N	2.71	0.47
41:QJ:21:ALA:HA	41:QJ:24:GLU:OE2	2.14	0.47
44:QM:105:ALA:O	44:QM:109:LYS:HB2	2.14	0.47
46:QO:34:GLN:HA	46:QO:34:GLN:OE1	2.14	0.47
46:QO:84:LEU:HB3	46:QO:86:LEU:HD22	1.97	0.47
52:QU:24:LYS:O	52:QU:26:GLY:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:346:G:O2'	32:XA:347:G:O4'	2.31	0.47
32:XA:375:U:C4	32:XA:376:G:N7	2.82	0.47
32:XA:1134:G:N1	32:XA:1141:C:C4	2.82	0.47
32:XA:1179:A:H2'	32:XA:1180:A:O4'	2.13	0.47
34:XC:161:ILE:H	34:XC:161:ILE:CD1	2.27	0.47
36:XE:40:ASP:OD1	36:XE:41:GLY:N	2.46	0.47
43:XL:106:VAL:HG23	43:XL:116:TYR:HB3	1.95	0.47
49:XR:25:ILE:O	49:XR:25:ILE:HG13	2.12	0.47
1:YA:185:G:N1	1:YA:212:G:C2	2.82	0.47
1:YA:219:A:N7	1:YA:220:G:C5	2.82	0.47
1:YA:347:A:N6	1:YA:348:A:N6	2.62	0.47
1:YA:607:U:H6	1:YA:607:U:H3'	1.79	0.47
1:YA:739:A:H4'	1:YA:740:C:OP1	2.13	0.47
1:YA:1313:U:OP2	1:YA:1314:C:C5	2.67	0.47
1:YA:1537:G:C3'	1:YA:1538:G:H4'	2.41	0.47
1:YA:1612:C:O2'	1:YA:1613:G:O4'	2.28	0.47
1:YA:1682:G:C2	1:YA:1757:A:O4'	2.68	0.47
1:YA:2748:A:C1'	7:YG:66:THR:HG22	2.35	0.47
4:YD:9:VAL:O	16:YP:4:ILE:HD11	2.14	0.47
4:YD:12:THR:CG2	4:YD:13:ARG:N	2.77	0.47
6:YF:11:VAL:HG12	6:YF:12:VAL:N	2.29	0.47
7:YG:88:LEU:HD13	7:YG:93:TYR:HB3	1.96	0.47
13:YM:41:LEU:HB3	13:YM:46:ILE:CG2	2.44	0.47
21:YU:50:ALA:O	21:YU:51:LEU:HB2	2.13	0.47
22:YV:61:LEU:O	22:YV:72:VAL:HG22	2.14	0.47
24:YX:3:VAL:C	24:YX:5:GLN:N	2.73	0.47
25:YY:48:ARG:HH11	25:YY:48:ARG:CG	2.26	0.47
29:Y2:30:VAL:C	29:Y2:32:ALA:H	2.22	0.47
1:RA:1069:A:O2'	1:RA:1070:A:C5'	2.58	0.47
1:RA:1157:G:O2'	26:RZ:31:ILE:CD1	2.62	0.47
1:RA:1832:C:N4	1:RA:1833:C:C4	2.82	0.47
1:RA:1998:A:H2'	1:RA:1999:C:C6	2.50	0.47
1:RA:2140:G:C2	1:RA:2141:G:C4	3.02	0.47
1:RA:2274:A:O2'	1:RA:2276:G:OP1	2.26	0.47
1:RA:2486:C:C2'	1:RA:2487:G:O5'	2.63	0.47
1:RA:2783:U:H2'	1:RA:2784:U:H6	1.78	0.47
1:RA:2886:A:C5	1:RA:2887:A:C8	3.02	0.47
1:RA:2897:U:H2'	1:RA:2898:U:H6	1.75	0.47
3:RC:140:VAL:HG13	3:RC:189:ALA:HB1	1.91	0.47
3:RC:142:ASN:O	3:RC:142:ASN:CG	2.58	0.47
6:RF:40:GLY:C	6:RF:84:ILE:HD11	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:RL:9:ALA:HB3	12:RL:12:SER:HB2	1.95	0.47
12:RL:18:ARG:O	12:RL:19:LEU:HB3	2.14	0.47
16:RP:57:ALA:HB1	16:RP:73:PHE:O	2.15	0.47
18:RR:49:ILE:HG21	18:RR:53:PHE:N	2.29	0.47
19:RS:28:LYS:O	19:RS:29:VAL:C	2.58	0.47
20:RT:32:LEU:HG	20:RT:83:ALA:CB	2.44	0.47
20:RT:34:VAL:O	20:RT:34:VAL:HG23	2.14	0.47
20:RT:69:ARG:CZ	20:RT:70:HIS:HA	2.44	0.47
21:RU:53:GLN:N	21:RU:54:PRO:CD	2.77	0.47
23:RW:36:ILE:O	23:RW:39:GLN:CD	2.57	0.47
26:RZ:29:ARG:CG	26:RZ:29:ARG:NH2	2.76	0.47
32:QA:84:U:O2	32:QA:84:U:C2'	2.63	0.47
32:QA:198:G:O6	32:QA:220:G:C6	2.67	0.47
32:QA:292:G:C2	32:QA:309:A:C2	3.02	0.47
32:QA:596:A:H2'	32:QA:597:G:H8	1.79	0.47
32:QA:715:A:H2'	32:QA:716:A:C8	2.49	0.47
32:QA:1118:U:P	40:QI:105:ARG:HE	2.37	0.47
32:QA:1367:C:C4	32:QA:1368:A:N7	2.82	0.47
32:QA:1488:G:O2'	32:QA:1489:G:H5'	2.14	0.47
35:QD:52:VAL:CG2	35:QD:53:GLN:N	2.77	0.47
36:QE:24:VAL:O	36:QE:25:LYS:C	2.57	0.47
36:QE:37:VAL:HG11	36:QE:113:VAL:HA	1.97	0.47
37:QF:67:PRO:C	37:QF:69:GLU:H	2.22	0.47
38:QG:12:LEU:N	38:QG:12:LEU:HD13	2.30	0.47
42:QK:96:ILE:HG13	42:QK:97:ARG:N	2.29	0.47
47:QP:20:VAL:HG21	47:QP:32:PHE:CB	2.44	0.47
32:XA:110:C:H2'	32:XA:111:G:O4'	2.15	0.47
32:XA:404:G:O6	35:XD:1:ALA:HB2	2.15	0.47
32:XA:557:G:H2'	32:XA:558:G:C8	2.50	0.47
32:XA:1098:C:H2'	32:XA:1099:G:O4'	2.14	0.47
32:XA:1241:G:C2	32:XA:1242:G:C5	3.02	0.47
32:XA:1279:G:C5'	41:XJ:9:ARG:HH12	2.19	0.47
36:XE:14:LEU:HD22	36:XE:59:ILE:CD1	2.43	0.47
36:XE:14:LEU:HD12	36:XE:15:ILE:H	1.78	0.47
37:XF:80:PHE:N	37:XF:80:PHE:HD1	2.13	0.47
38:XG:65:LEU:O	38:XG:69:ARG:HB2	2.15	0.47
38:XG:99:ALA:HB3	38:XG:100:MET:HE2	1.96	0.47
45:XN:16:ALA:HA	45:XN:20:PHE:CD1	2.42	0.47
46:XO:38:LEU:HD12	46:XO:41:HIS:CB	2.45	0.47
47:XP:16:PHE:CE2	47:XP:40:ASN:HB2	2.49	0.47
1:YA:233:A:O2'	1:YA:234:U:O4'	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:500:G:N2	1:YA:503:A:C8	2.83	0.47
1:YA:740:C:O2'	1:YA:741:U:C5'	2.63	0.47
1:YA:1021:A:H2'	1:YA:1022:G:H4'	1.96	0.47
1:YA:1259:G:H2'	1:YA:1260:A:O4'	2.14	0.47
1:YA:1326:U:O2'	1:YA:1327:A:O5'	2.31	0.47
1:YA:1441:G:H2'	1:YA:1442:U:H6	1.78	0.47
1:YA:1473:G:O2'	1:YA:1474:U:H5'	2.13	0.47
1:YA:1553:A:C8	1:YA:1555:G:O6	2.67	0.47
1:YA:1666:G:C2'	1:YA:1667:G:H5'	2.44	0.47
1:YA:1734:G:O2'	1:YA:1735:A:C8	2.59	0.47
1:YA:1866:A:H2'	1:YA:1867:G:C8	2.49	0.47
1:YA:2073:C:O2'	1:YA:2074:U:H5'	2.14	0.47
1:YA:2335:A:O2'	1:YA:2336:A:H2'	2.15	0.47
1:YA:2426:A:H3'	1:YA:2427:C:H5'	1.96	0.47
1:YA:2429:G:OP2	1:YA:2430:A:OP2	2.31	0.47
1:YA:2683:C:OP1	16:YP:55:HIS:CB	2.62	0.47
1:YA:2683:C:H4'	4:YD:13:ARG:NH2	2.30	0.47
1:YA:2707:U:H2'	1:YA:2708:G:H8	1.75	0.47
1:YA:2714:G:H2'	1:YA:2715:C:C6	2.48	0.47
1:YA:2848:G:H1'	1:YA:2849:U:C5	2.48	0.47
1:YA:2876:G:H4'	16:YP:2:ASN:ND2	2.26	0.47
2:YB:8:C:O3'	15:YO:25:ARG:NH1	2.48	0.47
3:YC:44:ASN:C	3:YC:46:GLY:H	2.21	0.47
5:YE:162:ARG:C	5:YE:164:LEU:N	2.72	0.47
10:YJ:1:MET:SD	10:YJ:2:LYS:HE3	2.54	0.47
11:YK:9:ASN:O	11:YK:83:ALA:HA	2.14	0.47
12:YL:29:LYS:O	12:YL:30:THR:OG1	2.32	0.47
12:YL:93:ASN:O	12:YL:95:LEU:N	2.44	0.47
13:YM:1:MET:O	13:YM:2:LEU:O	2.32	0.47
14:YN:67:PHE:HE2	14:YN:73:ASN:ND2	2.11	0.47
16:YP:77:SER:OG	16:YP:79:VAL:HG22	2.15	0.47
17:YQ:96:ASP:C	17:YQ:98:ALA:N	2.71	0.47
19:YS:1:MET:O	19:YS:2:GLU:HG2	2.15	0.47
24:YX:47:THR:O	24:YX:48:LEU:HD23	2.14	0.47
28:Y1:38:PHE:CD2	28:Y1:39:ASP:N	2.82	0.47
1:RA:34:U:C1'	1:RA:35:G:OP1	2.63	0.47
1:RA:181:A:C2	1:RA:182:A:C4	3.03	0.47
1:RA:1138:G:H5"	1:RA:1139:G:OP2	2.13	0.47
1:RA:1965:C:H3'	1:RA:1966:A:H8	1.79	0.47
1:RA:2478:A:H5'	31:R4:32:LYS:HD3	1.96	0.47
1:RA:2505:G:O4'	54:RA:3135:EM1:H58	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2563:U:C1'	1:RA:2566:A:N6	2.78	0.47
3:RC:39:SER:C	3:RC:41:GLY:N	2.72	0.47
4:RD:16:THR:CG2	4:RD:20:VAL:HB	2.44	0.47
5:RE:190:ALA:HA	5:RE:193:VAL:HB	1.97	0.47
6:RF:172:PHE:O	6:RF:173:ASP:C	2.56	0.47
8:RH:29:PHE:O	8:RH:33:GLN:HB3	2.14	0.47
10:RJ:77:HIS:CD2	10:RJ:79:GLY:N	2.74	0.47
13:RM:49:ALA:O	13:RM:50:ARG:C	2.57	0.47
14:RN:49:GLU:N	14:RN:50:PRO:HD3	2.30	0.47
19:RS:24:ILE:O	19:RS:71:VAL:HG11	2.14	0.47
21:RU:61:GLU:H	21:RU:61:GLU:HG2	1.34	0.47
23:RW:50:VAL:C	23:RW:52:CYS:N	2.73	0.47
28:R1:50:GLU:O	28:R1:51:ALA:HB2	2.14	0.47
32:QA:164:G:C2'	32:QA:165:G:H5'	2.45	0.47
32:QA:222:C:C2	32:QA:223:A:C8	3.03	0.47
32:QA:274:A:H4'	32:QA:275:G:O5'	2.10	0.47
32:QA:570:G:H2'	32:QA:571:U:C6	2.50	0.47
32:QA:574:A:H1'	32:QA:883:C:O4'	2.15	0.47
32:QA:644:U:O2'	32:QA:645:G:H5'	2.14	0.47
32:QA:1202:U:H1'	45:QN:68:ARG:HD2	1.96	0.47
33:QB:185:ILE:HA	33:QB:199:ILE:O	2.15	0.47
34:QC:33:ASP:O	34:QC:37:LYS:HB2	2.15	0.47
34:QC:116:ALA:HB2	34:QC:199:VAL:CG1	2.45	0.47
35:QD:12:ARG:NH1	35:QD:36:ALA:O	2.48	0.47
40:QI:60:LEU:HD23	40:QI:60:LEU:H	1.79	0.47
41:QJ:18:ILE:CG2	41:QJ:19:ASP:N	2.77	0.47
43:QL:2:THR:HB	43:QL:5:GLN:H	1.79	0.47
44:QM:106:ARG:HH11	44:QM:106:ARG:HG2	1.80	0.47
48:QQ:47:ASP:HA	48:QQ:51:GLU:OE2	2.14	0.47
50:QS:48:ILE:O	50:QS:48:ILE:HD12	2.14	0.47
51:QT:6:ALA:HB1	51:QT:9:ARG:HB2	1.96	0.47
51:QT:72:ALA:O	51:QT:73:ARG:C	2.57	0.47
32:XA:6:G:O6	36:XE:99:SER:HB2	2.14	0.47
32:XA:369:G:O2'	32:XA:370:C:H5'	2.13	0.47
32:XA:1336:C:C2'	32:XA:1337:G:OP2	2.62	0.47
33:XB:177:ASN:O	33:XB:177:ASN:ND2	2.48	0.47
35:XD:35:GLN:O	35:XD:36:ALA:HB2	2.14	0.47
37:XF:9:MET:HB2	37:XF:85:ILE:HG13	1.96	0.47
37:XF:56:LYS:O	37:XF:57:ALA:HB2	2.15	0.47
38:XG:140:VAL:C	38:XG:142:ARG:N	2.72	0.47
43:XL:42:LYS:HD3	43:XL:43:LYS:NZ	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:8:C:C2'	1:YA:9:G:H5'	2.45	0.47
1:YA:9:G:C6	1:YA:2629:U:C5	3.03	0.47
1:YA:116:C:C4	1:YA:117:G:C5	3.03	0.47
1:YA:140:C:H5'	1:YA:141:G:N2	2.30	0.47
1:YA:233:A:H2'	1:YA:234:U:C6	2.50	0.47
1:YA:241:A:C4	1:YA:243:U:O4	2.68	0.47
1:YA:299:A:H2	1:YA:320:A:O4'	1.96	0.47
1:YA:607:U:O2	1:YA:622:G:C6	2.67	0.47
1:YA:693:A:O2'	1:YA:1353:A:N3	2.44	0.47
1:YA:922:C:H1'	23:YW:22:VAL:CG2	2.41	0.47
1:YA:960:A:H5"	1:YA:961:C:OP2	2.14	0.47
1:YA:971:G:OP2	1:YA:974:G:N2	2.48	0.47
1:YA:1011:G:H5"	17:YQ:76:SER:HB2	1.96	0.47
1:YA:1073:A:O2'	1:YA:1074:G:C8	2.57	0.47
1:YA:1251:C:C6	17:YQ:5:ARG:NH1	2.82	0.47
1:YA:1456:G:C5	1:YA:1457:U:C5	3.02	0.47
1:YA:1495:A:H2'	1:YA:1496:A:C8	2.50	0.47
1:YA:1746:A:H2'	1:YA:1747:U:C6	2.50	0.47
1:YA:1785:A:N1	1:YA:1787:A:H1'	2.30	0.47
1:YA:1789:A:OP2	3:YC:220:ARG:NH1	2.43	0.47
1:YA:2031:A:C6	1:YA:2498:C:H1'	2.49	0.47
1:YA:2515:C:O2'	1:YA:2516:A:H5'	2.15	0.47
2:YB:24:G:C6	2:YB:56:G:C2	3.01	0.47
2:YB:90:C:H5"	2:YB:90:C:H6	1.80	0.47
3:YC:17:LYS:HD3	3:YC:18:VAL:O	2.15	0.47
3:YC:63:ILE:O	3:YC:64:VAL:HB	2.15	0.47
7:YG:6:ALA:HA	7:YG:7:PRO:HD3	1.63	0.47
8:YH:32:PRO:C	8:YH:34:GLY:H	2.22	0.47
10:YJ:45:THR:C	10:YJ:47:HIS:N	2.68	0.47
17:YQ:87:VAL:O	17:YQ:88:GLU:O	2.32	0.47
17:YQ:96:ASP:C	17:YQ:98:ALA:H	2.22	0.47
20:YT:14:PRO:HG2	20:YT:15:HIS:H	1.79	0.47
21:YU:44:HIS:O	21:YU:45:GLN:C	2.57	0.47
1:RA:117:G:C6	1:RA:119:A:C6	3.03	0.47
1:RA:322:A:H5'	1:RA:340:A:C1'	2.45	0.47
1:RA:608:A:H2'	1:RA:609:A:C8	2.50	0.47
1:RA:666:A:H4'	12:RL:48:ARG:HD2	1.96	0.47
1:RA:679:C:H2'	1:RA:680:C:C6	2.50	0.47
1:RA:983:A:N6	1:RA:984:A:N1	2.63	0.47
1:RA:1004:U:C2'	1:RA:1005:C:OP2	2.62	0.47
1:RA:1063:G:C2	1:RA:1064:C:H1'	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1279:G:O2'	1:RA:1280:G:H5'	2.14	0.47
1:RA:1422:G:C4	1:RA:1423:G:C8	3.03	0.47
1:RA:1566:A:P	3:RC:17:LYS:HZ3	2.38	0.47
1:RA:1570:A:H2'	1:RA:1571:A:C8	2.49	0.47
1:RA:1682:G:H2'	1:RA:1683:U:C6	2.49	0.47
1:RA:1802:A:N1	1:RA:1822:C:H1'	2.30	0.47
1:RA:1842:G:H2'	1:RA:1843:C:C6	2.50	0.47
1:RA:2075:U:C4	1:RA:2238:G:C6	3.02	0.47
1:RA:2151:U:N3	1:RA:2152:G:N7	2.62	0.47
1:RA:2223:G:H2'	1:RA:2224:G:C5'	2.44	0.47
1:RA:2444:G:OP2	5:RE:63:LYS:HD2	2.14	0.47
1:RA:2846:G:H2'	1:RA:2847:U:O4'	2.14	0.47
2:RB:8:C:O3'	15:RO:25:ARG:NH1	2.47	0.47
3:RC:184:GLU:O	3:RC:185:ALA:HB3	2.13	0.47
4:RD:11:MET:HA	4:RD:24:VAL:O	2.15	0.47
4:RD:124:ARG:HG2	4:RD:125:TRP:NE1	2.29	0.47
4:RD:158:GLY:O	4:RD:159:LYS:C	2.58	0.47
5:RE:12:LEU:O	5:RE:13:THR:HB	2.15	0.47
5:RE:48:THR:N	5:RE:51:GLU:HG3	2.30	0.47
6:RF:10:GLU:O	6:RF:11:VAL:HB	2.14	0.47
7:RG:1:SER:HB3	7:RG:5:LYS:NZ	2.30	0.47
9:RI:17:ALA:CB	9:RI:42:ASN:HD21	2.27	0.47
10:RJ:55:ILE:HD12	10:RJ:56:VAL:O	2.15	0.47
11:RK:119:ALA:HA	11:RK:120:PRO:HD2	1.78	0.47
12:RL:65:GLY:O	12:RL:66:PHE:HB3	2.14	0.47
14:RN:49:GLU:N	14:RN:50:PRO:CD	2.78	0.47
17:RQ:78:PHE:CZ	17:RQ:82:LEU:HD11	2.50	0.47
17:RQ:116:LEU:O	17:RQ:117:ALA:C	2.58	0.47
18:RR:10:LYS:N	18:RR:10:LYS:CD	2.77	0.47
18:RR:39:LEU:O	18:RR:49:ILE:HG23	2.13	0.47
20:RT:13:ALA:HB1	20:RT:14:PRO:HD2	1.95	0.47
22:RV:48:MET:O	22:RV:51:GLN:HG3	2.14	0.47
23:RW:49:ASN:OD1	23:RW:79:ILE:O	2.32	0.47
24:RX:30:PRO:HD2	24:RX:32:LEU:HD11	1.96	0.47
24:RX:77:TYR:O	24:RX:77:TYR:CG	2.68	0.47
26:RZ:12:ALA:HB2	26:RZ:53:MET:HE1	1.96	0.47
26:RZ:26:LEU:O	26:RZ:37:ARG:NH1	2.48	0.47
26:RZ:30:ARG:HE	26:RZ:30:ARG:HB2	1.46	0.47
28:R1:3:GLY:C	28:R1:5:ARG:H	2.22	0.47
28:R1:18:HIS:CG	28:R1:19:PHE:N	2.82	0.47
32:QA:16:A:C2'	32:QA:17:U:H5'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:164:G:H2'	32:QA:165:G:H5'	1.96	0.47
32:QA:191:G:H2'	32:QA:192:A:H8	1.79	0.47
32:QA:250:A:C4'	32:QA:251:G:O5'	2.56	0.47
32:QA:270:A:H2'	32:QA:271:C:C6	2.49	0.47
32:QA:471:U:C2'	32:QA:472:U:H5'	2.45	0.47
32:QA:754:C:O2'	32:QA:755:G:OP1	2.31	0.47
32:QA:1091:U:O2	32:QA:1093:A:C8	2.68	0.47
32:QA:1124:G:HO2'	32:QA:1125:U:H6	1.53	0.47
32:QA:1232:U:C4	32:QA:1233:G:N7	2.83	0.47
32:QA:1303:C:O2'	32:QA:1304:G:O4'	2.30	0.47
32:QA:1371:G:OP2	40:QI:12:LYS:HD3	2.14	0.47
32:QA:1406:U:C5	32:QA:1407:C:C5	3.03	0.47
32:QA:1453:G:N3	32:QA:1453:G:C2'	2.76	0.47
34:QC:138:GLN:C	34:QC:140:ALA:H	2.21	0.47
35:QD:145:ARG:C	35:QD:147:LYS:N	2.71	0.47
36:QE:120:HIS:C	36:QE:121:ASN:HD22	2.23	0.47
37:QF:15:SER:C	37:QF:16:GLU:HG3	2.39	0.47
37:QF:86:ARG:CZ	49:QR:63:TYR:HB3	2.41	0.47
39:QH:21:LYS:HE2	39:QH:21:LYS:HA	1.96	0.47
44:QM:73:SER:O	44:QM:77:LYS:HG2	2.15	0.47
46:QO:54:GLY:O	46:QO:58:MET:HG3	2.14	0.47
46:QO:55:LEU:O	46:QO:55:LEU:HD12	2.14	0.47
47:QP:42:ILE:C	47:QP:44:SER:H	2.22	0.47
51:QT:14:GLU:O	51:QT:15:LYS:C	2.57	0.47
52:QU:24:LYS:HG2	52:QU:25:ALA:N	2.30	0.47
32:XA:120:A:O2'	32:XA:121:U:C4'	2.62	0.47
32:XA:203:G:N2	32:XA:215:C:C2	2.83	0.47
32:XA:321:A:O2'	32:XA:1436:U:H5'	2.15	0.47
32:XA:406:G:C8	32:XA:495:A:C4	3.02	0.47
32:XA:414:A:H2'	32:XA:415:A:C5'	2.45	0.47
32:XA:461:A:O5'	32:XA:462:G:OP2	2.32	0.47
32:XA:533:A:C2	32:XA:536:C:C5	3.02	0.47
32:XA:690:G:H2'	32:XA:691:G:O4'	2.15	0.47
32:XA:909:A:H2'	32:XA:910:C:O4'	2.14	0.47
32:XA:949:A:C2	32:XA:1233:G:N3	2.83	0.47
32:XA:998:C:H2'	32:XA:999:C:C6	2.50	0.47
32:XA:1224:U:C4'	32:XA:1225:A:OP2	2.63	0.47
32:XA:1239:A:H5"	38:XG:118:ARG:NH1	2.17	0.47
32:XA:1240:U:O2'	38:XG:37:THR:HB	2.14	0.47
33:XB:147:LEU:O	33:XB:150:ILE:HG22	2.15	0.47
35:XD:76:LYS:O	35:XD:79:ALA:HB3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:XE:112:ALA:O	36:XE:113:VAL:C	2.56	0.47
36:XE:114:LEU:C	36:XE:116:VAL:H	2.23	0.47
36:XE:153:ALA:O	36:XE:156:ARG:HG2	2.14	0.47
40:XI:56:MET:O	40:XI:58:GLU:HG2	2.15	0.47
40:XI:88:GLU:CD	40:XI:88:GLU:N	2.72	0.47
41:XJ:30:LYS:O	41:XJ:30:LYS:HG2	2.15	0.47
42:XK:55:ARG:O	42:XK:56:LYS:C	2.58	0.47
42:XK:70:ALA:CA	42:XK:73:VAL:HG22	2.29	0.47
42:XK:126:ARG:O	52:XU:33:ARG:CZ	2.61	0.47
44:XM:64:VAL:HG12	44:XM:65:GLU:N	2.21	0.47
44:XM:101:THR:O	44:XM:102:LYS:C	2.57	0.47
45:XN:89:ARG:HG3	45:XN:91:GLU:HG2	1.97	0.47
48:XQ:42:LYS:HB3	48:XQ:42:LYS:HZ3	1.80	0.47
48:XQ:45:VAL:HG11	48:XQ:60:ILE:CG2	2.44	0.47
51:XT:66:ILE:CG1	51:XT:67:HIS:N	2.78	0.47
52:XU:52:VAL:HG22	52:XU:52:VAL:O	2.15	0.47
1:YA:37:C:H1'	5:YE:45:ALA:HB2	1.97	0.47
1:YA:39:G:C6	1:YA:40:U:O4	2.68	0.47
1:YA:51:G:N3	1:YA:119:A:C2	2.82	0.47
1:YA:68:G:C2'	1:YA:69:C:H5'	2.45	0.47
1:YA:116:C:H5"	1:YA:128:C:N4	2.27	0.47
1:YA:116:C:H5"	1:YA:128:C:C5	2.50	0.47
1:YA:308:G:N2	1:YA:329:G:H21	2.12	0.47
1:YA:579:G:C2	1:YA:1262:A:C5	3.03	0.47
1:YA:607:U:H5	1:YA:619:G:C5	2.33	0.47
1:YA:661:A:H2'	1:YA:662:G:O4'	2.15	0.47
1:YA:754:U:H2'	1:YA:755:U:C6	2.50	0.47
1:YA:1135:C:N4	1:YA:1139:G:O6	2.47	0.47
1:YA:1252:G:N3	17:YQ:32:ARG:HG2	2.30	0.47
1:YA:1275:A:H4'	1:YA:1276:A:OP1	2.14	0.47
1:YA:1300:G:C4'	1:YA:1301:A:O5'	2.59	0.47
1:YA:1312:U:O2	1:YA:1603:A:C2	2.68	0.47
1:YA:1370:C:O4'	1:YA:1810:A:H2	1.96	0.47
1:YA:1487:U:O5'	1:YA:1487:U:H6	1.97	0.47
1:YA:1594:U:H2'	1:YA:1595:C:O4'	2.15	0.47
1:YA:1596:A:N6	1:YA:1597:A:C6	2.83	0.47
1:YA:1638:C:H1'	1:YA:2698:U:O2'	2.14	0.47
1:YA:1733:G:C6	1:YA:1734:G:N7	2.82	0.47
1:YA:1788:C:O2'	1:YA:1789:A:H5'	2.14	0.47
1:YA:1965:C:C5'	1:YA:1966:A:H2'	2.45	0.47
1:YA:2083:G:C5	1:YA:2084:C:C5	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2246:G:H2'	1:YA:2247:A:C8	2.50	0.47
1:YA:2304:G:N2	1:YA:2312:U:H3	2.07	0.47
1:YA:2341:G:H2'	1:YA:2342:C:O4'	2.15	0.47
1:YA:2353:G:H1'	23:YW:30:VAL:CG1	2.45	0.47
1:YA:2425:A:H1'	1:YA:2426:A:OP2	2.14	0.47
1:YA:2439:A:C8	1:YA:2586:U:H4'	2.50	0.47
1:YA:2724:U:H5"	4:YD:123:LYS:HZ3	1.79	0.47
1:YA:2748:A:N1	1:YA:2757:A:N7	2.62	0.47
2:YB:51:G:C8	15:YO:64:TYR:CE2	3.03	0.47
3:YC:44:ASN:C	3:YC:46:GLY:N	2.73	0.47
3:YC:118:GLY:O	3:YC:119:VAL:C	2.57	0.47
3:YC:140:VAL:O	3:YC:141:HIS:HB2	2.15	0.47
4:YD:13:ARG:HH22	16:YP:74:GLN:NE2	2.13	0.47
4:YD:51:THR:HG21	4:YD:76:GLY:HA3	1.97	0.47
4:YD:137:SER:CB	4:YD:138:LEU:HD22	2.39	0.47
4:YD:193:VAL:O	4:YD:194:PRO:O	2.33	0.47
5:YE:28:VAL:HG23	5:YE:29:HIS:N	2.30	0.47
5:YE:47:LYS:HD3	5:YE:51:GLU:HB3	1.97	0.47
5:YE:47:LYS:O	5:YE:83:VAL:HB	2.14	0.47
6:YF:36:ASN:HA	6:YF:86:CYS:O	2.15	0.47
7:YG:117:PRO:HD2	7:YG:120:ILE:HG23	1.95	0.47
8:YH:38:PRO:HB2	8:YH:40:THR:CG2	2.45	0.47
12:YL:17:LYS:CE	12:YL:19:LEU:HD13	2.44	0.47
12:YL:124:GLY:H	12:YL:143:GLU:CG	2.25	0.47
14:YN:28:LEU:HD23	14:YN:29:VAL:N	2.30	0.47
15:YO:26:LEU:O	15:YO:28:VAL:N	2.48	0.47
16:YP:65:ASN:N	16:YP:65:ASN:HD22	2.13	0.47
16:YP:65:ASN:N	16:YP:65:ASN:ND2	2.63	0.47
16:YP:77:SER:HB3	16:YP:80:VAL:HG23	1.97	0.47
17:YQ:35:PHE:HE1	17:YQ:39:ILE:HD11	1.80	0.47
17:YQ:82:LEU:O	17:YQ:85:ALA:HB3	2.14	0.47
18:YR:41:ILE:HG22	18:YR:42:ALA:N	2.30	0.47
20:YT:29:THR:HA	20:YT:87:LEU:HB2	1.96	0.47
20:YT:38:ALA:C	20:YT:39:THR:HG22	2.39	0.47
21:YU:14:THR:CG2	21:YU:15:GLY:H	2.10	0.47
21:YU:39:ASN:O	21:YU:40:LEU:C	2.57	0.47
24:YX:24:THR:O	24:YX:25:LYS:C	2.57	0.47
24:YX:63:ILE:CD1	24:YX:64:ASP:H	2.27	0.47
25:YY:18:LEU:HD13	25:YY:22:LEU:HD13	1.97	0.47
27:Y0:38:LEU:HB2	27:Y0:41:HIS:CE1	2.50	0.47
1:RA:278:A:H2'	1:RA:278:A:N3	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:304:U:C2	1:RA:305:C:C5	3.02	0.47
1:RA:404:A:C1'	1:RA:405:U:OP2	2.62	0.47
1:RA:528:A:C2	1:RA:2043:C:C5'	2.97	0.47
1:RA:959:A:H62	13:RM:82:MET:HE3	1.78	0.47
1:RA:1866:A:H2'	1:RA:1867:G:H5'	1.95	0.47
1:RA:2821:A:OP2	4:RD:115:GLY:N	2.46	0.47
3:RC:67:LYS:HE2	3:RC:149:LYS:O	2.15	0.47
6:RF:7:TYR:O	6:RF:11:VAL:HB	2.14	0.47
7:RG:15:ASP:CG	7:RG:16:VAL:H	2.22	0.47
7:RG:82:PHE:CZ	7:RG:137:LYS:HD2	2.50	0.47
9:RI:59:THR:HG22	9:RI:61:TYR:HE2	1.79	0.47
10:RJ:30:THR:HG22	10:RJ:31:GLU:N	2.29	0.47
18:RR:74:ILE:HB	18:RR:87:GLN:O	2.15	0.47
20:RT:54:GLU:O	20:RT:55:VAL:HB	2.13	0.47
21:RU:5:ARG:O	21:RU:8:ASP:HB2	2.14	0.47
32:QA:198:G:N3	32:QA:199:A:C8	2.83	0.47
32:QA:485:U:O4'	32:QA:485:U:O2	2.30	0.47
32:QA:1348:U:O2'	32:QA:1349:A:O5'	2.33	0.47
32:QA:1403:C:O5'	32:QA:1403:C:H6	1.98	0.47
33:QB:30:ILE:HG23	33:QB:31:PHE:N	2.30	0.47
34:QC:59:PRO:O	34:QC:60:ALA:O	2.33	0.47
35:QD:114:ARG:O	35:QD:115:GLN:C	2.58	0.47
39:QH:74:ILE:CD1	39:QH:128:VAL:HG13	2.34	0.47
40:QI:119:LYS:HG3	40:QI:122:ARG:HB3	1.96	0.47
42:QK:86:LYS:CG	42:QK:114:PRO:HD3	2.44	0.47
48:QQ:14:ASP:O	48:QQ:16:MET:SD	2.73	0.47
50:QS:35:ARG:HH21	50:QS:74:ALA:HB3	1.79	0.47
32:XA:182:A:HO2'	32:XA:183:C:H2'	1.79	0.47
32:XA:186:C:O2'	32:XA:187:G:H5'	2.15	0.47
32:XA:211:G:C2'	32:XA:211:G:N3	2.77	0.47
32:XA:1138:G:N2	32:XA:1140:C:N3	2.61	0.47
32:XA:1494:G:C2	32:XA:1495:U:C2	3.03	0.47
35:XD:164:ARG:HB3	35:XD:165:GLU:H	1.53	0.47
37:XF:27:ALA:O	37:XF:31:GLY:HA3	2.14	0.47
39:XH:11:THR:CG2	39:XH:14:ARG:NH2	2.78	0.47
39:XH:65:PHE:C	39:XH:67:GLY:H	2.23	0.47
40:XI:63:TYR:C	40:XI:63:TYR:CD1	2.93	0.47
42:XK:87:GLY:H	42:XK:113:THR:CG2	2.28	0.47
42:XK:88:PRO:HD3	52:XU:28:LEU:HD11	1.97	0.47
50:XS:38:THR:O	50:XS:43:MET:SD	2.73	0.47
50:XS:57:VAL:HG21	50:XS:75:PRO:HD2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:302:C:O2'	1:YA:303:G:O5'	2.33	0.47
1:YA:455:C:N3	1:YA:473:G:C4'	2.78	0.47
1:YA:500:G:C2	1:YA:503:A:N7	2.83	0.47
1:YA:828:U:C5	1:YA:829:A:N6	2.83	0.47
1:YA:1068:G:C8	1:YA:1069:A:N7	2.83	0.47
1:YA:1087:G:H1'	1:YA:1089:A:H1'	1.96	0.47
1:YA:1142:A:H4'	10:YJ:27:ARG:HH22	1.80	0.47
1:YA:1155:A:H5"	17:YQ:54:ARG:CZ	2.45	0.47
1:YA:1358:G:N7	56:YA:3417:HOH:O	2.46	0.47
1:YA:1563:U:H2'	1:YA:1564:C:C6	2.50	0.47
1:YA:1585:C:H2'	1:YA:1586:A:O5'	2.15	0.47
1:YA:1722:A:C6	1:YA:1739:A:C8	3.03	0.47
1:YA:1737:G:C5'	1:YA:1738:G:OP2	2.63	0.47
1:YA:1810:A:H3'	1:YA:1811:G:C8	2.50	0.47
2:YB:110:C:O2'	2:YB:111:U:C5'	2.60	0.47
10:YJ:51:GLY:C	10:YJ:121:LYS:HE3	2.39	0.47
12:YL:84:LYS:O	12:YL:85:VAL:HB	2.15	0.47
12:YL:89:VAL:HG22	12:YL:90:VAL:N	2.30	0.47
15:YO:10:ARG:HD2	15:YO:96:GLY:O	2.14	0.47
18:YR:9:GLY:H	18:YR:10:LYS:NZ	2.12	0.47
20:YT:69:ARG:HG3	20:YT:70:HIS:N	2.30	0.47
27:Y0:41:HIS:HD1	27:Y0:41:HIS:C	2.22	0.47
1:RA:26:G:OP1	19:RS:80:PRO:HB3	2.15	0.47
1:RA:545:U:O2	1:RA:545:U:O5'	2.32	0.47
1:RA:827:U:H5'	1:RA:828:U:O5'	2.15	0.47
1:RA:907:G:O2'	1:RA:908:C:H5'	2.15	0.47
1:RA:1206:G:C6	1:RA:1207:C:C4	3.03	0.47
1:RA:2211:A:OP2	1:RA:2211:A:H4'	2.14	0.47
1:RA:2285:C:P	28:R1:5:ARG:HH21	2.38	0.47
1:RA:2485:G:H5"	13:RM:45:GLN:HE21	1.80	0.47
3:RC:255:LYS:C	3:RC:256:THR:HG23	2.40	0.47
7:RG:61:TRP:O	7:RG:62:ALA:C	2.57	0.47
9:RI:126:ARG:HA	9:RI:129:GLU:CD	2.40	0.47
16:RP:3:ILE:C	16:RP:4:ILE:O	2.56	0.47
32:QA:173:U:C2	32:QA:197:A:N1	2.83	0.47
32:QA:673:A:H2'	32:QA:674:G:C8	2.50	0.47
32:QA:736:C:H4'	37:QF:88:MET:HE2	1.95	0.47
32:QA:827:U:C4	32:QA:870:U:C2	3.02	0.47
32:QA:1240:U:H3	38:QG:29:LEU:CD2	2.28	0.47
32:QA:1453:G:N2	32:QA:1454:G:C5	2.83	0.47
33:QB:86:CYS:H	33:QB:88:GLN:NE2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:QB:172:ILE:HG22	33:QB:176:ASN:OD1	2.15	0.47
34:QC:22:PHE:CD1	41:QJ:12:ALA:HA	2.50	0.47
36:QE:81:GLN:HE22	36:QE:146:MET:HE2	1.80	0.47
45:QN:22:LYS:CG	45:QN:23:ARG:H	2.20	0.47
46:QO:34:GLN:HB3	46:QO:58:MET:HE1	1.97	0.47
46:QO:57:ARG:HH11	46:QO:57:ARG:HB3	1.80	0.47
48:QQ:76:ARG:HG2	48:QQ:77:VAL:H	1.80	0.47
49:QR:33:THR:HG22	49:QR:37:LYS:N	2.30	0.47
32:XA:284:C:H2'	32:XA:285:C:C6	2.50	0.47
32:XA:509:A:C6	32:XA:510:A:C6	3.03	0.47
32:XA:961:U:O2'	32:XA:962:C:O5'	2.32	0.47
32:XA:1509:C:O2'	32:XA:1510:C:H5'	2.15	0.47
33:XB:80:LYS:O	33:XB:81:ASP:C	2.58	0.47
33:XB:122:ASP:HB3	33:XB:124:THR:HG22	1.97	0.47
39:XH:77:VAL:N	39:XH:125:ILE:O	2.47	0.47
43:XL:86:VAL:HG11	43:XL:89:LEU:HD23	1.96	0.47
44:XM:48:SER:O	44:XM:50:GLY:N	2.48	0.47
44:XM:74:MET:HG3	44:XM:78:ARG:HB2	1.97	0.47
45:XN:52:ARG:HA	45:XN:52:ARG:NH1	2.30	0.47
48:XQ:14:ASP:OD2	48:XQ:52:CYS:HB2	2.14	0.47
1:YA:85:G:OP2	21:YU:27:VAL:HG11	2.15	0.47
1:YA:206:U:O2'	1:YA:207:A:H5'	2.15	0.47
1:YA:231:A:C2'	1:YA:232:G:H5'	2.45	0.47
1:YA:425:G:C2	1:YA:426:C:C4	3.03	0.47
1:YA:607:U:H3'	1:YA:607:U:C6	2.50	0.47
1:YA:607:U:C5	1:YA:619:G:C2	3.03	0.47
1:YA:637:A:P	12:YL:128:THR:HG21	2.54	0.47
1:YA:675:A:C8	1:YA:802:A:N6	2.83	0.47
1:YA:1277:G:O2'	14:YN:24:MET:HB2	2.15	0.47
1:YA:1341:G:C2	20:YT:84:TYR:CE2	3.03	0.47
1:YA:1394:U:C4	1:YA:1395:A:C6	3.03	0.47
1:YA:1716:U:C4	1:YA:1745:A:N6	2.83	0.47
1:YA:2313:C:O2'	1:YA:2314:A:H8	1.74	0.47
1:YA:2425:A:P	1:YA:2427:C:H5'	2.54	0.47
1:YA:2740:A:N6	1:YA:2764:A:C8	2.83	0.47
1:YA:2756:U:H1'	1:YA:2757:A:C5'	2.45	0.47
1:YA:2816:G:C2	1:YA:2831:G:C2	3.03	0.47
2:YB:52:A:N6	15:YO:33:ARG:NE	2.62	0.47
2:YB:55:U:O2'	2:YB:56:G:H5'	2.15	0.47
2:YB:59:A:H2'	2:YB:60:C:O4'	2.14	0.47
2:YB:67:G:O2'	2:YB:68:C:H6	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:YD:140:HIS:CD2	4:YD:140:HIS:H	2.33	0.47
8:YH:27:ARG:HH12	24:YX:59:ASP:HA	1.75	0.47
8:YH:143:ILE:O	8:YH:144:VAL:HG13	2.14	0.47
14:YN:8:ARG:HG2	14:YN:10:LEU:HD22	1.96	0.47
18:YR:80:ARG:HG2	18:YR:81:LYS:HZ3	1.80	0.47
20:YT:10:VAL:HG23	20:YT:11:LEU:H	1.80	0.47
1:RA:35:G:N2	1:RA:36:G:H1'	2.30	0.47
1:RA:250:G:C6	1:RA:251:A:C6	3.03	0.47
1:RA:409:G:O2'	1:RA:410:G:H5'	2.15	0.47
1:RA:588:U:H2'	1:RA:589:U:H6	1.78	0.47
1:RA:958:U:N3	13:RM:16:ARG:HD3	2.30	0.47
1:RA:999:U:C5	1:RA:1154:G:C5	3.02	0.47
1:RA:1176:U:H2'	1:RA:1177:G:N9	2.30	0.47
1:RA:2012:G:OP1	19:RS:98:LYS:HG2	2.15	0.47
1:RA:2151:U:N3	1:RA:2152:G:C5	2.82	0.47
1:RA:2286:G:H5'	1:RA:2286:G:H8	1.77	0.47
1:RA:2385:C:O2'	1:RA:2386:A:H5'	2.14	0.47
1:RA:2574:G:C6	1:RA:2575:C:C4	3.04	0.47
1:RA:2825:G:C3'	1:RA:2826:A:H5'	2.44	0.47
3:RC:115:ILE:HA	3:RC:115:ILE:HD12	1.61	0.47
4:RD:107:VAL:HA	4:RD:205:PRO:HA	1.97	0.47
5:RE:126:VAL:HG22	5:RE:127:GLU:H	1.79	0.47
5:RE:174:GLY:O	5:RE:175:ILE:C	2.58	0.47
6:RF:173:ASP:O	6:RF:174:PHE:C	2.58	0.47
7:RG:30:GLY:O	7:RG:32:LEU:N	2.47	0.47
8:RH:31:VAL:CG1	8:RH:36:ALA:O	2.57	0.47
9:RI:7:TYR:HB3	9:RI:58:ILE:H	1.79	0.47
11:RK:47:ILE:HD12	11:RK:47:ILE:HA	1.75	0.47
20:RT:39:THR:H	20:RT:43:ILE:HG22	1.80	0.47
23:RW:24:ARG:C	23:RW:24:ARG:CD	2.85	0.47
32:QA:34:C:H2'	32:QA:35:G:C8	2.49	0.47
32:QA:208:U:H3	32:QA:212:G:N2	2.12	0.47
32:QA:269:C:H2'	32:QA:270:A:H8	1.79	0.47
32:QA:364:A:C2	32:QA:365:U:O4	2.68	0.47
32:QA:607:A:H2'	32:QA:608:A:C8	2.50	0.47
32:QA:645:G:C2'	32:QA:646:G:H5'	2.45	0.47
32:QA:767:A:H2'	32:QA:768:A:O4'	2.15	0.47
34:QC:81:GLU:O	34:QC:84:GLU:HB3	2.15	0.47
37:QF:81:ASN:OD1	37:QF:83:ALA:HB3	2.15	0.47
39:QH:83:ARG:O	39:QH:84:ILE:HD13	2.16	0.47
42:QK:13:LYS:O	42:QK:14:GLN:CB	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:QL:42:LYS:HD3	43:QL:90:PRO:HG3	1.96	0.47
32:XA:60:A:N3	32:XA:61:G:H1'	2.29	0.47
32:XA:72:A:O2'	32:XA:73:C:H5'	2.14	0.47
32:XA:104:G:H4'	32:XA:174:A:O4'	2.15	0.47
32:XA:168:G:C2'	32:XA:169:C:H5'	2.45	0.47
32:XA:211:G:N3	32:XA:211:G:H2'	2.29	0.47
32:XA:243:A:H4'	32:XA:244:U:C5'	2.41	0.47
32:XA:245:U:HO2'	32:XA:246:A:H5'	1.74	0.47
32:XA:320:A:C2	32:XA:334:C:N3	2.83	0.47
32:XA:372:C:H4'	32:XA:373:A:H5'	1.97	0.47
32:XA:610:U:O2	32:XA:610:U:O4'	2.33	0.47
32:XA:1225:A:H2'	32:XA:1225:A:N3	2.29	0.47
32:XA:1495:U:O2'	32:XA:1496:C:H5'	2.15	0.47
33:XB:9:LEU:HB2	33:XB:11:ALA:N	2.25	0.47
33:XB:19:THR:OG1	33:XB:20:ARG:N	2.47	0.47
35:XD:50:TYR:O	35:XD:51:GLY:C	2.57	0.47
37:XF:3:HIS:CD2	37:XF:65:GLU:HG2	2.42	0.47
38:XG:61:PHE:C	38:XG:63:VAL:H	2.23	0.47
40:XI:63:TYR:C	40:XI:63:TYR:HD1	2.23	0.47
42:XK:91:GLY:O	42:XK:95:THR:HG22	2.14	0.47
44:XM:52:ILE:HG23	44:XM:53:ASP:N	2.30	0.47
47:XP:48:GLU:HG3	47:XP:51:ARG:HE	1.80	0.47
51:XT:70:LYS:HD2	51:XT:73:ARG:HH21	1.80	0.47
1:YA:141:G:C2'	1:YA:142:A:O4'	2.63	0.47
1:YA:233:A:H61	1:YA:428:A:N6	2.12	0.47
1:YA:379:G:C6	1:YA:380:G:N7	2.83	0.47
1:YA:475:C:O2'	1:YA:476:G:C5'	2.63	0.47
1:YA:616:A:N3	1:YA:617:G:C8	2.83	0.47
1:YA:636:G:H3'	12:YL:128:THR:CG2	2.43	0.47
1:YA:857:G:O2'	23:YW:19:ARG:CZ	2.63	0.47
1:YA:962:G:O2'	1:YA:963:U:O5'	2.32	0.47
1:YA:1255:U:O2'	1:YA:1256:G:P	2.72	0.47
1:YA:1308:A:N6	1:YA:1309:G:C2	2.83	0.47
1:YA:1455:G:O2'	1:YA:1456:G:O5'	2.32	0.47
1:YA:1518:C:H2'	1:YA:1519:G:O4'	2.15	0.47
1:YA:1549:A:C6	1:YA:1550:C:N3	2.83	0.47
1:YA:1639:C:C3'	1:YA:1640:A:H5"	2.45	0.47
1:YA:1709:U:C2	1:YA:1750:G:N2	2.82	0.47
1:YA:1753:G:C2	1:YA:1756:G:C2	3.04	0.47
1:YA:2078:C:C4	1:YA:2079:U:C4	3.02	0.47
1:YA:2093:G:C6	1:YA:2225:A:C8	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2336:A:N7	23:YW:40:ARG:NE	2.63	0.47
1:YA:2345:G:C5	1:YA:2347:C:C5	3.02	0.47
1:YA:2453:A:O2'	1:YA:2572:A:H1'	2.15	0.47
1:YA:2675:A:C2	1:YA:2676:C:C2	3.02	0.47
3:YC:225:ASN:HB2	3:YC:228:ASP:OD2	2.14	0.47
4:YD:119:ALA:CB	4:YD:163:GLY:C	2.88	0.47
6:YF:60:SER:C	6:YF:62:GLN:H	2.23	0.47
7:YG:74:MET:O	7:YG:78:VAL:HG13	2.15	0.47
12:YL:56:PRO:HD2	12:YL:59:ARG:HB2	1.97	0.47
13:YM:13:HIS:O	13:YM:14:LYS:HB2	2.15	0.47
19:YS:103:ILE:HD12	19:YS:103:ILE:N	2.30	0.47
21:YU:43:LYS:HE3	21:YU:45:GLN:CD	2.40	0.47
24:YX:38:TRP:HA	24:YX:38:TRP:CE3	2.50	0.47
26:YZ:13:ILE:C	26:YZ:15:ARG:H	2.23	0.47
1:RA:184:C:H2'	1:RA:185:G:H8	1.79	0.46
1:RA:776:G:H4'	1:RA:777:G:O5'	2.15	0.46
1:RA:855:G:N3	23:RW:23:LYS:CD	2.68	0.46
1:RA:923:G:H1'	23:RW:23:LYS:CE	2.40	0.46
1:RA:1738:G:O2'	1:RA:1739:A:H8	1.96	0.46
1:RA:1871:A:C8	1:RA:1872:A:C6	3.03	0.46
1:RA:2140:G:C6	1:RA:2141:G:C5	3.02	0.46
1:RA:2239:G:H5'	3:RC:248:GLY:HA3	1.96	0.46
1:RA:2755:C:O2'	1:RA:2756:U:H2'	2.15	0.46
1:RA:2823:A:OP2	4:RD:118:PHE:HD1	1.98	0.46
1:RA:2845:U:H5"	16:RP:51:ASN:O	2.15	0.46
5:RE:5:LEU:HD23	5:RE:120:VAL:O	2.15	0.46
8:RH:40:THR:O	8:RH:42:LYS:N	2.46	0.46
8:RH:67:ALA:C	8:RH:69:ALA:N	2.72	0.46
20:RT:29:THR:HA	20:RT:86:THR:H	1.80	0.46
23:RW:50:VAL:HG12	23:RW:51:GLY:N	2.30	0.46
26:RZ:40:THR:CG2	26:RZ:43:ILE:HG23	2.45	0.46
30:R3:14:LYS:O	30:R3:21:PHE:O	2.33	0.46
32:QA:340:U:H2'	32:QA:341:C:C6	2.49	0.46
32:QA:807:A:C4	32:QA:808:C:C5	3.02	0.46
32:QA:1017:U:C2	32:QA:1018:G:C8	3.03	0.46
32:QA:1129:C:O2'	32:QA:1139:G:N7	2.46	0.46
32:QA:1161:C:HO2'	32:QA:1162:C:H6	1.51	0.46
33:QB:67:LEU:HD22	33:QB:69:VAL:CG2	2.45	0.46
33:QB:134:LEU:HD12	33:QB:137:THR:OG1	2.14	0.46
33:QB:187:ASP:OD2	33:QB:202:ASN:HA	2.14	0.46
36:QE:119:VAL:O	36:QE:119:VAL:HG23	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:QL:64:SER:OG	43:QL:96:THR:HG23	2.14	0.46
44:QM:15:VAL:HA	44:QM:33:LEU:HD11	1.96	0.46
44:QM:88:LEU:HD23	44:QM:91:ARG:HH21	1.80	0.46
44:QM:106:ARG:HG2	44:QM:106:ARG:NH1	2.29	0.46
50:QS:43:MET:O	50:QS:61:VAL:HG21	2.15	0.46
51:QT:4:LYS:CE	51:QT:5:SER:HB3	2.43	0.46
51:QT:16:ALA:O	51:QT:17:ARG:C	2.58	0.46
32:XA:182:A:C2	32:XA:194:C:N4	2.79	0.46
32:XA:358:U:H2'	32:XA:359:G:C8	2.51	0.46
32:XA:518:C:H2'	32:XA:530:G:C8	2.50	0.46
32:XA:523:A:H61	43:XL:88:ASP:HB2	1.80	0.46
32:XA:608:A:H2'	32:XA:609:A:O4'	2.15	0.46
32:XA:759:A:H2'	32:XA:760:G:H5'	1.96	0.46
32:XA:765:G:C4	32:XA:812:G:C6	3.03	0.46
32:XA:1150:A:H1'	32:XA:1280:A:N6	2.30	0.46
32:XA:1331:G:O2'	32:XA:1332:A:H8	1.97	0.46
32:XA:1520:C:H2'	32:XA:1521:C:C6	2.50	0.46
33:XB:64:GLY:HA2	33:XB:158:ASP:OD2	2.15	0.46
36:XE:151:MET:O	36:XE:154:ALA:HB3	2.15	0.46
39:XH:75:GLN:O	39:XH:126:CYS:HB2	2.15	0.46
39:XH:102:VAL:HG22	39:XH:125:ILE:HB	1.97	0.46
44:XM:16:ILE:HD12	44:XM:16:ILE:N	2.31	0.46
52:XU:36:PHE:HA	52:XU:39:LYS:HE2	1.97	0.46
1:YA:201:C:O5'	1:YA:201:C:H6	1.99	0.46
1:YA:574:A:H4'	1:YA:575:A:C5'	2.44	0.46
1:YA:595:C:H6	1:YA:595:C:O5'	1.98	0.46
1:YA:627:A:O4'	1:YA:637:A:N6	2.48	0.46
1:YA:1337:G:H8	1:YA:1337:G:OP2	1.97	0.46
1:YA:1436:G:N2	1:YA:1557:C:C2	2.83	0.46
1:YA:1801:A:C4	1:YA:2203:U:C5	3.03	0.46
1:YA:2136:G:H2'	1:YA:2137:U:H6	1.76	0.46
1:YA:2235:G:C5	1:YA:2236:U:C5	3.04	0.46
1:YA:2330:G:C2	1:YA:2386:A:N1	2.83	0.46
1:YA:2415:G:C4	1:YA:2416:C:C5	3.03	0.46
1:YA:2446:G:H5"	1:YA:2447:G:OP2	2.15	0.46
2:YB:57:A:OP2	2:YB:57:A:H2'	2.15	0.46
7:YG:11:PRO:O	7:YG:14:VAL:HG22	2.14	0.46
20:YT:19:LYS:HD3	20:YT:19:LYS:HA	1.71	0.46
22:YV:80:HIS:CD2	22:YV:82:TYR:H	2.32	0.46
1:RA:141:G:H3'	1:RA:142:A:O4'	2.15	0.46
1:RA:565:C:O2'	1:RA:566:U:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:789:A:OP1	1:RA:790:U:C5	2.68	0.46
1:RA:1056:G:O2'	1:RA:1086:A:H8	1.98	0.46
1:RA:1063:G:C6	1:RA:1064:C:C2	3.04	0.46
1:RA:1684:G:C2	1:RA:1705:A:C2	3.03	0.46
1:RA:2515:C:H6	1:RA:2515:C:O5'	1.99	0.46
1:RA:2523:G:C2'	1:RA:2524:G:H5'	2.46	0.46
1:RA:2804:U:H2'	1:RA:2805:C:C6	2.50	0.46
2:RB:78:A:C2	2:RB:99:A:C4	3.03	0.46
3:RC:141:HIS:N	3:RC:190:THR:O	2.42	0.46
3:RC:173:LEU:O	3:RC:180:MET:HA	2.14	0.46
3:RC:211:ARG:HA	3:RC:211:ARG:HD2	1.43	0.46
4:RD:61:THR:OG1	4:RD:63:PRO:HD2	2.14	0.46
5:RE:148:ILE:H	5:RE:187:VAL:H	1.63	0.46
6:RF:36:ASN:HA	6:RF:87:LYS:HA	1.97	0.46
9:RI:2:LYS:HB3	9:RI:3:LYS:H	1.57	0.46
9:RI:56:VAL:CG2	9:RI:68:PHE:HB2	2.45	0.46
10:RJ:81:ILE:HG23	10:RJ:83:GLY:N	2.30	0.46
12:RL:75:ALA:O	12:RL:108:ALA:HA	2.15	0.46
14:RN:1:MET:O	14:RN:2:ARG:CB	2.62	0.46
15:RO:14:ALA:O	15:RO:18:LEU:HB2	2.15	0.46
16:RP:19:PHE:N	16:RP:19:PHE:CD2	2.81	0.46
23:RW:22:VAL:HA	23:RW:68:PHE:HE2	1.80	0.46
30:R3:7:ARG:HA	30:R3:7:ARG:HD2	1.48	0.46
32:QA:109:A:C6	32:QA:326:G:C6	3.02	0.46
32:QA:207:C:H5"	32:QA:208:U:OP2	2.15	0.46
32:QA:316:C:N3	32:QA:317:U:C5	2.83	0.46
32:QA:697:U:C5	32:QA:698:G:C8	3.03	0.46
32:QA:1239:A:H62	32:QA:1299:A:H61	1.58	0.46
32:QA:1409:C:H2'	32:QA:1410:A:H8	1.79	0.46
33:QB:78:ALA:O	33:QB:81:ASP:OD2	2.33	0.46
34:QC:106:ARG:O	34:QC:107:LYS:O	2.32	0.46
35:QD:60:VAL:HA	35:QD:63:ILE:HG22	1.95	0.46
35:QD:145:ARG:HD2	35:QD:147:LYS:HE3	1.95	0.46
36:QE:147:ASN:O	36:QE:149:PRO:HD3	2.15	0.46
38:QG:107:ALA:CA	38:QG:122:GLU:HG3	2.46	0.46
44:QM:36:ALA:HB3	44:QM:38:ILE:HG12	1.97	0.46
45:QN:15:LEU:CD1	45:QN:53:ASP:HB2	2.43	0.46
48:QQ:30:HIS:ND1	48:QQ:31:PRO:HD2	2.30	0.46
52:QU:3:ILE:HA	52:QU:19:LYS:NZ	2.30	0.46
32:XA:65:A:C2'	32:XA:382:A:H61	2.28	0.46
32:XA:254:G:H21	48:XQ:17:GLU:HG3	1.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:369:G:OP2	32:XA:388:G:N1	2.46	0.46
32:XA:375:U:N3	32:XA:376:G:N7	2.63	0.46
32:XA:653:U:H5'	39:XH:55:LYS:CE	2.45	0.46
32:XA:764:C:H42	32:XA:812:G:H1	1.62	0.46
32:XA:969:A:C5	32:XA:970:C:O2	2.68	0.46
32:XA:972:C:O2'	41:XJ:57:VAL:HG23	2.15	0.46
32:XA:1054:C:H1'	32:XA:1196:A:C5	2.50	0.46
32:XA:1103:C:N4	32:XA:1104:G:C6	2.83	0.46
32:XA:1130:A:C5	32:XA:1146:A:C5	3.02	0.46
32:XA:1189:U:O2'	34:XC:175:HIS:HD2	1.99	0.46
32:XA:1287:A:O2'	32:XA:1288:A:O5'	2.33	0.46
32:XA:1326:U:C2	32:XA:1327:C:C5	3.03	0.46
32:XA:1363:A:N1	32:XA:1365:G:O6	2.48	0.46
32:XA:1525:G:OP1	52:XU:37:TYR:HD1	1.97	0.46
32:XA:1532:U:H2'	32:XA:1534:A:OP2	2.14	0.46
33:XB:80:LYS:O	33:XB:83:ALA:N	2.48	0.46
33:XB:99:MET:O	33:XB:103:TRP:HB3	2.16	0.46
34:XC:17:TRP:CZ2	45:XN:94:GLY:O	2.69	0.46
35:XD:111:ALA:O	35:XD:114:ARG:HB3	2.15	0.46
36:XE:129:SER:HA	56:XE:204:HOH:O	2.14	0.46
37:XF:3:HIS:ND1	37:XF:94:HIS:HA	2.30	0.46
41:XJ:71:LEU:HD12	41:XJ:72:ARG:H	1.79	0.46
43:XL:113:ARG:HD2	43:XL:118:VAL:CG1	2.45	0.46
1:YA:466:A:H2	1:YA:795:C:O2	1.98	0.46
1:YA:532:A:H5'	1:YA:533:G:O4'	2.14	0.46
1:YA:1286:A:C5	1:YA:1289:C:N4	2.83	0.46
1:YA:1341:G:C4	20:YT:84:TYR:CE2	3.03	0.46
1:YA:1387:A:C4	1:YA:1388:G:C8	3.03	0.46
1:YA:1492:G:H3'	1:YA:1493:C:C5'	2.45	0.46
1:YA:1884:G:OP2	1:YA:1884:G:C8	2.67	0.46
1:YA:2059:A:H4'	5:YE:64:GLY:O	2.15	0.46
1:YA:2394:C:O2'	1:YA:2395:C:H5'	2.15	0.46
1:YA:2656:U:OP2	1:YA:2664:G:N2	2.45	0.46
2:YB:18:G:C6	2:YB:19:C:C4	3.03	0.46
2:YB:99:A:C5	2:YB:100:G:C5	3.03	0.46
3:YC:2:VAL:O	3:YC:3:VAL:HB	2.15	0.46
3:YC:92:LEU:HD12	3:YC:92:LEU:HA	1.82	0.46
3:YC:106:PRO:HB3	3:YC:141:HIS:CE1	2.49	0.46
4:YD:48:ILE:O	4:YD:48:ILE:HG23	2.15	0.46
6:YF:110:ILE:HA	6:YF:111:ARG:NH1	2.24	0.46
6:YF:157:THR:HB	6:YF:168:LEU:HD22	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:YJ:25:LEU:C	10:YJ:27:ARG:N	2.73	0.46
10:YJ:38:GLY:C	10:YJ:40:HIS:H	2.23	0.46
12:YL:78:ARG:C	12:YL:80:SER:H	2.23	0.46
13:YM:81:ARG:HH21	13:YM:84:LYS:HE2	1.80	0.46
13:YM:108:VAL:HG23	13:YM:109:PRO:HD2	1.97	0.46
21:YU:64:ILE:O	21:YU:64:ILE:HG23	2.15	0.46
24:YX:35:HIS:O	24:YX:47:THR:HA	2.15	0.46
27:Y0:39:ARG:O	27:Y0:40:HIS:HB2	2.15	0.46
27:Y0:53:VAL:HG23	27:Y0:54:ILE:H	1.80	0.46
1:RA:10:A:C2	1:RA:2800:A:H2'	2.51	0.46
1:RA:36:G:C2'	1:RA:37:C:H5'	2.45	0.46
1:RA:360:U:C4	1:RA:361:G:C6	3.04	0.46
1:RA:383:C:H5'	1:RA:384:A:H5"	1.97	0.46
1:RA:528:A:C8	1:RA:528:A:C3'	2.98	0.46
1:RA:581:C:O2'	1:RA:582:A:H5'	2.16	0.46
1:RA:686:U:H1'	29:R2:6:GLN:O	2.15	0.46
1:RA:761:A:N6	56:RA:3293:HOH:O	2.48	0.46
1:RA:1060:U:O4	1:RA:1088:A:C6	2.68	0.46
1:RA:1421:G:C2	1:RA:1422:G:N7	2.84	0.46
1:RA:1474:U:H2'	1:RA:1475:G:H5'	1.98	0.46
1:RA:1727:C:O2	1:RA:1727:C:H2'	2.16	0.46
1:RA:2503:A:H3'	1:RA:2503:A:OP2	2.15	0.46
3:RC:257:ARG:HE	3:RC:269:ARG:HH22	1.63	0.46
4:RD:108:ASP:OD2	4:RD:173:GLN:HA	2.15	0.46
4:RD:117:GLY:C	4:RD:118:PHE:CD1	2.93	0.46
9:RI:74:PRO:HB2	9:RI:77:VAL:HG13	1.98	0.46
10:RJ:4:PHE:O	10:RJ:44:TYR:CZ	2.68	0.46
16:RP:33:GLU:HB2	16:RP:38:ARG:HE	1.80	0.46
16:RP:112:ARG:O	16:RP:113:LEU:HD23	2.15	0.46
20:RT:61:LEU:HD12	20:RT:61:LEU:O	2.14	0.46
23:RW:69:GLU:O	23:RW:77:LYS:O	2.33	0.46
24:RX:44:ARG:CG	24:RX:45:PHE:N	2.78	0.46
32:QA:446:G:N2	32:QA:489:C:C2	2.84	0.46
32:QA:1319:A:C4	32:QA:1323:G:N7	2.84	0.46
36:QE:110:MET:HB3	36:QE:139:THR:HG21	1.97	0.46
41:QJ:88:MET:O	41:QJ:90:LEU:N	2.48	0.46
32:XA:109:A:C5	32:XA:327:A:C4	3.04	0.46
32:XA:190:A:H8	32:XA:190:A:O5'	1.98	0.46
32:XA:785:G:H2'	32:XA:785:G:N3	2.30	0.46
32:XA:793:U:O2	32:XA:1516:G:H4'	2.15	0.46
32:XA:913:A:C4'	32:XA:914:A:O5'	2.53	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1006:G:C6	32:XA:1024:G:C2	3.04	0.46
32:XA:1067:A:C4'	32:XA:1068:G:O5'	2.63	0.46
32:XA:1319:A:H2'	32:XA:1320:C:OP2	2.14	0.46
33:XB:80:LYS:HD3	33:XB:90:PHE:CZ	2.50	0.46
39:XH:111:THR:HG22	39:XH:112:ASP:N	2.29	0.46
40:XI:45:MET:O	40:XI:49:GLN:N	2.35	0.46
40:XI:129:ARG:CZ	40:XI:129:ARG:HA	2.46	0.46
46:XO:32:THR:O	46:XO:33:ALA:C	2.57	0.46
46:XO:63:ARG:C	46:XO:65:LEU:N	2.73	0.46
1:YA:70:G:H3'	1:YA:113:U:H4'	1.95	0.46
1:YA:333:G:C4	1:YA:334:C:C5	3.03	0.46
1:YA:353:C:N4	1:YA:354:A:H62	2.14	0.46
1:YA:584:C:P	17:YQ:5:ARG:HD3	2.55	0.46
1:YA:729:G:O2'	1:YA:1775:U:H1'	2.15	0.46
1:YA:1055:G:C2'	1:YA:1056:G:H5'	2.46	0.46
1:YA:1354:A:OP1	3:YC:35:LYS:HE2	2.16	0.46
1:YA:1451:C:H42	1:YA:1461:C:H42	1.62	0.46
1:YA:1784:A:H4'	1:YA:1785:A:O5'	2.15	0.46
1:YA:2496:C:N4	56:YA:3562:HOH:O	2.49	0.46
2:YB:40:U:O2	2:YB:43:C:C2'	2.58	0.46
6:YF:11:VAL:HG22	6:YF:171:ALA:HA	1.98	0.46
7:YG:112:VAL:HG12	7:YG:114:HIS:HB3	1.97	0.46
7:YG:137:LYS:C	7:YG:139:VAL:H	2.22	0.46
17:YQ:64:ILE:HD12	17:YQ:95:ALA:CB	2.46	0.46
30:Y3:28:LEU:O	30:Y3:29:ARG:HB3	2.15	0.46
1:RA:160:A:C6	1:RA:161:A:C6	3.03	0.46
1:RA:301:G:C4	1:RA:302:C:C5	3.03	0.46
1:RA:843:G:O2'	1:RA:844:A:H5'	2.15	0.46
1:RA:958:U:H3	13:RM:16:ARG:HD3	1.79	0.46
1:RA:996:A:C6	1:RA:1160:G:C2	3.03	0.46
1:RA:1059:G:C6	1:RA:1080:A:N1	2.83	0.46
1:RA:1417:C:O2'	1:RA:1587:G:O2'	2.24	0.46
1:RA:1784:A:H4'	1:RA:1785:A:C5'	2.46	0.46
1:RA:2556:C:H2'	1:RA:2557:G:H5'	1.97	0.46
3:RC:20:ASN:HA	3:RC:21:PRO:HD2	1.75	0.46
3:RC:85:ASN:OD1	3:RC:85:ASN:N	2.48	0.46
3:RC:141:HIS:CD2	3:RC:192:GLY:O	2.68	0.46
4:RD:179:ARG:HB3	4:RD:188:LEU:HB2	1.97	0.46
6:RF:82:TYR:CD2	6:RF:83:PRO:HD2	2.44	0.46
7:RG:51:PHE:CE2	7:RG:68:ARG:HA	2.50	0.46
8:RH:66:ASN:C	8:RH:68:ARG:H	2.23	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:RJ:111:LYS:HD2	10:RJ:112:GLY:N	2.29	0.46
12:RL:94:THR:HG22	12:RL:95:LEU:N	2.30	0.46
19:RS:4:ILE:HG22	19:RS:106:VAL:HG22	1.98	0.46
19:RS:24:ILE:HD11	19:RS:35:ILE:HB	1.98	0.46
19:RS:34:ASP:O	19:RS:35:ILE:C	2.56	0.46
21:RU:10:VAL:HB	21:RU:70:ALA:O	2.15	0.46
23:RW:30:VAL:HG23	23:RW:59:PHE:HD1	1.79	0.46
23:RW:50:VAL:HB	23:RW:61:LYS:HZ2	1.80	0.46
23:RW:75:ASN:O	23:RW:76:ARG:HB2	2.15	0.46
25:RY:45:GLN:O	25:RY:46:VAL:CB	2.63	0.46
28:R1:34:GLU:O	28:R1:35:LEU:HB3	2.15	0.46
30:R3:31:ILE:C	30:R3:31:ILE:HD12	2.40	0.46
32:QA:263:A:OP2	51:QT:73:ARG:NH1	2.47	0.46
32:QA:267:C:O2'	32:QA:268:U:C5'	2.63	0.46
32:QA:274:A:H4'	48:QQ:15:LYS:HE2	1.96	0.46
32:QA:342:C:C2'	32:QA:343:U:H5'	2.45	0.46
32:QA:864:A:H3'	32:QA:865:A:C8	2.51	0.46
32:QA:1266:G:N1	32:QA:1270:G:C6	2.83	0.46
33:QB:20:ARG:HA	33:QB:20:ARG:NE	2.30	0.46
33:QB:68:PHE:HE2	33:QB:88:GLN:HB2	1.80	0.46
34:QC:13:ILE:C	34:QC:15:LYS:H	2.24	0.46
34:QC:164:THR:O	34:QC:165:GLU:O	2.33	0.46
36:QE:12:GLU:HB3	36:QE:38:VAL:HG12	1.97	0.46
38:QG:144:ALA:C	38:QG:146:ALA:N	2.73	0.46
40:QI:111:GLU:HG2	40:QI:120:ALA:HB1	1.96	0.46
32:XA:90:C:O2'	32:XA:91:U:H6	1.91	0.46
32:XA:104:G:C2	32:XA:105:G:C8	3.04	0.46
32:XA:411:A:O3'	32:XA:412:A:O4'	2.32	0.46
32:XA:428:G:H4'	32:XA:429:U:OP1	2.15	0.46
32:XA:820:U:C4'	32:XA:821:G:OP2	2.51	0.46
32:XA:948:C:OP2	44:XM:104:ASN:HB3	2.14	0.46
32:XA:1202:U:C2'	32:XA:1203:C:H5'	2.45	0.46
32:XA:1238:A:N6	32:XA:1302:C:N4	2.63	0.46
32:XA:1277:C:O2'	32:XA:1279:G:C8	2.63	0.46
32:XA:1279:G:H2'	32:XA:1279:G:N3	2.31	0.46
32:XA:1372:U:OP1	40:XI:70:GLY:O	2.33	0.46
34:XC:36:PHE:CZ	45:XN:91:GLU:HB3	2.51	0.46
34:XC:120:THR:O	34:XC:120:THR:CG2	2.63	0.46
36:XE:78:GLY:O	36:XE:121:ASN:OD1	2.34	0.46
38:XG:26:VAL:HG23	38:XG:27:ASN:H	1.81	0.46
41:XJ:17:LEU:C	41:XJ:19:ASP:H	2.24	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:XM:85:TYR:HE2	44:XM:96:VAL:HG13	1.80	0.46
44:XM:95:PRO:HG3	44:XM:99:GLN:OE1	2.15	0.46
1:YA:82:U:H5"	1:YA:296:U:C5'	2.46	0.46
1:YA:118:A:P	1:YA:119:A:H5"	2.55	0.46
1:YA:227:A:H5'	1:YA:229:C:N4	2.31	0.46
1:YA:235:U:N3	1:YA:236:C:C5	2.83	0.46
1:YA:266:G:N2	1:YA:427:U:H1'	2.30	0.46
1:YA:332:A:C5	1:YA:335:C:N4	2.83	0.46
1:YA:455:C:N4	1:YA:473:G:H5'	2.29	0.46
1:YA:483:A:O2'	1:YA:484:C:C5'	2.64	0.46
1:YA:718:A:C3'	1:YA:719:C:H5'	2.45	0.46
1:YA:1265:A:C4	1:YA:1267:U:C4	3.04	0.46
1:YA:1324:G:N2	1:YA:1328:A:C6	2.84	0.46
1:YA:1394:U:C6	1:YA:1394:U:C3'	2.99	0.46
1:YA:1402:U:H2'	1:YA:1403:A:O5'	2.15	0.46
1:YA:1420:A:N3	1:YA:2211:A:N7	2.63	0.46
1:YA:1551:A:C5	1:YA:1552:A:C8	3.03	0.46
1:YA:1570:A:H8	1:YA:1570:A:O5'	1.99	0.46
1:YA:1801:A:C5	1:YA:2203:U:C5	3.03	0.46
1:YA:1936:A:H2	1:YA:1943:U:C4	2.33	0.46
1:YA:2025:C:H2'	1:YA:2026:U:C6	2.51	0.46
1:YA:2037:A:C6	1:YA:2038:G:C6	3.04	0.46
1:YA:2322:A:C8	1:YA:2323:G:C8	3.03	0.46
1:YA:2571:U:N3	1:YA:2574:G:C8	2.84	0.46
4:YD:159:LYS:O	4:YD:161:MET:HG2	2.16	0.46
5:YE:5:LEU:HD22	5:YE:122:GLU:H	1.81	0.46
7:YG:157:LYS:C	7:YG:159:LYS:N	2.73	0.46
8:YH:6:LEU:HD13	8:YH:36:ALA:HA	1.98	0.46
10:YJ:119:PHE:C	10:YJ:121:LYS:H	2.23	0.46
10:YJ:123:LYS:HG2	10:YJ:132:HIS:NE2	2.31	0.46
11:YK:107:LEU:C	11:YK:107:LEU:HD23	2.40	0.46
13:YM:17:ASN:HB3	13:YM:38:ARG:NH2	2.30	0.46
13:YM:69:PRO:CA	13:YM:94:ALA:HB2	2.46	0.46
23:YW:37:VAL:HG12	23:YW:55:ASP:CB	2.40	0.46
30:Y3:9:ALA:HB1	30:Y3:13:PHE:CD2	2.50	0.46
1:RA:301:G:H4'	1:RA:302:C:OP1	2.15	0.46
1:RA:488:G:O2'	19:RS:49:LYS:NZ	2.44	0.46
1:RA:1045:C:H4'	1:RA:1046:A:H5'	1.98	0.46
1:RA:1061:U:H6	1:RA:1070:A:N9	2.14	0.46
1:RA:1563:U:H2'	1:RA:1564:C:C6	2.51	0.46
1:RA:1939:U:OP1	1:RA:2604:U:O2'	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2152:G:H2'	1:RA:2153:C:H6	1.80	0.46
1:RA:2223:G:H2'	1:RA:2224:G:H5'	1.98	0.46
1:RA:2669:G:C2'	1:RA:2670:A:H5'	2.45	0.46
2:RB:104:A:H2'	2:RB:105:G:O4'	2.16	0.46
4:RD:91:THR:C	4:RD:93:GLY:N	2.64	0.46
13:RM:19:GLY:O	13:RM:97:GLN:HB2	2.15	0.46
15:RO:84:GLU:O	15:RO:86:GLY:N	2.48	0.46
16:RP:24:THR:O	16:RP:24:THR:HG23	2.15	0.46
24:RX:32:LEU:O	24:RX:33:HIS:CG	2.68	0.46
27:R0:38:LEU:O	27:R0:39:ARG:C	2.57	0.46
32:QA:72:A:N6	32:QA:99:C:H1'	2.30	0.46
32:QA:76:G:C2	32:QA:95:C:N3	2.84	0.46
32:QA:370:C:O2'	32:QA:371:A:H5'	2.15	0.46
32:QA:772:U:O2'	32:QA:773:G:H5'	2.16	0.46
32:QA:993:G:H2'	32:QA:993:G:N3	2.30	0.46
32:QA:1460:C:C2	32:QA:1461:G:C8	3.03	0.46
33:QB:116:LEU:HG	33:QB:140:LEU:HG	1.96	0.46
34:QC:53:ARG:O	34:QC:68:HIS:HB2	2.16	0.46
35:QD:168:THR:HG22	35:QD:183:ARG:HH21	1.81	0.46
35:QD:191:SER:OG	35:QD:192:ALA:N	2.45	0.46
36:QE:56:PRO:O	36:QE:59:ILE:HG13	2.15	0.46
37:QF:9:MET:HE3	49:QR:64:LEU:HD22	1.97	0.46
38:QG:46:LEU:O	38:QG:50:ALA:HB2	2.15	0.46
41:QJ:81:GLU:CA	41:QJ:84:VAL:HG12	2.45	0.46
47:QP:20:VAL:HG21	47:QP:32:PHE:HB2	1.98	0.46
48:QQ:58:VAL:HG23	48:QQ:76:ARG:O	2.15	0.46
50:QS:43:MET:HA	50:QS:46:LEU:HD12	1.97	0.46
32:XA:35:G:H21	43:XL:114:SER:CB	2.28	0.46
32:XA:85:U:O2	32:XA:85:U:O4'	2.32	0.46
32:XA:251:G:N2	32:XA:253:A:N6	2.63	0.46
32:XA:354:G:C2	32:XA:355:C:C6	3.04	0.46
32:XA:505:G:C6	32:XA:535:A:C2	3.04	0.46
32:XA:801:U:O2'	32:XA:802:A:H5'	2.16	0.46
32:XA:1240:U:OP1	38:XG:118:ARG:CZ	2.64	0.46
32:XA:1256:A:N1	32:XA:1278:G:H2'	2.31	0.46
33:XB:35:ASN:O	33:XB:36:LYS:C	2.57	0.46
35:XD:60:VAL:CG2	35:XD:194:ILE:HG21	2.46	0.46
35:XD:146:GLU:C	35:XD:148:ALA:H	2.23	0.46
36:XE:44:ARG:HG2	36:XE:72:ASN:HA	1.97	0.46
36:XE:103:GLY:CA	36:XE:121:ASN:HA	2.40	0.46
38:XG:12:LEU:HD13	38:XG:12:LEU:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:XH:57:GLU:O	39:XH:58:LEU:HB2	2.15	0.46
44:XM:13:HIS:ND1	44:XM:43:LYS:HE2	2.26	0.46
45:XN:31:SER:HA	45:XN:45:LEU:HD11	1.98	0.46
1:YA:40:U:C4	1:YA:41:C:C4	3.04	0.46
1:YA:186:G:N2	1:YA:211:C:C2	2.83	0.46
1:YA:203:A:OP2	1:YA:204:A:O2'	2.29	0.46
1:YA:371:A:N6	1:YA:402:A:OP2	2.44	0.46
1:YA:587:C:N3	12:YL:33:ARG:NH2	2.63	0.46
1:YA:654:A:C2'	1:YA:655:A:H5"	2.40	0.46
1:YA:995:C:HO2'	17:YQ:60:TRP:HZ2	1.53	0.46
1:YA:1033:U:O2'	1:YA:2750:A:N6	2.48	0.46
1:YA:1109:C:H5"	1:YA:1110:G:OP2	2.15	0.46
1:YA:1410:G:N2	1:YA:1593:A:C4	2.83	0.46
1:YA:1532:A:H2'	1:YA:1533:C:C6	2.51	0.46
1:YA:2091:C:H1'	24:YX:33:HIS:NE2	2.30	0.46
1:YA:2307:G:O2'	1:YA:2308:G:C8	2.69	0.46
1:YA:2492:U:O5'	1:YA:2492:U:H6	1.99	0.46
1:YA:2574:G:N2	1:YA:2575:C:H1'	2.30	0.46
2:YB:15:A:H1'	2:YB:109:A:N7	2.30	0.46
3:YC:26:GLY:O	3:YC:27:LYS:C	2.57	0.46
3:YC:35:LYS:O	3:YC:36:ASN:CB	2.62	0.46
12:YL:47:ARG:H	12:YL:47:ARG:HG3	1.60	0.46
16:YP:19:PHE:N	16:YP:19:PHE:CD2	2.83	0.46
17:YQ:87:VAL:HG12	17:YQ:88:GLU:N	2.30	0.46
18:YR:54:VAL:O	18:YR:55:ASP:C	2.57	0.46
18:YR:78:ARG:HB3	18:YR:83:TYR:HD1	1.79	0.46
22:YV:26:PHE:CD1	22:YV:26:PHE:C	2.93	0.46
26:YZ:32:GLY:C	26:YZ:34:THR:N	2.74	0.46
1:RA:402:A:C2'	1:RA:403:U:H5'	2.46	0.46
1:RA:508:A:C4'	1:RA:509:C:OP2	2.61	0.46
1:RA:1275:A:H2	1:RA:1295:C:O2	1.98	0.46
1:RA:1721:G:O2'	1:RA:1739:A:N6	2.49	0.46
1:RA:1733:G:C2	1:RA:1734:G:C5	3.04	0.46
1:RA:2204:G:O5'	3:RC:149:LYS:HE3	2.15	0.46
1:RA:2553:G:N1	1:RA:2554:U:O2	2.49	0.46
3:RC:156:SER:O	3:RC:157:ALA:C	2.59	0.46
3:RC:181:ARG:NH2	3:RC:265:PHE:HB3	2.29	0.46
6:RF:111:ARG:NE	6:RF:111:ARG:HA	2.30	0.46
10:RJ:58:ASN:N	10:RJ:127:GLY:O	2.45	0.46
12:RL:14:LYS:HG3	12:RL:15:ALA:N	2.31	0.46
12:RL:93:ASN:O	12:RL:94:THR:HB	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:RM:42:THR:H	13:RM:45:GLN:HB2	1.80	0.46
17:RQ:91:ARG:CZ	17:RQ:93:ILE:HG21	2.46	0.46
17:RQ:91:ARG:CB	17:RQ:94:LEU:HB2	2.46	0.46
18:RR:15:SER:O	18:RR:18:GLN:HB3	2.14	0.46
24:RX:20:ALA:O	24:RX:21:LEU:HB2	2.16	0.46
27:R0:14:MET:O	27:R0:17:SER:HB3	2.15	0.46
32:QA:33:A:H2'	32:QA:34:C:C6	2.51	0.46
32:QA:95:C:H5"	32:QA:95:C:C6	2.51	0.46
32:QA:417:G:O2'	32:QA:418:C:H5'	2.15	0.46
32:QA:450:G:H2'	32:QA:451:A:OP1	2.15	0.46
32:QA:680:C:O2'	32:QA:681:A:H5'	2.16	0.46
32:QA:819:A:N7	32:QA:1529:G:C2	2.84	0.46
32:QA:924:C:H2'	32:QA:925:G:H8	1.80	0.46
32:QA:1014:A:H4'	50:QS:13:HIS:CD2	2.51	0.46
34:QC:156:LEU:C	34:QC:158:GLY:N	2.74	0.46
48:QQ:12:VAL:CG1	48:QQ:21:VAL:O	2.64	0.46
32:XA:120:A:O2'	32:XA:121:U:H5"	2.15	0.46
32:XA:562:U:H1'	43:XL:11:ARG:HD2	1.97	0.46
32:XA:963:G:C2	32:XA:973:G:C6	3.03	0.46
32:XA:986:U:C2	32:XA:1220:G:N2	2.83	0.46
32:XA:996:A:C2	32:XA:1046:A:H5'	2.50	0.46
32:XA:1014:A:C5	50:XS:33:TRP:CE3	3.04	0.46
32:XA:1133:G:C4	32:XA:1134:G:C8	3.04	0.46
32:XA:1226:C:H5'	44:XM:94:LEU:HD21	1.97	0.46
32:XA:1319:A:OP2	50:XS:4:LEU:HD21	2.15	0.46
32:XA:1434:A:N6	32:XA:1435:G:C6	2.84	0.46
33:XB:164:ASP:OD2	33:XB:203:ASP:HB2	2.16	0.46
38:XG:68:VAL:O	38:XG:70:PRO:HD3	2.15	0.46
38:XG:102:TRP:C	38:XG:104:VAL:H	2.23	0.46
39:XH:29:SER:OG	39:XH:32:LYS:HB2	2.15	0.46
44:XM:13:HIS:CD2	44:XM:14:ALA:H	2.34	0.46
45:XN:46:LYS:HE3	50:XS:10:ILE:HB	1.98	0.46
45:XN:80:ARG:HH11	45:XN:80:ARG:HG2	1.80	0.46
1:YA:105:C:H2'	1:YA:106:C:H6	1.78	0.46
1:YA:204:A:C8	1:YA:206:U:C4	3.03	0.46
1:YA:478:A:C2	1:YA:480:A:N9	2.84	0.46
1:YA:482:A:N6	1:YA:506:G:C5	2.83	0.46
1:YA:533:G:N2	17:YQ:44:TYR:CE1	2.83	0.46
1:YA:1114:C:H2'	1:YA:1115:G:C8	2.50	0.46
1:YA:1179:G:C4	1:YA:1180:U:C5	3.04	0.46
1:YA:1222:U:H2'	1:YA:1223:G:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1378:A:N7	1:YA:1380:G:C6	2.83	0.46
1:YA:1512:C:C4	1:YA:1513:U:C4	3.03	0.46
1:YA:1568:G:N2	3:YC:57:HIS:HE1	2.07	0.46
1:YA:1799:G:O2'	3:YC:179:GLU:OE2	2.34	0.46
1:YA:2097:A:C4	1:YA:2098:U:C5	3.04	0.46
1:YA:2142:A:H2'	1:YA:2143:C:O3'	2.15	0.46
1:YA:2321:U:H5"	1:YA:2322:A:OP2	2.16	0.46
1:YA:2474:U:H2'	1:YA:2475:C:O5'	2.16	0.46
1:YA:2686:G:C5	1:YA:2687:U:C4	3.03	0.46
8:YH:25:TYR:O	8:YH:29:PHE:HB3	2.15	0.46
9:YI:104:GLN:HA	9:YI:107:GLU:HB3	1.98	0.46
13:YM:7:THR:HG22	13:YM:9:PHE:H	1.80	0.46
14:YN:28:LEU:C	14:YN:30:ARG:H	2.23	0.46
14:YN:73:ASN:CA	14:YN:76:VAL:HG22	2.45	0.46
16:YP:16:VAL:HA	16:YP:17:PRO:HD3	1.59	0.46
18:YR:49:ILE:C	18:YR:51:VAL:H	2.24	0.46
19:YS:10:ALA:HB3	19:YS:101:SER:O	2.15	0.46
21:YU:3:LYS:HG2	21:YU:84:PHE:CZ	2.51	0.46
21:YU:54:PRO:CG	21:YU:55:GLY:H	2.27	0.46
25:YY:3:ALA:C	25:YY:5:GLU:N	2.73	0.46
28:Y1:8:ILE:HD12	28:Y1:52:LYS:HG3	1.96	0.46
1:RA:449:A:C2'	1:RA:450:G:H5'	2.45	0.46
1:RA:733:G:O6	1:RA:761:A:C8	2.69	0.46
1:RA:989:G:C8	26:RZ:13:ILE:HD11	2.51	0.46
1:RA:996:A:O2'	17:RQ:91:ARG:HG3	2.16	0.46
1:RA:2282:G:H4'	1:RA:2389:G:O2'	2.16	0.46
1:RA:2311:A:O3'	1:RA:2312:U:C6	2.69	0.46
1:RA:2884:U:O2	1:RA:2884:U:O4'	2.33	0.46
3:RC:77:VAL:HG22	3:RC:111:ALA:HA	1.98	0.46
3:RC:141:HIS:NE2	3:RC:194:VAL:HA	2.30	0.46
4:RD:98:VAL:C	4:RD:100:LEU:N	2.74	0.46
4:RD:133:THR:CG2	4:RD:134:HIS:CD2	2.92	0.46
5:RE:110:SER:O	5:RE:113:VAL:HG12	2.16	0.46
5:RE:190:ALA:C	5:RE:192:ALA:N	2.70	0.46
6:RF:151:LEU:HD12	6:RF:152:ASP:N	2.31	0.46
10:RJ:20:ALA:O	10:RJ:21:THR:O	2.34	0.46
10:RJ:25:LEU:C	10:RJ:25:LEU:HD22	2.41	0.46
12:RL:78:ARG:HA	12:RL:113:ALA:HB3	1.97	0.46
14:RN:36:THR:HG23	14:RN:37:THR:O	2.16	0.46
21:RU:44:HIS:HD2	21:RU:57:ILE:HG12	1.81	0.46
32:QA:140:U:H2'	32:QA:141:G:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:184:G:H2'	32:QA:185:U:C5	2.51	0.46
32:QA:484:G:H4'	32:QA:485:U:C5'	2.46	0.46
32:QA:545:C:H5'	35:QD:68:GLU:HG3	1.97	0.46
32:QA:855:U:H2'	32:QA:856:C:H6	1.81	0.46
32:QA:967:C:O5'	32:QA:967:C:H6	1.99	0.46
32:QA:990:C:H2'	32:QA:991:U:C6	2.51	0.46
32:QA:1056:U:H5'	34:QC:162:ALA:HB2	1.97	0.46
33:QB:95:TRP:HZ3	33:QB:98:GLY:H	1.61	0.46
36:QE:125:LYS:HG3	36:QE:126:ALA:N	2.30	0.46
37:QF:47:LEU:HG	37:QF:56:LYS:H	1.81	0.46
38:QG:14:ASP:C	38:QG:14:ASP:OD2	2.58	0.46
38:QG:71:THR:C	38:QG:90:VAL:HG12	2.40	0.46
42:QK:124:LYS:HE2	52:QU:33:ARG:NH2	2.31	0.46
48:QQ:46:HIS:HB3	48:QQ:73:THR:HG23	1.98	0.46
32:XA:203:G:H8	32:XA:203:G:O5'	1.97	0.46
32:XA:251:G:H4'	32:XA:252:U:OP1	2.14	0.46
32:XA:415:A:H3'	32:XA:416:G:H8	1.81	0.46
32:XA:805:C:C2	32:XA:806:C:C5	3.03	0.46
32:XA:828:U:H2'	32:XA:829:G:O5'	2.14	0.46
32:XA:878:A:C5	32:XA:879:C:C5	3.03	0.46
32:XA:1130:A:C6	32:XA:1146:A:N7	2.83	0.46
34:XC:131:ARG:O	34:XC:135:ARG:HB2	2.15	0.46
39:XH:93:LYS:HD3	39:XH:93:LYS:N	2.31	0.46
40:XI:15:ALA:O	40:XI:66:VAL:HA	2.15	0.46
40:XI:27:ILE:HD13	40:XI:62:LEU:HG	1.98	0.46
40:XI:45:MET:HA	40:XI:48:ARG:HG2	1.97	0.46
43:XL:42:LYS:CG	43:XL:43:LYS:HG2	2.45	0.46
44:XM:1:ALA:HB3	44:XM:8:ILE:HG23	1.96	0.46
44:XM:12:LYS:HB3	44:XM:17:ALA:CB	2.38	0.46
45:XN:79:SER:O	45:XN:83:VAL:HG23	2.15	0.46
48:XQ:20:ILE:HG13	48:XQ:22:VAL:HG23	1.98	0.46
1:YA:170:U:O5'	1:YA:170:U:H6	1.99	0.46
1:YA:173:A:H2'	1:YA:174:U:C6	2.51	0.46
1:YA:217:A:H2'	1:YA:218:A:C8	2.51	0.46
1:YA:266:G:H2'	1:YA:267:C:O5'	2.15	0.46
1:YA:279:A:C2	1:YA:362:A:C4'	2.92	0.46
1:YA:321:U:O2'	1:YA:340:A:N3	2.46	0.46
1:YA:454:A:C3'	1:YA:455:C:H5"	2.46	0.46
1:YA:617:G:N2	1:YA:618:G:C4	2.83	0.46
1:YA:811:U:H1'	1:YA:1251:C:C2	2.51	0.46
1:YA:968:C:H2'	1:YA:969:G:H8	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1171:G:C4	1:YA:1179:G:N2	2.84	0.46
1:YA:1244:A:HO2'	5:YE:29:HIS:CE1	2.32	0.46
1:YA:1281:G:O2'	1:YA:1282:U:H5'	2.15	0.46
1:YA:1611:C:O2'	1:YA:1612:C:O5'	2.32	0.46
1:YA:1655:A:H4'	4:YD:118:PHE:CD1	2.50	0.46
1:YA:2096:C:H2'	1:YA:2097:A:H8	1.81	0.46
1:YA:2444:G:C6	1:YA:2445:G:C5	3.04	0.46
1:YA:2635:A:C5'	4:YD:79:LEU:HB2	2.46	0.46
1:YA:2845:U:H2'	1:YA:2846:G:O4'	2.16	0.46
2:YB:13:G:O2'	2:YB:14:U:H5"	2.15	0.46
3:YC:251:THR:HG22	3:YC:252:LYS:HG3	1.97	0.46
11:YK:69:VAL:HG12	11:YK:70:ARG:N	2.30	0.46
11:YK:91:SER:O	11:YK:92:GLU:C	2.58	0.46
29:Y2:24:THR:O	29:Y2:28:ARG:HB3	2.15	0.46
30:Y3:18:LYS:CD	30:Y3:19:GLY:H	2.29	0.46
1:RA:364:C:O2'	1:RA:365:U:H5'	2.15	0.46
1:RA:722:A:H2'	1:RA:723:C:O4'	2.16	0.46
1:RA:1005:C:H1'	1:RA:1012:U:N3	2.30	0.46
1:RA:1356:G:C2	1:RA:1357:C:C2	3.04	0.46
1:RA:1730:C:H1'	1:RA:1731:G:C2	2.51	0.46
1:RA:1792:G:OP1	3:RC:203:VAL:O	2.34	0.46
1:RA:2033:A:H1'	1:RA:2035:G:OP2	2.15	0.46
1:RA:2064:C:H2'	1:RA:2065:C:C6	2.50	0.46
1:RA:2523:G:O2'	1:RA:2524:G:H5'	2.15	0.46
1:RA:2654:A:N1	1:RA:2665:A:H5"	2.31	0.46
1:RA:2680:U:OP2	4:RD:114:LYS:HE2	2.16	0.46
2:RB:13:G:O2'	2:RB:15:A:H5'	2.16	0.46
4:RD:151:THR:O	4:RD:152:PRO:C	2.56	0.46
6:RF:72:SER:HB2	6:RF:80:GLN:HB2	1.98	0.46
7:RG:31:GLU:O	7:RG:32:LEU:C	2.59	0.46
9:RI:71:LYS:CG	9:RI:72:THR:H	2.28	0.46
11:RK:10:VAL:HG11	11:RK:16:ALA:HB2	1.96	0.46
16:RP:24:THR:HG22	16:RP:87:ARG:H	1.80	0.46
18:RR:49:ILE:O	18:RR:51:VAL:O	2.33	0.46
20:RT:7:LEU:C	20:RT:8:LEU:HD23	2.41	0.46
20:RT:14:PRO:HD3	25:RY:30:MET:HE1	1.98	0.46
20:RT:29:THR:CA	20:RT:86:THR:HA	2.45	0.46
24:RX:3:VAL:HG22	24:RX:10:ARG:HB3	1.98	0.46
30:R3:54:LEU:HD12	30:R3:54:LEU:HA	1.70	0.46
32:QA:263:A:H2'	32:QA:264:C:C5	2.51	0.46
32:QA:804:U:H5"	32:QA:805:C:OP2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:1160:G:HO2'	32:QA:1161:C:C5'	2.28	0.46
32:QA:1332:A:H5"	32:QA:1333:A:OP2	2.16	0.46
34:QC:13:ILE:N	34:QC:13:ILE:HD13	2.30	0.46
38:QG:49:LEU:CD2	38:QG:124:SER:HB2	2.45	0.46
39:QH:20:ASN:HA	39:QH:64:TYR:CE2	2.51	0.46
39:QH:36:ALA:HA	39:QH:39:LEU:HD12	1.98	0.46
44:QM:18:LEU:O	44:QM:24:VAL:CG2	2.63	0.46
32:XA:102:G:H2'	32:XA:103:U:H6	1.80	0.46
32:XA:275:G:H2'	32:XA:276:G:C8	2.50	0.46
32:XA:563:A:C8	32:XA:567:G:O4'	2.68	0.46
32:XA:632:U:O2	32:XA:632:U:C2'	2.63	0.46
32:XA:752:G:O2'	32:XA:753:A:P	2.73	0.46
32:XA:976:G:N2	32:XA:1363:A:N3	2.64	0.46
32:XA:989:U:C2'	32:XA:990:C:H5'	2.46	0.46
32:XA:998:C:C6	32:XA:999:C:H5	2.33	0.46
32:XA:1000:A:C2	32:XA:1041:G:C5	3.04	0.46
32:XA:1099:G:H5"	33:XB:94:ARG:NH2	2.31	0.46
32:XA:1305:G:C6	32:XA:1331:G:C2	3.03	0.46
33:XB:14:HIS:CD2	33:XB:16:GLY:HA3	2.51	0.46
35:XD:75:TYR:HA	35:XD:89:LEU:HD13	1.98	0.46
36:XE:157:GLY:HA3	39:XH:63:LYS:CE	2.46	0.46
45:XN:78:LEU:HD12	45:XN:78:LEU:N	2.31	0.46
52:XU:33:ARG:HG2	52:XU:34:ARG:N	2.31	0.46
1:YA:125:A:H5"	29:Y2:19:ARG:HB2	1.98	0.46
1:YA:126:A:H2'	29:Y2:46:LYS:HE2	1.98	0.46
1:YA:231:A:H2'	1:YA:232:G:H5'	1.97	0.46
1:YA:302:C:C2'	1:YA:303:G:H8	2.28	0.46
1:YA:381:G:H5'	24:YX:15:ASN:HD22	1.79	0.46
1:YA:567:U:H4'	1:YA:808:G:OP1	2.15	0.46
1:YA:1006:C:O5'	1:YA:1006:C:H6	1.99	0.46
1:YA:1289:C:O2'	1:YA:1290:C:O5'	2.33	0.46
1:YA:1483:G:C6	1:YA:1484:U:C4	3.04	0.46
1:YA:1571:A:H2'	1:YA:1572:A:C8	2.50	0.46
1:YA:2390:U:O2	1:YA:2390:U:H2'	2.16	0.46
1:YA:2394:C:H41	30:Y3:30:HIS:CE1	2.33	0.46
1:YA:2726:A:O2'	1:YA:2727:A:H5'	2.16	0.46
1:YA:2800:A:C2'	1:YA:2801:G:H4'	2.39	0.46
2:YB:44:G:H3'	6:YF:91:ARG:HE	1.80	0.46
4:YD:45:TYR:CE2	4:YD:47:ALA:HB3	2.48	0.46
8:YH:86:ASP:O	8:YH:86:ASP:CG	2.58	0.46
10:YJ:2:LYS:HB2	10:YJ:2:LYS:HZ3	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:YM:73:ILE:HG12	13:YM:93:VAL:CG1	2.45	0.46
16:YP:50:ARG:HB2	16:YP:56:SER:HB3	1.96	0.46
16:YP:75:THR:HG23	16:YP:76:HIS:CD2	2.50	0.46
18:YR:68:ARG:NH1	18:YR:90:ARG:HG2	2.30	0.46
21:YU:71:ILE:H	21:YU:71:ILE:HG12	1.47	0.46
23:YW:9:THR:HG23	23:YW:10:ARG:N	2.31	0.46
23:YW:37:VAL:CG1	23:YW:55:ASP:HB2	2.38	0.46
30:Y3:29:ARG:HH21	30:Y3:29:ARG:CG	2.29	0.46
30:Y3:41:ARG:CG	30:Y3:41:ARG:NH2	2.72	0.46
30:Y3:50:SER:O	30:Y3:52:GLY:N	2.49	0.46
1:RA:263:G:H2'	1:RA:264:C:O5'	2.16	0.46
1:RA:574:A:C4'	1:RA:575:A:O5'	2.63	0.46
1:RA:1045:C:H3'	1:RA:1046:A:C5'	2.46	0.46
1:RA:1110:G:O2'	1:RA:1111:A:P	2.74	0.46
1:RA:1924:C:C4	1:RA:1925:C:C5	3.03	0.46
1:RA:2134:A:C4	1:RA:2135:A:N7	2.84	0.46
1:RA:2331:G:O2'	23:RW:39:GLN:O	2.27	0.46
1:RA:2365:G:H2'	1:RA:2366:A:C8	2.51	0.46
1:RA:2794:C:H2'	1:RA:2795:C:H6	1.81	0.46
1:RA:2846:G:OP2	16:RP:51:ASN:CB	2.64	0.46
2:RB:27:C:OP1	15:RO:34:HIS:CE1	2.68	0.46
2:RB:28:C:H2'	2:RB:29:A:H5'	1.98	0.46
3:RC:15:VAL:CA	3:RC:203:VAL:HG11	2.43	0.46
4:RD:114:LYS:HE3	4:RD:114:LYS:CA	2.45	0.46
7:RG:148:ARG:O	7:RG:149:ALA:C	2.59	0.46
8:RH:11:ASN:C	8:RH:12:LEU:HD23	2.41	0.46
14:RN:13:ASN:O	14:RN:14:SER:C	2.59	0.46
14:RN:70:THR:HG21	14:RN:75:ILE:HD11	1.97	0.46
14:RN:101:GLY:HA3	14:RN:102:PHE:HD2	1.80	0.46
17:RQ:93:ILE:HG23	17:RQ:94:LEU:H	1.80	0.46
20:RT:15:HIS:O	20:RT:17:SER:N	2.49	0.46
20:RT:34:VAL:HG21	20:RT:43:ILE:HD12	1.98	0.46
20:RT:37:ASP:C	20:RT:38:ALA:O	2.59	0.46
20:RT:68:LYS:O	20:RT:69:ARG:O	2.33	0.46
25:RY:47:ARG:HH21	25:RY:47:ARG:CG	2.17	0.46
32:QA:71:A:C6	32:QA:100:G:C8	3.04	0.46
32:QA:604:G:C6	32:QA:605:U:N3	2.84	0.46
32:QA:613:C:H2'	32:QA:614:C:C6	2.50	0.46
32:QA:842:U:H2'	32:QA:844:G:OP1	2.15	0.46
32:QA:935:A:O2'	32:QA:1383:C:N3	2.40	0.46
32:QA:972:C:O2'	41:QJ:57:VAL:HG23	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:1343:G:H1'	40:QI:122:ARG:NH1	2.30	0.46
33:QB:66:ILE:HG13	33:QB:220:VAL:HG11	1.97	0.46
34:QC:35:ASP:C	34:QC:37:LYS:H	2.24	0.46
35:QD:21:LYS:O	35:QD:22:SER:C	2.59	0.46
37:QF:86:ARG:C	37:QF:86:ARG:HD3	2.41	0.46
38:QG:12:LEU:HD22	38:QG:12:LEU:N	2.25	0.46
40:QI:11:ARG:HA	40:QI:105:ARG:HH12	1.80	0.46
40:QI:56:MET:SD	40:QI:57:VAL:N	2.89	0.46
41:QJ:35:GLN:HG2	41:QJ:77:VAL:CB	2.45	0.46
44:QM:92:ARG:HH11	44:QM:92:ARG:HG2	1.80	0.46
47:QP:22:ALA:CB	47:QP:32:PHE:HA	2.43	0.46
52:QU:39:LYS:N	52:QU:40:PRO:CD	2.76	0.46
32:XA:86:G:N2	32:XA:87:C:C2	2.84	0.46
32:XA:267:C:H2'	32:XA:268:U:O5'	2.16	0.46
32:XA:1010:U:C2	32:XA:1020:G:N2	2.84	0.46
32:XA:1024:G:C5	32:XA:1025:U:C5	3.04	0.46
32:XA:1133:G:C6	32:XA:1142:G:O6	2.68	0.46
32:XA:1167:A:C2'	32:XA:1168:U:OP1	2.64	0.46
32:XA:1219:A:C6	32:XA:1220:G:C5	3.04	0.46
35:XD:127:ARG:HH11	35:XD:127:ARG:HG2	1.80	0.46
37:XF:86:ARG:NH1	49:XR:63:TYR:CB	2.57	0.46
38:XG:9:ARG:C	38:XG:10:LYS:HG3	2.41	0.46
38:XG:68:VAL:CG2	38:XG:134:VAL:HG12	2.45	0.46
52:XU:28:LEU:O	52:XU:29:ALA:C	2.58	0.46
1:YA:172:A:C2	1:YA:173:A:C5	3.04	0.46
1:YA:647:G:N7	1:YA:648:G:N7	2.63	0.46
1:YA:898:C:H2'	1:YA:899:A:O4'	2.16	0.46
1:YA:945:A:C5	1:YA:2448:A:C2	3.04	0.46
1:YA:1187:G:H8	1:YA:1187:G:O5'	1.98	0.46
1:YA:1280:G:C2'	1:YA:1281:G:H5'	2.46	0.46
1:YA:1378:A:N6	1:YA:1569:A:N1	2.59	0.46
1:YA:1430:G:H2'	1:YA:1431:A:H8	1.80	0.46
1:YA:1534:U:H6	1:YA:1538:G:H1	1.61	0.46
1:YA:1816:C:H2'	3:YC:61:TYR:OH	2.15	0.46
1:YA:2067:G:O6	1:YA:2444:G:C6	2.69	0.46
1:YA:2198:A:O2'	1:YA:2199:A:H8	1.98	0.46
1:YA:2298:A:N6	1:YA:2321:U:O4	2.49	0.46
1:YA:2330:G:H8	1:YA:2330:G:O5'	1.99	0.46
1:YA:2507:C:H1'	1:YA:2583:G:N2	2.31	0.46
1:YA:2543:G:H5'	1:YA:2543:G:H8	1.80	0.46
1:YA:2550:G:N2	1:YA:2559:C:H1'	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2623:G:C4'	1:YA:2825:G:C8	2.94	0.46
3:YC:124:LYS:NZ	3:YC:124:LYS:HB3	2.30	0.46
5:YE:98:LYS:O	5:YE:99:LYS:CB	2.63	0.46
6:YF:14:LYS:O	6:YF:15:LEU:HD23	2.16	0.46
6:YF:91:ARG:HA	6:YF:95:MET:SD	2.56	0.46
8:YH:25:TYR:CE1	8:YH:29:PHE:HD2	2.33	0.46
9:YI:112:LYS:HZ3	9:YI:128:ILE:HD12	1.81	0.46
10:YJ:69:ARG:HH21	10:YJ:93:ILE:HG12	1.80	0.46
12:YL:58:TYR:O	30:Y3:12:ARG:CZ	2.64	0.46
15:YO:62:LEU:HD11	15:YO:65:THR:CA	2.46	0.46
21:YU:16:LYS:HB3	21:YU:17:ASP:H	1.52	0.46
23:YW:49:ASN:HB2	23:YW:60:ALA:HA	1.98	0.46
24:YX:39:VAL:O	24:YX:41:SER:N	2.41	0.46
25:YY:45:GLN:C	25:YY:47:ARG:H	2.24	0.46
1:RA:228:C:H4'	1:RA:229:C:C5'	2.43	0.46
1:RA:263:G:C2'	1:RA:264:C:O5'	2.64	0.46
1:RA:309:A:H4'	21:RU:15:GLY:HA2	1.97	0.46
1:RA:646:U:H3'	1:RA:647:G:C5'	2.46	0.46
1:RA:960:A:C5'	1:RA:961:C:OP2	2.64	0.46
1:RA:1941:C:H5'	1:RA:1941:C:C6	2.46	0.46
1:RA:2284:A:OP1	28:R1:4:ILE:HG12	2.16	0.46
1:RA:2354:C:H4'	23:RW:31:LEU:HD22	1.98	0.46
1:RA:2756:U:H1'	1:RA:2757:A:H5"	1.98	0.46
1:RA:2849:U:H5'	1:RA:2849:U:C6	2.50	0.46
5:RE:46:GLN:CG	5:RE:87:ALA:H	2.27	0.46
5:RE:119:ILE:HD11	5:RE:187:VAL:HG23	1.93	0.46
11:RK:1:MET:HE3	11:RK:32:TYR:CD2	2.51	0.46
12:RL:47:ARG:HG3	12:RL:50:PHE:HB2	1.97	0.46
16:RP:15:ASP:O	16:RP:16:VAL:C	2.58	0.46
17:RQ:43:GLN:NE2	18:RR:77:PHE:HB3	2.30	0.46
18:RR:49:ILE:HD12	18:RR:53:PHE:H	1.81	0.46
19:RS:50:VAL:HG12	19:RS:51:LEU:N	2.32	0.46
22:RV:49:ASN:O	22:RV:52:ALA:HB3	2.16	0.46
32:QA:161:A:N6	32:QA:162:A:C6	2.84	0.46
32:QA:208:U:H3	32:QA:212:G:H21	1.64	0.46
32:QA:841:C:H2'	32:QA:841:C:O2	2.15	0.46
32:QA:1031:C:C2'	32:QA:1032:G:OP2	2.63	0.46
32:QA:1241:G:O2'	32:QA:1242:G:H8	1.98	0.46
32:QA:1473:G:O2'	32:QA:1474:U:H5'	2.16	0.46
33:QB:90:PHE:O	33:QB:90:PHE:CD2	2.69	0.46
33:QB:98:GLY:O	33:QB:102:ASN:N	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:QG:48:THR:O	38:QG:52:ARG:HB2	2.16	0.46
39:QH:112:ASP:O	39:QH:113:ARG:C	2.59	0.46
41:QJ:59:LYS:HD2	41:QJ:60:ASP:H	1.79	0.46
44:QM:84:CYS:HA	50:QS:73:PHE:CD2	2.47	0.46
46:QO:16:ARG:O	46:QO:17:ASP:CB	2.63	0.46
32:XA:499:A:C6	32:XA:547:A:C8	3.03	0.46
32:XA:998:C:C5	32:XA:999:C:H5	2.34	0.46
32:XA:1040:U:O2'	32:XA:1041:G:H5'	2.16	0.46
32:XA:1264:U:H2'	32:XA:1265:C:H6	1.76	0.46
32:XA:1301:U:H2'	32:XA:1302:C:H5	1.80	0.46
32:XA:1449:C:C2'	32:XA:1450:U:H5'	2.46	0.46
34:XC:190:THR:HG22	34:XC:191:THR:N	2.22	0.46
35:XD:12:ARG:NH2	35:XD:36:ALA:O	2.49	0.46
35:XD:80:ARG:HB2	35:XD:81:LEU:H	1.50	0.46
37:XF:81:ASN:O	37:XF:82:ASP:C	2.59	0.46
39:XH:82:LEU:HD21	48:XQ:34:GLY:O	2.16	0.46
42:XK:87:GLY:N	42:XK:113:THR:HG23	2.32	0.46
42:XK:115:ILE:HD12	52:XU:23:GLU:HG2	1.97	0.46
44:XM:5:GLY:C	44:XM:6:ILE:HG13	2.41	0.46
44:XM:82:LEU:HD21	50:XS:60:PHE:HB3	1.97	0.46
45:XN:94:GLY:O	45:XN:95:LEU:C	2.58	0.46
46:XO:88:ARG:NH2	1:YA:715:A:H4'	2.29	0.46
50:XS:20:LYS:HD3	50:XS:20:LYS:O	2.15	0.46
52:XU:24:LYS:HE3	52:XU:25:ALA:H	1.80	0.46
52:XU:39:LYS:O	52:XU:43:GLU:HB2	2.15	0.46
1:YA:265:A:O2'	1:YA:266:G:H1'	2.16	0.46
1:YA:287:G:N1	1:YA:354:A:C6	2.84	0.46
1:YA:323:C:OP1	1:YA:339:U:O2'	2.32	0.46
1:YA:599:A:N3	1:YA:659:G:C2	2.84	0.46
1:YA:636:G:O5'	12:YL:128:THR:HG23	2.16	0.46
1:YA:1022:G:N7	10:YJ:68:LYS:HD3	2.31	0.46
1:YA:1324:G:O2'	1:YA:1616:A:N1	2.49	0.46
1:YA:1359:A:H2'	1:YA:1359:A:N3	2.31	0.46
1:YA:1431:A:H2'	1:YA:1432:G:O4'	2.16	0.46
1:YA:1526:C:C4	1:YA:1527:G:C5	3.03	0.46
1:YA:1668:A:H4'	1:YA:1669:A:O5'	2.15	0.46
1:YA:1695:G:H8	3:YC:7:PRO:HB2	1.81	0.46
1:YA:1709:U:O2'	1:YA:1710:G:H5'	2.16	0.46
1:YA:1919:A:H2'	1:YA:1920:C:H5'	1.97	0.46
1:YA:1965:C:C3'	1:YA:1966:A:H5"	2.46	0.46
1:YA:2218:G:H2'	1:YA:2219:U:H6	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2311:A:N3	6:YF:78:ILE:HD11	2.31	0.46
1:YA:2391:G:O2'	1:YA:2392:A:O5'	2.27	0.46
1:YA:2697:G:C2	1:YA:2711:A:C2	3.04	0.46
1:YA:2895:G:H2'	1:YA:2896:C:C6	2.50	0.46
2:YB:81:G:C5	2:YB:82:U:C5	3.05	0.46
3:YC:79:ARG:HG3	3:YC:92:LEU:HB2	1.98	0.46
3:YC:94:LEU:HA	3:YC:100:ARG:HG2	1.97	0.46
7:YG:88:LEU:N	7:YG:128:THR:O	2.49	0.46
10:YJ:4:PHE:CD2	17:YQ:99:VAL:HG11	2.51	0.46
11:YK:1:MET:HA	11:YK:33:ALA:O	2.16	0.46
12:YL:88:GLY:O	12:YL:89:VAL:HG12	2.16	0.46
20:YT:44:LYS:C	20:YT:48:GLN:HG2	2.40	0.46
28:Y1:47:ILE:N	28:Y1:47:ILE:HD12	2.31	0.46
1:RA:721:A:H2'	1:RA:722:A:C8	2.52	0.45
1:RA:1165:A:H2'	1:RA:1166:G:C8	2.51	0.45
1:RA:1507:C:C4	1:RA:1508:A:C2	3.04	0.45
1:RA:2024:G:OP2	1:RA:2034:U:H4'	2.14	0.45
4:RD:17:GLU:C	4:RD:19:GLY:H	2.24	0.45
7:RG:73:SER:CA	7:RG:76:ILE:HG22	2.39	0.45
8:RH:82:SER:C	8:RH:83:LYS:HD3	2.40	0.45
9:RI:7:TYR:HA	9:RI:58:ILE:CB	2.36	0.45
14:RN:38:LEU:HB3	14:RN:39:PRO:HD3	1.97	0.45
16:RP:35:SER:HG	32:QA:345:C:P	2.38	0.45
17:RQ:79:ILE:O	17:RQ:80:ASN:C	2.58	0.45
32:QA:421:U:H2'	32:QA:422:C:OP1	2.16	0.45
32:QA:528:C:H41	43:QL:45:ASN:ND2	2.15	0.45
32:QA:1284:C:C4	32:QA:1285:A:N7	2.84	0.45
32:QA:1332:A:C5'	32:QA:1333:A:OP2	2.64	0.45
32:QA:1368:A:O2'	32:QA:1369:C:H5'	2.16	0.45
33:QB:150:ILE:O	33:QB:151:LYS:C	2.58	0.45
36:QE:155:LYS:CD	36:QE:155:LYS:H	2.28	0.45
37:QF:51:ILE:HD13	37:QF:86:ARG:HB2	1.98	0.45
39:QH:10:LEU:O	39:QH:13:ILE:HB	2.16	0.45
39:QH:104:SER:HB2	39:QH:125:ILE:CD1	2.46	0.45
44:QM:77:LYS:HA	44:QM:80:MET:HE3	1.97	0.45
45:QN:5:MET:HE3	45:QN:5:MET:HB3	1.78	0.45
46:QO:29:ALA:HA	46:QO:84:LEU:HD21	1.99	0.45
51:QT:68:LYS:HB2	51:QT:68:LYS:HZ3	1.81	0.45
32:XA:366:A:O2'	32:XA:394:G:N2	2.49	0.45
32:XA:372:C:H4'	32:XA:373:A:O5'	2.13	0.45
32:XA:530:G:C5'	32:XA:531:U:H5"	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:624:C:H4'	47:XP:10:GLY:C	2.42	0.45
32:XA:737:C:OP1	37:XF:91:ARG:HB3	2.17	0.45
32:XA:1049:U:C4'	32:XA:1050:G:OP2	2.63	0.45
32:XA:1072:G:H21	33:XB:105:THR:HG21	1.81	0.45
32:XA:1446:A:C2'	32:XA:1447:A:H5"	2.46	0.45
36:XE:56:PRO:O	36:XE:57:ALA:C	2.59	0.45
37:XF:99:ALA:O	37:XF:100:SER:CB	2.64	0.45
38:XG:13:PRO:HA	38:XG:23:ALA:HB2	1.97	0.45
39:XH:103:VAL:CG1	39:XH:124:ILE:HA	2.30	0.45
40:XI:46:VAL:O	40:XI:50:PRO:HD3	2.16	0.45
40:XI:83:THR:HG21	40:XI:102:PHE:HB3	1.98	0.45
43:XL:48:LEU:N	43:XL:48:LEU:HD23	2.30	0.45
43:XL:85:ARG:HA	43:XL:93:ARG:HA	1.98	0.45
52:XU:19:LYS:N	52:XU:19:LYS:NZ	2.64	0.45
52:XU:25:ALA:O	52:XU:26:GLY:C	2.59	0.45
1:YA:799:G:P	1:YA:800:A:H3'	2.56	0.45
1:YA:1000:A:N1	1:YA:1001:A:C2	2.84	0.45
1:YA:1138:G:H2'	1:YA:1139:G:O4'	2.16	0.45
1:YA:1388:G:O6	1:YA:1400:U:O4	2.34	0.45
1:YA:1686:C:H2'	1:YA:1687:G:O4'	2.16	0.45
1:YA:1773:A:N7	1:YA:1829:A:H1'	2.32	0.45
1:YA:2304:G:H2'	1:YA:2304:G:N3	2.31	0.45
1:YA:2443:C:C2'	1:YA:2444:G:H5'	2.45	0.45
1:YA:2542:A:H4'	1:YA:2543:G:C5'	2.47	0.45
2:YB:66:A:C2	2:YB:108:A:C6	3.04	0.45
8:YH:83:LYS:HG3	8:YH:149:GLU:HB2	1.97	0.45
10:YJ:4:PHE:CB	17:YQ:63:ARG:HH22	2.28	0.45
11:YK:17:ARG:HD3	11:YK:18:ARG:H	1.80	0.45
11:YK:119:ALA:O	11:YK:120:PRO:C	2.59	0.45
12:YL:17:LYS:HZ3	12:YL:19:LEU:HD22	1.79	0.45
13:YM:17:ASN:C	13:YM:18:ARG:HG2	2.40	0.45
20:YT:62:VAL:CG1	20:YT:63:VAL:N	2.79	0.45
25:YY:50:VAL:C	25:YY:52:ARG:N	2.74	0.45
29:Y2:22:MET:HA	29:Y2:28:ARG:HB2	1.97	0.45
1:RA:654:A:H2'	1:RA:655:A:H5"	1.97	0.45
1:RA:697:G:H2'	1:RA:698:C:H6	1.80	0.45
1:RA:733:G:N7	1:RA:761:A:N6	2.64	0.45
1:RA:996:A:N6	1:RA:1160:G:N1	2.64	0.45
1:RA:1083:U:H2'	1:RA:1084:A:O5'	2.17	0.45
1:RA:1246:A:H2'	1:RA:1247:A:O5'	2.16	0.45
1:RA:1607:C:N4	1:RA:1622:G:C5	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1726:C:H2'	1:RA:1727:C:H6	1.81	0.45
1:RA:2107:G:H2'	1:RA:2107:G:N3	2.31	0.45
1:RA:2134:A:O2'	1:RA:2135:A:H5"	2.17	0.45
1:RA:2428:G:H5"	1:RA:2429:G:P	2.57	0.45
1:RA:2685:G:O2'	1:RA:2686:G:H5'	2.16	0.45
1:RA:2888:C:O2	1:RA:2888:C:H2'	2.16	0.45
4:RD:49:GLN:C	4:RD:50:VAL:HG13	2.42	0.45
5:RE:3:LEU:O	5:RE:11:ALA:HA	2.16	0.45
5:RE:61:ARG:H	5:RE:61:ARG:HG2	1.46	0.45
6:RF:3:LEU:HD13	6:RF:3:LEU:HA	1.63	0.45
8:RH:68:ARG:NH2	8:RH:69:ALA:HA	2.30	0.45
10:RJ:17:VAL:HG22	10:RJ:55:ILE:HG12	1.98	0.45
10:RJ:44:TYR:HD2	17:RQ:63:ARG:HG2	1.79	0.45
12:RL:3:LEU:HD23	12:RL:3:LEU:HA	1.76	0.45
12:RL:120:VAL:HG12	12:RL:121:THR:N	2.32	0.45
14:RN:51:LEU:HD12	14:RN:51:LEU:HA	1.62	0.45
16:RP:63:ILE:O	16:RP:63:ILE:HG22	2.17	0.45
18:RR:49:ILE:O	18:RR:49:ILE:CG1	2.64	0.45
20:RT:29:THR:H	20:RT:91:GLN:HE22	1.63	0.45
22:RV:75:GLN:HA	22:RV:75:GLN:OE1	2.16	0.45
23:RW:37:VAL:HG13	23:RW:55:ASP:O	2.16	0.45
25:RY:2:LYS:HE3	25:RY:52:ARG:CZ	2.46	0.45
25:RY:45:GLN:O	25:RY:46:VAL:HB	2.17	0.45
32:QA:73:C:HO2'	32:QA:74:A:H8	1.61	0.45
32:QA:466:A:O2'	32:QA:467:U:C6	2.69	0.45
32:QA:479:U:C2'	32:QA:480:U:H5'	2.46	0.45
32:QA:501:C:O2'	32:QA:502:A:H5'	2.15	0.45
32:QA:544:G:OP1	35:QD:55:ARG:NH1	2.49	0.45
32:QA:601:G:C2	32:QA:602:A:C4	3.04	0.45
32:QA:652:U:C6	32:QA:752:G:C2	3.04	0.45
32:QA:736:C:C4'	37:QF:88:MET:HE2	2.46	0.45
32:QA:819:A:H4'	32:QA:820:U:OP2	2.17	0.45
32:QA:1293:C:H2'	32:QA:1294:G:C8	2.51	0.45
33:QB:46:VAL:HB	33:QB:47:PRO:HD3	1.98	0.45
33:QB:80:LYS:HG3	33:QB:90:PHE:CE1	2.50	0.45
33:QB:83:ALA:O	33:QB:88:GLN:NE2	2.50	0.45
33:QB:99:MET:HA	33:QB:106:VAL:HG21	1.97	0.45
34:QC:76:ILE:C	34:QC:82:ASP:HB2	2.41	0.45
34:QC:113:LYS:HE3	34:QC:117:ASP:OD2	2.16	0.45
34:QC:120:THR:HG22	34:QC:121:SER:N	2.31	0.45
39:QH:28:SER:HA	39:QH:32:LYS:HD2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:QI:119:LYS:CG	40:QI:122:ARG:HB3	2.46	0.45
41:QJ:56:HIS:HD2	41:QJ:57:VAL:HG12	1.81	0.45
45:QN:2:LYS:N	56:QN:205:HOH:O	2.48	0.45
32:XA:71:A:C2	32:XA:72:A:C8	3.04	0.45
32:XA:398:U:H2'	32:XA:399:G:H8	1.81	0.45
32:XA:631:C:H5"	32:XA:632:U:O4'	2.16	0.45
32:XA:868:C:H2'	32:XA:869:G:O4'	2.17	0.45
32:XA:1072:G:N2	33:XB:105:THR:HG21	2.32	0.45
32:XA:1283:U:H2'	32:XA:1284:C:H6	1.80	0.45
32:XA:1294:G:C6	32:XA:1295:U:C4	3.04	0.45
32:XA:1316:G:N1	32:XA:1319:A:OP2	2.35	0.45
32:XA:1387:G:C4	32:XA:1388:C:C5	3.04	0.45
32:XA:1442:G:O2'	16:YP:113:LEU:HD13	2.15	0.45
33:XB:93:HIS:CD2	33:XB:145:ASN:HB3	2.51	0.45
33:XB:185:ILE:HA	33:XB:199:ILE:HG13	1.98	0.45
33:XB:195:VAL:HB	33:XB:198:VAL:HG12	1.97	0.45
37:XF:3:HIS:O	37:XF:4:TYR:CD1	2.69	0.45
40:XI:128:LYS:O	40:XI:128:LYS:HG3	2.16	0.45
41:XJ:37:ARG:HG2	41:XJ:75:ASP:HB3	1.99	0.45
44:XM:68:LEU:C	44:XM:70:ARG:H	2.25	0.45
47:XP:69:ASP:O	47:XP:70:ARG:C	2.59	0.45
1:YA:35:G:C5	1:YA:454:A:C2	3.05	0.45
1:YA:99:U:O2	1:YA:99:U:O4'	2.33	0.45
1:YA:1255:U:HO2'	1:YA:1256:G:P	2.37	0.45
1:YA:1363:C:C2	1:YA:1364:G:C8	3.04	0.45
1:YA:2072:C:H2'	1:YA:2073:C:H5'	1.99	0.45
1:YA:2468:A:O2'	1:YA:2469:A:O5'	2.35	0.45
1:YA:2626:C:C2'	1:YA:2627:G:H5'	2.47	0.45
4:YD:10:GLY:O	4:YD:11:MET:CB	2.62	0.45
5:YE:40:ARG:NH2	5:YE:92:HIS:NE2	2.65	0.45
6:YF:103:ILE:HA	6:YF:107:VAL:CG2	2.43	0.45
8:YH:38:PRO:O	8:YH:40:THR:HG23	2.16	0.45
10:YJ:17:VAL:HG23	10:YJ:137:PRO:HB2	1.97	0.45
12:YL:47:ARG:NH2	12:YL:47:ARG:HG2	2.32	0.45
12:YL:63:LYS:HB3	30:Y3:12:ARG:CD	2.43	0.45
14:YN:38:LEU:CB	14:YN:39:PRO:HD3	2.43	0.45
16:YP:67:GLU:OE1	16:YP:68:GLY:N	2.50	0.45
18:YR:93:PHE:CD2	18:YR:93:PHE:C	2.93	0.45
1:RA:81:G:C2	1:RA:106:C:C2	3.04	0.45
1:RA:187:G:C2	1:RA:210:C:O2	2.69	0.45
1:RA:465:G:H4'	29:R2:16:HIS:CD2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:812:C:H1'	1:RA:1250:G:C2	2.51	0.45
1:RA:868:U:C4	1:RA:869:G:N7	2.84	0.45
1:RA:1071:G:C5	1:RA:1089:A:C6	3.05	0.45
1:RA:1268:A:H2'	1:RA:1269:A:O4'	2.17	0.45
1:RA:1844:C:C2	1:RA:1897:G:C2	3.04	0.45
1:RA:2104:C:C2	1:RA:2186:G:N2	2.85	0.45
1:RA:2210:U:O2	1:RA:2212:A:C8	2.69	0.45
4:RD:38:LYS:O	4:RD:46:ARG:HA	2.17	0.45
4:RD:170:VAL:O	4:RD:170:VAL:HG22	2.16	0.45
5:RE:68:ALA:O	5:RE:69:ARG:C	2.58	0.45
5:RE:148:ILE:HA	5:RE:187:VAL:HB	1.98	0.45
6:RF:111:ARG:HB3	6:RF:112:ASP:H	1.39	0.45
8:RH:67:ALA:O	8:RH:69:ALA:N	2.40	0.45
8:RH:147:VAL:CG1	8:RH:149:GLU:HG3	2.46	0.45
9:RI:50:LYS:HE2	9:RI:50:LYS:HB2	1.83	0.45
9:RI:123:ALA:C	9:RI:125:THR:H	2.24	0.45
11:RK:17:ARG:HG3	11:RK:47:ILE:HD13	1.97	0.45
13:RM:50:ARG:HG2	13:RM:50:ARG:HH21	1.80	0.45
16:RP:102:ARG:O	16:RP:103:THR:CG2	2.64	0.45
18:RR:76:LYS:HB2	18:RR:85:LYS:HG3	1.98	0.45
28:R1:47:ILE:N	28:R1:47:ILE:CD1	2.75	0.45
32:QA:701:U:H4'	32:QA:702:A:O5'	2.15	0.45
32:QA:978:A:C5	32:QA:1318:A:C6	3.03	0.45
32:QA:1033:G:H2'	32:QA:1034:G:H5"	1.98	0.45
32:QA:1293:C:H2'	32:QA:1294:G:H8	1.80	0.45
32:QA:1526:G:P	52:QU:38:GLU:HB2	2.56	0.45
33:QB:38:HIS:CD2	33:QB:38:HIS:H	2.35	0.45
33:QB:186:VAL:N	33:QB:199:ILE:O	2.42	0.45
35:QD:84:ASN:HB3	35:QD:87:GLU:HG2	1.98	0.45
38:QG:119:LEU:CD2	38:QG:123:LEU:HD23	2.46	0.45
41:QJ:35:GLN:HE21	41:QJ:35:GLN:CA	2.27	0.45
42:QK:22:ILE:HG12	42:QK:85:VAL:HA	1.98	0.45
42:QK:126:ARG:CB	52:QU:33:ARG:NH1	2.76	0.45
45:QN:20:PHE:HA	45:QN:24:ALA:CB	2.47	0.45
48:QQ:35:LYS:HG2	48:QQ:36:PHE:N	2.32	0.45
50:QS:4:LEU:H	50:QS:4:LEU:CD1	2.27	0.45
50:QS:52:ASN:OD1	50:QS:52:ASN:C	2.60	0.45
32:XA:91:U:C6	32:XA:92:U:C5	3.04	0.45
32:XA:367:U:C6	32:XA:394:G:N2	2.85	0.45
32:XA:442:G:C6	32:XA:443:C:C4	3.04	0.45
32:XA:532:A:H62	34:XC:191:THR:HG21	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:722:G:O3'	32:XA:723:U:C5	2.69	0.45
32:XA:796:C:O3'	42:XK:126:ARG:NH2	2.47	0.45
32:XA:908:A:H2'	32:XA:909:A:C8	2.51	0.45
32:XA:936:C:H1'	32:XA:1382:C:H42	1.80	0.45
32:XA:1172:C:C2'	32:XA:1173:U:H5'	2.46	0.45
32:XA:1323:G:H2'	32:XA:1324:A:H8	1.81	0.45
32:XA:1364:U:O2'	32:XA:1365:G:H5'	2.16	0.45
32:XA:1406:U:H1'	32:XA:1518:A:H4'	1.99	0.45
32:XA:1408:A:C8	32:XA:1409:C:C5	3.04	0.45
33:XB:21:TYR:HD1	33:XB:21:TYR:N	2.14	0.45
33:XB:65:LYS:HB2	33:XB:157:PRO:HA	1.98	0.45
33:XB:72:LYS:O	33:XB:74:ALA:N	2.50	0.45
34:XC:17:TRP:HD1	45:XN:90:GLY:HA2	1.81	0.45
37:XF:38:ARG:HD2	37:XF:63:ASN:CG	2.41	0.45
38:XG:148:LYS:O	38:XG:148:LYS:HD3	2.16	0.45
41:XJ:17:LEU:C	41:XJ:19:ASP:N	2.74	0.45
42:XK:86:LYS:HB2	42:XK:113:THR:HA	1.99	0.45
43:XL:82:ARG:N	43:XL:95:HIS:O	2.38	0.45
44:XM:19:THR:C	44:XM:21:ILE:H	2.24	0.45
48:XQ:18:LYS:HE3	48:XQ:48:GLU:OE1	2.17	0.45
1:YA:30:G:OP1	17:YQ:4:LYS:HG3	2.15	0.45
1:YA:96:C:C4'	25:YY:41:HIS:CD2	2.92	0.45
1:YA:247:G:N2	1:YA:250:G:H3'	2.31	0.45
1:YA:278:A:O3'	1:YA:279:A:H8	1.99	0.45
1:YA:351:C:H42	1:YA:352:A:N6	2.15	0.45
1:YA:358:U:N3	1:YA:359:G:N7	2.63	0.45
1:YA:476:G:O2'	1:YA:477:A:C5'	2.65	0.45
1:YA:510:C:C4	1:YA:511:U:C4	3.05	0.45
1:YA:605:G:H2'	1:YA:606:U:H6	1.79	0.45
1:YA:618:G:C2	1:YA:619:G:H1'	2.51	0.45
1:YA:659:G:C5'	5:YE:95:LYS:HD2	2.47	0.45
1:YA:668:A:C5	1:YA:670:A:N7	2.84	0.45
1:YA:698:C:C4	1:YA:762:U:O4	2.69	0.45
1:YA:1019:U:C2'	1:YA:1021:A:N1	2.79	0.45
1:YA:1316:U:O2'	1:YA:1317:G:H5'	2.16	0.45
1:YA:1501:G:C4	1:YA:1502:A:C8	3.04	0.45
1:YA:1519:G:H2'	1:YA:1519:G:N3	2.31	0.45
1:YA:1647:U:H3'	1:YA:1647:U:P	2.57	0.45
1:YA:1655:A:H5'	4:YD:118:PHE:CD1	2.52	0.45
1:YA:2013:A:H2	19:YS:88:ARG:HH11	1.59	0.45
1:YA:2040:G:H2'	1:YA:2041:U:H6	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2353:G:N3	23:YW:30:VAL:CG1	2.78	0.45
1:YA:2755:C:O2'	1:YA:2756:U:H2'	2.16	0.45
2:YB:53:A:H2'	2:YB:53:A:N3	2.32	0.45
6:YF:107:VAL:N	6:YF:108:PRO:HD2	2.30	0.45
10:YJ:94:ALA:O	10:YJ:95:ARG:CG	2.65	0.45
13:YM:17:ASN:HB3	13:YM:38:ARG:HH22	1.81	0.45
13:YM:72:PRO:HB2	13:YM:73:ILE:H	1.62	0.45
14:YN:21:PHE:N	14:YN:21:PHE:HD1	2.14	0.45
15:YO:68:LYS:HB2	15:YO:68:LYS:NZ	2.31	0.45
16:YP:89:GLY:O	16:YP:112:ARG:NH1	2.48	0.45
17:YQ:26:ALA:HB1	17:YQ:30:VAL:CG2	2.46	0.45
17:YQ:42:GLY:O	17:YQ:45:ALA:HB3	2.16	0.45
20:YT:5:GLU:HA	20:YT:8:LEU:CD1	2.46	0.45
20:YT:21:SER:HA	20:YT:25:GLU:HB2	1.98	0.45
23:YW:70:VAL:HG22	23:YW:70:VAL:O	2.16	0.45
1:RA:64:A:C5	1:RA:65:U:C4	3.05	0.45
1:RA:247:G:C8	1:RA:249:C:C6	3.04	0.45
1:RA:286:U:H2'	1:RA:287:G:C8	2.51	0.45
1:RA:544:C:C4	1:RA:550:C:N4	2.85	0.45
1:RA:1253:A:C5	56:RA:3332:HOH:O	2.69	0.45
1:RA:1355:G:C2	1:RA:1356:G:C8	3.05	0.45
1:RA:1378:A:C4'	1:RA:1379:U:OP1	2.60	0.45
1:RA:1430:G:O2'	1:RA:1431:A:H5'	2.17	0.45
1:RA:2049:G:C2'	1:RA:2050:C:H5'	2.46	0.45
1:RA:2199:A:H5'	1:RA:2200:C:H5	1.81	0.45
3:RC:106:PRO:HA	3:RC:141:HIS:NE2	2.31	0.45
4:RD:67:HIS:O	4:RD:68:PHE:C	2.58	0.45
4:RD:149:ASN:CG	4:RD:150:GLN:N	2.75	0.45
4:RD:172:VAL:O	4:RD:173:GLN:CB	2.55	0.45
14:RN:62:ASN:N	14:RN:62:ASN:HD22	2.13	0.45
15:RO:84:GLU:C	15:RO:86:GLY:N	2.74	0.45
18:RR:66:HIS:CG	18:RR:94:THR:HG22	2.51	0.45
23:RW:37:VAL:CG1	23:RW:55:ASP:O	2.64	0.45
23:RW:41:GLY:HA2	23:RW:44:PHE:CZ	2.52	0.45
32:QA:521:G:O2'	32:QA:522:C:H5'	2.17	0.45
32:QA:756:C:H2'	32:QA:757:U:O4'	2.17	0.45
32:QA:1520:C:C2	32:QA:1521:C:C5	3.04	0.45
35:QD:25:ARG:O	35:QD:26:ALA:CB	2.65	0.45
35:QD:102:TYR:C	35:QD:104:MET:H	2.24	0.45
35:QD:103:ARG:NH1	35:QD:110:ARG:HH22	2.15	0.45
35:QD:154:VAL:O	35:QD:157:ALA:HB3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:QF:91:ARG:HG3	37:QF:92:THR:N	2.31	0.45
41:QJ:88:MET:HE3	41:QJ:89:ARG:NH1	2.32	0.45
42:QK:62:ALA:CB	42:QK:91:GLY:HA3	2.46	0.45
44:QM:13:HIS:CD2	44:QM:41:ASP:HB2	2.52	0.45
32:XA:91:U:O2'	32:XA:92:U:OP2	2.31	0.45
32:XA:503:C:O2	32:XA:510:A:H2	1.99	0.45
32:XA:653:U:H5'	39:XH:55:LYS:HE3	1.99	0.45
32:XA:1090:U:H2'	32:XA:1091:U:H6	1.80	0.45
32:XA:1348:U:H2'	32:XA:1349:A:C8	2.47	0.45
32:XA:1384:C:O2'	32:XA:1385:G:H5'	2.15	0.45
32:XA:1402:C:H2'	32:XA:1403:C:O4'	2.17	0.45
32:XA:1409:C:O5'	32:XA:1409:C:H6	1.98	0.45
33:XB:17:HIS:CG	33:XB:18:GLN:H	2.33	0.45
35:XD:2:ARG:N	35:XD:2:ARG:HH11	2.15	0.45
36:XE:38:VAL:CG1	36:XE:39:GLY:N	2.70	0.45
41:XJ:5:ARG:CG	41:XJ:79:PRO:HG3	2.46	0.45
42:XK:18:GLY:O	42:XK:81:LEU:HA	2.16	0.45
1:YA:86:G:HO2'	1:YA:87:U:H6	1.62	0.45
1:YA:183:C:C2'	1:YA:184:C:H5'	2.46	0.45
1:YA:621:A:HO2'	1:YA:622:G:C4'	2.29	0.45
1:YA:876:C:O4'	1:YA:876:C:O2	2.32	0.45
1:YA:1021:A:HO2'	1:YA:1022:G:P	2.39	0.45
1:YA:1260:A:C2	1:YA:1261:C:C2	3.04	0.45
1:YA:1651:G:C2	1:YA:2007:U:N3	2.85	0.45
1:YA:2093:G:HO2'	1:YA:2094:A:P	2.37	0.45
1:YA:2332:C:H4'	23:YW:40:ARG:CZ	2.47	0.45
1:YA:2748:A:C2	1:YA:2757:A:C5	3.04	0.45
4:YD:118:PHE:CE1	4:YD:119:ALA:O	2.69	0.45
5:YE:90:GLN:HA	5:YE:90:GLN:OE1	2.15	0.45
5:YE:146:VAL:HG13	5:YE:187:VAL:HG23	1.97	0.45
21:YU:52:ASN:C	21:YU:54:PRO:HD3	2.41	0.45
26:YZ:19:HIS:O	26:YZ:20:LYS:C	2.60	0.45
27:Y0:38:LEU:N	27:Y0:41:HIS:CE1	2.83	0.45
1:RA:593:U:H2'	1:RA:594:U:C6	2.51	0.45
1:RA:598:U:H2'	1:RA:599:A:C8	2.52	0.45
1:RA:693:A:O2'	1:RA:694:U:H5'	2.17	0.45
1:RA:760:G:H4'	1:RA:1776:G:OP1	2.16	0.45
1:RA:1743:G:H8	1:RA:1743:G:O5'	2.00	0.45
1:RA:1966:A:C2	1:RA:2593:U:O4'	2.69	0.45
1:RA:2092:U:C2	1:RA:2225:A:O2'	2.69	0.45
1:RA:2478:A:C2'	1:RA:2479:U:H5'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2602:A:H4'	1:RA:2603:G:H5'	1.94	0.45
1:RA:2680:U:OP2	4:RD:114:LYS:CE	2.65	0.45
3:RC:96:LYS:HD3	3:RC:96:LYS:HA	1.81	0.45
4:RD:174:SER:O	4:RD:175:LEU:CB	2.53	0.45
4:RD:174:SER:OG	4:RD:175:LEU:N	2.49	0.45
5:RE:153:LEU:HB3	5:RE:171:ASP:CB	2.46	0.45
6:RF:134:GLN:C	6:RF:136:ILE:N	2.74	0.45
8:RH:39:ALA:O	8:RH:41:LYS:N	2.48	0.45
8:RH:78:VAL:HB	8:RH:145:ASN:HB3	1.98	0.45
9:RI:78:LEU:HD13	9:RI:108:ILE:HG23	1.99	0.45
9:RI:126:ARG:C	9:RI:129:GLU:HB2	2.41	0.45
11:RK:7:MET:SD	11:RK:20:MET:HB2	2.57	0.45
11:RK:19:VAL:CG1	11:RK:41:ILE:HG12	2.46	0.45
16:RP:19:PHE:O	16:RP:20:ARG:CB	2.64	0.45
17:RQ:10:ARG:HB2	17:RQ:10:ARG:HH11	1.81	0.45
20:RT:11:LEU:HA	20:RT:34:VAL:HG12	1.98	0.45
23:RW:72:GLY:C	23:RW:74:LYS:H	2.24	0.45
23:RW:72:GLY:C	23:RW:74:LYS:N	2.74	0.45
25:RY:42:LEU:HD12	25:RY:42:LEU:HA	1.80	0.45
26:RZ:9:THR:HG22	26:RZ:53:MET:C	2.42	0.45
26:RZ:12:ALA:HA	26:RZ:15:ARG:HD3	1.97	0.45
32:QA:460:A:O3'	32:QA:462:G:OP2	2.34	0.45
32:QA:664:G:H22	32:QA:741:G:H1	1.65	0.45
32:QA:950:U:H2'	32:QA:951:G:H8	1.82	0.45
32:QA:1039:G:O2'	32:QA:1040:U:H5'	2.17	0.45
32:QA:1066:C:H5"	32:QA:1066:C:C6	2.40	0.45
32:QA:1291:U:O2'	32:QA:1292:G:H5'	2.16	0.45
32:QA:1309:G:C6	32:QA:1329:A:N1	2.84	0.45
32:QA:1473:G:C2'	32:QA:1474:U:H5'	2.46	0.45
34:QC:99:GLN:O	34:QC:100:ILE:HB	2.17	0.45
35:QD:101:VAL:HG13	35:QD:106:PHE:HB2	1.98	0.45
35:QD:156:ALA:O	35:QD:159:GLU:HB3	2.16	0.45
38:QG:53:SER:C	38:QG:55:LYS:N	2.70	0.45
38:QG:78:ARG:HA	38:QG:83:THR:HA	1.99	0.45
38:QG:125:ASP:OD2	38:QG:130:LYS:HG3	2.16	0.45
40:QI:9:GLY:HA2	40:QI:80:HIS:CD2	2.52	0.45
45:QN:14:ALA:HB1	45:QN:18:LYS:HE2	1.99	0.45
52:QU:13:VAL:HG13	52:QU:15:LEU:HG	1.99	0.45
32:XA:567:G:H1'	56:XA:1820:HOH:O	2.16	0.45
32:XA:1303:C:N4	32:XA:1334:G:H1	2.14	0.45
35:XD:124:VAL:O	35:XD:125:ASN:C	2.60	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:XG:34:LYS:HB2	38:XG:34:LYS:NZ	2.31	0.45
40:XI:119:LYS:O	40:XI:121:ARG:N	2.39	0.45
44:XM:82:LEU:CD2	50:XS:60:PHE:HB3	2.47	0.45
44:XM:87:GLY:O	44:XM:91:ARG:HD2	2.16	0.45
1:YA:125:A:OP2	29:Y2:19:ARG:NH2	2.49	0.45
1:YA:352:A:H2'	1:YA:353:C:H4'	1.99	0.45
1:YA:450:G:N1	1:YA:454:A:OP2	2.42	0.45
1:YA:482:A:N6	1:YA:506:G:C8	2.85	0.45
1:YA:489:G:C4'	1:YA:490:C:OP1	2.65	0.45
1:YA:510:C:OP1	1:YA:511:U:OP2	2.35	0.45
1:YA:579:G:N2	1:YA:1262:A:C4	2.85	0.45
1:YA:872:U:C2'	1:YA:873:C:H5'	2.46	0.45
1:YA:876:C:H2'	1:YA:877:A:OP1	2.17	0.45
1:YA:1299:G:H5"	56:YA:3648:HOH:O	2.17	0.45
1:YA:1415:U:O3'	1:YA:1416:G:H4'	2.16	0.45
1:YA:1605:C:C3'	1:YA:1606:C:C5'	2.89	0.45
1:YA:1652:A:OP1	14:YN:8:ARG:HD3	2.16	0.45
1:YA:1740:G:O2'	1:YA:1741:C:H5'	2.17	0.45
1:YA:2025:C:H42	1:YA:2037:A:H61	1.64	0.45
1:YA:2234:G:C6	1:YA:2235:G:N7	2.85	0.45
1:YA:2314:A:N1	1:YA:2315:G:C6	2.85	0.45
1:YA:2337:G:C2'	1:YA:2338:C:H5'	2.46	0.45
1:YA:2743:U:OP1	31:Y4:34:LYS:NZ	2.49	0.45
1:YA:2755:C:O3'	1:YA:2756:U:H6	1.99	0.45
3:YC:8:THR:O	3:YC:9:SER:CB	2.65	0.45
3:YC:68:ARG:NH2	3:YC:126:GLY:O	2.41	0.45
3:YC:69:ASN:O	3:YC:70:LYS:C	2.58	0.45
3:YC:76:VAL:O	3:YC:93:VAL:O	2.34	0.45
5:YE:143:LEU:HD23	5:YE:146:VAL:HG22	1.98	0.45
6:YF:52:ALA:HA	6:YF:55:ASP:HB2	1.98	0.45
6:YF:122:ASP:HB3	6:YF:123:GLY:H	1.40	0.45
8:YH:4:ILE:O	8:YH:36:ALA:HB1	2.17	0.45
8:YH:65:ALA:O	8:YH:66:ASN:C	2.59	0.45
13:YM:21:ALA:HB2	13:YM:97:GLN:O	2.17	0.45
13:YM:61:GLY:CA	13:YM:107:GLY:HA3	2.47	0.45
17:YQ:82:LEU:HB3	17:YQ:88:GLU:OE2	2.16	0.45
20:YT:30:ILE:O	20:YT:85:VAL:HG23	2.17	0.45
21:YU:40:LEU:HA	21:YU:61:GLU:HA	1.99	0.45
21:YU:65:GLN:HE21	21:YU:65:GLN:HB3	1.59	0.45
21:YU:80:ASP:OD1	21:YU:80:ASP:N	2.50	0.45
23:YW:35:ILE:O	23:YW:36:ILE:C	2.59	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YY:31:GLN:C	25:YY:33:ALA:N	2.75	0.45
25:YY:58:ASN:C	25:YY:60:LYS:N	2.74	0.45
1:RA:31:C:H4'	1:RA:1238:G:H4'	1.98	0.45
1:RA:163:C:O2'	1:RA:164:C:C5'	2.65	0.45
1:RA:253:C:OP2	30:R3:4:LYS:NZ	2.44	0.45
1:RA:627:A:OP1	12:RL:78:ARG:NH1	2.49	0.45
1:RA:668:A:H2'	1:RA:670:A:H62	1.80	0.45
1:RA:1171:G:C6	1:RA:1172:C:C5	3.05	0.45
1:RA:1402:U:H2'	1:RA:1403:A:O5'	2.17	0.45
1:RA:1528:A:C2'	1:RA:1529:G:H5'	2.45	0.45
1:RA:1818:U:O2'	3:RC:152:GLN:O	2.19	0.45
1:RA:2715:C:H6	1:RA:2715:C:O5'	2.00	0.45
4:RD:69:ALA:HA	4:RD:73:VAL:HG13	1.98	0.45
4:RD:110:THR:HA	4:RD:171:THR:HA	1.98	0.45
7:RG:7:PRO:O	7:RG:8:VAL:HB	2.15	0.45
8:RH:99:ILE:O	8:RH:99:ILE:CG2	2.64	0.45
14:RN:8:ARG:HB2	14:RN:43:GLU:HG3	1.99	0.45
18:RR:36:ALA:N	18:RR:37:GLU:OE2	2.49	0.45
19:RS:36:LEU:HA	19:RS:36:LEU:HD12	1.55	0.45
21:RU:20:LYS:C	21:RU:21:ARG:HG3	2.42	0.45
23:RW:21:GLY:O	23:RW:22:VAL:HB	2.17	0.45
26:RZ:20:LYS:C	26:RZ:22:THR:N	2.75	0.45
32:QA:82:G:H22	32:QA:84:U:H3	1.64	0.45
32:QA:339:C:H2'	32:QA:340:U:H6	1.80	0.45
32:QA:1305:G:O2'	32:QA:1306:A:H8	2.00	0.45
43:QL:24:GLU:O	43:QL:25:ALA:C	2.60	0.45
43:QL:74:GLN:O	43:QL:76:HIS:N	2.50	0.45
32:XA:623:C:O5'	32:XA:623:C:H6	2.00	0.45
32:XA:679:C:C2	32:XA:712:A:C2	3.04	0.45
32:XA:978:A:N3	32:XA:1318:A:C2	2.85	0.45
32:XA:994:A:C6	32:XA:1216:A:C5'	3.00	0.45
32:XA:1243:C:N4	32:XA:1244:G:O6	2.50	0.45
32:XA:1269:A:C2	32:XA:1313:U:H1'	2.52	0.45
32:XA:1315:U:C5	32:XA:1316:G:N7	2.85	0.45
32:XA:1319:A:C6	32:XA:1323:G:C4	3.04	0.45
32:XA:1480:A:H2'	32:XA:1481:U:O4'	2.17	0.45
35:XD:2:ARG:HE	35:XD:114:ARG:HD2	1.80	0.45
35:XD:102:TYR:C	35:XD:104:MET:N	2.75	0.45
40:XI:90:ASP:HB3	40:XI:93:LEU:CD2	2.40	0.45
40:XI:126:PHE:O	40:XI:126:PHE:CG	2.68	0.45
43:XL:2:THR:HB	43:XL:5:GLN:H	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:XL:70:GLY:C	43:XL:98:ARG:HH22	2.25	0.45
43:XL:113:ARG:HD2	43:XL:118:VAL:HG12	1.97	0.45
44:XM:96:VAL:C	44:XM:98:GLY:H	2.25	0.45
45:XN:44:VAL:C	45:XN:46:LYS:H	2.25	0.45
50:XS:32:THR:O	50:XS:32:THR:HG23	2.16	0.45
1:YA:180:G:O6	1:YA:213:A:N6	2.50	0.45
1:YA:181:A:H2	1:YA:434:U:C1'	2.22	0.45
1:YA:238:C:H2'	1:YA:239:C:O4'	2.17	0.45
1:YA:310:A:C2	1:YA:330:A:C5	3.04	0.45
1:YA:447:A:C8	1:YA:473:G:C6	3.04	0.45
1:YA:486:C:O2	1:YA:495:G:N2	2.50	0.45
1:YA:586:A:H5'	5:YE:84:THR:HG21	1.98	0.45
1:YA:617:G:O2'	1:YA:618:G:O5'	2.35	0.45
1:YA:732:C:C4	1:YA:733:G:C5	3.05	0.45
1:YA:785:G:C6	1:YA:786:C:C4	3.04	0.45
1:YA:1014:A:C2	1:YA:1149:G:C2	3.05	0.45
1:YA:1060:U:O4'	1:YA:1061:U:C2'	2.62	0.45
1:YA:1087:G:C4	1:YA:1089:A:C2	3.04	0.45
1:YA:1429:G:H8	1:YA:1429:G:O5'	1.99	0.45
1:YA:1778:U:H2'	1:YA:1784:A:N6	2.31	0.45
1:YA:1867:G:O6	1:YA:1875:G:N2	2.50	0.45
1:YA:2015:A:C6	27:Y0:2:VAL:HG11	2.51	0.45
1:YA:2272:U:H6	1:YA:2272:U:O5'	1.98	0.45
1:YA:2296:U:H4'	1:YA:2297:A:OP1	2.16	0.45
1:YA:2305:U:H5	1:YA:2312:U:O4	2.00	0.45
1:YA:2407:A:HO2'	1:YA:2408:U:C5'	2.30	0.45
1:YA:2809:A:OP2	1:YA:2890:G:N1	2.47	0.45
2:YB:16:G:H2'	2:YB:17:C:H6	1.82	0.45
2:YB:25:U:O2	2:YB:25:U:H2'	2.16	0.45
8:YH:94:ILE:CB	8:YH:98:ASP:HB2	2.47	0.45
9:YI:105:LEU:HD21	9:YI:129:GLU:CD	2.41	0.45
12:YL:18:ARG:O	12:YL:19:LEU:HB3	2.16	0.45
12:YL:77:ILE:HG12	12:YL:101:ILE:HD11	1.98	0.45
13:YM:61:GLY:HA2	13:YM:107:GLY:HA3	1.98	0.45
14:YN:16:HIS:O	14:YN:20:MET:CB	2.65	0.45
14:YN:35:LYS:HA	14:YN:111:ALA:O	2.17	0.45
14:YN:84:GLY:N	14:YN:85:PRO:CD	2.79	0.45
26:YZ:37:ARG:HA	26:YZ:37:ARG:NE	2.32	0.45
1:RA:265:A:N1	1:RA:427:U:O2'	2.47	0.45
1:RA:395:U:O2'	1:RA:396:G:N7	2.45	0.45
1:RA:1178:C:C5	1:RA:1180:U:C4	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1289:C:H2'	1:RA:1290:C:H6	1.82	0.45
1:RA:1478:G:O2'	1:RA:1479:G:H5'	2.16	0.45
1:RA:1998:A:O2'	1:RA:1999:C:H5'	2.17	0.45
1:RA:2563:U:H1'	1:RA:2566:A:C6	2.52	0.45
2:RB:109:A:C5	2:RB:110:C:C4	3.05	0.45
4:RD:133:THR:O	4:RD:134:HIS:C	2.58	0.45
5:RE:72:SER:C	5:RE:74:LYS:N	2.75	0.45
5:RE:79:ARG:HG2	5:RE:80:SER:N	2.32	0.45
9:RI:91:LYS:O	9:RI:92:PRO:O	2.34	0.45
9:RI:96:LYS:HD2	9:RI:96:LYS:H	1.81	0.45
9:RI:126:ARG:HD3	9:RI:126:ARG:H	1.80	0.45
9:RI:135:MET:HE3	9:RI:135:MET:HB3	1.85	0.45
12:RL:104:GLN:HA	12:RL:104:GLN:HE21	1.80	0.45
16:RP:20:ARG:HG2	16:RP:21:PRO:HD2	1.98	0.45
16:RP:37:LYS:HG2	16:RP:37:LYS:O	2.15	0.45
17:RQ:34:ALA:O	17:RQ:38:VAL:HG23	2.17	0.45
18:RR:53:PHE:N	18:RR:53:PHE:CD1	2.83	0.45
21:RU:60:LYS:HD2	21:RU:60:LYS:HA	1.68	0.45
28:R1:29:LYS:HB3	28:R1:29:LYS:HZ2	1.81	0.45
32:QA:813:U:H2'	32:QA:814:A:H5"	1.97	0.45
32:QA:947:G:C6	32:QA:948:C:C4	3.05	0.45
32:QA:1381:U:O2'	32:QA:1382:C:C5'	2.65	0.45
34:QC:82:ASP:O	34:QC:86:LEU:HG	2.16	0.45
35:QD:7:LYS:O	35:QD:10:LEU:HB2	2.17	0.45
35:QD:64:TYR:CE1	35:QD:93:LEU:HD13	2.52	0.45
35:QD:158:LEU:HA	35:QD:161:ALA:HB3	1.99	0.45
38:QG:145:GLU:N	38:QG:148:LYS:HB2	2.32	0.45
42:QK:125:LYS:C	52:QU:33:ARG:NH2	2.75	0.45
47:QP:39:PHE:CD2	47:QP:74:LEU:HD11	2.51	0.45
52:QU:18:PHE:O	52:QU:21:SER:HB3	2.17	0.45
32:XA:626:G:H2'	32:XA:627:G:C8	2.51	0.45
32:XA:976:G:N7	32:XA:1359:C:O4'	2.49	0.45
32:XA:1058:G:C5	32:XA:1059:C:C4	3.04	0.45
32:XA:1151:A:OP1	41:XJ:43:PRO:HA	2.16	0.45
32:XA:1239:A:H3'	38:XG:118:ARG:NH2	2.32	0.45
32:XA:1331:G:C2'	32:XA:1332:A:OP2	2.65	0.45
32:XA:1346:A:N1	38:XG:9:ARG:NH2	2.64	0.45
35:XD:29:THR:O	35:XD:30:LYS:HB2	2.16	0.45
40:XI:59:LYS:HE2	40:XI:59:LYS:HB3	1.72	0.45
41:XJ:76:ILE:HG22	41:XJ:77:VAL:N	2.31	0.45
42:XK:66:ALA:HB2	42:XK:95:THR:OG1	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:XL:65:TYR:CE1	43:XL:67:GLY:HA2	2.51	0.45
44:XM:97:ARG:HG2	44:XM:97:ARG:O	2.17	0.45
45:XN:4:SER:O	45:XN:7:ALA:HB3	2.17	0.45
45:XN:46:LYS:CE	50:XS:10:ILE:HB	2.47	0.45
46:XO:80:LEU:HD22	46:XO:84:LEU:HD12	1.97	0.45
52:XU:13:VAL:HG22	52:XU:15:LEU:HD23	1.98	0.45
52:XU:53:LYS:HB2	52:XU:53:LYS:NZ	2.31	0.45
1:YA:46:G:N1	1:YA:47:C:C4	2.85	0.45
1:YA:187:G:N2	1:YA:210:C:H1'	2.32	0.45
1:YA:570:G:C4	1:YA:2030:A:N7	2.85	0.45
1:YA:650:C:H4'	30:Y3:48:MET:HE1	1.98	0.45
1:YA:1392:A:N6	1:YA:1393:A:C6	2.85	0.45
1:YA:1723:G:O2'	1:YA:1724:G:H5'	2.16	0.45
1:YA:1744:A:N6	1:YA:1745:A:C2	2.85	0.45
1:YA:1805:A:O2'	3:YC:49:THR:HA	2.16	0.45
1:YA:2463:C:H6	1:YA:2463:C:O5'	1.98	0.45
1:YA:2677:G:H2'	1:YA:2678:C:C6	2.52	0.45
1:YA:2831:G:C8	4:YD:59:ARG:NH1	2.84	0.45
1:YA:2889:C:C4	1:YA:2890:G:C6	3.04	0.45
2:YB:8:C:H2'	2:YB:9:G:O4'	2.17	0.45
3:YC:171:VAL:N	3:YC:185:ALA:HB2	2.32	0.45
14:YN:10:LEU:HD13	14:YN:10:LEU:HA	1.84	0.45
15:YO:10:ARG:HB2	15:YO:96:GLY:HA2	1.98	0.45
18:YR:22:LEU:HD21	18:YR:96:VAL:HG22	1.97	0.45
22:YV:44:HIS:HE2	22:YV:85:LYS:HB2	1.81	0.45
22:YV:49:ASN:O	22:YV:52:ALA:HB3	2.16	0.45
25:YY:20:ASN:ND2	25:YY:50:VAL:HG22	2.14	0.45
25:YY:40:SER:C	25:YY:42:LEU:N	2.74	0.45
29:Y2:11:LYS:C	29:Y2:13:ASN:N	2.72	0.45
1:RA:183:C:H1'	1:RA:433:C:H1'	1.99	0.45
1:RA:553:G:H2'	1:RA:554:U:O4'	2.17	0.45
1:RA:866:A:C2'	1:RA:867:C:H5'	2.47	0.45
1:RA:1045:C:H3'	1:RA:1046:A:H5'	1.98	0.45
1:RA:1056:G:O2'	1:RA:1086:A:H1'	2.17	0.45
1:RA:1069:A:N1	1:RA:1073:A:N6	2.43	0.45
1:RA:1073:A:H8	1:RA:1073:A:OP1	2.00	0.45
1:RA:1084:A:C6	1:RA:1085:A:C6	3.05	0.45
1:RA:1106:G:C2	1:RA:1107:G:N9	2.85	0.45
1:RA:1165:A:H2'	1:RA:1166:G:H8	1.81	0.45
1:RA:1326:U:N3	1:RA:1648:U:O2'	2.49	0.45
1:RA:1587:G:C2	1:RA:1588:G:C8	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1664:A:C2	1:RA:2726:A:C8	3.05	0.45
1:RA:1881:C:H2'	1:RA:1882:U:O4'	2.17	0.45
1:RA:2572:A:H2'	4:RD:149:ASN:HD22	1.82	0.45
3:RC:114:GLN:HE21	3:RC:114:GLN:HB2	1.53	0.45
3:RC:257:ARG:O	3:RC:258:SER:HB2	2.16	0.45
4:RD:166:GLY:O	4:RD:167:ASN:CB	2.64	0.45
5:RE:134:LEU:HD12	5:RE:138:LEU:HG	1.98	0.45
7:RG:37:ASN:OD1	7:RG:37:ASN:N	2.50	0.45
9:RI:3:LYS:HD3	9:RI:4:VAL:HG23	1.97	0.45
10:RJ:41:LYS:N	17:RQ:66:ALA:HB1	2.32	0.45
10:RJ:77:HIS:HD2	10:RJ:79:GLY:HA2	1.82	0.45
22:RV:38:LEU:HD23	22:RV:40:ILE:HD11	1.99	0.45
23:RW:23:LYS:CG	23:RW:24:ARG:N	2.76	0.45
25:RY:56:LEU:O	25:RY:57:LEU:CB	2.57	0.45
32:QA:591:U:H2'	32:QA:592:G:C8	2.51	0.45
32:QA:603:U:H3'	32:QA:603:U:C6	2.48	0.45
32:QA:988:G:C6	32:QA:989:U:C4	3.04	0.45
32:QA:1253:G:C6	32:QA:1285:A:N6	2.85	0.45
32:QA:1283:U:H2'	32:QA:1284:C:H6	1.81	0.45
33:QB:32:GLY:HA3	33:QB:39:ILE:N	2.25	0.45
33:QB:100:LEU:HD13	33:QB:100:LEU:HA	1.79	0.45
33:QB:125:PHE:HD2	33:QB:125:PHE:N	2.15	0.45
33:QB:221:ARG:HH11	33:QB:221:ARG:CG	2.30	0.45
35:QD:37:PRO:HD2	35:QD:41:GLY:HA2	1.99	0.45
36:QE:97:PRO:HB2	36:QE:98:ALA:H	1.59	0.45
36:QE:104:ILE:O	36:QE:104:ILE:HG23	2.17	0.45
36:QE:133:ILE:H	36:QE:133:ILE:HD12	1.82	0.45
36:QE:148:SER:O	36:QE:152:VAL:CG1	2.64	0.45
37:QF:91:ARG:CG	37:QF:92:THR:H	2.27	0.45
38:QG:68:VAL:O	38:QG:69:ARG:C	2.60	0.45
39:QH:82:LEU:HD22	39:QH:82:LEU:C	2.41	0.45
40:QI:40:ARG:O	40:QI:44:ARG:HD3	2.17	0.45
47:QP:42:ILE:O	47:QP:44:SER:N	2.42	0.45
47:QP:51:ARG:HG2	47:QP:52:LEU:N	2.31	0.45
32:XA:111:G:O6	32:XA:330:C:H5	2.00	0.45
32:XA:487:A:H2'	32:XA:488:C:O4'	2.17	0.45
32:XA:750:C:O2'	46:XO:20:ASP:HB2	2.17	0.45
32:XA:948:C:H5"	44:XM:104:ASN:HB3	1.98	0.45
32:XA:981:U:C4	32:XA:982:U:C2	3.04	0.45
32:XA:1000:A:H1'	32:XA:1041:G:N2	2.31	0.45
32:XA:1326:U:N3	32:XA:1327:C:C4	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1375:A:H2'	32:XA:1376:U:C6	2.52	0.45
33:XB:25:LYS:H	33:XB:25:LYS:HD2	1.81	0.45
34:XC:10:ARG:O	34:XC:13:ILE:O	2.34	0.45
36:XE:103:GLY:HA3	36:XE:120:HIS:O	2.17	0.45
38:XG:137:ARG:C	38:XG:137:ARG:HD2	2.42	0.45
39:XH:9:MET:HG3	39:XH:26:MET:SD	2.57	0.45
40:XI:27:ILE:HG13	40:XI:34:LEU:HD13	1.99	0.45
44:XM:16:ILE:HD12	44:XM:16:ILE:H	1.82	0.45
47:XP:78:VAL:C	47:XP:80:LYS:N	2.72	0.45
1:YA:94:A:C6	1:YA:95:A:C6	3.05	0.45
1:YA:121:G:N2	1:YA:131:A:C4	2.85	0.45
1:YA:168:G:HO2'	1:YA:2209:G:HO2'	1.64	0.45
1:YA:200:U:O4	1:YA:248:G:C2	2.70	0.45
1:YA:243:U:O2'	1:YA:244:A:C8	2.64	0.45
1:YA:508:A:C3'	1:YA:509:C:C5'	2.95	0.45
1:YA:758:C:O2	1:YA:759:G:C8	2.69	0.45
1:YA:764:A:C2	1:YA:781:A:C4	3.05	0.45
1:YA:860:U:O4	1:YA:2268:A:C4	2.70	0.45
1:YA:1056:G:O5'	1:YA:1085:A:H2	2.00	0.45
1:YA:1544:A:C6	1:YA:1545:A:C6	3.05	0.45
1:YA:1558:C:H4'	1:YA:1559:U:C5'	2.44	0.45
1:YA:1914:C:O2'	1:YA:1915:U:C5'	2.64	0.45
1:YA:1973:G:C5	1:YA:1974:C:C5	3.05	0.45
1:YA:2067:G:C6	1:YA:2444:G:N1	2.84	0.45
1:YA:2445:G:H2'	1:YA:2446:G:C8	2.52	0.45
1:YA:2652:C:H2'	1:YA:2653:U:O4'	2.17	0.45
1:YA:2786:U:OP1	4:YD:70:LYS:HD2	2.16	0.45
3:YC:128:THR:O	3:YC:129:LEU:HB3	2.17	0.45
3:YC:180:MET:O	3:YC:267:VAL:HG23	2.16	0.45
4:YD:148:GLN:O	4:YD:149:ASN:HB2	2.16	0.45
5:YE:138:LEU:HD23	5:YE:141:MET:HE1	1.98	0.45
7:YG:152:ARG:CD	7:YG:153:PRO:HD2	2.46	0.45
9:YI:20:SER:N	9:YI:21:PRO:CD	2.80	0.45
9:YI:105:LEU:HD21	9:YI:129:GLU:OE2	2.16	0.45
10:YJ:69:ARG:CZ	10:YJ:89:PHE:HE1	2.30	0.45
12:YL:65:GLY:O	12:YL:66:PHE:HB2	2.16	0.45
12:YL:85:VAL:O	12:YL:86:GLU:HB2	2.17	0.45
22:YV:43:ASP:C	22:YV:45:ASP:H	2.24	0.45
23:YW:55:ASP:C	23:YW:57:THR:H	2.25	0.45
24:YX:1:SER:O	24:YX:2:ARG:C	2.59	0.45
26:YZ:6:ILE:O	26:YZ:34:THR:HA	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:434:U:H4'	1:RA:435:C:OP1	2.16	0.45
1:RA:571:U:H3'	18:RR:80:ARG:CZ	2.47	0.45
1:RA:646:U:C3'	1:RA:647:G:H5"	2.46	0.45
1:RA:727:A:C2	3:RC:8:THR:HG21	2.47	0.45
1:RA:900:A:C2	1:RA:901:C:H1'	2.52	0.45
1:RA:1037:G:C2	1:RA:1119:U:O2	2.70	0.45
1:RA:1064:C:C4	1:RA:1066:U:O2	2.70	0.45
1:RA:1322:A:C2'	1:RA:1323:C:H5'	2.47	0.45
1:RA:1826:G:C4	1:RA:1827:U:C5	3.05	0.45
1:RA:1833:C:C5	1:RA:1834:U:C5	3.05	0.45
1:RA:2323:G:C2'	1:RA:2324:U:H5'	2.47	0.45
1:RA:2556:C:C2'	1:RA:2557:G:H5'	2.47	0.45
1:RA:2573:C:OP1	1:RA:2574:G:OP1	2.34	0.45
1:RA:2780:G:H4'	1:RA:2781:A:OP2	2.17	0.45
4:RD:90:PHE:CD1	4:RD:90:PHE:N	2.84	0.45
7:RG:18:ILE:HD12	7:RG:42:VAL:HG13	1.99	0.45
7:RG:34:ARG:HD3	7:RG:34:ARG:N	2.32	0.45
10:RJ:5:THR:O	10:RJ:5:THR:HG22	2.14	0.45
12:RL:95:LEU:HD13	12:RL:100:ILE:HD11	1.99	0.45
13:RM:108:VAL:CG1	13:RM:112:LEU:HB3	2.46	0.45
16:RP:25:VAL:HA	16:RP:84:SER:O	2.17	0.45
16:RP:33:GLU:CB	16:RP:36:LYS:HB2	2.47	0.45
16:RP:85:VAL:O	16:RP:86:LYS:HB2	2.16	0.45
18:RR:24:LYS:HE2	18:RR:24:LYS:HB3	1.68	0.45
18:RR:37:GLU:OE1	18:RR:37:GLU:O	2.35	0.45
21:RU:2:ALA:HB3	21:RU:5:ARG:NH2	2.32	0.45
21:RU:13:LEU:HD12	21:RU:69:VAL:CA	2.47	0.45
22:RV:93:ARG:O	22:RV:94:ALA:HB2	2.16	0.45
27:R0:42:ILE:HD12	27:R0:42:ILE:HA	1.81	0.45
32:QA:111:G:C6	32:QA:330:C:N4	2.85	0.45
32:QA:141:G:C2	32:QA:142:G:H1'	2.52	0.45
32:QA:267:C:H2'	32:QA:268:U:H6	1.80	0.45
32:QA:441:A:H2'	32:QA:441:A:N3	2.32	0.45
32:QA:601:G:C2	32:QA:638:U:O2	2.69	0.45
32:QA:958:A:C6	32:QA:959:A:N1	2.84	0.45
32:QA:1039:G:C6	32:QA:1040:U:C4	3.04	0.45
32:QA:1278:G:O5'	32:QA:1279:G:H5'	2.17	0.45
33:QB:127:LYS:HG3	33:QB:128:LEU:N	2.24	0.45
33:QB:130:LYS:HA	33:QB:130:LYS:HE2	1.98	0.45
33:QB:132:GLU:O	33:QB:136:ARG:HB3	2.17	0.45
35:QD:106:PHE:CG	35:QD:144:ILE:HD11	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:QE:71:ILE:CD1	36:QE:144:GLU:HG3	2.46	0.45
36:QE:113:VAL:O	36:QE:117:ALA:HB2	2.16	0.45
37:QF:6:ILE:O	37:QF:61:LEU:HD12	2.16	0.45
38:QG:29:LEU:HD23	38:QG:29:LEU:O	2.17	0.45
43:QL:81:ILE:HD11	43:QL:94:TYR:CB	2.47	0.45
46:QO:87:ARG:O	46:QO:88:ARG:C	2.60	0.45
50:QS:33:TRP:CD1	50:QS:51:HIS:CG	3.05	0.45
51:QT:27:MET:HG3	51:QT:28:ARG:N	2.30	0.45
32:XA:283:U:H2'	32:XA:284:C:C6	2.52	0.45
32:XA:301:G:H2'	32:XA:302:G:H8	1.82	0.45
32:XA:516:U:C4	32:XA:517:G:C6	3.05	0.45
32:XA:939:G:O3'	38:XG:101:ARG:NH2	2.50	0.45
32:XA:1242:G:HO2'	32:XA:1243:C:C4'	2.27	0.45
32:XA:1319:A:H5"	50:XS:4:LEU:CD1	2.47	0.45
35:XD:105:GLY:HA2	35:XD:161:ALA:HB2	1.99	0.45
39:XH:77:VAL:HG12	39:XH:84:ILE:HG13	1.98	0.45
40:XI:25:GLY:HA2	40:XI:60:LEU:O	2.16	0.45
40:XI:38:PHE:HE2	40:XI:71:ILE:HG22	1.80	0.45
45:XN:42:ASN:C	45:XN:44:VAL:H	2.24	0.45
45:XN:76:PHE:CE2	45:XN:95:LEU:HD22	2.51	0.45
49:XR:41:SER:C	49:XR:43:ILE:H	2.25	0.45
1:YA:77:G:H2'	1:YA:78:U:O4'	2.17	0.45
1:YA:348:A:C6	1:YA:349:U:C4	3.04	0.45
1:YA:672:C:C6	1:YA:672:C:C3'	3.00	0.45
1:YA:816:C:H2'	1:YA:817:C:H6	1.82	0.45
1:YA:1019:U:H2'	1:YA:1021:A:N1	2.31	0.45
1:YA:1047:G:C2'	1:YA:1048:A:OP2	2.64	0.45
1:YA:1090:A:C6	1:YA:1102:C:O2	2.70	0.45
1:YA:1112:G:H2'	1:YA:1113:U:C5	2.52	0.45
1:YA:1223:G:N1	1:YA:1227:G:C6	2.85	0.45
1:YA:1352:U:C5	1:YA:1377:G:O6	2.70	0.45
1:YA:1570:A:C6	1:YA:1571:A:C6	3.05	0.45
1:YA:1716:U:C5	1:YA:1743:G:N2	2.84	0.45
1:YA:1958:C:C2'	1:YA:1959:G:H5'	2.46	0.45
1:YA:2043:C:C2	1:YA:2044:C:C5	3.05	0.45
1:YA:2367:G:O2'	1:YA:2368:C:H5'	2.17	0.45
1:YA:2458:G:H1'	1:YA:2459:A:N7	2.31	0.45
1:YA:2531:A:C4	1:YA:2532:G:C8	3.05	0.45
1:YA:2674:G:H4'	11:YK:30:ARG:HD2	1.99	0.45
1:YA:2853:C:H2'	1:YA:2854:G:C8	2.51	0.45
2:YB:76:G:H2'	2:YB:77:U:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:YD:36:GLN:HG3	4:YD:38:LYS:HZ1	1.82	0.45
4:YD:48:ILE:HG22	4:YD:82:PHE:O	2.17	0.45
5:YE:154:ASP:C	5:YE:156:ASN:N	2.75	0.45
7:YG:43:LYS:HB2	7:YG:50:THR:O	2.17	0.45
9:YI:92:PRO:HB3	9:YI:134:SER:O	2.16	0.45
12:YL:98:ALA:O	12:YL:99:ASN:C	2.59	0.45
13:YM:126:ILE:O	13:YM:127:LYS:C	2.59	0.45
14:YN:92:GLY:H	14:YN:94:TYR:HE1	1.62	0.45
18:YR:36:ALA:HA	18:YR:58:VAL:HA	1.99	0.45
21:YU:58:VAL:CG1	21:YU:59:GLU:N	2.79	0.45
22:YV:40:ILE:HD13	22:YV:40:ILE:H	1.80	0.45
23:YW:23:LYS:HD2	23:YW:24:ARG:HB2	1.99	0.45
25:YY:53:VAL:O	25:YY:57:LEU:HB2	2.16	0.45
31:Y4:16:ILE:CG1	31:Y4:25:VAL:HG22	2.45	0.45
1:RA:231:A:N7	1:RA:232:G:C6	2.85	0.45
1:RA:734:A:C4	1:RA:735:A:C8	3.05	0.45
1:RA:1002:G:H2'	1:RA:1003:G:O5'	2.16	0.45
1:RA:1288:G:C5	1:RA:1327:A:C2	3.05	0.45
1:RA:1724:G:C2'	1:RA:1725:U:H5'	2.46	0.45
1:RA:1731:G:C5	1:RA:1733:G:N7	2.85	0.45
1:RA:2020:A:H5'	27:R0:8:THR:HG22	1.98	0.45
1:RA:2220:U:H2'	1:RA:2221:G:C8	2.50	0.45
1:RA:2846:G:OP2	16:RP:51:ASN:HB2	2.17	0.45
4:RD:163:GLY:O	4:RD:164:GLN:C	2.58	0.45
6:RF:27:VAL:O	6:RF:29:ARG:NH1	2.50	0.45
7:RG:59:ASP:O	7:RG:60:GLY:O	2.35	0.45
10:RJ:105:VAL:O	10:RJ:109:LEU:HD12	2.16	0.45
12:RL:57:LEU:CD2	30:R3:53:ASP:HB3	2.46	0.45
13:RM:54:THR:O	13:RM:57:VAL:HG22	2.16	0.45
18:RR:21:ARG:HG3	18:RR:95:ASP:OD1	2.17	0.45
20:RT:16:VAL:C	20:RT:17:SER:OG	2.60	0.45
23:RW:39:GLN:NE2	23:RW:43:LYS:HB2	2.32	0.45
24:RX:68:ALA:C	24:RX:69:GLU:O	2.59	0.45
32:QA:40:C:H2'	32:QA:40:C:O2	2.16	0.45
32:QA:198:G:C6	32:QA:220:G:N3	2.85	0.45
32:QA:858:G:C6	32:QA:869:G:C8	3.05	0.45
32:QA:1039:G:C2'	32:QA:1040:U:H5'	2.47	0.45
32:QA:1378:C:C5	32:QA:1379:G:C8	3.05	0.45
32:QA:1517:G:O6	32:QA:1518:A:C6	2.69	0.45
35:QD:29:THR:CG2	35:QD:30:LYS:HD3	2.45	0.45
35:QD:47:LEU:HD23	35:QD:47:LEU:H	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:QD:75:TYR:CD2	35:QD:203:TYR:HD1	2.34	0.45
38:QG:92:PRO:C	38:QG:93:VAL:HG22	2.42	0.45
40:QI:70:GLY:O	40:QI:71:ILE:C	2.59	0.45
42:QK:24:ALA:O	42:QK:88:PRO:O	2.35	0.45
44:QM:92:ARG:CZ	44:QM:92:ARG:HB3	2.47	0.45
47:QP:28:ARG:NE	47:QP:29:ASN:HD21	2.15	0.45
32:XA:140:U:H6	32:XA:140:U:H3'	1.82	0.45
32:XA:275:G:O2'	32:XA:276:G:H8	2.00	0.45
32:XA:623:C:C6	32:XA:623:C:H3'	2.52	0.45
32:XA:631:C:C3'	32:XA:632:U:H5'	2.46	0.45
32:XA:764:C:H2'	32:XA:764:C:O2	2.16	0.45
32:XA:952:U:H5	44:XM:102:LYS:NZ	2.14	0.45
32:XA:1309:G:C6	32:XA:1329:A:N1	2.84	0.45
32:XA:1326:U:N3	32:XA:1327:C:N4	2.65	0.45
32:XA:1335:U:H5"	32:XA:1336:C:H5'	1.98	0.45
33:XB:199:ILE:HG13	33:XB:199:ILE:O	2.16	0.45
34:XC:6:PRO:HG3	34:XC:200:TRP:HE1	1.81	0.45
34:XC:122:GLN:HA	34:XC:125:ARG:HG3	1.98	0.45
35:XD:32:LYS:O	35:XD:35:GLN:HG2	2.16	0.45
36:XE:69:ASN:O	36:XE:69:ASN:ND2	2.49	0.45
37:XF:12:PRO:CD	37:XF:54:LEU:HD11	2.46	0.45
37:XF:25:TYR:O	37:XF:29:ILE:HD13	2.16	0.45
39:XH:109:VAL:C	39:XH:110:MET:HG3	2.42	0.45
40:XI:4:GLN:H	40:XI:4:GLN:HG2	1.37	0.45
43:XL:78:VAL:O	43:XL:102:ASP:HB2	2.17	0.45
43:XL:115:LYS:O	43:XL:116:TYR:CB	2.64	0.45
46:XO:15:GLY:O	46:XO:16:ARG:C	2.59	0.45
48:XQ:45:VAL:CG2	48:XQ:60:ILE:HD12	2.46	0.45
48:XQ:51:GLU:H	48:XQ:51:GLU:HG2	1.42	0.45
48:XQ:52:CYS:HB2	48:XQ:53:GLY:H	1.58	0.45
49:XR:19:GLU:CG	49:XR:20:ILE:N	2.80	0.45
51:XT:47:GLN:O	51:XT:51:ASN:OD1	2.35	0.45
1:YA:21:A:H2'	1:YA:22:C:H6	1.80	0.45
1:YA:84:A:C2	1:YA:98:G:N2	2.79	0.45
1:YA:219:A:N6	1:YA:220:G:N1	2.65	0.45
1:YA:249:C:C4'	1:YA:250:G:O5'	2.65	0.45
1:YA:586:A:H8	1:YA:586:A:O5'	1.99	0.45
1:YA:653:U:H4'	1:YA:653:U:OP1	2.17	0.45
1:YA:685:A:C8	1:YA:773:U:O4	2.70	0.45
1:YA:1019:U:C4	1:YA:1020:A:N6	2.85	0.45
1:YA:1208:C:O2'	1:YA:1209:U:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1341:G:C2	20:YT:84:TYR:HE2	2.35	0.45
1:YA:1440:U:H2'	1:YA:1441:G:C8	2.52	0.45
1:YA:1601:G:C5	1:YA:1602:U:C4	3.05	0.45
1:YA:1775:U:C2'	1:YA:1776:G:O5'	2.65	0.45
1:YA:2036:C:H2'	1:YA:2037:A:C8	2.52	0.45
1:YA:2056:G:N2	1:YA:2057:G:C8	2.85	0.45
1:YA:2361:G:C6	1:YA:2362:C:C4	3.05	0.45
1:YA:2687:U:H2'	1:YA:2688:G:O4'	2.17	0.45
1:YA:2760:C:C2'	1:YA:2761:A:H5'	2.47	0.45
1:YA:2876:G:H5"	16:YP:2:ASN:ND2	2.32	0.45
3:YC:30:ALA:N	3:YC:31:PRO:CD	2.80	0.45
3:YC:196:ASN:HB3	3:YC:197:ALA:H	1.66	0.45
4:YD:15:PHE:CD2	16:YP:77:SER:HA	2.52	0.45
4:YD:114:LYS:CD	4:YD:116:LYS:NZ	2.75	0.45
6:YF:65:LEU:HD21	6:YF:87:LYS:HG3	1.99	0.45
7:YG:112:VAL:HG13	7:YG:150:TYR:CE1	2.45	0.45
7:YG:152:ARG:HG3	7:YG:153:PRO:HD2	1.98	0.45
8:YH:3:VAL:N	8:YH:39:ALA:HB2	2.31	0.45
9:YI:57:VAL:HG12	9:YI:58:ILE:N	2.32	0.45
10:YJ:69:ARG:O	10:YJ:90:GLU:HB2	2.16	0.45
10:YJ:95:ARG:NH1	10:YJ:99:ARG:HH21	2.15	0.45
12:YL:12:SER:C	12:YL:13:LYS:HD3	2.42	0.45
16:YP:19:PHE:N	16:YP:19:PHE:HD2	2.15	0.45
16:YP:52:ARG:HH11	16:YP:52:ARG:HG2	1.82	0.45
17:YQ:46:TYR:CE1	17:YQ:50:ARG:NH2	2.85	0.45
17:YQ:86:SER:HB3	18:YR:50:GLY:O	2.17	0.45
24:YX:53:LYS:O	24:YX:57:VAL:N	2.43	0.45
28:Y1:10:LEU:HD12	28:Y1:50:GLU:O	2.17	0.45
29:Y2:18:PHE:O	29:Y2:21:ARG:N	2.50	0.45
1:RA:928:A:C2	26:RZ:46:MET:HE1	2.52	0.44
1:RA:1045:C:C3'	1:RA:1046:A:C5'	2.95	0.44
1:RA:1246:A:C2'	1:RA:1247:A:O5'	2.65	0.44
1:RA:1316:U:H2'	1:RA:1317:G:C8	2.53	0.44
1:RA:1746:A:C2	1:RA:1747:U:N3	2.85	0.44
1:RA:1797:G:C6	1:RA:1798:U:C4	3.05	0.44
1:RA:1922:G:H2'	1:RA:1923:U:O4'	2.17	0.44
1:RA:1932:A:H2'	1:RA:1933:G:O4'	2.17	0.44
1:RA:2307:G:N2	1:RA:2311:A:C8	2.85	0.44
1:RA:2544:G:H2'	1:RA:2545:G:O4'	2.17	0.44
1:RA:2571:U:H2'	1:RA:2572:A:OP1	2.16	0.44
4:RD:34:VAL:CG2	4:RD:91:THR:HA	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:RF:21:TYR:CE2	6:RF:27:VAL:HA	2.52	0.44
6:RF:131:VAL:C	6:RF:132:ARG:HG3	2.42	0.44
7:RG:10:VAL:O	7:RG:10:VAL:HG23	2.16	0.44
18:RR:46:GLU:OE1	18:RR:46:GLU:C	2.60	0.44
21:RU:73:ASN:HD22	21:RU:76:THR:H	1.64	0.44
23:RW:37:VAL:HG11	23:RW:55:ASP:HB2	1.98	0.44
24:RX:29:LEU:HD23	24:RX:29:LEU:H	1.82	0.44
28:R1:22:THR:OG1	28:R1:23:THR:N	2.50	0.44
29:R2:29:GLN:O	29:R2:33:ARG:HG3	2.16	0.44
32:QA:191:G:C5	32:QA:192:A:N7	2.85	0.44
32:QA:362:G:N2	32:QA:365:U:OP2	2.50	0.44
32:QA:466:A:C3'	32:QA:467:U:H5"	2.46	0.44
32:QA:828:U:H2'	32:QA:829:G:O5'	2.17	0.44
32:QA:1394:A:C6	32:QA:1501:C:H4'	2.52	0.44
32:QA:1432:G:O2'	32:QA:1433:A:OP2	2.27	0.44
32:QA:1503:A:C8	32:QA:1531:A:H1'	2.53	0.44
33:QB:121:GLN:HA	33:QB:125:PHE:CE1	2.51	0.44
33:QB:125:PHE:N	33:QB:125:PHE:CD2	2.84	0.44
35:QD:151:GLN:H	35:QD:154:VAL:HG13	1.81	0.44
37:QF:11:HIS:CD2	37:QF:12:PRO:HD2	2.53	0.44
37:QF:90:MET:HE1	49:QR:22:TYR:OH	2.17	0.44
38:QG:105:GLU:O	38:QG:105:GLU:HG2	2.17	0.44
39:QH:63:LYS:C	39:QH:64:TYR:CD1	2.94	0.44
42:QK:125:LYS:O	42:QK:126:ARG:CB	2.65	0.44
43:QL:41:PRO:HA	43:QL:88:ASP:O	2.17	0.44
44:QM:65:GLU:HB3	44:QM:66:GLY:H	1.57	0.44
46:QO:7:THR:O	46:QO:11:VAL:HG23	2.17	0.44
51:QT:32:LYS:O	51:QT:35:TYR:HD2	1.99	0.44
32:XA:53:A:C2	32:XA:359:G:C6	3.05	0.44
32:XA:207:C:N3	32:XA:208:U:O4	2.50	0.44
32:XA:469:C:H2'	32:XA:470:C:O4'	2.18	0.44
32:XA:575:G:C6	32:XA:821:G:C5	3.06	0.44
32:XA:599:C:H4'	39:XH:121:GLY:HA3	1.99	0.44
32:XA:637:C:H2'	32:XA:638:U:H6	1.81	0.44
32:XA:706:A:N7	32:XA:707:U:C5	2.85	0.44
32:XA:944:G:H3'	32:XA:945:G:H5'	1.97	0.44
32:XA:1050:G:O6	32:XA:1209:C:N3	2.50	0.44
32:XA:1092:A:H5'	38:XG:3:ARG:NH2	2.32	0.44
32:XA:1381:U:HO2'	32:XA:1382:C:C5'	2.31	0.44
35:XD:59:LYS:O	35:XD:63:ILE:HG13	2.17	0.44
37:XF:61:LEU:CD1	37:XF:62:MET:H	2.25	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:XH:45:ILE:O	39:XH:45:ILE:HG13	2.17	0.44
43:XL:56:LEU:HB2	43:XL:58:ASN:OD1	2.17	0.44
1:YA:271:G:C2	1:YA:367:G:N3	2.86	0.44
1:YA:462:C:C2'	1:YA:463:G:H5'	2.47	0.44
1:YA:571:U:C6	1:YA:575:A:N6	2.85	0.44
1:YA:1210:G:H4'	1:YA:1211:C:H5"	1.98	0.44
1:YA:1327:A:N6	1:YA:1328:A:C6	2.85	0.44
1:YA:1338:G:N3	1:YA:1393:A:H2	2.16	0.44
1:YA:1571:A:H8	1:YA:1571:A:O5'	1.99	0.44
1:YA:1789:A:H5"	3:YC:218:THR:O	2.17	0.44
1:YA:1790:C:O2'	3:YC:207:ALA:HB2	2.16	0.44
1:YA:1827:U:O4'	1:YA:1970:A:O2'	2.34	0.44
1:YA:2056:G:H21	27:Y0:1:ALA:H3	1.66	0.44
1:YA:2200:C:N4	1:YA:2224:G:H21	2.14	0.44
1:YA:2234:G:C5	1:YA:2235:G:N7	2.85	0.44
1:YA:2254:C:C2'	1:YA:2255:G:H5'	2.46	0.44
1:YA:2286:G:O6	28:Y1:22:THR:HG21	2.17	0.44
1:YA:2307:G:N7	1:YA:2312:U:C5	2.85	0.44
1:YA:2331:G:C1'	23:YW:40:ARG:HB3	2.46	0.44
1:YA:2607:G:H2'	1:YA:2608:G:O4'	2.17	0.44
2:YB:17:C:H2'	2:YB:18:G:H8	1.83	0.44
2:YB:95:U:O4	56:YB:303:HOH:O	2.15	0.44
2:YB:108:A:O2'	2:YB:109:A:OP1	2.28	0.44
5:YE:146:VAL:HG12	5:YE:167:VAL:HG23	1.99	0.44
5:YE:195:GLN:CD	5:YE:195:GLN:H	2.25	0.44
6:YF:73:VAL:HG12	6:YF:73:VAL:O	2.17	0.44
6:YF:177:ARG:NE	6:YF:178:LYS:H	2.13	0.44
10:YJ:103:ILE:C	10:YJ:103:ILE:HD12	2.42	0.44
11:YK:118:LEU:O	11:YK:120:PRO:HD2	2.16	0.44
12:YL:79:LEU:HD12	12:YL:112:LEU:CA	2.46	0.44
14:YN:83:LEU:CD1	14:YN:86:ARG:HH21	2.30	0.44
15:YO:24:THR:H	15:YO:90:VAL:CG1	2.29	0.44
15:YO:30:ARG:HH12	15:YO:102:ARG:HB2	1.81	0.44
20:YT:45:ALA:HA	20:YT:48:GLN:CG	2.47	0.44
20:YT:55:VAL:HG23	20:YT:86:THR:O	2.17	0.44
25:YY:17:GLU:HG3	25:YY:53:VAL:HG11	1.99	0.44
26:YZ:51:SER:C	26:YZ:53:MET:H	2.25	0.44
27:Y0:41:HIS:C	27:Y0:41:HIS:ND1	2.74	0.44
1:RA:464:U:O2'	29:R2:16:HIS:CE1	2.70	0.44
1:RA:715:A:OP1	1:RA:715:A:H8	1.99	0.44
1:RA:866:A:C8	1:RA:914:G:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:996:A:C2'	1:RA:997:G:O5'	2.66	0.44
1:RA:1019:U:C2	1:RA:1142:A:N6	2.85	0.44
1:RA:1059:G:C8	1:RA:1060:U:H2'	2.52	0.44
1:RA:1085:A:C2	1:RA:1086:A:N7	2.85	0.44
1:RA:1104:C:H2'	1:RA:1105:U:C6	2.52	0.44
1:RA:1347:A:H2'	1:RA:1348:C:O4'	2.17	0.44
1:RA:1945:G:H2'	1:RA:1946:U:C6	2.51	0.44
1:RA:1999:C:H4'	1:RA:2723:C:O2	2.17	0.44
1:RA:2353:G:O2'	23:RW:31:LEU:CD2	2.65	0.44
1:RA:2585:U:O2'	1:RA:2586:U:O5'	2.34	0.44
2:RB:63:C:O2'	2:RB:64:G:H5'	2.17	0.44
3:RC:77:VAL:HG13	3:RC:113:ASP:O	2.17	0.44
3:RC:216:ARG:HB3	3:RC:217:PRO:HD2	1.99	0.44
4:RD:68:PHE:CD2	4:RD:75:ALA:HA	2.52	0.44
6:RF:99:PHE:O	6:RF:103:ILE:HG12	2.17	0.44
8:RH:110:VAL:HG23	8:RH:111:ALA:N	2.32	0.44
13:RM:108:VAL:HG13	13:RM:109:PRO:CD	2.45	0.44
17:RQ:60:TRP:CZ2	17:RQ:93:ILE:HB	2.52	0.44
17:RQ:63:ARG:O	17:RQ:64:ILE:C	2.58	0.44
17:RQ:75:TYR:CE2	17:RQ:79:ILE:HG13	2.52	0.44
19:RS:24:ILE:HA	19:RS:24:ILE:HD12	1.62	0.44
27:R0:43:THR:HG23	27:R0:47:TYR:O	2.17	0.44
31:R4:9:LYS:HB3	31:R4:14:CYS:CB	2.47	0.44
32:QA:21:G:N2	32:QA:22:G:C6	2.85	0.44
32:QA:273:U:O4	32:QA:274:A:N6	2.49	0.44
32:QA:715:A:OP1	32:QA:805:C:O2'	2.32	0.44
32:QA:1033:G:H2'	32:QA:1034:G:C5'	2.48	0.44
32:QA:1296:C:O3'	32:QA:1302:C:N4	2.50	0.44
32:QA:1398:A:H5"	32:QA:1398:A:H8	1.82	0.44
33:QB:170:ILE:H	33:QB:170:ILE:HG12	1.50	0.44
37:QF:92:THR:HG22	37:QF:93:LYS:H	1.81	0.44
39:QH:91:LEU:HD23	39:QH:92:PRO:HD2	1.99	0.44
40:QI:22:PRO:HA	40:QI:60:LEU:HA	1.98	0.44
44:QM:2:ARG:HA	44:QM:8:ILE:HG12	1.99	0.44
48:QQ:12:VAL:CG1	48:QQ:21:VAL:HG13	2.38	0.44
32:XA:41:G:H2'	32:XA:42:G:C8	2.51	0.44
32:XA:160:A:C2	32:XA:343:U:H1'	2.52	0.44
32:XA:178:C:H2'	32:XA:179:A:H8	1.82	0.44
32:XA:207:C:O2	32:XA:207:C:H2'	2.17	0.44
32:XA:495:A:C2	32:XA:496:A:C6	3.05	0.44
32:XA:567:G:H2'	32:XA:568:G:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:575:G:O2'	32:XA:821:G:H5'	2.18	0.44
32:XA:858:G:C8	32:XA:869:G:O6	2.70	0.44
32:XA:934:C:H5	32:XA:1344:C:C2	2.35	0.44
32:XA:1364:U:O2	32:XA:1364:U:O4'	2.34	0.44
33:XB:15:PHE:O	33:XB:39:ILE:HD11	2.17	0.44
38:XG:36:SER:HA	40:XI:42:THR:CG2	2.47	0.44
38:XG:59:GLU:C	38:XG:61:PHE:N	2.75	0.44
38:XG:128:GLU:O	38:XG:129:ASN:HB2	2.18	0.44
39:XH:23:ALA:HA	39:XH:62:LEU:HD22	1.98	0.44
40:XI:30:ASN:O	40:XI:31:GLN:CG	2.65	0.44
42:XK:74:LYS:HG3	42:XK:78:ILE:HG12	2.00	0.44
50:XS:39:ILE:O	50:XS:39:ILE:HG13	2.17	0.44
1:YA:28:A:O2'	1:YA:583:G:H5'	2.18	0.44
1:YA:75:G:O2'	1:YA:76:C:O5'	2.34	0.44
1:YA:146:A:C2	1:YA:147:C:C2	3.05	0.44
1:YA:228:C:C5'	1:YA:229:C:C5	2.98	0.44
1:YA:475:C:C2'	1:YA:476:G:C8	2.98	0.44
1:YA:584:C:H2'	1:YA:585:G:C8	2.52	0.44
1:YA:609:A:N7	1:YA:610:C:C2	2.86	0.44
1:YA:635:C:OP2	12:YL:126:ARG:NH1	2.48	0.44
1:YA:684:G:H5'	29:Y2:16:HIS:NE2	2.32	0.44
1:YA:770:G:H1'	1:YA:1379:U:O4	2.17	0.44
1:YA:1112:G:H2'	1:YA:1113:U:C6	2.53	0.44
1:YA:1485:U:C2	1:YA:1505:A:C2	3.05	0.44
1:YA:1499:C:C4	1:YA:1500:G:N7	2.85	0.44
1:YA:1506:U:H2'	1:YA:1507:C:O4'	2.17	0.44
1:YA:1672:A:O4'	1:YA:2553:G:H4'	2.17	0.44
1:YA:1677:A:C8	56:YA:3749:HOH:O	2.70	0.44
1:YA:1936:A:C2	1:YA:1943:U:H5	2.34	0.44
1:YA:2066:C:H5"	56:YA:3533:HOH:O	2.17	0.44
1:YA:2402:U:O2'	1:YA:2403:C:OP1	2.31	0.44
1:YA:2813:A:H2'	1:YA:2814:A:C8	2.52	0.44
1:YA:2850:A:C6	1:YA:2869:G:H4'	2.51	0.44
2:YB:76:G:P	22:YV:13:GLY:H	2.41	0.44
2:YB:78:A:H2'	2:YB:79:G:H8	1.82	0.44
2:YB:81:G:C5	2:YB:82:U:C4	3.05	0.44
4:YD:196:ALA:O	4:YD:197:THR:C	2.60	0.44
4:YD:200:ASP:O	4:YD:201:LEU:HD23	2.16	0.44
5:YE:153:LEU:HD23	5:YE:154:ASP:N	2.32	0.44
6:YF:65:LEU:HD11	6:YF:87:LYS:NZ	2.31	0.44
6:YF:134:GLN:HE22	6:YF:136:ILE:H	1.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:YG:176:LYS:HD2	7:YG:176:LYS:OXT	2.16	0.44
8:YH:104:THR:O	8:YH:104:THR:CG2	2.65	0.44
11:YK:17:ARG:O	11:YK:18:ARG:O	2.36	0.44
11:YK:60:ALA:HB2	11:YK:86:LEU:HA	1.99	0.44
12:YL:110:VAL:C	12:YL:111:ILE:HD13	2.42	0.44
14:YN:87:PHE:CD1	14:YN:90:ARG:HD3	2.52	0.44
16:YP:28:LYS:HB3	16:YP:39:LEU:HD23	1.99	0.44
18:YR:62:GLU:OE1	18:YR:97:LYS:HD2	2.18	0.44
21:YU:73:ASN:HD22	21:YU:95:PHE:HD2	1.65	0.44
22:YV:75:GLN:HG3	22:YV:92:VAL:CG1	2.47	0.44
24:YX:60:LYS:O	24:YX:61:LYS:C	2.60	0.44
1:RA:58:G:N2	1:RA:70:G:C4	2.85	0.44
1:RA:258:G:H8	1:RA:258:G:O5'	2.00	0.44
1:RA:497:A:H2'	1:RA:498:G:O4'	2.18	0.44
1:RA:1081:U:O2	1:RA:1081:U:H2'	2.17	0.44
1:RA:1252:G:O2'	1:RA:1253:A:C8	2.68	0.44
1:RA:1799:G:H8	3:RC:179:GLU:OE1	2.00	0.44
1:RA:2146:C:O2	1:RA:2146:C:O4'	2.34	0.44
1:RA:2553:G:H2'	1:RA:2554:U:O4'	2.17	0.44
1:RA:2792:A:C2	1:RA:2793:C:C2	3.06	0.44
3:RC:246:PRO:HG2	3:RC:247:TRP:CH2	2.51	0.44
5:RE:79:ARG:CG	5:RE:80:SER:N	2.80	0.44
10:RJ:40:HIS:O	10:RJ:41:LYS:HG2	2.17	0.44
11:RK:98:ARG:NE	32:QA:340:U:OP2	2.51	0.44
20:RT:2:ILE:HB	20:RT:3:ARG:NH1	2.32	0.44
23:RW:74:LYS:HE2	23:RW:74:LYS:HB3	1.77	0.44
24:RX:69:GLU:O	24:RX:71:ARG:N	2.48	0.44
25:RY:21:LEU:O	25:RY:22:LEU:C	2.59	0.44
26:RZ:16:LEU:O	26:RZ:19:HIS:HB2	2.18	0.44
32:QA:56:U:H2'	32:QA:57:G:H8	1.80	0.44
32:QA:207:C:H2'	32:QA:207:C:O2	2.17	0.44
32:QA:284:C:H2'	32:QA:285:C:C6	2.48	0.44
32:QA:342:C:H2'	32:QA:343:U:H5'	1.98	0.44
32:QA:777:A:H2'	32:QA:778:G:C8	2.52	0.44
32:QA:976:G:N1	32:QA:1363:A:C2	2.85	0.44
32:QA:1154:G:N1	32:QA:1155:A:C5	2.85	0.44
32:QA:1216:A:C2	32:QA:1217:C:C4	3.05	0.44
32:QA:1241:G:C2	32:QA:1242:G:C5	3.06	0.44
32:QA:1461:G:H2'	32:QA:1462:C:H6	1.82	0.44
34:QC:54:ILE:HD12	34:QC:55:VAL:N	2.33	0.44
35:QD:113:ALA:O	35:QD:117:VAL:HG23	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:QD:121:ALA:HA	35:QD:145:ARG:HG3	2.00	0.44
37:QF:6:ILE:HG22	37:QF:7:VAL:N	2.32	0.44
37:QF:7:VAL:HA	37:QF:60:VAL:O	2.17	0.44
37:QF:90:MET:HB3	37:QF:91:ARG:H	1.49	0.44
40:QI:7:GLY:HA3	40:QI:85:ALA:HB2	1.99	0.44
43:QL:87:LYS:HB2	43:QL:87:LYS:NZ	2.32	0.44
44:QM:2:ARG:HG3	44:QM:3:ILE:H	1.82	0.44
47:QP:56:ARG:HD2	47:QP:56:ARG:HA	1.69	0.44
32:XA:109:A:C8	32:XA:327:A:H5'	2.52	0.44
32:XA:188:C:H42	32:XA:189:A:N6	2.15	0.44
32:XA:249:U:C2	32:XA:276:G:N1	2.85	0.44
32:XA:642:A:O2'	32:XA:643:C:O5'	2.34	0.44
32:XA:853:C:H2'	32:XA:854:U:O4'	2.18	0.44
32:XA:858:G:C5	56:XA:1822:HOH:O	2.69	0.44
32:XA:1050:G:O2'	32:XA:1051:C:O5'	2.35	0.44
32:XA:1422:G:C5'	11:YK:48:PRO:HB3	2.44	0.44
33:XB:21:TYR:N	33:XB:21:TYR:CD1	2.84	0.44
33:XB:95:TRP:CH2	33:XB:174:GLU:CD	2.96	0.44
33:XB:176:ASN:O	33:XB:178:LEU:N	2.50	0.44
35:XD:25:ARG:HH12	35:XD:30:LYS:HE2	1.80	0.44
35:XD:55:ARG:HH12	35:XD:58:GLN:HG2	1.82	0.44
35:XD:100:VAL:O	35:XD:101:VAL:C	2.61	0.44
35:XD:100:VAL:HG21	35:XD:136:VAL:HG21	1.98	0.44
36:XE:136:VAL:HG22	36:XE:137:ARG:N	2.31	0.44
38:XG:72:VAL:O	38:XG:140:VAL:HG11	2.18	0.44
40:XI:106:ASP:OD1	40:XI:106:ASP:N	2.51	0.44
42:XK:92:ARG:HA	42:XK:92:ARG:HD2	1.65	0.44
45:XN:13:VAL:HG22	45:XN:59:GLN:CD	2.42	0.44
46:XO:55:LEU:HA	46:XO:58:MET:HG3	1.98	0.44
48:XQ:68:LYS:O	48:XQ:69:THR:HG23	2.17	0.44
52:XU:33:ARG:NH2	52:XU:34:ARG:HD3	2.33	0.44
1:YA:48:G:N2	1:YA:177:G:C2	2.85	0.44
1:YA:214:G:H1'	1:YA:217:A:H5'	1.98	0.44
1:YA:414:C:H4'	1:YA:1879:C:O2	2.17	0.44
1:YA:511:U:C5'	1:YA:1235:G:H4'	2.47	0.44
1:YA:648:G:N3	1:YA:649:G:C8	2.86	0.44
1:YA:1062:G:H2'	1:YA:1070:A:OP1	2.17	0.44
1:YA:1350:C:C2	1:YA:1382:G:N7	2.85	0.44
1:YA:1381:G:C2'	1:YA:1382:G:H5"	2.43	0.44
1:YA:1386:C:O2'	1:YA:1387:A:H8	1.99	0.44
1:YA:1439:A:H8	1:YA:1440:U:O4'	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1562:U:H2'	1:YA:1563:U:O4'	2.17	0.44
1:YA:1616:A:OP1	1:YA:1616:A:C8	2.68	0.44
1:YA:1670:C:C4	1:YA:1671:U:C2	3.05	0.44
1:YA:1799:G:C8	3:YC:175:LEU:HD13	2.53	0.44
1:YA:1830:C:H5'	3:YC:14:HIS:HE1	1.81	0.44
1:YA:2005:A:H5"	1:YA:2006:C:OP2	2.17	0.44
1:YA:2135:A:OP2	1:YA:2135:A:H8	2.00	0.44
1:YA:2287:A:O2'	1:YA:2288:A:H3'	2.18	0.44
1:YA:2373:G:C2	1:YA:2374:C:C2	3.04	0.44
1:YA:2650:U:C2	1:YA:2671:G:N2	2.85	0.44
1:YA:2718:G:O2'	16:YP:95:LYS:HG3	2.18	0.44
2:YB:77:U:H2'	2:YB:78:A:H5'	2.00	0.44
2:YB:99:A:N6	2:YB:100:G:C6	2.86	0.44
3:YC:231:HIS:O	3:YC:232:GLY:C	2.60	0.44
4:YD:43:ASP:HB3	4:YD:44:GLY:H	1.59	0.44
4:YD:73:VAL:HG22	4:YD:74:GLU:N	2.31	0.44
4:YD:107:VAL:HA	4:YD:204:LYS:O	2.18	0.44
5:YE:102:ARG:O	5:YE:104:ALA:N	2.50	0.44
5:YE:133:LEU:C	5:YE:133:LEU:HD23	2.43	0.44
6:YF:110:ILE:H	6:YF:110:ILE:CD1	2.31	0.44
11:YK:46:ALA:HB3	11:YK:54:LYS:NZ	2.32	0.44
12:YL:3:LEU:HG	12:YL:4:ASN:N	2.33	0.44
14:YN:9:GLN:C	14:YN:10:LEU:O	2.60	0.44
14:YN:45:ARG:HG2	14:YN:95:THR:HG21	1.99	0.44
14:YN:103:ARG:HG3	14:YN:104:ALA:N	2.32	0.44
20:YT:47:VAL:O	20:YT:53:VAL:O	2.35	0.44
20:YT:48:GLN:NE2	20:YT:54:GLU:HB2	2.32	0.44
24:YX:3:VAL:HG23	24:YX:3:VAL:O	2.17	0.44
25:YY:22:LEU:CD1	25:YY:23:ARG:HH12	2.31	0.44
30:Y3:48:MET:HB3	30:Y3:48:MET:HE3	1.78	0.44
1:RA:1438:U:O2'	1:RA:1439:A:H5'	2.17	0.44
1:RA:2459:A:O5'	1:RA:2459:A:C8	2.70	0.44
2:RB:94:A:C5	2:RB:95:U:C4	3.05	0.44
3:RC:90:ILE:HD12	3:RC:90:ILE:HA	1.53	0.44
3:RC:238:ASN:O	3:RC:239:PHE:HB2	2.18	0.44
4:RD:119:ALA:CB	4:RD:165:MET:HB2	2.48	0.44
7:RG:97:VAL:HG22	7:RG:102:ILE:HG12	1.99	0.44
9:RI:24:GLY:HA3	9:RI:25:PRO:HD3	1.86	0.44
9:RI:122:GLU:O	9:RI:122:GLU:HG3	2.16	0.44
12:RL:95:LEU:CD2	12:RL:100:ILE:HD11	2.43	0.44
13:RM:24:THR:O	13:RM:24:THR:HG23	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:RM:53:MET:HE1	13:RM:103:TYR:CG	2.52	0.44
17:RQ:85:ALA:HA	17:RQ:115:ALA:CB	2.48	0.44
21:RU:64:ILE:O	21:RU:65:GLN:C	2.60	0.44
25:RY:8:GLU:O	25:RY:9:LYS:HB3	2.17	0.44
32:QA:45:G:O2'	32:QA:46:G:H5'	2.17	0.44
32:QA:177:G:C2'	32:QA:178:C:H5'	2.47	0.44
32:QA:210:C:H4'	32:QA:211:G:C2	2.52	0.44
32:QA:684:U:H1'	42:QK:39:ASN:O	2.17	0.44
32:QA:1216:A:C6	32:QA:1217:C:N4	2.86	0.44
32:QA:1304:G:H5"	32:QA:1305:G:OP1	2.17	0.44
32:QA:1342:C:O2'	40:QI:125:GLN:HG3	2.17	0.44
33:QB:116:LEU:HD13	33:QB:116:LEU:HA	1.76	0.44
34:QC:60:ALA:O	34:QC:61:LYS:C	2.60	0.44
36:QE:132:PRO:O	36:QE:136:VAL:HG13	2.17	0.44
38:QG:78:ARG:HD2	38:QG:83:THR:HA	2.00	0.44
39:QH:63:LYS:O	39:QH:70:VAL:HG23	2.18	0.44
44:QM:2:ARG:HA	44:QM:7:ASN:O	2.17	0.44
48:QQ:47:ASP:C	48:QQ:51:GLU:OE2	2.60	0.44
32:XA:247:G:N2	32:XA:248:C:C2	2.86	0.44
32:XA:327:A:O2'	32:XA:328:C:H6	2.00	0.44
32:XA:484:G:C6	32:XA:486:U:H1'	2.53	0.44
32:XA:484:G:C5	32:XA:486:U:H1'	2.52	0.44
32:XA:636:U:O2'	32:XA:637:C:H5'	2.18	0.44
33:XB:77:GLU:C	33:XB:79:VAL:H	2.26	0.44
34:XC:59:PRO:HG2	34:XC:62:SER:HB3	1.99	0.44
34:XC:117:ASP:HA	34:XC:120:THR:HB	1.99	0.44
38:XG:74:VAL:HG11	38:XG:143:MET:HB2	1.99	0.44
38:XG:79:VAL:HG23	38:XG:79:VAL:O	2.18	0.44
45:XN:96:LYS:H	45:XN:96:LYS:HD2	1.81	0.44
49:XR:41:SER:HA	49:XR:46:THR:HG22	1.99	0.44
50:XS:40:PHE:CE1	50:XS:66:VAL:HG12	2.52	0.44
1:YA:135:U:H3	1:YA:144:A:H61	1.64	0.44
1:YA:320:A:H5"	1:YA:321:U:OP1	2.18	0.44
1:YA:401:A:H2'	1:YA:402:A:C8	2.52	0.44
1:YA:600:G:C5	1:YA:601:C:C4	3.05	0.44
1:YA:854:C:O2'	1:YA:855:G:H5'	2.18	0.44
1:YA:857:G:H4'	23:YW:43:LYS:HE2	1.99	0.44
1:YA:1064:C:C4	1:YA:1065:U:C5	3.05	0.44
1:YA:1070:A:C5	1:YA:1097:U:H4'	2.52	0.44
1:YA:1109:C:C4	1:YA:1110:G:C6	3.06	0.44
1:YA:1251:C:O2'	56:YA:3286:HOH:O	2.21	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1270:C:H6	1:YA:1270:C:O5'	2.00	0.44
1:YA:1417:C:H2'	1:YA:1418:G:N7	2.29	0.44
1:YA:1528:A:H2'	1:YA:1529:G:O4'	2.18	0.44
1:YA:1754:A:OP1	16:YP:93:LYS:HE3	2.18	0.44
1:YA:2151:U:H2'	1:YA:2152:G:C8	2.52	0.44
1:YA:2204:G:C2	1:YA:2205:A:C8	3.05	0.44
1:YA:2214:C:O2'	1:YA:2215:C:C5'	2.57	0.44
1:YA:2234:G:C4	1:YA:2235:G:C8	3.06	0.44
1:YA:2287:A:C8	1:YA:2289:G:C8	3.06	0.44
1:YA:2300:C:O2'	1:YA:2301:C:H5'	2.18	0.44
1:YA:2307:G:O2'	1:YA:2308:G:O4'	2.36	0.44
1:YA:2474:U:C2'	1:YA:2475:C:O5'	2.65	0.44
1:YA:2817:U:H2'	1:YA:2818:U:O5'	2.18	0.44
1:YA:2875:C:HO2'	1:YA:2876:G:H8	0.70	0.44
2:YB:24:G:H4'	2:YB:26:C:H5	1.83	0.44
4:YD:5:VAL:HG21	4:YD:80:TRP:CG	2.53	0.44
7:YG:85:LYS:HG3	7:YG:163:TYR:HB2	1.98	0.44
12:YL:116:VAL:O	12:YL:117:THR:C	2.61	0.44
13:YM:58:LYS:O	13:YM:60:GLN:N	2.51	0.44
15:YO:74:VAL:O	15:YO:78:VAL:HG23	2.17	0.44
17:YQ:10:ARG:HB2	17:YQ:10:ARG:NH1	2.32	0.44
20:YT:18:GLU:HA	20:YT:22:THR:CG2	2.48	0.44
20:YT:27:SER:O	20:YT:28:ASN:HB3	2.17	0.44
25:YY:56:LEU:N	25:YY:56:LEU:HD22	2.32	0.44
25:YY:57:LEU:O	25:YY:57:LEU:HD13	2.17	0.44
1:RA:226:A:N6	1:RA:227:A:C6	2.85	0.44
1:RA:271:G:C2	1:RA:367:G:N3	2.86	0.44
1:RA:659:G:H21	5:RE:30:GLN:HE22	1.66	0.44
1:RA:782:A:C2	3:RC:224:MET:SD	3.11	0.44
1:RA:863:A:H2'	1:RA:864:G:C8	2.53	0.44
1:RA:1062:G:H2'	1:RA:1063:G:C8	2.52	0.44
1:RA:1234:U:H2'	1:RA:1235:G:O4'	2.17	0.44
1:RA:1734:G:N3	1:RA:1735:A:C8	2.86	0.44
1:RA:1837:C:C2	1:RA:1899:A:N6	2.86	0.44
1:RA:1970:A:H4'	1:RA:1971:U:O5'	2.17	0.44
1:RA:2145:C:P	1:RA:2148:G:C6	3.11	0.44
1:RA:2298:A:H2'	1:RA:2299:U:O4'	2.18	0.44
1:RA:2765:A:H2'	1:RA:2765:A:N3	2.31	0.44
3:RC:198:GLU:O	3:RC:199:HIS:C	2.60	0.44
4:RD:110:THR:O	4:RD:201:LEU:HD12	2.18	0.44
5:RE:137:LYS:O	5:RE:141:MET:HG3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:RF:129:MET:O	6:RF:129:MET:HG3	2.18	0.44
7:RG:44:HIS:O	7:RG:45:ALA:O	2.35	0.44
8:RH:134:VAL:O	8:RH:135:HIS:HB2	2.18	0.44
10:RJ:1:MET:O	10:RJ:2:LYS:C	2.61	0.44
11:RK:107:LEU:HD12	11:RK:107:LEU:HA	1.76	0.44
14:RN:51:LEU:HD21	14:RN:70:THR:HG22	2.00	0.44
16:RP:19:PHE:HE2	16:RP:83:ILE:HD12	1.82	0.44
17:RQ:91:ARG:NH2	17:RQ:93:ILE:CD1	2.74	0.44
18:RR:80:ARG:C	18:RR:81:LYS:HD3	2.41	0.44
23:RW:67:LYS:O	23:RW:68:PHE:HB2	2.18	0.44
24:RX:39:VAL:HG21	24:RX:42:GLU:HB3	1.99	0.44
28:R1:5:ARG:HG3	28:R1:24:LYS:O	2.17	0.44
32:QA:70:U:H5	32:QA:94:G:HO2'	1.62	0.44
32:QA:109:A:C6	32:QA:327:A:C6	3.06	0.44
32:QA:177:G:H2'	32:QA:178:C:H5'	1.98	0.44
32:QA:753:A:H4'	32:QA:754:C:O2	2.17	0.44
32:QA:757:U:O2'	32:QA:879:C:H1'	2.17	0.44
32:QA:1250:A:O3'	40:QI:68:GLY:HA2	2.17	0.44
34:QC:125:ARG:O	34:QC:126:ARG:CB	2.66	0.44
35:QD:54:LEU:CD2	35:QD:54:LEU:C	2.91	0.44
36:QE:93:VAL:HG11	36:QE:139:THR:HG22	1.99	0.44
36:QE:155:LYS:C	36:QE:156:ARG:O	2.61	0.44
38:QG:14:ASP:OD1	38:QG:17:PHE:HB2	2.16	0.44
45:QN:72:PHE:CD1	45:QN:73:LEU:N	2.86	0.44
46:QO:41:HIS:CD2	46:QO:42:PHE:CD2	3.06	0.44
48:QQ:60:ILE:HG22	48:QQ:72:TRP:CE3	2.50	0.44
32:XA:130:A:O2'	32:XA:131:A:O5'	2.32	0.44
32:XA:158:G:C5	32:XA:164:G:C6	3.06	0.44
32:XA:428:G:OP2	35:XD:9:LYS:HE3	2.18	0.44
32:XA:865:A:C2	32:XA:918:A:H4'	2.52	0.44
32:XA:888:G:H3'	32:XA:889:A:C5'	2.47	0.44
32:XA:1057:G:H2'	32:XA:1058:G:O4'	2.17	0.44
32:XA:1098:C:OP1	33:XB:142:LYS:HE3	2.16	0.44
32:XA:1449:C:C2	32:XA:1455:G:N2	2.85	0.44
33:XB:56:LEU:HD22	33:XB:59:ILE:HD11	1.98	0.44
34:XC:5:HIS:NE2	34:XC:183:TYR:HE2	2.15	0.44
38:XG:39:GLU:CD	40:XI:42:THR:HG22	2.42	0.44
41:XJ:15:HIS:CA	41:XJ:18:ILE:HG22	2.35	0.44
43:XL:37:TYR:O	43:XL:38:THR:CG2	2.66	0.44
46:XO:61:GLN:C	46:XO:65:LEU:HD12	2.42	0.44
47:XP:71:VAL:O	47:XP:74:LEU:HB2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:252:G:N2	1:YA:253:C:C2	2.85	0.44
1:YA:405:U:H3'	1:YA:406:G:C5'	2.48	0.44
1:YA:410:G:C2	1:YA:2407:A:C6	3.05	0.44
1:YA:474:G:H4'	1:YA:475:C:OP2	2.16	0.44
1:YA:547:A:H8	1:YA:548:G:H5'	1.82	0.44
1:YA:803:U:C2'	1:YA:804:A:H5'	2.47	0.44
1:YA:1268:A:H2'	1:YA:1269:A:O4'	2.18	0.44
1:YA:1371:G:H8	1:YA:1371:G:O5'	2.00	0.44
1:YA:1400:U:H2'	1:YA:1401:G:O4'	2.17	0.44
1:YA:1485:U:N3	1:YA:1505:A:C2	2.85	0.44
1:YA:1534:U:H3'	1:YA:1534:U:O2	2.18	0.44
1:YA:1608:A:C5	1:YA:1611:C:C4	3.05	0.44
1:YA:1626:A:O2'	1:YA:1627:G:OP2	2.35	0.44
1:YA:2039:U:H2'	1:YA:2040:G:C8	2.53	0.44
1:YA:2196:C:O2'	1:YA:2197:U:H5'	2.17	0.44
1:YA:2262:U:H1'	1:YA:2328:A:H1'	2.00	0.44
1:YA:2724:U:H5"	4:YD:123:LYS:NZ	2.32	0.44
1:YA:2787:C:O4'	4:YD:63:PRO:HA	2.17	0.44
4:YD:8:LYS:HE2	4:YD:197:THR:H	1.82	0.44
4:YD:166:GLY:O	4:YD:167:ASN:CB	2.65	0.44
7:YG:94:ARG:CG	7:YG:104:LEU:HA	2.47	0.44
8:YH:90:LEU:CD2	8:YH:91:PHE:H	2.30	0.44
9:YI:21:PRO:N	9:YI:22:PRO:HD2	2.33	0.44
10:YJ:64:VAL:HG22	10:YJ:68:LYS:HG3	1.99	0.44
14:YN:108:ALA:O	14:YN:110:MET:HG2	2.17	0.44
14:YN:114:GLU:HG3	14:YN:118:ARG:HD3	1.99	0.44
15:YO:62:LEU:HD21	15:YO:65:THR:HA	1.98	0.44
16:YP:21:PRO:HA	16:YP:46:VAL:HG12	1.98	0.44
17:YQ:57:ARG:HH12	17:YQ:92:LYS:HE2	1.76	0.44
25:YY:49:ASP:O	25:YY:52:ARG:HB2	2.16	0.44
1:RA:631:A:N3	1:RA:2415:G:O2'	2.44	0.44
1:RA:827:U:H2'	1:RA:2068:U:C2	2.53	0.44
1:RA:848:C:H2'	1:RA:849:A:H8	1.81	0.44
1:RA:923:G:H21	23:RW:23:LYS:NZ	2.16	0.44
1:RA:1058:U:O2'	9:RI:117:THR:HG23	2.17	0.44
1:RA:1122:G:H2'	1:RA:1122:G:N3	2.31	0.44
1:RA:1193:G:O2'	1:RA:1194:A:H5'	2.17	0.44
1:RA:1655:A:H3'	1:RA:1656:C:C6	2.52	0.44
1:RA:1866:A:C2	1:RA:1876:A:C5	3.06	0.44
1:RA:2315:G:O2'	1:RA:2316:G:H5'	2.17	0.44
1:RA:2364:C:H4'	23:RW:55:ASP:OD1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2722:G:H4'	14:RN:4:ARG:HB2	2.00	0.44
1:RA:2822:G:OP2	4:RD:115:GLY:O	2.35	0.44
2:RB:15:A:O2'	2:RB:16:G:H5'	2.17	0.44
7:RG:96:ALA:CB	7:RG:103:ASN:HB3	2.39	0.44
8:RH:27:ARG:NH1	24:RX:59:ASP:O	2.51	0.44
11:RK:51:LYS:HE3	11:RK:52:VAL:HG12	1.99	0.44
12:RL:73:ILE:C	12:RL:105:ILE:HD13	2.42	0.44
13:RM:2:LEU:O	13:RM:3:GLN:HB3	2.17	0.44
14:RN:30:ARG:HE	14:RN:30:ARG:HB2	1.57	0.44
14:RN:60:VAL:O	14:RN:61:ALA:C	2.60	0.44
15:RO:51:ALA:O	15:RO:74:VAL:HG13	2.17	0.44
17:RQ:69:ARG:HH21	17:RQ:69:ARG:CG	2.31	0.44
18:RR:1:MET:HA	18:RR:42:ALA:O	2.18	0.44
20:RT:13:ALA:O	20:RT:33:LYS:N	2.50	0.44
20:RT:40:LYS:CA	20:RT:43:ILE:HG23	2.47	0.44
20:RT:49:LYS:HB2	20:RT:50:LEU:HD12	2.00	0.44
23:RW:36:ILE:O	23:RW:39:GLN:OE1	2.35	0.44
25:RY:39:GLN:HB2	25:RY:41:HIS:HD2	1.80	0.44
25:RY:44:LYS:O	25:RY:47:ARG:HB3	2.18	0.44
32:QA:144:G:N2	32:QA:179:A:H1'	2.33	0.44
32:QA:592:G:C6	32:QA:648:A:C6	3.06	0.44
32:QA:855:U:H2'	32:QA:856:C:C6	2.53	0.44
33:QB:90:PHE:O	33:QB:149:GLY:HA3	2.17	0.44
33:QB:107:ARG:O	33:QB:110:ILE:HB	2.18	0.44
33:QB:209:VAL:O	33:QB:211:LEU:N	2.51	0.44
38:QG:6:ILE:HB	38:QG:7:GLY:H	1.57	0.44
40:QI:18:VAL:HG22	40:QI:64:ILE:CG2	2.48	0.44
40:QI:21:LYS:HE3	40:QI:21:LYS:HB3	1.89	0.44
40:QI:26:LYS:HE2	40:QI:26:LYS:HB3	1.86	0.44
40:QI:40:ARG:N	40:QI:44:ARG:HA	2.33	0.44
41:QJ:52:LEU:HD23	41:QJ:62:ARG:CG	2.48	0.44
44:QM:2:ARG:O	44:QM:7:ASN:O	2.36	0.44
47:QP:52:LEU:HD12	47:QP:52:LEU:N	2.32	0.44
48:QQ:46:HIS:N	48:QQ:72:TRP:O	2.40	0.44
32:XA:82:G:N7	32:XA:89:U:C4	2.85	0.44
32:XA:184:G:C6	32:XA:185:U:O4	2.71	0.44
32:XA:198:G:H1'	32:XA:199:A:H5'	1.99	0.44
32:XA:265:G:O2'	48:XQ:67:SER:HA	2.17	0.44
32:XA:762:U:O5'	32:XA:762:U:H6	1.99	0.44
32:XA:960:U:C5	32:XA:1225:A:H1'	2.53	0.44
32:XA:1074:G:C4'	33:XB:102:ASN:HB2	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:XB:128:LEU:HB3	33:XB:131:LYS:HB3	1.99	0.44
35:XD:197:HIS:O	35:XD:201:GLU:HG3	2.17	0.44
38:XG:102:TRP:C	38:XG:104:VAL:N	2.75	0.44
39:XH:46:GLU:N	39:XH:63:LYS:HG3	2.32	0.44
39:XH:82:LEU:HG	43:XL:3:VAL:HG11	2.00	0.44
41:XJ:18:ILE:O	41:XJ:18:ILE:HG12	2.18	0.44
41:XJ:25:ILE:O	41:XJ:25:ILE:CG2	2.64	0.44
43:XL:80:LEU:HD23	43:XL:97:VAL:CG2	2.43	0.44
44:XM:18:LEU:HD12	44:XM:18:LEU:H	1.83	0.44
45:XN:60:ARG:CZ	45:XN:70:HIS:HB3	2.48	0.44
45:XN:68:ARG:HG3	45:XN:69:PRO:CD	2.47	0.44
1:YA:59:U:H2'	1:YA:60:G:H5'	1.98	0.44
1:YA:182:A:O2'	1:YA:183:C:H5'	2.17	0.44
1:YA:229:C:O2'	1:YA:230:G:C5'	2.66	0.44
1:YA:241:A:C5	1:YA:243:U:O4	2.71	0.44
1:YA:249:C:H4'	1:YA:250:G:O5'	2.18	0.44
1:YA:478:A:C2	1:YA:480:A:C8	3.06	0.44
1:YA:773:U:H4'	3:YC:46:GLY:HA3	1.99	0.44
1:YA:817:C:O2'	1:YA:839:U:H5"	2.17	0.44
1:YA:965:C:H5"	56:YA:3346:HOH:O	2.16	0.44
1:YA:1026:G:O2'	1:YA:1027:A:H5'	2.17	0.44
1:YA:1091:G:C2	1:YA:1101:U:N3	2.86	0.44
1:YA:1096:A:H3'	1:YA:1097:U:C5	2.52	0.44
1:YA:1232:G:C4	1:YA:1233:C:C5	3.05	0.44
1:YA:1298:C:H2'	1:YA:1299:G:O4'	2.17	0.44
1:YA:1342:A:H4'	1:YA:1343:G:OP2	2.17	0.44
1:YA:1360:G:C2'	1:YA:1361:G:H5'	2.48	0.44
1:YA:1867:G:C2	1:YA:1868:C:C2	3.06	0.44
1:YA:2237:G:H5"	1:YA:2238:G:OP1	2.18	0.44
1:YA:2746:U:H1'	7:YG:138:GLN:HE21	1.83	0.44
1:YA:2869:G:H2'	1:YA:2870:C:O4'	2.17	0.44
1:YA:2881:U:O2'	14:YN:96:ARG:HA	2.16	0.44
1:YA:2882:A:C5'	14:YN:96:ARG:HD3	2.48	0.44
6:YF:41:GLU:O	6:YF:43:ILE:N	2.51	0.44
7:YG:91:VAL:O	7:YG:93:TYR:N	2.51	0.44
9:YI:90:GLY:O	9:YI:92:PRO:HD3	2.18	0.44
9:YI:132:ALA:CA	9:YI:137:LEU:HD12	2.48	0.44
11:YK:25:LEU:HD23	11:YK:25:LEU:H	1.82	0.44
12:YL:81:ASP:O	12:YL:82:LEU:C	2.61	0.44
12:YL:110:VAL:HG23	12:YL:126:ARG:O	2.18	0.44
14:YN:72:ASP:O	14:YN:76:VAL:HG13	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:YO:17:LYS:HE2	15:YO:21:LEU:HD11	1.99	0.44
16:YP:91:VAL:HG11	16:YP:96:LEU:CD1	2.45	0.44
16:YP:91:VAL:HG11	16:YP:96:LEU:CG	2.48	0.44
22:YV:44:HIS:CD2	22:YV:85:LYS:HB2	2.53	0.44
28:Y1:28:THR:C	28:Y1:29:LYS:HG2	2.42	0.44
1:RA:43:G:C2	1:RA:437:U:C2	3.05	0.44
1:RA:108:G:O2'	1:RA:109:C:H5'	2.18	0.44
1:RA:568:U:P	12:RL:36:LYS:HE3	2.58	0.44
1:RA:630:G:N2	1:RA:633:A:OP2	2.46	0.44
1:RA:1140:C:OP1	10:RJ:25:LEU:O	2.36	0.44
1:RA:1486:U:H2'	1:RA:1487:U:H6	1.82	0.44
1:RA:1786:A:C6	1:RA:1938:A:C2	3.06	0.44
1:RA:1906:G:C6	1:RA:1929:G:N2	2.86	0.44
1:RA:2026:U:H2'	1:RA:2027:G:O4'	2.18	0.44
1:RA:2072:C:H5"	1:RA:2072:C:H6	1.83	0.44
1:RA:2352:A:C2	1:RA:2366:A:C2	3.05	0.44
1:RA:2780:G:OP2	10:RJ:120:ARG:HD3	2.18	0.44
1:RA:2887:A:H3'	1:RA:2888:C:C6	2.52	0.44
3:RC:106:PRO:HB3	3:RC:141:HIS:NE2	2.32	0.44
6:RF:153:ILE:C	6:RF:153:ILE:HD12	2.42	0.44
8:RH:54:LEU:C	8:RH:56:ALA:H	2.26	0.44
9:RI:59:THR:HG22	9:RI:61:TYR:CE2	2.52	0.44
10:RJ:1:MET:HE3	10:RJ:1:MET:N	2.33	0.44
16:RP:85:VAL:HG13	16:RP:86:LYS:N	2.32	0.44
20:RT:28:ASN:C	20:RT:91:GLN:HE22	2.26	0.44
23:RW:22:VAL:O	23:RW:23:LYS:O	2.35	0.44
23:RW:22:VAL:CG1	23:RW:25:PHE:CE2	3.01	0.44
24:RX:38:TRP:HE3	24:RX:45:PHE:CE2	2.35	0.44
25:RY:24:GLU:O	25:RY:25:GLN:C	2.59	0.44
32:QA:417:G:H2'	32:QA:418:C:C6	2.53	0.44
32:QA:799:G:H2'	32:QA:800:G:O4'	2.18	0.44
32:QA:1054:C:O2'	32:QA:1055:A:OP2	2.29	0.44
32:QA:1246:A:H2'	32:QA:1247:U:O4'	2.18	0.44
32:QA:1410:A:H2'	32:QA:1411:C:C6	2.53	0.44
33:QB:90:PHE:CD2	33:QB:90:PHE:C	2.94	0.44
37:QF:72:ASP:O	37:QF:73:GLU:C	2.60	0.44
39:QH:46:GLU:O	39:QH:47:ASP:HB3	2.18	0.44
42:QK:15:VAL:HG13	42:QK:78:ILE:CG2	2.48	0.44
42:QK:109:ILE:HB	52:QU:5:VAL:HG22	1.99	0.44
42:QK:125:LYS:C	52:QU:33:ARG:CZ	2.91	0.44
43:QL:2:THR:O	43:QL:5:GLN:HB2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:QL:62:VAL:HG21	43:QL:94:TYR:HE2	1.78	0.44
45:QN:44:VAL:C	45:QN:46:LYS:H	2.25	0.44
48:QQ:59:GLU:HG2	48:QQ:60:ILE:H	1.83	0.44
32:XA:155:A:C4	32:XA:167:A:C2	3.06	0.44
32:XA:567:G:N2	56:XA:1819:HOH:O	2.36	0.44
32:XA:688:G:C4	32:XA:700:G:C2	3.06	0.44
32:XA:812:G:N3	32:XA:812:G:H2'	2.33	0.44
32:XA:855:U:H2'	32:XA:856:C:C6	2.52	0.44
32:XA:866:C:C4	32:XA:867:G:H1'	2.53	0.44
32:XA:932:C:O2	32:XA:932:C:H2'	2.18	0.44
32:XA:978:A:C5	32:XA:1319:A:C2	3.06	0.44
32:XA:1270:G:C4	32:XA:1271:A:C8	3.06	0.44
34:XC:93:ILE:O	34:XC:93:ILE:HG13	2.17	0.44
36:XE:148:SER:H	36:XE:151:MET:HE2	1.83	0.44
36:XE:148:SER:O	36:XE:151:MET:HB3	2.18	0.44
37:XF:29:ILE:HG22	37:XF:34:GLY:O	2.18	0.44
38:XG:77:ARG:HD3	38:XG:77:ARG:HA	1.59	0.44
42:XK:19:VAL:HG12	42:XK:34:THR:HG22	1.99	0.44
44:XM:11:HIS:CE1	44:XM:43:LYS:HD2	2.52	0.44
1:YA:92:U:C6	1:YA:93:G:C8	3.05	0.44
1:YA:333:G:O2'	1:YA:334:C:O5'	2.34	0.44
1:YA:352:A:N3	1:YA:353:C:H1'	2.31	0.44
1:YA:425:G:C4	1:YA:426:C:C5	3.06	0.44
1:YA:477:A:H2'	1:YA:478:A:C8	2.52	0.44
1:YA:607:U:H5	1:YA:619:G:C6	2.36	0.44
1:YA:614:A:H4'	1:YA:616:A:N7	2.33	0.44
1:YA:633:A:H8	1:YA:633:A:O5'	1.99	0.44
1:YA:671:C:H1'	1:YA:672:C:H5'	1.99	0.44
1:YA:815:C:OP2	18:YR:85:LYS:HE2	2.18	0.44
1:YA:1080:A:O2'	9:YI:126:ARG:O	2.35	0.44
1:YA:1204:A:O4'	1:YA:1206:G:N7	2.51	0.44
1:YA:1285:A:C6	1:YA:1329:U:C5	3.05	0.44
1:YA:1400:U:C2'	1:YA:1401:G:O4'	2.64	0.44
1:YA:1565:C:H3'	3:YC:17:LYS:CE	2.21	0.44
1:YA:1714:U:C3'	1:YA:1715:G:C5'	2.90	0.44
1:YA:1935:G:N2	1:YA:1964:G:OP2	2.51	0.44
1:YA:2151:U:H2'	1:YA:2152:G:H8	1.83	0.44
1:YA:2209:G:C6	1:YA:2216:G:N1	2.86	0.44
1:YA:2253:G:C6	1:YA:2254:C:C4	3.06	0.44
1:YA:2298:A:C6	1:YA:2321:U:C4	3.05	0.44
1:YA:2303:G:H2'	1:YA:2304:G:H8	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2385:C:O2'	1:YA:2386:A:H8	2.01	0.44
1:YA:2665:A:C2	1:YA:2666:C:N3	2.85	0.44
1:YA:2674:G:H2'	1:YA:2675:A:C8	2.52	0.44
1:YA:2832:U:H5"	1:YA:2834:G:H5'	2.00	0.44
4:YD:174:SER:O	4:YD:175:LEU:C	2.61	0.44
6:YF:103:ILE:HD12	6:YF:103:ILE:N	2.33	0.44
7:YG:44:HIS:O	7:YG:45:ALA:HB3	2.17	0.44
7:YG:94:ARG:HG2	7:YG:104:LEU:HA	1.99	0.44
9:YI:63:ASP:O	9:YI:64:ARG:HB2	2.18	0.44
9:YI:113:ALA:HB2	9:YI:124:MET:HB3	2.00	0.44
10:YJ:27:ARG:O	10:YJ:30:THR:HG22	2.17	0.44
11:YK:104:THR:O	11:YK:107:LEU:HD22	2.18	0.44
14:YN:84:GLY:O	14:YN:88:ALA:HB2	2.18	0.44
17:YQ:30:VAL:HG12	17:YQ:33:VAL:H	1.83	0.44
20:YT:5:GLU:HA	20:YT:8:LEU:HD12	2.00	0.44
22:YV:2:PHE:HD1	22:YV:50:MET:HE3	1.80	0.44
23:YW:49:ASN:CG	23:YW:81:ILE:HG23	2.43	0.44
25:YY:44:LYS:HZ3	25:YY:48:ARG:NE	2.16	0.44
25:YY:52:ARG:C	25:YY:54:LYS:N	2.73	0.44
30:Y3:28:LEU:O	30:Y3:29:ARG:CB	2.66	0.44
1:RA:637:A:H4'	1:RA:638:G:O5'	2.17	0.44
1:RA:670:A:H4'	1:RA:671:C:O5'	2.18	0.44
1:RA:1394:U:C2'	1:RA:1395:A:O5'	2.64	0.44
1:RA:2199:A:H5'	1:RA:2200:C:C5	2.52	0.44
1:RA:2802:G:H2'	1:RA:2803:G:O4'	2.18	0.44
2:RB:37:C:C5	2:RB:38:C:C4	3.06	0.44
4:RD:159:LYS:HZ2	4:RD:160:LYS:H	1.66	0.44
7:RG:36:LEU:HD22	7:RG:36:LEU:N	2.32	0.44
10:RJ:49:ASP:OD2	10:RJ:49:ASP:C	2.61	0.44
14:RN:32:GLU:CA	14:RN:115:LEU:HD12	2.44	0.44
15:RO:2:ASP:HB3	15:RO:5:SER:OG	2.17	0.44
16:RP:28:LYS:HB2	16:RP:82:SER:HB3	1.99	0.44
20:RT:65:GLY:N	20:RT:79:ASP:OD1	2.49	0.44
22:RV:44:HIS:O	22:RV:45:ASP:C	2.59	0.44
31:R4:14:CYS:HA	31:R4:26:ILE:O	2.17	0.44
32:QA:36:C:H2'	32:QA:37:U:O4'	2.18	0.44
32:QA:66:A:H2'	32:QA:67:C:H5'	1.99	0.44
32:QA:153:C:O2'	32:QA:154:U:H5'	2.18	0.44
32:QA:222:C:O2	32:QA:223:A:C8	2.71	0.44
32:QA:373:A:O2'	32:QA:374:A:C5'	2.62	0.44
32:QA:466:A:H5"	32:QA:466:A:H8	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:832:G:C6	32:QA:833:G:N7	2.86	0.44
32:QA:841:C:N3	32:QA:843:U:H5'	2.32	0.44
32:QA:1034:G:C6	32:QA:1035:A:C6	3.05	0.44
32:QA:1272:G:C6	32:QA:1273:C:C4	3.04	0.44
32:QA:1348:U:H4'	40:QI:121:ARG:HG2	1.99	0.44
33:QB:170:ILE:O	33:QB:171:ALA:C	2.60	0.44
35:QD:22:SER:O	35:QD:23:GLY:C	2.61	0.44
37:QF:14:GLN:OE1	37:QF:17:GLN:HB2	2.18	0.44
38:QG:7:GLY:O	38:QG:8:GLN:HB3	2.18	0.44
38:QG:35:LYS:O	38:QG:39:GLU:HG2	2.18	0.44
40:QI:42:THR:O	40:QI:43:ALA:HB2	2.17	0.44
40:QI:110:VAL:O	40:QI:110:VAL:HG23	2.16	0.44
41:QJ:53:ILE:O	41:QJ:53:ILE:HG12	2.16	0.44
44:QM:14:ALA:HB1	44:QM:33:LEU:HD21	2.00	0.44
51:QT:8:LYS:HA	51:QT:11:ILE:HG23	2.00	0.44
51:QT:11:ILE:HG12	51:QT:12:GLN:N	2.33	0.44
52:QU:24:LYS:C	52:QU:26:GLY:N	2.75	0.44
32:XA:1068:G:H2'	32:XA:1069:C:H5'	1.99	0.44
32:XA:1360:A:C2	32:XA:1361:G:H1'	2.52	0.44
32:XA:1471:U:O2'	32:XA:1472:U:H5'	2.17	0.44
32:XA:1479:C:H2'	32:XA:1480:A:H8	1.83	0.44
33:XB:111:LYS:C	33:XB:113:LEU:N	2.75	0.44
34:XC:119:ILE:HG22	34:XC:123:LEU:HD12	2.00	0.44
35:XD:38:GLY:O	35:XD:40:HIS:N	2.51	0.44
40:XI:112:ARG:HH22	41:XJ:64:GLN:HE21	1.66	0.44
40:XI:118:ARG:NH2	40:XI:122:ARG:NE	2.65	0.44
41:XJ:8:ILE:O	41:XJ:8:ILE:HG13	2.18	0.44
52:XU:16:ARG:NE	52:XU:16:ARG:HA	2.25	0.44
1:YA:2:G:H2'	1:YA:3:U:O4'	2.18	0.44
1:YA:90:U:C4	1:YA:91:A:C5	3.06	0.44
1:YA:533:G:C5	1:YA:534:U:C4	3.06	0.44
1:YA:591:U:C2	1:YA:592:A:C8	3.06	0.44
1:YA:616:A:H4'	5:YE:101:TYR:OH	2.17	0.44
1:YA:633:A:C5	1:YA:634:C:H1'	2.52	0.44
1:YA:983:A:C6	1:YA:984:A:C2	3.05	0.44
1:YA:993:G:O2'	1:YA:994:C:H5'	2.18	0.44
1:YA:1071:G:OP1	1:YA:1071:G:H8	2.00	0.44
1:YA:1204:A:N1	1:YA:1241:A:N1	2.65	0.44
1:YA:1411:U:H2'	1:YA:1412:U:O4'	2.18	0.44
1:YA:1463:C:H2'	1:YA:1464:G:C8	2.53	0.44
1:YA:1661:G:C5	1:YA:1662:U:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1735:A:C6	1:YA:1736:U:C4	3.06	0.44
1:YA:1833:C:C2	1:YA:1834:U:C6	3.06	0.44
1:YA:2021:C:O2	1:YA:2021:C:H2'	2.18	0.44
1:YA:2142:A:N3	1:YA:2144:G:OP1	2.51	0.44
1:YA:2447:G:N7	1:YA:2500:U:H2'	2.33	0.44
3:YC:149:LYS:CE	3:YC:152:GLN:NE2	2.81	0.44
3:YC:259:ASN:C	3:YC:261:ARG:H	2.26	0.44
4:YD:1:MET:HB3	4:YD:205:PRO:HG3	2.00	0.44
4:YD:173:GLN:HA	4:YD:173:GLN:NE2	2.33	0.44
5:YE:58:LYS:N	5:YE:58:LYS:HD3	2.33	0.44
5:YE:112:LEU:HD12	5:YE:118:LEU:HD13	2.00	0.44
6:YF:46:LYS:C	6:YF:48:LEU:H	2.26	0.44
8:YH:72:ILE:CD1	8:YH:140:ALA:HA	2.47	0.44
12:YL:18:ARG:HA	12:YL:18:ARG:NE	2.33	0.44
12:YL:62:PRO:HG2	30:Y3:24:LYS:HB3	1.98	0.44
13:YM:12:MET:HG3	13:YM:72:PRO:HG2	2.00	0.44
18:YR:52:PRO:C	18:YR:53:PHE:CG	2.96	0.44
22:YV:47:VAL:O	22:YV:47:VAL:HG12	2.17	0.44
23:YW:35:ILE:O	23:YW:36:ILE:O	2.36	0.44
28:Y1:5:ARG:HH21	28:Y1:23:THR:HB	1.83	0.44
1:RA:244:A:C2	1:RA:255:A:C4	3.06	0.44
1:RA:449:A:H4'	17:RQ:2:ARG:NH1	2.33	0.44
1:RA:511:U:H5	1:RA:512:G:C5	2.36	0.44
1:RA:666:A:C4	1:RA:667:U:C5	3.06	0.44
1:RA:756:A:H2'	1:RA:757:G:O4'	2.18	0.44
1:RA:1090:A:C6	1:RA:1091:G:N7	2.86	0.44
1:RA:1317:G:C2	1:RA:1336:A:C2	3.06	0.44
1:RA:1340:U:C4'	1:RA:1341:G:OP2	2.54	0.44
1:RA:1770:G:C4'	56:RA:3729:HOH:O	2.66	0.44
1:RA:2134:A:C6	1:RA:2135:A:C6	3.05	0.44
1:RA:2148:G:HO2'	1:RA:2149:U:P	2.41	0.44
1:RA:2366:A:H2'	1:RA:2367:G:O4'	2.18	0.44
1:RA:2665:A:C2	1:RA:2666:C:C2	3.06	0.44
5:RE:131:THR:CG2	5:RE:160:ALA:HA	2.48	0.44
6:RF:27:VAL:O	6:RF:27:VAL:HG13	2.18	0.44
6:RF:35:LEU:CD1	6:RF:88:VAL:HB	2.48	0.44
6:RF:169:LEU:HD12	6:RF:169:LEU:HA	1.81	0.44
16:RP:37:LYS:N	16:RP:37:LYS:CD	2.81	0.44
16:RP:83:ILE:C	16:RP:83:ILE:CD1	2.88	0.44
24:RX:39:VAL:HG23	24:RX:40:GLU:N	2.33	0.44
32:QA:100:G:C6	32:QA:101:A:C6	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:212:G:C2'	32:QA:213:G:H8	2.28	0.44
32:QA:557:G:C6	32:QA:558:G:N1	2.86	0.44
32:QA:663:A:H5'	32:QA:836:G:OP1	2.17	0.44
32:QA:843:U:O5'	32:QA:844:G:OP2	2.36	0.44
32:QA:858:G:O6	32:QA:869:G:C8	2.71	0.44
32:QA:1296:C:O2'	32:QA:1302:C:C4	2.63	0.44
32:QA:1517:G:C6	32:QA:1518:A:C6	3.05	0.44
32:QA:1526:G:OP2	52:QU:38:GLU:HB2	2.18	0.44
33:QB:95:TRP:CZ2	33:QB:99:MET:HG2	2.53	0.44
33:QB:95:TRP:CD1	33:QB:171:ALA:HB2	2.53	0.44
36:QE:104:ILE:HG13	36:QE:114:LEU:HD23	2.00	0.44
40:QI:34:LEU:HD11	40:QI:47:VAL:HG21	2.00	0.44
40:QI:129:ARG:HA	40:QI:129:ARG:HH11	1.83	0.44
43:QL:82:ARG:HG2	43:QL:82:ARG:NH1	2.33	0.44
46:QO:63:ARG:CD	46:QO:87:ARG:HH12	2.29	0.44
51:QT:33:LYS:HD3	51:QT:33:LYS:HA	1.64	0.44
32:XA:16:A:O4'	36:XE:21:SER:HB3	2.18	0.44
32:XA:150:U:O2'	32:XA:151:A:H5'	2.17	0.44
32:XA:174:A:C2'	32:XA:175:C:H5'	2.48	0.44
32:XA:405:U:OP1	32:XA:406:G:O2'	2.30	0.44
32:XA:451:A:O4'	32:XA:452:A:C8	2.71	0.44
32:XA:499:A:N1	32:XA:546:A:O2'	2.50	0.44
32:XA:582:C:C4	32:XA:760:G:C6	3.05	0.44
32:XA:703:G:H4'	32:XA:704:A:H5'	2.00	0.44
32:XA:764:C:C4	32:XA:812:G:O6	2.71	0.44
32:XA:1331:G:H2'	32:XA:1332:A:OP2	2.18	0.44
33:XB:115:ASP:O	33:XB:119:GLN:CB	2.66	0.44
35:XD:162:GLU:C	35:XD:164:ARG:H	2.25	0.44
37:XF:64:VAL:HG23	37:XF:65:GLU:N	2.32	0.44
39:XH:17:GLN:NE2	39:XH:71:VAL:HG23	2.33	0.44
40:XI:44:ARG:HH21	40:XI:48:ARG:HH12	1.62	0.44
47:XP:44:SER:O	47:XP:46:LYS:HG3	2.18	0.44
1:YA:64:A:P	20:YT:77:ARG:HG2	2.58	0.44
1:YA:83:A:H2	1:YA:103:A:H62	1.65	0.44
1:YA:223:A:N1	1:YA:407:G:O2'	2.48	0.44
1:YA:308:G:N1	1:YA:309:A:C2	2.86	0.44
1:YA:409:G:O2'	1:YA:410:G:H5'	2.18	0.44
1:YA:635:C:O2'	1:YA:639:U:OP1	2.31	0.44
1:YA:863:A:C2	1:YA:864:G:C4	3.05	0.44
1:YA:915:C:O2'	1:YA:916:G:H5'	2.17	0.44
1:YA:1071:G:O4'	1:YA:1088:A:O2'	2.35	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1368:G:H8	1:YA:1368:G:O5'	2.00	0.44
1:YA:1374:G:H2'	1:YA:1375:U:O4'	2.18	0.44
1:YA:1670:C:N4	1:YA:1671:U:N3	2.66	0.44
1:YA:1931:U:OP2	1:YA:1968:G:N2	2.43	0.44
1:YA:1935:G:H1'	1:YA:1964:G:H21	1.78	0.44
1:YA:2004:G:C5	1:YA:2005:A:C8	3.06	0.44
1:YA:2349:G:OP1	30:Y3:44:ARG:NH2	2.51	0.44
1:YA:2744:G:C6	1:YA:2761:A:N6	2.86	0.44
1:YA:2834:G:H1'	1:YA:2879:A:N6	2.32	0.44
1:YA:2847:U:H2'	1:YA:2848:G:C5'	2.44	0.44
3:YC:103:ILE:HD12	3:YC:104:LEU:N	2.28	0.44
4:YD:60:VAL:O	4:YD:60:VAL:HG13	2.18	0.44
5:YE:151:GLY:HA3	5:YE:191:ASP:HB3	2.00	0.44
6:YF:45:ASP:O	6:YF:47:LYS:N	2.50	0.44
6:YF:122:ASP:C	6:YF:162:ASP:OD2	2.61	0.44
7:YG:152:ARG:HD2	7:YG:153:PRO:HD2	2.00	0.44
8:YH:143:ILE:C	8:YH:144:VAL:HG22	2.43	0.44
11:YK:60:ALA:CB	11:YK:86:LEU:HA	2.48	0.44
13:YM:82:MET:O	13:YM:83:GLY:C	2.60	0.44
21:YU:27:VAL:O	21:YU:28:LEU:HD23	2.17	0.44
21:YU:100:GLU:O	21:YU:101:THR:C	2.61	0.44
25:YY:28:LEU:CD2	25:YY:42:LEU:HD13	2.48	0.44
28:Y1:3:GLY:C	28:Y1:5:ARG:H	2.25	0.44
31:Y4:16:ILE:HA	31:Y4:24:ARG:O	2.18	0.44
1:RA:356:G:C6	1:RA:357:C:C4	3.06	0.43
1:RA:358:U:H2'	1:RA:359:G:O4'	2.18	0.43
1:RA:480:A:OP2	21:RU:43:LYS:HD2	2.18	0.43
1:RA:674:G:O2'	5:RE:69:ARG:HD2	2.18	0.43
1:RA:1178:C:H2'	1:RA:1179:G:C8	2.53	0.43
1:RA:1404:C:O2'	1:RA:1405:U:H5'	2.18	0.43
1:RA:1604:C:H2'	1:RA:1605:C:H6	1.83	0.43
1:RA:1745:A:C2	1:RA:1746:A:C8	3.06	0.43
1:RA:1821:A:H2'	1:RA:1822:C:C6	2.53	0.43
1:RA:2150:C:C5	1:RA:2151:U:O4	2.71	0.43
1:RA:2373:G:H2'	1:RA:2374:C:H6	1.82	0.43
1:RA:2794:C:H2'	1:RA:2795:C:C6	2.53	0.43
1:RA:2861:U:C2	1:RA:2862:G:C8	3.06	0.43
2:RB:2:G:C2	2:RB:119:A:N3	2.86	0.43
5:RE:48:THR:O	5:RE:52:VAL:HG23	2.17	0.43
8:RH:21:VAL:HG22	8:RH:22:LYS:N	2.33	0.43
20:RT:37:ASP:O	20:RT:38:ALA:C	2.60	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:RW:25:PHE:O	23:RW:26:GLY:C	2.62	0.43
25:RY:2:LYS:HE3	25:RY:52:ARG:NH2	2.33	0.43
30:R3:44:ARG:N	30:R3:45:PRO:CD	2.79	0.43
30:R3:53:ASP:O	30:R3:54:LEU:C	2.61	0.43
31:R4:23:ILE:HB	31:R4:38:GLY:HA3	2.00	0.43
32:QA:407:U:H2'	32:QA:408:A:C8	2.53	0.43
32:QA:464:U:C2	32:QA:466:A:C5'	2.94	0.43
32:QA:501:C:H2'	32:QA:502:A:C8	2.53	0.43
32:QA:593:U:O2'	32:QA:594:U:H5'	2.18	0.43
32:QA:613:C:C2	32:QA:614:C:C5	3.06	0.43
32:QA:1160:G:C6	32:QA:1181:G:O6	2.71	0.43
32:QA:1162:C:H2'	32:QA:1163:A:C8	2.53	0.43
32:QA:1190:G:P	34:QC:4:VAL:HG12	2.58	0.43
32:QA:1527:U:OP2	52:QU:38:GLU:HG2	2.17	0.43
33:QB:16:GLY:HA2	33:QB:202:ASN:CB	2.47	0.43
33:QB:53:LEU:CA	33:QB:56:LEU:HB3	2.48	0.43
34:QC:190:THR:O	34:QC:192:TYR:N	2.51	0.43
36:QE:137:ARG:O	36:QE:141:ASP:HB2	2.18	0.43
37:QF:9:MET:CE	37:QF:59:TYR:CE2	3.01	0.43
40:QI:27:ILE:HG13	40:QI:62:LEU:CD2	2.46	0.43
42:QK:18:GLY:C	42:QK:81:LEU:HB2	2.43	0.43
43:QL:6:LEU:HD23	48:QQ:33:TYR:CE2	2.53	0.43
32:XA:148:G:N1	32:XA:149:A:C5	2.86	0.43
32:XA:158:G:C4	32:XA:164:G:C2	3.05	0.43
32:XA:458:U:OP2	32:XA:458:U:H6	2.01	0.43
32:XA:525:C:N4	32:XA:526:C:N4	2.66	0.43
32:XA:981:U:C5	32:XA:982:U:C2	3.06	0.43
32:XA:1303:C:N4	32:XA:1304:G:C2	2.86	0.43
32:XA:1343:G:H2'	32:XA:1344:C:C6	2.52	0.43
32:XA:1509:C:H2'	32:XA:1510:C:H6	1.83	0.43
35:XD:28:ASP:O	35:XD:31:CYS:SG	2.74	0.43
35:XD:29:THR:C	35:XD:30:LYS:HZ2	2.19	0.43
36:XE:39:GLY:HA2	36:XE:45:VAL:HA	2.00	0.43
39:XH:30:LYS:O	39:XH:33:VAL:HB	2.18	0.43
42:XK:34:THR:OG1	42:XK:39:ASN:C	2.61	0.43
42:XK:82:GLU:OE2	42:XK:82:GLU:N	2.51	0.43
43:XL:20:VAL:O	43:XL:20:VAL:HG23	2.18	0.43
1:YA:61:C:C2	1:YA:94:A:C2	3.06	0.43
1:YA:86:G:O2'	1:YA:87:U:H6	2.01	0.43
1:YA:311:A:H1'	1:YA:332:A:N9	2.33	0.43
1:YA:709:U:H2'	1:YA:710:U:H6	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:826:U:C5	1:YA:828:U:H6	2.36	0.43
1:YA:858:G:C5	1:YA:2268:A:N1	2.86	0.43
1:YA:1242:U:H2'	1:YA:1243:C:C6	2.53	0.43
1:YA:1304:A:C6	1:YA:1305:C:C4	3.06	0.43
1:YA:1734:G:C2'	1:YA:1735:A:C8	2.99	0.43
1:YA:1751:U:H2'	1:YA:1752:C:C6	2.53	0.43
1:YA:1753:G:N2	1:YA:1756:G:OP2	2.49	0.43
1:YA:1779:U:C5	1:YA:1784:A:N7	2.86	0.43
1:YA:1901:A:OP2	3:YC:252:LYS:HE3	2.18	0.43
1:YA:1907:G:C2	1:YA:1924:C:O2	2.71	0.43
1:YA:1965:C:C5'	1:YA:1966:A:H5"	2.41	0.43
1:YA:2099:U:O2	1:YA:2099:U:H2'	2.18	0.43
1:YA:2201:G:C5	1:YA:2223:G:C2	3.06	0.43
1:YA:2297:A:C2	1:YA:2298:A:N7	2.86	0.43
1:YA:2461:A:C2	1:YA:2490:G:N2	2.86	0.43
1:YA:2688:G:H1'	1:YA:2721:A:H61	1.83	0.43
2:YB:42:C:O2	6:YF:89:THR:N	2.50	0.43
3:YC:203:VAL:O	3:YC:205:GLY:N	2.51	0.43
5:YE:144:GLU:O	5:YE:145:ASP:C	2.61	0.43
6:YF:48:LEU:H	6:YF:48:LEU:HD23	1.82	0.43
7:YG:72:ASN:OD1	7:YG:73:SER:N	2.51	0.43
10:YJ:30:THR:CG2	10:YJ:31:GLU:N	2.81	0.43
14:YN:45:ARG:C	14:YN:47:VAL:H	2.24	0.43
17:YQ:9:ALA:C	17:YQ:11:ALA:H	2.25	0.43
20:YT:7:LEU:O	20:YT:10:VAL:HG13	2.18	0.43
21:YU:35:VAL:CG1	21:YU:36:GLU:H	2.20	0.43
22:YV:56:PHE:C	22:YV:56:PHE:HD1	2.25	0.43
23:YW:14:ASP:C	23:YW:16:GLU:H	2.26	0.43
26:YZ:5:LYS:HG2	26:YZ:36:GLU:HB2	2.00	0.43
1:RA:528:A:C2	1:RA:2043:C:C4'	2.97	0.43
1:RA:580:U:O2'	1:RA:581:C:H5'	2.18	0.43
1:RA:871:U:H5"	13:RM:68:PHE:CZ	2.53	0.43
1:RA:1062:G:C8	1:RA:1088:A:C8	3.06	0.43
1:RA:1190:G:H5"	12:RL:32:GLY:HA2	2.00	0.43
1:RA:1408:G:C2'	1:RA:1409:U:H5'	2.48	0.43
1:RA:1853:A:C5	1:RA:1889:A:C6	3.06	0.43
1:RA:1913:A:C2	32:QA:1494:G:C8	3.06	0.43
1:RA:2149:U:HO2'	1:RA:2150:C:C4'	2.27	0.43
1:RA:2727:A:C6	1:RA:2728:U:O4	2.71	0.43
1:RA:2846:G:P	16:RP:51:ASN:HB2	2.57	0.43
1:RA:2849:U:N3	1:RA:2867:G:O4'	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:RB:90:C:H6	2:RB:90:C:C5'	2.23	0.43
5:RE:108:ILE:CD1	5:RE:180:LEU:HD13	2.47	0.43
6:RF:39:VAL:HG13	6:RF:40:GLY:N	2.33	0.43
11:RK:99:ILE:CG2	11:RK:100:PHE:N	2.79	0.43
12:RL:53:GLY:O	12:RL:54:GLN:O	2.36	0.43
12:RL:113:ALA:O	12:RL:114:GLY:O	2.35	0.43
13:RM:46:ILE:HD12	13:RM:47:GLU:N	2.33	0.43
14:RN:90:ARG:O	14:RN:91:ALA:C	2.61	0.43
16:RP:103:THR:O	16:RP:104:GLY:O	2.35	0.43
32:QA:71:A:C5	32:QA:100:G:C5	3.05	0.43
32:QA:330:C:H6	32:QA:330:C:C5'	2.30	0.43
32:QA:341:C:H2'	32:QA:342:C:H6	1.82	0.43
32:QA:751:U:H4'	46:QO:23:SER:HA	1.99	0.43
32:QA:1160:G:C2	32:QA:1161:C:C5	3.06	0.43
32:QA:1501:C:C4	32:QA:1504:G:C5	3.06	0.43
33:QB:186:VAL:O	33:QB:186:VAL:CG2	2.65	0.43
34:QC:179:ALA:HB1	34:QC:202:PHE:CE1	2.53	0.43
37:QF:18:VAL:HB	37:QF:19:PRO:CD	2.48	0.43
38:QG:20:GLU:O	38:QG:24:LYS:HG3	2.18	0.43
38:QG:37:THR:O	38:QG:41:ILE:HG13	2.18	0.43
40:QI:49:GLN:C	40:QI:51:LEU:N	2.74	0.43
44:QM:113:LYS:H	44:QM:114:PRO:HD2	1.83	0.43
52:QU:9:GLU:CB	52:QU:10:PRO:HD3	2.47	0.43
32:XA:57:G:C6	32:XA:58:C:N4	2.87	0.43
32:XA:283:U:C4	32:XA:284:C:C4	3.06	0.43
32:XA:511:C:O2'	32:XA:512:U:H5"	2.18	0.43
32:XA:598:U:H2'	32:XA:599:C:C6	2.52	0.43
32:XA:769:G:O2'	32:XA:770:C:H5'	2.18	0.43
32:XA:1066:C:C2'	32:XA:1067:A:C8	3.01	0.43
32:XA:1202:U:H2'	32:XA:1203:C:H5'	1.99	0.43
32:XA:1316:G:N2	32:XA:1318:A:C8	2.86	0.43
32:XA:1332:A:C6	32:XA:1333:A:C4	3.05	0.43
32:XA:1449:C:H2'	32:XA:1450:U:C5'	2.47	0.43
34:XC:11:LEU:HD13	34:XC:17:TRP:NE1	2.32	0.43
34:XC:83:VAL:O	34:XC:87:ARG:N	2.51	0.43
36:XE:100:GLU:O	36:XE:102:THR:HG23	2.18	0.43
40:XI:18:VAL:HG21	40:XI:81:GLY:C	2.42	0.43
42:XK:94:SER:O	42:XK:97:ARG:HB2	2.18	0.43
44:XM:82:LEU:HB2	50:XS:73:PHE:CE2	2.53	0.43
1:YA:56:A:C6	1:YA:57:C:N3	2.86	0.43
1:YA:229:C:O2'	1:YA:230:G:C4'	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:301:G:N1	1:YA:302:C:N4	2.65	0.43
1:YA:338:G:H2'	1:YA:339:U:H5'	2.00	0.43
1:YA:351:C:N4	1:YA:352:A:N6	2.66	0.43
1:YA:481:G:OP2	21:YU:43:LYS:HA	2.18	0.43
1:YA:1286:A:C8	1:YA:1289:C:N4	2.85	0.43
1:YA:1388:G:N3	1:YA:1389:G:C8	2.86	0.43
1:YA:2314:A:N1	1:YA:2315:G:C5	2.86	0.43
1:YA:2519:U:C2	1:YA:2542:A:C6	3.06	0.43
1:YA:2688:G:H1'	1:YA:2721:A:N6	2.33	0.43
1:YA:2765:A:C3'	1:YA:2766:A:H5'	2.46	0.43
1:YA:2887:A:C4	27:Y0:39:ARG:NH1	2.85	0.43
3:YC:13:ARG:HG2	3:YC:14:HIS:CD2	2.52	0.43
3:YC:221:GLY:O	3:YC:224:MET:HG2	2.18	0.43
5:YE:3:LEU:O	5:YE:11:ALA:HA	2.17	0.43
6:YF:90:LEU:HG	6:YF:98:PHE:CD2	2.53	0.43
8:YH:68:ARG:CD	8:YH:71:LYS:HB2	2.43	0.43
12:YL:14:LYS:HB3	12:YL:14:LYS:NZ	2.34	0.43
12:YL:101:ILE:HD13	12:YL:101:ILE:HA	1.81	0.43
13:YM:11:LYS:NZ	13:YM:86:LYS:O	2.50	0.43
14:YN:47:VAL:C	14:YN:50:PRO:HD2	2.43	0.43
16:YP:62:LYS:HD3	16:YP:64:SER:HB2	2.00	0.43
16:YP:92:ARG:O	16:YP:92:ARG:CG	2.66	0.43
17:YQ:88:GLU:CD	17:YQ:88:GLU:C	2.85	0.43
19:YS:21:ALA:C	19:YS:23:LEU:H	2.24	0.43
21:YU:43:LYS:HG2	21:YU:45:GLN:HG2	2.00	0.43
26:YZ:12:ALA:HB2	26:YZ:53:MET:HE1	2.01	0.43
30:Y3:9:ALA:HB1	30:Y3:13:PHE:HD2	1.83	0.43
1:RA:324:A:H2'	1:RA:325:G:O4'	2.17	0.43
1:RA:444:C:H4'	5:RE:44:ARG:HD3	2.00	0.43
1:RA:948:C:O2'	1:RA:949:G:H5'	2.18	0.43
1:RA:1513:U:C2'	1:RA:1514:G:H5'	2.49	0.43
1:RA:1712:U:OP2	1:RA:1713:A:O2'	2.27	0.43
1:RA:1798:U:P	3:RC:255:LYS:O	2.76	0.43
1:RA:2093:G:O2'	1:RA:2094:A:H5'	2.18	0.43
4:RD:12:THR:HG23	4:RD:13:ARG:H	1.78	0.43
6:RF:114:ARG:HD2	6:RF:114:ARG:N	2.29	0.43
10:RJ:44:TYR:HA	17:RQ:59:LEU:HD21	1.99	0.43
11:RK:113:MET:O	11:RK:116:ILE:N	2.52	0.43
17:RQ:15:LYS:O	17:RQ:19:GLN:HG3	2.18	0.43
21:RU:97:SER:O	21:RU:98:ASN:CB	2.58	0.43
25:RY:47:ARG:NH2	25:RY:47:ARG:CG	2.78	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:R0:12:ARG:O	27:R0:16:ARG:HG3	2.18	0.43
32:QA:126:G:H2'	32:QA:127:G:O5'	2.19	0.43
32:QA:307:C:H6	32:QA:307:C:O5'	2.02	0.43
32:QA:827:U:H5"	32:QA:828:U:OP2	2.17	0.43
32:QA:1000:A:C2	32:QA:1041:G:C2	3.07	0.43
33:QB:138:ARG:HA	33:QB:141:GLU:CD	2.43	0.43
34:QC:70:ALA:HA	34:QC:105:VAL:HB	2.00	0.43
35:QD:60:VAL:C	35:QD:63:ILE:HG22	2.44	0.43
40:QI:12:LYS:C	40:QI:14:SER:H	2.26	0.43
48:QQ:60:ILE:CG2	48:QQ:61:ARG:N	2.81	0.43
48:QQ:66:LEU:HB2	48:QQ:70:LYS:HG2	2.00	0.43
50:QS:42:ASN:ND2	50:QS:42:ASN:C	2.76	0.43
51:QT:43:LYS:O	51:QT:46:ALA:HB3	2.19	0.43
32:XA:50:A:N6	32:XA:361:G:H4'	2.33	0.43
32:XA:155:A:C6	32:XA:167:A:C6	3.06	0.43
32:XA:251:G:H4'	32:XA:252:U:C5'	2.47	0.43
32:XA:403:C:H5'	35:XD:131:ILE:HD12	2.00	0.43
32:XA:568:G:N2	32:XA:883:C:C2	2.86	0.43
32:XA:1126:U:N3	32:XA:1280:A:OP1	2.51	0.43
32:XA:1149:C:O2'	32:XA:1280:A:N1	2.51	0.43
32:XA:1301:U:O2	32:XA:1301:U:C2'	2.62	0.43
32:XA:1320:C:H2'	32:XA:1321:U:O4'	2.18	0.43
36:XE:59:ILE:O	36:XE:62:ALA:HB3	2.17	0.43
36:XE:103:GLY:O	36:XE:104:ILE:CG2	2.54	0.43
37:XF:71:ILE:HD12	37:XF:71:ILE:HA	1.93	0.43
50:XS:14:LEU:HD22	50:XS:37:SER:OG	2.18	0.43
50:XS:40:PHE:CB	50:XS:41:PRO:CD	2.95	0.43
1:YA:226:A:N6	1:YA:409:G:N2	2.66	0.43
1:YA:311:A:O2'	1:YA:312:G:P	2.76	0.43
1:YA:334:C:O2'	1:YA:335:C:OP1	2.28	0.43
1:YA:691:C:H6	1:YA:691:C:O5'	2.01	0.43
1:YA:701:G:H2'	1:YA:701:G:N3	2.31	0.43
1:YA:724:U:O4	1:YA:725:G:N1	2.51	0.43
1:YA:1008:A:H5"	10:YJ:37:ARG:HH22	1.82	0.43
1:YA:1343:G:N2	1:YA:1344:U:C2	2.86	0.43
1:YA:1437:C:C2	1:YA:1438:U:C5	3.05	0.43
1:YA:1565:C:C3'	3:YC:17:LYS:HE2	2.22	0.43
1:YA:1912:A:N6	1:YA:1917:U:H3	2.10	0.43
1:YA:2103:C:H2'	1:YA:2103:C:O2	2.17	0.43
1:YA:2333:A:P	23:YW:76:ARG:HH12	2.42	0.43
1:YA:2359:C:H2'	1:YA:2360:G:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2406:A:OP2	1:YA:2411:A:N6	2.34	0.43
1:YA:2734:A:H2'	1:YA:2735:G:C5'	2.47	0.43
1:YA:2791:G:OP1	1:YA:2791:G:O4'	2.37	0.43
1:YA:2846:G:P	16:YP:51:ASN:HB2	2.58	0.43
2:YB:11:C:H5'	23:YW:71:LYS:HD3	2.00	0.43
2:YB:29:A:H3'	2:YB:30:C:H6	1.83	0.43
5:YE:73:ILE:HG13	5:YE:78:TRP:NE1	2.33	0.43
5:YE:115:GLN:O	5:YE:117:ARG:N	2.51	0.43
6:YF:36:ASN:O	6:YF:37:MET:CB	2.66	0.43
7:YG:36:LEU:HD12	7:YG:36:LEU:N	2.32	0.43
7:YG:104:LEU:N	7:YG:112:VAL:HG23	2.32	0.43
7:YG:157:LYS:C	7:YG:159:LYS:H	2.25	0.43
8:YH:102:ALA:C	8:YH:104:THR:H	2.26	0.43
9:YI:79:LEU:HD13	9:YI:100:ILE:HD12	2.01	0.43
11:YK:88:ASN:CB	11:YK:91:SER:HB2	2.48	0.43
12:YL:119:PRO:HB3	12:YL:139:GLY:O	2.19	0.43
16:YP:102:ARG:O	16:YP:103:THR:CB	2.66	0.43
23:YW:37:VAL:HG23	23:YW:38:ARG:CD	2.33	0.43
1:RA:211:C:O2'	1:RA:212:G:H5'	2.18	0.43
1:RA:501:A:H8	1:RA:501:A:O5'	2.01	0.43
1:RA:586:A:C2	1:RA:1254:A:C2	3.07	0.43
1:RA:666:A:C5	1:RA:667:U:C5	3.07	0.43
1:RA:855:G:N2	23:RW:23:LYS:HG2	2.16	0.43
1:RA:1011:G:C2	1:RA:1151:A:C2	3.07	0.43
1:RA:1045:C:O5'	1:RA:1046:A:C5'	2.64	0.43
1:RA:1061:U:H3'	1:RA:1062:G:C5'	2.47	0.43
1:RA:1266:G:OP1	27:R0:15:ARG:NE	2.50	0.43
1:RA:1716:U:H2'	1:RA:1717:A:C8	2.54	0.43
1:RA:1855:U:H6	1:RA:1855:U:O5'	2.01	0.43
1:RA:1952:A:C6	1:RA:1953:A:N1	2.86	0.43
1:RA:1972:G:H2'	1:RA:1973:G:H8	1.83	0.43
1:RA:2383:G:H5"	1:RA:2383:G:H8	1.83	0.43
1:RA:2533:U:H2'	1:RA:2534:A:O4'	2.19	0.43
1:RA:2694:G:H2'	1:RA:2695:U:C6	2.53	0.43
1:RA:2850:A:H2'	1:RA:2851:A:O4'	2.18	0.43
3:RC:109:LEU:CD2	3:RC:110:LYS:N	2.79	0.43
6:RF:64:PRO:HA	6:RF:88:VAL:CG2	2.48	0.43
6:RF:131:VAL:CG2	6:RF:151:LEU:HG	2.47	0.43
6:RF:135:ILE:C	6:RF:137:PHE:N	2.73	0.43
7:RG:82:PHE:HB2	7:RG:134:GLY:O	2.17	0.43
7:RG:124:CYS:HB3	7:RG:126:THR:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:RH:97:ARG:HG2	8:RH:111:ALA:HB1	1.99	0.43
11:RK:34:GLY:O	11:RK:36:GLY:N	2.51	0.43
11:RK:99:ILE:HG23	11:RK:100:PHE:N	2.34	0.43
17:RQ:114:ALA:O	17:RQ:116:LEU:N	2.50	0.43
21:RU:73:ASN:C	21:RU:75:ALA:H	2.26	0.43
22:RV:51:GLN:HG2	22:RV:86:LEU:HD11	2.00	0.43
23:RW:8:SER:O	23:RW:9:THR:CB	2.66	0.43
23:RW:30:VAL:HA	23:RW:60:ALA:HB3	2.00	0.43
23:RW:46:ALA:O	23:RW:47:GLY:O	2.37	0.43
28:R1:27:ARG:C	28:R1:29:LYS:H	2.26	0.43
32:QA:135:C:C2'	32:QA:136:C:H5'	2.47	0.43
32:QA:290:C:H2'	32:QA:291:U:H5'	2.00	0.43
32:QA:461:A:N3	32:QA:461:A:C3'	2.81	0.43
32:QA:877:G:H21	39:QH:1:SER:HB2	1.84	0.43
32:QA:895:G:H2'	32:QA:896:C:C6	2.53	0.43
32:QA:1410:A:H2'	32:QA:1411:C:O5'	2.18	0.43
33:QB:10:LYS:HB2	33:QB:10:LYS:HE3	1.72	0.43
33:QB:209:VAL:O	33:QB:210:THR:C	2.61	0.43
34:QC:164:THR:O	34:QC:165:GLU:C	2.60	0.43
35:QD:35:GLN:O	35:QD:36:ALA:HB2	2.18	0.43
35:QD:104:MET:HE2	35:QD:170:LEU:HB2	2.00	0.43
35:QD:196:GLU:C	35:QD:198:LEU:N	2.71	0.43
36:QE:152:VAL:CB	36:QE:155:LYS:HZ2	2.27	0.43
37:QF:66:ALA:HB1	37:QF:67:PRO:HD2	2.01	0.43
38:QG:16:LYS:O	38:QG:17:PHE:CD1	2.72	0.43
38:QG:70:PRO:HD2	38:QG:95:ARG:CG	2.48	0.43
40:QI:8:THR:O	40:QI:81:GLY:CA	2.66	0.43
43:QL:23:LEU:CB	43:QL:58:ASN:HD22	2.31	0.43
48:QQ:45:VAL:HG21	48:QQ:60:ILE:CD1	2.34	0.43
52:QU:10:PRO:HG2	34:XC:71:ARG:NH2	2.33	0.43
32:XA:25:C:H2'	32:XA:26:A:C8	2.53	0.43
32:XA:49:U:O2	32:XA:362:G:H1'	2.18	0.43
32:XA:163:C:H2'	32:XA:164:G:O5'	2.17	0.43
32:XA:188:C:N4	32:XA:189:A:C6	2.87	0.43
32:XA:208:U:O2	32:XA:210:C:H4'	2.18	0.43
32:XA:212:G:N2	32:XA:213:G:C8	2.86	0.43
32:XA:246:A:C4	32:XA:279:A:N6	2.87	0.43
32:XA:587:G:H4'	39:XH:3:GLN:HA	2.00	0.43
32:XA:631:C:O5'	32:XA:631:C:H6	2.02	0.43
32:XA:643:C:O2'	32:XA:644:U:H5'	2.18	0.43
32:XA:704:A:O2'	32:XA:705:G:O4'	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:880:C:H2'	32:XA:881:G:H5'	1.98	0.43
32:XA:898:G:N2	32:XA:901:A:OP2	2.43	0.43
32:XA:1129:C:C4	32:XA:1139:G:C5	3.06	0.43
32:XA:1158:C:O2	32:XA:1158:C:C2'	2.67	0.43
32:XA:1241:G:H2'	32:XA:1242:G:C8	2.39	0.43
32:XA:1307:U:H1'	44:XM:107:THR:CG2	2.48	0.43
32:XA:1365:G:O2'	32:XA:1366:C:O5'	2.35	0.43
32:XA:1481:U:H2'	32:XA:1482:G:C8	2.53	0.43
32:XA:1509:C:H2'	32:XA:1510:C:C6	2.53	0.43
33:XB:24:PRO:C	33:XB:26:MET:H	2.26	0.43
33:XB:182:VAL:O	33:XB:195:VAL:HG13	2.19	0.43
41:XJ:6:ILE:C	41:XJ:7:ARG:HD2	2.43	0.43
46:XO:38:LEU:HD12	46:XO:41:HIS:HB3	2.00	0.43
48:XQ:7:LEU:HD23	48:XQ:72:TRP:HZ3	1.83	0.43
49:XR:31:TYR:CG	49:XR:54:LEU:HD21	2.53	0.43
51:XT:30:PHE:CE2	51:XT:52:GLU:HG2	2.53	0.43
1:YA:82:U:C2	1:YA:83:A:C8	3.07	0.43
1:YA:265:A:C6	1:YA:428:A:O4'	2.71	0.43
1:YA:303:G:C2	1:YA:304:U:O2	2.71	0.43
1:YA:308:G:H8	1:YA:308:G:O5'	2.02	0.43
1:YA:511:U:H4'	1:YA:1235:G:H4'	2.00	0.43
1:YA:524:G:H2'	1:YA:525:U:C6	2.53	0.43
1:YA:625:G:H1'	1:YA:656:G:HO2'	1.83	0.43
1:YA:855:G:C2'	23:YW:23:LYS:HD3	2.48	0.43
1:YA:962:G:H4'	1:YA:2496:C:O2'	2.18	0.43
1:YA:970:U:H1'	1:YA:985:C:OP1	2.18	0.43
1:YA:1091:G:C2	1:YA:1092:C:C2	3.06	0.43
1:YA:1179:G:C2	1:YA:1180:U:C2	3.06	0.43
1:YA:1287:A:OP1	14:YN:103:ARG:HD2	2.18	0.43
1:YA:1338:G:O2'	1:YA:1393:A:N1	2.43	0.43
1:YA:1401:G:C4	1:YA:1402:U:C5	3.07	0.43
1:YA:1627:G:C2	1:YA:1628:G:C8	3.06	0.43
1:YA:1700:A:O2'	1:YA:1701:A:H5'	2.18	0.43
1:YA:1807:G:H2'	1:YA:1809:A:OP2	2.19	0.43
1:YA:1877:A:H2'	1:YA:1878:G:C8	2.54	0.43
1:YA:2014:A:H2	1:YA:2613:U:C2	2.36	0.43
1:YA:2052:A:H8	1:YA:2052:A:O5'	2.01	0.43
1:YA:2209:G:C4	1:YA:2216:G:N2	2.86	0.43
1:YA:2254:C:H2'	1:YA:2255:G:H5'	2.00	0.43
1:YA:2463:C:C2	1:YA:2488:G:N2	2.87	0.43
1:YA:2578:G:OP2	1:YA:2578:G:H4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2635:A:H5"	4:YD:79:LEU:O	2.18	0.43
2:YB:29:A:OP2	15:YO:32:PRO:HD2	2.17	0.43
2:YB:58:A:C8	2:YB:59:A:C8	3.07	0.43
3:YC:181:ARG:NE	3:YC:265:PHE:HB2	2.31	0.43
4:YD:151:THR:O	4:YD:152:PRO:C	2.58	0.43
6:YF:71:LYS:O	6:YF:72:SER:HB3	2.17	0.43
7:YG:117:PRO:O	7:YG:118:ALA:C	2.61	0.43
9:YI:11:GLN:O	9:YI:11:GLN:HG3	2.18	0.43
9:YI:20:SER:HB3	9:YI:21:PRO:HD3	2.00	0.43
9:YI:30:GLN:CG	9:YI:31:GLY:H	2.31	0.43
10:YJ:48:VAL:HG12	10:YJ:49:ASP:N	2.33	0.43
13:YM:73:ILE:HD13	13:YM:73:ILE:HA	1.79	0.43
13:YM:82:MET:HE3	13:YM:82:MET:HB3	1.87	0.43
14:YN:21:PHE:HD1	14:YN:21:PHE:H	1.65	0.43
16:YP:13:LYS:C	16:YP:14:GLN:HG2	2.44	0.43
18:YR:39:LEU:HA	18:YR:53:PHE:HA	2.01	0.43
19:YS:75:PHE:CZ	19:YS:104:THR:HG21	2.53	0.43
24:YX:18:SER:C	24:YX:19:HIS:O	2.59	0.43
25:YY:22:LEU:HG	25:YY:23:ARG:H	1.83	0.43
26:YZ:8:GLN:C	26:YZ:10:ARG:H	2.27	0.43
1:RA:141:G:N1	20:RT:2:ILE:HG23	2.34	0.43
1:RA:581:C:H2'	1:RA:582:A:C8	2.53	0.43
1:RA:666:A:H8	1:RA:666:A:O5'	2.00	0.43
1:RA:820:A:H2'	1:RA:821:A:O4'	2.18	0.43
1:RA:1073:A:C2'	1:RA:1074:G:H5"	2.45	0.43
1:RA:1387:A:H5'	1:RA:1469:A:H1'	1.99	0.43
1:RA:1725:U:H2'	1:RA:1726:C:O4'	2.19	0.43
1:RA:2050:C:H1'	4:RD:161:MET:HE2	2.01	0.43
1:RA:2080:A:O5'	24:RX:18:SER:HB2	2.19	0.43
1:RA:2681:C:H4'	1:RA:2682:A:OP1	2.18	0.43
1:RA:2879:A:H4'	1:RA:2880:C:OP1	2.19	0.43
4:RD:89:GLU:HG3	4:RD:94:GLN:OE1	2.18	0.43
4:RD:143:PRO:HD2	4:RD:144:GLY:H	1.83	0.43
8:RH:119:ASN:CG	8:RH:120:GLY:H	2.26	0.43
10:RJ:40:HIS:HD2	10:RJ:41:LYS:CG	2.27	0.43
10:RJ:141:ASP:C	10:RJ:142:ILE:O	2.62	0.43
13:RM:132:THR:CG2	13:RM:133:LYS:H	2.31	0.43
16:RP:33:GLU:HA	16:RP:38:ARG:NH1	2.33	0.43
19:RS:84:ARG:O	19:RS:95:ARG:O	2.36	0.43
22:RV:29:ILE:HG12	22:RV:30:ILE:H	1.84	0.43
32:QA:100:G:C5	32:QA:101:A:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:382:A:H2'	32:QA:383:A:C8	2.54	0.43
32:QA:809:G:C6	32:QA:810:C:C5	3.06	0.43
32:QA:1029:U:N3	32:QA:1033:G:C6	2.87	0.43
32:QA:1053:G:N7	32:QA:1199:U:C6	2.86	0.43
32:QA:1120:C:H2'	32:QA:1121:U:C6	2.54	0.43
32:QA:1202:U:N3	45:QN:81:ILE:HG21	2.33	0.43
32:QA:1514:G:O2'	32:QA:1515:G:H5'	2.18	0.43
35:QD:164:ARG:O	35:QD:165:GLU:C	2.61	0.43
37:QF:86:ARG:HH12	49:QR:63:TYR:CB	2.28	0.43
38:QG:91:ARG:HA	38:QG:92:PRO:HD3	1.81	0.43
39:QH:1:SER:HB3	39:QH:3:GLN:HG3	1.99	0.43
41:QJ:80:THR:O	41:QJ:81:GLU:C	2.62	0.43
42:QK:109:ILE:HG22	42:QK:110:THR:N	2.34	0.43
32:XA:16:A:N1	32:XA:919:A:H2	2.17	0.43
32:XA:560:A:C5	36:XE:127:TYR:CE2	3.07	0.43
32:XA:1114:C:O2'	45:XN:99:SER:HB2	2.17	0.43
32:XA:1126:U:O4'	32:XA:1281:C:C2	2.71	0.43
32:XA:1460:C:N4	32:XA:1461:G:C6	2.86	0.43
33:XB:100:LEU:O	33:XB:102:ASN:N	2.50	0.43
34:XC:49:ALA:O	34:XC:50:SER:HB2	2.18	0.43
35:XD:24:VAL:HG23	35:XD:25:ARG:N	2.33	0.43
38:XG:61:PHE:O	38:XG:63:VAL:N	2.50	0.43
41:XJ:20:GLN:O	41:XJ:23:ALA:HB3	2.19	0.43
43:XL:7:VAL:O	43:XL:8:ARG:HB2	2.18	0.43
47:XP:6:LEU:HB2	47:XP:17:TYR:HB3	2.00	0.43
1:YA:107:G:C2	1:YA:108:G:C8	3.05	0.43
1:YA:237:C:C4	1:YA:238:C:C5	3.06	0.43
1:YA:288:U:H2'	1:YA:289:G:H8	1.83	0.43
1:YA:295:G:N2	1:YA:296:U:C6	2.87	0.43
1:YA:301:G:N1	1:YA:317:G:C5	2.86	0.43
1:YA:625:G:H1'	1:YA:656:G:O2'	2.18	0.43
1:YA:804:A:C2'	1:YA:806:C:C4	3.00	0.43
1:YA:991:C:OP2	1:YA:1186:G:OP2	2.35	0.43
1:YA:1355:G:C2	1:YA:1356:G:C8	3.07	0.43
1:YA:1387:A:O2'	1:YA:1388:G:OP2	2.29	0.43
1:YA:1387:A:O2'	1:YA:1388:G:P	2.77	0.43
1:YA:1403:A:C6	1:YA:1404:C:C4	3.07	0.43
1:YA:1455:G:HO2'	1:YA:1456:G:H8	1.64	0.43
1:YA:1497:U:O2'	1:YA:1577:C:H4'	2.19	0.43
1:YA:1530:G:N2	1:YA:1542:U:O2	2.52	0.43
1:YA:1606:C:O2	1:YA:1606:C:C5'	2.58	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2022:U:O2'	1:YA:2617:U:H5'	2.18	0.43
1:YA:2052:A:OP1	4:YD:146:ILE:HG12	2.19	0.43
1:YA:2201:G:H2'	1:YA:2202:U:H6	1.82	0.43
1:YA:2229:U:H2'	1:YA:2230:G:C8	2.54	0.43
1:YA:2726:A:HO2'	1:YA:2727:A:C5'	2.31	0.43
3:YC:130:PRO:HG2	3:YC:133:ASN:ND2	2.34	0.43
4:YD:184:ARG:O	4:YD:186:LEU:HD13	2.18	0.43
7:YG:152:ARG:HD2	7:YG:153:PRO:CD	2.48	0.43
9:YI:64:ARG:HB2	9:YI:64:ARG:CZ	2.49	0.43
10:YJ:44:TYR:HD1	17:YQ:63:ARG:NH2	2.17	0.43
11:YK:80:ASP:HB2	16:YP:67:GLU:OE1	2.18	0.43
12:YL:112:LEU:HD23	12:YL:112:LEU:H	1.83	0.43
17:YQ:9:ALA:C	17:YQ:11:ALA:N	2.76	0.43
20:YT:17:SER:C	20:YT:18:GLU:HG2	2.42	0.43
20:YT:48:GLN:NE2	20:YT:54:GLU:CB	2.82	0.43
21:YU:27:VAL:HG22	21:YU:28:LEU:N	2.34	0.43
23:YW:18:LYS:CD	23:YW:19:ARG:N	2.71	0.43
24:YX:32:LEU:HD13	24:YX:50:VAL:O	2.19	0.43
30:Y3:21:PHE:O	30:Y3:22:LYS:C	2.61	0.43
1:RA:275:C:H3'	1:RA:276:U:H5"	2.00	0.43
1:RA:511:U:O4	1:RA:512:G:N1	2.52	0.43
1:RA:846:U:C2'	1:RA:847:U:OP2	2.67	0.43
1:RA:910:A:C6	1:RA:911:A:C6	3.06	0.43
1:RA:1257:C:H5'	5:RE:78:TRP:CZ3	2.53	0.43
1:RA:1614:A:C2	19:RS:93:ALA:HB2	2.54	0.43
1:RA:1614:A:N1	19:RS:93:ALA:HB2	2.34	0.43
1:RA:1737:G:H5"	1:RA:1738:G:OP2	2.18	0.43
1:RA:1931:U:C2'	1:RA:1932:A:H5'	2.48	0.43
1:RA:2223:G:O2'	1:RA:2224:G:H5'	2.18	0.43
1:RA:2353:G:O2'	23:RW:31:LEU:HD23	2.18	0.43
1:RA:2626:C:H2'	1:RA:2627:G:O4'	2.19	0.43
54:RA:3135:EM1:H24A	54:RA:3135:EM1:H30	1.63	0.43
3:RC:35:LYS:NZ	3:RC:37:SER:HB2	2.34	0.43
3:RC:106:PRO:HA	3:RC:141:HIS:CE1	2.54	0.43
5:RE:109:LEU:HA	5:RE:109:LEU:HD13	1.47	0.43
5:RE:150:THR:CG2	5:RE:153:LEU:HA	2.48	0.43
7:RG:136:ASP:OD1	7:RG:136:ASP:C	2.62	0.43
7:RG:153:PRO:HD3	7:RG:161:VAL:O	2.19	0.43
9:RI:39:LYS:HB2	9:RI:39:LYS:NZ	2.33	0.43
12:RL:78:ARG:HB3	12:RL:113:ALA:HB3	2.01	0.43
13:RM:34:LYS:HE3	13:RM:131:VAL:HG11	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:RQ:7:VAL:HG22	17:RQ:8:ILE:N	2.33	0.43
18:RR:14:VAL:HA	18:RR:18:GLN:OE1	2.17	0.43
22:RV:43:ASP:OD1	22:RV:43:ASP:C	2.61	0.43
23:RW:16:GLU:O	23:RW:17:ALA:HB3	2.19	0.43
24:RX:5:GLN:HE21	24:RX:49:ARG:HB3	1.83	0.43
29:R2:42:LEU:C	29:R2:43:THR:HG23	2.43	0.43
32:QA:660:C:H2'	32:QA:661:G:O4'	2.18	0.43
32:QA:765:G:H2'	32:QA:812:G:N2	2.34	0.43
32:QA:863:U:O2	32:QA:867:G:C2	2.72	0.43
32:QA:933:G:OP2	38:QG:2:ARG:HB3	2.19	0.43
32:QA:946:A:H2'	32:QA:947:G:C8	2.54	0.43
33:QB:27:LYS:HB3	33:QB:28:PRO:HD3	2.00	0.43
38:QG:70:PRO:HD2	38:QG:95:ARG:HG2	2.01	0.43
39:QH:66:GLN:HB3	39:QH:67:GLY:H	1.60	0.43
42:QK:59:PRO:HB2	42:QK:94:SER:HB2	2.00	0.43
46:QO:50:HIS:O	46:QO:53:ARG:N	2.52	0.43
48:QQ:59:GLU:C	48:QQ:60:ILE:HG13	2.44	0.43
32:XA:143:A:N3	32:XA:143:A:H2'	2.33	0.43
32:XA:229:U:H2'	32:XA:230:G:O4'	2.19	0.43
32:XA:284:C:H2'	32:XA:285:C:H6	1.83	0.43
32:XA:398:U:H2'	32:XA:399:G:C8	2.53	0.43
32:XA:632:U:H3'	32:XA:633:G:H5'	2.00	0.43
32:XA:934:C:N3	32:XA:1345:U:C5	2.87	0.43
32:XA:996:A:H2'	32:XA:997:U:C6	2.53	0.43
32:XA:1003:G:H21	32:XA:1005:A:H5"	1.82	0.43
32:XA:1040:U:H2'	32:XA:1041:G:H5'	2.01	0.43
33:XB:52:ALA:O	33:XB:56:LEU:HB2	2.18	0.43
36:XE:35:LEU:HD22	36:XE:36:THR:N	2.32	0.43
38:XG:22:LEU:HA	38:XG:25:PHE:CB	2.33	0.43
39:XH:63:LYS:O	39:XH:70:VAL:HG12	2.17	0.43
40:XI:80:HIS:O	40:XI:83:THR:HG23	2.19	0.43
42:XK:92:ARG:NH2	42:XK:111:ASP:OD1	2.51	0.43
50:XS:69:LYS:O	50:XS:72:GLU:HB2	2.18	0.43
52:XU:28:LEU:CD2	52:XU:28:LEU:C	2.91	0.43
1:YA:142:A:C2	1:YA:143:C:C2	3.06	0.43
1:YA:372:G:N2	1:YA:401:A:OP2	2.42	0.43
1:YA:487:C:H1'	19:YS:53:SER:OG	2.18	0.43
1:YA:621:A:O2'	1:YA:622:G:C4'	2.67	0.43
1:YA:800:A:H4'	1:YA:801:G:O5'	2.18	0.43
1:YA:858:G:C5	1:YA:2268:A:C2	3.07	0.43
1:YA:1091:G:N2	1:YA:1101:U:C2	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1120:G:O2'	1:YA:1121:C:H5'	2.19	0.43
1:YA:1435:G:N2	1:YA:1558:C:N4	2.67	0.43
1:YA:1551:A:H2'	1:YA:1552:A:O4'	2.19	0.43
1:YA:2029:G:C2	1:YA:2033:A:N7	2.87	0.43
1:YA:2142:A:H3'	1:YA:2143:C:H4'	1.96	0.43
1:YA:2392:A:OP1	30:Y3:30:HIS:ND1	2.51	0.43
1:YA:2699:C:H2'	1:YA:2700:A:C8	2.53	0.43
2:YB:67:G:N3	2:YB:68:C:C6	2.87	0.43
4:YD:130:GLN:O	4:YD:131:ASP:C	2.61	0.43
7:YG:15:ASP:HB3	7:YG:26:LYS:H	1.83	0.43
7:YG:53:PRO:HG3	7:YG:61:TRP:CE2	2.54	0.43
8:YH:101:ASP:O	8:YH:102:ALA:O	2.36	0.43
11:YK:34:GLY:C	11:YK:35:VAL:HG22	2.44	0.43
13:YM:31:PHE:O	13:YM:105:MET:N	2.43	0.43
15:YO:95:SER:C	15:YO:97:PHE:H	2.26	0.43
16:YP:25:VAL:HG23	16:YP:25:VAL:O	2.19	0.43
22:YV:61:LEU:HD23	22:YV:61:LEU:N	2.33	0.43
1:RA:65:U:C2	1:RA:66:C:C5	3.06	0.43
1:RA:357:C:O2'	1:RA:358:U:H5'	2.19	0.43
1:RA:633:A:OP1	12:RL:68:SER:OG	2.35	0.43
1:RA:766:U:H2'	1:RA:767:U:C6	2.54	0.43
1:RA:790:U:HO2'	1:RA:791:C:P	2.40	0.43
1:RA:839:U:H2'	1:RA:840:C:C6	2.54	0.43
1:RA:927:A:H2'	1:RA:928:A:H8	1.81	0.43
1:RA:960:A:C8	1:RA:962:G:C8	3.07	0.43
1:RA:1599:U:OP2	20:RT:40:LYS:HD2	2.17	0.43
1:RA:1604:C:H2'	1:RA:1605:C:C6	2.53	0.43
1:RA:1692:U:O2'	1:RA:1693:U:H2'	2.19	0.43
1:RA:1696:G:C6	1:RA:1697:G:C4	3.06	0.43
1:RA:1754:A:N1	1:RA:2716:C:O2'	2.45	0.43
1:RA:1789:A:H2'	1:RA:1790:C:O4'	2.18	0.43
1:RA:1805:A:H1'	3:RC:49:THR:HG23	1.99	0.43
1:RA:1916:A:H8	1:RA:1916:A:O5'	2.01	0.43
1:RA:2727:A:C2'	1:RA:2728:U:H5'	2.48	0.43
56:RA:3288:HOH:O	5:RE:98:LYS:HE2	2.19	0.43
7:RG:59:ASP:CB	7:RG:63:GLN:HG2	2.45	0.43
11:RK:121:GLU:O	11:RK:122:VAL:C	2.61	0.43
16:RP:91:VAL:O	16:RP:92:ARG:C	2.59	0.43
16:RP:112:ARG:O	16:RP:113:LEU:C	2.62	0.43
17:RQ:65:ASN:C	17:RQ:65:ASN:HD22	2.27	0.43
19:RS:57:ASN:O	19:RS:61:ASN:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RV:2:PHE:HD1	22:RV:50:MET:HE2	1.83	0.43
26:RZ:9:THR:CG2	26:RZ:53:MET:C	2.92	0.43
27:R0:47:TYR:CZ	27:R0:52:LYS:HD3	2.54	0.43
28:R1:7:LYS:HE3	30:R3:33:THR:HG21	2.00	0.43
31:R4:33:HIS:O	31:R4:35:GLN:HG3	2.18	0.43
32:QA:370:C:C2'	32:QA:371:A:H5'	2.48	0.43
32:QA:374:A:H2'	32:QA:375:U:H6	1.83	0.43
32:QA:1210:C:C2'	32:QA:1211:U:H5'	2.49	0.43
32:QA:1303:C:O2'	32:QA:1304:G:C5'	2.66	0.43
32:QA:1338:G:C6	32:QA:1339:A:C6	3.07	0.43
32:QA:1520:C:H2'	32:QA:1521:C:C6	2.53	0.43
33:QB:53:LEU:C	33:QB:56:LEU:HB3	2.44	0.43
38:QG:119:LEU:O	38:QG:122:GLU:N	2.52	0.43
39:QH:78:SER:CB	39:QH:84:ILE:H	2.32	0.43
41:QJ:20:GLN:C	41:QJ:22:THR:H	2.27	0.43
41:QJ:33:GLY:O	41:QJ:34:ALA:CB	2.66	0.43
42:QK:86:LYS:HG2	42:QK:114:PRO:HD3	2.00	0.43
45:QN:32:ASP:O	45:QN:33:VAL:C	2.61	0.43
32:XA:171:A:N1	32:XA:172:A:C2	2.87	0.43
32:XA:181:A:C4'	32:XA:182:A:OP1	2.59	0.43
32:XA:204:G:C4	32:XA:205:A:C8	3.06	0.43
32:XA:683:G:C2'	32:XA:684:U:H5'	2.49	0.43
32:XA:954:G:H1	32:XA:1228:C:H42	1.65	0.43
32:XA:960:U:H1'	32:XA:1223:C:H5'	2.00	0.43
32:XA:994:A:O2'	32:XA:995:C:O5'	2.36	0.43
32:XA:1352:C:O2	32:XA:1371:G:C2	2.72	0.43
32:XA:1408:A:N1	32:XA:1494:G:C5	2.87	0.43
35:XD:81:LEU:O	35:XD:82:LYS:C	2.61	0.43
40:XI:44:ARG:HB3	40:XI:44:ARG:NH1	2.34	0.43
43:XL:116:TYR:O	43:XL:117:GLY:C	2.61	0.43
45:XN:63:CYS:O	45:XN:67:GLY:HA2	2.18	0.43
47:XP:44:SER:HB2	47:XP:46:LYS:HG3	2.00	0.43
48:XQ:14:ASP:HB2	48:XQ:54:ILE:HG22	1.99	0.43
48:XQ:14:ASP:CB	48:XQ:54:ILE:HG22	2.49	0.43
50:XS:33:TRP:CD1	50:XS:56:HIS:HE2	2.37	0.43
1:YA:54:G:C6	1:YA:55:G:N7	2.87	0.43
1:YA:166:U:C2'	1:YA:167:A:H5'	2.49	0.43
1:YA:173:A:H2'	1:YA:174:U:H6	1.82	0.43
1:YA:233:A:O2'	1:YA:234:U:O5'	2.37	0.43
1:YA:340:A:H2'	1:YA:341:C:O4'	2.18	0.43
1:YA:371:A:C4	1:YA:373:U:O4	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:415:A:C2	1:YA:2409:G:C6	3.06	0.43
1:YA:485:C:C2	1:YA:496:G:N2	2.87	0.43
1:YA:622:G:O2'	1:YA:623:C:H5'	2.18	0.43
1:YA:623:C:H2'	1:YA:624:C:O4'	2.18	0.43
1:YA:768:G:N2	1:YA:1379:U:O2'	2.41	0.43
1:YA:821:A:O2'	1:YA:945:A:H5'	2.18	0.43
1:YA:927:A:N1	1:YA:928:A:C2	2.87	0.43
1:YA:1287:A:O2'	1:YA:1288:G:C5'	2.67	0.43
1:YA:1438:U:C5	1:YA:1552:A:N1	2.86	0.43
1:YA:1534:U:H2'	1:YA:1536:C:O2	2.19	0.43
1:YA:1585:C:C2'	1:YA:1586:A:O5'	2.66	0.43
1:YA:1590:A:C6	1:YA:1591:A:N6	2.86	0.43
1:YA:1611:C:C2	1:YA:1612:C:C5	3.06	0.43
1:YA:1760:C:C2'	1:YA:1761:C:H5'	2.48	0.43
1:YA:2031:A:O2'	1:YA:2454:G:N2	2.52	0.43
1:YA:2061:G:N7	1:YA:2501:C:H4'	2.33	0.43
1:YA:2157:G:OP2	1:YA:2157:G:N2	2.49	0.43
1:YA:2636:C:H2'	1:YA:2637:U:H6	1.78	0.43
1:YA:2749:A:P	1:YA:2750:A:H3'	2.59	0.43
1:YA:2886:A:N7	27:Y0:39:ARG:CZ	2.82	0.43
4:YD:151:THR:HG22	4:YD:152:PRO:CD	2.49	0.43
11:YK:17:ARG:O	11:YK:18:ARG:C	2.62	0.43
11:YK:87:LEU:HD23	11:YK:87:LEU:N	2.34	0.43
19:YS:33:LEU:CA	19:YS:36:LEU:HD23	2.47	0.43
22:YV:56:PHE:C	22:YV:58:SER:N	2.76	0.43
26:YZ:37:ARG:HB3	26:YZ:38:GLU:H	1.59	0.43
1:RA:125:A:C6	29:R2:10:LEU:HD13	2.54	0.43
1:RA:229:C:C2'	1:RA:230:G:O5'	2.67	0.43
1:RA:236:C:O2'	1:RA:237:C:H5'	2.18	0.43
1:RA:443:A:H2	1:RA:1245:G:N3	2.17	0.43
1:RA:659:G:H21	5:RE:30:GLN:NE2	2.16	0.43
1:RA:768:G:C5	1:RA:769:U:C5	3.07	0.43
1:RA:919:U:C4	1:RA:920:A:N7	2.87	0.43
1:RA:947:A:H2'	1:RA:948:C:C6	2.54	0.43
1:RA:958:U:H5'	13:RM:14:LYS:NZ	2.33	0.43
1:RA:1071:G:C4	1:RA:1089:A:C6	3.06	0.43
1:RA:1847:A:C2'	1:RA:1847:A:N3	2.81	0.43
1:RA:2491:U:H5"	1:RA:2570:G:H5"	1.99	0.43
1:RA:2522:U:O2'	1:RA:2647:U:OP1	2.35	0.43
1:RA:2846:G:OP1	16:RP:52:ARG:NH1	2.51	0.43
1:RA:2887:A:C5'	1:RA:2888:C:OP2	2.63	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:RC:236:GLY:O	3:RC:237:ARG:HB2	2.19	0.43
8:RH:34:GLY:O	8:RH:35:LYS:HG3	2.19	0.43
10:RJ:141:ASP:HB3	10:RJ:142:ILE:H	1.42	0.43
12:RL:131:ALA:O	12:RL:132:ARG:C	2.62	0.43
15:RO:105:ALA:O	15:RO:106:LEU:CB	2.61	0.43
18:RR:49:ILE:CG1	18:RR:52:PRO:HA	2.49	0.43
19:RS:72:THR:HG21	19:RS:108:SER:OG	2.19	0.43
28:R1:42:VAL:HG12	28:R1:44:GLN:HB2	2.01	0.43
32:QA:540:G:H2'	32:QA:541:G:O4'	2.18	0.43
32:QA:603:U:C6	32:QA:603:U:C3'	3.01	0.43
32:QA:647:C:O2'	32:QA:648:A:H5'	2.18	0.43
32:QA:748:G:C6	32:QA:749:A:C5	3.07	0.43
32:QA:761:G:C4	32:QA:762:U:C5	3.07	0.43
32:QA:777:A:H2'	32:QA:778:G:H8	1.83	0.43
32:QA:1086:U:O2'	32:QA:1087:G:H5'	2.19	0.43
32:QA:1405:G:H1'	32:QA:1519:A:O4'	2.18	0.43
32:QA:1460:C:C4	32:QA:1461:G:C5	3.07	0.43
34:QC:55:VAL:C	34:QC:56:ILE:HG13	2.44	0.43
36:QE:109:ALA:O	36:QE:110:MET:CG	2.61	0.43
38:QG:43:TYR:O	38:QG:47:GLU:HB2	2.19	0.43
43:QL:94:TYR:CD2	43:QL:94:TYR:N	2.87	0.43
44:QM:25:GLY:O	44:QM:26:LYS:C	2.61	0.43
32:XA:106:C:O2'	32:XA:107:G:H5'	2.19	0.43
32:XA:237:G:C6	32:XA:238:A:C5	3.06	0.43
32:XA:267:C:C2'	32:XA:268:U:O5'	2.66	0.43
32:XA:928:G:O2'	32:XA:1533:C:OP1	2.35	0.43
32:XA:977:A:H1'	32:XA:1223:C:N4	2.31	0.43
32:XA:1028:C:H2'	32:XA:1029:U:H5'	2.01	0.43
32:XA:1525:G:OP1	52:XU:37:TYR:CD1	2.71	0.43
35:XD:190:LEU:O	35:XD:190:LEU:HD23	2.19	0.43
38:XG:74:VAL:HG12	38:XG:143:MET:HB2	2.00	0.43
39:XH:11:THR:HG22	39:XH:14:ARG:CZ	2.49	0.43
40:XI:5:TYR:O	40:XI:19:PHE:HA	2.18	0.43
42:XK:67:GLU:C	42:XK:69:CYS:H	2.25	0.43
43:XL:46:SER:O	43:XL:47:ALA:HB2	2.19	0.43
46:XO:9:LYS:O	46:XO:13:GLU:OE2	2.36	0.43
46:XO:34:GLN:O	46:XO:38:LEU:HB2	2.19	0.43
50:XS:50:VAL:HG22	50:XS:57:VAL:O	2.19	0.43
1:YA:36:G:C6	1:YA:37:C:C4	3.07	0.43
1:YA:266:G:C2'	1:YA:267:C:O5'	2.66	0.43
1:YA:289:G:H2'	1:YA:290:U:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:391:A:C2	1:YA:411:G:C5	3.07	0.43
1:YA:1042:G:C5	1:YA:1043:C:C4	3.06	0.43
1:YA:1047:G:H2'	1:YA:1048:A:OP2	2.18	0.43
1:YA:1733:G:C2	1:YA:1734:G:C8	3.07	0.43
1:YA:2076:U:H5"	1:YA:2238:G:H22	1.84	0.43
1:YA:2093:G:C4'	8:YH:24:GLY:HA3	2.49	0.43
1:YA:2415:G:C4	1:YA:2416:C:C6	3.06	0.43
1:YA:2443:C:H2'	1:YA:2444:G:O4'	2.19	0.43
1:YA:2603:G:H4'	1:YA:2603:G:OP2	2.19	0.43
1:YA:2677:G:C4	1:YA:2731:G:N2	2.86	0.43
1:YA:2682:A:O2'	1:YA:2683:C:O4'	2.37	0.43
1:YA:2848:G:H1'	1:YA:2849:U:H5	1.83	0.43
3:YC:58:LYS:O	3:YC:59:GLN:HB2	2.19	0.43
3:YC:93:VAL:HG12	3:YC:101:ARG:N	2.34	0.43
3:YC:130:PRO:C	3:YC:132:ARG:N	2.75	0.43
7:YG:10:VAL:HG21	7:YG:44:HIS:HE1	1.84	0.43
8:YH:2:GLN:HB3	8:YH:18:GLN:CD	2.44	0.43
8:YH:94:ILE:HD12	8:YH:98:ASP:OD1	2.19	0.43
10:YJ:3:THR:CG2	17:YQ:60:TRP:HE1	2.29	0.43
10:YJ:41:LYS:C	10:YJ:43:GLU:N	2.76	0.43
10:YJ:104:ALA:O	10:YJ:108:MET:HG3	2.18	0.43
13:YM:105:MET:HE3	13:YM:105:MET:HA	2.01	0.43
16:YP:50:ARG:HB3	16:YP:56:SER:HB3	1.99	0.43
17:YQ:38:VAL:O	17:YQ:42:GLY:N	2.52	0.43
18:YR:72:VAL:O	18:YR:72:VAL:HG23	2.18	0.43
27:Y0:53:VAL:HG23	27:Y0:54:ILE:HG12	2.00	0.43
1:RA:62:U:H4'	1:RA:63:A:OP1	2.19	0.43
1:RA:63:A:O2'	1:RA:64:A:H5'	2.19	0.43
1:RA:418:C:H2'	1:RA:419:U:C6	2.53	0.43
1:RA:986:C:C2'	1:RA:987:C:H5'	2.49	0.43
1:RA:1414:C:C5	1:RA:1415:U:H5	2.36	0.43
1:RA:1838:C:H4'	1:RA:1839:G:C8	2.54	0.43
1:RA:1840:G:C2	1:RA:1841:U:C2	3.07	0.43
1:RA:2038:G:H2'	1:RA:2039:U:O4'	2.18	0.43
1:RA:2335:A:N6	1:RA:2337:G:H1'	2.33	0.43
3:RC:132:ARG:HD3	3:RC:132:ARG:O	2.19	0.43
4:RD:16:THR:HG23	4:RD:18:ASP:OD1	2.19	0.43
4:RD:92:VAL:C	4:RD:94:GLN:N	2.75	0.43
10:RJ:25:LEU:HD22	10:RJ:26:GLY:N	2.34	0.43
10:RJ:26:GLY:HA2	10:RJ:29:ALA:CB	2.49	0.43
10:RJ:69:ARG:O	10:RJ:89:PHE:HB3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:RK:10:VAL:CG2	11:RK:16:ALA:HB1	2.49	0.43
13:RM:51:ARG:O	13:RM:52:ALA:C	2.59	0.43
16:RP:59:THR:OG1	16:RP:72:VAL:HG12	2.18	0.43
16:RP:67:GLU:CG	16:RP:68:GLY:H	2.32	0.43
17:RQ:111:LYS:HE3	18:RR:50:GLY:HA2	2.00	0.43
18:RR:58:VAL:HG13	18:RR:102:SER:HB2	2.00	0.43
22:RV:77:VAL:CG2	22:RV:86:LEU:HD22	2.48	0.43
23:RW:29:SER:C	23:RW:30:VAL:HG12	2.43	0.43
26:RZ:20:LYS:O	26:RZ:22:THR:N	2.52	0.43
31:R4:36:ARG:HG2	31:R4:37:GLN:N	2.19	0.43
32:QA:39:G:H2'	32:QA:40:C:H6	1.84	0.43
32:QA:69:G:N3	32:QA:69:G:H2'	2.34	0.43
32:QA:410:G:C2	32:QA:429:U:C2	3.06	0.43
32:QA:687:A:N7	32:QA:701:U:H5	2.16	0.43
32:QA:693:G:C2'	32:QA:694:A:H5'	2.49	0.43
32:QA:784:A:H2'	32:QA:785:G:H8	1.84	0.43
32:QA:914:A:H2'	32:QA:915:A:C8	2.53	0.43
32:QA:976:G:OP1	45:QN:70:HIS:ND1	2.52	0.43
32:QA:1025:U:H5"	32:QA:1026:G:H5'	2.00	0.43
32:QA:1157:A:C6	32:QA:1180:A:C6	3.07	0.43
33:QB:70:GLY:O	33:QB:92:ASN:HA	2.19	0.43
33:QB:199:ILE:O	33:QB:200:PRO:O	2.37	0.43
39:QH:36:ALA:O	39:QH:37:ASN:C	2.61	0.43
39:QH:95:MET:SD	39:QH:129:ALA:HB1	2.59	0.43
41:QJ:80:THR:O	41:QJ:83:THR:N	2.52	0.43
44:QM:71:GLU:O	44:QM:74:MET:HB3	2.18	0.43
47:QP:75:ILE:C	47:QP:77:GLU:H	2.27	0.43
32:XA:65:A:H2'	32:XA:382:A:H61	1.83	0.43
32:XA:71:A:C5	32:XA:100:G:C5	3.07	0.43
32:XA:301:G:H2'	32:XA:302:G:C8	2.54	0.43
32:XA:523:A:C2	32:XA:527:G:O6	2.72	0.43
32:XA:890:G:O2'	32:XA:906:A:N6	2.52	0.43
32:XA:1026:G:O6	32:XA:1035:A:N1	2.52	0.43
32:XA:1270:G:O2'	32:XA:1314:C:H5'	2.18	0.43
32:XA:1306:A:N6	32:XA:1331:G:H1'	2.34	0.43
32:XA:1347:G:N2	32:XA:1373:G:H2'	2.33	0.43
34:XC:53:ARG:HB2	34:XC:53:ARG:HH11	1.84	0.43
34:XC:179:ALA:O	34:XC:180:ASP:C	2.61	0.43
36:XE:98:ALA:O	36:XE:121:ASN:HB2	2.18	0.43
39:XH:29:SER:O	39:XH:31:LEU:N	2.51	0.43
40:XI:4:GLN:HE21	40:XI:4:GLN:HB3	1.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:XJ:66:GLU:CG	45:XN:100:TRP:HZ3	2.31	0.43
43:XL:84:GLY:H	43:XL:94:TYR:HA	1.84	0.43
45:XN:27:LYS:O	45:XN:45:LEU:HD21	2.18	0.43
45:XN:54:SER:O	45:XN:55:SER:HB2	2.19	0.43
50:XS:54:ARG:HG2	50:XS:55:GLN:N	2.32	0.43
1:YA:42:A:C2	1:YA:438:G:C2	3.07	0.43
1:YA:153:U:O2'	1:YA:154:U:H5'	2.18	0.43
1:YA:590:A:H2'	1:YA:591:U:C6	2.50	0.43
1:YA:743:A:O2'	1:YA:744:U:H5'	2.19	0.43
1:YA:915:C:H6	1:YA:915:C:H5"	1.84	0.43
1:YA:1014:A:O2'	1:YA:1015:U:H5'	2.18	0.43
1:YA:1236:G:O2'	1:YA:1237:A:C8	2.72	0.43
1:YA:1255:U:H2'	1:YA:1255:U:H6	1.56	0.43
1:YA:1609:A:N3	1:YA:1616:A:O4'	2.51	0.43
1:YA:1637:A:H5'	1:YA:1760:C:O2'	2.19	0.43
1:YA:1663:G:C2	1:YA:1998:A:C5	3.07	0.43
1:YA:1757:A:N1	1:YA:1762:A:C2	2.87	0.43
1:YA:2069:G:N2	1:YA:2443:C:C2	2.87	0.43
1:YA:2331:G:C2	1:YA:2385:C:C4	3.07	0.43
3:YC:128:THR:CG2	3:YC:188:ARG:HB3	2.28	0.43
5:YE:153:LEU:HD22	5:YE:158:PHE:HD2	1.84	0.43
8:YH:40:THR:O	8:YH:41:LYS:HB2	2.18	0.43
11:YK:108:ARG:CA	11:YK:116:ILE:HD13	2.49	0.43
14:YN:114:GLU:HG2	14:YN:115:LEU:N	2.34	0.43
18:YR:97:LYS:O	18:YR:98:ILE:C	2.61	0.43
20:YT:5:GLU:CD	25:YY:18:LEU:HD21	2.43	0.43
23:YW:18:LYS:CD	23:YW:19:ARG:HG2	2.47	0.43
29:Y2:27:GLY:O	29:Y2:30:VAL:HB	2.18	0.43
1:RA:44:A:H2'	1:RA:45:G:O4'	2.18	0.43
1:RA:418:C:H2'	1:RA:419:U:O4'	2.19	0.43
1:RA:746:U:O2'	54:RA:3135:EM1:H14	2.19	0.43
1:RA:857:G:H2'	1:RA:858:G:O4'	2.19	0.43
1:RA:1005:C:O2	1:RA:1005:C:H2'	2.18	0.43
1:RA:1097:U:H3'	1:RA:1098:A:H4'	2.01	0.43
1:RA:1261:C:C2'	1:RA:1262:A:O5'	2.67	0.43
1:RA:1576:U:C2'	1:RA:1577:C:H5'	2.49	0.43
1:RA:1581:G:C6	1:RA:1582:C:C4	3.07	0.43
1:RA:1638:C:H1'	1:RA:2698:U:O2'	2.18	0.43
1:RA:1738:G:HO2'	1:RA:1739:A:P	2.39	0.43
1:RA:1858:A:O2'	1:RA:1859:U:C5'	2.67	0.43
1:RA:1873:G:N2	1:RA:1874:C:C2	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2071:A:H2'	1:RA:2072:C:C6	2.53	0.43
1:RA:2415:G:C4'	12:RL:66:PHE:HB2	2.44	0.43
1:RA:2694:G:C5	1:RA:2695:U:C4	3.07	0.43
3:RC:90:ILE:HD12	3:RC:103:ILE:O	2.19	0.43
7:RG:171:LYS:HA	7:RG:171:LYS:HD3	1.78	0.43
8:RH:14:SER:C	8:RH:16:GLY:H	2.27	0.43
9:RI:33:ASN:HB3	9:RI:36:GLU:HB2	2.01	0.43
11:RK:10:VAL:HG21	11:RK:16:ALA:HB1	2.00	0.43
21:RU:2:ALA:HB3	21:RU:5:ARG:HH21	1.84	0.43
22:RV:48:MET:HE2	22:RV:84:PRO:O	2.19	0.43
23:RW:71:LYS:C	23:RW:73:PRO:HD2	2.43	0.43
24:RX:76:LYS:O	24:RX:77:TYR:O	2.37	0.43
28:R1:39:ASP:OD1	28:R1:39:ASP:C	2.62	0.43
32:QA:80:A:C2	32:QA:81:A:H1'	2.54	0.43
32:QA:555:U:H2'	32:QA:556:C:C6	2.54	0.43
32:QA:723:U:H5"	52:QU:48:LYS:HG2	2.01	0.43
32:QA:844:G:N3	32:QA:844:G:H2'	2.34	0.43
32:QA:862:C:H2'	32:QA:863:U:H5'	2.01	0.43
32:QA:988:G:O6	32:QA:989:U:C4	2.72	0.43
32:QA:1073:U:O2'	33:QB:102:ASN:ND2	2.52	0.43
32:QA:1323:G:N2	32:QA:1324:A:C2	2.87	0.43
32:QA:1327:C:C2'	32:QA:1328:C:H5'	2.48	0.43
32:QA:1343:G:H2'	32:QA:1344:C:C6	2.54	0.43
33:QB:32:GLY:HA3	33:QB:39:ILE:CB	2.49	0.43
33:QB:156:LEU:O	33:QB:157:PRO:C	2.61	0.43
35:QD:48:SER:O	35:QD:52:VAL:HG13	2.18	0.43
35:QD:104:MET:HB3	35:QD:106:PHE:CE2	2.53	0.43
36:QE:146:MET:HE3	36:QE:146:MET:HB2	1.84	0.43
38:QG:112:ASP:HB2	38:QG:118:ARG:CG	2.49	0.43
40:QI:38:PHE:HA	40:QI:41:GLU:OE1	2.19	0.43
41:QJ:78:GLU:HA	41:QJ:79:PRO:HD2	1.87	0.43
44:QM:11:HIS:C	44:QM:12:LYS:HG3	2.43	0.43
47:QP:48:GLU:CG	47:QP:49:GLY:N	2.82	0.43
50:QS:62:THR:CG2	50:QS:63:ASP:N	2.82	0.43
32:XA:410:G:P	35:XD:25:ARG:HD2	2.59	0.43
32:XA:728:A:C6	32:XA:729:A:N6	2.87	0.43
32:XA:1048:G:H21	32:XA:1214:C:H5	1.66	0.43
32:XA:1320:C:H41	50:XS:36:ARG:HG3	1.84	0.43
35:XD:19:PHE:C	35:XD:20:LEU:O	2.59	0.43
36:XE:104:ILE:N	36:XE:122:VAL:H	2.05	0.43
41:XJ:44:THR:HG22	41:XJ:45:ARG:N	2.28	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:XK:19:VAL:HG22	42:XK:82:GLU:HG2	2.01	0.43
42:XK:64:VAL:O	42:XK:68:ARG:HB2	2.18	0.43
43:XL:47:ALA:C	43:XL:48:LEU:HD23	2.44	0.43
46:XO:26:VAL:HG12	46:XO:27:GLN:N	2.34	0.43
46:XO:42:PHE:O	46:XO:46:LYS:HG2	2.19	0.43
52:XU:35:GLU:OE2	52:XU:35:GLU:CA	2.64	0.43
1:YA:49:A:C6	1:YA:118:A:C6	3.06	0.43
1:YA:126:A:P	29:Y2:19:ARG:HG3	2.59	0.43
1:YA:250:G:OP1	12:YL:59:ARG:NH1	2.52	0.43
1:YA:447:A:C2	1:YA:454:A:C8	3.07	0.43
1:YA:531:C:H5"	1:YA:532:A:N7	2.34	0.43
1:YA:544:C:N4	1:YA:545:U:H3	2.16	0.43
1:YA:616:A:O2'	1:YA:617:G:O5'	2.37	0.43
1:YA:656:G:H2'	1:YA:657:U:O4'	2.18	0.43
1:YA:832:U:OP1	12:YL:39:LYS:N	2.43	0.43
1:YA:871:U:OP1	13:YM:4:PRO:HA	2.19	0.43
1:YA:924:G:C2'	1:YA:925:A:H5'	2.49	0.43
1:YA:929:U:O2'	1:YA:930:G:H5'	2.18	0.43
1:YA:944:C:H5'	1:YA:945:A:C5'	2.49	0.43
1:YA:1091:G:O2'	1:YA:1092:C:H5'	2.19	0.43
1:YA:1095:A:N1	1:YA:1096:A:N6	2.66	0.43
1:YA:1396:U:C2'	1:YA:1397:U:OP1	2.67	0.43
1:YA:1408:G:H2'	1:YA:1409:U:C6	2.54	0.43
1:YA:1480:C:C4	1:YA:1481:U:C5	3.07	0.43
1:YA:1484:U:O5'	1:YA:1484:U:H6	2.02	0.43
1:YA:1512:C:H2'	1:YA:1513:U:O4'	2.19	0.43
1:YA:1633:G:C6	1:YA:1635:A:C5	3.07	0.43
1:YA:2200:C:O2	1:YA:2226:C:N4	2.52	0.43
1:YA:2253:G:C5	1:YA:2254:C:C5	3.07	0.43
1:YA:2331:G:C2'	1:YA:2332:C:O5'	2.67	0.43
1:YA:2568:U:H2'	1:YA:2569:G:O4'	2.19	0.43
1:YA:2615:U:H2'	1:YA:2616:C:C5	2.54	0.43
1:YA:2677:G:H2'	1:YA:2678:C:H6	1.84	0.43
1:YA:2701:U:H3'	1:YA:2702:G:H5"	2.00	0.43
5:YE:175:ILE:HG23	5:YE:175:ILE:O	2.18	0.43
6:YF:52:ALA:C	6:YF:55:ASP:H	2.27	0.43
6:YF:131:VAL:C	6:YF:133:GLU:N	2.72	0.43
7:YG:88:LEU:HG	7:YG:128:THR:O	2.18	0.43
8:YH:53:GLU:C	8:YH:55:GLU:N	2.77	0.43
8:YH:96:THR:HA	8:YH:113:SER:OG	2.19	0.43
11:YK:45:GLU:O	11:YK:54:LYS:HE3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:YL:85:VAL:O	12:YL:85:VAL:HG22	2.18	0.43
12:YL:108:ALA:HB3	12:YL:125:LEU:HD22	2.00	0.43
12:YL:136:GLU:HG3	12:YL:140:GLY:O	2.19	0.43
14:YN:35:LYS:HD3	14:YN:112:TYR:CZ	2.54	0.43
20:YT:37:ASP:O	20:YT:38:ALA:O	2.36	0.43
24:YX:53:LYS:C	24:YX:55:MET:N	2.77	0.43
25:YY:58:ASN:C	25:YY:60:LYS:H	2.27	0.43
1:RA:116:C:H2'	1:RA:117:G:O4'	2.19	0.42
1:RA:141:G:H5'	1:RA:142:A:C5	2.54	0.42
1:RA:262:A:H2'	1:RA:263:G:H5'	2.00	0.42
1:RA:1812:U:H2'	1:RA:1813:G:C8	2.54	0.42
1:RA:1839:G:C4	1:RA:1840:G:C8	3.07	0.42
1:RA:2018:G:H2'	1:RA:2019:A:O4'	2.19	0.42
1:RA:2286:G:O6	28:R1:22:THR:HG21	2.19	0.42
1:RA:2417:C:C2	1:RA:2418:A:C8	3.07	0.42
1:RA:2480:C:H2'	1:RA:2481:G:H5'	2.01	0.42
3:RC:80:LEU:CD1	3:RC:109:LEU:HG	2.47	0.42
3:RC:180:MET:HG3	3:RC:268:ARG:HH11	1.83	0.42
4:RD:78:GLY:C	4:RD:80:TRP:CZ3	2.97	0.42
4:RD:137:SER:O	4:RD:138:LEU:HB2	2.18	0.42
5:RE:61:ARG:HH11	5:RE:64:GLY:HA3	1.80	0.42
6:RF:5:ASP:O	6:RF:8:LYS:N	2.52	0.42
6:RF:56:LEU:HD23	6:RF:56:LEU:HA	1.71	0.42
7:RG:93:TYR:HD2	7:RG:93:TYR:HA	1.63	0.42
8:RH:96:THR:O	8:RH:96:THR:HG23	2.19	0.42
15:RO:49:VAL:HG21	15:RO:82:ALA:CA	2.41	0.42
15:RO:93:ASP:C	15:RO:95:SER:H	2.27	0.42
16:RP:47:ILE:HA	16:RP:96:LEU:HB2	2.00	0.42
16:RP:50:ARG:HG2	16:RP:57:ALA:CA	2.49	0.42
17:RQ:94:LEU:O	17:RQ:96:ASP:N	2.50	0.42
19:RS:54:ALA:O	19:RS:57:ASN:HB2	2.19	0.42
20:RT:30:ILE:O	20:RT:85:VAL:HB	2.19	0.42
32:QA:74:A:C2	32:QA:97:G:C6	3.07	0.42
32:QA:98:A:H2'	32:QA:99:C:H6	1.84	0.42
32:QA:263:A:P	51:QT:73:ARG:HH11	2.42	0.42
32:QA:290:C:H2'	32:QA:291:U:C5'	2.49	0.42
32:QA:303:A:H2'	32:QA:304:U:O4'	2.19	0.42
32:QA:874:G:C6	32:QA:875:U:C4	3.07	0.42
32:QA:880:C:C2'	32:QA:881:G:H5'	2.49	0.42
32:QA:903:G:C6	32:QA:904:U:C4	3.07	0.42
32:QA:903:G:C4	32:QA:904:U:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:935:A:H2'	32:QA:936:C:H6	1.84	0.42
32:QA:945:G:C6	32:QA:1337:G:C5	3.06	0.42
32:QA:1237:C:O2'	32:QA:1335:U:O4'	2.37	0.42
32:QA:1386:G:H2'	32:QA:1387:G:C8	2.52	0.42
33:QB:131:LYS:C	33:QB:133:ALA:N	2.77	0.42
33:QB:173:LYS:O	33:QB:176:ASN:HB2	2.19	0.42
34:QC:61:LYS:HA	34:QC:61:LYS:HD2	1.89	0.42
34:QC:119:ILE:CG2	34:QC:197:VAL:HG11	2.46	0.42
34:QC:133:MET:HE3	34:QC:167:TYR:HB2	2.00	0.42
37:QF:25:TYR:CE1	37:QF:78:PHE:HE2	2.37	0.42
45:QN:65:GLN:HG3	45:QN:78:LEU:HD21	2.01	0.42
46:QO:50:HIS:O	46:QO:51:SER:C	2.62	0.42
52:QU:23:GLU:HB3	52:QU:24:LYS:H	1.55	0.42
32:XA:183:C:HO2'	32:XA:184:G:C5'	2.31	0.42
32:XA:198:G:O6	32:XA:220:G:C2	2.72	0.42
32:XA:215:C:H2'	32:XA:216:U:O4'	2.19	0.42
32:XA:259:G:O2'	32:XA:260:G:H5'	2.19	0.42
32:XA:490:C:OP1	35:XD:145:ARG:NH2	2.52	0.42
32:XA:695:A:N1	32:XA:696:A:C2	2.87	0.42
32:XA:751:U:H4'	46:XO:23:SER:HA	2.01	0.42
32:XA:765:G:O6	32:XA:812:G:C8	2.72	0.42
33:XB:41:ASN:O	33:XB:42:LEU:C	2.62	0.42
33:XB:130:LYS:O	33:XB:131:LYS:C	2.62	0.42
36:XE:88:HIS:CE1	36:XE:89:THR:HG23	2.54	0.42
40:XI:61:ASP:O	40:XI:62:LEU:HD22	2.19	0.42
43:XL:9:LYS:HE2	43:XL:9:LYS:HB2	1.81	0.42
44:XM:19:THR:HA	44:XM:25:GLY:O	2.19	0.42
45:XN:61:ASN:C	45:XN:62:ARG:HG3	2.44	0.42
49:XR:23:LYS:HG2	49:XR:23:LYS:H	1.67	0.42
49:XR:39:VAL:HA	49:XR:40:PRO:HD3	1.89	0.42
1:YA:64:A:H8	1:YA:64:A:O5'	2.02	0.42
1:YA:241:A:C8	1:YA:243:U:N3	2.87	0.42
1:YA:282:A:C6	1:YA:283:G:C5	3.07	0.42
1:YA:287:G:C2'	1:YA:288:U:H5'	2.49	0.42
1:YA:351:C:C2	1:YA:352:A:N7	2.87	0.42
1:YA:544:C:C4	1:YA:545:U:N3	2.86	0.42
1:YA:716:A:H2'	1:YA:717:C:O4'	2.19	0.42
1:YA:803:U:H2'	1:YA:804:A:H5'	2.00	0.42
1:YA:1079:C:N3	1:YA:1088:A:C2	2.87	0.42
1:YA:1299:G:H5"	1:YA:1300:G:H5"	2.00	0.42
1:YA:1338:G:H4'	20:YT:18:GLU:CD	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1365:A:H3'	1:YA:1366:A:C8	2.54	0.42
1:YA:2009:A:N6	56:YA:3385:HOH:O	2.52	0.42
1:YA:2199:A:C6	1:YA:2200:C:C2	3.07	0.42
1:YA:2624:G:H2'	1:YA:2625:G:O4'	2.19	0.42
1:YA:2638:G:C2'	1:YA:2639:A:OP2	2.66	0.42
1:YA:2784:U:C4	1:YA:2785:C:N4	2.87	0.42
2:YB:100:G:H2'	2:YB:101:A:C8	2.54	0.42
4:YD:163:GLY:O	4:YD:164:GLN:C	2.61	0.42
4:YD:183:GLU:N	4:YD:183:GLU:CD	2.77	0.42
5:YE:133:LEU:C	5:YE:135:ALA:N	2.75	0.42
6:YF:31:GLU:O	6:YF:32:LYS:C	2.63	0.42
6:YF:90:LEU:HG	6:YF:98:PHE:CE2	2.53	0.42
7:YG:28:LYS:H	7:YG:79:THR:HG22	1.83	0.42
7:YG:120:ILE:O	7:YG:120:ILE:HG23	2.19	0.42
9:YI:44:LYS:O	9:YI:48:ILE:HG12	2.19	0.42
9:YI:109:ALA:HB1	9:YI:125:THR:HA	2.00	0.42
10:YJ:75:TYR:CD1	10:YJ:84:ILE:HD11	2.54	0.42
10:YJ:81:ILE:HG22	10:YJ:82:GLY:N	2.34	0.42
11:YK:39:ILE:HB	11:YK:41:ILE:CD1	2.49	0.42
12:YL:103:ILE:HD13	12:YL:104:GLN:NE2	2.34	0.42
14:YN:96:ARG:CZ	14:YN:96:ARG:HB2	2.48	0.42
16:YP:103:THR:O	16:YP:106:ALA:HB3	2.19	0.42
18:YR:4:VAL:HA	18:YR:12:HIS:O	2.18	0.42
19:YS:66:ILE:C	19:YS:68:ASP:N	2.77	0.42
24:YX:76:LYS:HG3	24:YX:77:TYR:N	2.33	0.42
26:YZ:38:GLU:CD	26:YZ:39:ASP:H	2.26	0.42
31:Y4:9:LYS:HD3	31:Y4:9:LYS:C	2.43	0.42
1:RA:149:A:H2'	1:RA:150:U:C6	2.53	0.42
1:RA:243:U:O2'	1:RA:244:A:H5'	2.18	0.42
1:RA:591:U:H1'	30:R3:1:PRO:H3	1.84	0.42
1:RA:818:G:H5'	1:RA:839:U:OP1	2.19	0.42
1:RA:1028:A:H61	1:RA:1125:G:H2'	1.80	0.42
1:RA:1061:U:O4'	9:RI:9:LYS:HD2	2.20	0.42
1:RA:1070:A:C6	9:RI:9:LYS:O	2.72	0.42
1:RA:1358:G:N7	56:RA:3402:HOH:O	2.37	0.42
1:RA:1434:A:H2'	1:RA:1435:G:H8	1.84	0.42
1:RA:1906:G:C2'	1:RA:1907:G:O5'	2.68	0.42
1:RA:2286:G:H4'	1:RA:2287:A:O4'	2.19	0.42
1:RA:2320:U:H5'	1:RA:2321:U:C5	2.55	0.42
1:RA:2422:C:H5'	1:RA:2423:U:OP2	2.19	0.42
1:RA:2723:C:H6	1:RA:2723:C:O5'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:RC:29:PHE:O	3:RC:30:ALA:C	2.62	0.42
3:RC:185:ALA:C	3:RC:187:CYS:H	2.26	0.42
3:RC:209:ALA:HA	3:RC:212:TRP:NE1	2.35	0.42
4:RD:3:GLY:C	4:RD:82:PHE:CE1	2.97	0.42
4:RD:114:LYS:HG3	4:RD:114:LYS:H	1.48	0.42
5:RE:115:GLN:O	5:RE:116:ASP:C	2.61	0.42
10:RJ:74:TYR:CD2	10:RJ:92:MET:HE2	2.54	0.42
11:RK:47:ILE:HG13	11:RK:48:PRO:CD	2.49	0.42
11:RK:63:VAL:HG13	11:RK:103:VAL:HG12	2.01	0.42
13:RM:8:LYS:HD2	13:RM:8:LYS:HA	1.65	0.42
14:RN:73:ASN:ND2	14:RN:76:VAL:HG11	2.32	0.42
16:RP:96:LEU:HA	16:RP:96:LEU:HD12	1.76	0.42
17:RQ:53:LYS:H	17:RQ:53:LYS:HG2	1.60	0.42
19:RS:56:ALA:O	19:RS:57:ASN:C	2.62	0.42
21:RU:85:ARG:HA	21:RU:91:LYS:O	2.19	0.42
24:RX:73:ARG:O	24:RX:73:ARG:HG3	2.19	0.42
27:R0:22:THR:HG22	27:R0:23:ALA:O	2.19	0.42
32:QA:11:G:C6	32:QA:12:U:C4	3.07	0.42
32:QA:148:G:N3	32:QA:1446:A:H2	2.17	0.42
32:QA:255:G:H4'	48:QQ:18:LYS:CE	2.49	0.42
32:QA:485:U:O2'	32:QA:486:U:P	2.77	0.42
32:QA:725:G:H2'	32:QA:726:C:C6	2.54	0.42
32:QA:865:A:C5	32:QA:866:C:C5	3.06	0.42
32:QA:903:G:C5	32:QA:904:U:C4	3.06	0.42
32:QA:937:A:C2	32:QA:1379:G:O6	2.72	0.42
32:QA:949:A:C6	32:QA:950:U:C4	3.07	0.42
32:QA:1003:G:C6	32:QA:1036:A:N6	2.87	0.42
32:QA:1081:A:OP1	36:QE:20:VAL:HG23	2.19	0.42
32:QA:1128:C:O2'	32:QA:1129:C:H5'	2.18	0.42
32:QA:1137:C:O2	32:QA:1137:C:O4'	2.37	0.42
32:QA:1346:A:C4	32:QA:1348:U:C4	3.07	0.42
33:QB:131:LYS:C	33:QB:133:ALA:H	2.27	0.42
35:QD:53:GLN:HE21	35:QD:202:LEU:CA	2.31	0.42
38:QG:128:GLU:O	38:QG:129:ASN:C	2.61	0.42
40:QI:78:ILE:O	40:QI:79:ARG:C	2.61	0.42
41:QJ:35:GLN:CG	41:QJ:77:VAL:HB	2.49	0.42
46:QO:69:LEU:HD21	46:QO:76:ARG:HB2	2.01	0.42
48:QQ:7:LEU:HD23	48:QQ:24:ILE:HD13	1.97	0.42
48:QQ:55:GLY:HA3	48:QQ:82:VAL:CG1	2.46	0.42
51:QT:56:ILE:CG2	51:QT:57:VAL:N	2.81	0.42
32:XA:68:G:H5'	32:XA:171:A:C1'	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:142:G:N2	32:XA:143:A:H1'	2.34	0.42
32:XA:238:A:C2'	32:XA:239:U:H5"	2.47	0.42
32:XA:295:C:C4	32:XA:296:U:C5	3.07	0.42
32:XA:451:A:C4'	32:XA:452:A:O5'	2.57	0.42
32:XA:807:A:H2'	32:XA:808:C:C6	2.54	0.42
32:XA:1051:C:O2'	32:XA:1052:U:C6	2.66	0.42
32:XA:1213:A:C8	32:XA:1215:G:N7	2.87	0.42
32:XA:1215:G:O2'	32:XA:1216:A:C8	2.50	0.42
32:XA:1221:G:C2	32:XA:1222:G:H1'	2.53	0.42
32:XA:1460:C:N4	32:XA:1461:G:C5	2.87	0.42
37:XF:72:ASP:OD1	37:XF:72:ASP:N	2.52	0.42
39:XH:11:THR:HG22	39:XH:14:ARG:NH2	2.33	0.42
49:XR:39:VAL:HG13	49:XR:40:PRO:HD2	2.01	0.42
51:XT:54:GLN:N	51:XT:55:PRO:CD	2.82	0.42
1:YA:370:G:N1	1:YA:424:G:N7	2.66	0.42
1:YA:417:C:H2'	1:YA:418:C:H6	1.83	0.42
1:YA:447:A:N1	1:YA:454:A:H2'	2.33	0.42
1:YA:607:U:C6	1:YA:607:U:C3'	3.02	0.42
1:YA:656:G:H2'	1:YA:657:U:C6	2.54	0.42
1:YA:768:G:O2'	1:YA:769:U:H5'	2.19	0.42
1:YA:922:C:H2'	1:YA:923:G:C8	2.54	0.42
1:YA:1050:A:O2'	1:YA:1051:G:H5'	2.19	0.42
1:YA:1283:G:N1	1:YA:1286:A:OP2	2.52	0.42
1:YA:1308:A:N7	1:YA:1309:G:C5	2.87	0.42
1:YA:1338:G:O2'	20:YT:18:GLU:HG3	2.19	0.42
1:YA:1395:A:H4'	1:YA:1397:U:C5	2.53	0.42
1:YA:1438:U:H5"	56:YA:3643:HOH:O	2.20	0.42
1:YA:1555:G:H2'	1:YA:1556:C:C5	2.54	0.42
1:YA:1856:U:H2'	1:YA:1857:G:O5'	2.18	0.42
1:YA:2054:A:C2	1:YA:2616:C:N3	2.87	0.42
1:YA:2320:U:H1'	1:YA:2333:A:H62	1.84	0.42
1:YA:2738:A:C2	1:YA:2739:U:C2	3.08	0.42
3:YC:76:VAL:HG12	3:YC:114:GLN:HG3	2.01	0.42
3:YC:269:ARG:HE	3:YC:269:ARG:HA	1.84	0.42
4:YD:89:GLU:HG2	4:YD:94:GLN:HE22	1.83	0.42
6:YF:69:ALA:O	6:YF:70:ARG:HB2	2.18	0.42
6:YF:162:ASP:C	6:YF:164:GLU:N	2.75	0.42
6:YF:176:PHE:HB3	6:YF:177:ARG:H	1.72	0.42
8:YH:147:VAL:O	8:YH:148:ALA:HB3	2.19	0.42
9:YI:22:PRO:HB2	9:YI:23:VAL:H	1.61	0.42
9:YI:112:LYS:O	9:YI:113:ALA:HB2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:YI:124:MET:O	9:YI:127:SER:HB2	2.18	0.42
10:YJ:24:THR:O	10:YJ:25:LEU:HB3	2.18	0.42
12:YL:70:LYS:HG2	12:YL:70:LYS:O	2.19	0.42
16:YP:52:ARG:O	16:YP:55:HIS:HB2	2.18	0.42
16:YP:105:LYS:HA	16:YP:108:ARG:NE	2.33	0.42
17:YQ:64:ILE:HD12	17:YQ:95:ALA:HB3	2.00	0.42
17:YQ:91:ARG:CZ	18:YR:11:GLN:H	2.32	0.42
18:YR:21:ARG:HB2	18:YR:93:PHE:CD1	2.53	0.42
19:YS:28:LYS:O	19:YS:29:VAL:HG23	2.19	0.42
1:RA:271:G:N1	1:RA:367:G:C4	2.87	0.42
1:RA:1085:A:H2'	1:RA:1086:A:C4	2.54	0.42
1:RA:1385:A:N3	1:RA:1386:C:C6	2.87	0.42
1:RA:1773:A:H2'	1:RA:1774:C:H5'	2.00	0.42
1:RA:1996:C:OP1	11:RK:31:ARG:NE	2.51	0.42
1:RA:2396:G:O2'	1:RA:2397:G:H5'	2.19	0.42
1:RA:2459:A:O5'	1:RA:2459:A:H8	2.03	0.42
1:RA:2547:A:O2'	1:RA:2548:U:H5'	2.19	0.42
3:RC:182:LYS:C	3:RC:183:VAL:HG23	2.45	0.42
3:RC:269:ARG:HD3	3:RC:269:ARG:HA	1.59	0.42
8:RH:94:ILE:HG22	8:RH:95:GLY:O	2.19	0.42
11:RK:49:ARG:HB3	11:RK:50:GLY:H	1.64	0.42
13:RM:43:ALA:O	13:RM:47:GLU:HB2	2.19	0.42
19:RS:20:VAL:O	19:RS:23:LEU:HB2	2.19	0.42
22:RV:9:ARG:HD2	22:RV:40:ILE:O	2.19	0.42
25:RY:59:GLU:O	25:RY:63:ALA:HB3	2.18	0.42
32:QA:4:U:O2	32:QA:4:U:C2'	2.68	0.42
32:QA:251:G:H4'	32:QA:252:U:O5'	2.20	0.42
32:QA:504:C:H6	32:QA:504:C:O5'	2.02	0.42
32:QA:748:G:O6	32:QA:749:A:N6	2.52	0.42
32:QA:792:A:H4'	32:QA:793:U:O5'	2.19	0.42
32:QA:1083:U:H5	32:QA:1084:G:C6	2.37	0.42
32:QA:1312:G:N7	50:QS:2:ARG:HA	2.33	0.42
32:QA:1453:G:HO2'	32:QA:1454:G:P	2.42	0.42
33:QB:27:LYS:C	33:QB:29:PHE:H	2.26	0.42
33:QB:218:ALA:CA	33:QB:221:ARG:HH21	2.32	0.42
34:QC:166:TRP:N	34:QC:166:TRP:CE3	2.79	0.42
35:QD:87:GLU:O	35:QD:90:LEU:HB2	2.20	0.42
37:QF:62:MET:HG3	37:QF:64:VAL:HG23	1.99	0.42
40:QI:49:GLN:C	40:QI:51:LEU:H	2.27	0.42
42:QK:91:GLY:HA2	42:QK:94:SER:HB3	2.02	0.42
45:QN:20:PHE:O	45:QN:21:ALA:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:QT:3:ILE:H	51:QT:3:ILE:HG13	1.70	0.42
51:QT:74:HIS:O	51:QT:78:LEU:HB2	2.19	0.42
52:QU:28:LEU:HD23	52:QU:28:LEU:HA	1.80	0.42
32:XA:112:G:C2	32:XA:330:C:C4	3.06	0.42
32:XA:183:C:O2'	32:XA:184:G:C5'	2.66	0.42
32:XA:198:G:O2'	32:XA:199:A:P	2.77	0.42
32:XA:375:U:C2	32:XA:376:G:C8	3.07	0.42
32:XA:1097:C:C2	32:XA:1098:C:C5	3.08	0.42
32:XA:1241:G:C4	32:XA:1242:G:C8	3.07	0.42
32:XA:1408:A:N7	32:XA:1409:C:N4	2.67	0.42
34:XC:18:ASN:HA	34:XC:55:VAL:HG13	2.00	0.42
36:XE:36:THR:HG23	36:XE:62:ALA:HB1	2.00	0.42
39:XH:33:VAL:C	39:XH:35:ILE:N	2.77	0.42
39:XH:65:PHE:CD2	39:XH:66:GLN:HG2	2.55	0.42
43:XL:42:LYS:CG	43:XL:43:LYS:N	2.81	0.42
45:XN:20:PHE:HB3	45:XN:24:ALA:HB2	2.01	0.42
46:XO:34:GLN:NE2	46:XO:37:HIS:HD2	2.17	0.42
48:XQ:17:GLU:O	48:XQ:18:LYS:HB2	2.19	0.42
52:XU:34:ARG:O	52:XU:35:GLU:O	2.37	0.42
1:YA:55:G:H2'	1:YA:55:G:N3	2.34	0.42
1:YA:303:G:N1	1:YA:315:G:C6	2.87	0.42
1:YA:752:A:O2'	1:YA:753:A:C8	2.72	0.42
1:YA:952:G:C6	1:YA:966:G:N1	2.88	0.42
1:YA:953:G:O2'	1:YA:954:G:H5'	2.19	0.42
1:YA:1056:G:C5'	1:YA:1085:A:C2	3.02	0.42
1:YA:1075:C:O2'	1:YA:1076:C:H5'	2.19	0.42
1:YA:1154:G:H8	1:YA:1154:G:O5'	2.02	0.42
1:YA:1186:G:H2'	1:YA:1187:G:O4'	2.20	0.42
1:YA:1248:G:O2'	17:YQ:2:ARG:HA	2.20	0.42
1:YA:1349:C:N3	1:YA:1382:G:O6	2.52	0.42
1:YA:1428:C:H5"	3:YC:27:LYS:NZ	2.33	0.42
1:YA:1475:G:C2'	1:YA:1476:U:OP2	2.67	0.42
1:YA:1648:U:OP1	56:YA:3399:HOH:O	2.20	0.42
1:YA:1865:U:O2	1:YA:1877:A:C6	2.73	0.42
1:YA:2552:U:C2	1:YA:2554:U:C5'	3.01	0.42
1:YA:2574:G:C2	1:YA:2575:C:C2	3.07	0.42
2:YB:65:U:O2	2:YB:65:U:H2'	2.19	0.42
3:YC:161:VAL:HG13	3:YC:174:ARG:O	2.18	0.42
5:YE:160:ALA:C	5:YE:162:ARG:H	2.26	0.42
10:YJ:73:VAL:CG2	10:YJ:74:TYR:H	2.23	0.42
10:YJ:119:PHE:C	10:YJ:121:LYS:N	2.74	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:YM:5:LYS:HA	13:YM:5:LYS:HD2	1.78	0.42
16:YP:102:ARG:HD2	16:YP:106:ALA:C	2.44	0.42
19:YS:40:ASN:OD1	19:YS:41:LYS:N	2.52	0.42
24:YX:3:VAL:C	24:YX:5:GLN:H	2.27	0.42
27:Y0:30:ASP:O	27:Y0:31:LYS:C	2.63	0.42
1:RA:396:G:H1'	24:RX:28:PHE:HB3	2.01	0.42
1:RA:415:A:H61	1:RA:2407:A:N6	2.17	0.42
1:RA:950:G:C6	1:RA:951:C:C4	3.08	0.42
1:RA:1001:A:H2'	1:RA:1002:G:O4'	2.19	0.42
1:RA:1059:G:C2	1:RA:1080:A:N3	2.87	0.42
1:RA:1073:A:N7	1:RA:1074:G:C8	2.84	0.42
1:RA:1813:G:C2	3:RC:49:THR:CG2	3.01	0.42
1:RA:1959:G:C2'	1:RA:1960:A:O5'	2.67	0.42
1:RA:2076:U:O2	1:RA:2076:U:O4'	2.36	0.42
1:RA:2136:G:O6	1:RA:2156:G:C2	2.72	0.42
1:RA:2154:A:H2'	1:RA:2155:U:O4'	2.19	0.42
1:RA:2716:C:C2	1:RA:2717:C:C5	3.08	0.42
3:RC:129:LEU:O	3:RC:134:ILE:HD11	2.20	0.42
5:RE:83:VAL:HG12	5:RE:86:ALA:N	2.35	0.42
9:RI:39:LYS:O	9:RI:43:ALA:HB2	2.20	0.42
11:RK:113:MET:C	11:RK:115:ILE:N	2.77	0.42
13:RM:83:GLY:O	13:RM:85:GLY:N	2.52	0.42
14:RN:69:ARG:H	14:RN:69:ARG:HG2	1.24	0.42
17:RQ:93:ILE:O	17:RQ:96:ASP:HB3	2.19	0.42
18:RR:3:ALA:HA	18:RR:40:MET:O	2.18	0.42
20:RT:19:LYS:H	20:RT:19:LYS:HG3	1.63	0.42
25:RY:56:LEU:HA	25:RY:59:GLU:HG2	2.00	0.42
26:RZ:24:LEU:HD23	26:RZ:24:LEU:C	2.44	0.42
32:QA:36:C:H4'	43:QL:118:VAL:O	2.20	0.42
32:QA:394:G:H2'	32:QA:395:C:H6	1.85	0.42
32:QA:971:G:H1'	32:QA:1365:G:O2'	2.20	0.42
32:QA:1040:U:C2	32:QA:1041:G:C8	3.08	0.42
32:QA:1327:C:O2'	32:QA:1328:C:H5'	2.19	0.42
32:QA:1480:A:C2	32:QA:1481:U:C2	3.07	0.42
33:QB:191:ASP:HA	33:QB:192:PRO:HD2	1.69	0.42
34:QC:39:ARG:NE	34:QC:54:ILE:HD11	2.35	0.42
35:QD:138:PRO:HA	35:QD:181:PHE:HD2	1.84	0.42
38:QG:31:VAL:C	38:QG:33:GLY:N	2.75	0.42
38:QG:78:ARG:HA	38:QG:82:SER:O	2.19	0.42
44:QM:13:HIS:CG	44:QM:41:ASP:HB2	2.55	0.42
46:QO:55:LEU:HA	46:QO:58:MET:HG3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:QU:4:LYS:HD2	52:QU:4:LYS:C	2.44	0.42
32:XA:223:A:C4	32:XA:224:U:C5	3.08	0.42
32:XA:386:C:C2'	32:XA:387:U:H5'	2.48	0.42
32:XA:602:A:C2'	32:XA:603:U:H5'	2.50	0.42
32:XA:944:G:C3'	32:XA:945:G:H5'	2.49	0.42
32:XA:1084:G:C5	32:XA:1085:U:C4	3.07	0.42
32:XA:1126:U:O2	32:XA:1281:C:C6	2.72	0.42
32:XA:1343:G:H4'	40:XI:123:ARG:O	2.18	0.42
32:XA:1438:G:C2	32:XA:1464:U:O2	2.72	0.42
33:XB:84:LEU:O	33:XB:84:LEU:CG	2.67	0.42
34:XC:187:GLU:O	34:XC:188:ALA:CB	2.67	0.42
36:XE:17:VAL:HA	36:XE:33:THR:O	2.19	0.42
40:XI:70:GLY:O	40:XI:71:ILE:C	2.61	0.42
40:XI:77:ALA:O	40:XI:78:ILE:C	2.62	0.42
45:XN:20:PHE:CB	45:XN:24:ALA:HB2	2.49	0.42
1:YA:36:G:C6	1:YA:445:C:N4	2.87	0.42
1:YA:110:G:H2'	1:YA:110:G:N3	2.34	0.42
1:YA:121:G:C2	1:YA:131:A:C5	3.07	0.42
1:YA:233:A:O2'	1:YA:234:U:C5'	2.67	0.42
1:YA:335:C:O2'	1:YA:336:C:P	2.77	0.42
1:YA:425:G:C2	1:YA:426:C:C5	3.08	0.42
1:YA:570:G:C5	1:YA:2030:A:C5	3.08	0.42
1:YA:675:A:N6	1:YA:676:A:N6	2.68	0.42
1:YA:862:G:C4	1:YA:863:A:C8	3.07	0.42
1:YA:1127:A:O2'	1:YA:1128:G:C5'	2.58	0.42
1:YA:1171:G:C5	1:YA:1179:G:N2	2.87	0.42
1:YA:1353:A:O2'	1:YA:1354:A:H5'	2.19	0.42
1:YA:1359:A:OP1	1:YA:1360:G:OP2	2.37	0.42
1:YA:1438:U:C2'	1:YA:1439:A:H5'	2.49	0.42
1:YA:1865:U:C2'	1:YA:1866:A:H8	2.32	0.42
1:YA:2011:U:H2'	1:YA:2012:G:O4'	2.19	0.42
1:YA:2202:U:O2	1:YA:2202:U:H2'	2.19	0.42
1:YA:2214:C:H2'	1:YA:2215:C:C6	2.54	0.42
1:YA:2337:G:N3	1:YA:2337:G:C2'	2.81	0.42
1:YA:2844:G:N2	1:YA:2874:C:N3	2.68	0.42
3:YC:14:HIS:O	3:YC:203:VAL:HG11	2.19	0.42
4:YD:125:TRP:CD2	4:YD:160:LYS:HB3	2.54	0.42
5:YE:12:LEU:O	5:YE:13:THR:HB	2.18	0.42
5:YE:135:ALA:C	5:YE:137:LYS:N	2.78	0.42
6:YF:56:LEU:O	6:YF:56:LEU:HD13	2.20	0.42
7:YG:60:GLY:C	7:YG:62:ALA:H	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:YL:68:SER:O	12:YL:69:ARG:CB	2.68	0.42
12:YL:142:ILE:HG22	12:YL:144:GLU:H	1.85	0.42
14:YN:38:LEU:HB3	14:YN:39:PRO:CD	2.45	0.42
16:YP:3:ILE:C	16:YP:5:LYS:H	2.26	0.42
22:YV:43:ASP:C	22:YV:45:ASP:N	2.77	0.42
24:YX:69:GLU:HA	24:YX:72:ALA:HB3	2.01	0.42
31:Y4:3:VAL:HB	31:Y4:37:GLN:NE2	2.35	0.42
1:RA:137:U:HO2'	1:RA:138:U:P	2.27	0.42
1:RA:558:U:OP2	10:RJ:113:PRO:HG2	2.19	0.42
1:RA:627:A:C5	1:RA:637:A:N7	2.87	0.42
1:RA:733:G:C5	1:RA:761:A:C5	3.08	0.42
1:RA:845:A:H3'	1:RA:845:A:N3	2.34	0.42
1:RA:1252:G:N1	17:RQ:36:GLN:OE1	2.38	0.42
1:RA:1354:A:C8	1:RA:1355:G:C8	3.08	0.42
1:RA:1385:A:H4'	1:RA:1386:C:OP1	2.20	0.42
1:RA:1495:A:C6	1:RA:1496:A:C6	3.08	0.42
1:RA:1562:U:H2'	1:RA:1563:U:O4'	2.20	0.42
1:RA:1612:C:H4'	29:R2:5:PHE:O	2.19	0.42
1:RA:2149:U:C2'	1:RA:2150:C:O5'	2.67	0.42
1:RA:2313:C:H5"	6:RF:87:LYS:HD3	2.01	0.42
1:RA:2352:A:C2	23:RW:30:VAL:CG1	2.86	0.42
1:RA:2555:U:C5	1:RA:2556:C:C2	3.08	0.42
1:RA:2694:G:H2'	1:RA:2695:U:H6	1.85	0.42
1:RA:2856:A:N6	1:RA:2857:G:C6	2.88	0.42
2:RB:94:A:H2'	2:RB:95:U:C6	2.55	0.42
3:RC:77:VAL:CG2	3:RC:111:ALA:HA	2.49	0.42
3:RC:79:ARG:HG3	3:RC:92:LEU:CB	2.50	0.42
3:RC:181:ARG:CG	3:RC:181:ARG:NH2	2.80	0.42
4:RD:93:GLY:O	4:RD:94:GLN:C	2.62	0.42
4:RD:103:ASP:CG	4:RD:104:VAL:N	2.78	0.42
4:RD:190:LYS:O	4:RD:191:GLY:O	2.38	0.42
9:RI:96:LYS:H	9:RI:96:LYS:CD	2.32	0.42
12:RL:134:ALA:O	12:RL:135:ILE:C	2.62	0.42
14:RN:32:GLU:C	14:RN:33:ILE:HG13	2.44	0.42
14:RN:54:LEU:HD12	14:RN:54:LEU:HA	1.77	0.42
15:RO:71:ALA:O	15:RO:106:LEU:HB2	2.19	0.42
17:RQ:96:ASP:C	17:RQ:98:ALA:H	2.27	0.42
18:RR:49:ILE:CD1	18:RR:53:PHE:H	2.33	0.42
19:RS:19:LEU:O	27:R0:21:LEU:HD12	2.19	0.42
19:RS:28:LYS:O	19:RS:31:GLN:N	2.53	0.42
32:QA:49:U:O2'	32:QA:50:A:H2'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:737:C:H2'	32:QA:738:C:C6	2.51	0.42
32:QA:765:G:H2'	32:QA:812:G:H21	1.85	0.42
32:QA:1003:G:H21	32:QA:1005:A:P	2.41	0.42
32:QA:1066:C:C5'	32:QA:1066:C:C6	3.02	0.42
32:QA:1370:G:C2	32:QA:1371:G:C8	3.08	0.42
32:QA:1391:U:H2'	32:QA:1392:G:C8	2.55	0.42
33:QB:23:ASN:OD1	33:QB:25:LYS:HB2	2.19	0.42
33:QB:199:ILE:HA	33:QB:200:PRO:HD2	1.87	0.42
34:QC:34:SER:O	34:QC:37:LYS:HB3	2.19	0.42
34:QC:36:PHE:HZ	45:QN:89:ARG:HH12	1.68	0.42
35:QD:97:LEU:HD22	35:QD:117:VAL:HG11	2.01	0.42
37:QF:25:TYR:O	37:QF:29:ILE:HD12	2.20	0.42
37:QF:38:ARG:O	37:QF:39:LEU:HB2	2.19	0.42
37:QF:40:GLU:CB	37:QF:42:TRP:NE1	2.81	0.42
39:QH:33:VAL:HG12	39:QH:34:ALA:N	2.33	0.42
40:QI:10:ARG:HB2	40:QI:14:SER:O	2.19	0.42
40:QI:27:ILE:HD12	40:QI:27:ILE:N	2.34	0.42
42:QK:125:LYS:O	52:QU:33:ARG:NH1	2.53	0.42
50:QS:34:SER:C	50:QS:36:ARG:N	2.77	0.42
50:QS:79:TYR:CE1	50:QS:80:ARG:HB2	2.54	0.42
32:XA:370:C:O2'	32:XA:371:A:H5'	2.20	0.42
32:XA:754:C:O2	32:XA:754:C:C2'	2.64	0.42
32:XA:926:G:C6	32:XA:1505:G:C6	3.07	0.42
32:XA:1065:U:H5	32:XA:1190:G:N7	2.16	0.42
32:XA:1097:C:H2'	32:XA:1098:C:C6	2.52	0.42
32:XA:1258:G:C2	32:XA:1278:G:N1	2.88	0.42
32:XA:1467:C:H2'	32:XA:1468:A:C8	2.55	0.42
32:XA:1489:G:C5	32:XA:1490:U:C5	3.08	0.42
33:XB:67:LEU:HG	33:XB:157:PRO:HG3	2.01	0.42
34:XC:31:ASN:O	34:XC:35:ASP:HB2	2.19	0.42
40:XI:9:GLY:CA	40:XI:16:ALA:HB3	2.48	0.42
41:XJ:84:VAL:CG2	41:XJ:85:ASP:N	2.74	0.42
42:XK:70:ALA:HB1	42:XK:104:PHE:CZ	2.55	0.42
42:XK:96:ILE:HD13	42:XK:109:ILE:CD1	2.48	0.42
44:XM:11:HIS:NE2	44:XM:43:LYS:HD2	2.34	0.42
44:XM:78:ARG:NH2	44:XM:79:LEU:HA	2.34	0.42
45:XN:27:LYS:HB2	45:XN:45:LEU:HD23	2.00	0.42
49:XR:71:ASP:CB	49:XR:72:ARG:HH21	2.33	0.42
51:XT:42:ASP:O	51:XT:43:LYS:C	2.62	0.42
52:XU:19:LYS:HB2	52:XU:20:ARG:CZ	2.49	0.42
1:YA:28:A:H2'	1:YA:29:U:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:123:G:O3'	1:YA:1376:C:H4'	2.20	0.42
1:YA:140:C:O2'	1:YA:141:G:OP2	2.34	0.42
1:YA:300:A:H2	1:YA:319:G:N2	2.17	0.42
1:YA:323:C:N4	1:YA:333:G:N7	2.68	0.42
1:YA:455:C:N3	1:YA:473:G:H5'	2.35	0.42
1:YA:498:G:C6	1:YA:499:U:C4	3.07	0.42
1:YA:769:U:H1'	1:YA:1379:U:C6	2.54	0.42
1:YA:1056:G:H5"	1:YA:1085:A:C2	2.54	0.42
1:YA:1123:C:H2'	1:YA:1124:G:H8	1.85	0.42
1:YA:1303:G:O2'	1:YA:1304:A:C8	2.47	0.42
1:YA:1390:U:O2'	1:YA:1391:U:H5'	2.20	0.42
1:YA:1866:A:C4	1:YA:1876:A:N6	2.88	0.42
1:YA:2058:A:N6	1:YA:2059:A:N6	2.68	0.42
1:YA:2238:G:H4'	1:YA:2239:G:OP1	2.20	0.42
1:YA:2331:G:H1'	23:YW:40:ARG:HB3	2.01	0.42
1:YA:2335:A:C2	1:YA:2337:G:C8	3.07	0.42
1:YA:2540:C:H2'	1:YA:2541:A:C8	2.54	0.42
2:YB:21:G:C2	2:YB:63:C:C2	3.07	0.42
2:YB:27:C:C5	2:YB:28:C:C5	3.08	0.42
2:YB:42:C:H2'	2:YB:43:C:C5	2.52	0.42
2:YB:112:G:N2	15:YO:45:SER:HA	2.18	0.42
3:YC:115:ILE:HB	3:YC:127:ASN:OD1	2.20	0.42
3:YC:159:THR:N	3:YC:194:VAL:CG1	2.83	0.42
4:YD:32:ASN:HB2	4:YD:50:VAL:HB	2.01	0.42
4:YD:175:LEU:HB3	4:YD:176:ASP:H	1.61	0.42
5:YE:138:LEU:HA	5:YE:141:MET:CE	2.50	0.42
6:YF:25:MET:C	6:YF:27:VAL:N	2.77	0.42
7:YG:67:ALA:O	7:YG:71:LEU:HB2	2.19	0.42
8:YH:7:ASP:OD2	8:YH:35:LYS:HD3	2.20	0.42
9:YI:53:PRO:O	9:YI:73:PRO:HG3	2.19	0.42
11:YK:46:ALA:HB3	11:YK:54:LYS:CE	2.50	0.42
11:YK:104:THR:C	11:YK:106:GLU:N	2.77	0.42
12:YL:4:ASN:O	12:YL:6:LEU:N	2.51	0.42
16:YP:103:THR:HG22	16:YP:104:GLY:N	2.34	0.42
17:YQ:69:ARG:HH21	17:YQ:69:ARG:CB	2.22	0.42
18:YR:4:VAL:O	18:YR:38:VAL:HG23	2.20	0.42
20:YT:74:ILE:HG23	20:YT:75:GLY:N	2.34	0.42
21:YU:94:PHE:O	21:YU:95:PHE:C	2.61	0.42
24:YX:65:THR:O	24:YX:68:ALA:CB	2.67	0.42
26:YZ:28:LEU:N	26:YZ:28:LEU:CD2	2.82	0.42
1:RA:301:G:H1'	1:RA:302:C:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:735:A:H3'	1:RA:736:C:H6	1.85	0.42
1:RA:792:A:N3	1:RA:2072:C:O2'	2.48	0.42
1:RA:912:C:C2'	1:RA:913:U:H5'	2.49	0.42
1:RA:1105:U:H2'	1:RA:1106:G:C8	2.51	0.42
1:RA:1599:U:H2'	1:RA:1600:C:C6	2.55	0.42
1:RA:1655:A:H5'	4:RD:118:PHE:CD2	2.54	0.42
1:RA:2402:U:H2'	1:RA:2403:C:OP2	2.19	0.42
1:RA:2498:C:O2'	1:RA:2499:C:H5'	2.19	0.42
3:RC:124:LYS:HB3	3:RC:127:ASN:HD22	1.85	0.42
3:RC:229:HIS:CG	3:RC:230:PRO:HD2	2.55	0.42
4:RD:24:VAL:HA	4:RD:189:VAL:O	2.19	0.42
5:RE:150:THR:HG21	5:RE:153:LEU:HA	2.01	0.42
5:RE:194:LYS:O	5:RE:197:GLU:HB3	2.20	0.42
7:RG:36:LEU:HD13	7:RG:36:LEU:HA	1.85	0.42
7:RG:59:ASP:HB2	7:RG:63:GLN:HG3	2.01	0.42
9:RI:79:LEU:O	9:RI:85:ILE:HD12	2.19	0.42
9:RI:123:ALA:C	9:RI:125:THR:N	2.77	0.42
11:RK:18:ARG:HA	11:RK:18:ARG:HD2	1.80	0.42
12:RL:81:ASP:O	12:RL:82:LEU:HB3	2.18	0.42
15:RO:16:ARG:C	15:RO:18:LEU:N	2.75	0.42
17:RQ:40:LYS:HD3	17:RQ:44:TYR:CE1	2.54	0.42
17:RQ:85:ALA:O	17:RQ:87:VAL:C	2.62	0.42
17:RQ:104:ALA:O	17:RQ:108:LEU:HD12	2.19	0.42
17:RQ:105:PHE:HA	17:RQ:108:LEU:HD12	2.01	0.42
19:RS:96:ILE:O	19:RS:96:ILE:CG1	2.65	0.42
23:RW:9:THR:HG23	23:RW:10:ARG:HG3	2.01	0.42
23:RW:31:LEU:O	23:RW:33:GLY:N	2.53	0.42
24:RX:39:VAL:C	24:RX:41:SER:H	2.28	0.42
25:RY:13:GLU:C	25:RY:15:ASN:N	2.77	0.42
25:RY:18:LEU:O	25:RY:22:LEU:HB2	2.20	0.42
28:R1:9:LYS:NZ	28:R1:50:GLU:OE2	2.50	0.42
32:QA:68:G:C5	32:QA:69:G:H1'	2.55	0.42
32:QA:502:A:H2'	32:QA:503:C:O4'	2.20	0.42
32:QA:702:A:H3'	32:QA:703:G:C5'	2.49	0.42
32:QA:1046:A:O2'	32:QA:1047:G:H5'	2.20	0.42
32:QA:1370:G:C5'	40:QI:110:VAL:HG21	2.49	0.42
32:QA:1441:A:C8	32:QA:1442:G:C8	3.07	0.42
33:QB:105:THR:O	33:QB:105:THR:CG2	2.64	0.42
34:QC:166:TRP:CE3	34:QC:166:TRP:O	2.72	0.42
36:QE:60:GLN:C	36:QE:62:ALA:N	2.76	0.42
36:QE:104:ILE:HD11	36:QE:114:LEU:HB3	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:QG:12:LEU:H	38:QG:12:LEU:CD2	2.20	0.42
39:QH:76:ARG:CG	39:QH:76:ARG:NH1	2.74	0.42
39:QH:112:ASP:CG	39:QH:113:ARG:H	2.27	0.42
48:QQ:13:SER:O	48:QQ:16:MET:CE	2.68	0.42
32:XA:243:A:C2	32:XA:245:U:C2	3.08	0.42
32:XA:261:U:O2'	32:XA:263:A:N7	2.51	0.42
32:XA:330:C:O2'	32:XA:331:G:P	2.77	0.42
32:XA:408:A:C5	32:XA:409:U:C5	3.08	0.42
32:XA:413:G:H1'	32:XA:428:G:H21	1.85	0.42
32:XA:429:U:H4'	32:XA:430:A:O5'	2.18	0.42
32:XA:444:G:C6	32:XA:491:G:C6	3.08	0.42
32:XA:446:G:N2	32:XA:489:C:C2	2.88	0.42
32:XA:509:A:C5	32:XA:510:A:C6	3.07	0.42
32:XA:554:A:H2'	32:XA:555:U:C6	2.54	0.42
32:XA:577:G:C6	32:XA:812:G:N2	2.87	0.42
32:XA:1001:C:H2'	32:XA:1002:G:O4'	2.20	0.42
32:XA:1347:G:H8	40:XI:108:ARG:O	2.02	0.42
33:XB:63:LYS:HG2	33:XB:63:LYS:O	2.20	0.42
34:XC:18:ASN:ND2	34:XC:53:ARG:NH1	2.62	0.42
35:XD:84:ASN:OD1	36:XE:101:GLY:HA3	2.19	0.42
36:XE:96:GLN:N	36:XE:123:LEU:O	2.51	0.42
36:XE:131:ASN:HA	36:XE:132:PRO:HD2	1.82	0.42
37:XF:88:MET:HE3	37:XF:90:MET:SD	2.60	0.42
39:XH:8:ASP:O	39:XH:9:MET:C	2.61	0.42
40:XI:27:ILE:HD13	40:XI:62:LEU:HB3	2.01	0.42
41:XJ:51:VAL:HG22	41:XJ:65:TYR:HE1	1.83	0.42
42:XK:96:ILE:O	42:XK:97:ARG:C	2.63	0.42
1:YA:7:G:O2'	10:YJ:15:TRP:HZ2	2.03	0.42
1:YA:325:G:H2'	1:YA:326:G:H8	1.84	0.42
1:YA:370:G:C2	1:YA:424:G:C8	3.08	0.42
1:YA:444:C:O2'	1:YA:445:C:P	2.77	0.42
1:YA:729:G:C6	3:YC:206:LYS:HB2	2.54	0.42
1:YA:843:G:C6	1:YA:844:A:N6	2.87	0.42
1:YA:957:C:OP2	13:YM:75:GLU:HA	2.20	0.42
1:YA:995:C:O2'	17:YQ:60:TRP:HZ2	2.01	0.42
1:YA:1082:U:N3	1:YA:1086:A:C6	2.88	0.42
1:YA:1286:A:C5	1:YA:1289:C:C4	3.07	0.42
1:YA:1346:G:H2'	1:YA:1347:A:H8	1.85	0.42
1:YA:1395:A:H4'	1:YA:1397:U:C4	2.54	0.42
1:YA:1857:G:HO2'	1:YA:1884:G:H22	1.63	0.42
1:YA:2014:A:H5'	19:YS:94:ASP:OD2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2266:A:N6	1:YA:2273:A:OP2	2.49	0.42
1:YA:2331:G:H4'	23:YW:41:GLY:N	2.34	0.42
1:YA:2392:A:C2	12:YL:55:MET:HE3	2.55	0.42
1:YA:2672:U:O5'	1:YA:2672:U:H6	2.03	0.42
1:YA:2771:C:O2'	4:YD:173:GLN:OE1	2.38	0.42
1:YA:2884:U:P	27:Y0:40:HIS:HE2	2.41	0.42
2:YB:13:G:N2	2:YB:16:G:N3	2.67	0.42
6:YF:33:ILE:HB	6:YF:90:LEU:HD23	2.02	0.42
6:YF:111:ARG:NE	6:YF:111:ARG:N	2.68	0.42
8:YH:64:ALA:C	8:YH:66:ASN:N	2.75	0.42
14:YN:16:HIS:CE1	14:YN:20:MET:CE	2.99	0.42
16:YP:52:ARG:HB3	16:YP:55:HIS:HB2	2.00	0.42
18:YR:45:GLU:OE1	18:YR:46:GLU:O	2.38	0.42
21:YU:66:VAL:CG1	21:YU:67:SER:N	2.81	0.42
26:YZ:6:ILE:HD12	26:YZ:47:ILE:HD11	2.01	0.42
26:YZ:21:ALA:O	26:YZ:24:LEU:N	2.52	0.42
26:YZ:43:ILE:HD12	26:YZ:43:ILE:C	2.44	0.42
27:Y0:33:SER:HB3	27:Y0:34:GLY:H	1.43	0.42
30:Y3:31:ILE:HG22	30:Y3:34:LYS:HG2	2.01	0.42
1:RA:64:A:C6	1:RA:65:U:C4	3.08	0.42
1:RA:160:A:N6	1:RA:161:A:C6	2.88	0.42
1:RA:197:A:N6	1:RA:2430:A:H2'	2.35	0.42
1:RA:286:U:H2'	1:RA:287:G:H8	1.84	0.42
1:RA:324:A:C2	1:RA:325:G:H1'	2.54	0.42
1:RA:540:C:O2'	1:RA:541:A:H5'	2.20	0.42
1:RA:545:U:H2'	1:RA:546:U:C3'	2.49	0.42
1:RA:558:U:OP1	10:RJ:113:PRO:HD2	2.20	0.42
1:RA:720:U:H2'	1:RA:721:A:C8	2.54	0.42
1:RA:1142:A:C4	1:RA:1144:A:C8	3.08	0.42
1:RA:1443:U:H2'	1:RA:1444:G:H8	1.84	0.42
1:RA:1668:A:H4'	1:RA:1669:A:O5'	2.20	0.42
1:RA:1820:U:OP1	3:RC:176:ARG:CG	2.64	0.42
1:RA:1967:C:H2'	1:RA:1968:G:H5'	2.01	0.42
1:RA:2571:U:C2'	1:RA:2572:A:OP1	2.67	0.42
1:RA:2771:C:HO2'	4:RD:173:GLN:HE22	1.66	0.42
4:RD:46:ARG:NH1	4:RD:46:ARG:HG2	2.35	0.42
4:RD:103:ASP:CG	4:RD:104:VAL:H	2.26	0.42
5:RE:159:LEU:HD12	5:RE:159:LEU:HA	1.73	0.42
6:RF:46:LYS:HD2	6:RF:46:LYS:H	1.84	0.42
6:RF:112:ASP:OD2	6:RF:114:ARG:HG3	2.19	0.42
7:RG:59:ASP:C	7:RG:60:GLY:O	2.60	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:RG:93:TYR:O	7:RG:105:SER:O	2.38	0.42
10:RJ:38:GLY:C	10:RJ:40:HIS:N	2.74	0.42
12:RL:79:LEU:O	12:RL:82:LEU:HD22	2.19	0.42
13:RM:25:ASP:OD2	13:RM:25:ASP:N	2.52	0.42
13:RM:45:GLN:O	13:RM:46:ILE:C	2.63	0.42
15:RO:3:LYS:CG	15:RO:4:LYS:H	2.33	0.42
19:RS:20:VAL:CG1	19:RS:47:VAL:HG11	2.49	0.42
32:QA:10:A:HO2'	32:QA:507:C:HO2'	1.54	0.42
32:QA:71:A:N3	32:QA:72:A:C8	2.87	0.42
32:QA:82:G:H2'	32:QA:83:C:C4'	2.50	0.42
32:QA:204:G:C3'	32:QA:205:A:C5'	2.88	0.42
32:QA:257:G:H2'	32:QA:258:G:H8	1.85	0.42
32:QA:443:C:C2'	32:QA:444:G:H5'	2.50	0.42
32:QA:1084:G:C6	32:QA:1085:U:O4	2.72	0.42
32:QA:1221:G:H2'	32:QA:1222:G:C8	2.54	0.42
32:QA:1225:A:H2'	32:QA:1226:C:C6	2.55	0.42
32:QA:1280:A:OP1	41:QJ:9:ARG:NH1	2.52	0.42
33:QB:103:TRP:O	33:QB:105:THR:N	2.53	0.42
33:QB:221:ARG:HH12	33:QB:222:GLU:HB2	1.83	0.42
34:QC:10:ARG:O	34:QC:11:LEU:C	2.61	0.42
34:QC:119:ILE:HD11	34:QC:133:MET:HA	2.02	0.42
35:QD:131:ILE:C	35:QD:133:SER:H	2.28	0.42
37:QF:34:GLY:C	37:QF:35:LYS:HG2	2.45	0.42
38:QG:76:SER:HA	38:QG:85:GLN:HB2	2.02	0.42
42:QK:123:PRO:O	42:QK:124:LYS:C	2.63	0.42
48:QQ:66:LEU:O	48:QQ:67:SER:HB3	2.19	0.42
32:XA:53:A:N1	32:XA:359:G:C6	2.88	0.42
32:XA:137:U:H1'	32:XA:227:G:N2	2.35	0.42
32:XA:254:G:OP1	48:XQ:68:LYS:O	2.38	0.42
32:XA:275:G:O2'	32:XA:276:G:C5'	2.68	0.42
32:XA:955:U:H3	32:XA:1225:A:H61	1.67	0.42
32:XA:1006:G:N1	32:XA:1024:G:C2	2.88	0.42
32:XA:1012:A:C6	32:XA:1013:G:N7	2.88	0.42
32:XA:1306:A:C6	32:XA:1307:U:C4	3.08	0.42
32:XA:1349:A:H1'	32:XA:1374:A:N6	2.34	0.42
32:XA:1384:C:C2'	32:XA:1385:G:H5'	2.50	0.42
33:XB:90:PHE:CD2	33:XB:149:GLY:HA3	2.55	0.42
33:XB:216:VAL:C	33:XB:218:ALA:N	2.70	0.42
35:XD:149:LYS:NZ	35:XD:176:LYS:HD2	2.35	0.42
40:XI:26:LYS:HE3	40:XI:26:LYS:HB3	1.82	0.42
40:XI:123:ARG:HE	40:XI:123:ARG:HB2	1.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:XI:129:ARG:HA	40:XI:129:ARG:NE	2.34	0.42
43:XL:37:TYR:C	43:XL:38:THR:HG23	2.45	0.42
45:XN:8:ARG:HD2	45:XN:12:ARG:CZ	2.50	0.42
45:XN:9:GLU:HA	45:XN:12:ARG:HD2	2.02	0.42
1:YA:104:A:C8	1:YA:105:C:C5	3.08	0.42
1:YA:171:U:H2'	1:YA:172:A:C8	2.54	0.42
1:YA:191:A:N6	1:YA:203:A:H2'	2.34	0.42
1:YA:216:A:N7	1:YA:432:A:C6	2.88	0.42
1:YA:394:C:H2'	1:YA:395:U:C5'	2.49	0.42
1:YA:637:A:P	12:YL:112:LEU:HD22	2.60	0.42
1:YA:828:U:H4'	1:YA:831:G:N1	2.35	0.42
1:YA:898:C:C5	1:YA:899:A:C5	3.08	0.42
1:YA:1342:A:C6	1:YA:1397:U:C5	3.07	0.42
1:YA:1419:A:C2	1:YA:1579:A:C2	3.08	0.42
1:YA:1482:G:C4	1:YA:1483:G:C8	3.08	0.42
1:YA:1568:G:C2	3:YC:57:HIS:HE1	2.38	0.42
1:YA:1810:A:H2'	1:YA:1811:G:O4'	2.20	0.42
1:YA:1837:C:O2	1:YA:1927:A:H2	2.03	0.42
1:YA:2015:A:C2	27:Y0:2:VAL:HG11	2.55	0.42
1:YA:2033:A:H4'	1:YA:2034:U:OP1	2.20	0.42
1:YA:2322:A:N7	1:YA:2323:G:C5	2.88	0.42
1:YA:2331:G:H2'	1:YA:2332:C:O5'	2.20	0.42
1:YA:2379:G:H2'	1:YA:2380:C:C6	2.54	0.42
1:YA:2468:A:H1'	1:YA:2482:A:N6	2.35	0.42
1:YA:2668:G:H2'	1:YA:2669:G:H8	1.85	0.42
2:YB:84:G:O2'	2:YB:85:G:H5'	2.20	0.42
3:YC:242:HIS:HA	3:YC:243:PRO:HD3	1.88	0.42
6:YF:131:VAL:CG2	6:YF:151:LEU:H	2.32	0.42
6:YF:131:VAL:O	6:YF:132:ARG:HB2	2.18	0.42
6:YF:144:LYS:O	6:YF:145:VAL:C	2.63	0.42
6:YF:151:LEU:N	6:YF:151:LEU:HD13	2.35	0.42
8:YH:119:ASN:HB3	8:YH:120:GLY:H	1.68	0.42
12:YL:4:ASN:HD22	12:YL:4:ASN:HA	1.68	0.42
12:YL:55:MET:SD	12:YL:59:ARG:NE	2.81	0.42
13:YM:45:GLN:OE1	13:YM:125:PRO:HG3	2.20	0.42
13:YM:53:MET:HE2	13:YM:117:PHE:CE1	2.55	0.42
18:YR:88:GLY:O	18:YR:89:HIS:CB	2.68	0.42
19:YS:9:HIS:H	19:YS:102:HIS:HE1	1.66	0.42
23:YW:37:VAL:O	23:YW:39:GLN:N	2.52	0.42
25:YY:45:GLN:C	25:YY:47:ARG:N	2.76	0.42
31:Y4:13:ASN:O	31:Y4:13:ASN:CG	2.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:545:U:H1'	1:RA:547:A:H5'	2.01	0.42
1:RA:1141:U:H4'	1:RA:1142:A:O5'	2.20	0.42
1:RA:1166:G:C2'	1:RA:1167:C:H5'	2.49	0.42
1:RA:1570:A:C6	1:RA:1571:A:C6	3.07	0.42
1:RA:1870:C:H2'	1:RA:1871:A:C2	2.55	0.42
1:RA:1917:U:C4	1:RA:1918:A:C5	3.07	0.42
1:RA:2255:G:C2'	1:RA:2256:G:H5'	2.50	0.42
1:RA:2627:G:O2'	1:RA:2781:A:N1	2.51	0.42
1:RA:2647:U:O2'	1:RA:2648:G:H5'	2.19	0.42
3:RC:35:LYS:HB3	3:RC:35:LYS:HE3	1.46	0.42
3:RC:104:LEU:HB3	3:RC:105:ALA:H	1.66	0.42
3:RC:180:MET:HE2	3:RC:268:ARG:HH12	1.85	0.42
4:RD:9:VAL:O	4:RD:197:THR:HG23	2.19	0.42
4:RD:193:VAL:HG21	4:RD:201:LEU:HD21	2.02	0.42
5:RE:129:PRO:HG3	5:RE:156:ASN:OD1	2.19	0.42
7:RG:39:ALA:HB1	7:RG:57:TYR:CB	2.50	0.42
7:RG:102:ILE:HG22	7:RG:104:LEU:HG	2.01	0.42
20:RT:43:ILE:CD1	20:RT:58:VAL:HG21	2.50	0.42
21:RU:20:LYS:O	21:RU:21:ARG:HG3	2.19	0.42
22:RV:68:LYS:O	22:RV:69:GLU:O	2.38	0.42
23:RW:58:LEU:N	23:RW:58:LEU:HD13	2.34	0.42
24:RX:29:LEU:HB2	24:RX:30:PRO:CD	2.49	0.42
24:RX:54:GLY:O	24:RX:58:ILE:HD12	2.20	0.42
28:R1:16:THR:HB	28:R1:41:VAL:HG21	2.02	0.42
32:QA:258:G:H5'	51:QT:81:GLN:NE2	2.35	0.42
32:QA:481:G:C2'	32:QA:482:A:C8	3.02	0.42
32:QA:522:C:H2'	32:QA:523:A:O4'	2.20	0.42
32:QA:741:G:H2'	32:QA:742:G:O4'	2.19	0.42
32:QA:1242:G:O2'	32:QA:1243:C:H5'	2.19	0.42
32:QA:1319:A:OP1	50:QS:4:LEU:HD11	2.20	0.42
32:QA:1462:C:H2'	32:QA:1463:U:O4'	2.20	0.42
33:QB:66:ILE:HG22	33:QB:67:LEU:N	2.34	0.42
34:QC:147:GLY:HA3	34:QC:171:ARG:O	2.20	0.42
40:QI:128:LYS:H	40:QI:128:LYS:HG3	1.71	0.42
50:QS:26:ASP:CG	50:QS:27:LYS:N	2.74	0.42
32:XA:34:C:H2'	32:XA:35:G:C8	2.55	0.42
32:XA:76:G:H2'	32:XA:76:G:N3	2.35	0.42
32:XA:259:G:C2'	32:XA:260:G:H5'	2.49	0.42
32:XA:264:C:H2'	32:XA:265:G:O4'	2.19	0.42
32:XA:429:U:H3'	35:XD:8:LEU:CD2	2.36	0.42
32:XA:518:C:H4'	32:XA:519:C:O5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:723:U:O5'	32:XA:723:U:C6	2.68	0.42
32:XA:756:C:C2'	32:XA:757:U:H5'	2.50	0.42
32:XA:975:A:O2'	32:XA:976:G:OP2	2.35	0.42
32:XA:975:A:H1'	32:XA:1358:U:H1'	2.02	0.42
32:XA:1004:A:C4	32:XA:1026:G:N7	2.88	0.42
32:XA:1072:G:C5	32:XA:1073:U:C5	3.08	0.42
32:XA:1249:C:H4'	40:XI:74:GLN:NE2	2.32	0.42
32:XA:1265:C:C4	32:XA:1266:G:N7	2.88	0.42
32:XA:1298:U:H4'	32:XA:1299:A:O5'	2.20	0.42
32:XA:1408:A:C2	32:XA:1494:G:C2	3.07	0.42
32:XA:1426:G:C4	32:XA:1475:G:C2	3.07	0.42
34:XC:108:PRO:C	34:XC:110:LEU:H	2.28	0.42
35:XD:56:GLU:HA	35:XD:56:GLU:OE1	2.20	0.42
36:XE:66:ALA:O	36:XE:68:ARG:O	2.38	0.42
36:XE:152:VAL:O	36:XE:155:LYS:HB2	2.20	0.42
37:XF:72:ASP:O	37:XF:73:GLU:C	2.63	0.42
38:XG:10:LYS:HE3	38:XG:10:LYS:N	2.35	0.42
39:XH:24:VAL:HG22	39:XH:25:THR:N	2.34	0.42
39:XH:29:SER:OG	39:XH:32:LYS:CB	2.68	0.42
40:XI:84:ARG:O	40:XI:87:MET:SD	2.78	0.42
43:XL:109:ARG:HA	43:XL:109:ARG:HD2	1.83	0.42
45:XN:27:LYS:HB2	45:XN:45:LEU:HD22	2.01	0.42
46:XO:38:LEU:HG	46:XO:42:PHE:CE1	2.55	0.42
1:YA:43:G:N2	1:YA:437:U:C6	2.88	0.42
1:YA:141:G:HO2'	1:YA:142:A:P	2.43	0.42
1:YA:204:A:C4	1:YA:206:U:C4	3.07	0.42
1:YA:204:A:O4'	1:YA:206:U:C6	2.73	0.42
1:YA:299:A:N3	1:YA:319:G:O2'	2.43	0.42
1:YA:302:C:O2'	1:YA:303:G:C8	2.42	0.42
1:YA:323:C:H3'	1:YA:323:C:OP2	2.19	0.42
1:YA:374:A:N6	1:YA:401:A:C8	2.87	0.42
1:YA:374:A:C2	1:YA:375:G:H1'	2.55	0.42
1:YA:429:A:N6	1:YA:430:A:N6	2.68	0.42
1:YA:466:A:OP1	29:Y2:34:ARG:NH2	2.53	0.42
1:YA:601:C:H2'	1:YA:602:A:O4'	2.20	0.42
1:YA:1069:A:N6	1:YA:1073:A:H5"	2.34	0.42
1:YA:1324:G:N2	1:YA:1328:A:N1	2.68	0.42
1:YA:1350:C:O2	1:YA:1382:G:C8	2.73	0.42
1:YA:1361:G:C6	1:YA:1371:G:C2	3.08	0.42
1:YA:1387:A:C5'	1:YA:1469:A:C1'	2.93	0.42
1:YA:1545:A:H62	1:YA:1546:G:N2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1791:A:N6	1:YA:1828:G:O2'	2.52	0.42
1:YA:1800:C:H5"	3:YC:145:MET:HE1	2.01	0.42
1:YA:2373:G:O2'	1:YA:2374:C:H5'	2.19	0.42
1:YA:2526:G:C5	1:YA:2527:C:C5	3.07	0.42
1:YA:2836:U:O2'	1:YA:2837:A:P	2.78	0.42
2:YB:109:A:O2'	2:YB:110:C:O5'	2.38	0.42
3:YC:170:TYR:HD2	3:YC:183:VAL:O	2.03	0.42
3:YC:239:PHE:HD1	3:YC:240:GLY:H	1.67	0.42
8:YH:140:ALA:O	8:YH:141:LYS:HG3	2.19	0.42
10:YJ:128:ASN:C	10:YJ:129:GLU:HG3	2.45	0.42
11:YK:113:MET:O	11:YK:116:ILE:CG1	2.68	0.42
17:YQ:26:ALA:HA	17:YQ:29:ARG:HG3	2.02	0.42
17:YQ:87:VAL:CG1	17:YQ:88:GLU:H	2.32	0.42
20:YT:4:GLU:O	20:YT:8:LEU:HD12	2.20	0.42
20:YT:38:ALA:O	20:YT:39:THR:HB	2.20	0.42
21:YU:35:VAL:CG1	21:YU:36:GLU:N	2.77	0.42
23:YW:43:LYS:HD2	23:YW:79:ILE:HD11	2.02	0.42
23:YW:51:GLY:HA2	23:YW:59:PHE:HD2	1.84	0.42
24:YX:1:SER:C	24:YX:3:VAL:H	2.27	0.42
1:RA:224:U:H2'	1:RA:225:C:O5'	2.19	0.42
1:RA:790:U:HO2'	1:RA:791:C:C5'	2.31	0.42
1:RA:918:A:H4'	2:RB:97:C:O2	2.20	0.42
1:RA:947:A:O2'	1:RA:984:A:C2	2.56	0.42
1:RA:996:A:C4'	17:RQ:91:ARG:HD2	2.50	0.42
1:RA:1092:C:O5'	1:RA:1093:G:OP2	2.37	0.42
1:RA:1178:C:C4	1:RA:1180:U:C4	3.07	0.42
1:RA:1419:A:N6	1:RA:1421:G:N3	2.68	0.42
1:RA:1429:G:C2'	1:RA:1430:G:H5'	2.50	0.42
1:RA:1627:G:C2	1:RA:1628:G:C8	3.08	0.42
1:RA:1695:G:H1'	3:RC:7:PRO:O	2.19	0.42
1:RA:2043:C:C4	1:RA:2777:G:C2	3.08	0.42
1:RA:2308:G:H2'	1:RA:2310:C:H5	1.84	0.42
1:RA:2416:C:H2'	1:RA:2417:C:H6	1.85	0.42
3:RC:117:SER:HB3	3:RC:128:THR:HB	2.02	0.42
5:RE:160:ALA:O	5:RE:161:ALA:HB3	2.19	0.42
7:RG:8:VAL:HG12	7:RG:9:VAL:H	1.84	0.42
7:RG:115:GLN:O	7:RG:116:LEU:C	2.63	0.42
8:RH:54:LEU:C	8:RH:56:ALA:N	2.78	0.42
10:RJ:99:ARG:O	10:RJ:100:VAL:C	2.62	0.42
13:RM:21:ALA:CB	13:RM:100:LYS:N	2.82	0.42
13:RM:66:ARG:NH1	13:RM:101:VAL:HG11	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:RN:10:LEU:O	14:RN:12:ARG:HG3	2.19	0.42
16:RP:30:TRP:CD1	16:RP:81:ASP:HB2	2.55	0.42
16:RP:31:VAL:O	16:RP:31:VAL:CG1	2.67	0.42
16:RP:50:ARG:HG2	16:RP:57:ALA:C	2.45	0.42
16:RP:50:ARG:HD2	16:RP:51:ASN:N	2.34	0.42
17:RQ:94:LEU:HD13	17:RQ:94:LEU:HA	1.81	0.42
20:RT:4:GLU:CD	20:RT:5:GLU:H	2.28	0.42
29:R2:21:ARG:C	29:R2:23:ALA:H	2.28	0.42
32:QA:198:G:C4	32:QA:199:A:N7	2.87	0.42
32:QA:451:A:H5'	47:QP:70:ARG:HH12	1.84	0.42
32:QA:555:U:C2'	32:QA:556:C:O5'	2.67	0.42
32:QA:722:G:H5"	32:QA:722:G:N3	2.35	0.42
32:QA:1120:C:H2'	32:QA:1121:U:H6	1.85	0.42
32:QA:1315:U:C4	32:QA:1316:G:C6	3.08	0.42
36:QE:20:VAL:O	36:QE:30:PHE:HA	2.20	0.42
36:QE:94:PHE:CD1	36:QE:94:PHE:C	2.97	0.42
36:QE:140:ILE:C	36:QE:142:GLY:H	2.28	0.42
38:QG:89:GLU:N	38:QG:89:GLU:OE2	2.53	0.42
38:QG:114:SER:H	38:QG:117:LEU:HD12	1.84	0.42
49:QR:44:THR:C	49:QR:46:THR:H	2.28	0.42
50:QS:47:THR:O	50:QS:48:ILE:C	2.63	0.42
51:QT:19:HIS:O	51:QT:20:ASN:C	2.62	0.42
51:QT:43:LYS:NZ	51:QT:86:ALA:HA	2.34	0.42
32:XA:187:G:N2	32:XA:190:A:OP2	2.53	0.42
32:XA:248:C:C2'	32:XA:249:U:O5'	2.68	0.42
32:XA:318:G:C2	32:XA:336:A:C2	3.08	0.42
32:XA:413:G:N1	35:XD:32:LYS:HE3	2.35	0.42
32:XA:642:A:C2	32:XA:643:C:C2	3.08	0.42
32:XA:974:A:C3'	32:XA:975:A:H5'	2.50	0.42
35:XD:21:LYS:HB2	35:XD:21:LYS:HE2	1.79	0.42
35:XD:106:PHE:CD1	35:XD:158:LEU:HD21	2.54	0.42
35:XD:149:LYS:HZ1	35:XD:176:LYS:HD2	1.85	0.42
38:XG:4:ARG:NH1	38:XG:4:ARG:HG2	2.35	0.42
41:XJ:40:ILE:HG23	41:XJ:41:PRO:HD2	2.01	0.42
44:XM:64:VAL:O	44:XM:65:GLU:C	2.62	0.42
46:XO:44:GLU:O	46:XO:45:HIS:C	2.62	0.42
46:XO:55:LEU:O	46:XO:58:MET:N	2.43	0.42
47:XP:40:ASN:C	47:XP:42:ILE:H	2.27	0.42
52:XU:14:ALA:O	52:XU:15:LEU:C	2.62	0.42
1:YA:7:G:H2'	1:YA:8:C:O4'	2.20	0.42
1:YA:58:G:N3	1:YA:73:A:C2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:85:G:O2'	1:YA:86:G:H5"	2.19	0.42
1:YA:394:C:O2'	1:YA:395:U:H5'	2.19	0.42
1:YA:491:G:O2'	1:YA:492:A:C5'	2.68	0.42
1:YA:500:G:N2	1:YA:502:A:H3'	2.35	0.42
1:YA:584:C:C5	1:YA:585:G:N7	2.88	0.42
1:YA:622:G:O2'	1:YA:623:C:C5'	2.68	0.42
1:YA:749:A:C2	1:YA:750:A:C8	3.08	0.42
1:YA:814:C:OP1	18:YR:86:GLN:NE2	2.53	0.42
1:YA:973:A:H1'	1:YA:1188:U:C5	2.55	0.42
1:YA:1059:G:C6	1:YA:1080:A:N1	2.88	0.42
1:YA:1103:A:H8	1:YA:1103:A:O5'	2.02	0.42
1:YA:1465:G:H2'	1:YA:1466:U:O4'	2.20	0.42
1:YA:1465:G:C4	1:YA:1466:U:C6	3.08	0.42
1:YA:1775:U:H2'	1:YA:1776:G:O4'	2.19	0.42
1:YA:1782:U:O2	1:YA:2608:G:O2'	2.22	0.42
1:YA:2270:A:H5'	23:YW:18:LYS:HG2	2.02	0.42
1:YA:2283:C:C5	1:YA:2389:G:C4	3.07	0.42
1:YA:2445:G:H2'	1:YA:2446:G:H8	1.84	0.42
1:YA:2574:G:N2	4:YD:147:GLY:O	2.49	0.42
1:YA:2601:C:H4'	1:YA:2602:A:OP2	2.19	0.42
1:YA:2629:U:C5'	1:YA:2630:G:OP1	2.67	0.42
1:YA:2684:U:N3	1:YA:2685:G:C8	2.88	0.42
1:YA:2821:A:H2'	1:YA:2822:G:O4'	2.20	0.42
2:YB:29:A:H2'	2:YB:30:C:C6	2.55	0.42
2:YB:58:A:C2'	2:YB:59:A:H8	2.26	0.42
4:YD:137:SER:HB3	4:YD:138:LEU:CD2	2.41	0.42
5:YE:28:VAL:O	5:YE:31:VAL:HG22	2.19	0.42
5:YE:55:SER:OG	5:YE:56:GLY:N	2.52	0.42
6:YF:1:ALA:HB3	6:YF:93:GLU:OE2	2.20	0.42
7:YG:94:ARG:HH21	7:YG:111:PRO:HB3	1.83	0.42
7:YG:154:GLU:HA	7:YG:155:PRO:HD2	1.86	0.42
9:YI:52:LEU:HD11	9:YI:78:LEU:CD2	2.50	0.42
11:YK:17:ARG:CD	11:YK:18:ARG:H	2.33	0.42
15:YO:7:ARG:O	15:YO:8:ILE:C	2.63	0.42
15:YO:31:THR:HG23	15:YO:34:HIS:O	2.19	0.42
18:YR:87:GLN:CG	18:YR:88:GLY:H	2.24	0.42
19:YS:36:LEU:C	19:YS:38:TYR:H	2.27	0.42
20:YT:10:VAL:HG23	20:YT:11:LEU:CD1	2.49	0.42
21:YU:3:LYS:HG2	21:YU:84:PHE:HZ	1.84	0.42
23:YW:17:ALA:HB1	23:YW:36:ILE:HG12	2.01	0.42
23:YW:35:ILE:HB	23:YW:36:ILE:H	1.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:476:G:C2	1:RA:479:A:C8	3.08	0.42
1:RA:632:A:O2'	1:RA:633:A:H5'	2.20	0.42
1:RA:784:G:O2'	1:RA:785:G:H5"	2.19	0.42
1:RA:833:A:H2'	1:RA:834:G:H8	1.83	0.42
1:RA:1059:G:C6	1:RA:1080:A:C6	3.08	0.42
1:RA:1232:G:C5	1:RA:1233:C:C5	3.07	0.42
1:RA:1355:G:C6	1:RA:1377:G:N2	2.88	0.42
1:RA:1682:G:C8	1:RA:1757:A:C2	3.07	0.42
1:RA:1840:G:C6	1:RA:1841:U:C4	3.07	0.42
1:RA:1858:A:C8	1:RA:1885:A:C6	3.08	0.42
1:RA:1871:A:H8	1:RA:1872:A:C6	2.38	0.42
1:RA:2258:C:O2'	1:RA:2426:A:H4'	2.19	0.42
1:RA:2331:G:N2	1:RA:2385:C:C2	2.87	0.42
1:RA:2650:U:O2'	1:RA:2651:C:H5'	2.19	0.42
2:RB:14:U:OP2	2:RB:70:C:O2'	2.34	0.42
4:RD:90:PHE:O	4:RD:92:VAL:N	2.53	0.42
6:RF:146:ASP:O	6:RF:147:ARG:HB2	2.19	0.42
6:RF:174:PHE:HD1	6:RF:176:PHE:CE1	2.38	0.42
7:RG:33:THR:N	7:RG:34:ARG:HH11	2.18	0.42
7:RG:67:ALA:O	7:RG:68:ARG:C	2.63	0.42
7:RG:84:LYS:O	7:RG:85:LYS:HB2	2.19	0.42
7:RG:106:LEU:O	7:RG:151:ARG:NH2	2.46	0.42
8:RH:45:GLU:C	8:RH:48:GLU:H	2.28	0.42
11:RK:1:MET:HE3	11:RK:32:TYR:CE2	2.55	0.42
17:RQ:25:GLY:O	17:RQ:29:ARG:HG3	2.20	0.42
17:RQ:49:ARG:HH11	17:RQ:49:ARG:HG3	1.84	0.42
27:R0:38:LEU:O	27:R0:41:HIS:HB2	2.20	0.42
28:R1:16:THR:CG2	28:R1:41:VAL:HG22	2.49	0.42
29:R2:24:THR:HG23	29:R2:27:GLY:H	1.84	0.42
32:QA:243:A:H2	32:QA:245:U:H2'	1.85	0.42
32:QA:403:C:H5'	35:QD:131:ILE:HG22	2.01	0.42
32:QA:833:G:C2'	32:QA:834:U:H5'	2.50	0.42
35:QD:8:LEU:O	35:QD:12:ARG:HG3	2.20	0.42
39:QH:19:ALA:O	39:QH:20:ASN:C	2.63	0.42
41:QJ:12:ALA:O	41:QJ:70:HIS:HD2	2.03	0.42
41:QJ:48:ARG:NH2	45:QN:100:TRP:CE2	2.88	0.42
49:QR:20:ILE:H	49:QR:20:ILE:HG13	1.61	0.42
32:XA:71:A:N6	32:XA:100:G:N7	2.67	0.42
32:XA:91:U:C5	32:XA:92:U:C4	3.08	0.42
32:XA:218:U:O2'	32:XA:219:U:H5'	2.20	0.42
32:XA:460:A:O3'	32:XA:462:G:OP2	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:599:C:C2	32:XA:640:A:C2	3.08	0.42
32:XA:621:A:H2'	32:XA:622:A:O4'	2.20	0.42
32:XA:1048:G:N1	32:XA:1050:G:O6	2.53	0.42
32:XA:1074:G:H4'	33:XB:102:ASN:HB2	2.01	0.42
33:XB:160:LEU:HD13	33:XB:180:ILE:HG21	2.01	0.42
34:XC:5:HIS:HA	34:XC:6:PRO:HD2	1.92	0.42
34:XC:11:LEU:C	34:XC:13:ILE:N	2.77	0.42
35:XD:97:LEU:HB2	35:XD:134:TYR:HB3	2.02	0.42
37:XF:92:THR:C	37:XF:93:LYS:HG2	2.44	0.42
39:XH:28:SER:HB2	39:XH:57:GLU:O	2.20	0.42
39:XH:97:GLY:O	39:XH:98:LEU:CB	2.68	0.42
46:XO:24:THR:HG21	46:XO:69:LEU:HB2	2.02	0.42
47:XP:48:GLU:HG3	47:XP:51:ARG:HH21	1.84	0.42
1:YA:70:G:H3'	1:YA:113:U:C4'	2.49	0.42
1:YA:188:G:H2'	1:YA:189:G:H5'	2.01	0.42
1:YA:270:A:N1	1:YA:369:U:C1'	2.81	0.42
1:YA:310:A:H5"	21:YU:14:THR:O	2.19	0.42
1:YA:462:C:O2'	1:YA:463:G:H5'	2.19	0.42
1:YA:520:G:H2'	1:YA:521:U:H6	1.85	0.42
1:YA:699:A:H2'	1:YA:700:G:O4'	2.20	0.42
1:YA:1066:U:O2	1:YA:1069:A:OP2	2.37	0.42
1:YA:1168:G:C6	1:YA:1182:G:C6	3.07	0.42
1:YA:1199:U:H2'	1:YA:1200:C:C6	2.54	0.42
1:YA:1275:A:N6	14:YN:15:SER:O	2.53	0.42
1:YA:1285:A:H2'	1:YA:1286:A:H5'	2.01	0.42
1:YA:1339:G:O4'	1:YA:1393:A:C2	2.73	0.42
1:YA:1388:G:O2'	1:YA:1389:G:O4'	2.38	0.42
1:YA:1532:A:N1	1:YA:1540:G:C6	2.88	0.42
1:YA:1593:A:C6	1:YA:1594:U:N3	2.88	0.42
1:YA:2345:G:H4'	1:YA:2346:A:O5'	2.19	0.42
1:YA:2875:C:O2'	1:YA:2876:G:C8	2.41	0.42
2:YB:16:G:C6	2:YB:69:G:C5	3.08	0.42
5:YE:195:GLN:O	5:YE:199:MET:N	2.53	0.42
6:YF:1:ALA:CB	6:YF:93:GLU:HA	2.49	0.42
6:YF:24:VAL:HB	6:YF:25:MET:SD	2.60	0.42
6:YF:28:PRO:CB	6:YF:168:LEU:HD21	2.28	0.42
7:YG:25:ILE:CG2	7:YG:78:VAL:HG21	2.50	0.42
8:YH:94:ILE:HG13	8:YH:98:ASP:OD1	2.20	0.42
13:YM:36:VAL:HG13	22:YV:82:TYR:CD1	2.55	0.42
13:YM:135:VAL:HB	13:YM:136:MET:H	1.66	0.42
15:YO:69:ASP:O	15:YO:70:ALA:C	2.63	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:YP:52:ARG:HA	16:YP:52:ARG:HD3	1.78	0.42
21:YU:44:HIS:CD2	21:YU:57:ILE:HG21	2.54	0.42
22:YV:50:MET:O	22:YV:53:LYS:HB2	2.20	0.42
31:Y4:3:VAL:O	31:Y4:4:ARG:CB	2.67	0.42
1:RA:227:A:H4'	1:RA:229:C:C4	2.55	0.41
1:RA:384:A:N3	1:RA:384:A:H2'	2.35	0.41
1:RA:869:G:H2'	1:RA:870:U:O4'	2.19	0.41
1:RA:936:A:H2'	1:RA:937:C:C6	2.55	0.41
1:RA:1095:A:OP1	1:RA:1095:A:H8	2.01	0.41
1:RA:1403:A:H2'	1:RA:1404:C:C6	2.55	0.41
1:RA:1963:U:H6	1:RA:1963:U:O5'	2.03	0.41
1:RA:2210:U:H4'	1:RA:2211:A:O5'	2.20	0.41
1:RA:2250:G:OP1	13:RM:84:LYS:NZ	2.47	0.41
1:RA:2258:C:H4'	1:RA:2259:U:OP2	2.20	0.41
1:RA:2347:C:H2'	1:RA:2348:U:C6	2.55	0.41
1:RA:2356:U:H5"	23:RW:16:GLU:HG3	2.02	0.41
1:RA:2607:G:H2'	1:RA:2608:G:O4'	2.20	0.41
1:RA:2734:A:H2'	1:RA:2735:G:H5'	2.01	0.41
5:RE:149:ILE:HD12	5:RE:175:ILE:HB	2.02	0.41
6:RF:172:PHE:C	6:RF:174:PHE:N	2.76	0.41
8:RH:54:LEU:O	8:RH:57:LYS:N	2.52	0.41
17:RQ:54:ARG:O	17:RQ:55:GLN:C	2.63	0.41
21:RU:73:ASN:C	21:RU:75:ALA:N	2.77	0.41
22:RV:10:LYS:NZ	22:RV:10:LYS:HB2	2.35	0.41
22:RV:20:LEU:HD23	22:RV:25:LYS:HB2	2.03	0.41
26:RZ:43:ILE:O	26:RZ:47:ILE:HG13	2.20	0.41
26:RZ:52:PHE:CD2	26:RZ:52:PHE:C	2.98	0.41
32:QA:157:U:O2	32:QA:165:G:C2	2.73	0.41
32:QA:160:A:H2'	32:QA:161:A:O4'	2.20	0.41
32:QA:619:U:N3	35:QD:130:ASN:HB3	2.24	0.41
32:QA:649:A:H2'	32:QA:650:G:O4'	2.20	0.41
32:QA:669:G:O2'	32:QA:670:G:H5'	2.19	0.41
32:QA:811:C:H4'	32:QA:900:A:N6	2.34	0.41
32:QA:1202:U:O4'	45:QN:68:ARG:HD2	2.20	0.41
32:QA:1270:G:H2'	32:QA:1271:A:C8	2.54	0.41
32:QA:1315:U:C5	32:QA:1316:G:C5	3.08	0.41
32:QA:1472:U:H2'	32:QA:1473:G:C8	2.54	0.41
33:QB:90:PHE:H	33:QB:149:GLY:CA	2.33	0.41
36:QE:149:PRO:HG2	36:QE:150:GLU:H	1.86	0.41
37:QF:92:THR:CG2	37:QF:93:LYS:H	2.33	0.41
38:QG:137:ARG:C	38:QG:139:ASP:N	2.76	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:QI:8:THR:O	40:QI:16:ALA:O	2.38	0.41
40:QI:18:VAL:HG22	40:QI:64:ILE:HG23	2.01	0.41
42:QK:75:GLU:C	42:QK:77:GLY:N	2.77	0.41
42:QK:82:GLU:CD	42:QK:82:GLU:H	2.28	0.41
45:QN:40:ARG:NH1	45:QN:44:VAL:HG11	2.34	0.41
45:QN:40:ARG:HH12	45:QN:44:VAL:HG11	1.85	0.41
45:QN:46:LYS:C	45:QN:48:GLN:H	2.28	0.41
48:QQ:50:ASN:OD1	48:QQ:50:ASN:N	2.52	0.41
32:XA:83:C:O2	32:XA:87:C:N3	2.53	0.41
32:XA:193:C:O2'	32:XA:194:C:H5'	2.19	0.41
32:XA:718:A:C8	32:XA:719:C:C5	3.08	0.41
32:XA:816:A:OP1	32:XA:1526:G:O2'	2.30	0.41
32:XA:920:U:N3	32:XA:921:U:C4	2.87	0.41
32:XA:1076:U:N3	32:XA:1082:A:C2	2.88	0.41
32:XA:1104:G:H2'	32:XA:1105:A:O4'	2.20	0.41
32:XA:1191:A:OP1	34:XC:2:GLN:NE2	2.53	0.41
32:XA:1285:A:H4'	32:XA:1286:U:OP1	2.19	0.41
32:XA:1310:G:O6	32:XA:1311:A:N6	2.53	0.41
33:XB:27:LYS:N	33:XB:28:PRO:CD	2.83	0.41
37:XF:9:MET:HE3	49:XR:64:LEU:HD22	2.01	0.41
38:XG:26:VAL:HG23	38:XG:27:ASN:N	2.35	0.41
40:XI:89:TYR:HD1	40:XI:89:TYR:O	2.03	0.41
45:XN:8:ARG:HD3	45:XN:12:ARG:NH2	2.35	0.41
45:XN:60:ARG:HH22	45:XN:70:HIS:HB3	1.85	0.41
1:YA:71:A:O4'	1:YA:73:A:C5	2.73	0.41
1:YA:72:U:O2'	1:YA:73:A:H5'	2.20	0.41
1:YA:167:A:H3'	1:YA:168:G:H8	1.84	0.41
1:YA:180:G:P	29:Y2:35:ARG:NH1	2.93	0.41
1:YA:183:C:C5	1:YA:184:C:C5	3.08	0.41
1:YA:224:U:N3	1:YA:225:C:C6	2.88	0.41
1:YA:417:C:O2'	1:YA:418:C:H5'	2.20	0.41
1:YA:519:U:H5"	19:YS:25:ARG:NH2	2.34	0.41
1:YA:586:A:O2'	1:YA:671:C:O2	2.36	0.41
1:YA:1048:A:C5	1:YA:1049:C:N4	2.88	0.41
1:YA:1183:U:H2'	1:YA:1184:U:C6	2.55	0.41
1:YA:1231:U:OP2	1:YA:1231:U:H6	2.02	0.41
1:YA:1235:G:C6	1:YA:1236:G:N2	2.88	0.41
1:YA:1265:A:C5	1:YA:1267:U:C4	3.08	0.41
1:YA:1267:U:O2'	1:YA:1268:A:O5'	2.30	0.41
1:YA:1394:U:C4	1:YA:1395:A:N6	2.88	0.41
1:YA:1420:A:C4	1:YA:2211:A:N7	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1509:A:C3'	1:YA:1510:G:C5'	2.98	0.41
1:YA:1820:U:H3	3:YC:197:ALA:HA	1.85	0.41
1:YA:1833:C:C2	1:YA:1834:U:C5	3.08	0.41
1:YA:2301:C:C5	1:YA:2302:U:C5	3.08	0.41
1:YA:2324:U:C5'	1:YA:2325:G:C5'	2.96	0.41
1:YA:2448:A:O2'	1:YA:2449:U:H5	2.03	0.41
1:YA:2706:A:N6	56:YA:3670:HOH:O	2.49	0.41
1:YA:2831:G:N7	4:YD:59:ARG:NH1	2.67	0.41
1:YA:2853:C:O5'	1:YA:2853:C:H6	2.03	0.41
2:YB:9:G:OP2	15:YO:15:ARG:HD3	2.20	0.41
3:YC:73:ILE:O	3:YC:116:GLN:HG2	2.20	0.41
3:YC:106:PRO:HB3	3:YC:141:HIS:HE1	1.85	0.41
4:YD:40:LEU:HD12	4:YD:40:LEU:N	2.35	0.41
4:YD:113:SER:HB2	4:YD:168:GLU:OE1	2.20	0.41
6:YF:41:GLU:O	6:YF:42:ALA:C	2.64	0.41
6:YF:59:ILE:HG23	6:YF:137:PHE:HE1	1.84	0.41
7:YG:8:VAL:HB	7:YG:49:LEU:HB3	2.02	0.41
7:YG:106:LEU:HB2	7:YG:108:PHE:HE1	1.85	0.41
8:YH:9:VAL:HG12	8:YH:10:ALA:N	2.34	0.41
8:YH:67:ALA:HA	8:YH:138:VAL:CG2	2.50	0.41
8:YH:72:ILE:HD11	8:YH:140:ALA:HA	2.03	0.41
14:YN:37:THR:HB	14:YN:40:LYS:H	1.85	0.41
14:YN:98:LEU:HG	27:Y0:42:ILE:CG1	2.50	0.41
18:YR:4:VAL:HG22	18:YR:40:MET:HB3	2.02	0.41
19:YS:31:GLN:O	19:YS:33:LEU:N	2.54	0.41
19:YS:66:ILE:HG12	19:YS:67:ASP:N	2.34	0.41
20:YT:9:LYS:O	20:YT:9:LYS:CG	2.67	0.41
20:YT:29:THR:CB	20:YT:86:THR:N	2.77	0.41
22:YV:73:LYS:HB3	22:YV:92:VAL:HG23	2.02	0.41
23:YW:69:GLU:O	23:YW:78:PHE:O	2.38	0.41
24:YX:57:VAL:HG12	24:YX:58:ILE:HG13	2.02	0.41
25:YY:3:ALA:C	25:YY:5:GLU:H	2.28	0.41
1:RA:108:G:H2'	1:RA:109:C:H5'	2.01	0.41
1:RA:163:C:H6	1:RA:163:C:OP1	2.02	0.41
1:RA:274:C:H2'	1:RA:275:C:O4'	2.19	0.41
1:RA:279:A:H2'	1:RA:280:U:O4'	2.19	0.41
1:RA:734:A:C5	1:RA:735:A:C8	3.09	0.41
1:RA:740:C:H5'	1:RA:1784:A:C3'	2.46	0.41
1:RA:855:G:C4	1:RA:923:G:C2	3.07	0.41
1:RA:1006:C:C2	1:RA:1138:G:N2	2.88	0.41
1:RA:1061:U:O2	1:RA:1061:U:H2'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1062:G:C2'	1:RA:1063:G:C8	3.03	0.41
1:RA:1338:G:O2'	1:RA:1393:A:N1	2.48	0.41
1:RA:1351:C:H2'	1:RA:1352:U:O4'	2.20	0.41
1:RA:1746:A:C2	1:RA:1747:U:C2	3.08	0.41
1:RA:2107:G:O6	1:RA:2183:A:C6	2.74	0.41
1:RA:2578:G:C5	4:RD:145:SER:HB2	2.55	0.41
1:RA:2637:U:H2'	1:RA:2638:G:H5'	2.01	0.41
3:RC:190:THR:HG22	3:RC:191:LEU:N	2.34	0.41
4:RD:181:ASP:OD2	4:RD:184:ARG:HD2	2.21	0.41
5:RE:134:LEU:O	5:RE:135:ALA:C	2.63	0.41
5:RE:150:THR:HG22	5:RE:170:ARG:O	2.20	0.41
5:RE:189:THR:O	5:RE:192:ALA:N	2.31	0.41
6:RF:21:TYR:CE2	6:RF:28:PRO:HD3	2.55	0.41
8:RH:9:VAL:HG12	8:RH:12:LEU:HG	2.01	0.41
8:RH:12:LEU:HD12	8:RH:19:VAL:HG11	2.01	0.41
9:RI:18:ASN:CB	9:RI:38:CYS:HB3	2.49	0.41
10:RJ:25:LEU:HB2	10:RJ:62:VAL:CG2	2.50	0.41
13:RM:72:PRO:HG3	13:RM:92:TRP:CZ3	2.55	0.41
19:RS:97:LEU:N	19:RS:97:LEU:HD22	2.34	0.41
21:RU:33:VAL:O	21:RU:64:ILE:HG22	2.19	0.41
21:RU:84:PHE:N	21:RU:94:PHE:HE2	2.17	0.41
22:RV:51:GLN:NE2	22:RV:79:ARG:HH12	2.10	0.41
32:QA:22:G:C5	32:QA:23:C:C5	3.08	0.41
32:QA:132:C:H5"	51:QT:68:LYS:HD2	2.01	0.41
32:QA:292:G:N2	32:QA:309:A:C4	2.88	0.41
32:QA:328:C:O2	32:QA:328:C:C2'	2.68	0.41
32:QA:690:G:C6	32:QA:691:G:C6	3.08	0.41
32:QA:950:U:H2'	32:QA:951:G:C8	2.55	0.41
32:QA:1217:C:H2'	32:QA:1218:C:H6	1.85	0.41
32:QA:1387:G:C6	32:QA:1388:C:N4	2.88	0.41
33:QB:41:ASN:OD1	33:QB:44:LYS:HB2	2.19	0.41
33:QB:174:GLU:O	33:QB:178:LEU:HB2	2.20	0.41
34:QC:13:ILE:HB	34:QC:14:VAL:HG13	2.01	0.41
34:QC:154:GLY:H	34:QC:156:LEU:HD11	1.85	0.41
34:QC:184:ASN:O	34:QC:198:LYS:HA	2.20	0.41
37:QF:9:MET:CE	49:QR:64:LEU:HD22	2.50	0.41
37:QF:64:VAL:HG12	37:QF:65:GLU:N	2.35	0.41
41:QJ:8:ILE:O	41:QJ:73:LEU:O	2.38	0.41
41:QJ:48:ARG:NH2	45:QN:100:TRP:CE3	2.88	0.41
41:QJ:92:LEU:HD23	41:QJ:92:LEU:N	2.35	0.41
43:QL:6:LEU:HD23	48:QQ:33:TYR:CZ	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:QM:40:GLU:HG3	44:QM:41:ASP:N	2.35	0.41
48:QQ:30:HIS:HA	48:QQ:31:PRO:HD3	1.85	0.41
48:QQ:51:GLU:HG3	48:QQ:74:LEU:HD21	2.02	0.41
32:XA:265:G:C2'	32:XA:266:G:H5'	2.50	0.41
32:XA:276:G:O2'	32:XA:277:C:H5'	2.20	0.41
32:XA:623:C:C6	32:XA:623:C:C3'	3.03	0.41
32:XA:685:G:O2'	32:XA:686:U:H5'	2.20	0.41
32:XA:687:A:N3	32:XA:704:A:N6	2.68	0.41
32:XA:705:G:H2'	32:XA:706:A:O4'	2.20	0.41
32:XA:1003:G:N3	32:XA:1005:A:OP1	2.53	0.41
32:XA:1157:A:C6	32:XA:1180:A:C6	3.08	0.41
32:XA:1218:C:H2'	32:XA:1219:A:H8	1.81	0.41
33:XB:20:ARG:NE	33:XB:20:ARG:CA	2.82	0.41
33:XB:91:VAL:HG11	33:XB:95:TRP:CD1	2.54	0.41
34:XC:39:ARG:C	34:XC:41:TYR:H	2.27	0.41
34:XC:111:ASP:O	34:XC:115:VAL:HG12	2.20	0.41
35:XD:24:VAL:O	35:XD:25:ARG:C	2.62	0.41
35:XD:64:TYR:CD2	35:XD:93:LEU:HB3	2.55	0.41
35:XD:149:LYS:HZ2	35:XD:176:LYS:HZ3	1.68	0.41
35:XD:166:LYS:HE2	35:XD:166:LYS:HB2	1.84	0.41
35:XD:173:ASP:OD1	35:XD:176:LYS:HB3	2.20	0.41
41:XJ:10:LEU:O	41:XJ:18:ILE:HD11	2.20	0.41
45:XN:20:PHE:HA	45:XN:24:ALA:HB2	2.02	0.41
46:XO:83:ARG:O	46:XO:83:ARG:HG2	2.20	0.41
48:XQ:45:VAL:HG21	48:XQ:60:ILE:HG21	2.02	0.41
50:XS:4:LEU:HB3	50:XS:5:LYS:H	1.52	0.41
50:XS:35:ARG:NH1	50:XS:52:ASN:HA	2.35	0.41
50:XS:49:ALA:O	50:XS:56:HIS:HB3	2.20	0.41
51:XT:82:ILE:C	51:XT:84:LYS:N	2.77	0.41
1:YA:223:A:C6	1:YA:408:G:O4'	2.73	0.41
1:YA:298:G:H8	1:YA:298:G:O5'	2.03	0.41
1:YA:410:G:N2	1:YA:418:C:O2	2.54	0.41
1:YA:476:G:O2'	1:YA:477:A:H3'	2.20	0.41
1:YA:866:A:N1	1:YA:914:G:H5'	2.35	0.41
1:YA:1330:C:O2'	1:YA:1331:G:P	2.77	0.41
1:YA:1358:G:C8	1:YA:1371:G:C6	3.08	0.41
1:YA:1500:G:C6	1:YA:1501:G:C5	3.08	0.41
1:YA:1532:A:C2	1:YA:1540:G:N1	2.88	0.41
1:YA:1712:U:O4	1:YA:1713:A:C2	2.72	0.41
1:YA:1915:U:H2'	1:YA:1916:A:H8	1.78	0.41
1:YA:2231:U:H6	1:YA:2231:U:O5'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2316:G:C2	1:YA:2317:A:C4	3.08	0.41
1:YA:2391:G:H22	1:YA:2427:C:H4'	1.86	0.41
1:YA:2419:U:H5	56:YA:3656:HOH:O	2.04	0.41
1:YA:2420:C:N4	30:Y3:29:ARG:O	2.43	0.41
1:YA:2590:A:H5"	3:YC:237:ARG:HG3	2.01	0.41
1:YA:2648:G:H2'	1:YA:2649:C:O4'	2.20	0.41
1:YA:2658:C:H2'	1:YA:2659:G:H5'	2.02	0.41
2:YB:23:G:C2	2:YB:61:G:N1	2.89	0.41
4:YD:48:ILE:CG2	4:YD:84:LEU:HD23	2.50	0.41
4:YD:187:LEU:O	4:YD:188:LEU:HD23	2.20	0.41
5:YE:108:ILE:CD1	5:YE:181:ILE:HB	2.28	0.41
9:YI:8:VAL:C	9:YI:9:LYS:HG2	2.45	0.41
9:YI:57:VAL:HG21	9:YI:69:VAL:H	1.86	0.41
9:YI:118:GLY:O	9:YI:119:ALA:CB	2.68	0.41
10:YJ:29:ALA:HB3	10:YJ:108:MET:HE3	2.02	0.41
11:YK:113:MET:SD	11:YK:116:ILE:HD11	2.60	0.41
12:YL:20:GLY:CA	12:YL:28:GLY:HA2	2.49	0.41
13:YM:71:LYS:HA	13:YM:72:PRO:HD3	1.70	0.41
14:YN:35:LYS:HD3	14:YN:112:TYR:OH	2.20	0.41
16:YP:52:ARG:HG2	16:YP:52:ARG:NH1	2.35	0.41
29:Y2:38:GLY:O	29:Y2:42:LEU:HD13	2.20	0.41
1:RA:581:C:OP1	17:RQ:32:ARG:HB2	2.20	0.41
1:RA:595:C:H2'	1:RA:596:U:C6	2.54	0.41
1:RA:626:A:H2'	12:RL:78:ARG:CZ	2.51	0.41
1:RA:1061:U:O2'	1:RA:1062:G:P	2.79	0.41
1:RA:1104:C:H2'	1:RA:1105:U:H6	1.85	0.41
1:RA:1242:U:H2'	1:RA:1243:C:C6	2.54	0.41
1:RA:1587:G:C4	1:RA:1588:G:C8	3.09	0.41
1:RA:1656:C:OP1	4:RD:141:ARG:NH1	2.47	0.41
1:RA:1724:G:C6	1:RA:1725:U:C4	3.08	0.41
1:RA:1731:G:C4	1:RA:1733:G:C8	3.08	0.41
1:RA:1873:G:O2'	1:RA:1874:C:H5'	2.21	0.41
1:RA:2001:C:H1'	1:RA:2689:U:C4	2.55	0.41
1:RA:2067:G:H4'	1:RA:2068:U:OP2	2.20	0.41
1:RA:2182:U:H2'	1:RA:2183:A:OP1	2.20	0.41
1:RA:2243:U:H2'	1:RA:2244:U:C6	2.55	0.41
1:RA:2619:C:O2'	1:RA:2620:C:H5'	2.21	0.41
1:RA:2805:C:C4	1:RA:2806:C:C4	3.08	0.41
1:RA:2855:C:O5'	1:RA:2855:C:H6	2.03	0.41
5:RE:138:LEU:HD23	5:RE:138:LEU:HA	1.85	0.41
5:RE:199:MET:HE2	5:RE:199:MET:HB3	1.80	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:RF:4:HIS:O	6:RF:8:LYS:HG2	2.20	0.41
7:RG:18:ILE:CD1	7:RG:42:VAL:HG13	2.50	0.41
7:RG:51:PHE:CD2	7:RG:51:PHE:N	2.88	0.41
7:RG:72:ASN:O	7:RG:76:ILE:HG22	2.20	0.41
10:RJ:111:LYS:HE2	10:RJ:114:LEU:HB3	2.03	0.41
12:RL:55:MET:HA	12:RL:55:MET:HE2	2.00	0.41
16:RP:17:PRO:HG3	16:RP:83:ILE:O	2.21	0.41
16:RP:99:LEU:HA	16:RP:99:LEU:HD12	1.81	0.41
22:RV:40:ILE:HD13	22:RV:40:ILE:N	2.35	0.41
23:RW:69:GLU:HB3	23:RW:70:VAL:H	1.73	0.41
24:RX:17:ARG:N	24:RX:17:ARG:HD2	2.36	0.41
26:RZ:53:MET:O	26:RZ:54:VAL:HG13	2.20	0.41
32:QA:71:A:C2	32:QA:72:A:C5	3.07	0.41
32:QA:224:U:O2'	32:QA:225:C:H5'	2.20	0.41
32:QA:663:A:C2	32:QA:743:A:C2	3.08	0.41
32:QA:781:A:C5	32:QA:802:A:C2	3.08	0.41
32:QA:1080:A:OP1	36:QE:51:LYS:HE3	2.21	0.41
32:QA:1111:A:C2'	32:QA:1112:C:H5'	2.50	0.41
32:QA:1226:C:H5"	44:QM:101:THR:OG1	2.19	0.41
32:QA:1412:C:H2'	32:QA:1413:A:C8	2.55	0.41
34:QC:96:VAL:HB	34:QC:97:PRO:CD	2.45	0.41
35:QD:13:ARG:HG3	35:QD:55:ARG:HE	1.86	0.41
35:QD:146:GLU:HB3	35:QD:147:LYS:HZ3	1.83	0.41
36:QE:105:ILE:HD11	36:QE:123:LEU:CD2	2.47	0.41
39:QH:30:LYS:O	39:QH:33:VAL:HB	2.20	0.41
39:QH:110:MET:SD	39:QH:115:ALA:HA	2.60	0.41
40:QI:38:PHE:C	40:QI:38:PHE:CD1	2.97	0.41
40:QI:48:ARG:HH21	40:QI:52:GLU:HA	1.85	0.41
43:QL:21:PRO:HD2	43:QL:94:TYR:OH	2.20	0.41
44:QM:113:LYS:N	44:QM:114:PRO:CD	2.80	0.41
46:QO:30:LEU:O	46:QO:33:ALA:HB3	2.20	0.41
49:QR:41:SER:O	49:QR:45:GLY:N	2.53	0.41
51:QT:29:THR:HA	51:QT:32:LYS:CG	2.49	0.41
32:XA:16:A:O2'	32:XA:17:U:H5'	2.19	0.41
32:XA:289:G:C6	32:XA:290:C:N4	2.89	0.41
32:XA:604:G:H2'	32:XA:605:U:O4'	2.20	0.41
32:XA:770:C:O2'	32:XA:771:G:H5'	2.21	0.41
32:XA:889:A:O3'	32:XA:890:G:H4'	2.21	0.41
33:XB:71:THR:O	33:XB:72:LYS:C	2.63	0.41
33:XB:114:LYS:C	33:XB:117:GLU:HG2	2.45	0.41
33:XB:124:THR:C	33:XB:126:ASP:N	2.77	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:XC:22:PHE:CE2	41:XJ:97:ASP:HB2	2.54	0.41
35:XD:149:LYS:HZ2	35:XD:176:LYS:NZ	2.18	0.41
36:XE:13:LYS:HB2	36:XE:116:VAL:HG11	2.03	0.41
37:XF:64:VAL:HG23	37:XF:66:ALA:H	1.86	0.41
38:XG:103:ILE:O	38:XG:103:ILE:HG22	2.20	0.41
38:XG:128:GLU:OE2	38:XG:130:LYS:HB2	2.20	0.41
41:XJ:32:THR:HG23	41:XJ:83:THR:OG1	2.20	0.41
42:XK:125:LYS:C	52:XU:33:ARG:HE	2.28	0.41
50:XS:59:VAL:HB	50:XS:73:PHE:CD2	2.47	0.41
1:YA:117:G:C6	1:YA:119:A:C6	3.09	0.41
1:YA:157:C:C2	1:YA:158:U:C6	3.07	0.41
1:YA:170:U:C2	1:YA:171:U:C5	3.08	0.41
1:YA:270:A:H2'	1:YA:271:G:OP1	2.20	0.41
1:YA:449:A:H4'	17:YQ:2:ARG:HH22	1.84	0.41
1:YA:480:A:H2'	1:YA:480:A:N3	2.34	0.41
1:YA:489:G:C2'	1:YA:491:G:H8	2.33	0.41
1:YA:502:A:C6	1:YA:505:A:N7	2.88	0.41
1:YA:532:A:N3	1:YA:532:A:C2'	2.83	0.41
1:YA:639:U:H2'	1:YA:640:C:C6	2.47	0.41
1:YA:855:G:N2	1:YA:923:G:C4	2.88	0.41
1:YA:862:G:H2'	1:YA:863:A:O4'	2.20	0.41
1:YA:1087:G:C4	1:YA:1089:A:N3	2.88	0.41
1:YA:1096:A:C8	1:YA:1097:U:C5	3.08	0.41
1:YA:1207:C:N4	1:YA:1208:C:H41	2.18	0.41
1:YA:1676:A:C2	1:YA:1993:U:H5'	2.55	0.41
1:YA:1796:U:H2'	1:YA:1797:G:H8	1.82	0.41
1:YA:2067:G:C6	1:YA:2444:G:C6	3.08	0.41
1:YA:2235:G:C4	1:YA:2236:U:C5	3.08	0.41
1:YA:2266:A:C4'	1:YA:2267:A:O5'	2.57	0.41
1:YA:2428:G:H4'	1:YA:2429:G:C4	2.55	0.41
1:YA:2448:A:H61	12:YL:36:LYS:CE	2.33	0.41
1:YA:2825:G:H3'	1:YA:2826:A:H8	1.84	0.41
1:YA:2830:C:H2'	1:YA:2831:G:O4'	2.20	0.41
2:YB:16:G:O2'	2:YB:17:C:H5'	2.20	0.41
2:YB:75:G:H22	2:YB:102:G:N2	2.19	0.41
2:YB:90:C:H2'	2:YB:91:C:O4'	2.21	0.41
2:YB:100:G:H2'	2:YB:101:A:O4'	2.21	0.41
3:YC:65:ASP:OD1	3:YC:67:LYS:O	2.38	0.41
4:YD:56:LYS:NZ	4:YD:56:LYS:HB3	2.35	0.41
4:YD:104:VAL:O	4:YD:104:VAL:HG12	2.19	0.41
4:YD:185:ASN:O	4:YD:186:LEU:HD12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:YE:109:LEU:HA	5:YE:112:LEU:HB2	2.03	0.41
6:YF:99:PHE:C	6:YF:101:ARG:H	2.27	0.41
7:YG:86:LEU:HA	7:YG:163:TYR:CB	2.39	0.41
9:YI:95:ASP:HB3	9:YI:97:VAL:HG23	2.00	0.41
11:YK:88:ASN:HB2	11:YK:91:SER:HB2	2.02	0.41
14:YN:62:ASN:N	14:YN:62:ASN:OD1	2.51	0.41
14:YN:73:ASN:HA	14:YN:76:VAL:CG2	2.50	0.41
21:YU:33:VAL:O	21:YU:34:ILE:CG1	2.68	0.41
22:YV:21:ARG:NH2	22:YV:87:GLN:O	2.51	0.41
23:YW:31:LEU:C	23:YW:33:GLY:N	2.78	0.41
23:YW:52:CYS:O	23:YW:53:GLY:O	2.39	0.41
24:YX:38:TRP:HA	24:YX:38:TRP:HE3	1.85	0.41
28:Y1:38:PHE:CG	28:Y1:39:ASP:N	2.88	0.41
28:Y1:47:ILE:H	28:Y1:47:ILE:HD12	1.85	0.41
1:RA:136:G:C6	1:RA:142:A:N6	2.89	0.41
1:RA:374:A:H2'	1:RA:375:G:O4'	2.20	0.41
1:RA:481:G:O2'	1:RA:507:A:N1	2.45	0.41
1:RA:548:G:H8	1:RA:548:G:H3'	1.85	0.41
1:RA:907:G:C2'	1:RA:908:C:H5'	2.51	0.41
1:RA:1065:U:H5	1:RA:1074:G:H21	1.69	0.41
1:RA:1229:C:H2'	1:RA:1230:A:H8	1.85	0.41
1:RA:1384:A:H1'	1:RA:1405:U:C1'	2.50	0.41
1:RA:1384:A:H1'	1:RA:1405:U:H1'	2.00	0.41
1:RA:1588:G:C2	1:RA:1589:U:C5	3.08	0.41
1:RA:2180:U:C2'	1:RA:2181:U:H5	2.21	0.41
1:RA:2590:A:H2'	1:RA:2591:C:C6	2.56	0.41
1:RA:2742:G:OP2	31:R4:24:ARG:NH1	2.53	0.41
1:RA:2830:C:O3'	4:RD:56:LYS:NZ	2.53	0.41
1:RA:2839:G:C5	1:RA:2840:C:C5	3.08	0.41
3:RC:171:VAL:HG23	3:RC:185:ALA:CA	2.49	0.41
4:RD:85:ALA:O	4:RD:86:GLU:CB	2.69	0.41
4:RD:85:ALA:O	4:RD:86:GLU:HB2	2.21	0.41
4:RD:91:THR:O	4:RD:91:THR:OG1	2.34	0.41
5:RE:48:THR:OG1	5:RE:50:ALA:HB3	2.20	0.41
5:RE:52:VAL:O	5:RE:53:THR:C	2.63	0.41
7:RG:68:ARG:C	7:RG:68:ARG:HD2	2.45	0.41
7:RG:84:LYS:HB3	7:RG:132:LEU:O	2.19	0.41
8:RH:75:LEU:HD22	8:RH:143:ILE:CG2	2.50	0.41
9:RI:3:LYS:HD2	9:RI:4:VAL:H	1.84	0.41
12:RL:29:LYS:C	12:RL:31:GLY:H	2.28	0.41
16:RP:98:TYR:H	16:RP:98:TYR:HD1	1.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:RT:85:VAL:O	20:RT:86:THR:O	2.38	0.41
21:RU:5:ARG:O	21:RU:6:ARG:O	2.38	0.41
24:RX:19:HIS:C	24:RX:21:LEU:H	2.28	0.41
25:RY:40:SER:C	25:RY:42:LEU:N	2.78	0.41
29:R2:11:LYS:O	29:R2:12:ARG:C	2.62	0.41
30:R3:21:PHE:HB2	30:R3:49:VAL:HG13	1.99	0.41
32:QA:137:U:O2	32:QA:227:G:C2	2.73	0.41
32:QA:203:G:C2	32:QA:215:C:N3	2.88	0.41
32:QA:287:U:H2'	32:QA:288:A:H8	1.85	0.41
32:QA:543:U:H2'	32:QA:544:G:O4'	2.20	0.41
32:QA:602:A:O2'	32:QA:603:U:H5'	2.20	0.41
32:QA:1511:G:C5	32:QA:1512:U:C5	3.08	0.41
32:QA:1521:C:C2	32:QA:1522:U:C6	3.08	0.41
32:QA:1521:C:N3	32:QA:1522:U:C5	2.88	0.41
34:QC:34:SER:O	34:QC:38:VAL:HG13	2.21	0.41
34:QC:110:LEU:N	34:QC:110:LEU:HD22	2.36	0.41
34:QC:138:GLN:C	34:QC:140:ALA:N	2.78	0.41
35:QD:29:THR:O	35:QD:30:LYS:HB2	2.20	0.41
38:QG:71:THR:O	38:QG:90:VAL:HG12	2.20	0.41
39:QH:88:LYS:HB2	39:QH:88:LYS:HE3	1.87	0.41
40:QI:12:LYS:O	40:QI:13:SER:HB3	2.20	0.41
40:QI:88:GLU:HG3	40:QI:89:TYR:N	2.34	0.41
41:QJ:10:LEU:O	41:QJ:71:LEU:HD13	2.21	0.41
42:QK:110:THR:HG22	52:QU:4:LYS:HB3	2.02	0.41
42:QK:111:ASP:O	52:QU:3:ILE:HG23	2.20	0.41
45:QN:3:GLN:O	45:QN:6:LYS:HB3	2.21	0.41
45:QN:62:ARG:O	45:QN:63:CYS:C	2.64	0.41
48:QQ:14:ASP:O	48:QQ:16:MET:HG2	2.21	0.41
50:QS:55:GLN:CD	50:QS:56:HIS:H	2.28	0.41
51:QT:24:ARG:O	51:QT:25:SER:C	2.61	0.41
32:XA:6:G:O2'	32:XA:7:A:P	2.77	0.41
32:XA:72:A:H2'	32:XA:73:C:C6	2.55	0.41
32:XA:83:C:N4	32:XA:85:U:C4	2.88	0.41
32:XA:509:A:C6	32:XA:510:A:N1	2.87	0.41
32:XA:530:G:H3'	32:XA:530:G:N3	2.35	0.41
32:XA:765:G:C8	32:XA:812:G:N3	2.89	0.41
32:XA:1186:G:N2	32:XA:1187:G:H1'	2.35	0.41
40:XI:14:SER:OG	40:XI:69:GLY:HA3	2.19	0.41
40:XI:113:LYS:HG3	40:XI:119:LYS:HA	2.02	0.41
43:XL:49:ARG:HG2	43:XL:49:ARG:HH11	1.86	0.41
51:XT:74:HIS:O	51:XT:78:LEU:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:XU:38:GLU:C	52:XU:40:PRO:HD2	2.44	0.41
1:YA:26:G:H5'	1:YA:27:G:OP2	2.21	0.41
1:YA:184:C:N3	1:YA:213:A:H2	2.18	0.41
1:YA:405:U:H3'	1:YA:406:G:H5'	2.02	0.41
1:YA:468:G:H4'	5:YE:57:LYS:CG	2.51	0.41
1:YA:524:G:H2'	1:YA:525:U:H6	1.86	0.41
1:YA:528:A:C2	1:YA:2043:C:C5'	3.04	0.41
1:YA:752:A:O2'	1:YA:753:A:H8	2.02	0.41
1:YA:776:G:N1	1:YA:2072:C:OP1	2.41	0.41
1:YA:822:G:H5"	56:YA:3359:HOH:O	2.20	0.41
1:YA:922:C:H2'	1:YA:923:G:H8	1.85	0.41
1:YA:1069:A:H2	1:YA:1097:U:OP1	2.03	0.41
1:YA:1083:U:H1'	1:YA:1086:A:N1	2.36	0.41
1:YA:1092:C:H2'	1:YA:1093:G:C5'	2.50	0.41
1:YA:1358:G:H1'	1:YA:1374:G:N2	2.34	0.41
1:YA:1515:A:H4'	1:YA:1556:C:HO2'	1.85	0.41
1:YA:1661:G:H2'	1:YA:1662:U:H6	1.86	0.41
1:YA:1740:G:C2	1:YA:1741:C:C2	3.09	0.41
1:YA:1808:A:H4'	1:YA:1809:A:OP2	2.21	0.41
1:YA:1964:G:H4'	1:YA:1965:C:OP2	2.20	0.41
1:YA:2234:G:C6	1:YA:2235:G:C5	3.08	0.41
1:YA:2262:U:H4'	1:YA:2328:A:H2	1.85	0.41
1:YA:2396:G:C2'	1:YA:2397:G:H5'	2.50	0.41
1:YA:2461:A:N1	1:YA:2490:G:N2	2.68	0.41
1:YA:2519:U:N1	1:YA:2542:A:N6	2.68	0.41
1:YA:2538:C:O2'	1:YA:2539:C:H5'	2.21	0.41
2:YB:27:C:H2'	2:YB:28:C:O4'	2.20	0.41
3:YC:183:VAL:HG22	3:YC:184:GLU:H	1.84	0.41
3:YC:196:ASN:O	3:YC:197:ALA:CB	2.67	0.41
4:YD:119:ALA:HB2	4:YD:163:GLY:C	2.46	0.41
7:YG:8:VAL:HG21	7:YG:49:LEU:HD23	2.01	0.41
9:YI:12:VAL:CG1	9:YI:13:ALA:N	2.81	0.41
10:YJ:57:LEU:O	10:YJ:126:ALA:HA	2.20	0.41
10:YJ:116:ARG:HD2	10:YJ:116:ARG:HA	1.66	0.41
11:YK:11:ALA:O	11:YK:99:ILE:HG23	2.21	0.41
12:YL:63:LYS:HA	30:Y3:12:ARG:HB3	2.01	0.41
14:YN:51:LEU:HA	14:YN:51:LEU:HD23	1.82	0.41
16:YP:19:PHE:HE1	16:YP:58:PHE:CG	2.39	0.41
17:YQ:51:GLN:O	17:YQ:54:ARG:N	2.49	0.41
17:YQ:77:LYS:HE3	17:YQ:116:LEU:HD11	2.01	0.41
18:YR:8:GLY:HA3	18:YR:23:GLU:HG2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:YR:27:ILE:CG2	18:YR:28:ALA:N	2.73	0.41
20:YT:53:VAL:HB	20:YT:54:GLU:H	1.76	0.41
22:YV:14:LYS:HG3	22:YV:18:ARG:HD2	2.02	0.41
22:YV:57:TYR:N	22:YV:57:TYR:CD1	2.89	0.41
23:YW:19:ARG:C	23:YW:20:LEU:HD12	2.44	0.41
23:YW:44:PHE:HE2	23:YW:76:ARG:NE	2.18	0.41
23:YW:77:LYS:O	23:YW:78:PHE:CB	2.68	0.41
31:Y4:7:VAL:HG22	31:Y4:25:VAL:HG23	2.03	0.41
1:RA:272:A:O2'	1:RA:273:G:P	2.78	0.41
1:RA:778:G:C5	1:RA:779:U:C4	3.08	0.41
1:RA:980:A:C6	1:RA:981:A:N1	2.89	0.41
1:RA:1083:U:H6	1:RA:1083:U:H3'	1.84	0.41
1:RA:1095:A:C6	1:RA:1096:A:N6	2.88	0.41
1:RA:1568:G:H1'	3:RC:57:HIS:HE1	1.84	0.41
1:RA:1748:C:H2'	1:RA:1749:A:H8	1.86	0.41
1:RA:1808:A:O2'	24:RX:2:ARG:NH1	2.54	0.41
1:RA:1856:U:H3	1:RA:1886:U:H3	1.69	0.41
1:RA:1927:A:C6	1:RA:1928:A:C6	3.08	0.41
1:RA:1955:U:C5	1:RA:2557:G:N2	2.89	0.41
1:RA:2341:G:H2'	1:RA:2342:C:H6	1.85	0.41
1:RA:2383:G:H5"	1:RA:2383:G:C8	2.55	0.41
3:RC:76:VAL:CG1	3:RC:96:LYS:NZ	2.84	0.41
6:RF:172:PHE:O	6:RF:174:PHE:N	2.53	0.41
7:RG:44:HIS:HA	7:RG:49:LEU:HD23	2.03	0.41
7:RG:90:GLY:HA3	7:RG:159:LYS:HG3	2.03	0.41
10:RJ:97:PRO:C	10:RJ:99:ARG:H	2.28	0.41
12:RL:111:ILE:HD12	12:RL:128:THR:HG21	2.03	0.41
16:RP:19:PHE:HB2	16:RP:20:ARG:H	1.41	0.41
17:RQ:94:LEU:C	17:RQ:96:ASP:N	2.71	0.41
18:RR:68:ARG:HD3	18:RR:92:TRP:CZ2	2.54	0.41
19:RS:24:ILE:HG23	19:RS:71:VAL:HG11	2.02	0.41
21:RU:84:PHE:N	21:RU:94:PHE:CE2	2.89	0.41
23:RW:47:GLY:C	23:RW:49:ASN:N	2.76	0.41
23:RW:73:PRO:HG2	23:RW:76:ARG:CB	2.47	0.41
27:R0:53:VAL:O	27:R0:54:ILE:C	2.62	0.41
32:QA:903:G:H2'	32:QA:904:U:C6	2.56	0.41
32:QA:1348:U:C2'	32:QA:1349:A:H8	2.33	0.41
32:QA:1406:U:C2'	32:QA:1407:C:H5'	2.51	0.41
35:QD:195:ASN:O	35:QD:196:GLU:HG3	2.19	0.41
37:QF:2:ARG:HH21	37:QF:68:GLN:NE2	2.19	0.41
37:QF:97:THR:HG22	37:QF:98:GLU:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:QG:146:ALA:C	38:QG:148:LYS:N	2.78	0.41
39:QH:33:VAL:O	39:QH:34:ALA:C	2.61	0.41
41:QJ:18:ILE:HG23	41:QJ:19:ASP:N	2.34	0.41
41:QJ:42:LEU:HB3	41:QJ:43:PRO:CD	2.50	0.41
44:QM:86:ARG:NH2	44:QM:96:VAL:HG12	2.34	0.41
46:QO:2:LEU:O	46:QO:3:SER:C	2.63	0.41
46:QO:27:GLN:HA	46:QO:30:LEU:HD12	2.02	0.41
48:QQ:4:ILE:HG22	48:QQ:5:ARG:HD3	2.02	0.41
50:QS:79:TYR:CZ	50:QS:80:ARG:HB2	2.55	0.41
51:QT:66:ILE:O	51:QT:67:HIS:O	2.39	0.41
32:XA:259:G:C4	32:XA:260:G:C8	3.08	0.41
32:XA:505:G:H5'	32:XA:534:U:C2	2.55	0.41
32:XA:1084:G:C8	32:XA:1085:U:C6	3.08	0.41
32:XA:1111:A:H8	32:XA:1111:A:O5'	2.03	0.41
32:XA:1144:G:N1	32:XA:1145:A:C6	2.88	0.41
32:XA:1331:G:O2'	32:XA:1332:A:O5'	2.38	0.41
32:XA:1363:A:C5	32:XA:1365:G:O6	2.72	0.41
33:XB:9:LEU:C	33:XB:11:ALA:H	2.27	0.41
33:XB:72:LYS:O	33:XB:73:ARG:C	2.63	0.41
34:XC:172:VAL:O	34:XC:174:LEU:N	2.54	0.41
35:XD:64:TYR:CD1	35:XD:64:TYR:N	2.89	0.41
37:XF:18:VAL:HG13	37:XF:22:ILE:HD11	2.01	0.41
37:XF:39:LEU:HD12	37:XF:40:GLU:O	2.21	0.41
43:XL:41:PRO:HG2	43:XL:45:ASN:O	2.21	0.41
43:XL:81:ILE:HD11	43:XL:94:TYR:CG	2.55	0.41
44:XM:12:LYS:CE	44:XM:16:ILE:HG22	2.50	0.41
44:XM:72:ILE:O	44:XM:72:ILE:HG12	2.21	0.41
50:XS:43:MET:H	50:XS:43:MET:HG3	1.73	0.41
50:XS:62:THR:HG21	50:XS:64:GLU:OE2	2.20	0.41
51:XT:42:ASP:O	51:XT:44:ALA:N	2.53	0.41
1:YA:112:U:H2'	1:YA:113:U:H5'	2.03	0.41
1:YA:117:G:C4'	1:YA:126:A:H2	2.32	0.41
1:YA:223:A:O2'	1:YA:224:U:P	2.79	0.41
1:YA:416:U:H2'	1:YA:417:C:O4'	2.20	0.41
1:YA:822:G:H2'	1:YA:823:C:C6	2.55	0.41
1:YA:1152:C:H5"	17:YQ:79:ILE:HG23	2.01	0.41
1:YA:1345:C:O2'	1:YA:1346:G:P	2.79	0.41
1:YA:1429:G:O2'	1:YA:1430:G:P	2.79	0.41
1:YA:1432:G:H2'	1:YA:1433:A:C8	2.55	0.41
1:YA:1638:C:H4'	1:YA:2710:C:O2	2.21	0.41
1:YA:1842:G:N2	1:YA:1901:A:C4	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2079:U:H2'	1:YA:2080:A:O4'	2.20	0.41
1:YA:2387:U:H6	1:YA:2387:U:H3'	1.84	0.41
1:YA:2807:U:C5'	1:YA:2808:G:OP2	2.68	0.41
1:YA:2880:C:C1'	14:YN:93:GLY:H	2.29	0.41
3:YC:166:ARG:CB	3:YC:171:VAL:HG22	2.50	0.41
3:YC:229:HIS:ND1	3:YC:230:PRO:HD2	2.35	0.41
4:YD:115:GLY:O	14:YN:3:HIS:CE1	2.72	0.41
5:YE:157:LEU:O	5:YE:157:LEU:HD12	2.20	0.41
6:YF:87:LYS:C	6:YF:88:VAL:HG23	2.44	0.41
6:YF:130:GLY:HA2	6:YF:151:LEU:O	2.20	0.41
9:YI:78:LEU:C	9:YI:80:LYS:H	2.29	0.41
12:YL:40:SER:O	12:YL:41:ARG:C	2.63	0.41
12:YL:79:LEU:HD22	12:YL:115:GLU:O	2.20	0.41
12:YL:120:VAL:HG12	12:YL:121:THR:N	2.34	0.41
13:YM:102:LEU:HB3	13:YM:103:TYR:CD1	2.56	0.41
17:YQ:4:LYS:HZ1	17:YQ:6:GLY:HA3	1.82	0.41
20:YT:7:LEU:C	20:YT:9:LYS:H	2.28	0.41
20:YT:55:VAL:HG22	20:YT:56:GLU:N	2.34	0.41
21:YU:81:ARG:HD2	21:YU:81:ARG:H	1.85	0.41
22:YV:30:ILE:HG12	22:YV:91:PHE:CB	2.48	0.41
25:YY:17:GLU:OE1	25:YY:53:VAL:HB	2.20	0.41
26:YZ:23:LEU:C	26:YZ:25:GLY:H	2.28	0.41
28:Y1:52:LYS:HB2	28:Y1:52:LYS:NZ	2.36	0.41
29:Y2:30:VAL:C	29:Y2:32:ALA:N	2.76	0.41
1:RA:915:C:O2	2:RB:100:G:H4'	2.20	0.41
1:RA:1190:G:OP1	12:RL:32:GLY:CA	2.66	0.41
1:RA:1509:A:C1'	1:RA:1510:G:H5'	2.31	0.41
1:RA:1585:C:H2'	1:RA:1586:A:H5'	2.02	0.41
1:RA:1587:G:N3	1:RA:1588:G:C8	2.89	0.41
1:RA:1734:G:O2'	1:RA:1735:A:H5'	2.21	0.41
1:RA:1889:A:H2'	1:RA:1890:A:C8	2.56	0.41
1:RA:2660:A:H2'	1:RA:2661:G:C8	2.55	0.41
1:RA:2812:G:H2'	1:RA:2813:A:O4'	2.21	0.41
3:RC:141:HIS:HB2	3:RC:190:THR:CB	2.48	0.41
3:RC:268:ARG:HH11	3:RC:268:ARG:CB	2.33	0.41
4:RD:112:THR:O	4:RD:195:GLY:HA2	2.21	0.41
5:RE:147:LEU:O	5:RE:168:ASP:O	2.39	0.41
6:RF:84:ILE:O	6:RF:84:ILE:HG23	2.21	0.41
7:RG:31:GLU:O	7:RG:31:GLU:HG3	2.20	0.41
11:RK:28:SER:C	11:RK:30:ARG:N	2.78	0.41
11:RK:78:ARG:NH1	16:RP:70:GLU:OE2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:RM:56:ALA:H	13:RM:58:LYS:H	1.69	0.41
14:RN:18:GLN:NE2	14:RN:22:ARG:NH1	2.68	0.41
14:RN:116:VAL:O	14:RN:117:ASP:CG	2.64	0.41
21:RU:66:VAL:C	21:RU:68:ASN:N	2.79	0.41
22:RV:4:ILE:O	22:RV:4:ILE:HG22	2.21	0.41
31:R4:16:ILE:HA	31:R4:24:ARG:O	2.21	0.41
32:QA:11:G:H2'	32:QA:12:U:H6	1.86	0.41
32:QA:51:A:H4'	32:QA:52:C:H5'	2.03	0.41
32:QA:195:A:C6	32:QA:196:A:C6	3.08	0.41
32:QA:201:G:C2	32:QA:202:G:H1'	2.55	0.41
32:QA:254:G:H2'	32:QA:255:G:C8	2.55	0.41
32:QA:499:A:H4'	32:QA:500:G:OP1	2.20	0.41
32:QA:604:G:N1	32:QA:605:U:C2	2.89	0.41
32:QA:684:U:O2'	42:QK:39:ASN:O	2.32	0.41
32:QA:895:G:C5	32:QA:896:C:C4	3.08	0.41
32:QA:1114:C:H2'	32:QA:1115:U:O4'	2.21	0.41
32:QA:1142:G:C4	32:QA:1143:G:H1'	2.56	0.41
34:QC:6:PRO:CG	34:QC:183:TYR:CG	3.04	0.41
34:QC:98:ALA:C	34:QC:99:GLN:O	2.63	0.41
34:QC:106:ARG:O	34:QC:106:ARG:CG	2.69	0.41
37:QF:52:ASN:O	37:QF:53:LYS:CB	2.68	0.41
39:QH:24:VAL:O	39:QH:59:GLU:HA	2.21	0.41
39:QH:105:THR:CG2	39:QH:120:LEU:HD13	2.47	0.41
43:QL:42:LYS:O	43:QL:43:LYS:C	2.64	0.41
32:XA:213:G:N3	32:XA:213:G:H2'	2.36	0.41
32:XA:270:A:C5	32:XA:271:C:C5	3.09	0.41
32:XA:279:A:H5"	32:XA:280:C:C3'	2.39	0.41
32:XA:790:A:N6	32:XA:791:G:C6	2.88	0.41
32:XA:796:C:C3'	42:XK:126:ARG:HH21	2.33	0.41
32:XA:881:G:C2	32:XA:882:C:C2	3.09	0.41
32:XA:1161:C:O2'	32:XA:1162:C:H5'	2.21	0.41
32:XA:1203:C:H6	32:XA:1203:C:O5'	2.02	0.41
32:XA:1315:U:C4	32:XA:1316:G:C6	3.09	0.41
32:XA:1320:C:N4	50:XS:36:ARG:HG3	2.36	0.41
32:XA:1321:U:N3	32:XA:1322:C:N3	2.67	0.41
32:XA:1369:C:H2'	32:XA:1370:G:O4'	2.21	0.41
33:XB:89:PHE:HB3	33:XB:149:GLY:C	2.46	0.41
35:XD:72:ARG:HA	35:XD:203:TYR:HE1	1.85	0.41
36:XE:110:MET:HG2	36:XE:139:THR:CG2	2.49	0.41
37:XF:41:ASP:OD2	37:XF:41:ASP:C	2.64	0.41
44:XM:12:LYS:HE2	44:XM:16:ILE:HG22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:XO:2:LEU:HD12	46:XO:2:LEU:HA	1.89	0.41
46:XO:88:ARG:N	46:XO:88:ARG:HD3	2.36	0.41
48:XQ:21:VAL:HG11	48:XQ:42:LYS:NZ	2.35	0.41
48:XQ:62:GLU:HB2	48:XQ:72:TRP:CH2	2.56	0.41
50:XS:38:THR:HA	50:XS:69:LYS:HD3	2.01	0.41
1:YA:98:G:N3	1:YA:98:G:H2'	2.35	0.41
1:YA:198:C:H42	1:YA:248:G:H1	1.67	0.41
1:YA:234:U:O2'	1:YA:235:U:C5'	2.69	0.41
1:YA:324:A:N6	1:YA:339:U:H5'	2.36	0.41
1:YA:424:G:C2	1:YA:425:G:C8	3.08	0.41
1:YA:478:A:C6	1:YA:480:A:C6	3.09	0.41
1:YA:604:G:C2	1:YA:605:G:C5	3.09	0.41
1:YA:668:A:C4	1:YA:670:A:N7	2.89	0.41
1:YA:684:G:OP1	29:Y2:16:HIS:ND1	2.53	0.41
1:YA:715:A:C6	1:YA:716:A:C6	3.08	0.41
1:YA:769:U:O2'	1:YA:1379:U:H6	2.04	0.41
1:YA:1180:U:O4	1:YA:1181:U:C4	2.74	0.41
1:YA:1249:U:H3'	1:YA:1249:U:P	2.60	0.41
1:YA:1323:C:C4	1:YA:1324:G:N7	2.89	0.41
1:YA:1452:G:C8	1:YA:1457:U:N3	2.88	0.41
1:YA:1520:U:C4	1:YA:1521:G:C6	3.08	0.41
1:YA:1803:A:H2'	1:YA:1804:C:O4'	2.21	0.41
1:YA:1883:U:H2'	1:YA:1884:G:O4'	2.19	0.41
1:YA:2296:U:H5	15:YO:9:ARG:NH2	2.18	0.41
1:YA:2315:G:H5'	6:YF:156:THR:HG23	2.01	0.41
1:YA:2727:A:C2	1:YA:2728:U:N3	2.88	0.41
2:YB:73:A:C4	2:YB:104:A:C2	3.09	0.41
3:YC:66:PHE:CZ	3:YC:155:ARG:NH1	2.89	0.41
3:YC:169:ALA:O	3:YC:185:ALA:HB3	2.20	0.41
5:YE:160:ALA:C	5:YE:162:ARG:N	2.78	0.41
7:YG:82:PHE:CE2	7:YG:137:LYS:HB2	2.56	0.41
9:YI:104:GLN:HA	9:YI:107:GLU:HB2	2.03	0.41
10:YJ:4:PHE:HD1	10:YJ:44:TYR:HB3	1.86	0.41
10:YJ:98:GLU:O	10:YJ:102:GLU:HB2	2.21	0.41
12:YL:75:ALA:HB2	12:YL:105:ILE:CD1	2.50	0.41
12:YL:96:LYS:C	12:YL:98:ALA:N	2.79	0.41
13:YM:12:MET:HE2	13:YM:12:MET:HB3	1.86	0.41
13:YM:21:ALA:HA	13:YM:97:GLN:HG2	2.03	0.41
16:YP:5:LYS:HE3	16:YP:9:GLN:NE2	2.36	0.41
16:YP:72:VAL:O	16:YP:72:VAL:HG23	2.19	0.41
16:YP:92:ARG:O	16:YP:93:LYS:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:YR:94:THR:C	18:YR:95:ASP:OD1	2.64	0.41
20:YT:43:ILE:CG2	20:YT:58:VAL:HG11	2.50	0.41
20:YT:62:VAL:HG12	20:YT:63:VAL:H	1.84	0.41
24:YX:31:ASN:HB2	24:YX:33:HIS:CE1	2.55	0.41
25:YY:47:ARG:O	25:YY:48:ARG:C	2.63	0.41
27:Y0:21:LEU:HB3	27:Y0:22:THR:H	1.78	0.41
28:Y1:8:ILE:HG22	28:Y1:10:LEU:HD13	2.03	0.41
1:RA:61:C:H5"	1:RA:62:U:OP2	2.21	0.41
1:RA:372:G:N2	1:RA:400:G:H2'	2.36	0.41
1:RA:541:A:H2'	1:RA:542:C:O4'	2.20	0.41
1:RA:760:G:C2'	1:RA:761:A:H5'	2.51	0.41
1:RA:958:U:O4	13:RM:16:ARG:HA	2.21	0.41
1:RA:1333:G:C2	1:RA:1334:G:C8	3.08	0.41
1:RA:1507:C:H5"	1:RA:1508:A:OP2	2.20	0.41
1:RA:1795:C:H2'	1:RA:1796:U:C6	2.56	0.41
1:RA:2094:A:H5"	8:RH:25:TYR:CD2	2.54	0.41
1:RA:2536:G:C6	1:RA:2537:U:C4	3.09	0.41
1:RA:2820:A:O2'	1:RA:2821:A:P	2.79	0.41
4:RD:178:VAL:N	4:RD:188:LEU:O	2.40	0.41
5:RE:75:SER:OG	5:RE:77:ILE:HG23	2.21	0.41
6:RF:59:ILE:HG23	6:RF:137:PHE:CD1	2.56	0.41
7:RG:156:TYR:O	7:RG:157:LYS:HG3	2.21	0.41
7:RG:169:ARG:C	7:RG:170:THR:HG23	2.46	0.41
8:RH:147:VAL:HG12	8:RH:149:GLU:HG3	2.02	0.41
17:RQ:63:ARG:CZ	17:RQ:96:ASP:CA	2.90	0.41
20:RT:26:LYS:O	20:RT:27:SER:HB2	2.21	0.41
20:RT:27:SER:C	20:RT:28:ASN:CG	2.88	0.41
23:RW:21:GLY:O	23:RW:22:VAL:CB	2.68	0.41
23:RW:24:ARG:HD3	23:RW:65:LYS:HD3	2.02	0.41
23:RW:49:ASN:O	23:RW:49:ASN:CG	2.59	0.41
25:RY:26:PHE:HD1	25:RY:27:ASN:ND2	2.19	0.41
32:QA:209:U:O2	32:QA:209:U:O4'	2.39	0.41
32:QA:285:C:O2	32:QA:285:C:H2'	2.21	0.41
32:QA:807:A:C5	32:QA:808:C:C4	3.09	0.41
32:QA:1008:U:OP2	45:QN:23:ARG:NH2	2.54	0.41
32:QA:1045:C:O2	32:QA:1045:C:H2'	2.19	0.41
35:QD:27:ILE:O	35:QD:28:ASP:C	2.64	0.41
35:QD:115:GLN:CD	35:QD:119:HIS:HE1	2.29	0.41
36:QE:14:LEU:HA	36:QE:36:THR:HA	2.03	0.41
38:QG:110:ARG:NH1	38:QG:122:GLU:HG2	2.35	0.41
39:QH:74:ILE:HD13	39:QH:128:VAL:CG1	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:QL:32:VAL:O	43:QL:33:CYS:O	2.38	0.41
46:QO:68:TYR:CZ	46:QO:72:LYS:HG3	2.56	0.41
50:QS:79:TYR:CG	50:QS:80:ARG:N	2.87	0.41
32:XA:572:A:H5"	32:XA:917:G:H4'	2.01	0.41
32:XA:661:G:C5	32:XA:662:U:C5	3.08	0.41
32:XA:1003:G:N2	32:XA:1005:A:C5'	2.81	0.41
32:XA:1336:C:O2'	32:XA:1337:G:C4	2.71	0.41
32:XA:1365:G:O2'	32:XA:1366:C:H5'	2.20	0.41
35:XD:48:SER:O	35:XD:49:ASP:C	2.62	0.41
35:XD:57:LYS:HE3	35:XD:68:GLU:OE1	2.20	0.41
39:XH:33:VAL:O	39:XH:35:ILE:N	2.54	0.41
39:XH:38:VAL:HG12	39:XH:38:VAL:O	2.21	0.41
41:XJ:63:ASP:OD1	45:XN:97:LYS:HE3	2.19	0.41
42:XK:20:ALA:HB3	42:XK:83:VAL:HA	2.02	0.41
42:XK:70:ALA:HB1	42:XK:104:PHE:HZ	1.85	0.41
42:XK:75:GLU:HA	42:XK:75:GLU:OE2	2.20	0.41
45:XN:53:ASP:HA	45:XN:58:ARG:HD3	2.03	0.41
48:XQ:47:ASP:HB3	48:XQ:74:LEU:CB	2.51	0.41
48:XQ:61:ARG:HG2	48:XQ:75:VAL:HG11	2.02	0.41
49:XR:40:PRO:HB2	49:XR:42:ARG:CG	2.50	0.41
51:XT:25:SER:O	51:XT:26:MET:C	2.63	0.41
51:XT:61:ALA:C	51:XT:63:LYS:N	2.77	0.41
51:XT:64:GLY:O	51:XT:65:LEU:C	2.63	0.41
1:YA:92:U:H3'	1:YA:93:G:H8	1.86	0.41
1:YA:163:C:O2'	1:YA:164:C:C5'	2.69	0.41
1:YA:195:A:C5	1:YA:198:C:C5	3.08	0.41
1:YA:228:C:O2	1:YA:418:C:H4'	2.20	0.41
1:YA:319:G:H2'	1:YA:320:A:C5'	2.51	0.41
1:YA:320:A:O2'	1:YA:322:A:C8	2.72	0.41
1:YA:562:U:H2'	1:YA:572:A:O4'	2.20	0.41
1:YA:604:G:C6	1:YA:625:G:N1	2.89	0.41
1:YA:664:G:C2	1:YA:665:U:O2	2.73	0.41
1:YA:727:A:O2'	1:YA:728:G:O5'	2.38	0.41
1:YA:828:U:H2'	1:YA:829:A:C8	2.56	0.41
1:YA:1155:A:H5"	17:YQ:54:ARG:NE	2.35	0.41
1:YA:1317:G:N2	1:YA:1336:A:C2	2.88	0.41
1:YA:1584:U:C5	1:YA:1585:C:H1'	2.55	0.41
1:YA:1681:G:H2'	1:YA:1757:A:N1	2.36	0.41
1:YA:1733:G:C2'	1:YA:1734:G:O5'	2.69	0.41
1:YA:1826:G:O2'	1:YA:1971:U:OP2	2.38	0.41
1:YA:1865:U:O2	1:YA:1877:A:N1	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1867:G:O2'	1:YA:1868:C:H5'	2.21	0.41
1:YA:2087:G:C2	1:YA:2233:U:O2	2.73	0.41
1:YA:2141:G:H2'	1:YA:2142:A:C8	2.55	0.41
1:YA:2212:A:C8	1:YA:2214:C:C4	3.09	0.41
1:YA:2332:C:C4'	23:YW:40:ARG:NH2	2.82	0.41
1:YA:2355:G:C4'	23:YW:20:LEU:HD22	2.51	0.41
1:YA:2376:A:C2	15:YO:92:PHE:HD2	2.33	0.41
1:YA:2417:C:H2'	1:YA:2418:A:H8	1.84	0.41
1:YA:2522:U:C2'	1:YA:2523:G:H5'	2.51	0.41
1:YA:2652:C:C4	1:YA:2653:U:C4	3.09	0.41
1:YA:2784:U:C4	1:YA:2785:C:C4	3.09	0.41
1:YA:2897:U:H2'	1:YA:2898:U:O4'	2.20	0.41
3:YC:99:GLU:HG2	3:YC:100:ARG:N	2.35	0.41
3:YC:131:MET:CG	3:YC:134:ILE:HD11	2.48	0.41
3:YC:156:SER:O	3:YC:194:VAL:HG11	2.21	0.41
4:YD:149:ASN:O	4:YD:150:GLN:C	2.64	0.41
4:YD:168:GLU:HB2	4:YD:169:ARG:H	1.66	0.41
7:YG:26:LYS:HD3	7:YG:27:GLY:N	2.35	0.41
10:YJ:18:VAL:HG12	10:YJ:54:ILE:HD11	2.03	0.41
10:YJ:74:TYR:HE2	10:YJ:103:ILE:CD1	2.28	0.41
11:YK:71:ARG:CB	11:YK:72:PRO:HD3	2.36	0.41
12:YL:54:GLN:O	12:YL:55:MET:C	2.63	0.41
13:YM:78:LEU:HD22	13:YM:78:LEU:HA	1.68	0.41
17:YQ:46:TYR:CZ	17:YQ:50:ARG:CZ	3.04	0.41
17:YQ:89:ILE:O	17:YQ:91:ARG:N	2.53	0.41
20:YT:54:GLU:CD	20:YT:54:GLU:N	2.78	0.41
23:YW:44:PHE:HB3	23:YW:78:PHE:CD1	2.55	0.41
30:Y3:22:LYS:H	30:Y3:48:MET:HB2	1.86	0.41
1:RA:7:G:H2'	1:RA:8:C:C6	2.56	0.41
1:RA:143:C:H2'	1:RA:144:A:C8	2.55	0.41
1:RA:288:U:O2'	1:RA:289:G:H5'	2.21	0.41
1:RA:373:U:C5	1:RA:400:G:C2	3.08	0.41
1:RA:645:C:O2'	1:RA:646:U:H5"	2.20	0.41
1:RA:804:A:H2'	1:RA:806:C:C4	2.54	0.41
1:RA:1047:G:N2	1:RA:1110:G:N9	2.69	0.41
1:RA:1278:C:H2'	1:RA:1279:G:H8	1.85	0.41
1:RA:1385:A:H1'	1:RA:1386:C:H6	1.84	0.41
1:RA:1676:A:H2'	1:RA:1677:A:C8	2.55	0.41
1:RA:1858:A:O2'	1:RA:1859:U:O5'	2.38	0.41
1:RA:1918:A:O2'	1:RA:1920:C:N4	2.54	0.41
1:RA:2310:C:C5	6:RF:76:PHE:CZ	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2758:A:C2'	1:RA:2759:G:H5'	2.51	0.41
1:RA:2825:G:H5"	1:RA:2826:A:OP2	2.20	0.41
1:RA:2830:C:O2	1:RA:2883:A:H2	2.04	0.41
1:RA:2839:G:C6	1:RA:2840:C:C4	3.09	0.41
2:RB:29:A:H2'	2:RB:30:C:C6	2.56	0.41
5:RE:127:GLU:N	5:RE:127:GLU:OE1	2.54	0.41
8:RH:130:VAL:HG23	8:RH:131:SER:H	1.86	0.41
9:RI:120:ASP:HB3	9:RI:123:ALA:CB	2.51	0.41
10:RJ:60:ASP:HB3	10:RJ:97:PRO:HG2	2.02	0.41
14:RN:2:ARG:O	14:RN:3:HIS:C	2.63	0.41
19:RS:68:ASP:O	19:RS:109:ASP:HB3	2.21	0.41
23:RW:28:GLU:CG	23:RW:29:SER:N	2.83	0.41
25:RY:46:VAL:HB	25:RY:47:ARG:H	1.77	0.41
27:R0:6:LYS:HA	27:R0:7:PRO:HD3	1.93	0.41
32:QA:70:U:N3	32:QA:94:G:C5	2.88	0.41
32:QA:78:A:N7	32:QA:79:G:N7	2.69	0.41
32:QA:119:A:C6	32:QA:240:G:C8	3.09	0.41
32:QA:242:G:C2	32:QA:245:U:C4	3.09	0.41
32:QA:254:G:N2	32:QA:273:U:C2	2.89	0.41
32:QA:436:C:H2'	32:QA:437:U:C6	2.56	0.41
32:QA:437:U:H4'	35:QD:153:ARG:NH2	2.36	0.41
32:QA:960:U:H1'	32:QA:1222:G:O2'	2.20	0.41
32:QA:1101:A:H61	33:QB:101:THR:HG21	1.86	0.41
32:QA:1101:A:N3	32:QA:1102:A:H1'	2.35	0.41
32:QA:1154:G:C2	32:QA:1155:A:C4	3.09	0.41
32:QA:1157:A:C2	32:QA:1181:G:C4	3.09	0.41
34:QC:113:LYS:HD3	34:QC:184:ASN:ND2	2.36	0.41
35:QD:39:GLN:OE1	35:QD:40:HIS:CD2	2.74	0.41
35:QD:164:ARG:O	35:QD:166:LYS:N	2.54	0.41
36:QE:17:VAL:HG22	36:QE:18:ASN:N	2.35	0.41
37:QF:18:VAL:O	37:QF:19:PRO:C	2.61	0.41
38:QG:12:LEU:H	38:QG:12:LEU:HD13	1.85	0.41
38:QG:80:GLY:C	38:QG:82:SER:N	2.78	0.41
39:QH:65:PHE:HD1	39:QH:65:PHE:HA	1.69	0.41
40:QI:41:GLU:HB3	40:QI:42:THR:H	1.58	0.41
41:QJ:14:ASP:CB	41:QJ:17:LEU:HB3	2.51	0.41
42:QK:39:ASN:O	42:QK:40:ALA:HB3	2.21	0.41
47:QP:77:GLU:C	47:QP:79:ASN:N	2.78	0.41
51:QT:22:SER:OG	51:QT:23:ARG:HD2	2.20	0.41
32:XA:32:A:H2'	32:XA:32:A:N3	2.35	0.41
32:XA:243:A:C2	32:XA:245:U:H2'	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:247:G:OP1	32:XA:247:G:H4'	2.21	0.41
32:XA:289:G:C4	32:XA:290:C:C5	3.09	0.41
32:XA:322:C:C2	32:XA:332:G:N2	2.88	0.41
32:XA:415:A:N1	32:XA:428:G:O6	2.54	0.41
32:XA:846:G:O2'	32:XA:847:G:H5'	2.21	0.41
32:XA:974:A:H5"	45:XN:70:HIS:ND1	2.35	0.41
32:XA:1284:C:P	32:XA:1285:A:H3'	2.61	0.41
32:XA:1305:G:N2	32:XA:1331:G:H2'	2.28	0.41
34:XC:110:LEU:HD21	34:XC:203:LYS:CD	2.43	0.41
35:XD:16:THR:HG22	35:XD:17:ASP:N	2.35	0.41
37:XF:96:VAL:HG12	37:XF:97:THR:H	1.85	0.41
38:XG:85:GLN:HE21	38:XG:85:GLN:HB3	1.63	0.41
39:XH:85:TYR:CD1	48:XQ:36:PHE:HE2	2.38	0.41
40:XI:37:TYR:HD2	40:XI:37:TYR:H	1.69	0.41
40:XI:51:LEU:C	40:XI:53:LEU:N	2.78	0.41
42:XK:68:ARG:HA	42:XK:71:ASP:HB2	2.02	0.41
43:XL:24:GLU:O	43:XL:25:ALA:CB	2.69	0.41
43:XL:72:ASN:HD22	43:XL:72:ASN:N	2.13	0.41
44:XM:59:VAL:HG13	44:XM:60:ALA:H	1.85	0.41
45:XN:2:LYS:HD3	45:XN:5:MET:CG	2.51	0.41
45:XN:62:ARG:HB3	45:XN:68:ARG:O	2.21	0.41
47:XP:6:LEU:CD2	47:XP:71:VAL:HG12	2.51	0.41
47:XP:26:ASN:OD1	47:XP:31:ARG:HB3	2.20	0.41
48:XQ:10:ARG:HG2	48:XQ:11:VAL:O	2.21	0.41
51:XT:19:HIS:ND1	51:XT:19:HIS:C	2.79	0.41
52:XU:24:LYS:HA	52:XU:24:LYS:HD2	1.81	0.41
1:YA:99:U:H5'	1:YA:100:U:OP1	2.21	0.41
1:YA:121:G:N3	1:YA:131:A:N1	2.68	0.41
1:YA:279:A:P	1:YA:279:A:C8	3.13	0.41
1:YA:366:C:H2'	1:YA:367:G:O5'	2.20	0.41
1:YA:449:A:C5	1:YA:450:G:C8	3.09	0.41
1:YA:736:C:H42	1:YA:760:G:H1	1.69	0.41
1:YA:1050:A:C2	1:YA:2751:G:C2	3.08	0.41
1:YA:1126:A:OP1	1:YA:1126:A:H8	2.04	0.41
1:YA:1267:U:N3	1:YA:2013:A:N7	2.69	0.41
1:YA:1355:G:O2'	1:YA:1356:G:H5'	2.20	0.41
1:YA:1425:G:H8	1:YA:1425:G:O5'	2.04	0.41
1:YA:1513:U:O4	1:YA:1514:G:O6	2.37	0.41
1:YA:1769:U:H1'	1:YA:1984:G:H22	1.81	0.41
1:YA:1789:A:OP1	3:YC:219:VAL:HA	2.21	0.41
1:YA:1838:C:C5	1:YA:1899:A:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2093:G:O2'	1:YA:2094:A:O5'	2.39	0.41
1:YA:2275:C:O2	13:YM:84:LYS:HD3	2.21	0.41
1:YA:2287:A:O2'	1:YA:2288:A:C2'	2.69	0.41
1:YA:2316:G:C4	1:YA:2317:A:C8	3.09	0.41
1:YA:2638:G:O2'	1:YA:2639:A:P	2.79	0.41
3:YC:172:THR:HG22	3:YC:182:LYS:HG2	2.02	0.41
5:YE:193:VAL:O	5:YE:197:GLU:HB2	2.20	0.41
6:YF:2:LYS:N	6:YF:2:LYS:HD3	2.36	0.41
6:YF:164:GLU:O	6:YF:168:LEU:HD12	2.21	0.41
8:YH:2:GLN:HA	8:YH:2:GLN:NE2	2.35	0.41
8:YH:31:VAL:CB	8:YH:32:PRO:HD3	2.49	0.41
8:YH:80:ILE:HB	8:YH:101:ASP:CG	2.46	0.41
8:YH:98:ASP:O	8:YH:99:ILE:HG12	2.20	0.41
8:YH:103:VAL:C	8:YH:105:ALA:N	2.78	0.41
8:YH:140:ALA:C	8:YH:141:LYS:HG3	2.45	0.41
11:YK:66:LYS:HG2	11:YK:66:LYS:O	2.21	0.41
11:YK:121:GLU:HB3	11:YK:122:VAL:H	1.63	0.41
12:YL:92:LEU:HD23	12:YL:92:LEU:H	1.86	0.41
12:YL:99:ASN:O	12:YL:100:ILE:HB	2.21	0.41
13:YM:36:VAL:HG21	13:YM:129:THR:HG22	2.02	0.41
13:YM:53:MET:HE1	13:YM:103:TYR:CD2	2.56	0.41
16:YP:19:PHE:HE1	16:YP:58:PHE:CD2	2.39	0.41
16:YP:19:PHE:CE1	16:YP:58:PHE:CD2	3.08	0.41
1:RA:111:A:H2'	1:RA:112:U:O4'	2.20	0.41
1:RA:163:C:OP1	1:RA:163:C:C6	2.74	0.41
1:RA:226:A:N6	1:RA:227:A:N1	2.69	0.41
1:RA:496:G:C5	1:RA:497:A:C8	3.08	0.41
1:RA:571:U:OP1	18:RR:80:ARG:NH1	2.53	0.41
1:RA:969:G:H2'	1:RA:970:U:H6	1.85	0.41
1:RA:1059:G:C5	1:RA:1060:U:C4	3.08	0.41
1:RA:1090:A:H2'	1:RA:1091:G:H5'	2.02	0.41
1:RA:1150:C:C2'	1:RA:1151:A:O5'	2.69	0.41
1:RA:1256:G:O2'	5:RE:77:ILE:HD11	2.19	0.41
1:RA:1316:U:H2'	1:RA:1317:G:H8	1.85	0.41
1:RA:1477:A:N6	1:RA:1514:G:O2'	2.49	0.41
1:RA:1744:A:C2	1:RA:1745:A:H1'	2.56	0.41
1:RA:1848:A:H2'	1:RA:1849:G:O4'	2.21	0.41
1:RA:2148:G:O2'	1:RA:2149:U:H4'	2.21	0.41
1:RA:2185:U:H2'	1:RA:2186:G:C8	2.56	0.41
1:RA:2430:A:P	56:RA:3344:HOH:O	2.79	0.41
1:RA:2570:G:C2'	1:RA:2571:U:H5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2575:C:O2'	1:RA:2578:G:N7	2.48	0.41
1:RA:2823:A:OP2	4:RD:118:PHE:CD1	2.74	0.41
1:RA:2840:C:H2'	1:RA:2841:C:H6	1.86	0.41
1:RA:2898:U:O2	10:RJ:134:ALA:HB1	2.21	0.41
54:RA:3135:EM1:H3	54:RA:3135:EM1:O32	2.21	0.41
3:RC:56:GLY:HA2	3:RC:212:TRP:HA	2.02	0.41
3:RC:245:THR:C	3:RC:247:TRP:H	2.29	0.41
5:RE:35:TYR:CD2	5:RE:177:PRO:HD2	2.56	0.41
5:RE:172:ALA:HB2	5:RE:192:ALA:HB1	2.02	0.41
6:RF:1:ALA:O	6:RF:3:LEU:N	2.54	0.41
6:RF:129:MET:HG2	6:RF:153:ILE:CD1	2.44	0.41
7:RG:83:THR:HA	7:RG:84:LYS:HE2	2.03	0.41
7:RG:84:LYS:NZ	7:RG:133:LYS:HD3	2.35	0.41
7:RG:86:LEU:HD11	7:RG:132:LEU:HD21	2.03	0.41
7:RG:132:LEU:N	7:RG:132:LEU:CD2	2.81	0.41
8:RH:100:ALA:O	8:RH:102:ALA:N	2.54	0.41
9:RI:118:GLY:C	9:RI:120:ASP:H	2.28	0.41
10:RJ:128:ASN:O	10:RJ:128:ASN:CG	2.64	0.41
10:RJ:141:ASP:O	10:RJ:142:ILE:O	2.39	0.41
11:RK:4:GLU:O	11:RK:5:GLN:HB2	2.21	0.41
12:RL:21:ARG:HA	12:RL:21:ARG:HD3	1.53	0.41
13:RM:12:MET:HB2	13:RM:72:PRO:HD2	2.03	0.41
13:RM:41:LEU:CD2	13:RM:125:PRO:HD2	2.51	0.41
14:RN:106:ASP:OD1	14:RN:106:ASP:C	2.64	0.41
17:RQ:20:ALA:HA	17:RQ:23:TYR:CD1	2.55	0.41
17:RQ:76:SER:O	17:RQ:77:LYS:C	2.62	0.41
17:RQ:91:ARG:HE	18:RR:11:GLN:HB2	1.85	0.41
18:RR:38:VAL:CG1	18:RR:59:ILE:HG13	2.50	0.41
18:RR:49:ILE:O	18:RR:50:GLY:C	2.63	0.41
22:RV:26:PHE:HB2	22:RV:27:PRO:HD2	2.02	0.41
22:RV:65:VAL:O	22:RV:66:ASP:OD1	2.38	0.41
22:RV:92:VAL:O	22:RV:92:VAL:HG12	2.20	0.41
23:RW:55:ASP:O	23:RW:55:ASP:CG	2.64	0.41
28:R1:18:HIS:HE1	28:R1:20:TYR:CE2	2.39	0.41
32:QA:35:G:N2	43:QL:114:SER:OG	2.53	0.41
32:QA:76:G:N3	32:QA:76:G:C2'	2.81	0.41
32:QA:92:U:H6	32:QA:92:U:OP2	2.04	0.41
32:QA:268:U:H2'	32:QA:269:C:C6	2.55	0.41
32:QA:279:A:H5'	32:QA:279:A:C8	2.55	0.41
32:QA:414:A:O2'	32:QA:415:A:C5'	2.68	0.41
32:QA:520:A:N1	32:QA:536:C:H1'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:591:U:O2'	32:QA:592:G:H5'	2.20	0.41
32:QA:641:U:H4'	39:QH:106:SER:O	2.20	0.41
32:QA:761:G:C5	32:QA:762:U:C5	3.09	0.41
32:QA:860:A:H2'	32:QA:861:G:O5'	2.21	0.41
32:QA:887:G:H2'	32:QA:888:G:H5'	2.03	0.41
32:QA:924:C:H2'	32:QA:925:G:C8	2.55	0.41
32:QA:960:U:H5	50:QS:77:ARG:HG2	1.86	0.41
32:QA:1158:C:N3	32:QA:1160:G:N7	2.69	0.41
32:QA:1166:G:N1	32:QA:1169:A:OP2	2.54	0.41
32:QA:1269:A:C2	32:QA:1326:U:O2	2.74	0.41
32:QA:1336:C:C4'	32:QA:1337:G:OP2	2.68	0.41
33:QB:69:VAL:CB	33:QB:162:VAL:HG12	2.47	0.41
34:QC:115:VAL:O	34:QC:118:SER:HB3	2.20	0.41
34:QC:128:MET:HE2	34:QC:128:MET:HB2	1.63	0.41
35:QD:2:ARG:NH2	35:QD:114:ARG:HD3	2.36	0.41
35:QD:33:ILE:O	35:QD:34:GLU:CB	2.67	0.41
35:QD:109:THR:CG2	35:QD:112:GLU:HB2	2.51	0.41
36:QE:14:LEU:HB3	36:QE:36:THR:HG22	2.02	0.41
36:QE:96:GLN:HB2	36:QE:123:LEU:HD12	2.03	0.41
36:QE:97:PRO:O	36:QE:98:ALA:HB3	2.20	0.41
36:QE:105:ILE:HD11	36:QE:123:LEU:HB3	2.03	0.41
36:QE:121:ASN:ND2	36:QE:121:ASN:N	2.68	0.41
36:QE:152:VAL:O	36:QE:155:LYS:HD2	2.21	0.41
38:QG:119:LEU:O	38:QG:120:ALA:C	2.62	0.41
40:QI:76:GLY:O	40:QI:79:ARG:HB3	2.21	0.41
41:QJ:52:LEU:HB2	45:QN:80:ARG:HD2	2.01	0.41
41:QJ:56:HIS:O	41:QJ:57:VAL:HG12	2.21	0.41
42:QK:58:THR:HB	42:QK:59:PRO:HD2	2.02	0.41
44:QM:76:ILE:O	44:QM:79:LEU:HB2	2.21	0.41
45:QN:82:LYS:HE2	45:QN:82:LYS:HA	2.03	0.41
46:QO:69:LEU:C	46:QO:69:LEU:HD23	2.46	0.41
49:QR:61:ALA:O	49:QR:66:LEU:HB2	2.20	0.41
50:QS:3:SER:CB	50:QS:4:LEU:HD12	2.50	0.41
50:QS:64:GLU:CD	50:QS:64:GLU:H	2.29	0.41
51:QT:57:VAL:HG12	51:QT:71:ALA:HB1	2.03	0.41
32:XA:21:G:H2'	32:XA:22:G:C8	2.55	0.41
32:XA:28:A:H2'	32:XA:29:U:O4'	2.20	0.41
32:XA:65:A:C4	32:XA:200:G:O2'	2.73	0.41
32:XA:177:G:C2'	32:XA:178:C:H5'	2.51	0.41
32:XA:183:C:O2'	32:XA:184:G:H5'	2.20	0.41
32:XA:186:C:C2'	32:XA:187:G:H5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:246:A:C2	32:XA:279:A:N6	2.89	0.41
32:XA:358:U:H2'	32:XA:359:G:H8	1.85	0.41
32:XA:453:G:H8	32:XA:453:G:OP2	2.04	0.41
32:XA:527:G:C2	32:XA:528:C:C6	3.08	0.41
32:XA:653:U:O2'	32:XA:654:G:H8	2.04	0.41
32:XA:719:C:O2	49:XR:38:ILE:HG13	2.20	0.41
32:XA:821:G:H2'	32:XA:822:U:H6	1.86	0.41
32:XA:841:C:H2'	32:XA:843:U:O4'	2.20	0.41
32:XA:869:G:C8	56:XA:1822:HOH:O	2.74	0.41
32:XA:994:A:C5	32:XA:1216:A:H4'	2.56	0.41
32:XA:1049:U:H2'	45:XN:2:LYS:HD2	2.03	0.41
32:XA:1233:G:P	40:XI:125:GLN:HE22	2.43	0.41
32:XA:1292:G:C6	32:XA:1293:C:C4	3.09	0.41
32:XA:1305:G:H2'	32:XA:1306:A:H8	1.86	0.41
32:XA:1371:G:O3'	40:XI:70:GLY:HA3	2.20	0.41
32:XA:1381:U:O2	32:XA:1381:U:C2'	2.67	0.41
32:XA:1399:C:O2	32:XA:1401:G:C5	2.73	0.41
32:XA:1416:G:C2	32:XA:1485:U:O2	2.74	0.41
33:XB:11:ALA:HA	33:XB:13:VAL:HG22	2.02	0.41
33:XB:166:ASP:HB2	33:XB:190:SER:HB2	2.02	0.41
34:XC:110:LEU:CD2	34:XC:203:LYS:HD2	2.43	0.41
34:XC:139:ASN:O	34:XC:140:ALA:HB2	2.20	0.41
34:XC:153:SER:HB3	34:XC:164:THR:HB	2.03	0.41
35:XD:187:ARG:NH2	35:XD:191:SER:HB3	2.36	0.41
36:XE:13:LYS:HD3	36:XE:14:LEU:N	2.35	0.41
36:XE:65:LYS:HD3	36:XE:65:LYS:HA	1.88	0.41
36:XE:70:MET:HE3	36:XE:70:MET:HB3	1.87	0.41
39:XH:24:VAL:HG22	39:XH:25:THR:H	1.86	0.41
40:XI:39:GLY:HA2	40:XI:44:ARG:HD3	2.03	0.41
41:XJ:5:ARG:HA	41:XJ:7:ARG:HH12	1.86	0.41
41:XJ:46:LYS:HA	41:XJ:67:ILE:O	2.21	0.41
43:XL:14:LYS:O	43:XL:14:LYS:HG3	2.20	0.41
43:XL:115:LYS:C	43:XL:116:TYR:CG	2.99	0.41
44:XM:69:ARG:N	44:XM:69:ARG:HD2	2.36	0.41
44:XM:75:SER:HA	44:XM:78:ARG:HB3	2.03	0.41
45:XN:52:ARG:O	45:XN:53:ASP:HB2	2.21	0.41
45:XN:55:SER:HB3	45:XN:58:ARG:HG2	2.03	0.41
50:XS:35:ARG:HH12	50:XS:52:ASN:HA	1.86	0.41
51:XT:4:LYS:HB3	51:XT:4:LYS:HE3	1.83	0.41
1:YA:7:G:H4'	10:YJ:15:TRP:HH2	1.85	0.41
1:YA:48:G:N3	1:YA:48:G:H2'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:57:C:O2'	20:YT:36:LYS:HE2	2.21	0.41
1:YA:71:A:H5"	1:YA:73:A:N9	2.35	0.41
1:YA:109:C:N3	1:YA:110:G:C8	2.89	0.41
1:YA:138:U:O2	1:YA:140:C:O2'	2.39	0.41
1:YA:227:A:C5'	1:YA:229:C:H41	2.33	0.41
1:YA:307:G:H2'	1:YA:309:A:OP2	2.21	0.41
1:YA:324:A:N3	1:YA:325:G:H1'	2.36	0.41
1:YA:336:C:O2	1:YA:336:C:H2'	2.20	0.41
1:YA:347:A:H2'	1:YA:348:A:H8	1.86	0.41
1:YA:468:G:H5"	5:YE:55:SER:HB2	2.02	0.41
1:YA:523:C:O2'	1:YA:524:G:H5'	2.19	0.41
1:YA:582:A:OP1	17:YQ:13:HIS:ND1	2.52	0.41
1:YA:656:G:H2'	1:YA:657:U:H6	1.86	0.41
1:YA:684:G:H5'	29:Y2:16:HIS:CE1	2.56	0.41
1:YA:718:A:H3'	1:YA:719:C:C5'	2.51	0.41
1:YA:719:C:C2'	1:YA:720:U:H5'	2.51	0.41
1:YA:746:U:O2'	1:YA:2611:C:O2'	2.21	0.41
1:YA:782:A:O2'	3:YC:223:ALA:O	2.36	0.41
1:YA:830:G:H4'	1:YA:831:G:OP2	2.20	0.41
1:YA:833:A:C6	1:YA:834:G:C6	3.09	0.41
1:YA:845:A:N6	1:YA:932:U:C2	2.89	0.41
1:YA:857:G:H1'	23:YW:19:ARG:CZ	2.51	0.41
1:YA:1045:C:H5"	1:YA:1047:G:H1'	2.02	0.41
1:YA:1171:G:C6	1:YA:1179:G:C2	3.09	0.41
1:YA:1213:A:O2'	1:YA:1214:A:H5'	2.21	0.41
1:YA:1262:A:C6	1:YA:1263:U:C2	3.08	0.41
1:YA:1281:G:C5	1:YA:1282:U:C5	3.08	0.41
1:YA:1297:C:C2	1:YA:1298:C:C5	3.09	0.41
1:YA:1525:A:H8	1:YA:1525:A:O5'	2.03	0.41
1:YA:1527:G:C2	1:YA:1546:G:N1	2.89	0.41
1:YA:1606:C:H5'	1:YA:1606:C:C2	2.53	0.41
1:YA:1652:A:C2	1:YA:2006:C:N3	2.89	0.41
1:YA:1710:G:H2'	1:YA:1711:A:C8	2.55	0.41
1:YA:1734:G:N2	1:YA:1735:A:C4	2.89	0.41
1:YA:1857:G:N3	1:YA:1884:G:C2	2.89	0.41
1:YA:1867:G:H2'	1:YA:1868:C:C6	2.55	0.41
1:YA:1914:C:O2'	1:YA:1915:U:C6	2.72	0.41
1:YA:2025:C:OP1	4:YD:154:LYS:HE2	2.21	0.41
1:YA:2080:A:H4'	24:YX:22:ASN:HD22	1.85	0.41
1:YA:2144:G:N2	1:YA:2148:G:O6	2.53	0.41
1:YA:2182:U:H2'	1:YA:2183:A:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2284:A:OP1	28:Y1:5:ARG:HG3	2.21	0.41
1:YA:2331:G:C6	1:YA:2385:C:N4	2.89	0.41
1:YA:2345:G:C4	1:YA:2381:A:C2	3.08	0.41
1:YA:2508:G:H2'	1:YA:2509:G:C8	2.53	0.41
1:YA:2697:G:H2'	1:YA:2698:U:O4'	2.21	0.41
1:YA:2751:G:C5'	7:YG:2:ARG:HH21	2.34	0.41
1:YA:2760:C:H2'	1:YA:2761:A:H5'	2.03	0.41
1:YA:2887:A:H1'	27:Y0:39:ARG:NH2	2.24	0.41
1:YA:2889:C:O2'	1:YA:2890:G:H5'	2.21	0.41
2:YB:78:A:H2'	2:YB:79:G:C8	2.56	0.41
3:YC:104:LEU:HD12	3:YC:104:LEU:HA	1.75	0.41
3:YC:141:HIS:HB3	3:YC:190:THR:O	2.21	0.41
3:YC:152:GLN:HA	3:YC:155:ARG:HD3	2.03	0.41
4:YD:14:ILE:HA	16:YP:11:GLN:HE22	1.86	0.41
5:YE:45:ALA:O	5:YE:46:GLN:HB2	2.21	0.41
5:YE:88:ARG:HB3	5:YE:89:PRO:CD	2.49	0.41
5:YE:147:LEU:HD21	5:YE:179:SER:HB2	2.03	0.41
6:YF:28:PRO:HA	6:YF:158:THR:OG1	2.21	0.41
6:YF:101:ARG:HH11	6:YF:138:PRO:CB	2.33	0.41
7:YG:34:ARG:O	7:YG:35:THR:HG23	2.20	0.41
7:YG:126:THR:HG22	7:YG:127:GLN:H	1.85	0.41
8:YH:71:LYS:HD3	8:YH:71:LYS:N	2.36	0.41
8:YH:89:LYS:HB2	8:YH:90:LEU:H	1.73	0.41
9:YI:58:ILE:HG23	9:YI:66:PHE:CD2	2.55	0.41
10:YJ:127:GLY:O	10:YJ:129:GLU:HG3	2.21	0.41
12:YL:131:ALA:O	12:YL:135:ILE:HG22	2.20	0.41
12:YL:141:LYS:HD2	12:YL:142:ILE:N	2.35	0.41
13:YM:49:ALA:HB3	13:YM:103:TYR:OH	2.21	0.41
14:YN:79:LEU:O	14:YN:80:PHE:HB2	2.20	0.41
17:YQ:65:ASN:HA	17:YQ:75:TYR:HB2	2.01	0.41
17:YQ:101:ASP:OD1	17:YQ:104:ALA:HB2	2.21	0.41
19:YS:39:THR:O	19:YS:40:ASN:CB	2.69	0.41
19:YS:68:ASP:O	19:YS:69:LEU:HD12	2.20	0.41
20:YT:1:MET:O	20:YT:2:ILE:C	2.63	0.41
20:YT:6:ARG:O	20:YT:9:LYS:HD2	2.21	0.41
21:YU:44:HIS:HD2	21:YU:57:ILE:HD13	1.86	0.41
21:YU:64:ILE:O	21:YU:65:GLN:O	2.39	0.41
21:YU:94:PHE:O	21:YU:94:PHE:CD2	2.70	0.41
23:YW:30:VAL:HG23	23:YW:59:PHE:HD1	1.86	0.41
24:YX:36:ARG:HG2	24:YX:47:THR:HB	2.03	0.41
24:YX:44:ARG:HH11	24:YX:44:ARG:CB	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YZ:16:LEU:HD23	26:YZ:19:HIS:CD2	2.56	0.41
30:Y3:63:TYR:O	30:Y3:64:ALA:O	2.39	0.41
1:RA:60:G:H1'	1:RA:61:C:OP1	2.21	0.41
1:RA:115:C:O2'	1:RA:127:A:O2'	2.33	0.41
1:RA:187:G:C2	1:RA:210:C:C2	3.09	0.41
1:RA:703:U:C2'	1:RA:704:G:H5'	2.51	0.41
1:RA:735:A:H3'	1:RA:736:C:C6	2.56	0.41
1:RA:1103:A:H2'	1:RA:1104:C:C5'	2.51	0.41
1:RA:1738:G:O2'	1:RA:1739:A:C8	2.74	0.41
1:RA:2155:U:O4	1:RA:2156:G:N1	2.53	0.41
1:RA:2591:C:H2'	1:RA:2592:G:H8	1.81	0.41
3:RC:237:ARG:O	3:RC:238:ASN:HB2	2.20	0.41
5:RE:178:VAL:O	5:RE:179:SER:C	2.64	0.41
7:RG:145:ALA:O	7:RG:148:ARG:HB3	2.21	0.41
8:RH:27:ARG:NH1	8:RH:38:PRO:HG3	2.36	0.41
8:RH:38:PRO:HB2	8:RH:40:THR:HG23	2.02	0.41
10:RJ:31:GLU:O	10:RJ:35:ARG:HG3	2.21	0.41
10:RJ:124:VAL:O	10:RJ:125:TYR:CB	2.68	0.41
11:RK:21:CYS:HA	11:RK:41:ILE:CD1	2.41	0.41
11:RK:72:PRO:O	11:RK:72:PRO:CD	2.69	0.41
14:RN:55:ALA:HA	14:RN:80:PHE:CE1	2.55	0.41
16:RP:101:GLU:C	16:RP:102:ARG:HG2	2.46	0.41
17:RQ:49:ARG:HG3	17:RQ:49:ARG:NH1	2.36	0.41
17:RQ:91:ARG:HB2	17:RQ:94:LEU:HB2	2.02	0.41
20:RT:24:MET:O	20:RT:28:ASN:O	2.39	0.41
25:RY:44:LYS:C	25:RY:45:GLN:O	2.62	0.41
28:R1:25:ASN:O	28:R1:26:LYS:C	2.64	0.41
29:R2:42:LEU:HD22	29:R2:42:LEU:N	2.26	0.41
31:R4:25:VAL:HG11	31:R4:35:GLN:HE21	1.86	0.41
32:QA:211:G:C5	32:QA:212:G:H1'	2.56	0.41
32:QA:212:G:N3	32:QA:213:G:N7	2.69	0.41
32:QA:414:A:C2'	32:QA:415:A:H8	2.23	0.41
32:QA:515:G:N3	32:QA:537:G:C2	2.90	0.41
32:QA:533:A:C2	32:QA:536:C:C5	3.09	0.41
32:QA:1002:G:C5	32:QA:1003:G:C8	3.09	0.41
32:QA:1077:G:C6	32:QA:1081:A:C6	3.09	0.41
32:QA:1084:G:C6	32:QA:1085:U:C4	3.09	0.41
32:QA:1315:U:C4	32:QA:1316:G:C5	3.09	0.41
32:QA:1400:C:H4'	32:QA:1401:G:OP2	2.21	0.41
32:QA:1452:C:H5'	32:QA:1453:G:C5	2.56	0.41
33:QB:58:LYS:HD3	33:QB:58:LYS:C	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:QE:94:PHE:CE1	36:QE:96:GLN:HG2	2.56	0.41
37:QF:6:ILE:C	37:QF:7:VAL:HG12	2.46	0.41
37:QF:9:MET:HG2	37:QF:86:ARG:O	2.21	0.41
37:QF:71:ILE:CG2	37:QF:72:ASP:N	2.84	0.41
41:QJ:15:HIS:CG	41:QJ:16:ARG:N	2.89	0.41
42:QK:52:ARG:O	42:QK:55:ARG:HB2	2.21	0.41
42:QK:90:PRO:C	42:QK:92:ARG:N	2.78	0.41
44:QM:15:VAL:HG23	44:QM:16:ILE:HG13	2.02	0.41
46:QO:18:ALA:O	46:QO:19:ASN:CB	2.66	0.41
48:QQ:48:GLU:O	48:QQ:49:ASN:C	2.63	0.41
49:QR:28:LEU:C	49:QR:30:ASN:N	2.78	0.41
50:QS:12:LEU:HD23	50:QS:12:LEU:HA	1.91	0.41
52:QU:16:ARG:HH11	52:QU:19:LYS:HD2	1.85	0.41
32:XA:110:C:H2'	32:XA:110:C:O2	2.20	0.41
32:XA:113:G:H1'	32:XA:354:G:H5'	2.03	0.41
32:XA:255:G:O3'	48:XQ:18:LYS:HD2	2.21	0.41
32:XA:836:G:C6	32:XA:837:U:N3	2.89	0.41
32:XA:933:G:H8	32:XA:933:G:O5'	2.04	0.41
32:XA:983:A:HO2'	32:XA:984:C:C5'	2.34	0.41
32:XA:1004:A:C2	32:XA:1026:G:C5	3.09	0.41
32:XA:1301:U:H2'	32:XA:1302:C:C5	2.55	0.41
32:XA:1311:A:H2'	32:XA:1312:G:O4'	2.21	0.41
32:XA:1387:G:C6	32:XA:1388:C:C4	3.08	0.41
32:XA:1428:A:H2'	32:XA:1429:A:O4'	2.21	0.41
32:XA:1497:G:C2'	32:XA:1498:U:H5'	2.51	0.41
33:XB:49:PHE:CD1	33:XB:49:PHE:C	2.99	0.41
34:XC:77:GLY:O	34:XC:79:LYS:N	2.54	0.41
34:XC:149:LYS:HD2	34:XC:200:TRP:CE3	2.56	0.41
37:XF:88:MET:HE2	49:XR:64:LEU:HD11	2.03	0.41
39:XH:8:ASP:OD2	39:XH:12:ARG:NH1	2.53	0.41
40:XI:71:ILE:HD12	40:XI:72:SER:N	2.05	0.41
42:XK:92:ARG:HG3	42:XK:92:ARG:NH1	2.35	0.41
43:XL:71:HIS:ND1	43:XL:73:LEU:N	2.69	0.41
44:XM:47:LEU:HD23	44:XM:47:LEU:C	2.45	0.41
47:XP:20:VAL:HG21	47:XP:32:PHE:CG	2.56	0.41
49:XR:64:LEU:O	49:XR:65:SER:C	2.64	0.41
51:XT:51:ASN:OD1	51:XT:51:ASN:N	2.52	0.41
1:YA:163:C:O2'	1:YA:164:C:O5'	2.38	0.41
1:YA:200:U:C5	1:YA:201:C:C5	3.09	0.41
1:YA:265:A:C6	1:YA:428:A:C8	3.09	0.41
1:YA:323:C:H2'	5:YE:163:ASN:OD1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:467:G:O3'	1:YA:797:G:H5'	2.21	0.41
1:YA:470:A:N1	1:YA:471:A:C4	2.89	0.41
1:YA:502:A:N6	1:YA:505:A:C5	2.89	0.41
1:YA:633:A:H5"	12:YL:70:LYS:HD3	2.02	0.41
1:YA:665:U:H2'	1:YA:666:A:C8	2.51	0.41
1:YA:851:C:O4'	26:YZ:46:MET:HG2	2.20	0.41
1:YA:979:A:H2'	1:YA:982:C:H41	1.86	0.41
1:YA:1022:G:O6	10:YJ:68:LYS:NZ	2.48	0.41
1:YA:1310:G:N2	1:YA:1605:C:C2	2.89	0.41
1:YA:1654:A:O2'	4:YD:118:PHE:HB2	2.21	0.41
1:YA:1768:C:H2'	1:YA:1769:U:O4'	2.21	0.41
1:YA:1999:C:H4'	1:YA:2723:C:O2	2.20	0.41
1:YA:2074:U:H2'	1:YA:2075:U:C6	2.56	0.41
1:YA:2301:C:C2	1:YA:2316:G:N2	2.89	0.41
1:YA:2308:G:O6	1:YA:2311:A:N7	2.54	0.41
1:YA:2402:U:O2'	1:YA:2403:C:P	2.79	0.41
1:YA:2461:A:H1'	1:YA:2492:U:N3	2.36	0.41
1:YA:2846:G:P	16:YP:51:ASN:CB	3.09	0.41
2:YB:38:C:C4'	15:YO:100:HIS:NE2	2.80	0.41
2:YB:99:A:C6	2:YB:100:G:C5	3.09	0.41
5:YE:76:PRO:HA	5:YE:82:GLY:O	2.21	0.41
5:YE:102:ARG:C	5:YE:104:ALA:N	2.79	0.41
5:YE:149:ILE:HG23	5:YE:188:MET:H	1.83	0.41
5:YE:176:ASP:HA	5:YE:177:PRO:HD3	1.83	0.41
7:YG:152:ARG:CG	7:YG:153:PRO:HD2	2.51	0.41
8:YH:94:ILE:HG21	8:YH:98:ASP:OD1	2.21	0.41
9:YI:12:VAL:CG1	9:YI:13:ALA:H	2.31	0.41
10:YJ:36:LEU:HD21	10:YJ:122:LEU:HD13	2.03	0.41
12:YL:63:LYS:C	12:YL:65:GLY:H	2.29	0.41
17:YQ:73:ILE:HG13	17:YQ:74:SER:N	2.36	0.41
20:YT:55:VAL:HG21	20:YT:85:VAL:O	2.21	0.41
1:RA:164:C:H5"	1:RA:164:C:H6	1.85	0.40
1:RA:521:U:H2'	1:RA:522:A:C8	2.56	0.40
1:RA:592:A:C2	30:R3:3:ILE:HD11	2.57	0.40
1:RA:792:A:H5"	1:RA:793:A:H5'	2.02	0.40
1:RA:960:A:N7	1:RA:962:G:C8	2.89	0.40
1:RA:976:G:C2	1:RA:977:G:C8	3.10	0.40
1:RA:1011:G:H5"	17:RQ:76:SER:OG	2.21	0.40
1:RA:1074:G:N3	1:RA:1074:G:H2'	2.36	0.40
1:RA:1220:G:H2'	1:RA:1221:C:C6	2.56	0.40
1:RA:1422:G:C6	1:RA:1423:G:C5	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2293:G:H2'	1:RA:2294:G:O4'	2.21	0.40
1:RA:2508:G:C2	1:RA:2582:G:C6	3.08	0.40
1:RA:2723:C:H2'	1:RA:2724:U:O5'	2.21	0.40
2:RB:59:A:H2'	2:RB:60:C:O4'	2.20	0.40
3:RC:66:PHE:HB3	3:RC:150:GLY:O	2.21	0.40
3:RC:83:ASP:HA	3:RC:84:PRO:HD3	1.83	0.40
4:RD:74:GLU:O	4:RD:75:ALA:C	2.65	0.40
5:RE:32:VAL:CG2	5:RE:33:VAL:N	2.83	0.40
5:RE:190:ALA:O	5:RE:191:ASP:C	2.63	0.40
7:RG:124:CYS:HA	7:RG:125:PRO:HD2	1.78	0.40
9:RI:57:VAL:CG1	9:RI:58:ILE:N	2.84	0.40
9:RI:101:SER:HB2	9:RI:140:GLU:O	2.21	0.40
11:RK:19:VAL:HG13	11:RK:41:ILE:HG12	2.02	0.40
13:RM:34:LYS:HD3	22:RV:81:PRO:O	2.21	0.40
19:RS:2:GLU:O	19:RS:3:THR:O	2.38	0.40
21:RU:52:ASN:O	21:RU:54:PRO:HD2	2.21	0.40
22:RV:80:HIS:CD2	22:RV:83:LYS:N	2.88	0.40
23:RW:19:ARG:NH2	23:RW:22:VAL:CG2	2.84	0.40
24:RX:32:LEU:HA	24:RX:51:SER:HA	2.02	0.40
32:QA:338:A:C6	32:QA:339:C:C4	3.09	0.40
32:QA:715:A:O5'	32:QA:715:A:H8	2.04	0.40
32:QA:751:U:C5	32:QA:752:G:C5	3.09	0.40
32:QA:1004:A:C6	32:QA:1005:A:C4	3.09	0.40
32:QA:1032:G:C6	32:QA:1033:G:H1'	2.56	0.40
32:QA:1417:G:N2	32:QA:1482:G:H2'	2.36	0.40
32:QA:1501:C:C4	32:QA:1504:G:C4	3.09	0.40
36:QE:140:ILE:C	36:QE:142:GLY:N	2.78	0.40
37:QF:68:GLN:HE21	37:QF:68:GLN:HB3	1.60	0.40
38:QG:31:VAL:HG22	38:QG:32:ASP:N	2.36	0.40
38:QG:59:GLU:O	38:QG:63:VAL:HG23	2.21	0.40
39:QH:35:ILE:O	39:QH:36:ALA:C	2.64	0.40
41:QJ:15:HIS:C	41:QJ:17:LEU:N	2.78	0.40
41:QJ:49:PHE:CE1	45:QN:76:PHE:HZ	2.39	0.40
41:QJ:102:LEU:N	41:QJ:102:LEU:HD22	2.35	0.40
47:QP:78:VAL:O	47:QP:78:VAL:HG22	2.22	0.40
49:QR:63:TYR:CD1	49:QR:69:TYR:OH	2.73	0.40
32:XA:227:G:O2'	47:XP:63:GLN:HG2	2.21	0.40
32:XA:561:U:O2'	32:XA:562:U:OP1	2.28	0.40
32:XA:587:G:H4'	39:XH:3:GLN:CA	2.52	0.40
32:XA:644:U:C2	32:XA:645:G:C8	3.10	0.40
32:XA:708:C:H4'	42:XK:38:GLY:HA3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:804:U:H5”	32:XA:805:C:OP2	2.21	0.40
32:XA:961:U:H5	32:XA:1223:C:H1’	1.85	0.40
32:XA:1147:C:O2’	32:XA:1148:U:H6	2.05	0.40
32:XA:1495:U:O2’	1:YA:1919:A:N1	2.44	0.40
33:XB:187:ASP:OD1	33:XB:203:ASP:CG	2.64	0.40
34:XC:173:PRO:O	34:XC:175:HIS:N	2.54	0.40
35:XD:32:LYS:HB3	35:XD:35:GLN:OE1	2.21	0.40
36:XE:135:VAL:O	36:XE:138:ALA:HB3	2.22	0.40
37:XF:30:THR:HG22	37:XF:30:THR:O	2.21	0.40
38:XG:120:ALA:C	38:XG:122:GLU:H	2.29	0.40
40:XI:39:GLY:HA2	40:XI:44:ARG:CD	2.51	0.40
41:XJ:65:TYR:HB3	45:XN:95:LEU:HD11	2.03	0.40
45:XN:50:LEU:CB	45:XN:51:PRO:HD3	2.51	0.40
47:XP:75:ILE:HA	47:XP:78:VAL:HG23	2.02	0.40
1:YA:14:A:C6	1:YA:526:A:C2	3.10	0.40
1:YA:24:G:O2’	19:YS:77:ASP:HB3	2.21	0.40
1:YA:26:G:C5’	1:YA:27:G:OP2	2.69	0.40
1:YA:38:A:C2	1:YA:442:G:N1	2.89	0.40
1:YA:118:A:OP2	1:YA:119:A:H2’	2.21	0.40
1:YA:235:U:C4	1:YA:236:C:C5	3.09	0.40
1:YA:285:G:C2	1:YA:356:G:C4	3.08	0.40
1:YA:299:A:H8	1:YA:299:A:P	2.44	0.40
1:YA:419:U:C2	1:YA:420:C:C5	3.09	0.40
1:YA:475:C:H4’	1:YA:509:C:O2’	2.21	0.40
1:YA:529:A:H4’	1:YA:530:G:OP1	2.21	0.40
1:YA:648:G:C2	1:YA:649:G:C5	3.08	0.40
1:YA:830:G:C2	1:YA:2448:A:N7	2.89	0.40
1:YA:1095:A:C2	1:YA:1096:A:C5	3.08	0.40
1:YA:1389:G:C2	1:YA:1399:C:N3	2.89	0.40
1:YA:1614:A:N6	19:YS:91:GLY:HA2	2.36	0.40
1:YA:1645:G:H5”	1:YA:1646:C:O5’	2.21	0.40
1:YA:1683:U:O2’	1:YA:1684:G:H5’	2.21	0.40
1:YA:1703:G:H2’	1:YA:1704:C:C6	2.56	0.40
1:YA:1773:A:H2’	1:YA:1774:C:C5’	2.52	0.40
1:YA:1826:G:C5	1:YA:1827:U:C5	3.09	0.40
1:YA:1854:A:O4’	1:YA:2233:U:H4’	2.20	0.40
1:YA:1931:U:H2’	1:YA:1932:A:H8	1.86	0.40
1:YA:1968:G:C5’	56:YA:3484:HOH:O	2.67	0.40
1:YA:2024:G:C2	1:YA:2040:G:N3	2.89	0.40
1:YA:2152:G:H2’	1:YA:2152:G:N3	2.36	0.40
1:YA:2357:G:C2	1:YA:2361:G:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2504:U:H5”	56:YA:3512:HOH:O	2.21	0.40
1:YA:2531:A:C5’	7:YG:156:TYR:CZ	3.04	0.40
1:YA:2553:G:H2’	1:YA:2554:U:H4’	2.02	0.40
3:YC:52:HIS:HA	3:YC:216:ARG:CB	2.37	0.40
5:YE:60:TRP:C	5:YE:62:GLN:H	2.29	0.40
7:YG:93:TYR:HD2	7:YG:93:TYR:N	1.88	0.40
7:YG:112:VAL:O	7:YG:113:ASP:HB2	2.21	0.40
7:YG:143:VAL:O	7:YG:147:LEU:HG	2.21	0.40
9:YI:60:VAL:HG22	9:YI:66:PHE:CE2	2.46	0.40
11:YK:11:ALA:HB2	11:YK:64:ARG:NH1	2.36	0.40
11:YK:94:PRO:HG3	11:YK:115:ILE:HD12	2.03	0.40
11:YK:115:ILE:HG22	11:YK:116:ILE:N	2.35	0.40
13:YM:23:GLY:H	13:YM:100:LYS:NZ	2.19	0.40
13:YM:34:LYS:HD3	13:YM:131:VAL:HG21	2.02	0.40
13:YM:81:ARG:NH2	13:YM:84:LYS:HE2	2.36	0.40
15:YO:20:GLU:HG3	23:YW:50:VAL:HG11	2.03	0.40
18:YR:68:ARG:HD2	18:YR:92:TRP:CZ3	2.56	0.40
19:YS:5:ALA:O	19:YS:6:LYS:HB3	2.20	0.40
28:Y1:5:ARG:NH2	28:Y1:23:THR:CB	2.83	0.40
29:Y2:24:THR:O	29:Y2:24:THR:HG23	2.21	0.40
1:RA:182:A:H2’	1:RA:183:C:O4’	2.21	0.40
1:RA:417:C:H2’	1:RA:418:C:H6	1.86	0.40
1:RA:497:A:C4	1:RA:498:G:C8	3.09	0.40
1:RA:523:C:H4’	1:RA:540:C:O2	2.20	0.40
1:RA:876:C:N3	1:RA:901:C:N4	2.68	0.40
1:RA:1082:U:H5’	9:RI:117:THR:C	2.44	0.40
1:RA:1358:G:N7	1:RA:1371:G:N7	2.70	0.40
1:RA:1411:U:H2’	1:RA:1412:U:O4’	2.22	0.40
1:RA:1669:A:OP2	56:RA:3723:HOH:O	2.21	0.40
1:RA:1844:C:C2	1:RA:1897:G:N2	2.88	0.40
1:RA:2354:C:O4’	23:RW:31:LEU:HD22	2.22	0.40
1:RA:2531:A:OP1	7:RG:174:LYS:HE3	2.21	0.40
1:RA:2725:A:O2’	1:RA:2726:A:H2’	2.21	0.40
3:RC:219:VAL:O	3:RC:224:MET:HE3	2.21	0.40
5:RE:54:GLY:HA3	5:RE:74:LYS:HE2	2.03	0.40
7:RG:4:ALA:C	7:RG:6:ALA:H	2.29	0.40
8:RH:1:MET:HE1	24:RX:59:ASP:HB3	2.03	0.40
8:RH:89:LYS:CG	8:RH:90:LEU:H	2.14	0.40
9:RI:28:GLY:O	9:RI:34:ILE:HD11	2.21	0.40
10:RJ:36:LEU:HD12	10:RJ:36:LEU:HA	1.84	0.40
10:RJ:44:TYR:CD1	17:RQ:59:LEU:HD11	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:RK:113:MET:O	11:RK:115:ILE:N	2.53	0.40
12:RL:89:VAL:HA	12:RL:121:THR:HG23	2.02	0.40
14:RN:28:LEU:O	14:RN:32:GLU:N	2.52	0.40
15:RO:7:ARG:HD3	15:RO:97:PHE:CE1	2.57	0.40
15:RO:21:LEU:HD23	15:RO:21:LEU:HA	1.57	0.40
16:RP:24:THR:HG22	16:RP:85:VAL:O	2.21	0.40
17:RQ:13:HIS:CD2	17:RQ:31:TYR:CD1	3.08	0.40
19:RS:69:LEU:HD12	19:RS:69:LEU:HA	1.91	0.40
20:RT:4:GLU:CG	20:RT:6:ARG:HE	2.30	0.40
22:RV:6:ALA:HB2	22:RV:42:LEU:HD22	2.03	0.40
22:RV:12:GLN:CD	22:RV:12:GLN:C	2.88	0.40
23:RW:16:GLU:HB2	23:RW:17:ALA:H	1.52	0.40
23:RW:18:LYS:H	23:RW:36:ILE:N	2.20	0.40
23:RW:28:GLU:OE2	23:RW:29:SER:N	2.54	0.40
23:RW:39:GLN:CG	23:RW:42:THR:H	2.27	0.40
27:R0:36:LYS:O	27:R0:37:HIS:HB3	2.22	0.40
28:R1:7:LYS:CA	28:R1:23:THR:HG22	2.41	0.40
31:R4:1:MET:SD	31:R4:36:ARG:HB2	2.61	0.40
32:QA:13:U:C4	32:QA:916:U:O4	2.75	0.40
32:QA:138:G:C2'	32:QA:139:A:H5'	2.51	0.40
32:QA:139:A:O2'	32:QA:140:U:H5'	2.21	0.40
32:QA:450:G:C2'	32:QA:451:A:OP1	2.69	0.40
32:QA:523:A:H61	43:QL:88:ASP:CB	2.34	0.40
32:QA:616:G:C2'	32:QA:617:G:H5'	2.51	0.40
32:QA:857:C:H2'	32:QA:858:G:O4'	2.21	0.40
32:QA:1139:G:N2	32:QA:1141:C:N4	2.69	0.40
32:QA:1167:A:C8	32:QA:1169:A:C6	3.09	0.40
32:QA:1363:A:C5	32:QA:1365:G:C6	3.09	0.40
33:QB:58:LYS:HZ3	33:QB:58:LYS:HG2	1.76	0.40
33:QB:71:THR:O	33:QB:72:LYS:O	2.39	0.40
36:QE:12:GLU:HB2	36:QE:38:VAL:HG12	2.03	0.40
36:QE:80:LEU:N	36:QE:80:LEU:HD22	2.36	0.40
39:QH:54:THR:C	39:QH:56:PRO:HD3	2.47	0.40
40:QI:24:ASN:HA	40:QI:58:GLU:C	2.46	0.40
44:QM:5:GLY:C	44:QM:7:ASN:H	2.30	0.40
50:QS:66:VAL:C	50:QS:68:HIS:H	2.29	0.40
32:XA:6:G:O2'	32:XA:7:A:OP2	2.37	0.40
32:XA:92:U:H2'	32:XA:93:U:C6	2.56	0.40
32:XA:212:G:N2	32:XA:213:G:C4	2.90	0.40
32:XA:410:G:H5"	32:XA:411:A:OP1	2.22	0.40
32:XA:489:C:C4	32:XA:490:C:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:496:A:O2'	32:XA:497:G:C8	2.67	0.40
32:XA:619:U:O2	35:XD:129:VAL:HA	2.21	0.40
32:XA:834:U:H2'	32:XA:835:U:C6	2.56	0.40
32:XA:881:G:C6	32:XA:882:C:C4	3.09	0.40
32:XA:1065:U:H5	32:XA:1190:G:C8	2.40	0.40
32:XA:1073:U:N3	32:XA:1074:G:N7	2.69	0.40
32:XA:1076:U:C2	32:XA:1082:A:C2	3.09	0.40
32:XA:1241:G:N3	32:XA:1242:G:C8	2.89	0.40
32:XA:1388:C:N3	32:XA:1389:C:C5	2.89	0.40
32:XA:1426:G:C5	32:XA:1475:G:C2	3.10	0.40
32:XA:1525:G:H5"	52:XU:37:TYR:CD1	2.56	0.40
33:XB:20:ARG:NH2	33:XB:38:HIS:CE1	2.89	0.40
35:XD:117:VAL:O	35:XD:130:ASN:HA	2.21	0.40
38:XG:115:MET:C	38:XG:117:LEU:H	2.28	0.40
39:XH:94:VAL:HG21	39:XH:101:ALA:HB2	2.03	0.40
40:XI:126:PHE:CE1	40:XI:129:ARG:NH2	2.88	0.40
41:XJ:7:ARG:HD3	41:XJ:102:LEU:HD23	2.02	0.40
41:XJ:15:HIS:CE1	41:XJ:68:ARG:CD	3.03	0.40
47:XP:26:ASN:HD22	47:XP:26:ASN:HA	1.62	0.40
47:XP:50:THR:O	47:XP:51:ARG:CZ	2.69	0.40
49:XR:32:ILE:HA	49:XR:39:VAL:HG23	2.03	0.40
1:YA:72:U:O2	25:YY:51:ALA:HB1	2.21	0.40
1:YA:81:G:C8	1:YA:82:U:C5	3.09	0.40
1:YA:291:G:N1	1:YA:350:G:C5	2.90	0.40
1:YA:296:U:C2	1:YA:297:G:C8	3.09	0.40
1:YA:580:U:O5'	1:YA:580:U:H6	2.04	0.40
1:YA:588:U:H6	1:YA:588:U:O5'	2.04	0.40
1:YA:673:C:C2'	1:YA:674:G:H5'	2.51	0.40
1:YA:687:C:C2	1:YA:788:A:O4'	2.74	0.40
1:YA:1067:A:H2'	1:YA:1068:G:H5"	2.03	0.40
1:YA:1123:C:H2'	1:YA:1124:G:C8	2.56	0.40
1:YA:1179:G:C6	1:YA:1180:U:C4	3.09	0.40
1:YA:1275:A:C4	14:YN:16:HIS:CD2	3.05	0.40
1:YA:1380:G:H1'	1:YA:1569:A:N6	2.35	0.40
1:YA:1532:A:C6	1:YA:1533:C:C4	3.09	0.40
1:YA:1926:U:H1'	1:YA:1929:G:C6	2.57	0.40
1:YA:2258:C:C4'	1:YA:2259:U:OP2	2.65	0.40
1:YA:2373:G:H2'	1:YA:2374:C:C6	2.57	0.40
1:YA:2745:C:C4	1:YA:2746:U:C4	3.09	0.40
1:YA:2759:G:C5	1:YA:2760:C:C5	3.08	0.40
1:YA:2765:A:H5"	1:YA:2766:A:OP2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2800:A:N3	1:YA:2801:G:H1'	2.35	0.40
1:YA:2836:U:O2'	1:YA:2837:A:C8	2.49	0.40
1:YA:2862:G:C2	1:YA:2863:C:C2	3.09	0.40
2:YB:76:G:H1	2:YB:101:A:N6	2.19	0.40
2:YB:109:A:O2'	2:YB:110:C:H6	1.99	0.40
3:YC:65:ASP:CG	3:YC:101:ARG:HE	2.29	0.40
4:YD:197:THR:HG22	4:YD:197:THR:O	2.21	0.40
5:YE:146:VAL:HA	5:YE:185:LYS:O	2.21	0.40
11:YK:10:VAL:HG13	11:YK:12:ASP:H	1.85	0.40
12:YL:118:THR:O	12:YL:120:VAL:N	2.49	0.40
19:YS:35:ILE:HG13	19:YS:36:LEU:HD22	2.03	0.40
19:YS:47:VAL:O	19:YS:50:VAL:HB	2.21	0.40
23:YW:81:ILE:C	23:YW:81:ILE:HD12	2.46	0.40
26:YZ:40:THR:N	26:YZ:43:ILE:HD11	2.35	0.40
31:Y4:9:LYS:HD3	31:Y4:9:LYS:O	2.21	0.40
1:RA:483:A:O2'	21:RU:56:GLY:HA2	2.22	0.40
1:RA:1047:G:C2	1:RA:1110:G:C4	3.09	0.40
1:RA:1187:G:H5"	18:RR:83:TYR:CE2	2.57	0.40
1:RA:1857:G:H1'	1:RA:1884:G:N2	2.36	0.40
1:RA:2416:C:H2'	1:RA:2417:C:C6	2.56	0.40
1:RA:2670:A:H2'	1:RA:2671:G:O5'	2.21	0.40
1:RA:2740:A:C6	1:RA:2741:A:C6	3.09	0.40
1:RA:2765:A:N3	1:RA:2765:A:C2'	2.84	0.40
2:RB:33:G:C2'	2:RB:34:A:H5'	2.51	0.40
3:RC:132:ARG:NH2	3:RC:166:ARG:HD2	2.36	0.40
6:RF:35:LEU:HD13	6:RF:56:LEU:HD22	2.02	0.40
7:RG:7:PRO:HB2	7:RG:8:VAL:H	1.65	0.40
8:RH:27:ARG:HG2	8:RH:27:ARG:HH21	1.86	0.40
11:RK:7:MET:C	11:RK:8:LEU:HD23	2.47	0.40
12:RL:111:ILE:HD12	12:RL:128:THR:CG2	2.51	0.40
13:RM:70:ASP:OD1	13:RM:70:ASP:C	2.64	0.40
14:RN:32:GLU:CB	14:RN:115:LEU:HD12	2.51	0.40
15:RO:111:ARG:C	15:RO:113:ALA:N	2.79	0.40
16:RP:3:ILE:C	16:RP:3:ILE:CD1	2.93	0.40
18:RR:67:GLY:C	18:RR:93:PHE:CE2	2.98	0.40
19:RS:24:ILE:O	19:RS:71:VAL:CG1	2.69	0.40
24:RX:35:HIS:HB3	24:RX:37:PHE:CE2	2.57	0.40
26:RZ:13:ILE:C	26:RZ:15:ARG:H	2.29	0.40
30:R3:15:LYS:HE2	30:R3:19:GLY:HA2	2.04	0.40
31:R4:30:GLU:HB3	31:R4:33:HIS:ND1	2.36	0.40
32:QA:67:C:OP1	32:QA:199:A:H5"	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:74:A:N3	32:QA:97:G:C2	2.89	0.40
32:QA:96:U:O2'	32:QA:97:G:P	2.79	0.40
32:QA:427:U:C4	32:QA:428:G:C6	3.09	0.40
32:QA:481:G:H3'	32:QA:481:G:H8	1.87	0.40
32:QA:599:C:H5"	39:QH:87:ARG:HA	2.02	0.40
32:QA:651:C:C4	32:QA:652:U:O4	2.74	0.40
32:QA:683:G:N2	42:QK:39:ASN:HA	2.36	0.40
32:QA:764:C:O2'	32:QA:765:G:H5'	2.21	0.40
32:QA:960:U:O2'	32:QA:1223:C:C5'	2.70	0.40
32:QA:1113:C:H2'	32:QA:1114:C:H6	1.86	0.40
32:QA:1160:G:O6	32:QA:1181:G:C5	2.74	0.40
32:QA:1270:G:H2'	32:QA:1271:A:H8	1.86	0.40
32:QA:1392:G:O2'	32:QA:1393:U:H5'	2.21	0.40
33:QB:53:LEU:CD2	33:QB:53:LEU:H	2.34	0.40
33:QB:70:GLY:HA2	33:QB:163:ILE:CG2	2.51	0.40
33:QB:118:THR:O	33:QB:119:GLN:HB2	2.21	0.40
33:QB:148:GLY:C	33:QB:150:ILE:N	2.77	0.40
36:QE:116:VAL:CG2	36:QE:117:ALA:N	2.84	0.40
36:QE:152:VAL:CB	36:QE:155:LYS:NZ	2.84	0.40
37:QF:68:GLN:HA	37:QF:71:ILE:HG21	2.04	0.40
40:QI:113:LYS:HG2	40:QI:114:LYS:N	2.35	0.40
43:QL:43:LYS:NZ	43:QL:44:PRO:HD3	2.37	0.40
43:QL:89:LEU:HD22	43:QL:89:LEU:N	2.36	0.40
45:QN:52:ARG:HD3	45:QN:52:ARG:HA	1.88	0.40
45:QN:82:LYS:HE2	45:QN:85:GLU:HG3	2.04	0.40
47:QP:46:LYS:HB2	47:QP:47:GLU:H	1.62	0.40
32:XA:63:C:H4'	32:XA:380:G:H4'	2.03	0.40
32:XA:517:G:H5'	32:XA:519:C:C2	2.57	0.40
32:XA:908:A:O2'	32:XA:909:A:H5'	2.21	0.40
32:XA:949:A:C2	32:XA:1233:G:C4	3.10	0.40
32:XA:972:C:OP2	32:XA:1366:C:H5"	2.21	0.40
32:XA:990:C:C2'	32:XA:991:U:O4'	2.63	0.40
32:XA:1239:A:H3'	38:XG:118:ARG:HH22	1.87	0.40
33:XB:80:LYS:HG3	33:XB:81:ASP:H	1.86	0.40
33:XB:125:PHE:C	33:XB:125:PHE:CD2	2.98	0.40
34:XC:38:VAL:HG21	34:XC:56:ILE:HD11	2.03	0.40
34:XC:83:VAL:HA	34:XC:86:LEU:HD12	2.03	0.40
34:XC:133:MET:H	34:XC:133:MET:HG2	1.77	0.40
35:XD:8:LEU:HD13	35:XD:8:LEU:HA	1.85	0.40
38:XG:75:LYS:CE	38:XG:76:SER:H	2.26	0.40
42:XK:13:LYS:O	42:XK:14:GLN:O	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:XL:28:GLN:HE21	43:XL:28:GLN:HB3	1.61	0.40
44:XM:19:THR:HG22	44:XM:26:LYS:HA	2.03	0.40
44:XM:52:ILE:HG23	44:XM:53:ASP:H	1.86	0.40
46:XO:22:GLY:O	46:XO:23:SER:C	2.64	0.40
50:XS:32:THR:HG21	50:XS:70:LEU:HD13	2.03	0.40
1:YA:24:G:C2'	1:YA:25:U:H5'	2.51	0.40
1:YA:238:C:H4'	1:YA:608:A:O2'	2.21	0.40
1:YA:290:U:C4	1:YA:291:G:N7	2.90	0.40
1:YA:584:C:H2'	1:YA:585:G:H8	1.86	0.40
1:YA:1048:A:C6	1:YA:1049:C:N4	2.89	0.40
1:YA:1069:A:C2	1:YA:1097:U:OP1	2.75	0.40
1:YA:1085:A:C5'	1:YA:1105:U:H4'	2.51	0.40
1:YA:1154:G:OP1	17:YQ:57:ARG:HD2	2.21	0.40
1:YA:1342:A:C6	1:YA:1345:C:N3	2.90	0.40
1:YA:1565:C:H5"	3:YC:17:LYS:CE	2.51	0.40
1:YA:1765:U:O2'	1:YA:1766:G:H5'	2.21	0.40
1:YA:1813:G:N2	3:YC:49:THR:HB	2.36	0.40
1:YA:2187:U:N3	1:YA:2188:U:C5	2.89	0.40
1:YA:2209:G:C5	1:YA:2210:U:C4	3.09	0.40
1:YA:2221:G:C6	1:YA:2222:C:C4	3.10	0.40
1:YA:2330:G:C2	1:YA:2386:A:C6	3.10	0.40
1:YA:2533:U:H4'	1:YA:2664:G:H4'	2.03	0.40
1:YA:2573:C:OP1	1:YA:2575:C:OP2	2.39	0.40
1:YA:2579:C:H2'	1:YA:2580:U:O4'	2.21	0.40
1:YA:2658:C:C2'	1:YA:2659:G:H5'	2.51	0.40
1:YA:2866:U:H4'	1:YA:2867:G:OP1	2.21	0.40
2:YB:69:G:C2	2:YB:70:C:H1'	2.57	0.40
3:YC:1:ALA:O	3:YC:18:VAL:HG23	2.21	0.40
3:YC:141:HIS:CB	3:YC:190:THR:O	2.70	0.40
4:YD:12:THR:OG1	16:YP:4:ILE:HG23	2.22	0.40
4:YD:169:ARG:O	4:YD:170:VAL:CG2	2.68	0.40
5:YE:111:GLU:HG2	5:YE:114:ARG:NH2	2.37	0.40
6:YF:149:ARG:HA	6:YF:149:ARG:HD3	1.92	0.40
8:YH:61:VAL:CG1	8:YH:62:LEU:N	2.85	0.40
9:YI:24:GLY:HA3	9:YI:25:PRO:HD3	1.85	0.40
12:YL:29:LYS:HG2	12:YL:30:THR:HG23	2.04	0.40
13:YM:52:ALA:HB1	13:YM:119:LEU:HD22	2.03	0.40
13:YM:101:VAL:O	13:YM:101:VAL:HG13	2.22	0.40
14:YN:34:ILE:O	14:YN:112:TYR:HA	2.20	0.40
14:YN:97:ILE:HD12	14:YN:99:LYS:HD3	2.03	0.40
17:YQ:3:VAL:HG13	17:YQ:4:LYS:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:YR:37:GLU:HB2	18:YR:53:PHE:CE2	2.56	0.40
19:YS:80:PRO:HD2	19:YS:100:THR:OG1	2.20	0.40
21:YU:86:PHE:CD2	21:YU:87:GLU:HG3	2.56	0.40
24:YX:19:HIS:C	24:YX:21:LEU:N	2.73	0.40
1:RA:20:C:H2'	1:RA:21:A:H8	1.86	0.40
1:RA:323:C:N4	1:RA:333:G:N7	2.69	0.40
1:RA:348:A:H2'	1:RA:349:U:O4'	2.21	0.40
1:RA:373:U:HO2'	1:RA:423:A:H1'	1.86	0.40
1:RA:1042:G:C2'	1:RA:1043:C:H5'	2.51	0.40
1:RA:1183:U:O2'	1:RA:1184:U:H5'	2.22	0.40
1:RA:1198:U:H2'	1:RA:1199:U:C6	2.56	0.40
1:RA:1489:C:H6	1:RA:1489:C:O5'	2.05	0.40
1:RA:1577:C:H2'	1:RA:1578:U:O4'	2.21	0.40
1:RA:1762:A:O5'	1:RA:1762:A:H8	2.05	0.40
1:RA:1794:A:O4'	1:RA:1900:A:C2	2.74	0.40
1:RA:1809:A:C6	1:RA:1810:A:C6	3.09	0.40
1:RA:2296:U:C4'	1:RA:2297:A:OP1	2.68	0.40
1:RA:2582:G:C2	1:RA:2583:G:C8	3.10	0.40
1:RA:2592:G:C5	1:RA:2593:U:C4	3.09	0.40
1:RA:2825:G:C2'	1:RA:2826:A:H5'	2.51	0.40
3:RC:139:THR:O	3:RC:140:VAL:O	2.39	0.40
3:RC:255:LYS:C	3:RC:257:ARG:H	2.25	0.40
4:RD:16:THR:O	4:RD:17:GLU:C	2.64	0.40
4:RD:99:GLU:CG	4:RD:100:LEU:H	2.34	0.40
5:RE:114:ARG:C	5:RE:116:ASP:H	2.29	0.40
5:RE:160:ALA:C	5:RE:162:ARG:H	2.29	0.40
8:RH:43:ASN:C	8:RH:45:GLU:H	2.29	0.40
12:RL:105:ILE:CG2	12:RL:106:GLU:N	2.82	0.40
13:RM:33:LEU:HD23	13:RM:33:LEU:HA	1.55	0.40
13:RM:64:TRP:CZ3	13:RM:106:ASP:HB2	2.57	0.40
19:RS:71:VAL:O	19:RS:71:VAL:HG22	2.21	0.40
24:RX:14:GLY:O	24:RX:26:ARG:HG3	2.22	0.40
24:RX:53:LYS:HD3	24:RX:53:LYS:C	2.47	0.40
32:QA:71:A:C2	32:QA:72:A:N7	2.89	0.40
32:QA:214:C:O2'	32:QA:215:C:O5'	2.39	0.40
32:QA:334:C:O2'	32:QA:335:C:H5'	2.21	0.40
32:QA:532:A:O4'	32:QA:532:A:OP2	2.40	0.40
32:QA:787:A:C5	32:QA:788:U:C5	3.10	0.40
32:QA:875:U:O2'	39:QH:14:ARG:NH1	2.53	0.40
32:QA:896:C:H2'	32:QA:897:C:C6	2.51	0.40
32:QA:1161:C:O2'	32:QA:1162:C:H6	1.99	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:1187:G:N3	32:QA:1187:G:H2'	2.36	0.40
32:QA:1243:C:O2'	32:QA:1244:G:H5'	2.21	0.40
32:QA:1367:C:H5'	41:QJ:62:ARG:NH1	2.36	0.40
32:QA:1441:A:C8	32:QA:1442:G:N7	2.90	0.40
33:QB:57:ASN:O	33:QB:58:LYS:HB2	2.22	0.40
33:QB:71:THR:CG2	33:QB:72:LYS:N	2.83	0.40
34:QC:19:SER:HB2	34:QC:39:ARG:NH2	2.36	0.40
35:QD:28:ASP:O	35:QD:29:THR:O	2.39	0.40
36:QE:73:VAL:CG1	36:QE:75:LEU:HD12	2.52	0.40
37:QF:42:TRP:CZ2	37:QF:61:LEU:HD22	2.55	0.40
42:QK:22:ILE:CD1	42:QK:85:VAL:HG22	2.51	0.40
47:QP:20:VAL:HG22	47:QP:32:PHE:HB2	2.02	0.40
50:QS:4:LEU:O	50:QS:5:LYS:HB2	2.20	0.40
50:QS:51:HIS:CD2	50:QS:53:GLY:N	2.75	0.40
51:QT:57:VAL:O	51:QT:58:ASP:C	2.63	0.40
51:QT:61:ALA:CA	51:QT:66:ILE:HG22	2.51	0.40
51:QT:68:LYS:HZ2	51:QT:68:LYS:HB2	1.87	0.40
52:QU:17:ARG:HA	52:QU:20:ARG:CG	2.52	0.40
32:XA:73:C:H2'	32:XA:74:A:H8	1.86	0.40
32:XA:220:G:O2'	32:XA:221:C:H5'	2.22	0.40
32:XA:444:G:C2	32:XA:445:G:C4	3.10	0.40
32:XA:462:G:O6	32:XA:469:C:N4	2.54	0.40
32:XA:527:G:C6	32:XA:528:C:C5	3.09	0.40
32:XA:642:A:C8	39:XH:106:SER:HA	2.56	0.40
32:XA:954:G:N1	32:XA:1228:C:N4	2.68	0.40
32:XA:963:G:N1	32:XA:973:G:O6	2.54	0.40
32:XA:1059:C:O2	41:XJ:55:PRO:HG3	2.21	0.40
32:XA:1093:A:C5	32:XA:1095:U:O4'	2.75	0.40
32:XA:1147:C:H4'	40:XI:6:TYR:CZ	2.55	0.40
32:XA:1301:U:H5"	32:XA:1302:C:P	2.62	0.40
32:XA:1517:G:N3	1:YA:1919:A:O2'	2.48	0.40
33:XB:22:TRP:CG	33:XB:23:ASN:N	2.87	0.40
33:XB:57:ASN:CG	33:XB:219:THR:HB	2.46	0.40
34:XC:80:GLY:O	34:XC:83:VAL:HG22	2.21	0.40
37:XF:68:GLN:O	37:XF:69:GLU:C	2.64	0.40
37:XF:85:ILE:HB	37:XF:86:ARG:H	1.64	0.40
39:XH:28:SER:O	39:XH:29:SER:HB3	2.21	0.40
39:XH:30:LYS:O	39:XH:31:LEU:C	2.65	0.40
40:XI:44:ARG:C	40:XI:46:VAL:N	2.78	0.40
42:XK:124:LYS:O	52:XU:33:ARG:CZ	2.69	0.40
44:XM:108:ARG:C	44:XM:110:GLY:H	2.29	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:XN:55:SER:HB3	45:XN:58:ARG:HD2	2.02	0.40
50:XS:39:ILE:HD12	50:XS:65:MET:HG3	2.03	0.40
1:YA:48:G:H22	1:YA:177:G:N2	2.19	0.40
1:YA:83:A:H61	1:YA:101:A:C5'	2.25	0.40
1:YA:262:A:C2	1:YA:430:A:H1'	2.56	0.40
1:YA:271:G:N2	1:YA:367:G:H1'	2.36	0.40
1:YA:374:A:C6	1:YA:401:A:C8	3.10	0.40
1:YA:415:A:C2	1:YA:2409:G:N1	2.89	0.40
1:YA:471:A:H2'	1:YA:472:A:O4'	2.22	0.40
1:YA:563:A:H1'	1:YA:2018:G:N2	2.36	0.40
1:YA:719:C:O2'	1:YA:720:U:H5'	2.21	0.40
1:YA:816:C:C2	1:YA:1192:G:N2	2.90	0.40
1:YA:826:U:OP1	56:YA:3687:HOH:O	2.22	0.40
1:YA:846:U:O2	1:YA:846:U:O4'	2.40	0.40
1:YA:1213:A:H2'	1:YA:1214:A:O4'	2.21	0.40
1:YA:1339:G:C5'	1:YA:1393:A:N1	2.78	0.40
1:YA:1341:G:C2'	1:YA:1397:U:O2'	2.70	0.40
1:YA:1355:G:C6	1:YA:1377:G:N2	2.90	0.40
1:YA:1401:G:C6	1:YA:1402:U:C4	3.09	0.40
1:YA:1525:A:C2'	1:YA:1526:C:H5'	2.52	0.40
1:YA:1533:C:O5'	1:YA:1533:C:H6	2.04	0.40
1:YA:1795:C:O2	3:YC:252:LYS:NZ	2.54	0.40
1:YA:1868:C:N4	1:YA:1869:G:C6	2.90	0.40
1:YA:2013:A:C6	1:YA:2014:A:C2	3.09	0.40
1:YA:2256:G:N2	1:YA:2275:C:C4	2.90	0.40
1:YA:2314:A:H2'	1:YA:2315:G:C8	2.57	0.40
1:YA:2337:G:C6	1:YA:2338:C:N4	2.89	0.40
1:YA:2341:G:C5	1:YA:2342:C:C5	3.10	0.40
1:YA:2371:G:H4'	28:Y1:44:GLN:HE21	1.86	0.40
1:YA:2448:A:H61	12:YL:36:LYS:HZ1	1.69	0.40
1:YA:2529:G:H4'	7:YG:174:LYS:HD2	2.02	0.40
1:YA:2873:A:O4'	14:YN:6:SER:HB3	2.21	0.40
2:YB:17:C:C2'	2:YB:18:G:H5'	2.51	0.40
2:YB:71:C:C2	2:YB:106:G:N2	2.89	0.40
2:YB:90:C:H5"	2:YB:90:C:C6	2.56	0.40
3:YC:36:ASN:HB3	3:YC:37:SER:H	1.78	0.40
3:YC:44:ASN:O	3:YC:46:GLY:N	2.55	0.40
3:YC:96:LYS:HA	3:YC:96:LYS:HD3	1.86	0.40
3:YC:245:THR:C	3:YC:247:TRP:N	2.78	0.40
9:YI:96:LYS:HE2	9:YI:138:VAL:HG11	2.03	0.40
9:YI:130:GLY:C	9:YI:132:ALA:H	2.29	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:YJ:44:TYR:CD1	17:YQ:63:ARG:NH2	2.89	0.40
10:YJ:81:ILE:HG22	10:YJ:82:GLY:H	1.87	0.40
12:YL:81:ASP:C	12:YL:82:LEU:HD12	2.46	0.40
14:YN:73:ASN:HA	14:YN:76:VAL:CG1	2.52	0.40
15:YO:51:ALA:HB3	15:YO:78:VAL:HG23	2.03	0.40
19:YS:79:GLY:CA	19:YS:100:THR:OG1	2.68	0.40
21:YU:58:VAL:HG12	21:YU:59:GLU:N	2.34	0.40
23:YW:24:ARG:HA	23:YW:66:VAL:H	1.86	0.40
23:YW:37:VAL:HG21	23:YW:38:ARG:NH1	2.36	0.40
24:YX:37:PHE:O	24:YX:45:PHE:HA	2.21	0.40
24:YX:53:LYS:CA	24:YX:56:ARG:HB3	2.35	0.40
25:YY:57:LEU:HD13	25:YY:60:LYS:HE3	2.03	0.40
30:Y3:23:HIS:O	30:Y3:46:LYS:HB2	2.22	0.40
30:Y3:51:LYS:O	30:Y3:52:GLY:C	2.64	0.40
30:Y3:54:LEU:HD11	30:Y3:58:ILE:HD11	2.03	0.40
1:RA:37:C:H2'	1:RA:38:A:O5'	2.21	0.40
1:RA:247:G:H4'	1:RA:386:G:C5	2.56	0.40
1:RA:626:A:C2	12:RL:78:ARG:HD3	2.56	0.40
1:RA:971:G:H2'	1:RA:972:A:H5'	2.03	0.40
1:RA:1049:C:C2'	1:RA:1050:A:H5'	2.52	0.40
1:RA:1071:G:N7	1:RA:1089:A:N6	2.70	0.40
1:RA:1149:G:C6	1:RA:1150:C:N4	2.90	0.40
1:RA:1250:G:OP2	12:RL:18:ARG:NH2	2.48	0.40
1:RA:1360:G:C6	1:RA:1372:U:C2	3.10	0.40
1:RA:1563:U:H2'	1:RA:1564:C:H6	1.86	0.40
1:RA:1644:C:O2	1:RA:1644:C:H2'	2.21	0.40
1:RA:1731:G:C6	1:RA:1733:G:O6	2.75	0.40
1:RA:2065:C:H2'	1:RA:2066:C:C6	2.51	0.40
1:RA:2345:G:C5	1:RA:2381:A:C2	3.09	0.40
1:RA:2505:G:O2'	1:RA:2506:U:H5"	2.22	0.40
2:RB:110:C:C4	2:RB:111:U:C5	3.10	0.40
3:RC:5:CYS:HB3	3:RC:12:ARG:NH1	2.37	0.40
4:RD:73:VAL:HB	4:RD:74:GLU:H	1.54	0.40
5:RE:25:GLU:O	5:RE:28:VAL:HG13	2.21	0.40
8:RH:9:VAL:O	8:RH:10:ALA:C	2.65	0.40
8:RH:53:GLU:O	8:RH:54:LEU:HD22	2.22	0.40
9:RI:52:LEU:HA	9:RI:53:PRO:HD3	1.98	0.40
10:RJ:45:THR:O	10:RJ:45:THR:CG2	2.69	0.40
11:RK:13:ASN:C	11:RK:15:GLY:H	2.29	0.40
11:RK:92:GLU:O	11:RK:93:GLN:O	2.39	0.40
13:RM:76:LYS:O	13:RM:77:PRO:O	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:RO:30:ARG:HG2	15:RO:31:THR:N	2.36	0.40
19:RS:72:THR:O	19:RS:73:LYS:HD2	2.21	0.40
20:RT:17:SER:O	20:RT:18:GLU:CB	2.68	0.40
20:RT:88:LYS:HD3	20:RT:88:LYS:HA	1.93	0.40
21:RU:42:LYS:HB3	21:RU:57:ILE:CG2	2.49	0.40
28:R1:46:VAL:HG12	28:R1:47:ILE:N	2.33	0.40
32:QA:202:G:N2	32:QA:216:U:O2	2.54	0.40
32:QA:486:U:H6	32:QA:486:U:C5'	2.11	0.40
32:QA:764:C:H2'	32:QA:765:G:H8	1.86	0.40
32:QA:1081:A:H5'	36:QE:22:LYS:HG3	2.03	0.40
32:QA:1112:C:C2'	32:QA:1113:C:O5'	2.68	0.40
32:QA:1241:G:N2	32:QA:1242:G:C5	2.90	0.40
32:QA:1323:G:C2'	32:QA:1324:A:C8	3.05	0.40
32:QA:1419:G:C6	32:QA:1420:U:C4	3.10	0.40
33:QB:105:THR:HA	33:QB:108:GLN:HE22	1.87	0.40
36:QE:113:VAL:HG21	36:QE:140:ILE:HD12	2.04	0.40
41:QJ:56:HIS:C	41:QJ:57:VAL:HG12	2.46	0.40
41:QJ:57:VAL:O	41:QJ:58:ASN:HB2	2.21	0.40
41:QJ:80:THR:O	41:QJ:82:LYS:N	2.54	0.40
41:QJ:80:THR:C	41:QJ:82:LYS:N	2.78	0.40
43:QL:4:ASN:OD1	48:QQ:35:LYS:HE3	2.21	0.40
43:QL:72:ASN:CG	43:QL:73:LEU:N	2.79	0.40
45:QN:79:SER:O	45:QN:80:ARG:C	2.65	0.40
47:QP:46:LYS:HD3	47:QP:47:GLU:N	2.36	0.40
47:QP:48:GLU:HG3	47:QP:49:GLY:H	1.85	0.40
51:QT:26:MET:HG3	51:QT:27:MET:N	2.37	0.40
51:QT:54:GLN:N	51:QT:55:PRO:HD2	2.37	0.40
52:QU:36:PHE:CD1	52:QU:39:LYS:HB3	2.48	0.40
52:QU:52:VAL:HG13	52:QU:53:LYS:N	2.37	0.40
32:XA:442:G:C6	32:XA:443:C:N4	2.89	0.40
32:XA:674:G:O2'	49:XR:69:TYR:CD2	2.72	0.40
32:XA:890:G:O2'	32:XA:891:U:OP2	2.39	0.40
32:XA:919:A:O2'	32:XA:920:U:H5'	2.21	0.40
32:XA:1349:A:OP1	40:XI:122:ARG:N	2.47	0.40
32:XA:1449:C:C2	32:XA:1455:G:C2	3.09	0.40
32:XA:1499:A:O2'	32:XA:1500:A:H5'	2.22	0.40
33:XB:46:VAL:HG22	33:XB:47:PRO:N	2.35	0.40
33:XB:185:ILE:HA	33:XB:199:ILE:O	2.20	0.40
33:XB:212:TYR:O	33:XB:212:TYR:CD2	2.69	0.40
34:XC:35:ASP:OD1	34:XC:58:ARG:NH1	2.54	0.40
34:XC:78:LYS:O	34:XC:79:LYS:C	2.65	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:XD:31:CYS:O	35:XD:32:LYS:HB2	2.21	0.40
37:XF:53:LYS:O	37:XF:55:HIS:CD2	2.75	0.40
38:XG:86:VAL:HA	38:XG:87:PRO:HD2	1.87	0.40
40:XI:70:GLY:O	40:XI:72:SER:N	2.55	0.40
44:XM:63:VAL:O	44:XM:63:VAL:HG23	2.21	0.40
45:XN:66:THR:HG23	45:XN:82:LYS:HE3	2.03	0.40
46:XO:41:HIS:O	46:XO:44:GLU:O	2.40	0.40
50:XS:44:ILE:HG12	50:XS:45:GLY:N	2.35	0.40
52:XU:28:LEU:O	52:XU:28:LEU:HD23	2.22	0.40
1:YA:77:G:C6	1:YA:78:U:N3	2.90	0.40
1:YA:570:G:N7	1:YA:2030:A:N6	2.70	0.40
1:YA:589:U:O2'	1:YA:590:A:H8	2.04	0.40
1:YA:647:G:C4	1:YA:648:G:N7	2.89	0.40
1:YA:833:A:N6	1:YA:834:G:O6	2.55	0.40
1:YA:1027:A:C6	1:YA:1126:A:C4	3.09	0.40
1:YA:1210:G:H5'	1:YA:1212:G:O4'	2.21	0.40
1:YA:1665:A:H2'	1:YA:1666:G:C5'	2.50	0.40
1:YA:1691:C:H6	1:YA:1691:C:O5'	2.05	0.40
1:YA:1752:C:H6	1:YA:1752:C:O5'	2.04	0.40
1:YA:1794:A:H1'	1:YA:1900:A:C2	2.56	0.40
1:YA:1830:C:C5'	3:YC:14:HIS:HE1	2.34	0.40
1:YA:1858:A:N1	1:YA:1859:U:C2	2.89	0.40
1:YA:2108:A:OP2	1:YA:2108:A:C8	2.74	0.40
1:YA:2261:C:H41	23:YW:10:ARG:HB3	1.84	0.40
1:YA:2653:U:OP2	1:YA:2654:A:O2'	2.32	0.40
1:YA:2823:A:C2'	1:YA:2824:C:H5'	2.51	0.40
2:YB:18:G:C6	2:YB:19:C:N3	2.90	0.40
2:YB:29:A:C4	2:YB:30:C:C5	3.10	0.40
2:YB:76:G:OP1	22:YV:9:ARG:NH2	2.54	0.40
3:YC:161:VAL:CG1	3:YC:162:GLN:N	2.84	0.40
5:YE:54:GLY:O	5:YE:55:SER:HB3	2.22	0.40
5:YE:133:LEU:C	5:YE:135:ALA:H	2.28	0.40
6:YF:46:LYS:C	6:YF:48:LEU:N	2.79	0.40
6:YF:82:TYR:HA	6:YF:83:PRO:HD2	1.83	0.40
7:YG:23:ILE:HG21	7:YG:71:LEU:HD21	2.04	0.40
7:YG:92:GLY:O	7:YG:93:TYR:C	2.64	0.40
8:YH:61:VAL:HG13	8:YH:62:LEU:HG	2.04	0.40
11:YK:23:LYS:O	11:YK:25:LEU:HD23	2.21	0.40
11:YK:59:LYS:HG2	11:YK:89:ASN:HA	2.03	0.40
14:YN:20:MET:C	14:YN:22:ARG:N	2.79	0.40
14:YN:46:ARG:H	14:YN:46:ARG:HG3	1.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:YO:27:VAL:HB	15:YO:38:GLN:HG3	2.03	0.40
16:YP:19:PHE:CE1	16:YP:58:PHE:CG	3.10	0.40
16:YP:77:SER:OG	16:YP:78:PRO:HD2	2.22	0.40
16:YP:113:LEU:HD23	16:YP:113:LEU:C	2.46	0.40
17:YQ:61:ILE:N	17:YQ:61:ILE:HD12	2.36	0.40
18:YR:25:LEU:H	18:YR:94:THR:HG21	1.86	0.40
19:YS:68:ASP:N	19:YS:68:ASP:OD1	2.55	0.40
24:YX:14:GLY:O	24:YX:25:LYS:HA	2.22	0.40
25:YY:25:GLN:O	25:YY:29:ARG:HD3	2.21	0.40
25:YY:60:LYS:HE3	25:YY:60:LYS:HB3	1.85	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	
3	RC	269/271 (99%)	198 (74%)	43 (16%)	28 (10%)	0	2
3	YC	269/271 (99%)	180 (67%)	60 (22%)	29 (11%)	0	2
4	RD	207/209 (99%)	147 (71%)	31 (15%)	29 (14%)	0	1
4	YD	207/209 (99%)	128 (62%)	45 (22%)	34 (16%)	0	0
5	RE	199/201 (99%)	146 (73%)	32 (16%)	21 (11%)	0	2
5	YE	199/201 (99%)	117 (59%)	55 (28%)	27 (14%)	0	1
6	RF	175/178 (98%)	138 (79%)	22 (13%)	15 (9%)	0	4
6	YF	176/178 (99%)	102 (58%)	42 (24%)	32 (18%)	0	0
7	RG	174/176 (99%)	121 (70%)	26 (15%)	27 (16%)	0	0
7	YG	174/176 (99%)	104 (60%)	36 (21%)	34 (20%)	0	0
8	RH	147/149 (99%)	64 (44%)	49 (33%)	34 (23%)	0	0
8	YH	147/149 (99%)	73 (50%)	59 (40%)	15 (10%)	0	3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
9	RI	139/141 (99%)	84 (60%)	42 (30%)	13 (9%)	0 3
9	YI	139/141 (99%)	85 (61%)	37 (27%)	17 (12%)	0 1
10	RJ	140/142 (99%)	107 (76%)	19 (14%)	14 (10%)	0 3
10	YJ	140/142 (99%)	98 (70%)	28 (20%)	14 (10%)	0 3
11	RK	120/122 (98%)	87 (72%)	16 (13%)	17 (14%)	0 1
11	YK	120/122 (98%)	83 (69%)	20 (17%)	17 (14%)	0 1
12	RL	141/143 (99%)	98 (70%)	27 (19%)	16 (11%)	0 2
12	YL	141/143 (99%)	77 (55%)	45 (32%)	19 (14%)	0 1
13	RM	134/136 (98%)	97 (72%)	22 (16%)	15 (11%)	0 2
13	YM	134/136 (98%)	92 (69%)	28 (21%)	14 (10%)	0 2
14	RN	118/120 (98%)	96 (81%)	14 (12%)	8 (7%)	1 5
14	YN	118/120 (98%)	72 (61%)	30 (25%)	16 (14%)	0 1
15	RO	114/116 (98%)	89 (78%)	17 (15%)	8 (7%)	1 5
15	YO	114/116 (98%)	74 (65%)	29 (25%)	11 (10%)	0 3
16	RP	112/114 (98%)	78 (70%)	18 (16%)	16 (14%)	0 1
16	YP	112/114 (98%)	70 (62%)	25 (22%)	17 (15%)	0 0
17	RQ	115/117 (98%)	93 (81%)	17 (15%)	5 (4%)	2 12
17	YQ	115/117 (98%)	77 (67%)	27 (24%)	11 (10%)	0 3
18	RR	101/103 (98%)	82 (81%)	11 (11%)	8 (8%)	1 4
18	YR	101/103 (98%)	66 (65%)	22 (22%)	13 (13%)	0 1
19	RS	108/110 (98%)	88 (82%)	10 (9%)	10 (9%)	0 3
19	YS	108/110 (98%)	75 (69%)	22 (20%)	11 (10%)	0 3
20	RT	91/93 (98%)	51 (56%)	25 (28%)	15 (16%)	0 0
20	YT	91/93 (98%)	42 (46%)	27 (30%)	22 (24%)	0 0
21	RU	100/102 (98%)	69 (69%)	16 (16%)	15 (15%)	0 0
21	YU	100/102 (98%)	53 (53%)	23 (23%)	24 (24%)	0 0
22	RV	92/94 (98%)	81 (88%)	9 (10%)	2 (2%)	5 24
22	YV	92/94 (98%)	61 (66%)	23 (25%)	8 (9%)	0 4
23	RW	77/79 (98%)	34 (44%)	16 (21%)	27 (35%)	0 0
23	YW	77/79 (98%)	30 (39%)	27 (35%)	20 (26%)	0 0
24	RX	75/77 (97%)	58 (77%)	14 (19%)	3 (4%)	2 13

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
24	YX	75/77 (97%)	45 (60%)	22 (29%)	8 (11%)	0 2
25	RY	61/63 (97%)	38 (62%)	15 (25%)	8 (13%)	0 1
25	YY	61/63 (97%)	37 (61%)	20 (33%)	4 (7%)	1 6
26	RZ	56/58 (97%)	46 (82%)	8 (14%)	2 (4%)	2 16
26	YZ	56/58 (97%)	34 (61%)	16 (29%)	6 (11%)	0 2
27	R0	54/56 (96%)	42 (78%)	9 (17%)	3 (6%)	1 8
27	Y0	54/56 (96%)	38 (70%)	7 (13%)	9 (17%)	0 0
28	R1	48/50 (96%)	36 (75%)	8 (17%)	4 (8%)	0 4
28	Y1	48/50 (96%)	33 (69%)	10 (21%)	5 (10%)	0 2
29	R2	44/46 (96%)	37 (84%)	5 (11%)	2 (4%)	2 12
29	Y2	44/46 (96%)	29 (66%)	9 (20%)	6 (14%)	0 1
30	R3	62/64 (97%)	50 (81%)	8 (13%)	4 (6%)	1 6
30	Y3	62/64 (97%)	43 (69%)	13 (21%)	6 (10%)	0 3
31	R4	36/38 (95%)	29 (81%)	5 (14%)	2 (6%)	1 8
31	Y4	36/38 (95%)	22 (61%)	8 (22%)	6 (17%)	0 0
33	QB	216/218 (99%)	129 (60%)	51 (24%)	36 (17%)	0 0
33	XB	216/218 (99%)	146 (68%)	49 (23%)	21 (10%)	0 3
34	QC	204/206 (99%)	159 (78%)	26 (13%)	19 (9%)	0 3
34	XC	204/206 (99%)	137 (67%)	44 (22%)	23 (11%)	0 2
35	QD	203/205 (99%)	135 (66%)	39 (19%)	29 (14%)	0 1
35	XD	203/205 (99%)	141 (70%)	44 (22%)	18 (9%)	0 3
36	QE	148/150 (99%)	108 (73%)	25 (17%)	15 (10%)	0 3
36	XE	148/150 (99%)	110 (74%)	24 (16%)	14 (10%)	0 3
37	QF	98/100 (98%)	62 (63%)	28 (29%)	8 (8%)	0 4
37	XF	98/100 (98%)	59 (60%)	28 (29%)	11 (11%)	0 2
38	QG	149/151 (99%)	108 (72%)	33 (22%)	8 (5%)	1 9
38	XG	148/151 (98%)	86 (58%)	46 (31%)	16 (11%)	0 2
39	QH	127/129 (98%)	95 (75%)	25 (20%)	7 (6%)	1 9
39	XH	127/129 (98%)	92 (72%)	25 (20%)	10 (8%)	1 4
40	QI	125/127 (98%)	88 (70%)	25 (20%)	12 (10%)	0 3
40	XI	125/127 (98%)	91 (73%)	25 (20%)	9 (7%)	1 5

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
41	QJ	96/98 (98%)	64 (67%)	17 (18%)	15 (16%)	0	0
41	XJ	96/98 (98%)	61 (64%)	22 (23%)	13 (14%)	0	1
42	QK	115/117 (98%)	83 (72%)	22 (19%)	10 (9%)	0	4
42	XK	115/117 (98%)	87 (76%)	18 (16%)	10 (9%)	0	4
43	QL	121/123 (98%)	87 (72%)	23 (19%)	11 (9%)	0	3
43	XL	121/123 (98%)	90 (74%)	22 (18%)	9 (7%)	1	5
44	QM	112/114 (98%)	83 (74%)	20 (18%)	9 (8%)	1	4
44	XM	111/114 (97%)	64 (58%)	33 (30%)	14 (13%)	0	1
45	QN	92/101 (91%)	57 (62%)	25 (27%)	10 (11%)	0	2
45	XN	87/101 (86%)	58 (67%)	18 (21%)	11 (13%)	0	1
46	QO	86/88 (98%)	55 (64%)	26 (30%)	5 (6%)	1	8
46	XO	86/88 (98%)	64 (74%)	18 (21%)	4 (5%)	2	11
47	QP	80/82 (98%)	55 (69%)	17 (21%)	8 (10%)	0	3
47	XP	78/82 (95%)	52 (67%)	18 (23%)	8 (10%)	0	2
48	QQ	78/80 (98%)	55 (70%)	11 (14%)	12 (15%)	0	0
48	XQ	78/80 (98%)	63 (81%)	6 (8%)	9 (12%)	0	1
49	QR	53/55 (96%)	41 (77%)	10 (19%)	2 (4%)	2	15
49	XR	53/55 (96%)	37 (70%)	15 (28%)	1 (2%)	6	27
50	QS	77/79 (98%)	57 (74%)	14 (18%)	6 (8%)	1	4
50	XS	77/79 (98%)	47 (61%)	25 (32%)	5 (6%)	1	6
51	QT	83/85 (98%)	61 (74%)	16 (19%)	6 (7%)	1	5
51	XT	83/85 (98%)	59 (71%)	18 (22%)	6 (7%)	1	5
52	QU	49/51 (96%)	25 (51%)	14 (29%)	10 (20%)	0	0
52	XU	49/51 (96%)	21 (43%)	12 (24%)	16 (33%)	0	0
All	All	11234/11454 (98%)	7596 (68%)	2346 (21%)	1292 (12%)	0	1

All (1292) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	RC	104	LEU
3	RC	121	ALA
3	RC	200	MET
3	RC	239	PHE
3	RC	243	PRO

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Mol	Chain	Res	Type
4	RD	43	ASP
4	RD	73	VAL
4	RD	92	VAL
4	RD	99	GLU
4	RD	103	ASP
4	RD	104	VAL
4	RD	122	VAL
4	RD	190	LYS
4	RD	191	GLY
4	RD	192	ALA
5	RE	8	ALA
5	RE	79	ARG
5	RE	175	ILE
6	RF	134	GLN
6	RF	175	PRO
7	RG	7	PRO
7	RG	8	VAL
7	RG	28	LYS
7	RG	31	GLU
7	RG	33	THR
7	RG	84	LYS
7	RG	94	ARG
7	RG	110	HIS
7	RG	118	ALA
7	RG	170	THR
8	RH	3	VAL
8	RH	8	LYS
8	RH	9	VAL
8	RH	10	ALA
8	RH	15	LEU
8	RH	32	PRO
8	RH	33	GLN
9	RI	30	GLN
9	RI	92	PRO
9	RI	96	LYS
10	RJ	21	THR
10	RJ	44	TYR
10	RJ	45	THR
11	RK	13	ASN
11	RK	35	VAL
11	RK	71	ARG
11	RK	72	PRO

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Mol	Chain	Res	Type
12	RL	15	ALA
12	RL	66	PHE
12	RL	81	ASP
12	RL	88	GLY
13	RM	2	LEU
13	RM	35	ALA
13	RM	36	VAL
13	RM	55	ARG
13	RM	69	PRO
14	RN	101	GLY
15	RO	68	LYS
16	RP	25	VAL
16	RP	33	GLU
16	RP	50	ARG
16	RP	93	LYS
16	RP	103	THR
16	RP	105	LYS
17	RQ	5	ARG
17	RQ	87	VAL
17	RQ	91	ARG
19	RS	3	THR
19	RS	19	LEU
19	RS	64	ALA
20	RT	27	SER
20	RT	29	THR
20	RT	38	ALA
20	RT	69	ARG
20	RT	70	HIS
20	RT	86	THR
20	RT	88	LYS
21	RU	6	ARG
21	RU	51	LEU
21	RU	88	ASP
21	RU	98	ASN
22	RV	69	GLU
23	RW	9	THR
23	RW	14	ASP
23	RW	22	VAL
23	RW	23	LYS
23	RW	30	VAL
23	RW	34	SER
23	RW	40	ARG

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Mol	Chain	Res	Type
23	RW	48	ALA
23	RW	50	VAL
23	RW	70	VAL
24	RX	2	ARG
25	RY	22	LEU
25	RY	23	ARG
25	RY	24	GLU
26	RZ	3	THR
27	R0	35	GLU
27	R0	54	ILE
28	R1	4	ILE
28	R1	51	ALA
30	R3	31	ILE
31	R4	4	ARG
33	QB	20	ARG
33	QB	33	ALA
33	QB	40	ILE
33	QB	58	LYS
33	QB	72	LYS
33	QB	74	ALA
33	QB	75	ALA
33	QB	119	GLN
33	QB	133	ALA
33	QB	169	HIS
33	QB	200	PRO
34	QC	14	VAL
34	QC	16	PRO
34	QC	17	TRP
34	QC	60	ALA
34	QC	100	ILE
34	QC	165	GLU
35	QD	26	ALA
35	QD	28	ASP
35	QD	29	THR
35	QD	32	LYS
35	QD	34	GLU
35	QD	148	ALA
35	QD	152	SER
35	QD	159	GLU
35	QD	173	ASP
35	QD	191	SER
35	QD	192	ALA

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Mol	Chain	Res	Type
36	QE	44	ARG
36	QE	97	PRO
36	QE	154	ALA
36	QE	156	ARG
36	QE	157	GLY
37	QF	7	VAL
37	QF	91	ARG
38	QG	93	VAL
39	QH	66	GLN
40	QI	8	THR
40	QI	43	ALA
40	QI	55	ASP
40	QI	71	ILE
41	QJ	57	VAL
41	QJ	61	ALA
41	QJ	92	LEU
41	QJ	101	SER
42	QK	13	LYS
42	QK	126	ARG
43	QL	23	LEU
43	QL	24	GLU
43	QL	33	CYS
43	QL	43	LYS
43	QL	73	LEU
43	QL	75	GLU
44	QM	46	GLU
45	QN	33	VAL
45	QN	51	PRO
45	QN	52	ARG
45	QN	61	ASN
45	QN	81	ILE
46	QO	17	ASP
46	QO	35	ILE
47	QP	11	ALA
47	QP	80	LYS
48	QQ	12	VAL
48	QQ	16	MET
48	QQ	52	CYS
48	QQ	70	LYS
48	QQ	75	VAL
49	QR	47	ARG
51	QT	3	ILE

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Mol	Chain	Res	Type
51	QT	5	SER
51	QT	67	HIS
52	QU	11	PHE
52	QU	23	GLU
33	XB	84	LEU
33	XB	102	ASN
33	XB	129	THR
34	XC	59	PRO
34	XC	140	ALA
34	XC	188	ALA
34	XC	205	GLU
35	XD	24	VAL
35	XD	33	ILE
35	XD	35	GLN
35	XD	39	GLN
35	XD	80	ARG
35	XD	191	SER
35	XD	192	ALA
36	XE	29	ILE
36	XE	31	SER
36	XE	111	ARG
36	XE	144	GLU
37	XF	68	GLN
37	XF	82	ASP
37	XF	99	ALA
38	XG	10	LYS
38	XG	29	LEU
38	XG	30	MET
38	XG	31	VAL
38	XG	52	ARG
38	XG	99	ALA
40	XI	54	VAL
40	XI	71	ILE
41	XJ	36	VAL
41	XJ	57	VAL
41	XJ	87	LEU
42	XK	14	GLN
42	XK	70	ALA
42	XK	92	ARG
43	XL	34	THR
44	XM	4	ALA
44	XM	11	HIS

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Mol	Chain	Res	Type
44	XM	14	ALA
44	XM	49	GLU
45	XN	53	ASP
47	XP	63	GLN
48	XQ	12	VAL
48	XQ	52	CYS
48	XQ	69	THR
51	XT	3	ILE
51	XT	43	LYS
51	XT	65	LEU
52	XU	4	LYS
52	XU	15	LEU
52	XU	23	GLU
52	XU	32	ARG
52	XU	34	ARG
52	XU	35	GLU
52	XU	36	PHE
3	YC	9	SER
3	YC	28	PRO
3	YC	69	ASN
3	YC	140	VAL
3	YC	141	HIS
3	YC	227	VAL
3	YC	232	GLY
3	YC	269	ARG
4	YD	14	ILE
4	YD	31	ALA
4	YD	48	ILE
4	YD	74	GLU
4	YD	77	ARG
4	YD	95	SER
4	YD	102	ALA
4	YD	112	THR
4	YD	118	PHE
4	YD	150	GLN
4	YD	162	ALA
4	YD	164	GLN
4	YD	170	VAL
4	YD	175	LEU
4	YD	194	PRO
4	YD	208	LYS
5	YE	55	SER

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Mol	Chain	Res	Type
5	YE	69	ARG
5	YE	116	ASP
5	YE	153	LEU
5	YE	165	HIS
6	YF	10	GLU
6	YF	12	VAL
6	YF	32	LYS
6	YF	36	ASN
6	YF	42	ALA
6	YF	114	ARG
6	YF	120	SER
6	YF	122	ASP
6	YF	137	PHE
7	YG	49	LEU
7	YG	95	ALA
7	YG	125	PRO
7	YG	164	ALA
7	YG	165	ASP
8	YH	3	VAL
8	YH	9	VAL
8	YH	10	ALA
8	YH	66	ASN
8	YH	72	ILE
8	YH	98	ASP
8	YH	102	ALA
9	YI	22	PRO
9	YI	29	GLN
9	YI	113	ALA
10	YJ	45	THR
10	YJ	95	ARG
11	YK	16	ALA
11	YK	18	ARG
11	YK	49	ARG
11	YK	71	ARG
11	YK	72	PRO
11	YK	110	GLU
11	YK	120	PRO
12	YL	4	ASN
12	YL	41	ARG
12	YL	82	LEU
12	YL	85	VAL
12	YL	89	VAL

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Mol	Chain	Res	Type
12	YL	99	ASN
12	YL	101	ILE
12	YL	111	ILE
13	YM	2	LEU
13	YM	14	LYS
13	YM	72	PRO
13	YM	77	PRO
13	YM	135	VAL
14	YN	104	ALA
15	YO	27	VAL
15	YO	72	ALA
15	YO	90	VAL
16	YP	25	VAL
16	YP	50	ARG
16	YP	83	ILE
16	YP	85	VAL
16	YP	109	ILE
16	YP	112	ARG
18	YR	3	ALA
18	YR	29	THR
18	YR	98	ILE
19	YS	28	LYS
19	YS	33	LEU
19	YS	40	ASN
19	YS	72	THR
20	YT	14	PRO
20	YT	20	ALA
20	YT	29	THR
20	YT	39	THR
20	YT	56	GLU
20	YT	88	LYS
21	YU	4	ILE
21	YU	6	ARG
21	YU	54	PRO
21	YU	65	GLN
21	YU	82	VAL
21	YU	92	VAL
21	YU	96	LYS
21	YU	101	THR
22	YV	56	PHE
23	YW	9	THR
23	YW	34	SER

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Mol	Chain	Res	Type
23	YW	35	ILE
23	YW	36	ILE
23	YW	83	ALA
24	YX	2	ARG
24	YX	25	LYS
25	YY	9	LYS
25	YY	37	LEU
27	Y0	54	ILE
27	Y0	55	ALA
30	Y3	6	VAL
30	Y3	29	ARG
30	Y3	51	LYS
31	Y4	3	VAL
31	Y4	8	LYS
31	Y4	20	ASP
3	RC	105	ALA
3	RC	110	LYS
3	RC	120	ASP
3	RC	140	VAL
3	RC	141	HIS
3	RC	154	ALA
3	RC	167	ASP
4	RD	106	LYS
4	RD	118	PHE
4	RD	144	GLY
4	RD	169	ARG
4	RD	175	LEU
4	RD	183	GLU
4	RD	184	ARG
5	RE	46	GLN
5	RE	80	SER
5	RE	86	ALA
5	RE	123	LYS
6	RF	61	GLY
6	RF	77	LYS
6	RF	113	PHE
6	RF	132	ARG
7	RG	9	VAL
7	RG	45	ALA
7	RG	60	GLY
7	RG	83	THR
7	RG	164	ALA

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Mol	Chain	Res	Type
7	RG	168	VAL
8	RH	28	ASN
8	RH	34	GLY
8	RH	40	THR
8	RH	81	ALA
8	RH	83	LYS
8	RH	107	GLY
8	RH	131	SER
8	RH	138	VAL
10	RJ	2	LYS
10	RJ	22	GLY
10	RJ	39	LYS
10	RJ	41	LYS
10	RJ	81	ILE
10	RJ	98	GLU
11	RK	16	ALA
11	RK	17	ARG
11	RK	29	HIS
11	RK	46	ALA
11	RK	118	LEU
12	RL	41	ARG
12	RL	54	GLN
12	RL	65	GLY
12	RL	111	ILE
12	RL	114	GLY
13	RM	14	LYS
13	RM	56	ALA
13	RM	60	GLN
13	RM	77	PRO
14	RN	117	ASP
15	RO	3	LYS
15	RO	100	HIS
15	RO	112	GLU
16	RP	4	ILE
16	RP	5	LYS
16	RP	65	ASN
16	RP	92	ARG
16	RP	104	GLY
17	RQ	86	SER
19	RS	14	ALA
19	RS	63	GLY
20	RT	16	VAL

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Mol	Chain	Res	Type
20	RT	84	TYR
21	RU	8	ASP
21	RU	87	GLU
21	RU	92	VAL
23	RW	27	GLY
23	RW	36	ILE
23	RW	41	GLY
23	RW	47	GLY
23	RW	53	GLY
23	RW	74	LYS
23	RW	78	PHE
24	RX	34	SER
24	RX	53	LYS
25	RY	37	LEU
26	RZ	34	THR
28	R1	16	THR
29	R2	44	VAL
30	R3	27	ASN
30	R3	30	HIS
33	QB	18	GLN
33	QB	21	TYR
33	QB	52	ALA
33	QB	53	LEU
33	QB	63	LYS
33	QB	73	ARG
33	QB	96	LEU
33	QB	125	PHE
33	QB	142	LYS
33	QB	150	ILE
33	QB	163	ILE
33	QB	170	ILE
33	QB	202	ASN
33	QB	210	THR
33	QB	219	THR
34	QC	88	LYS
34	QC	126	ARG
34	QC	191	THR
35	QD	23	GLY
35	QD	31	CYS
35	QD	147	LYS
35	QD	150	LYS
35	QD	172	VAL

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Mol	Chain	Res	Type
35	QD	174	ALA
36	QE	88	HIS
36	QE	121	ASN
36	QE	137	ARG
37	QF	42	TRP
37	QF	92	THR
38	QG	6	ILE
38	QG	129	ASN
39	QH	49	LYS
40	QI	40	ARG
40	QI	119	LYS
40	QI	128	LYS
41	QJ	33	GLY
41	QJ	74	VAL
42	QK	38	GLY
42	QK	51	PHE
42	QK	77	GLY
42	QK	125	LYS
43	QL	22	ALA
43	QL	88	ASP
43	QL	97	VAL
45	QN	22	LYS
45	QN	27	LYS
45	QN	43	ALA
46	QO	24	THR
47	QP	10	GLY
48	QQ	5	ARG
48	QQ	34	GLY
48	QQ	50	ASN
50	QS	3	SER
50	QS	27	LYS
50	QS	63	ASP
51	QT	4	LYS
52	QU	8	ASN
52	QU	12	ASP
33	XB	73	ARG
33	XB	81	ASP
33	XB	101	THR
33	XB	128	LEU
33	XB	148	GLY
33	XB	150	ILE
33	XB	208	ALA

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Mol	Chain	Res	Type
34	XC	100	ILE
34	XC	180	ASP
35	XD	29	THR
35	XD	82	LYS
35	XD	83	GLY
35	XD	187	ARG
36	XE	69	ASN
36	XE	74	ALA
36	XE	75	LEU
36	XE	143	LEU
37	XF	44	ARG
37	XF	85	ILE
37	XF	92	THR
37	XF	94	HIS
37	XF	98	GLU
38	XG	62	GLU
38	XG	113	LYS
39	XH	29	SER
39	XH	30	LYS
40	XI	11	ARG
41	XJ	34	ALA
41	XJ	82	LYS
41	XJ	93	ALA
42	XK	126	ARG
43	XL	8	ARG
43	XL	43	LYS
43	XL	117	GLY
44	XM	45	SER
45	XN	60	ARG
45	XN	62	ARG
45	XN	95	LEU
46	XO	13	GLU
46	XO	15	GLY
46	XO	87	ARG
47	XP	31	ARG
47	XP	54	LEU
48	XQ	81	ALA
50	XS	4	LEU
50	XS	46	LEU
51	XT	72	ALA
52	XU	7	GLU
52	XU	8	ASN

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Mol	Chain	Res	Type
52	XU	11	PHE
3	YC	3	VAL
3	YC	59	GLN
3	YC	94	LEU
3	YC	239	PHE
4	YD	93	GLY
4	YD	107	VAL
4	YD	119	ALA
4	YD	136	ASN
4	YD	144	GLY
4	YD	145	SER
4	YD	169	ARG
4	YD	174	SER
5	YE	24	ASN
5	YE	62	GLN
5	YE	80	SER
5	YE	96	VAL
5	YE	99	LYS
5	YE	166	LYS
5	YE	188	MET
6	YF	6	TYR
6	YF	41	GLU
6	YF	43	ILE
6	YF	70	ARG
6	YF	86	CYS
6	YF	138	PRO
6	YF	145	VAL
6	YF	148	VAL
7	YG	80	GLU
7	YG	83	THR
7	YG	85	LYS
7	YG	86	LEU
7	YG	92	GLY
7	YG	126	THR
7	YG	136	ASP
7	YG	149	ALA
7	YG	150	TYR
7	YG	155	PRO
8	YH	76	GLU
8	YH	99	ILE
9	YI	23	VAL
9	YI	30	GLN

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Mol	Chain	Res	Type
9	YI	35	MET
9	YI	58	ILE
9	YI	69	VAL
9	YI	119	ALA
9	YI	140	GLU
10	YJ	44	TYR
10	YJ	81	ILE
11	YK	14	SER
11	YK	35	VAL
11	YK	93	GLN
12	YL	65	GLY
12	YL	88	GLY
13	YM	73	ILE
13	YM	83	GLY
14	YN	2	ARG
14	YN	8	ARG
14	YN	10	LEU
14	YN	13	ASN
14	YN	71	ARG
14	YN	82	GLU
15	YO	110	ALA
16	YP	63	ILE
16	YP	108	ARG
17	YQ	88	GLU
17	YQ	91	ARG
18	YR	8	GLY
18	YR	57	GLY
18	YR	65	ALA
18	YR	89	HIS
19	YS	32	ALA
19	YS	61	ASN
19	YS	67	ASP
20	YT	4	GLU
20	YT	15	HIS
20	YT	16	VAL
20	YT	38	ALA
20	YT	50	LEU
20	YT	68	LYS
21	YU	8	ASP
21	YU	17	ASP
21	YU	40	LEU
21	YU	87	GLU

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Mol	Chain	Res	Type
21	YU	95	PHE
21	YU	97	SER
21	YU	99	SER
22	YV	15	GLY
22	YV	33	GLY
23	YW	16	GLU
23	YW	33	GLY
23	YW	46	ALA
23	YW	53	GLY
23	YW	57	THR
23	YW	71	LYS
24	YX	34	SER
24	YX	69	GLU
25	YY	46	VAL
26	YZ	4	ILE
26	YZ	13	ILE
26	YZ	30	ARG
27	Y0	21	LEU
27	Y0	25	THR
27	Y0	32	THR
29	Y2	29	GLN
29	Y2	43	THR
30	Y3	20	GLY
30	Y3	22	LYS
3	RC	149	LYS
3	RC	184	GLU
3	RC	196	ASN
3	RC	257	ARG
3	RC	258	SER
4	RD	41	ALA
4	RD	72	GLY
4	RD	102	ALA
4	RD	107	VAL
4	RD	174	SER
5	RE	6	LYS
5	RE	116	ASP
5	RE	153	LEU
6	RF	8	LYS
6	RF	109	ARG
6	RF	111	ARG
6	RF	149	ARG
7	RG	2	ARG

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Mol	Chain	Res	Type
7	RG	44	HIS
7	RG	61	TRP
7	RG	97	VAL
7	RG	113	ASP
7	RG	174	LYS
8	RH	35	LYS
8	RH	55	GLU
8	RH	68	ARG
8	RH	101	ASP
8	RH	137	GLU
9	RI	112	LYS
10	RJ	14	ASP
10	RJ	74	TYR
11	RK	50	GLY
11	RK	92	GLU
12	RL	29	LYS
12	RL	40	SER
13	RM	54	THR
14	RN	15	SER
14	RN	119	SER
16	RP	2	ASN
16	RP	20	ARG
16	RP	110	LYS
17	RQ	115	ALA
19	RS	57	ASN
19	RS	96	ILE
20	RT	2	ILE
20	RT	49	LYS
21	RU	81	ARG
23	RW	15	SER
23	RW	51	GLY
23	RW	56	HIS
29	R2	42	LEU
30	R3	22	LYS
33	QB	22	TRP
33	QB	41	ASN
34	QC	35	ASP
34	QC	192	TYR
34	QC	205	GLU
35	QD	35	GLN
35	QD	125	ASN
35	QD	165	GLU

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Mol	Chain	Res	Type
35	QD	197	HIS
36	QE	102	THR
37	QF	54	LEU
37	QF	68	GLN
37	QF	80	PHE
37	QF	86	ARG
38	QG	95	ARG
40	QI	38	PHE
40	QI	120	ALA
41	QJ	30	LYS
41	QJ	34	ALA
42	QK	88	PRO
42	QK	97	ARG
44	QM	4	ALA
44	QM	36	ALA
44	QM	84	CYS
44	QM	113	LYS
47	QP	31	ARG
47	QP	45	GLU
47	QP	49	GLY
48	QQ	11	VAL
51	QT	76	ALA
52	QU	25	ALA
52	QU	37	TYR
33	XB	18	GLN
33	XB	42	LEU
33	XB	93	HIS
33	XB	179	GLY
34	XC	47	ALA
34	XC	87	ARG
34	XC	128	MET
34	XC	174	LEU
34	XC	186	SER
35	XD	9	LYS
35	XD	27	ILE
36	XE	56	PRO
36	XE	81	GLN
36	XE	104	ILE
37	XF	39	LEU
38	XG	59	GLU
39	XH	41	GLU
39	XH	58	LEU

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Mol	Chain	Res	Type
40	XI	44	ARG
40	XI	55	ASP
41	XJ	23	ALA
41	XJ	46	LYS
42	XK	88	PRO
42	XK	124	LYS
42	XK	127	ARG
44	XM	76	ILE
44	XM	77	LYS
45	XN	69	PRO
45	XN	99	SER
47	XP	24	SER
47	XP	46	LYS
47	XP	69	ASP
48	XQ	68	LYS
50	XS	79	TYR
52	XU	9	GLU
52	XU	26	GLY
52	XU	37	TYR
3	YC	36	ASN
3	YC	37	SER
3	YC	98	GLY
3	YC	121	ALA
3	YC	190	THR
3	YC	196	ASN
3	YC	237	ARG
4	YD	11	MET
4	YD	44	GLY
4	YD	99	GLU
4	YD	122	VAL
4	YD	167	ASN
4	YD	173	GLN
5	YE	79	ARG
5	YE	123	LYS
5	YE	127	GLU
6	YF	46	LYS
6	YF	67	THR
6	YF	69	ALA
6	YF	88	VAL
6	YF	94	ARG
6	YF	112	ASP
7	YG	9	VAL

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Mol	Chain	Res	Type
7	YG	91	VAL
7	YG	93	TYR
7	YG	169	ARG
8	YH	97	ARG
9	YI	19	PRO
10	YJ	6	ALA
10	YJ	13	ARG
10	YJ	83	GLY
10	YJ	112	GLY
11	YK	17	ARG
11	YK	48	PRO
12	YL	5	THR
12	YL	29	LYS
12	YL	115	GLU
12	YL	117	THR
13	YM	110	GLU
13	YM	111	GLU
13	YM	134	THR
14	YN	30	ARG
15	YO	23	ALA
15	YO	43	ASN
16	YP	20	ARG
16	YP	42	PHE
17	YQ	23	TYR
17	YQ	58	GLN
17	YQ	86	SER
17	YQ	87	VAL
18	YR	15	SER
18	YR	40	MET
19	YS	71	VAL
20	YT	66	LYS
20	YT	77	ARG
21	YU	23	LYS
21	YU	88	ASP
23	YW	17	ALA
23	YW	23	LYS
23	YW	24	ARG
24	YX	27	ARG
24	YX	63	ILE
25	YY	22	LEU
26	YZ	2	LYS
27	Y0	26	SER

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Mol	Chain	Res	Type
28	Y1	35	LEU
31	Y4	16	ILE
3	RC	37	SER
3	RC	77	VAL
3	RC	150	GLY
3	RC	237	ARG
4	RD	119	ALA
4	RD	170	VAL
4	RD	182	ALA
5	RE	43	THR
5	RE	45	ALA
5	RE	67	ARG
5	RE	71	GLY
6	RF	20	ASN
6	RF	174	PHE
7	RG	91	VAL
8	RH	7	ASP
8	RH	12	LEU
8	RH	14	SER
8	RH	70	GLU
8	RH	82	SER
8	RH	103	VAL
8	RH	121	VAL
8	RH	135	HIS
9	RI	59	THR
9	RI	89	SER
10	RJ	13	ARG
11	RK	73	ASP
11	RK	93	GLN
11	RK	108	ARG
11	RK	119	ALA
12	RL	86	GLU
13	RM	134	THR
14	RN	2	ARG
14	RN	80	PHE
15	RO	85	LYS
15	RO	113	ALA
18	RR	55	ASP
18	RR	65	ALA
18	RR	91	GLN
19	RS	56	ALA
20	RT	39	THR

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Mol	Chain	Res	Type
21	RU	85	ARG
22	RV	44	HIS
23	RW	10	ARG
23	RW	18	LYS
23	RW	52	CYS
23	RW	68	PHE
25	RY	44	LYS
25	RY	57	LEU
27	R0	51	ARG
28	R1	28	THR
33	QB	148	GLY
33	QB	201	GLY
34	QC	99	GLN
34	QC	107	LYS
34	QC	138	GLN
35	QD	33	ILE
35	QD	124	VAL
35	QD	132	ALA
35	QD	166	LYS
36	QE	109	ALA
36	QE	148	SER
38	QG	119	LEU
39	QH	48	PHE
39	QH	88	LYS
41	QJ	16	ARG
41	QJ	35	GLN
41	QJ	36	VAL
41	QJ	81	GLU
41	QJ	89	ARG
42	QK	15	VAL
44	QM	3	ILE
44	QM	10	ASP
44	QM	23	GLY
45	QN	63	CYS
45	QN	80	ARG
48	QQ	67	SER
48	QQ	69	THR
50	QS	5	LYS
52	QU	36	PHE
33	XB	86	CYS
33	XB	217	ALA
34	XC	63	ILE

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Mol	Chain	Res	Type
34	XC	164	THR
35	XD	37	PRO
36	XE	38	VAL
36	XE	68	ARG
38	XG	88	VAL
38	XG	93	VAL
38	XG	107	ALA
38	XG	125	ASP
38	XG	133	ALA
39	XH	2	MET
39	XH	34	ALA
39	XH	66	GLN
40	XI	58	GLU
41	XJ	41	PRO
41	XJ	62	ARG
43	XL	83	GLY
44	XM	42	VAL
44	XM	46	GLU
44	XM	53	ASP
45	XN	21	ALA
47	XP	49	GLY
47	XP	78	VAL
48	XQ	29	LYS
48	XQ	31	PRO
51	XT	12	GLN
51	XT	73	ARG
52	XU	22	CYS
52	XU	38	GLU
3	YC	123	ILE
3	YC	204	LEU
3	YC	226	PRO
4	YD	53	GLY
4	YD	176	ASP
5	YE	22	ASP
5	YE	60	TRP
5	YE	148	ILE
6	YF	8	LYS
6	YF	31	GLU
6	YF	77	LYS
6	YF	87	LYS
6	YF	104	THR
7	YG	8	VAL

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Mol	Chain	Res	Type
7	YG	11	PRO
7	YG	45	ALA
7	YG	46	ASP
7	YG	59	ASP
7	YG	118	ALA
8	YH	121	VAL
8	YH	143	ILE
8	YH	144	VAL
9	YI	51	GLY
9	YI	52	LEU
10	YJ	25	LEU
10	YJ	96	ARG
10	YJ	113	PRO
10	YJ	139	VAL
11	YK	46	ALA
11	YK	88	ASN
12	YL	79	LEU
13	YM	69	PRO
15	YO	7	ARG
15	YO	8	ILE
15	YO	42	PRO
16	YP	32	VAL
16	YP	51	ASN
16	YP	56	SER
16	YP	93	LYS
17	YQ	45	ALA
17	YQ	90	ASP
18	YR	53	PHE
19	YS	64	ALA
20	YT	19	LYS
20	YT	53	VAL
20	YT	70	HIS
21	YU	14	THR
22	YV	58	SER
22	YV	84	PRO
23	YW	18	LYS
23	YW	26	GLY
24	YX	17	ARG
26	YZ	9	THR
28	Y1	18	HIS
28	Y1	36	LYS
29	Y2	16	HIS

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Mol	Chain	Res	Type
29	Y2	39	ARG
29	Y2	40	ALA
31	Y4	37	GLN
3	RC	30	ALA
3	RC	57	HIS
3	RC	64	VAL
3	RC	199	HIS
3	RC	204	LEU
4	RD	86	GLU
4	RD	95	SER
4	RD	109	VAL
5	RE	11	ALA
5	RE	13	THR
5	RE	96	VAL
6	RF	2	LYS
6	RF	11	VAL
7	RG	16	VAL
7	RG	38	ASP
8	RH	16	GLY
8	RH	30	LEU
8	RH	111	ALA
9	RI	20	SER
9	RI	71	LYS
10	RJ	65	THR
10	RJ	73	VAL
11	RK	54	LYS
12	RL	69	ARG
13	RM	110	GLU
13	RM	133	LYS
14	RN	32	GLU
14	RN	118	ARG
15	RO	77	ALA
18	RR	53	PHE
18	RR	98	ILE
20	RT	55	VAL
20	RT	68	LYS
21	RU	38	ILE
21	RU	53	GLN
21	RU	63	ALA
21	RU	83	GLY
23	RW	62	ALA
25	RY	36	GLN

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Mol	Chain	Res	Type
31	R4	16	ILE
33	QB	31	PHE
34	QC	65	VAL
34	QC	102	ILE
34	QC	145	ALA
35	QD	24	VAL
35	QD	167	PRO
36	QE	23	THR
36	QE	98	ALA
38	QG	30	MET
39	QH	114	ALA
40	QI	23	GLY
41	QJ	41	PRO
43	QL	25	ALA
43	QL	77	SER
46	QO	43	ALA
48	QQ	49	ASN
49	QR	54	LEU
51	QT	40	ALA
52	QU	24	LYS
52	QU	35	GLU
33	XB	177	ASN
33	XB	205	ALA
33	XB	222	GLU
34	XC	85	LYS
34	XC	130	ARG
34	XC	145	ALA
34	XC	155	ARG
34	XC	167	TYR
34	XC	173	PRO
35	XD	25	ARG
35	XD	47	LEU
39	XH	98	LEU
39	XH	117	GLN
40	XI	52	GLU
41	XJ	31	ARG
42	XK	97	ARG
43	XL	3	VAL
43	XL	7	VAL
43	XL	37	TYR
44	XM	50	GLY
44	XM	65	GLU

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Mol	Chain	Res	Type
46	XO	64	LYS
48	XQ	4	ILE
50	XS	55	GLN
52	XU	10	PRO
3	YC	38	LYS
3	YC	45	ASN
3	YC	64	VAL
3	YC	106	PRO
4	YD	109	VAL
5	YE	13	THR
5	YE	86	ALA
5	YE	103	GLY
5	YE	129	PRO
6	YF	82	TYR
6	YF	136	ILE
6	YF	156	THR
7	YG	40	VAL
7	YG	53	PRO
7	YG	138	GLN
8	YH	61	VAL
9	YI	84	GLY
10	YJ	5	THR
10	YJ	23	LYS
11	YK	98	ARG
12	YL	96	LYS
12	YL	100	ILE
13	YM	16	ARG
13	YM	20	LEU
14	YN	15	SER
14	YN	29	VAL
14	YN	68	ALA
14	YN	72	ASP
14	YN	85	PRO
15	YO	3	LYS
15	YO	107	ALA
16	YP	65	ASN
16	YP	84	SER
16	YP	113	LEU
17	YQ	29	ARG
18	YR	52	PRO
18	YR	91	GLN
19	YS	29	VAL

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Mol	Chain	Res	Type
20	YT	8	LEU
20	YT	61	LEU
21	YU	81	ARG
22	YV	55	GLU
23	YW	41	GLY
23	YW	76	ARG
24	YX	5	GLN
27	Y0	33	SER
28	Y1	38	PHE
5	RE	69	ARG
5	RE	83	VAL
11	RK	49	ARG
12	RL	36	LYS
12	RL	58	TYR
13	RM	73	ILE
15	RO	101	GLY
18	RR	43	ASN
19	RS	74	ILE
20	RT	36	LYS
21	RU	16	LYS
21	RU	101	THR
23	RW	16	GLU
33	QB	42	LEU
33	QB	81	ASP
33	QB	140	LEU
33	QB	187	ASP
34	QC	173	PRO
38	QG	8	GLN
38	QG	55	LYS
39	QH	77	VAL
40	QI	41	GLU
40	QI	42	THR
42	QK	103	GLY
46	QO	86	LEU
34	XC	11	LEU
34	XC	78	LYS
35	XD	107	GLY
35	XD	166	LYS
40	XI	34	LEU
41	XJ	38	GLY
42	XK	90	PRO
42	XK	91	GLY

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Mol	Chain	Res	Type
43	XL	47	ALA
44	XM	97	ARG
45	XN	42	ASN
45	XN	51	PRO
45	XN	55	SER
48	XQ	78	VAL
49	XR	34	GLU
5	YE	73	ILE
5	YE	126	VAL
5	YE	187	VAL
7	YG	117	PRO
7	YG	166	GLU
12	YL	36	LYS
12	YL	139	GLY
14	YN	63	ARG
14	YN	70	THR
14	YN	105	GLY
19	YS	99	ARG
20	YT	11	LEU
21	YU	12	VAL
21	YU	41	VAL
21	YU	64	ILE
22	YV	44	HIS
22	YV	57	TYR
23	YW	22	VAL
23	YW	78	PHE
27	Y0	7	PRO
27	Y0	53	VAL
4	RD	2	ILE
8	RH	31	VAL
8	RH	44	ILE
9	RI	8	VAL
9	RI	31	GLY
12	RL	127	VAL
13	RM	3	GLN
19	RS	29	VAL
25	RY	46	VAL
47	QP	78	VAL
50	QS	48	ILE
34	XC	65	VAL
37	XF	64	VAL
41	XJ	74	VAL

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Mol	Chain	Res	Type
50	XS	8	PRO
5	YE	82	GLY
7	YG	16	VAL
7	YG	97	VAL
9	YI	138	VAL
11	YK	103	VAL
18	YR	27	ILE
21	YU	35	VAL
21	YU	89	GLY
30	Y3	3	ILE
31	Y4	21	GLY
16	RP	34	GLY
18	RR	50	GLY
18	RR	64	VAL
39	QH	102	VAL
41	QJ	42	LEU
47	QP	42	ILE
34	XC	54	ILE
38	XG	68	VAL
40	XI	103	VAL
13	YM	36	VAL
28	Y1	4	ILE
29	Y2	44	VAL
3	RC	9	SER
7	RG	30	GLY
8	RH	80	ILE
35	QD	36	ALA
36	QE	104	ILE
50	QS	61	VAL
52	QU	10	PRO
33	XB	16	GLY
37	XF	22	ILE
38	XG	90	VAL
3	YC	147	PRO
3	YC	195	GLY
4	YD	9	VAL
5	YE	81	GLY
7	YG	152	ARG
8	YH	134	VAL
11	YK	119	ALA
17	YQ	6	GLY
3	RC	226	PRO

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Mol	Chain	Res	Type
5	RE	73	ILE
5	RE	148	ILE
6	RF	83	PRO
7	RG	153	PRO
9	RI	23	VAL
9	RI	28	GLY
16	RP	63	ILE
23	RW	37	VAL
33	QB	209	VAL
35	QD	100	VAL
44	QM	6	ILE
33	XB	163	ILE
36	XE	43	GLY
44	XM	64	VAL
3	YC	2	VAL
6	YF	125	GLY
7	YG	153	PRO
20	YT	47	VAL
20	YT	74	ILE
9	RI	57	VAL
36	QE	149	PRO
39	XH	74	ILE
45	XN	50	LEU
9	YI	31	GLY
9	YI	121	ILE
17	YQ	7	VAL
26	YZ	50	VAL

5.3.2 Protein sidechains

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
3	RC	216/216 (100%)	163 (76%)	53 (24%)	1 3
3	YC	216/216 (100%)	182 (84%)	34 (16%)	2 12
4	RD	164/164 (100%)	137 (84%)	27 (16%)	2 11

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
4	YD	164/164 (100%)	135 (82%)	29 (18%)	2 9
5	RE	165/165 (100%)	120 (73%)	45 (27%)	0 1
5	YE	165/165 (100%)	141 (86%)	24 (14%)	3 14
6	RF	148/149 (99%)	121 (82%)	27 (18%)	2 8
6	YF	149/149 (100%)	118 (79%)	31 (21%)	1 5
7	RG	137/137 (100%)	107 (78%)	30 (22%)	1 4
7	YG	137/137 (100%)	116 (85%)	21 (15%)	3 12
8	RH	114/114 (100%)	95 (83%)	19 (17%)	2 10
8	YH	114/114 (100%)	89 (78%)	25 (22%)	1 4
9	RI	109/109 (100%)	94 (86%)	15 (14%)	3 15
9	YI	109/109 (100%)	100 (92%)	9 (8%)	10 35
10	RJ	116/116 (100%)	84 (72%)	32 (28%)	0 1
10	YJ	116/116 (100%)	96 (83%)	20 (17%)	2 10
11	RK	103/103 (100%)	71 (69%)	32 (31%)	0 0
11	YK	103/103 (100%)	77 (75%)	26 (25%)	0 2
12	RL	102/102 (100%)	74 (72%)	28 (28%)	0 1
12	YL	102/102 (100%)	85 (83%)	17 (17%)	2 10
13	RM	109/109 (100%)	86 (79%)	23 (21%)	1 5
13	YM	109/109 (100%)	95 (87%)	14 (13%)	4 18
14	RN	100/100 (100%)	79 (79%)	21 (21%)	1 5
14	YN	100/100 (100%)	81 (81%)	19 (19%)	1 7
15	RO	86/86 (100%)	62 (72%)	24 (28%)	0 1
15	YO	86/86 (100%)	77 (90%)	9 (10%)	6 26
16	RP	99/99 (100%)	73 (74%)	26 (26%)	0 2
16	YP	99/99 (100%)	86 (87%)	13 (13%)	4 17
17	RQ	89/89 (100%)	70 (79%)	19 (21%)	1 5
17	YQ	89/89 (100%)	71 (80%)	18 (20%)	1 5
18	RR	84/84 (100%)	67 (80%)	17 (20%)	1 5
18	YR	84/84 (100%)	69 (82%)	15 (18%)	2 9
19	RS	93/93 (100%)	65 (70%)	28 (30%)	0 1
19	YS	93/93 (100%)	71 (76%)	22 (24%)	1 3

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
20	RT	80/80 (100%)	59 (74%)	21 (26%)	0 2
20	YT	80/80 (100%)	69 (86%)	11 (14%)	3 15
21	RU	83/83 (100%)	59 (71%)	24 (29%)	0 1
21	YU	83/83 (100%)	65 (78%)	18 (22%)	1 5
22	RV	78/78 (100%)	60 (77%)	18 (23%)	1 4
22	YV	78/78 (100%)	68 (87%)	10 (13%)	4 18
23	RW	59/59 (100%)	36 (61%)	23 (39%)	0 0
23	YW	59/59 (100%)	44 (75%)	15 (25%)	0 2
24	RX	67/67 (100%)	50 (75%)	17 (25%)	0 2
24	YX	67/67 (100%)	54 (81%)	13 (19%)	1 7
25	RY	55/55 (100%)	41 (74%)	14 (26%)	0 2
25	YY	55/55 (100%)	49 (89%)	6 (11%)	6 24
26	RZ	48/48 (100%)	32 (67%)	16 (33%)	0 0
26	YZ	48/48 (100%)	35 (73%)	13 (27%)	0 2
27	R0	47/47 (100%)	39 (83%)	8 (17%)	2 10
27	Y0	47/47 (100%)	37 (79%)	10 (21%)	1 5
28	R1	45/45 (100%)	33 (73%)	12 (27%)	0 2
28	Y1	45/45 (100%)	38 (84%)	7 (16%)	2 12
29	R2	38/38 (100%)	29 (76%)	9 (24%)	1 3
29	Y2	38/38 (100%)	33 (87%)	5 (13%)	4 17
30	R3	51/51 (100%)	43 (84%)	8 (16%)	2 12
30	Y3	51/51 (100%)	37 (72%)	14 (28%)	0 1
31	R4	34/34 (100%)	29 (85%)	5 (15%)	3 14
31	Y4	34/34 (100%)	28 (82%)	6 (18%)	2 9
33	QB	180/180 (100%)	141 (78%)	39 (22%)	1 5
33	XB	180/180 (100%)	153 (85%)	27 (15%)	3 13
34	QC	170/170 (100%)	133 (78%)	37 (22%)	1 5
34	XC	170/170 (100%)	142 (84%)	28 (16%)	2 11
35	QD	172/172 (100%)	145 (84%)	27 (16%)	2 12
35	XD	172/172 (100%)	133 (77%)	39 (23%)	1 4
36	QE	113/113 (100%)	87 (77%)	26 (23%)	1 4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
36	XE	113/113 (100%)	85 (75%)	28 (25%)	1 2
37	QF	87/87 (100%)	72 (83%)	15 (17%)	2 10
37	XF	87/87 (100%)	70 (80%)	17 (20%)	1 6
38	QG	124/124 (100%)	106 (86%)	18 (14%)	3 14
38	XG	123/124 (99%)	95 (77%)	28 (23%)	1 4
39	QH	104/104 (100%)	84 (81%)	20 (19%)	1 7
39	XH	104/104 (100%)	85 (82%)	19 (18%)	2 8
40	QI	105/105 (100%)	84 (80%)	21 (20%)	1 6
40	XI	105/105 (100%)	84 (80%)	21 (20%)	1 6
41	QJ	86/86 (100%)	68 (79%)	18 (21%)	1 5
41	XJ	86/86 (100%)	67 (78%)	19 (22%)	1 4
42	QK	90/90 (100%)	74 (82%)	16 (18%)	2 9
42	XK	90/90 (100%)	77 (86%)	13 (14%)	3 14
43	QL	103/103 (100%)	82 (80%)	21 (20%)	1 5
43	XL	103/103 (100%)	85 (82%)	18 (18%)	2 9
44	QM	92/92 (100%)	82 (89%)	10 (11%)	6 24
44	XM	91/92 (99%)	79 (87%)	12 (13%)	4 17
45	QN	79/84 (94%)	72 (91%)	7 (9%)	9 33
45	XN	75/84 (89%)	65 (87%)	10 (13%)	4 17
46	QO	76/76 (100%)	64 (84%)	12 (16%)	2 12
46	XO	76/76 (100%)	67 (88%)	9 (12%)	5 21
47	QP	65/65 (100%)	54 (83%)	11 (17%)	2 10
47	XP	65/65 (100%)	50 (77%)	15 (23%)	1 4
48	QQ	74/74 (100%)	55 (74%)	19 (26%)	0 2
48	XQ	74/74 (100%)	58 (78%)	16 (22%)	1 5
49	QR	48/48 (100%)	44 (92%)	4 (8%)	10 35
49	XR	48/48 (100%)	42 (88%)	6 (12%)	4 19
50	QS	70/70 (100%)	59 (84%)	11 (16%)	2 12
50	XS	70/70 (100%)	60 (86%)	10 (14%)	3 14
51	QT	65/65 (100%)	46 (71%)	19 (29%)	0 1
51	XT	65/65 (100%)	49 (75%)	16 (25%)	1 3

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
52	QU	44/44 (100%)	33 (75%)	11 (25%)	0 2
52	XU	44/44 (100%)	34 (77%)	10 (23%)	1 4
All	All	9327/9344 (100%)	7489 (80%)	1838 (20%)	1 6

All (1838) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	RC	2	VAL
3	RC	4	LYS
3	RC	8	THR
3	RC	12	ARG
3	RC	13	ARG
3	RC	17	LYS
3	RC	27	LYS
3	RC	35	LYS
3	RC	38	LYS
3	RC	43	ASN
3	RC	63	ILE
3	RC	70	LYS
3	RC	76	VAL
3	RC	77	VAL
3	RC	79	ARG
3	RC	85	ASN
3	RC	90	ILE
3	RC	93	VAL
3	RC	100	ARG
3	RC	103	ILE
3	RC	104	LEU
3	RC	109	LEU
3	RC	110	LYS
3	RC	114	GLN
3	RC	115	ILE
3	RC	119	VAL
3	RC	120	ASP
3	RC	123	ILE
3	RC	142	ASN
3	RC	153	LEU
3	RC	155	ARG
3	RC	163	ILE
3	RC	166	ARG
3	RC	171	VAL

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Mol	Chain	Res	Type
3	RC	172	THR
3	RC	173	LEU
3	RC	175	LEU
3	RC	176	ARG
3	RC	181	ARG
3	RC	194	VAL
3	RC	198	GLU
3	RC	202	ARG
3	RC	203	VAL
3	RC	215	VAL
3	RC	222	THR
3	RC	227	VAL
3	RC	250	GLN
3	RC	252	LYS
3	RC	254	LYS
3	RC	256	THR
3	RC	267	VAL
3	RC	268	ARG
3	RC	269	ARG
4	RD	4	LEU
4	RD	9	VAL
4	RD	12	THR
4	RD	14	ILE
4	RD	16	THR
4	RD	26	VAL
4	RD	33	ARG
4	RD	42	ASN
4	RD	43	ASP
4	RD	60	VAL
4	RD	73	VAL
4	RD	89	GLU
4	RD	90	PHE
4	RD	91	THR
4	RD	95	SER
4	RD	98	VAL
4	RD	114	LYS
4	RD	124	ARG
4	RD	146	ILE
4	RD	150	GLN
4	RD	151	THR
4	RD	159	LYS
4	RD	170	VAL

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Mol	Chain	Res	Type
4	RD	171	THR
4	RD	183	GLU
4	RD	201	LEU
4	RD	207	VAL
5	RE	5	LEU
5	RE	12	LEU
5	RE	18	THR
5	RE	28	VAL
5	RE	32	VAL
5	RE	40	ARG
5	RE	44	ARG
5	RE	51	GLU
5	RE	55	SER
5	RE	61	ARG
5	RE	62	GLN
5	RE	65	THR
5	RE	69	ARG
5	RE	70	SER
5	RE	77	ILE
5	RE	80	SER
5	RE	93	SER
5	RE	108	ILE
5	RE	109	LEU
5	RE	113	VAL
5	RE	116	ASP
5	RE	118	LEU
5	RE	119	ILE
5	RE	120	VAL
5	RE	121	VAL
5	RE	127	GLU
5	RE	132	LYS
5	RE	136	GLN
5	RE	144	GLU
5	RE	146	VAL
5	RE	147	LEU
5	RE	149	ILE
5	RE	153	LEU
5	RE	159	LEU
5	RE	163	ASN
5	RE	166	LYS
5	RE	167	VAL
5	RE	169	VAL

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Mol	Chain	Res	Type
5	RE	175	ILE
5	RE	176	ASP
5	RE	178	VAL
5	RE	186	VAL
5	RE	189	THR
5	RE	196	VAL
5	RE	199	MET
6	RF	3	LEU
6	RF	9	ASP
6	RF	12	VAL
6	RF	14	LYS
6	RF	17	THR
6	RF	18	GLU
6	RF	24	VAL
6	RF	34	THR
6	RF	35	LEU
6	RF	36	ASN
6	RF	46	LYS
6	RF	47	LYS
6	RF	65	LEU
6	RF	88	VAL
6	RF	90	LEU
6	RF	102	LEU
6	RF	103	ILE
6	RF	107	VAL
6	RF	109	ARG
6	RF	111	ARG
6	RF	114	ARG
6	RF	132	ARG
6	RF	134	GLN
6	RF	136	ILE
6	RF	154	THR
6	RF	163	GLU
6	RF	169	LEU
7	RG	8	VAL
7	RG	10	VAL
7	RG	18	ILE
7	RG	21	GLN
7	RG	29	ASN
7	RG	33	THR
7	RG	34	ARG
7	RG	35	THR

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Mol	Chain	Res	Type
7	RG	37	ASN
7	RG	40	VAL
7	RG	42	VAL
7	RG	55	ASP
7	RG	59	ASP
7	RG	68	ARG
7	RG	80	GLU
7	RG	84	LYS
7	RG	86	LEU
7	RG	91	VAL
7	RG	115	GLN
7	RG	116	LEU
7	RG	120	ILE
7	RG	123	GLU
7	RG	131	VAL
7	RG	132	LEU
7	RG	138	GLN
7	RG	140	ILE
7	RG	151	ARG
7	RG	165	ASP
7	RG	170	THR
7	RG	174	LYS
8	RH	3	VAL
8	RH	6	LEU
8	RH	12	LEU
8	RH	14	SER
8	RH	15	LEU
8	RH	18	GLN
8	RH	28	ASN
8	RH	31	VAL
8	RH	33	GLN
8	RH	50	ARG
8	RH	54	LEU
8	RH	61	VAL
8	RH	68	ARG
8	RH	83	LYS
8	RH	96	THR
8	RH	103	VAL
8	RH	104	THR
8	RH	130	VAL
8	RH	135	HIS
9	RI	10	LEU

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Mol	Chain	Res	Type
9	RI	11	GLN
9	RI	23	VAL
9	RI	27	LEU
9	RI	30	GLN
9	RI	39	LYS
9	RI	48	ILE
9	RI	49	GLU
9	RI	61	TYR
9	RI	71	LYS
9	RI	81	LYS
9	RI	85	ILE
9	RI	86	LYS
9	RI	95	ASP
9	RI	108	ILE
10	RJ	1	MET
10	RJ	2	LYS
10	RJ	5	THR
10	RJ	24	THR
10	RJ	25	LEU
10	RJ	28	LEU
10	RJ	30	THR
10	RJ	34	ARG
10	RJ	36	LEU
10	RJ	41	LYS
10	RJ	44	TYR
10	RJ	50	THR
10	RJ	54	ILE
10	RJ	55	ILE
10	RJ	57	LEU
10	RJ	64	VAL
10	RJ	65	THR
10	RJ	67	ASN
10	RJ	72	LYS
10	RJ	84	ILE
10	RJ	85	LYS
10	RJ	86	GLN
10	RJ	101	ILE
10	RJ	103	ILE
10	RJ	105	VAL
10	RJ	111	LYS
10	RJ	114	LEU
10	RJ	118	MET

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Mol	Chain	Res	Type
10	RJ	123	LYS
10	RJ	129	GLU
10	RJ	139	VAL
10	RJ	140	LEU
11	RK	8	LEU
11	RK	18	ARG
11	RK	19	VAL
11	RK	20	MET
11	RK	23	LYS
11	RK	28	SER
11	RK	30	ARG
11	RK	39	ILE
11	RK	41	ILE
11	RK	47	ILE
11	RK	51	LYS
11	RK	52	VAL
11	RK	54	LYS
11	RK	58	LEU
11	RK	61	VAL
11	RK	63	VAL
11	RK	66	LYS
11	RK	67	LYS
11	RK	69	VAL
11	RK	70	ARG
11	RK	73	ASP
11	RK	89	ASN
11	RK	92	GLU
11	RK	93	GLN
11	RK	99	ILE
11	RK	105	ARG
11	RK	107	LEU
11	RK	108	ARG
11	RK	111	LYS
11	RK	114	LYS
11	RK	115	ILE
11	RK	116	ILE
12	RL	3	LEU
12	RL	4	ASN
12	RL	6	LEU
12	RL	13	LYS
12	RL	19	LEU
12	RL	21	ARG

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Mol	Chain	Res	Type
12	RL	27	LEU
12	RL	39	LYS
12	RL	47	ARG
12	RL	48	ARG
12	RL	51	GLU
12	RL	55	MET
12	RL	60	ARG
12	RL	61	LEU
12	RL	67	THR
12	RL	82	LEU
12	RL	86	GLU
12	RL	94	THR
12	RL	101	ILE
12	RL	103	ILE
12	RL	110	VAL
12	RL	111	ILE
12	RL	115	GLU
12	RL	118	THR
12	RL	121	THR
12	RL	122	VAL
12	RL	127	VAL
12	RL	135	ILE
13	RM	1	MET
13	RM	8	LYS
13	RM	10	ARG
13	RM	12	MET
13	RM	24	THR
13	RM	25	ASP
13	RM	33	LEU
13	RM	36	VAL
13	RM	51	ARG
13	RM	69	PRO
13	RM	70	ASP
13	RM	76	LYS
13	RM	81	ARG
13	RM	90	GLU
13	RM	96	ILE
13	RM	97	GLN
13	RM	100	LYS
13	RM	102	LEU
13	RM	110	GLU
13	RM	118	LYS

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Mol	Chain	Res	Type
13	RM	128	THR
13	RM	133	LYS
13	RM	134	THR
14	RN	8	ARG
14	RN	10	LEU
14	RN	15	SER
14	RN	23	ASN
14	RN	33	ILE
14	RN	35	LYS
14	RN	36	THR
14	RN	37	THR
14	RN	51	LEU
14	RN	63	ARG
14	RN	69	ARG
14	RN	70	THR
14	RN	71	ARG
14	RN	75	ILE
14	RN	83	LEU
14	RN	86	ARG
14	RN	95	THR
14	RN	97	ILE
14	RN	116	VAL
14	RN	117	ASP
14	RN	120	GLU
15	RO	4	LYS
15	RO	5	SER
15	RO	9	ARG
15	RO	16	ARG
15	RO	17	LYS
15	RO	31	THR
15	RO	36	TYR
15	RO	45	SER
15	RO	47	VAL
15	RO	52	SER
15	RO	58	ILE
15	RO	81	ARG
15	RO	83	LEU
15	RO	84	GLU
15	RO	89	ASP
15	RO	94	ARG
15	RO	98	GLN
15	RO	100	HIS

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Mol	Chain	Res	Type
15	RO	102	ARG
15	RO	103	VAL
15	RO	106	LEU
15	RO	111	ARG
15	RO	112	GLU
15	RO	116	GLN
16	RP	3	ILE
16	RP	5	LYS
16	RP	6	GLN
16	RP	14	GLN
16	RP	16	VAL
16	RP	19	PHE
16	RP	20	ARG
16	RP	24	THR
16	RP	28	LYS
16	RP	33	GLU
16	RP	35	SER
16	RP	36	LYS
16	RP	37	LYS
16	RP	38	ARG
16	RP	61	ARG
16	RP	69	VAL
16	RP	72	VAL
16	RP	75	THR
16	RP	79	VAL
16	RP	80	VAL
16	RP	83	ILE
16	RP	91	VAL
16	RP	92	ARG
16	RP	95	LYS
16	RP	96	LEU
16	RP	99	LEU
17	RQ	2	ARG
17	RQ	4	LYS
17	RQ	7	VAL
17	RQ	10	ARG
17	RQ	17	LEU
17	RQ	40	LYS
17	RQ	50	ARG
17	RQ	59	LEU
17	RQ	69	ARG
17	RQ	73	ILE

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Mol	Chain	Res	Type
17	RQ	88	GLU
17	RQ	89	ILE
17	RQ	91	ARG
17	RQ	93	ILE
17	RQ	94	LEU
17	RQ	96	ASP
17	RQ	97	ILE
17	RQ	106	THR
17	RQ	116	LEU
18	RR	10	LYS
18	RR	25	LEU
18	RR	27	ILE
18	RR	37	GLU
18	RR	38	VAL
18	RR	39	LEU
18	RR	43	ASN
18	RR	46	GLU
18	RR	48	LYS
18	RR	55	ASP
18	RR	58	VAL
18	RR	63	VAL
18	RR	72	VAL
18	RR	85	LYS
18	RR	86	GLN
18	RR	87	GLN
18	RR	101	ILE
19	RS	3	THR
19	RS	4	ILE
19	RS	12	SER
19	RS	24	ILE
19	RS	29	VAL
19	RS	30	SER
19	RS	33	LEU
19	RS	35	ILE
19	RS	36	LEU
19	RS	39	THR
19	RS	41	LYS
19	RS	45	VAL
19	RS	48	LYS
19	RS	50	VAL
19	RS	66	ILE
19	RS	68	ASP

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Mol	Chain	Res	Type
19	RS	71	VAL
19	RS	73	LYS
19	RS	74	ILE
19	RS	76	VAL
19	RS	81	SER
19	RS	83	LYS
19	RS	88	ARG
19	RS	96	ILE
19	RS	100	THR
19	RS	101	SER
19	RS	107	VAL
19	RS	109	ASP
20	RT	2	ILE
20	RT	3	ARG
20	RT	4	GLU
20	RT	8	LEU
20	RT	10	VAL
20	RT	17	SER
20	RT	18	GLU
20	RT	29	THR
20	RT	30	ILE
20	RT	31	VAL
20	RT	32	LEU
20	RT	43	ILE
20	RT	49	LYS
20	RT	50	LEU
20	RT	58	VAL
20	RT	67	VAL
20	RT	68	LYS
20	RT	69	ARG
20	RT	73	ARG
20	RT	74	ILE
20	RT	93	LEU
21	RU	4	ILE
21	RU	8	ASP
21	RU	10	VAL
21	RU	11	ILE
21	RU	18	LYS
21	RU	20	LYS
21	RU	23	LYS
21	RU	28	LEU
21	RU	30	SER

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Mol	Chain	Res	Type
21	RU	32	LYS
21	RU	33	VAL
21	RU	34	ILE
21	RU	42	LYS
21	RU	43	LYS
21	RU	52	ASN
21	RU	58	VAL
21	RU	61	GLU
21	RU	64	ILE
21	RU	78	LYS
21	RU	80	ASP
21	RU	86	PHE
21	RU	87	GLU
21	RU	92	VAL
21	RU	102	ILE
22	RV	1	MET
22	RV	3	THR
22	RV	5	ASN
22	RV	8	VAL
22	RV	10	LYS
22	RV	14	LYS
22	RV	20	LEU
22	RV	29	ILE
22	RV	35	GLU
22	RV	41	GLU
22	RV	42	LEU
22	RV	46	LYS
22	RV	51	GLN
22	RV	55	GLU
22	RV	61	LEU
22	RV	65	VAL
22	RV	66	ASP
22	RV	92	VAL
23	RW	10	ARG
23	RW	14	ASP
23	RW	15	SER
23	RW	16	GLU
23	RW	19	ARG
23	RW	22	VAL
23	RW	24	ARG
23	RW	30	VAL
23	RW	31	LEU

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Mol	Chain	Res	Type
23	RW	35	ILE
23	RW	38	ARG
23	RW	40	ARG
23	RW	42	THR
23	RW	49	ASN
23	RW	54	ARG
23	RW	58	LEU
23	RW	61	LYS
23	RW	67	LYS
23	RW	71	LYS
23	RW	76	ARG
23	RW	77	LYS
23	RW	80	SER
23	RW	81	ILE
24	RX	6	VAL
24	RX	10	ARG
24	RX	17	ARG
24	RX	24	THR
24	RX	26	ARG
24	RX	27	ARG
24	RX	29	LEU
24	RX	41	SER
24	RX	42	GLU
24	RX	45	PHE
24	RX	47	THR
24	RX	53	LYS
24	RX	60	LYS
24	RX	63	ILE
24	RX	65	THR
24	RX	73	ARG
24	RX	77	TYR
25	RY	9	LYS
25	RY	13	GLU
25	RY	14	LEU
25	RY	18	LEU
25	RY	19	LEU
25	RY	21	LEU
25	RY	29	ARG
25	RY	37	LEU
25	RY	39	GLN
25	RY	42	LEU
25	RY	47	ARG

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Mol	Chain	Res	Type
25	RY	56	LEU
25	RY	57	LEU
25	RY	59	GLU
26	RZ	3	THR
26	RZ	4	ILE
26	RZ	5	LYS
26	RZ	8	GLN
26	RZ	9	THR
26	RZ	13	ILE
26	RZ	22	THR
26	RZ	23	LEU
26	RZ	29	ARG
26	RZ	30	ARG
26	RZ	34	THR
26	RZ	37	ARG
26	RZ	38	GLU
26	RZ	43	ILE
26	RZ	51	SER
26	RZ	58	GLU
27	R0	5	ASN
27	R0	9	ARG
27	R0	17	SER
27	R0	26	SER
27	R0	27	LEU
27	R0	28	SER
27	R0	39	ARG
27	R0	42	ILE
28	R1	4	ILE
28	R1	9	LYS
28	R1	13	SER
28	R1	16	THR
28	R1	21	THR
28	R1	29	LYS
28	R1	33	LEU
28	R1	35	LEU
28	R1	41	VAL
28	R1	42	VAL
28	R1	46	VAL
28	R1	47	ILE
29	R2	1	MET
29	R2	3	ARG
29	R2	8	SER

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Mol	Chain	Res	Type
29	R2	9	VAL
29	R2	12	ARG
29	R2	21	ARG
29	R2	24	THR
29	R2	42	LEU
29	R2	45	SER
30	R3	5	THR
30	R3	7	ARG
30	R3	22	LYS
30	R3	29	ARG
30	R3	31	ILE
30	R3	49	VAL
30	R3	51	LYS
30	R3	56	LEU
31	R4	3	VAL
31	R4	6	SER
31	R4	9	LYS
31	R4	16	ILE
31	R4	27	CYS
33	QB	8	MET
33	QB	10	LYS
33	QB	13	VAL
33	QB	14	HIS
33	QB	19	THR
33	QB	20	ARG
33	QB	26	MET
33	QB	30	ILE
33	QB	36	LYS
33	QB	38	HIS
33	QB	42	LEU
33	QB	56	LEU
33	QB	67	LEU
33	QB	86	CYS
33	QB	87	ASP
33	QB	88	GLN
33	QB	90	PHE
33	QB	100	LEU
33	QB	102	ASN
33	QB	108	GLN
33	QB	115	ASP
33	QB	116	LEU
33	QB	119	GLN

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Mol	Chain	Res	Type
33	QB	125	PHE
33	QB	128	LEU
33	QB	130	LYS
33	QB	141	GLU
33	QB	142	LYS
33	QB	143	LEU
33	QB	158	ASP
33	QB	170	ILE
33	QB	178	LEU
33	QB	185	ILE
33	QB	193	ASP
33	QB	206	ILE
33	QB	207	ARG
33	QB	211	LEU
33	QB	219	THR
33	QB	221	ARG
34	QC	2	GLN
34	QC	13	ILE
34	QC	14	VAL
34	QC	15	LYS
34	QC	17	TRP
34	QC	24	ASN
34	QC	25	THR
34	QC	26	LYS
34	QC	27	GLU
34	QC	32	LEU
34	QC	35	ASP
34	QC	36	PHE
34	QC	42	LEU
34	QC	50	SER
34	QC	52	SER
34	QC	54	ILE
34	QC	57	GLU
34	QC	79	LYS
34	QC	102	ILE
34	QC	119	ILE
34	QC	120	THR
34	QC	127	VAL
34	QC	128	MET
34	QC	139	ASN
34	QC	143	LEU
34	QC	148	ILE

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Mol	Chain	Res	Type
34	QC	149	LYS
34	QC	152	VAL
34	QC	156	LEU
34	QC	161	ILE
34	QC	164	THR
34	QC	165	GLU
34	QC	166	TRP
34	QC	177	LEU
34	QC	184	ASN
34	QC	199	VAL
34	QC	205	GLU
35	QD	25	ARG
35	QD	32	LYS
35	QD	52	VAL
35	QD	54	LEU
35	QD	55	ARG
35	QD	58	GLN
35	QD	69	ARG
35	QD	92	LEU
35	QD	110	ARG
35	QD	115	GLN
35	QD	117	VAL
35	QD	122	ILE
35	QD	128	VAL
35	QD	131	ILE
35	QD	141	VAL
35	QD	151	GLN
35	QD	153	ARG
35	QD	154	VAL
35	QD	155	LYS
35	QD	160	LEU
35	QD	162	GLU
35	QD	166	LYS
35	QD	170	LEU
35	QD	178	GLU
35	QD	196	GLU
35	QD	199	ILE
35	QD	205	LYS
36	QE	9	GLU
36	QE	11	GLN
36	QE	14	LEU
36	QE	18	ASN

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Mol	Chain	Res	Type
36	QE	25	LYS
36	QE	28	ARG
36	QE	37	VAL
36	QE	45	VAL
36	QE	68	ARG
36	QE	75	LEU
36	QE	79	THR
36	QE	81	GLN
36	QE	93	VAL
36	QE	95	MET
36	QE	100	GLU
36	QE	113	VAL
36	QE	116	VAL
36	QE	121	ASN
36	QE	123	LEU
36	QE	135	VAL
36	QE	136	VAL
36	QE	141	ASP
36	QE	146	MET
36	QE	147	ASN
36	QE	155	LYS
36	QE	156	ARG
37	QF	7	VAL
37	QF	14	GLN
37	QF	35	LYS
37	QF	38	ARG
37	QF	39	LEU
37	QF	46	GLN
37	QF	54	LEU
37	QF	55	HIS
37	QF	68	GLN
37	QF	74	LEU
37	QF	77	THR
37	QF	84	VAL
37	QF	86	ARG
37	QF	87	SER
37	QF	93	LYS
38	QG	6	ILE
38	QG	8	GLN
38	QG	11	ILE
38	QG	12	LEU
38	QG	20	GLU

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Mol	Chain	Res	Type
38	QG	21	LEU
38	QG	22	LEU
38	QG	37	THR
38	QG	47	GLU
38	QG	58	LEU
38	QG	62	GLU
38	QG	68	VAL
38	QG	72	VAL
38	QG	83	THR
38	QG	85	GLN
38	QG	93	VAL
38	QG	117	LEU
38	QG	123	LEU
39	QH	11	THR
39	QH	21	LYS
39	QH	58	LEU
39	QH	59	GLU
39	QH	62	LEU
39	QH	65	PHE
39	QH	66	GLN
39	QH	68	LYS
39	QH	71	VAL
39	QH	72	GLU
39	QH	76	ARG
39	QH	79	ARG
39	QH	82	LEU
39	QH	89	ASP
39	QH	98	LEU
39	QH	100	ILE
39	QH	103	VAL
39	QH	110	MET
39	QH	116	ARG
39	QH	128	VAL
40	QI	28	VAL
40	QI	35	GLU
40	QI	42	THR
40	QI	44	ARG
40	QI	47	VAL
40	QI	48	ARG
40	QI	54	VAL
40	QI	56	MET
40	QI	59	LYS

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Mol	Chain	Res	Type
40	QI	62	LEU
40	QI	64	ILE
40	QI	67	LYS
40	QI	86	LEU
40	QI	87	MET
40	QI	89	TYR
40	QI	93	LEU
40	QI	98	ARG
40	QI	106	ASP
40	QI	115	VAL
40	QI	126	PHE
40	QI	128	LYS
41	QJ	6	ILE
41	QJ	17	LEU
41	QJ	22	THR
41	QJ	32	THR
41	QJ	35	GLN
41	QJ	42	LEU
41	QJ	44	THR
41	QJ	46	LYS
41	QJ	48	ARG
41	QJ	50	THR
41	QJ	59	LYS
41	QJ	70	HIS
41	QJ	73	LEU
41	QJ	75	ASP
41	QJ	87	LEU
41	QJ	89	ARG
41	QJ	96	VAL
41	QJ	100	ILE
42	QK	30	ILE
42	QK	51	PHE
42	QK	55	ARG
42	QK	64	VAL
42	QK	73	VAL
42	QK	76	TYR
42	QK	78	ILE
42	QK	81	LEU
42	QK	82	GLU
42	QK	96	ILE
42	QK	100	ASN
42	QK	106	ILE

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Mol	Chain	Res	Type
42	QK	107	THR
42	QK	124	LYS
42	QK	125	LYS
42	QK	128	VAL
43	QL	3	VAL
43	QL	9	LYS
43	QL	15	VAL
43	QL	26	CYS
43	QL	28	GLN
43	QL	32	VAL
43	QL	35	ARG
43	QL	38	THR
43	QL	42	LYS
43	QL	43	LYS
43	QL	49	ARG
43	QL	63	THR
43	QL	66	ILE
43	QL	74	GLN
43	QL	81	ILE
43	QL	82	ARG
43	QL	87	LYS
43	QL	88	ASP
43	QL	94	TYR
43	QL	101	LEU
43	QL	109	ARG
44	QM	3	ILE
44	QM	6	ILE
44	QM	21	ILE
44	QM	42	VAL
44	QM	52	ILE
44	QM	59	VAL
44	QM	70	ARG
44	QM	71	GLU
44	QM	86	ARG
44	QM	106	ARG
45	QN	3	GLN
45	QN	11	LYS
45	QN	13	VAL
45	QN	27	LYS
45	QN	58	ARG
45	QN	59	GLN
45	QN	83	VAL

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Mol	Chain	Res	Type
46	QO	21	THR
46	QO	34	GLN
46	QO	38	LEU
46	QO	39	GLN
46	QO	44	GLU
46	QO	47	LYS
46	QO	57	ARG
46	QO	60	SER
46	QO	61	GLN
46	QO	71	ARG
46	QO	84	LEU
46	QO	86	LEU
47	QP	1	MET
47	QP	6	LEU
47	QP	19	VAL
47	QP	29	ASN
47	QP	31	ARG
47	QP	36	VAL
47	QP	46	LYS
47	QP	55	ASP
47	QP	63	GLN
47	QP	67	ILE
47	QP	68	SER
48	QQ	3	LYS
48	QQ	11	VAL
48	QQ	16	MET
48	QQ	20	ILE
48	QQ	21	VAL
48	QQ	28	VAL
48	QQ	29	LYS
48	QQ	37	ILE
48	QQ	42	LYS
48	QQ	47	ASP
48	QQ	49	ASN
48	QQ	50	ASN
48	QQ	51	GLU
48	QQ	52	CYS
48	QQ	54	ILE
48	QQ	73	THR
48	QQ	74	LEU
48	QQ	75	VAL
48	QQ	80	LYS

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Mol	Chain	Res	Type
49	QR	20	ILE
49	QR	35	SER
49	QR	54	LEU
49	QR	70	THR
50	QS	6	LYS
50	QS	20	LYS
50	QS	42	ASN
50	QS	48	ILE
50	QS	54	ARG
50	QS	55	GLN
50	QS	57	VAL
50	QS	59	VAL
50	QS	61	VAL
50	QS	64	GLU
50	QS	79	TYR
51	QT	2	ASN
51	QT	4	LYS
51	QT	5	SER
51	QT	11	ILE
51	QT	22	SER
51	QT	26	MET
51	QT	27	MET
51	QT	33	LYS
51	QT	35	TYR
51	QT	38	ILE
51	QT	48	LYS
51	QT	65	LEU
51	QT	67	HIS
51	QT	68	LYS
51	QT	75	LYS
51	QT	77	ASN
51	QT	82	ILE
51	QT	84	LYS
51	QT	85	LEU
52	QU	8	ASN
52	QU	9	GLU
52	QU	12	ASP
52	QU	15	LEU
52	QU	19	LYS
52	QU	27	VAL
52	QU	33	ARG
52	QU	38	GLU

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Mol	Chain	Res	Type
52	QU	39	LYS
52	QU	42	THR
52	QU	45	LYS
33	XB	8	MET
33	XB	9	LEU
33	XB	10	LYS
33	XB	14	HIS
33	XB	19	THR
33	XB	26	MET
33	XB	36	LYS
33	XB	39	ILE
33	XB	42	LEU
33	XB	46	VAL
33	XB	69	VAL
33	XB	88	GLN
33	XB	103	TRP
33	XB	105	THR
33	XB	124	THR
33	XB	125	PHE
33	XB	131	LYS
33	XB	140	LEU
33	XB	147	LEU
33	XB	162	VAL
33	XB	172	ILE
33	XB	177	ASN
33	XB	182	VAL
33	XB	191	ASP
33	XB	196	ASP
33	XB	202	ASN
33	XB	209	VAL
34	XC	10	ARG
34	XC	26	LYS
34	XC	34	SER
34	XC	35	ASP
34	XC	38	VAL
34	XC	41	TYR
34	XC	42	LEU
34	XC	55	VAL
34	XC	83	VAL
34	XC	90	VAL
34	XC	123	LEU
34	XC	126	ARG

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Mol	Chain	Res	Type
34	XC	127	VAL
34	XC	134	LYS
34	XC	138	GLN
34	XC	139	ASN
34	XC	151	GLU
34	XC	152	VAL
34	XC	153	SER
34	XC	160	GLU
34	XC	161	ILE
34	XC	164	THR
34	XC	166	TRP
34	XC	182	ASP
34	XC	185	THR
34	XC	191	THR
34	XC	198	LYS
34	XC	201	ILE
35	XD	2	ARG
35	XD	8	LEU
35	XD	20	LEU
35	XD	24	VAL
35	XD	25	ARG
35	XD	29	THR
35	XD	30	LYS
35	XD	31	CYS
35	XD	34	GLU
35	XD	43	ARG
35	XD	47	LEU
35	XD	55	ARG
35	XD	57	LYS
35	XD	58	GLN
35	XD	69	ARG
35	XD	80	ARG
35	XD	84	ASN
35	XD	106	PHE
35	XD	116	LEU
35	XD	127	ARG
35	XD	142	VAL
35	XD	146	GLU
35	XD	147	LYS
35	XD	151	GLN
35	XD	152	SER
35	XD	153	ARG

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Mol	Chain	Res	Type
35	XD	154	VAL
35	XD	159	GLU
35	XD	160	LEU
35	XD	168	THR
35	XD	170	LEU
35	XD	182	LYS
35	XD	183	ARG
35	XD	184	LYS
35	XD	187	ARG
35	XD	189	ASP
35	XD	194	ILE
35	XD	199	ILE
35	XD	204	SER
36	XE	11	GLN
36	XE	13	LYS
36	XE	18	ASN
36	XE	25	LYS
36	XE	31	SER
36	XE	35	LEU
36	XE	51	LYS
36	XE	55	VAL
36	XE	59	ILE
36	XE	67	ARG
36	XE	75	LEU
36	XE	76	ASN
36	XE	80	LEU
36	XE	87	VAL
36	XE	91	SER
36	XE	95	MET
36	XE	99	SER
36	XE	104	ILE
36	XE	113	VAL
36	XE	119	VAL
36	XE	129	SER
36	XE	133	ILE
36	XE	134	ASN
36	XE	136	VAL
36	XE	137	ARG
36	XE	139	THR
36	XE	140	ILE
36	XE	144	GLU
37	XF	6	ILE

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Mol	Chain	Res	Type
37	XF	7	VAL
37	XF	10	VAL
37	XF	17	GLN
37	XF	33	GLU
37	XF	38	ARG
37	XF	44	ARG
37	XF	52	ASN
37	XF	54	LEU
37	XF	56	LYS
37	XF	61	LEU
37	XF	68	GLN
37	XF	85	ILE
37	XF	89	VAL
37	XF	90	MET
37	XF	96	VAL
37	XF	98	GLU
38	XG	3	ARG
38	XG	5	VAL
38	XG	6	ILE
38	XG	8	GLN
38	XG	9	ARG
38	XG	10	LYS
38	XG	12	LEU
38	XG	16	LYS
38	XG	34	LYS
38	XG	35	LYS
38	XG	41	ILE
38	XG	49	LEU
38	XG	55	LYS
38	XG	57	GLU
38	XG	61	PHE
38	XG	63	VAL
38	XG	65	LEU
38	XG	66	GLU
38	XG	72	VAL
38	XG	77	ARG
38	XG	78	ARG
38	XG	85	GLN
38	XG	91	ARG
38	XG	100	MET
38	XG	119	LEU
38	XG	123	LEU

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Mol	Chain	Res	Type
38	XG	139	ASP
38	XG	148	LYS
39	XH	37	ASN
39	XH	40	LYS
39	XH	42	GLU
39	XH	47	ASP
39	XH	50	VAL
39	XH	54	THR
39	XH	59	GLU
39	XH	62	LEU
39	XH	70	VAL
39	XH	76	ARG
39	XH	79	ARG
39	XH	82	LEU
39	XH	84	ILE
39	XH	89	ASP
39	XH	93	LYS
39	XH	102	VAL
39	XH	103	VAL
39	XH	106	SER
39	XH	110	MET
40	XI	4	GLN
40	XI	5	TYR
40	XI	11	ARG
40	XI	20	ILE
40	XI	26	LYS
40	XI	29	ILE
40	XI	37	TYR
40	XI	42	THR
40	XI	47	VAL
40	XI	53	LEU
40	XI	54	VAL
40	XI	55	ASP
40	XI	60	LEU
40	XI	65	THR
40	XI	71	ILE
40	XI	83	THR
40	XI	87	MET
40	XI	106	ASP
40	XI	115	VAL
40	XI	123	ARG
40	XI	125	GLN

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Mol	Chain	Res	Type
41	XJ	5	ARG
41	XJ	11	LYS
41	XJ	15	HIS
41	XJ	28	THR
41	XJ	36	VAL
41	XJ	48	ARG
41	XJ	50	THR
41	XJ	59	LYS
41	XJ	60	ASP
41	XJ	64	GLN
41	XJ	67	ILE
41	XJ	69	THR
41	XJ	75	ASP
41	XJ	82	LYS
41	XJ	87	LEU
41	XJ	90	LEU
41	XJ	92	LEU
41	XJ	101	SER
41	XJ	102	LEU
42	XK	19	VAL
42	XK	27	ASN
42	XK	33	ILE
42	XK	73	VAL
42	XK	78	ILE
42	XK	81	LEU
42	XK	92	ARG
42	XK	94	SER
42	XK	106	ILE
42	XK	112	VAL
42	XK	115	ILE
42	XK	121	ARG
42	XK	128	VAL
43	XL	3	VAL
43	XL	5	GLN
43	XL	9	LYS
43	XL	14	LYS
43	XL	19	ASN
43	XL	28	GLN
43	XL	39	THR
43	XL	48	LEU
43	XL	57	THR
43	XL	62	VAL

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Mol	Chain	Res	Type
43	XL	69	GLU
43	XL	72	ASN
43	XL	82	ARG
43	XL	88	ASP
43	XL	96	THR
43	XL	97	VAL
43	XL	107	LYS
43	XL	120	ARG
44	XM	12	LYS
44	XM	24	VAL
44	XM	28	ARG
44	XM	32	ILE
44	XM	46	GLU
44	XM	53	ASP
44	XM	64	VAL
44	XM	65	GLU
44	XM	72	ILE
44	XM	92	ARG
44	XM	100	ARG
44	XM	113	LYS
45	XN	3	GLN
45	XN	6	LYS
45	XN	27	LYS
45	XN	41	TRP
45	XN	52	ARG
45	XN	61	ASN
45	XN	72	PHE
45	XN	81	ILE
45	XN	96	LYS
45	XN	100	TRP
46	XO	13	GLU
46	XO	16	ARG
46	XO	38	LEU
46	XO	39	GLN
46	XO	45	HIS
46	XO	65	LEU
46	XO	69	LEU
46	XO	80	LEU
46	XO	87	ARG
47	XP	1	MET
47	XP	2	VAL
47	XP	3	THR

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Mol	Chain	Res	Type
47	XP	4	ILE
47	XP	6	LEU
47	XP	18	GLN
47	XP	19	VAL
47	XP	21	VAL
47	XP	36	VAL
47	XP	44	SER
47	XP	46	LYS
47	XP	54	LEU
47	XP	56	ARG
47	XP	69	ASP
47	XP	71	VAL
48	XQ	4	ILE
48	XQ	6	THR
48	XQ	20	ILE
48	XQ	28	VAL
48	XQ	32	ILE
48	XQ	37	ILE
48	XQ	39	ARG
48	XQ	43	LEU
48	XQ	51	GLU
48	XQ	52	CYS
48	XQ	54	ILE
48	XQ	67	SER
48	XQ	73	THR
48	XQ	78	VAL
48	XQ	79	GLU
48	XQ	80	LYS
49	XR	25	ILE
49	XR	30	ASN
49	XR	32	ILE
49	XR	47	ARG
49	XR	49	LYS
49	XR	72	ARG
50	XS	5	LYS
50	XS	10	ILE
50	XS	43	MET
50	XS	44	ILE
50	XS	52	ASN
50	XS	54	ARG
50	XS	55	GLN
50	XS	57	VAL

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Mol	Chain	Res	Type
50	XS	72	GLU
50	XS	73	PHE
51	XT	5	SER
51	XT	8	LYS
51	XT	11	ILE
51	XT	23	ARG
51	XT	26	MET
51	XT	30	PHE
51	XT	42	ASP
51	XT	47	GLN
51	XT	53	MET
51	XT	68	LYS
51	XT	70	LYS
51	XT	73	ARG
51	XT	74	HIS
51	XT	78	LEU
51	XT	82	ILE
51	XT	84	LYS
52	XU	4	LYS
52	XU	9	GLU
52	XU	19	LYS
52	XU	24	LYS
52	XU	27	VAL
52	XU	28	LEU
52	XU	32	ARG
52	XU	36	PHE
52	XU	39	LYS
52	XU	53	LYS
3	YC	2	VAL
3	YC	12	ARG
3	YC	13	ARG
3	YC	23	LEU
3	YC	35	LYS
3	YC	43	ASN
3	YC	53	ILE
3	YC	57	HIS
3	YC	102	TYR
3	YC	117	SER
3	YC	124	LYS
3	YC	134	ILE
3	YC	152	GLN
3	YC	162	GLN

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Mol	Chain	Res	Type
3	YC	172	THR
3	YC	173	LEU
3	YC	183	VAL
3	YC	187	CYS
3	YC	190	THR
3	YC	194	VAL
3	YC	196	ASN
3	YC	212	TRP
3	YC	213	ARG
3	YC	220	ARG
3	YC	227	VAL
3	YC	235	GLU
3	YC	249	VAL
3	YC	250	GLN
3	YC	251	THR
3	YC	256	THR
3	YC	258	SER
3	YC	260	LYS
3	YC	267	VAL
3	YC	269	ARG
4	YD	9	VAL
4	YD	16	THR
4	YD	28	GLU
4	YD	29	VAL
4	YD	32	ASN
4	YD	33	ARG
4	YD	34	VAL
4	YD	38	LYS
4	YD	55	LYS
4	YD	62	LYS
4	YD	79	LEU
4	YD	83	ARG
4	YD	84	LEU
4	YD	98	VAL
4	YD	100	LEU
4	YD	106	LYS
4	YD	121	THR
4	YD	128	ARG
4	YD	138	LEU
4	YD	140	HIS
4	YD	141	ARG
4	YD	148	GLN

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Mol	Chain	Res	Type
4	YD	150	GLN
4	YD	151	THR
4	YD	159	LYS
4	YD	168	GLU
4	YD	172	VAL
4	YD	193	VAL
4	YD	203	VAL
5	YE	53	THR
5	YE	57	LYS
5	YE	61	ARG
5	YE	63	LYS
5	YE	67	ARG
5	YE	69	ARG
5	YE	73	ILE
5	YE	77	ILE
5	YE	78	TRP
5	YE	84	THR
5	YE	91	ASP
5	YE	93	SER
5	YE	105	LEU
5	YE	108	ILE
5	YE	112	LEU
5	YE	117	ARG
5	YE	126	VAL
5	YE	139	LYS
5	YE	149	ILE
5	YE	157	LEU
5	YE	163	ASN
5	YE	164	LEU
5	YE	166	LYS
5	YE	169	VAL
6	YF	8	LYS
6	YF	13	LYS
6	YF	14	LYS
6	YF	32	LYS
6	YF	48	LEU
6	YF	49	LEU
6	YF	62	GLN
6	YF	77	LYS
6	YF	87	LYS
6	YF	90	LEU
6	YF	95	MET

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Mol	Chain	Res	Type
6	YF	97	GLU
6	YF	110	ILE
6	YF	111	ARG
6	YF	113	PHE
6	YF	119	LYS
6	YF	122	ASP
6	YF	133	GLU
6	YF	134	GLN
6	YF	135	ILE
6	YF	139	GLU
6	YF	141	ASP
6	YF	142	TYR
6	YF	147	ARG
6	YF	148	VAL
6	YF	151	LEU
6	YF	155	ILE
6	YF	160	LYS
6	YF	169	LEU
6	YF	172	PHE
6	YF	177	ARG
7	YG	2	ARG
7	YG	18	ILE
7	YG	19	ASN
7	YG	22	VAL
7	YG	34	ARG
7	YG	35	THR
7	YG	36	LEU
7	YG	40	VAL
7	YG	42	VAL
7	YG	51	PHE
7	YG	71	LEU
7	YG	72	ASN
7	YG	84	LYS
7	YG	91	VAL
7	YG	93	TYR
7	YG	101	VAL
7	YG	120	ILE
7	YG	126	THR
7	YG	163	TYR
7	YG	166	GLU
7	YG	176	LYS
8	YH	15	LEU

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Mol	Chain	Res	Type
8	YH	22	LYS
8	YH	27	ARG
8	YH	28	ASN
8	YH	37	VAL
8	YH	42	LYS
8	YH	44	ILE
8	YH	50	ARG
8	YH	55	GLU
8	YH	62	LEU
8	YH	66	ASN
8	YH	68	ARG
8	YH	71	LYS
8	YH	76	GLU
8	YH	86	ASP
8	YH	90	LEU
8	YH	91	PHE
8	YH	94	ILE
8	YH	103	VAL
8	YH	104	THR
8	YH	109	GLU
8	YH	128	HIS
8	YH	132	PHE
8	YH	133	GLN
8	YH	144	VAL
9	YI	30	GLN
9	YI	36	GLU
9	YI	45	THR
9	YI	57	VAL
9	YI	58	ILE
9	YI	68	PHE
9	YI	93	ASN
9	YI	106	GLN
9	YI	108	ILE
10	YJ	2	LYS
10	YJ	3	THR
10	YJ	5	THR
10	YJ	17	VAL
10	YJ	25	LEU
10	YJ	43	GLU
10	YJ	47	HIS
10	YJ	54	ILE
10	YJ	57	LEU

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Mol	Chain	Res	Type
10	YJ	72	LYS
10	YJ	92	MET
10	YJ	93	ILE
10	YJ	95	ARG
10	YJ	98	GLU
10	YJ	99	ARG
10	YJ	103	ILE
10	YJ	106	LYS
10	YJ	129	GLU
10	YJ	139	VAL
10	YJ	140	LEU
11	YK	3	GLN
11	YK	6	THR
11	YK	7	MET
11	YK	10	VAL
11	YK	13	ASN
11	YK	24	VAL
11	YK	25	LEU
11	YK	39	ILE
11	YK	41	ILE
11	YK	47	ILE
11	YK	49	ARG
11	YK	52	VAL
11	YK	54	LYS
11	YK	61	VAL
11	YK	62	VAL
11	YK	63	VAL
11	YK	65	THR
11	YK	69	VAL
11	YK	77	ILE
11	YK	87	LEU
11	YK	95	ILE
11	YK	105	ARG
11	YK	106	GLU
11	YK	107	LEU
11	YK	111	LYS
11	YK	114	LYS
12	YL	3	LEU
12	YL	4	ASN
12	YL	6	LEU
12	YL	14	LYS
12	YL	46	VAL

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Mol	Chain	Res	Type
12	YL	47	ARG
12	YL	48	ARG
12	YL	69	ARG
12	YL	79	LEU
12	YL	82	LEU
12	YL	92	LEU
12	YL	99	ASN
12	YL	103	ILE
12	YL	111	ILE
12	YL	116	VAL
12	YL	142	ILE
12	YL	143	GLU
13	YM	1	MET
13	YM	7	THR
13	YM	8	LYS
13	YM	38	ARG
13	YM	73	ILE
13	YM	78	LEU
13	YM	84	LYS
13	YM	97	GLN
13	YM	105	MET
13	YM	108	VAL
13	YM	112	LEU
13	YM	115	GLU
13	YM	126	ILE
13	YM	133	LYS
14	YN	14	SER
14	YN	18	GLN
14	YN	20	MET
14	YN	21	PHE
14	YN	33	ILE
14	YN	34	ILE
14	YN	37	THR
14	YN	40	LYS
14	YN	46	ARG
14	YN	62	ASN
14	YN	69	ARG
14	YN	78	LYS
14	YN	94	TYR
14	YN	95	THR
14	YN	96	ARG
14	YN	97	ILE

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Mol	Chain	Res	Type
14	YN	98	LEU
14	YN	110	MET
14	YN	114	GLU
15	YO	17	LYS
15	YO	28	VAL
15	YO	31	THR
15	YO	65	THR
15	YO	68	LYS
15	YO	90	VAL
15	YO	115	LEU
15	YO	116	GLN
15	YO	117	PHE
16	YP	3	ILE
16	YP	6	GLN
16	YP	7	LEU
16	YP	13	LYS
16	YP	28	LYS
16	YP	31	VAL
16	YP	50	ARG
16	YP	67	GLU
16	YP	83	ILE
16	YP	86	LYS
16	YP	95	LYS
16	YP	101	GLU
16	YP	109	ILE
17	YQ	3	VAL
17	YQ	8	ILE
17	YQ	10	ARG
17	YQ	12	ARG
17	YQ	15	LYS
17	YQ	16	ILE
17	YQ	21	LYS
17	YQ	29	ARG
17	YQ	32	ARG
17	YQ	39	ILE
17	YQ	49	ARG
17	YQ	54	ARG
17	YQ	57	ARG
17	YQ	63	ARG
17	YQ	69	ARG
17	YQ	79	ILE
17	YQ	93	ILE

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Mol	Chain	Res	Type
17	YQ	106	THR
18	YR	6	GLN
18	YR	10	LYS
18	YR	13	ARG
18	YR	21	ARG
18	YR	22	LEU
18	YR	37	GLU
18	YR	48	LYS
18	YR	49	ILE
18	YR	51	VAL
18	YR	58	VAL
18	YR	75	VAL
18	YR	80	ARG
18	YR	86	GLN
18	YR	90	ARG
18	YR	93	PHE
19	YS	4	ILE
19	YS	6	LYS
19	YS	11	ARG
19	YS	19	LEU
19	YS	23	LEU
19	YS	29	VAL
19	YS	31	GLN
19	YS	33	LEU
19	YS	45	VAL
19	YS	46	LEU
19	YS	49	LYS
19	YS	55	ILE
19	YS	62	ASP
19	YS	66	ILE
19	YS	70	LYS
19	YS	74	ILE
19	YS	76	VAL
19	YS	84	ARG
19	YS	85	ILE
19	YS	86	MET
19	YS	88	ARG
19	YS	101	SER
20	YT	8	LEU
20	YT	9	LYS
20	YT	12	ARG
20	YT	18	GLU

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Mol	Chain	Res	Type
20	YT	21	SER
20	YT	39	THR
20	YT	50	LEU
20	YT	54	GLU
20	YT	67	VAL
20	YT	68	LYS
20	YT	91	GLN
21	YU	11	ILE
21	YU	13	LEU
21	YU	16	LYS
21	YU	20	LYS
21	YU	21	ARG
21	YU	34	ILE
21	YU	40	LEU
21	YU	42	LYS
21	YU	45	GLN
21	YU	61	GLU
21	YU	65	GLN
21	YU	69	VAL
21	YU	71	ILE
21	YU	82	VAL
21	YU	85	ARG
21	YU	95	PHE
21	YU	98	ASN
21	YU	101	THR
22	YV	26	PHE
22	YV	40	ILE
22	YV	41	GLU
22	YV	44	HIS
22	YV	51	GLN
22	YV	61	LEU
22	YV	65	VAL
22	YV	69	GLU
22	YV	70	ILE
22	YV	76	ASP
23	YW	18	LYS
23	YW	22	VAL
23	YW	23	LYS
23	YW	28	GLU
23	YW	30	VAL
23	YW	31	LEU
23	YW	35	ILE

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Mol	Chain	Res	Type
23	YW	38	ARG
23	YW	40	ARG
23	YW	44	PHE
23	YW	58	LEU
23	YW	59	PHE
23	YW	67	LYS
23	YW	68	PHE
23	YW	77	LYS
24	YX	5	GLN
24	YX	6	VAL
24	YX	18	SER
24	YX	25	LYS
24	YX	26	ARG
24	YX	29	LEU
24	YX	31	ASN
24	YX	33	HIS
24	YX	34	SER
24	YX	46	VAL
24	YX	47	THR
24	YX	57	VAL
24	YX	63	ILE
25	YY	1	MET
25	YY	4	LYS
25	YY	28	LEU
25	YY	43	LEU
25	YY	45	GLN
25	YY	46	VAL
26	YZ	3	THR
26	YZ	4	ILE
26	YZ	16	LEU
26	YZ	23	LEU
26	YZ	24	LEU
26	YZ	28	LEU
26	YZ	29	ARG
26	YZ	30	ARG
26	YZ	34	THR
26	YZ	51	SER
26	YZ	53	MET
26	YZ	55	LYS
26	YZ	58	GLU
27	Y0	3	GLN
27	Y0	5	ASN

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Mol	Chain	Res	Type
27	Y0	9	ARG
27	Y0	27	LEU
27	Y0	33	SER
27	Y0	39	ARG
27	Y0	41	HIS
27	Y0	42	ILE
27	Y0	53	VAL
27	Y0	54	ILE
28	Y1	8	ILE
28	Y1	10	LEU
28	Y1	11	VAL
28	Y1	20	TYR
28	Y1	33	LEU
28	Y1	44	GLN
28	Y1	45	HIS
29	Y2	8	SER
29	Y2	22	MET
29	Y2	28	ARG
29	Y2	45	SER
29	Y2	46	LYS
30	Y3	12	ARG
30	Y3	14	LYS
30	Y3	24	LYS
30	Y3	25	HIS
30	Y3	27	ASN
30	Y3	28	LEU
30	Y3	29	ARG
30	Y3	30	HIS
30	Y3	33	THR
30	Y3	41	ARG
30	Y3	46	LYS
30	Y3	50	SER
30	Y3	51	LYS
30	Y3	61	LEU
31	Y4	2	LYS
31	Y4	3	VAL
31	Y4	9	LYS
31	Y4	15	LYS
31	Y4	17	VAL
31	Y4	28	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (342) such sidechains are listed below:

Mol	Chain	Res	Type
3	RC	14	HIS
3	RC	20	ASN
3	RC	59	GLN
3	RC	89	ASN
3	RC	114	GLN
3	RC	141	HIS
3	RC	152	GLN
3	RC	242	HIS
3	RC	250	GLN
4	RD	32	ASN
4	RD	42	ASN
4	RD	49	GLN
4	RD	58	ASN
4	RD	126	ASN
4	RD	130	GLN
4	RD	173	GLN
5	RE	29	HIS
5	RE	30	GLN
5	RE	46	GLN
5	RE	62	GLN
5	RE	92	HIS
5	RE	97	ASN
5	RE	136	GLN
6	RF	22	ASN
6	RF	26	GLN
6	RF	134	GLN
7	RG	72	ASN
7	RG	114	HIS
7	RG	138	GLN
8	RH	2	GLN
8	RH	18	GLN
8	RH	20	ASN
8	RH	28	ASN
8	RH	33	GLN
8	RH	43	ASN
8	RH	145	ASN
9	RI	5	GLN
9	RI	33	ASN
10	RJ	40	HIS
10	RJ	47	HIS
10	RJ	58	ASN
10	RJ	76	HIS
10	RJ	77	HIS

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Mol	Chain	Res	Type
10	RJ	80	HIS
10	RJ	128	ASN
10	RJ	130	HIS
11	RK	3	GLN
11	RK	88	ASN
11	RK	89	ASN
12	RL	4	ASN
12	RL	54	GLN
12	RL	93	ASN
12	RL	99	ASN
12	RL	104	GLN
13	RM	3	GLN
13	RM	13	HIS
13	RM	97	GLN
14	RN	9	GLN
14	RN	11	ASN
14	RN	18	GLN
14	RN	23	ASN
14	RN	62	ASN
14	RN	73	ASN
14	RN	107	ASN
15	RO	19	GLN
15	RO	29	HIS
15	RO	34	HIS
15	RO	38	GLN
16	RP	9	GLN
16	RP	74	GLN
17	RQ	13	HIS
17	RQ	65	ASN
17	RQ	80	ASN
18	RR	87	GLN
19	RS	9	HIS
19	RS	15	GLN
19	RS	57	ASN
19	RS	61	ASN
20	RT	70	HIS
20	RT	72	GLN
20	RT	91	GLN
21	RU	52	ASN
21	RU	65	GLN
21	RU	73	ASN
22	RV	5	ASN

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Mol	Chain	Res	Type
22	RV	44	HIS
22	RV	51	GLN
22	RV	80	HIS
22	RV	88	HIS
23	RW	11	ASN
23	RW	39	GLN
23	RW	45	HIS
24	RX	5	GLN
24	RX	22	ASN
24	RX	35	HIS
25	RY	15	ASN
25	RY	20	ASN
25	RY	27	ASN
25	RY	31	GLN
25	RY	45	GLN
26	RZ	8	GLN
27	R0	4	GLN
27	R0	41	HIS
29	R2	6	GLN
29	R2	13	ASN
29	R2	16	HIS
29	R2	26	ASN
30	R3	27	ASN
31	R4	33	HIS
31	R4	35	GLN
31	R4	37	GLN
33	QB	14	HIS
33	QB	38	HIS
33	QB	57	ASN
33	QB	88	GLN
33	QB	102	ASN
33	QB	108	GLN
33	QB	119	GLN
33	QB	167	HIS
33	QB	169	HIS
34	QC	24	ASN
34	QC	68	HIS
34	QC	139	ASN
34	QC	184	ASN
35	QD	40	HIS
35	QD	53	GLN
35	QD	58	GLN

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Mol	Chain	Res	Type
35	QD	70	GLN
35	QD	73	ASN
35	QD	84	ASN
35	QD	119	HIS
35	QD	163	GLN
36	QE	11	GLN
36	QE	42	ASN
36	QE	72	ASN
36	QE	81	GLN
36	QE	121	ASN
37	QF	11	HIS
37	QF	68	GLN
38	QG	129	ASN
38	QG	147	ASN
39	QH	3	GLN
39	QH	17	GLN
39	QH	117	GLN
40	QI	4	GLN
40	QI	74	GLN
40	QI	80	HIS
41	QJ	20	GLN
41	QJ	35	GLN
41	QJ	64	GLN
42	QK	21	HIS
42	QK	27	ASN
42	QK	100	ASN
42	QK	108	ASN
43	QL	45	ASN
43	QL	95	HIS
44	QM	51	GLN
45	QN	42	ASN
45	QN	48	GLN
45	QN	59	GLN
46	QO	19	ASN
46	QO	36	ASN
46	QO	39	GLN
46	QO	41	HIS
47	QP	9	HIS
47	QP	26	ASN
47	QP	29	ASN
47	QP	59	HIS
47	QP	63	GLN

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Mol	Chain	Res	Type
48	QQ	44	HIS
49	QR	30	ASN
49	QR	53	GLN
49	QR	73	HIS
50	QS	42	ASN
51	QT	12	GLN
51	QT	20	ASN
51	QT	54	GLN
51	QT	60	GLN
51	QT	77	ASN
52	QU	8	ASN
33	XB	17	HIS
33	XB	23	ASN
33	XB	38	HIS
33	XB	108	GLN
33	XB	119	GLN
33	XB	176	ASN
34	XC	2	GLN
34	XC	18	ASN
34	XC	31	ASN
34	XC	68	HIS
35	XD	70	GLN
35	XD	73	ASN
35	XD	84	ASN
35	XD	119	HIS
35	XD	163	GLN
36	XE	11	GLN
36	XE	69	ASN
36	XE	121	ASN
36	XE	131	ASN
36	XE	147	ASN
37	XF	11	HIS
37	XF	14	GLN
37	XF	17	GLN
37	XF	55	HIS
37	XF	58	HIS
37	XF	81	ASN
38	XG	67	ASN
38	XG	85	GLN
38	XG	121	ASN
39	XH	3	GLN
39	XH	17	GLN

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Mol	Chain	Res	Type
39	XH	20	ASN
40	XI	3	ASN
40	XI	4	GLN
40	XI	49	GLN
40	XI	109	GLN
40	XI	125	GLN
41	XJ	35	GLN
41	XJ	56	HIS
41	XJ	70	HIS
42	XK	21	HIS
42	XK	108	ASN
42	XK	118	ASN
43	XL	19	ASN
43	XL	28	GLN
43	XL	72	ASN
43	XL	74	GLN
43	XL	111	GLN
44	XM	90	HIS
45	XN	59	GLN
45	XN	65	GLN
46	XO	19	ASN
46	XO	27	GLN
46	XO	36	ASN
46	XO	37	HIS
46	XO	39	GLN
47	XP	9	HIS
47	XP	26	ASN
47	XP	63	GLN
48	XQ	49	ASN
49	XR	30	ASN
49	XR	73	HIS
50	XS	51	HIS
50	XS	52	ASN
51	XT	12	GLN
52	XU	8	ASN
3	YC	20	ASN
3	YC	43	ASN
3	YC	57	HIS
3	YC	59	GLN
3	YC	85	ASN
3	YC	116	GLN
3	YC	133	ASN

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Mol	Chain	Res	Type
3	YC	141	HIS
3	YC	152	GLN
3	YC	162	GLN
3	YC	196	ASN
3	YC	225	ASN
3	YC	242	HIS
4	YD	36	GLN
4	YD	49	GLN
4	YD	58	ASN
4	YD	126	ASN
4	YD	130	GLN
4	YD	140	HIS
4	YD	164	GLN
5	YE	41	GLN
5	YE	62	GLN
6	YF	4	HIS
6	YF	134	GLN
7	YG	19	ASN
7	YG	21	GLN
7	YG	47	ASN
7	YG	103	ASN
7	YG	138	GLN
8	YH	2	GLN
8	YH	28	ASN
8	YH	133	GLN
9	YI	42	ASN
9	YI	93	ASN
9	YI	104	GLN
9	YI	106	GLN
10	YJ	40	HIS
11	YK	3	GLN
11	YK	13	ASN
11	YK	89	ASN
12	YL	4	ASN
12	YL	38	GLN
12	YL	54	GLN
13	YM	13	HIS
14	YN	3	HIS
14	YN	11	ASN
14	YN	16	HIS
14	YN	18	GLN
14	YN	23	ASN

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Mol	Chain	Res	Type
14	YN	73	ASN
14	YN	81	ASN
14	YN	107	ASN
15	YO	34	HIS
15	YO	38	GLN
16	YP	6	GLN
16	YP	9	GLN
16	YP	11	GLN
16	YP	14	GLN
16	YP	74	GLN
18	YR	6	GLN
18	YR	12	HIS
18	YR	18	GLN
18	YR	43	ASN
18	YR	66	HIS
18	YR	82	HIS
18	YR	86	GLN
18	YR	87	GLN
19	YS	9	HIS
19	YS	31	GLN
20	YT	15	HIS
20	YT	48	GLN
20	YT	92	ASN
21	YU	44	HIS
21	YU	45	GLN
21	YU	53	GLN
21	YU	65	GLN
21	YU	68	ASN
21	YU	98	ASN
22	YV	51	GLN
22	YV	80	HIS
23	YW	11	ASN
24	YX	15	ASN
24	YX	22	ASN
24	YX	31	ASN
24	YX	35	HIS
25	YY	15	ASN
25	YY	20	ASN
25	YY	41	HIS
25	YY	58	ASN
26	YZ	19	HIS
27	Y0	5	ASN

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Mol	Chain	Res	Type
27	Y0	37	HIS
28	Y1	44	GLN
29	Y2	6	GLN
29	Y2	16	HIS
29	Y2	29	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	RA	2850/2904 (98%)	556 (19%)	74 (2%)
1	YA	2837/2904 (97%)	878 (30%)	153 (5%)
2	RB	117/118 (99%)	22 (18%)	0
2	YB	116/118 (98%)	33 (28%)	6 (5%)
32	QA	1532/1533 (99%)	378 (24%)	56 (3%)
32	XA	1529/1533 (99%)	448 (29%)	70 (4%)
All	All	8981/9110 (98%)	2315 (25%)	359 (3%)

All (2315) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	RA	10	A
1	RA	12	U
1	RA	13	A
1	RA	14	A
1	RA	15	G
1	RA	34	U
1	RA	35	G
1	RA	37	C
1	RA	43	G
1	RA	46	G
1	RA	61	C
1	RA	63	A
1	RA	71	A
1	RA	74	A
1	RA	75	G
1	RA	80	G
1	RA	84	A
1	RA	98	G
1	RA	101	A
1	RA	102	U
1	RA	118	A

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Mol	Chain	Res	Type
1	RA	119	A
1	RA	120	U
1	RA	135	U
1	RA	136	G
1	RA	137	U
1	RA	138	U
1	RA	139	U
1	RA	140	C
1	RA	141	G
1	RA	142	A
1	RA	143	C
1	RA	144	A
1	RA	149	A
1	RA	162	U
1	RA	163	C
1	RA	164	C
1	RA	165	A
1	RA	166	U
1	RA	174	U
1	RA	181	A
1	RA	196	A
1	RA	215	G
1	RA	216	A
1	RA	221	A
1	RA	222	A
1	RA	230	G
1	RA	248	G
1	RA	250	G
1	RA	255	A
1	RA	256	A
1	RA	265	A
1	RA	266	G
1	RA	267	C
1	RA	271	G
1	RA	272	A
1	RA	273	G
1	RA	276	U
1	RA	277	G
1	RA	278	A
1	RA	285	G
1	RA	299	A
1	RA	302	C

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Mol	Chain	Res	Type
1	RA	311	A
1	RA	325	G
1	RA	329	G
1	RA	330	A
1	RA	331	C
1	RA	346	A
1	RA	347	A
1	RA	350	G
1	RA	353	C
1	RA	359	G
1	RA	361	G
1	RA	362	A
1	RA	371	A
1	RA	372	G
1	RA	383	C
1	RA	386	G
1	RA	396	G
1	RA	404	A
1	RA	405	U
1	RA	411	G
1	RA	412	A
1	RA	424	G
1	RA	457	A
1	RA	461	C
1	RA	480	A
1	RA	481	G
1	RA	482	A
1	RA	491	G
1	RA	496	G
1	RA	504	A
1	RA	505	A
1	RA	507	A
1	RA	508	A
1	RA	509	C
1	RA	510	C
1	RA	527	C
1	RA	528	A
1	RA	529	A
1	RA	531	C
1	RA	532	A
1	RA	533	G
1	RA	544	C

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Mol	Chain	Res	Type
1	RA	546	U
1	RA	547	A
1	RA	548	G
1	RA	549	G
1	RA	550	C
1	RA	555	G
1	RA	556	A
1	RA	563	A
1	RA	573	U
1	RA	575	A
1	RA	586	A
1	RA	603	A
1	RA	604	G
1	RA	613	A
1	RA	614	A
1	RA	615	U
1	RA	627	A
1	RA	631	A
1	RA	634	C
1	RA	637	A
1	RA	645	C
1	RA	646	U
1	RA	647	G
1	RA	648	G
1	RA	654	A
1	RA	655	A
1	RA	656	G
1	RA	664	G
1	RA	670	A
1	RA	686	U
1	RA	714	U
1	RA	715	A
1	RA	717	C
1	RA	722	A
1	RA	730	A
1	RA	738	G
1	RA	740	C
1	RA	746	U
1	RA	747	U
1	RA	748	G
1	RA	763	G
1	RA	764	A

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Mol	Chain	Res	Type
1	RA	765	C
1	RA	775	G
1	RA	776	G
1	RA	782	A
1	RA	784	G
1	RA	785	G
1	RA	791	C
1	RA	792	A
1	RA	805	G
1	RA	812	C
1	RA	819	A
1	RA	827	U
1	RA	828	U
1	RA	845	A
1	RA	846	U
1	RA	847	U
1	RA	859	G
1	RA	876	C
1	RA	878	A
1	RA	879	G
1	RA	884	U
1	RA	896	A
1	RA	897	C
1	RA	910	A
1	RA	914	G
1	RA	915	C
1	RA	931	U
1	RA	932	U
1	RA	941	A
1	RA	946	C
1	RA	958	U
1	RA	959	A
1	RA	961	C
1	RA	974	G
1	RA	983	A
1	RA	989	G
1	RA	995	C
1	RA	996	A
1	RA	997	G
1	RA	1005	C
1	RA	1012	U
1	RA	1013	C

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Mol	Chain	Res	Type
1	RA	1020	A
1	RA	1021	A
1	RA	1022	G
1	RA	1023	U
1	RA	1024	G
1	RA	1026	G
1	RA	1033	U
1	RA	1044	C
1	RA	1045	C
1	RA	1046	A
1	RA	1047	G
1	RA	1060	U
1	RA	1061	U
1	RA	1062	G
1	RA	1063	G
1	RA	1064	C
1	RA	1065	U
1	RA	1066	U
1	RA	1070	A
1	RA	1071	G
1	RA	1072	C
1	RA	1073	A
1	RA	1074	G
1	RA	1078	U
1	RA	1083	U
1	RA	1084	A
1	RA	1088	A
1	RA	1092	C
1	RA	1098	A
1	RA	1104	C
1	RA	1106	G
1	RA	1111	A
1	RA	1112	G
1	RA	1128	G
1	RA	1130	U
1	RA	1132	U
1	RA	1133	A
1	RA	1135	C
1	RA	1136	G
1	RA	1138	G
1	RA	1139	G
1	RA	1142	A

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Mol	Chain	Res	Type
1	RA	1150	C
1	RA	1151	A
1	RA	1167	C
1	RA	1169	A
1	RA	1170	C
1	RA	1171	G
1	RA	1175	A
1	RA	1176	U
1	RA	1180	U
1	RA	1182	G
1	RA	1185	G
1	RA	1186	G
1	RA	1212	G
1	RA	1238	G
1	RA	1248	G
1	RA	1249	U
1	RA	1250	G
1	RA	1253	A
1	RA	1256	G
1	RA	1258	U
1	RA	1266	G
1	RA	1271	G
1	RA	1272	A
1	RA	1273	U
1	RA	1276	A
1	RA	1281	G
1	RA	1287	A
1	RA	1288	G
1	RA	1300	G
1	RA	1301	A
1	RA	1317	G
1	RA	1324	G
1	RA	1341	G
1	RA	1352	U
1	RA	1359	A
1	RA	1365	A
1	RA	1368	G
1	RA	1371	G
1	RA	1378	A
1	RA	1379	U
1	RA	1380	G
1	RA	1383	A

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Mol	Chain	Res	Type
1	RA	1386	C
1	RA	1395	A
1	RA	1416	G
1	RA	1419	A
1	RA	1420	A
1	RA	1427	A
1	RA	1428	C
1	RA	1434	A
1	RA	1435	G
1	RA	1437	C
1	RA	1440	U
1	RA	1452	G
1	RA	1453	A
1	RA	1458	U
1	RA	1459	G
1	RA	1475	G
1	RA	1476	U
1	RA	1482	G
1	RA	1483	G
1	RA	1493	C
1	RA	1499	C
1	RA	1502	A
1	RA	1504	A
1	RA	1507	C
1	RA	1508	A
1	RA	1509	A
1	RA	1510	G
1	RA	1512	C
1	RA	1515	A
1	RA	1533	C
1	RA	1534	U
1	RA	1535	A
1	RA	1536	C
1	RA	1537	G
1	RA	1538	G
1	RA	1540	G
1	RA	1554	U
1	RA	1555	G
1	RA	1558	C
1	RA	1566	A
1	RA	1569	A
1	RA	1578	U

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Mol	Chain	Res	Type
1	RA	1581	G
1	RA	1583	A
1	RA	1584	U
1	RA	1585	C
1	RA	1588	G
1	RA	1606	C
1	RA	1607	C
1	RA	1608	A
1	RA	1610	A
1	RA	1613	G
1	RA	1626	A
1	RA	1627	G
1	RA	1647	U
1	RA	1648	U
1	RA	1649	G
1	RA	1652	A
1	RA	1674	G
1	RA	1688	U
1	RA	1695	G
1	RA	1696	G
1	RA	1700	A
1	RA	1707	G
1	RA	1714	U
1	RA	1715	G
1	RA	1723	G
1	RA	1729	U
1	RA	1730	C
1	RA	1732	C
1	RA	1734	G
1	RA	1737	G
1	RA	1738	G
1	RA	1739	A
1	RA	1744	A
1	RA	1755	A
1	RA	1764	C
1	RA	1773	A
1	RA	1776	G
1	RA	1782	U
1	RA	1800	C
1	RA	1801	A
1	RA	1802	A
1	RA	1808	A

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Mol	Chain	Res	Type
1	RA	1809	A
1	RA	1812	U
1	RA	1815	A
1	RA	1816	C
1	RA	1817	G
1	RA	1828	G
1	RA	1829	A
1	RA	1848	A
1	RA	1858	A
1	RA	1859	U
1	RA	1865	U
1	RA	1869	G
1	RA	1870	C
1	RA	1871	A
1	RA	1872	A
1	RA	1873	G
1	RA	1897	G
1	RA	1902	C
1	RA	1906	G
1	RA	1913	A
1	RA	1914	C
1	RA	1927	A
1	RA	1929	G
1	RA	1930	G
1	RA	1937	A
1	RA	1938	A
1	RA	1941	C
1	RA	1942	C
1	RA	1955	U
1	RA	1967	C
1	RA	1970	A
1	RA	1971	U
1	RA	1972	G
1	RA	1991	U
1	RA	1993	U
1	RA	1997	C
1	RA	2022	U
1	RA	2023	C
1	RA	2030	A
1	RA	2031	A
1	RA	2032	G
1	RA	2033	A

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Mol	Chain	Res	Type
1	RA	2043	C
1	RA	2055	C
1	RA	2056	G
1	RA	2060	A
1	RA	2061	G
1	RA	2062	A
1	RA	2063	C
1	RA	2069	G
1	RA	2093	G
1	RA	2096	C
1	RA	2104	C
1	RA	2106	U
1	RA	2107	G
1	RA	2109	U
1	RA	2110	G
1	RA	2134	A
1	RA	2135	A
1	RA	2136	G
1	RA	2137	U
1	RA	2140	G
1	RA	2143	C
1	RA	2144	G
1	RA	2145	C
1	RA	2146	C
1	RA	2147	A
1	RA	2148	G
1	RA	2149	U
1	RA	2150	C
1	RA	2151	U
1	RA	2155	U
1	RA	2156	G
1	RA	2180	U
1	RA	2181	U
1	RA	2183	A
1	RA	2184	A
1	RA	2185	U
1	RA	2187	U
1	RA	2190	G
1	RA	2194	U
1	RA	2198	A
1	RA	2199	A
1	RA	2200	C

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Mol	Chain	Res	Type
1	RA	2203	U
1	RA	2204	G
1	RA	2211	A
1	RA	2212	A
1	RA	2214	C
1	RA	2225	A
1	RA	2226	C
1	RA	2238	G
1	RA	2239	G
1	RA	2243	U
1	RA	2268	A
1	RA	2273	A
1	RA	2278	A
1	RA	2279	G
1	RA	2282	G
1	RA	2283	C
1	RA	2287	A
1	RA	2297	A
1	RA	2305	U
1	RA	2308	G
1	RA	2311	A
1	RA	2312	U
1	RA	2317	A
1	RA	2321	U
1	RA	2325	G
1	RA	2326	C
1	RA	2327	A
1	RA	2335	A
1	RA	2347	C
1	RA	2350	C
1	RA	2357	G
1	RA	2361	G
1	RA	2383	G
1	RA	2384	U
1	RA	2385	C
1	RA	2402	U
1	RA	2403	C
1	RA	2406	A
1	RA	2423	U
1	RA	2424	C
1	RA	2425	A
1	RA	2426	A

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Mol	Chain	Res	Type
1	RA	2427	C
1	RA	2428	G
1	RA	2429	G
1	RA	2430	A
1	RA	2431	U
1	RA	2434	A
1	RA	2435	A
1	RA	2441	U
1	RA	2445	G
1	RA	2447	G
1	RA	2448	A
1	RA	2476	A
1	RA	2484	G
1	RA	2491	U
1	RA	2502	G
1	RA	2503	A
1	RA	2505	G
1	RA	2506	U
1	RA	2518	A
1	RA	2529	G
1	RA	2554	U
1	RA	2566	A
1	RA	2567	G
1	RA	2572	A
1	RA	2573	C
1	RA	2574	G
1	RA	2578	G
1	RA	2585	U
1	RA	2586	U
1	RA	2602	A
1	RA	2603	G
1	RA	2609	U
1	RA	2613	U
1	RA	2629	U
1	RA	2661	G
1	RA	2663	G
1	RA	2671	G
1	RA	2682	A
1	RA	2689	U
1	RA	2690	U
1	RA	2714	G
1	RA	2716	C

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Mol	Chain	Res	Type
1	RA	2726	A
1	RA	2729	G
1	RA	2732	G
1	RA	2744	G
1	RA	2748	A
1	RA	2757	A
1	RA	2762	C
1	RA	2765	A
1	RA	2769	U
1	RA	2777	G
1	RA	2778	A
1	RA	2779	U
1	RA	2791	G
1	RA	2797	U
1	RA	2798	U
1	RA	2799	A
1	RA	2800	A
1	RA	2801	G
1	RA	2818	U
1	RA	2820	A
1	RA	2821	A
1	RA	2825	G
1	RA	2826	A
1	RA	2849	U
1	RA	2867	G
1	RA	2873	A
1	RA	2874	C
1	RA	2880	C
1	RA	2883	A
1	RA	2884	U
1	RA	2891	U
2	RB	3	C
2	RB	4	C
2	RB	12	C
2	RB	15	A
2	RB	16	G
2	RB	25	U
2	RB	35	C
2	RB	37	C
2	RB	41	G
2	RB	42	C
2	RB	44	G

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Mol	Chain	Res	Type
2	RB	45	A
2	RB	56	G
2	RB	66	A
2	RB	85	G
2	RB	87	U
2	RB	88	C
2	RB	89	U
2	RB	90	C
2	RB	91	C
2	RB	99	A
2	RB	109	A
32	QA	5	U
32	QA	6	G
32	QA	8	A
32	QA	9	G
32	QA	22	G
32	QA	32	A
32	QA	39	G
32	QA	40	C
32	QA	47	C
32	QA	48	C
32	QA	50	A
32	QA	51	A
32	QA	52	C
32	QA	64	G
32	QA	70	U
32	QA	71	A
32	QA	72	A
32	QA	73	C
32	QA	74	A
32	QA	75	G
32	QA	76	G
32	QA	77	A
32	QA	79	G
32	QA	82	G
32	QA	83	C
32	QA	85	U
32	QA	86	G
32	QA	87	C
32	QA	88	U
32	QA	89	U
32	QA	90	C

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Mol	Chain	Res	Type
32	QA	91	U
32	QA	92	U
32	QA	95	C
32	QA	97	G
32	QA	98	A
32	QA	110	C
32	QA	111	G
32	QA	115	G
32	QA	116	A
32	QA	117	G
32	QA	120	A
32	QA	121	U
32	QA	122	G
32	QA	127	G
32	QA	130	A
32	QA	131	A
32	QA	138	G
32	QA	141	G
32	QA	143	A
32	QA	159	G
32	QA	163	C
32	QA	164	G
32	QA	166	U
32	QA	174	A
32	QA	175	C
32	QA	176	C
32	QA	177	G
32	QA	181	A
32	QA	182	A
32	QA	183	C
32	QA	184	G
32	QA	185	U
32	QA	197	A
32	QA	198	G
32	QA	199	A
32	QA	205	A
32	QA	207	C
32	QA	208	U
32	QA	209	U
32	QA	210	C
32	QA	213	G
32	QA	214	C

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Mol	Chain	Res	Type
32	QA	215	C
32	QA	219	U
32	QA	240	G
32	QA	244	U
32	QA	245	U
32	QA	247	G
32	QA	251	G
32	QA	258	G
32	QA	266	G
32	QA	267	C
32	QA	268	U
32	QA	273	U
32	QA	274	A
32	QA	275	G
32	QA	285	C
32	QA	289	G
32	QA	316	C
32	QA	320	A
32	QA	321	A
32	QA	328	C
32	QA	329	A
32	QA	330	C
32	QA	331	G
32	QA	332	G
32	QA	345	C
32	QA	346	G
32	QA	347	G
32	QA	352	C
32	QA	354	G
32	QA	356	A
32	QA	366	A
32	QA	367	U
32	QA	368	U
32	QA	369	G
32	QA	372	C
32	QA	373	A
32	QA	374	A
32	QA	384	G
32	QA	392	C
32	QA	398	U
32	QA	406	G
32	QA	409	U

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Mol	Chain	Res	Type
32	QA	411	A
32	QA	412	A
32	QA	413	G
32	QA	414	A
32	QA	415	A
32	QA	421	U
32	QA	422	C
32	QA	424	G
32	QA	429	U
32	QA	430	A
32	QA	439	U
32	QA	452	A
32	QA	453	G
32	QA	458	U
32	QA	459	A
32	QA	461	A
32	QA	462	G
32	QA	463	U
32	QA	466	A
32	QA	467	U
32	QA	468	A
32	QA	469	C
32	QA	478	A
32	QA	481	G
32	QA	482	A
32	QA	484	G
32	QA	485	U
32	QA	486	U
32	QA	496	A
32	QA	498	A
32	QA	500	G
32	QA	501	C
32	QA	505	G
32	QA	508	U
32	QA	509	A
32	QA	510	A
32	QA	511	C
32	QA	518	C
32	QA	527	G
32	QA	529	G
32	QA	532	A
32	QA	533	A

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Mol	Chain	Res	Type
32	QA	534	U
32	QA	535	A
32	QA	536	C
32	QA	547	A
32	QA	548	G
32	QA	549	C
32	QA	556	C
32	QA	559	A
32	QA	562	U
32	QA	564	C
32	QA	572	A
32	QA	573	A
32	QA	576	C
32	QA	579	A
32	QA	588	G
32	QA	604	G
32	QA	650	G
32	QA	653	U
32	QA	665	A
32	QA	666	G
32	QA	682	G
32	QA	700	G
32	QA	701	U
32	QA	702	A
32	QA	703	G
32	QA	721	G
32	QA	722	G
32	QA	723	U
32	QA	731	G
32	QA	748	G
32	QA	753	A
32	QA	754	C
32	QA	755	G
32	QA	776	G
32	QA	777	A
32	QA	793	U
32	QA	794	A
32	QA	802	A
32	QA	809	G
32	QA	814	A
32	QA	815	A
32	QA	817	C

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Mol	Chain	Res	Type
32	QA	827	U
32	QA	828	U
32	QA	841	C
32	QA	843	U
32	QA	845	A
32	QA	846	G
32	QA	859	G
32	QA	861	G
32	QA	876	C
32	QA	889	A
32	QA	914	A
32	QA	926	G
32	QA	927	G
32	QA	932	C
32	QA	934	C
32	QA	935	A
32	QA	960	U
32	QA	966	G
32	QA	969	A
32	QA	971	G
32	QA	974	A
32	QA	975	A
32	QA	976	G
32	QA	977	A
32	QA	983	A
32	QA	993	G
32	QA	1003	G
32	QA	1004	A
32	QA	1008	U
32	QA	1017	U
32	QA	1018	G
32	QA	1022	A
32	QA	1025	U
32	QA	1026	G
32	QA	1027	C
32	QA	1028	C
32	QA	1029	U
32	QA	1030	U
32	QA	1031	C
32	QA	1032	G
32	QA	1033	G
32	QA	1034	G

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Mol	Chain	Res	Type
32	QA	1037	C
32	QA	1039	G
32	QA	1050	G
32	QA	1052	U
32	QA	1053	G
32	QA	1054	C
32	QA	1055	A
32	QA	1065	U
32	QA	1066	C
32	QA	1086	U
32	QA	1093	A
32	QA	1094	G
32	QA	1095	U
32	QA	1101	A
32	QA	1102	A
32	QA	1104	G
32	QA	1113	C
32	QA	1124	G
32	QA	1125	U
32	QA	1130	A
32	QA	1132	C
32	QA	1133	G
32	QA	1135	U
32	QA	1136	C
32	QA	1137	C
32	QA	1138	G
32	QA	1140	C
32	QA	1141	C
32	QA	1144	G
32	QA	1145	A
32	QA	1158	C
32	QA	1159	U
32	QA	1160	G
32	QA	1161	C
32	QA	1162	C
32	QA	1167	A
32	QA	1168	U
32	QA	1181	G
32	QA	1182	G
32	QA	1183	U
32	QA	1184	G
32	QA	1193	G

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Mol	Chain	Res	Type
32	QA	1196	A
32	QA	1197	A
32	QA	1202	U
32	QA	1212	U
32	QA	1213	A
32	QA	1214	C
32	QA	1226	C
32	QA	1227	A
32	QA	1228	C
32	QA	1229	A
32	QA	1238	A
32	QA	1240	U
32	QA	1241	G
32	QA	1242	G
32	QA	1249	C
32	QA	1253	G
32	QA	1256	A
32	QA	1261	A
32	QA	1275	A
32	QA	1278	G
32	QA	1279	G
32	QA	1280	A
32	QA	1282	C
32	QA	1283	U
32	QA	1285	A
32	QA	1286	U
32	QA	1287	A
32	QA	1288	A
32	QA	1293	C
32	QA	1297	G
32	QA	1299	A
32	QA	1301	U
32	QA	1303	C
32	QA	1304	G
32	QA	1305	G
32	QA	1308	U
32	QA	1309	G
32	QA	1315	U
32	QA	1316	G
32	QA	1317	C
32	QA	1318	A
32	QA	1320	C

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Mol	Chain	Res	Type
32	QA	1321	U
32	QA	1322	C
32	QA	1323	G
32	QA	1324	A
32	QA	1331	G
32	QA	1332	A
32	QA	1336	C
32	QA	1337	G
32	QA	1338	G
32	QA	1348	U
32	QA	1349	A
32	QA	1353	G
32	QA	1362	A
32	QA	1363	A
32	QA	1364	U
32	QA	1368	A
32	QA	1370	G
32	QA	1371	G
32	QA	1381	U
32	QA	1382	C
32	QA	1398	A
32	QA	1411	C
32	QA	1412	C
32	QA	1413	A
32	QA	1419	G
32	QA	1432	G
32	QA	1433	A
32	QA	1441	A
32	QA	1442	G
32	QA	1446	A
32	QA	1448	C
32	QA	1451	U
32	QA	1452	C
32	QA	1453	G
32	QA	1454	G
32	QA	1455	G
32	QA	1469	C
32	QA	1470	U
32	QA	1474	U
32	QA	1475	G
32	QA	1476	A
32	QA	1490	U

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Mol	Chain	Res	Type
32	QA	1492	A
32	QA	1494	G
32	QA	1497	G
32	QA	1503	A
32	QA	1505	G
32	QA	1506	U
32	QA	1509	C
32	QA	1517	G
32	QA	1529	G
32	QA	1530	G
32	QA	1531	A
32	XA	6	G
32	XA	7	A
32	XA	8	A
32	XA	9	G
32	XA	14	U
32	XA	15	G
32	XA	22	G
32	XA	32	A
32	XA	39	G
32	XA	47	C
32	XA	48	C
32	XA	51	A
32	XA	61	G
32	XA	64	G
32	XA	65	A
32	XA	66	A
32	XA	67	C
32	XA	68	G
32	XA	71	A
32	XA	72	A
32	XA	73	C
32	XA	76	G
32	XA	77	A
32	XA	80	A
32	XA	81	A
32	XA	82	G
32	XA	83	C
32	XA	84	U
32	XA	85	U
32	XA	86	G
32	XA	87	C

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Mol	Chain	Res	Type
32	XA	88	U
32	XA	89	U
32	XA	90	C
32	XA	91	U
32	XA	92	U
32	XA	94	G
32	XA	95	C
32	XA	96	U
32	XA	98	A
32	XA	101	A
32	XA	109	A
32	XA	110	C
32	XA	116	A
32	XA	120	A
32	XA	121	U
32	XA	122	G
32	XA	129	A
32	XA	131	A
32	XA	132	C
32	XA	141	G
32	XA	143	A
32	XA	144	G
32	XA	154	U
32	XA	155	A
32	XA	164	G
32	XA	166	U
32	XA	167	A
32	XA	169	C
32	XA	177	G
32	XA	178	C
32	XA	181	A
32	XA	182	A
32	XA	191	G
32	XA	198	G
32	XA	199	A
32	XA	201	G
32	XA	206	C
32	XA	207	C
32	XA	208	U
32	XA	209	U
32	XA	210	C
32	XA	211	G

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Mol	Chain	Res	Type
32	XA	212	G
32	XA	214	C
32	XA	239	U
32	XA	240	G
32	XA	243	A
32	XA	244	U
32	XA	245	U
32	XA	246	A
32	XA	247	G
32	XA	248	C
32	XA	250	A
32	XA	251	G
32	XA	252	U
32	XA	253	A
32	XA	258	G
32	XA	262	A
32	XA	266	G
32	XA	267	C
32	XA	268	U
32	XA	275	G
32	XA	279	A
32	XA	280	C
32	XA	289	G
32	XA	298	A
32	XA	301	G
32	XA	305	G
32	XA	306	A
32	XA	316	C
32	XA	321	A
32	XA	328	C
32	XA	329	A
32	XA	330	C
32	XA	331	G
32	XA	332	G
32	XA	338	A
32	XA	339	C
32	XA	345	C
32	XA	346	G
32	XA	347	G
32	XA	348	G
32	XA	352	C
32	XA	353	A

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Mol	Chain	Res	Type
32	XA	354	G
32	XA	366	A
32	XA	367	U
32	XA	368	U
32	XA	369	G
32	XA	372	C
32	XA	373	A
32	XA	374	A
32	XA	381	C
32	XA	382	A
32	XA	383	A
32	XA	384	G
32	XA	397	A
32	XA	398	U
32	XA	406	G
32	XA	408	A
32	XA	409	U
32	XA	411	A
32	XA	412	A
32	XA	413	G
32	XA	415	A
32	XA	418	C
32	XA	421	U
32	XA	422	C
32	XA	423	G
32	XA	424	G
32	XA	425	G
32	XA	429	U
32	XA	430	A
32	XA	435	A
32	XA	436	C
32	XA	448	A
32	XA	451	A
32	XA	452	A
32	XA	456	A
32	XA	457	G
32	XA	458	U
32	XA	461	A
32	XA	462	G
32	XA	463	U
32	XA	464	U
32	XA	466	A

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Mol	Chain	Res	Type
32	XA	467	U
32	XA	468	A
32	XA	474	G
32	XA	476	U
32	XA	477	C
32	XA	478	A
32	XA	479	U
32	XA	481	G
32	XA	484	G
32	XA	485	U
32	XA	486	U
32	XA	493	A
32	XA	496	A
32	XA	497	G
32	XA	500	G
32	XA	501	C
32	XA	509	A
32	XA	511	C
32	XA	512	U
32	XA	513	C
32	XA	518	C
32	XA	519	C
32	XA	520	A
32	XA	522	C
32	XA	527	G
32	XA	530	G
32	XA	531	U
32	XA	532	A
32	XA	533	A
32	XA	534	U
32	XA	535	A
32	XA	536	C
32	XA	547	A
32	XA	550	G
32	XA	559	A
32	XA	562	U
32	XA	563	A
32	XA	564	C
32	XA	568	G
32	XA	572	A
32	XA	573	A
32	XA	576	C

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Mol	Chain	Res	Type
32	XA	577	G
32	XA	579	A
32	XA	595	A
32	XA	604	G
32	XA	616	G
32	XA	617	G
32	XA	628	G
32	XA	633	G
32	XA	641	U
32	XA	642	A
32	XA	643	C
32	XA	653	U
32	XA	665	A
32	XA	687	A
32	XA	694	A
32	XA	695	A
32	XA	700	G
32	XA	701	U
32	XA	702	A
32	XA	703	G
32	XA	704	A
32	XA	705	G
32	XA	721	G
32	XA	723	U
32	XA	724	G
32	XA	731	G
32	XA	748	G
32	XA	753	A
32	XA	754	C
32	XA	755	G
32	XA	758	C
32	XA	776	G
32	XA	777	A
32	XA	781	A
32	XA	782	A
32	XA	785	G
32	XA	787	A
32	XA	792	A
32	XA	793	U
32	XA	794	A
32	XA	803	G
32	XA	812	G

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Mol	Chain	Res	Type
32	XA	813	U
32	XA	815	A
32	XA	817	C
32	XA	820	U
32	XA	828	U
32	XA	829	G
32	XA	841	C
32	XA	842	U
32	XA	843	U
32	XA	844	G
32	XA	845	A
32	XA	846	G
32	XA	847	G
32	XA	849	G
32	XA	880	C
32	XA	889	A
32	XA	890	G
32	XA	913	A
32	XA	914	A
32	XA	926	G
32	XA	927	G
32	XA	934	C
32	XA	935	A
32	XA	936	C
32	XA	942	G
32	XA	945	G
32	XA	960	U
32	XA	961	U
32	XA	962	C
32	XA	966	G
32	XA	968	A
32	XA	969	A
32	XA	972	C
32	XA	974	A
32	XA	975	A
32	XA	976	G
32	XA	977	A
32	XA	982	U
32	XA	985	C
32	XA	990	C
32	XA	991	U
32	XA	992	U

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Mol	Chain	Res	Type
32	XA	993	G
32	XA	995	C
32	XA	996	A
32	XA	1000	A
32	XA	1004	A
32	XA	1007	U
32	XA	1009	U
32	XA	1016	A
32	XA	1019	A
32	XA	1020	G
32	XA	1022	A
32	XA	1026	G
32	XA	1028	C
32	XA	1029	U
32	XA	1031	C
32	XA	1032	G
32	XA	1036	A
32	XA	1037	C
32	XA	1050	G
32	XA	1051	C
32	XA	1052	U
32	XA	1053	G
32	XA	1054	C
32	XA	1065	U
32	XA	1066	C
32	XA	1067	A
32	XA	1068	G
32	XA	1086	U
32	XA	1087	G
32	XA	1094	G
32	XA	1095	U
32	XA	1101	A
32	XA	1102	A
32	XA	1118	U
32	XA	1119	C
32	XA	1125	U
32	XA	1130	A
32	XA	1131	G
32	XA	1136	C
32	XA	1137	C
32	XA	1138	G
32	XA	1139	G

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Mol	Chain	Res	Type
32	XA	1140	C
32	XA	1141	C
32	XA	1142	G
32	XA	1143	G
32	XA	1145	A
32	XA	1146	A
32	XA	1147	C
32	XA	1148	U
32	XA	1150	A
32	XA	1151	A
32	XA	1152	A
32	XA	1158	C
32	XA	1159	U
32	XA	1160	G
32	XA	1161	C
32	XA	1167	A
32	XA	1169	A
32	XA	1175	G
32	XA	1178	G
32	XA	1181	G
32	XA	1183	U
32	XA	1184	G
32	XA	1191	A
32	XA	1193	G
32	XA	1196	A
32	XA	1197	A
32	XA	1201	A
32	XA	1202	U
32	XA	1212	U
32	XA	1213	A
32	XA	1214	C
32	XA	1215	G
32	XA	1216	A
32	XA	1217	C
32	XA	1219	A
32	XA	1222	G
32	XA	1224	U
32	XA	1225	A
32	XA	1226	C
32	XA	1228	C
32	XA	1229	A
32	XA	1232	U

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Mol	Chain	Res	Type
32	XA	1238	A
32	XA	1239	A
32	XA	1240	U
32	XA	1241	G
32	XA	1243	C
32	XA	1250	A
32	XA	1251	A
32	XA	1256	A
32	XA	1257	A
32	XA	1260	G
32	XA	1266	G
32	XA	1272	G
32	XA	1278	G
32	XA	1279	G
32	XA	1280	A
32	XA	1281	C
32	XA	1282	C
32	XA	1283	U
32	XA	1285	A
32	XA	1286	U
32	XA	1287	A
32	XA	1288	A
32	XA	1294	G
32	XA	1295	U
32	XA	1297	G
32	XA	1298	U
32	XA	1299	A
32	XA	1300	G
32	XA	1301	U
32	XA	1302	C
32	XA	1303	C
32	XA	1305	G
32	XA	1316	G
32	XA	1317	C
32	XA	1319	A
32	XA	1320	C
32	XA	1322	C
32	XA	1323	G
32	XA	1324	A
32	XA	1332	A
32	XA	1335	U
32	XA	1337	G

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Mol	Chain	Res	Type
32	XA	1338	G
32	XA	1348	U
32	XA	1349	A
32	XA	1359	C
32	XA	1362	A
32	XA	1364	U
32	XA	1365	G
32	XA	1366	C
32	XA	1367	C
32	XA	1379	G
32	XA	1381	U
32	XA	1382	C
32	XA	1395	C
32	XA	1398	A
32	XA	1411	C
32	XA	1429	A
32	XA	1432	G
32	XA	1441	A
32	XA	1446	A
32	XA	1447	A
32	XA	1448	C
32	XA	1449	C
32	XA	1452	C
32	XA	1453	G
32	XA	1454	G
32	XA	1455	G
32	XA	1490	U
32	XA	1491	G
32	XA	1493	A
32	XA	1494	G
32	XA	1497	G
32	XA	1503	A
32	XA	1506	U
32	XA	1517	G
32	XA	1519	A
32	XA	1520	C
32	XA	1529	G
32	XA	1530	G
32	XA	1534	A
1	YA	10	A
1	YA	14	A
1	YA	15	G

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Mol	Chain	Res	Type
1	YA	27	G
1	YA	28	A
1	YA	34	U
1	YA	35	G
1	YA	36	G
1	YA	39	G
1	YA	41	C
1	YA	46	G
1	YA	49	A
1	YA	50	U
1	YA	52	A
1	YA	53	A
1	YA	55	G
1	YA	61	C
1	YA	62	U
1	YA	64	A
1	YA	71	A
1	YA	73	A
1	YA	74	A
1	YA	75	G
1	YA	76	C
1	YA	77	G
1	YA	79	C
1	YA	83	A
1	YA	84	A
1	YA	85	G
1	YA	86	G
1	YA	87	U
1	YA	91	A
1	YA	100	U
1	YA	101	A
1	YA	102	U
1	YA	103	A
1	YA	104	A
1	YA	118	A
1	YA	119	A
1	YA	120	U
1	YA	121	G
1	YA	122	G
1	YA	126	A
1	YA	128	C
1	YA	129	C

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Mol	Chain	Res	Type
1	YA	134	G
1	YA	139	U
1	YA	140	C
1	YA	141	G
1	YA	142	A
1	YA	144	A
1	YA	155	A
1	YA	156	A
1	YA	158	U
1	YA	160	A
1	YA	163	C
1	YA	164	C
1	YA	166	U
1	YA	177	G
1	YA	180	G
1	YA	181	A
1	YA	196	A
1	YA	199	A
1	YA	204	A
1	YA	205	G
1	YA	206	U
1	YA	207	A
1	YA	215	G
1	YA	216	A
1	YA	217	A
1	YA	221	A
1	YA	222	A
1	YA	223	A
1	YA	224	U
1	YA	227	A
1	YA	228	C
1	YA	229	C
1	YA	230	G
1	YA	231	A
1	YA	233	A
1	YA	234	U
1	YA	235	U
1	YA	241	A
1	YA	242	G
1	YA	245	G
1	YA	248	G
1	YA	249	C

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Mol	Chain	Res	Type
1	YA	250	G
1	YA	251	A
1	YA	255	A
1	YA	259	G
1	YA	264	C
1	YA	265	A
1	YA	266	G
1	YA	271	G
1	YA	272	A
1	YA	273	G
1	YA	277	G
1	YA	278	A
1	YA	281	C
1	YA	284	U
1	YA	285	G
1	YA	294	A
1	YA	295	G
1	YA	299	A
1	YA	302	C
1	YA	303	G
1	YA	311	A
1	YA	312	G
1	YA	314	C
1	YA	321	U
1	YA	322	A
1	YA	323	C
1	YA	324	A
1	YA	325	G
1	YA	329	G
1	YA	330	A
1	YA	334	C
1	YA	335	C
1	YA	336	C
1	YA	349	U
1	YA	351	C
1	YA	353	C
1	YA	354	A
1	YA	362	A
1	YA	367	G
1	YA	370	G
1	YA	371	A
1	YA	372	G

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Mol	Chain	Res	Type
1	YA	374	A
1	YA	383	C
1	YA	385	C
1	YA	386	G
1	YA	387	U
1	YA	388	G
1	YA	389	G
1	YA	390	U
1	YA	396	G
1	YA	397	U
1	YA	399	U
1	YA	404	A
1	YA	405	U
1	YA	406	G
1	YA	407	G
1	YA	411	G
1	YA	412	A
1	YA	413	C
1	YA	421	C
1	YA	423	A
1	YA	424	G
1	YA	430	A
1	YA	436	C
1	YA	443	A
1	YA	444	C
1	YA	445	C
1	YA	446	G
1	YA	447	A
1	YA	451	U
1	YA	455	C
1	YA	457	A
1	YA	461	C
1	YA	462	C
1	YA	475	C
1	YA	477	A
1	YA	480	A
1	YA	481	G
1	YA	482	A
1	YA	483	A
1	YA	484	C
1	YA	489	G
1	YA	490	C

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Mol	Chain	Res	Type
1	YA	491	G
1	YA	492	A
1	YA	498	G
1	YA	502	A
1	YA	503	A
1	YA	504	A
1	YA	505	A
1	YA	507	A
1	YA	509	C
1	YA	510	C
1	YA	512	G
1	YA	527	C
1	YA	528	A
1	YA	529	A
1	YA	532	A
1	YA	533	G
1	YA	544	C
1	YA	546	U
1	YA	547	A
1	YA	548	G
1	YA	549	G
1	YA	550	C
1	YA	563	A
1	YA	572	A
1	YA	573	U
1	YA	575	A
1	YA	576	U
1	YA	586	A
1	YA	587	C
1	YA	590	A
1	YA	592	A
1	YA	603	A
1	YA	604	G
1	YA	605	G
1	YA	609	A
1	YA	613	A
1	YA	614	A
1	YA	616	A
1	YA	617	G
1	YA	618	G
1	YA	620	G
1	YA	621	A

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Mol	Chain	Res	Type
1	YA	622	G
1	YA	623	C
1	YA	627	A
1	YA	628	G
1	YA	631	A
1	YA	634	C
1	YA	637	A
1	YA	638	G
1	YA	639	U
1	YA	645	C
1	YA	646	U
1	YA	649	G
1	YA	653	U
1	YA	654	A
1	YA	655	A
1	YA	656	G
1	YA	662	G
1	YA	664	G
1	YA	671	C
1	YA	672	C
1	YA	685	A
1	YA	686	U
1	YA	695	G
1	YA	699	A
1	YA	711	G
1	YA	717	C
1	YA	726	G
1	YA	728	G
1	YA	729	G
1	YA	730	A
1	YA	740	C
1	YA	741	U
1	YA	745	G
1	YA	746	U
1	YA	747	U
1	YA	748	G
1	YA	749	A
1	YA	751	A
1	YA	753	A
1	YA	757	G
1	YA	763	G
1	YA	764	A

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Mol	Chain	Res	Type
1	YA	770	G
1	YA	775	G
1	YA	776	G
1	YA	782	A
1	YA	784	G
1	YA	785	G
1	YA	789	A
1	YA	790	U
1	YA	791	C
1	YA	792	A
1	YA	801	G
1	YA	805	G
1	YA	806	C
1	YA	807	U
1	YA	812	C
1	YA	819	A
1	YA	827	U
1	YA	828	U
1	YA	846	U
1	YA	847	U
1	YA	858	G
1	YA	859	G
1	YA	860	U
1	YA	861	A
1	YA	866	A
1	YA	867	C
1	YA	868	U
1	YA	873	C
1	YA	875	G
1	YA	877	A
1	YA	878	A
1	YA	902	C
1	YA	905	A
1	YA	910	A
1	YA	911	A
1	YA	912	C
1	YA	914	G
1	YA	915	C
1	YA	916	G
1	YA	919	U
1	YA	922	C
1	YA	931	U

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Mol	Chain	Res	Type
1	YA	932	U
1	YA	933	A
1	YA	941	A
1	YA	946	C
1	YA	953	G
1	YA	958	U
1	YA	961	C
1	YA	963	U
1	YA	964	C
1	YA	973	A
1	YA	974	G
1	YA	976	G
1	YA	981	A
1	YA	983	A
1	YA	985	C
1	YA	990	A
1	YA	991	C
1	YA	996	A
1	YA	1005	C
1	YA	1009	A
1	YA	1010	A
1	YA	1012	U
1	YA	1013	C
1	YA	1020	A
1	YA	1021	A
1	YA	1022	G
1	YA	1023	U
1	YA	1024	G
1	YA	1025	G
1	YA	1026	G
1	YA	1027	A
1	YA	1033	U
1	YA	1034	G
1	YA	1044	C
1	YA	1045	C
1	YA	1046	A
1	YA	1047	G
1	YA	1048	A
1	YA	1050	A
1	YA	1055	G
1	YA	1056	G
1	YA	1057	A

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Mol	Chain	Res	Type
1	YA	1060	U
1	YA	1063	G
1	YA	1068	G
1	YA	1069	A
1	YA	1070	A
1	YA	1071	G
1	YA	1072	C
1	YA	1073	A
1	YA	1074	G
1	YA	1076	C
1	YA	1077	A
1	YA	1079	C
1	YA	1080	A
1	YA	1083	U
1	YA	1086	A
1	YA	1088	A
1	YA	1089	A
1	YA	1090	A
1	YA	1091	G
1	YA	1097	U
1	YA	1100	C
1	YA	1103	A
1	YA	1110	G
1	YA	1111	A
1	YA	1112	G
1	YA	1114	C
1	YA	1115	G
1	YA	1116	G
1	YA	1119	U
1	YA	1127	A
1	YA	1128	G
1	YA	1129	A
1	YA	1130	U
1	YA	1132	U
1	YA	1133	A
1	YA	1134	A
1	YA	1135	C
1	YA	1136	G
1	YA	1139	G
1	YA	1142	A
1	YA	1155	A
1	YA	1157	G

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Mol	Chain	Res	Type
1	YA	1158	C
1	YA	1169	A
1	YA	1170	C
1	YA	1172	C
1	YA	1174	U
1	YA	1176	U
1	YA	1195	G
1	YA	1204	A
1	YA	1205	A
1	YA	1206	G
1	YA	1207	C
1	YA	1211	C
1	YA	1227	G
1	YA	1231	U
1	YA	1235	G
1	YA	1236	G
1	YA	1237	A
1	YA	1238	G
1	YA	1241	A
1	YA	1242	U
1	YA	1246	A
1	YA	1247	A
1	YA	1249	U
1	YA	1253	A
1	YA	1255	U
1	YA	1256	G
1	YA	1262	A
1	YA	1266	G
1	YA	1267	U
1	YA	1268	A
1	YA	1271	G
1	YA	1272	A
1	YA	1273	U
1	YA	1274	A
1	YA	1275	A
1	YA	1276	A
1	YA	1278	C
1	YA	1286	A
1	YA	1287	A
1	YA	1288	G
1	YA	1290	C
1	YA	1291	C

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Mol	Chain	Res	Type
1	YA	1300	G
1	YA	1301	A
1	YA	1304	A
1	YA	1311	G
1	YA	1312	U
1	YA	1313	U
1	YA	1317	G
1	YA	1321	A
1	YA	1324	G
1	YA	1325	U
1	YA	1326	U
1	YA	1327	A
1	YA	1330	C
1	YA	1331	G
1	YA	1332	G
1	YA	1336	A
1	YA	1337	G
1	YA	1340	U
1	YA	1341	G
1	YA	1342	A
1	YA	1343	G
1	YA	1344	U
1	YA	1345	C
1	YA	1346	G
1	YA	1349	C
1	YA	1352	U
1	YA	1355	G
1	YA	1360	G
1	YA	1365	A
1	YA	1368	G
1	YA	1374	G
1	YA	1376	C
1	YA	1379	U
1	YA	1380	G
1	YA	1382	G
1	YA	1383	A
1	YA	1386	C
1	YA	1387	A
1	YA	1388	G
1	YA	1389	G
1	YA	1397	U
1	YA	1398	C

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Mol	Chain	Res	Type
1	YA	1399	C
1	YA	1400	U
1	YA	1401	G
1	YA	1403	A
1	YA	1404	C
1	YA	1416	G
1	YA	1417	C
1	YA	1418	G
1	YA	1419	A
1	YA	1420	A
1	YA	1421	G
1	YA	1424	G
1	YA	1426	G
1	YA	1427	A
1	YA	1428	C
1	YA	1430	G
1	YA	1437	C
1	YA	1440	U
1	YA	1444	G
1	YA	1452	G
1	YA	1453	A
1	YA	1455	G
1	YA	1456	G
1	YA	1459	G
1	YA	1460	U
1	YA	1461	C
1	YA	1470	A
1	YA	1478	G
1	YA	1481	U
1	YA	1482	G
1	YA	1483	G
1	YA	1489	C
1	YA	1490	A
1	YA	1491	G
1	YA	1493	C
1	YA	1494	A
1	YA	1498	C
1	YA	1504	A
1	YA	1507	C
1	YA	1508	A
1	YA	1509	A
1	YA	1510	G

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Mol	Chain	Res	Type
1	YA	1511	G
1	YA	1520	U
1	YA	1522	A
1	YA	1523	U
1	YA	1524	G
1	YA	1531	C
1	YA	1532	A
1	YA	1534	U
1	YA	1535	A
1	YA	1536	C
1	YA	1537	G
1	YA	1538	G
1	YA	1539	U
1	YA	1541	C
1	YA	1555	G
1	YA	1556	C
1	YA	1559	U
1	YA	1560	G
1	YA	1565	C
1	YA	1567	G
1	YA	1568	G
1	YA	1569	A
1	YA	1583	A
1	YA	1584	U
1	YA	1585	C
1	YA	1586	A
1	YA	1587	G
1	YA	1600	C
1	YA	1601	G
1	YA	1602	U
1	YA	1603	A
1	YA	1606	C
1	YA	1607	C
1	YA	1608	A
1	YA	1610	A
1	YA	1612	C
1	YA	1613	G
1	YA	1616	A
1	YA	1618	A
1	YA	1626	A
1	YA	1633	G
1	YA	1635	A

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Mol	Chain	Res	Type
1	YA	1636	U
1	YA	1640	A
1	YA	1646	C
1	YA	1647	U
1	YA	1648	U
1	YA	1649	G
1	YA	1654	A
1	YA	1655	A
1	YA	1661	G
1	YA	1663	G
1	YA	1674	G
1	YA	1682	G
1	YA	1683	U
1	YA	1695	G
1	YA	1696	G
1	YA	1699	G
1	YA	1700	A
1	YA	1701	A
1	YA	1707	G
1	YA	1714	U
1	YA	1715	G
1	YA	1717	A
1	YA	1722	A
1	YA	1723	G
1	YA	1728	C
1	YA	1729	U
1	YA	1730	C
1	YA	1731	G
1	YA	1732	C
1	YA	1733	G
1	YA	1734	G
1	YA	1735	A
1	YA	1738	G
1	YA	1750	G
1	YA	1758	U
1	YA	1764	C
1	YA	1773	A
1	YA	1776	G
1	YA	1782	U
1	YA	1787	A
1	YA	1800	C
1	YA	1802	A

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Mol	Chain	Res	Type
1	YA	1808	A
1	YA	1809	A
1	YA	1810	A
1	YA	1811	G
1	YA	1817	G
1	YA	1818	U
1	YA	1820	U
1	YA	1821	A
1	YA	1822	C
1	YA	1823	G
1	YA	1824	G
1	YA	1828	G
1	YA	1829	A
1	YA	1834	U
1	YA	1847	A
1	YA	1848	A
1	YA	1857	G
1	YA	1865	U
1	YA	1866	A
1	YA	1867	G
1	YA	1869	G
1	YA	1870	C
1	YA	1873	G
1	YA	1875	G
1	YA	1876	A
1	YA	1877	A
1	YA	1884	G
1	YA	1889	A
1	YA	1903	G
1	YA	1906	G
1	YA	1913	A
1	YA	1914	C
1	YA	1915	U
1	YA	1916	A
1	YA	1927	A
1	YA	1929	G
1	YA	1930	G
1	YA	1931	U
1	YA	1937	A
1	YA	1938	A
1	YA	1939	U
1	YA	1941	C

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Mol	Chain	Res	Type
1	YA	1942	C
1	YA	1944	U
1	YA	1945	G
1	YA	1955	U
1	YA	1956	U
1	YA	1963	U
1	YA	1964	G
1	YA	1965	C
1	YA	1966	A
1	YA	1967	C
1	YA	1970	A
1	YA	1971	U
1	YA	1972	G
1	YA	1975	G
1	YA	1981	A
1	YA	1982	U
1	YA	1993	U
1	YA	1997	C
1	YA	2018	G
1	YA	2020	A
1	YA	2022	U
1	YA	2023	C
1	YA	2024	G
1	YA	2031	A
1	YA	2033	A
1	YA	2034	U
1	YA	2035	G
1	YA	2043	C
1	YA	2049	G
1	YA	2055	C
1	YA	2056	G
1	YA	2060	A
1	YA	2061	G
1	YA	2062	A
1	YA	2068	U
1	YA	2069	G
1	YA	2079	U
1	YA	2080	A
1	YA	2092	U
1	YA	2093	G
1	YA	2094	A
1	YA	2104	C

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Mol	Chain	Res	Type
1	YA	2105	U
1	YA	2108	A
1	YA	2109	U
1	YA	2110	G
1	YA	2134	A
1	YA	2135	A
1	YA	2136	G
1	YA	2138	G
1	YA	2139	U
1	YA	2143	C
1	YA	2144	G
1	YA	2145	C
1	YA	2146	C
1	YA	2147	A
1	YA	2148	G
1	YA	2150	C
1	YA	2152	G
1	YA	2153	C
1	YA	2154	A
1	YA	2156	G
1	YA	2157	G
1	YA	2181	U
1	YA	2183	A
1	YA	2187	U
1	YA	2191	A
1	YA	2192	U
1	YA	2194	U
1	YA	2199	A
1	YA	2203	U
1	YA	2204	G
1	YA	2210	U
1	YA	2211	A
1	YA	2212	A
1	YA	2213	U
1	YA	2216	G
1	YA	2225	A
1	YA	2238	G
1	YA	2239	G
1	YA	2250	G
1	YA	2267	A
1	YA	2268	A
1	YA	2279	G

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Mol	Chain	Res	Type
1	YA	2283	C
1	YA	2286	G
1	YA	2287	A
1	YA	2289	G
1	YA	2297	A
1	YA	2298	A
1	YA	2299	U
1	YA	2305	U
1	YA	2306	C
1	YA	2308	G
1	YA	2309	A
1	YA	2310	C
1	YA	2311	A
1	YA	2312	U
1	YA	2313	C
1	YA	2314	A
1	YA	2320	U
1	YA	2321	U
1	YA	2322	A
1	YA	2325	G
1	YA	2332	C
1	YA	2334	U
1	YA	2335	A
1	YA	2337	G
1	YA	2338	C
1	YA	2339	C
1	YA	2345	G
1	YA	2347	C
1	YA	2348	U
1	YA	2358	A
1	YA	2361	G
1	YA	2379	G
1	YA	2382	G
1	YA	2383	G
1	YA	2385	C
1	YA	2386	A
1	YA	2387	U
1	YA	2388	A
1	YA	2390	U
1	YA	2392	A
1	YA	2401	U
1	YA	2402	U

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Mol	Chain	Res	Type
1	YA	2403	C
1	YA	2405	G
1	YA	2407	A
1	YA	2409	G
1	YA	2423	U
1	YA	2424	C
1	YA	2425	A
1	YA	2426	A
1	YA	2427	C
1	YA	2428	G
1	YA	2429	G
1	YA	2430	A
1	YA	2431	U
1	YA	2435	A
1	YA	2441	U
1	YA	2447	G
1	YA	2448	A
1	YA	2469	A
1	YA	2475	C
1	YA	2476	A
1	YA	2491	U
1	YA	2494	G
1	YA	2498	C
1	YA	2502	G
1	YA	2505	G
1	YA	2506	U
1	YA	2513	A
1	YA	2514	U
1	YA	2518	A
1	YA	2520	C
1	YA	2529	G
1	YA	2534	A
1	YA	2535	G
1	YA	2541	A
1	YA	2542	A
1	YA	2543	G
1	YA	2544	G
1	YA	2547	A
1	YA	2554	U
1	YA	2555	U
1	YA	2566	A
1	YA	2567	G

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Mol	Chain	Res	Type
1	YA	2573	C
1	YA	2574	G
1	YA	2576	G
1	YA	2578	G
1	YA	2579	C
1	YA	2586	U
1	YA	2602	A
1	YA	2603	G
1	YA	2606	C
1	YA	2609	U
1	YA	2612	C
1	YA	2613	U
1	YA	2614	A
1	YA	2615	U
1	YA	2616	C
1	YA	2618	G
1	YA	2620	C
1	YA	2629	U
1	YA	2630	G
1	YA	2632	A
1	YA	2638	G
1	YA	2639	A
1	YA	2645	G
1	YA	2646	C
1	YA	2656	U
1	YA	2657	A
1	YA	2666	C
1	YA	2667	C
1	YA	2681	C
1	YA	2682	A
1	YA	2683	C
1	YA	2689	U
1	YA	2690	U
1	YA	2714	G
1	YA	2718	G
1	YA	2726	A
1	YA	2727	A
1	YA	2728	U
1	YA	2729	G
1	YA	2732	G
1	YA	2736	A
1	YA	2744	G

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Mol	Chain	Res	Type
1	YA	2748	A
1	YA	2751	G
1	YA	2752	C
1	YA	2753	A
1	YA	2757	A
1	YA	2758	A
1	YA	2761	A
1	YA	2765	A
1	YA	2766	A
1	YA	2777	G
1	YA	2778	A
1	YA	2791	G
1	YA	2798	U
1	YA	2799	A
1	YA	2808	G
1	YA	2820	A
1	YA	2822	G
1	YA	2832	U
1	YA	2834	G
1	YA	2835	A
1	YA	2836	U
1	YA	2837	A
1	YA	2850	A
1	YA	2851	A
1	YA	2861	U
1	YA	2867	G
1	YA	2872	A
1	YA	2874	C
1	YA	2875	C
1	YA	2876	G
1	YA	2879	A
1	YA	2880	C
1	YA	2883	A
1	YA	2894	G
1	YA	2895	G
2	YB	11	C
2	YB	13	G
2	YB	15	A
2	YB	16	G
2	YB	17	C
2	YB	24	G
2	YB	25	U

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Mol	Chain	Res	Type
2	YB	30	C
2	YB	35	C
2	YB	36	C
2	YB	40	U
2	YB	41	G
2	YB	42	C
2	YB	43	C
2	YB	44	G
2	YB	45	A
2	YB	48	U
2	YB	57	A
2	YB	58	A
2	YB	60	C
2	YB	64	G
2	YB	65	U
2	YB	66	A
2	YB	67	G
2	YB	68	C
2	YB	87	U
2	YB	89	U
2	YB	90	C
2	YB	91	C
2	YB	99	A
2	YB	109	A
2	YB	110	C
2	YB	111	U

All (359) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	RA	34	U
1	RA	60	G
1	RA	100	U
1	RA	137	U
1	RA	164	C
1	RA	199	A
1	RA	229	C
1	RA	271	G
1	RA	301	G
1	RA	310	A
1	RA	404	A
1	RA	479	A

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Mol	Chain	Res	Type
1	RA	507	A
1	RA	527	C
1	RA	555	G
1	RA	614	A
1	RA	655	A
1	RA	746	U
1	RA	764	A
1	RA	914	G
1	RA	931	U
1	RA	958	U
1	RA	995	C
1	RA	1011	G
1	RA	1020	A
1	RA	1023	U
1	RA	1062	G
1	RA	1110	G
1	RA	1150	C
1	RA	1247	A
1	RA	1275	A
1	RA	1287	A
1	RA	1378	A
1	RA	1379	U
1	RA	1458	U
1	RA	1459	G
1	RA	1475	G
1	RA	1535	A
1	RA	1537	G
1	RA	1554	U
1	RA	1606	C
1	RA	1626	A
1	RA	1695	G
1	RA	1706	C
1	RA	1714	U
1	RA	1738	G
1	RA	1816	C
1	RA	1847	A
1	RA	1857	G
1	RA	1858	A
1	RA	1871	A
1	RA	1941	C
1	RA	2062	A
1	RA	2136	G

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Mol	Chain	Res	Type
1	RA	2148	G
1	RA	2149	U
1	RA	2199	A
1	RA	2225	A
1	RA	2275	C
1	RA	2282	G
1	RA	2296	U
1	RA	2311	A
1	RA	2321	U
1	RA	2324	U
1	RA	2326	C
1	RA	2383	G
1	RA	2406	A
1	RA	2425	A
1	RA	2430	A
1	RA	2602	A
1	RA	2756	U
1	RA	2800	A
1	RA	2820	A
1	RA	2873	A
32	QA	51	A
32	QA	72	A
32	QA	87	C
32	QA	95	C
32	QA	110	C
32	QA	115	G
32	QA	175	C
32	QA	184	G
32	QA	198	G
32	QA	250	A
32	QA	266	G
32	QA	267	C
32	QA	274	A
32	QA	330	C
32	QA	346	G
32	QA	351	G
32	QA	366	A
32	QA	368	U
32	QA	373	A
32	QA	414	A
32	QA	429	U
32	QA	451	A

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Mol	Chain	Res	Type
32	QA	452	A
32	QA	484	G
32	QA	486	U
32	QA	495	A
32	QA	499	A
32	QA	500	G
32	QA	534	U
32	QA	548	G
32	QA	701	U
32	QA	722	G
32	QA	754	C
32	QA	884	U
32	QA	913	A
32	QA	982	U
32	QA	1049	U
32	QA	1066	C
32	QA	1101	A
32	QA	1136	C
32	QA	1158	C
32	QA	1201	A
32	QA	1228	C
32	QA	1241	G
32	QA	1282	C
32	QA	1287	A
32	QA	1303	C
32	QA	1323	G
32	QA	1331	G
32	QA	1336	C
32	QA	1348	U
32	QA	1381	U
32	QA	1432	G
32	QA	1453	G
32	QA	1454	G
32	QA	1505	G
32	XA	6	G
32	XA	14	U
32	XA	60	A
32	XA	66	A
32	XA	71	A
32	XA	72	A
32	XA	86	G
32	XA	87	C

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Mol	Chain	Res	Type
32	XA	95	C
32	XA	109	A
32	XA	131	A
32	XA	197	A
32	XA	243	A
32	XA	245	U
32	XA	247	G
32	XA	251	G
32	XA	252	U
32	XA	274	A
32	XA	279	A
32	XA	305	G
32	XA	328	C
32	XA	347	G
32	XA	351	G
32	XA	352	C
32	XA	366	A
32	XA	368	U
32	XA	372	C
32	XA	373	A
32	XA	382	A
32	XA	423	G
32	XA	424	G
32	XA	429	U
32	XA	451	A
32	XA	484	G
32	XA	496	A
32	XA	500	G
32	XA	512	U
32	XA	519	C
32	XA	534	U
32	XA	559	A
32	XA	563	A
32	XA	701	U
32	XA	752	G
32	XA	802	A
32	XA	913	A
32	XA	973	G
32	XA	977	A
32	XA	1049	U
32	XA	1064	G
32	XA	1066	C

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Mol	Chain	Res	Type
32	XA	1067	A
32	XA	1086	U
32	XA	1101	A
32	XA	1138	G
32	XA	1142	G
32	XA	1157	A
32	XA	1160	G
32	XA	1190	G
32	XA	1201	A
32	XA	1224	U
32	XA	1242	G
32	XA	1278	G
32	XA	1282	C
32	XA	1299	A
32	XA	1331	G
32	XA	1348	U
32	XA	1381	U
32	XA	1447	A
32	XA	1451	U
32	XA	1453	G
1	YA	14	A
1	YA	33	C
1	YA	35	G
1	YA	49	A
1	YA	52	A
1	YA	73	A
1	YA	86	G
1	YA	103	A
1	YA	121	G
1	YA	140	C
1	YA	179	C
1	YA	196	A
1	YA	204	A
1	YA	206	U
1	YA	215	G
1	YA	221	A
1	YA	223	A
1	YA	227	A
1	YA	234	U
1	YA	249	C
1	YA	311	A
1	YA	324	A

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Mol	Chain	Res	Type
1	YA	329	G
1	YA	386	G
1	YA	388	G
1	YA	389	G
1	YA	406	G
1	YA	412	A
1	YA	422	A
1	YA	423	A
1	YA	443	A
1	YA	454	A
1	YA	474	G
1	YA	479	A
1	YA	483	A
1	YA	489	G
1	YA	491	G
1	YA	503	A
1	YA	575	A
1	YA	604	G
1	YA	617	G
1	YA	621	A
1	YA	622	G
1	YA	638	G
1	YA	648	G
1	YA	670	A
1	YA	727	A
1	YA	740	C
1	YA	746	U
1	YA	762	U
1	YA	763	G
1	YA	800	A
1	YA	806	C
1	YA	915	C
1	YA	931	U
1	YA	984	A
1	YA	990	A
1	YA	1009	A
1	YA	1011	G
1	YA	1021	A
1	YA	1023	U
1	YA	1026	G
1	YA	1079	C
1	YA	1129	A

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Mol	Chain	Res	Type
1	YA	1135	C
1	YA	1157	G
1	YA	1204	A
1	YA	1206	G
1	YA	1210	G
1	YA	1267	U
1	YA	1274	A
1	YA	1275	A
1	YA	1312	U
1	YA	1325	U
1	YA	1339	G
1	YA	1385	A
1	YA	1388	G
1	YA	1398	C
1	YA	1399	C
1	YA	1400	U
1	YA	1417	C
1	YA	1427	A
1	YA	1455	G
1	YA	1482	G
1	YA	1489	C
1	YA	1510	G
1	YA	1537	G
1	YA	1555	G
1	YA	1612	C
1	YA	1635	A
1	YA	1648	U
1	YA	1654	A
1	YA	1682	G
1	YA	1695	G
1	YA	1700	A
1	YA	1706	C
1	YA	1713	A
1	YA	1731	G
1	YA	1733	G
1	YA	1734	G
1	YA	1775	U
1	YA	1799	G
1	YA	1810	A
1	YA	1816	C
1	YA	1817	G
1	YA	1828	G

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Mol	Chain	Res	Type
1	YA	1866	A
1	YA	1913	A
1	YA	1915	U
1	YA	1941	C
1	YA	1943	U
1	YA	1965	C
1	YA	1981	A
1	YA	2068	U
1	YA	2143	C
1	YA	2148	G
1	YA	2214	C
1	YA	2282	G
1	YA	2286	G
1	YA	2288	A
1	YA	2310	C
1	YA	2311	A
1	YA	2337	G
1	YA	2344	U
1	YA	2347	C
1	YA	2391	G
1	YA	2406	A
1	YA	2425	A
1	YA	2427	C
1	YA	2428	G
1	YA	2468	A
1	YA	2497	A
1	YA	2543	G
1	YA	2566	A
1	YA	2613	U
1	YA	2615	U
1	YA	2638	G
1	YA	2656	U
1	YA	2666	C
1	YA	2681	C
1	YA	2682	A
1	YA	2727	A
1	YA	2750	A
1	YA	2752	C
1	YA	2756	U
1	YA	2757	A
1	YA	2776	A
1	YA	2777	G

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Mol	Chain	Res	Type
1	YA	2798	U
1	YA	2850	A
1	YA	2866	U
1	YA	2874	C
1	YA	2875	C
2	YB	12	C
2	YB	13	G
2	YB	16	G
2	YB	56	G
2	YB	90	C
2	YB	110	C

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

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 364 ligands modelled in this entry, 363 are monoatomic - leaving 1 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	$\#\|Z\| > 2$
54	EM1	RA	3135	-	60,64,64	2.08	15 (25%)	78,97,97	2.90	30 (38%)

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	EM1	RA	3135	-	-	10/75/112/112	0/4/5/5

All (15) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	RA	3135	EM1	C76-C78	-6.68	1.37	1.47
54	RA	3135	EM1	N80-N81	-5.67	1.25	1.34
54	RA	3135	EM1	C21-C15	-4.70	1.49	1.53
54	RA	3135	EM1	C77-C72	-4.60	1.32	1.39
54	RA	3135	EM1	C21-C26	-4.07	1.50	1.54
54	RA	3135	EM1	O5-C2	-4.07	1.41	1.47
54	RA	3135	EM1	O32-C28	-3.61	1.37	1.44
54	RA	3135	EM1	N82-N81	-3.47	1.26	1.32
54	RA	3135	EM1	C74-C75	-3.17	1.33	1.38
54	RA	3135	EM1	C74-C73	-2.87	1.34	1.38
54	RA	3135	EM1	C73-C72	-2.87	1.34	1.40
54	RA	3135	EM1	C72-N71	2.66	1.47	1.38
54	RA	3135	EM1	C79-C78	-2.54	1.33	1.37
54	RA	3135	EM1	C28-C34	-2.51	1.48	1.55
54	RA	3135	EM1	C78-N82	-2.27	1.32	1.36

All (30) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	RA	3135	EM1	C8-C4-C2	-11.37	99.56	115.23
54	RA	3135	EM1	N80-N81-N82	8.27	114.46	107.02
54	RA	3135	EM1	C76-C77-C72	-6.26	115.50	120.66
54	RA	3135	EM1	O20-C15-C21	-5.35	117.22	123.36
54	RA	3135	EM1	O9-C15-C21	5.31	117.70	110.87
54	RA	3135	EM1	C79-N80-N81	-5.12	105.77	110.75
54	RA	3135	EM1	C84-C83-N80	-4.93	97.44	111.90
54	RA	3135	EM1	C73-C72-C77	4.86	124.87	118.62
54	RA	3135	EM1	O45-C42-C44	-4.71	100.70	110.37
54	RA	3135	EM1	O9-C4-C2	4.54	115.73	105.48
54	RA	3135	EM1	O5-C2-C4	4.39	115.36	105.63
54	RA	3135	EM1	C2-O5-C10	-4.38	105.41	109.23
54	RA	3135	EM1	C42-O45-C50	-4.36	106.18	112.91
54	RA	3135	EM1	C78-N82-N81	-3.82	105.13	109.23
54	RA	3135	EM1	C55-C50-C54	-3.67	107.71	113.27
54	RA	3135	EM1	C54-C49-N53	-3.43	105.95	115.59
54	RA	3135	EM1	C83-N80-N81	3.29	127.39	120.78
54	RA	3135	EM1	O16-C10-N6	-3.28	123.74	128.08
54	RA	3135	EM1	C3-N6-C10	-3.23	107.28	111.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	RA	3135	EM1	O5-C2-C3	-3.19	100.03	103.28
54	RA	3135	EM1	O5-C10-O16	3.12	126.30	122.54
54	RA	3135	EM1	O45-C50-C54	2.69	113.18	109.34
54	RA	3135	EM1	C44-C49-N53	2.47	118.07	110.94
54	RA	3135	EM1	O45-C50-C55	2.46	111.50	106.88
54	RA	3135	EM1	C19-C13-C7	2.28	122.98	119.13
54	RA	3135	EM1	C77-C72-N71	-2.14	116.96	120.56
54	RA	3135	EM1	C78-C79-N80	2.12	106.99	105.28
54	RA	3135	EM1	C38-O32-C28	-2.06	113.32	117.51
54	RA	3135	EM1	C76-C78-N82	2.03	125.32	122.05
54	RA	3135	EM1	C54-C49-C44	-2.02	107.12	110.02

There are no chirality outliers.

All (10) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
54	RA	3135	EM1	O9-C4-C8-C14
54	RA	3135	EM1	C21-C15-O9-C4
54	RA	3135	EM1	O9-C15-C21-C26
54	RA	3135	EM1	O20-C15-C21-C26
54	RA	3135	EM1	O20-C15-O9-C4
54	RA	3135	EM1	N80-C83-C84-C17
54	RA	3135	EM1	C8-C4-O9-C15
54	RA	3135	EM1	C2-C4-C8-C14
54	RA	3135	EM1	N6-C11-C17-C84
54	RA	3135	EM1	C54-C49-N53-C58

There are no ring outliers.

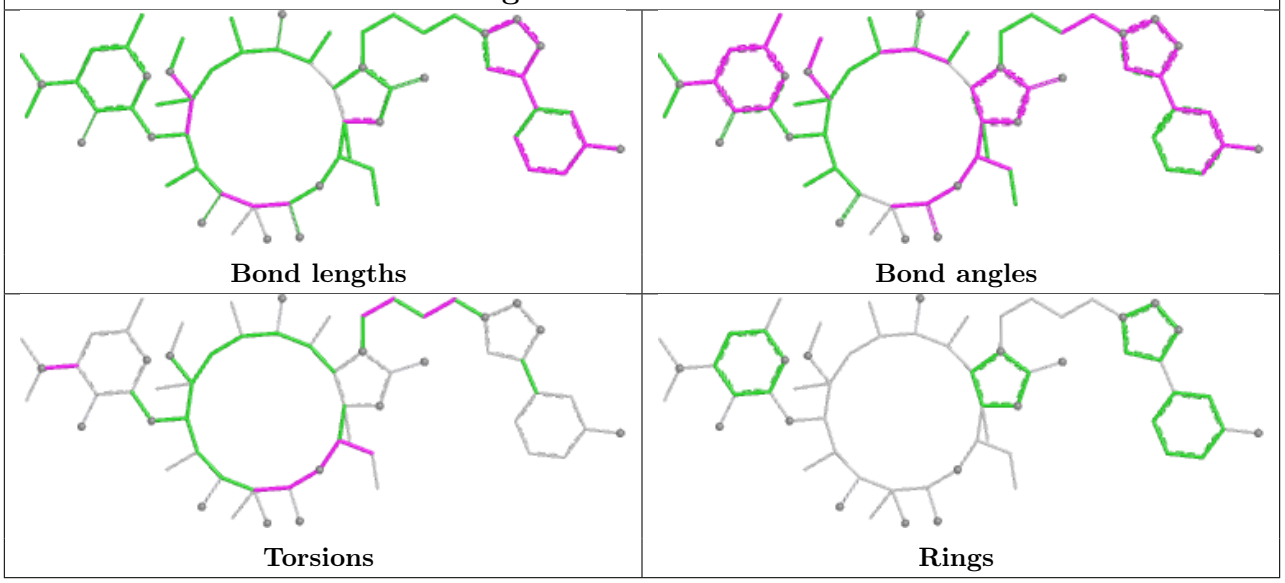
1 monomer is involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
54	RA	3135	EM1	4	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 EM1 RA 3135



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	RA	2853/2904 (98%)	-0.81	38 (1%) 75 56	19, 47, 175, 400	0
1	YA	2841/2904 (97%)	0.90	327 (11%) 9 5	64, 140, 260, 408	0
2	RB	118/118 (100%)	-0.83	0 100 100	32, 61, 95, 115	0
2	YB	117/118 (99%)	0.33	1 (0%) 81 63	111, 185, 242, 277	0
3	RC	271/271 (100%)	-0.03	14 (5%) 33 17	25, 57, 97, 202	0
3	YC	271/271 (100%)	1.24	58 (21%) 2 1	64, 107, 154, 181	0
4	RD	209/209 (100%)	-0.38	3 (1%) 73 53	19, 41, 90, 149	0
4	YD	209/209 (100%)	1.30	46 (22%) 2 1	71, 122, 174, 236	0
5	RE	201/201 (100%)	-0.35	0 100 100	23, 58, 116, 177	0
5	YE	201/201 (100%)	1.75	66 (32%) 1 0	91, 214, 335, 378	0
6	RF	177/178 (99%)	0.09	3 (1%) 69 48	52, 93, 166, 225	0
6	YF	178/178 (100%)	0.59	5 (2%) 55 34	154, 229, 270, 299	0
7	RG	176/176 (100%)	-0.03	5 (2%) 55 34	41, 75, 129, 161	0
7	YG	176/176 (100%)	0.89	19 (10%) 11 6	129, 198, 270, 312	0
8	RH	149/149 (100%)	0.92	18 (12%) 8 5	59, 178, 260, 278	0
8	YH	149/149 (100%)	1.18	28 (18%) 3 1	100, 197, 252, 272	0
9	RI	141/141 (100%)	1.15	20 (14%) 6 3	149, 241, 292, 339	0
9	YI	141/141 (100%)	1.44	31 (21%) 2 1	231, 317, 353, 360	0
10	RJ	142/142 (100%)	-0.34	3 (2%) 63 42	21, 40, 76, 139	0
10	YJ	142/142 (100%)	1.28	34 (23%) 2 1	75, 126, 168, 193	0
11	RK	122/122 (100%)	-0.28	4 (3%) 49 29	23, 45, 94, 191	0
11	YK	122/122 (100%)	0.68	8 (6%) 24 13	66, 107, 155, 228	0
12	RL	143/143 (100%)	-0.15	1 (0%) 84 68	18, 55, 93, 123	0
12	YL	143/143 (100%)	2.10	70 (48%) 0 0	86, 169, 242, 284	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	RM	136/136 (100%)	-0.47	0 100 100	17, 45, 85, 146	0
13	YM	136/136 (100%)	0.96	20 (14%) 6 3	78, 131, 175, 208	0
14	RN	120/120 (100%)	-0.36	1 (0%) 82 65	18, 41, 63, 132	0
14	YN	120/120 (100%)	1.72	39 (32%) 1 0	88, 136, 190, 237	0
15	RO	116/116 (100%)	-0.29	2 (1%) 69 48	40, 64, 97, 124	0
15	YO	116/116 (100%)	0.90	15 (12%) 7 4	134, 182, 227, 252	0
16	RP	114/114 (100%)	-0.28	3 (2%) 57 36	29, 53, 104, 149	0
16	YP	114/114 (100%)	1.04	16 (14%) 6 4	82, 121, 160, 197	0
17	RQ	117/117 (100%)	-0.45	3 (2%) 57 36	19, 34, 63, 108	0
17	YQ	117/117 (100%)	1.86	45 (38%) 1 0	88, 126, 203, 287	0
18	RR	103/103 (100%)	-0.25	2 (1%) 66 45	20, 48, 92, 115	0
18	YR	103/103 (100%)	1.45	27 (26%) 1 1	98, 154, 219, 274	0
19	RS	110/110 (100%)	-0.42	1 (0%) 81 63	20, 38, 83, 143	0
19	YS	110/110 (100%)	1.67	32 (29%) 1 1	86, 141, 208, 266	0
20	RT	93/93 (100%)	0.42	5 (5%) 31 17	35, 69, 134, 207	0
20	YT	93/93 (100%)	2.81	62 (66%) 0 0	133, 215, 282, 315	0
21	RU	102/102 (100%)	0.29	7 (6%) 23 12	38, 72, 160, 192	0
21	YU	102/102 (100%)	2.76	69 (67%) 0 0	151, 251, 347, 416	0
22	RV	94/94 (100%)	-0.35	0 100 100	31, 61, 102, 114	0
22	YV	94/94 (100%)	0.62	5 (5%) 32 17	107, 157, 199, 222	0
23	RW	79/79 (100%)	0.46	9 (11%) 10 5	22, 53, 114, 195	0
23	YW	79/79 (100%)	1.92	35 (44%) 0 0	108, 163, 232, 250	0
24	RX	77/77 (100%)	-0.07	0 100 100	32, 58, 110, 124	0
24	YX	77/77 (100%)	2.40	38 (49%) 0 0	88, 134, 182, 237	0
25	RY	63/63 (100%)	0.36	3 (4%) 35 19	53, 90, 153, 175	0
25	YY	63/63 (100%)	2.71	39 (61%) 0 0	167, 286, 366, 383	0
26	RZ	58/58 (100%)	-0.23	0 100 100	19, 40, 87, 117	0
26	YZ	58/58 (100%)	1.27	10 (17%) 4 2	104, 143, 200, 247	0
27	R0	56/56 (100%)	-0.36	1 (1%) 67 47	17, 42, 85, 150	0
27	Y0	56/56 (100%)	1.41	14 (25%) 2 1	87, 161, 210, 255	0
28	R1	50/50 (100%)	0.00	2 (4%) 42 23	45, 65, 111, 143	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	Y1	50/50 (100%)	1.30	9 (18%) 3 1	106, 161, 203, 255	0
29	R2	46/46 (100%)	-0.22	1 (2%) 62 41	30, 42, 69, 166	0
29	Y2	46/46 (100%)	2.24	27 (58%) 0 0	95, 128, 162, 176	0
30	R3	64/64 (100%)	-0.31	0 100 100	25, 44, 64, 91	0
30	Y3	64/64 (100%)	3.22	52 (81%) 0 0	96, 140, 173, 212	0
31	R4	38/38 (100%)	-0.02	0 100 100	40, 58, 98, 108	0
31	Y4	38/38 (100%)	2.59	25 (65%) 0 0	94, 155, 195, 203	0
32	QA	1533/1533 (100%)	-0.21	12 (0%) 82 65	46, 97, 198, 345	0
32	XA	1530/1533 (99%)	0.25	55 (3%) 46 26	55, 113, 259, 356	0
33	QB	218/218 (100%)	0.53	10 (4%) 37 20	82, 141, 198, 243	0
33	XB	218/218 (100%)	0.55	16 (7%) 21 11	93, 145, 201, 251	0
34	QC	206/206 (100%)	0.32	8 (3%) 43 24	71, 107, 156, 198	0
34	XC	206/206 (100%)	0.52	16 (7%) 19 10	86, 136, 185, 215	0
35	QD	205/205 (100%)	0.79	22 (10%) 11 6	57, 114, 174, 236	0
35	XD	205/205 (100%)	0.35	10 (4%) 35 18	41, 78, 132, 212	0
36	QE	150/150 (100%)	0.31	3 (2%) 65 44	59, 90, 147, 217	0
36	XE	150/150 (100%)	0.54	4 (2%) 56 35	55, 92, 141, 191	0
37	QF	100/100 (100%)	0.40	4 (4%) 42 23	80, 126, 168, 190	0
37	XF	100/100 (100%)	0.54	6 (6%) 27 15	82, 119, 176, 211	0
38	QG	151/151 (100%)	0.49	5 (3%) 49 29	98, 138, 186, 203	0
38	XG	150/151 (99%)	1.28	29 (19%) 3 1	121, 195, 245, 277	0
39	QH	129/129 (100%)	0.48	5 (3%) 43 24	62, 101, 142, 189	0
39	XH	129/129 (100%)	0.53	5 (3%) 43 24	77, 115, 152, 209	0
40	QI	127/127 (100%)	0.98	18 (14%) 6 3	82, 137, 209, 250	0
40	XI	127/127 (100%)	1.30	26 (20%) 2 1	114, 158, 225, 259	0
41	QJ	98/98 (100%)	1.00	16 (16%) 4 2	71, 121, 175, 200	0
41	XJ	98/98 (100%)	1.48	22 (22%) 2 1	117, 166, 211, 238	0
42	QK	117/117 (100%)	0.50	2 (1%) 69 48	54, 123, 177, 206	0
42	XK	117/117 (100%)	0.49	5 (4%) 40 22	67, 115, 162, 186	0
43	QL	123/123 (100%)	0.42	10 (8%) 18 10	50, 79, 123, 189	0
43	XL	123/123 (100%)	0.57	10 (8%) 18 10	61, 89, 142, 202	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	QM	114/114 (100%)	0.61	5 (4%) 39 21	94, 142, 198, 217	0
44	XM	113/114 (99%)	2.72	58 (51%) 0 0	218, 370, 442, 470	0
45	QN	96/101 (95%)	1.05	16 (16%) 4 2	80, 116, 187, 224	0
45	XN	91/101 (90%)	1.34	21 (23%) 2 1	107, 180, 260, 287	0
46	QO	88/88 (100%)	0.45	5 (5%) 29 16	64, 102, 139, 188	0
46	XO	88/88 (100%)	0.61	5 (5%) 29 16	76, 116, 160, 209	0
47	QP	82/82 (100%)	0.86	6 (7%) 21 11	78, 99, 166, 223	0
47	XP	80/82 (97%)	1.01	6 (7%) 20 11	72, 107, 158, 222	0
48	QQ	80/80 (100%)	0.80	7 (8%) 15 9	62, 96, 136, 164	0
48	XQ	80/80 (100%)	0.75	8 (10%) 12 6	78, 115, 144, 155	0
49	QR	55/55 (100%)	0.74	4 (7%) 21 11	90, 110, 168, 218	0
49	XR	55/55 (100%)	0.45	4 (7%) 21 11	74, 103, 171, 243	0
50	QS	79/79 (100%)	0.83	6 (7%) 20 11	110, 143, 197, 208	0
50	XS	79/79 (100%)	1.99	36 (45%) 0 0	205, 346, 411, 424	0
51	QT	85/85 (100%)	0.99	10 (11%) 9 5	74, 103, 147, 179	0
51	XT	85/85 (100%)	1.24	16 (18%) 3 1	91, 134, 190, 216	0
52	QU	51/51 (100%)	1.36	15 (29%) 1 1	96, 139, 187, 225	0
52	XU	51/51 (100%)	1.32	12 (23%) 2 1	83, 120, 184, 224	0
All	All	20426/20564 (99%)	0.42	1980 (9%) 13 7	17, 111, 252, 470	0

All (1980) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
44	XM	97	ARG	14.7
44	XM	98	GLY	12.4
24	YX	2	ARG	9.8
51	QT	3	ILE	9.7
44	XM	93	GLY	9.1
29	Y2	33	ARG	9.0
17	YQ	7	VAL	9.0
44	XM	111	PRO	8.8
44	XM	96	VAL	8.7
32	XA	1224	U	8.4
28	Y1	35	LEU	8.2
24	YX	49	ARG	8.2
19	YS	40	ASN	8.0

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Mol	Chain	Res	Type	RSRZ
3	YC	271	SER	7.8
12	YL	15	ALA	7.7
44	XM	94	LEU	7.7
52	XU	37	TYR	7.5
24	YX	33	HIS	7.4
25	YY	14	LEU	7.4
44	XM	99	GLN	7.3
32	QA	1362	A	7.3
50	XS	2	ARG	7.2
21	YU	30	SER	7.0
23	YW	37	VAL	6.9
25	YY	10	SER	6.9
44	XM	110	GLY	6.9
30	Y3	14	LYS	6.8
12	YL	16	GLY	6.8
30	Y3	60	CYS	6.8
24	YX	32	LEU	6.7
21	YU	4	ILE	6.7
25	YY	21	LEU	6.6
1	YA	2585	U	6.6
44	XM	26	LYS	6.6
9	YI	10	LEU	6.5
44	XM	108	ARG	6.4
29	R2	46	LYS	6.4
21	YU	13	LEU	6.3
30	Y3	19	GLY	6.3
30	Y3	59	ALA	6.3
42	XK	125	LYS	6.2
48	QQ	69	THR	6.2
16	YP	109	ILE	6.2
30	Y3	25	HIS	6.2
21	YU	70	ALA	6.2
1	YA	2062	A	6.2
20	YT	34	VAL	6.1
34	XC	166	TRP	6.1
25	YY	13	GLU	6.0
24	YX	10	ARG	6.0
18	RR	50	GLY	6.0
30	Y3	22	LYS	6.0
20	YT	46	ALA	5.9
45	XN	3	GLN	5.9
15	YO	5	SER	5.9

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Mol	Chain	Res	Type	RSRZ
30	Y3	31	ILE	5.9
43	QL	24	GLU	5.9
12	YL	81	ASP	5.9
5	YE	88	ARG	5.9
40	XI	67	LYS	5.8
30	Y3	51	LYS	5.8
25	YY	17	GLU	5.8
12	YL	82	LEU	5.8
40	XI	127	SER	5.7
10	YJ	44	TYR	5.7
30	Y3	58	ILE	5.7
40	QI	129	ARG	5.7
30	Y3	64	ALA	5.7
18	YR	20	VAL	5.7
40	XI	65	THR	5.6
34	XC	157	GLY	5.6
23	RW	40	ARG	5.6
3	YC	109	LEU	5.5
23	YW	42	THR	5.5
20	YT	32	LEU	5.5
17	YQ	3	VAL	5.5
17	YQ	6	GLY	5.5
23	YW	35	ILE	5.5
44	XM	109	LYS	5.4
47	QP	80	LYS	5.4
10	YJ	73	VAL	5.4
40	QI	42	THR	5.4
38	QG	4	ARG	5.4
44	XM	88	LEU	5.4
32	XA	1305	G	5.4
17	YQ	12	ARG	5.4
23	YW	52	CYS	5.3
50	XS	70	LEU	5.3
17	YQ	1	ALA	5.3
27	Y0	23	ALA	5.3
30	Y3	21	PHE	5.3
20	YT	67	VAL	5.3
1	RA	2154	A	5.3
44	XM	95	PRO	5.3
50	XS	36	ARG	5.3
5	YE	73	ILE	5.3
17	YQ	10	ARG	5.3

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Mol	Chain	Res	Type	RSRZ
51	XT	67	HIS	5.3
3	YC	236	GLY	5.2
25	YY	20	ASN	5.2
12	YL	101	ILE	5.2
37	QF	100	SER	5.2
12	YL	19	LEU	5.2
20	YT	43	ILE	5.2
44	XM	107	THR	5.2
1	RA	2402	U	5.2
25	YY	63	ALA	5.1
32	QA	121	U	5.1
25	YY	32	ALA	5.1
20	YT	35	ALA	5.1
10	YJ	111	LYS	5.1
18	YR	96	VAL	5.0
30	Y3	20	GLY	5.0
30	Y3	55	GLY	5.0
44	XM	89	ARG	5.0
17	YQ	89	ILE	5.0
21	YU	2	ALA	5.0
20	YT	62	VAL	5.0
35	QD	28	ASP	5.0
14	YN	109	PRO	5.0
21	YU	71	ILE	5.0
5	YE	87	ALA	5.0
44	XM	104	ASN	5.0
51	XT	8	LYS	5.0
44	XM	103	THR	5.0
44	XM	105	ALA	4.9
30	Y3	13	PHE	4.9
19	YS	97	LEU	4.9
19	YS	96	ILE	4.9
23	YW	74	LYS	4.9
8	RH	113	SER	4.9
5	YE	81	GLY	4.9
52	QU	23	GLU	4.9
21	YU	41	VAL	4.9
17	YQ	21	LYS	4.8
50	XS	37	SER	4.8
3	YC	250	GLN	4.8
20	YT	83	ALA	4.8
12	YL	116	VAL	4.8

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Mol	Chain	Res	Type	RSRZ
10	YJ	81	ILE	4.8
1	YA	2406	A	4.8
31	Y4	18	LYS	4.8
52	QU	37	TYR	4.8
20	YT	79	ASP	4.8
21	YU	69	VAL	4.8
22	YV	84	PRO	4.8
39	QH	1	SER	4.8
20	YT	64	LYS	4.8
1	YA	589	U	4.8
43	XL	123	ALA	4.8
51	XT	62	ALA	4.8
4	YD	151	THR	4.8
3	YC	253	GLY	4.7
41	XJ	61	ALA	4.7
12	YL	18	ARG	4.7
45	QN	51	PRO	4.7
21	YU	55	GLY	4.7
48	QQ	6	THR	4.7
35	XD	27	ILE	4.7
9	YI	1	ALA	4.7
4	YD	128	ARG	4.7
32	XA	1322	C	4.7
45	QN	20	PHE	4.7
5	YE	93	SER	4.6
39	XH	1	SER	4.6
3	YC	238	ASN	4.6
5	YE	90	GLN	4.6
20	YT	82	LYS	4.6
17	YQ	36	GLN	4.6
19	YS	42	LYS	4.6
1	RA	2885	G	4.6
26	YZ	33	HIS	4.6
48	QQ	19	SER	4.6
14	YN	46	ARG	4.6
21	YU	5	ARG	4.6
44	XM	86	ARG	4.6
43	QL	14	LYS	4.5
21	YU	11	ILE	4.5
24	YX	16	ASN	4.5
9	RI	3	LYS	4.5
12	YL	84	LYS	4.5

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Mol	Chain	Res	Type	RSRZ
31	Y4	10	LEU	4.5
1	RA	2180	U	4.5
52	QU	31	VAL	4.5
4	YD	10	GLY	4.5
35	XD	36	ALA	4.5
43	QL	123	ALA	4.5
23	YW	54	ARG	4.5
44	XM	85	TYR	4.5
13	YM	72	PRO	4.5
7	YG	165	ASP	4.5
12	YL	27	LEU	4.5
36	XE	30	PHE	4.5
49	XR	63	TYR	4.4
44	XM	102	LYS	4.4
4	YD	144	GLY	4.4
31	Y4	20	ASP	4.4
47	XP	52	LEU	4.4
6	YF	129	MET	4.4
20	YT	66	LYS	4.4
20	YT	12	ARG	4.4
43	XL	13	ARG	4.4
1	RA	1072	C	4.4
50	XS	67	GLY	4.4
20	YT	93	LEU	4.4
30	Y3	56	LEU	4.4
44	XM	90	HIS	4.4
50	XS	75	PRO	4.4
38	XG	61	PHE	4.4
20	YT	72	GLN	4.4
25	YY	43	LEU	4.4
32	XA	632	U	4.4
20	YT	37	ASP	4.4
12	YL	80	SER	4.4
21	YU	58	VAL	4.4
27	Y0	1	ALA	4.3
50	QS	36	ARG	4.3
1	YA	2799	A	4.3
20	YT	57	VAL	4.3
9	RI	52	LEU	4.3
5	YE	175	ILE	4.3
10	YJ	107	GLY	4.3
20	YT	30	ILE	4.3

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Mol	Chain	Res	Type	RSRZ
19	YS	45	VAL	4.3
20	YT	36	LYS	4.3
40	XI	63	TYR	4.3
20	YT	61	LEU	4.3
50	QS	2	ARG	4.3
8	RH	32	PRO	4.3
30	Y3	24	LYS	4.3
44	XM	100	ARG	4.3
3	RC	235	GLU	4.3
25	YY	5	GLU	4.3
1	YA	32	C	4.3
10	RJ	73	VAL	4.3
31	Y4	8	LYS	4.3
30	Y3	46	LYS	4.2
44	QM	86	ARG	4.2
30	Y3	50	SER	4.2
12	YL	69	ARG	4.2
24	YX	17	ARG	4.2
29	Y2	10	LEU	4.2
17	YQ	24	TYR	4.2
21	YU	59	GLU	4.2
20	YT	76	ARG	4.2
52	XU	34	ARG	4.2
20	YT	80	TRP	4.2
21	YU	40	LEU	4.2
25	YY	19	LEU	4.2
14	YN	113	ILE	4.2
21	YU	102	ILE	4.2
31	Y4	23	ILE	4.2
44	QM	98	GLY	4.2
5	YE	57	LYS	4.2
1	RA	2179	C	4.2
24	YX	29	LEU	4.1
21	YU	14	THR	4.1
30	Y3	48	MET	4.1
12	YL	77	ILE	4.1
21	YU	34	ILE	4.1
31	Y4	26	ILE	4.1
45	QN	48	GLN	4.1
24	YX	24	THR	4.1
28	Y1	23	THR	4.1
45	XN	11	LYS	4.1

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Mol	Chain	Res	Type	RSRZ
1	YA	795	C	4.1
8	RH	111	ALA	4.1
3	RC	238	ASN	4.1
18	YR	50	GLY	4.1
21	YU	35	VAL	4.1
20	YT	60	THR	4.1
1	YA	12	U	4.1
41	XJ	40	ILE	4.1
27	Y0	20	ALA	4.1
3	YC	237	ARG	4.1
5	YE	89	PRO	4.1
18	YR	73	LYS	4.1
51	XT	3	ILE	4.1
23	YW	13	ARG	4.1
30	Y3	30	HIS	4.1
8	YH	115	VAL	4.0
45	XN	62	ARG	4.0
3	YC	233	GLY	4.0
14	YN	65	LEU	4.0
30	Y3	27	ASN	4.0
32	QA	86	G	4.0
44	XM	106	ARG	4.0
1	YA	345	A	4.0
1	YA	11	C	4.0
1	YA	1075	C	4.0
1	YA	2295	C	4.0
20	YT	11	LEU	4.0
23	YW	73	PRO	4.0
26	YZ	24	LEU	4.0
33	XB	147	LEU	4.0
8	YH	142	VAL	4.0
20	RT	16	VAL	4.0
31	Y4	15	LYS	4.0
2	YB	87	U	4.0
14	YN	37	THR	4.0
5	YE	45	ALA	4.0
5	YE	94	GLN	4.0
35	QD	24	VAL	4.0
3	YC	45	ASN	4.0
17	YQ	34	ALA	4.0
3	YC	241	LYS	4.0
18	YR	51	VAL	4.0

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Mol	Chain	Res	Type	RSRZ
23	RW	51	GLY	4.0
24	YX	21	LEU	4.0
38	XG	104	VAL	3.9
18	YR	86	GLN	3.9
12	YL	36	LYS	3.9
9	YI	27	LEU	3.9
3	YC	235	GLU	3.9
21	YU	12	VAL	3.9
31	Y4	21	GLY	3.9
5	YE	108	ILE	3.9
10	RJ	142	ILE	3.9
21	YU	9	GLU	3.9
48	XQ	28	VAL	3.9
10	YJ	116	ARG	3.9
19	YS	99	ARG	3.9
35	QD	35	GLN	3.9
12	YL	14	LYS	3.9
23	RW	74	LYS	3.9
5	YE	180	LEU	3.9
7	YG	58	ALA	3.9
14	YN	19	ALA	3.9
24	YX	12	VAL	3.9
38	XG	73	GLU	3.9
40	XI	66	VAL	3.9
52	QU	35	GLU	3.9
5	YE	54	GLY	3.9
5	YE	56	GLY	3.9
18	YR	6	GLN	3.9
1	YA	1808	A	3.9
1	YA	1248	G	3.9
21	YU	66	VAL	3.9
20	YT	81	LYS	3.9
40	QI	67	LYS	3.9
50	XS	11	ASP	3.9
12	YL	43	GLY	3.8
10	YJ	49	ASP	3.8
27	Y0	25	THR	3.8
50	XS	38	THR	3.8
19	YS	85	ILE	3.8
14	YN	38	LEU	3.8
23	RW	45	HIS	3.8
1	YA	587	C	3.8

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Mol	Chain	Res	Type	RSRZ
20	YT	10	VAL	3.8
31	Y4	22	VAL	3.8
21	YU	26	ASN	3.8
17	YQ	98	ALA	3.8
4	YD	140	HIS	3.8
20	RT	24	MET	3.8
32	XA	210	C	3.8
20	YT	42	GLU	3.8
41	XJ	8	ILE	3.8
1	YA	669	G	3.8
17	YQ	86	SER	3.8
35	QD	21	LYS	3.8
41	XJ	6	ILE	3.8
44	XM	18	LEU	3.8
32	XA	381	C	3.7
23	YW	77	LYS	3.7
42	XK	128	VAL	3.7
1	YA	75	G	3.7
3	YC	47	ARG	3.7
13	YM	20	LEU	3.7
4	YD	192	ALA	3.7
1	YA	1420	A	3.7
24	YX	55	MET	3.7
32	XA	330	C	3.7
21	YU	17	ASP	3.7
21	YU	89	GLY	3.7
4	YD	118	PHE	3.7
41	XJ	39	PRO	3.7
19	YS	48	LYS	3.7
21	YU	63	ALA	3.7
32	XA	202	G	3.7
14	YN	11	ASN	3.7
37	XF	42	TRP	3.7
21	YU	56	GLY	3.7
51	XT	5	SER	3.7
41	QJ	75	ASP	3.7
44	XM	81	ASP	3.7
29	Y2	43	THR	3.7
38	XG	72	VAL	3.7
49	XR	73	HIS	3.7
21	YU	38	ILE	3.7
42	QK	125	LYS	3.7

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Mol	Chain	Res	Type	RSRZ
21	YU	47	PRO	3.7
37	XF	100	SER	3.7
4	YD	131	ASP	3.7
23	YW	70	VAL	3.7
29	Y2	44	VAL	3.7
34	XC	161	ILE	3.7
52	QU	22	CYS	3.7
4	YD	167	ASN	3.7
21	YU	42	LYS	3.7
5	YE	85	PHE	3.7
17	YQ	28	SER	3.6
14	YN	29	VAL	3.6
21	YU	27	VAL	3.6
21	YU	79	ALA	3.6
1	YA	355	U	3.6
12	YL	74	THR	3.6
19	YS	16	LYS	3.6
18	YR	52	PRO	3.6
5	YE	51	GLU	3.6
5	YE	178	VAL	3.6
14	YN	74	GLU	3.6
16	YP	8	GLU	3.6
24	YX	23	ALA	3.6
29	Y2	15	SER	3.6
30	Y3	57	VAL	3.6
49	QR	50	TYR	3.6
15	YO	87	ILE	3.6
1	YA	790	U	3.6
3	YC	58	LYS	3.6
19	YS	86	MET	3.6
24	YX	1	SER	3.6
27	Y0	22	THR	3.6
34	QC	174	LEU	3.6
51	XT	15	LYS	3.6
25	YY	45	GLN	3.6
3	RC	234	GLY	3.6
10	YJ	112	GLY	3.6
32	XA	209	U	3.6
20	YT	3	ARG	3.6
45	XN	61	ASN	3.6
39	QH	2	MET	3.6
25	YY	18	LEU	3.6

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Mol	Chain	Res	Type	RSRZ
4	YD	166	GLY	3.6
44	XM	112	ARG	3.6
48	QQ	5	ARG	3.6
20	YT	45	ALA	3.6
17	YQ	4	LYS	3.6
32	XA	1308	U	3.6
25	YY	24	GLU	3.6
41	XJ	46	LYS	3.6
17	YQ	8	ILE	3.6
1	YA	1247	A	3.5
32	XA	108	G	3.5
32	XA	134	G	3.5
24	YX	19	HIS	3.5
12	YL	31	GLY	3.5
19	YS	83	LYS	3.5
9	YI	7	TYR	3.5
1	RA	1094	U	3.5
14	YN	70	THR	3.5
15	YO	9	ARG	3.5
20	YT	51	PHE	3.5
3	RC	250	GLN	3.5
30	Y3	45	PRO	3.5
1	YA	1311	G	3.5
1	YA	336	C	3.5
8	RH	99	ILE	3.5
52	XU	23	GLU	3.5
21	YU	80	ASP	3.5
12	YL	72	ALA	3.5
33	QB	150	ILE	3.5
16	YP	111	GLU	3.5
1	YA	528	A	3.5
3	YC	27	LYS	3.5
40	XI	8	THR	3.5
46	XO	1	SER	3.5
22	YV	22	ALA	3.5
3	YC	63	ILE	3.5
22	YV	69	GLU	3.5
12	YL	13	LYS	3.5
5	YE	164	LEU	3.5
19	YS	44	ALA	3.5
1	YA	2000	C	3.5
14	YN	20	MET	3.5

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Mol	Chain	Res	Type	RSRZ
1	RA	2138	G	3.5
19	YS	11	ARG	3.5
21	YU	57	ILE	3.5
38	XG	102	TRP	3.5
24	YX	53	LYS	3.4
44	XM	22	TYR	3.4
15	YO	61	GLN	3.4
28	Y1	33	LEU	3.4
10	YJ	1	MET	3.4
30	Y3	1	PRO	3.4
13	YM	127	LYS	3.4
1	RA	1093	G	3.4
32	XA	1361	G	3.4
21	YU	62	ALA	3.4
24	YX	13	THR	3.4
3	RC	237	ARG	3.4
14	YN	2	ARG	3.4
25	YY	29	ARG	3.4
33	QB	26	MET	3.4
44	XM	76	ILE	3.4
49	QR	20	ILE	3.4
3	RC	239	PHE	3.4
16	RP	111	GLU	3.4
50	XS	79	TYR	3.4
1	YA	2008	C	3.4
40	XI	118	ARG	3.4
5	YE	119	ILE	3.4
19	YS	80	PRO	3.4
20	YT	33	LYS	3.4
24	YX	76	LYS	3.4
1	YA	801	G	3.4
14	YN	72	ASP	3.4
17	YQ	96	ASP	3.4
9	RI	78	LEU	3.4
38	QG	108	ARG	3.4
35	QD	26	ALA	3.4
39	XH	2	MET	3.4
1	YA	2336	A	3.4
3	YC	31	PRO	3.4
4	YD	114	LYS	3.4
43	XL	15	VAL	3.4
9	YI	119	ALA	3.4

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Mol	Chain	Res	Type	RSRZ
30	Y3	11	LYS	3.4
20	YT	15	HIS	3.4
23	YW	45	HIS	3.4
12	YL	99	ASN	3.3
1	YA	343	C	3.3
8	YH	27	ARG	3.3
1	YA	387	U	3.3
1	YA	1409	U	3.3
32	XA	1086	U	3.3
21	YU	8	ASP	3.3
8	YH	112	LYS	3.3
20	YT	9	LYS	3.3
52	XU	53	LYS	3.3
8	YH	99	ILE	3.3
1	RA	277	G	3.3
17	YQ	94	LEU	3.3
20	YT	47	VAL	3.3
21	YU	28	LEU	3.3
51	QT	7	LYS	3.3
3	YC	82	TYR	3.3
44	XM	31	ALA	3.3
5	YE	91	ASP	3.3
32	QA	1030	U	3.3
40	XI	19	PHE	3.3
9	YI	56	VAL	3.3
31	Y4	3	VAL	3.3
31	Y4	2	LYS	3.3
1	YA	784	G	3.3
14	YN	24	MET	3.3
8	YH	80	ILE	3.3
34	QC	206	ILE	3.3
52	QU	14	ALA	3.3
1	YA	1406	U	3.3
18	YR	80	ARG	3.3
20	YT	77	ARG	3.3
1	YA	341	C	3.3
1	YA	1644	C	3.3
29	Y2	42	LEU	3.3
7	YG	8	VAL	3.3
7	YG	167	VAL	3.3
12	YL	23	ILE	3.3
47	QP	81	ALA	3.3

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Mol	Chain	Res	Type	RSRZ
5	YE	55	SER	3.3
19	YS	81	SER	3.3
40	QI	89	TYR	3.3
11	RK	71	ARG	3.3
43	XL	8	ARG	3.3
4	YD	156	PHE	3.3
44	XM	101	THR	3.3
48	XQ	6	THR	3.3
1	YA	794	A	3.3
32	XA	101	A	3.3
38	XG	151	ALA	3.3
50	XS	48	ILE	3.3
21	YU	31	GLY	3.3
23	YW	21	GLY	3.3
7	RG	169	ARG	3.2
37	XF	91	ARG	3.2
3	RC	37	SER	3.2
41	XJ	71	LEU	3.2
4	YD	121	THR	3.2
9	YI	8	VAL	3.2
20	YT	13	ALA	3.2
23	RW	36	ILE	3.2
50	XS	43	MET	3.2
7	YG	173	ALA	3.2
23	RW	75	ASN	3.2
3	YC	46	GLY	3.2
1	YA	2150	C	3.2
5	YE	98	LYS	3.2
9	YI	78	LEU	3.2
21	RU	78	LYS	3.2
21	YU	29	SER	3.2
21	YU	46	LYS	3.2
35	QD	205	LYS	3.2
51	XT	63	LYS	3.2
23	YW	36	ILE	3.2
29	Y2	1	MET	3.2
3	YC	234	GLY	3.2
20	YT	65	GLY	3.2
10	YJ	53	TYR	3.2
50	XS	29	PRO	3.2
4	YD	26	VAL	3.2
1	YA	786	C	3.2

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Mol	Chain	Res	Type	RSRZ
29	Y2	14	ARG	3.2
49	QR	19	GLU	3.2
50	XS	12	LEU	3.2
14	YN	102	PHE	3.2
20	YT	85	VAL	3.2
1	RA	139	U	3.2
8	RH	27	ARG	3.2
18	YR	78	ARG	3.2
1	RA	1073	A	3.2
1	YA	1321	A	3.2
1	YA	1538	G	3.2
9	YI	51	GLY	3.2
3	YC	20	ASN	3.2
28	Y1	20	TYR	3.2
31	Y4	17	VAL	3.2
16	YP	4	ILE	3.2
5	YE	39	ALA	3.2
7	YG	83	THR	3.2
41	XJ	60	ASP	3.1
5	YE	177	PRO	3.1
12	YL	58	TYR	3.1
24	YX	3	VAL	3.1
41	XJ	72	ARG	3.1
20	RT	70	HIS	3.1
31	Y4	33	HIS	3.1
12	YL	104	GLN	3.1
17	YQ	55	GLN	3.1
13	YM	8	LYS	3.1
35	QD	36	ALA	3.1
45	QN	1	ALA	3.1
8	RH	92	GLY	3.1
21	YU	48	VAL	3.1
24	YX	6	VAL	3.1
5	YE	76	PRO	3.1
12	YL	62	PRO	3.1
23	YW	11	ASN	3.1
12	YL	17	LYS	3.1
8	YH	81	ALA	3.1
9	RI	1	ALA	3.1
1	YA	509	C	3.1
41	XJ	90	LEU	3.1
1	YA	2599	G	3.1

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Mol	Chain	Res	Type	RSRZ
40	QI	69	GLY	3.1
23	YW	55	ASP	3.1
43	QL	13	ARG	3.1
11	YK	32	TYR	3.1
3	YC	60	ALA	3.1
10	YJ	47	HIS	3.1
5	YE	41	GLN	3.1
8	YH	65	ALA	3.1
30	Y3	36	ALA	3.1
13	YM	2	LEU	3.1
1	YA	1654	A	3.1
5	YE	48	THR	3.1
23	YW	7	GLY	3.1
5	YE	72	SER	3.1
8	YH	113	SER	3.1
1	YA	1606	C	3.1
10	YJ	48	VAL	3.1
15	RO	2	ASP	3.1
30	Y3	53	ASP	3.1
33	QB	94	ARG	3.1
38	QG	3	ARG	3.1
45	XN	53	ASP	3.1
46	XO	71	ARG	3.1
7	YG	7	PRO	3.1
24	YX	30	PRO	3.1
10	YJ	75	TYR	3.1
32	XA	1331	G	3.1
9	YI	93	ASN	3.1
8	YH	105	ALA	3.1
18	YR	87	GLN	3.1
45	XN	47	LEU	3.1
10	YJ	45	THR	3.1
50	XS	71	GLY	3.1
20	YT	58	VAL	3.1
12	YL	106	GLU	3.1
1	YA	1383	A	3.1
8	RH	98	ASP	3.1
1	RA	1606	C	3.0
3	YC	89	ASN	3.0
51	XT	65	LEU	3.0
1	YA	205	G	3.0
1	YA	2133	G	3.0

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Mol	Chain	Res	Type	RSRZ
34	XC	163	ARG	3.0
38	XG	101	ARG	3.0
1	YA	2296	U	3.0
44	XM	59	VAL	3.0
4	YD	157	LYS	3.0
5	YE	130	LYS	3.0
10	YJ	142	ILE	3.0
38	XG	6	ILE	3.0
43	QL	37	TYR	3.0
4	YD	196	ALA	3.0
5	YE	50	ALA	3.0
8	RH	84	ALA	3.0
15	RO	98	GLN	3.0
17	YQ	100	PHE	3.0
20	YT	25	GLU	3.0
49	XR	20	ILE	3.0
50	XS	34	SER	3.0
1	YA	1	G	3.0
1	YA	333	G	3.0
32	XA	212	G	3.0
12	YL	92	LEU	3.0
9	YI	26	ALA	3.0
24	YX	27	ARG	3.0
31	Y4	36	ARG	3.0
33	XB	144	GLU	3.0
50	XS	39	ILE	3.0
41	XJ	79	PRO	3.0
20	RT	93	LEU	3.0
18	YR	55	ASP	3.0
4	YD	8	LYS	3.0
9	YI	9	LYS	3.0
40	XI	116	GLY	3.0
5	YE	24	ASN	3.0
45	XN	49	THR	3.0
4	YD	14	ILE	3.0
1	YA	342	A	3.0
32	QA	412	A	3.0
23	YW	15	SER	3.0
1	YA	867	C	3.0
43	XL	9	LYS	3.0
9	RI	69	VAL	3.0
10	YJ	83	GLY	3.0

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Mol	Chain	Res	Type	RSRZ
38	XG	68	VAL	3.0
52	XU	52	VAL	3.0
52	XU	36	PHE	3.0
51	XT	69	ASN	3.0
12	YL	5	THR	3.0
12	YL	67	THR	3.0
41	QJ	76	ILE	3.0
1	YA	411	G	2.9
39	XH	129	ALA	2.9
3	YC	219	VAL	2.9
20	YT	31	VAL	2.9
21	YU	37	GLY	2.9
25	YY	46	VAL	2.9
8	YH	91	PHE	2.9
9	YI	108	ILE	2.9
25	YY	30	MET	2.9
34	XC	206	ILE	2.9
23	YW	38	ARG	2.9
40	QI	65	THR	2.9
24	YX	11	PRO	2.9
40	XI	119	LYS	2.9
8	YH	111	ALA	2.9
30	Y3	9	ALA	2.9
34	QC	159	ALA	2.9
4	YD	153	GLY	2.9
12	YL	22	GLY	2.9
36	XE	108	GLY	2.9
1	YA	60	G	2.9
1	YA	325	G	2.9
1	YA	508	A	2.9
1	YA	1322	A	2.9
12	YL	48	ARG	2.9
32	XA	468	A	2.9
19	YS	100	THR	2.9
44	XM	30	LYS	2.9
1	YA	680	C	2.9
41	XJ	41	PRO	2.9
31	Y4	29	ALA	2.9
39	QH	129	ALA	2.9
41	QJ	34	ALA	2.9
3	RC	236	GLY	2.9
10	YJ	115	GLY	2.9

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Mol	Chain	Res	Type	RSRZ
12	YL	25	SER	2.9
5	YE	49	ARG	2.9
17	YQ	43	GLN	2.9
20	YT	24	MET	2.9
23	YW	19	ARG	2.9
48	XQ	7	LEU	2.9
5	YE	95	LYS	2.9
43	XL	87	LYS	2.9
14	YN	36	THR	2.9
1	YA	51	G	2.9
1	YA	356	G	2.9
1	YA	377	G	2.9
1	YA	776	G	2.9
1	YA	1407	G	2.9
4	YD	132	ALA	2.9
14	YN	107	ASN	2.9
20	YT	56	GLU	2.9
29	Y2	7	PRO	2.9
1	YA	878	A	2.9
1	YA	1626	A	2.9
9	RI	4	VAL	2.9
16	YP	91	VAL	2.9
1	RA	2153	C	2.9
1	YA	791	C	2.9
1	YA	1625	C	2.9
1	YA	448	U	2.9
1	YA	2245	U	2.9
25	YY	62	GLY	2.9
48	XQ	5	ARG	2.9
12	YL	73	ILE	2.9
38	XG	49	LEU	2.9
39	XH	82	LEU	2.9
51	QT	67	HIS	2.9
3	YC	251	THR	2.9
12	YL	51	GLU	2.9
4	YD	170	VAL	2.9
9	YI	4	VAL	2.9
5	YE	61	ARG	2.9
1	YA	1205	A	2.9
12	YL	64	PHE	2.9
23	YW	53	GLY	2.9
1	YA	2780	G	2.9

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Mol	Chain	Res	Type	RSRZ
25	YY	54	LYS	2.9
45	XN	6	LYS	2.9
1	RA	884	U	2.8
1	RA	2146	C	2.8
1	YA	946	C	2.8
31	Y4	37	GLN	2.8
32	XA	1217	C	2.8
25	YY	16	THR	2.8
52	QU	41	THR	2.8
20	YT	5	GLU	2.8
29	Y2	13	ASN	2.8
34	QC	166	TRP	2.8
31	Y4	12	ARG	2.8
3	YC	25	LYS	2.8
12	YL	66	PHE	2.8
14	YN	26	GLY	2.8
25	YY	42	LEU	2.8
1	YA	2820	A	2.8
16	YP	94	ALA	2.8
17	YQ	95	ALA	2.8
18	YR	103	ALA	2.8
30	Y3	47	ALA	2.8
1	RA	2110	G	2.8
1	RA	2149	U	2.8
1	YA	1326	U	2.8
1	YA	2629	U	2.8
40	XI	124	PRO	2.8
1	YA	334	C	2.8
1	YA	1278	C	2.8
1	YA	1289	C	2.8
5	YE	96	VAL	2.8
27	R0	56	LYS	2.8
50	XS	69	LYS	2.8
5	YE	23	PHE	2.8
24	YX	5	GLN	2.8
6	RF	118	ALA	2.8
9	YI	76	ALA	2.8
14	YN	25	ALA	2.8
24	YX	20	ALA	2.8
17	YQ	27	ARG	2.8
33	QB	28	PRO	2.8
4	RD	92	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
29	Y2	30	VAL	2.8
52	QU	27	VAL	2.8
4	YD	154	LYS	2.8
9	YI	120	ASP	2.8
28	R1	9	LYS	2.8
32	XA	532	A	2.8
32	XA	1441	A	2.8
1	RA	138	U	2.8
9	YI	79	LEU	2.8
28	Y1	19	PHE	2.8
32	XA	723	U	2.8
37	XF	8	PHE	2.8
45	QN	45	LEU	2.8
35	QD	23	GLY	2.8
1	YA	281	C	2.8
1	YA	1271	G	2.8
5	YE	46	GLN	2.8
12	YL	113	ALA	2.8
35	QD	42	ALA	2.8
51	XT	12	GLN	2.8
15	YO	13	ARG	2.8
38	XG	3	ARG	2.8
48	QQ	64	ARG	2.8
25	RY	11	VAL	2.8
40	QI	110	VAL	2.8
40	QI	128	LYS	2.8
13	YM	7	THR	2.8
25	YY	22	LEU	2.8
25	YY	26	PHE	2.8
26	YZ	32	GLY	2.8
29	Y2	22	MET	2.8
14	YN	23	ASN	2.8
25	YY	15	ASN	2.8
1	YA	504	A	2.8
1	YA	800	A	2.8
1	YA	2149	U	2.8
32	XA	1306	A	2.8
1	YA	302	C	2.8
1	YA	444	C	2.8
29	Y2	36	ALA	2.8
30	Y3	26	ALA	2.8
31	Y4	35	GLN	2.8

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Mol	Chain	Res	Type	RSRZ
38	XG	64	ALA	2.8
1	YA	389	G	2.8
1	YA	396	G	2.8
5	YE	32	VAL	2.8
21	YU	10	VAL	2.8
3	YC	258	SER	2.8
25	YY	40	SER	2.8
45	XN	50	LEU	2.8
14	YN	75	ILE	2.8
17	YQ	35	PHE	2.7
40	XI	64	ILE	2.8
25	YY	1	MET	2.7
7	YG	55	ASP	2.7
17	YQ	25	GLY	2.7
31	Y4	38	GLY	2.7
5	YE	190	ALA	2.7
29	Y2	20	ALA	2.7
43	QL	43	LYS	2.7
51	XT	4	LYS	2.7
1	YA	104	A	2.7
1	YA	125	A	2.7
10	YJ	11	VAL	2.7
14	YN	60	VAL	2.7
21	YU	82	VAL	2.7
39	QH	75	GLN	2.7
35	QD	37	PRO	2.7
50	XS	41	PRO	2.7
41	QJ	87	LEU	2.7
3	RC	271	SER	2.7
17	YQ	16	ILE	2.7
19	YS	12	SER	2.7
33	XB	146	SER	2.7
44	XM	20	SER	2.7
44	XM	75	SER	2.7
4	YD	125	TRP	2.7
5	YE	60	TRP	2.7
43	XL	91	GLY	2.7
25	YY	49	ASP	2.7
3	YC	264	LYS	2.7
8	RH	112	LYS	2.7
44	XM	113	LYS	2.7
52	QU	53	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
17	RQ	87	VAL	2.7
25	YY	31	GLN	2.7
29	Y2	29	GLN	2.7
20	YT	14	PRO	2.7
35	XD	45	PRO	2.7
1	YA	1249	U	2.7
16	YP	49	ILE	2.7
17	YQ	97	ILE	2.7
32	QA	1286	U	2.7
1	RA	2147	A	2.7
11	YK	68	GLY	2.7
12	YL	24	GLY	2.7
13	YM	83	GLY	2.7
15	YO	52	SER	2.7
32	XA	65	A	2.7
46	QO	1	SER	2.7
1	YA	76	C	2.7
1	YA	130	C	2.7
4	YD	43	ASP	2.7
23	YW	56	HIS	2.7
18	YR	75	VAL	2.7
20	YT	55	VAL	2.7
20	YT	7	LEU	2.7
30	Y3	28	LEU	2.7
40	XI	53	LEU	2.7
1	YA	512	G	2.7
1	YA	1358	G	2.7
30	Y3	62	PRO	2.7
8	YH	94	ILE	2.7
14	YN	97	ILE	2.7
8	RH	95	GLY	2.7
44	XM	23	GLY	2.7
13	YM	14	LYS	2.7
21	YU	20	LYS	2.7
24	YX	34	SER	2.7
28	R1	52	LYS	2.7
33	XB	129	THR	2.7
4	YD	75	ALA	2.7
4	YD	176	ASP	2.7
8	YH	86	ASP	2.7
9	RI	46	ASP	2.7
40	XI	15	ALA	2.7

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Mol	Chain	Res	Type	RSRZ
9	RI	12	VAL	2.7
30	Y3	49	VAL	2.7
52	QU	13	VAL	2.7
17	YQ	58	GLN	2.7
25	YY	25	GLN	2.7
41	QJ	35	GLN	2.7
50	XS	8	PRO	2.7
10	YJ	118	MET	2.7
5	YE	40	ARG	2.7
46	QO	57	ARG	2.7
52	XU	32	ARG	2.7
21	YU	77	GLY	2.7
30	Y3	18	LYS	2.7
40	XI	128	LYS	2.7
1	YA	1171	G	2.7
1	YA	2012	G	2.7
32	QA	1032	G	2.7
12	YL	97	ALA	2.7
15	YO	6	ALA	2.7
43	QL	1	ALA	2.7
3	YC	201	LEU	2.7
17	YQ	46	TYR	2.7
33	XB	106	VAL	2.7
33	XB	140	LEU	2.7
34	XC	172	VAL	2.7
30	Y3	42	HIS	2.7
14	YN	73	ASN	2.7
1	YA	2600	A	2.6
10	YJ	46	PRO	2.6
22	YV	48	MET	2.6
24	YX	28	PHE	2.6
32	XA	1362	A	2.6
44	XM	21	ILE	2.6
13	YM	81	ARG	2.6
35	QD	62	ARG	2.6
12	YL	65	GLY	2.6
1	YA	1612	C	2.6
4	YD	25	THR	2.6
18	YR	19	THR	2.6
33	XB	225	SER	2.6
41	XJ	74	VAL	2.6
43	XL	32	VAL	2.6

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Mol	Chain	Res	Type	RSRZ
50	XS	66	VAL	2.6
1	YA	2360	G	2.6
50	XS	10	ILE	2.6
21	YU	23	LYS	2.6
21	YU	25	LYS	2.6
25	YY	47	ARG	2.6
44	XM	28	ARG	2.6
52	QU	46	ARG	2.6
1	YA	2320	U	2.6
45	XN	65	GLN	2.6
23	YW	12	GLY	2.6
1	RA	2886	A	2.6
1	YA	483	A	2.6
1	YA	1077	A	2.6
34	XC	165	GLU	2.6
9	RI	137	LEU	2.6
12	YL	83	ALA	2.6
19	YS	43	ALA	2.6
20	YT	38	ALA	2.6
23	YW	58	LEU	2.6
38	XG	79	VAL	2.6
42	QK	128	VAL	2.6
1	YA	331	C	2.6
33	XB	109	SER	2.6
24	YX	56	ARG	2.6
25	YY	44	LYS	2.6
30	Y3	34	LYS	2.6
9	RI	11	GLN	2.6
17	YQ	90	ASP	2.6
41	QJ	91	ASP	2.6
1	YA	1078	U	2.6
38	XG	119	LEU	2.6
9	YI	13	ALA	2.6
23	YW	50	VAL	2.6
40	QI	43	ALA	2.6
1	YA	1302	A	2.6
5	YE	47	LYS	2.6
12	YL	21	ARG	2.6
17	YQ	14	LYS	2.6
19	YS	92	ARG	2.6
21	YU	32	LYS	2.6
26	YZ	20	LYS	2.6

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Mol	Chain	Res	Type	RSRZ
19	YS	82	MET	2.6
1	YA	268	C	2.6
1	YA	2755	C	2.6
32	XA	222	C	2.6
17	YQ	82	LEU	2.6
17	YQ	88	GLU	2.6
25	RY	6	LEU	2.6
8	YH	100	ALA	2.6
9	RI	132	ALA	2.6
16	YP	90	ALA	2.6
35	QD	1	ALA	2.6
41	XJ	51	VAL	2.6
1	YA	1340	U	2.6
3	YC	220	ARG	2.6
4	YD	129	THR	2.6
51	XT	40	ALA	2.6
13	YM	12	MET	2.6
1	YA	775	G	2.6
1	YA	1250	G	2.6
1	YA	2107	G	2.6
34	QC	167	TYR	2.6
34	XC	167	TYR	2.6
12	YL	8	PRO	2.6
40	QI	127	SER	2.6
45	QN	54	SER	2.6
18	YR	88	GLY	2.6
9	RI	79	LEU	2.6
9	YI	2	LYS	2.6
17	YQ	32	ARG	2.6
38	XG	136	LYS	2.6
52	XU	42	THR	2.6
35	QD	27	ILE	2.5
12	YL	50	PHE	2.5
13	YM	9	PHE	2.5
50	XS	73	PHE	2.5
7	YG	155	PRO	2.5
14	YN	10	LEU	2.5
25	YY	56	LEU	2.5
30	Y3	54	LEU	2.5
1	YA	30	G	2.5
1	YA	291	G	2.5
1	YA	446	G	2.5

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Mol	Chain	Res	Type	RSRZ
1	YA	1266	G	2.5
1	YA	2110	G	2.5
26	YZ	30	ARG	2.5
27	Y0	24	VAL	2.5
32	XA	1309	G	2.5
51	QT	15	LYS	2.5
1	YA	344	A	2.5
1	YA	1705	A	2.5
4	YD	31	ALA	2.5
5	YE	36	ALA	2.5
13	YM	43	ALA	2.5
36	QE	102	THR	2.5
40	XI	42	THR	2.5
1	YA	517	C	2.5
23	YW	25	PHE	2.5
30	Y3	23	HIS	2.5
16	YP	110	LYS	2.5
17	YQ	18	LYS	2.5
9	RI	13	ALA	2.5
12	RL	115	GLU	2.5
44	XM	52	ILE	2.5
47	XP	39	PHE	2.5
1	YA	131	A	2.5
1	YA	2725	A	2.5
1	YA	39	G	2.5
1	YA	327	G	2.5
1	YA	830	G	2.5
1	YA	1202	G	2.5
1	YA	1303	G	2.5
10	YJ	76	HIS	2.5
14	YN	39	PRO	2.5
1	YA	22	C	2.5
1	YA	61	C	2.5
3	YC	174	ARG	2.5
5	YE	42	GLY	2.5
15	YO	4	LYS	2.5
21	RU	18	LYS	2.5
23	YW	31	LEU	2.5
29	Y2	21	ARG	2.5
40	QI	122	ARG	2.5
44	QM	26	LYS	2.5
52	QU	28	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
32	QA	841	C	2.5
5	YE	33	VAL	2.5
9	RI	119	ALA	2.5
17	YQ	37	ALA	2.5
23	YW	17	ALA	2.5
38	XG	133	ALA	2.5
1	RA	2139	U	2.5
1	YA	1224	U	2.5
21	RU	59	GLU	2.5
21	YU	87	GLU	2.5
34	XC	160	GLU	2.5
52	XU	35	GLU	2.5
4	YD	126	ASN	2.5
7	YG	72	ASN	2.5
10	RJ	1	MET	2.5
31	Y4	1	MET	2.5
9	YI	111	THR	2.5
10	YJ	4	PHE	2.5
3	YC	4	LYS	2.5
40	XI	129	ARG	2.5
49	QR	63	TYR	2.5
1	YA	670	A	2.5
1	YA	1365	A	2.5
1	YA	1597	A	2.5
1	YA	2602	A	2.5
12	YL	11	GLY	2.5
8	RH	115	VAL	2.5
38	XG	5	VAL	2.5
43	QL	3	VAL	2.5
50	XS	59	VAL	2.5
1	YA	326	G	2.5
1	YA	1408	G	2.5
4	YD	139	SER	2.5
9	YI	75	ALA	2.5
16	RP	1	SER	2.5
24	YX	52	ALA	2.5
5	YE	181	ILE	2.5
1	YA	364	C	2.5
3	YC	34	GLU	2.5
3	YC	99	GLU	2.5
32	XA	207	C	2.5
32	XA	984	C	2.5

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Mol	Chain	Res	Type	RSRZ
40	QI	88	GLU	2.5
41	XJ	47	GLU	2.5
4	RD	103	ASP	2.5
4	RD	118	PHE	2.5
33	QB	29	PHE	2.5
1	RA	546	U	2.5
1	YA	34	U	2.5
1	YA	1559	U	2.5
1	YA	2007	U	2.5
30	Y3	5	THR	2.5
32	XA	121	U	2.5
35	XD	62	ARG	2.5
38	XG	46	LEU	2.5
40	QI	84	ARG	2.5
41	QJ	59	LYS	2.5
13	YM	124	LEU	2.5
46	XO	57	ARG	2.5
5	YE	165	HIS	2.5
34	QC	1	GLY	2.5
17	YQ	33	VAL	2.5
20	YT	63	VAL	2.5
46	XO	61	GLN	2.5
9	RI	26	ALA	2.4
10	YJ	104	ALA	2.4
29	Y2	23	ALA	2.4
45	QN	43	ALA	2.4
7	YG	1	SER	2.4
19	YS	13	SER	2.4
40	XI	27	ILE	2.4
1	YA	482	A	2.4
1	YA	631	A	2.4
1	YA	1237	A	2.4
14	RN	120	GLU	2.4
50	XS	72	GLU	2.4
21	RU	86	PHE	2.4
7	YG	35	THR	2.4
10	YJ	78	THR	2.4
15	YO	2	ASP	2.4
20	YT	59	ASN	2.4
33	XB	138	ARG	2.4
40	XI	30	ASN	2.4
41	QJ	63	ASP	2.4

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Mol	Chain	Res	Type	RSRZ
45	XN	60	ARG	2.4
47	XP	31	ARG	2.4
52	QU	34	ARG	2.4
1	YA	41	C	2.4
1	YA	184	C	2.4
1	YA	561	G	2.4
3	YC	222	THR	2.4
1	YA	1348	C	2.4
1	YA	2141	G	2.4
1	YA	2153	C	2.4
1	YA	2422	C	2.4
1	YA	2601	C	2.4
32	XA	1226	C	2.4
32	XA	1270	G	2.4
1	YA	290	U	2.4
15	YO	100	HIS	2.4
41	XJ	70	HIS	2.4
3	RC	233	GLY	2.4
3	RC	240	GLY	2.4
33	XB	13	VAL	2.4
17	YQ	20	ALA	2.4
26	YZ	31	ILE	2.4
26	YZ	47	ILE	2.4
3	YC	81	GLU	2.4
16	YP	1	SER	2.4
35	XD	146	GLU	2.4
45	XN	9	GLU	2.4
50	XS	64	GLU	2.4
11	YK	67	LYS	2.4
21	YU	90	LYS	2.4
33	XB	125	PHE	2.4
17	YQ	2	ARG	2.4
33	XB	131	LYS	2.4
45	XN	52	ARG	2.4
5	YE	147	LEU	2.4
33	XB	128	LEU	2.4
40	XI	86	LEU	2.4
23	YW	57	THR	2.4
25	YY	27	ASN	2.4
27	Y0	5	ASN	2.4
35	QD	73	ASN	2.4
1	YA	1008	A	2.4

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Mol	Chain	Res	Type	RSRZ
1	YA	1307	A	2.4
39	XH	4	ASP	2.4
3	YC	226	PRO	2.4
40	XI	110	VAL	2.4
51	QT	35	TYR	2.4
1	RA	143	C	2.4
1	YA	584	C	2.4
1	YA	671	C	2.4
1	YA	2313	C	2.4
9	RI	113	ALA	2.4
14	YN	61	ALA	2.4
20	YT	20	ALA	2.4
21	YU	64	ILE	2.4
32	XA	48	C	2.4
33	QB	11	ALA	2.4
1	YA	15	G	2.4
1	YA	379	G	2.4
1	YA	474	G	2.4
1	YA	1277	G	2.4
1	YA	1375	U	2.4
7	RG	115	GLN	2.4
33	XB	150	ILE	2.4
18	YR	21	ARG	2.4
31	Y4	9	LYS	2.4
21	YU	72	PHE	2.4
42	XK	126	ARG	2.4
23	YW	34	SER	2.4
29	Y2	45	SER	2.4
26	YZ	34	THR	2.4
29	Y2	26	ASN	2.4
44	XM	19	THR	2.4
44	XM	27	THR	2.4
12	YL	91	ASP	2.4
41	QJ	14	ASP	2.4
47	XP	69	ASP	2.4
3	YC	26	GLY	2.4
25	YY	41	HIS	2.4
27	Y0	41	HIS	2.4
30	Y3	52	GLY	2.4
38	XG	7	GLY	2.4
1	YA	101	A	2.4
1	YA	219	A	2.4

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Mol	Chain	Res	Type	RSRZ
1	YA	911	A	2.4
13	YM	73	ILE	2.4
15	YO	58	ILE	2.4
29	Y2	32	ALA	2.4
32	XA	1236	A	2.4
3	RC	241	LYS	2.4
17	YQ	40	LYS	2.4
30	Y3	38	LYS	2.4
51	QT	4	LYS	2.4
1	YA	1396	U	2.4
1	YA	1624	U	2.4
1	YA	45	G	2.4
1	YA	619	G	2.4
1	YA	1377	G	2.4
1	YA	2152	G	2.4
5	YE	59	PRO	2.4
9	RI	67	THR	2.4
11	RK	35	VAL	2.4
12	YL	90	VAL	2.4
30	Y3	33	THR	2.4
45	XN	51	PRO	2.4
6	YF	81	GLY	2.4
8	YH	95	GLY	2.4
43	QL	4	ASN	2.4
46	QO	19	ASN	2.4
51	QT	69	ASN	2.4
10	YJ	141	ASP	2.4
19	YS	32	ALA	2.4
25	YY	33	ALA	2.4
30	Y3	10	ALA	2.4
12	YL	63	LYS	2.4
19	YS	98	LYS	2.4
21	YU	16	LYS	2.4
13	YM	6	ARG	2.4
25	YY	23	ARG	2.4
40	XI	109	GLN	2.4
3	YC	204	LEU	2.4
50	XS	14	LEU	2.4
1	YA	443	A	2.4
1	YA	941	A	2.4
1	YA	1744	A	2.4
1	YA	2142	A	2.4

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Mol	Chain	Res	Type	RSRZ
1	YA	2328	A	2.4
4	YD	168	GLU	2.4
32	QA	1441	A	2.4
32	XA	977	A	2.4
23	YW	8	SER	2.4
1	YA	2034	U	2.4
1	YA	2402	U	2.4
3	YC	247	TRP	2.4
7	YG	61	TRP	2.4
23	RW	50	VAL	2.4
1	RA	885	C	2.3
1	YA	183	C	2.3
12	YL	26	GLY	2.3
14	YN	57	THR	2.3
48	XQ	9	GLY	2.3
3	YC	38	LYS	2.3
3	YC	103	ILE	2.3
5	YE	132	LYS	2.3
9	YI	121	ILE	2.3
16	YP	114	ASN	2.3
21	YU	1	ALA	2.3
21	YU	91	LYS	2.3
34	XC	195	ILE	2.3
38	XG	34	LYS	2.3
5	YE	188	MET	2.3
1	YA	442	G	2.3
1	YA	559	G	2.3
1	YA	2642	G	2.3
32	XA	94	G	2.3
32	XA	1255	G	2.3
8	RH	90	LEU	2.3
12	YL	57	LEU	2.3
37	XF	78	PHE	2.3
40	XI	125	GLN	2.3
48	XQ	8	GLN	2.3
18	YR	72	VAL	2.3
20	YT	16	VAL	2.3
34	XC	194	VAL	2.3
1	YA	1274	A	2.3
1	YA	2033	A	2.3
21	YU	101	THR	2.3
27	Y0	34	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
32	XA	353	A	2.3
47	XP	24	SER	2.3
5	YE	58	LYS	2.3
9	YI	3	LYS	2.3
10	YJ	72	LYS	2.3
12	YL	28	GLY	2.3
12	YL	45	GLY	2.3
51	QT	18	LYS	2.3
9	RI	85	ILE	2.3
24	YX	4	CYS	2.3
29	Y2	19	ARG	2.3
11	YK	119	ALA	2.3
34	QC	161	ILE	2.3
41	QJ	100	ILE	2.3
1	RA	2155	U	2.3
1	YA	92	U	2.3
1	YA	810	U	2.3
7	YG	57	TYR	2.3
32	QA	85	U	2.3
1	YA	1350	C	2.3
22	YV	45	ASP	2.3
6	YF	35	LEU	2.3
8	YH	15	LEU	2.3
41	QJ	52	LEU	2.3
25	RY	13	GLU	2.3
52	QU	38	GLU	2.3
1	YA	363	G	2.3
1	YA	1197	G	2.3
1	YA	2136	G	2.3
1	YA	2238	G	2.3
4	YD	155	VAL	2.3
5	YE	186	VAL	2.3
32	XA	104	G	2.3
32	XA	111	G	2.3
34	XC	90	VAL	2.3
44	XM	15	VAL	2.3
17	RQ	4	LYS	2.3
20	YT	40	LYS	2.3
51	XT	68	LYS	2.3
3	YC	100	ARG	2.3
12	YL	60	ARG	2.3
18	YR	79	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
28	Y1	40	PRO	2.3
9	YI	127	SER	2.3
34	XC	154	GLY	2.3
35	QD	152	SER	2.3
35	XD	199	ILE	2.3
48	XQ	4	ILE	2.3
50	XS	32	THR	2.3
51	QT	6	ALA	2.3
34	XC	192	TYR	2.3
4	YD	186	LEU	2.3
6	RF	116	LEU	2.3
9	YI	52	LEU	2.3
24	YX	48	LEU	2.3
37	XF	39	LEU	2.3
38	XG	123	LEU	2.3
1	YA	10	A	2.3
1	YA	507	A	2.3
32	XA	382	A	2.3
34	QC	36	PHE	2.3
1	RA	2137	U	2.3
1	YA	29	U	2.3
1	YA	1217	U	2.3
1	YA	1325	U	2.3
1	YA	673	C	2.3
1	YA	796	C	2.3
1	YA	1556	C	2.3
1	YA	1708	C	2.3
14	YN	5	LYS	2.3
41	XJ	36	VAL	2.3
45	XN	10	VAL	2.3
26	YZ	29	ARG	2.3
8	RH	85	GLY	2.3
8	YH	23	ALA	2.3
8	YH	106	ALA	2.3
25	YY	3	ALA	2.3
38	XG	60	ALA	2.3
4	YD	97	SER	2.3
11	YK	29	HIS	2.3
12	YL	12	SER	2.3
20	YT	78	SER	2.3
28	Y1	18	HIS	2.3
46	XO	56	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
1	YA	774	G	2.3
1	YA	1699	G	2.3
1	YA	1743	G	2.3
1	YA	2250	G	2.3
17	YQ	31	TYR	2.3
21	YU	86	PHE	2.3
32	XA	1312	G	2.3
10	YJ	86	GLN	2.3
50	QS	63	ASP	2.3
21	YU	43	LYS	2.3
1	YA	1090	A	2.3
1	YA	2267	A	2.3
18	YR	46	GLU	2.3
1	RA	2585	U	2.3
1	YA	437	U	2.3
1	YA	665	U	2.3
1	YA	2151	U	2.3
6	YF	155	ILE	2.3
44	XM	6	ILE	2.3
5	YE	26	ALA	2.3
5	YE	86	ALA	2.3
16	YP	53	GLY	2.3
1	YA	33	C	2.3
1	YA	57	C	2.3
1	YA	105	C	2.3
25	YY	37	LEU	2.3
29	Y2	31	LEU	2.3
7	RG	110	HIS	2.3
20	YT	84	TYR	2.3
41	QJ	49	PHE	2.3
45	XN	19	TYR	2.3
14	YN	78	LYS	2.3
19	YS	6	LYS	2.3
31	Y4	19	ARG	2.3
35	QD	72	ARG	2.3
8	YH	110	VAL	2.3
27	Y0	19	ASP	2.3
45	QN	33	VAL	2.3
47	QP	69	ASP	2.3
1	YA	1310	G	2.2
4	YD	96	ILE	2.2
44	XM	3	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
4	YD	11	MET	2.2
5	YE	38	GLY	2.2
8	YH	107	GLY	2.2
24	YX	54	GLY	2.2
35	QD	148	ALA	2.2
1	YA	321	U	2.2
1	YA	747	U	2.2
1	YA	1156	A	2.2
1	YA	2011	U	2.2
17	YQ	17	LEU	2.2
32	QA	209	U	2.2
32	XA	1307	U	2.2
50	XS	15	LEU	2.2
3	RC	242	HIS	2.2
9	YI	72	THR	2.2
9	YI	125	THR	2.2
37	QF	8	PHE	2.2
50	XS	40	PHE	2.2
50	XS	76	THR	2.2
12	YL	42	SER	2.2
30	Y3	63	TYR	2.2
52	XU	45	LYS	2.2
1	RA	1092	C	2.2
1	YA	208	C	2.2
1	YA	679	C	2.2
1	YA	1172	C	2.2
1	YA	2045	C	2.2
20	YT	6	ARG	2.2
35	QD	69	ARG	2.2
41	XJ	5	ARG	2.2
16	YP	11	GLN	2.2
45	XN	44	VAL	2.2
17	YQ	110	GLU	2.2
35	XD	159	GLU	2.2
39	QH	90	GLU	2.2
7	YG	39	ALA	2.2
12	YL	71	ALA	2.2
13	YM	15	GLY	2.2
15	YO	32	PRO	2.2
20	YT	41	ALA	2.2
21	YU	50	ALA	2.2
24	YX	14	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
40	QI	120	ALA	2.2
1	YA	1355	G	2.2
1	YA	1537	G	2.2
3	YC	242	HIS	2.2
9	RI	2	LYS	2.2
12	YL	107	PHE	2.2
33	QB	151	LYS	2.2
35	QD	7	LYS	2.2
50	QS	9	PHE	2.2
23	RW	42	THR	2.2
23	YW	9	THR	2.2
1	YA	50	U	2.2
1	YA	150	U	2.2
1	YA	2506	U	2.2
5	YE	69	ARG	2.2
43	XL	37	TYR	2.2
1	YA	947	A	2.2
1	YA	975	A	2.2
1	YA	1981	A	2.2
1	YA	2860	A	2.2
11	RK	122	VAL	2.2
21	YU	24	VAL	2.2
35	QD	87	GLU	2.2
44	XM	16	ILE	2.2
1	YA	16	C	2.2
1	YA	209	C	2.2
1	YA	1117	C	2.2
1	YA	1306	C	2.2
3	YC	40	GLY	2.2
3	YC	240	GLY	2.2
12	YL	114	GLY	2.2
14	YN	1	MET	2.2
18	YR	22	LEU	2.2
44	XM	68	LEU	2.2
50	XS	63	ASP	2.2
38	QG	151	ALA	2.2
38	XG	80	GLY	2.2
45	QN	28	ALA	2.2
18	YR	71	LYS	2.2
29	Y2	46	LYS	2.2
33	XB	130	LYS	2.2
29	Y2	18	PHE	2.2

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Mol	Chain	Res	Type	RSRZ
29	Y2	12	ARG	2.2
44	XM	92	ARG	2.2
45	QN	52	ARG	2.2
51	XT	23	ARG	2.2
5	YE	131	THR	2.2
7	YG	170	THR	2.2
48	QQ	44	HIS	2.2
8	YH	134	VAL	2.2
47	QP	20	VAL	2.2
47	XP	20	VAL	2.2
8	YH	93	SER	2.2
21	YU	67	SER	2.2
1	YA	2213	U	2.2
32	XA	219	U	2.2
1	RA	2148	G	2.2
1	YA	285	G	2.2
1	YA	1120	G	2.2
21	YU	39	ASN	2.2
38	XG	57	GLU	2.2
42	XK	118	ASN	2.2
1	YA	1133	A	2.2
12	YL	61	LEU	2.2
21	YU	51	LEU	2.2
32	XA	1324	A	2.2
44	XM	79	LEU	2.2
46	QO	2	LEU	2.2
9	YI	15	GLY	2.2
10	YJ	42	ALA	2.2
12	YL	75	ALA	2.2
40	XI	107	ALA	2.2
44	XM	83	GLY	2.2
45	QN	56	PRO	2.2
47	QP	22	ALA	2.2
6	RF	71	LYS	2.2
21	RU	46	LYS	2.2
21	YU	88	ASP	2.2
23	YW	14	ASP	2.2
33	QB	152	ASP	2.2
45	QN	46	LYS	2.2
14	YN	63	ARG	2.2
23	YW	59	PHE	2.2
36	QE	92	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
38	QG	17	PHE	2.2
44	XM	62	PHE	2.2
1	YA	246	C	2.2
1	YA	645	C	2.2
45	XN	100	TRP	2.2
29	Y2	24	THR	2.2
44	XM	24	VAL	2.2
17	RQ	86	SER	2.2
37	QF	51	ILE	2.2
42	XK	106	ILE	2.2
45	XN	99	SER	2.2
48	QQ	8	GLN	2.2
51	XT	66	ILE	2.2
33	QB	84	LEU	2.2
45	QN	50	LEU	2.2
45	XN	15	LEU	2.2
8	YH	127	GLU	2.2
10	YJ	9	GLU	2.2
16	RP	101	GLU	2.2
50	XS	65	MET	2.2
5	YE	63	LYS	2.2
1	YA	919	U	2.2
12	YL	49	GLY	2.2
17	YQ	22	GLY	2.2
18	YR	76	LYS	2.2
24	YX	31	ASN	2.2
27	Y0	36	LYS	2.2
44	QM	31	ALA	2.2
12	YL	59	ARG	2.2
19	YS	18	ARG	2.2
35	XD	28	ASP	2.2
41	XJ	75	ASP	2.2
1	YA	1009	A	2.2
1	YA	1276	A	2.2
1	YA	1552	A	2.2
1	YA	2333	A	2.2
1	YA	93	G	2.2
1	YA	185	G	2.2
1	YA	289	G	2.2
1	YA	388	G	2.2
1	YA	549	G	2.2
1	YA	1216	G	2.2

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Mol	Chain	Res	Type	RSRZ
1	YA	2318	G	2.2
1	YA	2391	G	2.2
32	XA	326	G	2.2
10	YJ	40	HIS	2.2
19	YS	9	HIS	2.2
3	YC	215	VAL	2.1
8	RH	134	VAL	2.1
19	YS	37	THR	2.1
10	YJ	74	TYR	2.1
1	RA	140	C	2.1
1	YA	531	C	2.1
1	YA	1319	C	2.1
1	YA	1345	C	2.1
1	YA	1607	C	2.1
1	YA	1870	C	2.1
1	YA	2507	C	2.1
21	RU	57	ILE	2.1
5	YE	157	LEU	2.1
19	YS	23	LEU	2.1
30	Y3	61	LEU	2.1
44	XM	51	GLN	2.1
3	YC	37	SER	2.1
15	YO	3	LYS	2.1
37	QF	62	MET	2.1
8	RH	100	ALA	2.1
5	YE	102	ARG	2.1
8	YH	149	GLU	2.1
9	RI	75	ALA	2.1
20	YT	4	GLU	2.1
14	YN	50	PRO	2.1
18	YR	8	GLY	2.1
8	YH	98	ASP	2.1
41	XJ	14	ASP	2.1
4	YD	122	VAL	2.1
19	YS	47	VAL	2.1
24	YX	66	VAL	2.1
34	XC	189	HIS	2.1
38	XG	63	VAL	2.1
8	RH	40	THR	2.1
12	YL	30	THR	2.1
20	YT	39	THR	2.1
30	Y3	16	THR	2.1

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Mol	Chain	Res	Type	RSRZ
1	YA	793	A	2.1
1	YA	1378	A	2.1
1	YA	2800	A	2.1
4	YD	188	LEU	2.1
11	RK	111	LYS	2.1
14	YN	51	LEU	2.1
18	YR	24	LYS	2.1
30	Y3	15	LYS	2.1
31	Y4	34	LYS	2.1
36	XE	22	LYS	2.1
38	XG	22	LEU	2.1
50	QS	4	LEU	2.1
1	YA	107	G	2.1
1	YA	1215	G	2.1
1	YA	1622	G	2.1
12	YL	54	GLN	2.1
5	YE	135	ALA	2.1
38	XG	9	ARG	2.1
44	XM	14	ALA	2.1
45	QN	35	ALA	2.1
7	RG	1	SER	2.1
12	YL	40	SER	2.1
18	RR	46	GLU	2.1
21	YU	19	GLY	2.1
40	QI	72	SER	2.1
12	YL	93	ASN	2.1
14	YN	21	PHE	2.1
3	YC	16	VAL	2.1
5	YE	193	VAL	2.1
27	Y0	2	VAL	2.1
3	YC	57	HIS	2.1
1	YA	288	U	2.1
3	YC	48	ILE	2.1
3	YC	252	LYS	2.1
4	YD	187	LEU	2.1
9	YI	67	THR	2.1
10	YJ	106	LYS	2.1
13	YM	63	ILE	2.1
13	YM	119	LEU	2.1
19	YS	39	THR	2.1
24	YX	47	THR	2.1
30	Y3	43	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
36	QE	10	LEU	2.1
23	YW	40	ARG	2.1
40	QI	121	ARG	2.1
43	QL	8	ARG	2.1
46	QO	16	ARG	2.1
21	RU	74	ALA	2.1
38	XG	149	ALA	2.1
1	YA	502	A	2.1
1	YA	1327	A	2.1
1	YA	2005	A	2.1
1	YA	2266	A	2.1
1	YA	2327	A	2.1
7	YG	154	GLU	2.1
8	YH	85	GLY	2.1
32	QA	1493	A	2.1
32	XA	946	A	2.1
47	QP	41	PRO	2.1
3	YC	239	PHE	2.1
18	YR	7	SER	2.1
29	Y2	5	PHE	2.1
41	XJ	49	PHE	2.1
1	YA	43	G	2.1
1	YA	88	G	2.1
1	YA	308	G	2.1
1	YA	319	G	2.1
1	YA	376	G	2.1
1	YA	914	G	2.1
1	YA	1022	G	2.1
1	YA	1193	G	2.1
1	YA	1245	G	2.1
1	YA	1568	G	2.1
1	YA	2383	G	2.1
1	YA	2677	G	2.1
9	YI	23	VAL	2.1
25	YY	11	VAL	2.1
32	XA	211	G	2.1
32	XA	220	G	2.1
52	XU	31	VAL	2.1
1	YA	1764	C	2.1
1	YA	2021	C	2.1
32	XA	1218	C	2.1
13	YM	118	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
3	YC	32	LEU	2.1
15	YO	62	LEU	2.1
20	RT	7	LEU	2.1
27	Y0	38	LEU	2.1
50	XS	68	HIS	2.1
28	Y1	21	THR	2.1
40	QI	123	ARG	2.1
49	XR	50	TYR	2.1
3	YC	223	ALA	2.1
11	YK	81	GLY	2.1
23	YW	51	GLY	2.1
7	YG	51	PHE	2.1
20	YT	17	SER	2.1
3	YC	2	VAL	2.1
1	RA	1808	A	2.1
1	YA	94	A	2.1
1	YA	354	A	2.1
1	YA	1070	A	2.1
1	YA	1301	A	2.1
14	YN	99	LYS	2.1
24	YX	22	ASN	2.1
31	Y4	13	ASN	2.1
32	XA	262	A	2.1
43	XL	14	LYS	2.1
12	YL	3	LEU	2.1
12	YL	95	LEU	2.1
16	YP	20	ARG	2.1
40	QI	118	ARG	2.1
52	XU	15	LEU	2.1
50	XS	13	HIS	2.1
3	RC	251	THR	2.1
7	RG	83	THR	2.1
20	YT	29	THR	2.1
33	XB	99	MET	2.1
36	XE	79	THR	2.1
52	QU	42	THR	2.1
1	RA	2150	C	2.1
1	YA	426	C	2.1
1	YA	435	C	2.1
1	YA	484	C	2.1
1	YA	961	C	2.1
1	YA	1320	C	2.1

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Mol	Chain	Res	Type	RSRZ
1	YA	1461	C	2.1
1	YA	1706	C	2.1
1	RA	1091	G	2.1
1	RA	2140	G	2.1
1	YA	242	G	2.1
1	YA	245	G	2.1
1	YA	630	G	2.1
1	YA	974	G	2.1
1	YA	1324	G	2.1
1	YA	1430	G	2.1
1	YA	1653	G	2.1
1	YA	1660	G	2.1
1	YA	2801	G	2.1
8	RH	65	ALA	2.1
32	XA	1314	C	2.1
44	XM	4	ALA	2.1
6	YF	80	GLN	2.1
30	Y3	17	GLY	2.1
35	XD	34	GLU	2.1
41	QJ	78	GLU	2.1
44	XM	65	GLU	2.1
1	YA	1779	U	2.0
4	YD	60	VAL	2.0
4	YD	73	VAL	2.0
9	YI	57	VAL	2.0
20	YT	53	VAL	2.0
24	YX	25	LYS	2.0
28	Y1	41	VAL	2.0
30	Y3	2	LYS	2.0
31	Y4	25	VAL	2.0
4	YD	27	ILE	2.0
10	YJ	96	ARG	2.0
17	YQ	5	ARG	2.0
19	RS	92	ARG	2.0
21	YU	52	ASN	2.0
30	Y3	29	ARG	2.0
35	QD	63	ILE	2.0
50	XS	46	LEU	2.0
51	XT	2	ASN	2.0
1	RA	1069	A	2.0
1	YA	73	A	2.0
1	YA	1095	A	2.0

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Mol	Chain	Res	Type	RSRZ
1	YA	1287	A	2.0
1	YA	2042	A	2.0
11	YK	16	ALA	2.0
32	XA	109	A	2.0
41	QJ	60	ASP	2.0
41	XJ	34	ALA	2.0
44	XM	17	ALA	2.0
45	QN	49	THR	2.0
19	YS	26	GLY	2.0
21	YU	49	PRO	2.0
23	RW	73	PRO	2.0
1	YA	228	C	2.0
1	YA	436	C	2.0
1	YA	1200	C	2.0
1	YA	2023	C	2.0
4	YD	116	LYS	2.0
4	YD	159	LYS	2.0
10	YJ	12	LYS	2.0
12	YL	76	GLU	2.0
30	Y3	35	LYS	2.0
35	XD	147	LYS	2.0
40	XI	111	GLU	2.0
51	QT	68	LYS	2.0
4	YD	20	VAL	2.0
14	YN	47	VAL	2.0
34	XC	51	VAL	2.0
41	QJ	74	VAL	2.0
48	XQ	82	VAL	2.0
1	RA	549	G	2.0
1	RA	1087	G	2.0
1	YA	46	G	2.0
1	YA	777	G	2.0
1	YA	1236	G	2.0
7	YG	32	LEU	2.0
11	YK	31	ARG	2.0
14	YN	83	LEU	2.0
15	YO	26	LEU	2.0
19	YS	84	ARG	2.0
32	XA	230	G	2.0
41	QJ	8	ILE	2.0
44	XM	73	SER	2.0
1	YA	100	U	2.0

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Mol	Chain	Res	Type	RSRZ
1	YA	1066	U	2.0
1	YA	1258	U	2.0
1	YA	2408	U	2.0
16	YP	30	TRP	2.0
33	QB	99	MET	2.0
45	QN	41	TRP	2.0
50	QS	13	HIS	2.0
50	XS	74	ALA	2.0
3	YC	186	ASP	2.0
18	YR	95	ASP	2.0
3	YC	55	GLY	2.0
16	YP	42	PHE	2.0
21	YU	22	GLY	2.0
8	RH	33	GLN	2.0
8	YH	38	PRO	2.0
40	XI	99	LYS	2.0
1	YA	514	A	2.0
1	YA	515	A	2.0
1	YA	529	A	2.0
1	YA	789	A	2.0
3	YC	184	GLU	2.0
5	YE	187	VAL	2.0
26	YZ	54	VAL	2.0
27	Y0	35	GLU	2.0
32	XA	1219	A	2.0
38	XG	74	VAL	2.0
44	QM	63	VAL	2.0
45	XN	25	GLU	2.0
13	YM	40	ARG	2.0
21	YU	85	ARG	2.0
5	YE	138	LEU	2.0
35	QD	20	LEU	2.0
1	YA	440	C	2.0
1	YA	1261	C	2.0
1	YA	2676	C	2.0

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

There are no non-standard protein/DNA/RNA residues in this entry.

6.3 Carbohydrates (i)

There are no oligosaccharides 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
53	MG	YA	3130	1/1	0.32	0.29	271,271,271,271	0
53	MG	YA	3125	1/1	0.40	0.19	200,200,200,200	0
53	MG	YA	3003	1/1	0.47	0.34	238,238,238,238	0
53	MG	YA	3049	1/1	0.49	0.10	243,243,243,243	0
53	MG	YA	3108	1/1	0.53	0.19	217,217,217,217	0
53	MG	YA	3019	1/1	0.55	0.22	278,278,278,278	0
53	MG	YA	3058	1/1	0.56	0.18	249,249,249,249	0
53	MG	YJ	201	1/1	0.57	0.38	319,319,319,319	0
53	MG	YA	3062	1/1	0.58	0.32	190,190,190,190	0
53	MG	YA	3045	1/1	0.59	0.17	206,206,206,206	0
53	MG	YA	3109	1/1	0.63	0.30	227,227,227,227	0
53	MG	XA	1636	1/1	0.63	0.31	224,224,224,224	0
53	MG	YA	3006	1/1	0.65	0.12	237,237,237,237	0
53	MG	YA	3028	1/1	0.66	0.27	222,222,222,222	0
53	MG	QA	1619	1/1	0.67	0.30	230,230,230,230	0
53	MG	YA	3005	1/1	0.69	0.28	282,282,282,282	0
53	MG	YA	3007	1/1	0.70	0.21	232,232,232,232	0
53	MG	RA	3068	1/1	0.70	0.13	175,175,175,175	0
53	MG	RA	3024	1/1	0.70	0.37	210,210,210,210	0
53	MG	YA	3002	1/1	0.71	0.19	231,231,231,231	0
53	MG	YA	3026	1/1	0.71	0.50	242,242,242,242	0
53	MG	YE	301	1/1	0.71	0.23	199,199,199,199	0
53	MG	YA	3017	1/1	0.71	0.13	185,185,185,185	0
53	MG	YA	3088	1/1	0.73	0.19	222,222,222,222	0
53	MG	YA	3015	1/1	0.74	0.15	219,219,219,219	0
53	MG	YA	3010	1/1	0.74	0.28	272,272,272,272	0
53	MG	YA	3128	1/1	0.75	0.34	163,163,163,163	0
53	MG	YA	3079	1/1	0.75	0.19	225,225,225,225	0
53	MG	YA	3082	1/1	0.76	0.14	164,164,164,164	0
53	MG	YA	3132	1/1	0.76	0.22	240,240,240,240	0
53	MG	XA	1619	1/1	0.76	0.14	212,212,212,212	0
53	MG	XA	1615	1/1	0.76	0.12	187,187,187,187	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	YA	3025	1/1	0.77	0.24	162,162,162,162	0
53	MG	YA	3105	1/1	0.77	0.16	97,97,97,97	0
53	MG	XA	1616	1/1	0.77	0.15	195,195,195,195	0
53	MG	RA	3046	1/1	0.77	0.12	176,176,176,176	0
53	MG	YA	3083	1/1	0.77	0.12	214,214,214,214	0
53	MG	YA	3074	1/1	0.78	0.28	260,260,260,260	0
53	MG	XA	1614	1/1	0.78	0.20	236,236,236,236	0
53	MG	YA	3123	1/1	0.78	0.27	217,217,217,217	0
53	MG	YA	3064	1/1	0.79	0.33	256,256,256,256	0
53	MG	YA	3013	1/1	0.79	0.27	241,241,241,241	0
53	MG	YA	3033	1/1	0.79	0.20	151,151,151,151	0
53	MG	YA	3009	1/1	0.79	0.18	157,157,157,157	0
53	MG	YA	3069	1/1	0.80	0.22	267,267,267,267	0
53	MG	RB	201	1/1	0.80	0.14	255,255,255,255	0
53	MG	YA	3133	1/1	0.80	0.16	220,220,220,220	0
53	MG	XA	1617	1/1	0.80	0.12	202,202,202,202	0
53	MG	YA	3129	1/1	0.80	0.36	261,261,261,261	0
53	MG	YA	3127	1/1	0.81	0.57	248,248,248,248	0
53	MG	YA	3097	1/1	0.81	0.12	159,159,159,159	0
53	MG	RA	3129	1/1	0.81	0.43	285,285,285,285	0
53	MG	YA	3076	1/1	0.81	0.21	195,195,195,195	0
53	MG	XA	1622	1/1	0.82	0.10	187,187,187,187	0
53	MG	YA	3085	1/1	0.82	0.17	158,158,158,158	0
53	MG	YA	3022	1/1	0.82	0.12	149,149,149,149	0
53	MG	YA	3091	1/1	0.82	0.14	184,184,184,184	0
53	MG	QA	1630	1/1	0.82	0.11	196,196,196,196	0
53	MG	RA	3069	1/1	0.82	0.17	197,197,197,197	0
53	MG	YA	3041	1/1	0.83	0.10	119,119,119,119	0
53	MG	YA	3087	1/1	0.83	0.10	199,199,199,199	0
53	MG	XA	1602	1/1	0.83	0.11	139,139,139,139	0
53	MG	RA	3131	1/1	0.84	0.30	187,187,187,187	0
53	MG	YA	3011	1/1	0.84	0.17	150,150,150,150	0
53	MG	RA	3113	1/1	0.84	0.12	190,190,190,190	0
53	MG	YA	3100	1/1	0.84	0.12	124,124,124,124	0
53	MG	YA	3036	1/1	0.84	0.11	205,205,205,205	0
53	MG	RA	3096	1/1	0.84	0.18	169,169,169,169	0
53	MG	YA	3066	1/1	0.84	0.14	105,105,105,105	0
53	MG	YA	3120	1/1	0.84	0.13	124,124,124,124	0
53	MG	YA	3043	1/1	0.84	0.13	155,155,155,155	0
53	MG	YA	3073	1/1	0.85	0.08	193,193,193,193	0
53	MG	QA	1610	1/1	0.85	0.14	197,197,197,197	0
53	MG	XA	1610	1/1	0.85	0.10	168,168,168,168	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	YA	3092	1/1	0.85	0.22	169,169,169,169	0
53	MG	XA	1634	1/1	0.85	0.09	165,165,165,165	0
53	MG	YA	3018	1/1	0.85	0.14	185,185,185,185	0
53	MG	YA	3101	1/1	0.85	0.13	96,96,96,96	0
53	MG	QA	1636	1/1	0.85	0.12	218,218,218,218	0
53	MG	YA	3084	1/1	0.85	0.13	168,168,168,168	0
53	MG	YA	3072	1/1	0.85	0.11	183,183,183,183	0
53	MG	YA	3115	1/1	0.85	0.17	176,176,176,176	0
53	MG	YA	3021	1/1	0.86	0.18	183,183,183,183	0
53	MG	YA	3038	1/1	0.86	0.10	234,234,234,234	0
53	MG	XA	1612	1/1	0.86	0.13	125,125,125,125	0
53	MG	YA	3059	1/1	0.86	0.22	232,232,232,232	0
53	MG	RA	3004	1/1	0.86	0.16	184,184,184,184	0
53	MG	YA	3134	1/1	0.86	0.15	201,201,201,201	0
53	MG	YA	3063	1/1	0.86	1.13	273,273,273,273	0
53	MG	YA	3075	1/1	0.86	0.25	209,209,209,209	0
53	MG	YA	3114	1/1	0.87	0.13	182,182,182,182	0
53	MG	YA	3057	1/1	0.87	0.20	205,205,205,205	0
53	MG	YA	3093	1/1	0.88	0.12	188,188,188,188	0
53	MG	RA	3085	1/1	0.88	0.16	133,133,133,133	0
53	MG	YA	3098	1/1	0.88	0.14	183,183,183,183	0
53	MG	YA	3027	1/1	0.88	0.15	194,194,194,194	0
53	MG	QA	1627	1/1	0.88	0.15	132,132,132,132	0
53	MG	XA	1620	1/1	0.88	0.12	182,182,182,182	0
53	MG	YA	3106	1/1	0.88	0.15	218,218,218,218	0
53	MG	YA	3024	1/1	0.88	0.13	102,102,102,102	0
53	MG	YA	3078	1/1	0.88	0.18	214,214,214,214	0
53	MG	XA	1638	1/1	0.88	0.13	204,204,204,204	0
53	MG	YA	3080	1/1	0.88	0.17	154,154,154,154	0
53	MG	YA	3118	1/1	0.88	0.12	100,100,100,100	0
53	MG	YA	3047	1/1	0.89	0.15	174,174,174,174	0
53	MG	XA	1629	1/1	0.89	0.09	190,190,190,190	0
53	MG	YA	3001	1/1	0.89	0.11	141,141,141,141	0
53	MG	XA	1624	1/1	0.89	0.18	146,146,146,146	0
53	MG	YA	3099	1/1	0.89	0.10	188,188,188,188	0
53	MG	YA	3111	1/1	0.89	0.10	202,202,202,202	0
53	MG	XA	1627	1/1	0.89	0.16	197,197,197,197	0
53	MG	QA	1631	1/1	0.90	0.14	228,228,228,228	0
53	MG	YA	3034	1/1	0.90	0.12	88,88,88,88	0
53	MG	YA	3050	1/1	0.90	0.10	154,154,154,154	0
53	MG	RA	3122	1/1	0.90	0.24	164,164,164,164	0
53	MG	XA	1625	1/1	0.90	0.11	111,111,111,111	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	QA	1639	1/1	0.90	0.10	118,118,118,118	0
53	MG	YA	3060	1/1	0.90	0.30	235,235,235,235	0
53	MG	XA	1628	1/1	0.90	0.16	224,224,224,224	0
53	MG	RA	3089	1/1	0.90	0.10	127,127,127,127	0
53	MG	YA	3008	1/1	0.91	0.10	147,147,147,147	0
53	MG	XA	1632	1/1	0.91	0.10	122,122,122,122	0
53	MG	YA	3095	1/1	0.91	0.11	138,138,138,138	0
53	MG	RA	3090	1/1	0.91	0.12	135,135,135,135	0
53	MG	XA	1640	1/1	0.91	0.11	137,137,137,137	0
53	MG	YA	3030	1/1	0.91	0.14	130,130,130,130	0
53	MG	YA	3053	1/1	0.91	0.17	127,127,127,127	0
53	MG	YA	3086	1/1	0.92	0.16	109,109,109,109	0
53	MG	YA	3122	1/1	0.92	0.08	104,104,104,104	0
53	MG	YA	3023	1/1	0.92	0.07	130,130,130,130	0
53	MG	XA	1623	1/1	0.92	0.13	108,108,108,108	0
53	MG	XA	1630	1/1	0.92	0.09	160,160,160,160	0
53	MG	YA	3107	1/1	0.92	0.12	91,91,91,91	0
53	MG	QA	1641	1/1	0.92	0.18	171,171,171,171	0
53	MG	YA	3039	1/1	0.92	0.10	105,105,105,105	0
53	MG	YA	3110	1/1	0.92	0.06	120,120,120,120	0
53	MG	YA	3071	1/1	0.92	0.10	102,102,102,102	0
53	MG	RA	3117	1/1	0.92	0.18	162,162,162,162	0
53	MG	XA	1607	1/1	0.92	0.10	167,167,167,167	0
53	MG	RA	3058	1/1	0.92	0.18	100,100,100,100	0
53	MG	XA	1637	1/1	0.93	0.11	94,94,94,94	0
53	MG	QA	1629	1/1	0.93	0.06	97,97,97,97	0
53	MG	RA	3020	1/1	0.93	0.15	200,200,200,200	0
53	MG	RA	3047	1/1	0.93	0.09	122,122,122,122	0
53	MG	YA	3102	1/1	0.93	0.09	118,118,118,118	0
53	MG	YA	3126	1/1	0.93	0.14	120,120,120,120	0
53	MG	QA	1614	1/1	0.93	0.12	159,159,159,159	0
53	MG	QA	1638	1/1	0.93	0.10	67,67,67,67	0
53	MG	RA	3130	1/1	0.93	0.15	118,118,118,118	0
53	MG	XA	1618	1/1	0.93	0.08	136,136,136,136	0
53	MG	QA	1620	1/1	0.93	0.07	116,116,116,116	0
53	MG	QA	1624	1/1	0.93	0.10	143,143,143,143	0
53	MG	YA	3094	1/1	0.93	0.09	145,145,145,145	0
53	MG	RA	3055	1/1	0.93	0.28	252,252,252,252	0
53	MG	YA	3042	1/1	0.93	0.09	81,81,81,81	0
54	EM1	RA	3135	60/60	0.93	0.14	0,23,85,88	0
53	MG	YA	3004	1/1	0.94	0.10	134,134,134,134	0
53	MG	YA	3121	1/1	0.94	0.11	168,168,168,168	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	RA	3033	1/1	0.94	0.15	159,159,159,159	0
53	MG	XA	1635	1/1	0.94	0.05	76,76,76,76	0
53	MG	XA	1601	1/1	0.94	0.07	106,106,106,106	0
53	MG	RA	3086	1/1	0.94	0.11	151,151,151,151	0
53	MG	QA	1604	1/1	0.94	0.06	139,139,139,139	0
53	MG	XA	1639	1/1	0.94	0.06	159,159,159,159	0
53	MG	RA	3035	1/1	0.94	0.20	189,189,189,189	0
53	MG	XA	1642	1/1	0.94	0.09	139,139,139,139	0
53	MG	YA	3029	1/1	0.94	0.21	178,178,178,178	0
53	MG	XA	1611	1/1	0.94	0.09	110,110,110,110	0
53	MG	YA	3031	1/1	0.94	0.10	80,80,80,80	0
53	MG	YB	201	1/1	0.94	0.07	111,111,111,111	0
53	MG	RA	3114	1/1	0.94	0.12	28,28,28,28	0
53	MG	YA	3096	1/1	0.94	0.10	127,127,127,127	0
53	MG	XA	1613	1/1	0.94	0.08	147,147,147,147	0
53	MG	QA	1602	1/1	0.95	0.12	177,177,177,177	0
53	MG	YA	3032	1/1	0.95	0.09	162,162,162,162	0
53	MG	RA	3120	1/1	0.95	0.20	45,45,45,45	0
53	MG	RA	3011	1/1	0.95	0.10	129,129,129,129	0
53	MG	QA	1612	1/1	0.95	0.09	113,113,113,113	0
53	MG	QA	1637	1/1	0.95	0.08	131,131,131,131	0
53	MG	YA	3103	1/1	0.95	0.09	86,86,86,86	0
53	MG	RA	3126	1/1	0.95	0.07	40,40,40,40	0
53	MG	QA	1617	1/1	0.95	0.09	129,129,129,129	0
53	MG	RA	3110	1/1	0.95	0.08	84,84,84,84	0
53	MG	YA	3131	1/1	0.95	0.08	94,94,94,94	0
53	MG	RA	3030	1/1	0.95	0.05	56,56,56,56	0
53	MG	RA	3007	1/1	0.95	0.07	112,112,112,112	0
53	MG	XA	1606	1/1	0.95	0.07	93,93,93,93	0
53	MG	RA	3054	1/1	0.95	0.20	198,198,198,198	0
53	MG	QA	1628	1/1	0.95	0.18	142,142,142,142	0
53	MG	YA	3014	1/1	0.95	0.11	113,113,113,113	0
53	MG	YA	3077	1/1	0.95	0.06	109,109,109,109	0
53	MG	RA	3070	1/1	0.96	0.18	137,137,137,137	0
53	MG	XA	1603	1/1	0.96	0.09	136,136,136,136	0
53	MG	RA	3081	1/1	0.96	0.06	99,99,99,99	0
53	MG	YA	3112	1/1	0.96	0.07	79,79,79,79	0
53	MG	YA	3113	1/1	0.96	0.05	128,128,128,128	0
53	MG	QA	1623	1/1	0.96	0.08	77,77,77,77	0
53	MG	XA	1609	1/1	0.96	0.07	98,98,98,98	0
53	MG	YA	3090	1/1	0.96	0.08	112,112,112,112	0
53	MG	YA	3119	1/1	0.96	0.10	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	RA	3083	1/1	0.96	0.06	53,53,53,53	0
53	MG	XA	1631	1/1	0.96	0.08	82,82,82,82	0
53	MG	RA	3059	1/1	0.96	0.23	207,207,207,207	0
53	MG	RB	202	1/1	0.96	0.07	82,82,82,82	0
53	MG	YA	3035	1/1	0.96	0.09	90,90,90,90	0
53	MG	RA	3060	1/1	0.96	0.31	236,236,236,236	0
53	MG	RA	3056	1/1	0.96	0.16	148,148,148,148	0
53	MG	QA	1606	1/1	0.96	0.07	80,80,80,80	0
53	MG	QA	1607	1/1	0.96	0.06	136,136,136,136	0
53	MG	QA	1609	1/1	0.96	0.07	77,77,77,77	0
53	MG	RA	3121	1/1	0.96	0.09	45,45,45,45	0
53	MG	RA	3026	1/1	0.96	0.10	143,143,143,143	0
53	MG	RA	3124	1/1	0.96	0.12	63,63,63,63	0
53	MG	YA	3104	1/1	0.96	0.11	52,52,52,52	0
53	MG	YA	3048	1/1	0.96	0.07	103,103,103,103	0
53	MG	QA	1643	1/1	0.96	0.06	67,67,67,67	0
53	MG	RA	3095	1/1	0.96	0.12	139,139,139,139	0
53	MG	YA	3051	1/1	0.96	0.06	88,88,88,88	0
53	MG	RA	3076	1/1	0.97	0.08	107,107,107,107	0
53	MG	YA	3081	1/1	0.97	0.09	83,83,83,83	0
53	MG	QA	1632	1/1	0.97	0.07	85,85,85,85	0
53	MG	QA	1634	1/1	0.97	0.08	94,94,94,94	0
53	MG	RA	3091	1/1	0.97	0.06	84,84,84,84	0
53	MG	RA	3022	1/1	0.97	0.05	27,27,27,27	0
53	MG	RA	3082	1/1	0.97	0.08	86,86,86,86	0
53	MG	YA	3054	1/1	0.97	0.06	86,86,86,86	0
53	MG	RA	3100	1/1	0.97	0.13	119,119,119,119	0
53	MG	YA	3089	1/1	0.97	0.09	101,101,101,101	0
53	MG	QA	1616	1/1	0.97	0.11	98,98,98,98	0
53	MG	RA	3103	1/1	0.97	0.06	30,30,30,30	0
53	MG	QA	1618	1/1	0.97	0.06	78,78,78,78	0
53	MG	RA	3105	1/1	0.97	0.15	66,66,66,66	0
53	MG	YA	3124	1/1	0.97	0.06	82,82,82,82	0
53	MG	RA	3133	1/1	0.97	0.15	116,116,116,116	0
53	MG	QA	1621	1/1	0.97	0.08	131,131,131,131	0
53	MG	YA	3065	1/1	0.97	0.06	88,88,88,88	0
53	MG	RA	3014	1/1	0.97	0.06	38,38,38,38	0
53	MG	RA	3051	1/1	0.97	0.06	70,70,70,70	0
53	MG	QA	1625	1/1	0.97	0.05	101,101,101,101	0
53	MG	YA	3037	1/1	0.97	0.07	81,81,81,81	0
53	MG	XA	1633	1/1	0.97	0.07	79,79,79,79	0
53	MG	RA	3003	1/1	0.97	0.08	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	YA	3040	1/1	0.97	0.05	72,72,72,72	0
53	MG	YA	3016	1/1	0.97	0.06	60,60,60,60	0
53	MG	RA	3088	1/1	0.97	0.04	59,59,59,59	0
53	MG	QA	1605	1/1	0.97	0.09	72,72,72,72	0
53	MG	RA	3074	1/1	0.97	0.06	93,93,93,93	0
55	ZN	Y4	101	1/1	0.97	0.06	169,169,169,169	0
53	MG	RA	3136	1/1	0.98	0.05	61,61,61,61	0
53	MG	YA	3012	1/1	0.98	0.05	72,72,72,72	0
53	MG	RA	3031	1/1	0.98	0.06	37,37,37,37	0
53	MG	RA	3002	1/1	0.98	0.05	75,75,75,75	0
53	MG	XA	1604	1/1	0.98	0.05	96,96,96,96	0
53	MG	RB	203	1/1	0.98	0.06	58,58,58,58	0
53	MG	RA	3118	1/1	0.98	0.05	48,48,48,48	0
53	MG	YA	3046	1/1	0.98	0.11	73,73,73,73	0
53	MG	XA	1608	1/1	0.98	0.14	46,46,46,46	0
53	MG	RA	3119	1/1	0.98	0.05	56,56,56,56	0
53	MG	YA	3116	1/1	0.98	0.08	84,84,84,84	0
53	MG	YA	3117	1/1	0.98	0.06	73,73,73,73	0
53	MG	YA	3020	1/1	0.98	0.11	53,53,53,53	0
53	MG	RA	3097	1/1	0.98	0.08	54,54,54,54	0
53	MG	RA	3027	1/1	0.98	0.05	33,33,33,33	0
53	MG	YA	3052	1/1	0.98	0.04	72,72,72,72	0
53	MG	RA	3045	1/1	0.98	0.07	25,25,25,25	0
53	MG	QA	1608	1/1	0.98	0.12	61,61,61,61	0
53	MG	YA	3056	1/1	0.98	0.09	85,85,85,85	0
53	MG	RA	3028	1/1	0.98	0.15	92,92,92,92	0
53	MG	XA	1641	1/1	0.98	0.09	116,116,116,116	0
53	MG	RA	3108	1/1	0.98	0.08	95,95,95,95	0
53	MG	RA	3109	1/1	0.98	0.07	46,46,46,46	0
53	MG	YA	3061	1/1	0.98	0.08	110,110,110,110	0
53	MG	QA	1635	1/1	0.98	0.04	87,87,87,87	0
53	MG	QA	1613	1/1	0.98	0.04	76,76,76,76	0
53	MG	RA	3005	1/1	0.98	0.05	74,74,74,74	0
53	MG	QA	1615	1/1	0.98	0.04	152,152,152,152	0
53	MG	RA	3112	1/1	0.98	0.04	49,49,49,49	0
53	MG	QA	1640	1/1	0.98	0.04	79,79,79,79	0
53	MG	YA	3070	1/1	0.98	0.05	91,91,91,91	0
53	MG	RA	3050	1/1	0.98	0.06	39,39,39,39	0
53	MG	QA	1642	1/1	0.98	0.05	79,79,79,79	0
53	MG	RA	3134	1/1	0.98	0.21	210,210,210,210	0
53	MG	RB	204	1/1	0.99	0.05	45,45,45,45	0
53	MG	QA	1601	1/1	0.99	0.03	94,94,94,94	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	RA	3010	1/1	0.99	0.04	31,31,31,31	0
53	MG	QA	1603	1/1	0.99	0.03	65,65,65,65	0
53	MG	RA	3025	1/1	0.99	0.06	40,40,40,40	0
53	MG	RA	3087	1/1	0.99	0.02	47,47,47,47	0
53	MG	RA	3048	1/1	0.99	0.03	25,25,25,25	0
53	MG	RA	3049	1/1	0.99	0.05	76,76,76,76	0
53	MG	RA	3006	1/1	0.99	0.07	54,54,54,54	0
53	MG	RA	3012	1/1	0.99	0.04	20,20,20,20	0
53	MG	XA	1621	1/1	0.99	0.09	57,57,57,57	0
53	MG	RA	3093	1/1	0.99	0.07	45,45,45,45	0
53	MG	QA	1611	1/1	0.99	0.04	57,57,57,57	0
53	MG	RA	3053	1/1	0.99	0.05	55,55,55,55	0
53	MG	RA	3001	1/1	0.99	0.05	98,98,98,98	0
53	MG	RA	3029	1/1	0.99	0.09	14,14,14,14	0
53	MG	RA	3098	1/1	0.99	0.03	49,49,49,49	0
53	MG	RA	3099	1/1	0.99	0.07	34,34,34,34	0
53	MG	RA	3015	1/1	0.99	0.05	65,65,65,65	0
53	MG	RA	3101	1/1	0.99	0.05	48,48,48,48	0
53	MG	YA	3044	1/1	0.99	0.07	87,87,87,87	0
53	MG	RA	3057	1/1	0.99	0.04	71,71,71,71	0
53	MG	RA	3104	1/1	0.99	0.07	23,23,23,23	0
53	MG	RA	3018	1/1	0.99	0.18	32,32,32,32	0
53	MG	QA	1622	1/1	0.99	0.10	54,54,54,54	0
53	MG	RA	3106	1/1	0.99	0.07	13,13,13,13	0
53	MG	RA	3107	1/1	0.99	0.07	17,17,17,17	0
53	MG	RA	3032	1/1	0.99	0.05	23,23,23,23	0
53	MG	RA	3019	1/1	0.99	0.06	34,34,34,34	0
53	MG	RA	3061	1/1	0.99	0.03	18,18,18,18	0
53	MG	RA	3111	1/1	0.99	0.04	31,31,31,31	0
53	MG	YA	3055	1/1	0.99	0.06	103,103,103,103	0
53	MG	RA	3062	1/1	0.99	0.05	19,19,19,19	0
53	MG	RA	3063	1/1	0.99	0.04	26,26,26,26	0
53	MG	RA	3065	1/1	0.99	0.04	35,35,35,35	0
53	MG	QA	1633	1/1	0.99	0.07	70,70,70,70	0
53	MG	RA	3116	1/1	0.99	0.07	72,72,72,72	0
53	MG	RA	3066	1/1	0.99	0.04	32,32,32,32	0
53	MG	RA	3067	1/1	0.99	0.04	28,28,28,28	0
53	MG	RA	3008	1/1	0.99	0.05	45,45,45,45	0
53	MG	RA	3036	1/1	0.99	0.05	23,23,23,23	0
53	MG	RA	3037	1/1	0.99	0.03	30,30,30,30	0
53	MG	RA	3072	1/1	0.99	0.06	61,61,61,61	0
53	MG	YA	3067	1/1	0.99	0.04	72,72,72,72	0

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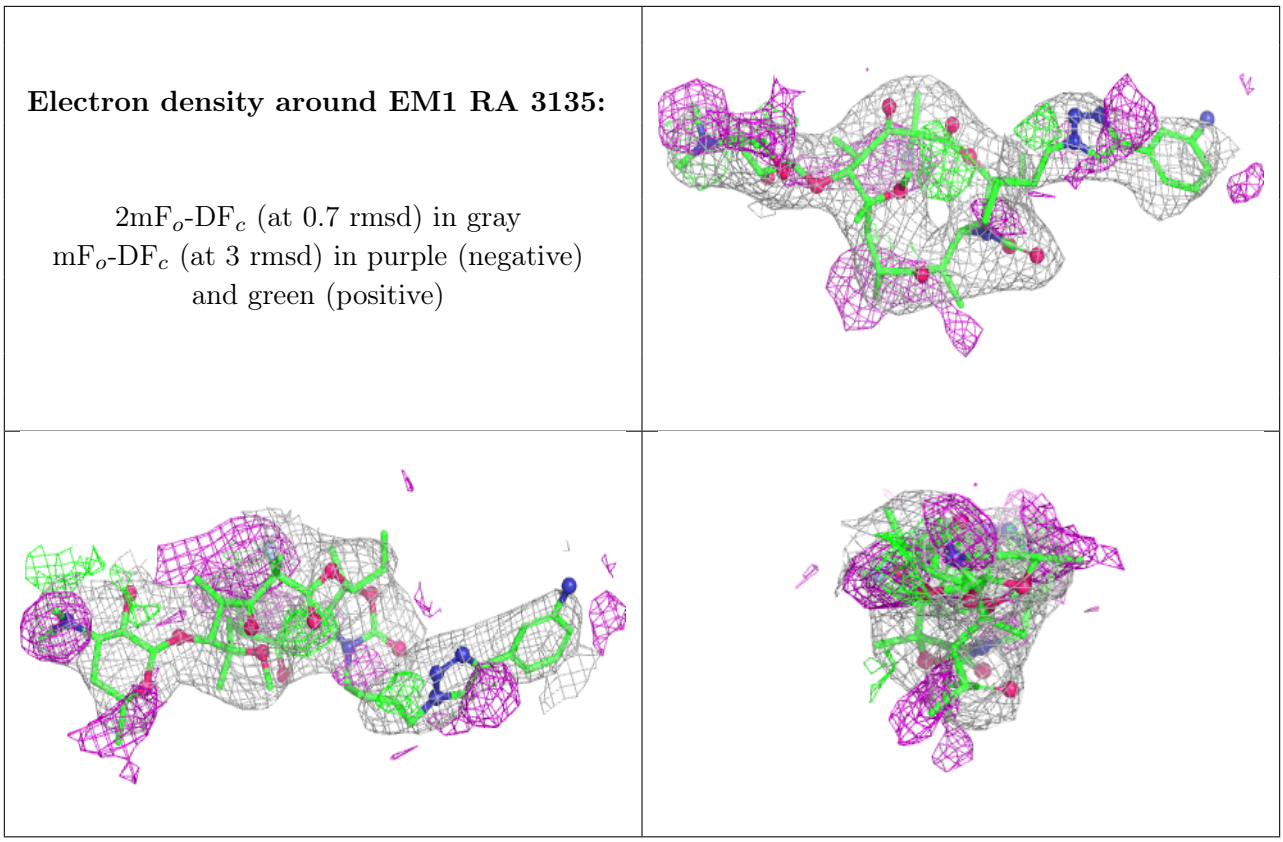
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	MG	YA	3068	1/1	0.99	0.04	98,98,98,98	0
53	MG	RA	3123	1/1	0.99	0.02	24,24,24,24	0
53	MG	RA	3073	1/1	0.99	0.07	43,43,43,43	0
53	MG	RA	3040	1/1	0.99	0.05	47,47,47,47	0
53	MG	RA	3075	1/1	0.99	0.03	43,43,43,43	0
53	MG	RA	3041	1/1	0.99	0.03	38,38,38,38	0
53	MG	RA	3077	1/1	0.99	0.06	63,63,63,63	0
53	MG	RA	3078	1/1	0.99	0.03	58,58,58,58	0
53	MG	XA	1605	1/1	0.99	0.06	54,54,54,54	0
53	MG	RA	3080	1/1	0.99	0.05	60,60,60,60	0
53	MG	RA	3042	1/1	0.99	0.06	60,60,60,60	0
53	MG	RA	3044	1/1	0.99	0.05	34,34,34,34	0
53	MG	RA	3009	1/1	0.99	0.05	38,38,38,38	0
55	ZN	R4	101	1/1	0.99	0.07	108,108,108,108	0
53	MG	RA	3084	1/1	0.99	0.05	26,26,26,26	0
53	MG	RA	3034	1/1	1.00	0.02	11,11,11,11	0
53	MG	RA	3102	1/1	1.00	0.08	24,24,24,24	0
53	MG	RA	3052	1/1	1.00	0.04	34,34,34,34	0
53	MG	RA	3043	1/1	1.00	0.12	11,11,11,11	0
53	MG	XA	1626	1/1	1.00	0.11	20,20,20,20	0
53	MG	RA	3064	1/1	1.00	0.03	28,28,28,28	0
53	MG	QA	1626	1/1	1.00	0.08	29,29,29,29	0
53	MG	RA	3016	1/1	1.00	0.02	22,22,22,22	0
53	MG	RA	3017	1/1	1.00	0.04	57,57,57,57	0
53	MG	RA	3125	1/1	1.00	0.04	40,40,40,40	0
53	MG	RA	3092	1/1	1.00	0.04	68,68,68,68	0
53	MG	RA	3127	1/1	1.00	0.03	8,8,8,8	0
53	MG	RA	3128	1/1	1.00	0.04	33,33,33,33	0
53	MG	RA	3079	1/1	1.00	0.05	32,32,32,32	0
53	MG	RA	3094	1/1	1.00	0.02	32,32,32,32	0
53	MG	RA	3021	1/1	1.00	0.03	24,24,24,24	0
53	MG	RA	3132	1/1	1.00	0.02	20,20,20,20	0
53	MG	RA	3038	1/1	1.00	0.02	19,19,19,19	0
53	MG	RA	3039	1/1	1.00	0.08	7,7,7,7	0
53	MG	RA	3013	1/1	1.00	0.05	18,18,18,18	0
53	MG	RA	3115	1/1	1.00	0.04	22,22,22,22	0
53	MG	RA	3071	1/1	1.00	0.02	16,16,16,16	0
53	MG	RA	3023	1/1	1.00	0.03	22,22,22,22	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around EM1 RA 3135:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



6.5 Other polymers (i)

There are no such residues in this entry.