



Full wwPDB X-ray Structure Validation Report ⓘ

May 16, 2020 – 01:41 am BST

PDB ID : 4WWW
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 following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.11
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.11

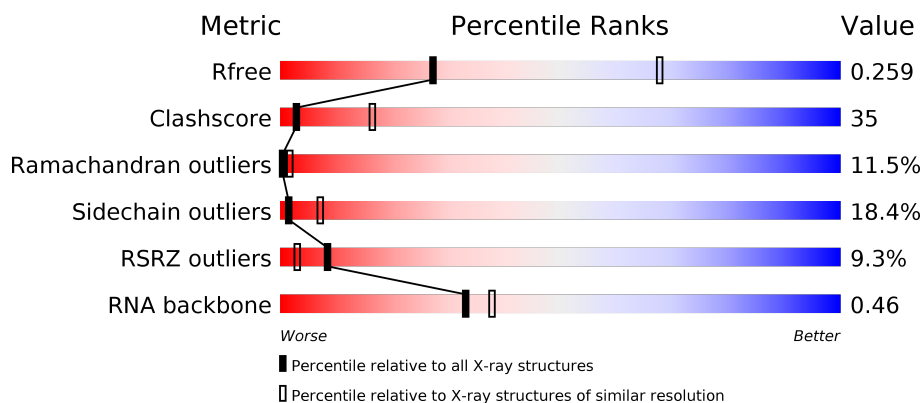
1 Overall quality at a glance

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}	130704	1094 (3.10-3.10)
Clashscore	141614	1184 (3.10-3.10)
Ramachandran outliers	138981	1141 (3.10-3.10)
Sidechain outliers	138945	1141 (3.10-3.10)
RSRZ outliers	127900	1067 (3.10-3.10)
RNA backbone	3102	1116 (3.40-2.80)

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

Mol	Chain	Length	Quality of chain
1	RA	2904	<div> <div>3%</div> <div>39% 43% 15% ..</div> </div>
1	YA	2904	<div> <div>3%</div> <div>19% 52% 26% ..</div> </div>
2	RB	118	<div> <div>43% 47% 10%</div> </div>
2	YB	118	<div> <div>21% 54% 24% .</div> </div>

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Mol	Chain	Length	Quality of chain
3	RC	271	
3	YC	271	
4	RD	209	
4	YD	209	
5	RE	201	
5	YE	201	
6	RF	178	
6	YF	178	
7	RG	176	
7	YG	176	
8	RH	149	
8	YH	149	
9	RI	141	
9	YI	141	
10	RJ	142	
10	YJ	142	
11	RK	122	
11	YK	122	
12	RL	143	
12	YL	143	
13	RM	136	
13	YM	136	
14	RN	120	
14	YN	120	
15	RO	116	

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Mol	Chain	Length	Quality of chain
15	YO	116	
16	RP	114	
16	YP	114	
17	RQ	117	
17	YQ	117	
18	RR	103	
18	YR	103	
19	RS	110	
19	YS	110	
20	RT	93	
20	YT	93	
21	RU	102	
21	YU	102	
22	RV	94	
22	YV	94	
23	RW	79	
23	YW	79	
24	RX	77	
24	YX	77	
25	RY	63	
25	YY	63	
26	RZ	58	
26	YZ	58	
27	R0	56	
27	Y0	56	

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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	
46	XO	88	
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	QA	1619	-	-	-	X
53	MG	RA	3129	-	-	-	X
53	MG	XA	1614	-	-	-	X
53	MG	XA	1616	-	-	-	X
53	MG	YA	3002	-	-	-	X
53	MG	YA	3003	-	-	-	X
53	MG	YA	3005	-	-	-	X
53	MG	YA	3019	-	-	-	X
53	MG	YA	3049	-	-	-	X
53	MG	YA	3062	-	-	-	X
53	MG	YA	3063	-	-	-	X
53	MG	YA	3064	-	-	-	X
53	MG	YA	3074	-	-	-	X
53	MG	YA	3108	-	-	-	X
53	MG	YA	3109	-	-	-	X
53	MG	YA	3127	-	-	-	X
53	MG	YA	3129	-	-	-	X
53	MG	YA	3130	-	-	-	X
53	MG	YJ	201	-	-	-	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	C	N	O	0	0	0
			779	492	146	141			
21	YU	102	Total	C	N	O	0	0	0
			779	492	146	141			

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

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

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

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

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

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

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

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

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

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

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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	S	0	0	0
			409	263	75	71				
28	Y1	50	Total	C	N	O	S	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			

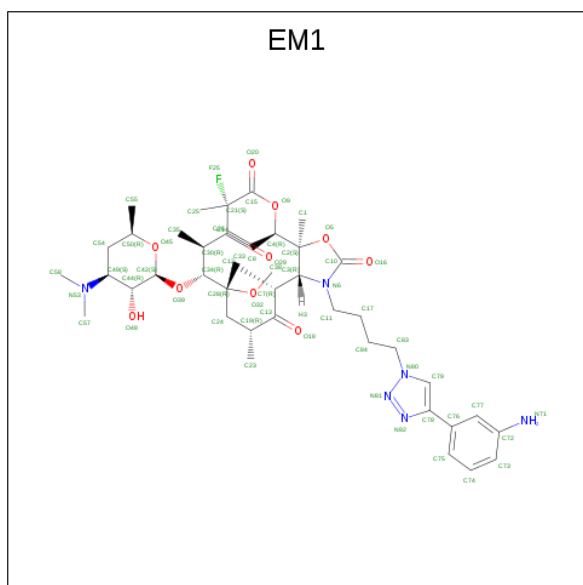
- Molecule 52 is a protein called 30S ribosomal protein S21.

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 (three-letter code: MG) (formula: Mg).

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

- Molecule 54 is (3a*S*,4*R*,7*S*,9*R*,10*R*,11*R*,13*R*,15*R*,15a*R*)-1-{4-[4-(3-aminophenyl)-1*H*-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-2*H*-oxacyclotetradecino[4,3-*d*][1,3]oxazol-10-yl 3,4,6-trideoxy-3-(dimethylamino)-β-D-xylo-hexopyranoside (three-letter code: EM1) (formula: C₄₃H₆₅FN₆O₁₀).



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 (three-letter code: 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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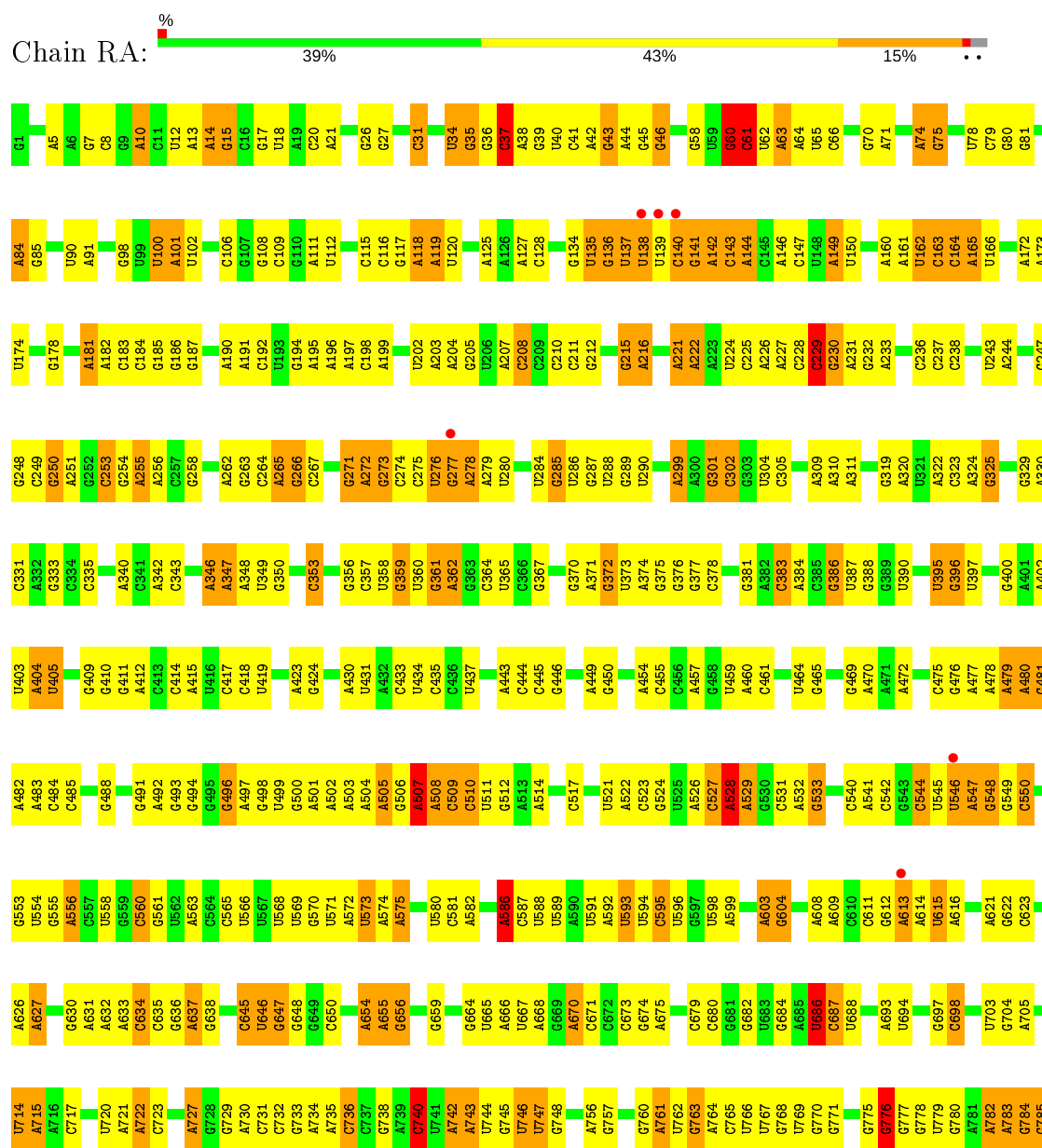
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	XL	1	Total 1	O 1	0	0
56	XN	3	Total 3	O 3	0	0
56	XT	2	Total 2	O 2	0	0
56	XU	1	Total 1	O 1	0	0
56	YA	605	Total 605	O 605	0	0
56	YB	4	Total 4	O 4	0	0
56	YC	8	Total 8	O 8	0	0
56	YD	3	Total 3	O 3	0	0
56	YE	3	Total 3	O 3	0	0
56	YJ	3	Total 3	O 3	0	0
56	YL	4	Total 4	O 4	0	0
56	YN	1	Total 1	O 1	0	0
56	YT	2	Total 2	O 2	0	0
56	YU	2	Total 2	O 2	0	0
56	YV	1	Total 1	O 1	0	0
56	Y2	1	Total 1	O 1	0	0
56	Y3	1	Total 1	O 1	0	0
56	Y4	5	Total 5	O 5	0	0

3 Residue-property plots

These plots are drawn for all protein, RNA and DNA 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

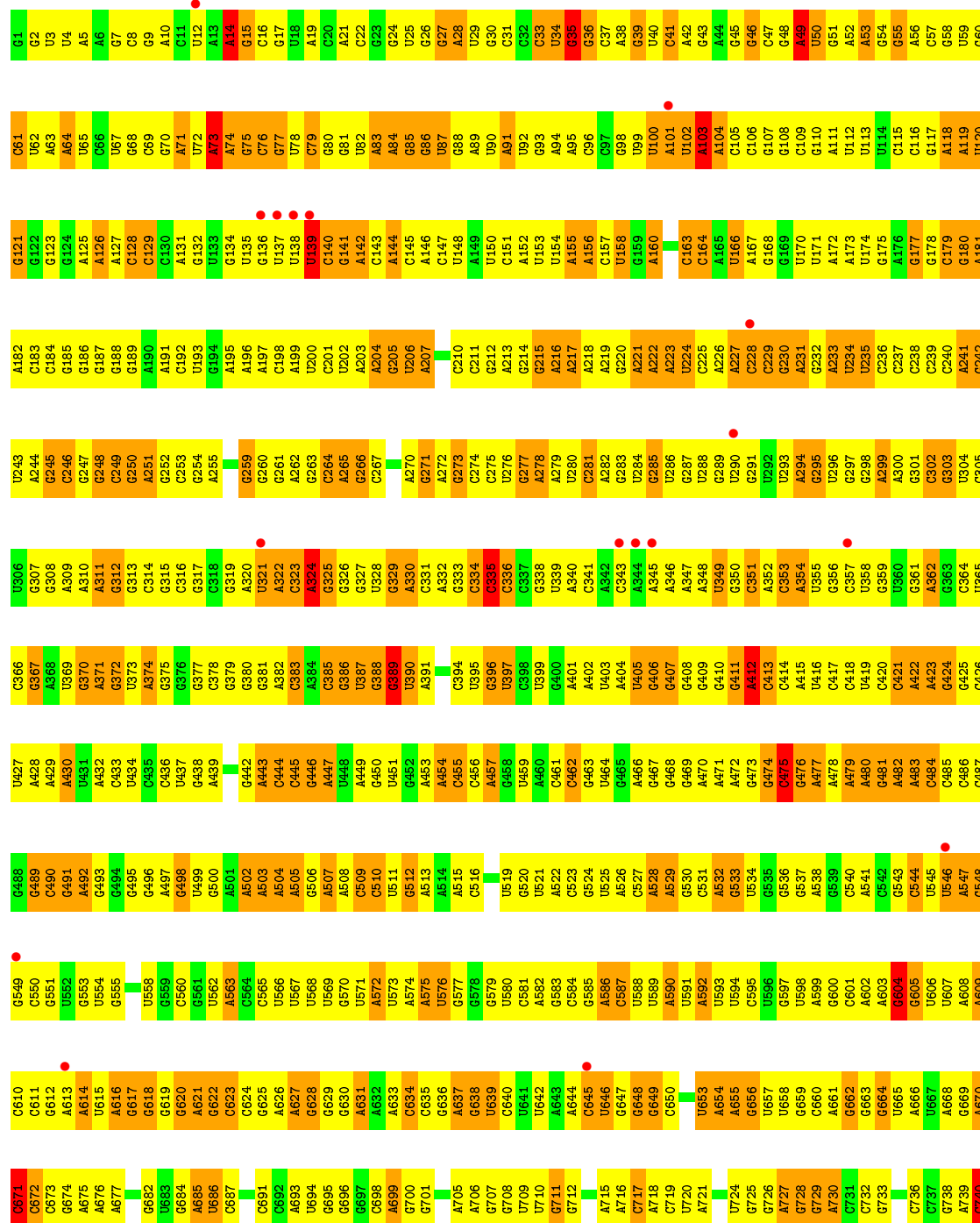


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A1784	G1627	G1546	U1467	A1392	G1310	C1229	C1152	U1083	U1012	C937	C867	C787
A1785	G1628	U1554	U1468	A1393	G1311	U1230	C1153	A1084	C1013	A941	C868	A788
A1786	A1635	G1555	A1470	A1395	C1315	G1232	A1155	A1085	A1014	C946	C869	A789
A1789	U1636	C1558	U1474	C1399	U1316	G1233	A1156	A1086	U1015	C947	C870	C791
C1790	A1637	U1562	G1475	U1402	G1317	U1234	G1157	A1088	U1019	A947	C871	A792
A1791	C1638	U1562	G1476	A1403	U1318	G1235	G1160	A1089	A1020	C948	C872	A793
G1792	C1644	U1563	A1477	C1404	C1320	G1238	C1161	A1090	A1021	C949	C873	A794
A1794	C1564	G1478	A1479	A1405	A1321	G1239	G1166	G1091	G1022	C950	A877	A804
C1795	U1647	G1479	U1474	U1405	A1322	U1242	A1165	G1092	G1023	C951	A878	G805
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G1797	G1649	G1567	G1476	U1409	G1324	C1243	C1167	A1095	G1026	C955	U884	
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G1799	A1651	A1569	U1483	U1410	G1326	U1244	A1169	A1097	A1028	A959	A	C812
C1800	A1652	U1484	U1484	U1411	A1327	G1245	A1170	A1098	U1029	C960	U	U813
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A1802	A1654	A1571	U1486	U1413	A1329	A1247	C1172	G1099	U1033	G962	C	C815
	A1655	A1572	U1487	A1414	G1333	U1248	U1173				C	
	A1656	G1573	C1488	U1415	G1334	U1249	U1174	A1103	G1037	G969	G	G818
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G1811	G1666	G1581	A1496	A1419	U1338	U1254	G1179	U1108	C1043	C974	A896	U827
U1812	G1667	U1497	U1497	A1420	G1339	U1255	G1179	C1109	C1044	A975	C897	U828
G1813	G1668	C1582	U1498	G1421	U1340	G1256	U1180	G1110	C1045	G976	C898	U829
G1814	A1669	A1583	C1499	G1422	G1341	U1257	U1181	A1111	A1046	G977	C899	U830
A1815	C1670	U1584	C1499	G1423	G1342	U1258	G1182	A1112	G1047	A900	A900	U831
C1816		C1585	G1500	G1423			U1183	U1113		A978	C901	A833
G1817	U1674	A1586	G1501	A1427	A1347	C1261	U1184	C1114	C1048	A979	U906	G834
U1818	C1675	A1587	A1502	C1428	C1348	A1262	G1185	G1115	C1049	A980	C935	A835
A1819	A1676	G1588	A1503	G1429	C1351	U1266	G1186	U1119	A1050	C982	G907	G836
U1820	A1677	U1589	A1504	G1430	A1352	U1267	U1187	G1122	G1056	A984	C908	U839
A1821	U1757	A1590	A1505	A1431	A1353	A1268	U1188	C1123	A1057	C985	A909	C840
C1822	U1680	C1591	U1506	G1432	G1354	A1269	A1189	G1124	U1058	C986	A910	C841
	G1681	U1592	C1507	A1433	G1355	G1270	G1190	G1125	U1059	C987	A911	U842
G1826	G1682	A1593	A1508	A1434	G1356	G1271	G1193	U1060	U1061	A988	U913	G843
U1827	U1683	U1594	A1509	G1435	C1357	A1272	A1194	G1062	G1064	A990	C915	A844
G1828	G1684	U1599	G1510	G1436	G1358	U1273	G1197	G1063	U1065	C994	A918	U845
A1829	U1684	C1600	C1511	U1437	G1359	A1274	U1198	A1129	U1066	C995	U919	U846
C1830	U1688	U1599	U1513	U1440	A1365	A1275	U1199	U1130	U1066	C996	A920	C847
G1831		U1603	U1514	G1441	A1366	G1276	C1200	U1131	A1067	A996	U921	C848
C1832	U1692	C1604	A1515	U1442	G1368	G1277	U1132	A1133	G1068	C997	C921	U850
C1833	U1693	C1605	G1516	U1443	U1371	G1278	U1133	G1135	A1069	C998	C922	C851
U1834	C1694	C1606	U1534	U1444	G1372	G1281	A1203	C1136	A1070	U999	G923	U852
G1835	G1695	C1607	C1454	G1444	U1372	G1281	A1205	G1137	G1071	A1000	G924	C853
C1836	G1696	U1520	G1455	G1444	G1373	G1281	G1206	G1138	C1072	A1001	A927	C854
C1837	G1697	A1528	G1456	G1450	U1377	A1287	C1207	G1139	A1073	G1002	A928	G855
C1838		G1529	C1451	C1452	A1378	G1288	G1207	C1139	G1074	G1003	U929	G856
G1839	A1700	U1533	A1452	C1453	U1379	C1289	G1212	C1140	C1075	U1004	G930	G857
U1840	A1701	C1534	C1454	G1454	G1380	C1290	G1221	U1141	C1076	C1005	U931	G858
U1841	A1705	A1535	G1455	G1456	U1383	C1295	U1222	A1142	C1077	C1006	U932	G859
G1842	U1778	C1536	G1456	U1457	A1384	G1300	U1223	A1144	U1078	C1007	A933	
C1843	G1707	G1537	U1458	U1459	A1385	A1301	G1224	G1149	C1079	A1008	U934	A863
C1844		U1538	G1459	G1460	C1386	G1387	U1225		U1081	A1010	C935	C865
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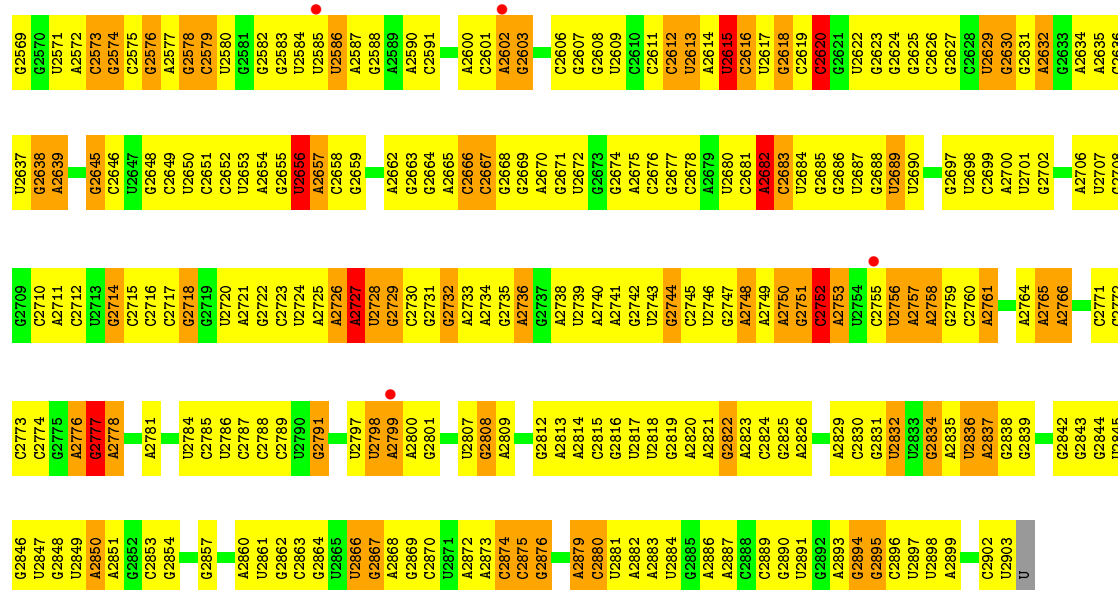


- Molecule 1: 23S rRNA



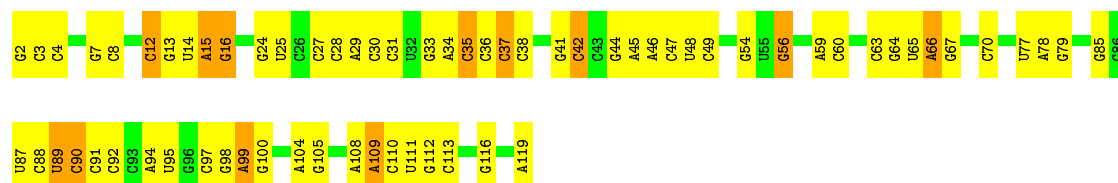


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U2506	G2436	U2372	G2306	U2245	U2181	G	G2055	C1990	U1833	U1769	C1707	C1638
G2507	G2437	U2373	G2307	U2246	A2182	U	G2056	U1991	C1834	C1708	C1709	C1639
G2508	G2438	U2374	G2308	U2247	A2183	G	G2057	G1992	C1835	A1773	G1710	A1640
G2509	G2439	U2375	G2309	U2248	A2184	G	G2058	U1993	C1836	C1774	G1711	G1645
G2510	G2440	U2376	C2310	U2249	U2185	G	A2059	C1996	C1837	U1775	A1712	G1646
C2512	U2441	A2377	A2311	G2250	U2186	A	A2060	C1997	C1838	G1776	U1713	U1647
C2513	A2442	A2378	U2312	G2251	U2187	G	G2061	A1998	G1839	U1777	A1714	U1648
U2514	C2443	A2379	A2313	G2252	U2188	G	A2062	C1999	G1840	U1778	G1715	G1649
C2515	G2444	U2380	G2314	G2253	U2189	C	G2063	C2000	G1841	U1779	U1716	A1650
A2516	G2445	G2381	G2315	G2254	A2190	U	A1928	C2001	C1842	A1928	U1717	A1651
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U2519	A2448	G2384	G2318	U2257	U2193	G	U2068	G2004	G1845	U1782		G1654
C2520	U2449	U2385	U2319	U2258	U2194	A	G2069	A2005	G1846	A1783		G1655
C2521	G2450	G2386	U2320	U2259	U2195	A	A2070	C2006	A1847	A1784	A1722	G1656
C2522	G2451	U2387	U2321	C2260	U2196	A	A2071	C2007	A1848	A1785	G1723	G1657
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G2524	G2453	A2389	G2323	U2262	U2197	A	C2073	C2008	A1850	A1787		G1659
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A2530	A2461	U2395	A2329	A2268	U2203	A	C1941	C1942	U1856	A1792	U1729	A1665
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C2538	A2469	U2403	G2337	G2276	U2151	A	A1952	U2023	A1801	A1801	G1737	G1673
C2539	U2474	U2404	C2338	A2277	C2152	A	G1953	G2024	A1802	A1802	G1738	G1674
C2540	U2475	G2405	U2339	G2278	C2153	A	G1954	C2025	A1803	A1803	A1739	C1675
A2541	C2476	A2406	A2340	G2279	C2154	A	U1955	U2026	A1804	A1804	G1740	A1676
C2542	C2477	U2407	G2342	G2280	U2155	A	U1956	C1957	A1805	A1805	C1741	A1677
G2543	A2478	U2408	U2343	G2281	G2156	A	C1957	C1958	G1806	G1806	U1742	A1678
G2544	G2485	U2409	U2344	G2282	G2157	A	U1958	U1959	G1807	G1807	G1743	
U2545	U2482	G2410	G2345	G2283	U2218	A	G1959	G1960	A1808	A1808	A1744	G1681
A2547	G2483	A2411	A2346	G2284	U2219	G	U1963	U1964	A1809	A1809	A1745	G1682
G2550	G2484	U2412	U2347	G2285	U2220	C	G1965	G1966	A1810	A1810	A1746	U1683
U2551	U2485	G2413	G2348	G2286	G2221	C	U1967	C1967	U1811	U1811	U1747	C1684
U2552	G2486	G2414	G2349	G2287	G2222	A	C2032	G2032	U1812	U1812		C1685
C2553	G2487	G2415	C2350	G2288	G2223	A	G2033	G2033	G1813	G1813	G1750	G1686
U2554	U2488	G2416	G2351	G2289	G2224	A	U1968	U1969	C1816	C1816	G1751	U1687
U2555	U2489	C2417	A2352	G2290	U2105	C	G1969	A1969	C1817	C1817	G1752	C1688
U2556	U2490	A2418	G2353	U2291	U2106	U	A1970	A1971	U1818	U1818	G1753	U1689
C2557	U2491	U2419	G2354	U2292	G2107	U	U1971	U1972	A1819	A1819	A1754	C1691
G2558	U2492	U2420	G2355	G2293	A2108	A	G1972	G1973	U1820	U1820	G1755	U1692
C2559	U2493	U2421	U2356	G2294	U2109	A	G1973	G1974	A1821	A1821	A1756	C1693
U2560	U2494	U2422	U2357	G2295	U2110	A	G1974	G1975	C1822	C1822	G1757	C1694
U2561	U2495	G2423	G2358	G2296	U2111	U	G1975	G1976	U1823	U1823	C1760	G1695
U2562	U2496	A2424	A2359	U2297	U2112	U	U2041	U2042	G1824	G1824	C1761	G1696
U2563	U2497	A2425	G2360	U2298	G2113	A	G2043	G2044	U1825	U1825	A1762	G1697
U2564	U2498	A2426	G2361	U2299	G2114	A	C2045	C2046	U1826	U1826	G1763	A1700
U2565	U2499	G2427	G2362	C2300	U2235	C	G2047	G2048	U1827	U1827	A1764	A1701
C2566	U2500	G2428	U2363	C2301	U2236	C	U2049	U2050	G1828	G1828	C1765	G1702
G2567	U2501	G2429	U2364	U2302	G2237	A	G2051	G2052	U1829	U1829	G1703	C1704
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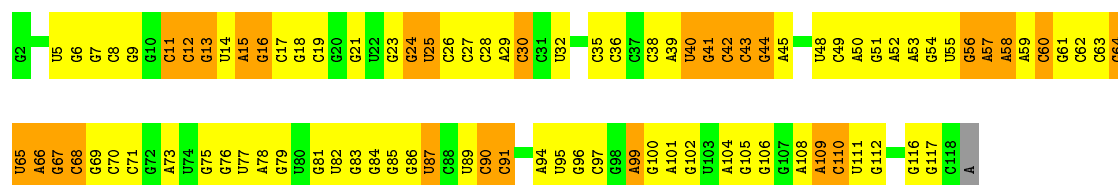
• Molecule 2: 5S rRNA

Chain RB: 43% 47% 10%



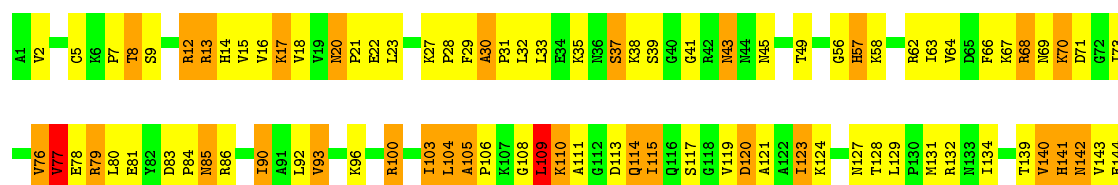
• Molecule 2: 5S rRNA

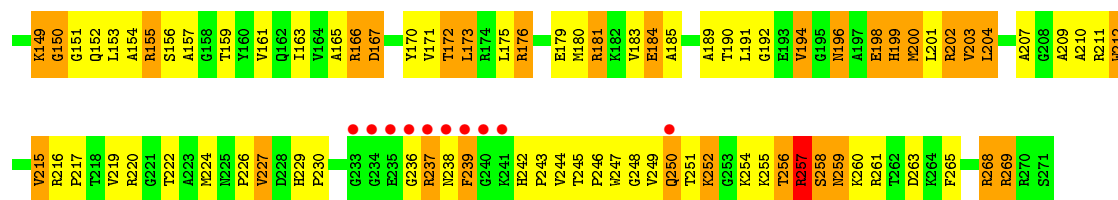
Chain YB: 21% 54% 24%



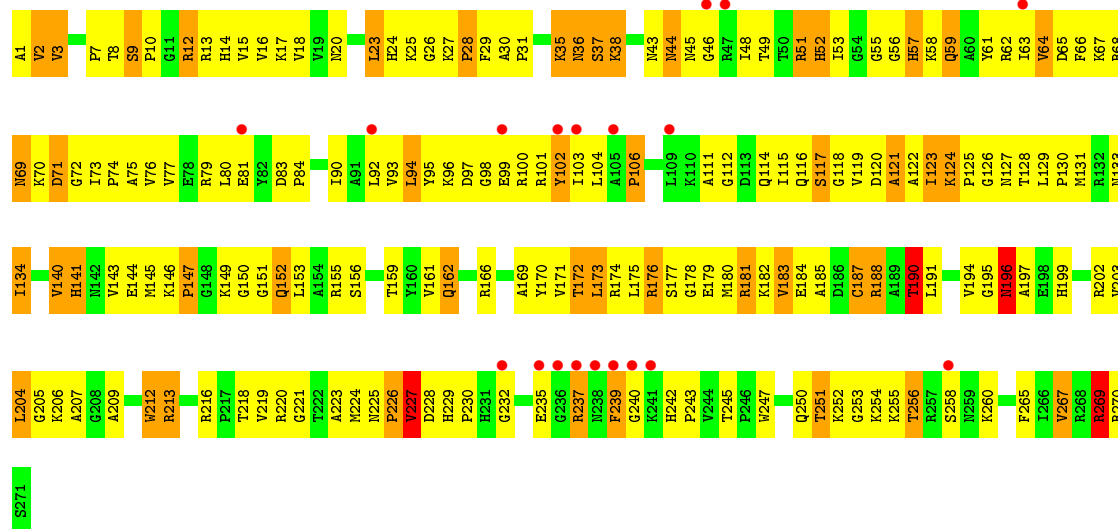
• Molecule 3: 50S ribosomal protein L2

Chain RC: 4% 37% 41% 21%

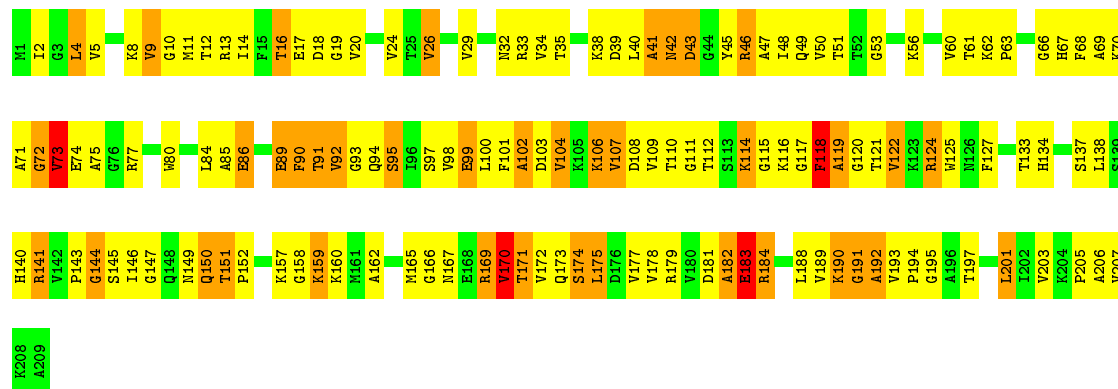
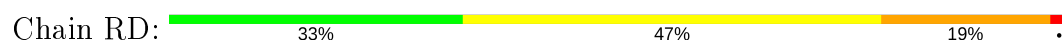




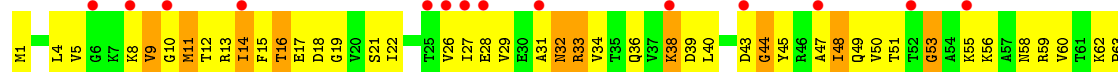
• Molecule 3: 50S ribosomal protein L2

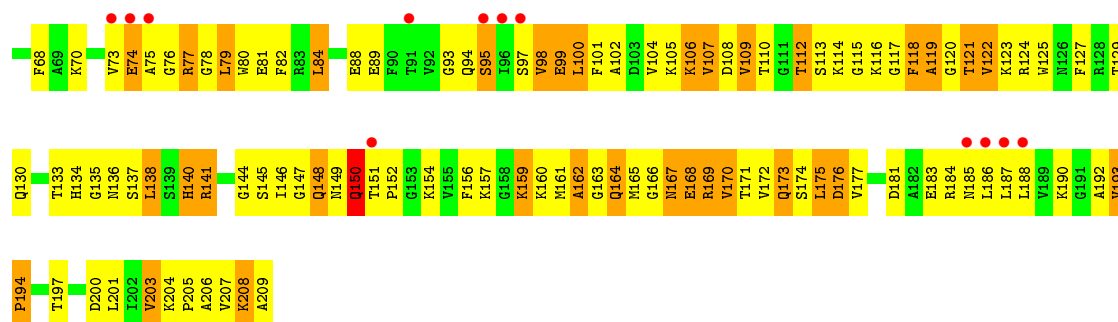


• Molecule 4: 50S ribosomal protein L3



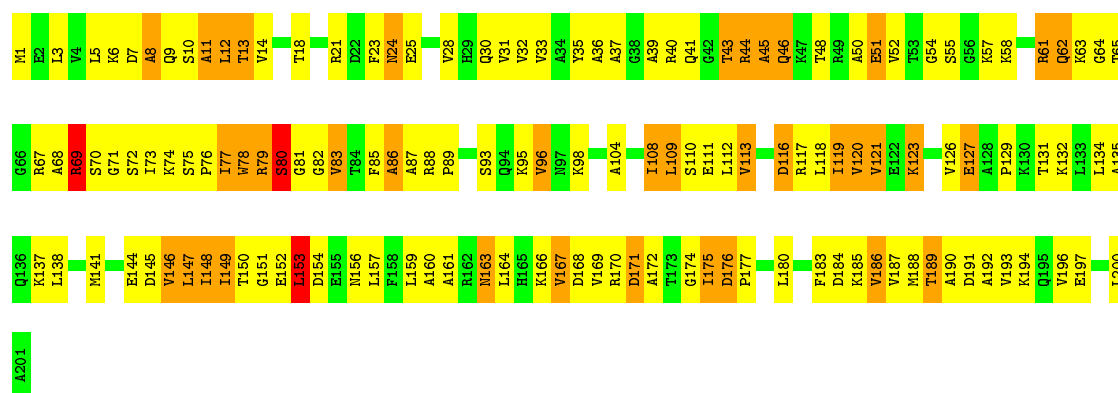
• Molecule 4: 50S ribosomal protein L3





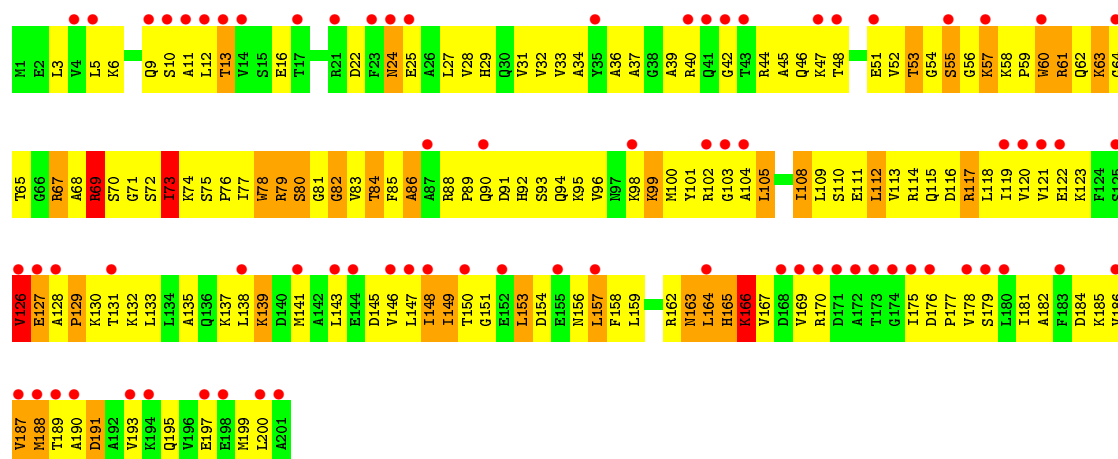
• Molecule 5: 50S ribosomal protein L4

Chain RE: 30% 49% 19%



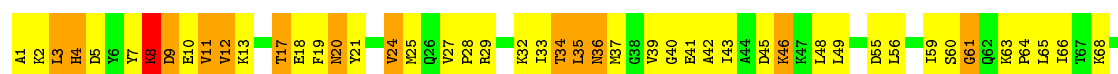
• Molecule 5: 50S ribosomal protein L4

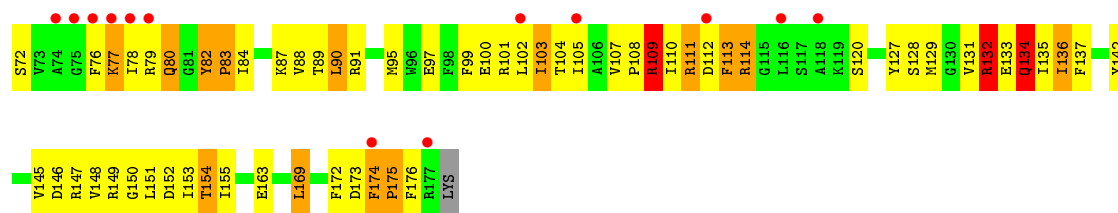
Chain YE: 24% 38% 57% 16%



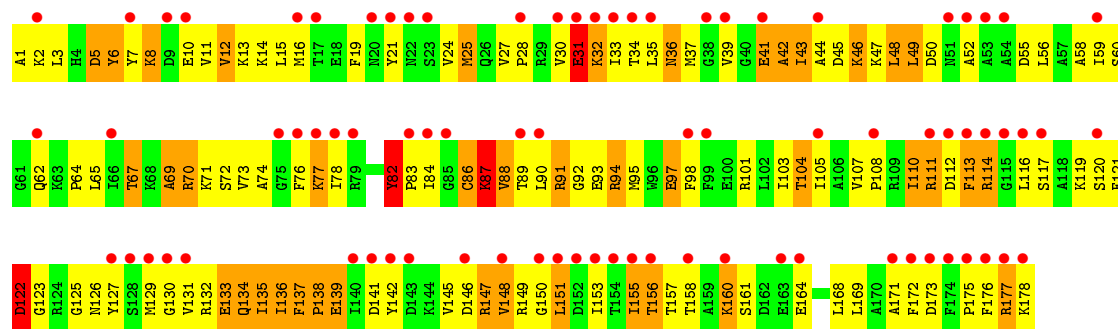
• Molecule 6: 50S ribosomal protein L5

Chain RF: 7% 39% 43% 15%

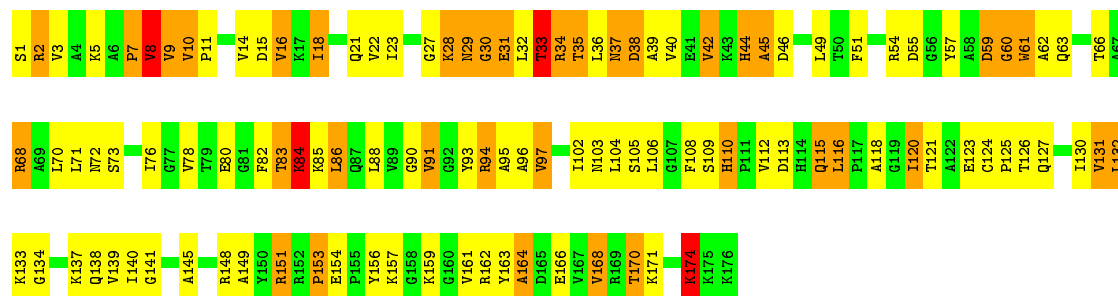




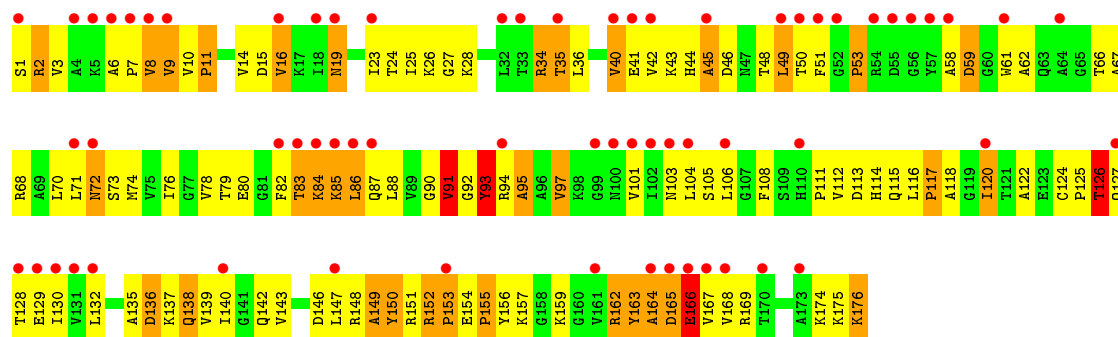
• Molecule 6: 50S ribosomal protein L5



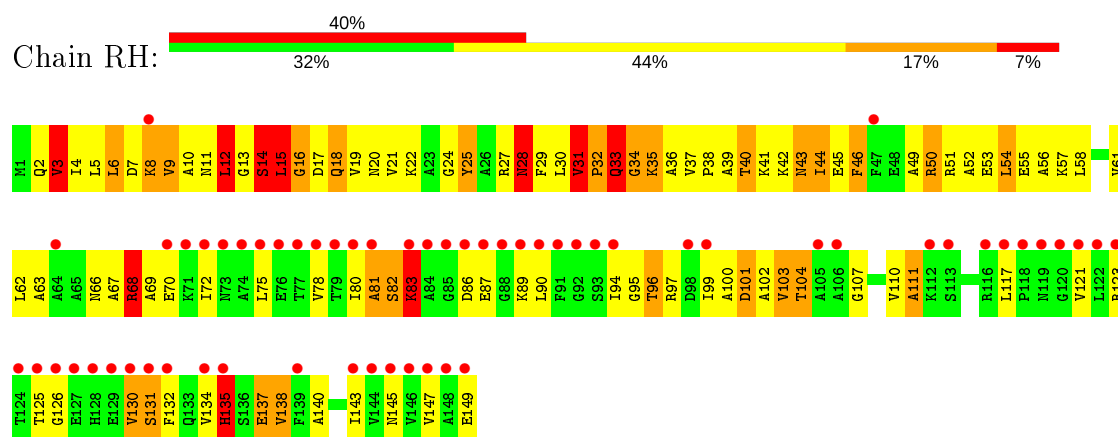
• Molecule 7: 50S ribosomal protein L6



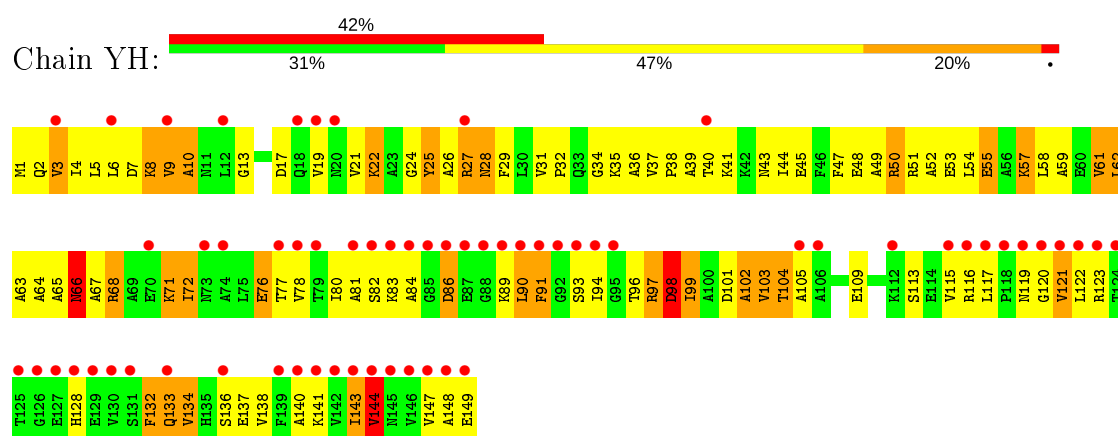
• Molecule 7: 50S ribosomal protein L6



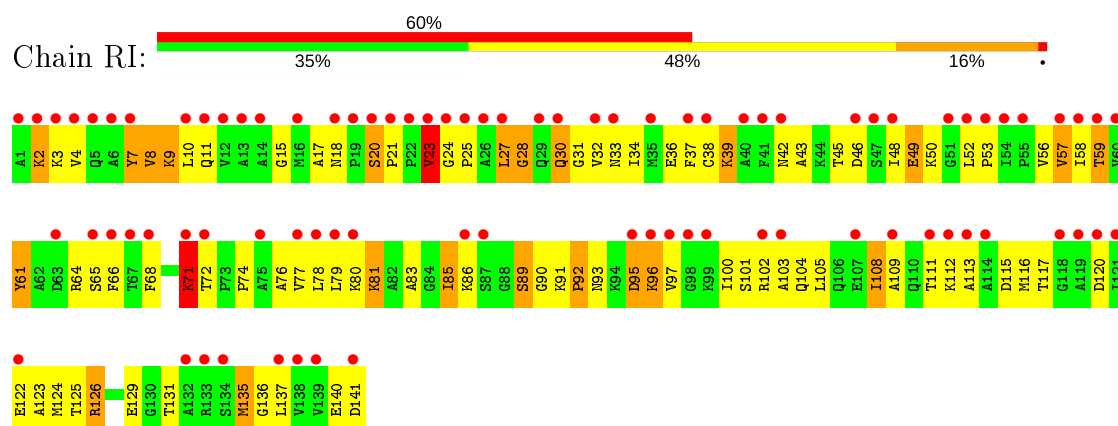
• Molecule 8: 50S ribosomal protein L9



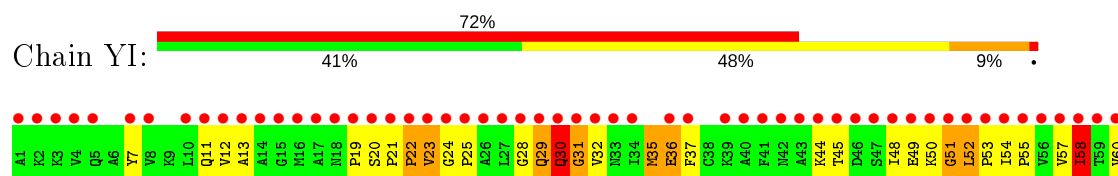
• Molecule 8: 50S ribosomal protein L9

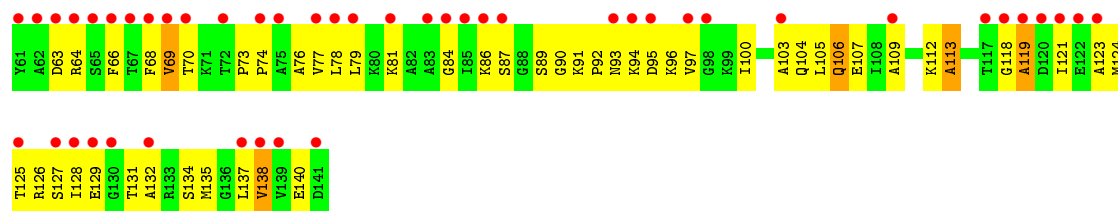


• Molecule 9: 50S ribosomal protein L11

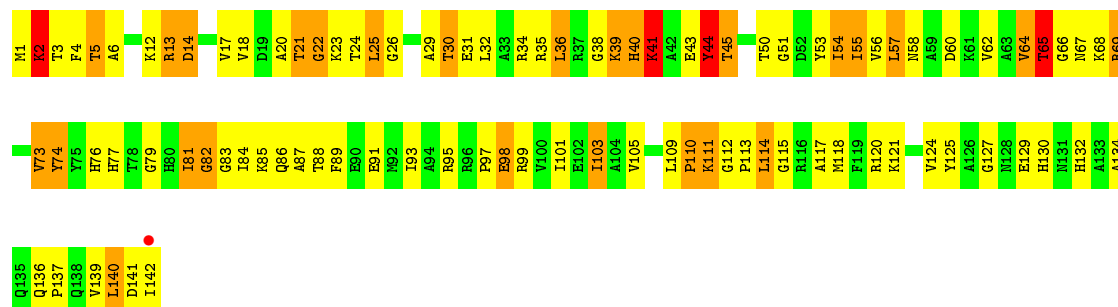


• Molecule 9: 50S ribosomal protein L11

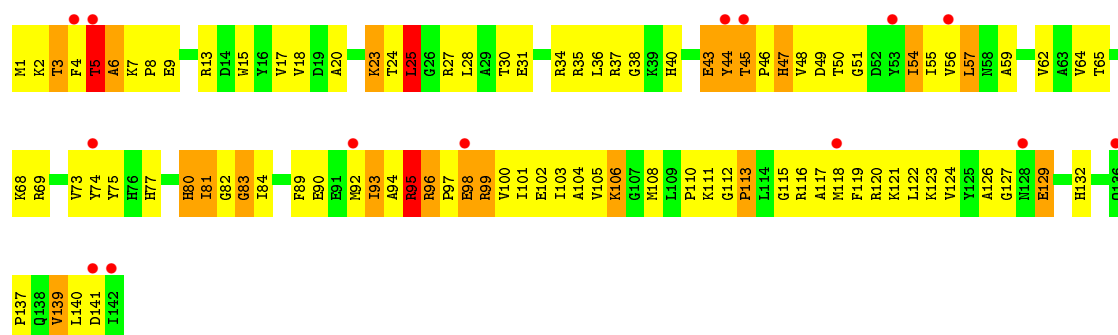




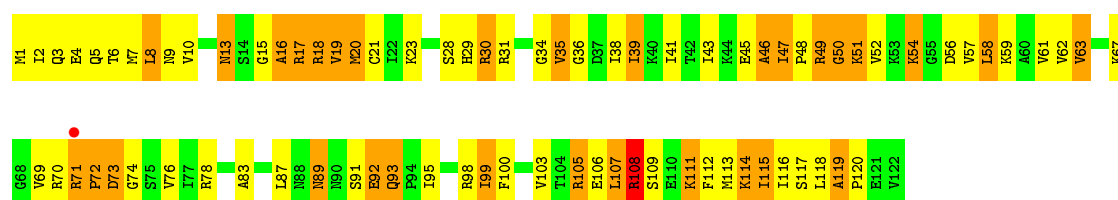
• Molecule 10: 50S ribosomal protein L13



• Molecule 10: 50S ribosomal protein L13

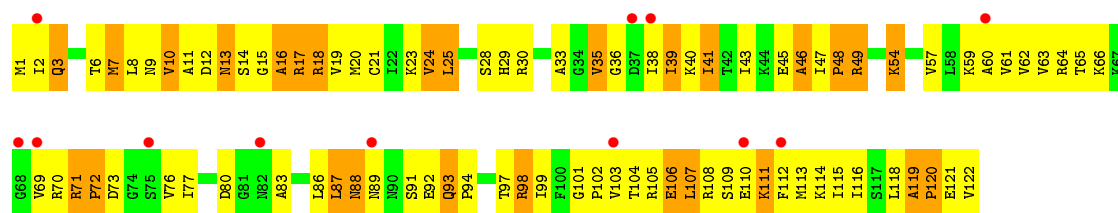


• Molecule 11: 50S ribosomal protein L14

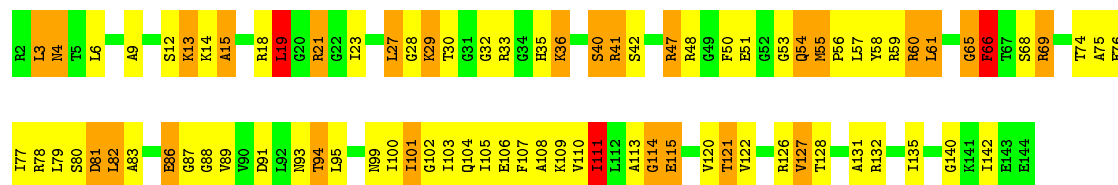


• Molecule 11: 50S ribosomal protein L14

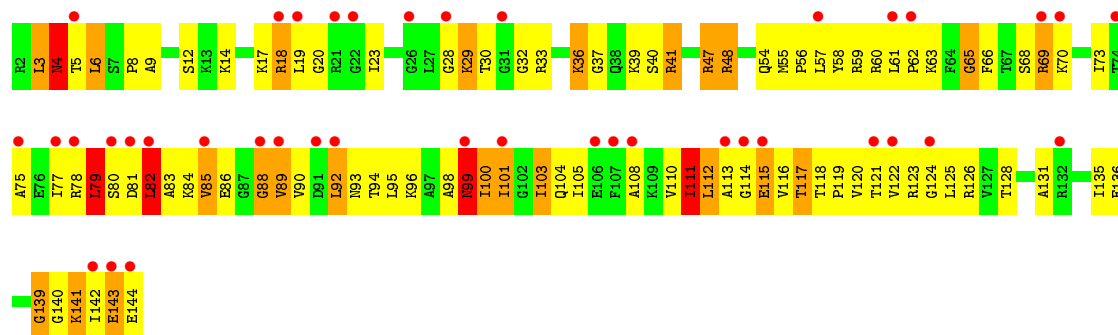




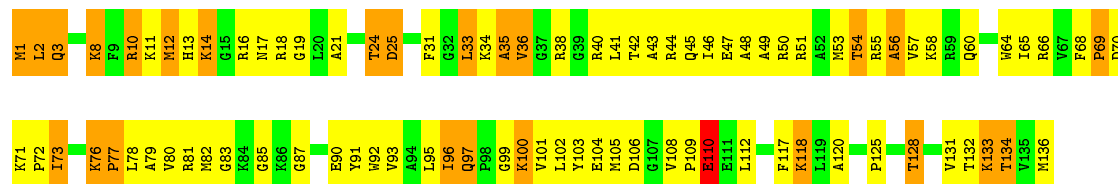
• Molecule 12: 50S ribosomal protein L15



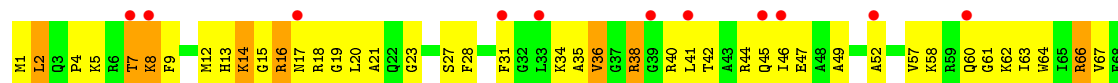
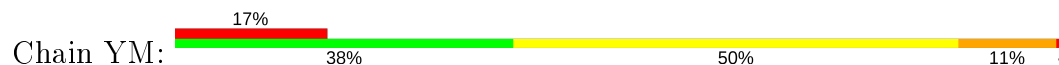
• Molecule 12: 50S ribosomal protein L15



• Molecule 13: 50S ribosomal protein L16



• Molecule 13: 50S ribosomal protein L16

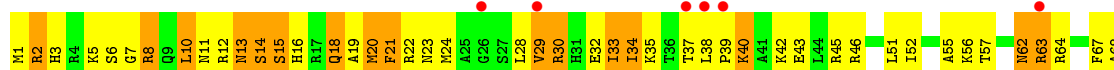




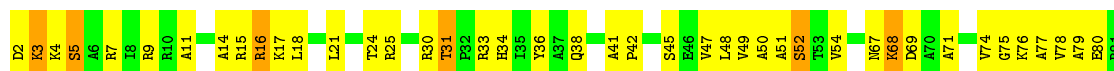
- Molecule 14: 50S ribosomal protein L17



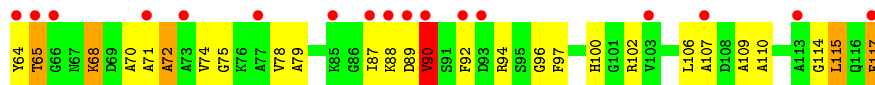
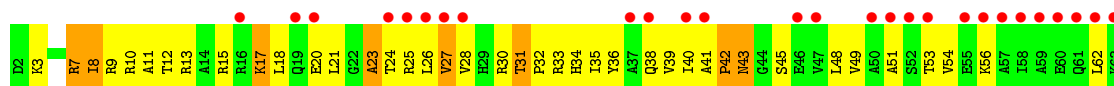
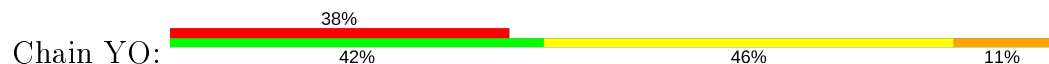
- Molecule 14: 50S ribosomal protein L17



- Molecule 15: 50S ribosomal protein L18

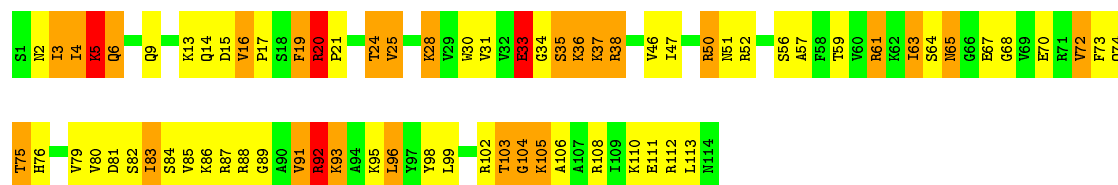


- Molecule 15: 50S ribosomal protein L18

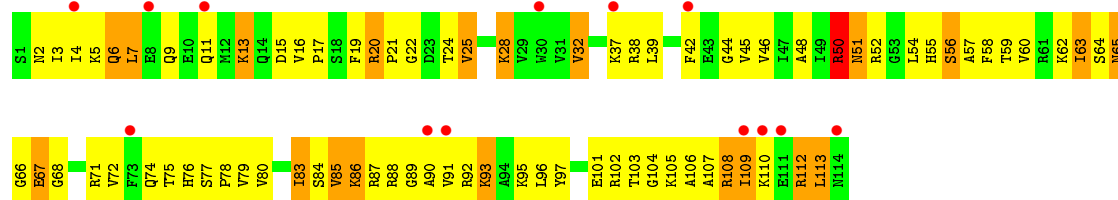


- Molecule 16: 50S ribosomal protein L19

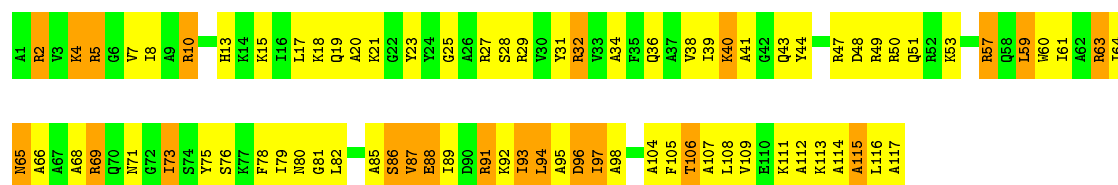




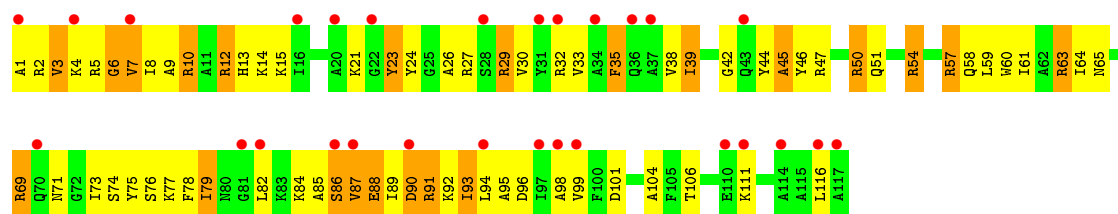
• Molecule 16: 50S ribosomal protein L19



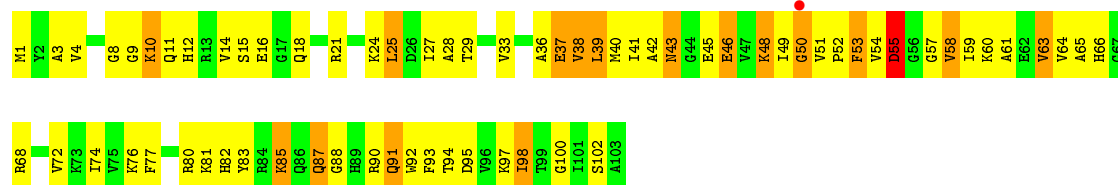
• Molecule 17: 50S ribosomal protein L20



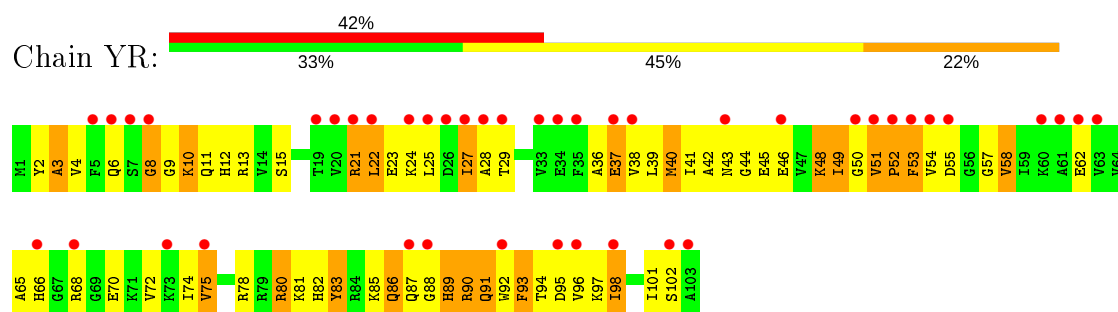
• Molecule 17: 50S ribosomal protein L20



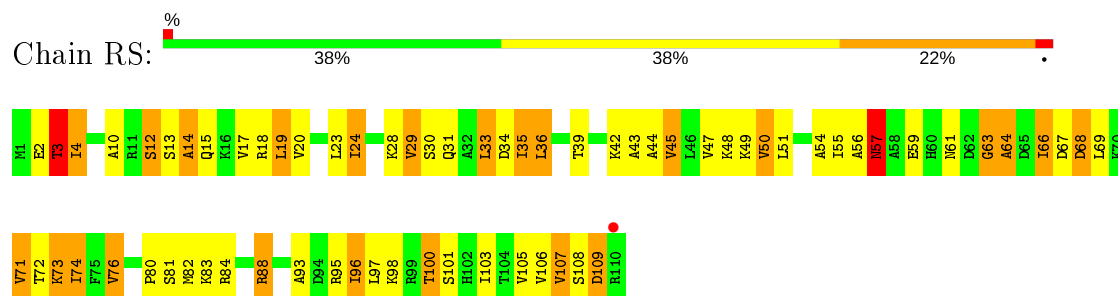
• Molecule 18: 50S ribosomal protein L21



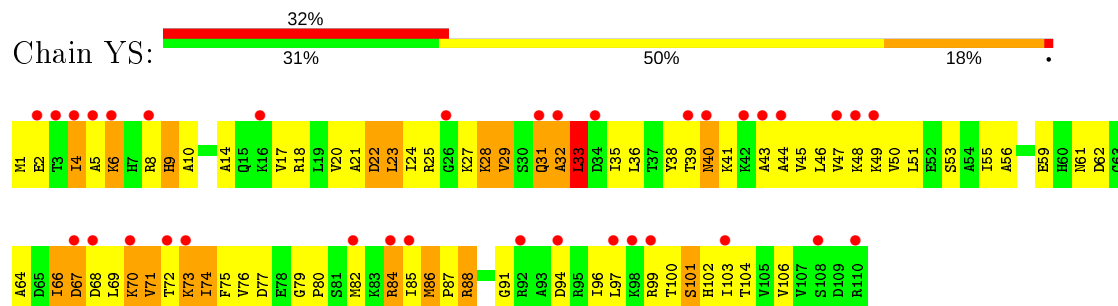
• Molecule 18: 50S ribosomal protein L21



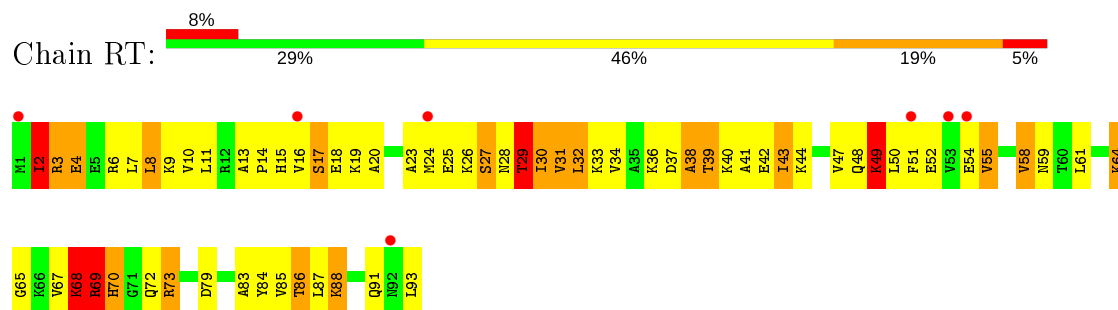
- Molecule 19: 50S ribosomal protein L22



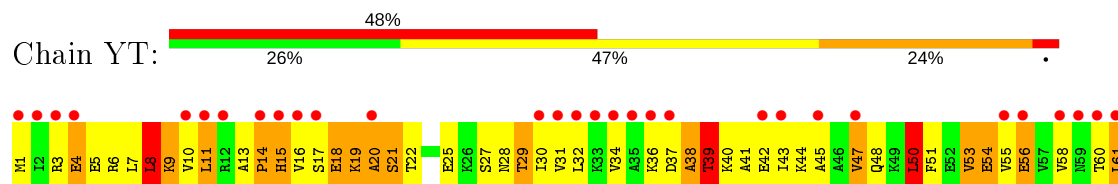
- Molecule 19: 50S ribosomal protein L22



- Molecule 20: 50S ribosomal protein L23

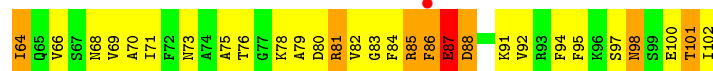


- Molecule 20: 50S ribosomal protein L23

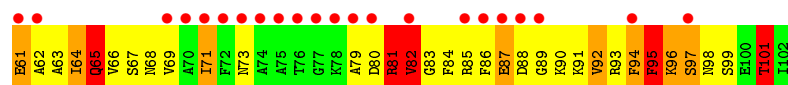
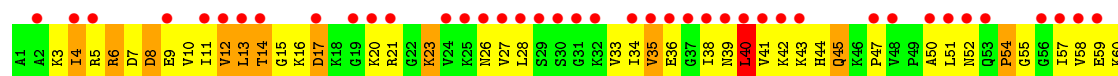




- Molecule 21: 50S ribosomal protein L24



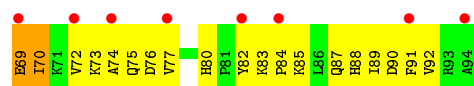
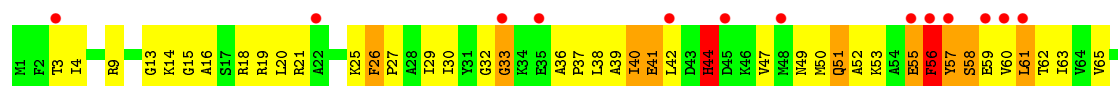
- Molecule 21: 50S ribosomal protein L24



- Molecule 22: 50S ribosomal protein L25

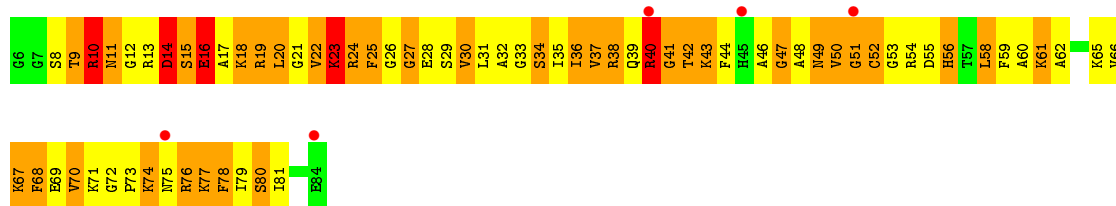


- Molecule 22: 50S ribosomal protein L25

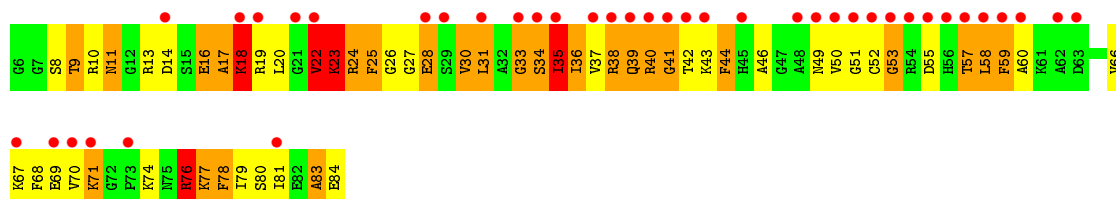
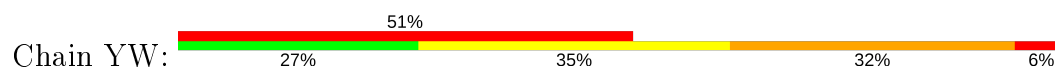


- Molecule 23: 50S ribosomal protein L27

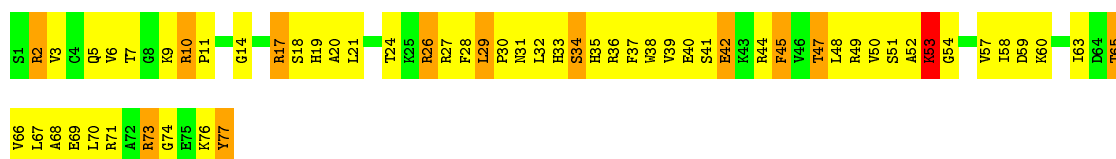




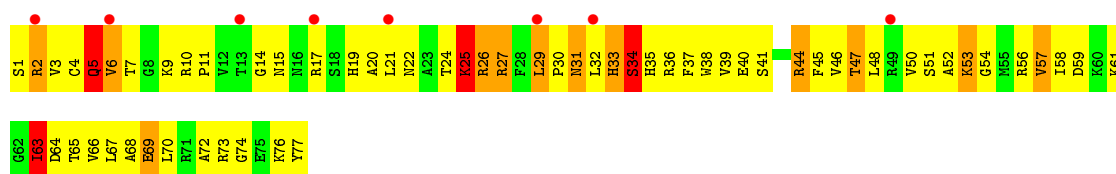
• Molecule 23: 50S ribosomal protein L27



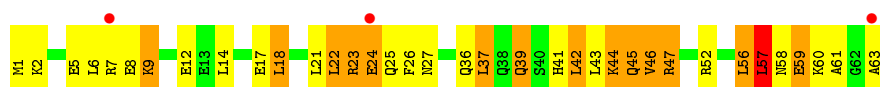
• Molecule 24: 50S ribosomal protein L28



• Molecule 24: 50S ribosomal protein L28

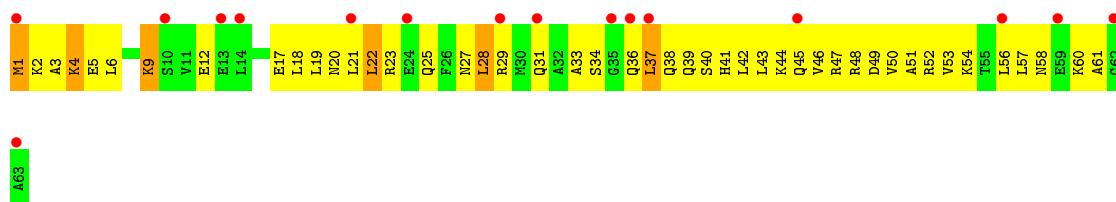


• Molecule 25: 50S ribosomal protein L29

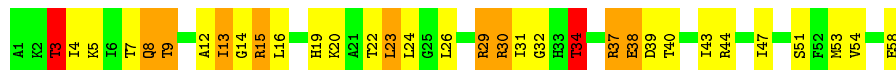


• Molecule 25: 50S ribosomal protein L29

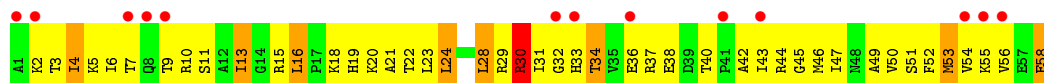




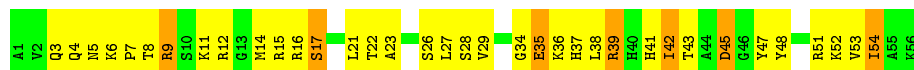
- Molecule 26: 50S ribosomal protein L30



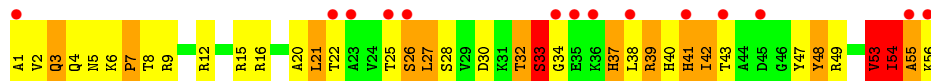
- Molecule 26: 50S ribosomal protein L30



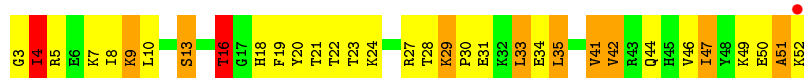
- Molecule 27: 50S ribosomal protein L32



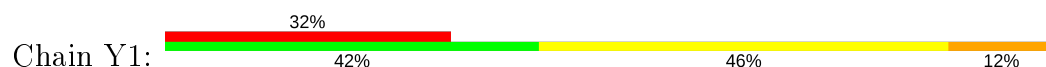
- Molecule 27: 50S ribosomal protein L32



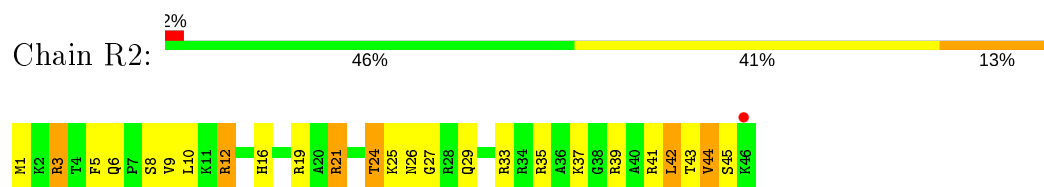
- Molecule 28: 50S ribosomal protein L33



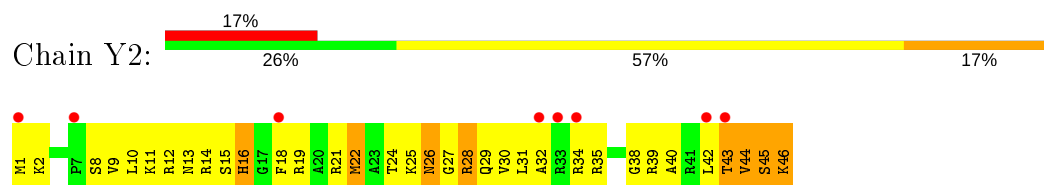
- Molecule 28: 50S ribosomal protein L33



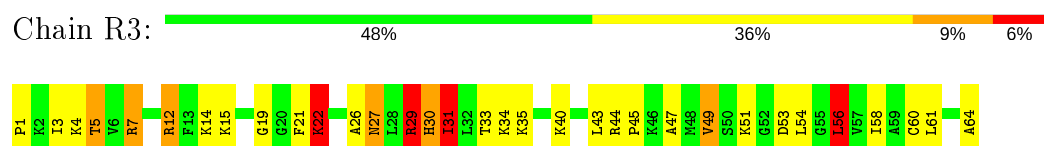
- Molecule 29: 50S ribosomal protein L34



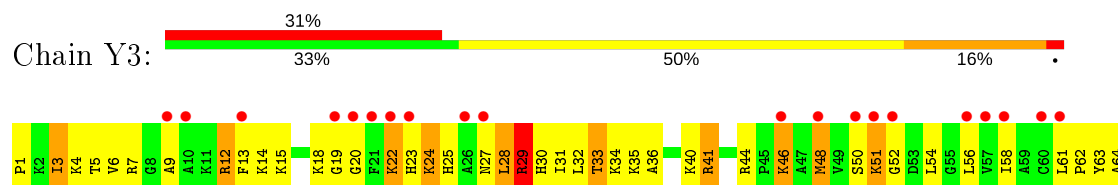
- Molecule 29: 50S ribosomal protein L34



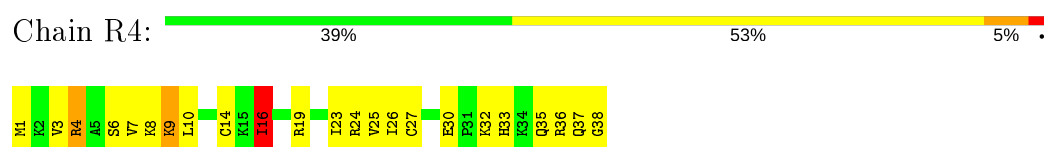
- Molecule 30: 50S ribosomal protein L35



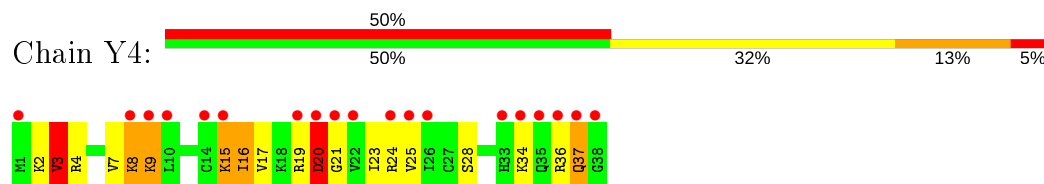
- Molecule 30: 50S ribosomal protein L35



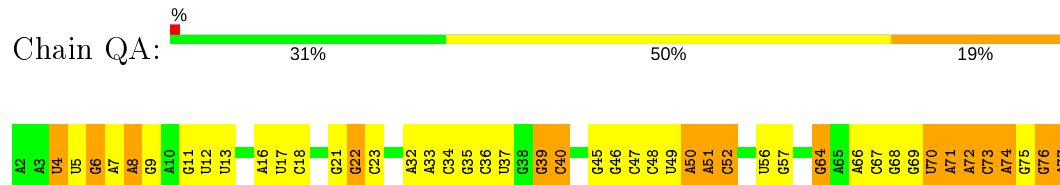
- Molecule 31: 50S ribosomal protein L36



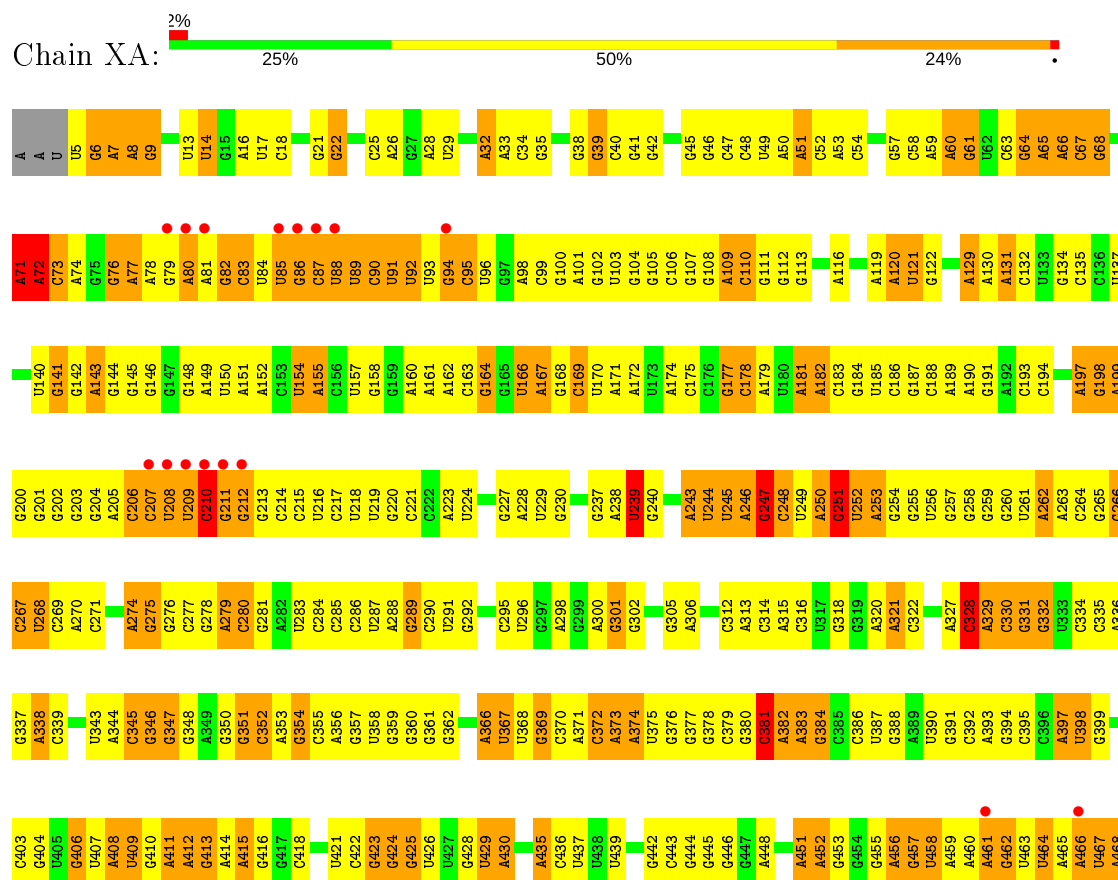
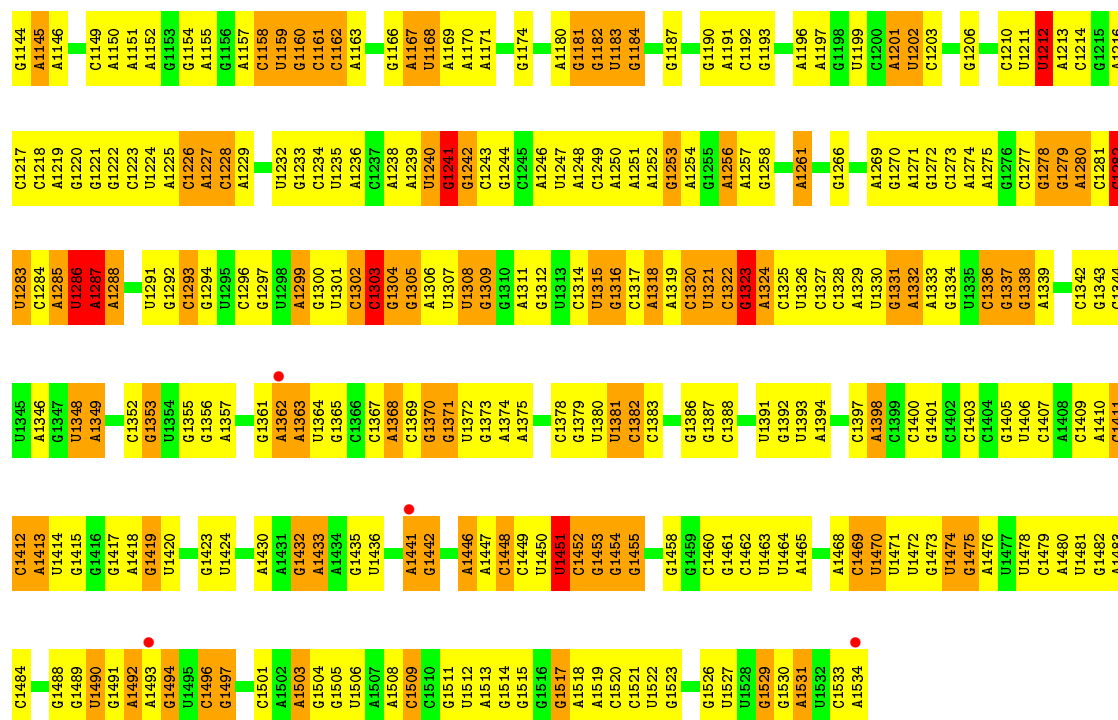
- Molecule 31: 50S ribosomal protein L36



- Molecule 32: 16S rRNA



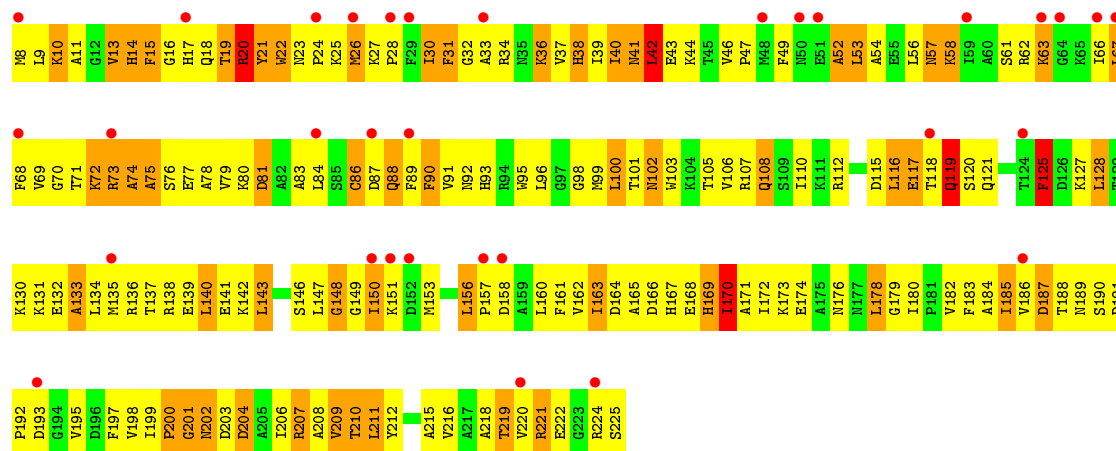




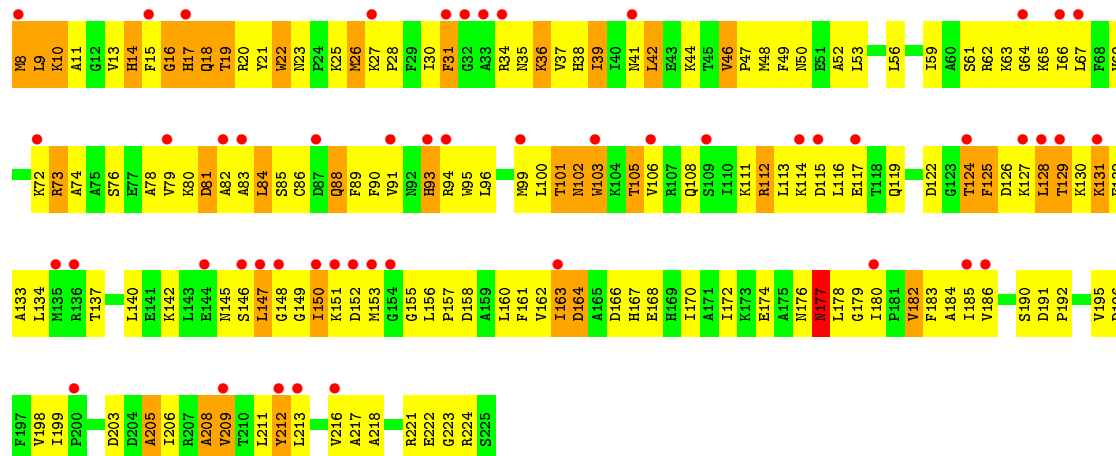
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G1370	G1370	G1308	G1242	G1174	G1104	U1042	U982	A914	G847	G775	A704	C643	G500	G500
G1371	G1371	G1309	G1243	A1176	A1105	G1043	A983	G926	C848	G783	A712	U644	C501	C501
U1372	U1372	G1310	C1244	C1177	G1106	A1046	U991	G927	U842	A784	G713	G645	A502	A502
G1373	G1373	A1311	G1245	G1178	C1107	U1047	U992	C932	U843	G785	U717	A649	C503	C503
A1374	A1374	G1312	C1246	A1179	A1111	G1048	A994	G933	U844	G786	A718	G650	C504	C504
A1375	A1375	U1313	C1247	C1180	G1112	U1049	C995	G934	U854	A787	C719	G577	G505	G505
U1376	U1376	C1314	G1249	G1181	C1113	C1050	A996	A935	U855	U790	C720	U853	A509	A509
A1377	A1377	U1315	A1250	U1183	C1114	C1051	U997	C936	U856	A791	G721	G654	C511	C511
C1378	C1378	C1316	A1251	G1184	G1115	U1052	C998	C937	C857	U792	G722	U659	U512	U512
G1379	G1379	A1317	G1252	G1185	C1116	C1053	U1060	G939	G858	U793	U723	C660	C513	C513
U1380	U1380	C1318	A1254	G1186	C1117	U1054	A1000	C940	G861	A794	G724	G661	C514	C514
U1381	U1381	A1319	G1255	G1187	U1056	U1062	C1001	G941	C862	C795	G725	U662	G515	G515
C1382	C1382	C1320	G1256	A1188	G1057	G1063	G1002	G942	A865	C796	A728	U663	U516	U516
C1383	C1383	U1321	A1257	U1189	G1058	U1064	G1003	G943	C866	C797	A729	A663	G517	G517
C1384	C1384	C1322	C1258	G1190	C1059	C1065	A1005	G944	G867	U798	G730	G664	C518	C518
G1385	G1385	G1323	C1259	A1191	A1067	A1066	G1006	G945	G868	G799	G731	A665	C519	C519
G1386	G1386	A1324	C1260	G1192	G1068	A1067	U1007	A946	C869	G800	C732	G666	A520	A520
G1387	G1387	C1325	G1261	G1193	C1069	C1068	U1008	G947	U870	U801	G736	G667	G521	G521
C1388	C1388	U1326	U1264	U1194	C1128	U1069	U1009	A949	U871	A802	C737	G668	C522	C522
C1389	C1389	C1327	C1265	U1195	C1129	U1070	U1010	A950	A872	G803	C738	G670	A523	A523
U1391	U1391	C1328	G1266	A1196	A1130	G1064	G1003	G943	C866	C797	A729	A663	C524	C524
G1392	G1392	U1330	C1267	A1197	C1131	U1065	A1005	G944	G867	U798	G730	G664	C525	C525
U1393	U1393	G1331	G1268	G1198	C1132	C1066	G1006	G945	G868	G799	G731	A665	C526	C526
A1394	A1394	A1332	A1269	U1199	G1133	A1067	G1007	A946	C869	G800	C732	G666	A602	A602
C1395	C1395	C1333	G1270	C1200	U1135	C1068	U1008	C948	U870	A802	C736	G667	G527	G527
A1463	A1463	G1334	A1271	A1201	C1136	C1069	U1009	A949	U871	G803	C737	G668	C528	C528
U1471	U1471	U1335	G1272	C1202	C1137	U1070	U1010	A950	A872	U804	C738	G670	G529	G529
U1472	U1472	C1336	C1273	C1203	G1138	U1071	U1011	G951	A873	C805	C739	G671	G530	G530
G1475	G1475	G1338	G1276	G1206	C1139	U1072	C1011	U952	A874	C806	C740	U672	U603	U603
A1476	A1476	A1339	C1277	G1207	C1140	U1073	A1012	U952	G875	C807	G741	A673	G527	G527
U1477	U1477	A1340	G1278	G1208	C1141	U1074	A1013	G953	U876	A807	G741	A674	G528	G528
U1478	U1478	U1341	G1279	C1209	G1142	U1075	A1014	G954	G877	C808	G741	A675	G529	G529
C1479	C1479	G1342	A1280	G1209	G1143	U1076	G1015	U955	A878	C811	G748	A676	G530	G530
A1480	A1480	G1343	C1281	U1212	G1144	U1077	U1016	U957	C880	U813	C750	U678	A608	A608



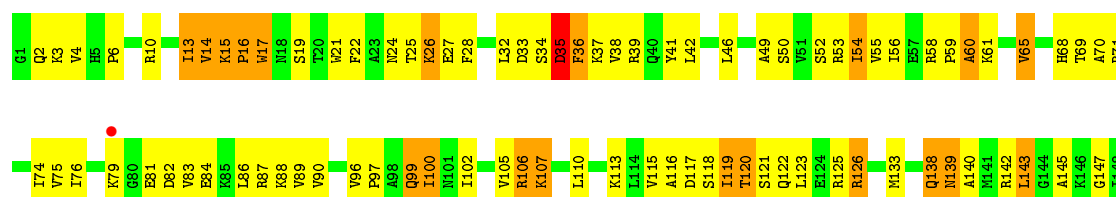
• Molecule 33: 30S ribosomal protein S2



• Molecule 33: 30S ribosomal protein S2

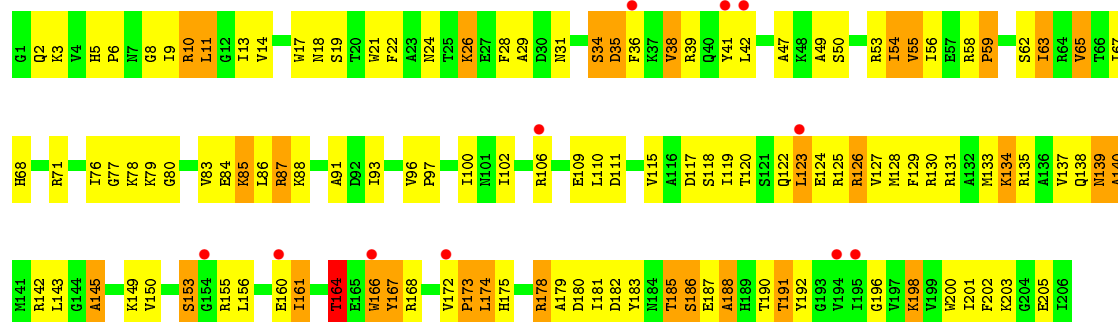


• Molecule 34: 30S ribosomal protein S3

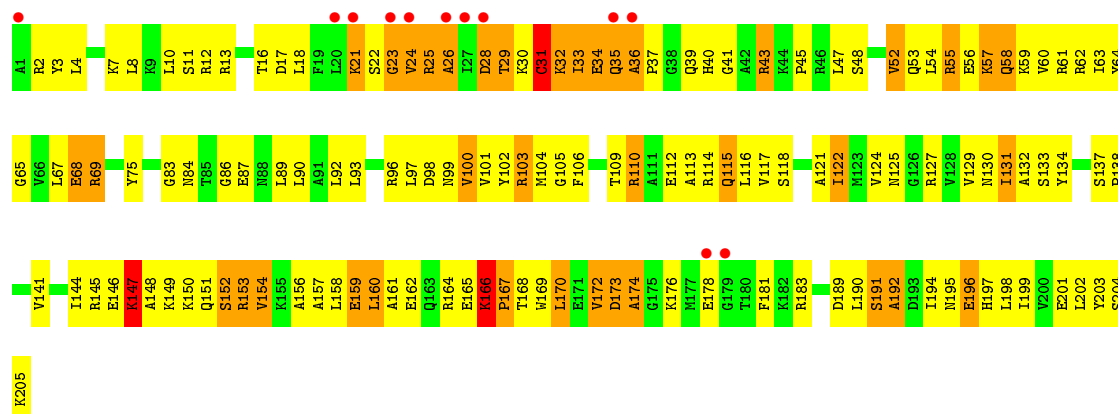




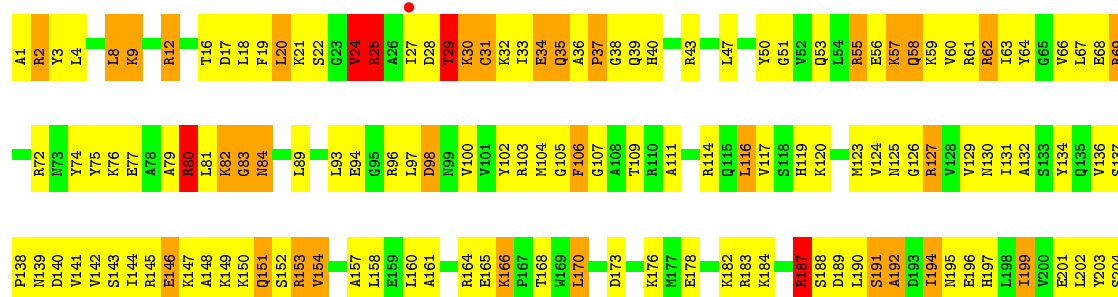
• Molecule 34: 30S ribosomal protein S3



• Molecule 35: 30S ribosomal protein S4

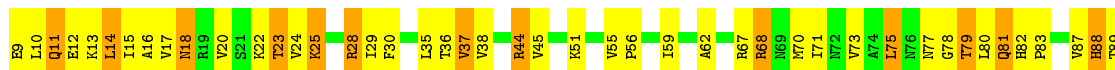


• Molecule 35: 30S ribosomal protein S4



K205

- Molecule 36: 30S ribosomal protein S5

R156
G157
K158

- Molecule 36: 30S ribosomal protein S5

M145
M146
N147
S148
P149
E150
M151
V152
G157
K158

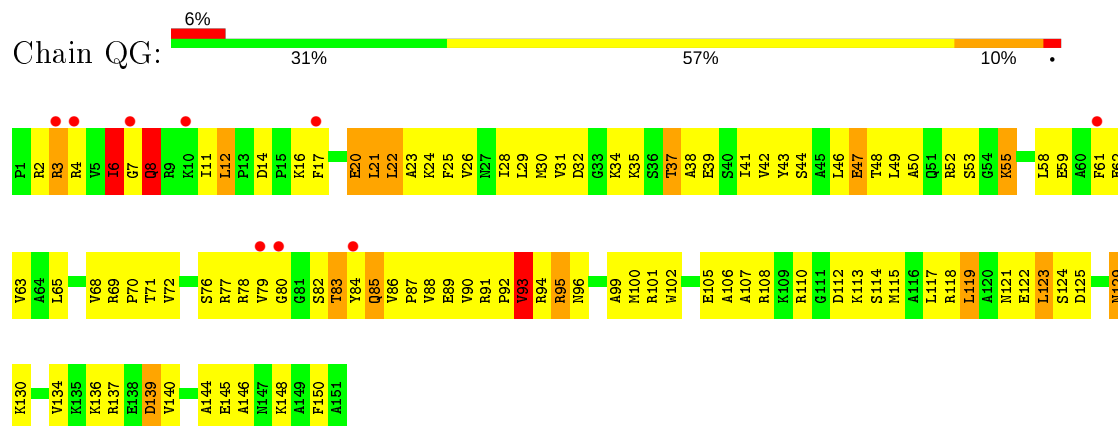
- Molecule 37: 30S ribosomal protein S6

I71
D72
T77
F78
E79
F80
M81
D82
A83
V84
V84
I85
R86
S87
M88
V89
M90
R91
T92
K93
H94
T97
E98
A99
S100

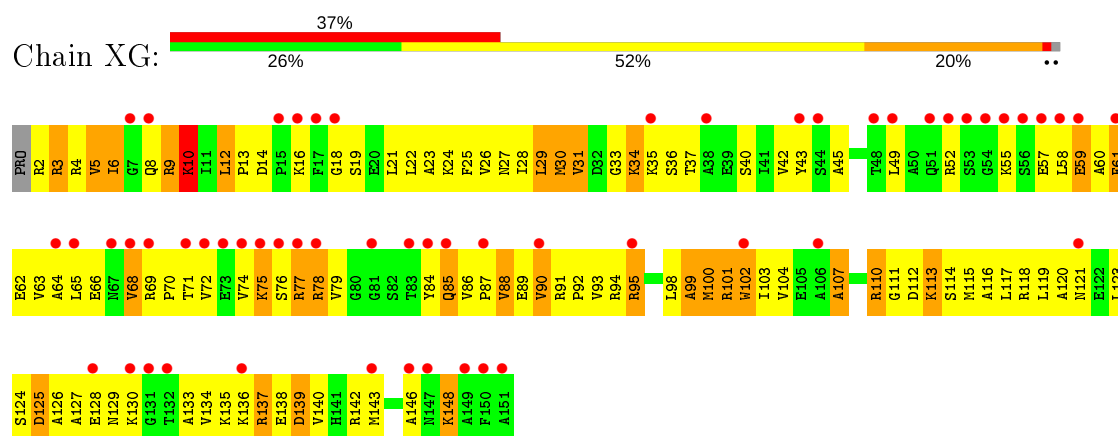
- Molecule 37: 30S ribosomal protein S6

P67
Q68
E69
V70
D71
D72
E75
F80
N81
D82
T85
R86
S87
V88
V89
M90
R91
T92
K93
H94
A95
V96
T97
E98
A99
S100

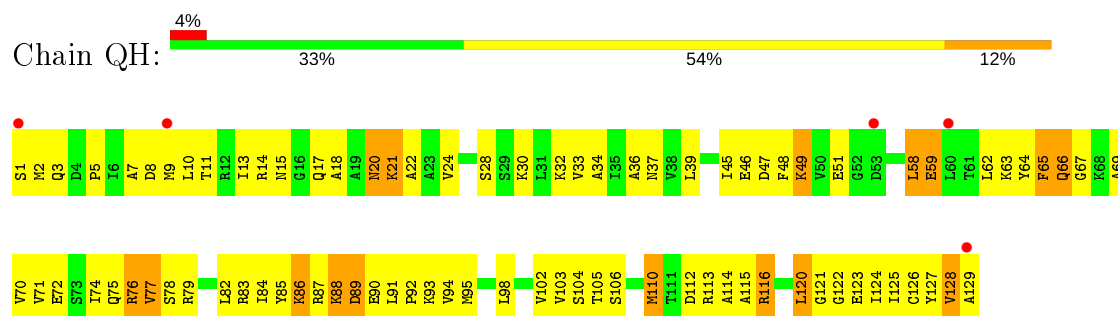
• Molecule 38: 30S ribosomal protein S7



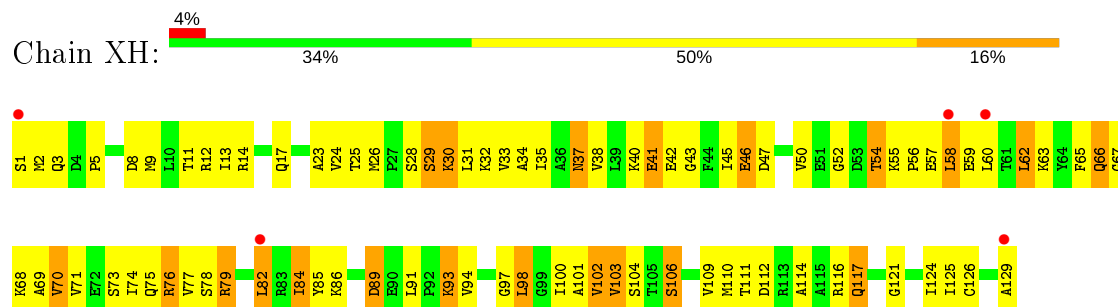
• Molecule 38: 30S ribosomal protein S7



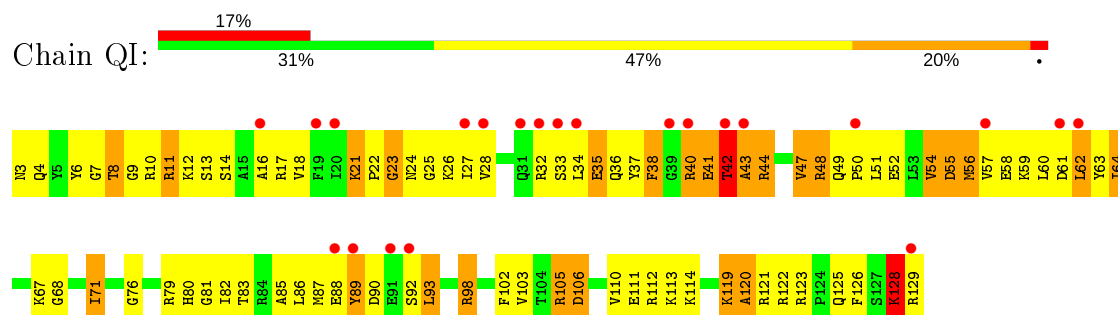
• Molecule 39: 30S ribosomal protein S8



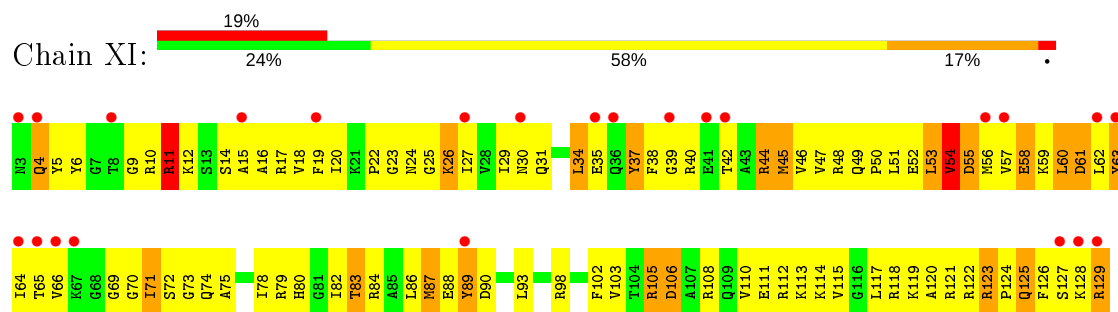
• Molecule 39: 30S ribosomal protein S8



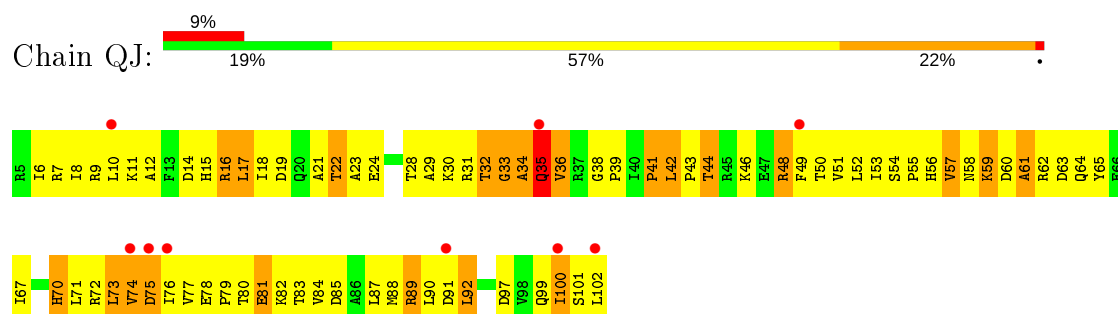
- Molecule 40: 30S ribosomal protein S9



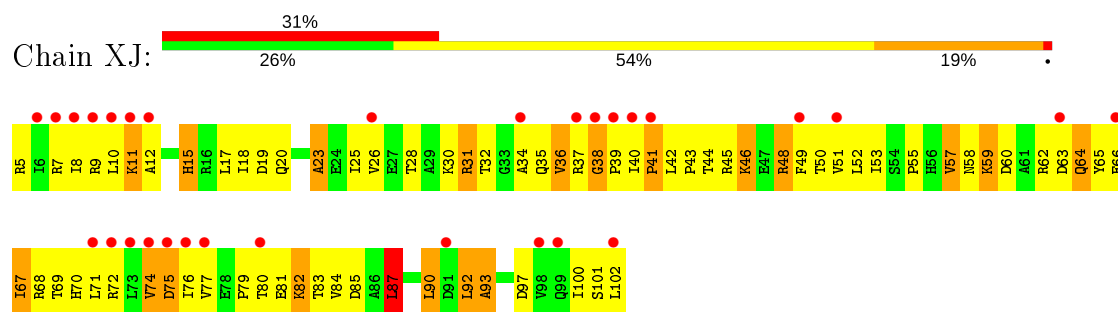
- Molecule 40: 30S ribosomal protein S9



- Molecule 41: 30S ribosomal protein S10

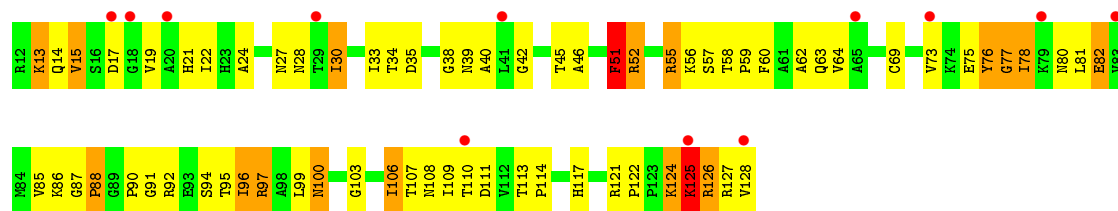


- Molecule 41: 30S ribosomal protein S10

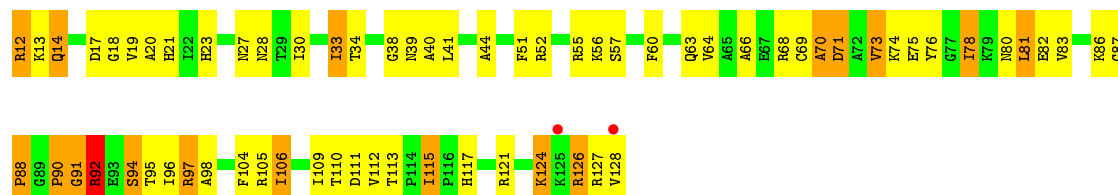
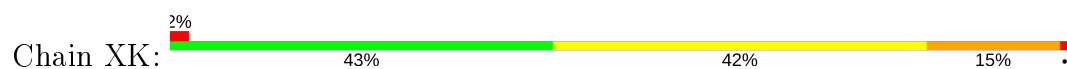


- Molecule 42: 30S ribosomal protein S11

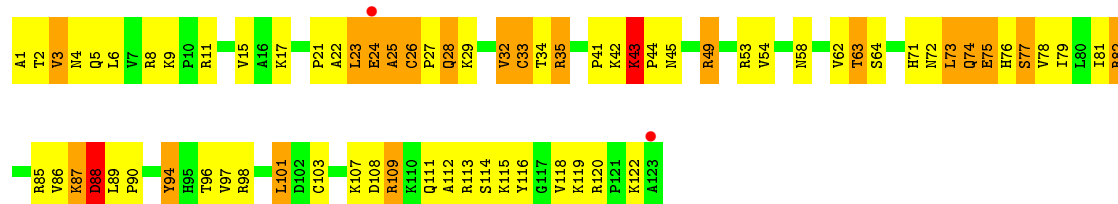
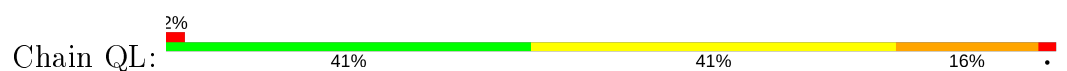




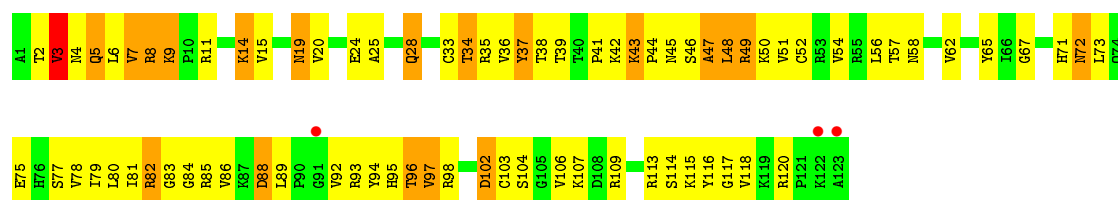
• Molecule 42: 30S ribosomal protein S11



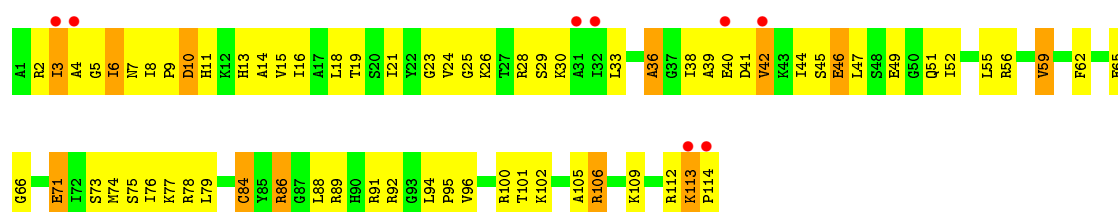
• Molecule 43: 30S ribosomal protein S12



• Molecule 43: 30S ribosomal protein S12

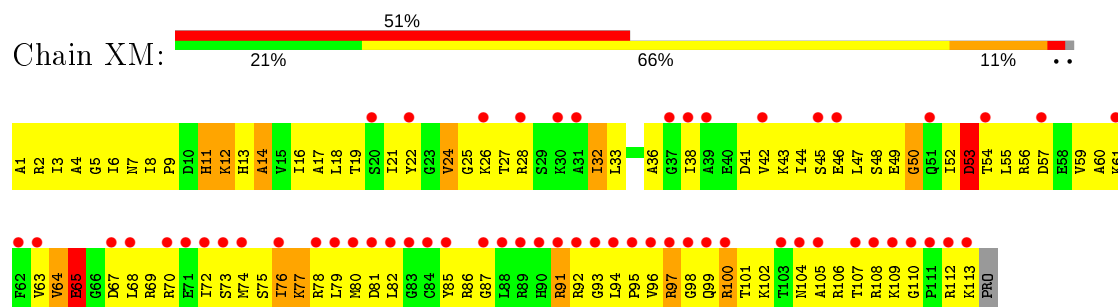


• Molecule 44: 30S ribosomal protein S13



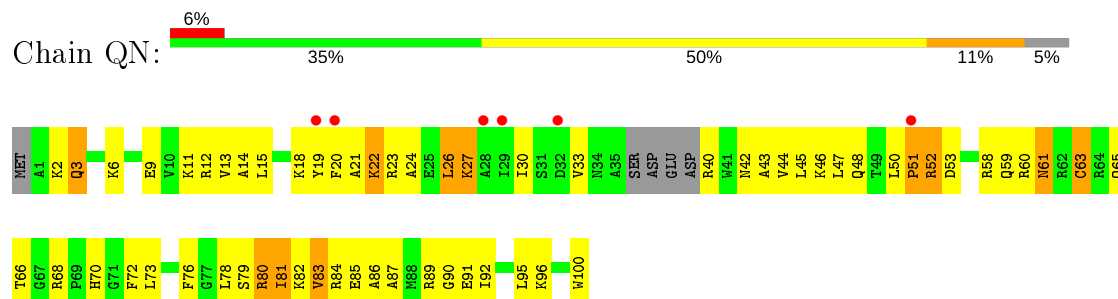
- Molecule 44: 30S ribosomal protein S13

Chain XM:



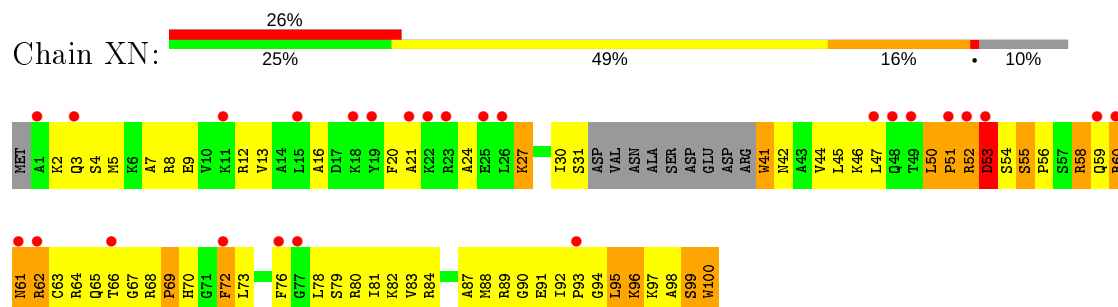
- Molecule 45: 30S ribosomal protein S14

Chain QN:



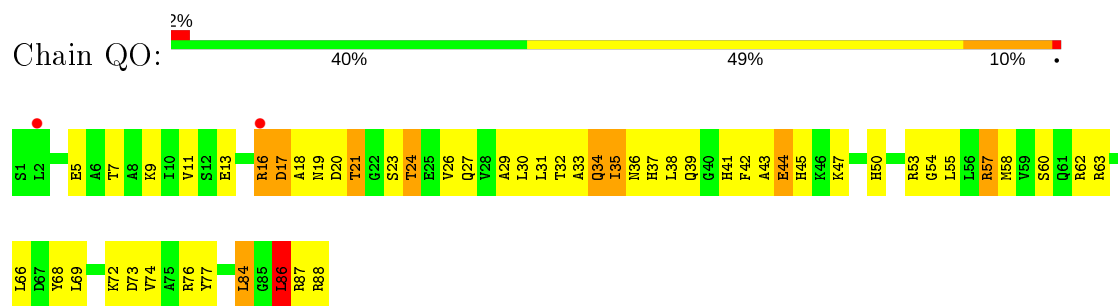
- Molecule 45: 30S ribosomal protein S14

Chain XN:



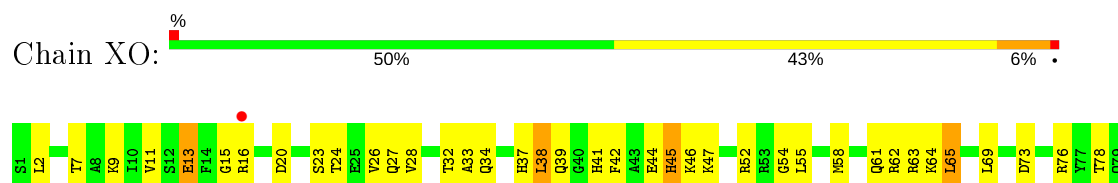
- Molecule 46: 30S ribosomal protein S15

Chain QO:



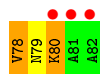
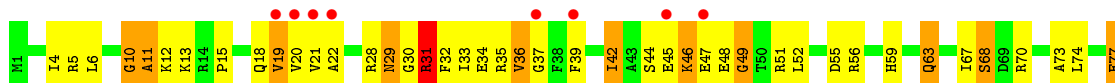
- Molecule 46: 30S ribosomal protein S15

Chain XO:

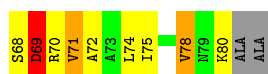




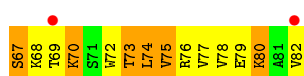
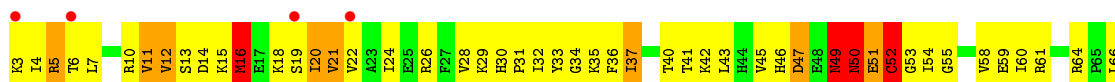
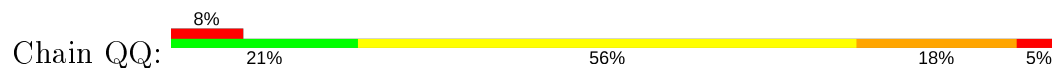
- Molecule 47: 30S ribosomal protein S16



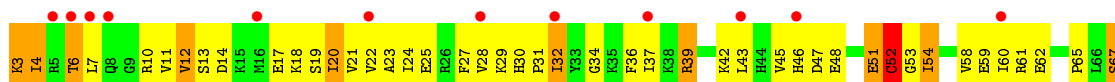
- Molecule 47: 30S ribosomal protein S16



- Molecule 48: 30S ribosomal protein S17

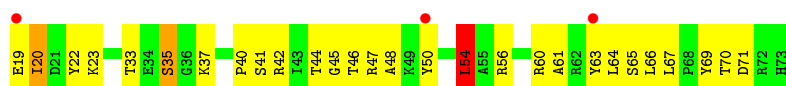


- Molecule 48: 30S ribosomal protein S17



- Molecule 49: 30S ribosomal protein S18

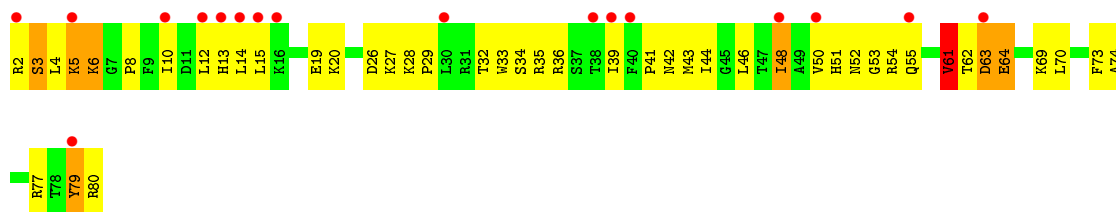




- Molecule 49: 30S ribosomal protein S18



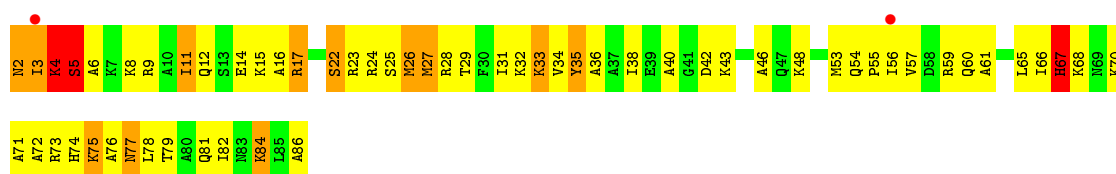
- Molecule 50: 30S ribosomal protein S19



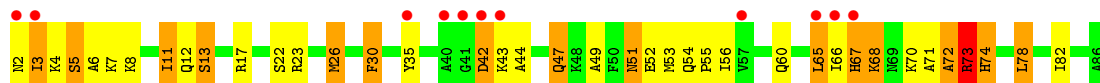
- Molecule 50: 30S ribosomal protein S19



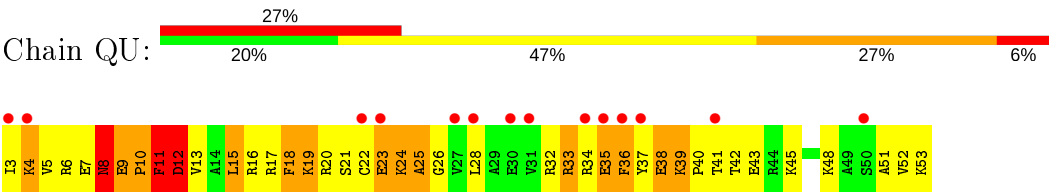
- Molecule 51: 30S ribosomal protein S20



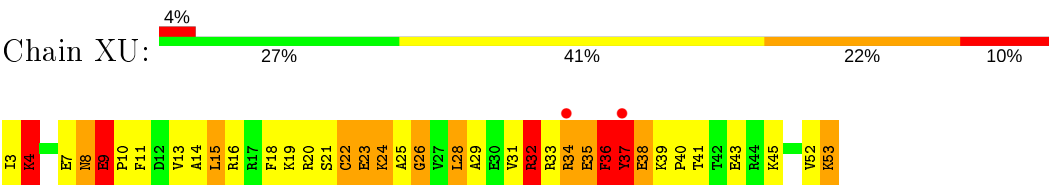
- Molecule 51: 30S ribosomal protein S20



● Molecule 52: 30S ribosomal protein S21



● Molecule 52: 30S ribosomal protein S21



4 Data and refinement statistics

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) 95.9 (69.78-3.10)	Depositor EDS
R_{merge}	0.11	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ 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 (2.02%)	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)	0.24 , 91.6	EDS
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.93	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.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z > 5$	RMSZ	# $ Z > 5$
1	RA	0.73	7/68626 (0.0%)	1.08	288/107056 (0.3%)
1	YA	0.38	0/68314	0.83	60/106569 (0.1%)
2	RB	0.64	0/2828	0.94	1/4410 (0.0%)
2	YB	0.30	0/2803	0.76	1/4371 (0.0%)
3	RC	0.47	0/2121	0.72	1/2852 (0.0%)
3	YC	0.32	0/2121	0.55	0/2852
4	RD	0.56	0/1586	0.80	1/2134 (0.0%)
4	YD	0.31	0/1586	0.57	0/2134
5	RE	0.43	0/1571	0.66	0/2113
5	YE	0.27	0/1571	0.51	0/2113
6	RF	0.32	0/1434	0.53	0/1926
6	YF	0.24	0/1444	0.50	0/1937
7	RG	0.40	0/1343	0.65	0/1816
7	YG	0.24	0/1343	0.50	0/1816
8	RH	0.32	0/1122	0.56	0/1515
8	YH	0.29	0/1122	0.52	0/1515
9	RI	0.23	0/1046	0.48	0/1410
9	YI	0.22	0/1046	0.47	0/1410
10	RJ	0.57	0/1152	0.82	1/1551 (0.1%)
10	YJ	0.29	0/1152	0.60	1/1551 (0.1%)
11	RK	0.54	0/947	0.80	0/1268
11	YK	0.34	0/947	0.58	0/1268
12	RL	0.44	0/1054	0.75	1/1403 (0.1%)
12	YL	0.28	0/1054	0.56	0/1403
13	RM	0.50	0/1093	0.71	0/1460
13	YM	0.29	0/1093	0.50	0/1460
14	RN	0.49	0/973	0.72	0/1301
14	YN	0.30	0/973	0.53	0/1301
15	RO	0.41	0/902	0.63	0/1209
15	YO	0.24	0/902	0.45	0/1209
16	RP	0.48	0/929	0.73	0/1242
16	YP	0.32	0/929	0.52	0/1242

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	RQ	0.58	0/960	0.75	0/1278
17	YQ	0.30	0/960	0.47	0/1278
18	RR	0.59	0/829	0.80	0/1107
18	YR	0.30	0/829	0.52	0/1107
19	RS	0.54	0/864	0.76	0/1156
19	YS	0.29	0/864	0.54	1/1156 (0.1%)
20	RT	0.47	0/744	0.72	0/994
20	YT	0.26	0/744	0.54	0/994
21	RU	0.43	0/787	0.68	0/1051
21	YU	0.26	0/787	0.51	0/1051
22	RV	0.42	0/766	0.61	0/1025
22	YV	0.24	0/766	0.44	0/1025
23	RW	0.67	1/603 (0.2%)	0.96	2/797 (0.3%)
23	YW	0.29	0/603	0.54	0/797
24	RX	0.44	0/635	0.69	0/848
24	YX	0.28	0/635	0.58	0/848
25	RY	0.35	0/510	0.61	0/677
25	YY	0.23	0/510	0.50	0/677
26	RZ	0.56	0/453	0.77	0/605
26	YZ	0.28	0/453	0.53	0/605
27	R0	0.45	0/450	0.74	0/599
27	Y0	0.30	0/450	0.52	0/599
28	R1	0.39	0/416	0.63	0/554
28	Y1	0.27	0/416	0.49	0/554
29	R2	0.52	0/380	0.76	0/498
29	Y2	0.30	0/380	0.54	0/498
30	R3	0.46	0/513	0.73	1/676 (0.1%)
30	Y3	0.29	0/513	0.56	0/676
31	R4	0.52	0/303	0.73	0/397
31	Y4	0.33	0/303	0.53	0/397
32	QA	0.43	0/36834	0.82	31/57462 (0.1%)
32	XA	0.39	0/36762	0.80	29/57350 (0.1%)
33	QB	0.30	0/1735	0.55	0/2338
33	XB	0.26	0/1735	0.49	0/2338
34	QC	0.30	0/1651	0.53	1/2225 (0.0%)
34	XC	0.26	0/1651	0.48	0/2225
35	QD	0.32	0/1665	0.54	0/2227
35	XD	0.40	0/1665	0.63	0/2227
36	QE	0.38	0/1118	0.63	0/1504
36	XE	0.35	0/1118	0.60	0/1504
37	QF	0.31	0/835	0.51	0/1128
37	XF	0.30	0/835	0.54	0/1128
38	QG	0.27	0/1195	0.47	0/1602

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	XG	0.25	0/1187	0.48	0/1591
39	QH	0.35	0/989	0.56	0/1326
39	XH	0.30	0/989	0.51	0/1326
40	QI	0.27	0/1034	0.51	0/1375
40	XI	0.26	0/1034	0.48	0/1375
41	QJ	0.30	0/796	0.52	0/1077
41	XJ	0.26	0/796	0.50	0/1077
42	QK	0.29	0/893	0.54	0/1205
42	XK	0.29	0/893	0.55	0/1205
43	QL	0.35	0/969	0.67	0/1300
43	XL	0.34	0/969	0.58	0/1300
44	QM	0.26	0/892	0.50	0/1193
44	XM	0.22	0/884	0.44	0/1181
45	QN	0.29	0/785	0.51	0/1043
45	XN	0.23	0/746	0.42	0/990
46	QO	0.31	0/722	0.49	0/964
46	XO	0.27	0/722	0.46	0/964
47	QP	0.29	0/659	0.51	0/884
47	XP	0.31	0/648	0.53	0/870
48	QQ	0.39	0/657	0.63	0/881
48	XQ	0.32	0/657	0.53	0/881
49	QR	0.30	0/462	0.52	0/621
49	XR	0.35	0/462	0.50	0/621
50	QS	0.26	0/652	0.48	0/877
50	XS	0.22	0/652	0.45	0/877
51	QT	0.38	0/671	0.58	0/888
51	XT	0.27	0/671	0.52	0/888
52	QU	0.33	0/430	0.50	0/570
52	XU	0.38	0/430	0.64	0/570
All	All	0.48	8/306703 (0.0%)	0.84	420/458519 (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 (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	RA	984	A	N9-C4	-8.71	1.32	1.37
1	RA	1142	A	N9-C4	-8.61	1.32	1.37
1	RA	1936	A	N9-C4	-6.89	1.33	1.37
23	RW	32	ALA	CA-CB	5.66	1.64	1.52
1	RA	984	A	C5-C6	-5.54	1.36	1.41
1	RA	804	A	N9-C4	-5.31	1.34	1.37
1	RA	528	A	N7-C5	-5.13	1.36	1.39
1	RA	1142	A	C5-C6	-5.01	1.36	1.41

All (420) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	RA	974	G	C5-N7-C8	-11.14	98.73	104.30
1	RA	1142	A	C2-N3-C4	-10.75	105.23	110.60
1	RA	974	G	N7-C8-N9	10.43	118.31	113.10
1	RA	1990	C	C6-N1-C2	10.42	124.47	120.30
1	RA	560	C	N3-C4-C5	10.30	126.02	121.90
1	RA	783	A	C5-N7-C8	-10.18	98.81	103.90
1	RA	1278	C	C6-N1-C2	10.10	124.34	120.30
1	RA	1936	A	C2-N3-C4	-9.95	105.63	110.60
1	RA	560	C	C6-N1-C2	9.94	124.28	120.30
1	RA	2055	C	C6-N1-C2	9.74	124.20	120.30
1	RA	783	A	N7-C8-N9	9.70	118.65	113.80
1	RA	698	C	C6-N1-C2	9.39	124.06	120.30
1	RA	2250	G	C5-N7-C8	-9.37	99.61	104.30
1	RA	974	G	C4-C5-N7	9.35	114.54	110.80
1	RA	783	A	N1-C6-N6	9.20	124.12	118.60
1	RA	984	A	C2-N3-C4	-9.20	106.00	110.60
1	RA	2815	C	C6-N1-C2	9.19	123.98	120.30
1	RA	984	A	C5-N7-C8	-8.99	99.40	103.90
1	RA	2499	C	N1-C2-O2	-8.96	113.53	118.90
1	RA	740	C	C6-N1-C2	8.87	123.85	120.30
1	RA	2250	G	C4-C5-N7	8.76	114.30	110.80
1	RA	2773	C	C6-N1-C2	8.72	123.79	120.30
1	RA	2606	C	C6-N1-C2	8.56	123.73	120.30
1	RA	1790	C	C6-N1-C2	8.45	123.68	120.30
1	RA	1997	C	C6-N1-C2	8.31	123.62	120.30
1	RA	984	A	N1-C6-N6	8.26	123.55	118.60
1	RA	1142	A	N3-C4-C5	8.17	132.52	126.80
1	RA	1790	C	N3-C4-C5	8.12	125.15	121.90
32	XA	765	G	C4-N9-C1'	8.08	137.01	126.50
1	RA	951	C	C6-N1-C2	8.02	123.51	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	RA	783	A	C4-C5-N7	7.94	114.67	110.70
1	RA	1779	U	C5-C6-N1	-7.75	118.83	122.70
1	RA	528	A	N7-C8-N9	7.71	117.65	113.80
32	XA	210	C	C2-N1-C1'	7.69	127.25	118.80
1	RA	2606	C	N3-C4-C5	7.68	124.97	121.90
32	XA	251	G	C4-N9-C1'	7.65	136.45	126.50
1	RA	787	C	C6-N1-C2	7.65	123.36	120.30
1	RA	786	C	N3-C4-C5	7.61	124.94	121.90
32	QA	365	U	C5-C6-N1	-7.55	118.92	122.70
1	RA	2870	C	C6-N1-C2	7.41	123.27	120.30
1	RA	686	U	C2-N1-C1'	-7.28	108.97	117.70
1	RA	2806	C	C6-N1-C2	7.25	123.20	120.30
1	RA	2501	C	C2-N1-C1'	-7.25	110.83	118.80
1	RA	2815	C	C5-C6-N1	-7.24	117.38	121.00
32	XA	381	C	C2-N1-C1'	7.24	126.76	118.80
1	RA	2527	C	C6-N1-C2	7.23	123.19	120.30
1	RA	2419	U	C5-C6-N1	-7.23	119.08	122.70
1	RA	1200	C	C6-N1-C2	7.23	123.19	120.30
1	RA	2000	C	C6-N1-C2	7.20	123.18	120.30
1	RA	783	A	C6-C5-N7	-7.18	127.27	132.30
1	RA	2250	G	N7-C8-N9	7.14	116.67	113.10
1	RA	2586	U	C5-C6-N1	7.14	126.27	122.70
1	RA	528	A	C5-N7-C8	-7.08	100.36	103.90
1	RA	736	C	C6-N1-C2	7.08	123.13	120.30
1	RA	984	A	C4-C5-N7	7.06	114.23	110.70
1	RA	705	A	N1-C6-N6	7.05	122.83	118.60
1	RA	1962	C	N1-C2-O2	-7.04	114.67	118.90
1	RA	2606	C	C2-N3-C4	-7.04	116.38	119.90
1	RA	2274	A	C8-N9-C4	7.03	108.61	105.80
1	RA	528	A	C8-N9-C4	-6.98	103.01	105.80
1	RA	1694	C	C6-N1-C2	6.97	123.09	120.30
1	RA	740	C	N3-C4-C5	6.96	124.69	121.90
1	RA	786	C	C6-N1-C2	6.96	123.09	120.30
1	RA	783	A	C8-N9-C4	-6.96	103.02	105.80
32	QA	733	G	C4-N9-C1'	-6.95	117.46	126.50
1	RA	2055	C	C5-C6-N1	-6.92	117.54	121.00
32	XA	251	G	C8-N9-C1'	-6.92	118.01	127.00
32	QA	1484	C	C6-N1-C2	6.91	123.06	120.30
1	RA	128	C	C6-N1-C2	6.89	123.06	120.30
1	RA	2606	C	C5-C6-N1	-6.87	117.56	121.00
32	XA	765	G	C8-N9-C1'	-6.80	118.15	127.00
1	RA	974	G	C8-N9-C4	-6.79	103.68	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	RA	1656	C	N3-C4-C5	6.79	124.61	121.90
1	RA	561	G	N3-C4-N9	-6.78	121.93	126.00
1	RA	1790	C	C2-N3-C4	-6.78	116.51	119.90
1	RA	736	C	N3-C4-C5	6.78	124.61	121.90
1	RA	2853	C	C6-N1-C2	6.76	123.01	120.30
1	RA	732	C	C6-N1-C2	6.76	123.00	120.30
1	RA	2250	G	N1-C6-O6	6.72	123.93	119.90
1	RA	1348	C	C6-N1-C2	6.69	122.97	120.30
1	RA	1278	C	C5-C6-N1	-6.67	117.67	121.00
1	RA	2250	G	C2-N3-C4	-6.60	108.60	111.90
32	QA	1053	G	C4-N9-C1'	-6.59	117.94	126.50
1	RA	1142	A	N1-C6-N6	6.58	122.55	118.60
1	RA	835	C	N3-C4-C5	6.57	124.53	121.90
1	YA	335	C	C2-N1-C1'	6.54	125.99	118.80
1	YA	1428	C	C2-N1-C1'	-6.53	111.62	118.80
1	RA	2874	C	C6-N1-C2	6.48	122.89	120.30
1	RA	794	A	C8-N9-C4	6.48	108.39	105.80
1	RA	2843	G	C8-N9-C4	6.46	108.98	106.40
1	RA	1936	A	N1-C6-N6	6.44	122.47	118.60
10	YJ	25	LEU	CA-CB-CG	6.38	129.97	115.30
1	RA	1828	G	C4-C5-N7	-6.36	108.25	110.80
1	RA	743	A	C8-N9-C4	6.35	108.34	105.80
1	RA	1152	C	N1-C2-O2	-6.34	115.09	118.90
1	RA	2503	A	C2-N3-C4	6.34	113.77	110.60
1	RA	2630	G	C8-N9-C4	6.34	108.94	106.40
1	RA	1830	C	C6-N1-C2	6.34	122.83	120.30
32	QA	4	U	C2-N1-C1'	6.33	125.30	117.70
1	RA	853	C	C6-N1-C2	6.29	122.81	120.30
32	XA	210	C	C6-N1-C1'	-6.28	113.27	120.80
1	RA	742	A	N1-C6-N6	6.26	122.36	118.60
1	RA	2283	C	N1-C2-O2	-6.25	115.15	118.90
1	YA	740	C	C6-N1-C2	6.25	122.80	120.30
1	RA	2769	U	C5-C6-N1	-6.21	119.59	122.70
1	RA	1962	C	N3-C2-O2	6.21	126.24	121.90
1	RA	686	U	C5-C6-N1	-6.20	119.60	122.70
1	RA	229	C	C6-N1-C1'	-6.18	113.39	120.80
1	RA	974	G	C4-N9-C1'	6.18	134.53	126.50
1	YA	2405	G	C4-N9-C1'	6.17	134.53	126.50
1	RA	128	C	N3-C2-O2	6.17	126.22	121.90
1	RA	494	G	C8-N9-C4	6.15	108.86	106.40
1	YA	776	G	C4-N9-C1'	6.14	134.48	126.50
1	RA	2250	G	N3-C4-C5	6.13	131.67	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	RA	1022	G	N9-C4-C5	6.12	107.85	105.40
12	RL	19	LEU	CA-CB-CG	6.12	129.37	115.30
1	RA	229	C	C2-N1-C1'	6.11	125.52	118.80
10	RJ	82	GLY	N-CA-C	-6.10	97.85	113.10
1	RA	2609	U	C2-N1-C1'	-6.09	110.39	117.70
1	RA	2501	C	C6-N1-C1'	6.08	128.09	120.80
32	XA	1297	G	C4-N9-C1'	-6.07	118.61	126.50
1	RA	673	C	C6-N1-C2	6.07	122.73	120.30
1	RA	378	C	C6-N1-C2	6.06	122.72	120.30
1	RA	815	C	C6-N1-C2	6.06	122.72	120.30
3	RC	109	LEU	CA-CB-CG	6.05	129.23	115.30
1	RA	1663	G	C8-N9-C4	6.04	108.82	106.40
1	RA	2250	G	C6-C5-N7	-6.04	126.78	130.40
1	RA	1520	U	C6-N1-C2	6.03	124.62	121.00
1	RA	561	G	C5-N7-C8	-6.02	101.29	104.30
1	RA	2870	C	N3-C4-C5	6.02	124.31	121.90
1	RA	1618	A	N1-C6-N6	-6.02	114.99	118.60
1	RA	1994	C	C6-N1-C2	6.02	122.71	120.30
1	RA	1997	C	C2-N1-C1'	-6.02	112.18	118.80
1	RA	1936	A	C5-N7-C8	-6.01	100.89	103.90
1	RA	2626	C	C6-N1-C2	5.99	122.70	120.30
1	YA	828	U	C2-N1-C1'	5.99	124.89	117.70
1	RA	1604	C	C6-N1-C2	5.98	122.69	120.30
1	RA	1760	C	C6-N1-C2	5.97	122.69	120.30
1	RA	742	A	C8-N9-C4	5.97	108.19	105.80
1	RA	2419	U	C6-N1-C2	5.93	124.56	121.00
1	RA	1452	G	C5-N7-C8	-5.92	101.34	104.30
32	QA	244	U	N3-C2-O2	-5.92	118.06	122.20
1	RA	1168	G	N3-C4-N9	5.92	129.55	126.00
1	RA	1790	C	C5-C6-N1	-5.91	118.05	121.00
1	RA	560	C	N3-C4-N4	-5.91	113.86	118.00
1	RA	2286	G	C4-C5-N7	5.90	113.16	110.80
32	XA	381	C	C5-C6-N1	5.90	123.95	121.00
1	RA	846	U	C2-N1-C1'	5.89	124.77	117.70
1	RA	2023	C	C6-N1-C2	5.89	122.66	120.30
1	YA	1799	G	N3-C4-C5	-5.89	125.66	128.60
1	RA	1573	G	C8-N9-C4	5.88	108.75	106.40
32	QA	733	G	C8-N9-C1'	5.88	134.64	127.00
1	RA	2815	C	C2-N1-C1'	-5.88	112.34	118.80
1	RA	1245	G	C8-N9-C4	5.87	108.75	106.40
1	RA	1828	G	C5-C6-O6	5.86	132.12	128.60
1	RA	687	C	C6-N1-C2	5.86	122.64	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	QA	899	C	C6-N1-C2	5.84	122.64	120.30
1	RA	253	C	C6-N1-C2	5.84	122.64	120.30
1	RA	740	C	N3-C2-O2	5.84	125.99	121.90
1	YA	2620	C	C6-N1-C2	5.84	122.64	120.30
1	RA	1776	G	N1-C6-O6	5.83	123.40	119.90
1	RA	2385	C	N1-C2-O2	-5.83	115.41	118.90
32	QA	108	G	N7-C8-N9	5.82	116.01	113.10
1	RA	61	C	C6-N1-C2	5.81	122.62	120.30
32	XA	328	C	C6-N1-C2	-5.80	117.98	120.30
1	RA	2286	G	C5-N7-C8	-5.78	101.41	104.30
1	RA	1276	A	N1-C6-N6	5.78	122.07	118.60
1	RA	595	C	C6-N1-C2	5.78	122.61	120.30
23	RW	20	LEU	CB-CG-CD2	5.77	120.81	111.00
1	RA	698	C	C5-C6-N1	-5.75	118.12	121.00
32	QA	1496	C	C6-N1-C2	5.75	122.60	120.30
1	RA	593	U	C5-C6-N1	-5.74	119.83	122.70
2	RB	92	C	C6-N1-C2	5.74	122.60	120.30
32	XA	1297	G	C8-N9-C1'	5.73	134.45	127.00
1	YA	1255	U	C2-N1-C1'	5.73	124.58	117.70
32	QA	1451	U	C2-N1-C1'	5.73	124.57	117.70
1	RA	2286	G	N7-C8-N9	5.72	115.96	113.10
1	RA	1764	C	C6-N1-C2	5.72	122.59	120.30
1	RA	528	A	N1-C6-N6	5.72	122.03	118.60
1	RA	732	C	C5-C6-N1	-5.71	118.14	121.00
1	RA	2830	C	C6-N1-C2	5.71	122.58	120.30
1	RA	1836	C	C6-N1-C2	5.70	122.58	120.30
1	YA	774	G	C4-N9-C1'	-5.70	119.09	126.50
1	RA	1771	C	N1-C2-O2	-5.70	115.48	118.90
1	RA	2275	C	N1-C2-O2	5.69	122.31	118.90
1	RA	1072	C	C2-N1-C1'	5.69	125.06	118.80
32	XA	765	G	N7-C8-N9	5.68	115.94	113.10
1	YA	757	G	N3-C4-C5	5.68	131.44	128.60
1	RA	2055	C	N1-C2-O2	-5.68	115.49	118.90
32	XA	717	U	C2-N1-C1'	5.67	124.50	117.70
1	RA	31	C	C6-N1-C2	5.66	122.56	120.30
1	RA	128	C	N1-C2-O2	-5.66	115.50	118.90
1	RA	854	C	C6-N1-C2	5.66	122.56	120.30
1	RA	1229	C	N1-C2-O2	-5.65	115.51	118.90
1	RA	1020	A	N1-C6-N6	5.64	121.99	118.60
1	RA	2645	G	C4-N9-C1'	5.64	133.84	126.50
1	RA	1142	A	N3-C4-N9	-5.64	122.89	127.40
1	RA	727	A	C8-N9-C4	5.63	108.05	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	RA	783	A	C2-N3-C4	-5.63	107.78	110.60
1	RA	804	A	C8-N9-C4	5.62	108.05	105.80
1	RA	560	C	C2-N1-C1'	-5.62	112.61	118.80
1	RA	561	G	N3-C4-C5	5.62	131.41	128.60
1	YA	246	C	C6-N1-C2	5.62	122.55	120.30
1	RA	528	A	C6-C5-N7	-5.61	128.37	132.30
1	YA	1428	C	C6-N1-C1'	5.61	127.53	120.80
1	YA	2405	G	C8-N9-C1'	-5.61	119.70	127.00
1	RA	381	G	C8-N9-C4	5.61	108.64	106.40
1	RA	1936	A	C4-C5-N7	5.60	113.50	110.70
1	RA	984	A	N3-C4-C5	5.60	130.72	126.80
1	RA	2844	G	C8-N9-C4	5.59	108.64	106.40
1	RA	731	C	C6-N1-C2	5.59	122.53	120.30
1	RA	1990	C	N3-C4-C5	5.58	124.13	121.90
1	RA	2845	U	C5-C6-N1	-5.58	119.91	122.70
1	RA	2042	A	N1-C6-N6	5.58	121.94	118.60
1	RA	2499	C	N3-C2-O2	5.57	125.80	121.90
1	YA	475	C	C2-N1-C1'	5.57	124.92	118.80
1	RA	2774	C	N3-C4-C5	5.55	124.12	121.90
1	RA	984	A	N7-C8-N9	5.55	116.57	113.80
1	RA	740	C	N1-C2-O2	-5.55	115.57	118.90
1	RA	1168	G	N9-C4-C5	-5.54	103.18	105.40
1	YA	1021	A	C3'-C2'-C1'	5.54	105.93	101.50
1	RA	1278	C	N3-C4-C5	5.53	124.11	121.90
1	RA	2032	G	N1-C6-O6	5.53	123.22	119.90
32	XA	251	G	C6-C5-N7	-5.53	127.08	130.40
32	XA	765	G	C6-C5-N7	-5.51	127.09	130.40
1	RA	556	A	N1-C6-N6	5.51	121.91	118.60
1	RA	698	C	C2-N1-C1'	-5.50	112.75	118.80
1	RA	1990	C	C5-C6-N1	-5.50	118.25	121.00
1	YA	139	U	C2-N1-C1'	5.50	124.30	117.70
1	RA	2282	G	N3-C4-C5	-5.49	125.85	128.60
1	YA	1568	G	C8-N9-C1'	-5.48	119.87	127.00
1	RA	2586	U	C4-C5-C6	-5.48	116.41	119.70
1	RA	381	G	N3-C4-C5	5.48	131.34	128.60
1	RA	1168	G	C8-N9-C1'	-5.47	119.89	127.00
1	RA	984	A	C6-C5-N7	-5.47	128.47	132.30
32	QA	1053	G	N3-C4-N9	-5.47	122.72	126.00
1	RA	832	U	C5-C6-N1	-5.45	119.97	122.70
1	RA	2658	C	C6-N1-C2	5.45	122.48	120.30
1	RA	2055	C	C2-N1-C1'	-5.44	112.82	118.80
1	RA	974	G	N3-C4-C5	5.44	131.32	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	RA	1760	C	C5-C6-N1	-5.43	118.28	121.00
1	RA	1999	C	C6-N1-C2	5.43	122.47	120.30
32	QA	1053	G	N3-C4-C5	5.43	131.32	128.60
1	YA	2310	C	C3'-C2'-C1'	5.43	105.84	101.50
1	RA	1399	C	C6-N1-C2	5.41	122.47	120.30
19	YS	97	LEU	CA-CB-CG	5.41	127.75	115.30
1	RA	2536	G	C8-N9-C4	5.41	108.56	106.40
1	RA	1351	C	C2-N1-C1'	-5.40	112.86	118.80
1	RA	507	A	C3'-C2'-C1'	5.40	105.82	101.50
1	RA	1452	G	N7-C8-N9	5.38	115.79	113.10
32	QA	733	G	N3-C4-C5	5.38	131.29	128.60
1	RA	2815	C	N3-C4-C5	5.37	124.05	121.90
1	RA	1156	A	N1-C6-N6	5.37	121.82	118.60
1	RA	1977	A	C8-N9-C4	5.37	107.95	105.80
32	QA	414	A	C3'-C2'-C1'	5.37	105.80	101.50
1	RA	1706	C	C6-N1-C1'	-5.37	114.36	120.80
1	RA	1994	C	N3-C4-C5	5.37	124.05	121.90
1	YA	49	A	C3'-C2'-C1'	5.37	105.80	101.50
1	RA	1785	A	N1-C6-N6	5.36	121.82	118.60
32	QA	733	G	N3-C4-N9	-5.36	122.78	126.00
1	YA	476	G	C4-N9-C1'	5.36	133.47	126.50
1	YA	671	C	C2-N1-C1'	5.36	124.69	118.80
1	YA	1455	G	C3'-C2'-C1'	5.36	105.78	101.50
32	QA	1323	G	C3'-C2'-C1'	5.35	105.78	101.50
1	RA	727	A	N1-C6-N6	5.35	121.81	118.60
1	RA	37	C	C6-N1-C2	5.34	122.44	120.30
1	RA	2012	G	N3-C4-N9	5.34	129.20	126.00
32	XA	239	U	C5-C6-N1	5.34	125.37	122.70
1	YA	335	C	C6-N1-C1'	-5.34	114.39	120.80
1	RA	978	G	C8-N9-C4	5.33	108.53	106.40
1	RA	1638	C	C6-N1-C2	5.33	122.43	120.30
32	QA	198	G	C3'-C2'-C1'	5.33	105.77	101.50
1	RA	981	A	C8-N9-C4	5.33	107.93	105.80
32	XA	1381	U	C3'-C2'-C1'	5.32	105.76	101.50
1	RA	686	U	C6-N1-C2	5.31	124.19	121.00
1	RA	2385	C	C6-N1-C2	5.31	122.42	120.30
1	RA	1816	C	C3'-C2'-C1'	5.30	105.74	101.50
1	RA	834	G	N1-C6-O6	5.30	123.08	119.90
1	RA	1858	A	C3'-C2'-C1'	5.30	105.74	101.50
1	RA	2555	U	C2-N1-C1'	-5.30	111.34	117.70
1	RA	1706	C	C2-N1-C1'	5.29	124.62	118.80
1	RA	2815	C	C2-N3-C4	-5.29	117.25	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	QA	1287	A	C3'-C2'-C1'	5.29	105.73	101.50
1	RA	60	G	N3-C4-C5	-5.29	125.95	128.60
1	RA	2774	C	C6-N1-C2	5.29	122.42	120.30
1	RA	974	G	C6-C5-N7	-5.28	127.23	130.40
1	YA	2061	G	N1-C6-O6	5.28	123.07	119.90
32	QA	1303	C	C3'-C2'-C1'	5.28	105.72	101.50
1	YA	2347	C	C3'-C2'-C1'	5.28	105.72	101.50
32	XA	765	G	C8-N9-C4	-5.27	104.29	106.40
32	QA	1286	U	C2-N1-C1'	5.27	124.03	117.70
32	QA	1053	G	C8-N9-C1'	5.27	133.85	127.00
32	QA	1241	G	C3'-C2'-C1'	5.27	105.71	101.50
1	RA	973	A	C6-N1-C2	-5.26	115.44	118.60
1	RA	2274	A	N7-C8-N9	-5.26	111.17	113.80
1	YA	2682	A	C3'-C2'-C1'	5.26	105.71	101.50
1	RA	1936	A	N3-C4-C5	5.26	130.48	126.80
1	RA	2853	C	C5-C6-N1	-5.26	118.37	121.00
1	RA	1223	G	C4-N9-C1'	-5.25	119.68	126.50
32	XA	247	G	C3'-C2'-C1'	5.25	105.70	101.50
1	YA	389	G	C3'-C2'-C1'	5.25	105.70	101.50
1	RA	2762	C	C6-N1-C2	5.24	122.40	120.30
34	QC	204	GLY	N-CA-C	5.24	126.21	113.10
1	YA	412	A	C3'-C2'-C1'	5.24	105.69	101.50
1	RA	2773	C	N3-C4-C5	5.24	124.00	121.90
1	RA	650	C	C6-N1-C2	5.23	122.39	120.30
1	RA	1135	C	C6-N1-C2	5.23	122.39	120.30
1	RA	1666	G	N3-C4-C5	5.23	131.22	128.60
1	YA	1314	C	C2-N1-C1'	5.23	124.56	118.80
1	RA	1764	C	N1-C2-O2	-5.23	115.76	118.90
32	XA	519	C	C3'-C2'-C1'	5.23	105.68	101.50
1	RA	835	C	C6-N1-C2	5.23	122.39	120.30
1	RA	2749	A	C8-N9-C4	5.23	107.89	105.80
1	YA	1274	A	C3'-C2'-C1'	5.23	105.68	101.50
1	YA	73	A	C3'-C2'-C1'	5.22	105.68	101.50
1	YA	2615	U	C3'-C2'-C1'	5.22	105.67	101.50
1	YA	1648	U	C3'-C2'-C1'	5.21	105.67	101.50
32	XA	1348	U	C3'-C2'-C1'	5.21	105.67	101.50
1	YA	1555	G	C3'-C2'-C1'	5.21	105.67	101.50
1	YA	35	G	C3'-C2'-C1'	5.21	105.66	101.50
1	YA	1568	G	C4-N9-C1'	5.20	133.26	126.50
1	RA	2645	G	C6-C5-N7	-5.20	127.28	130.40
1	YA	2458	G	C4-N9-C1'	5.20	133.25	126.50
1	RA	2275	C	N3-C2-O2	-5.19	118.27	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	RA	60	G	C8-N9-C4	-5.19	104.32	106.40
1	YA	1400	U	C3'-C2'-C1'	5.19	105.65	101.50
1	RA	783	A	C5-C6-N6	-5.17	119.56	123.70
1	RA	1150	C	C3'-C2'-C1'	5.17	105.63	101.50
1	RA	836	G	N1-C6-O6	5.16	123.00	119.90
1	RA	1983	G	N3-C4-C5	5.16	131.18	128.60
32	QA	1302	C	C2-N1-C1'	5.16	124.47	118.80
1	YA	1682	G	C3'-C2'-C1'	5.16	105.63	101.50
1	RA	2072	C	C6-N1-C2	5.15	122.36	120.30
1	YA	1612	C	C3'-C2'-C1'	5.15	105.62	101.50
1	RA	1123	C	C6-N1-C2	5.15	122.36	120.30
1	YA	990	A	C3'-C2'-C1'	5.14	105.61	101.50
1	RA	736	C	N3-C2-O2	5.14	125.50	121.90
1	RA	1989	G	N9-C4-C5	-5.14	103.34	105.40
32	QA	534	U	C3'-C2'-C1'	5.14	105.61	101.50
32	QA	1212	U	C2-N1-C1'	5.14	123.87	117.70
1	RA	1062	G	C3'-C2'-C1'	5.14	105.61	101.50
1	RA	2012	G	N9-C4-C5	-5.14	103.34	105.40
1	RA	561	G	N7-C8-N9	5.13	115.67	113.10
1	RA	2844	G	N9-C4-C5	-5.13	103.35	105.40
32	QA	87	C	C3'-C2'-C1'	5.13	105.60	101.50
32	QA	108	G	C8-N9-C4	-5.13	104.35	106.40
32	QA	175	C	C3'-C2'-C1'	5.13	105.60	101.50
32	XA	1138	G	C3'-C2'-C1'	5.13	105.60	101.50
1	YA	1915	U	C3'-C2'-C1'	5.12	105.60	101.50
1	RA	1997	C	C5-C6-N1	-5.12	118.44	121.00
1	YA	475	C	C6-N1-C1'	-5.12	114.65	120.80
1	YA	1695	G	C3'-C2'-C1'	5.12	105.60	101.50
1	RA	954	G	N3-C4-C5	5.12	131.16	128.60
32	XA	1160	G	C3'-C2'-C1'	5.12	105.60	101.50
32	XA	534	U	C3'-C2'-C1'	5.12	105.59	101.50
1	YA	1388	G	C3'-C2'-C1'	5.12	105.59	101.50
1	RA	1152	C	N3-C2-O2	5.11	125.48	121.90
1	RA	1288	G	N1-C6-O6	5.11	122.97	119.90
1	YA	1439	A	C4-C5-C6	5.11	119.56	117.00
1	RA	2286	G	C6-C5-N7	-5.11	127.33	130.40
1	RA	794	A	N7-C8-N9	-5.11	111.25	113.80
32	QA	530	G	C4-N9-C1'	5.11	133.14	126.50
1	YA	103	A	C3'-C2'-C1'	5.11	105.58	101.50
1	RA	761	A	N7-C8-N9	5.10	116.35	113.80
1	RA	1957	C	N3-C4-C5	5.10	123.94	121.90
32	XA	71	A	C3'-C2'-C1'	5.10	105.58	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	RA	919	U	C2-N1-C1'	5.10	123.82	117.70
1	RA	2699	C	C6-N1-C2	5.10	122.34	120.30
1	RA	743	A	N7-C8-N9	-5.09	111.25	113.80
30	R3	56	LEU	CA-CB-CG	5.09	127.02	115.30
32	XA	1282	C	C3'-C2'-C1'	5.09	105.57	101.50
1	YA	2656	U	C3'-C2'-C1'	5.09	105.57	101.50
1	RA	208	C	C6-N1-C2	5.08	122.33	120.30
1	RA	1987	A	C8-N9-C4	5.08	107.83	105.80
1	RA	2565	A	C8-N9-C4	5.08	107.83	105.80
1	RA	973	A	N1-C2-N3	5.08	131.84	129.30
1	RA	2503	A	C8-N9-C4	-5.08	103.77	105.80
1	YA	2777	G	C3'-C2'-C1'	5.08	105.56	101.50
1	RA	61	C	C5-C6-N1	-5.08	118.46	121.00
1	RA	736	C	N1-C2-O2	-5.08	115.85	118.90
1	RA	848	C	C6-N1-C2	5.07	122.33	120.30
1	YA	1489	C	C3'-C2'-C1'	5.07	105.56	101.50
1	RA	958	U	C3'-C2'-C1'	5.07	105.55	101.50
1	YA	1799	G	C4-N9-C1'	5.07	133.09	126.50
1	RA	586	A	N7-C8-N9	-5.06	111.27	113.80
1	YA	604	G	C3'-C2'-C1'	5.06	105.55	101.50
2	YB	41	G	C4-N9-C1'	5.06	133.08	126.50
1	RA	1655	A	C8-N9-C4	5.06	107.82	105.80
1	RA	2760	C	C6-N1-C2	5.06	122.32	120.30
1	YA	1789	A	C8-N9-C4	5.06	107.82	105.80
1	RA	906	U	C2-N1-C1'	-5.05	111.64	117.70
1	RA	2263	C	C5-C6-N1	-5.05	118.47	121.00
1	RA	1791	A	C8-N9-C4	5.05	107.82	105.80
1	RA	2830	C	N3-C4-C5	5.05	123.92	121.90
32	XA	381	C	C6-N1-C2	-5.05	118.28	120.30
1	RA	2045	C	C6-N1-C2	5.04	122.32	120.30
1	RA	2456	C	C6-N1-C2	5.04	122.32	120.30
32	XA	328	C	C5-C6-N1	5.04	123.52	121.00
1	YA	324	A	C3'-C2'-C1'	5.04	105.53	101.50
1	RA	1142	A	C5-N7-C8	-5.04	101.38	103.90
23	RW	43	LYS	CD-CE-NZ	-5.04	100.10	111.70
4	RD	10	GLY	N-CA-C	5.04	125.69	113.10
1	YA	2752	C	C3'-C2'-C1'	5.04	105.53	101.50
1	RA	1276	A	N9-C4-C5	-5.04	103.79	105.80
1	RA	2813	A	C8-N9-C4	5.04	107.81	105.80
1	YA	2727	A	C3'-C2'-C1'	5.03	105.53	101.50
1	RA	1651	G	C8-N9-C1'	-5.03	120.46	127.00
1	RA	1985	C	C5-C6-N1	-5.03	118.48	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	YA	1135	C	C3'-C2'-C1'	5.03	105.52	101.50
1	YA	14	A	C3'-C2'-C1'	5.02	105.52	101.50
1	YA	1313	U	N3-C2-O2	-5.02	118.69	122.20
1	RA	1758	U	C5-C6-N1	-5.02	120.19	122.70
1	RA	2773	C	C5-C6-N1	-5.02	118.49	121.00
32	QA	1282	C	C3'-C2'-C1'	5.02	105.51	101.50
1	RA	395	U	C5-C6-N1	-5.02	120.19	122.70
32	XA	72	A	C3'-C2'-C1'	5.02	105.51	101.50
1	RA	2592	G	N3-C2-N2	-5.01	116.39	119.90
1	RA	2840	C	C6-N1-C2	5.01	122.30	120.30
1	RA	776	G	C5-C6-N1	-5.01	109.00	111.50
1	RA	2815	C	N1-C2-O2	-5.00	115.90	118.90

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

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	3669	0
2	RB	2529	0	1281	57	0
2	YB	2507	0	1270	166	0
3	RC	2082	0	2157	207	0
3	YC	2082	0	2157	227	0
4	RD	1565	0	1616	201	0
4	YD	1565	0	1616	202	0
5	RE	1552	0	1619	151	0
5	YE	1552	0	1619	188	0
6	RF	1410	0	1447	128	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	YF	1420	0	1460	158	0
7	RG	1323	0	1374	138	0
7	YG	1323	0	1374	144	0
8	RH	1111	0	1148	97	0
8	YH	1111	0	1148	119	0
9	RI	1032	0	1088	108	0
9	YI	1032	0	1088	83	0
10	RJ	1129	0	1162	151	0
10	YJ	1129	0	1162	132	0
11	RK	938	0	1012	91	0
11	YK	938	0	1012	107	0
12	RL	1045	0	1117	110	0
12	YL	1045	0	1117	136	0
13	RM	1074	0	1157	94	0
13	YM	1074	0	1157	91	0
14	RN	960	0	1000	77	0
14	YN	960	0	1000	141	0
15	RO	892	0	923	50	0
15	YO	892	0	923	76	0
16	RP	917	0	965	122	0
16	YP	917	0	965	123	0
17	RQ	947	0	1022	139	0
17	YQ	947	0	1022	124	0
18	RR	816	0	839	102	0
18	YR	816	0	839	94	0
19	RS	857	0	922	83	0
19	YS	857	0	922	69	0
20	RT	738	0	807	107	0
20	YT	738	0	807	104	0
21	RU	779	0	834	61	0
21	YU	779	0	834	98	0
22	RV	753	0	780	47	0
22	YV	753	0	780	62	0
23	RW	596	0	610	191	0
23	YW	596	0	610	127	0
24	RX	625	0	655	53	0
24	YX	625	0	655	77	0
25	RY	509	0	543	40	0
25	YY	509	0	543	76	0
26	RZ	449	0	491	33	0
26	YZ	449	0	491	42	0
27	R0	444	0	461	29	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
27	Y0	444	0	461	54	0
28	R1	409	0	440	42	0
28	Y1	409	0	440	39	0
29	R2	377	0	418	25	0
29	Y2	377	0	418	52	0
30	R3	504	0	574	42	0
30	Y3	504	0	574	52	0
31	R4	302	0	340	29	0
31	Y4	302	0	342	22	0
32	QA	32895	0	16553	1244	0
32	XA	32831	0	16521	1591	0
33	QB	1704	0	1732	225	0
33	XB	1704	0	1732	160	0
34	QC	1624	0	1699	109	0
34	XC	1624	0	1699	125	0
35	QD	1643	0	1710	153	0
35	XD	1643	0	1710	156	0
36	QE	1105	0	1148	135	0
36	XE	1105	0	1148	106	0
37	QF	817	0	808	83	0
37	XF	817	0	808	85	0
38	QG	1181	0	1240	93	0
38	XG	1174	0	1230	130	0
39	QH	979	0	1034	86	0
39	XH	979	0	1034	97	0
40	QI	1022	0	1070	99	0
40	XI	1022	0	1070	127	0
41	QJ	786	0	828	93	0
41	XJ	786	0	828	96	0
42	QK	877	0	887	83	0
42	XK	877	0	887	74	0
43	QL	955	0	1019	88	0
43	XL	955	0	1019	86	0
44	QM	883	0	944	67	0
44	XM	876	0	937	106	0
45	QN	774	0	827	78	0
45	XN	735	0	790	97	0
46	QO	714	0	737	54	0
46	XO	714	0	737	43	0
47	QP	649	0	666	48	0
47	XP	638	0	656	51	0
48	QQ	648	0	691	89	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
48	XQ	648	0	691	56	0
49	QR	455	0	478	21	0
49	XR	455	0	478	39	0
50	QS	637	0	665	54	0
50	XS	637	0	665	87	0
51	QT	665	0	714	85	0
51	XT	665	0	714	40	0
52	QU	425	0	449	79	0
52	XU	425	0	449	76	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
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

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
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	16435	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 35.

All (16435) 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
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:HG2	43:QL:49:ARG:HH11	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:HG3	23:RW:76:ARG:HH21	1.15	1.11
1:YA:1565:C:H3'	3:YC:17:LYS:HE2	1.29	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:HG2	37:QF:38:ARG:HH11	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:H2'	32:XA:6:G:N3	1.53	1.08
1:YA:1489:C:H4'	1:YA:1490:A:OP1	1.36	1.08
1:RA:271:G:H4'	1:RA:272:A:OP1	1.44	1.08
30:R3:31:ILE:HD11	30:R3:34:LYS:HD2	1.36	1.07
1:RA:2800:A:H4'	1:RA:2801:G:OP2	1.31	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
32:XA:1224:U:H5'	32:XA:1225:A:OP2	1.56	1.05
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
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:YW:40:ARG:HG2	23:YW:40:ARG:HH11	0.92	1.05
23:RW:28:GLU:HB3	23:RW:31:LEU:HD21	1.35	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1537:G:C2'	1:YA:1538:G:H4'	1.88	1.03
1:YA:227:A:H4'	1:YA:228:C:OP1	1.54	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
1:YA:1913:A:H4'	1:YA:1914:C:OP1	1.52	1.03
5:RE:44:ARG:HG3	5:RE:44:ARG:HH21	1.24	1.03
1:RA:1458:U:H4'	1:RA:1459:G:O5'	1.56	1.02
51:XT:73:ARG:HG2	51:XT:73:ARG:HH11	1.24	1.02
1:YA:1237:A:C2	1:YA:1238:G:H1'	1.94	1.02
36:XE:29:ILE:HG23	36:XE:30:PHE:H	0.90	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:2023:C:HO2'	1:YA:2024:G:H8	1.07	1.02
1:YA:197:A:H62	1:YA:2430:A:H2'	1.17	1.02
1:YA:2838:G:H1'	14:YN:45:ARG:HH22	1.20	1.02
1:RA:2577:A:H5''	1:RA:2578:G:H5'	1.40	1.02
1:RA:335:C:H5''	21:RU:81:ARG:HD3	1.37	1.02
41:QJ:53:ILE:HG22	41:QJ:61:ALA:HB1	1.40	1.02
1:RA:1179:G:C6	1:RA:1180:U:H1'	1.94	1.02
10:RJ:111:LYS:CD	10:RJ:112:GLY:H	1.72	1.02
32:QA:1468:A:C2'	32:QA:1469:C:H5''	1.90	1.01
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:486:U:C6	32:QA:486:U:H5''	1.94	1.01
1:YA:2216:G:H2'	1:YA:2217:G:H8	1.24	1.01
5:YE:108:ILE:HD11	5:YE:181:ILE:HB	1.38	1.01
23:YW:28:GLU:H	23:YW:31:LEU:HD21	1.19	1.01
32:QA:204:G:H3'	32:QA:205:A:H5''	1.36	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:YN:37:THR:HG22	14:YN:39:PRO:HD2	1.41	1.01
10:RJ:130:HIS:HD2	10:RJ:132:HIS:H	1.06	1.01
1:YA:1808:A:H3'	1:YA:1809:A:H8	1.23	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
3:YC:146:LYS:HB2	3:YC:149:LYS:HB2	1.42	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
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
17:YQ:61:ILE:HD11	17:YQ:92:LYS:HD3	1.42	1.01
1:YA:1809:A:O2'	1:YA:1810:A:H8	1.43	1.01
1:YA:996:A:H4'	17:YQ:91:ARG:HD2	1.42	1.01
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
32:XA:202:G:HO2'	32:XA:468:A:H8	1.06	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:H	36:QE:81:GLN:NE2	1.60	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
42:XK:74:LYS:HA	42:XK:78:ILE:HD11	1.44	0.99
33:QB:209:VAL:HG23	33:QB:210:THR:H	1.28	0.99
12:RL:93:ASN:HD22	12:RL:94:THR:N	1.59	0.99
33:XB:114:LYS:HA	33:XB:117:GLU:HG2	1.44	0.99
32:QA:486:U:H6	32:QA:486:U:H5''	1.22	0.99
32:QA:841:C:C2	32:QA:843:U:H5'	1.98	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2352:A:C2	23:RW:30:VAL:HG11	1.98	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
48:QQ:18:LYS:HA	48:QQ:47:ASP:HB2	1.46	0.97
1:RA:2346:A:H3'	1:RA:2347:C:H5''	1.44	0.97
1:RA:1654:A:O2'	4:RD:118:PHE:CG	2.16	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
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:483:A:H2'	1:YA:484:C:H6	1.24	0.97
1:YA:49:A:H4'	1:YA:50:U:O5'	1.63	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
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:OP1	32:XA:702:A:H8	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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: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
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
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
32:QA:1279:G:H1'	32:QA:1282:C:N4	1.81	0.95
4:RD:169:ARG:O	4:RD:170:VAL:HG13	1.67	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
38:XG:22:LEU:HA	38:XG:25:PHE:HB3	1.47	0.95
33:QB:163:ILE:HG23	33:QB:164:ASP:H	1.31	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
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
48:QQ:45:VAL:HG21	48:QQ:60:ILE:HD13	1.46	0.94
13:RM:35:ALA:O	13:RM:36:VAL:HB	1.65	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
32:XA:961:U:O2'	32:XA:962:C:H6	1.49	0.94
23:YW:40:ARG:NH1	23:YW:40:ARG:HG2	1.72	0.94
17:RQ:48:ASP:HA	17:RQ:51:GLN:HB2	1.49	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XS:5:LYS:HE3	50:XS:6:LYS:H	1.32	0.94
27:Y0:12:ARG:HG3	27:Y0:15:ARG:HH11	1.33	0.94
1:YA:483:A:H2'	1:YA:484:C:C6	2.02	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: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
1:YA:870:U:H2'	1:YA:871:U:H5'	1.49	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
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:1847:A:HO2'	1:YA:1848:A:H8	1.02	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:N3	32:XA:1299:A:H2'	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
36:QE:80:LEU:HD23	36:QE:122:VAL:HG11	1.51	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:QH:74:ILE:HD13	39:QH:128:VAL:HG13	1.50	0.92
1:RA:1733:G:HO2'	1:RA:1734:G:H8	0.96	0.92
12:RL:93:ASN:HD22	12:RL:94:THR:H	1.14	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
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:H8	2:YB:13:G:H5''	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
32:QA:86:G:N2	32:QA:87:C:H41	1.67	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
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:71:ARG:HB3	11:YK:72:PRO:HD3	1.52	0.92
32:QA:667:G:H4'	46:QO:50:HIS:CE1	2.05	0.92
23:RW:37:VAL:HG12	23:RW:38:ARG:H	1.33	0.92
1:YA:2748:A:H1'	7:YG:66:THR:HG22	1.50	0.92
1:YA:503:A:H4'	1:YA:504:A:O5'	1.70	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:1441:A:N6	32:QA:1461:G:H21	1.68	0.91
32:QA:975:A:H4'	32:QA:976:G:C5'	2.00	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
28:R1:47:ILE:HD12	28:R1:47:ILE:H	1.34	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
4:YD:106:LYS:HB3	4:YD:206:ALA:HB3	1.52	0.91
37:QF:3:HIS:H	37:QF:92:THR:HG23	1.32	0.91
12:RL:30:THR:O	12:RL:33:ARG:HG2	1.69	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
7:RG:83:THR:HA	7:RG:84:LYS:HZ3	1.35	0.90
1:YA:1447:C:H2'	1:YA:1448:G:H8	1.32	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
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
11:YK:61:VAL:HG11	11:YK:112:PHE:HE2	1.36	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
1:RA:276:U:O2'	1:RA:278:A:N7	2.04	0.90
23:YW:18:LYS:H	23:YW:36:ILE:HG12	1.35	0.90
37:QF:86:ARG:NH1	49:QR:63:TYR:HB3	1.86	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:QM:10:ASP:CG	44:QM:11:HIS:H	1.75	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
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
1:YA:96:C:H4'	25:YY:41:HIS:CD2	2.07	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:1441:A:H62	32:QA:1461:G:H21	1.19	0.89
32:QA:747:A:H5'	32:QA:748:G:OP2	1.72	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
1:RA:947:A:HO2'	1:RA:984:A:H2	0.93	0.89
11:RK:18:ARG:H	11:RK:45:GLU:HB2	1.37	0.89
4:YD:11:MET:HE1	4:YD:192:ALA:HA	1.54	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
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
32:QA:198:G:HO2'	32:QA:199:A:H8	1.15	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
10:RJ:21:THR:HG22	10:RJ:22:GLY:N	1.87	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
33:QB:42:LEU:HG	33:QB:43:GLU:HG3	1.55	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
32:XA:1134:G:C6	32:XA:1135:U:H1'	2.07	0.89
16:YP:28:LYS:HZ2	16:YP:28:LYS:HB2	1.38	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
43:QL:49:ARG:HG2	43:QL:49:ARG:NH1	1.81	0.88
3:RC:140:VAL:CG1	3:RC:189:ALA:HB1	2.03	0.88
4:RD:151:THR:HG22	4:RD:152:PRO:HD3	1.55	0.88
4:RD:125:TRP:CE3	4:RD:160:LYS:HD3	2.09	0.88
32:XA:1279:G:H5'	41:XJ:9:ARG:HH12	1.36	0.88
28:R1:33:LEU:H	28:R1:51:ALA:HB3	1.37	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
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
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
1:RA:1082:U:H5'	9:RI:117:THR:O	1.73	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
17:RQ:4:LYS:HG3	17:RQ:5:ARG:H	1.37	0.88
1:YA:674:G:HI1'	5:YE:69:ARG:HE	1.38	0.88
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
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
32:QA:1469:C:H6	32:QA:1469:C:H5'	1.37	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
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:H6	1:RA:137:U:O5'	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:2297:A:HO2'	1:YA:2298:A:H8	0.88	0.87
1:YA:1049:C:HO2'	1:YA:1050:A:H8	0.92	0.87
1:YA:1965:C:H6	1:YA:1965:C:H5''	1.39	0.87
30:R3:26:ALA:O	30:R3:27:ASN:HB2	1.73	0.87
1:RA:1779:U:H5	1:RA:1784:A:N7	1.71	0.87
2:YB:42:C:H2'	2:YB:43:C:C6	2.07	0.87
7:YG:86:LEU:HA	7:YG:163:TYR:HB3	1.55	0.87
1:YA:627:A:H2'	12:YL:78:ARG:NH1	1.89	0.87
2:YB:112:G:H21	15:YO:45:SER:HA	1.37	0.87
16:RP:50:ARG:HG2	16:RP:57:ALA:N	1.89	0.87
32:XA:1215:G:HO2'	32:XA:1216:A:H8	0.89	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
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
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
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
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:HG2	35:XD:25:ARG:HH11	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:XM:12:LYS:HE3	44:XM:12:LYS:HA	1.55	0.86
32:QA:204:G:H3'	32:QA:205:A:C5'	2.03	0.86
5:RE:119:ILE:HD11	5:RE:187:VAL:CG2	2.06	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:HD22	24:YX:31:ASN:H	0.89	0.86
48:QQ:12:VAL:HG13	48:QQ:13:SER:H	1.41	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:CG	19:RS:88:ARG:HH21	1.88	0.86
28:Y1:8:ILE:HD11	28:Y1:52:LYS:HE3	1.58	0.86
1:YA:332:A:H61	21:YU:68:ASN:HD21	1.22	0.86
32:QA:974:A:H4'	32:QA:975:A:H5'	1.58	0.86
34:QC:166:TRP:HE3	34:QC:166:TRP:H	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
32:QA:71:A:O2'	32:QA:72:A:H5''	1.75	0.86
27:R0:42:ILE:HD12	27:R0:48:TYR:HB2	1.57	0.86
17:RQ:65:ASN:ND2	17:RQ:69:ARG:HH22	1.74	0.86
1:YA:1606:C:H5'	1:YA:1606:C:O2	1.75	0.86
1:YA:915:C:H2'	1:YA:916:G:H8	1.39	0.86
7:YG:112:VAL:HG12	7:YG:114:HIS:H	1.40	0.86
32:QA:414:A:H2'	32:QA:415:A:H8	1.40	0.86
20:RT:39:THR:HB	20:RT:42:GLU:HB2	1.58	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
32:QA:49:U:O4	32:QA:365:U:H5	1.58	0.86
4:RD:174:SER:O	4:RD:175:LEU:HB2	1.74	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
32:QA:1303:C:H2'	32:QA:1304:G:C8	2.10	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: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
39:QH:9:MET:HE1	39:QH:32:LYS:HA	1.59	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1817:G:HO2'	1:YA:1818:U:H5'	1.41	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: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
32:QA:923:A:H5''	36:QE:25:LYS:HE2	1.58	0.85
39:QH:76:ARG:HG3	39:QH:76:ARG:HH11	1.41	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
38:XG:110:ARG:HG3	38:XG:111:GLY:H	1.41	0.85
32:QA:496:A:H2'	32:QA:496:A:N3	1.90	0.85
7:RG:96:ALA:HB3	7:RG:103:ASN:HB3	1.56	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
32:QA:1183:U:H3'	32:QA:1184:G:H5''	1.57	0.85
31:R4:36:ARG:HG2	31:R4:37:GLN:H	1.41	0.85
44:XM:64:VAL:HG12	44:XM:65:GLU:H	1.41	0.85
32:QA:1373:G:H5''	38:QG:35:LYS:HD2	1.59	0.84
32:QA:205:A:OP1	32:QA:205:A:H4'	1.73	0.84
48:QQ:22:VAL:HG21	48:QQ:60:ILE:HD11	1.56	0.84
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
1:YA:286:U:H2'	1:YA:287:G:C8	2.12	0.84
39:QH:17:GLN:NE2	39:QH:71:VAL:HG23	1.92	0.84
16:RP:3:ILE:HD13	16:RP:3:ILE:O	1.76	0.84
1:YA:1080:A:H2'	1:YA:1081:U:C6	2.12	0.84
1:YA:617:G:HO2'	1:YA:618:G:H8	0.84	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:YA:616:A:HO2'	1:YA:617:G:H8	0.86	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
34:QC:38:VAL:O	34:QC:42:LEU:HB2	1.76	0.84
36:QE:81:GLN:HE21	36:QE:81:GLN:H	1.25	0.84
39:QH:28:SER:HB2	39:QH:58:LEU:HB2	1.59	0.84
17:RQ:63:ARG:HD2	17:RQ:64:ILE:N	1.93	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:HE3	4:RD:114:LYS:O	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
32:XA:1141:C:HO2'	32:XA:1142:G:H8	1.23	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
6:YF:39:VAL:HA	6:YF:49:LEU:HG	1.60	0.84
4:YD:13:ARG:HH12	16:YP:74:GLN:NE2	1.74	0.84
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:1303:G:HO2'	1:YA:1304:A:H8	0.89	0.84
1:YA:45:G:H5'	1:YA:46:G:H5'	1.58	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:1706:C:H4'	1:YA:1707:G:OP2	1.75	0.84
1:YA:876:C:H3'	1:YA:877:A:H8	1.41	0.84
3:YC:83:ASP:HB2	3:YC:90:ILE:HD12	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
17:RQ:97:ILE:HD11	17:RQ:105:PHE:HA	1.59	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
46:QO:63:ARG:HD3	46:QO:87:ARG:NH2	1.93	0.83
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
32:QA:1055:A:H1'	34:QC:155:ARG:HH21	1.42	0.83
29:R2:3:ARG:HG2	29:R2:3:ARG:HH21	1.43	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
11:YK:17:ARG:HH11	11:YK:18:ARG:HG2	1.41	0.83
1:YA:1127:A:O2'	1:YA:1128:G:H5'	1.77	0.83
1:YA:15:G:OP1	27:Y0:20:ALA:HB2	1.78	0.83
1:YA:1716:U:O2'	1:YA:1717:A:H8	1.60	0.83
1:YA:489:G:HO2'	1:YA:491:G:H8	1.27	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:245:U:H6	32:XA:245:U:H5''	1.44	0.83
32:XA:94:G:H4'	32:XA:95:C:OP1	1.76	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
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
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
32:XA:372:C:H1'	32:XA:373:A:OP2	1.77	0.83
30:Y3:41:ARG:HG3	30:Y3:41:ARG:HH21	1.42	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
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
32:QA:1299:A:H2'	32:QA:1299:A:N3	1.94	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
32:XA:704:A:O2'	32:XA:705:G:H8	1.62	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:YD:114:LYS:HD2	4:YD:116:LYS:HZ2	1.42	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
38:QG:86:VAL:HG22	38:QG:150:PHE:HB3	1.59	0.82
7:RG:84:LYS:CG	7:RG:132:LEU:H	1.92	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:2836:U:O2'	1:YA:2837:A:H8	1.60	0.82
1:YA:604:G:O2'	1:YA:605:G:H5'	1.80	0.82
20:YT:14:PRO:O	20:YT:15:HIS:HB2	1.79	0.82
5:RE:44:ARG:CG	5:RE:44:ARG:HH21	1.92	0.82
12:RL:93:ASN:ND2	12:RL:94:THR:N	2.27	0.82
33:XB:209:VAL:O	33:XB:213:LEU:HB2	1.78	0.82
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
7:RG:115:GLN:H	7:RG:115:GLN:CD	1.82	0.82
1:YA:2458:G:H8	1:YA:2459:A:H62	1.27	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
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
48:QQ:16:MET:HB2	48:QQ:19:SER:HB3	1.58	0.82
1:RA:1475:G:H1'	1:RA:1476:U:OP2	1.79	0.82
4:RD:11:MET:HE1	4:RD:192:ALA:HA	1.61	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:2197:U:O2'	1:YA:2198:A:C8	2.32	0.82
1:YA:226:A:H2'	1:YA:227:A:H8	1.43	0.82
20:YT:39:THR:HG21	20:YT:42:GLU:HB2	1.59	0.82
21:YU:95:PHE:HD1	21:YU:95:PHE:H	1.23	0.82
32:QA:464:U:C2	32:QA:466:A:H5'	2.14	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2800:A:H2'	1:YA:2801:G:H4'	1.58	0.82
1:YA:78:U:O2'	1:YA:79:C:H5'	1.79	0.82
2:YB:57:A:O2'	2:YB:58:A:C8	2.24	0.82
2:RB:90:C:H5''	2:RB:90:C:H6	1.43	0.82
1:YA:1714:U:H3'	1:YA:1715:G:H5'	1.61	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
23:RW:24:ARG:HD2	23:RW:25:PHE:N	1.95	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:CG	23:YW:40:ARG:HH11	1.84	0.81
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
1:RA:509:C:H5''	1:RA:510:C:OP2	1.80	0.81
17:RQ:97:ILE:HD11	17:RQ:105:PHE:CA	2.10	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
12:YL:117:THR:HG22	12:YL:118:THR:H	1.43	0.81
34:QC:156:LEU:H	34:QC:156:LEU:HD12	1.45	0.81
23:RW:37:VAL:HG12	23:RW:38:ARG:N	1.94	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:YA:2022:U:HO2'	1:YA:2616:C:HO2'	1.26	0.81
46:QO:63:ARG:CG	46:QO:87:ARG:HH12	1.93	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
32:XA:109:A:H4'	32:XA:110:C:OP2	1.79	0.81
1:YA:1493:C:H2'	1:YA:1493:C:O2	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:HD23	34:XC:110:LEU:O	1.80	0.81
42:XK:111:ASP:H	52:XU:3:ILE:N	1.77	0.81
3:RC:123:ILE:O	3:RC:123:ILE:HG12	1.78	0.81
9:RI:89:SER:HB3	9:RI:92:PRO:HG3	1.63	0.81
1:YA:12:U:O2	1:YA:12:U:H2'	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
17:YQ:87:VAL:HG11	18:YR:52:PRO:HG3	1.62	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
32:QA:250:A:H4'	32:QA:251:G:O5'	1.79	0.81
16:RP:36:LYS:HE3	32:QA:344:A:O3'	1.81	0.81
51:QT:67:HIS:HB3	51:QT:68:LYS:NZ	1.94	0.81
24:RX:5:GLN:NE2	24:RX:49:ARG:H	1.79	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
43:QL:23:LEU:O	43:QL:25:ALA:N	2.14	0.81
18:RR:49:ILE:CD1	18:RR:52:PRO:HA	2.11	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:1278:G:C4'	32:XA:1279:G:O5'	2.28	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:960:U:H4'	32:XA:961:U:H5''	1.60	0.81
32:XA:994:A:HO2'	32:XA:995:C:H6	1.27	0.81
1:YA:206:U:H6	1:YA:206:U:H5'	1.46	0.81
1:YA:2215:C:HO2'	1:YA:2216:G:H8	1.27	0.81
1:YA:2887:A:H1'	27:Y0:39:ARG:HH22	1.44	0.81
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
14:RN:79:LEU:O	14:RN:80:PHE:HB2	1.81	0.80
1:YA:1381:G:H2'	1:YA:1382:G:H5''	1.63	0.80
1:YA:1552:A:H2'	1:YA:1552:A:N3	1.95	0.80
26:YZ:16:LEU:CD2	26:YZ:16:LEU:H	1.93	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
1:RA:931:U:H4'	1:RA:932:U:OP2	1.81	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:1989:G:C2'	1:YA:1990:C:H5'	2.11	0.80
1:YA:230:G:HO2'	1:YA:231:A:H8	1.28	0.80
1:YA:2829:A:H2'	1:YA:2830:C:H5'	1.62	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
1:RA:1287:A:H5'	14:RN:103:ARG:HD2	1.64	0.80
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:XA:1492:A:H2'	1:YA:1913:A:N7	1.96	0.80
35:XD:55:ARG:HH11	35:XD:55:ARG:HA	1.46	0.80
43:XL:43:LYS:CB	43:XL:44:PRO:HD2	2.06	0.80
29:Y2:34:ARG:HB3	29:Y2:42:LEU:HD11	1.63	0.80
1:YA:627:A:H5''	12:YL:78:ARG:HH12	1.43	0.80
1:YA:95:A:H1'	25:YY:40:SER:HB2	1.60	0.80
4:YD:114:LYS:HD2	4:YD:116:LYS:NZ	1.96	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
1:RA:1747:U:H2'	1:RA:1748:C:C6	2.16	0.80
1:RA:762:U:H4'	1:RA:763:G:O5'	1.82	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:YO:23:ALA:HB1	15:YO:90:VAL:HG12	1.64	0.80
36:QE:14:LEU:O	36:QE:14:LEU:HD13	1.81	0.80
1:RA:1733:G:O2'	1:RA:1734:G:H8	1.65	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: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
1:RA:636:G:C6	12:RL:111:ILE:HD11	2.16	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
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
20:RT:64:LYS:HA	20:RT:79:ASP:OD1	1.81	0.80
1:YA:1913:A:C4'	1:YA:1914:C:OP1	2.29	0.80
14:YN:35:LYS:HZ2	14:YN:112:TYR:HE1	1.30	0.80
16:YP:50:ARG:HB3	16:YP:57:ALA:H	1.44	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
10:RJ:43:GLU:O	10:RJ:45:THR:HG22	1.81	0.80
20:RT:50:LEU:HD12	20:RT:50:LEU:H	1.46	0.80
1:RA:923:G:N3	23:RW:23:LYS:HE2	1.95	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: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:RA:923:G:H1'	23:RW:23:LYS:HE2	1.63	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
32:QA:1007:U:H2'	32:QA:1008:U:H5''	1.64	0.80
1:RA:2720:U:OP1	16:RP:52:ARG:NH2	2.15	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
36:QE:155:LYS:HA	36:QE:158:LYS:HZ3	1.47	0.79
29:R2:42:LEU:H	29:R2:42:LEU:HD22	1.47	0.79
1:RA:137:U:O2'	1:RA:138:U:P	2.40	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:Y1:25:ASN:HB3	28:Y1:28:THR:OG1	1.82	0.79
1:YA:1079:C:N4	1:YA:1088:A:H5''	1.95	0.79
4:YD:112:THR:HG22	4:YD:113:SER:N	1.98	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
10:RJ:77:HIS:CD2	10:RJ:79:GLY:H	1.99	0.79
34:XC:179:ALA:HB1	34:XC:202:PHE:CE1	2.18	0.79
32:XA:643:C:H5''	39:XH:31:LEU:HD22	1.62	0.79
32:XA:1348:U:H4'	40:X1:121:ARG:HG3	1.64	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:YA:2387:U:H1'	23:YW:38:ARG:NH1	1.97	0.79
46:QO:9:LYS:O	46:QO:13:GLU:HG3	1.83	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
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
32:XA:1322:C:O2	32:XA:1322:C:H2'	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
52:XU:19:LYS:HZ3	52:XU:19:LYS:N	1.79	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
36:QE:114:LEU:HG	36:QE:119:VAL:HG21	1.65	0.79
28:R1:7:LYS:HA	28:R1:23:THR:HG22	1.63	0.79
1:RA:228:C:H4'	1:RA:229:C:H5''	1.64	0.79
20:RT:61:LEU:HD12	20:RT:61:LEU:C	2.03	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1135:U:H5'	32:XA:1136:C:OP2	1.83	0.79
32:XA:87:C:O2'	32:XA:88:U:H4'	1.82	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: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
1:YA:617:G:O2'	1:YA:618:G:H8	1.64	0.79
6:YF:49:LEU:HD22	6:YF:49:LEU:H	1.47	0.79
36:QE:83:PRO:HB3	36:QE:96:GLN:NE2	1.98	0.78
30:R3:31:ILE:CD1	30:R3:34:LYS:HD2	2.12	0.78
1:RA:1019:U:H3	1:RA:1142:A:H62	1.30	0.78
1:RA:479:A:H4'	1:RA:480:A:OP1	1.83	0.78
32:XA:1329:A:H5''	44:XM:25:GLY:N	1.97	0.78
32:XA:6:G:C2'	32:XA:6:G:N3	2.40	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
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
1:RA:1714:U:H2'	1:RA:1714:U:O2	1.81	0.78
1:RA:733:G:C8	1:RA:761:A:N6	2.51	0.78
25:RY:9:LYS:HB3	25:RY:12:GLU:HG3	1.65	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: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
1:YA:634:C:H2'	1:YA:635:C:C6	2.19	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:YW:13:ARG:HG3	23:YW:14:ASP:H	1.47	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
1:RA:1071:G:H8	1:RA:1071:G:OP2	1.66	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
32:QA:473:U:H2'	32:QA:474:G:H8	1.46	0.78
32:QA:481:G:HO2'	32:QA:482:A:H8	1.31	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:XA:464:U:O4	32:XA:466:A:H4'	1.82	0.78
32:XA:66:A:N3	32:XA:66:A:H2'	1.98	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
32:XA:1422:G:H5''	11:YK:48:PRO:HB3	1.66	0.78
12:YL:48:ARG:HH11	12:YL:48:ARG:CG	1.95	0.78
32:QA:374:A:OP1	32:QA:452:A:N1	2.17	0.78
11:RK:18:ARG:NH1	11:RK:18:ARG:HG3	1.96	0.78
17:RQ:85:ALA:O	17:RQ:86:SER:C	2.21	0.78
22:RV:80:HIS:HD2	22:RV:83:LYS:CB	1.95	0.78
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
32:QA:464:U:N3	32:QA:466:A:H5'	1.99	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
6:YF:103:ILE:HA	6:YF:107:VAL:HG21	1.64	0.78
43:QL:43:LYS:HB2	43:QL:44:PRO:HD3	1.64	0.78
31:R4:10:LEU:HD12	31:R4:33:HIS:CD2	2.19	0.78
1:RA:1069:A:O2'	1:RA:1070:A:H5''	1.83	0.78
1:RA:819:A:OP2	1:RA:1187:G:N2	2.15	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
33:XB:79:VAL:HA	33:XB:213:LEU:HD21	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:287:G:O2'	1:YA:288:U:H5'	1.84	0.78
2:YB:110:C:O2'	2:YB:111:U:H5'	1.84	0.78
1:YA:2882:A:H4'	14:YN:97:ILE:HG12	1.64	0.78
20:YT:1:MET:HG2	20:YT:4:GLU:HA	1.65	0.78
32:QA:1103:C:H2'	32:QA:1104:G:O4'	1.84	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
4:RD:12:THR:HG22	4:RD:13:ARG:N	1.99	0.78
32:XA:977:A:O2'	32:XA:978:A:H5''	1.81	0.78
37:XF:18:VAL:HG21	37:XF:58:HIS:CD2	2.19	0.78
1:YA:1231:U:H2'	1:YA:1232:G:C8	2.19	0.78
32:XA:1493:A:C8	1:YA:1913:A:N6	2.51	0.78
1:YA:963:U:OP1	1:YA:2497:A:H5''	1.84	0.78
1:YA:2716:C:H2'	1:YA:2717:C:H6	1.47	0.78
1:YA:1051:G:H5'	1:YA:2752:C:H1'	1.66	0.78
1:YA:1652:A:H62	14:YN:11:ASN:HD21	1.30	0.78
14:YN:90:ARG:HH21	14:YN:116:VAL:HG11	1.48	0.78
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
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: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
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
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
1:RA:2135:A:O2'	1:RA:2136:G:H8	1.67	0.77
1:RA:84:A:H62	1:RA:101:A:H2	1.33	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:XA:876:C:H1'	39:XH:11:THR:HG21	1.64	0.77
32:XA:532:A:C8	34:XC:192:TYR:CE2	2.70	0.77
32:XA:1221:G:H4'	50:XS:35:ARG:NH2	1.99	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
38:QG:3:ARG:HG3	38:QG:4:ARG:H	1.48	0.77
10:RJ:81:ILE:HG23	10:RJ:82:GLY:N	1.93	0.77
1:RA:2269:G:H4'	23:RW:18:LYS:HE2	1.64	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:1071:G:N7	1:YA:1089:A:C6	2.53	0.77
1:YA:320:A:H2'	5:YE:131:THR:OG1	1.84	0.77
32:QA:8:A:H62	35:QD:204:SER:HB2	1.48	0.77
31:R4:10:LEU:HD12	31:R4:33:HIS:HD2	1.49	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
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:2311:A:H5'	1:YA:2312:U:C5	2.19	0.77
1:YA:1490:A:H8	3:YC:73:ILE:HD12	1.50	0.77
26:YZ:10:ARG:HB2	26:YZ:53:MET:HB3	1.65	0.77
32:QA:721:G:H4'	32:QA:722:G:O5'	1.84	0.77
44:QM:10:ASP:CG	44:QM:11:HIS:N	2.36	0.77
4:RD:133:THR:HG23	4:RD:134:HIS:CD2	2.18	0.77
14:RN:71:ARG:CG	14:RN:71:ARG:HH21	1.98	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:1062:G:HO2'	1:YA:1063:G:H8	1.33	0.77
1:YA:834:G:H5'	30:Y3:56:LEU:HD11	1.65	0.77
2:YB:50:A:C2	2:YB:51:G:H1'	2.20	0.77
3:YC:75:ALA:HB2	3:YC:95:TYR:CD1	2.20	0.77
1:YA:855:G:N3	23:YW:23:LYS:HE3	1.99	0.77
32:QA:1320:C:OP1	50:QS:69:LYS:HE2	1.84	0.77
18:RR:48:LYS:H	18:RR:48:LYS:HD2	1.47	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
32:QA:452:A:H2'	32:QA:453:G:O4'	1.84	0.77
3:RC:166:ARG:O	3:RC:166:ARG:HG3	1.85	0.77
11:RK:108:ARG:HG2	11:RK:108:ARG:HH11	1.50	0.77
23:RW:76:ARG:HG3	23:RW:76:ARG:NH2	1.93	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:94:G:H4'	32:QA:95:C:H5''	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: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
36:QE:23:THR:HA	36:QE:28:ARG:HA	1.67	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
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: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
1:RA:826:U:O2'	12:RL:53:GLY:HA3	1.85	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
32:QA:721:G:H4'	32:QA:722:G:C5'	2.14	0.76
33:QB:131:LYS:O	33:QB:135:MET:HB2	1.86	0.76
33:QB:9:LEU:HD12	33:QB:42:LEU:HD13	1.65	0.76
36:QE:156:ARG:O	36:QE:158:LYS:N	2.18	0.76
6:RF:134:GLN:HG2	6:RF:135:ILE:N	1.98	0.76
13:RM:40:ARG:HB2	13:RM:93:VAL:CG2	2.15	0.76
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:O2	1:YA:1379:U:H2'	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
32:QA:1066:C:H6	32:QA:1066:C:H5''	1.49	0.76
32:QA:214:C:O2'	32:QA:215:C:C6	2.39	0.76
32:QA:73:C:O2'	32:QA:74:A:O4'	2.02	0.76
43:QL:49:ARG:CG	43:QL:49:ARG:HH11	1.95	0.76
44:QM:2:ARG:O	44:QM:3:ILE:HG12	1.85	0.76
1:RA:1392:A:H61	20:RT:18:GLU:CD	1.89	0.76
32:XA:1138:G:N2	32:XA:1140:C:C4	2.54	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
1:YA:482:A:N6	1:YA:506:G:C4	2.52	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
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
28:Y1:5:ARG:HD2	28:Y1:25:ASN:HB2	1.67	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
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
12:RL:95:LEU:HD22	12:RL:100:ILE:HD11	1.67	0.76
32:XA:1296:C:C4	32:XA:1297:G:N2	2.53	0.76
32:XA:563:A:H2'	32:XA:563:A:N3	1.99	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
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
1:RA:1820:U:OP1	3:RC:176:ARG:HG2	1.85	0.76
20:RT:51:PHE:O	20:RT:52:GLU:HG2	1.86	0.76
32:XA:1239:A:O2'	32:XA:1241:G:C5	2.38	0.76
37:QF:16:GLU:CG	35:XD:191:SER:HB2	2.10	0.76
35:XD:34:GLU:O	35:XD:37:PRO:HD3	1.85	0.76
1:YA:686:U:O4	29:Y2:12:ARG:HG3	1.85	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:226:A:C2	1:YA:230:G:O6	2.38	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:YA:921:C:C2'	1:YA:922:C:H5'	2.16	0.76
32:QA:1138:G:O2'	32:QA:1139:G:H4'	1.86	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:QC:10:ARG:HH21	34:QC:181:ILE:HG13	1.51	0.76
29:R2:43:THR:O	29:R2:44:VAL:HB	1.84	0.76
1:RA:729:G:H4'	1:RA:763:G:H5'	1.65	0.76
3:RC:100:ARG:CG	3:RC:100:ARG:HH11	1.98	0.76
10:RJ:117:ALA:HA	10:RJ:120:ARG:NH2	2.01	0.76
10:RJ:77:HIS:HD2	10:RJ:79:GLY:H	1.34	0.76
32:XA:1147:C:H4'	40:X1:6:TYR:CE1	2.21	0.76
51:XT:73:ARG:CG	51:XT:73:ARG:HH11	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:1936:A:H2	1:RA:1943:U:C5	2.04	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
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: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
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
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:2093:G:O6	1:YA:2225:A:C8	2.38	0.76
1:YA:762:U:C4'	1:YA:763:G:O5'	2.33	0.76
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:2557:G:H2'	1:RA:2558:C:C6	2.21	0.76
1:RA:682:G:H5'	29:R2:26:ASN:OD1	1.86	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
32:QA:1191:A:H5''	34:QC:3:LYS:HE3	1.68	0.75
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:XA:1159:U:H5	32:XA:1182:G:HO2'	1.34	0.75
32:XA:1215:G:O2'	32:XA:1216:A:H8	1.69	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
1:YA:300:A:OP2	21:YU:96:LYS:HD3	1.84	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:45:G:H5'	1:YA:46:G:OP1	1.86	0.75
1:YA:614:A:H4'	1:YA:616:A:H62	1.49	0.75
1:YA:95:A:H4'	25:YY:38:GLN:O	1.85	0.75
34:QC:76:ILE:HA	34:QC:83:VAL:HG23	1.66	0.75
43:QL:23:LEU:HG	43:QL:24:GLU:H	1.50	0.75
42:QK:88:PRO:HD3	52:QU:28:LEU:HD13	1.68	0.75
3:RC:246:PRO:HG2	3:RC:247:TRP:CZ3	2.20	0.75
32:XA:328:C:H1'	32:XA:329:A:OP2	1.86	0.75
1:YA:1476:U:H1'	1:YA:1732:C:C2	2.21	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
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
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
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: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
32:QA:94:G:H4'	32:QA:95:C:C5'	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
19:RS:18:ARG:O	19:RS:19:LEU:HB2	1.85	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:XA:1091:U:O2	32:XA:1093:A:H8	1.70	0.75
32:XA:14:U:H2'	32:XA:16:A:OP 2	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
1:YA:1312:U:H4'	1:YA:1313:U:O5'	1.85	0.75
38:QG:12:LEU:H	38:QG:12:LEU:HD22	1.51	0.75
48:QQ:42:LYS:O	48:QQ:43:LEU:HD23	1.87	0.75
32:QA:322:C:O2'	51:QT:17:ARG:HG2	1.87	0.75
1:RA:481:G:C4	1:RA:507:A:C2	2.75	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
32:QA:174:A:H2'	32:QA:175:C:H5'	1.69	0.75
32:QA:86:G:H21	32:QA:87:C:H41	1.33	0.75
35:QD:29:THR:HG22	35:QD:30:LYS:HD3	1.68	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
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
32:XA:181:A:H4'	32:XA:182:A:OP1	1.85	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
1:YA:172:A:H2'	1:YA:173:A:H8	1.49	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
36:QE:158:LYS:HE2	39:QH:63:LYS:HZ1	1.52	0.75
42:QK:21:HIS:CE1	42:QK:34:THR:HG21	2.22	0.75
1:RA:284:U:H2'	1:RA:285:G:H8	1.50	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
1:RA:2415:G:H4'	12:RL:66:PHE:HB2	1.68	0.75
20:RT:73:ARG:HB3	20:RT:73:ARG:CZ	2.16	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1606:C:O2'	1:YA:1607:C:OP2	2.04	0.75
1:YA:184:C:H2'	1:YA:185:G:H8	1.50	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
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
49:QR:40:PRO:HB2	49:QR:42:ARG:HG2	1.66	0.75
28:R1:24:LYS:HE2	28:R1:52:LYS:HB2	1.68	0.75
5:RE:41:GLN:OE1	5:RE:43:THR:HG21	1.87	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: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
1:YA:230:G:O2'	1:YA:231:A:H8	1.70	0.75
1:YA:75:G:H4'	25:YY:48:ARG:NH2	2.02	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
45:QN:22:LYS:HG3	45:QN:23:ARG:N	2.02	0.74
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
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
32:QA:1387:G:H2'	32:QA:1388:C:C6	2.22	0.74
15:RO:51:ALA:HB3	15:RO:78:VAL:HG13	1.67	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
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
1:RA:2648:G:H2'	1:RA:2649:C:C6	2.21	0.74
1:RA:962:G:OP1	56:RA:3355:HOH:O	2.05	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:XA:1366:C:O2'	32:XA:1367:C:C6	2.39	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1324:G:H1'	1:YA:1616:A:N6	2.01	0.74
1:YA:320:A:N7	5:YE:132:LYS:HB2	2.02	0.74
2:YB:13:G:C8	2:YB:13:G:H5''	2.21	0.74
20:YT:20:ALA:HB1	20:YT:31:VAL:HG11	1.68	0.74
42:QK:87:GLY:H	42:QK:113:THR:HG22	1.51	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
32:XA:1361:G:H2'	32:XA:1362:A:H5'	1.69	0.74
32:XA:346:G:N3	32:XA:346:G:H2'	1.99	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
33:QB:207:ARG:O	33:QB:211:LEU:HB2	1.86	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
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
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: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
1:YA:312:G:H5'	1:YA:331:C:O2'	1.86	0.74
16:YP:63:ILE:HA	16:YP:68:GLY:HA2	1.68	0.74
32:QA:1049:U:H4'	32:QA:1050:G:OP2	1.87	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
50:XS:10:ILE:HG22	50:XS:14:LEU:HD11	1.69	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:995:C:N3	32:XA:1046:A:O2'	2.20	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
1:YA:1783:A:H5'	1:YA:2608:G:H4'	1.70	0.74
1:YA:506:G:H4'	1:YA:507:A:H5'	1.70	0.74
1:YA:27:G:N2	1:YA:512:G:H2'	2.02	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
32:QA:110:C:H2'	32:QA:111:G:C8	2.23	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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:1324:G:H1	1:YA:1330:C:H42	1.35	0.74
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
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
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
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
32:QA:202:G:H21	32:QA:466:A:H61	1.35	0.74
1:RA:995:C:H6	1:RA:995:C:H5'	1.51	0.74
45:XN:16:ALA:HA	45:XN:20:PHE:HD1	1.52	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
1:YA:335:C:HO2'	1:YA:336:C:H6	1.34	0.74
4:YD:124:ARG:HD3	4:YD:125:TRP:NE1	2.03	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
1:RA:1455:G:OP2	56:RA:3413:HOH:O	2.04	0.74
23:RW:9:THR:OG1	23:RW:10:ARG:N	2.20	0.74
38:XG:110:ARG:CG	38:XG:111:GLY:H	2.01	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
1:YA:335:C:O2'	1:YA:336:C:C6	2.40	0.74
5:YE:147:LEU:HB3	5:YE:186:VAL:HG23	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1371:G:N7	56:RA:3402:HOH:O	2.21	0.73
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
17:RQ:69:ARG:CB	17:RQ:69:ARG:HH21	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
6:YF:5:ASP:C	6:YF:7:TYR:H	1.90	0.73
14:YN:71:ARG:NH2	14:YN:71:ARG:HB2	2.03	0.73
33:QB:13:VAL:CG2	33:QB:207:ARG:HH22	2.00	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
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
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
1:RA:1022:G:N2	1:RA:1142:A:C2	2.56	0.73
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
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
14:YN:98:LEU:HD21	27:Y0:53:VAL:HG21	1.67	0.73
1:YA:2316:G:H2'	1:YA:2317:A:H8	1.51	0.73
1:YA:223:A:N6	1:YA:422:A:N6	2.37	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
25:YY:18:LEU:O	25:YY:22:LEU:HD13	1.88	0.73
32:QA:601:G:H2'	32:QA:602:A:C8	2.23	0.73
32:QA:86:G:N2	32:QA:87:C:N4	2.36	0.73
36:QE:82:HIS:HB2	36:QE:83:PRO:HD2	1.70	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
37:XF:3:HIS:HD2	37:XF:65:GLU:HG2	1.53	0.73
47:XP:36:VAL:HG13	47:XP:36:VAL:O	1.87	0.73
5:YE:166:LYS:HA	5:YE:166:LYS:HE2	1.70	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:YA:1394:U:H4'	1:YA:1603:A:H4'	1.69	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
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
1:RA:856:G:H1'	23:RW:23:LYS:HB3	1.69	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
27:Y0:12:ARG:HG3	27:Y0:15:ARG:NH1	2.01	0.73
4:YD:49:GLN:HE21	4:YD:79:LEU:HB3	1.53	0.73
11:YK:70:ARG:HB3	11:YK:76:VAL:HG22	1.71	0.73
11:YK:13:ASN:HD21	11:YK:97:THR:H	1.35	0.73
25:YY:31:GLN:HE22	25:YY:37:LEU:HD12	1.54	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
36:QE:158:LYS:HE2	39:QH:63:LYS:NZ	2.04	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
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
32:XA:560:A:H4'	32:XA:561:U:H5''	1.71	0.73
33:XB:103:TRP:HA	33:XB:106:VAL:HB	1.70	0.73
33:XB:48:MET:O	33:XB:199:ILE:HG22	1.87	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:HH21	6:YF:91:ARG:HB3	1.51	0.73
20:YT:38:ALA:HB1	20:YT:81:LYS:NZ	2.04	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
52:QU:33:ARG:NE	52:QU:34:ARG:HG3	2.02	0.73
1:RA:2199:A:C8	1:RA:2199:A:H5'	2.24	0.73
1:RA:927:A:H2'	1:RA:928:A:C8	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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:2056:G:N2	27:Y0:1:ALA:N	2.36	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
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
51:XT:2:ASN:N	51:XT:7:LYS:HZ3	1.86	0.73
27:Y0:38:LEU:HB2	27:Y0:41:HIS:NE2	2.04	0.73
1:YA:1062:G:H8	1:YA:1070:A:OP2	1.71	0.73
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
32:QA:1101:A:C4'	32:QA:1102:A:O5'	2.35	0.73
32:QA:49:U:O4	32:QA:365:U:C5	2.42	0.73
33:QB:22:TRP:O	33:QB:22:TRP:CG	2.41	0.73
21:RU:73:ASN:ND2	21:RU:76:THR:HG23	2.03	0.73
26:RZ:13:ILE:HG22	26:RZ:14:GLY:N	2.02	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:H	42:XK:55:ARG:HD2	1.54	0.73
43:XL:19:ASN:H	43:XL:19:ASN:HD22	1.34	0.73
43:XL:82:ARG:HG2	43:XL:82:ARG:HH11	1.54	0.73
52:XU:16:ARG:CG	52:XU:19:LYS:HG2	2.14	0.73
1:YA:2468:A:HO2'	1:YA:2469:A:H8	1.34	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
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
32:QA:202:G:N2	32:QA:466:A:H61	1.87	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:QB:9:LEU:HB2	33:QB:42:LEU:HD13	1.70	0.72
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
1:RA:994:C:H1'	18:RR:10:LYS:HZ1	1.52	0.72
34:XC:166:TRP:HE3	34:XC:166:TRP:H	1.35	0.72
34:XC:22:PHE:CD2	41:XJ:97:ASP:HB2	2.24	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
19:YS:14:ALA:HB1	19:YS:18:ARG:NH2	2.03	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
1:RA:545:U:H2'	1:RA:546:U:O3'	1.89	0.72
3:RC:12:ARG:HG2	3:RC:12:ARG:HH11	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
40:XI:75:ALA:HA	40:XI:78:ILE:HD12	1.69	0.72
27:Y0:28:SER:HB3	27:Y0:39:ARG:NE	2.03	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
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
1:RA:2276:G:OP2	13:RM:83:GLY:O	2.07	0.72
1:RA:372:G:H5''	24:RX:60:LYS:HE3	1.69	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: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:528:A:C2	1:YA:2043:C:H4'	2.25	0.72
1:YA:389:G:C8	1:YA:2413:G:H4'	2.25	0.72
1:YA:379:G:C6	1:YA:396:G:O6	2.42	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:YK:60:ALA:HA	11:YK:87:LEU:HD23	1.69	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
3:RC:16:VAL:HB	3:RC:203:VAL:HB	1.70	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
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
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
5:YE:149:ILE:O	5:YE:188:MET:HA	1.89	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
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
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:XA:157:U:O2'	32:XA:158:G:H5'	1.88	0.72
1:YA:464:U:H1'	1:YA:686:U:H5	1.54	0.72
1:YA:642:U:H4'	1:YA:2349:G:O2'	1.89	0.72
1:YA:83:A:N6	1:YA:101:A:H5'	2.04	0.72
3:YC:79:ARG:HD3	3:YC:81:GLU:OE1	1.90	0.72
1:YA:616:A:H4'	5:YE:101:TYR:CZ	2.24	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
32:XA:1301:U:H2'	32:XA:1301:U:O2	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
36:QE:105:ILE:HD11	36:QE:123:LEU:HD23	1.70	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
10:RJ:13:ARG:O	10:RJ:14:ASP:HB2	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:XA:1264:U:H2'	32:XA:1265:C:C6	2.24	0.72
32:XA:142:G:C2	32:XA:143:A:H1'	2.25	0.72
40:XI:58:GLU:HG3	40:XI:59:LYS:H	1.55	0.72
1:YA:1275:A:N7	14:YN:16:HIS:HB2	2.04	0.72
1:YA:301:G:H3'	21:YU:81:ARG:NH1	2.05	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
8:YH:97:ARG:O	8:YH:98:ASP:HB2	1.88	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
23:RW:23:LYS:HG3	23:RW:24:ARG:O	1.89	0.72
32:XA:764:C:H2'	32:XA:765:G:H5'	1.71	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
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
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
32:QA:266:G:H3'	48:QQ:68:LYS:HB2	1.71	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
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
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
28:R1:8:ILE:HG23	28:R1:51:ALA:HA	1.71	0.71
14:RN:31:HIS:O	14:RN:33:ILE:HD12	1.88	0.71
38:XG:135:LYS:O	38:XG:139:ASP:HB2	1.90	0.71
38:XG:76:SER:HA	38:XG:85:GLN:HA	1.70	0.71
40:XI:48:ARG:C	40:XI:50:PRO:HD2	2.10	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:XU:24:LYS:HG3	52:XU:25:ALA:H	1.55	0.71
29:Y2:22:MET:O	29:Y2:22:MET:HG2	1.90	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
1:YA:867:C:HO2'	1:YA:868:U:H6	0.73	0.71
15:YO:70:ALA:O	15:YO:74:VAL:HG23	1.90	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
47:QP:20:VAL:HG21	47:QP:32:PHE:CG	2.25	0.71
42:QK:126:ARG:HB2	52:QU:33:ARG:NH1	2.05	0.71
9:RI:20:SER:HB3	9:RI:21:PRO:HD3	1.72	0.71
32:XA:1268:G:N2	32:XA:1327:C:H1'	2.06	0.71
32:XA:66:A:N6	32:XA:67:C:N4	2.38	0.71
1:YA:1437:C:H2'	1:YA:1438:U:C6	2.25	0.71
1:YA:1343:G:C5	1:YA:1597:A:N6	2.58	0.71
1:YA:2619:C:H4'	4:YD:156:PHE:O	1.90	0.71
1:YA:422:A:O2'	1:YA:423:A:C8	2.43	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
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
30:R3:22:LYS:HA	30:R3:47:ALA:O	1.90	0.71
1:RA:1178:C:H2'	1:RA:1179:G:N7	2.05	0.71
32:XA:108:G:H5'	32:XA:109:A:H5''	1.72	0.71
32:XA:1217:C:H2'	32:XA:1218:C:C6	2.21	0.71
32:XA:252:U:H5'	32:XA:252:U:H6	1.54	0.71
34:XC:84:GLU:C	34:XC:86:LEU:H	1.91	0.71
1:YA:1345:C:OP2	1:YA:1345:C:H3'	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
1:YA:273:G:H2'	1:YA:274:C:O4'	1.90	0.71
19:YS:6:LYS:HD2	19:YS:8:ARG: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:XA:1011:C:H2'	32:XA:1012:A:H8	1.54	0.71
32:XA:268:U:H2'	32:XA:269:C:C6	2.25	0.71
33:XB:96:LEU:H	33:XB:99:MET:HE3	1.56	0.71
34:XC:18:ASN:HD21	34:XC:53:ARG:NH1	1.88	0.71
32:XA:1226:C:H41	44:XM:102:LYS:HG2	1.56	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
32:QA:1003:G:N2	32:QA:1005:A:H5'	2.06	0.71
32:QA:76:G:H2'	32:QA:76:G:N3	2.05	0.71
33:QB:66:ILE:HB	33:QB:88:GLN:HB3	1.71	0.71
1:RA:1498:C:O2'	1:RA:1499:C:H6	1.72	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
4:RD:118:PHE:CD2	4:RD:119:ALA:N	2.56	0.71
4:RD:12:THR:CG2	4:RD:13:ARG:N	2.53	0.71
8:RH:18:GLN:HA	8:RH:18:GLN:HE21	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: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: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
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
11:YK:69:VAL:HG11	11:YK:106:GLU:HG2	1.72	0.71
32:QA:409:U:OP1	35:QD:23:GLY:HA3	1.91	0.71
32:QA:86:G:H21	32:QA:87:C:N4	1.87	0.71
37:QF:92:THR:O	37:QF:93:LYS:HG2	1.90	0.71
51:QT:67:HIS:HB3	51:QT:68:LYS:HZ2	1.55	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:XA:1024:G:H2'	32:XA:1025:U:O4'	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1450:U:H4'	32:XA:1451:U:H5	1.55	0.71
32:XA:328:C:O2	32:XA:328:C:H2'	1.89	0.71
37:XF:61:LEU:HD13	37:XF:62:MET:H	1.54	0.71
38:XG:110:ARG:HG3	38:XG:111:GLY:N	2.04	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
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
1:RA:1060:U:O4'	1:RA:1062:G:H5''	1.90	0.71
1:RA:141:G:H5'	1:RA:142:A:C8	2.25	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
23:RW:28:GLU:HB3	23:RW:31:LEU:CD2	2.19	0.71
32:XA:239:U:H6	32:XA:239:U:C5'	2.04	0.71
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:1060:U:C4'	1:YA:1061:U:H2'	2.21	0.71
1:YA:132:G:N2	1:YA:148:U:C2	2.58	0.71
1:YA:2147:A:OP1	1:YA:2147:A:H4'	1.90	0.71
1:YA:969:G:H2'	1:YA:970:U:C6	2.25	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
32:QA:389:A:C6	32:QA:390:U:H1'	2.26	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
34:XC:178:ARG:HD2	34:XC:178:ARG:O	1.90	0.71
40:XI:26:LYS:O	40:XI:62:LEU:HB2	1.90	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
32:QA:1491:G:H5'	32:QA:1492:A:OP1	1.90	0.71
33:QB:14:HIS:CG	33:QB:14:HIS:O	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
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
35:XD:34:GLU:O	35:XD:36:ALA:N	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:117:ALA:HA	10:YJ:120:ARG:HD2	1.72	0.71
10:YJ:20:ALA:HA	10:YJ:23:LYS:HG3	1.73	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
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
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
23:RW:30:VAL:O	23:RW:30:VAL:HG22	1.91	0.71
1:RA:2336:A:N6	23:RW:40:ARG:HD2	2.05	0.71
36:XE:29:ILE:CG2	36:XE:30:PHE:N	2.42	0.71
1:YA:1324:G:O2'	1:YA:1616:A:C6	2.44	0.71
1:YA:68:G:N2	1:YA:74:A:OP2	2.24	0.71
14:YN:12:ARG:HG3	14:YN:13:ASN:H	1.55	0.71
13:YM:36:VAL:HG22	22:YV:82:TYR:HB2	1.72	0.71
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
1:RA:2321:U:H5''	1:RA:2321:U:H6	1.56	0.70
17:RQ:88:GLU:C	17:RQ:88:GLU:OE1	2.28	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:HD2	38:XG:10:LYS:O	1.91	0.70
4:YD:49:GLN:NE2	4:YD:79:LEU:HB3	2.04	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
32:QA:1307:U:H2'	32:QA:1308:U:C6	2.25	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:YA:502:A:C5	1:YA:505:A:N7	2.59	0.70
4:YD:106:LYS:O	4:YD:107:VAL:HB	1.91	0.70
4:YD:34:VAL:HG12	4:YD:48:ILE:HD11	1.73	0.70
5:YE:126:VAL:HG13	5:YE:127:GLU:N	2.05	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:1352:U:C5	1:YA:1377:G:C6	2.79	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
1:YA:664:G:H4'	1:YA:941:A:OP1	1.91	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
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
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
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:1049:C:O2'	1:YA:1050:A:H8	1.71	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: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
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
28:R1:47:ILE:N	28:R1:47:ILE:HD12	2.07	0.70
1:RA:1056:G:HO2'	1:RA:1086:A:H8	1.39	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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:40:ARG:H	23:RW:56:HIS:HB3	1.56	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
32:XA:412:A:H4'	32:XA:413:G:OP1	1.91	0.70
32:XA:831:A:OP1	33:XB:20:ARG:HG3	1.90	0.70
43:XL:19:ASN:H	43:XL:19:ASN:ND2	1.89	0.70
1:YA:1439:A:H1'	1:YA:1553:A:H61	1.57	0.70
1:YA:758:C:O2	1:YA:758:C:H2'	1.90	0.70
4:YD:123:LYS:HG2	4:YD:165:MET:SD	2.32	0.70
18:YR:39:LEU:O	18:YR:40:MET:HB2	1.92	0.70
21:YU:45:GLN:HA	21:YU:45:GLN:HE21	1.56	0.70
32:QA:222:C:H2'	32:QA:223:A:H8	1.54	0.70
45:QN:42:ASN:C	45:QN:44:VAL:H	1.95	0.70
1:RA:2136:G:H2'	1:RA:2137:U:H5	1.56	0.70
32:XA:1033:G:O2'	32:XA:1034:G:H5''	1.92	0.70
32:XA:17:U:H2'	32:XA:18:C:C6	2.26	0.70
34:XC:8:GLY:HA3	45:YN:88:MET:SD	2.31	0.70
35:XD:25:ARG:HG2	35:XD:25:ARG:NH1	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
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
1:RA:2577:A:H5''	1:RA:2578:G:C5'	2.20	0.70
16:RP:33:GLU:CB	16:RP:38:ARG:HH11	2.04	0.70
1:RA:2352:A:N1	23:RW:30:VAL:HG21	2.07	0.70
41:XJ:40:ILE:HG22	41:XJ:42:LEU:HD12	1.72	0.70
41:XJ:64:GLN:HB2	45:YN:98:ALA:HB3	1.74	0.70
1:YA:2458:G:H8	1:YA:2459:A:N6	1.90	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:1038:C:H2'	32:QA:1039:G:H8	1.56	0.70
37:QF:6:ILE:HG12	37:QF:89:VAL:HG23	1.72	0.70
1:RA:1498:C:O2'	1:RA:1499:C:C6	2.45	0.70
10:RJ:105:VAL:HG23	10:RJ:109:LEU:HD11	1.73	0.70
10:RJ:18:VAL:HG22	10:RJ:140:LEU:CD1	2.22	0.70
10:RJ:18:VAL:HG23	10:RJ:54:ILE:HD13	1.74	0.70
10:RJ:73:VAL:HG23	10:RJ:74:TYR:N	2.05	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:1059:G:H1	1:YA:1088:A:H2	1.40	0.70
1:YA:319:G:OP2	5:YE:132:LYS:HD2	1.91	0.70
1:YA:279:A:H61	1:YA:361:G:H1'	1.57	0.70
1:YA:77:G:N2	1:YA:110:G:H1'	2.07	0.70
3:YC:140:VAL:CG2	3:YC:161:VAL:HB	2.22	0.70
2:YB:42:C:H41	6:YF:87:LYS:NZ	1.90	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:1278:G:H4'	32:XA:1279:G:C5'	2.22	0.70
32:XA:93:U:H2'	32:XA:95:C:C5	2.27	0.70
1:YA:1695:G:H8	3:YC:7:PRO:O	1.75	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: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
32:XA:491:G:O2'	32:XA:492:C:H5'	1.91	0.69
32:XA:54:C:H41	32:XA:352:C:H2'	1.55	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: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:247:G:H4'	1:YA:386:G:C5	2.27	0.69
1:YA:2707:U:H2'	1:YA:2708:G:C8	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:675:A:OP1	5:YE:60:TRP:CZ2	2.45	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:HH21	14:YN:71:ARG:HB2	1.57	0.69
17:YQ:27:ARG:HA	17:YQ:33:VAL:HG12	1.74	0.69
20:YT:87:LEU:HD23	20:YT:88:LYS:N	2.06	0.69
26:YZ:16:LEU:N	26:YZ:16:LEU:HD22	2.07	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
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
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: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
31:Y4:19:ARG:O	31:Y4:20:ASP:HB2	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
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:67:LEU:HB3	33:QB:160:LEU:CD1	2.23	0.69
33:QB:20:ARG:NH1	33:QB:20:ARG:HA	2.08	0.69
50:QS:14:LEU:HD13	50:QS:32:THR:HG21	1.74	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: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
31:Y4:16:ILE:HG12	31:Y4:25:VAL:HG22	1.72	0.69
1:YA:747:U:H3'	1:YA:748:G:C5'	2.21	0.69
3:YC:177:SER:O	3:YC:270:ARG:HG3	1.91	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YV:30:ILE:HG12	22:YV:91:PHE:HB2	1.73	0.69
2:YB:83:G:OP1	26:YZ:16:LEU:HD21	1.92	0.69
32:QA:246:A:H4'	32:QA:247:G:OP1	1.93	0.69
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:151:GLY:HA2	5:RE:192:ALA:HB2	1.74	0.69
5:RE:76:PRO:HA	5:RE:82:GLY:HA3	1.74	0.69
16:RP:51:ASN:O	16:RP:52:ARG:HG2	1.92	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: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:YA:321:U:H5'	5:YE:129:PRO:HB3	1.73	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
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
1:RA:572:A:OP2	18:RR:80:ARG:NH2	2.24	0.69
21:RU:73:ASN:ND2	21:RU:75:ALA:HB3	2.07	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: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
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
6:YF:16:MET:HA	6:YF:21:TYR:HB2	1.74	0.69
2:YB:44:G:H5''	6:YF:91:ARG:CZ	2.22	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
37:QF:71:ILE:HD11	37:QF:89:VAL:HG21	1.75	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
16:RP:51:ASN:C	16:RP:52:ARG:HG2	2.13	0.69
20:RT:40:LYS:H	20:RT:43:ILE:HG23	1.55	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:373:A:H8	32:XA:373:A:H5'	1.58	0.69
1:YA:2415:G:H4'	12:YL:66:PHE:HB2	1.74	0.69
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
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:H	11:YK:54:LYS:HD2	1.58	0.69
1:YA:1156:A:C8	17:YQ:50:ARG:HG2	2.27	0.69
32:QA:1285:A:H5'	32:QA:1286:U:C4	2.27	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
43:QL:33:CYS:HB3	43:QL:54:VAL:HG22	1.75	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: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: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:OP2	1:YA:2138:G:H8	1.75	0.69
1:YA:2798:U:H5'	1:YA:2800:A:C6	2.27	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
7:YG:93:TYR:CD2	7:YG:93:TYR:N	2.55	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
44:QM:26:LYS:O	44:QM:30:LYS:HG3	1.92	0.69
1:RA:2591:C:H2'	1:RA:2592:G:C8	2.27	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
3:RC:81:GLU:HB2	3:RC:90:ILE:CG2	2.22	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:XA:1172:C:O2'	32:XA:1173:U:H5'	1.92	0.69
32:XA:1249:C:H2'	32:XA:1250:A:H5''	1.72	0.69
32:XA:16:A:C2'	32:XA:17:U:H5'	2.23	0.69
40:XI:12:LYS:H	40:XI:105:ARG:HH12	1.41	0.69
1:YA:125:A:H3'	29:Y2:19:ARG:CD	2.23	0.69
1:YA:1308:A:H2'	1:YA:1309:G:O4'	1.92	0.69
1:YA:201:C:C5	1:YA:202:U:H5	2.10	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:226:A:C4	1:YA:227:A:N7	2.61	0.69
1:YA:2800:A:C4	1:YA:2801:G:H1'	2.28	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
4:YD:12:THR:HG22	4:YD:13:ARG:O	1.93	0.69
4:YD:4:LEU:HD12	4:YD:32:ASN:OD1	1.93	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
1:YA:1391:U:H4'	20:YT:19:LYS:NZ	2.08	0.69
23:YW:39:GLN:HG2	23:YW:42:THR:HB	1.75	0.69
36:QE:152:VAL:HG12	36:QE:155:LYS:HZ1	1.57	0.69
3:RC:170:TYR:CD2	3:RC:184:GLU:HA	2.28	0.69
32:XA:1067:A:H4'	32:XA:1068:G:O5'	1.92	0.69
42:XK:110:THR:HG22	52:XU:4:LYS:HA	1.74	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: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
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
25:YY:28:LEU:HG	25:YY:42:LEU:HD22	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
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
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:39:GLN:HG3	23:RW:42:THR:HB	1.74	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
45:XN:52:ARG:CZ	45:XN:52:ARG:HA	2.23	0.69
29:Y2:15:SER:O	29:Y2:16:HIS:CD2	2.45	0.69
1:YA:139:U:O2	1:YA:139:U:H2'	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
1:YA:303:G:H2'	1:YA:304:U:C6	2.28	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:354:A:H2'	1:YA:355:U:O4'	1.92	0.69
5:YE:75:SER:O	5:YE:78:TRP:HB2	1.92	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
30:R3:54:LEU:O	30:R3:58:ILE:HG13	1.93	0.69
1:RA:356:G:O2'	1:RA:357:C:H5'	1.93	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:H	18:RR:39:LEU:HD23	1.55	0.69
24:RX:65:THR:O	24:RX:68:ALA:HB3	1.93	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: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:YA:2355:G:H5''	23:YW:20:LEU:HD22	1.74	0.69
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
1:RA:2104:C:H2'	1:RA:2105:U:O4'	1.93	0.68
1:RA:404:A:H1'	1:RA:405:U:OP2	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
19:RS:88:ARG:CG	19:RS:88:ARG:NH2	2.51	0.68
32:XA:1328:C:H5''	44:XM:27:THR:HG21	1.76	0.68
1:YA:1241:A:N3	1:YA:1241:A:H5'	2.08	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
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:1666:G:O3'	11:YK:6:THR:HG23	1.93	0.68
16:YP:88:ARG:HH11	16:YP:112:ARG:HH21	1.39	0.68
21:YU:95:PHE:O	21:YU:97:SER:N	2.26	0.68
24:YX:4:CYS:HA	24:YX:32:LEU:HD11	1.74	0.68
38:QG:61:PHE:CE1	38:QG:65:LEU:HD22	2.28	0.68
28:R1:33:LEU:N	28:R1:51:ALA:HB3	2.07	0.68
1:RA:2648:G:H2'	1:RA:2649:C:H6	1.56	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:XA:120:A:O2'	32:XA:121:U:H4'	1.94	0.68
32:XA:977:A:H8	32:XA:1223:C:C4	2.11	0.68
32:XA:728:A:H2'	32:XA:729:A:H8	1.58	0.68
32:XA:413:G:C6	35:XD:32:LYS:HE3	2.27	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
37:XF:80:PHE:CE2	3:YC:123:ILE:HG21	2.29	0.68
17:YQ:91:ARG:HG3	18:YR:11:GLN:CD	2.14	0.68
42:QK:124:LYS:CE	52:QU:33:ARG:HH21	2.06	0.68
1:RA:1098:A:H5'	1:RA:1099:G:OP2	1.92	0.68
1:RA:1867:G:O2'	1:RA:1868:C:H5'	1.92	0.68
1:RA:1829:A:N3	3:RC:14:HIS:HE1	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:HG3	14:RN:71:ARG:HH21	1.57	0.68
25:RY:2:LYS:HG3	25:RY:52:ARG:HD3	1.74	0.68
32:XA:1151:A:O2'	32:XA:1152:A:C8	2.30	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
34:XC:149:LYS:HG3	34:XC:168:ARG:HB2	1.75	0.68
39:XH:68:LYS:HD3	39:XH:69:ALA:N	2.09	0.68
1:YA:1326:U:O2'	1:YA:1327:A:H8	1.76	0.68
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
16:YP:20:ARG:HG2	16:YP:112:ARG:HH12	1.57	0.68
13:YM:136:MET:HE1	22:YV:57:TYR:HD2	1.56	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:79:GLU:C	48:QQ:80:LYS:HD3	2.14	0.68
1:RA:558:U:OP1	10:RJ:111:LYS:HE3	1.92	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:RJ:44:TYR:CD1	10:RJ:44:TYR:C	2.66	0.68
2:RB:7:G:O2'	15:RO:38:GLN:NE2	2.27	0.68
16:RP:91:VAL:HG11	16:RP:96:LEU:HD21	1.76	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
52:QU:39:LYS:N	52:QU:40:PRO:HD2	2.08	0.68
28:R1:33:LEU:H	28:R1:51:ALA:CB	2.06	0.68
29:R2:3:ARG:NH2	29:R2:3:ARG:HG2	2.04	0.68
1:RA:1238:G:C2'	1:RA:1239:G:H5'	2.22	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
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
29:Y2:19:ARG:NH2	29:Y2:19:ARG:HB3	2.08	0.68
1:YA:229:C:O2'	1:YA:230:G:O4'	2.10	0.68
1:YA:53:A:C2	1:YA:179:C:H4'	2.28	0.68
7:YG:68:ARG:O	7:YG:72:ASN:HB3	1.94	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
39:QH:9:MET:HE2	39:QH:32:LYS:HG2	1.76	0.68
40:QI:6:TYR:HE2	40:QI:17:ARG:HB2	1.59	0.68
1:RA:1818:U:OP2	3:RC:155:ARG:NH1	2.27	0.68
1:RA:276:U:H2'	1:RA:276:U:O2	1.93	0.68
20:RT:38:ALA:HB1	20:RT:43:ILE:CG2	2.22	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
1:YA:1240:U:O2'	1:YA:1241:A:H5''	1.93	0.68
1:YA:989:G:H4'	1:YA:990:A:OP1	1.94	0.68
13:YM:72:PRO:O	13:YM:73:ILE:HB	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1014:A:C2	50:XS:33:TRP:HB2	2.28	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
32:QA:194:C:O2'	32:QA:195:A:H5'	1.93	0.68
1:RA:1179:G:H3'	1:RA:1180:U:C4'	2.19	0.68
1:RA:78:U:H2'	1:RA:79:C:C6	2.29	0.68
5:RE:119:ILE:O	5:RE:119:ILE:HG12	1.92	0.68
5:RE:24:ASN:O	5:RE:28:VAL:HG12	1.94	0.68
9:RI:126:ARG:HA	9:RI:129:GLU:CB	2.24	0.68
9:RI:71:LYS:HG2	9:RI:72:THR:H	1.59	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
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
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
2:YB:116:G:H2'	2:YB:117:G:H8	1.58	0.68
1:YA:2822:G:C5'	4:YD:164:GLN:HE22	2.05	0.68
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
32:QA:485:U:O2'	32:QA:486:U:OP1	2.12	0.68
41:QJ:80:THR:HB	41:QJ:83:THR:HG22	1.75	0.68
28:R1:8:ILE:HG22	28:R1:9:LYS:N	2.09	0.68
1:RA:1153:C:OP2	56:RA:3360:HOH:O	2.12	0.68
1:RA:2051:A:OP2	1:RA:2051:A:H8	1.77	0.68
7:RG:140:ILE:HD12	7:RG:141:GLY:N	2.08	0.68
17:RQ:65:ASN:ND2	17:RQ:69:ARG:NH2	2.38	0.68
18:RR:48:LYS:N	18:RR:48:LYS:HD2	2.09	0.68
20:RT:40:LYS:N	20:RT:43:ILE:HG23	2.09	0.68
32:XA:1135:U:O2	32:XA:1135:U:H2'	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1062:G:O2'	1:YA:1063:G:H8	1.77	0.68
1:YA:333:G:O2'	1:YA:334:C:H6	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
32:QA:1021:A:C2'	32:QA:1022:A:H5''	2.23	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
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
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: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:1439:A:N7	1:YA:1440:U:C1'	2.57	0.68
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
1:YA:396:G:O2'	1:YA:397:U:C6	2.43	0.68
1:YA:45:G:C5'	1:YA:46:G:H5'	2.23	0.68
1:YA:574:A:H4'	1:YA:575:A:H5'	1.76	0.68
1:YA:70:G:H4'	1:YA:71:A:OP1	1.91	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
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
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
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
31:R4:25:VAL:HB	31:R4:35:GLN:HB2	1.75	0.67
1:RA:1092:C:H2'	1:RA:1093:G:O4'	1.92	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:RC:153:LEU:N	3:RC:153:LEU:HD23	2.09	0.67
1:RA:2052:A:O4'	4:RD:147:GLY:HA3	1.93	0.67
10:RJ:44:TYR:C	10:RJ:44:TYR:HD1	1.96	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
44:XM:79:LEU:HD13	44:XM:86:ARG:HG2	1.76	0.67
48:XQ:3:LYS:HZ3	48:XQ:6:THR:HG21	1.59	0.67
1:YA:244:A:H2'	1:YA:245:G:O4'	1.93	0.67
1:YA:27:G:H22	1:YA:512:G:H2'	1.58	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:959:A:H2'	1:YA:960:A:C8	2.29	0.67
1:YA:956:G:C2	1:YA:962:G:O6	2.47	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
32:QA:198:G:O2'	32:QA:199:A:H8	1.76	0.67
1:RA:1141:U:H4'	1:RA:1142:A:O4'	1.93	0.67
1:RA:271:G:C4'	1:RA:272:A:OP1	2.35	0.67
7:RG:132:LEU:HD23	7:RG:132:LEU:N	2.10	0.67
10:RJ:56:VAL:HG12	10:RJ:57:LEU:N	2.09	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
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
12:YL:63:LYS:HB3	30:Y3:12:ARG:HD3	1.76	0.67
1:YA:1662:U:C2'	1:YA:1663:G:H5''	2.21	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
22:YV:30:ILE:HG13	22:YV:40:ILE:HD11	1.76	0.67
33:QB:187:ASP:HB2	33:QB:203:ASP:CG	2.14	0.67
41:QJ:57:VAL:HG22	41:QJ:58:ASN:N	2.04	0.67
42:QK:95:THR:O	42:QK:99:LEU:HB2	1.94	0.67
1:RA:2197:U:OP1	35:XD:150:LYS:HE3	1.94	0.67
1:RA:948:C:OP1	56:RA:3355:HOH:O	2.12	0.67
9:RI:42:ASN:HA	9:RI:45:THR:HB	1.74	0.67
20:RT:39:THR:HG22	20:RT:39:THR:O	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:128:C:H5''	1:YA:128:C:H6	1.59	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:21:A:C2	1:YA:520:G:C2	2.82	0.67
1:YA:782:A:H5'	1:YA:783:A:C2	2.28	0.67
12:YL:79:LEU:HD12	12:YL:112:LEU:HA	1.76	0.67
1:YA:2353:G:H21	23:YW:30:VAL:HG21	1.59	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
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
1:RA:1190:G:OP1	12:RL:32:GLY:HA2	1.94	0.67
33:XB:10:LYS:HA	33:XB:10:LYS:HE3	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
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
44:QM:106:ARG:HH21	44:QM:112:ARG:HB3	1.59	0.67
1:RA:740:C:H5'	1:RA:1784:A:H3'	1.77	0.67
1:RA:580:U:H2'	1:RA:581:C:H6	1.58	0.67
8:RH:68:ARG:NH2	8:RH:72:ILE:HG21	2.08	0.67
37:XF:42:TRP:HB2	37:XF:59:TYR:HB2	1.75	0.67
44:XM:13:HIS:HB3	44:XM:16:ILE:HD13	1.76	0.67
41:XJ:48:ARG:HB3	45:XN:100:TRP:HZ2	1.60	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
1:YA:774:G:HO2'	1:YA:775:G:H8	1.42	0.67
6:YF:91:ARG:NH2	6:YF:91:ARG:HB3	2.09	0.67
22:YV:59:GLU:HG2	22:YV:60:VAL:H	1.57	0.67
8:YH:32:PRO:HA	24:YX:38:TRP:CD1	2.28	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:QJ:48:ARG:NH2	45:QN:100:TRP:CD2	2.63	0.67
4:RD:92:VAL:O	4:RD:92:VAL:HG12	1.95	0.67
7:RG:86:LEU:HD12	7:RG:86:LEU:N	2.09	0.67
16:RP:83:ILE:C	16:RP:83:ILE:HD13	2.15	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: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: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
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
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
2:YB:8:C:H5'	15:YO:27:VAL:HG11	1.75	0.67
21:YU:35:VAL:HG12	21:YU:36:GLU:N	2.10	0.67
32:QA:299:G:H2'	32:QA:300:A:C8	2.28	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:QA:667:G:H4'	46:QO:50:HIS:ND1	2.08	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
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
18:RR:54:VAL:HG23	18:RR:57:GLY:H	1.57	0.67
32:XA:1201:A:H1'	32:XA:1202:U:OP2	1.94	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
1:YA:1055:G:N3	1:YA:1055:G:H2'	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
6:YF:136:ILE:O	6:YF:137:PHE:O	2.13	0.67
2:YB:44:G:H3'	6:YF:91:ARG:NE	2.10	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:RA:1300:G:H5''	1:RA:1301:A:H5'	1.77	0.67
1:RA:460:A:OP1	29:R2:41:ARG:NH1	2.28	0.67
3:RC:109:LEU:CD2	3:RC:110:LYS:H	2.08	0.67
6:RF:68:LYS:H	6:RF:68:LYS:HD2	1.58	0.67
6:RF:82:TYR:HD2	6:RF:83:PRO:HD2	1.59	0.67
32:XA:245:U:HO2'	32:XA:246:A:H5'	1.58	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:1063:G:C6	1:YA:1064:C:N4	2.63	0.67
1:YA:223:A:C4	1:YA:408:G:H1'	2.30	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
1:YA:454:A:C4'	1:YA:455:C:OP2	2.36	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
1:YA:857:G:H1'	23:YW:19:ARG:NE	2.09	0.67
23:YW:36:ILE:HG22	23:YW:39:GLN:HB2	1.77	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
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
1:RA:995:C:C6	1:RA:995:C:H5'	2.29	0.67
3:RC:100:ARG:HG2	3:RC:100:ARG:HH11	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: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
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
35:XD:69:ARG:HG3	35:XD:69:ARG:HH11	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:QA:1181:G:O2'	32:QA:1182:G:C5	2.48	0.67
32:QA:433:G:C2'	32:QA:434:U:H5'	2.25	0.67
12:RL:61:LEU:O	30:R3:12:ARG:HD3	1.95	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
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
35:XD:2:ARG:NH2	35:XD:114:ARG:HH11	1.92	0.67
41:XJ:25:ILE:HG22	41:XJ:25:ILE:O	1.94	0.67
1:YA:206:U:C6	1:YA:206:U:H5'	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
32:QA:865:A:H2'	32:QA:866:C:H6	1.60	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
28:R1:8:ILE:HD11	28:R1:24:LYS:HG2	1.77	0.66
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
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
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
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
41:QJ:65:TYR:CB	45:QN:95:LEU:HD11	2.25	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:284:U:H2'	1:RA:285:G:C8	2.30	0.66
16:RP:112:ARG:C	16:RP:113:LEU:HD23	2.15	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
23:RW:39:GLN:C	23:RW:41:GLY:N	2.46	0.66
32:XA:649:A:H2'	32:XA:650:G:O4'	1.95	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: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
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
4:YD:10:GLY:O	4:YD:11:MET:HB2	1.96	0.66
11:YK:7:MET:CE	11:YK:7:MET:HA	2.25	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
32:QA:1281:C:O2'	32:QA:1282:C:H5'	1.95	0.66
1:RA:134:G:H5'	1:RA:135:U:OP2	1.96	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
1:RA:924:G:H4'	23:RW:24:ARG:HH21	1.60	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
1:RA:994:C:H3'	17:RQ:53:LYS:HE2	1.78	0.66
32:XA:1279:G:OP2	32:XA:1279:G:N2	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: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
1:YA:682:G:H5'	29:Y2:26:ASN:OD1	1.95	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:YM:66:ARG:CZ	13:YM:101:VAL:HG11	2.25	0.66
17:YQ:8:ILE:O	17:YQ:8:ILE:HG12	1.95	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
14:RN:66:ALA:O	14:RN:69:ARG:O	2.13	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: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
1:YA:639:U:H2'	1:YA:640:C:H6	1.60	0.66
2:YB:65:U:H3'	2:YB:108:A:N6	2.11	0.66
18:YR:43:ASN:ND2	18:YR:44:GLY:H	1.92	0.66
33:QB:186:VAL:O	33:QB:186:VAL:HG23	1.95	0.66
35:QD:105:GLY:HA3	35:QD:161:ALA:HB1	1.78	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
37:QF:86:ARG:HH12	49:QR:63:TYR:HB3	1.59	0.66
52:QU:16:ARG:NH1	52:QU:19:LYS:HG3	2.11	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
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:46:HIS:NE2	48:XQ:48:GLU:HG2	2.10	0.66
30:Y3:41:ARG:CG	30:Y3:41:ARG:HH21	2.09	0.66
1:YA:339:U:H2'	1:YA:340:A:C8	2.31	0.66
1:YA:917:A:H2	2:YB:79:G:H21	1.38	0.66
1:YA:797:G:OP1	5:YE:57:LYS:HG2	1.96	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:HG3	52:QU:17:ARG:HH11	1.60	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
1:RA:446:G:OP1	17:RQ:2:ARG:HD2	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
12:RL:55:MET:HA	12:RL:55:MET:HE3	1.77	0.66
1:RA:533:G:H5'	17:RQ:23:TYR:CD2	2.30	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:XA:1105:A:H2'	32:XA:1106:G:H8	1.59	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
33:QB:212:TYR:O	33:QB:216:VAL:HG23	1.95	0.66
1:RA:1459:G:O2'	1:RA:1460:U:H3'	1.96	0.66
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
32:XA:1239:A:H62	32:XA:1299:A:N6	1.93	0.66
32:XA:663:A:O2'	32:XA:664:G:H5'	1.96	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
32:XA:693:G:OP1	42:XK:126:ARG:NH1	2.29	0.66
28:Y1:10:LEU:HB2	28:Y1:20:TYR:HB2	1.77	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:243:U:HO2'	1:YA:244:A:H8	1.44	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
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
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
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
32:XA:1430:A:H2'	32:XA:1431:A:O4'	1.95	0.66
32:XA:708:C:H2'	32:XA:709:U:H6	1.61	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:YN:62:ASN:O	14:YN:63:ARG:HB2	1.95	0.66
32:QA:358:U:H2'	32:QA:359:G:C8	2.31	0.66
32:QA:428:G:H4'	32:QA:429:U:OP1	1.95	0.66
32:QA:408:A:OP1	35:QD:109:THR:HG21	1.95	0.66
39:QH:93:LYS:HE3	39:QH:116:ARG:HH12	1.61	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:XA:1245:C:H2'	32:XA:1246:A:H8	1.61	0.66
32:XA:350:G:C6	32:XA:351:G:C6	2.84	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:N	18:YR:81:LYS:HD3	2.10	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
1:RA:2394:C:OP2	30:R3:29:ARG:HD3	1.95	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:1813:G:N3	3:RC:49:THR:CG2	2.58	0.66
8:RH:117:LEU:HD11	8:RH:130:VAL:HG11	1.78	0.66
12:RL:114:GLY:C	12:RL:115:GLU:HG3	2.16	0.66
32:XA:456:A:H2'	32:XA:457:G:H8	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:532:A:N1	1:YA:2020:A:H1'	2.11	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
1:YA:593:U:H2'	1:YA:594:U:H6	1.60	0.66
3:YC:68:ARG:HH12	3:YC:115:ILE:HD12	1.61	0.66
1:YA:2305:U:O2'	6:YF:132:ARG:HA	1.95	0.66
8:YH:5:LEU:O	8:YH:6:LEU:HD12	1.96	0.66
1:YA:538:A:H5''	10:YJ:7:LYS:NZ	2.11	0.66
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:XA:963:G:C6	32:XA:973:G:O6	2.48	0.65
36:XE:154:ALA:HB1	39:XH:65:PHE:HE2	1.60	0.65
32:XA:1249:C:H4'	40:X1:74:GLN:HE22	1.61	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
28:Y1:51:ALA:O	28:Y1:52:LYS:HB2	1.96	0.65
1:YA:2430:A:H5'	1:YA:2431:U:OP2	1.96	0.65
1:YA:2448:A:HO2'	1:YA:2449:U:H5	1.44	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
46:QO:34:GLN:NE2	46:QO:38:LEU:HD21	2.10	0.65
47:QP:51:ARG:C	47:QP:52:LEU:HD12	2.16	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
1:RA:780:G:N2	1:RA:783:A:H62	1.91	0.65
6:RF:45:ASP:HB3	6:RF:48:LEU:HB2	1.76	0.65
6:RF:43:ILE:HG22	6:RF:82:TYR:CE1	2.31	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
50:XS:52:ASN:HD21	50:XS:55:GLN:N	1.94	0.65
1:YA:1313:U:O2	1:YA:1313:U:H2'	1.94	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:185:G:H2'	1:YA:186:G:H8	1.59	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
11:YK:118:LEU:C	11:YK:120:PRO:HD2	2.17	0.65
1:YA:1364:G:C5	24:YX:1:SER:HB2	2.31	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
23:RW:41:GLY:O	23:RW:42:THR:C	2.34	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:O	47:XP:78:VAL:HG12	1.95	0.65
30:Y3:3:ILE:HG21	30:Y3:62:PRO:HG2	1.76	0.65
1:YA:1568:G:N2	3:YC:57:HIS:CE1	2.64	0.65
1:YA:532:A:N1	1:YA:2020:A:O2'	2.21	0.65
1:YA:636:G:H3'	12:YL:128:THR:HG21	1.77	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
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
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
10:RJ:43:GLU:O	10:RJ:44:TYR:C	2.34	0.65
40:XI:51:LEU:HG	40:XI:86:LEU:HD22	1.79	0.65
1:YA:1249:U:OP1	1:YA:1249:U:H3'	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
1:YA:781:A:H5''	1:YA:782:A:OP1	1.96	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
32:QA:1472:U:O2'	32:QA:1473:G:H5'	1.96	0.65
32:QA:452:A:H8	32:QA:452:A:H5''	1.60	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
24:RX:34:SER:HB3	24:RX:49:ARG:HG3	1.78	0.65
32:XA:119:A:H4'	32:XA:120:A:O5'	1.97	0.65
32:XA:1323:G:H2'	32:XA:1324:A:C8	2.31	0.65
32:XA:461:A:P	32:XA:462:G:OP2	2.55	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:YE:145:ASP:OD1	5:YE:166:LYS:HG3	1.97	0.65
5:YE:59:PRO:HB2	5:YE:67:ARG:NH2	2.12	0.65
36:QE:136:VAL:O	36:QE:137:ARG:HB2	1.97	0.65
38:QG:145:GLU:HA	38:QG:148:LYS:HB2	1.76	0.65
38:QG:23:ALA:O	38:QG:26:VAL:HG22	1.95	0.65
47:QP:22:ALA:HA	47:QP:33:ILE:HG13	1.78	0.65
27:R0:29:VAL:HG13	27:R0:34:GLY:O	1.97	0.65
1:RA:1747:U:H2'	1:RA:1748:C:H6	1.58	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
51:XT:26:MET:HE1	51:XT:56:ILE:HD13	1.79	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:223:A:C5	1:YA:422:A:N7	2.65	0.65
1:YA:2324:U:H5'	1:YA:2325:G:H5''	1.78	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: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:63:A:N6	1:YA:91:A:N6	2.44	0.65
7:YG:167:VAL:HG23	7:YG:168:VAL:H	1.61	0.65
1:YA:2529:G:H4'	7:YG:174:LYS:CD	2.27	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:YA:2353:G:H21	23:YW:30:VAL:CG2	2.10	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
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
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
1:RA:31:C:OP1	56:RA:3701:HOH:O	2.15	0.65
8:RH:90:LEU:HB2	8:RH:123:ARG:HB3	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:RH:68:ARG:HH12	8:RH:140:ALA:HB2	1.60	0.65
17:RQ:68:ALA:HB1	17:RQ:73:ILE:HG23	1.79	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:XA:1011:C:H2'	32:XA:1012:A:C8	2.31	0.65
32:XA:976:G:O5'	32:XA:1358:U:O2'	2.14	0.65
32:XA:456:A:H2'	32:XA:457:G:C8	2.32	0.65
29:Y2:19:ARG:HB3	29:Y2:19:ARG:HH21	1.62	0.65
1:YA:1023:U:C6	1:YA:1023:U:H5'	2.32	0.65
1:YA:2617:U:C2'	1:YA:2618:G:H5'	2.27	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
8:YH:41:LYS:HA	8:YH:44:ILE:HG12	1.79	0.65
32:QA:89:U:O2'	32:QA:90:C:H5''	1.96	0.65
40:QI:32:ARG:HG2	40:QI:36:GLN:HB3	1.79	0.65
40:QI:23:GLY:H	40:QI:60:LEU:HA	1.62	0.65
1:RA:2151:U:H2'	1:RA:2152:G:O4'	1.95	0.65
1:RA:229:C:H2'	1:RA:230:G:O4'	1.97	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
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
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:2285:C:H5	28:Y1:5:ARG:NH2	1.95	0.65
1:YA:2147:A:OP1	1:YA:2147:A:C4'	2.45	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
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
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
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
1:RA:45:G:H5''	1:RA:46:G:H5'	1.79	0.65
13:RM:35:ALA:O	13:RM:128:THR:HA	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:RW:24:ARG:HB2	23:RW:65:LYS:HD3	1.79	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
23:YW:37:VAL:C	23:YW:39:GLN:H	2.01	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
51:QT:27:MET:HE3	51:QT:57:VAL:HG22	1.79	0.65
52:QU:11:PHE:O	52:QU:12:ASP:HB2	1.96	0.65
42:QK:126:ARG:C	52:QU:33:ARG:HH12	1.99	0.65
1:RA:320:A:H4'	1:RA:322:A:N7	2.12	0.65
1:RA:65:U:H2'	1:RA:66:C:C6	2.28	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
10:RJ:21:THR:C	10:RJ:23:LYS:H	1.98	0.65
10:RJ:88:THR:HG22	10:RJ:91:GLU:CD	2.17	0.65
4:RD:13:ARG:NH1	16:RP:74:GLN:HE21	1.93	0.65
32:XA:1003:G:N2	32:XA:1005:A:H5''	2.12	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
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
1:YA:763:G:HO2'	1:YA:764:A:H3'	1.60	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
32:QA:1069:C:H4'	32:QA:1192:C:O2	1.97	0.64
32:QA:721:G:H4'	32:QA:722:G:H5''	1.78	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
3:RC:43:ASN:HB3	3:RC:45:ASN:H	1.61	0.64
1:RA:587:C:OP2	12:RL:21:ARG:NH1	2.30	0.64
12:RL:68:SER:O	12:RL:69:ARG:HB2	1.97	0.64
13:RM:17:ASN:O	13:RM:38:ARG:HD3	1.97	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1605:C:H4'	1:YA:1610:A:C6	2.31	0.64
1:YA:206:U:H2'	1:YA:207:A:C8	2.25	0.64
1:YA:1255:U:H5'	1:YA:2502:G:H22	1.61	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:2332:C:O2'	23:YW:40:ARG:NH2	2.30	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
30:R3:40:LYS:HA	30:R3:43:LEU:HD12	1.79	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
38:XG:117:LEU:HG	38:XG:121:ASN:HD22	1.60	0.64
1:YA:1358:G:N2	1:YA:1374:G:C6	2.65	0.64
1:YA:1507:C:H5'	1:YA:1508:A:OP2	1.96	0.64
1:YA:170:U:H2'	1:YA:171:U:H6	1.61	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
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
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
1:YA:1364:G:C8	24:YX:1:SER:HB2	2.32	0.64
32:QA:1219:A:H2'	32:QA:1220:G:H8	1.61	0.64
17:RQ:39:ILE:O	17:RQ:43:GLN:HG3	1.97	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:YN:89:ARG:HG3	45:YN:91:GLU:CG	2.27	0.64
1:YA:1264:A:H5'	27:Y0:7:PRO:HG2	1.79	0.64
1:YA:1400:U:O2'	1:YA:1401:G:O4'	2.13	0.64
1:YA:1744:A:H3'	1:YA:1745:A:H8	1.62	0.64
1:YA:747:U:O2	1:YA:2014:A:H1'	1.98	0.64
6:YF:147:ARG:O	6:YF:148:VAL:HG22	1.97	0.64
21:YU:39:ASN:HB3	21:YU:62:ALA:HB3	1.79	0.64
32:QA:1201:A:H1'	32:QA:1202:U:OP2	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
33:QB:187:ASP:HB2	33:QB:203:ASP:CB	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:QC:13:ILE:O	34:QC:15:LYS:N	2.30	0.64
43:QL:23:LEU:C	43:QL:25:ALA:H	2.00	0.64
1:RA:1720:U:H2'	1:RA:1721:G:O4'	1.97	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
32:XA:1095:U:H2'	32:XA:1096:C:C6	2.32	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
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
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
1:YA:456:C:O2'	20:YT:73:ARG:HG3	1.97	0.64
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
11:YK:97:THR:O	11:YK:98:ARG:HB2	1.96	0.64
1:YA:1286:A:H5''	14:YN:104:ALA:HB2	1.79	0.64
23:YW:19:ARG:HA	23:YW:34:SER:HA	1.78	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
30:R3:44:ARG:N	30:R3:45:PRO:HD2	2.12	0.64
1:RA:2557:G:H2'	1:RA:2558:C:H6	1.61	0.64
1:RA:611:C:H2'	1:RA:612:G:H5'	1.78	0.64
4:RD:182:ALA:C	4:RD:183:GLU:HG3	2.18	0.64
8:RH:67:ALA:HA	8:RH:138:VAL:CB	2.23	0.64
11:RK:111:LYS:H	11:RK:111:LYS:HE2	1.60	0.64
19:RS:17:VAL:HG12	19:RS:76:VAL:HG11	1.78	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:107:ALA:O	38:XG:118:ARG:HB3	1.98	0.64
38:XG:4:ARG:HD2	38:XG:5:VAL:H	1.63	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2727:A:O2'	1:YA:2728:U:H5'	1.98	0.64
1:YA:621:A:OP2	1:YA:621:A:H3'	1.97	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
32:QA:1348:U:HO2'	32:QA:1349:A:H8	1.44	0.64
35:QD:53:GLN:HE21	35:QD:202:LEU:HA	1.62	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
4:RD:97:SER:C	4:RD:99:GLU:HG2	2.18	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
23:RW:18:LYS:HG3	23:RW:19:ARG:N	2.12	0.64
23:RW:21:GLY:C	23:RW:22:VAL:HG12	2.17	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
32:XA:93:U:O5'	32:XA:93:U:H6	1.81	0.64
31:Y4:7:VAL:HG13	31:Y4:8:LYS:N	2.13	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
1:YA:764:A:C2	1:YA:781:A:C2	2.85	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:108:ILE:HD13	5:YE:108:ILE:O	1.98	0.64
5:YE:61:ARG:O	5:YE:61:ARG:HD2	1.98	0.64
7:YG:83:THR:C	7:YG:84:LYS:HD3	2.18	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:QL:43:LYS:HB2	43:QL:44:PRO:CD	2.27	0.64
1:RA:141:G:H5'	1:RA:142:A:N7	2.13	0.64
1:RA:2849:U:O4	16:RP:20:ARG:NH1	2.31	0.64
1:RA:2680:U:P	4:RD:114:LYS:HE2	2.38	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
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
32:QA:1123:U:O3'	41:QJ:38:GLY:HA3	1.97	0.64
32:QA:769:G:H4'	32:QA:1513:A:H4'	1.80	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
33:QB:40:ILE:HG21	33:QB:201:GLY:HA2	1.78	0.64
33:QB:19:THR:HB	33:QB:37:VAL:HB	1.80	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
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
1:RA:780:G:H21	1:RA:783:A:N6	1.89	0.64
4:RD:182:ALA:C	4:RD:184:ARG:N	2.49	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:XA:1135:U:H3'	32:XA:1137:C:O2	1.98	0.64
32:XA:268:U:H2'	32:XA:269:C:H6	1.62	0.64
35:XD:195:ASN:HB3	35:XD:197:HIS:NE2	2.12	0.64
35:XD:53:GLN:HB3	35:XD:202:LEU:HD12	1.78	0.64
37:XF:11:HIS:CD2	37:XF:12:PRO:HD2	2.31	0.64
1:YA:1545:A:H2'	1:YA:1546:G:O4'	1.98	0.64
1:YA:303:G:C2	1:YA:304:U:C2	2.86	0.64
1:YA:876:C:H3'	1:YA:877:A:C8	2.29	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:YU:81:ARG:HB2	21:YU:96:LYS:HD2	1.80	0.64
1:YA:851:C:C4'	26:YZ:46:MET:HG2	2.28	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
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
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
7:RG:115:GLN:N	7:RG:115:GLN:CD	2.51	0.64
32:XA:1350:A:C2	38:XG:33:GLY:HA3	2.32	0.64
32:XA:79:G:H2'	32:XA:80:A:H8	1.63	0.64
35:XD:116:LEU:HD21	35:XD:153:ARG:HD3	1.79	0.64
1:YA:1023:U:H6	1:YA:1023:U:H5'	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
17:YQ:79:ILE:C	17:YQ:79:ILE:HD13	2.18	0.64
20:YT:29:THR:H	20:YT:87:LEU:CB	2.10	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
29:R2:43:THR:O	29:R2:44:VAL:CB	2.46	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
32:XA:1381:U:C4	38:XG:77:ARG:NH1	2.66	0.64
32:XA:824:G:O2'	32:XA:825:A:H5'	1.97	0.64
33:XB:20:ARG:NE	33:XB:20:ARG:HA	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:1709:U:H2'	1:YA:1710:G:C8	2.33	0.64
1:YA:319:G:C6	1:YA:333:G:N1	2.66	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:845:A:N6	1:YA:932:U:N3	2.45	0.64
3:YC:68:ARG:HH21	3:YC:190:THR:HG23	1.63	0.64
4:YD:94:GLN:HG2	4:YD:94:GLN:O	1.98	0.64
5:YE:139:LYS:NZ	5:YE:139:LYS:HB2	2.13	0.64
5:YE:98:LYS:O	5:YE:99:LYS:HB2	1.98	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
1:YA:533:G:H5'	17:YQ:23:TYR:CE2	2.33	0.64
26:YZ:4:ILE:HG23	26:YZ:56:VAL:HG13	1.80	0.64
43:QL:88:ASP:HB3	43:QL:89:LEU:HD22	1.80	0.63
48:QQ:20:ILE:H	48:QQ:47:ASP:CG	2.02	0.63
50:QS:50:VAL:CG2	50:QS:70:LEU:HB3	2.27	0.63
1:RA:1475:G:O2'	1:RA:1476:U:P	2.55	0.63
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
9:RI:126:ARG:HA	9:RI:129:GLU:CG	2.27	0.63
12:RL:28:GLY:O	12:RL:29:LYS:HB3	1.99	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
20:RT:9:LYS:HG3	20:RT:9:LYS:O	1.98	0.63
36:XE:131:ASN:O	36:XE:135:VAL:HG23	1.98	0.63
32:XA:537:G:H5''	43:XL:109:ARG:NH1	2.12	0.63
44:XM:21:ILE:HB	44:XM:24:VAL:HG23	1.80	0.63
1:YA:2285:C:OP2	28:Y1:5:ARG:HD3	1.98	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: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
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
27:R0:9:ARG:HG3	27:R0:9:ARG:HH21	1.63	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
3:RC:259:ASN:C	3:RC:261:ARG:H	2.02	0.63
32:XA:377:G:H2'	32:XA:378:G:H8	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:51:A:H4'	32:XA:52:C:C5'	2.29	0.63
40:XI:30:ASN:O	40:XI:31:GLN:HG2	1.98	0.63
52:XU:35:GLU:OE2	52:XU:35:GLU:HA	1.97	0.63
31:Y4:36:ARG:HG2	31:Y4:37:GLN:N	2.12	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:565:C:H4'	1:YA:1253:A:N6	2.13	0.63
3:YC:51:ARG:O	3:YC:53:ILE:HG22	1.96	0.63
1:YA:1993:U:H4'	4:YD:133:THR:CG2	2.28	0.63
7:YG:154:GLU:O	7:YG:156:TYR:N	2.30	0.63
1:YA:2376:A:H2	15:YO:92:PHE:HD2	1.46	0.63
16:YP:92:ARG:O	16:YP:92:ARG:HG2	1.98	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
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
32:QA:1329:A:H5"	44:QM:25:GLY:H	1.63	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
1:RA:2086:U:H2'	1:RA:2087:G:C8	2.34	0.63
1:RA:714:U:H5'	1:RA:715:A:OP2	1.98	0.63
18:RR:1:MET:HG3	18:RR:1:MET:O	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
33:XB:212:TYR:HD2	33:XB:212:TYR:O	1.82	0.63
35:XD:84:ASN:C	35:XD:84:ASN:HD22	2.02	0.63
1:YA:1309:G:OP1	29:Y2:9:VAL:HG12	1.98	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
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
32:QA:1316:G:N2	32:QA:1318:A:H3'	2.13	0.63
32:QA:109:A:H2'	32:QA:326:G:N2	2.12	0.63
51:QT:82:ILE:O	51:QT:86:ALA:HB3	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
40:QI:24:ASN:H	40:QI:61:ASP:HB2	1.63	0.63
40:QI:90:ASP:CG	40:QI:92:SER:HB3	2.19	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
1:RA:1509:A:O2'	1:RA:1510:G:OP2	2.13	0.63
1:RA:580:U:H2'	1:RA:581:C:C6	2.33	0.63
3:RC:18:VAL:HG13	3:RC:18:VAL:O	1.98	0.63
5:RE:154:ASP:OD2	5:RE:157:LEU:HB3	1.98	0.63
10:RJ:54:ILE:HD12	10:RJ:54:ILE:C	2.19	0.63
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
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
43:XL:79:ILE:HD12	43:XL:96:THR:HG21	1.80	0.63
30:Y3:15:LYS:NZ	30:Y3:19:GLY:HA2	2.14	0.63
1:YA:1021:A:C2'	1:YA:1022:G:H4'	2.28	0.63
1:YA:128:C:HO2'	1:YA:129:C:H6	1.42	0.63
1:YA:2886:A:H62	27:Y0:39:ARG:HD3	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
4:YD:124:ARG:HD3	4:YD:125:TRP:CD1	2.33	0.63
14:YN:97:ILE:HD11	14:YN:99:LYS:NZ	2.12	0.63
18:YR:49:ILE:HG22	18:YR:54:VAL:N	2.14	0.63
1:YA:301:G:H3'	21:YU:81:ARG:HH12	1.64	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
32:QA:212:G:H2'	32:QA:213:G:H8	1.63	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2800:A:C4'	1:RA:2801:G:OP2	2.25	0.63
1:RA:627:A:C6	1:RA:637:A:C8	2.87	0.63
1:RA:90:U:H2'	1:RA:91:A:C8	2.34	0.63
7:RG:174:LYS:C	7:RG:174:LYS:HD2	2.19	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: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
1:YA:1081:U:H4'	9:YI:123:ALA:HA	1.81	0.63
1:YA:151:C:H2'	1:YA:152:A:C8	2.34	0.63
1:YA:1998:A:H4'	1:YA:2724:U:O2'	1.98	0.63
1:YA:223:A:N6	1:YA:422:A:C6	2.67	0.63
1:YA:2729:G:H5"	4:YD:190:LYS:HZ3	1.62	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
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
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
30:R3:56:LEU:H	30:R3:56:LEU:HD22	1.64	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
20:RT:27:SER:O	20:RT:28:ASN:CG	2.36	0.63
23:RW:19:ARG:HA	23:RW:34:SER:HA	1.81	0.63
34:XC:63:ILE:HG12	34:XC:65:VAL:HG23	1.81	0.63
43:XL:97:VAL:O	43:XL:97:VAL:HG23	1.98	0.63
45:YN:76:PHE:CE2	45:YN:92:ILE:HG21	2.31	0.63
29:Y2:46:LYS:N	29:Y2:46:LYS:HD2	2.13	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2337:G:H2'	1:YA:2337:G:N3	2.13	0.63
1:YA:740:C:H5'	1:YA:1784:A:C3'	2.26	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
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
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
33:QB:105:THR:O	33:QB:105:THR:HG22	1.97	0.63
33:QB:19:THR:HA	33:QB:37:VAL:HG23	1.81	0.63
41:QJ:8:ILE:HA	41:QJ:99:GLN:O	1.99	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:N	22:RV:10:LYS:HD3	2.04	0.63
33:XB:78:ALA:O	33:XB:213:LEU:HD23	1.99	0.63
50:XS:38:THR:HA	50:XS:69:LYS:HA	1.80	0.63
1:YA:2815:C:O2	27:Y0:40:HIS:CE1	2.52	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:137:U:C4	1:YA:138:U:C2	2.86	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
32:QA:272:C:H2'	32:QA:273:U:H6	1.63	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:NZ	43:QL:43:LYS:HB2	2.14	0.63
49:QR:50:TYR:O	49:QR:54:LEU:HB2	1.98	0.63
32:QA:1458:G:H5'	51:QT:26:MET:HB3	1.81	0.63
52:QU:19:LYS:N	52:QU:19:LYS:HE2	2.14	0.63
30:R3:53:ASP:HA	30:R3:56:LEU:HD23	1.80	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:O	19:RS:96:ILE:HG13	1.97	0.63
32:XA:1013:G:H22	32:XA:1015:G:H3'	1.62	0.63
32:XA:624:C:H2'	32:XA:625:U:O4'	1.99	0.63
1:YA:1307:A:N6	1:YA:1606:C:H6	1.96	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1339:G:H21	1:YA:1603:A:H1'	1.63	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: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
19:YS:9:HIS:H	19:YS:102:HIS:CE1	2.17	0.63
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
32:QA:451:A:C4'	32:QA:452:A:O5'	2.41	0.62
36:QE:81:GLN:N	36:QE:81:GLN:NE2	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
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
1:RA:727:A:H2	3:RC:8:THR:HG21	1.63	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
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
10:RJ:44:TYR:CB	17:RQ:63:ARG:HB3	2.18	0.62
18:RR:4:VAL:HG23	18:RR:39:LEU:HG	1.80	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:270:A:H2'	32:XA:271:C:H6	1.64	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
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
1:YA:647:G:O2'	1:YA:648:G:H5'	1.99	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
1:RA:1798:U:OP1	3:RC:255:LYS:O	2.17	0.62
1:RA:869:G:O2'	13:RM:8:LYS:HD3	1.99	0.62
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
1:RA:815:C:OP1	18:RR:85:LYS:HE2	2.00	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
32:XA:344:A:H5''	32:XA:345:C:C5	2.35	0.62
32:XA:39:G:H2'	32:XA:40:C:H6	1.63	0.62
32:XA:500:G:H5''	32:XA:500:G:H8	1.62	0.62
32:XA:575:G:H4'	32:XA:576:C:O5'	1.99	0.62
44:XM:36:ALA:HB3	44:XM:55:LEU:HD11	1.79	0.62
1:YA:1734:G:O2'	1:YA:1735:A:H8	1.82	0.62
1:YA:622:G:H2'	1:YA:623:C:C5	2.34	0.62
2:YB:52:A:O2'	2:YB:53:A:C8	2.51	0.62
2:YB:5:U:H2'	2:YB:6:G:H8	1.63	0.62
1:YA:1830:C:H5'	3:YC:14:HIS:CE1	2.34	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:48:ARG:O	25:YY:51:ALA:HB3	2.00	0.62
32:QA:1234:C:O2'	32:QA:1235:U:H5'	1.99	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
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)
1:RA:1176:U:H2'	1:RA:1177:G:C4	2.34	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
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
31:Y4:7:VAL:HG13	31:Y4:8:LYS:H	1.64	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
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
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
17:YQ:4:LYS:HZ2	17:YQ:6:GLY:HA3	1.63	0.62
22:YV:61:LEU:H	22:YV:61:LEU:HD23	1.65	0.62
48:QQ:80:LYS:HB2	48:QQ:80:LYS:NZ	2.13	0.62
29:R2:35:ARG:HG2	29:R2:42:LEU:HD11	1.80	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
4:RD:90:PHE:C	4:RD:92:VAL:H	2.03	0.62
11:RK:69:VAL:O	11:RK:76:VAL:HA	2.00	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
43:XL:19:ASN:HD22	43:XL:19:ASN:N	1.96	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
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
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
34:QC:54:ILE:HD12	34:QC:54:ILE:C	2.19	0.62
44:QM:10:ASP:CG	44:QM:44:ILE:HB	2.20	0.62
1:RA:2021:C:P	27:R0:8:THR:HG21	2.39	0.62
1:RA:1045:C:C3'	1:RA:1046:A:H5'	2.29	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
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:HG13	18:RR:49:ILE:O	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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:185:G:C6	1:YA:212:G:C2	2.87	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:51:ALA:HB3	15:YO:78:VAL:CG2	2.30	0.62
15:YO:26:LEU:HB3	15:YO:92:PHE:CD1	2.34	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
33:QB:89:PHE:CZ	33:QB:153:MET:HB2	2.35	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
32:XA:109:A:C6	32:XA:327:A:C6	2.88	0.62
32:XA:1502:A:H5'	32:XA:1504:G:N7	2.15	0.62
32:XA:204:G:H2'	32:XA:205:A:H8	1.64	0.62
32:XA:890:G:HO2'	32:XA:891:U:P	2.23	0.62
35:XD:196:GLU:O	35:XD:199:ILE:HG12	2.00	0.62
44:XM:93:GLY:O	44:XM:109:LYS:HG3	1.98	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
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
4:YD:141:ARG:HB3	4:YD:141:ARG:HH11	1.64	0.62
5:YE:5:LEU:HA	5:YE:120:VAL:HG13	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
1:RA:2286:G:H5'	1:RA:2286:G:C8	2.35	0.62
1:RA:2308:G:N7	6:RF:76:PHE:HE2	1.97	0.62
1:RA:64:A:H2'	1:RA:65:U:C6	2.34	0.62
2:RB:90:C:C6	2:RB:90:C:H5''	2.31	0.62
1:RA:675:A:OP1	5:RE:58:LYS:HE2	2.00	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: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
1:YA:1361:G:C2'	1:YA:1362:C:H5'	2.30	0.62
1:YA:142:A:HO2'	1:YA:143:C:H6	1.45	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
9:YI:57:VAL:O	9:YI:58:ILE:HG13	1.99	0.62
12:YL:93:ASN:CG	12:YL:94:THR:H	2.02	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
3:RC:77:VAL:O	3:RC:77:VAL:HG22	2.00	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
32:XA:980:C:O3'	45:YN:12:ARG:NH2	2.33	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
1:YA:529:A:C8	1:YA:2023:C:N4	2.68	0.62
4:YD:110:THR:OG1	4:YD:171:THR:HG22	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:YF:47:LYS:HA	6:YF:50:ASP:HB3	1.82	0.62
1:YA:558:U:OP1	10:YJ:113:PRO:HD2	1.99	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
32:QA:1247:U:O2'	32:QA:1248:A:H5'	2.00	0.62
32:QA:74:A:H1'	32:QA:97:G:N2	2.15	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
38:QG:53:SER:C	38:QG:55:LYS:H	2.02	0.62
41:QJ:91:ASP:O	41:QJ:92:LEU:O	2.18	0.62
32:QA:554:A:H5"	43:QL:25:ALA:HB1	1.82	0.62
12:RL:57:LEU:HD22	30:R3:53:ASP:HB3	1.81	0.62
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
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:25:GLU:C	20:RT:27:SER:H	2.03	0.62
20:RT:29:THR:HB	20:RT:86:THR:CG2	2.29	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
32:XA:451:A:H61	32:XA:481:G:H5'	1.64	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:N	47:XP:4:ILE:HD12	2.14	0.62
51:XT:49:ALA:O	51:XT:52:GLU:HB3	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
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:9:G:H1	1:YA:2629:U:H2'	1.63	0.62
4:YD:73:VAL:O	4:YD:74:GLU:HB2	2.00	0.62
1:YA:1248:G:H2'	17:YQ:1:ALA:O	2.00	0.62
25:YY:28:LEU:HD11	25:YY:43:LEU:HD13	1.82	0.62
32:QA:830:G:H2'	32:QA:831:A:H8	1.65	0.62
34:QC:174:LEU:HD12	34:QC:174:LEU:O	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
29:R2:12:ARG:CZ	29:R2:12:ARG:HB2	2.29	0.62
1:RA:1045:C:C4'	1:RA:1046:A:H5'	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2014:A:H2'	1:RA:2015:A:C8	2.35	0.62
1:RA:979:A:H2'	1:RA:982:C:H42	1.65	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
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
32:XA:1160:G:O6	32:XA:1181:G:C6	2.53	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
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:2260:C:H2'	1:YA:2261:C:H6	1.65	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
2:YB:49:C:OP1	15:YO:102:ARG:N	2.33	0.62
1:YA:2093:G:H5''	8:YH:24:GLY:HA3	1.82	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
33:QB:119:GLN:C	33:QB:119:GLN:HE21	2.02	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
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
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:117:LEU:HA	38:XG:121:ASN:HB2	1.81	0.61
38:XG:148:LYS:NZ	38:XG:148:LYS:HB2	2.15	0.61
38:XG:64:ALA:HB2	38:XG:126:ALA:HB1	1.81	0.61
44:XM:93:GLY:O	44:XM:94:LEU:HG	2.00	0.61
1:YA:104:A:H2'	1:YA:105:C:O4'	2.00	0.61
1:YA:1345:C:C5'	1:YA:1396:U:O4	2.48	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1358:G:C5	56:YA:3417:HOH:O	2.53	0.61
1:YA:192:C:OP1	56:YA:3724:HOH:O	2.16	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:H3'	1:YA:2506:U:H6	1.65	0.61
1:YA:2746:U:H2'	1:YA:2747:G:H5'	1.81	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
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
9:YI:35:MET:C	9:YI:37:PHE:H	2.03	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
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
32:QA:841:C:H3'	32:QA:843:U:OP2	2.00	0.61
43:QL:85:ARG:NH2	43:QL:87:LYS:HD2	2.15	0.61
32:QA:261:U:OP2	51:QT:73:ARG:NH2	2.34	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:108:ILE:HD11	5:RE:180:LEU:HD13	1.81	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
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
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: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
1:YA:2093:G:C5'	8:YH:24:GLY:HA3	2.31	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:YS:32:ALA:O	19:YS:33:LEU:HB2	2.00	0.61
32:QA:1161:C:O2'	32:QA:1162:C:C6	2.52	0.61
32:QA:978:A:HO2'	32:QA:1322:C:H5	1.49	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
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
1:RA:419:U:H5''	56:RA:3233:HOH:O	2.00	0.61
3:RC:171:VAL:HG23	3:RC:185:ALA:HA	1.83	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
23:RW:17:ALA:O	23:RW:18:LYS:HB3	2.00	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
32:XA:206:C:H2'	32:XA:207:C:H4'	1.81	0.61
34:XC:120:THR:HG22	34:XC:120:THR:O	2.01	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:201:C:C4	1:YA:202:U:C5	2.88	0.61
1:YA:826:U:H5'	1:YA:2428:G:O2'	1.99	0.61
1:YA:2662:A:H2'	1:YA:2663:G:O4'	2.00	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
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
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:67:LEU:HD21	33:QB:91:VAL:HG23	1.82	0.61
36:QE:158:LYS:HG3	39:QH:63:LYS:HZ1	1.66	0.61
47:QP:79:ASN:O	47:QP:80:LYS:HB2	2.00	0.61
1:RA:2097:A:H2'	1:RA:2098:U:C6	2.34	0.61
1:RA:744:U:H2'	1:RA:745:G:O4'	2.00	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: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:XA:1272:G:H2'	32:XA:1273:C:H5'	1.81	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
44:XM:22:TYR:HB2	44:XM:65:GLU:HG2	1.83	0.61
49:XR:72:ARG:NE	49:XR:72:ARG:H	1.93	0.61
52:XU:41:THR:O	52:XU:45:LYS:HB2	2.00	0.61
1:YA:127:A:N7	29:Y2:46:LYS:HE3	2.16	0.61
1:YA:1508:A:H4'	1:YA:1509:A:OP1	2.00	0.61
32:XA:1492:A:C8	1:YA:1913:A:C8	2.88	0.61
1:YA:240:C:C3'	1:YA:241:A:H5''	2.29	0.61
1:YA:2520:C:H2'	1:YA:2521:C:H6	1.65	0.61
1:YA:627:A:H5''	12:YL:78:ARG:NH1	2.15	0.61
1:YA:74:A:H5'	25:YY:48:ARG:HH22	1.66	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
32:QA:128:G:O2'	32:QA:129:A:H5'	1.99	0.61
32:QA:1236:A:H4'	32:QA:1304:G:H4'	1.82	0.61
32:QA:428:G:O4'	32:QA:430:A:C8	2.54	0.61
39:QH:17:GLN:NE2	39:QH:71:VAL:H	1.99	0.61
50:QS:6:LYS:HA	50:QS:6:LYS:HE2	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:XA:1029:U:H1'	32:XA:1033:G:O6	1.99	0.61
32:XA:252:U:C5'	32:XA:252:U:H6	2.11	0.61
32:XA:263:A:P	51:XT:73:ARG:HH12	2.24	0.61
32:XA:106:C:O2	32:XA:379:C:H4'	2.00	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:YD:19:GLY:O	11:YK:72:PRO:HB2	1.99	0.61
13:YM:112:LEU:O	13:YM:112:LEU:HD13	2.01	0.61
17:YQ:91:ARG:NH2	17:YQ:93:ILE:HD13	2.15	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
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
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
17:RQ:114:ALA:C	17:RQ:116:LEU:H	2.02	0.61
19:RS:18:ARG:HG2	19:RS:76:VAL:HG13	1.82	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
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:228:C:H5''	1:YA:229:C:C6	2.36	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
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
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
1:YA:64:A:OP1	20:YT:77:ARG:HA	2.00	0.61
32:QA:433:G:H2'	32:QA:434:U:H5'	1.83	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
47:QP:19:VAL:HG13	47:QP:37:GLY:C	2.20	0.61
1:RA:14:A:H5''	1:RA:15:G:OP2	2.01	0.61
3:RC:230:PRO:CD	3:RC:246:PRO:HA	2.29	0.61
3:RC:80:LEU:HD11	3:RC:109:LEU:HG	1.83	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:RP:25:VAL:HG11	16:RP:46:VAL:HG23	1.83	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
23:RW:31:LEU:HD23	23:RW:31:LEU:N	2.16	0.61
23:RW:73:PRO:HG3	23:RW:76:ARG:HD2	1.82	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
37:XF:90:MET:HE1	49:XR:60:ARG:HD3	1.83	0.61
52:XU:33:ARG:HH22	52:XU:34:ARG:HH11	1.49	0.61
29:Y2:35:ARG:HG3	29:Y2:42:LEU:HD21	1.83	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
1:YA:414:C:H5''	1:YA:1879:C:O2'	2.00	0.61
4:YD:56:LYS:NZ	4:YD:58:ASN:HD22	1.99	0.61
1:YA:1076:C:O2	9:YI:92:PRO:HG2	2.00	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
13:YM:136:MET:HE1	22:YV:57:TYR:CD2	2.36	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
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
1:RA:272:A:O2'	1:RA:273:G:H8	1.82	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
23:RW:24:ARG:C	23:RW:24:ARG:HD2	2.20	0.61
32:XA:227:G:H2'	32:XA:228:A:O4'	2.00	0.61
32:XA:216:U:H4'	32:XA:464:U:H4'	1.82	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
31:Y4:7:VAL:CG1	31:Y4:8:LYS:H	2.13	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:YF:45:ASP:C	6:YF:47:LYS:H	2.03	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
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
1:RA:287:G:H2'	1:RA:288:U:C6	2.36	0.61
1:RA:31:C:O3'	1:RA:1238:G:H5''	2.01	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
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: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
1:YA:379:G:C6	1:YA:396:G:C6	2.89	0.61
5:YE:128:ALA:HB1	5:YE:129:PRO:CD	2.28	0.61
1:YA:321:U:O4'	5:YE:159:LEU:HG	2.00	0.61
10:YJ:111:LYS:HB2	10:YJ:115:GLY:CA	2.31	0.61
10:YJ:110:PRO:O	10:YJ:115:GLY:HA3	2.00	0.61
18:YR:9:GLY:H	18:YR:10:LYS:HD2	1.63	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
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
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: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
32:XA:748:G:H2'	32:XA:749:A:C8	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:935:A:O2'	32:XA:936:C:H6	1.82	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:OP2	1:YA:1884:G:H8	1.84	0.61
1:YA:202:U:H2'	1:YA:202:U:O2	2.00	0.61
1:YA:225:C:H2'	1:YA:226:A:O4'	2.00	0.61
1:YA:2721:A:H2'	1:YA:2722:G:O4'	2.01	0.61
1:YA:78:U:C2'	1:YA:79:C:H5'	2.30	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:16:VAL:HG11	7:YG:44:HIS:ND1	2.16	0.61
7:YG:8:VAL:O	7:YG:9:VAL:HB	1.99	0.61
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
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:XA:1242:G:O2'	32:XA:1243:C:O4'	2.18	0.60
34:XC:14:VAL:HG12	34:XC:14:VAL:O	2.00	0.60
41:XJ:38:GLY:O	41:XJ:40:ILE:HD12	2.00	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:21:A:H2'	1:YA:22:C:C6	2.36	0.60
5:YE:119:ILE:HG13	5:YE:119:ILE:O	2.01	0.60
12:YL:73:ILE:O	12:YL:105:ILE:HG23	2.00	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:H2'	32:QA:328:C:O2	2.01	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:R3:21:PHE:HB2	30:R3:49:VAL:CG1	2.30	0.60
1:RA:2199:A:H8	1:RA:2199:A:C5'	2.14	0.60
7:RG:83:THR:C	7:RG:84:LYS:HD3	2.20	0.60
9:RI:80:LYS:HA	9:RI:85:ILE:O	2.01	0.60
19:RS:63:GLY:O	19:RS:64:ALA:CB	2.49	0.60
32:XA:1350:A:H2	38:XG:33:GLY:HA3	1.65	0.60
32:XA:39:G:H2'	32:XA:40:C:C6	2.37	0.60
32:XA:476:U:OP2	32:XA:476:U:C6	2.54	0.60
32:XA:90:C:O2'	32:XA:91:U:H5'	2.02	0.60
32:XA:640:A:O2'	39:XH:106:SER:HB2	2.01	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
29:Y2:45:SER:C	29:Y2:46:LYS:HD2	2.22	0.60
1:YA:1439:A:N7	1:YA:1440:U:H1'	2.17	0.60
1:YA:151:C:OP1	1:YA:1359:A:O2'	2.19	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
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
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
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
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
1:RA:1071:G:C8	1:RA:1071:G:OP2	2.53	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
1:RA:357:C:H2'	1:RA:358:U:C6	2.36	0.60
1:RA:545:U:O2	1:RA:545:U:O4'	2.18	0.60
3:RC:77:VAL:CG2	3:RC:77:VAL:O	2.48	0.60
13:RM:54:THR:O	13:RM:56:ALA:N	2.33	0.60
1:RA:1154:G:OP2	17:RQ:57:ARG:NH1	2.33	0.60
32:XA:1241:G:C4	32:XA:1242:G:N7	2.69	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:769:G:H4'	32:XA:1513:A:H4'	1.82	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: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:243:U:O2'	1:YA:244:A:H8	1.84	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
32:QA:1349:A:OP1	40:QI:122:ARG:N	2.29	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
40:QI:3:ASN:CG	40:QI:4:GLN:H	2.05	0.60
43:QL:73:LEU:HD11	43:QL:79:ILE:HG21	1.82	0.60
1:RA:1075:C:C4	1:RA:1076:C:N4	2.69	0.60
12:RL:77:ILE:HD13	12:RL:108:ALA:HB1	1.83	0.60
17:RQ:94:LEU:C	17:RQ:96:ASP:H	2.04	0.60
23:RW:37:VAL:HG13	23:RW:56:HIS:HB2	1.83	0.60
32:XA:1140:C:O2'	32:XA:1141:C:C6	2.51	0.60
32:XA:972:C:H4'	41:XJ:59:LYS:HG2	1.83	0.60
52:XU:38:GLU:HA	52:XU:41:THR:OG1	2.01	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:2577:A:H5''	1:YA:2578:G:H5'	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: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:81:G:H2'	1:YA:82:U:O4'	2.02	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
1:YA:660:C:H5''	5:YE:94:GLN:OE1	2.02	0.60
1:YA:2305:U:H4'	6:YF:132:ARG:HG2	1.82	0.60
14:YN:73:ASN:HD22	14:YN:76:VAL:HG21	1.65	0.60
17:YQ:50:ARG:HD2	17:YQ:50:ARG:N	2.17	0.60
32:QA:1001:C:H2'	32:QA:1002:G:H8	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
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:107:VAL:O	4:RD:174:SER:O	2.19	0.60
4:RD:33:ARG:NH2	4:RD:51:THR:HG23	2.17	0.60
11:RK:51:LYS:HD2	11:RK:51:LYS:O	2.01	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:NZ	25:RY:9:LYS:HA	2.17	0.60
32:XA:1316:G:N2	32:XA:1318:A:H3'	2.15	0.60
32:XA:1514:G:H2'	32:XA:1515:G:H8	1.65	0.60
32:XA:968:A:C4	32:XA:1062:U:H4'	2.37	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: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
1:YA:467:G:H4'	1:YA:796:C:O2'	2.01	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
32:QA:1492:A:H2'	32:QA:1493:A:H5"	1.84	0.60
32:QA:737:C:H2'	32:QA:738:C:H6	1.65	0.60
38:QG:121:ASN:O	38:QG:125:ASP:HB2	2.00	0.60
32:QA:1314:C:C5	50:QS:5:LYS:HD3	2.36	0.60
51:QT:43:LYS:CB	51:QT:86:ALA:HB1	2.24	0.60
1:RA:2358:A:H61	12:RL:54:GLN:HE22	1.48	0.60
7:RG:15:ASP:CG	7:RG:16:VAL:N	2.55	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:RJ:13:ARG:HD3	10:RJ:51:GLY:O	2.01	0.60
1:RA:470:A:H61	20:RT:72:GLN:HE22	1.49	0.60
26:RZ:7:THR:HG23	26:RZ:34:THR:H	1.67	0.60
32:XA:1400:C:H4'	32:XA:1401:G:OP2	2.02	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
33:XB:164:ASP:HB3	33:XB:167:HIS:HB3	1.83	0.60
35:XD:58:GLN:OE1	35:XD:58:GLN:HA	2.02	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
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: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:234:U:H2'	1:YA:235:U:C6	2.37	0.60
1:YA:2414:G:C2'	1:YA:2415:G:H5'	2.31	0.60
1:YA:379:G:C6	1:YA:380:G:C5	2.90	0.60
2:YB:42:C:H41	6:YF:87:LYS:HZ3	1.50	0.60
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
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:40:GLU:CB	37:QF:42:TRP:HE1	2.15	0.60
37:QF:38:ARG:HB3	37:QF:63:ASN:HB2	1.83	0.60
41:QJ:22:THR:HG22	41:QJ:23:ALA:N	2.17	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: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:79:THR:HA	36:XE:121:ASN:OD1	2.01	0.60
36:XE:24:VAL:HG23	36:XE:26:GLY:H	1.67	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XS:40:PHE:HB3	50:XS:41:PRO:CD	2.29	0.60
27:Y0:37:HIS:CG	27:Y0:43:THR:HG22	2.37	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
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
5:YE:179:SER:HA	5:YE:182:ALA:HB3	1.83	0.60
1:YA:2060:A:H2'	5:YE:63:LYS:NZ	2.17	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
32:QA:1212:U:H2'	32:QA:1212:U:O2	2.02	0.60
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
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
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
5:RE:146:VAL:HG23	5:RE:167:VAL:CG2	2.32	0.60
20:RT:32:LEU:O	20:RT:83:ALA:HB2	2.01	0.60
32:XA:1365:G:O2'	32:XA:1366:C:C6	2.55	0.60
32:XA:71:A:O2'	32:XA:72:A:O4'	2.16	0.60
33:XB:76:SER:O	33:XB:79:VAL:HG12	2.00	0.60
39:XH:85:TYR:CE1	48:XQ:36:PHE:HE2	2.20	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
1:YA:226:A:N6	1:YA:227:A:N6	2.50	0.60
3:YC:173:LEU:H	3:YC:173:LEU:HD22	1.66	0.60
6:YF:34:THR:O	6:YF:35:LEU:HB2	2.00	0.60
11:YK:35:VAL:HG23	11:YK:36:GLY:N	2.16	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
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:194:G:C8	56:RA:3760:HOH:O	2.52	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2356:U:H4'	23:RW:16:GLU:HG3	1.84	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: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:128:C:O2'	1:YA:129:C:H6	1.81	0.60
1:YA:2729:G:H5''	4:YD:190:LYS:NZ	2.17	0.60
1:YA:478:A:N1	1:YA:480:A:C4	2.70	0.60
8:YH:57:LYS:HD2	8:YH:57:LYS:O	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
32:QA:1005:A:C2	32:QA:1006:G:H1'	2.37	0.60
36:QE:81:GLN:HG2	36:QE:149:PRO:CB	2.32	0.60
36:QE:55:VAL:N	36:QE:56:PRO:HD2	2.17	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
42:QK:124:LYS:HE2	52:QU:33:ARG:HH21	1.66	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
1:RA:973:A:O4'	1:RA:1188:U:C6	2.55	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
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
27:Y0:30:ASP:OD1	27:Y0:47:TYR:HB3	2.02	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
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:170:ARG:HH22	5:YE:176:ASP:HB2	1.67	0.60
5:YE:79:ARG:HG2	5:YE:80:SER:N	2.17	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YY:19:LEU:HA	25:YY:22:LEU:HB2	1.83	0.60
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
36:QE:11:GLN:HA	36:QE:11:GLN:NE2	2.10	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
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:NH2	14:RN:71:ARG:HG3	2.15	0.59
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
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
1:YA:125:A:C5'	29:Y2:19:ARG:HD3	2.32	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:247:G:N7	1:YA:249:C:C2	2.70	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:CD2	4:YD:140:HIS:N	2.69	0.59
7:YG:154:GLU:C	7:YG:156:TYR:H	2.06	0.59
8:YH:94:ILE:HG13	8:YH:98:ASP:CB	2.32	0.59
1:YA:2448:A:H61	12:YL:36:LYS:NZ	1.99	0.59
39:QH:58:LEU:HD13	39:QH:59:GLU:N	2.17	0.59
1:RA:1157:G:O2'	26:RZ:31:ILE:HD11	2.01	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
4:RD:98:VAL:O	4:RD:99:GLU:C	2.41	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1124:G:H1'	32:XA:1125:U:H5	1.65	0.59
32:XA:54:C:N4	32:XA:352:C:H2'	2.17	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
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
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
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
14:YN:35:LYS:NZ	14:YN:112:TYR:HE1	1.98	0.59
32:QA:1314:C:O2'	32:QA:1315:U:H5'	2.02	0.59
32:QA:330:C:C6	32:QA:330:C:H5''	2.37	0.59
41:QJ:32:THR:HG23	41:QJ:33:GLY:H	1.68	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
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
5:RE:161:ALA:HA	5:RE:164:LEU:HB2	1.83	0.59
10:RJ:55:ILE:HG13	10:RJ:55:ILE:O	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:XA:356:A:H2'	32:XA:357:G:O4'	2.01	0.59
32:XA:87:C:O2'	32:XA:88:U:C4'	2.49	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
28:Y1:5:ARG:CD	28:Y1:25:ASN:HB2	2.30	0.59
1:YA:1338:G:H5''	20:YT:17:SER:HB3	1.83	0.59
1:YA:142:A:O2'	1:YA:143:C:H6	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
1:YA:327:G:H21	21:YU:67:SER:HB2	1.66	0.59
1:YA:84:A:H2	1:YA:98:G:N3	2.00	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:YM:8:LYS:N	13:YM:8:LYS:HD2	2.16	0.59
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
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
17:RQ:69:ARG:NH2	17:RQ:69:ARG:HB2	2.06	0.59
20:RT:51:PHE:C	20:RT:52:GLU:HG2	2.22	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: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:410:G:N1	1:YA:2407:A:N6	2.49	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
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: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:79:C:H2'	1:YA:80:G:O4'	2.01	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:90:U:H3'	1:YA:91:A:C5'	2.32	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
16:YP:86:LYS:HZ2	16:YP:86:LYS:HA	1.68	0.59
26:YZ:23:LEU:HD12	26:YZ:28:LEU:HD21	1.83	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
31:R4:9:LYS:HB3	31:R4:14:CYS:HB2	1.82	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
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
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:O	8:RH:99:ILE:HG22	2.01	0.59
14:RN:102:PHE:HD1	14:RN:107:ASN:HD21	1.50	0.59
14:RN:74:GLU:O	14:RN:77:ALA:HB3	2.03	0.59
14:RN:85:PRO:HA	14:RN:88:ALA:HB2	1.84	0.59
17:RQ:85:ALA:O	17:RQ:86:SER:O	2.21	0.59
18:RR:27:ILE:HD13	18:RR:27:ILE:N	2.15	0.59
18:RR:45:GLU:OE2	18:RR:45:GLU:HA	2.02	0.59
18:RR:24:LYS:HA	18:RR:94:THR:HG23	1.84	0.59
21:RU:86:PHE:CE1	21:RU:101:THR:HG21	2.37	0.59
26:RZ:39:ASP:CG	26:RZ:44:ARG:HH11	2.06	0.59
32:XA:1365:G:C2	32:XA:1366:C:C2	2.91	0.59
32:XA:457:G:OP2	32:XA:457:G:C8	2.56	0.59
32:XA:522:C:H41	43:XL:49:ARG:NH2	1.96	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: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: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
2:YB:38:C:O2'	2:YB:39:A:H5'	2.02	0.59
1:YA:2305:U:P	6:YF:132:ARG:HE	2.25	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
32:QA:1469:C:H5'	32:QA:1469:C:C6	2.29	0.59
32:QA:1489:G:C2'	32:QA:1490:U:H5'	2.32	0.59
32:QA:575:G:O3'	56:QA:1740:HOH:O	2.17	0.59
32:QA:70:U:O2'	32:QA:71:A:C8	2.56	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:QR:44:THR:OG1	49:QR:46:THR:HG22	2.02	0.59
51:QT:27:MET:HE2	51:QT:31:ILE:HD11	1.85	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
12:RL:76:GLU:C	12:RL:77:ILE:HD12	2.22	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
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:XA:1037:C:H2'	32:XA:1037:C:O2	2.00	0.59
32:XA:140:U:H2'	32:XA:141:G:O4'	2.02	0.59
34:XC:166:TRP:CE3	34:XC:166:TRP:N	2.70	0.59
34:XC:88:LYS:HA	34:XC:91:ALA:HB3	1.84	0.59
36:XE:157:GLY:HA3	39:XH:63:LYS:NZ	2.17	0.59
32:XA:1014:A:H4'	50:XS:13:HIS:ND1	2.17	0.59
50:XS:35:ARG:NH2	50:XS:53:GLY:H	2.00	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: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
6:YF:131:VAL:C	6:YF:133:GLU:H	2.06	0.59
8:YH:82:SER:O	8:YH:90:LEU:HD11	2.03	0.59
1:YA:2846:G:OP1	16:YP:51:ASN:HB2	2.03	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
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
1:RA:343:C:H2'	1:RA:343:C:O2	2.03	0.59
1:RA:527:C:H4'	1:RA:528:A:O5'	2.02	0.59
4:RD:149:ASN:CG	4:RD:150:GLN:H	2.05	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
32:XA:1170:A:H2'	32:XA:1171:A:O4'	2.02	0.59
32:XA:457:G:N3	32:XA:457:G:H2'	2.18	0.59
32:XA:951:G:H1'	32:XA:970:C:O2'	2.02	0.59
36:XE:154:ALA:HB1	39:XH:65:PHE:CE2	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:XI:49:GLN:N	40:XI:50:PRO:HD2	2.17	0.59
47:XP:44:SER:H	47:XP:46:LYS:NZ	2.01	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:1079:C:O2'	1:YA:1080:A:O4'	2.20	0.59
1:YA:1062:G:O4'	1:YA:1088:A:N7	2.35	0.59
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:H6	1:YA:1574:C:O5'	1.85	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
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
2:YB:42:C:N4	6:YF:87:LYS:HD2	2.18	0.59
13:YM:19:GLY:H	13:YM:38:ARG:HH21	1.51	0.59
19:YS:71:VAL:HG13	19:YS:71:VAL:O	2.03	0.59
32:QA:255:G:H4'	48:QQ:18:LYS:HE3	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:QA:636:U:H5''	48:QQ:5:ARG:HG2	1.83	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
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:259:ASN:O	3:RC:260:LYS:HB2	2.03	0.59
3:RC:30:ALA:HB3	3:RC:31:PRO:HD3	1.83	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
32:XA:1458:G:O2'	51:XT:22:SER:HB3	2.02	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
34:XC:187:GLU:O	34:XC:188:ALA:HB2	2.03	0.59
36:XE:80:LEU:HD22	36:XE:146:MET:HE1	1.83	0.59
39:XH:104:SER:HA	39:XH:109:VAL:HG22	1.85	0.59
32:XA:1372:U:H5''	40:XI:71:ILE:HD11	1.84	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2725:A:C4	1:YA:2727:A:N7	2.71	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
5:YE:147:LEU:O	5:YE:148:ILE:HB	2.02	0.59
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
37:QF:93:LYS:O	37:QF:94:HIS:HB2	2.03	0.59
41:QJ:7:ARG:HD3	41:QJ:75:ASP:OD1	2.03	0.59
1:RA:747:U:C5	1:RA:2613:U:C5	2.91	0.59
1:RA:39:G:H2'	1:RA:40:U:C6	2.38	0.59
10:RJ:124:VAL:O	10:RJ:125:TYR:HB2	2.03	0.59
10:RJ:39:LYS:HA	10:RJ:43:GLU:HG3	1.83	0.59
21:RU:6:ARG:O	21:RU:24:VAL:HB	2.03	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
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
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: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
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:67:U:H2'	1:YA:68:G:C8	2.33	0.59
1:YA:976:G:H2'	1:YA:977:G:H8	1.68	0.59
4:YD:97:SER:HB2	4:YD:99:GLU:HG2	1.84	0.59
5:YE:138:LEU:HA	5:YE:141:MET:HE2	1.83	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
32:QA:1331:G:O2'	32:QA:1332:A:P	2.61	0.59
33:QB:143:LEU:H	33:QB:143:LEU:HD23	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
1:RA:1935:G:H1'	1:RA:1964:G:N2	2.17	0.59
3:RC:12:ARG:NH1	3:RC:12:ARG:CG	2.51	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:RI:90:GLY:O	9:RI:92:PRO:HD3	2.03	0.59
16:RP:105:LYS:HA	16:RP:108:ARG:HD3	1.84	0.59
20:RT:19:LYS:O	20:RT:20:ALA:C	2.40	0.59
23:RW:23:LYS:HD2	23:RW:24:ARG:N	2.18	0.59
32:XA:1254:A:H2'	32:XA:1255:G:C8	2.38	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
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: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:1866:A:H2'	1:YA:1867:G:O4'	2.03	0.59
1:YA:27:G:H1'	1:YA:513:A:H62	1.66	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:78:U:H2'	1:YA:79:C:C6	2.38	0.59
1:YA:321:U:C2	5:YE:159:LEU:HD21	2.38	0.59
13:YM:42:THR:HG22	13:YM:44:ARG:H	1.68	0.59
13:YM:41:LEU:HD23	13:YM:46:ILE:HG22	1.85	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:YA:1808:A:N7	24:YX:27:ARG:NH1	2.51	0.59
32:QA:1461:G:O2'	32:QA:1462:C:H5'	2.04	0.58
32:QA:843:U:H2'	32:QA:844:G:H5'	1.85	0.58
32:QA:82:G:N2	32:QA:84:U:N3	2.51	0.58
38:QG:136:LYS:O	38:QG:140:VAL:HG23	2.03	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:RX:34:SER:HA	24:RX:48:LEU:O	2.03	0.58
32:XA:1033:G:HO2'	32:XA:1034:G:H5''	1.68	0.58
32:XA:1084:G:H5'	32:XA:1102:A:OP2	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
34:XC:129:PHE:CE1	34:XC:156:LEU:HB3	2.37	0.58
34:XC:84:GLU:C	34:XC:86:LEU:N	2.57	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
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
1:YA:37:C:H2'	1:YA:38:A:O4'	2.03	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
32:QA:1279:G:H1'	32:QA:1282:C:H42	1.63	0.58
32:QA:439:U:H1'	35:QD:118:SER:O	2.03	0.58
32:QA:481:G:O2'	32:QA:482:A:C8	2.56	0.58
41:QJ:44:THR:HG23	41:QJ:70:HIS:HA	1.85	0.58
46:QO:35:ILE:HG22	46:QO:36:ASN:N	2.18	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:XA:1206:G:C6	32:XA:1207:G:C5	2.90	0.58
32:XA:204:G:H2'	32:XA:205:A:C8	2.38	0.58
32:XA:33:A:H2'	32:XA:34:C:H6	1.66	0.58
32:XA:723:U:O5'	32:XA:723:U:H6	1.86	0.58
32:XA:754:C:O2	32:XA:754:C:H2'	2.03	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
32:XA:322:C:O2'	51:XT:17:ARG:HG3	2.02	0.58
1:YA:167:A:H2'	1:YA:168:G:O4'	2.03	0.58
1:YA:1733:G:C8	1:YA:1733:G:H5'	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:YC:147:PRO:CD	3:YC:184:GLU:HG3	2.32	0.58
25:YY:1:MET:H2	25:YY:5:GLU:CG	2.15	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
32:QA:507:C:C3'	32:QA:508:U:H5''	2.31	0.58
32:QA:6:G:HO2'	32:QA:7:A:H8	1.50	0.58
34:QC:21:TRP:CD1	34:QC:58:ARG:HG2	2.38	0.58
37:QF:38:ARG:CG	37:QF:38:ARG:HH11	2.01	0.58
48:QQ:37:ILE:H	48:QQ:37:ILE:HD12	1.67	0.58
48:QQ:21:VAL:HA	48:QQ:43:LEU:O	2.04	0.58
50:QS:28:LYS:HB3	50:QS:29:PRO:CD	2.19	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
1:RA:475:C:C4	1:RA:481:G:O6	2.56	0.58
3:RC:144:GLU:HA	3:RC:151:GLY:HA2	1.85	0.58
10:RJ:140:LEU:HD13	10:RJ:140:LEU:C	2.24	0.58
10:RJ:44:TYR:CD1	10:RJ:44:TYR:O	2.57	0.58
19:RS:88:ARG:HG2	19:RS:88:ARG:NH2	2.17	0.58
32:XA:1416:G:N2	32:XA:1485:U:H1'	2.18	0.58
32:XA:618:C:H5''	32:XA:619:U:H5''	1.86	0.58
32:XA:410:G:OP1	35:XD:25:ARG:HD2	2.03	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:1:SER:C	39:XH:3:GLN:H	2.05	0.58
39:XH:38:VAL:HA	39:XH:41:GLU:HG3	1.85	0.58
43:XL:33:CYS:HB3	43:XL:77:SER:O	2.02	0.58
42:XK:126:ARG:HB2	52:XU:33:ARG:HD2	1.84	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:172:A:O2'	1:YA:173:A:H5'	2.02	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
1:YA:716:A:H2'	1:YA:717:C:H5''	1.85	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:YA:989:G:OP2	26:YZ:11:SER:HB2	2.04	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
38:QG:113:LYS:HB2	38:QG:117:LEU:HD12	1.85	0.58
32:QA:1343:G:O3'	40:QI:123:ARG:HB3	2.03	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
30:R3:26:ALA:O	30:R3:27:ASN:CB	2.47	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
1:RA:613:A:C8	1:RA:616:A:N1	2.71	0.58
6:RF:33:ILE:O	6:RF:90:LEU:HB2	2.03	0.58
11:RK:105:ARG:N	11:RK:105:ARG:HD3	2.17	0.58
32:XA:1130:A:N7	32:XA:1146:A:N6	2.52	0.58
32:XA:423:G:H2'	32:XA:424:G:O4'	2.04	0.58
33:XB:216:VAL:C	33:XB:218:ALA:H	2.07	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
32:XA:263:A:OP1	51:XT:73:ARG:NH1	2.33	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
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
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
37:QF:91:ARG:HG3	37:QF:92:THR:H	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:RA:1223:G:OP2	18:RR:68:ARG:NH1	2.37	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:783:A:C8	1:RA:784:G:H4'	2.38	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
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
1:RA:1266:G:H5''	19:RS:15:GLN:HE22	1.68	0.58
20:RT:24:MET:HG3	20:RT:29:THR:HG23	1.84	0.58
1:RA:2354:C:C4'	23:RW:31:LEU:HD22	2.32	0.58
32:XA:814:A:C5'	32:XA:1511:G:H4'	2.30	0.58
33:XB:84:LEU:HG	33:XB:84:LEU:O	2.03	0.58
36:XE:79:THR:HA	36:XE:121:ASN:CG	2.24	0.58
44:XM:106:ARG:HA	44:XM:110:GLY:O	2.02	0.58
47:XP:78:VAL:C	47:XP:80:LYS:H	2.06	0.58
48:XQ:3:LYS:HZ2	48:XQ:6:THR:HG21	1.68	0.58
52:XU:31:VAL:O	52:XU:32:ARG:C	2.41	0.58
29:Y2:11:LYS:NZ	56:Y2:101:HOH:O	2.37	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
1:YA:35:G:N2	1:YA:36:G:H1'	2.19	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
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
1:YA:600:G:C5'	5:YE:27:LEU:HD22	2.33	0.58
6:YF:31:GLU:C	6:YF:95:MET:HE1	2.23	0.58
12:YL:123:ARG:HG2	12:YL:143:GLU:HB3	1.85	0.58
13:YM:27:SER:N	13:YM:66:ARG:HH22	1.97	0.58
13:YM:8:LYS:HE3	13:YM:8:LYS:HA	1.86	0.58
18:YR:51:VAL:HB	18:YR:52:PRO:HD2	1.85	0.58
39:QH:34:ALA:O	39:QH:37:ASN:HB3	2.03	0.58
40:QI:48:ARG:C	40:QI:50:PRO:HD2	2.23	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:QN:48:GLN:HA	45:QN:48:GLN:NE2	2.19	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
1:RA:914:G:H5''	1:RA:914:G:C8	2.38	0.58
5:RE:175:ILE:O	5:RE:175:ILE:HG23	2.04	0.58
5:RE:45:ALA:O	5:RE:46:GLN:HG2	2.03	0.58
14:RN:96:ARG:HH22	14:RN:116:VAL:HG23	1.69	0.58
32:XA:1219:A:OP1	45:YN:52:ARG:HG3	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
49:XR:19:GLU:CD	49:XR:20:ILE:H	2.06	0.58
30:Y3:29:ARG:HH21	30:Y3:29:ARG:HG2	1.68	0.58
1:YA:1048:A:C6	1:YA:1111:A:C2	2.90	0.58
1:YA:860:U:O4	1:YA:2268:A:C5	2.57	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
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:6:GLY:C	17:YQ:8:ILE:H	2.07	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
32:QA:1138:G:C2'	32:QA:1138:G:N3	2.64	0.58
32:QA:1248:A:H2	40:QI:71:ILE:HD11	1.69	0.58
35:QD:21:LYS:HD3	35:QD:21:LYS:O	2.03	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
1:RA:2267:A:H5''	1:RA:2268:A:H5'	1.84	0.58
1:RA:588:U:H2'	1:RA:589:U:C6	2.39	0.58
8:RH:104:THR:HG23	8:RH:104:THR:O	2.03	0.58
11:RK:108:ARG:NH1	11:RK:108:ARG:HG2	2.19	0.58
17:RQ:91:ARG:HH21	17:RQ:93:ILE:HD13	1.66	0.58
18:RR:39:LEU:CD2	18:RR:39:LEU:N	2.65	0.58
21:RU:52:ASN:C	21:RU:54:PRO:HD2	2.24	0.58
32:XA:1050:G:O2'	32:XA:1051:C:C6	2.56	0.58
32:XA:223:A:C6	32:XA:224:U:C4	2.92	0.58
42:XK:81:LEU:HD11	42:XK:104:PHE:CD2	2.38	0.58
1:YA:1140:C:O2'	1:YA:1141:U:H5'	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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
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
1:YA:631:A:O2'	12:YL:66:PHE:HB3	2.04	0.58
1:YA:2720:U:H5''	16:YP:52:ARG:NH2	2.16	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:YA:923:G:H1'	23:YW:23:LYS:HZ1	1.66	0.58
32:QA:1034:G:H2'	32:QA:1035:A:C8	2.38	0.58
32:QA:591:U:H2'	32:QA:592:G:H8	1.68	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
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
20:RT:31:VAL:C	20:RT:32:LEU:HD23	2.23	0.58
23:RW:23:LYS:HD2	23:RW:24:ARG:H	1.67	0.58
32:XA:1215:G:O2'	32:XA:1216:A:C8	2.50	0.58
32:XA:243:A:H4'	32:XA:244:U:OP2	2.04	0.58
32:XA:68:G:H5'	32:XA:171:A:H1'	1.85	0.58
36:XE:152:VAL:HG21	39:XH:98:LEU:HD22	1.84	0.58
36:XE:80:LEU:O	36:XE:80:LEU:HD13	2.03	0.58
37:XF:3:HIS:CE1	37:XF:95:ALA:H	2.22	0.58
38:XG:140:VAL:C	38:XG:142:ARG:H	2.06	0.58
40:XI:128:LYS:O	40:XI:129:ARG:HB2	2.04	0.58
30:Y3:32:LEU:HD23	30:Y3:35:LYS:HE2	1.86	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:858:G:C4	1:YA:2268:A:C2	2.92	0.58
1:YA:2297:A:O2'	1:YA:2298:A:C8	2.36	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2788:C:H1'	1:YA:2809:A:H2	1.69	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
2:YB:81:G:C6	2:YB:82:U:C4	2.92	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
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:221:ARG:HH11	33:QB:221:ARG:HG2	1.67	0.58
33:QB:67:LEU:HA	33:QB:89:PHE:O	2.04	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
1:RA:1508:A:O2'	1:RA:1509:A:OP2	2.20	0.58
1:RA:2149:U:O2'	1:RA:2150:C:O5'	2.20	0.58
1:RA:1050:A:C2	1:RA:2751:G:C4	2.92	0.58
1:RA:899:A:HO2'	1:RA:900:A:H8	1.50	0.58
4:RD:9:VAL:HG13	4:RD:26:VAL:O	2.04	0.58
5:RE:45:ALA:C	5:RE:46:GLN:HG2	2.24	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: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
32:XA:392:C:C2	32:XA:393:A:C8	2.91	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: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
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
7:YG:163:TYR:CD2	7:YG:163:TYR:N	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
1:RA:2262:U:H4'	1:RA:2328:A:H2	1.69	0.58
11:RK:57:VAL:C	11:RK:58:LEU:HD23	2.24	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:XA:747:A:H2'	32:XA:748:G:O4'	2.03	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
1:YA:453:A:H4'	1:YA:472:A:H62	1.69	0.58
1:YA:85:G:HO2'	1:YA:86:G:H8	1.51	0.58
18:YR:82:HIS:CG	18:YR:82:HIS:O	2.57	0.58
32:QA:1251:A:H2'	32:QA:1252:A:C8	2.39	0.57
32:QA:182:A:N3	32:QA:184:G:C8	2.71	0.57
1:RA:2340:A:H2'	1:RA:2341:G:H8	1.69	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
1:RA:2393:U:H5'	12:RL:60:ARG:O	2.04	0.57
13:RM:43:ALA:O	13:RM:46:ILE:HG13	2.03	0.57
19:RS:20:VAL:HG21	19:RS:43:ALA:HB3	1.86	0.57
32:XA:112:G:C2	32:XA:330:C:N4	2.72	0.57
32:XA:5:U:H4'	32:XA:6:G:H5'	1.84	0.57
35:XD:2:ARG:NH2	35:XD:114:ARG:NH1	2.51	0.57
1:YA:2344:U:H2'	28:Y1:35:LEU:O	2.04	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
1:YA:2392:A:H2	12:YL:55:MET:SD	2.26	0.57
32:QA:1234:C:C2'	32:QA:1235:U:H5'	2.33	0.57
32:QA:211:G:C6	32:QA:212:G:H1'	2.38	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
1:RA:100:U:C4'	1:RA:101:A:O5'	2.51	0.57
1:RA:1110:G:O2'	1:RA:1111:A:O5'	2.22	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:RA:569:U:H1'	1:RA:947:A:O4'	2.04	0.57
7:RG:163:TYR:O	7:RG:164:ALA:HB2	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:O	18:RR:46:GLU:OE1	2.22	0.57
20:RT:32:LEU:H	20:RT:83:ALA:CB	2.11	0.57
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
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
28:Y1:25:ASN:OD1	28:Y1:28:THR:HG23	2.03	0.57
29:Y2:28:ARG:C	29:Y2:30:VAL:H	2.08	0.57
1:YA:591:U:H1'	30:Y3:1:PRO:HD2	1.85	0.57
1:YA:254:G:N7	30:Y3:4:LYS:HE2	2.19	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
1:YA:779:U:OP1	3:YC:48:ILE:HG13	2.05	0.57
2:YB:30:C:O2	2:YB:30:C:H2'	2.03	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:101:ASP:HB2	18:YR:2:TYR:OH	2.03	0.57
17:YQ:26:ALA:O	17:YQ:30:VAL:HB	2.04	0.57
1:YA:995:C:O2'	17:YQ:93:ILE:HD12	2.03	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
32:QA:818:G:O2'	32:QA:819:A:H5'	2.04	0.57
33:QB:58:LYS:HZ1	33:QB:62:ARG:HG3	1.68	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
1:RA:2649:C:H2'	1:RA:2650:U:C6	2.39	0.57
1:RA:959:A:H62	13:RM:82:MET:HE3	1.69	0.57
6:RF:4:HIS:O	6:RF:7:TYR:HB3	2.04	0.57
7:RG:154:GLU:OE1	7:RG:157:LYS:HB2	2.04	0.57
7:RG:88:LEU:HD11	7:RG:95:ALA:HB2	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:RH:46:PHE:HD2	8:RH:46:PHE:O	1.87	0.57
9:RI:52:LEU:HD11	9:RI:81:LYS:HE2	1.86	0.57
20:RT:28:ASN:HA	20:RT:91:GLN:CD	2.25	0.57
1:RA:923:G:H5'	23:RW:25:PHE:CZ	2.39	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
36:XE:35:LEU:HD11	36:XE:136:VAL:HG11	1.86	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:1071:G:O2'	1:YA:1072:C:O5'	2.21	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
1:YA:777:G:N7	1:YA:793:A:H2	2.02	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
20:YT:40:LYS:HE3	20:YT:58:VAL:O	2.04	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
43:QL:81:ILE:HD11	43:QL:94:TYR:CG	2.39	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
1:RA:511:U:O4	1:RA:512:G:C2	2.57	0.57
3:RC:257:ARG:NE	3:RC:269:ARG:NH2	2.53	0.57
6:RF:68:LYS:N	6:RF:68:LYS:HD2	2.18	0.57
32:XA:1143:G:H2'	32:XA:1144:G:C8	2.39	0.57
32:XA:977:A:H1'	32:XA:1223:C:H42	1.69	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:YN:70:HIS:CE1	2.38	0.57
34:XC:21:TRP:CH2	45:YN:93:PRO:HG2	2.40	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1131:G:O6	1:YA:2024:G:O2'	2.22	0.57
1:YA:246:C:C2'	1:YA:247:G:H5'	2.34	0.57
1:YA:2847:U:C2'	1:YA:2848:G:H5'	2.33	0.57
1:YA:489:G:C4	1:YA:491:G:C8	2.92	0.57
1:YA:82:U:N3	1:YA:83:A:C8	2.72	0.57
7:YG:163:TYR:HD2	7:YG:163:TYR:N	2.02	0.57
8:YH:67:ALA:HA	8:YH:138:VAL:HG22	1.87	0.57
8:YH:41:LYS:H	8:YH:44:ILE:HG23	1.69	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
32:QA:1159:U:O2	32:QA:1159:U:O4'	2.22	0.57
32:QA:1241:G:HO2'	32:QA:1242:G:H8	1.53	0.57
32:QA:240:G:H4'	32:QA:240:G:OP1	2.05	0.57
32:QA:439:U:H2'	32:QA:440:C:H5'	1.86	0.57
35:QD:145:ARG:HD2	35:QD:147:LYS:HE2	1.85	0.57
37:QF:5:GLU:HG2	37:QF:90:MET:HE3	1.85	0.57
32:QA:1370:G:P	40:QI:110:VAL:HG21	2.44	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
32:QA:1320:C:N3	50:QS:35:ARG:NH1	2.53	0.57
51:QT:53:MET:CE	51:QT:57:VAL:HG21	2.34	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:299:A:H8	1:RA:299:A:OP2	1.87	0.57
3:RC:77:VAL:HA	3:RC:93:VAL:HA	1.85	0.57
1:RA:2572:A:N7	4:RD:150:GLN:HB3	2.20	0.57
23:RW:72:GLY:N	23:RW:73:PRO:HD2	2.20	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
32:XA:1514:G:H2'	32:XA:1515:G:C8	2.39	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
28:Y1:46:VAL:HG22	28:Y1:47:ILE:N	2.19	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
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:443:A:H2'	5:YE:40:ARG:NE	2.19	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
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
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
1:RA:397:U:H6	1:RA:397:U:O5'	1.88	0.57
1:RA:969:G:H2'	1:RA:970:U:C6	2.38	0.57
3:RC:143:VAL:HG12	3:RC:144:GLU:O	2.04	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
25:RY:23:ARG:O	25:RY:24:GLU:C	2.42	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:HB2	35:XD:127:ARG:CZ	2.35	0.57
40:XI:17:ARG:NH1	40:XI:65:THR:HG21	2.19	0.57
47:XP:1:MET:HG3	47:XP:1:MET:O	2.04	0.57
1:YA:100:U:C6	1:YA:100:U:OP1	2.57	0.57
1:YA:2666:C:O2'	1:YA:2667:C:C5'	2.46	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)
8:YH:62:LEU:C	8:YH:64:ALA:H	2.08	0.57
10:YJ:25:LEU:HD12	10:YJ:64:VAL:HA	1.87	0.57
1:YA:1156:A:P	17:YQ:54:ARG:HE	2.28	0.57
32:QA:1151:A:H5'	41:QJ:42:LEU:O	2.05	0.57
32:QA:267:C:O2'	32:QA:268:U:H5'	2.05	0.57
41:QJ:51:VAL:HB	45:QN:80:ARG:HB2	1.85	0.57
32:QA:538:G:OP2	43:QL:111:GLN:HB2	2.04	0.57
45:QN:51:PRO:O	45:QN:52:ARG:CB	2.53	0.57
52:QU:32:ARG:O	52:QU:32:ARG:HG2	2.04	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: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: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: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
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
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:YA:110:G:N2	1:YA:111:A:H1'	2.20	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:203:A:O5'	1:YA:204:A:H2'	2.05	0.57
1:YA:2313:C:O2'	1:YA:2314:A:C8	2.54	0.57
3:YC:145:MET:CE	3:YC:181:ARG:HH22	2.17	0.57
5:YE:105:LEU:HD12	5:YE:200:LEU:HD11	1.86	0.57
6:YF:107:VAL:N	6:YF:108:PRO:CD	2.68	0.57
6:YF:35:LEU:O	6:YF:87:LYS:HA	2.05	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:YU:58:VAL:CG1	21:YU:60:LYS:HG2	2.35	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
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
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
1:RA:510:C:H2'	1:RA:511:U:O4'	2.05	0.57
4:RD:182:ALA:C	4:RD:184:ARG:H	2.07	0.57
6:RF:151:LEU:C	6:RF:151:LEU:HD12	2.24	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: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
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:1090:A:H3'	1:YA:1091:G:H5''	1.87	0.57
1:YA:1157:G:H5'	1:YA:1157:G:C8	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
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:7:G:H4'	10:YJ:15:TRP:CH2	2.40	0.57
14:YN:96:ARG:HG3	14:YN:97:ILE:H	1.68	0.57
4:YD:184:ARG:NH2	16:YP:6:GLN:HE21	1.97	0.57
1:YA:17:G:H4'	17:YQ:24:TYR:HE1	1.70	0.57
19:YS:39:THR:O	19:YS:40:ASN:HB3	2.05	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
32:QA:1040:U:H2'	32:QA:1041:G:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:1348:U:O2'	32:QA:1349:A:H8	1.88	0.57
32:QA:771:G:H2'	32:QA:772:U:C6	2.40	0.57
35:QD:147:LYS:O	35:QD:149:LYS:N	2.37	0.57
35:QD:196:GLU:C	35:QD:198:LEU:H	2.08	0.57
35:QD:36:ALA:HA	35:QD:41:GLY:HA3	1.87	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
1:RA:1515:A:H2'	1:RA:1516:G:O4'	2.04	0.57
1:RA:221:A:H4'	1:RA:222:A:O5'	2.04	0.57
1:RA:2531:A:OP1	7:RG:174:LYS:HG3	2.05	0.57
1:RA:38:A:N3	5:RE:43:THR:HB	2.19	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
35:XD:29:THR:C	35:XD:30:LYS:HD3	2.25	0.57
46:XO:2:LEU:HD13	46:XO:34:GLN:HG2	1.86	0.57
27:Y0:42:ILE:HD11	27:Y0:48:TYR:HB2	1.87	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
2:YB:23:G:N2	2:YB:61:G:C2	2.73	0.57
4:YD:12:THR:HG22	4:YD:13:ARG:N	2.20	0.57
4:YD:181:ASP:C	4:YD:183:GLU:H	2.08	0.57
5:YE:147:LEU:CB	5:YE:186:VAL:HG23	2.35	0.57
1:YA:1275:A:C4	14:YN:16:HIS:HD2	2.23	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
32:QA:8:A:N6	35:QD:201:GLU:O	2.38	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
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
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
21:RU:13:LEU:HD12	21:RU:69:VAL:C	2.25	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:65:A:C5	32:XA:200:G:O2'	2.58	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:371:A:O2'	32:XA:372:C:H5'	2.05	0.57
32:XA:79:G:H2'	32:XA:80:A:C8	2.40	0.57
32:XA:858:G:O6	56:XA:1822:HOH:O	2.17	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
38:XG:30:MET:HE1	38:XG:33:GLY:HA2	1.87	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:113:ARG:HB3	43:XL:118:VAL:HB	1.86	0.57
43:XL:79:ILE:HD12	43:XL:96:THR:CG2	2.35	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
32:XA:1492:A:C8	1:YA:1913:A:H8	2.22	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
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
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
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:HG13	47:QP:36:VAL:O	2.05	0.56
50:QS:41:PRO:O	50:QS:44:ILE:HG13	2.04	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: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:2058:A:H5''	1:RA:2059:A:OP2	2.05	0.56
9:RI:126:ARG:CA	9:RI:129:GLU:HB2	2.30	0.56
12:RL:47:ARG:HG2	12:RL:47:ARG:NH2	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
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
48:XQ:22:VAL:HG21	48:XQ:58:VAL:HG21	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:466:A:P	29:Y2:34:ARG:HH21	2.27	0.56
1:YA:1044:C:O2	1:YA:1044:C:H2'	2.04	0.56
1:YA:819:A:OP2	1:YA:1187:G:N2	2.38	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
1:YA:308:G:C6	1:YA:309:A:C6	2.93	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
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
24:YX:19:HIS:C	24:YX:21:LEU:H	2.08	0.56
32:QA:1449:C:C2'	32:QA:1450:U:H5'	2.35	0.56
33:QB:70:GLY:HA2	33:QB:163:ILE:HG22	1.86	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
35:QD:116:LEU:C	35:QD:122:ILE:HD11	2.26	0.56
38:QG:112:ASP:HB2	38:QG:118:ARG:HG2	1.86	0.56
27:R0:35:GLU:OE1	27:R0:45:ASP:HB2	2.05	0.56
28:R1:47:ILE:H	28:R1:47:ILE:CD1	2.09	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
1:RA:142:A:O2'	1:RA:143:C:O5'	2.23	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:109:SER:O	7:RG:110:HIS:HB3	2.05	0.56
7:RG:8:VAL:HG12	7:RG:9:VAL:N	2.20	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
21:RU:42:LYS:N	21:RU:42:LYS:HD3	2.21	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
38:XG:117:LEU:HG	38:XG:121:ASN:ND2	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:XC:29:ALA:HB1	45:XN:64:ARG:NH1	2.20	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
1:YA:570:G:H2'	1:YA:571:U:H5'	1.87	0.56
3:YC:74:PRO:HA	3:YC:116:GLN:HG3	1.87	0.56
4:YD:137:SER:C	4:YD:138:LEU:HD22	2.25	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
32:QA:1108:G:H5''	34:QC:175:HIS:ND1	2.19	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
1:RA:1310:G:C2'	1:RA:1311:G:H5'	2.35	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
9:RI:74:PRO:O	9:RI:77:VAL:HG22	2.05	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
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
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
41:XJ:41:PRO:O	41:XJ:42:LEU:HB2	2.05	0.56
1:YA:242:G:C8	30:Y3:3:ILE:O	2.55	0.56
1:YA:1059:G:N1	1:YA:1088:A:H2	2.03	0.56
1:YA:111:A:C2	1:YA:112:U:C2	2.93	0.56
1:YA:1301:A:C4	1:YA:1303:G:N7	2.73	0.56
1:YA:1525:A:H2'	1:YA:1526:C:O4'	2.05	0.56
1:YA:120:U:O4	1:YA:177:G:C8	2.58	0.56
1:YA:1799:G:H8	3:YC:179:GLU:OE1	1.88	0.56
1:YA:676:A:H2	1:YA:2069:G:N3	2.02	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
1:YA:309:A:N3	1:YA:329:G:H1'	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:748:G:O2'	1:YA:749:A:H3'	2.04	0.56
3:YC:173:LEU:HD22	3:YC:181:ARG:O	2.04	0.56
3:YC:8:THR:O	3:YC:9:SER:HB3	2.05	0.56
10:YJ:97:PRO:C	10:YJ:99:ARG:H	2.08	0.56
23:YW:22:VAL:O	23:YW:23:LYS:HG3	2.05	0.56
32:QA:903:G:C5	32:QA:904:U:C5	2.93	0.56
33:QB:90:PHE:H	33:QB:149:GLY:HA2	1.70	0.56
33:QB:40:ILE:HG21	33:QB:201:GLY:CA	2.35	0.56
35:QD:113:ALA:O	35:QD:116:LEU:HB2	2.05	0.56
37:QF:92:THR:HG22	37:QF:93:LYS:N	2.20	0.56
28:R1:49:LYS:O	28:R1:50:GLU:HB3	2.04	0.56
1:RA:1327:A:H2'	1:RA:1328:A:O4'	2.05	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
3:RC:229:HIS:HD2	3:RC:246:PRO:HB3	1.69	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
11:RK:111:LYS:H	11:RK:111:LYS:CE	2.18	0.56
18:RR:9:GLY:C	18:RR:10:LYS:HD2	2.25	0.56
23:RW:39:GLN:O	23:RW:40:ARG:C	2.43	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
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: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:1734:G:H2'	1:YA:1735:A:C8	2.40	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:1651:G:N2	1:YA:2007:U:C2	2.72	0.56
1:YA:2725:A:C4	1:YA:2727:A:C8	2.93	0.56
1:YA:646:U:OP2	1:YA:646:U:H6	1.87	0.56
1:YA:972:A:C3'	1:YA:973:A:H5''	2.32	0.56
2:YB:78:A:C2	2:YB:99:A:C4	2.93	0.56
3:YC:144:GLU:HG3	3:YC:151:GLY:N	2.20	0.56
3:YC:196:ASN:O	3:YC:197:ALA:HB3	2.05	0.56
6:YF:11:VAL:O	6:YF:12:VAL:HB	2.04	0.56
6:YF:1:ALA:HA	6:YF:97:GLU:HB3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:YG:97:VAL:HG21	7:YG:124:CYS:H	1.71	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
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
32:QA:71:A:N7	32:QA:100:G:C6	2.73	0.56
33:QB:24:PRO:C	33:QB:26:MET:H	2.09	0.56
41:QJ:81:GLU:HA	41:QJ:84:VAL:HG12	1.87	0.56
41:QJ:53:ILE:HD11	45:QN:84:ARG:NH2	2.20	0.56
31:R4:9:LYS:O	31:R4:10:LEU:HD23	2.05	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
1:RA:278:A:C2	1:RA:362:A:C8	2.93	0.56
1:RA:34:U:H1'	1:RA:35:G:OP1	2.05	0.56
1:RA:560:C:O2	17:RQ:47:ARG:NH1	2.38	0.56
4:RD:169:ARG:C	4:RD:170:VAL:CG1	2.74	0.56
5:RE:146:VAL:HA	5:RE:185:LYS:O	2.05	0.56
15:RO:75:GLY:HA2	15:RO:106:LEU:CD1	2.35	0.56
15:RO:24:THR:HG22	15:RO:42:PRO:HD3	1.88	0.56
32:XA:1448:C:O2'	32:XA:1449:C:C6	2.58	0.56
32:XA:423:G:N3	32:XA:423:G:H2'	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
34:XC:76:ILE:HA	34:XC:83:VAL:CG1	2.34	0.56
1:YA:1409:U:H6	1:YA:1409:U:O5'	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
1:YA:265:A:N7	1:YA:427:U:O2'	2.37	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
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
9:YI:95:ASP:CG	9:YI:96:LYS:H	2.09	0.56
15:YO:62:LEU:HD11	15:YO:65:THR:N	2.20	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:YX:48:LEU:O	24:YX:50:VAL:HG13	2.05	0.56
32:QA:1125:U:OP2	32:QA:1145:A:N6	2.39	0.56
32:QA:418:C:N4	56:QA:1718:HOH:O	2.39	0.56
32:QA:862:C:C2'	32:QA:863:U:H5'	2.35	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
38:QG:34:LYS:HB3	38:QG:37:THR:HG23	1.88	0.56
40:QI:6:TYR:CE2	40:QI:17:ARG:HB2	2.41	0.56
32:QA:675:A:H1'	42:QK:117:HIS:CD2	2.41	0.56
48:QQ:6:THR:C	48:QQ:7:LEU:HD12	2.26	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:174:LYS:HD2	7:RG:174:LYS:O	2.05	0.56
16:RP:33:GLU:C	16:RP:33:GLU:OE1	2.44	0.56
21:RU:70:ALA:CB	21:RU:79:ALA:HB1	2.35	0.56
32:XA:1191:A:H5''	34:XC:3:LYS:HE3	1.87	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
38:XG:24:LYS:O	38:XG:28:ILE:HG12	2.05	0.56
39:XH:100:ILE:HD12	39:XH:100:ILE:C	2.25	0.56
41:XJ:15:HIS:ND1	41:XJ:15:HIS:N	2.53	0.56
43:XL:50:LYS:HD2	43:XL:50:LYS:N	2.19	0.56
43:XL:82:ARG:NH1	43:XL:82:ARG:HG2	2.19	0.56
1:YA:1651:G:C2	1:YA:2007:U:C2	2.94	0.56
1:YA:2135:A:O2'	1:YA:2136:G:O4'	2.23	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: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
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:85:G:OP2	21:YU:6:ARG:HB2	2.06	0.56
1:YA:2093:G:H4'	8:YH:24:GLY:HA3	1.88	0.56
10:YJ:2:LYS:NZ	10:YJ:2:LYS:HB2	2.21	0.56
2:YB:90:C:H4'	13:YM:38:ARG:NH1	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
14:YN:97:ILE:HD11	14:YN:99:LYS:HZ3	1.71	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
1:YA:2336:A:C8	23:YW:40:ARG:NH2	2.73	0.56
1:YA:2232:C:P	24:YX:26:ARG:NH1	2.79	0.56
32:QA:1451:U:O2	32:QA:1451:U:H2'	2.04	0.56
35:QD:105:GLY:HA3	35:QD:161:ALA:CB	2.35	0.56
36:QE:80:LEU:HD12	36:QE:146:MET:HE1	1.86	0.56
40:QI:8:THR:O	40:QI:81:GLY:HA3	2.06	0.56
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
42:QK:109:ILE:HB	52:QU:5:VAL:CG2	2.36	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
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
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
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: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
32:XA:245:U:H6	32:XA:245:U:C5'	2.16	0.56
32:XA:328:C:C2'	32:XA:328:C:O2	2.53	0.56
32:XA:636:U:H2'	32:XA:637:C:C6	2.40	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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2345:G:C4	1:YA:2347:C:H5	2.23	0.56
1:YA:2345:G:C6	1:YA:2381:A:C6	2.94	0.56
1:YA:2391:G:HO2'	1:YA:2392:A:P	2.28	0.56
1:YA:2583:G:C2'	1:YA:2584:U:H5'	2.36	0.56
1:YA:526:A:N6	1:YA:2626:C:H4'	2.21	0.56
1:YA:612:G:N2	1:YA:614:A:HO2'	2.04	0.56
2:YB:116:G:H2'	2:YB:117:G:C8	2.40	0.56
4:YD:105:LYS:HA	4:YD:177:VAL:HG22	1.88	0.56
4:YD:22:ILE:HD12	4:YD:190:LYS:HD2	1.88	0.56
7:YG:167:VAL:HG23	7:YG:168:VAL:N	2.20	0.56
2:YB:8:C:O2'	15:YO:40:ILE:HD13	2.06	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
46:QO:86:LEU:C	46:QO:88:ARG:H	2.08	0.56
47:QP:18:GLN:HE21	47:QP:35:ARG:HD2	1.70	0.56
52:QU:8:ASN:HD22	52:QU:8:ASN:N	2.03	0.56
1:RA:469:G:O6	29:R2:37:LYS:HE2	2.06	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
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
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
32:XA:1086:U:H6	32:XA:1086:U:O5'	1.88	0.56
32:XA:1097:C:H2'	32:XA:1098:C:H6	1.71	0.56
32:XA:212:G:O2'	32:XA:213:G:OP2	2.21	0.56
32:XA:266:G:HO2'	32:XA:267:C:H3'	1.70	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
34:XC:166:TRP:O	34:XC:167:TYR:HB2	2.05	0.56
36:XE:131:ASN:C	36:XE:135:VAL:HG23	2.25	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1731:G:H4'	1:YA:1732:C:OP1	2.03	0.56
1:YA:216:A:O2'	1:YA:217:A:C8	2.20	0.56
1:YA:2212:A:N7	1:YA:2214:C:N4	2.54	0.56
1:YA:226:A:H2	1:YA:230:G:O6	1.88	0.56
1:YA:2314:A:C2	1:YA:2315:G:C5	2.93	0.56
2:YB:67:G:HO2'	2:YB:68:C:H6	1.53	0.56
1:YA:2314:A:H5''	6:YF:34:THR:OG1	2.06	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
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:168:GLU:O	33:QB:169:HIS:C	2.43	0.56
33:QB:13:VAL:HG23	33:QB:207:ARG:NH2	2.19	0.56
35:QD:28:ASP:OD1	35:QD:33:ILE:HG12	2.05	0.56
40:QI:26:LYS:C	40:QI:27:ILE:HD12	2.25	0.56
48:QQ:12:VAL:HG12	48:QQ:21:VAL:O	2.06	0.56
1:RA:1032:A:H1'	31:R4:23:ILE:HD13	1.88	0.56
5:RE:152:GLU:OE2	5:RE:152:GLU:HA	2.06	0.56
1:RA:1063:G:OP1	9:RI:76:ALA:HB3	2.06	0.56
18:RR:27:ILE:HG13	18:RR:33:VAL:HG12	1.86	0.56
18:RR:49:ILE:C	18:RR:51:VAL:O	2.44	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:XA:1169:A:H2'	32:XA:1170:A:C8	2.39	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
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
28:Y1:46:VAL:HG22	28:Y1:47:ILE:H	1.71	0.56
1:YA:677:A:O2'	1:YA:2071:A:H5'	2.06	0.56
1:YA:221:A:C2	1:YA:233:A:C5	2.94	0.56
1:YA:2403:C:O2'	1:YA:2404:U:H5'	2.06	0.56
1:YA:453:A:N3	1:YA:457:A:O2'	2.39	0.56
1:YA:507:A:H2'	1:YA:507:A:OP2	2.05	0.56
1:YA:59:U:H1'	1:YA:73:A:O2'	2.05	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
1:YA:1993:U:H4'	4:YD:133:THR:HG22	1.87	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:YG:94:ARG:NH2	7:YG:111:PRO:HB3	2.20	0.56
32:QA:1239:A:N6	32:QA:1299:A:N6	2.47	0.56
33:QB:163:ILE:CG2	33:QB:164:ASP:H	2.14	0.56
32:QA:1057:G:O3'	34:QC:196:GLY:HA3	2.05	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
50:QS:19:GLU:OE2	50:QS:19:GLU:HA	2.06	0.56
52:QU:7:GLU:HB2	52:QU:11:PHE:CE1	2.40	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:225:C:H2'	1:RA:226:A:O4'	2.06	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
1:RA:39:G:H2'	1:RA:40:U:H6	1.70	0.56
6:RF:142:TYR:O	6:RF:145:VAL:HG22	2.06	0.56
6:RF:39:VAL:HG11	6:RF:49:LEU:HD13	1.88	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:XA:982:U:H4'	32:XA:983:A:C5'	2.34	0.56
33:XB:20:ARG:C	33:XB:21:TYR:HD1	2.09	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: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:261:G:H2'	1:YA:262:A:H8	1.71	0.56
1:YA:2638:G:H1'	1:YA:2778:A:N6	2.21	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
5:YE:59:PRO:HB2	5:YE:67:ARG:HH22	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:YI:118:GLY:O	9:YI:119:ALA:HB3	2.05	0.56
9:YI:74:PRO:HB2	9:YI:77:VAL:CG2	2.30	0.56
12:YL:18:ARG:HA	12:YL:18:ARG:HE	1.71	0.56
17:YQ:10:ARG:O	17:YQ:14:LYS:HB2	2.06	0.56
17:YQ:4:LYS:HE3	17:YQ:7:VAL:H	1.70	0.56
22:YV:56:PHE:C	22:YV:58:SER:H	2.09	0.56
26:YZ:7:THR:O	26:YZ:54:VAL:HA	2.06	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
32:QA:87:C:H2'	32:QA:88:U:C6	2.40	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
39:QH:85:TYR:CE2	39:QH:123:GLU:HB2	2.41	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
12:RL:66:PHE:CD1	12:RL:66:PHE:C	2.77	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
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
35:XD:66:VAL:HG22	35:XD:96:ARG:HH11	1.68	0.56
38:XG:100:MET:HA	38:XG:103:ILE:HB	1.87	0.56
38:XG:89:GLU:O	38:XG:90:VAL:HG13	2.06	0.56
47:XP:44:SER:HB2	47:XP:46:LYS:CG	2.36	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:2415:G:C5	1:YA:2416:C:C4	2.94	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:83:A:N6	1:YA:101:A:C5'	2.69	0.56
4:YD:110:THR:HA	4:YD:171:THR:HA	1.86	0.56
7:YG:120:ILE:HD13	7:YG:120:ILE:O	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:QA:1261:A:C2	32:QA:1274:A:C2	2.94	0.55
32:QA:968:A:H4'	32:QA:969:A:OP2	2.06	0.55
32:QA:546:A:P	35:QD:68:GLU:HB2	2.46	0.55
44:QM:52:ILE:O	44:QM:55:LEU:HB2	2.05	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
1:RA:528:A:H3'	1:RA:528:A:H8	1.70	0.55
5:RE:7:ASP:O	5:RE:9:GLN:N	2.40	0.55
23:RW:35:ILE:O	23:RW:37:VAL:N	2.39	0.55
23:RW:50:VAL:C	23:RW:52:CYS:H	2.09	0.55
32:XA:1309:G:H2'	32:XA:1310:G:C8	2.40	0.55
39:XH:52:GLY:HA3	39:XH:56:PRO:HA	1.86	0.55
44:XM:76:ILE:O	44:XM:76:ILE:HG22	2.06	0.55
41:XJ:63:ASP:OD2	45:XN:84:ARG:NH1	2.39	0.55
52:XU:35:GLU:HG3	52:XU:36:PHE:N	2.20	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
32:XA:1409:C:H5'	1:YA:1916:A:N1	2.21	0.55
1:YA:1663:G:C6	1:YA:1998:A:N6	2.74	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
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:73:A:H8	1:YA:73:A:O5'	1.89	0.55
1:YA:811:U:C5'	1:YA:812:C:OP2	2.51	0.55
1:YA:1797:G:H4'	3:YC:254:LYS:O	2.06	0.55
13:YM:17:ASN:OD1	13:YM:95:LEU:HB3	2.06	0.55
4:YD:15:PHE:CE2	16:YP:77:SER:HA	2.40	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
32:QA:112:G:C6	32:QA:330:C:N4	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:QA:376:G:H2'	32:QA:377:G:H8	1.70	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
1:RA:574:A:H4'	1:RA:575:A:O5'	2.06	0.55
4:RD:110:THR:HG23	4:RD:171:THR:HG22	1.88	0.55
1:RA:675:A:H4'	5:RE:62:GLN:NE2	2.20	0.55
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:CD2	9:RI:61:TYR:N	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
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
23:RW:51:GLY:O	23:RW:52:CYS:C	2.45	0.55
32:XA:1363:A:C5	32:XA:1365:G:C6	2.94	0.55
32:XA:512:U:O2'	32:XA:513:C:O5'	2.23	0.55
32:XA:91:U:C4	32:XA:92:U:C4	2.94	0.55
36:XE:95:MET:HB3	36:XE:124:ALA:HB2	1.88	0.55
39:XH:41:GLU:C	39:XH:43:GLY:H	2.09	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
29:Y2:43:THR:HG23	29:Y2:45:SER:OG	2.05	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:145:C:H6	1:YA:145:C:O5'	1.89	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:YA:855:G:O2'	23:YW:23:LYS:HD3	2.07	0.55
32:QA:71:A:N6	32:QA:100:G:N7	2.54	0.55
32:QA:1471:U:O2'	32:QA:1472:U:H5'	2.07	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
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
49:QR:22:TYR:CZ	49:QR:23:LYS:HE3	2.41	0.55
28:R1:8:ILE:CG2	28:R1:9:LYS:N	2.69	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
3:RC:165:ALA:HB3	3:RC:172:THR:HG23	1.89	0.55
4:RD:97:SER:H	4:RD:99:GLU:CD	2.10	0.55
1:RA:1248:G:OP2	5:RE:44:ARG:NH1	2.40	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
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
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
32:XA:1280:A:H5''	41:XJ:43:PRO:CG	2.36	0.55
52:XU:33:ARG:CZ	52:XU:34:ARG:HD3	2.36	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:503:A:N3	1:YA:505:A:H2'	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:571:U:C5	1:YA:575:A:C6	2.94	0.55
2:YB:58:A:C8	2:YB:59:A:N7	2.75	0.55
3:YC:129:LEU:HB2	3:YC:130:PRO:HD2	1.87	0.55
3:YC:71:ASP:O	3:YC:73:ILE:HG12	2.07	0.55
1:YA:2657:A:O3'	7:YG:159:LYS:NZ	2.40	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
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
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
33:QB:138:ARG:HG3	33:QB:139:GLU:N	2.21	0.55
33:QB:71:THR:HG22	33:QB:72:LYS:N	2.20	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
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:QA:834:U:OP1	49:QR:48:ALA:HB2	2.06	0.55
42:QK:126:ARG:CA	52:QU:33:ARG:HH12	2.19	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
3:RC:20:ASN:C	3:RC:20:ASN:HD22	2.10	0.55
5:RE:28:VAL:O	5:RE:32:VAL:HG13	2.07	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: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
32:XA:270:A:H2'	32:XA:271:C:C6	2.40	0.55
32:XA:33:A:H2'	32:XA:34:C:C6	2.41	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
32:XA:796:C:H4'	42:XK:126:ARG:NH2	2.20	0.55
32:XA:35:G:H21	43:XL:114:SER:HB3	1.70	0.55
44:XM:52:ILE:C	44:XM:54:THR:H	2.09	0.55
28:Y1:34:GLU:HG3	28:Y1:49:LYS:HB2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:YA:1965:C:H5''	1:YA:1966:A:H2'	1.89	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
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
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
1:YA:2574:G:O2'	4:YD:148:GLN:HB2	2.06	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:O	14:YN:70:THR:HG22	2.06	0.55
14:YN:82:GLU:C	14:YN:85:PRO:HD2	2.27	0.55
40:QI:24:ASN:HA	40:QI:58:GLU:O	2.06	0.55
42:QK:13:LYS:O	42:QK:14:GLN:HB3	2.06	0.55
50:QS:3:SER:HB2	50:QS:4:LEU:HD12	1.89	0.55
29:R2:12:ARG:NH2	29:R2:12:ARG:HB2	2.21	0.55
30:R3:60:CYS:O	30:R3:61:LEU:HD23	2.07	0.55
1:RA:161:A:C3'	1:RA:162:U:H5''	2.32	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:2308:G:N7	6:RF:76:PHE:CE2	2.74	0.55
1:RA:2262:U:H4'	1:RA:2328:A:C2	2.42	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
1:RA:322:A:H3'	5:RE:163:ASN:HD21	1.72	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
18:RR:28:ALA:O	18:RR:63:VAL:HG21	2.06	0.55
32:XA:664:G:N2	32:XA:666:G:C8	2.74	0.55
32:XA:93:U:C2	32:XA:95:C:N4	2.74	0.55
33:XB:133:ALA:HA	33:XB:137:THR:CG2	2.36	0.55
34:XC:133:MET:O	34:XC:137:VAL:HG23	2.07	0.55
34:XC:35:ASP:OD1	34:XC:56:ILE:HG21	2.07	0.55
37:XF:6:ILE:HD12	37:XF:6:ILE:H	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:XI:44:ARG:HH21	40:XI:48:ARG:HH11	1.50	0.55
48:XQ:19:SER:HB3	48:XQ:70:LYS:NZ	2.20	0.55
49:XR:19:GLU:CD	49:XR:20:ILE:N	2.60	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
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: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
1:YA:299:A:C2	1:YA:319:G:N3	2.75	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
32:QA:1190:G:OP1	34:QC:4:VAL:HG12	2.06	0.55
32:QA:1305:G:HO2'	32:QA:1306:A:H8	1.53	0.55
32:QA:1329:A:H5''	44:QM:25:GLY:N	2.20	0.55
32:QA:367:U:OP1	32:QA:395:C:H1'	2.07	0.55
32:QA:486:U:C5'	32:QA:486:U:C6	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
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
30:R3:31:ILE:HG13	30:R3:31:ILE:O	2.05	0.55
1:RA:1009:A:O5'	1:RA:1009:A:H8	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:250:G:H2'	1:RA:251:A:C8	2.42	0.55
1:RA:2520:C:C6	1:RA:2567:G:H1'	2.41	0.55
1:RA:975:A:H1'	1:RA:990:A:C2	2.42	0.55
10:RJ:43:GLU:O	10:RJ:45:THR:CG2	2.54	0.55
14:RN:75:ILE:HD12	14:RN:75:ILE:C	2.27	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
32:XA:239:U:H6	32:XA:239:U:H5'	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:72:A:N6	32:XA:99:C:H1'	2.22	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
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
40:X1:38:PHE:CE2	40:X1:71: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: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
1:YA:191:A:H2'	1:YA:192:C:C6	2.42	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
6:YF:103:ILE:O	6:YF:103:ILE:HG22	2.07	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
32:QA:1285:A:H5'	32:QA:1286:U:O4	2.06	0.55
32:QA:138:G:O2'	32:QA:139:A:H5'	2.07	0.55
32:QA:71:A:C2	32:QA:72:A:C8	2.94	0.55
34:QC:156:LEU:C	34:QC:158:GLY:H	2.09	0.55
32:QA:1112:C:N4	34:QC:177:LEU:HD22	2.22	0.55
39:QH:49:LYS:HB3	39:QH:51:GLU:OE2	2.06	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:98:VAL:O	4:RD:100:LEU:N	2.39	0.55
1:RA:615:U:C4	5:RE:35:TYR:CE1	2.94	0.55
7:RG:162:ARG:NH1	7:RG:168:VAL:HG21	2.22	0.55
9:RI:49:GLU:HG2	9:RI:50:LYS:N	2.22	0.55
13:RM:13:HIS:O	13:RM:14:LYS:HB2	2.06	0.55
13:RM:1:MET:CE	13:RM:2:LEU:H	2.19	0.55
13:RM:42:THR:CG2	13:RM:93:VAL:HG23	2.31	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:RN:103:ARG:HD3	14:RN:110:MET:CE	2.37	0.55
17:RQ:86:SER:O	17:RQ:87:VAL:C	2.45	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: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
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
33:XB:49:PHE:O	33:XB:53:LEU:N	2.31	0.55
35:XD:29:THR:HG22	35:XD:30:LYS:HD3	1.88	0.55
44:XM:105:ALA:HB1	44:XM:109:LYS:HB2	1.89	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
27:Y0:37:HIS:CD2	27:Y0:43:THR:HG22	2.42	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:C8	1:YA:1635:A:H5'	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
1:YA:457:A:N1	1:YA:470:A:H5''	2.21	0.55
5:YE:130:LYS:HG3	5:YE:133:LEU:HD13	1.88	0.55
5:YE:44:ARG:HB2	5:YE:88:ARG:O	2.07	0.55
14:YN:14:SER:C	14:YN:16:HIS:H	2.08	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
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
52:QU:24:LYS:CG	52:QU:25:ALA:H	2.18	0.55
1:RA:1171:G:C6	1:RA:1172:C:C4	2.95	0.55
1:RA:172:A:O2'	1:RA:173:A:H5'	2.06	0.55
1:RA:635:C:H3'	12:RL:109:LYS:HZ1	1.71	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:784:G:O6	3:RC:227:VAL:HG11	2.06	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: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
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
34:XC:26:LYS:HA	34:XC:26:LYS:HE3	1.88	0.55
39:XH:114:ALA:O	39:XH:117:GLN:HB3	2.07	0.55
39:XH:89:ASP:N	39:XH:89:ASP:OD1	2.38	0.55
47:XP:12:LYS:HG2	47:XP:13:LYS:HG2	1.88	0.55
30:Y3:41:ARG:HD2	30:Y3:41:ARG:O	2.06	0.55
1:YA:116:C:H2'	1:YA:117:G:H8	1.72	0.55
1:YA:1593:A:C5	1:YA:1594:U:C4	2.95	0.55
1:YA:1340:U:C4	1:YA:1603:A:C8	2.95	0.55
1:YA:2748:A:H1'	7:YG:66:THR:CG2	2.31	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:82:U:H5''	1:YA:296:U:H5''	1.89	0.55
1:YA:61:C:N3	1:YA:94:A:C2	2.75	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
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
40:QI:9:GLY:HA2	40:QI:80:HIS:HD2	1.71	0.55
32:QA:537:G:H5''	43:QL:109:ARG:HH12	1.72	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
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:370:G:OP2	56:RA:3560:HOH:O	2.18	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
9:RI:109:ALA:HB1	9:RI:124:MET:HE1	1.89	0.55
1:RA:2820:A:OP1	14:RN:2:ARG:NH2	2.39	0.55
16:RP:67:GLU:HG3	16:RP:68:GLY:H	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:RS:73:LYS:CB	19:RS:106:VAL:HB	2.36	0.55
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:O2	32:XA:1303:C:H2'	2.07	0.55
32:XA:1331:G:HO2'	32:XA:1332:A:H8	1.53	0.55
32:XA:182:A:O2'	32:XA:183:C:H2'	2.06	0.55
32:XA:71:A:C6	32:XA:100:G:C5	2.95	0.55
32:XA:752:G:HO2'	32:XA:753:A:P	2.30	0.55
32:XA:920:U:O2'	32:XA:921:U:H5'	2.07	0.55
33:XB:156:LEU:HD23	33:XB:156:LEU:H	1.71	0.55
32:XA:437:U:H4'	35:XD:151:GLN:OE1	2.07	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:2015:A:C4	27:Y0:2:VAL:HG11	2.42	0.55
1:YA:1438:U:O2'	1:YA:1439:A:H5'	2.06	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: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
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
4:YD:184:ARG:HH22	16:YP:6:GLN:NE2	1.97	0.55
4:YD:8:LYS:HB2	4:YD:201:LEU:HD11	1.89	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:70:ILE:N	22:YV:70:ILE:HD13	2.22	0.55
22:YV:44:HIS:CE1	22:YV:85:LYS:HD3	2.42	0.55
32:QA:1337:G:H5''	32:QA:1338:G:OP1	2.06	0.55
32:QA:4:U:H2'	32:QA:4:U:O2	2.06	0.55
35:QD:151:GLN:O	35:QD:152:SER:C	2.45	0.55
42:QK:42:GLY:HA3	42:QK:73:VAL:CG1	2.37	0.55
31:R4:37:GLN:HG2	31:R4:37:GLN:O	2.06	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:RC:131:MET:HA	3:RC:134:ILE:CD1	2.37	0.55
3:RC:28:PRO:HG2	3:RC:33:LEU:HD11	1.88	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
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
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
47:XP:46:LYS:H	47:XP:46:LYS:HZ2	1.55	0.55
51:XT:3:ILE:O	51:XT:4:LYS:HG2	2.07	0.55
1:YA:1197:G:H2'	1:YA:1198:U:C6	2.41	0.55
1:YA:1240:U:H2'	1:YA:1240:U:O2	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: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
3:YC:147:PRO:HA	3:YC:187:CYS:HB3	1.89	0.55
5:YE:162:ARG:C	5:YE:164:LEU:H	2.10	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
1:YA:2882:A:H5''	14:YN:96:ARG:HD3	1.89	0.55
22:YV:56:PHE:CE1	22:YV:61:LEU:HD13	2.42	0.55
24:YX:44:ARG:NH1	24:YX:44:ARG:HB3	2.22	0.55
32:QA:1468:A:C3'	32:QA:1469:C:H5''	2.37	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
36:QE:81:GLN:HE22	36:QE:146:MET:HE1	1.71	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
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:17:G:H2'	1:RA:18:U:H6	1.72	0.54
1:RA:2383:G:H2'	1:RA:2384:U:C6	2.42	0.54
3:RC:199:HIS:O	3:RC:202:ARG:HG3	2.06	0.54
3:RC:29:PHE:CE2	3:RC:31:PRO:HG2	2.42	0.54
5:RE:46:GLN:HG3	5:RE:87:ALA:N	2.19	0.54
8:RH:67:ALA:C	8:RH:69:ALA:H	2.09	0.54
23:RW:24:ARG:HD3	23:RW:65:LYS:HE2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:RW:28:GLU:HG3	23:RW:29:SER:H	1.71	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
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
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
32:XA:8:A:C5	35:XD:205:LYS:HG3	2.41	0.54
40:XI:35:GLU:HA	40:XI:39:GLY:CA	2.37	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:H3'	1:YA:1394:U:H6	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: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
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
44:QM:3:ILE:O	44:QM:5:GLY:N	2.40	0.54
43:QL:6:LEU:HB3	48:QQ:33:TYR:CE1	2.42	0.54
51:QT:55:PRO:O	51:QT:59:ARG:CB	2.55	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:132:LYS:O	5:RE:135:ALA:HB3	2.07	0.54
8:RH:18:GLN:HG3	8:RH:18:GLN:O	2.06	0.54
9:RI:46:ASP:HA	9:RI:50:LYS:HD2	1.88	0.54
18:RR:27:ILE:HD13	18:RR:27:ILE:H	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:RR:29:THR:O	18:RR:29:THR:HG22	2.07	0.54
19:RS:73:LYS:HA	19:RS:73:LYS:CE	2.33	0.54
25:RY:5:GLU:O	25:RY:8:GLU:HB2	2.07	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
32:XA:295:C:H2'	32:XA:296:U:H6	1.71	0.54
32:XA:45:G:O2'	32:XA:46:G:H5'	2.08	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: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:C2'	1:YA:1493:C:O2	2.54	0.54
1:YA:1519:G:C6	1:YA:1520:U:N3	2.76	0.54
1:YA:227:A:C4'	1:YA:228:C:OP1	2.42	0.54
1:YA:2586:U:H2'	1:YA:2587:A:O4'	2.07	0.54
1:YA:82:U:H2'	1:YA:83:A:O4'	2.06	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:38:ARG:O	13:YM:126:ILE:HG21	2.07	0.54
13:YM:34:LYS:HB3	13:YM:129:THR:HG22	1.89	0.54
1:YA:17:G:H4'	17:YQ:24:TYR:CE1	2.42	0.54
25:YY:28:LEU:O	25:YY:28:LEU:HD22	2.07	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
32:QA:975:A:H4'	32:QA:976:G:H5''	1.85	0.54
33:QB:86:CYS:HB2	33:QB:88:GLN:HG3	1.89	0.54
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
30:R3:31:ILE:HD11	30:R3:34:LYS:CD	2.24	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
6:RF:84:ILE:HG13	6:RF:84:ILE:O	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:RI:33:ASN:ND2	9:RI:64:ARG:HH22	2.00	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
10:RJ:44:TYR:HA	17:RQ:59:LEU:CD2	2.37	0.54
17:RQ:93:ILE:CG2	17:RQ:94:LEU:N	2.71	0.54
17:RQ:91:ARG:HD3	18:RR:11:GLN:CG	2.38	0.54
32:XA:1133:G:C2	32:XA:1142:G:C5	2.94	0.54
32:XA:1054:C:OP2	32:XA:1197:A:OP2	2.26	0.54
32:XA:977:A:O2'	32:XA:1224:U:O4	2.20	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
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: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
1:YA:288:U:H2'	1:YA:289:G:C8	2.42	0.54
4:YD:173:GLN:HE21	4:YD:173:GLN:HA	1.72	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
10:YJ:4:PHE:HB3	17:YQ:63:ARG:HH22	1.72	0.54
10:YJ:4:PHE:HB3	17:YQ:63:ARG:NH2	2.23	0.54
18:YR:10:LYS:N	18:YR:10:LYS:HD2	2.22	0.54
32:QA:1015:G:H1'	32:QA:1218:C:O2'	2.07	0.54
32:QA:1386:G:H2'	32:QA:1387:G:H8	1.70	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
33:QB:53:LEU:HA	33:QB:56:LEU:HB3	1.88	0.54
1:RA:1062:G:O2'	1:RA:1063:G:O5'	2.25	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
1:RA:514:A:H1'	1:RA:581:C:O2'	2.08	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1203:U:H1'	12:RL:4:ASN:HB3	1.90	0.54
23:RW:11:ASN:HD22	23:RW:12:GLY:N	2.06	0.54
32:XA:533:A:OP1	56:XA:1852:HOH:O	2.17	0.54
32:XA:981:U:H5	32:XA:982:U:HO2'	1.56	0.54
34:XC:126:ARG:CA	34:XC:126:ARG:HE	2.19	0.54
34:XC:139:ASN:HB3	34:XC:142:ARG:NH2	2.23	0.54
37:XF:38:ARG:HD2	37:XF:63:ASN:OD1	2.08	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: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
1:YA:357:C:H2'	1:YA:358:U:H6	1.71	0.54
1:YA:38:A:C2	1:YA:442:G:C6	2.94	0.54
1:YA:417:C:H6	1:YA:417:C:O5'	1.90	0.54
1:YA:445:C:O2'	1:YA:449:A:N3	2.41	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
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
18:YR:97:LYS:HG2	18:YR:97:LYS:O	2.07	0.54
24:YX:70:LEU:O	24:YX:74:GLY:N	2.39	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
39:QH:78:SER:OG	39:QH:83:ARG:HA	2.08	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
1:RA:1415:U:C2'	1:RA:1415:U:O2	2.55	0.54
1:RA:2511:U:O4	1:RA:2575:C:N3	2.41	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
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:O	6:RF:66:ILE:HG13	2.07	0.54
19:RS:73:LYS:CA	19:RS:73:LYS:HE3	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RZ:3:THR:HA	26:RZ:37:ARG:O	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:68:G:H5'	32:XA:171:A:O2'	2.07	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:112:ARG:O	33:XB:112:ARG:HG3	2.08	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
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
1:YA:315:G:H2'	1:YA:316:C:O4'	2.08	0.54
1:YA:343:C:O2	1:YA:343:C:H2'	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:78:U:H2'	1:YA:79:C:H6	1.71	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
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
44:QM:94:LEU:HB3	44:QM:95:PRO:HD2	1.88	0.54
28:R1:31:GLU:O	28:R1:31:GLU:HG2	2.07	0.54
31:R4:7:VAL:O	31:R4:8:LYS:HB2	2.08	0.54
1:RA:1433:A:H2'	1:RA:1434:A:O4'	2.08	0.54
1:RA:2327:A:H2'	1:RA:2328:A:C8	2.42	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
11:RK:34:GLY:O	11:RK:35:VAL:C	2.45	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
19:RS:107:VAL:HG12	19:RS:107:VAL:O	2.06	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
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: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:182:A:H2'	1:YA:183:C:C6	2.43	0.54
1:YA:563:A:C4	1:YA:2018:G:C2	2.96	0.54
1:YA:201:C:C5	1:YA:202:U:C5	2.95	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
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: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
6:YF:105:ILE:C	6:YF:108:PRO:HD2	2.27	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:N	14:YN:94:TYR:CD1	2.72	0.54
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
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:106:ALA:CB	36:QE:124:ALA:HB3	2.38	0.54
36:QE:13:LYS:HD3	36:QE:115:GLU:OE2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
1:RA:983:A:C6	1:RA:984:A:C2	2.96	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
1:RA:558:U:H5''	10:RJ:111:LYS:HE3	1.90	0.54
10:RJ:54:ILE:HD12	10:RJ:55:ILE:N	2.23	0.54
11:RK:58:LEU:N	11:RK:58:LEU:HD23	2.22	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
32:XA:197:A:C6	32:XA:221:C:H4'	2.43	0.54
38:XG:128:GLU:HG3	38:XG:130:LYS:H	1.73	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
42:XK:74:LYS:HA	42:XK:78:ILE:CD1	2.29	0.54
1:YA:104:A:N7	1:YA:105:C:C4	2.75	0.54
1:YA:1166:G:N2	1:YA:1184:U:H1'	2.23	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
1:YA:545:U:H2'	1:YA:547:A:OP1	2.07	0.54
1:YA:81:G:H2'	1:YA:82:U:C6	2.43	0.54
4:YD:148:GLN:CG	4:YD:152:PRO:HG2	2.38	0.54
4:YD:27:ILE:HG12	4:YD:201:LEU:HD12	1.90	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
1:YA:1190:G:OP1	12:YL:32:GLY:HA2	2.08	0.54
19:YS:79:GLY:HA3	19:YS:100:THR:OG1	2.07	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
32:QA:89:U:O2'	32:QA:90:C:C5'	2.55	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
35:QD:75:TYR:C	35:QD:75:TYR:CD1	2.81	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:QF:85:ILE:O	37:QF:86:ARG:C	2.45	0.54
43:QL:115:LYS:O	43:QL:116:TYR:HB2	2.07	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
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:H4'	1:RA:1913:A:OP1	2.08	0.54
1:RA:511:U:C5	1:RA:512:G:C5	2.95	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:XA:1072:G:C6	32:XA:1073:U:C4	2.96	0.54
32:XA:991:U:C5	32:XA:1212:U:H1'	2.43	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
33:XB:137:THR:O	33:XB:140:LEU:HB3	2.07	0.54
34:XC:125:ARG:HG3	34:XC:125:ARG:HH11	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
44:XM:53:ASP:HA	44:XM:56:ARG:CZ	2.38	0.54
29:Y2:28:ARG:O	29:Y2:30:VAL:N	2.41	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
32:QA:1053:G:O6	32:QA:1199:U:H2'	2.08	0.54
32:QA:1054:C:O2	32:QA:1054:C:O4'	2.26	0.54
32:QA:1361:G:C2'	32:QA:1362:A:H5''	2.38	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
40:QI:128:LYS:CD	40:QI:129:ARG:H	2.15	0.54
46:QO:23:SER:O	46:QO:24:THR:C	2.46	0.54
42:QK:108:ASN:CB	52:QU:6:ARG:HG2	2.37	0.54
1:RA:1419:A:C6	1:RA:1421:G:C4	2.96	0.54
1:RA:17:G:H2'	1:RA:18:U:C6	2.43	0.54
1:RA:1936:A:H2	1:RA:1943:U:C4	2.25	0.54
1:RA:528:A:H2	1:RA:2043:C:H5'	1.73	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
4:RD:42:ASN:HD22	4:RD:42:ASN:C	2.11	0.54
7:RG:104:LEU:HB2	7:RG:112:VAL:HG21	1.87	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
32:XA:1387:G:C6	32:XA:1388:C:N4	2.75	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
33:XB:20:ARG:HA	33:XB:20:ARG:HE	1.72	0.54
42:XK:106:ILE:O	42:XK:106:ILE:HG12	2.08	0.54
42:XK:27:ASN:O	42:XK:28:ASN:HB2	2.07	0.54
48:XQ:23:ALA:C	48:XQ:24:ILE:HD12	2.28	0.54
52:XU:25:ALA:O	52:XU:29:ALA:N	2.39	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:141:G:H2'	1:YA:142:A:O4'	2.08	0.54
1:YA:1536:C:C2	1:YA:1536:C:OP2	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
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:95:A:O2'	25:YY:41:HIS:CD2	2.60	0.54
2:YB:63:C:H2'	2:YB:63:C:O2	2.08	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
15:YO:117:PHE:CD2	15:YO:117:PHE:C	2.81	0.54
16:YP:102:ARG:HD2	16:YP:106:ALA:O	2.06	0.54
1:YA:1391:U:H4'	20:YT:19:LYS:HZ1	1.71	0.54
21:YU:9:GLU:OE1	21:YU:23:LYS:HA	2.07	0.54
32:QA:1084:G:C5	32:QA:1085:U:C4	2.96	0.54
32:QA:114:U:O2'	32:QA:115:G:H5'	2.08	0.54
32:QA:1381:U:HO2'	32:QA:1382:C:H6	1.52	0.54
32:QA:212:G:H2'	32:QA:213:G:C8	2.42	0.54
32:QA:71:A:O2'	32:QA:72:A:C5'	2.51	0.54
35:QD:190:LEU:O	35:QD:190:LEU:HD12	2.08	0.54
39:QH:8:ASP:O	39:QH:9:MET:C	2.47	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:HD22	51:QT:77:ASN:N	2.05	0.54
52:QU:16:ARG:HH11	52:QU:19:LYS:CG	2.20	0.54
28:R1:49:LYS:HG2	28:R1:50:GLU:H	1.73	0.54
28:R1:24:LYS:NZ	28:R1:51:ALA:O	2.40	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:163:C:O2'	1:RA:164:C:H5''	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1856:U:O2'	1:RA:1857:G:H5'	2.08	0.54
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
1:RA:492:A:H2'	1:RA:493:G:O4'	2.08	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
23:RW:23:LYS:NZ	23:RW:24:ARG:HG3	2.22	0.54
1:RA:930:G:H1'	26:RZ:24:LEU:HD21	1.90	0.54
32:XA:1074:G:H2'	32:XA:1075:U:C6	2.42	0.54
32:XA:888:G:O3'	32:XA:1488:G:H4'	2.06	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
34:XC:53:ARG:HG3	34:XC:68:HIS:CD2	2.43	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
30:Y3:15:LYS:HZ1	30:Y3:19:GLY:HA2	1.71	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:818:G:O2'	1:YA:819:A:H5''	2.07	0.54
4:YD:150:GLN:HG3	4:YD:151:THR:N	2.23	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
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
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
32:QA:1055:A:H1'	34:QC:155:ARG:NH2	2.20	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
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
52:QU:38:GLU:CD	52:QU:41:THR:HG21	2.29	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
3:RC:199:HIS:O	3:RC:201:LEU:N	2.40	0.53
4:RD:169:ARG:C	4:RD:170:VAL:HG13	2.28	0.53
13:RM:46:ILE:C	13:RM:46:ILE:HD12	2.28	0.53
32:XA:1387:G:H2'	32:XA:1388:C:H6	1.71	0.53
32:XA:957:U:C5	32:XA:959:A:OP2	2.61	0.53
35:XD:25:ARG:CG	35:XD:25:ARG:HH11	2.16	0.53
32:XA:933:G:OP1	38:XG:3:ARG:NH1	2.41	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:HB3	48:XQ:42:LYS:NZ	2.23	0.53
29:Y2:10:LEU:HD21	29:Y2:14:ARG:HH11	1.73	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
1:YA:158:U:H2'	1:YA:158:U:O2	2.08	0.53
1:YA:1050:A:C2	1:YA:2751:G:N3	2.76	0.53
1:YA:41:C:H2'	1:YA:42:A:H8	1.72	0.53
1:YA:729:G:N3	1:YA:729:G:C2'	2.70	0.53
1:YA:749:A:C6	1:YA:750:A:N7	2.76	0.53
2:YB:96:G:O2'	2:YB:97:C:H5'	2.08	0.53
4:YD:36:GLN:HE21	4:YD:38:LYS:HZ1	1.57	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
11:YK:69:VAL:HG12	11:YK:70:ARG:H	1.72	0.53
1:YA:995:C:O2'	17:YQ:60:TRP:CZ2	2.61	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
34:QC:22:PHE:C	34:QC:22:PHE:CD2	2.81	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:740:U:OP1	46:QO:37:HIS:HE1	1.91	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:H6	1:RA:2703:C:O5'	1.91	0.53
8:RH:75:LEU:HD22	8:RH:143:ILE:HG23	1.89	0.53
10:RJ:40:HIS:C	10:RJ:41:LYS:CG	2.75	0.53
24:RX:36:ARG:HG2	24:RX:47:THR:HB	1.91	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
32:XA:973:G:HO2'	32:XA:974:A:H5'	1.68	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
33:XB:26:MET:HE1	33:XB:192:PRO:HB3	1.90	0.53
38:XG:116:ALA:O	38:XG:120:ALA:HB3	2.08	0.53
38:XG:2:ARG:HG2	38:XG:3:ARG:N	2.23	0.53
32:XA:796:C:H4'	42:XK:126:ARG:HH21	1.72	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
1:YA:108:G:H2'	1:YA:109:C:C6	2.43	0.53
1:YA:1339:G:N2	1:YA:1603:A:H1'	2.22	0.53
1:YA:223:A:H61	1:YA:422:A:N6	2.06	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
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:95:A:O2'	25:YY:41:HIS:HD2	1.91	0.53
2:YB:42:C:O2'	2:YB:43:C:C5'	2.46	0.53
10:YJ:93:ILE:HA	10:YJ:97:PRO:HB3	1.89	0.53
12:YL:103:ILE:HD12	12:YL:103:ILE:N	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
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
33:QB:148:GLY:C	33:QB:150:ILE:H	2.11	0.53
35:QD:137:SER:HB3	35:QD:138:PRO:HD2	1.89	0.53
35:QD:28:ASP:C	35:QD:29:THR:O	2.46	0.53
41:QJ:71:LEU:O	41:QJ:72:ARG:HD3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:QU:3:ILE:HD13	52:QU:19:LYS:NZ	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
1:RA:455:C:N3	1:RA:472:A:H2'	2.23	0.53
2:RB:33:G:O2'	2:RB:34:A:H5'	2.09	0.53
9:RI:61:TYR:N	9:RI:61:TYR:HD2	2.07	0.53
12:RL:95:LEU:HD22	12:RL:100:ILE:CD1	2.36	0.53
15:RO:75:GLY:HA2	15:RO:106:LEU:HD13	1.88	0.53
23:RW:37:VAL:C	23:RW:38:ARG:CG	2.77	0.53
23:RW:46:ALA:HB3	23:RW:79:ILE:O	2.09	0.53
32:XA:1091:U:O2	32:XA:1093:A:C8	2.57	0.53
32:XA:1114:C:O2	45:YN:99:SER:HB3	2.08	0.53
32:XA:1417:G:C6	32:XA:1482:G:C6	2.97	0.53
32:XA:223:A:H2'	32:XA:224:U:C6	2.43	0.53
32:XA:89:U:O2'	32:XA:90:C:O4'	2.26	0.53
32:XA:961:U:O4	32:XA:983:A:N6	2.42	0.53
33:XB:132:GLU:C	33:XB:134:LEU:H	2.10	0.53
35:XD:28:ASP:O	35:XD:29:THR:O	2.26	0.53
37:XF:43:GLY:HA2	37:XF:58:HIS:ND1	2.23	0.53
37:XF:3:HIS:ND1	37:XF:95:ALA:N	2.56	0.53
48:XQ:46:HIS:HB2	48:XQ:70:LYS:CE	2.31	0.53
1:YA:56:A:C2	1:YA:115:C:C2	2.97	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
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
1:YA:30:G:C6	1:YA:31:C:N3	2.77	0.53
1:YA:847:U:H5'	1:YA:848:C:OP2	2.08	0.53
6:YF:113:PHE:O	6:YF:114:ARG:CB	2.56	0.53
6:YF:155:ILE:HD12	6:YF:155:ILE:H	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
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:HH11	24:YX:44:ARG:HB3	1.73	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:692:U:O2	32:QA:694:A:C8	2.61	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
35:QD:57:LYS:NZ	35:QD:68:GLU:OE2	2.35	0.53
37:QF:17:GLN:HG2	35:XD:188:SER:HB2	1.90	0.53
47:QP:44:SER:O	47:QP:46:LYS:HG3	2.08	0.53
37:QF:47:LEU:HB3	49:QR:65:SER:OG	2.08	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:2783:U:H2'	1:RA:2784:U:C6	2.43	0.53
1:RA:31:C:O3'	1:RA:1238:G:C5'	2.56	0.53
1:RA:923:G:N3	23:RW:23:LYS:NZ	2.56	0.53
4:RD:99:GLU:CG	4:RD:100:LEU:N	2.72	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
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: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
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
32:XA:844:G:O2'	32:XA:845:A:H5''	2.07	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
47:XP:46:LYS:H	47:XP:46:LYS:NZ	2.06	0.53
1:YA:142:A:H2'	1:YA:143:C:C5	2.43	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2142:A:C2'	1:YA:2143:C:H4'	2.38	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:64:A:H2'	1:YA:65:U:O4'	2.09	0.53
2:YB:15:A:C8	2:YB:109:A:N6	2.76	0.53
4:YD:148:GLN:N	4:YD:148:GLN:CD	2.62	0.53
1:YA:2636:C:H4'	4:YD:81:GLU:OE1	2.08	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
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
15:YO:31:THR:HG23	15:YO:34:HIS:C	2.28	0.53
16:YP:28:LYS:NZ	16:YP:28:LYS:HB2	2.16	0.53
16:YP:88:ARG:CZ	16:YP:112:ARG:HH21	2.21	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
32:QA:1248:A:C2	40:QI:71:ILE:HD11	2.44	0.53
32:QA:217:C:C2'	32:QA:218:U:H5'	2.38	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
32:QA:1118:U:OP1	40:QI:10:ARG:HD2	2.09	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
30:R3:49:VAL:HG23	30:R3:53:ASP:HB2	1.91	0.53
1:RA:1568:G:H4'	3:RC:58:LYS:HG2	1.90	0.53
1:RA:1610:A:H5'	1:RA:1610:A:H8	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
1:RA:1784:A:H4'	1:RA:1785:A:O5'	2.08	0.53
1:RA:202:U:H2'	1:RA:203:A:C8	2.43	0.53
1:RA:2776:A:H4'	1:RA:2777:G:H5''	1.89	0.53
1:RA:304:U:H2'	1:RA:305:C:H6	1.73	0.53
14:RN:103:ARG:NH1	14:RN:110:MET:HE3	2.24	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1258:G:O2'	32:XA:1259:C:H5'	2.08	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
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: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
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
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:20:MET:C	14:YN:22:ARG:H	2.11	0.53
14:YN:55:ALA:HA	14:YN:80:PHE:CE1	2.44	0.53
22:YV:40:ILE:N	22:YV:40:ILE:HD13	2.24	0.53
24:YX:29:LEU:HB2	24:YX:30:PRO:CD	2.38	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
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
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
1:RA:1113:U:H2'	1:RA:1114:C:H6	1.72	0.53
1:RA:1140:C:P	10:RJ:68:LYS:HZ3	2.32	0.53
1:RA:1322:A:H2'	1:RA:1323:C:H5'	1.91	0.53
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
10:RJ:32:LEU:O	10:RJ:36:LEU:HB2	2.09	0.53
15:RO:11:ALA:HB2	15:RO:96:GLY:CA	2.39	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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
38:XG:100:MET:H	38:XG:100:MET:CE	2.22	0.53
41:XJ:5:ARG:HG2	41:XJ:79:PRO:HG3	1.91	0.53
47:XP:28:ARG:HG2	47:XP:29:ASN:OD1	2.09	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
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
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: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: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
3:YC:166:ARG:O	3:YC:166:ARG:HG3	2.07	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
4:YD:33:ARG:HB3	4:YD:95:SER:OG	2.08	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
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
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:60:GLN:NE2	51:QT:60:GLN:HA	2.23	0.53
51:QT:66:ILE:CD1	51:QT:70:LYS:HE3	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:146:A:H2'	1:RA:147:C:C6	2.44	0.53
1:RA:1882:U:O2'	1:RA:1883:U:H5'	2.08	0.53
1:RA:946:C:O2'	1:RA:947:A:H5'	2.09	0.53
3:RC:259:ASN:C	3:RC:261:ARG:N	2.59	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
5:RE:48:THR:C	5:RE:50:ALA:H	2.12	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
1:RA:923:G:C1'	23:RW:23:LYS:HE2	2.35	0.53
32:XA:1304:G:C1'	32:XA:1333:A:H61	2.19	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
33:XB:205:ALA:O	33:XB:209:VAL:HG13	2.09	0.53
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
32:XA:1317:C:OP1	45:XN:56:PRO:HD2	2.08	0.53
49:XR:57:ALA:O	49:XR:60:ARG:N	2.41	0.53
32:XA:332:G:OP2	51:XT:4:LYS:HG3	2.09	0.53
1:YA:105:C:H2'	1:YA:106:C:C6	2.44	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
1:YA:249:C:H3'	1:YA:2394:C:C4'	2.33	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
10:YJ:35:ARG:HG2	10:YJ:40:HIS:CD2	2.44	0.53
12:YL:48:ARG:NH1	12:YL:48:ARG:CG	2.64	0.53
13:YM:71:LYS:HG3	13:YM:72:PRO:HD2	1.90	0.53
14:YN:67:PHE:HE2	14:YN:73:ASN:CG	2.12	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:QB:153:MET:SD	33:QB:157:PRO:HD3	2.49	0.53
33:QB:40:ILE:O	33:QB:41:ASN:HB2	2.09	0.53
33:QB:95:TRP:HE3	33:QB:95:TRP:O	1.92	0.53
36:QE:29:ILE:HD12	36:QE:30:PHE:H	1.73	0.53
36:QE:14:LEU:HB2	36:QE:36:THR:HG22	1.90	0.53
41:QJ:35:GLN:HA	41:QJ:35:GLN:HE21	1.72	0.53
50:QS:4:LEU:HD12	50:QS:4:LEU:N	2.24	0.53
1:RA:1020:A:H2	1:RA:1141:U:HO2'	1.56	0.53
1:RA:108:G:C2'	1:RA:109:C:H5'	2.39	0.53
1:RA:142:A:O2'	1:RA:143:C:C6	2.61	0.53
1:RA:503:A:H5'	1:RA:505:A:OP1	2.07	0.53
3:RC:103:ILE:O	3:RC:104:LEU:O	2.26	0.53
3:RC:76:VAL:O	3:RC:76:VAL:HG23	2.08	0.53
4:RD:157:LYS:HD2	10:RJ:79:GLY:O	2.09	0.53
16:RP:67:GLU:HA	16:RP:67:GLU:OE1	2.09	0.53
19:RS:74:ILE:HG23	19:RS:74:ILE:O	2.09	0.53
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
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
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:1072:C:O2'	1:YA:1093:G:O6	2.26	0.53
1:YA:813:U:H1'	1:YA:1226:A:N3	2.24	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:179:C:H2'	1:YA:180:G:O4'	2.09	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:YA:380:G:O3'	24:YX:15:ASN:HB2	2.08	0.53
32:QA:1170:A:H2'	32:QA:1171:A:O4'	2.08	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
32:QA:502:A:H2'	32:QA:503:C:C6	2.44	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
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
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
5:RE:154:ASP:OD2	5:RE:154:ASP:C	2.47	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
15:RO:49:VAL:HG12	15:RO:50:ALA:N	2.24	0.53
16:RP:37:LYS:H	16:RP:37:LYS:HD3	1.74	0.53
32:XA:185:U:H6	32:XA:185:U:O5'	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
35:XD:84:ASN:CG	36:XE:101:GLY:HA3	2.28	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:H2'	1:YA:100:U:OP1	2.08	0.53
1:YA:1062:G:OP1	1:YA:1070:A:H4'	2.09	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:1324:G:O2'	1:YA:1616:A:N6	2.42	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
32:QA:1338:G:H2'	32:QA:1339:A:H8	1.74	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:80:A:C2	32:QA:90:C:N3	2.77	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
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
10:RJ:40:HIS:C	10:RJ:41:LYS:HG2	2.29	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
23:RW:49:ASN:C	23:RW:49:ASN:ND2	2.61	0.53
24:RX:30:PRO:O	24:RX:32:LEU:HD12	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:XI:88:GLU:H	40:XI:88:GLU:CD	2.12	0.53
32:XA:1202:U:O2	45:XN:81:ILE:HD13	2.09	0.53
50:XS:52:ASN:HD22	50:XS:54:ARG:H	1.56	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:214:G:O2'	1:YA:216:A:O3'	2.26	0.53
1:YA:2428:G:C2	12:YL:54:GLN:NE2	2.77	0.53
1:YA:265:A:C5	1:YA:428:A:C8	2.96	0.53
1:YA:2756:U:H4'	1:YA:2757:A:O5'	2.08	0.53
1:YA:222:A:H3'	1:YA:421:C:H5'	1.91	0.53
3:YC:93:VAL:CG1	3:YC:101:ARG:H	2.22	0.53
13:YM:62:LYS:C	13:YM:63:ILE:HD12	2.29	0.53
14:YN:82:GLU:O	14:YN:86:ARG:HG3	2.09	0.53
21:YU:11:ILE:O	21:YU:11:ILE:HG12	2.09	0.53
21:YU:35:VAL:HB	21:YU:38:ILE:HD13	1.91	0.53
25:YY:34:SER:O	25:YY:36:GLN:HG3	2.09	0.53
32:QA:978:A:O2'	32:QA:1322:C:H5	1.91	0.52
32:QA:1472:U:H2'	32:QA:1473:G:H8	1.74	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
33:QB:156:LEU:O	33:QB:156:LEU:HG	2.09	0.52
34:QC:166:TRP:N	34:QC:166:TRP:HE3	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
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
1:RA:2742:G:OP1	31:R4:36:ARG:HD3	2.09	0.52
1:RA:26:G:H1'	1:RA:514:A:H61	1.74	0.52
1:RA:864:G:O2'	1:RA:865:C:H5'	2.08	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
4:RD:90:PHE:C	4:RD:92:VAL:N	2.61	0.52
9:RI:109:ALA:HB1	9:RI:124:MET:CE	2.39	0.52
17:RQ:44:TYR:O	17:RQ:47:ARG:HB3	2.10	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:XI:118:ARG:HG3	40:XI:124:PRO:HG3	1.90	0.52
40:XI:78:ILE:O	40:XI:82:ILE:HG13	2.09	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
31:Y4:19:ARG:O	31:Y4:20:ASP:CB	2.56	0.52
1:YA:1290:C:C6	1:YA:1291:C:H5	2.27	0.52
1:YA:136:G:H8	1:YA:136:G:O5'	1.93	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
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
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:3:U:C4	1:YA:4:U:C5	2.97	0.52
1:YA:567:U:O4	1:YA:568:U:C4	2.62	0.52
1:YA:612:G:C2	1:YA:614:A:H1'	2.44	0.52
1:YA:604:G:C6	1:YA:625:G:C6	2.97	0.52
1:YA:638:G:O2'	1:YA:639:U:H5'	2.09	0.52
2:YB:16:G:C6	2:YB:69:G:C4	2.97	0.52
6:YF:32:LYS:HB2	6:YF:32:LYS:NZ	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
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
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
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:HD22	36:QE:121:ASN:N	2.06	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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:273:G:N2	1:RA:365:U:C2	2.78	0.52
1:RA:45:G:H5''	1:RA:46:G:OP1	2.09	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:2572:A:C8	4:RD:149:ASN:ND2	2.78	0.52
5:RE:176:ASP:C	5:RE:176:ASP:OD1	2.47	0.52
6:RF:107:VAL:HG13	6:RF:113:PHE:CZ	2.44	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
18:RR:90:ARG:O	18:RR:91:GLN:CB	2.56	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
43:XL:14:LYS:HE2	43:XL:15:VAL:C	2.29	0.52
43:XL:42:LYS:HD3	43:XL:43:LYS:HZ2	1.74	0.52
47:XP:41:PRO:O	47:XP:42:ILE:HD13	2.09	0.52
1:YA:1060:U:H1'	1:YA:1062:G:OP2	2.10	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
1:YA:469:G:OP2	5:YE:54:GLY:O	2.26	0.52
1:YA:45:G:C5'	1:YA:46:G:OP1	2.55	0.52
1:YA:686:U:N3	29:Y2:12:ARG:HB2	2.23	0.52
1:YA:748:G:HO2'	1:YA:749:A:H3'	1.72	0.52
3:YC:120:ASP:CG	3:YC:121:ALA:H	2.12	0.52
3:YC:245:THR:C	3:YC:247:TRP:H	2.13	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:YA:1650:A:O2'	14:YN:108:ALA:HB1	2.09	0.52
2:YB:52:A:N6	15:YO:33:ARG:HE	2.06	0.52
22:YV:29:ILE:HG22	22:YV:39:ALA:HA	1.91	0.52
1:YA:2353:G:N3	23:YW:30:VAL:HG13	2.23	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
32:QA:36:C:OP1	43:QL:119:LYS:HE3	2.09	0.52
34:QC:183:TYR:HA	34:QC:199:VAL:O	2.09	0.52
36:QE:114:LEU:O	36:QE:119:VAL:HG22	2.09	0.52
36:QE:15:ILE:HG22	36:QE:16:ALA:N	2.23	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
1:RA:591:U:H1'	30:R3:1:PRO:N	2.24	0.52
1:RA:2331:G:O2'	23:RW:39:GLN:O	2.27	0.52
3:RC:151:GLY:C	3:RC:152:GLN:HG3	2.30	0.52
4:RD:159:LYS:HA	4:RD:159:LYS:HZ3	1.74	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:XA:1071:C:H2'	32:XA:1072:G:C8	2.44	0.52
34:XC:124:GLU:H	34:XC:124:GLU:CD	2.12	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
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:150:U:H2'	1:YA:151:C:C6	2.44	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: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
6:YF:111:ARG:NE	6:YF:111:ARG:H	2.07	0.52
1:YA:2529:G:H4'	7:YG:174:LYS:HD3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1666:G:H4'	11:YK:6:THR:HG23	1.90	0.52
24:YX:57:VAL:CG1	24:YX:58:ILE:N	2.71	0.52
32:QA:211:G:C2	32:QA:212:G:H1'	2.44	0.52
33:QB:72:LYS:HZ2	33:QB:204:ASP:HB3	1.75	0.52
33:QB:20:ARG:O	33:QB:21:TYR:C	2.47	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
1:RA:1392:A:N6	1:RA:1393:A:N6	2.57	0.52
1:RA:1537:G:N3	1:RA:1537:G:H5''	2.25	0.52
1:RA:2414:G:C2'	1:RA:2415:G:H5'	2.40	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
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
20:RT:50:LEU:HD12	20:RT:50:LEU:N	2.20	0.52
32:XA:1051:C:O2'	32:XA:1052:U:O5'	2.27	0.52
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
33:XB:17:HIS:CE1	33:XB:18:GLN:HG3	2.44	0.52
34:XC:24:ASN:O	34:XC:28:PHE:HB2	2.10	0.52
35:XD:29:THR:C	35:XD:31:CYS:H	2.13	0.52
36:XE:131:ASN:ND2	36:XE:132:PRO:HD2	2.24	0.52
36:XE:96:GLN:HG2	36:XE:97:PRO:HD2	1.91	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
34:XC:19:SER:O	45:XN:93:PRO:HG3	2.10	0.52
46:XO:47:LYS:HD2	46:XO:47:LYS:H	1.75	0.52
49:XR:58:ILE:O	49:XR:62:ARG:HG3	2.09	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:OP1	1:YA:2033:A:H2'	2.10	0.52
1:YA:2543:G:C6	1:YA:2765:A:C5	2.97	0.52
1:YA:749:A:C4	1:YA:750:A:C8	2.97	0.52
4:YD:36:GLN:HG3	4:YD:38:LYS:HZ1	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:YE:128:ALA:O	5:YE:130:LYS:HG2	2.09	0.52
7:YG:112:VAL:HG12	7:YG:114:HIS:N	2.19	0.52
7:YG:84:LYS:O	7:YG:85:LYS:CB	2.57	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
18:YR:70:GLU:CD	18:YR:70:GLU:H	2.13	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
32:QA:1134:G:H2'	32:QA:1135:U:C1'	2.39	0.52
32:QA:291:U:O2'	32:QA:292:G:H5'	2.10	0.52
32:QA:330:C:H6	32:QA:330:C:H5''	1.73	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
33:QB:89:PHE:CE1	33:QB:153:MET:HB2	2.45	0.52
33:QB:53:LEU:HD21	33:QB:212:TYR:OH	2.10	0.52
38:QG:137:ARG:C	38:QG:139:ASP:H	2.13	0.52
40:QI:119:LYS:O	40:QI:119:LYS:HG3	2.09	0.52
40:QI:41:GLU:O	40:QI:44:ARG:HG2	2.08	0.52
32:QA:1202:U:C1'	45:QN:68:ARG:HD2	2.40	0.52
32:QA:451:A:H5''	47:QP:70:ARG:HH22	1.75	0.52
30:R3:30:HIS:O	30:R3:31:ILE:C	2.48	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:184:C:H2'	1:RA:185:G:C8	2.45	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
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
3:RC:20:ASN:CB	3:RC:23:LEU:HD23	2.36	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
6:RF:32:LYS:HD3	6:RF:91:ARG:NH1	2.24	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:XA:1004:A:N7	32:XA:1025:U:O2'	2.41	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:78:A:H2'	32:XA:79:G:C8	2.45	0.52
33:XB:30:ILE:HG23	33:XB:39:ILE:O	2.10	0.52
35:XD:106:PHE:CD1	35:XD:106:PHE:N	2.77	0.52
45:XN:52:ARG:NE	45:XN:52:ARG:HA	2.25	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:2093:G:C2	1:YA:2094:A:C5	2.97	0.52
1:YA:2563:U:C1'	1:YA:2566:A:N6	2.72	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
3:YC:212:TRP:C	3:YC:212:TRP:CD1	2.82	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
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
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
32:QA:67:C:H4'	32:QA:172:A:O4'	2.10	0.52
33:QB:103:TRP:C	33:QB:105:THR:H	2.13	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
1:RA:1107:G:H2'	1:RA:1108:U:H6	1.74	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:2250:G:H8	1:RA:2250:G:O5'	1.93	0.52
8:RH:125:THR:HG23	8:RH:126:GLY:H	1.75	0.52
8:RH:25:TYR:HE1	8:RH:29:PHE:CD2	2.28	0.52
11:RK:91:SER:O	11:RK:92:GLU:C	2.48	0.52
12:RL:47:ARG:CG	12:RL:47:ARG:HH21	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:1004:A:N3	32:XA:1026:G:C5	2.77	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
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:1349:C:H2'	1:YA:1350:C:C6	2.44	0.52
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
1:YA:311:A:O2'	1:YA:332:A:O4'	2.21	0.52
1:YA:748:G:OP2	19:YS:88:ARG:HG3	2.08	0.52
1:YA:696:G:C2	1:YA:767:U:O2	2.63	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
32:QA:1127:G:O2'	32:QA:1128:C:H5'	2.10	0.52
32:QA:393:A:OP2	47:QP:12:LYS:HD2	2.10	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
33:QB:34:ARG:O	33:QB:37:VAL:O	2.28	0.52
35:QD:121:ALA:C	35:QD:122:ILE:HD13	2.29	0.52
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
32:QA:1060:U:H4'	41:QJ:53:ILE:HG23	1.90	0.52
43:QL:4:ASN:ND2	43:QL:8:ARG:HH12	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:QN:20:PHE:C	45:QN:22:LYS:H	2.13	0.52
32:QA:624:C:H4'	47:QP:10:GLY:O	2.08	0.52
47:QP:20:VAL:CG2	47:QP:32:PHE:HB2	2.40	0.52
28:R1:10:LEU:O	28:R1:19:PHE:HB2	2.10	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
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
2:RB:35:C:H2'	2:RB:36:C:O4'	2.10	0.52
4:RD:104:VAL:O	4:RD:177:VAL:HG21	2.08	0.52
4:RD:72:GLY:O	4:RD:73:VAL:O	2.27	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
10:RJ:140:LEU:C	10:RJ:140:LEU:CD1	2.77	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
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
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
35:XD:3:TYR:O	35:XD:4:LEU:HB2	2.10	0.52
40:XI:61:ASP:C	40:XI:62:LEU:HD22	2.30	0.52
42:XK:57:SER:C	42:XK:90:PRO:HG3	2.29	0.52
50:XS:46:LEU:HD23	50:XS:46:LEU:H	1.75	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: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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:589:U:O2'	1:YA:590:A:OP2	2.27	0.52
1:YA:7:G:HO2'	10:YJ:15:TRP:HZ2	1.58	0.52
1:YA:836:G:C5	1:YA:837:C:C4	2.97	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:O	13:YM:119:LEU:HD23	2.09	0.52
22:YV:75:GLN:HG3	22:YV:92:VAL:HG13	1.91	0.52
1:YA:2355:G:H4'	23:YW:20:LEU:HD22	1.92	0.52
25:YY:1:MET:H2	25:YY:5:GLU:HG2	1.75	0.52
32:QA:1253:G:N1	32:QA:1285:A:N6	2.57	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
35:QD:190:LEU:C	35:QD:190:LEU:HD12	2.30	0.52
44:QM:24:VAL:HG23	44:QM:24:VAL:O	2.10	0.52
44:QM:7:ASN:O	44:QM:9:PRO:HD3	2.10	0.52
48:QQ:40:THR:HG22	48:QQ:41:THR:N	2.25	0.52
1:RA:1458:U:H5'	1:RA:1459:G:N3	2.24	0.52
1:RA:342:A:C6	1:RA:343:C:C5	2.98	0.52
6:RF:133:GLU:H	6:RF:150:GLY:CA	2.23	0.52
7:RG:54:ARG:C	7:RG:54:ARG:HD3	2.29	0.52
11:RK:39:ILE:HD13	11:RK:41:ILE:HD13	1.92	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:CD1	20:RT:50:LEU:H	2.18	0.52
20:RT:87:LEU:O	20:RT:88:LYS:C	2.48	0.52
24:RX:39:VAL:HG22	24:RX:44:ARG:O	2.09	0.52
33:XB:59:ILE:HD12	33:XB:59:ILE:C	2.29	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
42:XK:124:LYS:HE3	52:XU:34:ARG:CZ	2.40	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:116:C:H2'	1:YA:117:G:C8	2.45	0.52
1:YA:1552:A:C2'	1:YA:1552:A:N3	2.69	0.52
1:YA:1833:C:C4	1:YA:1834:U:C5	2.98	0.52
1:YA:186:G:N2	1:YA:211:C:O2	2.43	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:305:C:H1'	1:YA:313:G:N2	2.25	0.52
1:YA:623:C:H2'	1:YA:624:C:H6	1.74	0.52
3:YC:147:PRO:HD3	3:YC:184:GLU:CG	2.36	0.52
3:YC:93:VAL:HG13	3:YC:94:LEU:N	2.25	0.52
5:YE:79:ARG:O	5:YE:80:SER:C	2.47	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
2:YB:91:C:OP1	13:YM:19:GLY:HA3	2.10	0.52
18:YR:51:VAL:HB	18:YR:52:PRO:CD	2.40	0.52
2:YB:94:A:OP1	22:YV:19:ARG:HD3	2.09	0.52
32:QA:1277:C:H2'	32:QA:1278:G:H5''	1.92	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
33:QB:77:GLU:HB2	33:QB:80:LYS:HE2	1.92	0.52
38:QG:144:ALA:C	38:QG:146:ALA:H	2.13	0.52
46:QO:62:ARG:HG2	46:QO:66:LEU:HD12	1.92	0.52
1:RA:1205:A:H4'	1:RA:1206:G:OP2	2.09	0.52
1:RA:1277:G:H4'	14:RN:20:MET:HE2	1.91	0.52
1:RA:1635:A:C6	1:RA:1636:U:C2	2.98	0.52
1:RA:565:C:C2'	1:RA:566:U:H5'	2.40	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:145:ASP:OD1	5:RE:183:PHE:HD2	1.92	0.52
5:RE:117:ARG:HA	5:RE:185:LYS:HD3	1.91	0.52
11:RK:8:LEU:N	11:RK:8:LEU:HD23	2.24	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
25:RY:61:ALA:C	25:RY:63:ALA:H	2.14	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
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
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
52:XU:3:ILE:HG21	52:XU:18:PHE:HB3	1.91	0.52
31:Y4:7:VAL:CG1	31:Y4:8:LYS:N	2.71	0.52
1:YA:1069:A:O2'	1:YA:1072:C:OP2	2.26	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:808:G:O2'	1:YA:1254:A:H4'	2.10	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:N3	1:YA:1490:A:H5'	2.25	0.52
1:YA:192:C:N4	1:YA:193:U:C2	2.78	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
1:YA:223:A:H2	1:YA:407:G:N3	2.08	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
5:YE:5:LEU:HD12	5:YE:10:SER:HB2	1.92	0.52
10:YJ:37:ARG:HG3	10:YJ:118:MET:SD	2.49	0.52
1:YA:2562:U:H1'	11:YK:23:LYS:HE2	1.92	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
32:QA:1053:G:N2	32:QA:1056:U:C4	2.78	0.52
32:QA:1414:U:H2'	32:QA:1415:G:C8	2.44	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
33:QB:22:TRP:HA	33:QB:189:ASN:HA	1.92	0.52
37:QF:71:ILE:HG23	37:QF:72:ASP:N	2.25	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
41:QJ:15:HIS:C	41:QJ:17:LEU:H	2.11	0.52
32:QA:1060:U:H5''	41:QJ:53:ILE:HD13	1.92	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
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
1:RA:301:G:OP2	21:RU:81:ARG:NH1	2.43	0.52
8:RH:89:LYS:HG2	8:RH:90:LEU:N	2.14	0.52
10:RJ:97:PRO:O	10:RJ:98:GLU:C	2.48	0.52
11:RK:18:ARG:HB2	11:RK:45:GLU:CG	2.40	0.52
1:RA:998:C:OP2	17:RQ:57:ARG:NH2	2.37	0.52
17:RQ:8:ILE:HD12	17:RQ:8:ILE:C	2.30	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RY:26:PHE:HD1	25:RY:27:ASN:HD22	1.58	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
32:XA:695:A:H61	32:XA:797:C:H1'	1.75	0.52
32:XA:86:G:H1'	32:XA:87:C:O5'	2.10	0.52
33:XB:103:TRP:HA	33:XB:106:VAL:H	1.74	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
32:XA:598:U:H4'	39:XH:85:TYR:CD1	2.45	0.52
44:XM:64:VAL:HG12	44:XM:65:GLU:HG3	1.92	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
1:YA:351:C:N4	1:YA:352:A:H62	2.08	0.52
1:YA:35:G:C8	1:YA:454:A:C2	2.98	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
2:YB:28:C:OP1	15:YO:31:THR:HG21	2.10	0.52
3:YC:191:LEU:HD22	3:YC:191:LEU:N	2.25	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
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
32:QA:751:U:C5	32:QA:752:G:C6	2.98	0.51
33:QB:86:CYS:SG	33:QB:221:ARG:HB2	2.50	0.51
35:QD:190:LEU:O	35:QD:191:SER:HB2	2.10	0.51
43:QL:87:LYS:O	43:QL:88:ASP:CB	2.58	0.51
47:QP:77:GLU:C	47:QP:79:ASN:H	2.13	0.51
30:R3:56:LEU:H	30:R3:56:LEU:CD2	2.22	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:HD12	14:RN:65:LEU:O	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
32:XA:1394:A:H4'	32:XA:1395:C:OP2	2.08	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
33:XB:125:PHE:CD1	33:XB:137:THR:HG22	2.45	0.51
33:XB:95:TRP:CZ3	33:XB:170:ILE:HG22	2.45	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
35:XD:96:ARG:O	35:XD:100:VAL:HG23	2.10	0.51
37:XF:41:ASP:O	37:XF:42:TRP:C	2.48	0.51
31:Y4:36:ARG:HG2	31:Y4:37:GLN:H	1.75	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: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:183:C:O5'	1:YA:183:C:H6	1.93	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:1638:C:H5"	1:YA:2710:C:O2'	2.11	0.51
1:YA:68:G:C2	1:YA:69:C:C2	2.98	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:HG3	5:YE:9:GLN:O	2.10	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
1:YA:810:U:C4	12:YL:30:THR:HG22	2.43	0.51
16:YP:107:ALA:O	16:YP:108:ARG:C	2.48	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2352:A:C6	23:YW:30:VAL:HG11	2.45	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
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:82:G:H2'	32:QA:83:C:H4'	1.91	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
39:QH:63:LYS:C	39:QH:64:TYR:HD1	2.14	0.51
1:RA:1378:A:O2'	56:RA:3754:HOH:O	2.18	0.51
1:RA:232:G:H4'	1:RA:233:A:OP1	2.09	0.51
1:RA:2414:G:O2'	1:RA:2415:G:H5'	2.10	0.51
1:RA:31:C:O2'	1:RA:1238:G:H5'	2.10	0.51
1:RA:364:C:H2'	1:RA:365:U:C6	2.45	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
16:RP:64:SER:O	16:RP:65:ASN:C	2.48	0.51
17:RQ:23:TYR:O	17:RQ:28:SER:HB3	2.10	0.51
32:XA:1213:A:C8	32:XA:1215:G:C5	2.98	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
34:XC:183:TYR:HE1	34:XC:198:LYS:HB3	1.74	0.51
35:XD:138:PRO:O	35:XD:139:ASN:HB2	2.10	0.51
35:XD:60:VAL:HG22	35:XD:194:ILE:HG21	1.92	0.51
43:XL:98:ARG:HA	43:XL:103:CYS:SG	2.50	0.51
44:XM:75:SER:C	44:XM:77:LYS:H	2.12	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
27:Y0:12:ARG:O	27:Y0:16:ARG:HG3	2.10	0.51
1:YA:1157:G:H2'	1:YA:1158:C:C5	2.45	0.51
1:YA:1340:U:O2'	1:YA:1602:U:H2'	2.09	0.51
1:YA:769:U:HO2'	1:YA:1379:U:H6	1.56	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:1299:G:H22	1:YA:1640:A:H5'	1.74	0.51
1:YA:2092:U:H4'	1:YA:2093:G:H5''	1.93	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:777:G:N7	1:YA:793:A:C2	2.77	0.51
9:YI:103:ALA:O	9:YI:107:GLU:HB2	2.09	0.51
9:YI:52:LEU:CD1	9:YI:53:PRO:HD2	2.30	0.51
11:YK:39:ILE:HB	11:YK:41:ILE:HD13	1.93	0.51
12:YL:101:ILE:HG23	12:YL:105:ILE:HG13	1.92	0.51
12:YL:83:ALA:CB	12:YL:117:THR:HB	2.40	0.51
4:YD:115:GLY:O	14:YN:3:HIS:HE1	1.93	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
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
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
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
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
48:QQ:18:LYS:C	48:QQ:47:ASP:OD2	2.49	0.51
51:QT:78:LEU:O	51:QT:82:ILE:HG23	2.10	0.51
1:RA:1441:G:H2'	1:RA:1442:U:C6	2.45	0.51
1:RA:544:C:H3'	1:RA:545:U:O2	2.09	0.51
7:RG:33:THR:C	7:RG:34:ARG:HD3	2.30	0.51
9:RI:52:LEU:N	9:RI:52:LEU:HD12	2.25	0.51
12:RL:55:MET:HE2	12:RL:56:PRO:HD3	1.93	0.51
14:RN:23:ASN:N	14:RN:23:ASN:HD22	2.08	0.51
19:RS:84:ARG:HB2	19:RS:96:ILE:CD1	2.40	0.51
23:RW:50:VAL:O	23:RW:52:CYS:N	2.35	0.51
23:RW:40:ARG:HG3	23:RW:52:CYS:SG	2.50	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:N3	32:XA:461:A:H2'	2.25	0.51
32:XA:681:A:C2	32:XA:710:G:C2	2.99	0.51
34:XC:134:LYS:HD3	34:XC:138:GLN:OE1	2.10	0.51
34:XC:5:HIS:CD2	34:XC:183:TYR:HE2	2.29	0.51
43:XL:89:LEU:HB3	43:XL:92:VAL:HG21	1.91	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:2347:C:O2'	1:YA:2348:U:O5'	2.29	0.51
1:YA:2282:G:N3	1:YA:2425:A:N6	2.58	0.51
1:YA:2531:A:H5'	7:YG:156:TYR:CZ	2.45	0.51
1:YA:2894:G:H2'	1:YA:2894:G:OP2	2.10	0.51
1:YA:406:G:O2'	1:YA:407:G:O4'	2.27	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
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:132:PHE:CZ	8:YH:134:VAL:HB	2.45	0.51
8:YH:68:ARG:HD2	8:YH:71:LYS:HD3	1.92	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
1:YA:83:A:P	21:YU:91:LYS:HZ2	2.33	0.51
22:YV:51:GLN:HA	22:YV:56:PHE:CD2	2.45	0.51
32:QA:1296:C:O2'	32:QA:1302:C:C4	2.63	0.51
32:QA:1441:A:N7	32:QA:1442:G:N7	2.59	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:56:U:H2'	32:QA:57:G:C8	2.46	0.51
33:QB:81:ASP:OD1	33:QB:83:ALA:N	2.38	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:QC:110:LEU:HD21	34:QC:143:LEU:HD23	1.90	0.51
34:QC:86:LEU:O	34:QC:90:VAL:HG23	2.11	0.51
43:QL:76:HIS:O	43:QL:77:SER:HB2	2.10	0.51
30:R3:61:LEU:HB3	30:R3:64:ALA:HB2	1.93	0.51
1:RA:84:A:N6	1:RA:101:A:H2	2.05	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
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
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
16:RP:3:ILE:HD13	16:RP:3:ILE:C	2.30	0.51
19:RS:73:LYS:HA	19:RS:73:LYS:HE3	1.92	0.51
23:RW:47:GLY:C	23:RW:49:ASN:H	2.14	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
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
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:66:A:C6	32:XA:67:C:C4	2.99	0.51
33:XB:91:VAL:HG11	33:XB:95:TRP:HD1	1.75	0.51
32:XA:1108:G:H5''	34:XC:175:HIS:CE1	2.45	0.51
44:XM:11:HIS:HA	44:XM:44:ILE:HB	1.92	0.51
45:XN:100:TRP:C	45:XN:100:TRP:CD1	2.84	0.51
52:XU:24:LYS:CE	52:XU:25:ALA:H	2.23	0.51
1:YA:2887:A:C1'	27:Y0:39:ARG:HH22	2.18	0.51
1:YA:118:A:N7	1:YA:119:A:C8	2.78	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:195:A:C6	1:YA:198:C:C5	2.98	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
32:QA:1371:G:H5''	32:QA:1372:U:OP2	2.10	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
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
1:RA:684:G:OP1	29:R2:21:ARG:NH1	2.43	0.51
30:R3:31:ILE:CG1	30:R3:34:LYS:HD2	2.40	0.51
1:RA:125:A:OP2	29:R2:19:ARG:NH2	2.43	0.51
1:RA:2714:G:P	56:RA:3546:HOH:O	2.68	0.51
1:RA:480:A:H2'	1:RA:481:G:OP1	2.10	0.51
4:RD:114:LYS:N	4:RD:114:LYS:CE	2.72	0.51
9:RI:96:LYS:HD2	9:RI:96:LYS:N	2.25	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
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
32:XA:620:C:H1'	35:XD:131:ILE:HG21	1.93	0.51
39:XH:11:THR:HG23	39:XH:14:ARG:HH22	1.73	0.51
29:Y2:25:LYS:O	29:Y2:25:LYS:HG2	2.11	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2729:G:H2'	1:YA:2730:C:C6	2.46	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:56:A:C2	1:YA:57:C:C2	2.97	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:99:U:H5'	1:YA:100:U:H2'	1.91	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
10:YJ:95:ARG:O	10:YJ:96:ARG:C	2.49	0.51
18:YR:39:LEU:HD23	18:YR:39:LEU:H	1.76	0.51
1:YA:856:G:O4'	23:YW:23:LYS:HB3	2.10	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
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:183:PHE:CE1	33:QB:197:PHE:CD2	2.99	0.51
44:QM:49:GLU:O	44:QM:52:ILE:HG22	2.10	0.51
48:QQ:49:ASN:O	48:QQ:50:ASN:C	2.48	0.51
50:QS:39:ILE:HD11	50:QS:70:LEU:HD23	1.93	0.51
1:RA:1496:A:H2'	1:RA:1498:C:N4	2.26	0.51
1:RA:2210:U:C2	1:RA:2212:A:N7	2.79	0.51
1:RA:2075:U:H2'	1:RA:2238:G:N2	2.26	0.51
1:RA:2430:A:H2'	1:RA:2430:A:N3	2.26	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
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
9:RI:27:LEU:HD12	9:RI:27:LEU:O	2.11	0.51
9:RI:8:VAL:HG23	9:RI:9:LYS:N	2.26	0.51
16:RP:21:PRO:HA	16:RP:46:VAL:CG1	2.41	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
45:YN:20:PHE:CA	45:YN:24:ALA:HB2	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:XC:29:ALA:HB1	45:XN:64:ARG:HH12	1.75	0.51
50:XS:35:ARG:HH22	50:XS:53:GLY:N	2.09	0.51
27:Y0:27:LEU:N	27:Y0:27:LEU:HD22	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: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:C2'	1:YA:2021:C:O2	2.58	0.51
1:YA:2744:G:C6	1:YA:2761:A:C6	2.99	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
3:YC:95:TYR:C	3:YC:97:ASP:H	2.13	0.51
1:YA:321:U:O2	5:YE:159:LEU:HD11	2.11	0.51
2:YB:42:C:H5	6:YF:65:LEU:HD13	1.75	0.51
8:YH:8:LYS:C	8:YH:8:LYS:HD2	2.30	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
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
35:QD:68:GLU:O	35:QD:69:ARG:C	2.47	0.51
38:QG:22:LEU:O	38:QG:25:PHE:HB3	2.10	0.51
41:QJ:67:ILE:HG13	45:QN:95:LEU:HD13	1.92	0.51
51:QT:53:MET:HE1	51:QT:57:VAL:HG21	1.92	0.51
1:RA:1275:A:C2	1:RA:1295:C:O2	2.64	0.51
1:RA:164:C:H2'	1:RA:165:A:O4'	2.11	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
12:RL:101:ILE:HG22	12:RL:102:GLY:N	2.25	0.51
32:XA:1042:A:H2'	32:XA:1043:G:O4'	2.11	0.51
32:XA:977:A:H8	32:XA:1223:C:N3	2.08	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
32:XA:189:A:H3'	32:XA:190:A:C8	2.46	0.51
32:XA:38:G:C2	32:XA:397:A:C2	2.99	0.51
32:XA:642:A:N7	39:XH:106:SER:HA	2.26	0.51
32:XA:64:G:H4'	32:XA:65:A:H5''	1.93	0.51
32:XA:708:C:H2'	32:XA:709:U:C6	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:XB:103:TRP:HA	33:XB:106:VAL:CB	2.41	0.51
32:XA:624:C:O2'	47:XP:10:GLY:HA2	2.10	0.51
50:XS:15:LEU:O	50:XS:19:GLU:HB2	2.10	0.51
51:XT:26:MET:CE	51:XT:30:PHE:HD1	2.24	0.51
30:Y3:36:ALA:O	30:Y3:40:LYS:HG3	2.10	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: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
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
4:YD:133:THR:O	4:YD:134:HIS:C	2.49	0.51
4:YD:17:GLU:CD	4:YD:17:GLU:H	2.14	0.51
6:YF:49:LEU:HD22	6:YF:49:LEU:N	2.21	0.51
8:YH:24:GLY:O	8:YH:25:TYR:C	2.48	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
1:YA:329:G:O6	21:YU:16:LYS:HB2	2.10	0.51
32:QA:1017:U:OP2	32:QA:1017:U:H6	1.93	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
35:QD:56:GLU:O	35:QD:59:LYS:HB3	2.10	0.51
41:QJ:91:ASP:C	41:QJ:92:LEU:HD23	2.31	0.51
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
1:RA:195:A:C6	1:RA:198:C:C5	2.98	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
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
4:RD:92:VAL:O	4:RD:93:GLY:C	2.48	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:RE:72:SER:C	5:RE:74:LYS:H	2.14	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
15:RO:84:GLU:C	15:RO:86:GLY:H	2.14	0.51
19:RS:59:GLU:HA	19:RS:64:ALA:CB	2.41	0.51
2:RB:98:G:H1	22:RV:14:LYS:HB3	1.76	0.51
23:RW:14:ASP:OD2	23:RW:16:GLU:OE1	2.29	0.51
32:XA:1049:U:H4'	32:XA:1050:G:H5'	1.92	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
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:1178:G:OP2	40:XI:98:ARG:NH2	2.44	0.51
43:XL:109:ARG:NH2	43:XL:116:TYR:HE2	2.09	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: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
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
3:YC:131:MET:HA	3:YC:134:ILE:HD11	1.92	0.51
3:YC:70:LYS:HB2	3:YC:101:ARG:HH22	1.75	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
1:YA:2305:U:H4'	6:YF:132:ARG:CG	2.41	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:YL:90:VAL:HG12	12:YL:90:VAL:O	2.09	0.51
18:YR:21:ARG:HB2	18:YR:93:PHE:HD1	1.75	0.51
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
32:QA:1053:G:C6	32:QA:1199:U:C2	2.99	0.51
32:QA:928:G:O2'	32:QA:1533:C:OP1	2.29	0.51
33:QB:49:PHE:CD1	33:QB:53:LEU:HD23	2.46	0.51
32:QA:1152:A:OP1	41:QJ:70:HIS:ND1	2.42	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:QA:186:C:O4'	51:QT:75:LYS:HD2	2.11	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:191:A:H2'	1:RA:192:C:C6	2.46	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
1:RA:987:C:H2'	1:RA:988:A:H5'	1.93	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
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:XA:1435:G:H2'	32:XA:1436:U:C6	2.45	0.51
32:XA:1408:A:N1	32:XA:1494:G:C6	2.79	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:C2'	32:XA:496:A:N3	2.71	0.51
32:XA:701:U:C2'	32:XA:702:A:OP2	2.57	0.51
33:XB:147:LEU:N	33:XB:147:LEU:HD12	2.25	0.51
33:XB:20:ARG:HH21	33:XB:38:HIS:CE1	2.28	0.51
34:XC:185:THR:O	34:XC:186:SER:HB2	2.11	0.51
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:XF:67:PRO:O	37:XF:68:GLN:C	2.49	0.51
42:XK:74:LYS:HG2	42:XK:74:LYS:O	2.10	0.51
1:YA:1027:A:N7	1:YA:1126:A:C2	2.79	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:694:U:OP1	1:YA:1569:A:H1'	2.11	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:260:G:C6	1:YA:261:G:C5	2.99	0.51
1:YA:2818:U:H2'	1:YA:2819:G:C8	2.46	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
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
1:YA:1295:C:H1'	14:YN:23:ASN:HD21	1.76	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
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
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
32:QA:51:A:H4'	32:QA:52:C:C5'	2.41	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:HG2	34:QC:106:ARG:O	2.12	0.51
34:QC:156:LEU:CD1	34:QC:156:LEU:H	2.17	0.51
35:QD:33:ILE:HG23	35:QD:33:ILE:O	2.11	0.51
42:QK:22:ILE:HG13	42:QK:22:ILE:O	2.10	0.51
46:QO:23:SER:HB3	46:QO:26:VAL:HG23	1.92	0.51
46:QO:31:LEU:O	46:QO:32:THR:C	2.49	0.51
51:QT:26:MET:CE	51:QT:56:ILE:HD11	2.41	0.51
28:R1:34:GLU:HG2	28:R1:49:LYS:HG3	1.93	0.51
1:RA:137:U:OP2	1:RA:137:U:C5	2.64	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:276:U:O2'	1:RA:277:G:O5'	2.28	0.51
1:RA:2779:U:C6	1:RA:2781:A:C2	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:RC:219:VAL:HG12	3:RC:224:MET:CE	2.41	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
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
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
32:XA:1447:A:O3'	32:XA:1448:C:H6	1.94	0.51
32:XA:216:U:C4	32:XA:217:C:N4	2.79	0.51
32:XA:373:A:C5'	32:XA:373:A:H8	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:83:C:H2'	32:XA:83:C:O2	2.11	0.51
33:XB:125:PHE:HD1	33:XB:137:THR:HG22	1.75	0.51
33:XB:73:ARG:HG3	33:XB:74:ALA:N	2.26	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
41:XJ:65:TYR:HB3	45:XN:95:LEU:CD1	2.41	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
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:249:C:C5'	1:YA:2394:C:O2'	2.45	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:84:A:H5'	21:YU:5:ARG:HD2	1.93	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
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
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
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
34:QC:119:ILE:HA	34:QC:122:GLN:HG3	1.93	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
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: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
1:RA:594:U:H2'	1:RA:595:C:C6	2.46	0.50
1:RA:743:A:O3'	56:RA:3653:HOH:O	2.19	0.50
3:RC:180:MET:HG3	3:RC:268:ARG:NH1	2.25	0.50
6:RF:134:GLN:CG	6:RF:135:ILE:N	2.68	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
1:RA:1224:U:H4'	18:RR:88:GLY:O	2.11	0.50
21:RU:70:ALA:HB3	21:RU:79:ALA:HB1	1.93	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
32:XA:841:C:H3'	32:XA:843:U:OP2	2.11	0.50
32:XA:8:A:C6	35:XD:205:LYS:HG3	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1045:C:H4'	1:YA:1047:G:C4	2.46	0.50
1:YA:1062:G:C8	1:YA:1088:A:C8	2.99	0.50
1:YA:1056:G:C2	1:YA:1102:C:H5	2.29	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:2135:A:HO2'	1:YA:2136:G:C1'	2.24	0.50
1:YA:2308:G:C2'	1:YA:2309:A:OP1	2.58	0.50
1:YA:2819:G:H5''	56:YA:3802:HOH:O	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: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:O2	1:YA:931:U:H2'	2.11	0.50
1:YA:935:C:H2'	1:YA:936:A:C8	2.44	0.50
5:YE:153:LEU:HD12	5:YE:170:ARG:O	2.09	0.50
5:YE:150:THR:HA	5:YE:189:THR:OG1	2.11	0.50
1:YA:1244:A:O2'	5:YE:29:HIS:CE1	2.65	0.50
8:YH:103:VAL:HG23	8:YH:105:ALA:O	2.11	0.50
1:YA:581:C:P	17:YQ:32:ARG:HE	2.33	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
1:YA:2232:C:OP1	24:YX:26:ARG:NH1	2.44	0.50
26:YZ:31:ILE:HG13	26:YZ:31:ILE:O	2.11	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
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
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
51:QT:29:THR:O	51:QT:33:LYS:HE2	2.12	0.50
42:QK:125:LYS:O	52:QU:33:ARG:CZ	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1277:G:H5'	14:RN:20:MET:HE1	1.93	0.50
1:RA:143:C:H2'	1:RA:144:A:H8	1.77	0.50
1:RA:1857:G:H1'	1:RA:1858:A:OP2	2.11	0.50
1:RA:478:A:C6	1:RA:480:A:C6	2.99	0.50
5:RE:151:GLY:CA	5:RE:192:ALA:HB2	2.40	0.50
5:RE:48:THR:C	5:RE:50:ALA:N	2.62	0.50
12:RL:95:LEU:HB3	12:RL:100:ILE:HD11	1.93	0.50
12:RL:77:ILE:HG12	12:RL:95:LEU:HD13	1.94	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
21:RU:52:ASN:C	21:RU:54:PRO:CD	2.79	0.50
23:RW:44:PHE:O	23:RW:78:PHE:HA	2.10	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
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:68:G:N2	32:XA:152:A:H1'	2.26	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
44:XM:95:PRO:HG3	44:XM:99:GLN:CD	2.31	0.50
30:Y3:18:LYS:HD2	30:Y3:19:GLY:H	1.76	0.50
1:YA:55:G:N2	1:YA:116:C:C2	2.80	0.50
1:YA:1391:U:H4'	20:YT:19:LYS:HZ2	1.75	0.50
1:YA:1400:U:HO2'	1:YA:1401:G:C1'	2.23	0.50
1:YA:1491:G:O6	1:YA:1500:G:C2	2.64	0.50
1:YA:2831:G:OP2	4:YD:59:ARG:NE	2.44	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
3:YC:29:PHE:CE2	3:YC:31:PRO:HG2	2.46	0.50
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
10:YJ:111:LYS:HB2	10:YJ:115:GLY:H	1.74	0.50
12:YL:93:ASN:CG	12:YL:94:THR:N	2.64	0.50
15:YO:75:GLY:HA3	15:YO:109:ALA:O	2.11	0.50
4:YD:13:ARG:NH1	16:YP:74:GLN:NE2	2.53	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
45:QN:13:VAL:HG23	45:QN:59:GLN:HG2	1.93	0.50
52:QU:11:PHE:O	52:QU:12:ASP:CB	2.59	0.50
42:QK:124:LYS:O	52:QU:33:ARG:NE	2.45	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
9:RI:123:ALA:HA	9:RI:126:ARG:CZ	2.42	0.50
9:RI:15:GLY:HA2	9:RI:50:LYS:CB	2.34	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
14:RN:103:ARG:HD3	14:RN:110:MET:HE3	1.94	0.50
15:RO:116:GLN:O	15:RO:117:PHE:HB3	2.11	0.50
15:RO:54:VAL:HG22	15:RO:54:VAL:O	2.11	0.50
17:RQ:96:ASP:C	17:RQ:98:ALA:N	2.63	0.50
18:RR:49:ILE:HB	18:RR:51:VAL:O	2.10	0.50
21:RU:66:VAL:C	21:RU:68:ASN:H	2.15	0.50
23:RW:51:GLY:HA3	23:RW:59:PHE:HE2	1.71	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
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
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
35:XD:2:ARG:NE	35:XD:114:ARG:HD3	2.26	0.50
37:XF:43:GLY:O	37:XF:44:ARG:C	2.49	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
50:XS:52:ASN:C	50:XS:54:ARG:H	2.15	0.50
52:XU:38:GLU:OE1	52:XU:41:THR:OG1	2.28	0.50
1:YA:1060:U:H4'	1:YA:1061:U:O5'	2.11	0.50
1:YA:141:G:H3'	1:YA:142:A:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:264:C:H4'	1:YA:264:C:OP1	2.12	0.50
1:YA:2857:G:N2	1:YA:2860:A:OP2	2.36	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
3:YC:144:GLU:HB3	3:YC:187:CYS:CB	2.33	0.50
8:YH:54:LEU:HA	8:YH:57:LYS:HG3	1.94	0.50
10:YJ:25:LEU:C	10:YJ:27:ARG:H	2.14	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
20:YT:19:LYS:O	20:YT:20:ALA:HB2	2.12	0.50
23:YW:37:VAL:CG2	23:YW:38:ARG:NH1	2.74	0.50
8:YH:27:ARG:CZ	24:YX:59:ASP:HA	2.41	0.50
32:QA:1182:G:H4'	32:QA:1183:U:H5'	1.93	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
33:QB:108:GLN:N	33:QB:108:GLN:HE21	2.01	0.50
33:QB:132:GLU:HG3	33:QB:132:GLU:O	2.11	0.50
39:QH:104:SER:HB2	39:QH:125:ILE:HD11	1.93	0.50
32:QA:967:C:C1'	40:QI:129:ARG:HH22	2.24	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
31:R4:30:GLU:OE2	31:R4:32:LYS:HG3	2.12	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:186:G:O2'	1:RA:187:G:H5'	2.10	0.50
1:RA:2032:G:C8	56:RA:3532:HOH:O	2.54	0.50
1:RA:2149:U:HO2'	1:RA:2150:C:C4'	2.22	0.50
1:RA:276:U:C2'	1:RA:276:U:O2	2.60	0.50
1:RA:414:C:H1'	1:RA:1864:U:O2'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:RD:16:THR:O	4:RD:19:GLY:N	2.41	0.50
4:RD:40:LEU:O	4:RD:41:ALA:C	2.50	0.50
4:RD:91:THR:C	4:RD:93:GLY:H	2.07	0.50
6:RF:87:LYS:HG3	6:RF:88:VAL:N	2.27	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
16:RP:111:GLU:CD	16:RP:111:GLU:N	2.65	0.50
32:XA:977:A:C8	32:XA:1223:C:N3	2.80	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
34:XC:181:ILE:HA	34:XC:201:ILE:O	2.11	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
28:Y1:10:LEU:HB2	28:Y1:20:TYR:CB	2.41	0.50
12:YL:61:LEU:O	30:Y3:12:ARG:NH2	2.43	0.50
1:YA:1023:U:H6	1:YA:1023:U:C5'	2.23	0.50
1:YA:108:G:H2'	1:YA:109:C:H6	1.75	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:945:A:C8	1:YA:2448:A:C2	2.99	0.50
1:YA:2615:U:H2'	1:YA:2616:C:C6	2.46	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: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
11:YK:61:VAL:HG13	11:YK:87:LEU:HD22	1.93	0.50
14:YN:12:ARG:HB3	14:YN:16:HIS:ND1	2.27	0.50
17:YQ:84:LYS:C	17:YQ:86:SER:H	2.15	0.50
17:YQ:93:ILE:O	17:YQ:96:ASP:HB3	2.12	0.50
18:YR:98:ILE:O	18:YR:98:ILE:HG22	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
32:QA:143:A:N3	32:QA:143:A:H2'	2.24	0.50
32:QA:178:C:O2'	32:QA:179:A:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:374:A:H5''	32:QA:452:A:C2	2.47	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
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
33:QB:22:TRP:O	33:QB:22:TRP:CD2	2.65	0.50
45:QN:27:LYS:CA	45:QN:30:ILE:HB	2.42	0.50
1:RA:1409:U:O2'	1:RA:1410:G:H5'	2.12	0.50
1:RA:5:A:C2	1:RA:2899:A:C2	2.99	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:O	10:RJ:25:LEU:HD13	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: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
32:XA:1388:C:C2	32:XA:1389:C:C5	3.00	0.50
32:XA:239:U:C6	32:XA:239:U:H5'	2.46	0.50
32:XA:262:A:H5'	51:XT:68:LYS:HD3	1.93	0.50
32:XA:109:A:H8	32:XA:327:A:H5'	1.77	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
33:XB:102:ASN:O	33:XB:102:ASN:CG	2.50	0.50
35:XD:19:PHE:O	35:XD:22:SER:HB2	2.11	0.50
40:XI:49:GLN:N	40:XI:50:PRO:CD	2.74	0.50
40:XI:5:TYR:N	40:XI:5:TYR:HD2	2.09	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:2742:G:OP1	31:Y4:36:ARG:HD3	2.10	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:OP2	1:YA:2108:A:H8	1.95	0.50
1:YA:858:G:C6	1:YA:2268:A:C6	3.00	0.50
1:YA:2373:G:C6	1:YA:2374:C:C4	3.00	0.50
1:YA:249:C:O2'	1:YA:250:G:OP2	2.26	0.50
1:YA:2869:G:H2'	1:YA:2870:C:C6	2.46	0.50
1:YA:611:C:H2'	1:YA:612:G:O4'	2.10	0.50
1:YA:604:G:O6	1:YA:625:G:C6	2.64	0.50
1:YA:71:A:H5''	1:YA:73:A:C5	2.46	0.50
1:YA:58:G:N3	1:YA:73:A:H2	2.10	0.50
1:YA:834:G:H2'	1:YA:835:C:O4'	2.11	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
10:YJ:18:VAL:HG13	10:YJ:56:VAL:HA	1.94	0.50
11:YK:111:LYS:H	11:YK:111:LYS:HE3	1.77	0.50
11:YK:28:SER:O	11:YK:29:HIS:HB3	2.12	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:HA	20:YT:48:GLN:HE21	1.77	0.50
22:YV:80:HIS:CD2	22:YV:83:LYS:HB2	2.46	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
33:QB:72:LYS:HZ1	33:QB:204:ASP:HA	1.77	0.50
36:QE:77:ASN:CG	36:QE:78:GLY:N	2.65	0.50
36:QE:79:THR:HB	36:QE:121:ASN:CG	2.32	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
43:QL:74:GLN:O	43:QL:75:GLU:C	2.49	0.50
51:QT:67:HIS:HB3	51:QT:68:LYS:HZ1	1.73	0.50
1:RA:1013:C:H2'	1:RA:1014:A:C8	2.47	0.50
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:2472:G:H2'	1:RA:2475:C:H42	1.76	0.50
1:RA:523:C:O2'	1:RA:524:G:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:RC:124:LYS:HB3	3:RC:127:ASN:ND2	2.27	0.50
1:RA:2682:A:C8	4:RD:11:MET:CG	2.95	0.50
4:RD:40:LEU:HD12	4:RD:40:LEU:H	1.76	0.50
10:RJ:111:LYS:HE2	10:RJ:115:GLY:H	1.75	0.50
10:RJ:38:GLY:C	10:RJ:40:HIS:H	2.14	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
1:RA:2336:A:H61	23:RW:40:ARG:HB3	1.76	0.50
32:XA:108:G:H5'	32:XA:109:A:C5'	2.40	0.50
32:XA:239:U:C6	32:XA:239:U:C5'	2.91	0.50
33:XB:81:ASP:CG	33:XB:82:ALA:H	2.14	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:1053:C:N4	1:YA:1054:A:N6	2.58	0.50
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:YA:538:A:H5''	10:YJ:7:LYS:HZ3	1.77	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
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:991:U:O2'	32:QA:1212:U:H6	1.92	0.50
32:QA:1240:U:H3'	32:QA:1241:G:C5'	2.42	0.50
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
32:QA:652:U:C5	32:QA:752:G:N3	2.79	0.50
32:QA:91:U:C5	32:QA:92:U:C2	3.00	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:120:HIS:O	36:QE:121:ASN:HB3	2.10	0.50
36:QE:29:ILE:HD12	36:QE:30:PHE:N	2.26	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
27:R0:9:ARG:HH21	27:R0:9:ARG:CG	2.25	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:C5'	1:RA:1941:C:H6	2.25	0.50
1:RA:747:U:C4	1:RA:2613:U:C5	3.00	0.50
1:RA:988:A:O5'	1:RA:988:A:H8	1.95	0.50
1:RA:996:A:C2	1:RA:997:G:C8	2.99	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
1:RA:2308:G:C5	6:RF:76:PHE:HE2	2.29	0.50
7:RG:61:TRP:HA	7:RG:61:TRP:CE3	2.46	0.50
11:RK:107:LEU:C	11:RK:109:SER:H	2.15	0.50
16:RP:25:VAL:CG1	16:RP:46:VAL:HG23	2.42	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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:65:U:C4	2:YB:108:A:C4	3.00	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:7:G:O2'	15:YO:38:GLN:NE2	2.45	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
1:YA:1993:U:H4'	4:YD:133:THR:HG21	1.94	0.50
4:YD:193:VAL:HB	4:YD:194:PRO:HD2	1.94	0.50
10:YJ:120:ARG:O	10:YJ:123:LYS:NZ	2.43	0.50
10:YJ:54:ILE:O	10:YJ:122:LEU:HD12	2.10	0.50
11:YK:104:THR:C	11:YK:106:GLU:H	2.15	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
24:YX:57:VAL:HG12	24:YX:58:ILE:N	2.27	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
32:QA:579:A:H2'	32:QA:580:C:C6	2.47	0.50
35:QD:2:ARG:CZ	35:QD:114:ARG:HD3	2.41	0.50
37:QF:40:GLU:HB2	37:QF:42:TRP:NE1	2.26	0.50
32:QA:974:A:P	45:QN:68:ARG:HH22	2.34	0.50
46:QO:5:GLU:O	46:QO:9:LYS:HG3	2.12	0.50
28:R1:3:GLY:O	28:R1:4:ILE:HG12	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1477:A:H2'	1:RA:1478:G:O4'	2.12	0.50
1:RA:747:U:C4	1:RA:2613:U:C4	2.99	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:960:A:H5''	1:RA:961:C:OP2	2.12	0.50
56:RA:3242:HOH:O	5:RE:81:GLY:HA2	2.12	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
1:RA:621:A:OP2	12:RL:99:ASN:OD1	2.30	0.50
16:RP:33:GLU:OE1	32:QA:345:C:H3'	2.12	0.50
16:RP:4:ILE:CG2	16:RP:5:LYS:N	2.60	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
1:RA:1338:G:O2'	20:RT:18:GLU:HG2	2.12	0.50
1:RA:856:G:H21	23:RW:19:ARG:HH22	1.58	0.50
26:RZ:8:GLN:O	26:RZ:9:THR:HG22	2.12	0.50
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
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
33:XB:19:THR:HG22	33:XB:37:VAL:HG23	1.93	0.50
35:XD:20:LEU:O	35:XD:21:LYS:C	2.50	0.50
36:XE:68:ARG:O	36:XE:69:ASN:C	2.48	0.50
41:XJ:80:THR:C	41:XJ:84:VAL:HG22	2.32	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:19:SER:HB3	48:XQ:70:LYS:HZ2	1.75	0.50
48:XQ:77:VAL:HG12	48:XQ:78:VAL:O	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:570:G:C5	1:YA:2030:A:N7	2.80	0.50
1:YA:234:U:O2'	1:YA:235:U:H5'	2.12	0.50
1:YA:2751:G:N3	1:YA:2751:G:H2'	2.27	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:565:C:H1'	1:YA:577:G:N2	2.26	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:81:G:H2'	1:YA:82:U:H6	1.77	0.50
1:YA:931:U:H4'	1:YA:932:U:OP2	2.11	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
23:YW:27:GLY:HA2	23:YW:31:LEU:HD11	1.90	0.50
25:YY:28:LEU:HD23	25:YY:42:LEU:HD13	1.94	0.50
25:YY:5:GLU:O	25:YY:6:LEU:HG	2.12	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
32:QA:983:A:H2	32:QA:1222:G:H22	1.60	0.50
40:QI:32:ARG:HG2	40:QI:36:GLN:CB	2.42	0.50
41:QJ:28:THR:CG2	41:QJ:28:THR:O	2.59	0.50
47:QP:10:GLY:O	47:QP:11:ALA:HB2	2.11	0.50
27:R0:53:VAL:O	27:R0:54:ILE:O	2.30	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: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
1:RA:1955:U:H5	1:RA:2557:G:N2	2.10	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
2:RB:65:U:C4	2:RB:108:A:C4	3.00	0.50
5:RE:127:GLU:H	5:RE:127:GLU:CD	2.14	0.50
6:RF:19:PHE:O	6:RF:20:ASN:C	2.50	0.50
8:RH:131:SER:O	8:RH:132:PHE:HB3	2.12	0.50
10:RJ:21:THR:C	10:RJ:23:LYS:N	2.61	0.50
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
38:XG:114:SER:O	38:XG:118:ARG:HG3	2.12	0.50
41:XJ:40:ILE:HG22	41:XJ:42:LEU:CD1	2.42	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:117:G:C2	1:YA:119:A:N6	2.80	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:142:A:O2'	1:YA:143:C:O4'	2.29	0.50
1:YA:1460:U:OP2	1:YA:1460:U:C6	2.64	0.50
1:YA:146:A:C6	1:YA:147:C:C4	3.00	0.50
1:YA:2408:U:O2'	1:YA:2409:G:C8	2.64	0.50
1:YA:2415:G:C2	1:YA:2416:C:C2	3.00	0.50
1:YA:2415:G:C5	1:YA:2416:C:C5	3.00	0.50
1:YA:1759:A:O2'	1:YA:2714:G:H1'	2.12	0.50
1:YA:2757:A:O2'	1:YA:2758:A:H5'	2.12	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
2:YB:50:A:OP1	15:YO:68:LYS:HB2	2.12	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
6:YF:74:ALA:HB1	6:YF:76:PHE:CD2	2.47	0.50
8:YH:68:ARG:HB3	8:YH:68:ARG:CZ	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
2:YB:94:A:OP1	22:YV:19:ARG:CD	2.60	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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:QI:57:VAL:O	40:QI:58:GLU:HG2	2.12	0.49
51:QT:6:ALA:HA	51:QT:8:LYS:HG2	1.93	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:237:C:O2'	1:RA:238:C:H5'	2.12	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
1:RA:603:A:H4'	1:RA:604:G:C5'	2.41	0.49
4:RD:117:GLY:C	4:RD:118:PHE:CG	2.82	0.49
5:RE:153:LEU:HG	5:RE:153:LEU:O	2.11	0.49
6:RF:134:GLN:NE2	6:RF:150:GLY:H	2.10	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
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
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
39:XH:85:TYR:CE1	48:XQ:36:PHE:CE2	3.00	0.49
34:XC:17:TRP:CD1	45:XN:90:GLY:HA2	2.47	0.49
50:XS:38:THR:HB	50:XS:69:LYS:NZ	2.27	0.49
1:YA:2371:G:O3'	28:Y1:44:GLN:NE2	2.46	0.49
1:YA:118:A:O5'	1:YA:119:A:H5''	2.12	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: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:YE:165:HIS:O	5:YE:167:VAL:N	2.45	0.49
11:YK:57:VAL:HG13	11:YK:57:VAL:O	2.11	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
25:YY:21:LEU:HD23	25:YY:25:GLN:HG2	1.92	0.49
32:QA:1066:C:H6	32:QA:1066:C:C5'	2.21	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
33:QB:74:ALA:O	33:QB:75:ALA:HB2	2.12	0.49
35:QD:100:VAL:CG1	35:QD:100:VAL:O	2.60	0.49
35:QD:29:THR:C	35:QD:30:LYS:HD3	2.32	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
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
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:635:C:H3'	12:RL:109:LYS:NZ	2.26	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
5:RE:147:LEU:HD23	5:RE:183:PHE:CD1	2.46	0.49
7:RG:116:LEU:N	7:RG:116:LEU:HD13	2.27	0.49
10:RJ:124:VAL:HG23	10:RJ:125:TYR:H	1.77	0.49
11:RK:76:VAL:HB	16:RP:72:VAL:HG23	1.90	0.49
13:RM:109:PRO:O	13:RM:110:GLU:C	2.51	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:29:LEU:HB2	24:RX:30:PRO:HD3	1.94	0.49
24:RX:5:GLN:HE21	24:RX:49:ARG:CB	2.25	0.49
32:XA:1066:C:H2'	32:XA:1067:A:N7	2.28	0.49
32:XA:343:U:HO2'	32:XA:344:A:H8	1.60	0.49
32:XA:373:A:C5'	32:XA:373:A:C8	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:XE:54:GLU:C	36:XE:56:PRO:HD2	2.32	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:11:VAL:HG12	48:XQ:12:VAL:H	1.76	0.49
48:XQ:3:LYS:HG3	48:XQ:3:LYS:O	2.11	0.49
49:XR:33:THR:C	49:XR:35:SER:H	2.16	0.49
50:XS:11:ASP:H	50:XS:14:LEU:HD21	1.76	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
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
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: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
10:YJ:8:PRO:HG2	10:YJ:9:GLU:H	1.77	0.49
12:YL:40:SER:OG	12:YL:41:ARG:N	2.45	0.49
20:YT:61:LEU:HD12	20:YT:61:LEU:C	2.33	0.49
21:YU:6:ARG:HG2	21:YU:7:ASP:N	2.26	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
32:QA:237:G:H5''	48:QQ:26:ARG:NH2	2.27	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
28:R1:29:LYS:NZ	28:R1:29:LYS:HB3	2.27	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
1:RA:323:C:C4	1:RA:333:G:C8	3.01	0.49
1:RA:37:C:O2'	5:RE:45:ALA:HA	2.13	0.49
2:RB:28:C:OP1	15:RO:31:THR:HG21	2.12	0.49
3:RC:12:ARG:HG2	3:RC:12:ARG:NH1	2.23	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:RC:181:ARG:HH21	3:RC:181:ARG:CG	2.24	0.49
8:RH:9:VAL:HG12	8:RH:9:VAL:O	2.12	0.49
12:RL:55:MET:HE2	12:RL:56:PRO:CD	2.42	0.49
2:RB:90:C:H5'	13:RM:18:ARG:HG2	1.94	0.49
17:RQ:60:TRP:O	17:RQ:61:ILE:C	2.51	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
32:XA:1161:C:O2	32:XA:1176:A:H2	1.95	0.49
32:XA:1159:U:O4'	32:XA:1182:G:N2	2.45	0.49
32:XA:1460:C:O5'	32:XA:1460:C:H6	1.95	0.49
32:XA:83:C:C2	32:XA:87:C:N4	2.79	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
51:XT:11:ILE:C	51:XT:13:SER:H	2.16	0.49
52:XU:20:ARG:NH1	52:XU:24:LYS:HG2	2.26	0.49
52:XU:8:ASN:CG	52:XU:9:GLU:H	2.14	0.49
1:YA:1060:U:H4'	1:YA:1061:U:H2'	1.95	0.49
1:YA:1425:G:H2'	1:YA:1426:G:C8	2.46	0.49
1:YA:170:U:H2'	1:YA:171:U:C6	2.44	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
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:88:G:C2	1:YA:89:A:C8	3.00	0.49
3:YC:68:ARG:NE	3:YC:128:THR:OG1	2.46	0.49
3:YC:17:LYS:HD3	3:YC:18:VAL:N	2.26	0.49
10:YJ:99:ARG:HA	10:YJ:102:GLU:CB	2.37	0.49
12:YL:48:ARG:NH1	12:YL:48:ARG:HG3	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
1:YA:1251:C:C5	17:YQ:5:ARG:NH1	2.81	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
32:QA:116:A:C2'	32:QA:117:G:O5'	2.60	0.49
32:QA:1283:U:H2'	32:QA:1284:C:C6	2.47	0.49
32:QA:191:G:C4	32:QA:192:A:C8	3.00	0.49
32:QA:405:U:OP1	32:QA:406:G:O2'	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:450:G:N7	32:QA:481:G:O6	2.45	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
41:QJ:88:MET:C	41:QJ:90:LEU:H	2.16	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
28:R1:9:LYS:O	28:R1:50:GLU:HG2	2.11	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
1:RA:884:U:O2	1:RA:884:U:H2'	2.12	0.49
2:RB:77:U:C2'	2:RB:78:A:H5'	2.43	0.49
4:RD:34:VAL:HG21	4:RD:90:PHE:O	2.13	0.49
6:RF:79:ARG:O	6:RF:82:TYR:HB2	2.13	0.49
8:RH:72:ILE:HG23	8:RH:72:ILE:O	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
9:RI:90:GLY:C	9:RI:92:PRO:HD3	2.31	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
23:RW:30:VAL:CG2	23:RW:30:VAL:O	2.60	0.49
32:XA:1239:A:N7	32:XA:1298:U:N3	2.54	0.49
32:XA:1242:G:HO2'	32:XA:1243:C:C4'	2.26	0.49
32:XA:1378:C:H3'	32:XA:1379:G:H5''	1.93	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
33:XB:153:MET:HE3	33:XB:155:GLY:O	2.11	0.49
35:XD:84:ASN:ND2	35:XD:84:ASN:C	2.64	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
28:Y1:42:VAL:O	28:Y1:42:VAL:HG12	2.11	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: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:1594:U:H2'	1:YA:1595:C:C6	2.47	0.49
1:YA:1312:U:N3	1:YA:1603:A:C6	2.81	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1476:U:H1'	1:YA:1732:C:O2	2.11	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
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: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
3:YC:131:MET:HA	3:YC:134:ILE:CD1	2.43	0.49
3:YC:226:PRO:O	3:YC:227:VAL:C	2.51	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
6:YF:37:MET:HE3	6:YF:56:LEU:HD23	1.95	0.49
7:YG:95:ALA:HB1	7:YG:124:CYS:SG	2.53	0.49
7:YG:94:ARG:O	7:YG:95:ALA:HB2	2.13	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
32:QA:1379:G:C6	32:QA:1380:U:C4	2.99	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:73:C:O2'	32:QA:74:A:C5'	2.61	0.49
32:QA:903:G:H2'	32:QA:904:U:H6	1.78	0.49
33:QB:22:TRP:HA	33:QB:188:THR:O	2.13	0.49
35:QD:109:THR:HG22	35:QD:112:GLU:HB2	1.93	0.49
32:QA:1117:A:O3'	40:QL:105:ARG:NE	2.46	0.49
43:QL:72:ASN:CG	43:QL:73:LEU:H	2.12	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:254:G:N7	30:R3:4:LYS:HE2	2.27	0.49
1:RA:2886:A:C2	1:RA:2887:A:H1'	2.47	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
2:RB:94:A:O2'	2:RB:95:U:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:RL:14:LYS:CG	12:RL:15:ALA:N	2.75	0.49
18:RR:54:VAL:O	18:RR:55:ASP:C	2.50	0.49
23:RW:35:ILE:O	23:RW:37:VAL:HG23	2.13	0.49
25:RY:42:LEU:O	25:RY:45:GLN:O	2.30	0.49
25:RY:9:LYS:HA	25:RY:9:LYS:HZ1	1.78	0.49
32:XA:1014:A:C2	32:XA:1219:A:H1'	2.47	0.49
32:XA:386:C:H2'	32:XA:387:U:H5'	1.94	0.49
32:XA:752:G:H1'	32:XA:754:C:H41	1.70	0.49
32:XA:731:G:OP1	32:XA:766:A:H1'	2.13	0.49
32:XA:878:A:O2'	32:XA:879:C:H5'	2.13	0.49
32:XA:86:G:O2'	32:XA:87:C:O5'	2.30	0.49
40:XI:29:ILE:HA	40:XI:64:ILE:O	2.12	0.49
44:XM:18:LEU:HD12	44:XM:18:LEU:N	2.28	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:YA:1056:G:O5'	1:YA:1085:A:C2	2.64	0.49
1:YA:1054:A:C2	1:YA:1106:G:C2	3.00	0.49
1:YA:1237:A:N3	1:YA:1238:G:H1'	2.26	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:192:C:OP1	1:YA:2243:U:OP1	2.31	0.49
1:YA:19:A:C2	1:YA:522:A:C2	2.99	0.49
1:YA:2142:A:H2'	1:YA:2143:C:H4'	1.95	0.49
1:YA:860:U:C4	1:YA:2268:A:C4	3.01	0.49
1:YA:2376:A:H2'	1:YA:2377:A:O4'	2.13	0.49
1:YA:2428:G:H3'	1:YA:2428:G:OP1	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
1:YA:345:A:O2'	1:YA:346:A:C2	2.61	0.49
1:YA:49:A:C8	1:YA:51:G:C2	3.00	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
3:YC:75:ALA:HA	3:YC:95:TYR:HA	1.93	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
1:YA:1455:G:N7	14:YN:64:ARG:NH1	2.60	0.49
15:YO:9:ARG:HA	15:YO:12:THR:OG1	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:YP:67:GLU:CD	16:YP:68:GLY:H	2.16	0.49
20:YT:29:THR:OG1	20:YT:85:VAL:HB	2.12	0.49
1:YA:2232:C:P	24:YX:26:ARG:HH12	2.35	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
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
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
41:QJ:10:LEU:HD22	41:QJ:22:THR:OG1	2.12	0.49
51:QT:33:LYS:N	51:QT:33:LYS:HE2	2.27	0.49
51:QT:4:LYS:O	51:QT:5:SER:C	2.51	0.49
52:QU:38:GLU:OE2	52:QU:41:THR:HG21	2.12	0.49
1:RA:1106:G:N2	1:RA:1107:G:H1'	2.27	0.49
1:RA:1496:A:H2'	1:RA:1498:C:C4	2.48	0.49
1:RA:182:A:H2'	1:RA:183:C:C6	2.48	0.49
1:RA:1926:U:H2'	1:RA:1928:A:N7	2.27	0.49
1:RA:373:U:O2'	1:RA:423:A:H1'	2.12	0.49
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:922:C:HO2'	23:RW:25:PHE:HE2	1.60	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
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:101:ASP:OD2	8:RH:102:ALA:N	2.44	0.49
1:RA:1252:G:C2	17:RQ:32:ARG:HG2	2.48	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:XA:1255:G:N1	32:XA:1279:G:N7	2.60	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
33:XB:153:MET:SD	33:XB:157:PRO:HD3	2.53	0.49
37:XF:88:MET:HG2	37:XF:90:MET:SD	2.53	0.49
38:XG:29:LEU:O	38:XG:30:MET:O	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:XK:115:ILE:O	42:XK:115:ILE:HG12	2.11	0.49
42:XK:12:ARG:NH1	42:XK:76:TYR:HE1	2.10	0.49
43:XL:89:LEU:HB3	43:XL:92:VAL:CG2	2.42	0.49
37:XF:86:ARG:HD3	49:XR:63:TYR:O	2.12	0.49
51:XT:3:ILE:HD12	51:XT:3:ILE:H	1.77	0.49
52:XU:22:CYS:O	52:XU:23:GLU:O	2.30	0.49
27:Y0:26:SER:O	27:Y0:27:LEU:HD13	2.12	0.49
27:Y0:4:GLN:O	27:Y0:4:GLN:HG2	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: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:2054:A:C2	1:YA:2616:C:C2	3.00	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
3:YC:149:LYS:HE3	3:YC:152:GLN:NE2	2.28	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:52:LEU:HD11	9:YI:78:LEU:HD21	1.93	0.49
10:YJ:140:LEU:HD22	10:YJ:141:ASP:H	1.76	0.49
10:YJ:65:THR:O	10:YJ:68:LYS:NZ	2.38	0.49
11:YK:13:ASN:H	11:YK:13:ASN:ND2	2.03	0.49
11:YK:7:MET:HG3	11:YK:17:ARG:HH12	1.78	0.49
20:YT:34:VAL:O	20:YT:34:VAL:HG12	2.12	0.49
1:YA:2356:U:C4'	23:YW:16:GLU:HG3	2.35	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:115:G:C6	32:QA:313:A:C2	3.00	0.49
32:QA:1508:A:H2'	32:QA:1509:C:O4'	2.12	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
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
48:QQ:51:GLU:H	48:QQ:51:GLU:CD	2.15	0.49
51:QT:28:ARG:O	51:QT:32:LYS:HG2	2.13	0.49
1:RA:1469:A:H2'	1:RA:1470:A:H8	1.73	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:HD1	4:RD:101:PHE:N	2.11	0.49
5:RE:5:LEU:CD1	5:RE:10:SER:HB3	2.41	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
32:XA:1148:U:H2'	32:XA:1149:C:O4'	2.12	0.49
32:XA:1158:C:H2'	32:XA:1158:C:O2	2.12	0.49
32:XA:1202:U:H2'	32:XA:1203:C:C5'	2.43	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
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
34:XC:21:TRP:CZ3	45:XN:93:PRO:HG2	2.47	0.49
1:YA:1816:C:O2'	1:YA:1817:G:P	2.70	0.49
1:YA:1844:C:O3'	3:YC:255:LYS:NZ	2.34	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
1:YA:2875:C:O2'	1:YA:2876:G:O5'	2.30	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:85:G:O2'	1:YA:86:G:H8	1.95	0.49
4:YD:129:THR:HG22	4:YD:130:GLN:O	2.13	0.49
4:YD:78:GLY:C	4:YD:80:TRP:CZ3	2.86	0.49
7:YG:84:LYS:HB3	7:YG:132:LEU:O	2.13	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:201:G:H2'	32:QA:202:G:O4'	2.13	0.49
32:QA:955:U:H6	32:QA:955:U:O5'	1.95	0.49
33:QB:9:LEU:HD23	33:QB:11:ALA:N	2.28	0.49
33:QB:221:ARG:CZ	33:QB:221:ARG:HB3	2.43	0.49
33:QB:84:LEU:O	33:QB:84:LEU:HG	2.13	0.49
35:QD:3:TYR:HB2	35:QD:62:ARG:NH2	2.27	0.49
42:QK:121:ARG:CZ	52:QU:35:GLU:HG3	2.42	0.49
42:QK:17:ASP:HB3	42:QK:80:ASN:OD1	2.13	0.49
47:QP:20:VAL:HG22	47:QP:21:VAL:N	2.28	0.49
48:QQ:12:VAL:HG11	48:QQ:21:VAL:H	1.77	0.49
28:R1:27:ARG:O	28:R1:30:PRO:HD3	2.12	0.49
1:RA:244:A:OP2	30:R3:7:ARG:NH2	2.46	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
1:RA:277:G:H4'	1:RA:278:A:N7	2.28	0.49
1:RA:361:G:O2'	1:RA:362:A:O5'	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
3:RC:219:VAL:HG12	3:RC:224:MET:HE3	1.93	0.49
4:RD:114:LYS:HE3	4:RD:114:LYS:C	2.32	0.49
4:RD:149:ASN:OD1	4:RD:150:GLN:N	2.46	0.49
7:RG:38:ASP:N	7:RG:38:ASP:OD1	2.46	0.49
9:RI:58:ILE:O	9:RI:58:ILE:HG22	2.12	0.49
10:RJ:13:ARG:O	10:RJ:14:ASP:CB	2.57	0.49
56:RA:3780:HOH:O	10:RJ:39:LYS:HE3	2.12	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
17:RQ:40:LYS:O	17:RQ:41:ALA:C	2.49	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
32:XA:1138:G:N3	32:XA:1138:G:H5''	2.28	0.49
32:XA:1486:G:H2'	32:XA:1487:G:O4'	2.13	0.49
32:XA:484:G:H4'	32:XA:485:U:OP1	2.09	0.49
32:XA:6:G:H1	36:XE:102:THR:HG21	1.78	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:XC:124:GLU:N	34:XC:124:GLU:CD	2.66	0.49
40:XI:51:LEU:C	40:XI:53:LEU:H	2.16	0.49
40:XI:5:TYR:N	40:XI:5:TYR:CD2	2.80	0.49
49:XR:63:TYR:CE2	49:XR:69:TYR:OH	2.64	0.49
29:Y2:1:MET:HG3	29:Y2:2:LYS:N	2.27	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:752:A:C6	1:YA:1781:U:H1'	2.48	0.49
1:YA:1906:G:H5''	1:YA:1929:G:O2'	2.13	0.49
1:YA:229:C:O2'	1:YA:230:G:O5'	2.31	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:2726:A:HO2'	1:YA:2727:A:C5'	2.26	0.49
1:YA:2773:C:C2	1:YA:2774:C:C5	3.01	0.49
1:YA:311:A:H1'	1:YA:332:A:C8	2.48	0.49
1:YA:534:U:H6	1:YA:534:U:O5'	1.96	0.49
1:YA:626:A:H2'	12:YL:78:ARG:HH22	1.77	0.49
1:YA:64:A:O2'	1:YA:65:U:H5'	2.12	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
3:YC:28:PRO:HG3	3:YC:62:ARG:NH1	2.28	0.49
5:YE:135:ALA:C	5:YE:137:LYS:H	2.15	0.49
10:YJ:43:GLU:O	10:YJ:45:THR:HG22	2.12	0.49
11:YK:13:ASN:N	11:YK:13:ASN:HD22	1.96	0.49
11:YK:19:VAL:HG12	11:YK:41:ILE:CG1	2.42	0.49
1:YA:2392:A:C2	12:YL:55:MET:SD	3.04	0.49
13:YM:52:ALA:HB1	13:YM:119:LEU:CD2	2.43	0.49
20:YT:39:THR:HG21	20:YT:42:GLU:CD	2.33	0.49
32:QA:1005:A:H2'	32:QA:1006:G:O4'	2.13	0.49
32:QA:198:G:O2'	32:QA:199:A:C5'	2.61	0.49
32:QA:97:G:H2'	32:QA:98:A:O4'	2.13	0.49
33:QB:195:VAL:HG11	33:QB:198:VAL:HA	1.95	0.49
33:QB:95:TRP:HZ3	33:QB:98:GLY:N	2.11	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
32:QA:1226:C:N4	44:QM:102:LYS:HG3	2.27	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:QT:32:LYS:O	51:QT:35:TYR:CD2	2.66	0.49
1:RA:1584:U:H2'	1:RA:1584:U:O2	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
6:RF:45:ASP:CB	6:RF:48:LEU:HB2	2.43	0.49
10:RJ:54:ILE:HD12	10:RJ:55:ILE:C	2.33	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: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
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:64:G:C8	32:XA:99:C:N4	2.81	0.49
33:XB:83:ALA:O	33:XB:85:SER:N	2.45	0.49
32:XA:9:G:OP2	36:XE:125:LYS:HG3	2.12	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
49:XR:53:GLN:O	49:XR:56:ARG:HB2	2.12	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:YA:1361:G:C6	1:YA:1371:G:N2	2.81	0.49
1:YA:142:A:C2'	1:YA:143:C:C6	2.96	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:785:G:O2'	1:YA:1779:U:C5'	2.61	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: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:54:G:C4	1:YA:55:G:C8	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:931:U:C2'	1:YA:931:U:O2	2.60	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
5:YE:154:ASP:C	5:YE:156:ASN:H	2.15	0.49
9:YI:69:VAL:HG13	9:YI:69:VAL:O	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
25:YY:1:MET:H2	25:YY:5:GLU:HG3	1.77	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:133:U:H1'	32:QA:230:G:N2	2.28	0.49
32:QA:1414:U:H2'	32:QA:1415:G:H8	1.76	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
33:QB:134:LEU:HA	33:QB:137:THR:OG1	2.13	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
14:RN:98:LEU:HB3	27:R0:42:ILE:HG12	1.95	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:962:G:N2	1:RA:2250:G:H1	2.11	0.49
1:RA:2269:G:O2'	23:RW:18:LYS:HG2	2.13	0.49
1:RA:2321:U:C6	1:RA:2321:U:H5''	2.44	0.49
1:RA:920:A:C6	1:RA:921:C:C4	3.01	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
1:RA:2683:C:O2	11:RK:70:ARG:NH2	2.44	0.49
13:RM:50:ARG:HG2	13:RM:50:ARG:NH2	2.28	0.49
14:RN:33:ILE:HG23	14:RN:114:GLU:HB3	1.93	0.49
16:RP:56:SER:O	16:RP:75:THR:HG23	2.13	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:197:A:H4'	32:XA:198:G:OP1	2.10	0.49
32:XA:1226:C:C5'	44:XM:94:LEU:HD21	2.43	0.49
45:YN:61:ASN:OD1	45:YN:61:ASN:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:XR:25:ILE:O	49:XR:25:ILE:HG13	2.12	0.49
51:XT:71:ALA:O	51:XT:72:ALA:C	2.51	0.49
1:YA:2286:G:C8	28:Y1:33:LEU:HD21	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:1361:G:O2'	1:YA:1362:C:H5'	2.13	0.49
1:YA:1377:G:O5'	1:YA:1377:G:H8	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:2311:A:H3'	1:YA:2312:U:H6	1.78	0.49
1:YA:2407:A:HO2'	1:YA:2408:U:C5'	2.26	0.49
1:YA:2600:A:C6	1:YA:2601:C:N4	2.81	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:71:A:H5''	1:YA:73:A:C4	2.48	0.49
1:YA:747:U:H3'	1:YA:748:G:H5'	1.95	0.49
4:YD:39:ASP:CG	4:YD:40:LEU:H	2.16	0.49
1:YA:2303:G:H5'	6:YF:121:PHE:CE1	2.47	0.49
8:YH:35:LYS:O	8:YH:36:ALA:HB2	2.13	0.49
10:YJ:106:LYS:HB2	10:YJ:119:PHE:CE2	2.42	0.49
1:YA:1287:A:H5'	14:YN:103:ARG:CZ	2.43	0.49
24:YX:65:THR:O	24:YX:68:ALA:HB3	2.13	0.49
32:QA:1157:A:C6	32:QA:1180:A:C5	3.00	0.48
32:QA:451:A:O4'	32:QA:452:A:C8	2.66	0.48
33:QB:165:ALA:HB2	33:QB:186:VAL:HG12	1.94	0.48
42:QK:90:PRO:C	42:QK:92:ARG:H	2.16	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
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:149:A:H2'	1:RA:150:U:H6	1.77	0.48
1:RA:1576:U:O2'	1:RA:1577:C:H5'	2.13	0.48
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
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:832:U:H2'	1:RA:833:A:C8	2.48	0.48
5:RE:134:LEU:HD12	5:RE:134:LEU:O	2.13	0.48
1:RA:675:A:H4'	5:RE:62:GLN:HE22	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:RG:35:THR:C	7:RG:36:LEU:HD22	2.34	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
13:RM:47:GLU:O	13:RM:48:ALA:C	2.51	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
24:RX:44:ARG:HG2	24:RX:45:PHE:N	2.28	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
32:XA:956:U:O2	32:XA:1225:A:C2	2.66	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
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
39:XH:91:LEU:HB3	39:XH:112:ASP:OD2	2.13	0.48
40:XI:86:LEU:HG	40:XI:86:LEU:O	2.12	0.48
52:XU:38:GLU:CA	52:XU:40:PRO:HD2	2.43	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: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:2060:A:H2'	5:YE:63:LYS:HZ1	1.78	0.48
1:YA:2474:U:O4'	1:YA:2474:U:O2	2.30	0.48
1:YA:2461:A:H1'	1:YA:2492:U:O2	2.13	0.48
1:YA:2540:C:H2'	1:YA:2541:A:H8	1.78	0.48
1:YA:263:G:H2'	1:YA:264:C:O4'	2.13	0.48
1:YA:2868:A:C6	1:YA:2869:G:C6	3.01	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:1282:C:H2'	32:QA:1283:U:H6	1.76	0.48
32:QA:188:C:C2'	32:QA:188:C:O2	2.60	0.48
32:QA:34:C:H2'	32:QA:35:G:H8	1.77	0.48
32:QA:471:U:H2'	32:QA:472:U:O4'	2.13	0.48
32:QA:51:A:H4'	32:QA:52:C:O5'	2.13	0.48
32:QA:830:G:H2'	32:QA:831:A:C8	2.46	0.48
37:QF:6:ILE:HB	37:QF:62:MET:HB3	1.95	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:N	42:QK:76:TYR:CD1	2.81	0.48
48:QQ:51:GLU:O	48:QQ:52:CYS:O	2.31	0.48
51:QT:33:LYS:O	51:QT:36:ALA:HB3	2.13	0.48
1:RA:1020:A:O5'	1:RA:1020:A:H8	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
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
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
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
12:RL:19:LEU:C	12:RL:19:LEU:HD23	2.33	0.48
13:RM:96:ILE:C	13:RM:96:ILE:HD12	2.33	0.48
16:RP:50:ARG:HG3	16:RP:57:ALA:O	2.13	0.48
17:RQ:88:GLU:O	17:RQ:88:GLU:OE1	2.31	0.48
18:RR:18:GLN:O	18:RR:97:LYS:O	2.31	0.48
21:RU:73:ASN:HA	21:RU:95:PHE:CE2	2.48	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
40:XI:127:SER:O	40:XI:128:LYS:HB3	2.13	0.48
40:XI:53:LEU:O	40:XI:54:VAL:HG13	2.13	0.48
42:XK:27:ASN:N	42:XK:27:ASN:OD1	2.46	0.48
42:XK:91:GLY:O	42:XK:92:ARG:C	2.51	0.48
45:XN:12:ARG:HD3	45:XN:58:ARG:O	2.13	0.48
41:XJ:49:PHE:CE2	45:XN:73:LEU:HD13	2.48	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:1324:G:C2	1:YA:1328:A:C6	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1351:C:H2'	1:YA:1352:U:O4'	2.13	0.48
1:YA:1667:G:O5'	1:YA:1667:G:H8	1.97	0.48
1:YA:183:C:N4	1:YA:184:C:C4	2.81	0.48
1:YA:1663:G:C6	1:YA:1992:G:N7	2.81	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
1:YA:28:A:C6	1:YA:29:U:C2	3.01	0.48
1:YA:984:A:HO2'	1:YA:985:C:P	2.33	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
10:YJ:99:ARG:HG3	10:YJ:102:GLU:CD	2.32	0.48
10:YJ:45:THR:C	10:YJ:47:HIS:H	2.15	0.48
12:YL:103:ILE:HD12	12:YL:103:ILE:H	1.77	0.48
12:YL:57:LEU:HA	12:YL:60:ARG:HG3	1.93	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
32:QA:1226:C:C5	44:QM:102:LYS:HA	2.48	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
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
32:QA:1203:C:H4'	45:QN:66:THR:HG22	1.95	0.48
47:QP:11:ALA:O	47:QP:12:LYS:C	2.51	0.48
52:QU:45:LYS:HE3	52:QU:45:LYS:HA	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
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
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
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:HZ2	5:RE:132:LYS:HB3	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:RL:79:LEU:O	12:RL:81:ASP:O	2.31	0.48
18:RR:37:GLU:N	18:RR:37:GLU:CD	2.65	0.48
21:RU:3:LYS:HD3	21:RU:82:VAL:HB	1.94	0.48
1:RA:112:U:H5'	25:RY:58:ASN:ND2	2.28	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:XA:1213:A:C4	32:XA:1215:G:C8	3.01	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
34:XC:11:LEU:HD23	34:XC:11:LEU:HA	1.59	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
41:XJ:48:ARG:CZ	41:XJ:48:ARG:HB2	2.43	0.48
27:Y0:55:ALA:HB3	27:Y0:56:LYS:NZ	2.28	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:H2'	1:YA:2772:C:O2	2.12	0.48
1:YA:2845:U:H5''	16:YP:51:ASN:O	2.13	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:54:G:C5	1:YA:55:G:C8	3.02	0.48
1:YA:767:U:O2'	1:YA:768:G:H5'	2.14	0.48
3:YC:74:PRO:HG2	3:YC:96:LYS:HB2	1.94	0.48
6:YF:111:ARG:N	6:YF:111:ARG:HE	2.11	0.48
6:YF:67:THR:O	6:YF:84:ILE:HG22	2.13	0.48
8:YH:128:HIS:HB2	8:YH:144:VAL:HG22	1.94	0.48
8:YH:80:ILE:HG13	8:YH:81:ALA:H	1.78	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:O	16:YP:63:ILE:HG22	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:HD23	26:YZ:28:LEU:N	2.28	0.48
32:QA:1052:U:C5'	32:QA:1053:G:OP2	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
33:QB:146:SER:O	33:QB:147:LEU:HD23	2.14	0.48
34:QC:190:THR:C	34:QC:192:TYR:H	2.17	0.48
34:QC:188:ALA:O	34:QC:194:VAL:HA	2.12	0.48
32:QA:674:G:OP1	37:QF:51:ILE:HG13	2.13	0.48
38:QG:114:SER:CB	38:QG:117:LEU:HG	2.30	0.48
42:QK:124:LYS:O	52:QU:33:ARG:CZ	2.61	0.48
42:QK:76:TYR:N	42:QK:76:TYR:HD1	2.11	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
1:RA:1106:G:C2	1:RA:1107:G:C8	3.01	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
2:RB:109:A:C6	2:RB:110:C:C4	3.02	0.48
1:RA:1789:A:OP1	3:RC:220:ARG:HD3	2.13	0.48
4:RD:119:ALA:HB2	4:RD:165:MET:CB	2.42	0.48
56:RA:3654:HOH:O	4:RD:140:HIS:CE1	2.64	0.48
4:RD:177:VAL:O	4:RD:177:VAL:HG23	2.13	0.48
1:RA:38:A:O2'	5:RE:43:THR:HA	2.13	0.48
6:RF:128:SER:HA	6:RF:154:THR:HA	1.95	0.48
11:RK:113:MET:O	11:RK:114:LYS:C	2.52	0.48
18:RR:49:ILE:HG21	18:RR:53:PHE:H	1.79	0.48
20:RT:73:ARG:NH2	20:RT:73:ARG:HB3	2.28	0.48
23:RW:35:ILE:O	23:RW:35:ILE:HG12	2.13	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
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
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
32:XA:265:G:H5'	48:XQ:65:PRO:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:Y3:31:ILE:HG21	30:Y3:34:LYS:NZ	2.28	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:141:G:H3'	1:YA:142:A:O4'	2.12	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:192:C:C4	1:YA:193:U:C2	3.01	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
1:YA:379:G:N1	1:YA:380:G:C4	2.82	0.48
1:YA:46:G:N2	1:YA:47:C:C2	2.82	0.48
1:YA:543:G:N2	1:YA:551:G:C4	2.81	0.48
1:YA:55:G:C2	1:YA:116:C:C2	3.01	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
2:YB:77:U:C2'	2:YB:78:A:H5'	2.44	0.48
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:162:ARG:NH1	7:YG:168:VAL:HG21	2.27	0.48
7:YG:90:GLY:HA3	7:YG:93:TYR:CZ	2.48	0.48
10:YJ:44:TYR:C	10:YJ:44:TYR:CD2	2.86	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
1:YA:492:A:C2	19:YS:49:LYS:HE2	2.46	0.48
19:YS:49:LYS:HB3	19:YS:49:LYS:NZ	2.29	0.48
21:YU:33:VAL:O	21:YU:34:ILE:HG13	2.12	0.48
23:YW:37:VAL:HG23	23:YW:38:ARG:NH1	2.29	0.48
25:YY:18:LEU:HD13	25:YY:18:LEU:O	2.13	0.48
1:YA:112:U:H5'	25:YY:58:ASN:HD21	1.77	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
32:QA:489:C:C2'	32:QA:490:C:H5'	2.43	0.48
32:QA:444:G:N2	32:QA:491:G:C4	2.81	0.48
32:QA:548:G:C8	32:QA:548:G:H5''	2.46	0.48
32:QA:922:G:H2'	32:QA:923:A:C8	2.49	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:124:ILE:O	39:QH:124:ILE:HG13	2.13	0.48
39:QH:74:ILE:HD12	39:QH:127:TYR:O	2.14	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
1:RA:2756:U:H5''	31:R4:19:ARG:HG2	1.96	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
2:RB:77:U:H2'	2:RB:78:A:H5'	1.96	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
4:RD:107:VAL:HG13	4:RD:203:VAL:HG23	1.95	0.48
4:RD:39:ASP:OD2	4:RD:40:LEU:HD12	2.14	0.48
6:RF:13:LYS:O	6:RF:17:THR:HG23	2.13	0.48
6:RF:42:ALA:HA	6:RF:45:ASP:O	2.13	0.48
6:RF:35:LEU:HD12	6:RF:88:VAL:HB	1.96	0.48
7:RG:23:ILE:N	7:RG:23:ILE:HD12	2.28	0.48
9:RI:104:GLN:O	9:RI:105:LEU:CB	2.61	0.48
9:RI:53:PRO:O	9:RI:74:PRO:HD2	2.14	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
32:XA:1123:U:O3'	41:XJ:38:GLY:HA3	2.14	0.48
32:XA:976:G:N2	32:XA:1363:A:C4	2.81	0.48
33:XB:128:LEU:O	33:XB:129:THR:C	2.52	0.48
33:XB:46:VAL:HG13	33:XB:47:PRO:CD	2.42	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
32:XA:1330:U:H5'	44:XM:69:ARG:HH22	1.79	0.48
30:Y3:23:HIS:O	30:Y3:46:LYS:HE3	2.13	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:204:A:C5	1:YA:206:U:O4	2.66	0.48
1:YA:185:G:C5	1:YA:212:G:N2	2.81	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
1:YA:295:G:N3	1:YA:295:G:H2'	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:240:C:H5''	1:YA:623:C:OP1	2.13	0.48
1:YA:727:A:O2'	1:YA:728:G:C8	2.63	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
6:YF:31:GLU:CA	6:YF:95:MET:HE1	2.44	0.48
15:YO:34:HIS:CD2	15:YO:65:THR:HG21	2.48	0.48
21:YU:3:LYS:O	21:YU:4:ILE:C	2.52	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
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
32:QA:211:G:N1	32:QA:212:G:N3	2.62	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
33:QB:139:GLU:O	33:QB:143:LEU:CD2	2.62	0.48
33:QB:49:PHE:HB2	33:QB:53:LEU:CD2	2.43	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: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
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
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
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
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:174:PHE:CD1	6:RF:176:PHE:CE1	3.02	0.48
6:RF:97:GLU:O	6:RF:101:ARG:HG2	2.14	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:RS:69:LEU:HG	19:RS:107:VAL:HG13	1.94	0.48
19:RS:42:LYS:O	19:RS:42:LYS:HD3	2.13	0.48
20:RT:25:GLU:C	20:RT:27:SER:N	2.67	0.48
24:RX:29:LEU:N	24:RX:29:LEU:CD2	2.76	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
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
33:XB:8:MET:SD	33:XB:9:LEU:HG	2.54	0.48
35:XD:104:MET:SD	35:XD:142:VAL:HG13	2.53	0.48
35:XD:77:GLU:HG3	35:XD:81:LEU:HD11	1.96	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
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: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:C6	1:YA:1394:U:H3'	2.48	0.48
1:YA:2067:G:H4'	1:YA:2068:U:OP2	2.12	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
1:YA:301:G:C2	1:YA:317:G:C4	3.01	0.48
1:YA:53:A:C8	1:YA:54:G:C8	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:996:A:OP2	17:YQ:91:ARG:NH1	2.47	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
1:YA:1059:G:O2'	9:YI:131:THR:HG21	2.13	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
1:YA:2230:G:O3'	24:YX:29:LEU:HD12	2.13	0.48
1:YA:102:U:H3	25:YY:2:LYS:HB3	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:1449:C:H2'	32:QA:1450:U:C5'	2.44	0.48
32:QA:167:A:H2'	32:QA:168:G:O4'	2.13	0.48
35:QD:176:LYS:N	35:QD:176:LYS:HD3	2.28	0.48
36:QE:10:LEU:H	36:QE:10:LEU:HD23	1.79	0.48
36:QE:155:LYS:N	36:QE:155:LYS:HD2	2.28	0.48
37:QF:41:ASP:C	37:QF:43:GLY:H	2.17	0.48
37:QF:97:THR:O	37:QF:98:GLU:CG	2.61	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:26:G:C6	1:RA:27:G:N1	2.81	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:N	4:RD:106:LYS:HD2	2.28	0.48
4:RD:124:ARG:HG2	4:RD:125:TRP:CD1	2.49	0.48
11:RK:51:LYS:HE2	11:RK:95:ILE:HG12	1.95	0.48
12:RL:57:LEU:C	12:RL:59:ARG:H	2.16	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:O	22:RV:65:VAL:HG22	2.13	0.48
32:XA:1073:U:H2'	32:XA:1074:G:C8	2.47	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
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:YN:61:ASN:HB2	45:YN:72:PHE:CZ	2.48	0.48
51:XT:4:LYS:HE3	51:XT:5:SER:H	1.79	0.48
1:YA:1335:C:N4	56:YA:3409:HOH:O	2.40	0.48
1:YA:16:C:O2'	1:YA:17:G:H5'	2.14	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:226:A:C6	1:YA:227:A:N6	2.82	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
1:YA:1649:G:O2'	14:YN:106:ASP:OD2	2.31	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
32:QA:1004:A:H2'	32:QA:1005:A:O4'	2.13	0.48
32:QA:153:C:C2'	32:QA:154:U:H5'	2.44	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
49:QR:67:LEU:HA	49:QR:67:LEU:HD23	1.70	0.48
42:QK:124:LYS:HE3	52:QU:34:ARG:HG2	1.96	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:262:A:C2'	1:RA:263:G:H5'	2.43	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
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
3:RC:106:PRO:HA	3:RC:141:HIS:HE2	1.78	0.48
3:RC:219:VAL:O	3:RC:224:MET:HE3	2.14	0.48
4:RD:140:HIS:N	4:RD:140:HIS:CD2	2.81	0.48
7:RG:10:VAL:CG2	7:RG:10:VAL:O	2.62	0.48
7:RG:96:ALA:O	7:RG:97:VAL:CB	2.61	0.48
8:RH:31:VAL:O	8:RH:32:PRO:C	2.51	0.48
1:RA:1081:U:O2'	9:RI:117:THR:O	2.26	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
22:RV:39:ALA:C	22:RV:40:ILE:HD13	2.34	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
32:XA:1255:G:HO2'	32:XA:1258:G:H1'	1.79	0.48
32:XA:1319:A:N6	32:XA:1323:G:N3	2.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:288:A:H2'	32:XA:289:G:H4'	1.94	0.48
32:XA:29:U:H5'	32:XA:296:U:OP1	2.13	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
33:XB:100:LEU:C	33:XB:102:ASN:H	2.16	0.48
33:XB:19:THR:HB	33:XB:37:VAL:HA	1.95	0.48
34:XC:67:ILE:H	34:XC:102:ILE:HA	1.79	0.48
34:XC:38:VAL:O	34:XC:42:LEU:HD23	2.13	0.48
39:XH:102:VAL:CG2	39:XH:125:ILE:HB	2.44	0.48
36:XE:157:GLY:HA3	39:XH:63:LYS:HE3	1.96	0.48
32:XA:952:U:H5	44:XM:102:LYS:HZ1	1.57	0.48
46:XO:62:ARG:HH22	46:XO:88:ARG:NH2	2.12	0.48
51:XT:72:ALA:C	51:XT:74:HIS:H	2.17	0.48
42:XK:126:ARG:O	52:XU:33:ARG:NH2	2.47	0.48
1:YA:254:G:N7	30:Y3:4:LYS:CE	2.77	0.48
1:YA:1058:U:H2'	1:YA:1059:G:O4'	2.13	0.48
1:YA:204:A:C4	1:YA:206:U:O4	2.67	0.48
1:YA:2337:G:C3'	1:YA:2338:C:H5'	2.43	0.48
1:YA:237:C:N3	1:YA:238:C:C5	2.82	0.48
1:YA:2700:A:C2	1:YA:2708:G:C2	3.02	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:39:G:C2	1:YA:40:U:C4	3.02	0.48
1:YA:511:U:H3'	1:YA:512:G:O4'	2.14	0.48
1:YA:49:A:C8	1:YA:51:G:N2	2.82	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
2:YB:14:U:H3'	2:YB:15:A:H5'	1.95	0.48
2:YB:29:A:C6	2:YB:30:C:N4	2.82	0.48
2:YB:16:G:O6	2:YB:69:G:C6	2.66	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
1:YA:443:A:N6	5:YE:36:ALA:HB1	2.27	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
6:YF:3:LEU:O	6:YF:6:TYR:HB3	2.14	0.48
7:YG:53:PRO:HB3	7:YG:61:TRP:H	1.78	0.48
12:YL:123:ARG:HA	12:YL:143:GLU:HB3	1.95	0.48
12:YL:9:ALA:HB3	12:YL:12:SER:CB	2.34	0.48
14:YN:21:PHE:HE2	14:YN:43:GLU:HB3	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:508:A:N6	19:YS:9:HIS:CE1	2.68	0.48
23:YW:31:LEU:C	23:YW:33:GLY:H	2.17	0.48
25:YY:31:GLN:C	25:YY:33:ALA:H	2.15	0.48
26:YZ:40:THR:C	26:YZ:42:ALA:H	2.16	0.48
32:QA:1018:G:H2'	32:QA:1018:G:N3	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
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
33:QB:24:PRO:C	33:QB:26:MET:N	2.67	0.48
35:QD:11:SER:HA	35:QD:18:LEU:CD1	2.41	0.48
40:QI:129:ARG:HA	40:QI:129:ARG:NH1	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
1:RA:1714:U:C2'	1:RA:1714:U:O2	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
1:RA:271:G:C4	1:RA:272:A:N7	2.82	0.48
1:RA:320:A:HO2'	1:RA:322:A:H8	1.62	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
3:RC:190:THR:CG2	3:RC:191:LEU:N	2.76	0.48
5:RE:48:THR:O	5:RE:50:ALA:N	2.47	0.48
9:RI:95:ASP:O	9:RI:97:VAL:N	2.46	0.48
14:RN:38:LEU:HD12	14:RN:38:LEU:O	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:XA:1137:C:H4'	32:XA:1138:G:N1	2.28	0.48
32:XA:1297:G:C8	32:XA:1297:G:OP2	2.67	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:821:G:H2'	32:XA:822:U:C6	2.49	0.48
32:XA:770:C:H1'	32:XA:899:C:H42	1.79	0.48
36:XE:121:ASN:ND2	36:XE:121:ASN:O	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:XF:20:GLY:HA2	37:XF:23:GLU:HG2	1.94	0.48
38:XG:124:SER:C	38:XG:126:ALA:H	2.17	0.48
34:XC:36:PHE:HE1	45:XN:91:GLU:OE1	1.96	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: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
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:834:G:H1'	1:YA:2358:A:C2	2.49	0.48
1:YA:966:G:H5'	1:YA:2272:U:O2	2.14	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
1:YA:743:A:OP1	4:YD:135:GLY:HA2	2.13	0.48
5:YE:149:ILE:O	5:YE:149:ILE:HG12	2.14	0.48
7:YG:19:ASN:HD22	7:YG:19:ASN:N	2.11	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:32:GLY:C	26:YZ:34:THR:H	2.17	0.48
26:YZ:43:ILE:HD12	26:YZ:44:ARG:N	2.29	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
32:QA:1533:C:H3'	32:QA:1534:A:C5'	2.43	0.48
34:QC:119:ILE:O	34:QC:123:LEU:HG	2.14	0.48
34:QC:71:ARG:O	34:QC:74:ILE:HG22	2.13	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:77:ASN:CG	36:QE:78:GLY:H	2.17	0.48
32:QA:706:A:O2'	42:QK:30:ILE:HD11	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:186:C:H4'	51:QT:75:LYS:HG3	1.95	0.48
1:RA:1414:C:C4	1:RA:1415:U:C5	3.00	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: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
1:RA:460:A:P	29:R2:41:ARG:HH12	2.37	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
7:RG:45:ALA:O	7:RG:46:ASP:CB	2.62	0.48
7:RG:59:ASP:O	7:RG:60:GLY:C	2.51	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:HG23	16:RP:103:THR:O	2.14	0.48
23:RW:67:LYS:HE2	23:RW:67:LYS:O	2.13	0.48
26:RZ:43:ILE:C	26:RZ:43:ILE:HD12	2.33	0.48
26:RZ:7:THR:HG22	26:RZ:32:GLY:HA2	1.96	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
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: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
33:XB:111:LYS:C	33:XB:113:LEU:H	2.17	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
38:XG:9:ARG:HD3	38:XG:24:LYS:HZ1	1.79	0.48
39:XH:37:ASN:O	39:XH:41:GLU:HG2	2.14	0.48
32:XA:707:U:H4'	42:XK:21:HIS:CD2	2.48	0.48
43:XL:36:VAL:HG23	43:XL:36:VAL:O	2.13	0.48
44:XM:32:ILE:O	44:XM:32:ILE:HD13	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:138:U:H2'	1:YA:140:C:C1'	2.34	0.48
1:YA:1430:G:H2'	1:YA:1431:A:C8	2.48	0.48
1:YA:155:A:H2'	1:YA:156:A:C8	2.49	0.48
1:YA:1647:U:OP2	1:YA:1647:U:H3'	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:526:A:C6	1:YA:2626:C:H4'	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2766:A:H2'	1:YA:2766:A:N3	2.29	0.48
1:YA:364:C:H2'	1:YA:365:U:O4'	2.14	0.48
1:YA:3:U:C4	1:YA:4:U:C4	3.02	0.48
1:YA:504:A:HO2'	1:YA:505:A:P	2.36	0.48
1:YA:503:A:N3	1:YA:506:G:C8	2.82	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:57:ARG:C	17:YQ:59:LEU:H	2.15	0.48
17:YQ:90:ASP:O	17:YQ:94:LEU:HB2	2.13	0.48
19:YS:74:ILE:O	19:YS:74:ILE:HG12	2.14	0.48
1:YA:301:G:O5'	21:YU:81:ARG:NH1	2.46	0.48
22:YV:69:GLU:C	22:YV:70:ILE:HD13	2.33	0.48
32:QA:1409:C:C2'	32:QA:1410:A:H5'	2.44	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
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:153:ALA:HA	36:QE:156:ARG:CB	2.44	0.47
36:QE:153:ALA:O	36:QE:154:ALA:C	2.52	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
30:R3:35:LYS:O	30:R3:40:LYS:HE2	2.14	0.47
1:RA:1079:C:C4	1:RA:1080:A:N7	2.82	0.47
1:RA:1070:A:C2	1:RA:1097:U:H4'	2.49	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
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:O5'	1:RA:634:C:H6	1.97	0.47
2:RB:34:A:C2'	2:RB:35:C:OP2	2.61	0.47
3:RC:69:ASN:O	3:RC:70:LYS:C	2.52	0.47
6:RF:110:ILE:O	6:RF:111:ARG:C	2.52	0.47
7:RG:66:THR:O	7:RG:70:LEU:HG	2.14	0.47
10:RJ:56:VAL:HG12	10:RJ:57:LEU:H	1.75	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:RL:110:VAL:HG12	12:RL:111:ILE:N	2.29	0.47
12:RL:59:ARG:HA	30:R3:12:ARG:NH2	2.28	0.47
23:RW:26:GLY:O	23:RW:27:GLY:O	2.32	0.47
32:XA:1017:U:H2'	32:XA:1017:U:O2	2.13	0.47
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
32:XA:112:G:N3	32:XA:330:C:N4	2.62	0.47
32:XA:59:A:N3	32:XA:59:A:H2'	2.29	0.47
32:XA:678:U:H2'	32:XA:679:C:C6	2.49	0.47
32:XA:957:U:O2'	32:XA:958:A:N7	2.40	0.47
32:XA:983:A:OP1	45:YN:8:ARG:NH2	2.47	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:CD1	37:XF:80:PHE:N	2.81	0.47
32:XA:1060:U:H5'	41:XJ:53:ILE:HG12	1.96	0.47
41:XJ:65:TYR:HD2	45:YN:96:LYS:O	1.97	0.47
42:XK:92:ARG:HG3	42:XK:92:ARG:HH11	1.77	0.47
43:XL:72:ASN:HD21	43:XL:104:SER:H	1.61	0.47
43:XL:33:CYS:HA	43:XL:54:VAL:HA	1.96	0.47
52:XU:19:LYS:C	52:XU:21:SER:H	2.17	0.47
1:YA:1386:C:HO2'	1:YA:1387:A:H8	1.61	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:160:A:H1'	1:YA:2208:C:O2'	2.14	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:202:U:H5''	1:YA:203:A:OP2	2.14	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:O5'	1:YA:2497:A:H8	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
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
2:YB:65:U:H3'	2:YB:108:A:H62	1.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:YE:184:ASP:O	5:YE:185:LYS:HG3	2.14	0.47
1:YA:2306:C:H42	6:YF:150:GLY:N	2.12	0.47
12:YL:3:LEU:O	12:YL:4:ASN:C	2.52	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:111:LYS:CE	18:YR:48:LYS:HD3	2.44	0.47
17:YQ:87:VAL:CG2	18:YR:52:PRO:HD3	2.23	0.47
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:58:ASN:O	25:YY:61:ALA:HB2	2.14	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
32:QA:429:U:H1'	32:QA:430:A:H5''	1.95	0.47
36:QE:153:ALA:CA	36:QE:156:ARG:HB2	2.43	0.47
32:QA:736:C:H5'	37:QF:88:MET:HE1	1.96	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
47:QP:30:GLY:O	47:QP:31:ARG:C	2.52	0.47
48:QQ:46:HIS:HB2	48:QQ:66:LEU:CD1	2.43	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: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
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:N	6:RF:46:LYS:HD2	2.29	0.47
1:RA:2531:A:P	7:RG:174:LYS:HG3	2.53	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
18:RR:37:GLU:CD	18:RR:37:GLU:H	2.18	0.47
24:RX:70:LEU:O	24:RX:74:GLY:N	2.47	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:XC:149:LYS:CG	34:XC:168:ARG:HB2	2.42	0.47
32:XA:1189:U:O2'	34:XC:175:HIS:CD2	2.67	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
27:Y0:32:THR:HG21	27:Y0:47:TYR:CD2	2.49	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:C3'	1:YA:2506:U:C6	2.96	0.47
1:YA:2571:U:C4	1:YA:2574:G:H8	2.29	0.47
1:YA:273:G:N2	1:YA:365:U:O2	2.45	0.47
1:YA:108:G:P	1:YA:293:U:HO2'	2.37	0.47
1:YA:335:C:O2'	1:YA:336:C:O5'	2.32	0.47
1:YA:53:A:N7	1:YA:54:G:C5	2.82	0.47
1:YA:671:C:O2'	1:YA:672:C:P	2.72	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
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
32:QA:1521:C:O2'	32:QA:1522:U:H5'	2.14	0.47
16:RP:35:SER:OG	32:QA:345:C:OP1	2.27	0.47
32:QA:414:A:N3	32:QA:415:A:C8	2.82	0.47
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
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:15:HIS:HB3	41:QJ:70:HIS:CE1	2.49	0.47
41:QJ:14:ASP:HB3	41:QJ:17:LEU:HB3	1.96	0.47
42:QK:22:ILE:HG12	42:QK:85:VAL:HG22	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:QL:3:VAL:HG23	43:QL:4:ASN:N	2.29	0.47
32:QA:1202:U:O2'	45:QN:68:ARG:HB2	2.14	0.47
51:QT:34:VAL:O	51:QT:38:ILE:HG12	2.14	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:1939:U:OP1	1:RA:2604:U:O2'	2.30	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
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
3:RC:109:LEU:HD23	3:RC:110:LYS:N	2.21	0.47
3:RC:184:GLU:O	3:RC:185:ALA:HB3	2.13	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:120:ILE:C	7:RG:120:ILE:HD13	2.34	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
19:RS:29:VAL:O	19:RS:33:LEU:HD22	2.14	0.47
19:RS:20:VAL:HG11	19:RS:47:VAL:HG11	1.96	0.47
25:RY:59:GLU:HG3	25:RY:60:LYS:N	2.29	0.47
32:XA:239:U:H6	32:XA:239:U:H5''	1.78	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:151:LYS:HG3	33:XB:152:ASP:OD1	2.14	0.47
33:XB:59:ILE:HA	33:XB:62:ARG:HD3	1.96	0.47
34:XC:76:ILE:HA	34:XC:83:VAL:HG13	1.96	0.47
32:XA:406:G:H5'	35:XD:4:LEU:HD22	1.95	0.47
38:XG:100:MET:H	38:XG:100:MET:HE2	1.79	0.47
38:XG:91:ARG:HG2	38:XG:92:PRO:CD	2.36	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
37:XF:59:TYR:CE2	49:XR:66:LEU:HD21	2.45	0.47
49:XR:64:LEU:O	49:XR:66:LEU:HD23	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:XT:11:ILE:C	51:XT:13:SER:N	2.67	0.47
51:XT:30:PHE:HE2	51:XT:52:GLU:HG2	1.79	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
1:YA:1833:C:C4	1:YA:1834:U:C4	3.02	0.47
1:YA:2056:G:N3	1:YA:2056:G:H2'	2.30	0.47
1:YA:2744:G:N2	1:YA:2745:C:C2	2.82	0.47
1:YA:860:U:O2'	1:YA:861:A:O5'	2.27	0.47
1:YA:98:G:O2'	1:YA:103:A:C8	2.67	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:126:VAL:HG22	5:YE:127:GLU:OE2	2.14	0.47
5:YE:79:ARG:CG	5:YE:80:SER:N	2.77	0.47
7:YG:162:ARG:HB2	7:YG:166:GLU:HB3	1.95	0.47
7:YG:91:VAL:N	7:YG:93:TYR:CD2	2.81	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
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
41:QJ:21:ALA:HA	41:QJ:24:GLU:OE2	2.14	0.47
32:QA:797:C:OP2	42:QK:125:LYS:HG3	2.14	0.47
43:QL:23:LEU:C	43:QL:25:ALA:N	2.63	0.47
44:QM:105:ALA:O	44:QM:109:LYS:HB2	2.14	0.47
46:QO:34:GLN:OE1	46:QO:34:GLN:HA	2.14	0.47
46:QO:84:LEU:HB3	46:QO:86:LEU:HD22	1.97	0.47
52:QU:21:SER:C	52:QU:22:CYS:SG	2.93	0.47
52:QU:24:LYS:O	52:QU:26:GLY:N	2.48	0.47
28:R1:16:THR:HG21	28:R1:41:VAL:HG22	1.95	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: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
3:RC:32:LEU:HD23	3:RC:32:LEU:HA	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
7:RG:85:LYS:HG2	7:RG:131:VAL:CG1	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
20:RT:61:LEU:HD12	20:RT:61:LEU:O	2.14	0.47
1:RA:2352:A:C6	23:RW:30:VAL:HG11	2.50	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
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
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
43:XL:75:GLU:C	43:XL:77:SER:H	2.16	0.47
45:XN:27:LYS:HD2	45:XN:27:LYS:C	2.34	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: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:H3'	1:YA:607:U:H6	1.79	0.47
1:YA:739:A:H4'	1:YA:740:C:OP1	2.13	0.47
4:YD:12:THR:CG2	4:YD:13:ARG:N	2.77	0.47
4:YD:9:VAL:O	16:YP:4:ILE:HD11	2.14	0.47
6:YF:11:VAL:HG12	6:YF:12:VAL:N	2.29	0.47
1:YA:2748:A:C1'	7:YG:66:THR:HG22	2.35	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
20:YT:63:VAL:C	20:YT:64:LYS:HD2	2.33	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
25:YY:48:ARG:HH11	25:YY:48:ARG:CG	2.26	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
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:84:U:O2	32:QA:84:U:C2'	2.63	0.47
34:QC:86:LEU:O	34:QC:87:ARG:C	2.53	0.47
35:QD:52:VAL:CG2	35:QD:53:GLN:N	2.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:QE:37:VAL:HG11	36:QE:113:VAL:HA	1.97	0.47
38:QG:12:LEU:HD13	38:QG:12:LEU:N	2.30	0.47
32:QA:1118:U:P	40:QI:105:ARG:HE	2.37	0.47
41:QJ:29:ALA:C	41:QJ:31:ARG:H	2.18	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
31:R4:36:ARG:HG2	31:R4:37:GLN:N	2.19	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: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
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
20:RT:32:LEU:HG	20:RT:83:ALA:CB	2.44	0.47
20:RT:34:VAL:HG23	20:RT:34:VAL:O	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
26:RZ:29:ARG:NH2	26:RZ:29:ARG:CG	2.76	0.47
32:XA:1098:C:H2'	32:XA:1099:G:O4'	2.14	0.47
32:XA:110:C:H2'	32:XA:111:G:O4'	2.15	0.47
32:XA:1241:G:C2	32:XA:1242:G:C5	3.02	0.47
32:XA:557:G:H2'	32:XA:558:G:C8	2.50	0.47
32:XA:404:G:O6	35:XD:1:ALA:HB2	2.15	0.47
36:XE:14:LEU:HD12	36:XE:15:ILE:H	1.78	0.47
36:XE:14:LEU:HD22	36:XE:59:ILE:CD1	2.43	0.47
37:XF:80:PHE:N	37:XF:80:PHE:HD1	2.13	0.47
38:XG:59:GLU:C	38:XG:61:PHE:H	2.16	0.47
38:XG:65:LEU:O	38:XG:69:ARG:HB2	2.15	0.47
32:XA:1279:G:C5'	41:XJ:9:ARG:HH12	2.19	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
51:XT:2:ASN:O	51:XT:3:ILE:C	2.53	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:Y1:38:PHE:CD2	28:Y1:39:ASP:N	2.82	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:233:A:O2'	1:YA:234:U:O4'	2.32	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: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
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
2:YB:8:C:O3'	15:YO:25:ARG:NH1	2.48	0.47
1:YA:2683:C:H4'	4:YD:13:ARG:NH2	2.30	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: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
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
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:644:U:O2'	32:QA:645:G:H5'	2.14	0.47
32:QA:574:A:H1'	32:QA:883:C:O4'	2.15	0.47
33:QB:185:ILE:HA	33:QB:199:ILE:O	2.15	0.47
34:QC:116:ALA:HB2	34:QC:199:VAL:CG1	2.45	0.47
34:QC:33:ASP:O	34:QC:37:LYS:HB2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:HG2	44:QM:106:ARG:HH11	1.80	0.47
32:QA:1202:U:H1'	45:QN:68:ARG:HD2	1.96	0.47
48:QQ:47:ASP:HA	48:QQ:51:GLU:OE2	2.14	0.47
50:QS:48:ILE:HD12	50:QS:48:ILE:O	2.14	0.47
51:QT:6:ALA:HB1	51:QT:9:ARG:HB2	1.96	0.47
28:R1:50:GLU:O	28:R1:51:ALA:HB2	2.14	0.47
1:RA:1138:G:H5''	1:RA:1139:G:OP2	2.13	0.47
1:RA:181:A:C2	1:RA:182:A:C4	3.03	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:2563:U:C1'	1:RA:2566:A:N6	2.78	0.47
1:RA:2505:G:O4'	54:RA:3135:EM1:H58	2.14	0.47
1:RA:34:U:C1'	1:RA:35:G:OP1	2.63	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
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
12:RL:82:LEU:HD23	12:RL:82:LEU:C	2.35	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
32:XA:1336:C:C2'	32:XA:1337:G:OP2	2.62	0.47
32:XA:369:G:O2'	32:XA:370:C:H5'	2.13	0.47
32:XA:6:G:O6	36:XE:99:SER:HB2	2.14	0.47
33:XB:177:ASN:O	33:XB:177:ASN:ND2	2.48	0.47
33:XB:19:THR:OG1	33:XB:20:ARG:N	2.47	0.47
35:XD:35:GLN:O	35:XD:36:ALA:HB2	2.14	0.47
37:XF:56:LYS:O	37:XF:57:ALA:HB2	2.15	0.47
37:XF:9:MET:HB2	37:XF:85:ILE:HG13	1.96	0.47
38:XG:98:LEU:O	38:XG:99:ALA:C	2.53	0.47
43:XL:42:LYS:HD3	43:XL:43:LYS:NZ	2.30	0.47
1:YA:1073:A:O2'	1:YA:1074:G:C8	2.57	0.47
1:YA:116:C:C4	1:YA:117:G:C5	3.03	0.47
1:YA:693:A:O2'	1:YA:1353:A:N3	2.44	0.47
1:YA:140:C:H5'	1:YA:141:G:N2	2.30	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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:2515:C:O2'	1:YA:2516:A:H5'	2.15	0.47
1:YA:299:A:H2	1:YA:320:A:O4'	1.96	0.47
1:YA:323:C:H2'	5:YE:163:ASN:CG	2.35	0.47
1:YA:607:U:O2	1:YA:622:G:C6	2.67	0.47
1:YA:8:C:C2'	1:YA:9:G:H5'	2.45	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:9:G:C6	1:YA:2629:U:C5	3.03	0.47
2:YB:24:G:C6	2:YB:56:G:C2	3.01	0.47
2:YB:90:C:H6	2:YB:90:C:H5''	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
1:YA:1251:C:C6	17:YQ:5:ARG:NH1	2.82	0.47
1:YA:1011:G:H5''	17:YQ:76:SER:HB2	1.96	0.47
17:YQ:87:VAL:O	17:YQ:88:GLU:O	2.32	0.47
20:YT:14:PRO:HG2	20:YT:15:HIS:H	1.79	0.47
26:YZ:40:THR:C	26:YZ:42:ALA:N	2.67	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:1453:G:C2'	32:QA:1453:G:N3	2.76	0.47
32:QA:270:A:H2'	32:QA:271:C:C6	2.49	0.47
16:RP:33:GLU:CD	32:QA:345:C:H4'	2.35	0.47
32:QA:471:U:C2'	32:QA:472:U:H5'	2.45	0.47
32:QA:1371:G:OP2	40:QI:12:LYS:HD3	2.14	0.47
43:QL:71:HIS:ND1	43:QL:71:HIS:C	2.68	0.47
45:QN:42:ASN:C	45:QN:44:VAL:N	2.63	0.47
46:QO:54:GLY:O	46:QO:58:MET:HG3	2.14	0.47
51:QT:68:LYS:HZ3	51:QT:68:LYS:HB2	1.80	0.47
52:QU:24:LYS:HG2	52:QU:25:ALA:N	2.30	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
1:RA:117:G:C6	1:RA:119:A:C6	3.03	0.47
1:RA:1279:G:O2'	1:RA:1280:G:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1422:G:C4	1:RA:1423:G:C8	3.03	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:2151:U:N3	1:RA:2152:G:N7	2.62	0.47
1:RA:2846:G:H2'	1:RA:2847:U:O4'	2.14	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
2:RB:8:C:O3'	15:RO:25:ARG:NH1	2.47	0.47
4:RD:124:ARG:HG2	4:RD:125:TRP:NE1	2.29	0.47
7:RG:1:SER:HB3	7:RG:5:LYS:NZ	2.30	0.47
10:RJ:55:ILE:HD12	10:RJ:56:VAL:O	2.15	0.47
12:RL:65:GLY:O	12:RL:66:PHE:HB3	2.14	0.47
20:RT:13:ALA:HB1	20:RT:14:PRO:HD2	1.95	0.47
23:RW:49:ASN:OD1	23:RW:79:ILE:O	2.32	0.47
24:RX:77:TYR:O	24:RX:77:TYR:CG	2.68	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
32:XA:1240:U:O2'	38:XG:37:THR:HB	2.14	0.47
32:XA:203:G:N2	32:XA:215:C:C2	2.83	0.47
32:XA:406:G:C8	32:XA:495:A:C4	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
33:XB:147:LEU:O	33:XB:150:ILE:HG22	2.15	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
42:XK:70:ALA:CA	42:XK:73:VAL:HG22	2.29	0.47
44:XM:64:VAL:HG12	44:XM:65:GLU:N	2.21	0.47
45:XN:89:ARG:HG3	45:XN:91:GLU:HG2	1.97	0.47
47:XP:36:VAL:CG1	47:XP:36:VAL:O	2.59	0.47
48:XQ:42:LYS:HZ3	48:XQ:42:LYS:HB3	1.80	0.47
51:XT:66:ILE:CG1	51:XT:67:HIS:N	2.78	0.47
52:XU:52:VAL:O	52:XU:52:VAL:HG22	2.15	0.47
1:YA:116:C:H5''	1:YA:128:C:N4	2.27	0.47
1:YA:1275:A:H4'	1:YA:1276:A:OP1	2.14	0.47
1:YA:1312:U:O2	1:YA:1603:A:C2	2.68	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: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: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:2353:G:H1'	23:YW:30:VAL:CG1	2.45	0.47
1:YA:308:G:N2	1:YA:329:G:H21	2.12	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
4:YD:137:SER:CB	4:YD:138:LEU:HD22	2.39	0.47
4:YD:51:THR:HG21	4:YD:76:GLY:HA3	1.97	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
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
2:YB:51:G:C8	15:YO:64:TYR:CE2	3.03	0.47
16:YP:65:ASN:N	16:YP:65:ASN:ND2	2.63	0.47
16:YP:65:ASN:N	16:YP:65:ASN:HD22	2.13	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
21:YU:14:THR:CG2	21:YU:15:GLY:H	2.10	0.47
24:YX:63:ILE:CD1	24:YX:64:ASP:H	2.27	0.47
32:QA:1232:U:C4	32:QA:1233:G:N7	2.83	0.47
32:QA:1406:U:C5	32:QA:1407:C:C5	3.03	0.47
32:QA:164:G:H2'	32:QA:165:G:H5'	1.96	0.47
32:QA:16:A:C2'	32:QA:17:U:H5'	2.45	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:754:C:O2'	32:QA:755:G:OP1	2.31	0.47
36:QE:125:LYS:HG3	36:QE:126:ALA:N	2.30	0.47
39:QH:21:LYS:HA	39:QH:21:LYS:HE2	1.96	0.47
44:QM:73:SER:O	44:QM:77:LYS:HG2	2.15	0.47
46:QO:55:LEU:O	46:QO:55:LEU:HD12	2.14	0.47
37:QF:86:ARG:CZ	49:QR:63:TYR:HB3	2.41	0.47
28:R1:18:HIS:CG	28:R1:19:PHE:N	2.82	0.47
1:RA:1842:G:H2'	1:RA:1843:C:C6	2.50	0.47
1:RA:2223:G:H2'	1:RA:2224:G:C5'	2.44	0.47
1:RA:2075:U:C4	1:RA:2238:G:C6	3.02	0.47
1:RA:2444:G:OP2	5:RE:63:LYS:HD2	2.14	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
4:RD:11:MET:HA	4:RD:24:VAL:O	2.15	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:RI:17:ALA:CB	9:RI:42:ASN:HD21	2.27	0.47
11:RK:119:ALA:HA	11:RK:120:PRO:HD2	1.78	0.47
1:RA:666:A:H4'	12:RL:48:ARG:HD2	1.96	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
18:RR:10:LYS:CD	18:RR:10:LYS:N	2.77	0.47
18:RR:39:LEU:O	18:RR:49:ILE:HG23	2.13	0.47
22:RV:48:MET:O	22:RV:51:GLN:HG3	2.14	0.47
23:RW:37:VAL:HG13	23:RW:55:ASP:C	2.35	0.47
24:RX:30:PRO:HD2	24:RX:32:LEU:HD11	1.96	0.47
32:XA:120:A:O2'	32:XA:121:U:C4'	2.62	0.47
32:XA:1224:U:C4'	32:XA:1225:A:OP2	2.63	0.47
32:XA:949:A:C2	32:XA:1233:G:N3	2.83	0.47
32:XA:1239:A:H5''	38:XG:118:ARG:NH1	2.17	0.47
32:XA:321:A:O2'	32:XA:1436:U:H5'	2.15	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:998:C:H2'	32:XA:999:C:C6	2.50	0.47
35:XD:76:LYS:O	35:XD:79:ALA:HB3	2.15	0.47
41:XJ:30:LYS:O	41:XJ:30:LYS:HG2	2.15	0.47
47:XP:1:MET:HE2	47:XP:2:VAL:N	2.29	0.47
48:XQ:45:VAL:HG11	48:XQ:60:ILE:CG2	2.44	0.47
42:XK:126:ARG:O	52:XU:33:ARG:CZ	2.61	0.47
27:Y0:38:LEU:HB2	27:Y0:41:HIS:CE1	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:116:C:H5''	1:YA:128:C:C5	2.50	0.47
1:YA:1300:G:C4'	1:YA:1301:A:O5'	2.59	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:1965:C:C5'	1:YA:1966:A:H2'	2.45	0.47
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: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:1638:C:H1'	1:YA:2698:U:O2'	2.14	0.47
1:YA:2748:A:N1	1:YA:2757:A:N7	2.62	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:51:G:N3	1:YA:119:A:C2	2.82	0.47
1:YA:579:G:C2	1:YA:1262:A:C5	3.03	0.47
1:YA:68:G:C2'	1:YA:69:C:H5'	2.45	0.47
3:YC:140:VAL:O	3:YC:141:HIS:HB2	2.15	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
6:YF:36:ASN:HA	6:YF:86:CYS:O	2.15	0.47
12:YL:124:GLY:H	12:YL:143:GLU:CG	2.25	0.47
12:YL:17:LYS:CE	12:YL:19:LEU:HD13	2.44	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
4:YD:13:ARG:HH22	16:YP:74:GLN:NE2	2.13	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
24:YX:1:SER:C	24:YX:3:VAL:N	2.68	0.47
25:YY:18:LEU:HD13	25:YY:22:LEU:HD13	1.97	0.47
32:QA:1348:U:O2'	32:QA:1349:A:O5'	2.33	0.47
32:QA:1403:C:H6	32:QA:1403:C:O5'	1.98	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
33:QB:30:ILE:HG23	33:QB:31:PHE:N	2.30	0.47
34:QC:133:MET:HE3	34:QC:167:TYR:HB2	1.95	0.47
34:QC:59:PRO:O	34:QC:60:ALA:O	2.33	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:75:GLU:C	42:QK:77:GLY:H	2.17	0.47
42:QK:86:LYS:CG	42:QK:114:PRO:HD3	2.44	0.47
48:QQ:13:SER:O	48:QQ:16:MET:HE2	2.15	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
1:RA:1866:A:H2'	1:RA:1867:G:H5'	1.95	0.47
1:RA:528:A:C2	1:RA:2043:C:C5'	2.97	0.47
1:RA:278:A:H2'	1:RA:278:A:N3	2.28	0.47
1:RA:2821:A:OP2	4:RD:115:GLY:N	2.46	0.47
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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
25:RY:45:GLN:O	25:RY:46:VAL:CB	2.63	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
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
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
42:XK:87:GLY:H	42:XK:113:THR:CG2	2.28	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
42:XK:88:PRO:HD3	52:XU:28:LEU:HD11	1.97	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: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:1737:G:C5'	1:YA:1738:G:OP2	2.63	0.47
1:YA:1722:A:C6	1:YA:1739:A:C8	3.03	0.47
1:YA:1810:A:H3'	1:YA:1811:G:C8	2.50	0.47
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:818:G:HO2'	1:YA:819:A:H5''	1.79	0.47
1:YA:828:U:C5	1:YA:829:A:N6	2.83	0.47
2:YB:110:C:O2'	2:YB:111:U:C5'	2.60	0.47
4:YD:36:GLN:NE2	4:YD:38:LYS:HZ1	2.12	0.47
5:YE:85:PHE:O	5:YE:86:ALA:C	2.53	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
1:YA:1155:A:H5''	17:YQ:54:ARG:CZ	2.45	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:827:U:C4	32:QA:870:U:C2	3.02	0.47
33:QB:172:ILE:HG22	33:QB:176:ASN:OD1	2.15	0.47
33:QB:86:CYS:H	33:QB:88:GLN:NE2	2.13	0.47
34:QC:22:PHE:CD1	41:QJ:12:ALA:HA	2.50	0.47
45:QN:22:LYS:CG	45:QN:23:ARG:H	2.20	0.47
46:QO:57:ARG:HB3	46:QO:57:ARG:HH11	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
1:RA:1206:G:C6	1:RA:1207:C:C4	3.03	0.47
1:RA:2211:A:H4'	1:RA:2211:A:OP2	2.14	0.47
1:RA:2285:C:P	28:R1:5:ARG:HH21	2.38	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:2485:G:H5''	13:RM:45:GLN:HE21	1.80	0.47
1:RA:26:G:OP1	19:RS:80:PRO:HB3	2.15	0.47
32:XA:1509:C:O2'	32:XA:1510:C:H5'	2.15	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
33:XB:122:ASP:HB3	33:XB:124:THR:HG22	1.97	0.47
33:XB:176:ASN:C	33:XB:178:LEU:H	2.18	0.47
33:XB:88:GLN:C	33:XB:89:PHE:CG	2.88	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:1238:G:HO2'	1:YA:1239:G:H5'	1.79	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:206:U:O2'	1:YA:207:A:H5'	2.15	0.47
1:YA:2313:C:O2'	1:YA:2314:A:H8	1.74	0.47
1:YA:231:A:C2'	1:YA:232:G:H5'	2.45	0.47
1:YA:2425:A:P	1:YA:2427:C:H5'	2.54	0.47
1:YA:2756:U:H1'	1:YA:2757:A:C5'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2740:A:N6	1:YA:2764:A:C8	2.83	0.47
1:YA:2816:G:C2	1:YA:2831:G:C2	3.03	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
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
4:YD:140:HIS:CD2	4:YD:140:HIS:H	2.33	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
2:YB:52:A:N6	15:YO:33:ARG:NE	2.62	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:YA:85:G:OP2	21:YU:27:VAL:HG11	2.15	0.47
8:YH:27:ARG:HH12	24:YX:59:ASP:HA	1.75	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:34:C:H2'	32:QA:35:G:C8	2.49	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
43:QL:42:LYS:HD3	43:QL:90:PRO:HG3	1.96	0.47
1:RA:1176:U:H2'	1:RA:1177:G:N9	2.30	0.47
1:RA:1266:G:O2'	1:RA:2012:G:O6	2.23	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:250:G:C6	1:RA:251:A:C6	3.03	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
1:RA:35:G:N2	1:RA:36:G:H1'	2.30	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:RC:115:ILE:HD12	3:RC:115:ILE:HA	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
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:HA	11:RK:47:ILE:HD12	1.75	0.47
1:RA:2012:G:OP1	19:RS:98:LYS:HG2	2.15	0.47
20:RT:39:THR:H	20:RT:43:ILE:HG22	1.80	0.47
32:XA:104:G:H4'	32:XA:174:A:O4'	2.15	0.47
32:XA:1225:A:N3	32:XA:1225:A:H2'	2.29	0.47
32:XA:1495:U:O2'	32:XA:1496:C:H5'	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: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:60:A:N3	32:XA:61:G:H1'	2.29	0.47
32:XA:610:U:O4'	32:XA:610:U:O2	2.33	0.47
32:XA:72:A:O2'	32:XA:73:C:H5'	2.14	0.47
33:XB:9:LEU:HB2	33:XB:11:ALA:N	2.25	0.47
37:XF:3:HIS:CD2	37:XF:65:GLU:HG2	2.42	0.47
42:XK:91:GLY:O	42:XK:95:THR:HG22	2.14	0.47
43:XL:2:THR:O	43:XL:3:VAL:C	2.51	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: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:141:G:C2'	1:YA:142:A:O4'	2.63	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
1:YA:233:A:H61	1:YA:428:A:N6	2.12	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
3:YC:225:ASN:HB2	3:YC:228:ASP:OD2	2.14	0.47
7:YG:74:MET:O	7:YG:78:VAL:HG13	2.15	0.47
10:YJ:45:THR:C	10:YJ:47:HIS:N	2.68	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
23:YW:37:VAL:C	23:YW:39:GLN:N	2.67	0.47
1:YA:2336:A:N7	23:YW:40:ARG:NE	2.63	0.47
24:YX:38:TRP:HA	24:YX:38:TRP:CE3	2.50	0.47
32:QA:1017:U:C2	32:QA:1018:G:C8	3.03	0.46
32:QA:1161:C:HO2'	32:QA:1162:C:H6	1.51	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
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
33:QB:67:LEU:HD22	33:QB:69:VAL:CG2	2.45	0.46
35:QD:166:LYS:HB3	35:QD:166:LYS:HZ2	1.79	0.46
36:QE:119:VAL:HG23	36:QE:119:VAL:O	2.14	0.46
38:QG:146:ALA:C	38:QG:148:LYS:H	2.17	0.46
38:QG:29:LEU:HD23	38:QG:29:LEU:C	2.36	0.46
43:QL:64:SER:OG	43:QL:96:THR:HG23	2.14	0.46
44:QM:106:ARG:HG2	44:QM:106:ARG:NH1	2.29	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
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
30:R3:14:LYS:O	30:R3:21:PHE:O	2.33	0.46
1:RA:1738:G:O2'	1:RA:1739:A:H8	1.96	0.46
1:RA:184:C:H2'	1:RA:185:G:H8	1.79	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
3:RC:247:TRP:C	3:RC:249:VAL:H	2.17	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
18:RR:11:GLN:C	18:RR:12:HIS:ND1	2.68	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
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
32:XA:182:A:C2	32:XA:194:C:N4	2.79	0.46
32:XA:183:C:HO2'	32:XA:184:G:C5'	2.27	0.46
32:XA:358:U:H2'	32:XA:359:G:C8	2.51	0.46
32:XA:523:A:H61	43:XL:88:ASP:HB2	1.80	0.46
32:XA:518:C:H2'	32:XA:530:G:C8	2.50	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
33:XB:11:ALA:C	33:XB:13:VAL:H	2.17	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:102:VAL:HG22	39:XH:125:ILE:HB	1.97	0.46
39:XH:75:GLN:O	39:XH:126:CYS:HB2	2.15	0.46
41:XJ:45:ARG:O	41:XJ:46:LYS:C	2.53	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: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:201:C:H6	1:YA:201:C:O5'	1.99	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:923:G:H1'	23:YW:23:LYS:HZ2	1.80	0.46
2:YB:57:A:H2'	2:YB:57:A:OP2	2.15	0.46
7:YG:11:PRO:O	7:YG:14:VAL:HG22	2.14	0.46
20:YT:19:LYS:HA	20:YT:19:LYS:HD3	1.71	0.46
22:YV:80:HIS:CD2	22:YV:82:TYR:H	2.32	0.46
32:QA:109:A:C6	32:QA:326:G:C6	3.02	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
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
33:QB:63:LYS:C	33:QB:63:LYS:HD3	2.35	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:145:ARG:HD2	35:QD:147:LYS:HE3	1.95	0.46
35:QD:60:VAL:HA	35:QD:63:ILE:HG22	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
30:R3:7:ARG:HA	30:R3:7:ARG:HD2	1.48	0.46
1:RA:1063:G:C6	1:RA:1064:C:C2	3.04	0.46
1:RA:141:G:H3'	1:RA:142:A:O4'	2.15	0.46
1:RA:1684:G:C2	1:RA:1705:A:C2	3.03	0.46
1:RA:2515:C:O5'	1:RA:2515:C:H6	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
1:RA:565:C:O2'	1:RA:566:U:H5'	2.15	0.46
1:RA:789:A:OP1	1:RA:790:U:C5	2.68	0.46
1:RA:923:G:N2	23:RW:23:LYS:HZ3	2.13	0.46
2:RB:78:A:C2	2:RB:99:A:C4	3.03	0.46
3:RC:173:LEU:O	3:RC:180:MET:HA	2.14	0.46
3:RC:141:HIS:N	3:RC:190:THR:O	2.42	0.46
3:RC:211:ARG:HD2	3:RC:211:ARG:HA	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
17:RQ:96:ASP:OD2	17:RQ:96:ASP:C	2.54	0.46
23:RW:22:VAL:HA	23:RW:68:PHE:HE2	1.80	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:1054:C:H1'	32:XA:1196:A:C5	2.50	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:1532:U:H2'	32:XA:1534:A:OP2	2.14	0.46
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:65:A:C2'	32:XA:382:A:H61	2.28	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
33:XB:99:MET:O	33:XB:103:TRP:HB3	2.16	0.46
33:XB:80:LYS:O	33:XB:83:ALA:N	2.48	0.46
32:XA:1189:U:O2'	34:XC:175:HIS:HD2	1.99	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
32:XA:972:C:O2'	41:XJ:57:VAL:HG23	2.15	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
32:XA:254:G:H21	48:XQ:17:GLU:HG3	1.78	0.46
32:XA:1525:G:OP1	52:XU:37:TYR:HD1	1.97	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:YA:1286:A:C5	1:YA:1289:C:N4	2.83	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:C8	1:YA:1884:G:OP2	2.67	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:YA:532:A:H5'	1:YA:533:G:O4'	2.14	0.46
1:YA:466:A:H2	1:YA:795:C:O2	1.98	0.46
2:YB:99:A:C5	2:YB:100:G:C5	3.03	0.46
2:YB:18:G:C6	2:YB:19:C:C4	3.03	0.46
3:YC:106:PRO:HB3	3:YC:141:HIS:CE1	2.49	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
4:YD:48:ILE:HG23	4:YD:48:ILE:O	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
7:YG:1:SER:C	7:YG:3:VAL:H	2.18	0.46
13:YM:108:VAL:HG23	13:YM:109:PRO:HD2	1.97	0.46
13:YM:81:ARG:HH21	13:YM:84:LYS:HE2	1.80	0.46
19:YS:36:LEU:C	19:YS:38:TYR:N	2.69	0.46
1:YA:1341:G:C4	20:YT:84:TYR:CE2	3.03	0.46
21:YU:64:ILE:HG23	21:YU:64:ILE:O	2.15	0.46
24:YX:35:HIS:O	24:YX:47:THR:HA	2.15	0.46
32:QA:1319:A:C4	32:QA:1323:G:N7	2.84	0.46
32:QA:446:G:N2	32:QA:489:C:C2	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
46:QO:68:TYR:O	46:QO:69:LEU:C	2.54	0.46
1:RA:686:U:H1'	29:R2:6:GLN:O	2.15	0.46
1:RA:1060:U:O4	1:RA:1088:A:C6	2.68	0.46
1:RA:10:A:C2	1:RA:2800:A:H2'	2.51	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:OP2	1:RA:2503:A:H3'	2.15	0.46
1:RA:360:U:C4	1:RA:361:G:C6	3.04	0.46
1:RA:36:G:C2'	1:RA:37:C:H5'	2.45	0.46
1:RA:383:C:H5'	1:RA:384:A:H5''	1.97	0.46
1:RA:528:A:C3'	1:RA:528:A:C8	2.98	0.46
1:RA:581:C:O2'	1:RA:582:A:H5'	2.16	0.46
1:RA:761:A:N6	56:RA:3293:HOH:O	2.48	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
7:RG:29:ASN:CG	7:RG:30:GLY:N	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:112:ARG:O	16:RP:113:LEU:HD23	2.15	0.46
16:RP:33:GLU:HB2	16:RP:38:ARG:HE	1.80	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: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:109:A:C5	32:XA:327:A:C4	3.04	0.46
32:XA:1319:A:H2'	32:XA:1320:C:OP2	2.14	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
33:XB:80:LYS:HD3	33:XB:90:PHE:CZ	2.50	0.46
38:XG:124:SER:C	38:XG:126:ALA:N	2.69	0.46
39:XH:111:THR:HG22	39:XH:112:ASP:N	2.29	0.46
40:XI:129:ARG:CZ	40:XI:129:ARG:HA	2.46	0.46
40:XI:45:MET:O	40:XI:49:GLN:N	2.35	0.46
30:Y3:28:LEU:O	30:Y3:29:ARG:HB3	2.15	0.46
1:YA:1055:G:C2'	1:YA:1056:G:H5'	2.46	0.46
1:YA:70:G:H3'	1:YA:113:U:H4'	1.95	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:729:G:O2'	1:YA:1775:U:H1'	2.15	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
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
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
17:YQ:64:ILE:HD12	17:YQ:95:ALA:CB	2.46	0.46
32:QA:1266:G:N1	32:QA:1270:G:C6	2.83	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: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
33:QB:20:ARG:NE	33:QB:20:ARG:HA	2.30	0.46
33:QB:68:PHE:HE2	33:QB:88:GLN:HB2	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
40:QI:111:GLU:HG2	40:QI:120:ALA:HB1	1.96	0.46
32:QA:274:A:H4'	48:QQ:15:LYS:HE2	1.96	0.46
28:R1:34:GLU:O	28:R1:35:LEU:HB3	2.15	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:160:A:C6	1:RA:161:A:C6	3.03	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
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:996:A:C6	1:RA:1160:G:C2	3.03	0.46
3:RC:141:HIS:CD2	3:RC:192:GLY:O	2.68	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
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
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
1:RA:958:U:H3	13:RM:16:ARG:HD3	1.79	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
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:75:ASN:O	23:RW:76:ARG:HB2	2.15	0.46
32:XA:104:G:C2	32:XA:105:G:C8	3.04	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:N3	32:XA:1279:G:H2'	2.31	0.46
32:XA:1372:U:OP1	40:XI:70:GLY:O	2.33	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:90:C:O2'	32:XA:91:U:H6	1.91	0.46
33:XB:164:ASP:CG	33:XB:203:ASP:HB2	2.36	0.46
34:XC:120:THR:O	34:XC:120:THR:CG2	2.63	0.46
34:XC:36:PHE:CZ	45:XN:91:GLU:HB3	2.51	0.46
36:XE:78:GLY:O	36:XE:121:ASN:OD1	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:XG:26:VAL:HG23	38:XG:27:ASN:H	1.81	0.46
32:XA:948:C:OP2	44:XM:104:ASN:HB3	2.14	0.46
44:XM:95:PRO:HG3	44:XM:99:GLN:OE1	2.15	0.46
44:XM:85:TYR:HE2	44:XM:96:VAL:HG13	1.80	0.46
50:XS:52:ASN:HD22	50:XS:52:ASN:C	2.18	0.46
30:Y3:9:ALA:HB1	30:Y3:13:PHE:CD2	2.50	0.46
1:YA:118:A:P	1:YA:119:A:H5''	2.55	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:C3'	1:YA:1394:U:C6	2.99	0.46
1:YA:1402:U:H2'	1:YA:1403:A:O5'	2.15	0.46
1:YA:1551:A:C5	1:YA:1552:A:C8	3.03	0.46
1:YA:1570:A:O5'	1:YA:1570:A:H8	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:1420:A:N3	1:YA:2211:A:N7	2.63	0.46
1:YA:227:A:H5'	1:YA:229:C:N4	2.31	0.46
1:YA:2322:A:C8	1:YA:2323:G:C8	3.03	0.46
1:YA:235:U:N3	1:YA:236:C:C5	2.83	0.46
1:YA:2571:U:N3	1:YA:2574:G:C8	2.84	0.46
1:YA:82:U:H5''	1:YA:296:U:C5'	2.46	0.46
1:YA:332:A:C5	1:YA:335:C:N4	2.83	0.46
1:YA:266:G:N2	1:YA:427:U:H1'	2.30	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
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
8:YH:50:ARG:C	8:YH:52:ALA:N	2.69	0.46
8:YH:6:LEU:HD13	8:YH:36:ALA:HA	1.98	0.46
10:YJ:123:LYS:HG2	10:YJ:132:HIS:NE2	2.31	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
32:QA:1460:C:C2	32:QA:1461:G:C8	3.03	0.46
32:QA:370:C:O2'	32:QA:371:A:H5'	2.15	0.46
32:QA:72:A:N6	32:QA:99:C:H1'	2.30	0.46
32:QA:772:U:O2'	32:QA:773:G:H5'	2.16	0.46
32:QA:76:G:C2	32:QA:95:C:N3	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:993:G:N3	32:QA:993:G:H2'	2.30	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
38:QG:46:LEU:O	38:QG:50:ALA:HB2	2.15	0.46
38:QG:83:THR:O	38:QG:84:TYR:C	2.53	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
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: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
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
2:RB:104:A:H2'	2:RB:105:G:O4'	2.16	0.46
12:RL:53:GLY:O	12:RL:54:GLN:C	2.53	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:HG23	16:RP:24:THR:O	2.15	0.46
1:RA:923:G:H21	23:RW:23:LYS:HZ3	1.62	0.46
24:RX:32:LEU:O	24:RX:33:HIS:CG	2.68	0.46
32:XA:1256:A:N1	32:XA:1278:G:H2'	2.31	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:85:U:O4'	32:XA:85:U:O2	2.32	0.46
35:XD:60:VAL:CG2	35:XD:194:ILE:HG21	2.46	0.46
36:XE:103:GLY:CA	36:XE:121:ASN:HA	2.40	0.46
36:XE:44:ARG:HG2	36:XE:72:ASN:HA	1.97	0.46
32:XA:1240:U:OP1	38:XG:118:ARG:CZ	2.64	0.46
38:XG:12:LEU:O	38:XG:12:LEU:HD13	2.15	0.46
39:XH:57:GLU:O	39:XH:58:LEU:HB2	2.15	0.46
32:XA:35:G:H21	43:XL:114:SER:CB	2.28	0.46
44:XM:13:HIS:ND1	44:XM:43:LYS:HE2	2.26	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:XM:56:ARG:C	44:XM:59:VAL:HG12	2.36	0.46
45:YN:31:SER:HA	45:YN:45:LEU:HD11	1.98	0.46
52:XU:3:ILE:CG2	52:XU:19:LYS:HZ1	2.28	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:1532:A:H2'	1:YA:1533:C:C6	2.51	0.46
1:YA:1410:G:N2	1:YA:1593:A:C4	2.83	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:2492:U:H6	1:YA:2492:U:O5'	1.99	0.46
1:YA:2574:G:N2	1:YA:2575:C:H1'	2.30	0.46
1:YA:371:A:N6	1:YA:402:A:OP2	2.44	0.46
1:YA:40:U:C4	1:YA:41:C:C4	3.04	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
2:YB:15:A:H1'	2:YB:109:A:N7	2.30	0.46
3:YC:35:LYS:O	3:YC:36:ASN:CB	2.62	0.46
4:YD:94:GLN:O	4:YD:95:SER:C	2.53	0.46
12:YL:47:ARG:H	12:YL:47:ARG:HG3	1.60	0.46
14:YN:16:HIS:CE1	14:YN:20:MET:CE	2.99	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:78:ARG:HB3	18:YR:83:TYR:HD1	1.79	0.46
1:YA:2091:C:H1'	24:YX:33:HIS:NE2	2.30	0.46
32:QA:1014:A:H4'	50:QS:13:HIS:CD2	2.51	0.46
32:QA:33:A:H2'	32:QA:34: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:95:C:C6	32:QA:95:C:H5''	2.51	0.46
33:QB:71:THR:HG23	33:QB:93:HIS:C	2.36	0.46
39:QH:1:SER:C	39:QH:3:GLN:H	2.19	0.46
48:QQ:12:VAL:CG1	48:QQ:21:VAL:O	2.64	0.46
27:R0:14:MET:O	27:R0:17:SER:HB3	2.15	0.46
1:RA:1275:A:H2	1:RA:1295:C:O2	1.98	0.46
1:RA:1733:G:C2	1:RA:1734:G:C5	3.04	0.46
1:RA:1721:G:O2'	1:RA:1739:A:N6	2.49	0.46
1:RA:2553:G:N1	1:RA:2554:U:O2	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:2204:G:O5'	3:RC:149:LYS:HE3	2.15	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
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
32:XA:1014:A:C5	50:XS:33:TRP:CE3	3.04	0.46
32:XA:996:A:C2	32:XA:1046:A:H5'	2.50	0.46
32:XA:1133:G:C4	32:XA:1134:G:C8	3.04	0.46
32:XA:120:A:O2'	32:XA:121:U:H5''	2.15	0.46
32:XA:986:U:C2	32:XA:1220:G:N2	2.83	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
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
33:XB:124:THR:C	33:XB:126:ASP:H	2.18	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
39:XH:29:SER:OG	39:XH:32:LYS:HB2	2.15	0.46
39:XH:33:VAL:C	39:XH:35:ILE:H	2.18	0.46
40:XI:63:TYR:C	40:XI:64:ILE:HD12	2.36	0.46
44:XM:13:HIS:CD2	44:XM:14:ALA:H	2.34	0.46
32:XA:1226:C:H5'	44:XM:94:LEU:HD21	1.97	0.46
45:XN:80:ARG:HH11	45:XN:80:ARG:HG2	1.80	0.46
45:XN:46:LYS:HE3	50:XS:10:ILE:HB	1.98	0.46
28:Y1:8:ILE:HD12	28:Y1:52:LYS:HG3	1.96	0.46
1:YA:105:C:H2'	1:YA:106:C:H6	1.78	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
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:204:A:C8	1:YA:206:U:C4	3.03	0.46
1:YA:2097:A:C4	1:YA:2098:U:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:YA:406:G:O2'	1:YA:407:G:O5'	2.34	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
3:YC:149:LYS:HE3	3:YC:152:GLN:CD	2.36	0.46
1:YA:1799:G:O2'	3:YC:179:GLU:OE2	2.34	0.46
1:YA:1568:G:N2	3:YC:57:HIS:HE1	2.07	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: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
1:YA:533:G:N2	17:YQ:44:TYR:CE1	2.83	0.46
19:YS:10:ALA:HB3	19:YS:101:SER:O	2.15	0.46
21:YU:54:PRO:CG	21:YU:55:GLY:H	2.27	0.46
21:YU:3:LYS:HG2	21:YU:84:PHE:CZ	2.51	0.46
32:QA:1056:U:H5'	34:QC:162:ALA:HB2	1.97	0.46
32:QA:140:U:H2'	32:QA:141:G:O4'	2.15	0.46
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
33:QB:95:TRP:HZ3	33:QB:98:GLY:H	1.61	0.46
37:QF:47:LEU:HG	37:QF:56:LYS:H	1.81	0.46
42:QK:124:LYS:HE2	52:QU:33:ARG:NH2	2.31	0.46
48:QQ:16:MET:HE2	48:QQ:20:ILE:HD12	1.98	0.46
48:QQ:46:HIS:HB3	48:QQ:73:THR:HG23	1.98	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:O4'	1:RA:2884:U:O2	2.33	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:996:A:O2'	17:RQ:91:ARG:HG3	2.16	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:101:PHE:O	4:RD:102:ALA:C	2.54	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
6:RF:151:LEU:HD12	6:RF:152:ASP:N	2.31	0.46
2:RB:54:G:H21	6:RF:25:MET:CE	2.28	0.46
10:RJ:20:ALA:O	10:RJ:21:THR:O	2.34	0.46
10:RJ:5:THR:O	10:RJ:5:THR:HG22	2.14	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
18:RR:49:ILE:O	18:RR:51:VAL:O	2.33	0.46
21:RU:44:HIS:HD2	21:RU:57:ILE:HG12	1.81	0.46
1:RA:989:G:C8	26:RZ:13:ILE:HD11	2.51	0.46
32:XA:1130:A:C6	32:XA:1146:A:N7	2.83	0.46
32:XA:203:G:O5'	32:XA:203:G:H8	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
34:XC:131:ARG:O	34:XC:135:ARG:HB2	2.15	0.46
39:XH:93:LYS:N	39:XH:93:LYS:HD3	2.31	0.46
40:XI:45:MET:HA	40:XI:48:ARG:HG2	1.97	0.46
40:XI:27:ILE:HD13	40:XI:62:LEU:HG	1.98	0.46
40:XI:15:ALA:O	40:XI:66:VAL:HA	2.15	0.46
43:XL:42:LYS:CG	43:XL:43:LYS:HG2	2.45	0.46
44:XM:12:LYS:HB3	44:XM:17:ALA:CB	2.38	0.46
44:XM:1:ALA:HB3	44:XM:8:ILE:HG23	1.96	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
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: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:811:U:H1'	1:YA:1251:C:C2	2.51	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:170:U:H6	1:YA:170:U:O5'	1.99	0.46
1:YA:173:A:H2'	1:YA:174:U:C6	2.51	0.46
1:YA:2096:C:H2'	1:YA:2097:A:H8	1.81	0.46
1:YA:217:A:H2'	1:YA:218:A:C8	2.51	0.46
1:YA:2444:G:C6	1:YA:2445:G:C5	3.04	0.46
1:YA:266:G:H2'	1:YA:267:C:O5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:279:A:C2	1:YA:362:A:C4'	2.92	0.46
1:YA:2845:U:H2'	1:YA:2846:G:O4'	2.16	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:968:C:H2'	1:YA:969:G:H8	1.81	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
1:YA:1655:A:H4'	4:YD:118:PHE:CD1	2.50	0.46
1:YA:2635:A:C5'	4:YD:79:LEU:HB2	2.46	0.46
11:YK:69:VAL:HG12	11:YK:70:ARG:N	2.30	0.46
16:YP:24:THR:O	16:YP:25:VAL:C	2.54	0.46
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
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
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
30:R3:54:LEU:HA	30:R3:54:LEU:HD12	1.70	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: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: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
2:RB:13:G:O2'	2:RB:15:A:H5'	2.16	0.46
1:RA:1792:G:OP1	3:RC:203:VAL:O	2.34	0.46
1:RA:2680:U:OP2	4:RD:114:LYS:HE2	2.16	0.46
6:RF:72:SER:HB2	6:RF:80:GLN:HB2	1.98	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
17:RQ:75:TYR:CD2	17:RQ:75:TYR:C	2.88	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RY:5:GLU:O	25:RY:6:LEU:C	2.54	0.46
32:XA:1000:A:C2	32:XA:1041:G:C5	3.04	0.46
32:XA:102:G:H2'	32:XA:103:U:H6	1.80	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
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:802:A:HO2'	32:XA:803:G:P	2.37	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
33:XB:14:HIS:CD2	33:XB:16:GLY:HA3	2.51	0.46
35:XD:28:ASP:O	35:XD:31:CYS:SG	2.74	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
30:Y3:29:ARG:HH21	30:Y3:29:ARG:CG	2.29	0.46
1:YA:2394:C:H41	30:Y3:30:HIS:CE1	2.33	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:YA:1006:C:O5'	1:YA:1006:C:H6	1.99	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:231:A:H2'	1:YA:232:G:H5'	1.97	0.46
1:YA:2390:U:H2'	1:YA:2390:U:O2	2.16	0.46
1:YA:2636:C:H4'	4:YD:81:GLU:CD	2.36	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
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
4:YD:45:TYR:CE2	4:YD:47:ALA:HB3	2.48	0.46
2:YB:44:G:H3'	6:YF:91:ARG:HE	1.80	0.46
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:YR:68:ARG:NH1	18:YR:90:ARG:HG2	2.30	0.46
21:YU:71:ILE:HG12	21:YU:71:ILE:H	1.47	0.46
23:YW:37:VAL:CG1	23:YW:55:ASP:HB2	2.38	0.46
23:YW:9:THR:HG23	23:YW:10:ARG:N	2.31	0.46
32:QA:935:A:O2'	32:QA:1383:C:N3	2.40	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:71:A:C6	32:QA:100:G:C8	3.04	0.46
32:QA:842:U:H2'	32:QA:844:G:OP1	2.15	0.46
32:QA:972:C:O2'	41:QJ:57:VAL:HG23	2.14	0.46
33:QB:66:ILE:HG13	33:QB:220:VAL:HG11	1.97	0.46
38:QG:12:LEU:HD22	38:QG:12:LEU:N	2.25	0.46
36:QE:82:HIS:CE1	39:QH:95:MET:HE2	2.51	0.46
40:QI:11:ARG:HA	40:QI:105:ARG:HH12	1.80	0.46
32:QA:1343:G:H1'	40:QI:122:ARG:NH1	2.30	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:HG2	44:QM:92:ARG:HH11	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
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:2365:G:H2'	1:RA:2366:A:C8	2.51	0.46
1:RA:263:G:H2'	1:RA:264:C:O5'	2.16	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
1:RA:574:A:C4'	1:RA:575:A:O5'	2.63	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:CA	4:RD:114:LYS:HE3	2.45	0.46
8:RH:96:THR:C	8:RH:97:ARG:HG3	2.36	0.46
13:RM:1:MET:HE3	13:RM:2:LEU:H	1.81	0.46
14:RN:101:GLY:HA3	14:RN:102:PHE:HD2	1.80	0.46
14:RN:37:THR:HG22	14:RN:110:MET:HE1	1.98	0.46
14:RN:70:THR:HG21	14:RN:75:ILE:HD11	1.97	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
32:XA:267:C:H2'	32:XA:268:U:O5'	2.16	0.46
32:XA:86:G:N2	32:XA:87:C:C2	2.84	0.46
35:XD:127:ARG:HG2	35:XD:127:ARG:HH11	1.80	0.46
37:XF:86:ARG:NH1	49:XR:63:TYR:CB	2.57	0.46
38:XG:68:VAL:CG2	38:XG:134:VAL:HG12	2.45	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: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:1378:A:N6	1:YA:1569:A:N1	2.59	0.46
1:YA:172:A:C2	1:YA:173:A:C5	3.04	0.46
1:YA:1816:C:H2'	3:YC:61:TYR:OH	2.15	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:2067:G:O6	1:YA:2444:G:C6	2.69	0.46
1:YA:945:A:C5	1:YA:2448:A:C2	3.04	0.46
1:YA:2543:G:H8	1:YA:2543:G:H5'	1.80	0.46
1:YA:2550:G:N2	1:YA:2559:C:H1'	2.31	0.46
1:YA:2507:C:H1'	1:YA:2583:G:N2	2.31	0.46
1:YA:2623:G:C4'	1:YA:2825:G:C8	2.94	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
3:YC:124:LYS:HB3	3:YC:124:LYS:NZ	2.30	0.46
4:YD:148:GLN:O	4:YD:149:ASN:HB2	2.16	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:QA:1031:C:C2'	32:QA:1032:G:OP2	2.63	0.46
32:QA:1473:G:O2'	32:QA:1474:U:H5'	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:O2	32:QA:841:C:H2'	2.15	0.46
33:QB:90:PHE:CD2	33:QB:90:PHE:O	2.69	0.46
33:QB:98:GLY:O	33:QB:102:ASN:N	2.47	0.46
35:QD:34:GLU:C	35:QD:36:ALA:H	2.19	0.46
38:QG:48:THR:O	38:QG:52:ARG:HB2	2.16	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
46:QO:26:VAL:O	46:QO:27:GLN:C	2.54	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: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:2756:U:H1'	1:RA:2757:A:H5''	1.98	0.46
1:RA:2849:U:C6	1:RA:2849:U:H5'	2.50	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
5:RE:119:ILE:HD11	5:RE:187:VAL:HG23	1.93	0.46
5:RE:46:GLN:CG	5:RE:87:ALA:H	2.27	0.46
6:RF:60:SER:O	6:RF:61:GLY:C	2.54	0.46
7:RG:1:SER:HB3	7:RG:5:LYS:HZ3	1.80	0.46
9:RI:115:ASP:C	9:RI:115:ASP:OD1	2.54	0.46
12:RL:47:ARG:HG3	12:RL:50:PHE:HB2	1.97	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
1:RA:309:A:H4'	21:RU:15:GLY:HA2	1.97	0.46
22:RV:49:ASN:O	22:RV:52:ALA:HB3	2.16	0.46
23:RW:13:ARG:O	23:RW:14:ASP:C	2.55	0.46
1:RA:2354:C:H4'	23:RW:31:LEU:HD22	1.98	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
32:XA:512:U:HO2'	32:XA:513:C:H6	1.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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:34:THR:HG1	42:XK:39:ASN:C	2.18	0.46
50:XS:20:LYS:O	50:XS:20:LYS:HD3	2.15	0.46
44:XM:82:LEU:HD21	50:XS:60:PHE:HB3	1.97	0.46
42:XK:115:ILE:HD12	52:XU:23:GLU:HG2	1.97	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
28:Y1:47:ILE:N	28:Y1:47:ILE:HD12	2.31	0.46
1:YA:1324:G:O2'	1:YA:1616:A:N1	2.49	0.46
1:YA:1359:A:N3	1:YA:1359:A:H2'	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: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
1:YA:2391:G:O2'	1:YA:2392:A:O5'	2.27	0.46
1:YA:265:A:O2'	1:YA:266:G:H1'	2.16	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
1:YA:323:C:OP1	1:YA:339:U:O2'	2.32	0.46
1:YA:287:G:N1	1:YA:354:A:C6	2.84	0.46
1:YA:599:A:N3	1:YA:659:G:C2	2.84	0.46
46:XO:88:ARG:NH2	1:YA:715:A:H4'	2.29	0.46
2:YB:81:G:C5	2:YB:82:U:C5	3.05	0.46
3:YC:212:TRP:C	3:YC:212:TRP:HD1	2.19	0.46
1:YA:1695:G:H8	3:YC:7:PRO:HB2	1.81	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
1:YA:2311:A:N3	6:YF:78:ILE:HD11	2.31	0.46
7:YG:88:LEU:N	7:YG:128:THR:O	2.49	0.46
8:YH:5:LEU:C	8:YH:6:LEU:HD12	2.35	0.46
9:YI:28:GLY:O	9:YI:29:GLN:C	2.53	0.46
1:YA:1022:G:N7	10:YJ:68:LYS:HD3	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:YK:1:MET:HA	11:YK:33:ALA:O	2.16	0.46
1:YA:636:G:O5'	12:YL:128:THR:HG23	2.16	0.46
12:YL:88:GLY:O	12:YL:89:VAL:HG12	2.16	0.46
17:YQ:6:GLY:C	17:YQ:8:ILE:N	2.69	0.46
10:YJ:4:PHE:CD2	17:YQ:99:VAL:HG11	2.51	0.46
32:QA:1241:G:O2'	32:QA:1242:G:H8	1.98	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
32:QA:421:U:H2'	32:QA:422:C:OP1	2.16	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:104:SER:HB2	39:QH:125:ILE:CD1	2.46	0.45
39:QH:10:LEU:O	39:QH:13:ILE:HB	2.16	0.45
32:QA:528:C:H41	43:QL:45:ASN:ND2	2.15	0.45
46:QO:29:ALA:HA	46:QO:84:LEU:HD21	1.99	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
1:RA:721:A:H2'	1:RA:722:A:C8	2.52	0.45
1:RA:947:A:O2'	1:RA:984:A:C2	2.56	0.45
7:RG:73:SER:CA	7:RG:76:ILE:HG22	2.39	0.45
9:RI:7:TYR:HA	9:RI:58:ILE:CB	2.36	0.45
10:RJ:97:PRO:C	10:RJ:99:ARG:N	2.68	0.45
13:RM:97:GLN:CD	13:RM:97:GLN:N	2.69	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:114:ALA:C	17:RQ:116:LEU:N	2.68	0.45
20:RT:18:GLU:O	20:RT:19:LYS:C	2.54	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
32:XA:372:C:H4'	32:XA:373:A:O5'	2.13	0.45
32:XA:366:A:O2'	32:XA:394:G:N2	2.49	0.45
32:XA:530:G:C5'	32:XA:531:U:H5''	2.46	0.45
32:XA:737:C:OP1	37:XF:91:ARG:HB3	2.17	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:83:THR:HG21	40:XI:102:PHE:HB3	1.98	0.45
40:XI:46:VAL:O	40:XI:50:PRO:HD3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
29:Y2:22:MET:HA	29:Y2:28:ARG:HB2	1.97	0.45
29:Y2:28:ARG:C	29:Y2:30:VAL:N	2.69	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
1:YA:799:G:P	1:YA:800:A:H3'	2.56	0.45
2:YB:66:A:C2	2:YB:108:A:C6	3.04	0.45
3:YC:79:ARG:C	3:YC:80:LEU:HD12	2.36	0.45
2:YB:54:G:N2	6:YF:25:MET:HE1	2.31	0.45
8:YH:83:LYS:HG3	8:YH:149:GLU:HB2	1.97	0.45
9:YI:76:ALA:O	9:YI:135:MET:HE1	2.16	0.45
11:YK:107:LEU:C	11:YK:109:SER:H	2.19	0.45
11:YK:17:ARG:HD3	11:YK:18:ARG:H	1.80	0.45
12:YL:17:LYS:HZ3	12:YL:19:LEU:HD22	1.79	0.45
10:YJ:4:PHE:CB	17:YQ:63:ARG:HH22	2.28	0.45
20:YT:62:VAL:CG1	20:YT:63:VAL:N	2.79	0.45
32:QA:1293:C:H2'	32:QA:1294:G:C8	2.51	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: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:819:A:H4'	32:QA:820:U:OP2	2.17	0.45
33:QB:99:MET:HA	33:QB:106:VAL:HG21	1.97	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
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
32:QA:544:G:OP1	35:QD:55:ARG:NH1	2.49	0.45
37:QF:9:MET:HE3	49:QR:64:LEU:HD22	1.98	0.45
39:QH:1:SER:C	39:QH:3:GLN:N	2.68	0.45
39:QH:28:SER:HA	39:QH:32:LYS:HD2	1.98	0.45
40:QI:119:LYS:CG	40:QI:122:ARG:HB3	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:QJ:17:LEU:C	41:QJ:17:LEU:HD23	2.36	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
51:QT:67:HIS:C	51:QT:68:LYS:HZ2	2.20	0.45
51:QT:82:ILE:HD12	51:QT:82:ILE:C	2.36	0.45
1:RA:1083:U:H2'	1:RA:1084:A:O5'	2.17	0.45
1:RA:996:A:N6	1:RA:1160:G:N1	2.64	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
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
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
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
12:RL:120:VAL:HG12	12:RL:121:THR:N	2.32	0.45
12:RL:3:LEU:HA	12:RL:3:LEU:HD23	1.76	0.45
14:RN:51:LEU:HA	14:RN:51:LEU:HD12	1.62	0.45
16:RP:63:ILE:O	16:RP:63:ILE:HG22	2.17	0.45
10:RJ:44:TYR:HD2	17:RQ:63:ARG:HG2	1.79	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:OE1	22:RV:75:GLN:HA	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: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:1381:U:HO2'	32:XA:1382:C:C5'	2.30	0.45
32:XA:1387:G:C4	32:XA:1388:C:C5	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:71:A:C2	32:XA:72:A:C8	3.04	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
33:XB:93:HIS:CD2	33:XB:145:ASN:HB3	2.51	0.45
33:XB:195:VAL:HB	33:XB:198:VAL:HG12	1.97	0.45
33:XB:185:ILE:HA	33:XB:199:ILE:HG13	1.98	0.45
35:XD:102:TYR:C	35:XD:104:MET:H	2.19	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
12:YL:63:LYS:HB3	30:Y3:12:ARG:CD	2.43	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:140:C:O2'	1:YA:141:G:OP2	2.34	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
1:YA:35:G:C5	1:YA:454:A:C2	3.05	0.45
1:YA:99:U:O4'	1:YA:99:U:O2	2.33	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:HG2	12:YL:47:ARG:NH2	2.32	0.45
14:YN:38:LEU:CB	14:YN:39:PRO:HD3	2.43	0.45
32:XA:1442:G:O2'	16:YP:113:LEU:HD13	2.15	0.45
16:YP:67:GLU:OE1	16:YP:68:GLY:N	2.50	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:978:A:C5	32:QA:1318:A:C6	3.03	0.45
32:QA:1526:G:P	52:QU:38:GLU:HB2	2.56	0.45
32:QA:701:U:H4'	32:QA:702:A:O5'	2.15	0.45
32:QA:73:C:HO2'	32:QA:74:A:H8	1.61	0.45
33:QB:186:VAL:N	33:QB:199:ILE:O	2.42	0.45
33:QB:38:HIS:H	33:QB:38:HIS:CD2	2.35	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
32:QA:684:U:O2'	42:QK:39:ASN:O	2.32	0.45
42:QK:22:ILE:HG12	42:QK:85:VAL:HA	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:CD1	50:QS:4:LEU:H	2.27	0.45
42:QK:126:ARG:CB	52:QU:33:ARG:NH1	2.76	0.45
28:R1:47:ILE:N	28:R1:47:ILE:CD1	2.75	0.45
1:RA:465:G:H4'	29:R2:16:HIS:CD2	2.51	0.45
1:RA:1071:G:C5	1:RA:1089:A:C6	3.05	0.45
1:RA:812:C:H1'	1:RA:1250:G:C2	2.51	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:187:G:C2	1:RA:210:C:O2	2.69	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
1:RA:81:G:C2	1:RA:106:C:C2	3.04	0.45
1:RA:868:U:C4	1:RA:869:G:N7	2.84	0.45
4:RD:170:VAL:O	4:RD:170:VAL:HG22	2.16	0.45
4:RD:38:LYS:O	4:RD:46:ARG:HA	2.17	0.45
5:RE:108:ILE:HD13	5:RE:108:ILE:C	2.36	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:147:VAL:CG1	8:RH:149:GLU:HG3	2.46	0.45
8:RH:67:ALA:O	8:RH:69:ALA:N	2.40	0.45
9:RI:50:LYS:HE2	9:RI:50:LYS:HB2	1.83	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
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:1408:A:C8	32:XA:1409:C:C5	3.04	0.45
32:XA:1406:U:H1'	32:XA:1518:A:H4'	1.99	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:599:C:H4'	39:XH:121:GLY:C	2.37	0.45
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:91:U:C6	32:XA:92:U:C5	3.04	0.45
32:XA:936:C:H1'	32:XA:1382:C:H42	1.80	0.45
33:XB:21:TYR:HD1	33:XB:21:TYR:N	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:XA:532:A:H62	34:XC:191:THR:HG21	1.81	0.45
38:XG:148:LYS:O	38:XG:148:LYS:HD3	2.16	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
48:XQ:18:LYS:HE3	48:XQ:48:GLU:OE1	2.17	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:N3	1:YA:1519:G:H2'	2.31	0.45
1:YA:1647:U:P	1:YA:1647:U:H3'	2.57	0.45
1:YA:2040:G:H2'	1:YA:2041:U:H6	1.82	0.45
1:YA:2353:G:N3	23:YW:30:VAL:CG1	2.78	0.45
1:YA:247:G:N2	1:YA:250:G:H3'	2.31	0.45
1:YA:2755:C:O2'	1:YA:2756:U:H2'	2.16	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: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
2:YB:53:A:H2'	2:YB:53:A:N3	2.32	0.45
1:YA:1655:A:H5'	4:YD:118:PHE:CD1	2.52	0.45
1:YA:659:G:C5'	5:YE:95:LYS:HD2	2.47	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:HD1	14:YN:21:PHE:N	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
1:YA:30:G:OP1	17:YQ:4:LYS:HG3	2.15	0.45
1:YA:2013:A:H2	19:YS:88:ARG:HH11	1.59	0.45
20:YT:21:SER:HA	20:YT:25:GLU:HB2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:YT:5:GLU:HA	20:YT:8:LEU:CD1	2.46	0.45
23:YW:70:VAL:HG22	23:YW:70:VAL:O	2.16	0.45
1:YA:96:C:C4'	25:YY:41:HIS:CD2	2.92	0.45
32:QA:1520:C:C2	32:QA:1521:C:C5	3.04	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
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
35:QD:25:ARG:O	35:QD:26:ALA:CB	2.65	0.45
36:QE:67:ARG:O	36:QE:70:MET:HE3	2.16	0.45
37:QF:91:ARG:HG3	37:QF:92:THR:N	2.31	0.45
38:QG:14:ASP:CG	38:QG:17:PHE:HB2	2.36	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
52:QU:19:LYS:C	52:QU:21:SER:H	2.19	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
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:64:A:C5	1:RA:65:U:C4	3.05	0.45
3:RC:106:PRO:HA	3:RC:141:HIS:NE2	2.31	0.45
4:RD:172:VAL:O	4:RD:173:GLN:CB	2.55	0.45
8:RH:66:ASN:C	8:RH:68:ARG:N	2.70	0.45
14:RN:62:ASN:HD22	14:RN:62:ASN:N	2.13	0.45
16:RP:85:VAL:O	16:RP:86:LYS:HB2	2.16	0.45
18:RR:66:HIS:CG	18:RR:94:THR:HG22	2.51	0.45
23:RW:41:GLY:HA2	23:RW:44:PHE:CZ	2.52	0.45
23:RW:37:VAL:CG1	23:RW:55:ASP:O	2.64	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
32:XA:503:C:O2	32:XA:510:A:H2	1.99	0.45
32:XA:91:U:O2'	32:XA:92:U:OP2	2.31	0.45
33:XB:17:HIS:CG	33:XB:18:GLN:H	2.33	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:XD:2:ARG:HH11	35:XD:2:ARG:N	2.15	0.45
36:XE:38:VAL:CG1	36:XE:39:GLY:N	2.70	0.45
32:XA:653:U:H5'	39:XH:55:LYS:HE3	1.99	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
27:Y0:38:LEU:N	27:Y0:41:HIS:CE1	2.83	0.45
28:Y1:7:LYS:C	28:Y1:8:ILE:HD13	2.37	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:183:C:C2'	1:YA:184:C:H5'	2.46	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:2748:A:C2	1:YA:2757:A:C5	3.04	0.45
1:YA:621:A:HO2'	1:YA:622:G:C4'	2.29	0.45
1:YA:86:G:HO2'	1:YA:87:U:H6	1.62	0.45
1:YA:876:C:O4'	1:YA:876:C:O2	2.32	0.45
4:YD:118:PHE:CE1	4:YD:119:ALA:O	2.69	0.45
5:YE:146:VAL:HG13	5:YE:187:VAL:HG23	1.97	0.45
5:YE:90:GLN:OE1	5:YE:90:GLN:HA	2.15	0.45
14:YN:14:SER:C	14:YN:16:HIS:N	2.69	0.45
18:YR:62:GLU:CD	18:YR:97:LYS:HD2	2.37	0.45
18:YR:81:LYS:O	18:YR:82:HIS:C	2.55	0.45
1:YA:2332:C:H4'	23:YW:40:ARG:CZ	2.47	0.45
32:QA:1039:G:O2'	32:QA:1040:U:H5'	2.17	0.45
32:QA:1066:C:C6	32:QA:1066:C:H5''	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
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
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:133:SER:O	35:QD:134:TYR:C	2.53	0.45
35:QD:156:ALA:O	35:QD:159:GLU:HB3	2.16	0.45
38:QG:125:ASP:OD2	38:QG:130:LYS:HG3	2.16	0.45
38:QG:78:ARG:HA	38:QG:83:THR:HA	1.99	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
45:QN:20:PHE:C	45:QN:22:LYS:N	2.70	0.45
52:QU:13:VAL:HG13	52:QU:15:LEU:HG	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:1743:G:O5'	1:RA:1743:G:H8	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
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
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
3:RC:96:LYS:HA	3:RC:96:LYS:HD3	1.81	0.45
4:RD:174:SER:OG	4:RD:175:LEU:N	2.49	0.45
4:RD:174:SER:O	4:RD:175:LEU:CB	2.53	0.45
5:RE:153:LEU:HB3	5:RE:171:ASP:CB	2.46	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
10:RJ:73:VAL:CG2	10:RJ:74:TYR:N	2.74	0.45
11:RK:19:VAL:CG1	11:RK:41:ILE:HG12	2.46	0.45
11:RK:7:MET:SD	11:RK:20:MET:HB2	2.57	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
21:RU:5:ARG:O	21:RU:6:ARG:C	2.54	0.45
25:RY:42:LEU:HD12	25:RY:42:LEU:HA	1.80	0.45
26:RZ:12:ALA:HA	26:RZ:15:ARG:HD3	1.97	0.45
32:XA:1303:C:N4	32:XA:1334:G:H1	2.14	0.45
32:XA:567:G:H1'	56:XA:1820:HOH:O	2.16	0.45
38:XG:34:LYS:NZ	38:XG:34:LYS:HB2	2.31	0.45
40:XI:119:LYS:O	40:XI:121:ARG:N	2.39	0.45
41:XJ:81:GLU:C	41:XJ:83:THR:H	2.18	0.45
44:XM:87:GLY:O	44:XM:91:ARG:HD2	2.16	0.45
44:XM:7:ASN:C	44:XM:9:PRO:HD3	2.37	0.45
44:XM:82:LEU:CD2	50:XS:60:PHE:HB3	2.47	0.45
1:YA:125:A:OP2	29:Y2:19:ARG:NH2	2.49	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:2755:C:O3'	1:YA:2756:U:H6	1.99	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
3:YC:68:ARG:NH2	3:YC:126:GLY:O	2.41	0.45
3:YC:8:THR:O	3:YC:9:SER:CB	2.65	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:122:ASP:HB3	6:YF:123:GLY:H	1.40	0.45
6:YF:52:ALA:HA	6:YF:55:ASP:HB2	1.98	0.45
8:YH:4:ILE:O	8:YH:36:ALA:HB1	2.17	0.45
12:YL:3:LEU:C	12:YL:3:LEU:HD12	2.36	0.45
13:YM:61:GLY:CA	13:YM:107:GLY:HA3	2.47	0.45
13:YM:21:ALA:HB2	13:YM:97:GLN:O	2.17	0.45
1:YA:1652:A:OP1	14:YN:8:ARG:HD3	2.16	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:HB3	21:YU:65:GLN:HE21	1.59	0.45
21:YU:80:ASP:OD1	21:YU:80:ASP:N	2.50	0.45
32:QA:339:C:H2'	32:QA:340:U:H6	1.80	0.45
32:QA:82:G:H22	32:QA:84:U:H3	1.64	0.45
43:QL:74:GLN:O	43:QL:76:HIS:N	2.50	0.45
50:QS:41:PRO:C	50:QS:43:MET:H	2.20	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: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:2715:C:H6	1:RA:2715:C:O5'	2.00	0.45
1:RA:31:C:H4'	1:RA:1238:G:H4'	1.98	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:1818:U:O2'	3:RC:152:GLN:O	2.19	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:RD:110:THR:HA	4:RD:171:THR:HA	1.98	0.45
4:RD:69:ALA:HA	4:RD:73:VAL:HG13	1.98	0.45
5:RE:37:ALA:C	5:RE:39:ALA:H	2.20	0.45
7:RG:7:PRO:O	7:RG:8:VAL:HB	2.15	0.45
8:RH:99:ILE:CG2	8:RH:99:ILE:O	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
23:RW:21:GLY:O	23:RW:22:VAL:HB	2.17	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
32:XA:623:C:H6	32:XA:623:C:O5'	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
35:XD:2:ARG:HE	35:XD:114:ARG:HD2	1.80	0.45
39:XH:1:SER:C	39:XH:3:GLN:N	2.70	0.45
40:XI:126:PHE:CG	40:XI:126:PHE:O	2.68	0.45
40:XI:90:ASP:HB3	40:XI:93:LEU:CD2	2.40	0.45
42:XK:90:PRO:O	42:XK:91:GLY:C	2.55	0.45
43:XL:113:ARG:HD2	43:XL:118:VAL:HG12	1.97	0.45
43:XL:2:THR:HB	43:XL:5:GLN:H	1.80	0.45
50:XS:32:THR:O	50:XS:32:THR:HG23	2.16	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:1014:A:C2	1:YA:1149:G:C2	3.05	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:181:A:H2	1:YA:434:U:C1'	2.22	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:180:G:O6	1:YA:213:A:N6	2.50	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:238:C:H2'	1:YA:239:C:O4'	2.17	0.45
1:YA:2809:A:OP2	1:YA:2890:G:N1	2.47	0.45
1:YA:310:A:C2	1:YA:330:A:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:855:G:H21	23:YW:23:LYS:HZ2	1.64	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:136:SER:C	8:YH:137:GLU:HG3	2.37	0.45
8:YH:94:ILE:CB	8:YH:98:ASP:HB2	2.47	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:35:LYS:HA	14:YN:111:ALA:O	2.17	0.45
14:YN:16:HIS:O	14:YN:20:MET:CB	2.65	0.45
14:YN:84:GLY:N	14:YN:85:PRO:CD	2.79	0.45
25:YY:40:SER:C	25:YY:42:LEU:H	2.19	0.45
26:YZ:37:ARG:NE	26:YZ:37:ARG:HA	2.32	0.45
32:QA:1381:U:O2'	32:QA:1382:C:C5'	2.65	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
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:158:LEU:HA	35:QD:161:ALA:HB3	1.99	0.45
35:QD:64:TYR:CE1	35:QD:93:LEU:HD13	2.52	0.45
38:QG:145:GLU:N	38:QG:148:LYS:HB2	2.32	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
1:RA:1178:C:C5	1:RA:1180:U:C4	3.05	0.45
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
1:RA:395:U:O2'	1:RA:396:G:N7	2.45	0.45
2:RB:109:A:C5	2:RB:110:C:C4	3.05	0.45
5:RE:79:ARG:HG2	5:RE:80:SER:N	2.32	0.45
9:RI:126:ARG:HD3	9:RI:126:ARG:H	1.80	0.45
9:RI:91:LYS:O	9:RI:92:PRO:O	2.34	0.45
9:RI:96:LYS:H	9:RI:96:LYS:HD2	1.81	0.45
12:RL:104:GLN:HE21	12:RL:104:GLN:HA	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:RP:20:ARG:HG2	16:RP:21:PRO:HD2	1.98	0.45
16:RP:37:LYS:O	16:RP:37:LYS:HG2	2.15	0.45
17:RQ:34:ALA:O	17:RQ:38:VAL:HG23	2.17	0.45
18:RR:53:PHE:CD1	18:RR:53:PHE:N	2.83	0.45
21:RU:60:LYS:HD2	21:RU:60:LYS:HA	1.68	0.45
32:XA:1058:G:C5	32:XA:1059:C:C4	3.04	0.45
32:XA:1331:G:C2'	32:XA:1332:A:OP2	2.65	0.45
32:XA:976:G:N7	32:XA:1359:C:O4'	2.49	0.45
32:XA:626:G:H2'	32:XA:627:G:C8	2.51	0.45
35:XD:29:THR:O	35:XD:30:LYS:HB2	2.16	0.45
32:XA:1239:A:H3'	38:XG:118:ARG:NH2	2.32	0.45
32:XA:1346:A:N1	38:XG:9:ARG:NH2	2.64	0.45
40:XI:59:LYS:HB3	40:XI:59:LYS:HE2	1.72	0.45
32:XA:1151:A:OP1	41:XJ:43:PRO:HA	2.16	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
43:XL:65:TYR:CE1	43:XL:67:GLY:HA2	2.51	0.45
44:XM:97:ARG:O	44:XM:97:ARG:HG2	2.17	0.45
45:YN:4:SER:O	45:YN:7:ALA:HB3	2.17	0.45
46:XO:80:LEU:HD22	46:XO:84:LEU:HD12	1.97	0.45
45:YN:46:LYS:CE	50:XS:10:ILE:HB	2.47	0.45
52:XU:13:VAL:HG22	52:XU:15:LEU:HD23	1.98	0.45
52:XU:53:LYS:NZ	52:XU:53:LYS:HB2	2.31	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:187:G:N2	1:YA:210:C:H1'	2.32	0.45
1:YA:2463:C:O5'	1:YA:2463:C:H6	1.98	0.45
1:YA:2677:G:H2'	1:YA:2678:C:C6	2.52	0.45
1:YA:2889:C:C4	1:YA:2890:G:C6	3.04	0.45
1:YA:46:G:N1	1:YA:47:C:C4	2.85	0.45
1:YA:570:G:C4	1:YA:2030:A:N7	2.85	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
4:YD:181:ASP:C	4:YD:183:GLU:N	2.70	0.45
1:YA:2831:G:C8	4:YD:59:ARG:NH1	2.84	0.45
9:YI:79:LEU:C	9:YI:81:LYS:H	2.19	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YV:49:ASN:O	22:YV:52:ALA:HB3	2.16	0.45
22:YV:56:PHE:CD1	22:YV:56:PHE:C	2.90	0.45
25:YY:20:ASN:ND2	25:YY:50:VAL:HG22	2.14	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
32:QA:591:U:H2'	32:QA:592:G:C8	2.51	0.45
32:QA:603:U:C6	32:QA:603:U:H3'	2.48	0.45
32:QA:988:G:C6	32:QA:989:U:C4	3.04	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
33:QB:32:GLY:HA3	33:QB:39:ILE:N	2.25	0.45
35:QD:37:PRO:HD2	35:QD:41:GLY:HA2	1.99	0.45
36:QE:104:ILE:O	36:QE:104:ILE:HG23	2.17	0.45
36:QE:133:ILE:HD12	36:QE:133:ILE:H	1.82	0.45
36:QE:148:SER:O	36:QE:152:VAL:CG1	2.64	0.45
36:QE:97:PRO:HB2	36:QE:98:ALA:H	1.59	0.45
37:QF:91:ARG:CG	37:QF:92:THR:H	2.27	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
1:RA:1045:C:H3'	1:RA:1046:A:H5'	1.98	0.45
1:RA:1069:A:N1	1:RA:1073:A:N6	2.43	0.45
1:RA:1073:A:OP1	1:RA:1073:A:H8	2.00	0.45
1:RA:1084:A:C6	1:RA:1085:A:C6	3.05	0.45
1:RA:1056:G:O2'	1:RA:1086:A:H1'	2.17	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:1587:G:C2	1:RA:1588:G:C8	3.05	0.45
1:RA:1326:U:N3	1:RA:1648:U:O2'	2.49	0.45
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: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
3:RC:114:GLN:HB2	3:RC:114:GLN:HE21	1.53	0.45
3:RC:170:TYR:HD2	3:RC:183:VAL:C	2.21	0.45
3:RC:257:ARG:O	3:RC:258:SER:HB2	2.16	0.45
1:RA:2572:A:H2'	4:RD:149:ASN:HD22	1.82	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:RG:37:ASN:N	7:RG:37:ASN:OD1	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: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
32:XA:1375:A:H2'	32:XA:1376:U:C6	2.52	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
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
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
1:YA:1056:G:O5'	1:YA:1085:A:H2	2.00	0.45
1:YA:121:G:N2	1:YA:131:A:C4	2.85	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:168:G:HO2'	1:YA:2209:G:HO2'	1.64	0.45
1:YA:2215:C:O2'	1:YA:2216:G:H8	1.94	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:200:U:O4	1:YA:248:G:C2	2.70	0.45
1:YA:2652:C:H2'	1:YA:2653:U:O4'	2.17	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:94:A:C6	1:YA:95:A:C6	3.05	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
1:YA:2786:U:OP1	4:YD:70:LYS:HD2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:YF:45:ASP:C	6:YF:47:LYS:N	2.69	0.45
7:YG:152:ARG:CD	7:YG:153:PRO:HD2	2.46	0.45
9:YI:105:LEU:HD21	9:YI:129:GLU:OE2	2.16	0.45
9:YI:20:SER:N	9:YI:21:PRO:CD	2.80	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
26:YZ:6:ILE:O	26:YZ:34:THR:HA	2.17	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
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:111:G:C6	32:QA:330:C:N4	2.85	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
33:QB:127:LYS:HG3	33:QB:128:LEU:N	2.24	0.45
33:QB:130:LYS:HE2	33:QB:130:LYS:HA	1.98	0.45
33:QB:132:GLU:O	33:QB:136:ARG:HB3	2.17	0.45
33:QB:49:PHE:C	33:QB:49:PHE:CD1	2.90	0.45
35:QD:106:PHE:CG	35:QD:144:ILE:HD11	2.52	0.45
36:QE:113:VAL:O	36:QE:117:ALA:HB2	2.16	0.45
36:QE:71:ILE:CD1	36:QE:144:GLU:HG3	2.46	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
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
27:R0:42:ILE:HD12	27:R0:42:ILE:HA	1.81	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:2585:U:HO2'	1:RA:2586:U:C5'	2.30	0.45
1:RA:2780:G:H4'	1:RA:2781:A:OP2	2.17	0.45
1:RA:361:G:HO2'	1:RA:362:A:C5'	2.30	0.45
1:RA:434:U:H4'	1:RA:435:C:OP1	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:RD:108:ASP:CG	4:RD:206:ALA:HA	2.36	0.45
4:RD:35:THR:HG1	4:RD:49:GLN:HG2	1.81	0.45
4:RD:90:PHE:N	4:RD:90:PHE:CD1	2.84	0.45
7:RG:18:ILE:HD12	7:RG:42:VAL:HG13	1.99	0.45
7:RG:34:ARG:N	7:RG:34:ARG:HD3	2.32	0.45
9:RI:122:GLU:O	9:RI:122:GLU:HG3	2.16	0.45
1:RA:1009:A:P	10:RJ:39:LYS:HZ1	2.40	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:33:GLU:CB	16:RP:36:LYS:HB2	2.47	0.45
16:RP:25:VAL:HA	16:RP:84:SER:O	2.17	0.45
18:RR:24:LYS:HE2	18:RR:24:LYS:HB3	1.68	0.45
18:RR:37:GLU:O	18:RR:37:GLU:OE1	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
32:XA:1147:C:HO2'	32:XA:1148:U:H6	1.62	0.45
32:XA:1319:A:H5''	50:XS:4:LEU:CD1	2.47	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
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
44:XM:47:LEU:HD23	44:XM:48:SER:C	2.38	0.45
45:XN:76:PHE:CE2	45:XN:95:LEU:HD22	2.51	0.45
31:Y4:16:ILE:CG1	31:Y4:25:VAL:HG22	2.45	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:YA:322:A:H3'	5:YE:163:ASN:CG	2.37	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:77:G:H2'	1:YA:78:U:O4'	2.17	0.45
1:YA:816:C:H2'	1:YA:817:C:H6	1.82	0.45
2:YB:76:G:H2'	2:YB:77:U:H6	1.81	0.45
4:YD:48:ILE:HG22	4:YD:82:PHE:O	2.17	0.45
5:YE:139:LYS:HZ3	5:YE:139:LYS:HB2	1.82	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
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:H	22:YV:40:ILE:HD13	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
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
32:QA:198:G:C6	32:QA:220:G:N3	2.85	0.45
32:QA:40:C:H2'	32:QA:40:C:O2	2.16	0.45
32:QA:858:G:C6	32:QA:869:G:C8	3.05	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
35:QD:75:TYR:CD2	35:QD:203:TYR:HD1	2.34	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
12:RL:57:LEU:CD2	30:R3:53:ASP:HB3	2.46	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2220:U:H2'	1:RA:2221:G:C8	2.50	0.45
1:RA:231:A:N7	1:RA:232:G:C6	2.85	0.45
1:RA:2846:G:OP2	16:RP:51:ASN:HB2	2.17	0.45
1:RA:734:A:C4	1:RA:735:A:C8	3.05	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
10:RJ:31:GLU:O	10:RJ:32:LEU:C	2.54	0.45
13:RM:54:THR:O	13:RM:57:VAL:HG22	2.16	0.45
17:RQ:63:ARG:NH2	17:RQ:95:ALA:C	2.70	0.45
18:RR:21:ARG:HG3	18:RR:95:ASP:OD1	2.17	0.45
23:RW:39:GLN:NE2	23:RW:43:LYS:HB2	2.32	0.45
32:XA:1326:U:N3	32:XA:1327:C:N4	2.65	0.45
32:XA:1309:G:C6	32:XA:1329:A:N1	2.84	0.45
32:XA:1335:U:H5'	32:XA:1336:C:H5'	1.98	0.45
32:XA:140:U:H3'	32:XA:140:U:H6	1.82	0.45
32:XA:275:G:O2'	32:XA:276:G:H8	2.00	0.45
32:XA:623:C:H3'	32:XA:623:C:C6	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
33:XB:199:ILE:HG13	33:XB:199:ILE:O	2.16	0.45
34:XC:122:GLN:HA	34:XC:125:ARG:HG3	1.98	0.45
34:XC:6:PRO:HG3	34:XC:200:TRP:HE1	1.81	0.45
35:XD:32:LYS:O	35:XD:35:GLN:HG2	2.16	0.45
36:XE:69:ASN:ND2	36:XE:69:ASN:O	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
40:XI:4:GLN:H	40:XI:4:GLN:HG2	1.37	0.45
43:XL:115:LYS:O	43:XL:116:TYR:CB	2.64	0.45
43:XL:78:VAL:O	43:XL:102:ASP:HB2	2.17	0.45
32:XA:952:U:H5	44:XM:102:LYS:NZ	2.14	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
48:XQ:45:VAL:CG2	48:XQ:60:ILE:HD12	2.46	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
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: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
1:YA:1341:G:C2	20:YT:84:TYR:HE2	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:219:A:N6	1:YA:220:G:N1	2.65	0.45
1:YA:21:A:H2'	1:YA:22:C:H6	1.80	0.45
1:YA:2361:G:C6	1:YA:2362:C:C4	3.05	0.45
1:YA:249:C:C4'	1:YA:250:G:O5'	2.65	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
1:YA:586:A:O5'	1:YA:586:A:H8	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:84:A:C2	1:YA:98:G:N2	2.79	0.45
3:YC:196:ASN:HB3	3:YC:197:ALA:H	1.66	0.45
3:YC:30:ALA:N	3:YC:31:PRO:CD	2.80	0.45
4:YD:114:LYS:CD	4:YD:116:LYS:NZ	2.75	0.45
4:YD:15:PHE:CD2	16:YP:77:SER:HA	2.52	0.45
4:YD:73:VAL:HG22	4:YD:74:GLU:N	2.31	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
16:YP:19:PHE:HD2	16:YP:19:PHE:N	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
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
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
33:QB:125:PHE:CD2	33:QB:125:PHE:N	2.84	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:QB:121:GLN:HA	33:QB:125:PHE:CE1	2.51	0.44
33:QB:164:ASP:CG	33:QB:203:ASP:OD1	2.56	0.44
33:QB:26:MET:HA	33:QB:26:MET:HE3	1.99	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
38:QG:105:GLU:O	38:QG:105:GLU:HG2	2.17	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
45:QN:50:LEU:O	45:QN:51:PRO:C	2.56	0.44
46:QO:7:THR:O	46:QO:11:VAL:HG23	2.17	0.44
46:QO:86:LEU:C	46:QO:88:ARG:N	2.70	0.44
50:QS:34:SER:C	50:QS:36:ARG:H	2.19	0.44
51:QT:32:LYS:O	51:QT:35:TYR:HD2	1.99	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
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
3:RC:196:ASN:C	3:RC:198:GLU:H	2.19	0.44
4:RD:34:VAL:CG2	4:RD:91:THR:HA	2.47	0.44
5:RE:79:ARG:O	5:RE:80:SER:C	2.56	0.44
6:RF:105:ILE:C	6:RF:108:PRO:HD2	2.37	0.44
6:RF:21:TYR:CE2	6:RF:27:VAL:HA	2.52	0.44
7:RG:10:VAL:HG23	7:RG:10:VAL:O	2.16	0.44
12:RL:80:SER:C	12:RL:81:ASP:O	2.54	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
32:XA:1050:G:O6	32:XA:1209:C:N3	2.50	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:53:A:C2	32:XA:359:G:C6	3.05	0.44
32:XA:637:C:H2'	32:XA:638:U:H6	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:706:A:N7	32:XA:707:U:C5	2.85	0.44
32:XA:575:G:C6	32:XA:821:G:C5	3.06	0.44
32:XA:944:G:H3'	32:XA:945:G:H5'	1.97	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
32:XA:1092:A:H5'	38:XG:3:ARG:NH2	2.32	0.44
32:XA:599:C:H4'	39:XH:121:GLY:HA3	1.99	0.44
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
44:XM:77:LYS:HA	44:XM:80:MET:CE	2.47	0.44
1:YA:2286:G:O6	28:Y1:22:THR:HG21	2.17	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:O5'	1:YA:1571:A:H8	1.99	0.44
1:YA:1789:A:H5''	3:YC:218:THR:O	2.17	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: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
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
2:YB:108:A:O2'	2:YB:109:A:OP1	2.28	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
1:YA:1790:C:O2'	3:YC:207:ALA:HB2	2.16	0.44
3:YC:255:LYS:C	3:YC:256:THR:HG23	2.36	0.44
5:YE:146:VAL:HG12	5:YE:167:VAL:HG23	1.99	0.44
6:YF:177:ARG:NE	6:YF:178:LYS:H	2.13	0.44
6:YF:73:VAL:HG12	6:YF:73:VAL:O	2.17	0.44
8:YH:50:ARG:C	8:YH:52:ALA:H	2.20	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:16:HIS:CE1	14:YN:20:MET:HE2	2.52	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:YO:30:ARG:HH12	15:YO:102:ARG:HB2	1.81	0.44
17:YQ:63:ARG:O	17:YQ:64:ILE:C	2.54	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
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
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
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
38:QG:94:ARG:O	38:QG:95:ARG:C	2.55	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
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
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:1019:U:C2	1:RA:1142:A:N6	2.85	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: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
1:RA:1999:C:H4'	1:RA:2723:C:O2	2.17	0.44
1:RA:464:U:O2'	29:R2:16:HIS:CE1	2.70	0.44
1:RA:715:A:H8	1:RA:715:A:OP1	1.99	0.44
1:RA:866:A:C8	1:RA:914:G:C6	3.05	0.44
1:RA:996:A:C2'	1:RA:997:G:O5'	2.66	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
8:RH:39:ALA:C	8:RH:41:LYS:H	2.20	0.44
13:RM:108:VAL:HG13	13:RM:109:PRO:CD	2.45	0.44
13:RM:117:PHE:O	13:RM:118:LYS:C	2.54	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:RQ:75:TYR:CE2	17:RQ:79:ILE:HG13	2.52	0.44
17:RQ:60:TRP:CZ2	17:RQ:93:ILE:HB	2.52	0.44
19:RS:24:ILE:HD12	19:RS:24:ILE:HA	1.62	0.44
23:RW:8:SER:C	23:RW:9:THR:HG22	2.36	0.44
32:XA:1364:U:O2	32:XA:1364:U:O4'	2.34	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:41:G:H2'	32:XA:42:G:C8	2.51	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
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
33:XB:15:PHE:O	33:XB:39:ILE:HD11	2.17	0.44
35:XD:8:LEU:O	35:XD:9:LYS:C	2.54	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
38:XG:36:SER:HA	40:XI:42:THR:CG2	2.47	0.44
42:XK:74:LYS:HG3	42:XK:78:ILE:HG12	2.00	0.44
44:XM:13:HIS:O	44:XM:14:ALA:C	2.55	0.44
50:XS:39:ILE:O	50:XS:39:ILE:HG13	2.17	0.44
1:YA:1112:G:H2'	1:YA:1113:U:C6	2.53	0.44
1:YA:146:A:C2	1:YA:147:C:C2	3.05	0.44
1:YA:1499:C:C4	1:YA:1500:G:N7	2.85	0.44
1:YA:1485:U:C2	1:YA:1505:A:C2	3.05	0.44
1:YA:1506:U:H2'	1:YA:1507:C:O4'	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:2049:G:H21	4:YD:161:MET:HE2	1.82	0.44
1:YA:2066:C:H5''	56:YA:3533:HOH:O	2.17	0.44
1:YA:228:C:C5'	1:YA:229:C:C5	2.98	0.44
1:YA:2402:U:O2'	1:YA:2403:C:OP1	2.31	0.44
1:YA:1672:A:O4'	1:YA:2553:G:H4'	2.17	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
1:YA:475:C:C2'	1:YA:476:G:C8	2.98	0.44
1:YA:28:A:O2'	1:YA:583:G:H5'	2.18	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:75:G:O2'	1:YA:76:C:O5'	2.34	0.44
1:YA:770:G:H1'	1:YA:1379:U:O4	2.17	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: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
5:YE:72:SER:C	5:YE:74:LYS:H	2.20	0.44
6:YF:134:GLN:HE22	6:YF:136:ILE:H	1.65	0.44
6:YF:65:LEU:HD11	6:YF:87:LYS:NZ	2.31	0.44
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
10:YJ:43:GLU:O	10:YJ:44:TYR:C	2.56	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
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
20:YT:39:THR:C	20:YT:41:ALA:H	2.19	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
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
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:56:U:H2'	32:QA:57:G:H8	1.80	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
33:QB:61:SER:C	33:QB:63:LYS:H	2.20	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
35:QD:121:ALA:HA	35:QD:145:ARG:HG3	2.00	0.44
37:QF:7:VAL:HA	37:QF:60:VAL:O	2.17	0.44
37:QF:6:ILE:HG22	37:QF:7:VAL:N	2.32	0.44
37:QF:90:MET:HB3	37:QF:91:ARG:H	1.49	0.44
38:QG:80:GLY:C	38:QG:82:SER:H	2.21	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:QI:7:GLY:HA3	40:QI:85:ALA:HB2	1.99	0.44
43:QL:87:LYS:NZ	43:QL:87:LYS:HB2	2.32	0.44
44:QM:2:ARG:HG3	44:QM:3:ILE:H	1.82	0.44
47:QP:56:ARG:HA	47:QP:56:ARG:HD2	1.69	0.44
51:QT:2:ASN:O	51:QT:3:ILE:C	2.55	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:2146:C:O4'	1:RA:2146:C:O2	2.34	0.44
1:RA:2553:G:H2'	1:RA:2554:U:O4'	2.17	0.44
1:RA:258:G:H8	1:RA:258:G:O5'	2.00	0.44
1:RA:2792:A:C2	1:RA:2793:C:C2	3.06	0.44
1:RA:497:A:H2'	1:RA:498:G:O4'	2.18	0.44
1:RA:58:G:N2	1:RA:70:G:C4	2.85	0.44
1:RA:1799:G:H8	3:RC:179:GLU:OE1	2.00	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
7:RG:164:ALA:C	7:RG:166:GLU:H	2.20	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
14:RN:92:GLY:O	14:RN:93:GLY:C	2.54	0.44
20:RT:2:ILE:HB	20:RT:3:ARG:NH1	2.32	0.44
23:RW:26:GLY:O	23:RW:27:GLY:C	2.55	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
26:RZ:16:LEU:O	26:RZ:19:HIS:HB2	2.18	0.44
32:XA:1050:G:O2'	32:XA:1051:C:O5'	2.35	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
33:XB:176:ASN:O	33:XB:178:LEU:N	2.50	0.44
33:XB:21:TYR:N	33:XB:21:TYR:CD1	2.84	0.44
34:XC:93:ILE:HG13	34:XC:93:ILE:O	2.17	0.44
35:XD:100:VAL:HG21	35:XD:136:VAL:HG21	1.98	0.44
35:XD:29:THR:C	35:XD:31:CYS:N	2.70	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:1062:G:H2'	1:YA:1070:A:OP1	2.17	0.44
1:YA:1381:G:C2'	1:YA:1382:G:H5''	2.43	0.44
1:YA:1350:C:C2	1:YA:1382:G:N7	2.85	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
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:414:C:H4'	1:YA:1879:C:O2	2.17	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:214:G:H1'	1:YA:217:A:H5'	1.98	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
1:YA:48:G:N2	1:YA:177:G:C2	2.85	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
2:YB:54:G:H21	6:YF:25:MET:CE	2.29	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
4:YD:107:VAL:HA	4:YD:204:LYS:O	2.18	0.44
4:YD:43:ASP:HB3	4:YD:44:GLY:H	1.59	0.44
5:YE:102:ARG:O	5:YE:104:ALA:N	2.50	0.44
6:YF:110:ILE:CD1	6:YF:110:ILE:H	2.31	0.44
8:YH:45:GLU:C	8:YH:47:PHE:H	2.21	0.44
32:XA:1422:G:C5'	11:YK:48:PRO:HB3	2.44	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:103:ARG:HG3	14:YN:104:ALA:N	2.32	0.44
14:YN:45:ARG:HG2	14:YN:95:THR:HG21	1.99	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:YX:3:VAL:O	24:YX:3:VAL:HG23	2.17	0.44
25:YY:22:LEU:CD1	25:YY:23:ARG:HH12	2.31	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: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:45:G:O2'	32:QA:46:G:H5'	2.17	0.44
32:QA:684:U:H1'	42:QK:39:ASN:O	2.17	0.44
33:QB:116:LEU:HD13	33:QB:116:LEU:HA	1.76	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
32:QA:1342:C:O2'	40:QI:125:GLN:HG3	2.17	0.44
44:QM:2:ARG:HA	44:QM:7:ASN:O	2.17	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:238:ASN:O	3:RC:239:PHE:HB2	2.18	0.44
3:RC:90:ILE:HD12	3:RC:90:ILE:HA	1.53	0.44
4:RD:119:ALA:CB	4:RD:165:MET:HB2	2.48	0.44
5:RE:24:ASN:HD22	5:RE:24:ASN:C	2.19	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
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
17:RQ:85:ALA:HA	17:RQ:115:ALA:CB	2.48	0.44
25:RY:8:GLU:O	25:RY:9:LYS:HB3	2.17	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
34:XC:117:ASP:HA	34:XC:120:THR:HB	1.99	0.44
34:XC:59:PRO:HG2	34:XC:62:SER:HB3	1.99	0.44
36:XE:154:ALA:C	36:XE:156:ARG:H	2.20	0.44
38:XG:74:VAL:HG11	38:XG:143:MET:HB2	1.99	0.44
38:XG:79:VAL:O	38:XG:79:VAL:HG23	2.18	0.44
45:XN:96:LYS:HD2	45:XN:96:LYS:H	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:1064:C:C4	1:YA:1065:U:C5	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:YA:1270:C:O5'	1:YA:1270:C:H6	2.00	0.44
1:YA:1417:C:H2'	1:YA:1418:G:N7	2.29	0.44
1:YA:135:U:H3	1:YA:144:A:H61	1.64	0.44
1:YA:1528:A:H2'	1:YA:1529:G:O4'	2.18	0.44
1:YA:1266:G:O2'	1:YA:2012:G:O6	2.21	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
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
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
5:YE:127:GLU:H	5:YE:127:GLU:CD	2.21	0.44
7:YG:85:LYS:HG3	7:YG:163:TYR:HB2	1.98	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
1:YA:1754:A:OP1	16:YP:93:LYS:HE3	2.18	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
20:YT:85:VAL:O	20:YT:86:THR:OG1	2.31	0.44
25:YY:56:LEU:HD22	25:YY:56:LEU:N	2.32	0.44
25:YY:57:LEU:O	25:YY:57:LEU:HD13	2.17	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:70:U:H5	32:QA:94:G:HO2'	1.62	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:QC:125:ARG:O	34:QC:126:ARG:CB	2.66	0.44
36:QE:93:VAL:HG11	36:QE:139:THR:HG22	1.99	0.44
38:QG:14:ASP:OD1	38:QG:17:PHE:HB2	2.16	0.44
32:QA:1250:A:O3'	40:QI:68:GLY:HA2	2.17	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
52:QU:10:PRO:C	52:QU:11:PHE:HD2	2.20	0.44
28:R1:5:ARG:HG3	28:R1:24:LYS:O	2.17	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:226:A:N6	1:RA:227:A:C6	2.85	0.44
1:RA:2298:A:H2'	1:RA:2299:U:O4'	2.18	0.44
1:RA:271:G:C2	1:RA:367:G:N3	2.86	0.44
1:RA:2765:A:N3	1:RA:2765:A:H2'	2.31	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
3:RC:39:SER:C	3:RC:41:GLY:H	2.19	0.44
4:RD:110:THR:O	4:RD:201:LEU:HD12	2.18	0.44
5:RE:127:GLU:N	5:RE:127:GLU:CD	2.71	0.44
5:RE:137:LYS:O	5:RE:141:MET:HG3	2.17	0.44
1:RA:659:G:H21	5:RE:30:GLN:HE22	1.66	0.44
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
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
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
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:130:A:O2'	32:XA:131:A:O5'	2.32	0.44
32:XA:1449:C:C2	32:XA:1455:G:N2	2.85	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:116:ALA:C	38:XG:120:ALA:HB3	2.38	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:63:ARG:C	46:XO:65:LEU:H	2.21	0.44
47:XP:71:VAL:O	47:XP:74:LEU:HB2	2.18	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:O2	1:YA:1534:U:H3'	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:252:G:N2	1:YA:253:C:C2	2.85	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
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
4:YD:166:GLY:O	4:YD:167:ASN:CB	2.65	0.44
4:YD:8:LYS:HE2	4:YD:197:THR:H	1.82	0.44
6:YF:69:ALA:O	6:YF:70:ARG:HB2	2.18	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
32:QA:1305:G:O2'	32:QA:1306:A:H8	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:107:ARG:O	33:QB:110:ILE:HB	2.18	0.44
33:QB:90:PHE:O	33:QB:149:GLY:HA3	2.17	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: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
40:QI:18:VAL:HG22	40:QI:64:ILE:CG2	2.48	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
1:RA:1058:U:O2'	9:RI:117:THR:HG23	2.17	0.44
1:RA:1122:G:N3	1:RA:1122:G:H2'	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:2822:G:OP2	4:RD:115:GLY:O	2.35	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
2:RB:15:A:O2'	2:RB:16:G:H5'	2.17	0.44
5:RE:8:ALA:O	5:RE:9:GLN:C	2.56	0.44
7:RG:96:ALA:CB	7:RG:103:ASN:HB3	2.39	0.44
11:RK:51:LYS:HE3	11:RK:52:VAL:HG12	1.99	0.44
13:RM:2:LEU:O	13:RM:3:GLN:HB3	2.17	0.44
14:RN:30:ARG:HB2	14:RN:30:ARG:HE	1.57	0.44
1:RA:2722:G:H4'	14:RN:4:ARG:HB2	2.00	0.44
14:RN:93:GLY:C	14:RN:95:THR:H	2.21	0.44
15:RO:51:ALA:O	15:RO:74:VAL:HG13	2.17	0.44
17:RQ:69:ARG:CG	17:RQ:69:ARG:HH21	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
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)
8:RH:27:ARG:NH1	24:RX:59:ASP:O	2.51	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: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:762:U:O5'	32:XA:762:U:H6	1.99	0.44
32:XA:82:G:N7	32:XA:89:U:C4	2.85	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
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
39:XH:46:GLU:N	39:XH:63:LYS:HG3	2.32	0.44
41:XJ:18:ILE:HG12	41:XJ:18:ILE:O	2.18	0.44
41:XJ:25:ILE:O	41:XJ:25:ILE:CG2	2.64	0.44
39:XH:82:LEU:HG	43:XL:3:VAL:HG11	2.00	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
32:XA:265:G:O2'	48:XQ:67:SER:HA	2.17	0.44
1:YA:1026:G:O2'	1:YA:1027:A:H5'	2.17	0.44
1:YA:1096:A:H3'	1:YA:1097:U:C5	2.52	0.44
1:YA:1091:G:C2	1:YA:1101:U:N3	2.86	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:182:A:O2'	1:YA:183:C:H5'	2.17	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: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: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
1:YA:478:A:C2	1:YA:480:A:C8	3.06	0.44
1:YA:59:U:H2'	1:YA:60:G:H5'	1.98	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
3:YC:120:ASP:CG	3:YC:121:ALA:N	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:773:U:H4'	3:YC:46:GLY:HA3	1.99	0.44
6:YF:41:GLU:O	6:YF:43:ILE:N	2.51	0.44
1:YA:2746:U:H1'	7:YG:138:GLN:HE21	1.83	0.44
7:YG:91:VAL:O	7:YG:93:TYR:N	2.51	0.44
9:YI:132:ALA:CA	9:YI:137:LEU:HD12	2.48	0.44
9:YI:90:GLY:O	9:YI:92:PRO:HD3	2.18	0.44
11:YK:25:LEU:H	11:YK:25:LEU:HD23	1.82	0.44
11:YK:38:ILE:C	11:YK:39:ILE:HD13	2.38	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
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
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
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
33:QB:103:TRP:C	33:QB:105:THR:N	2.69	0.44
39:QH:46:GLU:O	39:QH:47:ASP:HB3	2.18	0.44
42:QK:109:ILE:HB	52:QU:5:VAL:HG22	1.99	0.44
42:QK:15:VAL:HG13	42:QK:78:ILE:CG2	2.48	0.44
43:QL:120:ARG:C	43:QL:122:LYS:H	2.21	0.44
43:QL:2:THR:O	43:QL:5:GLN:HB2	2.18	0.44
43:QL:62:VAL:HG21	43:QL:94:TYR:HE2	1.78	0.44
48:QQ:59:GLU:HG2	48:QQ:60:ILE:H	1.83	0.44
1:RA:108:G:O2'	1:RA:109:C:H5'	2.18	0.44
1:RA:1486:U:H2'	1:RA:1487:U:H6	1.82	0.44
1:RA:1906:G:C6	1:RA:1929:G:N2	2.86	0.44
1:RA:1786:A:C6	1:RA:1938:A:C2	3.06	0.44
1:RA:2026:U:H2'	1:RA:2027:G:O4'	2.18	0.44
1:RA:2072:C:H6	1:RA:2072:C:H5''	1.83	0.44
1:RA:2352:A:C2	1:RA:2366:A:C2	3.05	0.44
1:RA:2887:A:H3'	1:RA:2888:C:C6	2.52	0.44
1:RA:43:G:C2	1:RA:437:U:C2	3.05	0.44
1:RA:481:G:O2'	1:RA:507:A:N1	2.45	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
3:RC:106:PRO:HB3	3:RC:141:HIS:NE2	2.32	0.44
9:RI:59:THR:HG22	9:RI:61:TYR:CE2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:2780:G:OP2	10:RJ:120:ARG:HD3	2.18	0.44
1:RA:1140:C:OP1	10:RJ:25:LEU:O	2.36	0.44
16:RP:85:VAL:HG13	16:RP:86:LYS:N	2.32	0.44
23:RW:22:VAL:CG1	23:RW:25:PHE:CE2	3.01	0.44
23:RW:22:VAL:O	23:RW:23:LYS:O	2.35	0.44
24:RX:38:TRP:HE3	24:RX:45:PHE:CE2	2.35	0.44
32:XA:1228:C:HO2'	32:XA:1229:A:P	2.40	0.44
32:XA:1270:G:C4	32:XA:1271:A:C8	3.06	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
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:HA	38:XG:77:ARG:HD3	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
30:Y3:28:LEU:O	30:Y3:29:ARG:CB	2.66	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:2303:G:H2'	1:YA:2304:G:H8	1.83	0.44
1:YA:2298:A:C6	1:YA:2321:U:C4	3.05	0.44
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:O5'	1:YA:633:A:H8	1.99	0.44
1:YA:671:C:H1'	1:YA:672:C:H5'	1.99	0.44
1:YA:92:U:C6	1:YA:93:G:C8	3.05	0.44
3:YC:176:ARG:C	3:YC:178:GLY:H	2.21	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
8:YH:53:GLU:C	8:YH:55:GLU:H	2.20	0.44
9:YI:113:ALA:HB2	9:YI:124:MET:HB3	2.00	0.44
1:YA:1080:A:O2'	9:YI:126:ARG:O	2.35	0.44
9:YI:63:ASP:O	9:YI:64:ARG:HB2	2.18	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
1:YA:815:C:OP2	18:YR:85:LYS:HE2	2.18	0.44
20:YT:5:GLU:HA	20:YT:8:LEU:HD12	2.00	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
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:36:C:H2'	32:QA:37:U:O4'	2.18	0.44
32:QA:466:A:H8	32:QA:466:A:H5''	1.83	0.44
32:QA:66:A:H2'	32:QA:67:C:H5'	1.99	0.44
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
36:QE:121:ASN:CG	36:QE:122:VAL:N	2.71	0.44
37:QF:14:GLN:OE1	37:QF:17:GLN:HB2	2.18	0.44
38:QG:35:LYS:O	38:QG:39:GLU:HG2	2.18	0.44
38:QG:7:GLY:O	38:QG:8:GLN:HB3	2.18	0.44
40:QI:110:VAL:O	40:QI:110:VAL:HG23	2.16	0.44
40:QI:42:THR:O	40:QI:43:ALA:HB2	2.17	0.44
40:QI:57:VAL:C	40:QI:58:GLU:HG2	2.37	0.44
41:QJ:53:ILE:HG12	41:QJ:53:ILE:O	2.16	0.44
44:QM:14:ALA:HB1	44:QM:33:LEU:HD21	2.00	0.44
51:QT:11:ILE:HG12	51:QT:12:GLN:N	2.33	0.44
51:QT:8:LYS:HA	51:QT:11:ILE:HG23	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:R2:24:THR:O	29:R2:25:LYS:C	2.55	0.44
31:R4:14:CYS:HA	31:R4:26:ILE:O	2.17	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:2211:A:HO2'	1:RA:2212:A:P	2.41	0.44
1:RA:2802:G:H2'	1:RA:2803:G:O4'	2.18	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
2:RB:37:C:C5	2:RB:38:C:C4	3.06	0.44
7:RG:27:GLY:O	7:RG:28:LYS:C	2.56	0.44
7:RG:36:LEU:HD22	7:RG:36:LEU:N	2.32	0.44
7:RG:83:THR:C	7:RG:84:LYS:CD	2.85	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
21:RU:44:HIS:O	21:RU:45:GLN:C	2.57	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
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
39:XH:41:GLU:C	39:XH:43:GLY:N	2.70	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
28:Y1:5:ARG:HH21	28:Y1:23:THR:HB	1.83	0.44
29:Y2:43:THR:O	29:Y2:44:VAL:C	2.56	0.44
1:YA:1071:G:H8	1:YA:1071:G:OP1	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
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:H2'	1:YA:2021:C:O2	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
1:YA:2:G:H2'	1:YA:3:U:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:90:U:C4	1:YA:91:A:C5	3.06	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
3:YC:149:LYS:CE	3:YC:152:GLN:NE2	2.81	0.44
4:YD:173:GLN:NE2	4:YD:173:GLN:HA	2.33	0.44
4:YD:1:MET:HB3	4:YD:205:PRO:HG3	2.00	0.44
5:YE:112:LEU:HD12	5:YE:118:LEU:HD13	2.00	0.44
5:YE:165:HIS:C	5:YE:167:VAL:H	2.22	0.44
5:YE:58:LYS:N	5:YE:58:LYS:HD3	2.33	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
22:YV:47:VAL:HG12	22:YV:47:VAL:O	2.17	0.44
23:YW:35:ILE:O	23:YW:36:ILE:O	2.36	0.44
25:YY:4:LYS:HZ2	25:YY:4:LYS:HB2	1.79	0.44
32:QA:100:G:C6	32:QA:101:A:C6	3.06	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
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
33:QB:95:TRP:CD1	33:QB:171:ALA:HB2	2.53	0.44
33:QB:95:TRP:CZ2	33:QB:99:MET:HG2	2.53	0.44
36:QE:104:ILE:HG13	36:QE:114:LEU:HD23	2.00	0.44
40:QI:129:ARG:HA	40:QI:129:ARG:HH11	1.83	0.44
40:QI:34:LEU:HD11	40:QI:47:VAL:HG21	2.00	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
50:QS:64:GLU:CD	50:QS:64:GLU:N	2.70	0.44
51:QT:33:LYS:HA	51:QT:33:LYS:HD3	1.64	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:244:A:C2	1:RA:255:A:C4	3.06	0.44
1:RA:2665:A:C2	1:RA:2666:C:C2	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
5:RE:131:THR:CG2	5:RE:160:ALA:HA	2.48	0.44
6:RF:169:LEU:HD12	6:RF:169:LEU:HA	1.81	0.44
6:RF:27:VAL:HG13	6:RF:27:VAL:O	2.18	0.44
6:RF:35:LEU:CD1	6:RF:88:VAL:HB	2.48	0.44
7:RG:166:GLU:C	7:RG:166:GLU:OE2	2.57	0.44
10:RJ:64:VAL:CG1	10:RJ:65:THR:N	2.81	0.44
16:RP:37:LYS:CD	16:RP:37:LYS:N	2.81	0.44
24:RX:39:VAL:HG23	24:RX:40:GLU:N	2.33	0.44
32:XA:1331:G:H2'	32:XA:1332:A:OP2	2.18	0.44
32:XA:150:U:O2'	32:XA:151:A:H5'	2.17	0.44
32:XA:16:A:O4'	36:XE:21:SER:HB3	2.18	0.44
32:XA:174:A:C2'	32:XA:175:C:H5'	2.48	0.44
32:XA:451:A:O4'	32:XA:452:A:C8	2.71	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
33:XB:115:ASP:O	33:XB:119:GLN:CB	2.66	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:32:PHE:CD1	47:XP:32:PHE:C	2.91	0.44
47:XP:44:SER:O	47:XP:46:LYS:HG3	2.18	0.44
31:Y4:16:ILE:HA	31:Y4:24:ARG:O	2.18	0.44
1:YA:83:A:H2	1:YA:103:A:H62	1.65	0.44
1:YA:1071:G:O4'	1:YA:1088:A:O2'	2.35	0.44
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2744:G:C6	1:YA:2761:A:N6	2.86	0.44
1:YA:2847:U:H2'	1:YA:2848:G:C5'	2.44	0.44
1:YA:2834:G:H1'	1:YA:2879:A:N6	2.32	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:64:A:P	20:YT:77:ARG:HG2	2.58	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
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:71:LYS:O	6:YF:72:SER:HB3	2.17	0.44
7:YG:152:ARG:HD2	7:YG:153:PRO:HD2	2.00	0.44
11:YK:60:ALA:CB	11:YK:86:LEU:HA	2.48	0.44
21:YU:27:VAL:O	21:YU:28:LEU:HD23	2.17	0.44
25:YY:28:LEU:CD2	25:YY:42:LEU:HD13	2.48	0.44
25:YY:44:LYS:HZ1	25:YY:48:ARG:NE	2.16	0.44
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
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
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
35:QD:57:LYS:HZ2	35:QD:61:ARG:HD3	1.83	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
43:QL:6:LEU:HD23	48:QQ:33:TYR:CE2	2.53	0.43
46:QO:73:ASP:CG	46:QO:76:ARG:HG3	2.38	0.43
30:R3:44:ARG:N	30:R3:45:PRO:CD	2.79	0.43
31:R4:23:ILE:HB	31:R4:38:GLY:HA3	2.00	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
2:RB:2:G:C2	2:RB:119:A:N3	2.86	0.43
5:RE:190:ALA:C	5:RE:192:ALA:N	2.70	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
8:RH:86:ASP:O	8:RH:87:GLU:C	2.56	0.43
13:RM:136:MET:HE1	22:RV:57:TYR:HD2	1.83	0.43
25:RY:2:LYS:HE3	25:RY:52:ARG:NH2	2.33	0.43
26:RZ:23:LEU:HD21	26:RZ:53:MET:HE1	2.00	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:148:G:N1	32:XA:149:A:C5	2.86	0.43
32:XA:1509:C:H2'	32:XA:1510:C:H6	1.83	0.43
32:XA:158:G:C4	32:XA:164:G:C2	3.05	0.43
32:XA:458:U:H6	32:XA:458:U:OP2	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
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: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
47:XP:48:GLU:CD	47:XP:51:ARG:HB2	2.37	0.43
1:YA:1069:A:C2	1:YA:1072:C:O2'	2.66	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:YA:311:A:H1'	1:YA:332:A:N9	2.33	0.43
1:YA:61:C:C2	1:YA:94:A:C2	3.06	0.43
1:YA:709:U:H2'	1:YA:710:U:H6	1.82	0.43
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:86:G:O2'	1:YA:87:U:H6	2.01	0.43
3:YC:145:MET:HE2	3:YC:181:ARG:HH22	1.82	0.43
3:YC:203:VAL:O	3:YC:205:GLY:N	2.51	0.43
1:YA:1901:A:OP2	3:YC:252:LYS:HE3	2.18	0.43
6:YF:48:LEU:HD23	6:YF:48:LEU:H	1.82	0.43
2:YB:42:C:O2	6:YF:89:THR:N	2.50	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
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:32:GLY:O	22:YV:33:GLY:C	2.56	0.43
23:YW:25:PHE:CD1	23:YW:25:PHE:C	2.92	0.43
26:YZ:5:LYS:HG2	26:YZ:36:GLU:HB2	2.00	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
32:QA:330:C:C5'	32:QA:330:C:H6	2.30	0.43
32:QA:341:C:H2'	32:QA:342:C:H6	1.82	0.43
32:QA:71:A:C5	32:QA:100:G:C5	3.05	0.43
32:QA:751:U:H4'	46:QO:23:SER:HA	1.99	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
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
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:2727:A:C6	1:RA:2728:U:O4	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
2:RB:90:C:C5'	2:RB:90:C:H6	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
8:RH:100:ALA:O	8:RH:101:ASP:C	2.56	0.43
8:RH:52:ALA:C	8:RH:54:LEU:H	2.20	0.43
11:RK:99:ILE:CG2	11:RK:100:PHE:N	2.79	0.43
12:RL:113:ALA:O	12:RL:114:GLY:O	2.35	0.43
12:RL:53:GLY:O	12:RL:54:GLN:O	2.36	0.43
13:RM:46:ILE:HD12	13:RM:47:GLU:N	2.33	0.43
16:RP:103:THR:O	16:RP:104:GLY:O	2.35	0.43
16:RP:111:GLU:CD	16:RP:111:GLU:H	2.20	0.43
22:RV:66:ASP:O	22:RV:66:ASP:CG	2.57	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
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:57:G:C6	32:XA:58:C:N4	2.87	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
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
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
30:Y3:9:ALA:HB1	30:Y3:13:PHE:HD2	1.83	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:229:C:O2'	1:YA:230:G:C4'	2.66	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

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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:56:A:C6	1:YA:57:C:N3	2.86	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
9:YI:35:MET:C	9:YI:37:PHE:N	2.70	0.43
12:YL:101:ILE:HD13	12:YL:101:ILE:HA	1.81	0.43
12:YL:14:LYS:NZ	12:YL:14:LYS:HB3	2.34	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
18:YR:49:ILE:C	18:YR:51:VAL:N	2.71	0.43
21:YU:43:LYS:HG2	21:YU:45:GLN:HG2	2.00	0.43
32:QA:1000:A:C2	32:QA:1041:G:C2	3.07	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
34:QC:70:ALA:HA	34:QC:105:VAL:HB	2.00	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
51:QT:43:LYS:O	51:QT:46:ALA:HB3	2.19	0.43
27:R0:12:ARG:O	27:R0:16:ARG:HG3	2.18	0.43
1:RA:1513:U:C2'	1:RA:1514:G:H5'	2.49	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
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
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
6:RF:39:VAL:C	6:RF:41:GLU:H	2.21	0.43
7:RG:139:VAL:C	7:RG:141:GLY:N	2.71	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
10:RJ:44:TYR:HA	17:RQ:59:LEU:HD21	1.99	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)
32:XA:1126:U:N3	32:XA:1280:A:OP1	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
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:50:A:N6	32:XA:361:G:H4'	2.33	0.43
32:XA:568:G:N2	32:XA:883:C:C2	2.86	0.43
33:XB:176:ASN:C	33:XB:178:LEU:N	2.71	0.43
32:XA:403:C:H5'	35:XD:131:ILE:HD12	2.00	0.43
36:XE:103:GLY:O	36:XE:104:ILE:CG2	2.54	0.43
36:XE:59:ILE:O	36:XE:62:ALA:HB3	2.17	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: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:1912:A:N6	1:YA:1917:U:H3	2.10	0.43
1:YA:2103:C:O2	1:YA:2103:C:H2'	2.17	0.43
1:YA:226:A:N6	1:YA:409:G:N2	2.66	0.43
1:YA:2359:C:H2'	1:YA:2360:G:O4'	2.18	0.43
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
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:N3	1:YA:701:G:H2'	2.31	0.43
1:YA:724:U:O4	1:YA:725:G:N1	2.51	0.43
2:YB:29:A:H3'	2:YB:30:C:H6	1.83	0.43
1:YA:1565:C:C3'	3:YC:17:LYS:HE2	2.22	0.43
5:YE:115:GLN:O	5:YE:117:ARG:N	2.51	0.43
5:YE:73:ILE:HG13	5:YE:78:TRP:NE1	2.33	0.43
6:YF:36:ASN:O	6:YF:37:MET:CB	2.66	0.43
7:YG:104:LEU:N	7:YG:112:VAL:HG23	2.32	0.43
7:YG:36:LEU:HD12	7:YG:36:LEU:N	2.32	0.43
9:YI:79:LEU:HD13	9:YI:100:ILE:HD12	2.01	0.43
1:YA:1008:A:H5''	10:YJ:37:ARG:HH22	1.82	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
13:YM:1:MET:O	13:YM:2:LEU:C	2.55	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:YB:11:C:H5'	23:YW:71:LYS:HD3	2.00	0.43
1:YA:2333:A:P	23:YW:76:ARG:HH12	2.42	0.43
32:QA:135:C:C2'	32:QA:136:C:H5'	2.47	0.43
32:QA:1410:A:H2'	32:QA:1411:C:O5'	2.18	0.43
32:QA:290:C:H2'	32:QA:291:U:H5'	2.00	0.43
32:QA:461:A:C3'	32:QA:461:A:N3	2.81	0.43
32:QA:895:G:H2'	32:QA:896:C:C6	2.53	0.43
33:QB:10:LYS:HE3	33:QB:10:LYS:HB2	1.72	0.43
35:QD:35:GLN:O	35:QD:36:ALA:HB2	2.18	0.43
35:QD:83:GLY:O	35:QD:84:ASN:C	2.57	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
32:QA:877:G:H21	39:QH:1:SER:HB2	1.84	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
46:QO:34:GLN:O	46:QO:35:ILE:C	2.56	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
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:211:C:O2'	1:RA:212:G:H5'	2.18	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
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
3:RC:109:LEU:CD2	3:RC:110:LYS:N	2.79	0.43
3:RC:252:LYS:HZ2	3:RC:252:LYS:HA	1.83	0.43
6:RF:131:VAL:CG2	6:RF:151:LEU:HG	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:RF:64:PRO:HA	6:RF:88:VAL:CG2	2.48	0.43
7:RG:124:CYS:HB3	7:RG:126:THR:O	2.18	0.43
7:RG:82:PHE:HB2	7:RG:134:GLY:O	2.17	0.43
8:RH:97:ARG:HG2	8:RH:111:ALA:HB1	1.99	0.43
9:RI:78:LEU:C	9:RI:79:LEU:HG	2.39	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
15:RO:106:LEU:C	15:RO:106:LEU:HD12	2.38	0.43
17:RQ:114:ALA:O	17:RQ:116:LEU:N	2.50	0.43
22:RV:51:GLN:HG2	22:RV:86:LEU:HD11	2.00	0.43
1:RA:855:G:N2	23:RW:23:LYS:HG2	2.16	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
23:RW:8:SER:O	23:RW:9:THR:CB	2.66	0.43
32:XA:1129:C:C4	32:XA:1139:G:C5	3.06	0.43
32:XA:1158:C:C2'	32:XA:1158:C:O2	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
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:25:C:H2'	32:XA:26:A:C8	2.53	0.43
32:XA:246:A:C4	32:XA:279:A:N6	2.87	0.43
32:XA:49:U:O2	32:XA:362:G:H1'	2.18	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
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
33:XB:182:VAL:O	33:XB:195:VAL:HG13	2.19	0.43
33:XB:216:VAL:C	33:XB:218:ALA:N	2.70	0.43
33:XB:221:ARG:C	33:XB:223:GLY:H	2.20	0.43
32:XA:587:G:H4'	39:XH:3:GLN:HA	2.00	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:26:MET:HE1	51:XT:30:PHE:CD1	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:XT:30:PHE:CE2	51:XT:52:GLU:HG2	2.53	0.43
29:Y2:18:PHE:O	29:Y2:19:ARG:C	2.57	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:511:U:H4'	1:YA:1235:G:H4'	2.00	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:962:G:H4'	1:YA:2496:C:O2'	2.18	0.43
1:YA:2578:G:H4'	1:YA:2578:G:OP2	2.18	0.43
1:YA:303:G:C2	1:YA:304:U:O2	2.71	0.43
1:YA:308:G:O5'	1:YA:308:G:H8	2.02	0.43
1:YA:265:A:C6	1:YA:428:A:O4'	2.71	0.43
1:YA:524:G:H2'	1:YA:525:U:C6	2.53	0.43
1:YA:82:U:C2	1:YA:83:A:C8	3.07	0.43
1:YA:970:U:H1'	1:YA:985:C:OP1	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
1:YA:2635:A:H5''	4:YD:79:LEU:O	2.18	0.43
7:YG:175:LYS:HD3	7:YG:175:LYS:C	2.39	0.43
9:YI:11:GLN:HG3	9:YI:11:GLN:O	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:HA	13:YM:73:ILE:HD13	1.79	0.43
1:YA:1287:A:OP1	14:YN:103:ARG:HD2	2.18	0.43
14:YN:21:PHE:H	14:YN:21:PHE:HD1	1.65	0.43
15:YO:62:LEU:HD13	15:YO:62:LEU:C	2.38	0.43
17:YQ:96:ASP:C	17:YQ:98:ALA:H	2.22	0.43
17:YQ:96:ASP:C	17:YQ:98:ALA:N	2.71	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:855:G:C2'	23:YW:23:LYS:HD3	2.48	0.43
25:YY:22:LEU:HG	25:YY:23:ARG:H	1.83	0.43
32:QA:100:G:C5	32:QA:101:A:C5	3.06	0.43
32:QA:1029:U:N3	32:QA:1033:G:C6	2.87	0.43
32:QA:1120:C:H2'	32:QA:1121:U:C6	2.54	0.43
32:QA:1053:G:N7	32:QA:1199:U:C6	2.86	0.43
32:QA:1514:G:O2'	32:QA:1515:G:H5'	2.18	0.43
32:QA:382:A:H2'	32:QA:383:A:C8	2.54	0.43
32:QA:654:G:H4'	39:QH:2:MET:CE	2.48	0.43
32:QA:809:G:C6	32:QA:810:C:C5	3.06	0.43
35:QD:196:GLU:C	35:QD:198:LEU:N	2.71	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
42:QK:109:ILE:HG22	42:QK:110:THR:N	2.34	0.43
32:QA:1202:U:N3	45:QN:81:ILE:HG21	2.33	0.43
1:RA:1073:A:C2'	1:RA:1074:G:H5''	2.45	0.43
1:RA:141:G:N1	20:RT:2:ILE:HG23	2.34	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: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
1:RA:581:C:H2'	1:RA:582:A:C8	2.53	0.43
1:RA:666:A:O5'	1:RA:666:A:H8	2.00	0.43
1:RA:820:A:H2'	1:RA:821:A:O4'	2.18	0.43
4:RD:143:PRO:HD2	4:RD:144:GLY:H	1.83	0.43
4:RD:89:GLU:HG3	4:RD:94:GLN:OE1	2.18	0.43
10:RJ:40:HIS:HD2	10:RJ:41:LYS:CG	2.27	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
16:RP:3:ILE:C	16:RP:4:ILE:O	2.56	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
26:RZ:29:ARG:C	26:RZ:30:ARG:HG3	2.39	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
32:XA:560:A:C5	36:XE:127:TYR:CE2	3.07	0.43
32:XA:16:A:N1	32:XA:919:A:H2	2.17	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:XD:24:VAL:HG23	35:XD:25:ARG:N	2.33	0.43
37:XF:97:THR:C	37:XF:98:GLU:HG3	2.38	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
32:XA:1114:C:O2'	45:XN:99:SER:HB2	2.17	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:1129:A:HO2'	1:YA:1130:U:P	2.41	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:C5'	1:YA:1606:C:O2	2.58	0.43
1:YA:2022:U:O2'	1:YA:2617:U:H5'	2.18	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: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
3:YC:130:PRO:HG2	3:YC:133:ASN:ND2	2.34	0.43
1:YA:2052:A:OP1	4:YD:146:ILE:HG12	2.19	0.43
4:YD:184:ARG:O	4:YD:186:LEU:HD13	2.18	0.43
6:YF:93:GLU:C	6:YF:95:MET:H	2.22	0.43
7:YG:152:ARG:HD2	7:YG:153:PRO:CD	2.48	0.43
7:YG:58:ALA:O	7:YG:59:ASP:C	2.57	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
32:QA:933:G:OP2	38:QG:2:ARG:HB3	2.19	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
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
1:RA:275:C:H3'	1:RA:276:U:H5''	2.00	0.43
54:RA:3135:EM1:H24A	54:RA:3135:EM1:H30	1.63	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
3:RC:106:PRO:HA	3:RC:141:HIS:CE1	2.54	0.43
1:RA:1566:A:P	3:RC:17:LYS:HZ1	2.41	0.43
3:RC:35:LYS:NZ	3:RC:37:SER:HB2	2.34	0.43
5:RE:109:LEU:HD13	5:RE:109:LEU:HA	1.47	0.43
5:RE:150:THR:CG2	5:RE:153:LEU:HA	2.48	0.43
7:RG:153:PRO:HD3	7:RG:161:VAL:O	2.19	0.43
9:RI:39:LYS:NZ	9:RI:39:LYS:HB2	2.33	0.43
12:RL:78:ARG:HB3	12:RL:113:ALA:HB3	2.01	0.43
13:RM:25:ASP:OD2	13:RM:25:ASP:N	2.52	0.43
13:RM:34:LYS:HE3	13:RM:131:VAL:HG11	1.99	0.43
13:RM:97:GLN:CD	13:RM:97:GLN:H	2.22	0.43
15:RO:16:ARG:C	15:RO:18:LEU:H	2.21	0.43
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:143:A:H2'	32:XA:143:A:N3	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
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
1:YA:2392:A:OP1	30:Y3:30:HIS:ND1	2.51	0.43
1:YA:1091:G:N2	1:YA:1101:U:C2	2.86	0.43
1:YA:1120:G:O2'	1:YA:1121:C:H5'	2.19	0.43
1:YA:142:A:C2	1:YA:143:C:C2	3.06	0.43
1:YA:1551:A:H2'	1:YA:1552:A:O4'	2.19	0.43
1:YA:1435:G:N2	1:YA:1558:C:N4	2.67	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:858:G:C5	1:YA:2268:A:C2	3.07	0.43
1:YA:2347:C:O2'	1:YA:2348:U:C6	2.71	0.43
1:YA:2699:C:H2'	1:YA:2700:A:C8	2.53	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
2:YB:67:G:N3	2:YB:68:C:C6	2.87	0.43
7:YG:15:ASP:HB3	7:YG:26:LYS:H	1.83	0.43
7:YG:24:THR:C	7:YG:25:ILE:HD12	2.39	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
8:YH:103:VAL:C	8:YH:105:ALA:H	2.21	0.43
13:YM:31:PHE:O	13:YM:105:MET:N	2.43	0.43
16:YP:25:VAL:HG23	16:YP:25:VAL:O	2.19	0.43
22:YV:61:LEU:N	22:YV:61:LEU:HD23	2.33	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:1520:C:H2'	32:QA:1521:C:C6	2.53	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
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: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
43:QL:43:LYS:HZ3	43:QL:43:LYS:HB2	1.83	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
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:O5'	1:RA:1916:A:H8	2.01	0.43
1:RA:2727:A:C2'	1:RA:2728:U:H5'	2.48	0.43
1:RA:357:C:O2'	1:RA:358:U:H5'	2.19	0.43
1:RA:65:U:C2	1:RA:66:C:C5	3.06	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
3:RC:20:ASN:C	3:RC:20:ASN:ND2	2.72	0.43
4:RD:182:ALA:O	4:RD:183:GLU:C	2.57	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
1:RA:826:U:HO2'	12:RL:53:GLY:HA3	1.81	0.43
14:RN:65:LEU:HD12	14:RN:65:LEU:C	2.38	0.43
19:RS:57:ASN:O	19:RS:61:ASN:HB2	2.18	0.43
32:XA:954:G:H1	32:XA:1228:C:H42	1.65	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
40:XI:44:ARG:HB3	40:XI:44:ARG:NH1	2.34	0.43
43:XL:86:VAL:C	43:XL:88:ASP:H	2.21	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
1:YA:2886:A:N7	27:Y0:39:ARG:CZ	2.82	0.43
1:YA:1287:A:O2'	1:YA:1288:G:C5'	2.67	0.43
1:YA:768:G:N2	1:YA:1379:U:O2'	2.41	0.43
1:YA:1534:U:H2'	1:YA:1536:C:O2	2.19	0.43
1:YA:1438:U:C5	1:YA:1552:A:N1	2.86	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: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:1760:C:C2'	1:YA:1761:C:H5'	2.48	0.43
1:YA:2157:G:OP2	1:YA:2157:G:N2	2.49	0.43
1:YA:233:A:O2'	1:YA:234:U:O5'	2.37	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: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: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
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:54:G:C6	1:YA:55:G:N7	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: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
4:YD:151:THR:HG22	4:YD:152:PRO:CD	2.49	0.43
8:YH:62:LEU:C	8:YH:64:ALA:N	2.72	0.43
8:YH:94:ILE:HG13	8:YH:98:ASP:CG	2.39	0.43
10:YJ:97:PRO:C	10:YJ:99:ARG:N	2.69	0.43
11:YK:87:LEU:N	11:YK:87:LEU:HD23	2.34	0.43
19:YS:33:LEU:CA	19:YS:36:LEU:HD23	2.47	0.43
26:YZ:37:ARG:HB3	26:YZ:38:GLU:H	1.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
51:QT:53:MET:HE3	51:QT:57:VAL:HG21	2.01	0.43
28:R1:42:VAL:HG12	28:R1:44:GLN:HB2	2.01	0.43
1:RA:125:A:C6	29:R2:10:LEU:HD13	2.54	0.43
1:RA:1071:G:C4	1:RA:1089:A:C6	3.06	0.43
1:RA:443:A:H2	1:RA:1245:G:N3	2.17	0.43
1:RA:1847:A:C2'	1:RA:1847:A:N3	2.81	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:2491:U:H5''	1:RA:2570:G:H5''	1.99	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
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
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:81:ASP:O	12:RL:82:LEU:HB3	2.18	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
32:XA:1028:C:H2'	32:XA:1029:U:H5'	2.01	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:977:A:H1'	32:XA:1223:C:N4	2.31	0.43
35:XD:190:LEU:HD23	35:XD:190:LEU:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
43:XL:46:SER:O	43:XL:47:ALA:HB2	2.19	0.43
46:XO:34:GLN:O	46:XO:38:LEU:HB2	2.19	0.43
46:XO:9:LYS:O	46:XO:13:GLU:OE2	2.36	0.43
50:XS:50:VAL:HG22	50:XS:57:VAL:O	2.19	0.43
32:XA:1525:G:OP1	52:XU:37:TYR:CD1	2.71	0.43
27:Y0:53:VAL:HG23	27:Y0:54:ILE:HG12	2.00	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: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:266:G:C2'	1:YA:267:C:O5'	2.66	0.43
1:YA:2682:A:O2'	1:YA:2683:C:O4'	2.37	0.43
1:YA:2677:G:C4	1:YA:2731:G:N2	2.86	0.43
1:YA:2848:G:H1'	1:YA:2849:U:H5	1.83	0.43
1:YA:289:G:H2'	1:YA:290:U:O4'	2.19	0.43
1:YA:36:G:C6	1:YA:37:C:C4	3.07	0.43
1:YA:391:A:C2	1:YA:411:G:C5	3.07	0.43
3:YC:93:VAL:HG12	3:YC:101:ARG:N	2.34	0.43
3:YC:58:LYS:O	3:YC:59:GLN:HB2	2.19	0.43
6:YF:131:VAL:O	6:YF:132:ARG:HB2	2.18	0.43
7:YG:10:VAL:HG21	7:YG:44:HIS:HE1	1.84	0.43
1:YA:2093:G:C4'	8:YH:24:GLY:HA3	2.49	0.43
8:YH:94:ILE:HD12	8:YH:98:ASP:OD1	2.19	0.43
10:YJ:104:ALA:O	10:YJ:108:MET:HG3	2.18	0.43
15:YO:31:THR:HG23	15:YO:34:HIS:O	2.19	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
10:YJ:3:THR:CG2	17:YQ:60:TRP:HE1	2.29	0.43
18:YR:72:VAL:O	18:YR:72:VAL:HG23	2.18	0.43
32:QA:1025:U:H5''	32:QA:1026:G:H5'	2.00	0.43
32:QA:1145:A:HO2'	32:QA:1146:A:P	2.41	0.43
32:QA:1157:A:C6	32:QA:1180:A:C6	3.07	0.43
32:QA:39:G:H2'	32:QA:40:C:H6	1.84	0.43
32:QA:410:G:C2	32:QA:429:U:C2	3.06	0.43
32:QA:693:G:C2'	32:QA:694:A:H5'	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:69:G:N3	32:QA:69:G:H2'	2.34	0.43
32:QA:687:A:N7	32:QA:701:U:H5	2.16	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
33:QB:199:ILE:O	33:QB:200:PRO:O	2.37	0.43
33:QB:70:GLY:O	33:QB:92:ASN:HA	2.19	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
32:QA:976:G:OP1	45:QN:70:HIS:ND1	2.52	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
1:RA:418:C:H2'	1:RA:419:U:C6	2.53	0.43
1:RA:63:A:O2'	1:RA:64:A:H5'	2.19	0.43
1:RA:62:U:H4'	1:RA:63:A:OP1	2.19	0.43
1:RA:986:C:C2'	1:RA:987:C:H5'	2.49	0.43
3:RC:132:ARG:O	3:RC:132:ARG:HD3	2.19	0.43
4:RD:16:THR:HG23	4:RD:18:ASP:OD1	2.19	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
11:RK:10:VAL:CG2	11:RK:16:ALA:HB1	2.49	0.43
15:RO:67:ASN:O	15:RO:68:LYS:C	2.57	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
20:RT:70:HIS:HB2	20:RT:73:ARG:C	2.39	0.43
22:RV:77:VAL:CG2	22:RV:86:LEU:HD22	2.48	0.43
23:RW:41:GLY:C	23:RW:43:LYS:N	2.68	0.43
26:RZ:20:LYS:O	26:RZ:22:THR:N	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
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:65:A:H2'	32:XA:382:A:H61	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:71:A:C5	32:XA:100:G:C5	3.07	0.43
32:XA:890:G:O2'	32:XA:906:A:N6	2.52	0.43
34:XC:53:ARG:HH11	34:XC:53:ARG:HB2	1.84	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
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
29:Y2:27:GLY:O	29:Y2:30:VAL:HB	2.18	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:153:U:O2'	1:YA:154:U:H5'	2.18	0.43
1:YA:1609:A:N3	1:YA:1616:A:O4'	2.51	0.43
1:YA:1663:G:C2	1:YA:1998:A:C5	3.07	0.43
1:YA:1637:A:H5'	1:YA:1760:C:O2'	2.19	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
1:YA:2448:A:H61	12:YL:36:LYS:HZ1	1.66	0.43
1:YA:42:A:C2	1:YA:438:G:C2	3.07	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:H5''	1:YA:915:C:H6	1.84	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
6:YF:31:GLU:HA	6:YF:95:MET:HE1	2.01	0.43
8:YH:40:THR:O	8:YH:41:LYS:HB2	2.18	0.43
10:YJ:80:HIS:O	10:YJ:81:ILE:C	2.57	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
23:YW:18:LYS:CD	23:YW:19:ARG:HG2	2.47	0.43
25:YY:50:VAL:C	25:YY:52:ARG:H	2.22	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
32:QA:555:U:H2'	32:QA:556:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:723:U:H5''	52:QU:48:LYS:HG2	2.01	0.43
32:QA:80:A:C2	32:QA:81:A:H1'	2.54	0.43
32:QA:844:G:H2'	32:QA:844:G:N3	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
33:QB:32:GLY:HA3	33:QB:39:ILE:CB	2.49	0.43
35:QD:104:MET:HB3	35:QD:106:PHE:CE2	2.53	0.43
35:QD:48:SER:O	35:QD:52:VAL:HG13	2.18	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
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
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: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
1:RA:2071:A:H2'	1:RA:2072:C:C6	2.53	0.43
1:RA:2694:G:C5	1:RA:2695:U:C4	3.07	0.43
1:RA:1638:C:H1'	1:RA:2698:U:O2'	2.18	0.43
1:RA:2755:C:HO2'	1:RA:2756:U:H2'	1.82	0.43
1:RA:418:C:H2'	1:RA:419:U:O4'	2.19	0.43
1:RA:44:A:H2'	1:RA:45:G:O4'	2.18	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
3:RC:90:ILE:HD12	3:RC:103:ILE:O	2.19	0.43
6:RF:172:PHE:O	6:RF:173:ASP:C	2.56	0.43
7:RG:171:LYS:HA	7:RG:171:LYS:HD3	1.78	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
1:RA:2415:G:C4'	12:RL:66:PHE:HB2	2.44	0.43
21:RU:2:ALA:HB3	21:RU:5:ARG:HH21	1.84	0.43
24:RX:76:LYS:O	24:RX:77:TYR:O	2.37	0.43
32:XA:1190:G:HO2'	32:XA:1191:A:P	2.41	0.43
32:XA:1048:G:H21	32:XA:1214:C:H5	1.66	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:XE:104:ILE:N	36:XE:122:VAL:H	2.05	0.43
40:XI:4:GLN:C	40:XI:5:TYR:HD2	2.22	0.43
41:XJ:44:THR:HG22	41:XJ:45:ARG:N	2.28	0.43
42:XK:64:VAL:O	42:XK:68:ARG:HB2	2.18	0.43
42:XK:19:VAL:HG22	42:XK:82:GLU:HG2	2.01	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
32:XA:1320:C:H41	50:XS:36:ARG:HG3	1.84	0.43
52:XU:35:GLU:CA	52:XU:35:GLU:OE2	2.64	0.43
1:YA:126:A:P	29:Y2:19:ARG:HG3	2.59	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:1997:C:P	4:YD:129:THR:HG1	2.41	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
1:YA:447:A:C2	1:YA:454:A:C8	3.07	0.43
1:YA:49:A:C6	1:YA:118:A:C6	3.06	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: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
3:YC:44:ASN:C	3:YC:46:GLY:H	2.21	0.43
5:YE:175:ILE:O	5:YE:175:ILE:HG23	2.18	0.43
7:YG:88:LEU:HG	7:YG:128:THR:O	2.18	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: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
1:YA:250:G:OP1	12:YL:59:ARG:NH1	2.52	0.43
12:YL:85:VAL:O	12:YL:85:VAL:HG22	2.18	0.43
1:YA:871:U:OP1	13:YM:4:PRO:HA	2.19	0.43
14:YN:35:LYS:HD3	14:YN:112:TYR:CZ	2.54	0.43
17:YQ:86:SER:O	17:YQ:87:VAL:C	2.58	0.43
20:YT:37:ASP:O	20:YT:38:ALA:O	2.36	0.43
24:YX:15:ASN:C	24:YX:26:ARG:HG2	2.39	0.43
32:QA:1386:G:H2'	32:QA:1387:G:C8	2.52	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
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: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
33:QB:173:LYS:O	33:QB:176:ASN:HB2	2.19	0.42
34:QC:119:ILE:CG2	34:QC:197:VAL:HG11	2.46	0.42
34:QC:61:LYS:HD2	34:QC:61:LYS:HA	1.89	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
32:QA:263:A:P	51:QT:73:ARG:HH11	2.42	0.42
52:QU:23:GLU:HB3	52:QU:24:LYS:H	1.55	0.42
1:RA:2286:G:O6	28:R1:22:THR:HG21	2.19	0.42
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: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: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
1:RA:262:A:H2'	1:RA:263:G:H5'	2.00	0.42
3:RC:180:MET:HG3	3:RC:268:ARG:HH11	1.83	0.42
3:RC:39:SER:C	3:RC:41:GLY:N	2.72	0.42
3:RC:80:LEU:CD1	3:RC:109:LEU:HG	2.47	0.42
4:RD:137:SER:O	4:RD:138:LEU:HB2	2.18	0.42
4:RD:159:LYS:HZ2	4:RD:160:LYS:H	1.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:RE:196:VAL:O	5:RE:197:GLU:C	2.57	0.42
5:RE:61:ARG:HH11	5:RE:64:GLY:HA3	1.80	0.42
6:RF:56:LEU:HA	6:RF:56:LEU:HD23	1.71	0.42
6:RF:5:ASP:O	6:RF:8:LYS:N	2.52	0.42
7:RG:93:TYR:HD2	7:RG:93:TYR:HA	1.63	0.42
8:RH:16:GLY:C	8:RH:51:ARG:HH21	2.22	0.42
8:RH:96:THR:HG23	8:RH:96:THR:O	2.19	0.42
15:RO:49:VAL:HG21	15:RO:82:ALA:CA	2.41	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
23:RW:50:VAL:HB	23:RW:61:LYS:HZ1	1.84	0.42
32:XA:215:C:H2'	32:XA:216:U:O4'	2.19	0.42
32:XA:198:G:O6	32:XA:220:G:C2	2.72	0.42
32:XA:259:G:O2'	32:XA:260:G:H5'	2.19	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
35:XD:123:MET:CE	35:XD:126:GLY:O	2.67	0.42
32:XA:490:C:OP1	35:XD:145:ARG:NH2	2.52	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:HB2	43:XL:9:LYS:HE2	1.81	0.42
44:XM:19:THR:HA	44:XM:25:GLY:O	2.19	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: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: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:241:A:C8	1:YA:243:U:N3	2.87	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:64:A:O5'	1:YA:64:A:H8	2.02	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
2:YB:100:G:H2'	2:YB:101:A:C8	2.54	0.42
6:YF:90:LEU:HG	6:YF:98:PHE:CE2	2.53	0.42
7:YG:120:ILE:O	7:YG:120:ILE:HG23	2.19	0.42
7:YG:28:LYS:H	7:YG:79:THR:HG22	1.83	0.42
9:YI:109:ALA:HB1	9:YI:125:THR:HA	2.00	0.42
9:YI:44:LYS:O	9:YI:48:ILE:HG12	2.19	0.42
10:YJ:81:ILE:HG22	10:YJ:82:GLY:N	2.34	0.42
10:YJ:75:TYR:CD1	10:YJ:84:ILE:HD11	2.54	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
17:YQ:4:LYS:HZ1	17:YQ:6:GLY:HA3	1.81	0.42
18:YR:4:VAL:HA	18:YR:12:HIS:O	2.18	0.42
24:YX:3:VAL:C	24:YX:5:GLN:N	2.73	0.42
24:YX:76:LYS:HG3	24:YX:77:TYR:N	2.33	0.42
32:QA:1003:G:C6	32:QA:1036:A:N6	2.87	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:11:G:C6	32:QA:12:U:C4	3.07	0.42
32:QA:1346:A:C4	32:QA:1348:U:C4	3.07	0.42
32:QA:937:A:C2	32:QA:1379:G:O6	2.72	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:949:A:C6	32:QA:950:U:C4	3.07	0.42
34:QC:138:GLN:C	34:QC:140:ALA:H	2.21	0.42
35:QD:53:GLN:HE21	35:QD:202:LEU:CA	2.31	0.42
32:QA:1081:A:OP1	36:QE:20:VAL:HG23	2.19	0.42
36:QE:24:VAL:O	36:QE:25:LYS:C	2.57	0.42
37:QF:38:ARG:O	37:QF:39:LEU:HB2	2.19	0.42
37:QF:67:PRO:C	37:QF:69:GLU:H	2.22	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:55:GLY:HA3	48:QQ:82:VAL:CG1	2.46	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:QQ:7:LEU:HD23	48:QQ:24:ILE:HD13	1.97	0.42
51:QT:26:MET:HE1	51:QT:56:ILE:HD11	1.99	0.42
51:QT:56:ILE:CG2	51:QT:57:VAL:N	2.81	0.42
27:R0:22:THR:HG22	27:R0:23:ALA:O	2.19	0.42
1:RA:1070:A:C6	9:RI:9:LYS:O	2.72	0.42
1:RA:1028:A:H61	1:RA:1125:G:H2'	1.80	0.42
1:RA:1187:G:HO2'	1:RA:1188:U:H6	1.65	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:149:A:H2'	1:RA:150:U:C6	2.53	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:243:U:O2'	1:RA:244:A:H5'	2.18	0.42
1:RA:2723:C:O5'	1:RA:2723:C:H6	2.02	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
3:RC:142:ASN:CG	3:RC:142:ASN:O	2.58	0.42
3:RC:209:ALA:HA	3:RC:212:TRP:NE1	2.35	0.42
4:RD:114:LYS:HG3	4:RD:114:LYS:H	1.48	0.42
6:RF:40:GLY:C	6:RF:84:ILE:HD11	2.40	0.42
7:RG:139:VAL:O	7:RG:140:ILE:C	2.57	0.42
1:RA:1061:U:O4'	9:RI:9:LYS:HD2	2.20	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:HG2	17:RQ:53:LYS:H	1.60	0.42
19:RS:28:LYS:O	19:RS:29:VAL:C	2.58	0.42
21:RU:85:ARG:HA	21:RU:91:LYS:O	2.19	0.42
23:RW:36:ILE:O	23:RW:39:GLN:CD	2.57	0.42
24:RX:73:ARG:HG3	24:RX:73:ARG:O	2.19	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:1221:G:C2	32:XA:1222:G:H1'	2.53	0.42
32:XA:142:G:N2	32:XA:143:A:H1'	2.34	0.42
32:XA:1460:C:N4	32:XA:1461:G:C5	2.87	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:XA:451:A:C4'	32:XA:452:A:O5'	2.57	0.42
32:XA:68:G:H5'	32:XA:171:A:C1'	2.49	0.42
32:XA:807:A:H2'	32:XA:808:C:C6	2.54	0.42
35:XD:149:LYS:HZ2	35:XD:176:LYS:NZ	2.17	0.42
35:XD:149:LYS:HZ1	35:XD:176:LYS:HD2	1.85	0.42
37:XF:72:ASP:OD1	37:XF:72:ASP:N	2.52	0.42
38:XG:99:ALA:HB3	38:XG:100:MET:HE2	2.01	0.42
39:XH:11:THR:HG22	39:XH:14:ARG:NH2	2.33	0.42
47:XP:44:SER:H	47:XP:46:LYS:HZ2	1.66	0.42
48:XQ:19:SER:CB	48:XQ:70:LYS:HZ2	2.32	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: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: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
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
3:YC:269:ARG:HA	3:YC:269:ARG:HE	1.84	0.42
3:YC:76:VAL:HG12	3:YC:114:GLN:HG3	2.01	0.42
4:YD:89:GLU:HG2	4:YD:94:GLN:HE22	1.83	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:112:LYS:O	9:YI:113:ALA:HB2	2.18	0.42
9:YI:124:MET:O	9:YI:127:SER:HB2	2.18	0.42
9:YI:22:PRO:HB2	9:YI:23:VAL:H	1.61	0.42
10:YJ:24:THR:O	10:YJ:25:LEU:HB3	2.18	0.42
12:YL:70:LYS:O	12:YL:70:LYS:HG2	2.19	0.42
16:YP:105:LYS:HA	16:YP:108:ARG:NE	2.33	0.42
16:YP:52:ARG:O	16:YP:55:HIS:HB2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:YQ:91:ARG:CZ	18:YR:11:GLN:H	2.32	0.42
17:YQ:64:ILE:HD12	17:YQ:95:ALA:HB3	2.00	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:YA:1338:G:O2'	20:YT:18:GLU:HG3	2.19	0.42
32:QA:1083:U:H5	32:QA:1084:G:C6	2.37	0.42
32:QA:1453:G:HO2'	32:QA:1454:G:P	2.42	0.42
32:QA:251:G:H4'	32:QA:252:U:O5'	2.20	0.42
32:QA:4:U:C2'	32:QA:4:U:O2	2.68	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
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:145:ARG:C	35:QD:147:LYS:N	2.71	0.42
35:QD:87:GLU:O	35:QD:90:LEU:HB2	2.20	0.42
37:QF:15:SER:C	37:QF:16:GLU:HG3	2.39	0.42
37:QF:62:MET:HG3	37:QF:64:VAL:HG23	1.99	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
32:QA:1312:G:N7	50:QS:2:ARG:HA	2.33	0.42
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
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
1:RA:271:G:N1	1:RA:367:G:C4	2.87	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
12:RL:105:ILE:CG2	12:RL:106:GLU:N	2.82	0.42
13:RM:43:ALA:O	13:RM:47:GLU:HB2	2.19	0.42
13:RM:49:ALA:O	13:RM:50:ARG:C	2.57	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
23:RW:50:VAL:C	23:RW:52:CYS:N	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RY:59:GLU:O	25:RY:63:ALA:HB3	2.18	0.42
26:RZ:13:ILE:CG2	26:RZ:14:GLY:N	2.73	0.42
32:XA:1097:C:C2	32:XA:1098:C:C5	3.08	0.42
32:XA:112:G:C2	32:XA:330:C:C4	3.06	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
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
34:XC:18:ASN:HA	34:XC:55:VAL:HG13	2.00	0.42
35:XD:84:ASN:OD1	36:XE:101:GLY:HA3	2.19	0.42
36:XE:36:THR:HG23	36:XE:62:ALA:HB1	2.00	0.42
38:XG:140:VAL:C	38:XG:142:ARG:N	2.72	0.42
39:XH:65:PHE:CD2	39:XH:66:GLN:HG2	2.55	0.42
40:XI:88:GLU:N	40:XI:88:GLU:CD	2.72	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: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: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
1:YA:2615:U:HO2'	1:YA:2616:C:H6	1.66	0.42
1:YA:303:G:N1	1:YA:315:G:C6	2.87	0.42
1:YA:55:G:H2'	1:YA:55:G:N3	2.34	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
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
1:YA:2620:C:O2'	4:YD:162:ALA:O	2.30	0.42
8:YH:32:PRO:C	8:YH:34:GLY:H	2.22	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:YJ:73:VAL:CG2	10:YJ:74:TYR:H	2.23	0.42
13:YM:5:LYS:HD2	13:YM:5:LYS:HA	1.78	0.42
1:YA:1248:G:O2'	17:YQ:2:ARG:HA	2.20	0.42
19:YS:40:ASN:OD1	19:YS:41:LYS:N	2.52	0.42
21:YU:44:HIS:O	21:YU:45:GLN:C	2.57	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:971:G:H1'	32:QA:1365:G:O2'	2.20	0.42
32:QA:1480:A:C2	32:QA:1481:U:C2	3.07	0.42
32:QA:394:G:H2'	32:QA:395:C:H6	1.85	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:78:ARG:HA	38:QG:82:SER:O	2.19	0.42
32:QA:36:C:H4'	43:QL:118:VAL:O	2.20	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
51:QT:72:ALA:O	51:QT:73:ARG:C	2.57	0.42
28:R1:3:GLY:C	28:R1:5:ARG:H	2.22	0.42
1:RA:1001:A:H2'	1:RA:1002:G:O4'	2.19	0.42
1:RA:1073:A:N7	1:RA:1074:G:C8	2.84	0.42
1:RA:1059:G:C2	1:RA:1080:A:N3	2.87	0.42
1:RA:1959:G:C2'	1:RA:1960:A:O5'	2.67	0.42
1:RA:2076:U:O4'	1:RA:2076:U:O2	2.36	0.42
1:RA:2154:A:H2'	1:RA:2155:U:O4'	2.19	0.42
1:RA:2136:G:O6	1:RA:2156:G:C2	2.72	0.42
1:RA:415:A:H61	1:RA:2407:A:N6	2.17	0.42
1:RA:2716:C:C2	1:RA:2717:C:C5	3.08	0.42
1:RA:950:G:C6	1:RA:951:C:C4	3.08	0.42
3:RC:129:LEU:O	3:RC:134:ILE:HD11	2.20	0.42
1:RA:1813:G:C2	3:RC:49:THR:CG2	3.01	0.42
4:RD:158:GLY:O	4:RD:159:LYS:C	2.58	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
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:HG3	20:RT:19:LYS:H	1.63	0.42
1:RA:396:G:H1'	24:RX:28:PHE:HB3	2.01	0.42
25:RY:56:LEU:HA	25:RY:59:GLU:HG2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
33:XB:84:LEU:CG	33:XB:84:LEU:O	2.67	0.42
34:XC:187:GLU:O	34:XC:188:ALA:CB	2.67	0.42
36:XE:114:LEU:C	36:XE:116:VAL:H	2.23	0.42
36:XE:17:VAL:HA	36:XE:33:THR:O	2.19	0.42
42:XK:55:ARG:O	42:XK:56:LYS:C	2.58	0.42
45:XN:20:PHE:CB	45:XN:24:ALA:HB2	2.49	0.42
31:Y4:3:VAL:HB	31:Y4:37:GLN:NE2	2.35	0.42
1:YA:110:G:H2'	1:YA:110:G:N3	2.34	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:121:G:C2	1:YA:131:A:C5	3.07	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:C2'	1:YA:2337:G:N3	2.81	0.42
1:YA:233:A:O2'	1:YA:234:U:C5'	2.67	0.42
1:YA:2844:G:N2	1:YA:2874:C:N3	2.68	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:36:G:C6	1:YA:445:C:N4	2.87	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
3:YC:118:GLY:O	3:YC:119:VAL:C	2.57	0.42
3:YC:14:HIS:O	3:YC:203:VAL:HG11	2.19	0.42
3:YC:44:ASN:C	3:YC:46:GLY:N	2.73	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
6:YF:56:LEU:HD13	6:YF:56:LEU:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:YL:142:ILE:HG22	12:YL:144:GLU:H	1.85	0.42
12:YL:68:SER:O	12:YL:69:ARG:CB	2.68	0.42
14:YN:38:LEU:HB3	14:YN:39:PRO:CD	2.45	0.42
16:YP:86:LYS:HA	16:YP:86:LYS:NZ	2.33	0.42
20:YT:38:ALA:C	20:YT:39:THR:HG22	2.39	0.42
24:YX:24:THR:O	24:YX:25:LYS:C	2.57	0.42
24:YX:69:GLU:HA	24:YX:72:ALA:HB3	2.01	0.42
32:QA:1003:G:H21	32:QA:1005:A:P	2.41	0.42
32:QA:1066:C:C6	32:QA:1066:C:C5'	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
32:QA:49:U:O2'	32:QA:50:A:H2'	2.18	0.42
32:QA:715:A:OP1	32:QA:805:C:O2'	2.32	0.42
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
33:QB:199:ILE:HA	33:QB:200:PRO:HD2	1.87	0.42
33:QB:23:ASN:OD1	33:QB:25:LYS:HB2	2.19	0.42
34:QC:34:SER:O	34:QC:37:LYS:HB3	2.19	0.42
35:QD:97:LEU:HD22	35:QD:117:VAL:HG11	2.01	0.42
36:QE:120:HIS:C	36:QE:121:ASN:HD22	2.23	0.42
37:QF:25:TYR:O	37:QF:29:ILE:HD12	2.20	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
34:QC:36:PHE:HZ	45:QN:89:ARG:HH12	1.68	0.42
50:QS:79:TYR:CE1	50:QS:80:ARG:HB2	2.54	0.42
42:QK:125:LYS:O	52:QU:33:ARG:NH1	2.53	0.42
1:RA:1354:A:C8	1:RA:1355:G:C8	3.08	0.42
1:RA:137:U:HO2'	1:RA:138:U:P	2.27	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: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:2831:G:OP1	4:RD:56:LYS:NZ	2.50	0.42
1:RA:2856:A:N6	1:RA:2857:G:C6	2.88	0.42
1:RA:558:U:OP2	10:RJ:113:PRO:HG2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:N3	1:RA:845:A:H3'	2.34	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:181:ARG:NH2	3:RC:181:ARG:CG	2.80	0.42
3:RC:79:ARG:HG3	3:RC:92:LEU:CB	2.50	0.42
4:RD:190:LYS:O	4:RD:191:GLY:O	2.38	0.42
1:RA:2313:C:H5''	6:RF:87:LYS:HD3	2.01	0.42
9:RI:96:LYS:H	9:RI:96:LYS:CD	2.32	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:116:LEU:O	17:RQ:117:ALA:C	2.58	0.42
1:RA:1252:G:N1	17:RQ:36:GLN:OE1	2.38	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:XA:1097:C:H2'	32:XA:1098:C:C6	2.52	0.42
32:XA:1065:U:H5	32:XA:1190:G:N7	2.16	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
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
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
36:XE:112:ALA:O	36:XE:113:VAL:C	2.56	0.42
40:XI:9:GLY:CA	40:XI:16:ALA:HB3	2.48	0.42
40:XI:63:TYR:C	40:XI:63:TYR:CD1	2.93	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
52:XU:19:LYS:HB2	52:XU:20:ARG:CZ	2.49	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:123:G:O3'	1:YA:1376:C:H4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:YA:28:A:H2'	1:YA:29:U:O4'	2.20	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
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:21:G:C2	2:YB:63:C:C2	3.07	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:175:LEU:HB3	4:YD:176:ASP:H	1.61	0.42
4:YD:32:ASN:HB2	4:YD:50:VAL:HB	2.01	0.42
5:YE:70:SER:HG	5:YE:78:TRP:HH2	1.68	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
12:YL:120:VAL:HG12	12:YL:121:THR:N	2.34	0.42
12:YL:4:ASN:O	12:YL:6:LEU:N	2.51	0.42
2:YB:112:G:N2	15:YO:45:SER:HA	2.18	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:39:ASN:O	21:YU:40:LEU:C	2.57	0.42
24:YX:65:THR:O	24:YX:68:ALA:CB	2.67	0.42
26:YZ:28:LEU:CD2	26:YZ:28:LEU:N	2.82	0.42
32:QA:1046:A:O2'	32:QA:1047:G:H5'	2.20	0.42
32:QA:1441:A:C8	32:QA:1442:G:C8	3.07	0.42
32:QA:502:A:H2'	32:QA:503:C:O4'	2.20	0.42
32:QA:68:G:C5	32:QA:69:G:H1'	2.55	0.42
32:QA:702:A:H3'	32:QA:703:G:C5'	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:QB:105:THR:CG2	33:QB:105:THR:O	2.64	0.42
34:QC:166:TRP:O	34:QC:166:TRP:CE3	2.72	0.42
35:QD:114:ARG:O	35:QD:115:GLN:C	2.58	0.42
36:QE:104:ILE:HD11	36:QE:114:LEU:HB3	2.00	0.42
38:QG:12:LEU:CD2	38:QG:12:LEU:H	2.20	0.42
39:QH:76:ARG:NH1	39:QH:76:ARG:CG	2.74	0.42
32:QA:1370:G:C5'	40:QI:110:VAL:HG21	2.49	0.42
48:QQ:13:SER:O	48:QQ:16:MET:CE	2.68	0.42
51:QT:14:GLU:O	51:QT:15:LYS:C	2.57	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
1:RA:301:G:H1'	1:RA:302:C:C6	2.55	0.42
1:RA:735:A:H3'	1:RA:736:C:H6	1.85	0.42
1:RA:912:C:C2'	1:RA:913:U:H5'	2.49	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
7:RG:84:LYS:O	7:RG:85:LYS:HB2	2.19	0.42
9:RI:79:LEU:O	9:RI:85:ILE:HD12	2.19	0.42
11:RK:18:ARG:HD2	11:RK:18:ARG:HA	1.80	0.42
17:RQ:105:PHE:HA	17:RQ:108:LEU:HD12	2.01	0.42
17:RQ:104:ALA:O	17:RQ:108:LEU:HD12	2.19	0.42
17:RQ:40:LYS:HD3	17:RQ:44:TYR:CE1	2.54	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
25:RY:18:LEU:O	25:RY:22:LEU:HB2	2.20	0.42
32:XA:1001:C:H2'	32:XA:1002:G:O4'	2.20	0.42
32:XA:243:A:C2	32:XA:245:U:C2	3.08	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
33:XB:63:LYS:O	33:XB:63:LYS:HG2	2.20	0.42
34:XC:18:ASN:ND2	34:XC:53:ARG:NH1	2.62	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
39:XH:65:PHE:C	39:XH:67:GLY:H	2.23	0.42
32:XA:1347:G:H8	40:XI:108:ARG:O	2.02	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
44:XM:101:THR:O	44:XM:102:LYS:C	2.57	0.42
27:Y0:33:SER:HB3	27:Y0:34:GLY:H	1.43	0.42
1:YA:2884:U:P	27:Y0:40:HIS:HE2	2.41	0.42
30:Y3:31:ILE:HG22	30:Y3:34:LYS:HG2	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:2014:A:H5'	19:YS:94:ASP:OD2	2.20	0.42
1:YA:2266:A:N6	1:YA:2273:A:OP2	2.49	0.42
1:YA:2672:U:H6	1:YA:2672:U:O5'	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
2:YB:13:G:N2	2:YB:16:G:N3	2.67	0.42
1:YA:2771:C:O2'	4:YD:173:GLN:OE1	2.38	0.42
6:YF:111:ARG:NE	6:YF:111:ARG:N	2.68	0.42
6:YF:33:ILE:HB	6:YF:90:LEU:HD23	2.02	0.42
10:YJ:51:GLY:C	10:YJ:121:LYS:HE3	2.39	0.42
1:YA:7:G:O2'	10:YJ:15:TRP:HZ2	2.03	0.42
1:YA:957:C:OP2	13:YM:75:GLU:HA	2.20	0.42
16:YP:52:ARG:HB3	16:YP:55:HIS:HB2	2.00	0.42
1:YA:995:C:O2'	17:YQ:60:TRP:HZ2	2.01	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
1:YA:2331:G:H4'	23:YW:41:GLY:N	2.34	0.42
26:YZ:13:ILE:C	26:YZ:15:ARG:H	2.23	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YZ:21:ALA:O	26:YZ:24:LEU:N	2.52	0.42
26:YZ:6:ILE:HD12	26:YZ:47:ILE:HD11	2.01	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
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: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
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
33:QB:26:MET:HE3	33:QB:192:PRO:HG3	2.01	0.42
34:QC:119:ILE:HD11	34:QC:133:MET:HA	2.02	0.42
38:QG:76:SER:HA	38:QG:85:GLN:HB2	2.02	0.42
48:QQ:66:LEU:O	48:QQ:67:SER:HB3	2.19	0.42
30:R3:31:ILE:C	30:R3:31:ILE:HD12	2.40	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:160:A:N6	1:RA:161:A:C6	2.88	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:197:A:N6	1:RA:2430:A:H2'	2.35	0.42
1:RA:2571:U:C2'	1:RA:2572:A:OP1	2.67	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:64:A:C6	1:RA:65:U:C4	3.08	0.42
1:RA:720:U:H2'	1:RA:721:A:C8	2.54	0.42
1:RA:2771:C:HO2'	4:RD:173:GLN:HE22	1.66	0.42
4:RD:46:ARG:HG2	4:RD:46:ARG:NH1	2.35	0.42
5:RE:159:LEU:HD12	5:RE:159:LEU:HA	1.73	0.42
6:RF:112:ASP:OD2	6:RF:114:ARG:HG3	2.19	0.42
6:RF:173:ASP:O	6:RF:174:PHE:C	2.58	0.42
6:RF:46:LYS:HD2	6:RF:46:LYS:H	1.84	0.42
7:RG:61:TRP:O	7:RG:62:ALA:C	2.57	0.42
7:RG:93:TYR:O	7:RG:105:SER:O	2.38	0.42
1:RA:558:U:OP1	10:RJ:113:PRO:HD2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:RL:79:LEU:O	12:RL:82:LEU:HD22	2.19	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:XA:1012:A:C6	32:XA:1013:G:N7	2.88	0.42
32:XA:1006:G:N1	32:XA:1024:G:C2	2.88	0.42
32:XA:955:U:H3	32:XA:1225:A:H61	1.67	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:137:U:H1'	32:XA:227:G:N2	2.35	0.42
32:XA:1384:C:C2'	32:XA:1385:G:H5'	2.50	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:53:A:N1	32:XA:359:G:C6	2.88	0.42
33:XB:90:PHE:CD2	33:XB:149:GLY:HA3	2.55	0.42
33:XB:80:LYS:O	33:XB:81:ASP:C	2.58	0.42
35:XD:149:LYS:NZ	35:XD:176:LYS:HD2	2.35	0.42
40:XI:123:ARG:HE	40:XI:123:ARG:HB2	1.72	0.42
40:XI:129:ARG:NE	40:XI:129:ARG:HA	2.34	0.42
40:XI:26:LYS:HB3	40:XI:26:LYS:HE3	1.82	0.42
45:YN:8:ARG:HD2	45:YN:12:ARG:CZ	2.50	0.42
45:YN:9:GLU:HA	45:YN:12:ARG:HD2	2.02	0.42
1:YA:104:A:C8	1:YA:105:C: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:171:U:H2'	1:YA:172:A:C8	2.54	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:2034:U:O2'	1:YA:2035:G:O5'	2.25	0.42
1:YA:191:A:N6	1:YA:203:A:H2'	2.34	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
1:YA:394:C:H2'	1:YA:395:U:C5'	2.49	0.42
1:YA:216:A:N7	1:YA:432:A:C6	2.88	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:YA:1568:G:C2	3:YC:57:HIS:HE1	2.38	0.42
6:YF:131:VAL:CG2	6:YF:151:LEU:H	2.32	0.42
6:YF:151:LEU:HD13	6:YF:151:LEU:N	2.35	0.42
8:YH:119:ASN:HB3	8:YH:120:GLY:H	1.68	0.42
1:YA:637:A:P	12:YL:112:LEU:HD22	2.60	0.42
12:YL:4:ASN:HA	12:YL:4:ASN:HD22	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
18:YR:88:GLY:O	18:YR:89:HIS:CB	2.68	0.42
19:YS:82:MET:HE1	19:YS:84:ARG:NH2	2.35	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
32:QA:1242:G:O2'	32:QA:1243:C:H5'	2.19	0.42
32:QA:1462:C:H2'	32:QA:1463:U:O4'	2.20	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
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
32:QA:1319:A:OP1	50:QS:4:LEU:HD11	2.20	0.42
32:QA:258:G:H5'	51:QT:81:GLN:NE2	2.35	0.42
28:R1:16:THR:HB	28:R1:41:VAL:HG21	2.02	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:2647:U:O2'	1:RA:2648:G:H5'	2.19	0.42
1:RA:545:U:H1'	1:RA:547:A:H5'	2.01	0.42
3:RC:104:LEU:HB3	3:RC:105:ALA:H	1.66	0.42
3:RC:35:LYS:HB3	3:RC:35:LYS:HE3	1.46	0.42
4:RD:193:VAL:HG21	4:RD:201:LEU:HD21	2.02	0.42
4:RD:9:VAL:O	4:RD:197:THR:HG23	2.19	0.42
5:RE:129:PRO:HG3	5:RE:156:ASN:OD1	2.19	0.42
5:RE:174:GLY:O	5:RE:175:ILE:C	2.58	0.42
7:RG:102:ILE:HG22	7:RG:104:LEU:HG	2.01	0.42
7:RG:115:GLN:H	7:RG:115:GLN:NE2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:RG:39:ALA:HB1	7:RG:57:TYR:CB	2.50	0.42
8:RH:67:ALA:C	8:RH:69:ALA:N	2.72	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:24:ARG:CD	23:RW:24:ARG:C	2.85	0.42
23:RW:58:LEU:HD13	23:RW:58:LEU:N	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
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:975:A:H1'	32:XA:1358:U:H1'	2.02	0.42
32:XA:1426:G:C4	32:XA:1475:G:C2	3.07	0.42
32:XA:1408:A:C2	32:XA:1494:G:C2	3.07	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:34:C:H2'	32:XA:35:G:C8	2.55	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
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:76:G:H2'	32:XA:76:G:N3	2.35	0.42
35:XD:149:LYS:HZ2	35:XD:176:LYS:HZ3	1.67	0.42
35:XD:50:TYR:O	35:XD:51:GLY:C	2.57	0.42
35:XD:56:GLU:OE1	35:XD:56:GLU:HA	2.20	0.42
36:XE:152:VAL:O	36:XE:155:LYS:HB2	2.20	0.42
36:XE:66:ALA:O	36:XE:68:ARG:O	2.38	0.42
38:XG:10:LYS:HE3	38:XG:10:LYS:N	2.35	0.42
38:XG:61:PHE:C	38:XG:63:VAL:H	2.23	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:63:TYR:HD1	40:XI:63:TYR:C	2.23	0.42
40:XI:84:ARG:O	40:XI:87:MET:SD	2.78	0.42
43:XL:109:ARG:HD2	43:XL:109:ARG:HA	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:466:A:OP1	29:Y2:34:ARG:NH2	2.53	0.42
1:YA:1069:A:N6	1:YA:1073:A:H5''	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:141:G:HO2'	1:YA:142:A:P	2.43	0.42
1:YA:1545:A:H62	1:YA:1546:G:N2	2.18	0.42
1:YA:1791:A:N6	1:YA:1828:G:O2'	2.52	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: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
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:43:G:N2	1:YA:437:U:C6	2.88	0.42
1:YA:601:C:H2'	1:YA:602:A:O4'	2.20	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
4:YD:119:ALA:CB	4:YD:163:GLY:C	2.88	0.42
6:YF:60:SER:C	6:YF:62:GLN:H	2.23	0.42
8:YH:140:ALA:O	8:YH:141:LYS:HG3	2.19	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:38:ALA:O	20:YT:39:THR:HB	2.20	0.42
20:YT:4:GLU:O	20:YT:8:LEU:HD12	2.20	0.42
21:YU:35:VAL:CG1	21:YU:36:GLU:N	2.77	0.42
21:YU:43:LYS:HE3	21:YU:45:GLN:CD	2.40	0.42
23:YW:51:GLY:HA2	23:YW:59:PHE:HD2	1.84	0.42
23:YW:43:LYS:HD2	23:YW:79:ILE:HD11	2.02	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
32:QA:198:G:C4	32:QA:199:A:N7	2.87	0.42
32:QA:555:U:C2'	32:QA:556:C:O5'	2.67	0.42
32:QA:722:G:N3	32:QA:722:G:H5''	2.35	0.42
36:QE:20:VAL:O	36:QE:30:PHE:HA	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:QG:114:SER:H	38:QG:117:LEU:HD12	1.84	0.42
38:QG:89:GLU:N	38:QG:89:GLU:OE2	2.53	0.42
32:QA:451:A:H5'	47:QP:70:ARG:HH12	1.84	0.42
51:QT:16:ALA:O	51:QT:17:ARG:C	2.58	0.42
51:QT:43:LYS:NZ	51:QT:86:ALA:HA	2.34	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:224:U:H2'	1:RA:225:C:O5'	2.19	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
1:RA:2043:C:C4	1:RA:2777:G:C2	3.08	0.42
1:RA:790:U:HO2'	1:RA:791:C:C5'	2.31	0.42
1:RA:996:A:C4'	17:RQ:91:ARG:HD2	2.50	0.42
1:RA:918:A:H4'	2:RB:97:C:O2	2.20	0.42
3:RC:117:SER:HB3	3:RC:128:THR:HB	2.02	0.42
1:RA:1695:G:H1'	3:RC:7:PRO:O	2.19	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
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
14:RN:10:LEU:O	14:RN:12:ARG:HG3	2.19	0.42
16:RP:31:VAL:CG1	16:RP:31:VAL:O	2.67	0.42
16:RP:50:ARG:HD2	16:RP:51:ASN:N	2.34	0.42
16:RP:30:TRP:CD1	16:RP:81:ASP:HB2	2.55	0.42
17:RQ:94:LEU:HD13	17:RQ:94:LEU:HA	1.81	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: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:106:PHE:CD1	35:XD:158:LEU:HD21	2.54	0.42
35:XD:21:LYS:HE2	35:XD:21:LYS:HB2	1.79	0.42
32:XA:413:G:N1	35:XD:32:LYS:HE3	2.35	0.42
38:XG:4:ARG:HG2	38:XG:4:ARG:NH1	2.35	0.42
41:XJ:40:ILE:HG23	41:XJ:41:PRO:HD2	2.01	0.42
46:XO:55:LEU:O	46:XO:58:MET:N	2.43	0.42
27:Y0:41:HIS:HD1	27:Y0:41:HIS:C	2.22	0.42
29:Y2:30:VAL:C	29:Y2:32:ALA:H	2.22	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1059:G:C6	1:YA:1080:A:N1	2.88	0.42
1:YA:1103:A:O5'	1:YA:1103:A:H8	2.02	0.42
1:YA:973:A:H1'	1:YA:1188:U:C5	2.55	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: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: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
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:58:G:N3	1:YA:73:A:C2	2.87	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:85:G:O2'	1:YA:86:G:H5''	2.19	0.42
1:YA:7:G:H2'	1:YA:8:C: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
1:YA:2574:G:N2	4:YD:147:GLY:O	2.49	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:154:GLU:HA	7:YG:155:PRO:HD2	1.86	0.42
7:YG:94:ARG:HH21	7:YG:111:PRO:HB3	1.83	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
18:YR:54:VAL:O	18:YR:55:ASP:C	2.57	0.42
18:YR:87:GLN:CG	18:YR:88:GLY:H	2.24	0.42
19:YS:5:ALA:O	19:YS:6:LYS:HB3	2.20	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
1:YA:2270:A:H5'	23:YW:18:LYS:HG2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:YW:35:ILE:HB	23:YW:36:ILE:H	1.50	0.42
25:YY:52:ARG:C	25:YY:54:LYS:N	2.73	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
41:QJ:48:ARG:NH2	45:QN:100:TRP:CE2	2.88	0.42
41:QJ:12:ALA:O	41:QJ:70:HIS:HD2	2.03	0.42
49:QR:20:ILE:H	49:QR:20:ILE:HG13	1.61	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
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:1871:A:H8	1:RA:1872:A:C6	2.38	0.42
1:RA:1858:A:C8	1:RA:1885:A:C6	3.08	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
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
2:RB:14:U:OP2	2:RB:70:C:O2'	2.34	0.42
3:RC:255:LYS:C	3:RC:256:THR:HG23	2.40	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:106:LEU:O	7:RG:151:ARG:NH2	2.46	0.42
7:RG:33:THR:N	7:RG:34:ARG:HH11	2.18	0.42
9:RI:126:ARG:HA	9:RI:129:GLU:CD	2.40	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
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
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
32:XA:621:A:H2'	32:XA:622:A:O4'	2.20	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:65:A:C4	32:XA:200:G:O2'	2.73	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
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
35:XD:97:LEU:HB2	35:XD:134:TYR:HB3	2.02	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
31:Y4:3:VAL:O	31:Y4:4:ARG:CB	2.67	0.42
1:YA:1066:U:O2	1:YA:1069:A:OP2	2.37	0.42
1:YA:70:G:H3'	1:YA:113:U:C4'	2.49	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: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:188:G:H2'	1:YA:189:G:H5'	2.01	0.42
1:YA:2214:C:HO2'	1:YA:2215:C:H5'	1.80	0.42
1:YA:2345:G:H4'	1:YA:2346:A:O5'	2.19	0.42
1:YA:270:A:N1	1:YA:369:U:C1'	2.81	0.42
1:YA:2875:C:O2'	1:YA:2876:G:C8	2.41	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:481:G:HO2'	1:YA:507:A:H61	1.68	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
2:YB:16:G:C6	2:YB:69:G:C5	3.08	0.42
5:YE:162:ARG:C	5:YE:164:LEU:N	2.72	0.42
5:YE:195:GLN:O	5:YE:199:MET:N	2.53	0.42
6:YF:28:PRO:CB	6:YF:168:LEU:HD21	2.28	0.42
6:YF:24:VAL:HB	6:YF:25:MET:SD	2.60	0.42
6:YF:1:ALA:CB	6:YF:93:GLU:HA	2.49	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
10:YJ:25:LEU:C	10:YJ:27:ARG:N	2.73	0.42
12:YL:78:ARG:C	12:YL:80:SER:H	2.23	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:YM:135:VAL:HB	13:YM:136:MET:H	1.66	0.42
1:YA:1275:A:N6	14:YN:15:SER:O	2.53	0.42
16:YP:52:ARG:HD3	16:YP:52:ARG:HA	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
13:YM:36:VAL:HG13	22:YV:82:TYR:CD1	2.55	0.42
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
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: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
33:QB:90:PHE:H	33:QB:149:GLY:CA	2.33	0.41
32:QA:619:U:N3	35:QD:130:ASN:HB3	2.24	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
40:QI:18:VAL:HG22	40:QI:64:ILE:HG23	2.01	0.41
40:QI:8:THR:O	40:QI:16:ALA:O	2.38	0.41
45:QN:40:ARG:HH12	45:QN:44:VAL:HG11	1.85	0.41
45:QN:40:ARG:NH1	45:QN:44:VAL:HG11	2.34	0.41
48:QQ:50:ASN:N	48:QQ:50:ASN:OD1	2.52	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:O5'	1:RA:1963:U:H6	2.03	0.41
1:RA:2210:U:H4'	1:RA:2211:A:O5'	2.20	0.41
1:RA:2258:C:H4'	1:RA:2259:U:OP2	2.20	0.41
1:RA:227:A:H4'	1:RA:229:C:C4	2.55	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
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
5:RE:149:ILE:HD12	5:RE:175:ILE:HB	2.02	0.41
8:RH:54:LEU:O	8:RH:57:LYS:N	2.52	0.41
22:RV:10:LYS:HB2	22:RV:10:LYS:NZ	2.35	0.41
22:RV:20:LEU:HD23	22:RV:25:LYS:HB2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RZ:43:ILE:O	26:RZ:47:ILE:HG13	2.20	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:1285:A:H4'	32:XA:1286:U:OP1	2.19	0.41
32:XA:1297:G:O2'	32:XA:1298:U:OP2	2.28	0.41
32:XA:1310:G:O6	32:XA:1311:A:N6	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:83:C:O2	32:XA:87:C:N3	2.53	0.41
32:XA:920:U:N3	32:XA:921:U:C4	2.87	0.41
33:XB:27:LYS:N	33:XB:28:PRO:CD	2.83	0.41
32:XA:1191:A:OP1	34:XC:2:GLN:NE2	2.53	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
46:XO:32:THR:O	46:XO:33:ALA:C	2.57	0.41
46:XO:63:ARG:C	46:XO:65:LEU:N	2.73	0.41
14:YN:98:LEU:HG	27:Y0:42:ILE:CG1	2.50	0.41
1:YA:1048:A:C5	1:YA:1049:C:N4	2.88	0.41
1:YA:1130:U:HO2'	1:YA:1131:G:H8	1.66	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
1:YA:1509:A:C3'	1:YA:1510:G:C5'	2.98	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: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: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: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:2706:A:N6	56:YA:3670:HOH:O	2.49	0.41
1:YA:2743:U:OP1	31:Y4:34:LYS:NZ	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:417:C:O2'	1:YA:418:C:H5'	2.20	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
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:113:SER:HB2	4:YD:168:GLU:OE1	2.20	0.41
4:YD:40:LEU:N	4:YD:40:LEU:HD12	2.35	0.41
6:YF:59:ILE:HG23	6:YF:137:PHE:HE1	1.84	0.41
7:YG:106:LEU:HB2	7:YG:108:PHE:HE1	1.85	0.41
7:YG:157:LYS:C	7:YG:159:LYS:N	2.73	0.41
7:YG:8:VAL:HB	7:YG:49:LEU:HB3	2.02	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
8:YH:9:VAL:HG12	8:YH:10:ALA:N	2.34	0.41
14:YN:37:THR:HB	14:YN:40:LYS:H	1.85	0.41
2:YB:9:G:OP2	15:YO:15:ARG:HD3	2.20	0.41
18:YR:4:VAL:HG22	18:YR:40:MET:HB3	2.02	0.41
1:YA:519:U:H5''	19:YS:25:ARG:NH2	2.34	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:29:THR:CB	20:YT:86:THR:N	2.77	0.41
20:YT:9:LYS:CG	20:YT:9:LYS:O	2.67	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
32:QA:1217:C:H2'	32:QA:1218:C:H6	1.85	0.41
32:QA:132:C:H5''	51:QT:68:LYS:HD2	2.01	0.41
32:QA:1387:G:C6	32:QA:1388:C:N4	2.88	0.41
32:QA:22:G:C5	32:QA:23:C:C5	3.08	0.41
32:QA:292:G:N2	32:QA:309:A:C4	2.88	0.41
32:QA:328:C:C2'	32:QA:328:C:O2	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
33:QB:174:GLU:O	33:QB:178:LEU:HB2	2.20	0.41
33:QB:41:ASN:OD1	33:QB:44:LYS:HB2	2.19	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:13:ILE:C	34:QC:15:LYS:H	2.24	0.41
34:QC:184:ASN:O	34:QC:198:LYS:HA	2.20	0.41
37:QF:64:VAL:HG12	37:QF:65:GLU:N	2.35	0.41
37:QF:9:MET:CE	49:QR:64:LEU:HD22	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:QI:3:ASN:CG	40:QI:4:GLN:N	2.71	0.41
41:QJ:48:ARG:NH2	45:QN:100:TRP:CE3	2.88	0.41
41:QJ:8:ILE:O	41:QJ:73:LEU:O	2.38	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
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
1:RA:1061:U:H2'	1:RA:1061:U:O2	2.20	0.41
1:RA:1062:G:C2'	1:RA:1063:G:C8	3.03	0.41
1:RA:108:G:H2'	1:RA:109:C:H5'	2.01	0.41
1:RA:1006:C:C2	1:RA:1138:G:N2	2.88	0.41
1:RA:1351:C:H2'	1:RA:1352:U:O4'	2.20	0.41
1:RA:163:C:H6	1:RA:163:C:OP1	2.02	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
1:RA:272:A:HO2'	1:RA:273:G:P	2.42	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
3:RC:190:THR:HG22	3:RC:191:LEU:N	2.34	0.41
4:RD:117:GLY:C	4:RD:118:PHE:CD1	2.93	0.41
4:RD:181:ASP:OD2	4:RD:184:ARG:HD2	2.21	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:12:LEU:HD12	8:RH:19:VAL:HG11	2.01	0.41
8:RH:66:ASN:C	8:RH:68:ARG:H	2.23	0.41
8:RH:9:VAL:HG12	8:RH:12:LEU:HG	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:HD22	19:RS:97:LEU:N	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:XA:1003:G:N3	32:XA:1005:A:OP1	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
33:XB:20:ARG:CA	33:XB:20:ARG:NE	2.82	0.41
33:XB:91:VAL:HG11	33:XB:95:TRP:CD1	2.54	0.41
34:XC:111:ASP:O	34:XC:115:VAL:HG12	2.20	0.41
35:XD:166:LYS:HB2	35:XD:166:LYS:HE2	1.84	0.41
35:XD:173:ASP:OD1	35:XD:176:LYS:HB3	2.20	0.41
35:XD:64:TYR:CD2	35:XD:93:LEU:HB3	2.55	0.41
38:XG:148:LYS:HB2	38:XG:148:LYS:HZ3	1.85	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:HG2	46:XO:83:ARG:O	2.20	0.41
48:XQ:45:VAL:HG21	48:XQ:60:ILE:HG21	2.02	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
50:XS:4:LEU:HB3	50:XS:5:LYS:H	1.52	0.41
29:Y2:11:LYS:C	29:Y2:13:ASN:N	2.72	0.41
29:Y2:38:GLY:O	29:Y2:42:LEU:HD13	2.20	0.41
1:YA:2420:C:N4	30:Y3:29:ARG:O	2.43	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:O5'	1:YA:2231:U:H6	2.03	0.41
1:YA:223:A:C6	1:YA:408:G:O4'	2.73	0.41
1:YA:2316:G:C2	1:YA:2317:A:C4	3.08	0.41
1:YA:2419:U:H5	56:YA:3656:HOH:O	2.04	0.41
1:YA:2391:G:H22	1:YA:2427:C:H4'	1.86	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
1:YA:298:G:O5'	1:YA:298:G:H8	2.03	0.41
1:YA:410:G:N2	1:YA:418:C:O2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:YB:23:G:C2	2:YB:61:G:N1	2.89	0.41
4:YD:187:LEU:O	4:YD:188:LEU:HD23	2.20	0.41
4:YD:48:ILE:CG2	4:YD:84:LEU:HD23	2.50	0.41
5:YE:108:ILE:CD1	5:YE:181:ILE:HB	2.28	0.41
7:YG:137:LYS:C	7:YG:139:VAL:H	2.22	0.41
9:YI:118:GLY:O	9:YI:119:ALA:CB	2.68	0.41
9:YI:57:VAL:HG21	9:YI:69:VAL:H	1.86	0.41
10:YJ:119:PHE:C	10:YJ:121:LYS:H	2.23	0.41
11:YK:107:LEU:HD23	11:YK:107:LEU:C	2.40	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
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:1412:C:H2'	32:QA:1413:A:C8	2.55	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:71:A:C2	32:QA:72:A:C5	3.07	0.41
32:QA:781:A:C5	32:QA:802:A:C2	3.08	0.41
34:QC:96:VAL:HB	34:QC:97:PRO:CD	2.45	0.41
35:QD:146:GLU:HB3	35:QD:147:LYS:HZ3	1.83	0.41
35:QD:13:ARG:HG3	35:QD:55:ARG:HE	1.86	0.41
36:QE:105:ILE:HD11	36:QE:123:LEU:CD2	2.47	0.41
39:QH:110:MET:SD	39:QH:115:ALA:HA	2.60	0.41
39:QH:30:LYS:O	39:QH:33:VAL:HB	2.20	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
32:QA:1226:C:H5''	44:QM:101:THR:OG1	2.19	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
48:QQ:16:MET:CE	48:QQ:20:ILE:HD12	2.51	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
27:R0:38:LEU:O	27:R0:39:ARG:C	2.57	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
4:RD:91:THR:C	4:RD:93:GLY:N	2.64	0.41
5:RE:138:LEU:HD23	5:RE:138:LEU:HA	1.85	0.41
6:RF:135:ILE:C	6:RF:137:PHE:N	2.73	0.41
6:RF:4:HIS:O	6:RF:8:LYS:HG2	2.20	0.41
7:RG:15:ASP:CG	7:RG:16:VAL:H	2.22	0.41
7:RG:18:ILE:CD1	7:RG:42:VAL:HG13	2.50	0.41
7:RG:51:PHE:N	7:RG:51:PHE:CD2	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
1:RA:626:A:H2'	12:RL:78:ARG:CZ	2.51	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
19:RS:34:ASP:O	19:RS:35:ILE:C	2.56	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:HD2	24:RX:17:ARG:N	2.36	0.41
24:RX:68:ALA:C	24:RX:69:GLU:O	2.59	0.41
26:RZ:53:MET:O	26:RZ:54:VAL:HG13	2.20	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:35:ASN:O	33:XB:36:LYS:C	2.57	0.41
35:XD:146:GLU:C	35:XD:148:ALA:H	2.23	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:XG:102:TRP:C	38:XG:104:VAL:H	2.23	0.41
38:XG:103:ILE:HG22	38:XG:103:ILE:O	2.20	0.41
38:XG:128:GLU:OE2	38:XG:130:LYS:HB2	2.20	0.41
41:XJ:17:LEU:C	41:XJ:19:ASP:H	2.24	0.41
41:XJ:32:THR:HG23	41:XJ:83:THR:OG1	2.20	0.41
34:XC:22:PHE:CE2	41:XJ:97:ASP:HB2	2.54	0.41
50:XS:59:VAL:HB	50:XS:73:PHE:CD2	2.47	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: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:117:G:C6	1:YA:119:A:C6	3.09	0.41
1:YA:1207:C:N4	1:YA:1208:C:H41	2.18	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:1796:U:H2'	1:YA:1797:G:H8	1.82	0.41
1:YA:1676:A:C2	1:YA:1993:U:H5'	2.55	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:2067:G:C6	1:YA:2444:G:C6	3.08	0.41
1:YA:2448:A:H61	12:YL:36:LYS:CE	2.33	0.41
1:YA:270:A:H2'	1:YA:271:G:OP1	2.20	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
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:C2'	1:YA:532:A:N3	2.83	0.41
1:YA:639:U:H2'	1:YA:640:C:C6	2.47	0.41
1:YA:586:A:O2'	1:YA:671:C:O2	2.36	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
2:YB:100:G:H2'	2:YB:101:A:O4'	2.21	0.41
2:YB:75:G:H22	2:YB:102:G:N2	2.19	0.41
2:YB:16:G:O2'	2:YB:17:C:H5'	2.20	0.41
2:YB:90:C:H2'	2:YB:91:C:O4'	2.21	0.41
3:YC:26:GLY:O	3:YC:27:LYS:C	2.57	0.41
3:YC:65:ASP:OD1	3:YC:67:LYS:O	2.38	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)
4:YD:38:LYS:HB3	4:YD:38:LYS:HZ3	1.85	0.41
4:YD:56:LYS:NZ	4:YD:56:LYS:HB3	2.35	0.41
5:YE:109:LEU:HA	5:YE:112:LEU:HB2	2.03	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
10:YJ:38:GLY:C	10:YJ:40:HIS:H	2.23	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
1:YA:449:A:H4'	17:YQ:2:ARG:HH22	1.84	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: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
26:YZ:32:GLY:C	26:YZ:34:THR:N	2.74	0.41
32:QA:1511:G:C5	32:QA:1512:U:C5	3.08	0.41
32:QA:1521:C:N3	32:QA:1522:U:C5	2.88	0.41
32:QA:1521:C:C2	32:QA:1522:U:C6	3.08	0.41
32:QA:203:G:C2	32:QA:215:C:N3	2.88	0.41
32:QA:137:U:O2	32:QA:227:G:C2	2.73	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
34:QC:110:LEU:HD22	34:QC:110:LEU:N	2.36	0.41
34:QC:34:SER:O	34:QC:38:VAL:HG13	2.21	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
45:QN:3:GLN:O	45:QN:6:LYS:HB3	2.21	0.41
48:QQ:14:ASP:O	48:QQ:16:MET:HG2	2.21	0.41
42:QK:111:ASP:O	52:QU:3:ILE:HG23	2.20	0.41
30:R3:21:PHE:HB2	30:R3:49:VAL:HG13	1.99	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:136:G:C6	1:RA:142:A:N6	2.89	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:RA:374:A:H2'	1:RA:375:G:O4'	2.20	0.41
1:RA:548:G:H3'	1:RA:548:G:H8	1.85	0.41
1:RA:907:G:C2'	1:RA:908:C:H5'	2.51	0.41
3:RC:156:SER:O	3:RC:157:ALA:C	2.59	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:OG1	4:RD:91:THR:O	2.34	0.41
5:RE:48:THR:OG1	5:RE:50:ALA:HB3	2.20	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
16:RP:98:TYR:H	16:RP:98:TYR:HD1	1.64	0.41
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
32:XA:1186:G:N2	32:XA:1187:G:H1'	2.35	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:72:A:H2'	32:XA:73:C:C6	2.55	0.41
32:XA:765:G:C8	32:XA:812:G:N3	2.89	0.41
32:XA:6:G:O2'	32:XA:7:A:P	2.77	0.41
32:XA:83:C:N4	32:XA:85:U:C4	2.88	0.41
40:XI:113:LYS:HG3	40:XI:119:LYS:HA	2.02	0.41
40:XI:14:SER:OG	40:XI:69:GLY:HA3	2.19	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
31:Y4:7:VAL:HG22	31:Y4:25:VAL:HG23	2.03	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:528:A:C2	1:YA:2043:C:C5'	3.04	0.41
1:YA:776:G:N1	1:YA:2072:C:OP1	2.41	0.41
1:YA:184:C:N3	1:YA:213:A:H2	2.18	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
1:YA:26:G:H5'	1:YA:27:G:OP2	2.21	0.41
1:YA:405:U:H3'	1:YA:406:G:H5'	2.02	0.41
1:YA:524:G:H2'	1:YA:525:U:H6	1.86	0.41
1:YA:752:A:O2'	1:YA:753:A:H8	2.02	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
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
1:YA:468:G:H4'	5:YE:57:LYS:CG	2.51	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:116:ARG:HA	10:YJ:116:ARG:HD2	1.66	0.41
10:YJ:57:LEU:O	10:YJ:126:ALA:HA	2.20	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:28:LEU:C	14:YN:30:ARG:H	2.23	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:77:LYS:HE3	17:YQ:116:LEU:HD11	2.01	0.41
17:YQ:51:GLN:O	17:YQ:54:ARG:N	2.49	0.41
18:YR:8:GLY:HA3	18:YR:23:GLU:HG2	2.02	0.41
18:YR:27:ILE:CG2	18:YR:28:ALA:N	2.73	0.41
18:YR:49:ILE:C	18:YR:51:VAL:H	2.24	0.41
19:YS:82:MET:HE1	19:YS:84:ARG:HH22	1.85	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:26:PHE:CD1	22:YV:26:PHE:C	2.93	0.41
22:YV:4:ILE:HD11	22:YV:50:MET:HE2	2.03	0.41
22:YV:57:TYR:N	22:YV:57:TYR:CD1	2.89	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:QA:903:G:H2'	32:QA:904:U:C6	2.56	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
38:QG:144:ALA:C	38:QG:146:ALA:N	2.73	0.41
38:QG:14:ASP:C	38:QG:14:ASP:OD2	2.58	0.41
38:QG:71:THR:C	38:QG:90:VAL:HG12	2.40	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: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
1:RA:1083:U:H3'	1:RA:1083:U:H6	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: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
1:RA:1955:U:C5	1:RA:2557:G:N2	2.89	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
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:25:LEU:HD22	10:RJ:25:LEU:C	2.41	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
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:73:PRO:HG2	23:RW:76:ARG:CB	2.47	0.41
32:XA:1084:G:C8	32:XA:1085:U:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
34:XC:172:VAL:O	34:XC:174:LEU:N	2.54	0.41
35:XD:64:TYR:N	35:XD:64:TYR:CD1	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
41:XJ:17:LEU:C	41:XJ:19:ASP:N	2.74	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
47:XP:78:VAL:C	47:XP:80:LYS:N	2.72	0.41
50:XS:43:MET:HG3	50:XS:43:MET:H	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
28:Y1:52:LYS:NZ	28:Y1:52:LYS:HB2	2.36	0.41
1:YA:112:U:H2'	1:YA:113:U:H5'	2.03	0.41
1:YA:1152:C:H5''	17:YQ:79:ILE:HG23	2.01	0.41
1:YA:117:G:C4'	1:YA:126:A:H2	2.32	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:1842:G:N2	1:YA:1901:A:C4	2.89	0.41
1:YA:2079:U:H2'	1:YA:2080:A:O4'	2.20	0.41
1:YA:223:A:O2'	1:YA:224:U:P	2.79	0.41
1:YA:2387:U:H6	1:YA:2387:U:H3'	1.84	0.41
1:YA:1638:C:H4'	1:YA:2710:C:O2	2.21	0.41
1:YA:2807:U:C5'	1:YA:2808:G:OP2	2.68	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
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
5:YE:139:LYS:HZ2	5:YE:139:LYS:HB2	1.83	0.41
5:YE:157:LEU:HD12	5:YE:157:LEU:O	2.20	0.41
6:YF:130:GLY:HA2	6:YF:151:LEU:O	2.20	0.41
12:YL:79:LEU:HD22	12:YL:115:GLU:O	2.20	0.41
13:YM:102:LEU:HB3	13:YM:103:TYR:CD1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:YD:115:GLY:O	14:YN:3:HIS:CE1	2.72	0.41
1:YA:2880:C:C1'	14:YN:93:GLY:H	2.29	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
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
32:QA:11:G:H2'	32:QA:12:U:H6	1.86	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:51:A:H4'	32:QA:52:C:H5'	2.03	0.41
32:QA:604:G:N1	32:QA:605:U:C2	2.89	0.41
32:QA:895:G:C5	32:QA:896:C:C4	3.08	0.41
32:QA:89:U:HO2'	32:QA:90:C:C5'	2.32	0.41
33:QB:150:ILE:O	33:QB:151:LYS:C	2.58	0.41
34:QC:106:ARG:CG	34:QC:106:ARG:O	2.69	0.41
34:QC:6:PRO:CG	34:QC:183:TYR:CG	3.04	0.41
34:QC:35:ASP:C	34:QC:37:LYS:H	2.24	0.41
37:QF:52:ASN:O	37:QF:53:LYS:CB	2.68	0.41
39:QH:105:THR:CG2	39:QH:120:LEU:HD13	2.47	0.41
39:QH:24:VAL:O	39:QH:59:GLU:HA	2.21	0.41
31:R4:16:ILE:HA	31:R4:24:ARG:O	2.21	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
1:RA:915:C:O2	2:RB:100:G:H4'	2.20	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:98:VAL:C	4:RD:100:LEU:N	2.74	0.41
4:RD:112:THR:O	4:RD:195:GLY:HA2	2.21	0.41
4:RD:133:THR:O	4:RD:134:HIS:C	2.58	0.41
5:RE:147:LEU:O	5:RE:168:ASP:O	2.39	0.41
6:RF:84:ILE:HG23	6:RF:84:ILE:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:RG:31:GLU:HG3	7:RG:31:GLU:O	2.20	0.41
7:RG:31:GLU:O	7:RG:32:LEU:C	2.59	0.41
1:RA:2747:G:HO2'	7:RG:66:THR:HG22	1.85	0.41
13:RM:105:MET:HE3	13:RM:117:PHE:CE1	2.56	0.41
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
11:RK:78:ARG:NH1	16:RP:70:GLU:OE2	2.50	0.41
20:RT:7:LEU:C	20:RT:8:LEU:HD23	2.41	0.41
22:RV:4:ILE:O	22:RV:4:ILE:HG22	2.21	0.41
32:XA:1161:C:O2'	32:XA:1162:C:H5'	2.21	0.41
32:XA:1203:C:O5'	32:XA:1203:C:H6	2.02	0.41
32:XA:1315:U:C4	32:XA:1316:G:C6	3.09	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
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:881:G:C2	32:XA:882:C:C2	3.09	0.41
32:XA:978:A:HO2'	32:XA:979:C:H6	1.66	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
32:XA:796:C:C3'	42:XK:126:ARG:HH21	2.33	0.41
44:XM:12:LYS:HE2	44:XM:16:ILE:HG22	2.02	0.41
44:XM:5:GLY:C	44:XM:6:ILE:HG13	2.41	0.41
46:XO:2:LEU:HA	46:XO:2:LEU:HD12	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
32:XA:1320:C:N4	50:XS:36:ARG:HG3	2.36	0.41
50:XS:38:THR:HA	50:XS:69:LYS:HD3	2.01	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:YA:684:G:OP1	29:Y2:16:HIS:ND1	2.53	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:769:U:O2'	1:YA:1379:U:H6	2.04	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:234:U:O2'	1:YA:235:U:C5'	2.69	0.41
1:YA:198:C:H42	1:YA:248:G:H1	1.67	0.41
1:YA:2727:A:C2	1:YA:2728:U:N3	2.88	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:715:A:C6	1:YA:716:A:C6	3.08	0.41
1:YA:98:G:N3	1:YA:98:G:H2'	2.35	0.41
2:YB:73:A:C4	2:YB:104:A:C2	3.09	0.41
3:YC:169:ALA:O	3:YC:185:ALA:HB3	2.20	0.41
3:YC:66:PHE:CZ	3:YC:155:ARG:NH1	2.89	0.41
7:YG:82:PHE:CE2	7:YG:137:LYS:HB2	2.56	0.41
8:YH:86:ASP:O	8:YH:86:ASP:CG	2.58	0.41
9:YI:104:GLN:HA	9:YI:107:GLU:HB2	2.03	0.41
10:YJ:98:GLU:O	10:YJ:102:GLU:HB2	2.21	0.41
10:YJ:4:PHE:HD1	10:YJ:44:TYR:HB3	1.86	0.41
11:YK:91:SER:O	11:YK:92:GLU:C	2.58	0.41
12:YL:75:ALA:HB2	12:YL:105:ILE:CD1	2.50	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:HG23	16:YP:72:VAL:O	2.19	0.41
16:YP:92:ARG:O	16:YP:93:LYS:HB2	2.20	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:19:HIS:C	24:YX:21:LEU:N	2.73	0.41
24:YX:31:ASN:HB2	24:YX:33:HIS:CE1	2.55	0.41
32:QA:1045:C:O2	32:QA:1045:C:H2'	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
35:QD:21:LYS:O	35:QD:22:SER:C	2.59	0.41
36:QE:14:LEU:HA	36:QE:36:THR:HA	2.03	0.41
37:QF:86:ARG:C	37:QF:86:ARG:HD3	2.41	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
40:QI:113:LYS:HG2	40:QI:114:LYS:N	2.35	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
32:QA:1008:U:OP2	45:QN:23:ARG:NH2	2.54	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
51:QT:53:MET:HE3	51:QT:57:VAL:CG2	2.51	0.41
51:QT:27:MET:HE1	51:QT:57:VAL:HG22	2.01	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:1816:C:HO2'	1:RA:1817:G:P	2.44	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
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:61:C:H5''	1:RA:62:U:OP2	2.21	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
4:RD:178:VAL:N	4:RD:188:LEU:O	2.40	0.41
5:RE:32:VAL:CG2	5:RE:33:VAL:N	2.83	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:148:ARG:O	7:RG:149:ALA:C	2.59	0.41
7:RG:156:TYR:O	7:RG:157:LYS:HG3	2.21	0.41
8:RH:147:VAL:HG12	8:RH:149:GLU:HG3	2.02	0.41
1:RA:2094:A:H5''	8:RH:25:TYR:CD2	2.54	0.41
14:RN:13:ASN:O	14:RN:14:SER:C	2.59	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:37:ASP:C	20:RT:38:ALA:O	2.59	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
25:RY:24:GLU:O	25:RY:25:GLN:C	2.59	0.41
25:RY:26:PHE:HD1	25:RY:27:ASN:ND2	2.19	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
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
35:XD:57:LYS:HE3	35:XD:68:GLU:OE1	2.20	0.41
38:XG:9:ARG:C	38:XG:10:LYS:HG3	2.41	0.41
38:XG:30:MET:HE2	38:XG:30:MET:HB3	1.93	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
42:XK:70:ALA:HB1	42:XK:104:PHE:HZ	1.85	0.41
42:XK:20:ALA:HB3	42:XK:83:VAL:HA	2.02	0.41
42:XK:75:GLU:OE2	42:XK:75:GLU:HA	2.20	0.41
45:YN:53:ASP:HA	45:YN:58:ARG:HD3	2.03	0.41
41:XJ:63:ASP:OD1	45:YN:97:LYS:HE3	2.19	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
52:XU:18:PHE:C	52:XU:19:LYS:HZ3	2.21	0.41
52:XU:28:LEU:O	52:XU:29:ALA:C	2.58	0.41
30:Y3:22:LYS:H	30:Y3:48:MET:HB2	1.86	0.41
1:YA:1317:G:N2	1:YA:1336:A:C2	2.88	0.41
1:YA:1400:U:HO2'	1:YA:1401:G:C4'	2.28	0.41
1:YA:1584:U:C5	1:YA:1585:C:H1'	2.55	0.41
1:YA:163:C:O2'	1:YA:164:C:C5'	2.69	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:1865:U:O2	1:YA:1877:A:N1	2.54	0.41
1:YA:1867:G:O2'	1:YA:1868:C:H5'	2.21	0.41
1:YA:195:A:C5	1:YA:198:C:C5	3.08	0.41
1:YA:1826:G:O2'	1:YA:1971:U:OP2	2.38	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:2087:G:C2	1:YA:2233:U:O2	2.73	0.41
1:YA:2307:G:O2'	1:YA:2308:G:C8	2.69	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
1:YA:319:G:H2'	1:YA:320:A:C5'	2.51	0.41
1:YA:228:C:O2	1:YA:418:C:H4'	2.20	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:92:U:H3'	1:YA:93:G:H8	1.86	0.41
3:YC:131:MET:CG	3:YC:134:ILE:HD11	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:YC:156:SER:O	3:YC:194:VAL:HG11	2.21	0.41
3:YC:99:GLU:HG2	3:YC:100:ARG:N	2.35	0.41
4:YD:168:GLU:HB2	4:YD:169:ARG:H	1.66	0.41
7:YG:154:GLU:C	7:YG:156:TYR:N	2.71	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
13:YM:78:LEU:HA	13:YM:78:LEU:HD22	1.68	0.41
1:YA:2376:A:C2	15:YO:92:PHE:HD2	2.33	0.41
17:YQ:46:TYR:CZ	17:YQ:50:ARG:CZ	3.04	0.41
1:YA:1155:A:H5''	17:YQ:54:ARG:NE	2.35	0.41
17:YQ:89:ILE:O	17:YQ:91:ARG:N	2.53	0.41
1:YA:2355:G:C4'	23:YW:20:LEU:HD22	2.51	0.41
1:YA:2332:C:C4'	23:YW:40:ARG:NH2	2.82	0.41
23:YW:44:PHE:HB3	23:YW:78:PHE:CD1	2.55	0.41
25:YY:3:ALA:C	25:YY:5:GLU:N	2.73	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
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: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:960:U:H1'	32:QA:1222:G:O2'	2.20	0.41
34:QC:113:LYS:HD3	34:QC:184:ASN:ND2	2.36	0.41
35:QD:164:ARG:O	35:QD:166:LYS:N	2.54	0.41
35:QD:39:GLN:OE1	35:QD:40:HIS:CD2	2.74	0.41
36:QE:17:VAL:HG22	36:QE:18:ASN:N	2.35	0.41
38:QG:12:LEU:H	38:QG:12:LEU:HD13	1.85	0.41
39:QH:112:ASP:O	39:QH:113:ARG:C	2.59	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
51:QT:22:SER:OG	51:QT:23:ARG:HD2	2.20	0.41
27:R0:6:LYS:HA	27:R0:7:PRO:HD3	1.93	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:143:C:H2'	1:RA:144:A:C8	2.55	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:2508:G:HO2'	1:RA:2554:U:HO2'	1.69	0.41
1:RA:2758:A:C2'	1:RA:2759:G:H5'	2.51	0.41
1:RA:2820:A:HO2'	1:RA:2821:A:P	2.44	0.41
1:RA:2825:G:H5''	1:RA:2826:A:OP2	2.20	0.41
1:RA:2839:G:C6	1:RA:2840:C:C4	3.09	0.41
1:RA:2830:C:O2	1:RA:2883:A:H2	2.04	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:7:G:H2'	1:RA:8:C:C6	2.56	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
6:RF:134:GLN:C	6:RF:136:ILE:N	2.74	0.41
1:RA:2310:C:C5	6:RF:76:PHE:CZ	3.08	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
16:RP:15:ASP:O	16:RP:16:VAL:C	2.58	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
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
32:XA:243:A:C2	32:XA:245:U:H2'	2.56	0.41
32:XA:247:G:H4'	32:XA:247:G:OP1	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:32:A:H2'	32:XA:32:A:N3	2.35	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:YN:70:HIS:ND1	2.35	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:XE:157:GLY:HA3	39:XH:63:LYS:HZ2	1.85	0.41
37:XF:96:VAL:HG12	37:XF:97:THR:H	1.85	0.41
38:XG:85:GLN:HB3	38:XG:85:GLN:HE21	1.63	0.41
40:XI:37:TYR:H	40:XI:37:TYR:HD2	1.69	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:YN:2:LYS:HD3	45:YN:5:MET:CG	2.51	0.41
45:YN:62:ARG:HB3	45:YN:68:ARG:O	2.21	0.41
45:YN:94:GLY:O	45:YN:95:LEU:C	2.58	0.41
47:XP:1:MET:HE2	47:XP:2:VAL:O	2.20	0.41
47:XP:26:ASN:OD1	47:XP:31:ARG:HB3	2.20	0.41
47:XP:6:LEU:CD2	47:XP:71:VAL:HG12	2.51	0.41
48:XQ:10:ARG:HG2	48:XQ:11:VAL:O	2.21	0.41
39:XH:85:TYR:CD1	48:XQ:36:PHE:HE2	2.38	0.41
52:XU:24:LYS:HA	52:XU:24:LYS:HD2	1.81	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:121:G:N3	1:YA:131:A:N1	2.68	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
1:YA:2093:G:O2'	1:YA:2094:A:O5'	2.39	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
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:95:A:HO2'	25:YY:39:GLN:HA	1.86	0.41
1:YA:99:U:H5'	1:YA:100:U:OP1	2.21	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:164:GLU:O	6:YF:168:LEU:HD12	2.21	0.41
6:YF:2:LYS:HD3	6:YF:2:LYS:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:YH:2:GLN:NE2	8:YH:2:GLN:HA	2.35	0.41
8:YH:31:VAL:CB	8:YH:32:PRO:HD3	2.49	0.41
8:YH:98:ASP:O	8:YH:99:ILE:HG12	2.20	0.41
11:YK:121:GLU:HB3	11:YK:122:VAL:H	1.63	0.41
11:YK:66:LYS:HG2	11:YK:66:LYS:O	2.21	0.41
12:YL:99:ASN:O	12:YL:100:ILE:HB	2.21	0.41
12:YL:92:LEU:HD23	12:YL:92:LEU:H	1.86	0.41
13:YM:36:VAL:HG21	13:YM:129:THR:HG22	2.02	0.41
1:YA:2275:C:O2	13:YM:84:LYS:HD3	2.21	0.41
16:YP:19:PHE:CE1	16:YP:58:PHE:CD2	3.08	0.41
16:YP:19:PHE:HE1	16:YP:58:PHE:CD2	2.39	0.41
20:YT:44:LYS:C	20:YT:48:GLN:HG2	2.40	0.41
25:YY:1:MET:N	25:YY:5:GLU:CG	2.84	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:268:U:H2'	32:QA:269:C:C6	2.55	0.41
32:QA:520:A:N1	32:QA:536:C:H1'	2.35	0.41
32:QA:591:U:O2'	32:QA:592:G:H5'	2.20	0.41
32:QA:761:G:C5	32:QA:762:U:C5	3.09	0.41
32:QA:76:G:C2'	32:QA:76:G:N3	2.81	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:92:U:OP2	32:QA:92:U:H6	2.04	0.41
33:QB:69:VAL:CB	33:QB:162:VAL:HG12	2.47	0.41
35:QD:109:THR:CG2	35:QD:112:GLU:HB2	2.51	0.41
35:QD:33:ILE:O	35:QD:34:GLU:CB	2.67	0.41
36:QE:105:ILE:HD11	36:QE:123:LEU:HB3	2.03	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
32:QA:641:U:H4'	39:QH:106:SER:O	2.20	0.41
41:QJ:52:LEU:HB2	45:QN:80:ARG:HD2	2.01	0.41
42:QK:58:THR:HB	42:QK:59:PRO:HD2	2.02	0.41
32:QA:35:G:N2	43:QL:114:SER:OG	2.53	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
49:QR:61:ALA:O	49:QR:66:LEU:HB2	2.20	0.41
1:RA:1090:A:H2'	1:RA:1091:G:H5'	2.02	0.41
1:RA:111:A:H2'	1:RA:112:U:O4'	2.20	0.41
1:RA:1477:A:N6	1:RA:1514:G:O2'	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:163:C:C6	1:RA:163:C:OP1	2.74	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
1:RA:969:G:H2'	1:RA:970:U:H6	1.85	0.41
4:RD:17:GLU:C	4:RD:19:GLY:H	2.24	0.41
5:RE:35:TYR:CD2	5:RE:177:PRO:HD2	2.56	0.41
6:RF:1:ALA:O	6:RF:3:LEU:N	2.54	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
8:RH:82:SER:C	8:RH:83:LYS:HD3	2.40	0.41
1:RA:2898:U:O2	10:RJ:134:ALA:HB1	2.21	0.41
11:RK:4:GLU:O	11:RK:5:GLN:HB2	2.21	0.41
13:RM:12:MET:HB2	13:RM:72:PRO:HD2	2.03	0.41
17:RQ:20:ALA:HA	17:RQ:23:TYR:CD1	2.55	0.41
17:RQ:79:ILE:O	17:RQ:80:ASN:C	2.58	0.41
17:RQ:91:ARG:HE	18:RR:11:GLN:HB2	1.85	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
32:XA:1292:G:C6	32:XA:1293:C:C4	3.09	0.41
32:XA:1371:G:O3'	40:XI:70:GLY:HA3	2.20	0.41
32:XA:1381:U:C2'	32:XA:1381:U:O2	2.67	0.41
32:XA:1399:C:O2	32:XA:1401:G:C5	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
32:XA:453:G:OP2	32:XA:453:G:H8	2.04	0.41
32:XA:527:G:C2	32:XA:528:C:C6	3.08	0.41
32:XA:624:C:H4'	47:XP:10:GLY:C	2.42	0.41
32:XA:653:U:O2'	32:XA:654:G:H8	2.04	0.41
32:XA:821:G:H2'	32:XA:822:U:H6	1.86	0.41
33:XB:166:ASP:HB2	33:XB:190:SER:HB2	2.02	0.41
34:XC:139:ASN:O	34:XC:140:ALA:HB2	2.20	0.41
34:XC:110:LEU:CD2	34:XC:203:LYS:HD2	2.43	0.41
36:XE:56:PRO:O	36:XE:57:ALA:C	2.59	0.41
36:XE:65:LYS:HA	36:XE:65:LYS:HD3	1.88	0.41
37:XF:81:ASN:O	37:XF:82:ASP:C	2.59	0.41
41:XJ:46:LYS:HA	41:XJ:67:ILE:O	2.21	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
51:XT:4:LYS:HB3	51:XT:4:LYS:HE3	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:XU:25:ALA:O	52:XU:26:GLY:C	2.59	0.41
30:Y3:63:TYR:O	30:Y3:64:ALA:O	2.39	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:1297:C:C2	1:YA:1298:C:C5	3.09	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:1652:A:C2	1:YA:2006:C:N3	2.89	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
1:YA:2284:A:OP1	28:Y1:5:ARG:HG3	2.21	0.41
1:YA:227:A:C5'	1:YA:229:C:H41	2.33	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:746:U:O2'	1:YA:2611:C:O2'	2.21	0.41
1:YA:2697:G:H2'	1:YA:2698:U:O4'	2.21	0.41
1:YA:2889:C:O2'	1:YA:2890:G:H5'	2.21	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:71:A:H5''	1:YA:73:A:N9	2.35	0.41
1:YA:830:G:H4'	1:YA:831:G:OP2	2.20	0.41
3:YC:141:HIS:HB3	3:YC:190:THR:O	2.21	0.41
1:YA:782:A:O2'	3:YC:223:ALA:O	2.36	0.41
5:YE:147:LEU:HD21	5:YE:179:SER:HB2	2.03	0.41
5:YE:45:ALA:O	5:YE:46:GLN:HB2	2.21	0.41
6:YF:101:ARG:HH11	6:YF:138:PRO:CB	2.33	0.41
6:YF:28:PRO:HA	6:YF:158:THR:OG1	2.21	0.41
7:YG:126:THR:HG22	7:YG:127:GLN:H	1.85	0.41
1:YA:2751:G:C5'	7:YG:2:ARG:HH21	2.34	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:119:PHE:C	10:YJ:121:LYS:N	2.74	0.41
10:YJ:127:GLY:O	10:YJ:129:GLU:HG3	2.21	0.41
12:YL:141:LYS:HD2	12:YL:142:ILE:N	2.35	0.41
13:YM:17:ASN:C	13:YM:18:ARG:HG2	2.40	0.41
13:YM:49:ALA:HB3	13:YM:103:TYR:OH	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:YM:82:MET:HE2	13:YM:82:MET:HB3	1.81	0.41
14:YN:79:LEU:O	14:YN:80:PHE:HB2	2.20	0.41
19:YS:39:THR:O	19:YS:40:ASN:CB	2.69	0.41
20:YT:6:ARG:O	20:YT:9:LYS:HD2	2.21	0.41
21:YU:64:ILE:O	21:YU:65:GLN:O	2.39	0.41
26:YZ:16:LEU:HD23	26:YZ:19:HIS:CD2	2.56	0.41
32:QA:1336:C:C4'	32:QA:1337:G:OP2	2.68	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
34:QC:115:VAL:O	34:QC:118:SER:HB3	2.20	0.41
35:QD:102:TYR:C	35:QD:104:MET:H	2.24	0.41
35:QD:2:ARG:NH2	35:QD:114:ARG:HD3	2.36	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
36:QE:14:LEU:HB3	36:QE:36:THR:HG22	2.02	0.41
40:QI:76:GLY:O	40:QI:79:ARG:HB3	2.21	0.41
41:QJ:56:HIS:O	41:QJ:57:VAL:HG12	2.21	0.41
50:QS:3:SER:CB	50:QS:4:LEU:HD12	2.50	0.41
32:QA:960:U:H5	50:QS:77:ARG:HG2	1.86	0.41
51:QT:57:VAL:HG12	51:QT:71:ALA:HB1	2.03	0.41
28:R1:18:HIS:HE1	28:R1:20:TYR:CE2	2.39	0.41
1:RA:1059:G:C5	1:RA:1060:U:C4	3.08	0.41
1:RA:1150:C:C2'	1:RA:1151:A:O5'	2.69	0.41
1:RA:1316:U:H2'	1:RA:1317:G:H8	1.85	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:226:A:N6	1:RA:227:A:N1	2.69	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
54:RA:3135:EM1:H3	54:RA:3135:EM1:O32	2.21	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
3:RC:56:GLY:HA2	3:RC:212:TRP:HA	2.02	0.41
4:RD:49:GLN:C	4:RD:50:VAL:HG13	2.42	0.41
5:RE:172:ALA:HB2	5:RE:192:ALA:HB1	2.02	0.41
1:RA:1256:G:O2'	5:RE:77:ILE:HD11	2.19	0.41
6:RF:129:MET:HG2	6:RF:153:ILE:CD1	2.44	0.41
7:RG:84:LYS:NZ	7:RG:133:LYS:HD3	2.35	0.41
7:RG:83:THR:HA	7:RG:84:LYS:HE2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:RG:86:LEU:HD11	7:RG:132:LEU:HD21	2.03	0.41
10:RJ:141:ASP:O	10:RJ:142:ILE:O	2.39	0.41
10:RJ:38:GLY:C	10:RJ:40:HIS:N	2.74	0.41
12:RL:21:ARG:HD3	12:RL:21:ARG:HA	1.53	0.41
13:RM:41:LEU:CD2	13:RM:125:PRO:HD2	2.51	0.41
18:RR:38:VAL:CG1	18:RR:59:ILE:HG13	2.50	0.41
22:RV:44:HIS:O	22:RV:45:ASP:C	2.59	0.41
32:XA:1233:G:P	40:XI:125:GLN:HE22	2.43	0.41
32:XA:1305:G:H2'	32:XA:1306:A:H8	1.86	0.41
32:XA:1416:G:C2	32:XA:1485:U:O2	2.74	0.41
32:XA:21:G:H2'	32:XA:22:G:C8	2.55	0.41
32:XA:246:A:C2	32:XA:279:A:N6	2.89	0.41
32:XA:28:A:H2'	32:XA:29:U:O4'	2.20	0.41
32:XA:358:U:H2'	32:XA:359:G:H8	1.85	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
33:XB:11:ALA:HA	33:XB:13:VAL:HG22	2.02	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
37:XF:38:ARG:HD2	37:XF:63:ASN:CG	2.41	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
43:XL:14:LYS:HG3	43:XL:14:LYS:O	2.20	0.41
44:XM:19:THR:C	44:XM:21:ILE:H	2.24	0.41
44:XM:68:LEU:C	44:XM:70:ARG:H	2.25	0.41
44:XM:69:ARG:HD2	44:XM:69:ARG:N	2.36	0.41
32:XA:1049:U:H2'	45:XN:2:LYS:HD2	2.03	0.41
45:XN:55:SER:HB3	45:XN:58:ARG:HG2	2.03	0.41
47:XP:69:ASP:O	47:XP:70:ARG:C	2.59	0.41
32:XA:719:C:O2	49:XR:38:ILE:HG13	2.20	0.41
50:XS:35:ARG:HH12	50:XS:52:ASN:HA	1.86	0.41
1:YA:684:G:H5'	29:Y2:16:HIS:CE1	2.56	0.41
1:YA:109:C:N3	1:YA:110:G:C8	2.89	0.41
1:YA:1281:G:C5	1:YA:1282:U:C5	3.08	0.41
1:YA:1525:A:O5'	1:YA:1525:A:H8	2.03	0.41
1:YA:1527:G:C2	1:YA:1546:G:N1	2.89	0.41
1:YA:1606:C:C2	1:YA:1606:C:H5'	2.53	0.41
1:YA:1867:G:H2'	1:YA:1868:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:2331:G:C6	1:YA:2385:C:N4	2.89	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: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:48:G:N3	1:YA:48:G:H2'	2.35	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:719:C:C2'	1:YA:720:U:H5'	2.51	0.41
1:YA:718:A:H3'	1:YA:719:C:C5'	2.51	0.41
1:YA:7:G:H4'	10:YJ:15:TRP:HH2	1.85	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
2:YB:78:A:H2'	2:YB:79:G:C8	2.56	0.41
3:YC:104:LEU:HA	3:YC:104:LEU:HD12	1.75	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
1:YA:2025:C:OP1	4:YD:154:LYS:HE2	2.21	0.41
5:YE:88:ARG:HB3	5:YE:89:PRO:CD	2.49	0.41
7:YG:34:ARG:O	7:YG:35:THR:HG23	2.20	0.41
11:YK:119:ALA:O	11:YK:120:PRO:C	2.59	0.41
12:YL:131:ALA:O	12:YL:135:ILE:HG22	2.20	0.41
17:YQ:101:ASP:OD1	17:YQ:104:ALA:HB2	2.21	0.41
17:YQ:65:ASN:HA	17:YQ:75:TYR:HB2	2.01	0.41
18:YR:93:PHE:CD2	18:YR:93:PHE:C	2.93	0.41
19:YS:68:ASP:O	19:YS:69:LEU:HD12	2.20	0.41
1:YA:57:C:O2'	20:YT:36:LYS:HE2	2.21	0.41
21:YU:44:HIS:HD2	21:YU:57:ILE:HD13	1.86	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:533:A:C2	32:QA:536:C:C5	3.09	0.41
32:QA:515:G:N3	32:QA:537:G:C2	2.90	0.41
34:QC:76:ILE:C	34:QC:82:ASP:HB2	2.41	0.41
36:QE:152:VAL:C	36:QE:156:ARG:HB2	2.39	0.41
36:QE:94:PHE:CE1	36:QE:96:GLN:HG2	2.56	0.41
37:QF:71:ILE:CG2	37:QF:72:ASP:N	2.84	0.41
37:QF:9:MET:HG2	37:QF:86:ARG:O	2.21	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
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
50:QS:12:LEU:HA	50:QS:12:LEU:HD23	1.91	0.41
50:QS:52:ASN:OD1	50:QS:52:ASN:C	2.60	0.41
52:QU:16:ARG:HH11	52:QU:19:LYS:HD2	1.85	0.41
29:R2:42:LEU:N	29:R2:42:LEU:HD22	2.26	0.41
31:R4:25:VAL:HG11	31:R4:35:GLN:HE21	1.86	0.41
1:RA:1103:A:H2'	1:RA:1104:C:C5'	2.51	0.41
1:RA:115:C:O2'	1:RA:127:A:O2'	2.33	0.41
1:RA:1738:G:O2'	1:RA:1739:A:C8	2.74	0.41
1:RA:187:G:C2	1:RA:210:C:C2	3.09	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
1:RA:60:G:H1'	1:RA:61:C:OP1	2.21	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
3:RC:237:ARG:O	3:RC:238:ASN:HB2	2.20	0.41
7:RG:145:ALA:O	7:RG:148:ARG:HB3	2.21	0.41
8:RH:11:ASN:C	8:RH:12:LEU:HD23	2.41	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:124:VAL:O	10:RJ:125:TYR:CB	2.68	0.41
10:RJ:31:GLU:O	10:RJ:35:ARG:HG3	2.21	0.41
11:RK:21:CYS:HA	11:RK:41:ILE:CD1	2.41	0.41
11:RK:72:PRO:CD	11:RK:72:PRO:O	2.69	0.41
14:RN:55:ALA:HA	14:RN:80:PHE:CE1	2.55	0.41
15:RO:84:GLU:C	15:RO:86:GLY:N	2.74	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:RT:24:MET:O	20:RT:28:ASN:O	2.39	0.41
32:XA:1004:A:C2	32:XA:1026:G:C5	3.09	0.41
32:XA:110:C:O2	32:XA:110:C:H2'	2.20	0.41
32:XA:113:G:H1'	32:XA:354:G:H5'	2.03	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
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
34:XC:149:LYS:HD2	34:XC:200:TRP:CE3	2.56	0.41
34:XC:77:GLY:O	34:XC:79:LYS:N	2.54	0.41
38:XG:115:MET:O	38:XG:115:MET:HE3	2.20	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
47:XP:20:VAL:HG21	47:XP:32:PHE:CG	2.56	0.41
32:XA:255:G:O3'	48:XQ:18:LYS:HD2	2.21	0.41
51:XT:51:ASN:N	51:XT:51:ASN:OD1	2.52	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:163:C:O2'	1:YA:164:C:O5'	2.38	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:200:U:C5	1:YA:201:C:C5	3.09	0.41
1:YA:2074:U:H2'	1:YA:2075:U:C6	2.56	0.41
1:YA:2308:G:O6	1:YA:2311:A:N7	2.54	0.41
1:YA:2301:C:C2	1:YA:2316:G:N2	2.89	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:265:A:C6	1:YA:428:A:C8	3.09	0.41
1:YA:2846:G:P	16:YP:51:ASN:CB	3.09	0.41
1:YA:323:C:H2'	5:YE:163:ASN:OD1	2.21	0.41
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:665:U:H2'	1:YA:666:A:C8	2.51	0.41
1:YA:979:A:H2'	1:YA:982:C:H41	1.86	0.41
2:YB:99:A:C6	2:YB:100:G:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:1654:A:O2'	4:YD:118:PHE:HB2	2.21	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
5:YE:76:PRO:HA	5:YE:82:GLY:O	2.21	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
1:YA:633:A:H5''	12:YL:70:LYS:HD3	2.02	0.41
2:YB:38:C:C4'	15:YO:100:HIS:NE2	2.80	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:YA:851:C:O4'	26:YZ:46:MET:HG2	2.20	0.41
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
32:QA:338:A:C6	32:QA:339:C:C4	3.09	0.40
32:QA:686:U:HO2'	32:QA:687:A:H8	1.66	0.40
32:QA:715:A:H8	32:QA:715:A:O5'	2.04	0.40
32:QA:751:U:C5	32:QA:752:G:C5	3.09	0.40
33:QB:224:ARG:O	33:QB:225:SER:HB2	2.20	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
41:QJ:102:LEU:N	41:QJ:102:LEU:HD22	2.35	0.40
41:QJ:49:PHE:CE1	45:QN:76:PHE:HZ	2.39	0.40
47:QP:78:VAL:HG22	47:QP:78:VAL:O	2.22	0.40
49:QR:63:TYR:CD1	49:QR:69:TYR:OH	2.73	0.40
1:RA:592:A:C2	30:R3:3:ILE:HD11	2.57	0.40
1:RA:1011:G:H5''	17:RQ:76:SER:OG	2.21	0.40
1:RA:1074:G:H2'	1:RA:1074:G:N3	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
1:RA:164:C:H6	1:RA:164:C:H5''	1.85	0.40
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
1:RA:521:U:H2'	1:RA:522:A:C8	2.56	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:RA:976:G:C2	1:RA:977:G:C8	3.10	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:67:HIS:O	4:RD:68:PHE:C	2.58	0.40
5:RE:68:ALA:O	5:RE:69:ARG:C	2.58	0.40
7:RG:124:CYS:HA	7:RG:125:PRO:HD2	1.78	0.40
9:RI:101:SER:HB2	9:RI:140:GLU:O	2.21	0.40
9:RI:57:VAL:CG1	9:RI:58:ILE:N	2.84	0.40
11:RK:19:VAL:HG13	11:RK:41:ILE:HG12	2.02	0.40
17:RQ:63:ARG:O	17:RQ:64:ILE:C	2.58	0.40
18:RR:10:LYS:HD2	18:RR:10:LYS:N	2.36	0.40
19:RS:2:GLU:O	19:RS:3:THR:O	2.38	0.40
20:RT:61:LEU:CD1	20:RT:61:LEU:C	2.78	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
13:RM:34:LYS:HD3	22:RV:81:PRO:O	2.21	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:XA:1147:C:O2'	32:XA:1148:U:H6	2.05	0.40
32:XA:961:U:H5	32:XA:1223:C:H1'	1.85	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: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
32:XA:804:U:H5''	32:XA:805:C:OP2	2.21	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
36:XE:147:ASN:HA	36:XE:151:MET:HE3	2.03	0.40
37:XF:30:THR:HG22	37:XF:30:THR:O	2.21	0.40
32:XA:587:G:H4'	39:XH:3:GLN:CA	2.52	0.40
40:XI:39:GLY:HA2	40:XI:44:ARG:CD	2.51	0.40
45:XN:50:LEU:CB	45:XN:51:PRO:HD3	2.51	0.40
41:XJ:65:TYR:HB3	45:XN:95:LEU:HD11	2.03	0.40
47:XP:75:ILE:HA	47:XP:78:VAL:HG23	2.02	0.40
28:Y1:5:ARG:NH2	28:Y1:23:THR:CB	2.83	0.40
29:Y2:24:THR:HG23	29:Y2:24:THR:O	2.21	0.40
1:YA:1095:A:C2	1:YA:1096:A:C5	3.08	0.40
1:YA:118:A:OP2	1:YA:119:A:H2'	2.21	0.40
1:YA:1389:G:C2	1:YA:1399:C:N3	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:14:A:C6	1:YA:526:A:C2	3.10	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
32:XA:1495:U:O2'	1:YA:1919:A:N1	2.44	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:1854:A:O4'	1:YA:2233:U:H4'	2.20	0.40
1:YA:2357:G:C2	1:YA:2361:G:C6	3.09	0.40
1:YA:235:U:C4	1:YA:236:C:C5	3.09	0.40
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
1:YA:26:G:C5'	1:YA:27:G:OP2	2.69	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:38:A:C2	1:YA:442:G:N1	2.89	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
3:YC:52:HIS:HA	3:YC:216:ARG:CB	2.37	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
7:YG:93:TYR:HD2	7:YG:93:TYR:N	1.88	0.40
9:YI:60:VAL:HG22	9:YI:66:PHE:CE2	2.46	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
11:YK:11:ALA:HB2	11:YK:64:ARG:NH1	2.36	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
1:YA:24:G:O2'	19:YS:77:ASP:HB3	2.21	0.40
1:YA:1614:A:N6	19:YS:91:GLY:HA2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:YT:39:THR:HG21	20:YT:42:GLU:OE1	2.21	0.40
21:YU:52:ASN:C	21:YU:54:PRO:HD3	2.41	0.40
25:YY:50:VAL:C	25:YY:52:ARG:N	2.74	0.40
26:YZ:19:HIS:O	26:YZ:20:LYS:C	2.60	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
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:13:U:C4	32:QA:916:U:O4	2.75	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
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:HD22	36:QE:80:LEU:N	2.36	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
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:182:A:H2'	1:RA:183:C:O4'	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:2725:A:O2'	1:RA:2726:A:H2'	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
5:RE:54:GLY:HA3	5:RE:74:LYS:HE2	2.03	0.40
1:RA:2531:A:OP1	7:RG:174:LYS:HE3	2.21	0.40
8:RH:89:LYS:CG	8:RH:90:LEU:H	2.14	0.40
9:RI:123:ALA:C	9:RI:125:THR:H	2.24	0.40
9:RI:126:ARG:C	9:RI:129:GLU:HB2	2.41	0.40
9:RI:28:GLY:O	9:RI:34:ILE:HD11	2.21	0.40
10:RJ:36:LEU:HA	10:RJ:36:LEU:HD12	1.84	0.40
10:RJ:44:TYR:CD1	17:RQ:59:LEU:HD11	2.57	0.40
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:RN:28:LEU:O	14:RN:32:GLU:N	2.52	0.40
15:RO:21:LEU:HD23	15:RO:21:LEU:HA	1.57	0.40
15:RO:7:ARG:HD3	15:RO:97:PHE:CE1	2.57	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
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
23:RW:72:GLY:C	23:RW:74:LYS:N	2.74	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: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
32:XA:496:A:O2'	32:XA:497:G:C8	2.67	0.40
32:XA:6:G:O2'	32:XA:7:A:OP2	2.37	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:92:U:H2'	32:XA:93:U:C6	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
35:XD:124:VAL:O	35:XD:125:ASN:C	2.60	0.40
32:XA:619:U:O2	35:XD:129:VAL:HA	2.21	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
45:XN:44:VAL:C	45:XN:46:LYS:H	2.25	0.40
47:XP:26:ASN:HA	47:XP:26:ASN:HD22	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
32:XA:1525:G:H5''	52:XU:37:TYR:CD1	2.56	0.40
31:Y4:9:LYS:O	31:Y4:9:LYS:HD3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1532:A:C6	1:YA:1533:C:C4	3.09	0.40
1:YA:1380:G:H1'	1:YA:1569:A:N6	2.35	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
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
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:O5'	1:YA:588:U:H6	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: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
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:69:ASN:O	3:YC:70:LYS:C	2.58	0.40
4:YD:113:SER:OG	4:YD:114:LYS:N	2.55	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
8:YH:65:ALA:O	8:YH:66:ASN:C	2.59	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:35:ILE:O	23:YW:36:ILE:C	2.59	0.40
25:YY:31:GLN:C	25:YY:33:ALA:N	2.75	0.40
26:YZ:40:THR:N	26:YZ:43:ILE:HD11	2.35	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:960:U:O2'	32:QA:1223:C:C5'	2.70	0.40
32:QA:1270:G:H2'	32:QA:1271:A:H8	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:QA:1392:G:O2'	32:QA:1393:U:H5'	2.21	0.40
32:QA:427:U:C4	32:QA:428:G:C6	3.09	0.40
32:QA:481:G:H8	32:QA:481:G:H3'	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:67:C:OP1	32:QA:199:A:H5''	2.22	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:96:U:O2'	32:QA:97:G:P	2.79	0.40
32:QA:74:A:N3	32:QA:97:G:C2	2.89	0.40
33:QB:118:THR:O	33:QB:119:GLN:HB2	2.21	0.40
33:QB:53:LEU:H	33:QB:53:LEU:CD2	2.34	0.40
33:QB:70:GLY:HA2	33:QB:163:ILE:CG2	2.51	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
43:QL:24:GLU:O	43:QL:25:ALA:C	2.60	0.40
43:QL:43:LYS:NZ	43:QL:44:PRO:HD3	2.37	0.40
43:QL:89:LEU:N	43:QL:89:LEU:HD22	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
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
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
1:RA:372:G:O2'	1:RA:400:G:O6	2.21	0.40
1:RA:483:A:O2'	21:RU:56:GLY:HA2	2.22	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
12:RL:111:ILE:HD12	12:RL:128:THR:CG2	2.51	0.40
14:RN:32:GLU:CB	14:RN:115:LEU:HD12	2.51	0.40
18:RR:80:ARG:C	18:RR:81:LYS:HD3	2.41	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:RS:24:ILE:O	19:RS:71:VAL:CG1	2.69	0.40
21:RU:20:LYS:C	21:RU:21:ARG:HG3	2.42	0.40
23:RW:72:GLY:C	23:RW:74:LYS:H	2.24	0.40
24:RX:35:HIS:HB3	24:RX:37:PHE:CE2	2.57	0.40
26:RZ:20:LYS:C	26:RZ:22:THR:N	2.75	0.40
26:RZ:9:THR:HG22	26:RZ:53:MET:C	2.42	0.40
32:XA:517:G:H5'	32:XA:519:C:C2	2.57	0.40
32:XA:63:C:H4'	32:XA:380:G:H4'	2.03	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
33:XB:80:LYS:HG3	33:XB:81:ASP:H	1.86	0.40
34:XC:133:MET:HG2	34:XC:133:MET:H	1.77	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
35:XD:123:MET:HE1	35:XD:126:GLY:O	2.20	0.40
35:XD:31:CYS:O	35:XD:32:LYS:HB2	2.21	0.40
35:XD:8:LEU:HA	35:XD:8:LEU:HD13	1.85	0.40
32:XA:1239:A:H3'	38:XG:118:ARG:HH22	1.87	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
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
50:XS:32:THR:HG21	50:XS:70:LEU:HD13	2.03	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: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:238:C:H4'	1:YA:608:A:O2'	2.21	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:24:G:C2'	1:YA:25:U:H5'	2.51	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
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
2:YB:69:G:C2	2:YB:70:C:H1'	2.57	0.40
3:YC:141:HIS:CB	3:YC:190:THR:O	2.70	0.40
3:YC:1:ALA:O	3:YC:18:VAL:HG23	2.21	0.40
1:YA:1813:G:N2	3:YC:49:THR:HB	2.36	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:HD3	6:YF:149:ARG:HA	1.92	0.40
8:YH:61:VAL:CG1	8:YH:62:LEU:N	2.85	0.40
9:YI:105:LEU:HD21	9:YI:129:GLU:CD	2.41	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:101:VAL:HG13	13:YM:101:VAL:O	2.22	0.40
13:YM:52:ALA:HB1	13:YM:119:LEU:HD22	2.03	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
4:YD:12:THR:OG1	16:YP:4:ILE:HG23	2.22	0.40
17:YQ:3:VAL:HG13	17:YQ:4:LYS:N	2.36	0.40
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
32:QA:1161:C:O2'	32:QA:1162:C:H6	1.99	0.40
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
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:OP2	32:QA:532:A:O4'	2.40	0.40
32:QA:71:A:C2	32:QA:72:A:N7	2.89	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
38:QG:53:SER:C	38:QG:55:LYS:N	2.70	0.40
42:QK:125:LYS:C	52:QU:33:ARG:NH2	2.75	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:61:ALA:CA	51:QT:66:ILE:HG22	2.51	0.40
52:QU:17:ARG:HA	52:QU:20:ARG:CG	2.52	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:H8	1:RA:1762:A:O5'	2.05	0.40
1:RA:1809:A:C6	1:RA:1810:A:C6	3.09	0.40
1:RA:1794:A:O4'	1:RA:1900:A:C2	2.74	0.40
1:RA:20:C:H2'	1:RA:21:A:H8	1.86	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
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
3:RC:139:THR:O	3:RC:140:VAL:O	2.39	0.40
4:RD:99:GLU:CG	4:RD:100:LEU:H	2.34	0.40
5:RE:72:SER:C	5:RE:74:LYS:N	2.75	0.40
13:RM:64:TRP:CZ3	13:RM:106:ASP:HB2	2.57	0.40
13:RM:33:LEU:HD23	13:RM:33:LEU:HA	1.55	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
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:XJ:6:TYR:CZ	2.55	0.40
32:XA:1242:G:HO2'	32:XA:1243:C:C5'	2.31	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:73:C:H2'	32:XA:74:A:H8	1.86	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
33:XB:22:TRP:CG	33:XB:23:ASN:N	2.87	0.40
34:XC:80:GLY:O	34:XC:83:VAL:HG22	2.21	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
42:XK:124:LYS:O	52:XU:33:ARG:CZ	2.69	0.40
44:XM:96:VAL:C	44:XM:98:GLY:H	2.25	0.40
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:2371:G:H4'	28:Y1:44:GLN:HE21	1.86	0.40
30:Y3:23:HIS:O	30:Y3:46:LYS:HB2	2.22	0.40
30:Y3:54:LEU:HD11	30:Y3:58:ILE:HD11	2.03	0.40
1:YA:1009:A:O2'	1:YA:1010:A:C8	2.59	0.40
1:YA:816:C:C2	1:YA:1192:G:N2	2.90	0.40
1:YA:1213:A:H2'	1:YA:1214:A:O4'	2.21	0.40
1:YA:1355:G:C6	1:YA:1377:G:N2	2.90	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: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:H6	1:YA:1533:C:O5'	2.04	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:563:A:H1'	1:YA:2018:G:N2	2.36	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:2529:G:H4'	7:YG:174:LYS:HD2	2.02	0.40
1:YA:262:A:C2	1:YA:430:A:H1'	2.56	0.40
1:YA:2873:A:O4'	14:YN:6:SER:HB3	2.21	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:48:G:H22	1:YA:177:G:N2	2.19	0.40
1:YA:719:C:O2'	1:YA:720:U:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:YA:826:U:OP1	56:YA:3687:HOH:O	2.22	0.40
1:YA:83:A:H61	1:YA:101:A:C5'	2.25	0.40
1:YA:846:U:O4'	1:YA:846:U:O2	2.40	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:C6	2:YB:90:C:H5''	2.56	0.40
1:YA:1795:C:O2	3:YC:252:LYS:NZ	2.54	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
9:YI:96:LYS:HE2	9:YI:138:VAL:HG11	2.03	0.40
10:YJ:81:ILE:HG22	10:YJ:82:GLY:H	1.87	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
10:YJ:44:TYR:CD1	17:YQ:63:ARG:NH2	2.89	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:40:SER:C	25:YY:42:LEU:N	2.74	0.40
25:YY:58:ASN:C	25:YY:60:LYS:N	2.74	0.40
25:YY:57:LEU:HD13	25:YY:60:LYS:HE3	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
32:QA:202:G:N2	32:QA:216:U:O2	2.54	0.40
32:QA:486:U:C5'	32:QA:486:U:H6	2.11	0.40
32:QA:764:C:H2'	32:QA:765:G:H8	1.86	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
32:QA:1081:A:H5'	36:QE:22:LYS:HG3	2.03	0.40
38:QG:68:VAL:O	38:QG:69:ARG:C	2.60	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
43:QL:4:ASN:OD1	48:QQ:35:LYS:HE3	2.21	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
28:R1:46:VAL:HG12	28:R1:47:ILE:N	2.33	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:H2'	1:RA:1644:C:O2	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:247:G:H4'	1:RA:386:G:C5	2.56	0.40
1:RA:2505:G:O2'	1:RA:2506:U:H5''	2.22	0.40
1:RA:37:C:H2'	1:RA:38:A:O5'	2.21	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
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
3:RC:245:THR:HG1	3:RC:249:VAL:HB	1.85	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: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:CG2	10:RJ:45:THR:O	2.69	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
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
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
32:XA:442:G:C6	32:XA:443:C:N4	2.89	0.40
32:XA:919:A:O2'	32:XA:920:U:H5'	2.21	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:XB:46:VAL:HG22	33:XB:47:PRO:N	2.35	0.40
34:XC:35:ASP:OD1	34:XC:58:ARG:NH1	2.54	0.40
35:XD:102:TYR:C	35:XD:104:MET:N	2.75	0.40
37:XF:53:LYS:O	37:XF:55:HIS:CD2	2.75	0.40
38:XG:137:ARG:C	38:XG:137:ARG:HD2	2.42	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:HG23	44:XM:63:VAL:O	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
47:XP:1:MET:C	47:XP:1:MET:HE2	2.42	0.40
49:XR:41:SER:C	49:XR:43:ILE:H	2.25	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: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:1858:A:N1	1:YA:1859:U:C2	2.89	0.40
1:YA:1794:A:H1'	1:YA:1900:A:C2	2.56	0.40
1:YA:570:G:N7	1:YA:2030:A:N6	2.70	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:2823:A:C2'	1:YA:2824:C:H5'	2.51	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:77:G:C6	1:YA:78:U:N3	2.90	0.40
1:YA:833:A:N6	1:YA:834:G:O6	2.55	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
1:YA:1830:C:C5'	3:YC:14:HIS:HE1	2.34	0.40
3:YC:161:VAL:CG1	3:YC:162:GLN:N	2.84	0.40
3:YC:145:MET:HE3	3:YC:181:ARG:HH22	1.86	0.40
5:YE:154:ASP:C	5:YE:156:ASN:N	2.75	0.40
5:YE:54:GLY:O	5:YE:55:SER:HB3	2.22	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:YK:59:LYS:HG2	11:YK:89:ASN:HA	2.03	0.40
12:YL:98:ALA:O	12:YL:99:ASN:C	2.59	0.40
14:YN:46:ARG:HG3	14:YN:46:ARG:H	1.54	0.40
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
17:YQ:61:ILE:HD12	17:YQ:61:ILE:N	2.36	0.40
18:YR:25:LEU:H	18:YR:94:THR:HG21	1.86	0.40
19:YS:21:ALA:C	19:YS:23:LEU:H	2.24	0.40
19:YS:68:ASP:OD1	19:YS:68:ASP:N	2.55	0.40
23:YW:55:ASP:C	23:YW:57:THR:H	2.25	0.40
24:YX:14:GLY:O	24:YX:25:LYS:HA	2.22	0.40
24:YX:1:SER:O	24:YX:2:ARG:C	2.59	0.40
1:YA:372:G:P	24:YX:61:LYS:HZ1	2.45	0.40
25:YY:25:GLN:O	25:YY:29:ARG:HD3	2.21	0.40
25:YY:60:LYS:HB3	25:YY:60:LYS:HE3	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	3
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	3
5	YE	199/201 (99%)	117 (59%)	55 (28%)	27 (14%)	0	1
6	RF	175/178 (98%)	138 (79%)	22 (13%)	15 (9%)	1	4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
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
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	3
14	RN	118/120 (98%)	96 (81%)	14 (12%)	8 (7%)	1	7
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	7
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	16
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	5
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

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
22	RV	92/94 (98%)	81 (88%)	9 (10%)	2 (2%)	6	29
22	YV	92/94 (98%)	61 (66%)	23 (25%)	8 (9%)	1	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%)	3	17
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	7
26	RZ	56/58 (97%)	46 (82%)	8 (14%)	2 (4%)	3	20
26	YZ	56/58 (97%)	34 (61%)	16 (29%)	6 (11%)	0	2
27	R0	54/56 (96%)	42 (78%)	9 (17%)	3 (6%)	2	11
27	Y0	54/56 (96%)	38 (70%)	7 (13%)	9 (17%)	0	0
28	R1	48/50 (96%)	36 (75%)	8 (17%)	4 (8%)	1	5
28	Y1	48/50 (96%)	33 (69%)	10 (21%)	5 (10%)	0	3
29	R2	44/46 (96%)	37 (84%)	5 (11%)	2 (4%)	2	15
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	8
30	Y3	62/64 (97%)	43 (69%)	13 (21%)	6 (10%)	0	3
31	R4	36/38 (95%)	29 (81%)	5 (14%)	2 (6%)	2	11
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%)	1	4
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%)	1	5
37	XF	98/100 (98%)	59 (60%)	28 (29%)	11 (11%)	0	2
38	QG	149/151 (99%)	108 (72%)	33 (22%)	8 (5%)	2	12

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
38	XG	148/151 (98%)	86 (58%)	46 (31%)	16 (11%)	0	2
39	QH	127/129 (98%)	95 (75%)	25 (20%)	7 (6%)	2	11
39	XH	127/129 (98%)	92 (72%)	25 (20%)	10 (8%)	1	5
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	6
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%)	1	4
42	XK	115/117 (98%)	87 (76%)	18 (16%)	10 (9%)	1	4
43	QL	121/123 (98%)	87 (72%)	23 (19%)	11 (9%)	1	4
43	XL	121/123 (98%)	90 (74%)	22 (18%)	9 (7%)	1	6
44	QM	112/114 (98%)	83 (74%)	20 (18%)	9 (8%)	1	5
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	10
46	XO	86/88 (98%)	64 (74%)	18 (21%)	4 (5%)	2	14
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	3
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	2
49	QR	53/55 (96%)	41 (77%)	10 (19%)	2 (4%)	3	19
49	XR	53/55 (96%)	37 (70%)	15 (28%)	1 (2%)	8	33
50	QS	77/79 (98%)	57 (74%)	14 (18%)	6 (8%)	1	5
50	XS	77/79 (98%)	47 (61%)	25 (32%)	5 (6%)	1	8
51	QT	83/85 (98%)	61 (74%)	16 (19%)	6 (7%)	1	6
51	XT	83/85 (98%)	59 (71%)	18 (22%)	6 (7%)	1	6
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	2

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
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

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Mol	Chain	Res	Type
11	RK	13	ASN
11	RK	35	VAL
11	RK	71	ARG
11	RK	72	PRO
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

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Mol	Chain	Res	Type
23	RW	23	LYS
23	RW	30	VAL
23	RW	34	SER
23	RW	40	ARG
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

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Mol	Chain	Res	Type
35	QD	159	GLU
35	QD	173	ASP
35	QD	191	SER
35	QD	192	ALA
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

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Mol	Chain	Res	Type
48	QQ	70	LYS
48	QQ	75	VAL
49	QR	47	ARG
51	QT	3	ILE
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

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Mol	Chain	Res	Type
42	XK	92	ARG
43	XL	34	THR
44	XM	4	ALA
44	XM	11	HIS
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

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Mol	Chain	Res	Type
4	YD	175	LEU
4	YD	194	PRO
4	YD	208	LYS
5	YE	55	SER
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

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Mol	Chain	Res	Type
12	YL	41	ARG
12	YL	82	LEU
12	YL	85	VAL
12	YL	89	VAL
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

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Mol	Chain	Res	Type
21	YU	101	THR
22	YV	56	PHE
23	YW	9	THR
23	YW	34	SER
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

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Mol	Chain	Res	Type
7	RG	45	ALA
7	RG	60	GLY
7	RG	83	THR
7	RG	164	ALA
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

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Mol	Chain	Res	Type
17	RQ	86	SER
19	RS	14	ALA
19	RS	63	GLY
20	RT	16	VAL
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

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Mol	Chain	Res	Type
35	QD	31	CYS
35	QD	147	LYS
35	QD	150	LYS
35	QD	172	VAL
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

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Mol	Chain	Res	Type
33	XB	128	LEU
33	XB	148	GLY
33	XB	150	ILE
33	XB	208	ALA
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

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Mol	Chain	Res	Type
50	XS	46	LEU
51	XT	72	ALA
52	XU	7	GLU
52	XU	8	ASN
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

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Mol	Chain	Res	Type
8	YH	76	GLU
8	YH	99	ILE
9	YI	23	VAL
9	YI	30	GLN
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

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Mol	Chain	Res	Type
21	YU	8	ASP
21	YU	17	ASP
21	YU	40	LEU
21	YU	87	GLU
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

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Mol	Chain	Res	Type
6	RF	109	ARG
6	RF	111	ARG
6	RF	149	ARG
7	RG	2	ARG
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

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Mol	Chain	Res	Type
34	QC	205	GLU
35	QD	35	GLN
35	QD	125	ASN
35	QD	165	GLU
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

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Mol	Chain	Res	Type
37	XF	39	LEU
38	XG	59	GLU
39	XH	41	GLU
39	XH	58	LEU
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

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Mol	Chain	Res	Type
6	YF	88	VAL
6	YF	94	ARG
6	YF	112	ASP
7	YG	9	VAL
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

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Mol	Chain	Res	Type
24	YX	63	ILE
25	YY	22	LEU
26	YZ	2	LYS
27	Y0	26	SER
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

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Mol	Chain	Res	Type
18	RR	65	ALA
18	RR	91	GLN
19	RS	56	ALA
20	RT	39	THR
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

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Mol	Chain	Res	Type
52	QU	36	PHE
33	XB	86	CYS
33	XB	217	ALA
34	XC	63	ILE
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

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Mol	Chain	Res	Type
6	YF	77	LYS
6	YF	87	LYS
6	YF	104	THR
7	YG	8	VAL
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

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Mol	Chain	Res	Type
26	YZ	9	THR
28	Y1	18	HIS
28	Y1	36	LYS
29	Y2	16	HIS
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

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Mol	Chain	Res	Type
21	RU	63	ALA
21	RU	83	GLY
23	RW	62	ALA
25	RY	36	GLN
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

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Mol	Chain	Res	Type
43	XL	7	VAL
43	XL	37	TYR
44	XM	50	GLY
44	XM	65	GLU
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

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Mol	Chain	Res	Type
17	YQ	29	ARG
18	YR	52	PRO
18	YR	91	GLN
19	YS	29	VAL
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

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Mol	Chain	Res	Type
40	XI	34	LEU
41	XJ	38	GLY
42	XK	90	PRO
42	XK	91	GLY
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

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Mol	Chain	Res	Type
50	QS	48	ILE
34	XC	65	VAL
37	XF	64	VAL
41	XJ	74	VAL
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

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Mol	Chain	Res	Type
8	YH	134	VAL
11	YK	119	ALA
17	YQ	6	GLY
3	RC	226	PRO
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.

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	RC	216/216 (100%)	164 (76%)	52 (24%)	0	2
3	YC	216/216 (100%)	181 (84%)	35 (16%)	2	10
4	RD	164/164 (100%)	138 (84%)	26 (16%)	2	11
4	YD	164/164 (100%)	142 (87%)	22 (13%)	4	16
5	RE	165/165 (100%)	126 (76%)	39 (24%)	1	2
5	YE	165/165 (100%)	140 (85%)	25 (15%)	3	12
6	RF	148/149 (99%)	121 (82%)	27 (18%)	1	7
6	YF	149/149 (100%)	120 (80%)	29 (20%)	1	6
7	RG	137/137 (100%)	108 (79%)	29 (21%)	1	5
7	YG	137/137 (100%)	119 (87%)	18 (13%)	4	17
8	RH	114/114 (100%)	93 (82%)	21 (18%)	1	7
8	YH	114/114 (100%)	91 (80%)	23 (20%)	1	5
9	RI	109/109 (100%)	89 (82%)	20 (18%)	1	7
9	YI	109/109 (100%)	102 (94%)	7 (6%)	17	48
10	RJ	116/116 (100%)	86 (74%)	30 (26%)	0	1
10	YJ	116/116 (100%)	99 (85%)	17 (15%)	3	13
11	RK	103/103 (100%)	81 (79%)	22 (21%)	1	4
11	YK	103/103 (100%)	84 (82%)	19 (18%)	1	7
12	RL	102/102 (100%)	80 (78%)	22 (22%)	1	4
12	YL	102/102 (100%)	85 (83%)	17 (17%)	2	9
13	RM	109/109 (100%)	89 (82%)	20 (18%)	1	7
13	YM	109/109 (100%)	98 (90%)	11 (10%)	7	28
14	RN	100/100 (100%)	82 (82%)	18 (18%)	1	7
14	YN	100/100 (100%)	85 (85%)	15 (15%)	3	12
15	RO	86/86 (100%)	67 (78%)	19 (22%)	1	4
15	YO	86/86 (100%)	79 (92%)	7 (8%)	11	39
16	RP	99/99 (100%)	76 (77%)	23 (23%)	1	3
16	YP	99/99 (100%)	89 (90%)	10 (10%)	7	28
17	RQ	89/89 (100%)	69 (78%)	20 (22%)	1	3
17	YQ	89/89 (100%)	75 (84%)	14 (16%)	2	11

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
18	RR	84/84 (100%)	70 (83%)	14 (17%)	2	9
18	YR	84/84 (100%)	67 (80%)	17 (20%)	1	5
19	RS	93/93 (100%)	70 (75%)	23 (25%)	0	2
19	YS	93/93 (100%)	73 (78%)	20 (22%)	1	4
20	RT	80/80 (100%)	62 (78%)	18 (22%)	1	3
20	YT	80/80 (100%)	71 (89%)	9 (11%)	6	23
21	RU	83/83 (100%)	63 (76%)	20 (24%)	0	2
21	YU	83/83 (100%)	68 (82%)	15 (18%)	1	7
22	RV	78/78 (100%)	62 (80%)	16 (20%)	1	5
22	YV	78/78 (100%)	67 (86%)	11 (14%)	3	15
23	RW	59/59 (100%)	37 (63%)	22 (37%)	0	0
23	YW	59/59 (100%)	41 (70%)	18 (30%)	0	0
24	RX	67/67 (100%)	50 (75%)	17 (25%)	0	1
24	YX	67/67 (100%)	52 (78%)	15 (22%)	1	3
25	RY	55/55 (100%)	44 (80%)	11 (20%)	1	5
25	YY	55/55 (100%)	51 (93%)	4 (7%)	14	43
26	RZ	48/48 (100%)	33 (69%)	15 (31%)	0	0
26	YZ	48/48 (100%)	37 (77%)	11 (23%)	1	3
27	R0	47/47 (100%)	38 (81%)	9 (19%)	1	6
27	Y0	47/47 (100%)	34 (72%)	13 (28%)	0	1
28	R1	45/45 (100%)	34 (76%)	11 (24%)	0	2
28	Y1	45/45 (100%)	41 (91%)	4 (9%)	9	34
29	R2	38/38 (100%)	30 (79%)	8 (21%)	1	5
29	Y2	38/38 (100%)	32 (84%)	6 (16%)	2	11
30	R3	51/51 (100%)	42 (82%)	9 (18%)	2	8
30	Y3	51/51 (100%)	38 (74%)	13 (26%)	0	1
31	R4	34/34 (100%)	30 (88%)	4 (12%)	5	21
31	Y4	34/34 (100%)	27 (79%)	7 (21%)	1	5
33	QB	180/180 (100%)	138 (77%)	42 (23%)	1	3
33	XB	180/180 (100%)	148 (82%)	32 (18%)	2	8
34	QC	170/170 (100%)	142 (84%)	28 (16%)	2	10

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
34	XC	170/170 (100%)	148 (87%)	22 (13%)	4	18
35	QD	172/172 (100%)	142 (83%)	30 (17%)	2	9
35	XD	172/172 (100%)	133 (77%)	39 (23%)	1	3
36	QE	113/113 (100%)	86 (76%)	27 (24%)	0	2
36	XE	113/113 (100%)	89 (79%)	24 (21%)	1	5
37	QF	87/87 (100%)	71 (82%)	16 (18%)	1	7
37	XF	87/87 (100%)	69 (79%)	18 (21%)	1	5
38	QG	124/124 (100%)	105 (85%)	19 (15%)	2	12
38	XG	123/124 (99%)	94 (76%)	29 (24%)	1	2
39	QH	104/104 (100%)	85 (82%)	19 (18%)	1	7
39	XH	104/104 (100%)	84 (81%)	20 (19%)	1	6
40	QI	105/105 (100%)	82 (78%)	23 (22%)	1	4
40	XI	105/105 (100%)	82 (78%)	23 (22%)	1	4
41	QJ	86/86 (100%)	69 (80%)	17 (20%)	1	5
41	XJ	86/86 (100%)	70 (81%)	16 (19%)	1	7
42	QK	90/90 (100%)	73 (81%)	17 (19%)	1	6
42	XK	90/90 (100%)	76 (84%)	14 (16%)	2	11
43	QL	103/103 (100%)	85 (82%)	18 (18%)	2	8
43	XL	103/103 (100%)	84 (82%)	19 (18%)	1	7
44	QM	92/92 (100%)	85 (92%)	7 (8%)	13	41
44	XM	91/92 (99%)	81 (89%)	10 (11%)	6	25
45	QN	79/84 (94%)	74 (94%)	5 (6%)	18	48
45	XN	75/84 (89%)	64 (85%)	11 (15%)	3	13
46	QO	76/76 (100%)	66 (87%)	10 (13%)	4	17
46	XO	76/76 (100%)	69 (91%)	7 (9%)	9	33
47	QP	65/65 (100%)	55 (85%)	10 (15%)	2	11
47	XP	65/65 (100%)	51 (78%)	14 (22%)	1	4
48	QQ	74/74 (100%)	57 (77%)	17 (23%)	1	3
48	XQ	74/74 (100%)	57 (77%)	17 (23%)	1	3
49	QR	48/48 (100%)	44 (92%)	4 (8%)	11	38
49	XR	48/48 (100%)	42 (88%)	6 (12%)	4	18

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
50	QS	70/70 (100%)	61 (87%)	9 (13%)	4	18
50	XS	70/70 (100%)	60 (86%)	10 (14%)	3	14
51	QT	65/65 (100%)	48 (74%)	17 (26%)	0	1
51	XT	65/65 (100%)	48 (74%)	17 (26%)	0	1
52	QU	44/44 (100%)	32 (73%)	12 (27%)	0	1
52	XU	44/44 (100%)	36 (82%)	8 (18%)	1	7
All	All	9327/9344 (100%)	7607 (82%)	1720 (18%)	1	7

All (1720) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	RC	2	VAL
3	RC	8	THR
3	RC	12	ARG
3	RC	13	ARG
3	RC	17	LYS
3	RC	20	ASN
3	RC	27	LYS
3	RC	38	LYS
3	RC	43	ASN
3	RC	63	ILE
3	RC	68	ARG
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	109	LEU
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	155	ARG
3	RC	163	ILE

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Mol	Chain	Res	Type
3	RC	166	ARG
3	RC	167	ASP
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	212	TRP
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	257	ARG
3	RC	259	ASN
3	RC	268	ARG
3	RC	269	ARG
4	RD	4	LEU
4	RD	14	ILE
4	RD	16	THR
4	RD	26	VAL
4	RD	42	ASN
4	RD	43	ASP
4	RD	46	ARG
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	114	LYS
4	RD	118	PHE
4	RD	124	ARG
4	RD	141	ARG
4	RD	146	ILE
4	RD	150	GLN

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Mol	Chain	Res	Type
4	RD	151	THR
4	RD	159	LYS
4	RD	170	VAL
4	RD	171	THR
4	RD	183	GLU
4	RD	201	LEU
4	RD	207	VAL
5	RE	12	LEU
5	RE	18	THR
5	RE	21	ARG
5	RE	24	ASN
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	78	TRP
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	123	LYS
5	RE	127	GLU
5	RE	144	GLU
5	RE	146	VAL
5	RE	147	LEU
5	RE	149	ILE
5	RE	153	LEU
5	RE	163	ASN
5	RE	166	LYS
5	RE	167	VAL

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Mol	Chain	Res	Type
5	RE	171	ASP
5	RE	176	ASP
5	RE	186	VAL
5	RE	189	THR
6	RF	3	LEU
6	RF	4	HIS
6	RF	8	LYS
6	RF	9	ASP
6	RF	12	VAL
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	37	MET
6	RF	46	LYS
6	RF	65	LEU
6	RF	80	GLN
6	RF	82	TYR
6	RF	90	LEU
6	RF	102	LEU
6	RF	103	ILE
6	RF	109	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	2	ARG
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
7	RG	37	ASN
7	RG	40	VAL

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Mol	Chain	Res	Type
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	151	ARG
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	25	TYR
8	RH	28	ASN
8	RH	31	VAL
8	RH	33	GLN
8	RH	43	ASN
8	RH	46	PHE
8	RH	50	ARG
8	RH	54	LEU
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	2	LYS
9	RI	7	TYR
9	RI	9	LYS

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Mol	Chain	Res	Type
9	RI	10	LEU
9	RI	11	GLN
9	RI	23	VAL
9	RI	27	LEU
9	RI	30	GLN
9	RI	37	PHE
9	RI	39	LYS
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
9	RI	126	ARG
9	RI	135	MET
10	RJ	1	MET
10	RJ	2	LYS
10	RJ	5	THR
10	RJ	24	THR
10	RJ	25	LEU
10	RJ	30	THR
10	RJ	34	ARG
10	RJ	36	LEU
10	RJ	40	HIS
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	69	ARG
10	RJ	84	ILE
10	RJ	85	LYS
10	RJ	86	GLN
10	RJ	101	ILE
10	RJ	103	ILE
10	RJ	111	LYS

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Mol	Chain	Res	Type
10	RJ	114	LEU
10	RJ	118	MET
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	47	ILE
11	RK	51	LYS
11	RK	54	LYS
11	RK	58	LEU
11	RK	63	VAL
11	RK	73	ASP
11	RK	89	ASN
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
12	RL	3	LEU
12	RL	4	ASN
12	RL	6	LEU
12	RL	13	LYS
12	RL	19	LEU
12	RL	21	ARG
12	RL	27	LEU
12	RL	47	ARG
12	RL	51	GLU
12	RL	55	MET
12	RL	60	ARG
12	RL	61	LEU
12	RL	66	PHE
12	RL	82	LEU
12	RL	86	GLU

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Mol	Chain	Res	Type
12	RL	94	THR
12	RL	101	ILE
12	RL	103	ILE
12	RL	111	ILE
12	RL	115	GLU
12	RL	121	THR
12	RL	122	VAL
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	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
13	RM	128	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	37	THR
14	RN	51	LEU
14	RN	69	ARG
14	RN	70	THR
14	RN	71	ARG
14	RN	83	LEU
14	RN	86	ARG
14	RN	95	THR
14	RN	97	ILE

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Mol	Chain	Res	Type
14	RN	116	VAL
14	RN	117	ASP
14	RN	120	GLU
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	83	LEU
15	RO	84	GLU
15	RO	89	ASP
15	RO	94	ARG
15	RO	100	HIS
15	RO	102	ARG
15	RO	103	VAL
15	RO	106	LEU
15	RO	111	ARG
15	RO	112	GLU
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	72	VAL
16	RP	75	THR
16	RP	79	VAL
16	RP	83	ILE
16	RP	91	VAL

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Mol	Chain	Res	Type
16	RP	92	ARG
16	RP	95	LYS
16	RP	96	LEU
17	RQ	2	ARG
17	RQ	4	LYS
17	RQ	10	ARG
17	RQ	17	LEU
17	RQ	32	ARG
17	RQ	40	LYS
17	RQ	50	ARG
17	RQ	57	ARG
17	RQ	59	LEU
17	RQ	63	ARG
17	RQ	65	ASN
17	RQ	69	ARG
17	RQ	73	ILE
17	RQ	88	GLU
17	RQ	89	ILE
17	RQ	93	ILE
17	RQ	94	LEU
17	RQ	96	ASP
17	RQ	97	ILE
17	RQ	106	THR
18	RR	10	LYS
18	RR	25	LEU
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	87	GLN
19	RS	3	THR
19	RS	4	ILE
19	RS	12	SER
19	RS	24	ILE
19	RS	30	SER

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Mol	Chain	Res	Type
19	RS	33	LEU
19	RS	35	ILE
19	RS	36	LEU
19	RS	45	VAL
19	RS	48	LYS
19	RS	50	VAL
19	RS	57	ASN
19	RS	66	ILE
19	RS	68	ASP
19	RS	71	VAL
19	RS	73	LYS
19	RS	76	VAL
19	RS	81	SER
19	RS	88	ARG
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	17	SER
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	58	VAL
20	RT	64	LYS
20	RT	67	VAL
20	RT	68	LYS
20	RT	69	ARG
20	RT	73	ARG
20	RT	93	LEU
21	RU	8	ASP
21	RU	10	VAL
21	RU	18	LYS
21	RU	20	LYS
21	RU	23	LYS
21	RU	28	LEU

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Mol	Chain	Res	Type
21	RU	30	SER
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	61	GLU
21	RU	64	ILE
21	RU	78	LYS
21	RU	80	ASP
21	RU	86	PHE
21	RU	87	GLU
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	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
23	RW	10	ARG
23	RW	11	ASN
23	RW	14	ASP
23	RW	15	SER
23	RW	16	GLU
23	RW	19	ARG
23	RW	23	LYS
23	RW	24	ARG
23	RW	25	PHE
23	RW	38	ARG
23	RW	40	ARG
23	RW	42	THR

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Mol	Chain	Res	Type
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	19	HIS
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	63	ILE
24	RX	65	THR
24	RX	73	ARG
24	RX	77	TYR
25	RY	9	LYS
25	RY	14	LEU
25	RY	18	LEU
25	RY	37	LEU
25	RY	39	GLN
25	RY	42	LEU
25	RY	45	GLN
25	RY	47	ARG
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

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Mol	Chain	Res	Type
26	RZ	9	THR
26	RZ	13	ILE
26	RZ	15	ARG
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	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
27	R0	45	ASP
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	47	ILE
29	R2	1	MET
29	R2	3	ARG
29	R2	8	SER
29	R2	12	ARG
29	R2	21	ARG
29	R2	24	THR
29	R2	39	ARG
29	R2	45	SER
30	R3	5	THR
30	R3	7	ARG
30	R3	12	ARG

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Mol	Chain	Res	Type
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	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	15	PHE
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	57	ASN
33	QB	67	LEU
33	QB	73	ARG
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	117	GLU
33	QB	119	GLN
33	QB	125	PHE
33	QB	128	LEU
33	QB	141	GLU
33	QB	143	LEU
33	QB	156	LEU
33	QB	158	ASP

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Mol	Chain	Res	Type
33	QB	170	ILE
33	QB	178	LEU
33	QB	185	ILE
33	QB	193	ASP
33	QB	204	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	15	LYS
34	QC	17	TRP
34	QC	24	ASN
34	QC	25	THR
34	QC	26	LYS
34	QC	27	GLU
34	QC	28	PHE
34	QC	32	LEU
34	QC	35	ASP
34	QC	36	PHE
34	QC	50	SER
34	QC	52	SER
34	QC	54	ILE
34	QC	79	LYS
34	QC	106	ARG
34	QC	119	ILE
34	QC	120	THR
34	QC	139	ASN
34	QC	143	LEU
34	QC	149	LYS
34	QC	161	ILE
34	QC	165	GLU
34	QC	166	TRP
34	QC	183	TYR
34	QC	184	ASN
34	QC	199	VAL
35	QD	21	LYS
35	QD	25	ARG
35	QD	31	CYS
35	QD	43	ARG

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Mol	Chain	Res	Type
35	QD	52	VAL
35	QD	54	LEU
35	QD	55	ARG
35	QD	57	LYS
35	QD	58	GLN
35	QD	68	GLU
35	QD	69	ARG
35	QD	92	LEU
35	QD	103	ARG
35	QD	110	ARG
35	QD	115	GLN
35	QD	122	ILE
35	QD	127	ARG
35	QD	131	ILE
35	QD	141	VAL
35	QD	147	LYS
35	QD	153	ARG
35	QD	154	VAL
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
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

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Mol	Chain	Res	Type
36	QE	116	VAL
36	QE	121	ASN
36	QE	123	LEU
36	QE	125	LYS
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	24	ARG
37	QF	35	LYS
37	QF	38	ARG
37	QF	39	LEU
37	QF	46	GLN
37	QF	52	ASN
37	QF	54	LEU
37	QF	55	HIS
37	QF	68	GLN
37	QF	69	GLU
37	QF	77	THR
37	QF	86	ARG
37	QF	87	SER
37	QF	93	LYS
38	QG	3	ARG
38	QG	6	ILE
38	QG	8	GLN
38	QG	11	ILE
38	QG	12	LEU
38	QG	20	GLU
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	72	VAL
38	QG	83	THR
38	QG	85	GLN

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Mol	Chain	Res	Type
38	QG	93	VAL
38	QG	108	ARG
38	QG	123	LEU
38	QG	139	ASP
39	QH	11	THR
39	QH	20	ASN
39	QH	21	LYS
39	QH	58	LEU
39	QH	59	GLU
39	QH	62	LEU
39	QH	65	PHE
39	QH	72	GLU
39	QH	76	ARG
39	QH	79	ARG
39	QH	82	LEU
39	QH	86	LYS
39	QH	89	ASP
39	QH	98	LEU
39	QH	103	VAL
39	QH	110	MET
39	QH	116	ARG
39	QH	120	LEU
39	QH	128	VAL
40	QI	11	ARG
40	QI	21	LYS
40	QI	35	GLU
40	QI	37	TYR
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
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

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Mol	Chain	Res	Type
40	QI	105	ARG
40	QI	106	ASP
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	44	THR
41	QJ	46	LYS
41	QJ	48	ARG
41	QJ	50	THR
41	QJ	59	LYS
41	QJ	63	ASP
41	QJ	70	HIS
41	QJ	73	LEU
41	QJ	75	ASP
41	QJ	87	LEU
41	QJ	89	ARG
41	QJ	100	ILE
42	QK	30	ILE
42	QK	51	PHE
42	QK	52	ARG
42	QK	55	ARG
42	QK	64	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
42	QK	107	THR
42	QK	124	LYS
42	QK	125	LYS
42	QK	127	ARG
42	QK	128	VAL
43	QL	3	VAL
43	QL	9	LYS
43	QL	15	VAL
43	QL	17	LYS

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Mol	Chain	Res	Type
43	QL	26	CYS
43	QL	28	GLN
43	QL	32	VAL
43	QL	35	ARG
43	QL	43	LYS
43	QL	49	ARG
43	QL	63	THR
43	QL	74	GLN
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	6	ILE
44	QM	42	VAL
44	QM	59	VAL
44	QM	71	GLU
44	QM	86	ARG
44	QM	100	ARG
44	QM	106	ARG
45	QN	3	GLN
45	QN	26	LEU
45	QN	58	ARG
45	QN	83	VAL
45	QN	96	LYS
46	QO	16	ARG
46	QO	21	THR
46	QO	34	GLN
46	QO	39	GLN
46	QO	44	GLU
46	QO	47	LYS
46	QO	57	ARG
46	QO	60	SER
46	QO	84	LEU
46	QO	86	LEU
47	QP	6	LEU
47	QP	19	VAL
47	QP	29	ASN
47	QP	31	ARG
47	QP	36	VAL
47	QP	46	LYS

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Mol	Chain	Res	Type
47	QP	55	ASP
47	QP	63	GLN
47	QP	68	SER
47	QP	77	GLU
48	QQ	3	LYS
48	QQ	16	MET
48	QQ	20	ILE
48	QQ	21	VAL
48	QQ	29	LYS
48	QQ	37	ILE
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	64	ARG
48	QQ	73	THR
48	QQ	74	LEU
48	QQ	75	VAL
48	QQ	80	LYS
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	26	ASP
50	QS	42	ASN
50	QS	54	ARG
50	QS	55	GLN
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	17	ARG
51	QT	22	SER
51	QT	26	MET
51	QT	27	MET

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Mol	Chain	Res	Type
51	QT	33	LYS
51	QT	35	TYR
51	QT	42	ASP
51	QT	48	LYS
51	QT	65	LEU
51	QT	67	HIS
51	QT	75	LYS
51	QT	77	ASN
51	QT	84	LYS
52	QU	4	LYS
52	QU	8	ASN
52	QU	9	GLU
52	QU	11	PHE
52	QU	12	ASP
52	QU	15	LEU
52	QU	18	PHE
52	QU	19	LYS
52	QU	33	ARG
52	QU	38	GLU
52	QU	39	LYS
52	QU	42	THR
33	XB	8	MET
33	XB	9	LEU
33	XB	10	LYS
33	XB	14	HIS
33	XB	17	HIS
33	XB	19	THR
33	XB	22	TRP
33	XB	26	MET
33	XB	31	PHE
33	XB	34	ARG
33	XB	36	LYS
33	XB	39	ILE
33	XB	42	LEU
33	XB	46	VAL
33	XB	61	SER
33	XB	69	VAL
33	XB	88	GLN
33	XB	103	TRP
33	XB	105	THR
33	XB	108	GLN
33	XB	112	ARG

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Mol	Chain	Res	Type
33	XB	124	THR
33	XB	125	PHE
33	XB	131	LYS
33	XB	147	LEU
33	XB	164	ASP
33	XB	177	ASN
33	XB	182	VAL
33	XB	191	ASP
33	XB	196	ASP
33	XB	209	VAL
33	XB	212	TYR
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	55	VAL
34	XC	106	ARG
34	XC	123	LEU
34	XC	126	ARG
34	XC	134	LYS
34	XC	139	ASN
34	XC	153	SER
34	XC	160	GLU
34	XC	161	ILE
34	XC	164	THR
34	XC	166	TRP
34	XC	178	ARG
34	XC	182	ASP
34	XC	185	THR
34	XC	191	THR
34	XC	198	LYS
35	XD	2	ARG
35	XD	8	LEU
35	XD	12	ARG
35	XD	20	LEU
35	XD	24	VAL
35	XD	25	ARG
35	XD	29	THR
35	XD	30	LYS
35	XD	31	CYS

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Mol	Chain	Res	Type
35	XD	34	GLU
35	XD	43	ARG
35	XD	55	ARG
35	XD	57	LYS
35	XD	58	GLN
35	XD	62	ARG
35	XD	69	ARG
35	XD	74	TYR
35	XD	80	ARG
35	XD	84	ASN
35	XD	98	ASP
35	XD	106	PHE
35	XD	116	LEU
35	XD	127	ARG
35	XD	146	GLU
35	XD	147	LYS
35	XD	151	GLN
35	XD	152	SER
35	XD	153	ARG
35	XD	154	VAL
35	XD	160	LEU
35	XD	168	THR
35	XD	170	LEU
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	59	ILE
36	XE	75	LEU
36	XE	76	ASN
36	XE	80	LEU
36	XE	87	VAL

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Mol	Chain	Res	Type
36	XE	91	SER
36	XE	95	MET
36	XE	99	SER
36	XE	104	ILE
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	144	GLU
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	58	HIS
37	XF	61	LEU
37	XF	72	ASP
37	XF	80	PHE
37	XF	86	ARG
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	34	LYS
38	XG	49	LEU
38	XG	55	LYS
38	XG	57	GLU
38	XG	58	LEU

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Mol	Chain	Res	Type
38	XG	61	PHE
38	XG	66	GLU
38	XG	75	LYS
38	XG	77	ARG
38	XG	78	ARG
38	XG	85	GLN
38	XG	95	ARG
38	XG	100	MET
38	XG	101	ARG
38	XG	102	TRP
38	XG	110	ARG
38	XG	119	LEU
38	XG	123	LEU
38	XG	125	ASP
38	XG	137	ARG
38	XG	139	ASP
38	XG	148	LYS
39	XH	37	ASN
39	XH	40	LYS
39	XH	42	GLU
39	XH	46	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	11	ARG
40	XI	20	ILE
40	XI	26	LYS
40	XI	37	TYR

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Mol	Chain	Res	Type
40	XI	45	MET
40	XI	47	VAL
40	XI	53	LEU
40	XI	54	VAL
40	XI	55	ASP
40	XI	60	LEU
40	XI	61	ASP
40	XI	63	TYR
40	XI	83	THR
40	XI	87	MET
40	XI	89	TYR
40	XI	105	ARG
40	XI	106	ASP
40	XI	111	GLU
40	XI	115	VAL
40	XI	123	ARG
40	XI	125	GLN
40	XI	129	ARG
41	XJ	11	LYS
41	XJ	15	HIS
41	XJ	28	THR
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
42	XK	12	ARG
42	XK	33	ILE
42	XK	71	ASP
42	XK	73	VAL
42	XK	78	ILE
42	XK	81	LEU
42	XK	92	ARG
42	XK	94	SER

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Mol	Chain	Res	Type
42	XK	105	ARG
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	49	ARG
43	XL	57	THR
43	XL	62	VAL
43	XL	72	ASN
43	XL	82	ARG
43	XL	88	ASP
43	XL	96	THR
43	XL	97	VAL
43	XL	102	ASP
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	53	ASP
44	XM	65	GLU
44	XM	91	ARG
44	XM	92	ARG
44	XM	100	ARG
44	XM	113	LYS
45	XN	3	GLN
45	XN	27	LYS
45	XN	41	TRP
45	XN	52	ARG
45	XN	53	ASP
45	XN	58	ARG
45	XN	61	ASN

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Mol	Chain	Res	Type
45	XN	65	GLN
45	XN	72	PHE
45	XN	96	LYS
45	XN	100	TRP
46	XO	16	ARG
46	XO	38	LEU
46	XO	39	GLN
46	XO	45	HIS
46	XO	65	LEU
46	XO	80	LEU
46	XO	87	ARG
47	XP	1	MET
47	XP	2	VAL
47	XP	3	THR
47	XP	6	LEU
47	XP	18	GLN
47	XP	29	ASN
47	XP	35	ARG
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	3	LYS
48	XQ	4	ILE
48	XQ	6	THR
48	XQ	20	ILE
48	XQ	27	PHE
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	80	LYS

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Mol	Chain	Res	Type
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	11	ASP
50	XS	46	LEU
50	XS	52	ASN
50	XS	54	ARG
50	XS	57	VAL
50	XS	72	GLU
50	XS	73	PHE
50	XS	80	ARG
51	XT	5	SER
51	XT	8	LYS
51	XT	11	ILE
51	XT	13	SER
51	XT	26	MET
51	XT	30	PHE
51	XT	35	TYR
51	XT	42	ASP
51	XT	47	GLN
51	XT	51	ASN
51	XT	53	MET
51	XT	67	HIS
51	XT	68	LYS
51	XT	73	ARG
51	XT	74	HIS
51	XT	78	LEU
51	XT	82	ILE
52	XU	4	LYS
52	XU	9	GLU
52	XU	24	LYS
52	XU	28	LEU
52	XU	32	ARG
52	XU	36	PHE
52	XU	37	TYR
52	XU	53	LYS
3	YC	12	ARG

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Mol	Chain	Res	Type
3	YC	23	LEU
3	YC	35	LYS
3	YC	43	ASN
3	YC	44	ASN
3	YC	51	ARG
3	YC	52	HIS
3	YC	57	HIS
3	YC	71	ASP
3	YC	102	TYR
3	YC	117	SER
3	YC	124	LYS
3	YC	134	ILE
3	YC	152	GLN
3	YC	162	GLN
3	YC	172	THR
3	YC	173	LEU
3	YC	176	ARG
3	YC	181	ARG
3	YC	183	VAL
3	YC	187	CYS
3	YC	188	ARG
3	YC	190	THR
3	YC	196	ASN
3	YC	212	TRP
3	YC	213	ARG
3	YC	227	VAL
3	YC	235	GLU
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	16	THR
4	YD	32	ASN
4	YD	33	ARG
4	YD	38	LYS
4	YD	55	LYS
4	YD	62	LYS
4	YD	79	LEU
4	YD	84	LEU

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Mol	Chain	Res	Type
4	YD	98	VAL
4	YD	100	LEU
4	YD	106	LYS
4	YD	121	THR
4	YD	138	LEU
4	YD	140	HIS
4	YD	141	ARG
4	YD	148	GLN
4	YD	150	GLN
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
5	YE	191	ASP
6	YF	5	ASP
6	YF	13	LYS
6	YF	25	MET

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Mol	Chain	Res	Type
6	YF	31	GLU
6	YF	48	LEU
6	YF	49	LEU
6	YF	82	TYR
6	YF	87	LYS
6	YF	91	ARG
6	YF	94	ARG
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	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	19	ASN
7	YG	34	ARG
7	YG	35	THR
7	YG	40	VAL
7	YG	42	VAL
7	YG	51	PHE
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	162	ARG
7	YG	163	TYR

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Mol	Chain	Res	Type
7	YG	166	GLU
7	YG	176	LYS
8	YH	8	LYS
8	YH	22	LYS
8	YH	25	TYR
8	YH	27	ARG
8	YH	28	ASN
8	YH	50	ARG
8	YH	55	GLU
8	YH	57	LYS
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	98	ASP
8	YH	103	VAL
8	YH	104	THR
8	YH	109	GLU
8	YH	132	PHE
8	YH	133	GLN
8	YH	144	VAL
9	YI	7	TYR
9	YI	30	GLN
9	YI	36	GLU
9	YI	58	ILE
9	YI	68	PHE
9	YI	93	ASN
9	YI	106	GLN
10	YJ	3	THR
10	YJ	5	THR
10	YJ	25	LEU
10	YJ	34	ARG
10	YJ	43	GLU
10	YJ	47	HIS
10	YJ	54	ILE
10	YJ	57	LEU
10	YJ	80	HIS
10	YJ	92	MET

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Mol	Chain	Res	Type
10	YJ	93	ILE
10	YJ	95	ARG
10	YJ	98	GLU
10	YJ	99	ARG
10	YJ	106	LYS
10	YJ	129	GLU
10	YJ	139	VAL
11	YK	3	GLN
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	54	LYS
11	YK	65	THR
11	YK	77	ILE
11	YK	87	LEU
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	18	ARG
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	112	LEU
12	YL	116	VAL
12	YL	141	LYS

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Mol	Chain	Res	Type
12	YL	143	GLU
13	YM	7	THR
13	YM	8	LYS
13	YM	38	ARG
13	YM	47	GLU
13	YM	66	ARG
13	YM	73	ILE
13	YM	78	LEU
13	YM	97	GLN
13	YM	105	MET
13	YM	115	GLU
13	YM	126	ILE
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	40	LYS
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
14	YN	114	GLU
15	YO	17	LYS
15	YO	31	THR
15	YO	65	THR
15	YO	68	LYS
15	YO	90	VAL
15	YO	115	LEU
15	YO	117	PHE
16	YP	6	GLN
16	YP	7	LEU
16	YP	13	LYS
16	YP	15	ASP
16	YP	28	LYS
16	YP	50	ARG
16	YP	67	GLU
16	YP	83	ILE

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Mol	Chain	Res	Type
16	YP	86	LYS
16	YP	101	GLU
17	YQ	3	VAL
17	YQ	10	ARG
17	YQ	12	ARG
17	YQ	15	LYS
17	YQ	21	LYS
17	YQ	35	PHE
17	YQ	39	ILE
17	YQ	50	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
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	83	TYR
18	YR	86	GLN
18	YR	90	ARG
18	YR	93	PHE
18	YR	95	ASP
19	YS	4	ILE
19	YS	6	LYS
19	YS	9	HIS
19	YS	22	ASP
19	YS	23	LEU
19	YS	31	GLN
19	YS	33	LEU
19	YS	45	VAL
19	YS	46	LEU

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Mol	Chain	Res	Type
19	YS	62	ASP
19	YS	66	ILE
19	YS	70	LYS
19	YS	73	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	18	GLU
20	YT	21	SER
20	YT	39	THR
20	YT	50	LEU
20	YT	54	GLU
20	YT	67	VAL
20	YT	91	GLN
21	YU	13	LEU
21	YU	20	LYS
21	YU	21	ARG
21	YU	40	LEU
21	YU	45	GLN
21	YU	61	GLU
21	YU	65	GLN
21	YU	71	ILE
21	YU	81	ARG
21	YU	82	VAL
21	YU	85	ARG
21	YU	94	PHE
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	56	PHE
22	YV	61	LEU

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Mol	Chain	Res	Type
22	YV	65	VAL
22	YV	69	GLU
22	YV	70	ILE
22	YV	76	ASP
23	YW	11	ASN
23	YW	18	LYS
23	YW	22	VAL
23	YW	23	LYS
23	YW	25	PHE
23	YW	28	GLU
23	YW	30	VAL
23	YW	31	LEU
23	YW	35	ILE
23	YW	38	ARG
23	YW	39	GLN
23	YW	40	ARG
23	YW	44	PHE
23	YW	58	LEU
23	YW	59	PHE
23	YW	68	PHE
23	YW	76	ARG
23	YW	77	LYS
24	YX	5	GLN
24	YX	6	VAL
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	44	ARG
24	YX	46	VAL
24	YX	47	THR
24	YX	53	LYS
24	YX	57	VAL
24	YX	63	ILE
24	YX	73	ARG
25	YY	1	MET
25	YY	4	LYS
25	YY	28	LEU
25	YY	45	GLN
26	YZ	3	THR

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Mol	Chain	Res	Type
26	YZ	16	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
27	Y0	9	ARG
27	Y0	27	LEU
27	Y0	33	SER
27	Y0	37	HIS
27	Y0	39	ARG
27	Y0	41	HIS
27	Y0	42	ILE
27	Y0	48	TYR
27	Y0	49	ARG
27	Y0	53	VAL
27	Y0	54	ILE
28	Y1	10	LEU
28	Y1	20	TYR
28	Y1	44	GLN
28	Y1	45	HIS
29	Y2	8	SER
29	Y2	22	MET
29	Y2	26	ASN
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	33	THR
30	Y3	41	ARG

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Mol	Chain	Res	Type
30	Y3	46	LYS
30	Y3	48	MET
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	20	ASP
31	Y4	28	SER

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (309) such sidechains are listed below:

Mol	Chain	Res	Type
3	RC	14	HIS
3	RC	20	ASN
3	RC	43	ASN
3	RC	59	GLN
3	RC	89	ASN
3	RC	114	GLN
3	RC	141	HIS
3	RC	152	GLN
3	RC	250	GLN
4	RD	32	ASN
4	RD	42	ASN
4	RD	58	ASN
4	RD	126	ASN
4	RD	130	GLN
4	RD	150	GLN
5	RE	24	ASN
5	RE	29	HIS
5	RE	30	GLN
5	RE	46	GLN
5	RE	62	GLN
5	RE	97	ASN
5	RE	136	GLN
6	RF	20	ASN
6	RF	22	ASN
6	RF	26	GLN
6	RF	134	GLN
7	RG	72	ASN

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Mol	Chain	Res	Type
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	30	GLN
9	RI	33	ASN
10	RJ	40	HIS
10	RJ	58	ASN
10	RJ	76	HIS
10	RJ	77	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	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	34	HIS
15	RO	38	GLN
16	RP	9	GLN
16	RP	74	GLN
17	RQ	13	HIS
17	RQ	65	ASN

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Mol	Chain	Res	Type
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	26	ASN
21	RU	65	GLN
21	RU	73	ASN
22	RV	5	ASN
22	RV	44	HIS
22	RV	51	GLN
22	RV	80	HIS
22	RV	88	HIS
23	RW	11	ASN
23	RW	39	GLN
24	RX	5	GLN
24	RX	15	ASN
24	RX	22	ASN
25	RY	15	ASN
25	RY	20	ASN
25	RY	27	ASN
25	RY	31	GLN
25	RY	41	HIS
25	RY	45	GLN
25	RY	58	ASN
26	RZ	8	GLN
27	R0	4	GLN
29	R2	13	ASN
29	R2	16	HIS
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

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Mol	Chain	Res	Type
33	QB	189	ASN
34	QC	5	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
35	QD	70	GLN
35	QD	73	ASN
35	QD	84	ASN
35	QD	99	ASN
35	QD	163	GLN
36	QE	11	GLN
36	QE	42	ASN
36	QE	69	ASN
36	QE	72	ASN
36	QE	81	GLN
36	QE	121	ASN
37	QF	11	HIS
37	QF	68	GLN
39	QH	3	GLN
39	QH	17	GLN
39	QH	20	ASN
39	QH	117	GLN
40	QI	4	GLN
40	QI	74	GLN
40	QI	80	HIS
41	QJ	15	HIS
41	QJ	20	GLN
41	QJ	35	GLN
41	QJ	56	HIS
41	QJ	64	GLN
42	QK	21	HIS
42	QK	100	ASN
42	QK	108	ASN
43	QL	45	ASN
43	QL	72	ASN
43	QL	95	HIS
45	QN	42	ASN
45	QN	48	GLN

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Mol	Chain	Res	Type
45	QN	59	GLN
46	QO	19	ASN
46	QO	36	ASN
47	QP	9	HIS
47	QP	26	ASN
47	QP	29	ASN
47	QP	59	HIS
48	QQ	44	HIS
49	QR	30	ASN
49	QR	53	GLN
50	QS	42	ASN
50	QS	55	GLN
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	38	HIS
33	XB	108	GLN
33	XB	119	GLN
33	XB	169	HIS
33	XB	176	ASN
34	XC	2	GLN
34	XC	18	ASN
34	XC	31	ASN
34	XC	68	HIS
35	XD	73	ASN
35	XD	84	ASN
35	XD	115	GLN
35	XD	119	HIS
35	XD	125	ASN
35	XD	163	GLN
36	XE	11	GLN
36	XE	121	ASN
36	XE	131	ASN
37	XF	11	HIS
37	XF	17	GLN
37	XF	58	HIS
37	XF	81	ASN
38	XG	67	ASN

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Mol	Chain	Res	Type
38	XG	85	GLN
38	XG	121	ASN
39	XH	3	GLN
39	XH	17	GLN
40	XI	3	ASN
40	XI	4	GLN
40	XI	49	GLN
40	XI	125	GLN
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
45	XN	59	GLN
45	XN	65	GLN
46	XO	27	GLN
46	XO	37	HIS
46	XO	39	GLN
46	XO	45	HIS
47	XP	26	ASN
47	XP	63	GLN
48	XQ	49	ASN
49	XR	30	ASN
50	XS	51	HIS
50	XS	52	ASN
51	XT	12	GLN
51	XT	60	GLN
52	XU	8	ASN
3	YC	20	ASN
3	YC	43	ASN
3	YC	52	HIS
3	YC	57	HIS
3	YC	59	GLN
3	YC	85	ASN
3	YC	133	ASN
3	YC	141	HIS
3	YC	152	GLN
3	YC	162	GLN

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Mol	Chain	Res	Type
3	YC	196	ASN
4	YD	36	GLN
4	YD	49	GLN
4	YD	58	ASN
4	YD	140	HIS
4	YD	164	GLN
5	YE	41	GLN
5	YE	165	HIS
6	YF	134	GLN
7	YG	19	ASN
7	YG	103	ASN
7	YG	138	GLN
8	YH	2	GLN
8	YH	28	ASN
8	YH	66	ASN
9	YI	42	ASN
9	YI	93	ASN
9	YI	106	GLN
10	YJ	40	HIS
10	YJ	77	HIS
11	YK	3	GLN
11	YK	9	ASN
11	YK	13	ASN
11	YK	89	ASN
12	YL	4	ASN
12	YL	54	GLN
13	YM	13	HIS
14	YN	3	HIS
14	YN	11	ASN
14	YN	16	HIS
14	YN	23	ASN
14	YN	73	ASN
14	YN	81	ASN
15	YO	29	HIS
15	YO	34	HIS
15	YO	38	GLN
16	YP	6	GLN
16	YP	9	GLN
16	YP	11	GLN
16	YP	74	GLN
17	YQ	19	GLN
17	YQ	71	ASN

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Mol	Chain	Res	Type
18	YR	6	GLN
18	YR	12	HIS
18	YR	43	ASN
18	YR	66	HIS
18	YR	82	HIS
18	YR	86	GLN
19	YS	9	HIS
19	YS	31	GLN
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
22	YV	51	GLN
22	YV	80	HIS
23	YW	11	ASN
24	YX	15	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
27	Y0	37	HIS
29	Y2	6	GLN
29	Y2	29	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	RA	2850/2904 (98%)	547 (19%)	74 (2%)
1	YA	2837/2904 (97%)	870 (30%)	153 (5%)
2	RB	117/118 (99%)	22 (18%)	0
2	YB	116/118 (98%)	31 (26%)	6 (5%)
32	QA	1532/1533 (99%)	372 (24%)	56 (3%)
32	XA	1529/1533 (99%)	442 (28%)	70 (4%)
All	All	8981/9110 (98%)	2284 (25%)	359 (3%)

All (2284) 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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	747	U
1	RA	748	G
1	RA	763	G
1	RA	764	A
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
1	RA	1273	U
1	RA	1276	A
1	RA	1281	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
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

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Mol	Chain	Res	Type
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	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
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	1647	U
1	RA	1648	U
1	RA	1649	G
1	RA	1652	A
1	RA	1674	G
1	RA	1688	U
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	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	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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
32	QA	91	U
32	QA	92	U
32	QA	95	C
32	QA	97	G
32	QA	98	A
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	197	A
32	QA	198	G

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Mol	Chain	Res	Type
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
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	369	G
32	QA	372	C

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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	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

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Mol	Chain	Res	Type
32	QA	1309	G
32	QA	1315	U
32	QA	1316	G
32	QA	1317	C
32	QA	1318	A
32	QA	1320	C
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

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Mol	Chain	Res	Type
32	QA	1469	C
32	QA	1470	U
32	QA	1474	U
32	QA	1475	G
32	QA	1476	A
32	QA	1490	U
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	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

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Mol	Chain	Res	Type
32	XA	83	C
32	XA	84	U
32	XA	85	U
32	XA	86	G
32	XA	87	C
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	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

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Mol	Chain	Res	Type
32	XA	208	U
32	XA	209	U
32	XA	210	C
32	XA	211	G
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	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

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Mol	Chain	Res	Type
32	XA	348	G
32	XA	352	C
32	XA	353	A
32	XA	354	G
32	XA	366	A
32	XA	367	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

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Mol	Chain	Res	Type
32	XA	464	U
32	XA	466	A
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

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Mol	Chain	Res	Type
32	XA	573	A
32	XA	576	C
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

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Mol	Chain	Res	Type
32	XA	803	G
32	XA	812	G
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	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

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Mol	Chain	Res	Type
32	XA	992	U
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	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	126	A
1	YA	128	C
1	YA	129	C
1	YA	134	G

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Mol	Chain	Res	Type
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
1	YA	250	G

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Mol	Chain	Res	Type
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
1	YA	374	A

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Mol	Chain	Res	Type
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
1	YA	491	G

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Mol	Chain	Res	Type
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
1	YA	622	G

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Mol	Chain	Res	Type
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	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
1	YA	770	G
1	YA	775	G

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Mol	Chain	Res	Type
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
1	YA	932	U
1	YA	933	A

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Mol	Chain	Res	Type
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
1	YA	1060	U
1	YA	1063	G

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Mol	Chain	Res	Type
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
1	YA	1158	C
1	YA	1169	A

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Mol	Chain	Res	Type
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
1	YA	1300	G
1	YA	1301	A

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Mol	Chain	Res	Type
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
1	YA	1399	C
1	YA	1400	U

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Mol	Chain	Res	Type
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
1	YA	1511	G
1	YA	1520	U

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Mol	Chain	Res	Type
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
1	YA	1636	U
1	YA	1640	A

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Mol	Chain	Res	Type
1	YA	1646	C
1	YA	1647	U
1	YA	1648	U
1	YA	1649	G
1	YA	1655	A
1	YA	1661	G
1	YA	1663	G
1	YA	1674	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
1	YA	1808	A
1	YA	1809	A
1	YA	1810	A
1	YA	1811	G

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Mol	Chain	Res	Type
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	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
1	YA	1944	U
1	YA	1945	G
1	YA	1955	U
1	YA	1956	U
1	YA	1963	U

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Mol	Chain	Res	Type
1	YA	1964	G
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
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

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Mol	Chain	Res	Type
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
1	YA	2283	C
1	YA	2286	G
1	YA	2289	G
1	YA	2297	A
1	YA	2298	A
1	YA	2299	U
1	YA	2305	U

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	24	G
2	YB	25	U
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

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Mol	Chain	Res	Type
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

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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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 carbohydrates 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	-	59,64,64	2.03	14 (23%)	75,97,97	2.82	24 (32%)

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 (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	RA	3135	EM1	C76-C78	-7.12	1.37	1.48
54	RA	3135	EM1	C21-C15	-5.52	1.49	1.53
54	RA	3135	EM1	C77-C72	-4.54	1.32	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	RA	3135	EM1	N81-N80	-4.50	1.25	1.34
54	RA	3135	EM1	N82-N81	-4.48	1.26	1.34
54	RA	3135	EM1	O5-C2	-4.02	1.41	1.47
54	RA	3135	EM1	O32-C28	-3.43	1.37	1.44
54	RA	3135	EM1	C79-N80	-2.92	1.32	1.35
54	RA	3135	EM1	C73-C72	-2.77	1.34	1.40
54	RA	3135	EM1	C72-N71	2.67	1.47	1.38
54	RA	3135	EM1	C74-C75	-2.59	1.33	1.38
54	RA	3135	EM1	C28-C34	-2.42	1.48	1.55
54	RA	3135	EM1	C74-C73	-2.34	1.34	1.38
54	RA	3135	EM1	C83-N80	-2.03	1.44	1.47

All (24) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	RA	3135	EM1	C8-C4-C2	-11.37	99.56	115.23
54	RA	3135	EM1	N82-N81-N80	9.48	114.46	107.31
54	RA	3135	EM1	C76-C77-C72	-5.96	115.50	120.66
54	RA	3135	EM1	O20-C15-C21	-5.88	117.22	123.51
54	RA	3135	EM1	C2-O5-C10	-4.91	105.41	109.29
54	RA	3135	EM1	C73-C72-C77	4.81	124.87	118.62
54	RA	3135	EM1	O45-C42-C44	-4.56	100.70	110.35
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	C42-O45-C50	-4.25	106.18	112.91
54	RA	3135	EM1	C55-C50-C54	-3.62	107.71	113.40
54	RA	3135	EM1	C12-C7-C3	3.52	117.82	112.49
54	RA	3135	EM1	C54-C49-N53	-3.44	105.95	115.67
54	RA	3135	EM1	O5-C10-O16	3.33	126.30	122.46
54	RA	3135	EM1	C3-N6-C10	-3.29	107.28	111.69
54	RA	3135	EM1	O16-C10-N6	-3.25	123.74	128.01
54	RA	3135	EM1	O5-C2-C3	-3.10	100.03	103.16
54	RA	3135	EM1	C76-C78-N82	2.73	125.32	120.96
54	RA	3135	EM1	O45-C50-C54	2.64	113.18	109.14
54	RA	3135	EM1	C44-C49-N53	2.50	118.07	110.83
54	RA	3135	EM1	C19-C13-C7	2.23	122.98	119.10
54	RA	3135	EM1	O45-C50-C55	2.18	111.50	106.88
54	RA	3135	EM1	C77-C72-N71	-2.09	116.96	120.57
54	RA	3135	EM1	C38-O32-C28	-2.03	113.32	117.55

There are no chirality outliers.

All (10) torsion outliers are listed below:

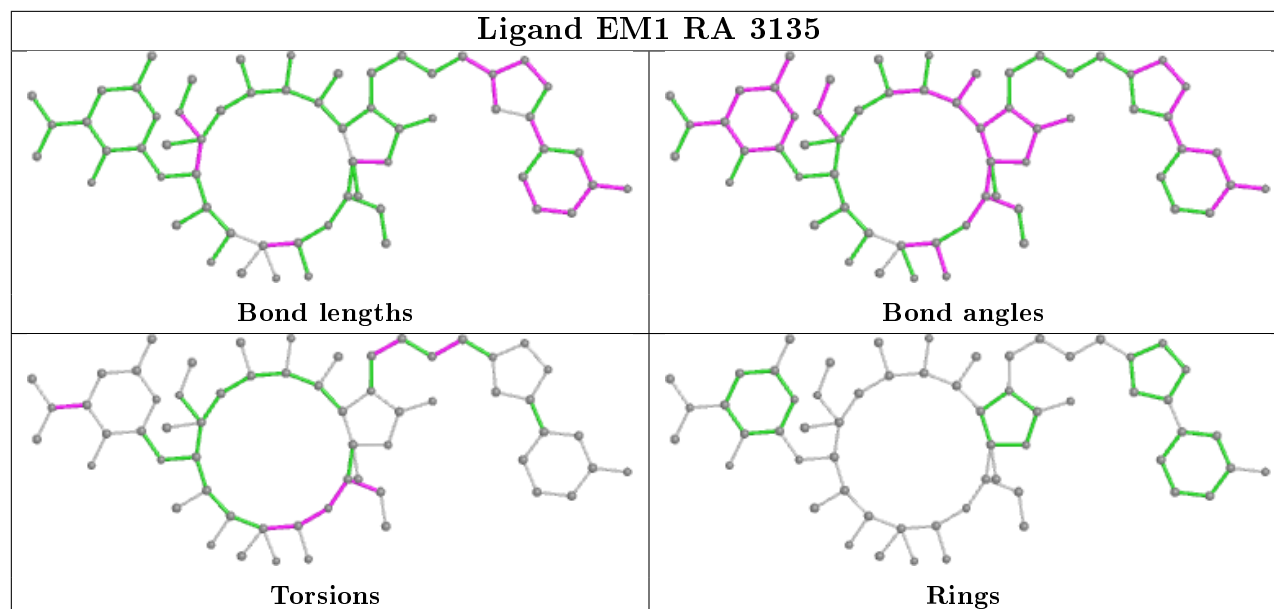
Mol	Chain	Res	Type	Atoms
54	RA	3135	EM1	O9-C4-C8-C14
54	RA	3135	EM1	C21-C15-O9-C4
54	RA	3135	EM1	O9-C15-C21-C26
54	RA	3135	EM1	O20-C15-C21-C26
54	RA	3135	EM1	O20-C15-O9-C4
54	RA	3135	EM1	N80-C83-C84-C17
54	RA	3135	EM1	C8-C4-O9-C15
54	RA	3135	EM1	C2-C4-C8-C14
54	RA	3135	EM1	N6-C11-C17-C84
54	RA	3135	EM1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



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, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	RA	2854/2904 (98%)	-0.43	41 (1%) 75 56	19, 47, 175, 400	0
1	YA	2841/2904 (97%)	0.15	90 (3%) 47 25	64, 141, 260, 408	0
2	RB	118/118 (100%)	-0.63	0 100 100	32, 61, 95, 115	0
2	YB	117/118 (99%)	-0.18	0 100 100	111, 185, 242, 277	0
3	RC	271/271 (100%)	-0.25	10 (3%) 41 21	25, 57, 97, 202	0
3	YC	271/271 (100%)	0.43	19 (7%) 16 7	64, 107, 154, 181	0
4	RD	209/209 (100%)	-0.36	0 100 100	19, 41, 90, 149	0
4	YD	209/209 (100%)	0.83	26 (12%) 4 1	71, 122, 174, 236	0
5	RE	201/201 (100%)	-0.24	0 100 100	23, 58, 116, 177	0
5	YE	201/201 (100%)	1.85	76 (37%) 0 0	91, 214, 335, 378	0
6	RF	177/178 (99%)	0.22	13 (7%) 15 6	52, 93, 166, 225	0
6	YF	178/178 (100%)	2.02	80 (44%) 0 0	154, 229, 270, 299	0
7	RG	176/176 (100%)	-0.05	0 100 100	41, 75, 129, 161	0
7	YG	176/176 (100%)	1.88	64 (36%) 0 0	129, 198, 270, 312	0
8	RH	149/149 (100%)	2.56	60 (40%) 0 0	59, 178, 260, 278	0
8	YH	149/149 (100%)	2.43	63 (42%) 0 0	100, 197, 252, 272	0
9	RI	141/141 (100%)	3.30	84 (59%) 0 0	149, 241, 292, 339	0
9	YI	141/141 (100%)	4.31	102 (72%) 0 0	231, 317, 353, 360	0
10	RJ	142/142 (100%)	-0.48	1 (0%) 87 75	21, 40, 76, 139	0
10	YJ	142/142 (100%)	0.47	14 (9%) 7 2	75, 127, 168, 193	0
11	RK	122/122 (100%)	-0.36	1 (0%) 86 72	23, 45, 94, 191	0
11	YK	122/122 (100%)	0.55	12 (9%) 7 2	66, 107, 155, 228	0
12	RL	143/143 (100%)	-0.42	0 100 100	18, 55, 93, 123	0
12	YL	143/143 (100%)	1.37	40 (27%) 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%)	-0.43	0 100 100	17, 45, 85, 146	0
13	YM	136/136 (100%)	1.04	23 (16%) 1 0	78, 131, 175, 208	0
14	RN	120/120 (100%)	-0.46	0 100 100	18, 41, 63, 132	0
14	YN	120/120 (100%)	0.89	16 (13%) 3 1	88, 136, 190, 237	0
15	RO	116/116 (100%)	-0.23	0 100 100	40, 64, 97, 124	0
15	YO	116/116 (100%)	1.88	44 (37%) 0 0	134, 182, 227, 252	0
16	RP	114/114 (100%)	-0.33	0 100 100	29, 53, 104, 149	0
16	YP	114/114 (100%)	0.65	13 (11%) 5 2	82, 121, 160, 197	0
17	RQ	117/117 (100%)	-0.54	0 100 100	19, 34, 63, 108	0
17	YQ	117/117 (100%)	1.17	28 (23%) 0 0	88, 126, 203, 287	0
18	RR	103/103 (100%)	-0.42	1 (0%) 82 67	20, 48, 92, 115	0
18	YR	103/103 (100%)	2.09	43 (41%) 0 0	98, 154, 219, 274	0
19	RS	110/110 (100%)	-0.42	1 (0%) 84 69	20, 38, 83, 143	0
19	YS	110/110 (100%)	1.55	35 (31%) 0 0	86, 141, 208, 266	0
20	RT	93/93 (100%)	0.34	7 (7%) 14 5	35, 69, 134, 207	0
20	YT	93/93 (100%)	2.30	45 (48%) 0 0	133, 215, 282, 315	0
21	RU	102/102 (100%)	0.02	2 (1%) 65 44	38, 72, 160, 192	0
21	YU	102/102 (100%)	3.27	63 (61%) 0 0	151, 251, 347, 416	0
22	RV	94/94 (100%)	-0.21	0 100 100	31, 61, 102, 114	0
22	YV	94/94 (100%)	1.08	21 (22%) 0 0	107, 157, 199, 222	0
23	RW	79/79 (100%)	0.10	5 (6%) 20 8	22, 53, 114, 195	0
23	YW	79/79 (100%)	2.25	40 (50%) 0 0	108, 163, 232, 250	0
24	RX	77/77 (100%)	-0.16	0 100 100	32, 58, 110, 124	0
24	YX	77/77 (100%)	0.84	8 (10%) 6 2	88, 134, 182, 237	0
25	RY	63/63 (100%)	0.23	3 (4%) 30 14	53, 90, 153, 175	0
25	YY	63/63 (100%)	1.45	16 (25%) 0 0	167, 286, 366, 383	0
26	RZ	58/58 (100%)	-0.36	0 100 100	19, 40, 87, 117	0
26	YZ	58/58 (100%)	1.02	13 (22%) 0 0	104, 143, 200, 247	0
27	R0	56/56 (100%)	-0.51	0 100 100	17, 42, 85, 150	0
27	Y0	56/56 (100%)	1.20	14 (25%) 0 0	87, 161, 210, 255	0
28	R1	50/50 (100%)	0.23	1 (2%) 65 44	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%)	1.57	16 (32%) 0 0	106, 161, 203, 255	0
29	R2	46/46 (100%)	-0.38	1 (2%) 62 41	30, 42, 69, 166	0
29	Y2	46/46 (100%)	1.09	8 (17%) 1 0	95, 128, 162, 176	0
30	R3	64/64 (100%)	-0.45	0 100 100	25, 44, 64, 91	0
30	Y3	64/64 (100%)	1.76	20 (31%) 0 0	96, 140, 173, 212	0
31	R4	38/38 (100%)	0.06	0 100 100	40, 58, 98, 108	0
31	Y4	38/38 (100%)	2.50	19 (50%) 0 0	94, 155, 195, 203	0
32	QA	1533/1533 (100%)	-0.46	19 (1%) 79 61	46, 97, 198, 345	0
32	XA	1530/1533 (99%)	-0.17	33 (2%) 62 41	55, 113, 259, 356	0
33	QB	218/218 (100%)	0.84	32 (14%) 2 1	82, 141, 198, 243	0
33	XB	218/218 (100%)	1.19	52 (23%) 0 0	93, 145, 201, 251	0
34	QC	206/206 (100%)	0.11	4 (1%) 66 46	71, 107, 156, 198	0
34	XC	206/206 (100%)	0.47	11 (5%) 26 12	86, 136, 185, 215	0
35	QD	205/205 (100%)	0.33	12 (5%) 22 10	57, 114, 174, 236	0
35	XD	205/205 (100%)	-0.20	1 (0%) 91 81	41, 78, 132, 212	0
36	QE	150/150 (100%)	-0.13	2 (1%) 77 59	59, 90, 147, 217	0
36	XE	150/150 (100%)	-0.19	1 (0%) 87 75	55, 92, 141, 191	0
37	QF	100/100 (100%)	0.03	1 (1%) 82 67	80, 126, 168, 190	0
37	XF	100/100 (100%)	0.14	3 (3%) 50 27	82, 119, 176, 211	0
38	QG	151/151 (100%)	0.33	9 (5%) 21 10	98, 138, 186, 203	0
38	XG	150/151 (99%)	1.68	56 (37%) 0 0	121, 195, 245, 277	0
39	QH	129/129 (100%)	0.22	5 (3%) 39 20	62, 101, 142, 189	0
39	XH	129/129 (100%)	0.10	5 (3%) 39 20	77, 115, 152, 209	0
40	QI	127/127 (100%)	0.93	22 (17%) 1 0	82, 137, 209, 250	0
40	XI	127/127 (100%)	1.19	24 (18%) 1 0	114, 158, 225, 259	0
41	QJ	98/98 (100%)	0.40	9 (9%) 9 3	71, 121, 175, 200	0
41	XJ	98/98 (100%)	1.57	30 (30%) 0 0	117, 166, 211, 238	0
42	QK	117/117 (100%)	0.85	12 (10%) 6 2	54, 123, 177, 206	0
42	XK	117/117 (100%)	0.02	2 (1%) 70 49	67, 115, 162, 186	0
43	QL	123/123 (100%)	0.05	2 (1%) 72 51	50, 79, 123, 189	0
43	XL	123/123 (100%)	0.26	3 (2%) 59 37	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%)	0.34	8 (7%) 16 7	94, 142, 198, 217	0
44	XM	113/114 (99%)	2.49	58 (51%) 0 0	218, 370, 442, 470	0
45	QN	96/101 (95%)	0.45	6 (6%) 20 8	80, 116, 187, 224	0
45	XN	91/101 (90%)	1.46	26 (28%) 0 0	107, 180, 260, 287	0
46	QO	88/88 (100%)	0.05	2 (2%) 60 39	64, 102, 139, 188	0
46	XO	88/88 (100%)	-0.12	1 (1%) 80 64	76, 116, 160, 209	0
47	QP	82/82 (100%)	0.84	11 (13%) 3 1	78, 99, 166, 223	0
47	XP	80/82 (97%)	0.78	8 (10%) 7 2	72, 107, 158, 222	0
48	QQ	80/80 (100%)	0.65	6 (7%) 14 5	62, 96, 136, 164	0
48	XQ	80/80 (100%)	1.17	13 (16%) 1 1	78, 115, 144, 155	0
49	QR	55/55 (100%)	0.50	3 (5%) 25 11	90, 110, 168, 218	0
49	XR	55/55 (100%)	0.07	2 (3%) 42 22	74, 103, 171, 243	0
50	QS	79/79 (100%)	1.06	17 (21%) 0 0	110, 143, 197, 208	0
50	XS	79/79 (100%)	3.78	52 (65%) 0 0	205, 346, 411, 424	0
51	QT	85/85 (100%)	0.35	2 (2%) 59 37	74, 103, 147, 179	0
51	XT	85/85 (100%)	1.04	11 (12%) 3 1	91, 134, 190, 216	0
52	QU	51/51 (100%)	1.11	14 (27%) 0 0	96, 139, 187, 225	0
52	XU	51/51 (100%)	0.21	2 (3%) 39 20	83, 120, 184, 224	0
All	All	20427/20564 (99%)	0.31	1894 (9%) 8 3	17, 111, 252, 470	0

All (1894) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
8	YH	91	PHE	19.3
9	RI	52	LEU	17.1
8	RH	92	GLY	16.3
9	YI	57	VAL	16.2
6	YF	129	MET	16.1
9	YI	56	VAL	15.8
8	YH	124	THR	15.8
50	XS	29	PRO	14.9
44	XM	93	GLY	14.5
25	YY	63	ALA	13.7
9	YI	15	GLY	13.5
9	RI	1	ALA	13.1
9	RI	2	LYS	12.9

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Mol	Chain	Res	Type	RSRZ
1	RA	2154	A	12.9
1	RA	2179	C	12.8
9	YI	51	GLY	12.4
8	YH	92	GLY	12.3
9	YI	5	GLN	12.2
21	YU	35	VAL	12.2
9	YI	55	PRO	12.1
9	YI	68	PHE	11.7
9	YI	59	THR	11.6
40	XI	42	THR	11.6
44	XM	94	LEU	11.4
8	RH	113	SER	11.2
9	YI	119	ALA	11.2
9	YI	4	VAL	11.2
8	RH	118	PRO	11.1
9	YI	2	LYS	11.1
8	RH	84	ALA	11.0
50	XS	23	GLU	10.9
8	YH	93	SER	10.8
32	XA	209	U	10.7
8	RH	93	SER	10.6
9	RI	66	PHE	10.4
8	RH	80	ILE	10.3
48	QQ	82	VAL	10.3
8	YH	123	ARG	10.3
38	XG	58	LEU	10.2
8	YH	95	GLY	10.2
9	RI	11	GLN	10.2
50	XS	12	LEU	10.2
8	RH	90	LEU	10.1
9	RI	3	LYS	10.1
9	YI	3	LYS	10.0
40	XI	127	SER	10.0
50	XS	38	THR	10.0
1	RA	2147	A	9.9
9	RI	67	THR	9.8
43	XL	123	ALA	9.8
8	RH	122	LEU	9.8
47	QP	80	LYS	9.8
50	XS	70	LEU	9.7
8	YH	112	LYS	9.6
28	Y1	35	LEU	9.6

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Mol	Chain	Res	Type	RSRZ
21	YU	12	VAL	9.5
5	YE	127	GLU	9.4
9	YI	66	PHE	9.3
21	YU	17	ASP	9.2
9	YI	17	ALA	9.1
8	YH	125	THR	9.0
20	YT	55	VAL	9.0
50	XS	47	THR	8.9
45	XN	52	ARG	8.8
18	YR	20	VAL	8.8
8	RH	124	THR	8.8
8	RH	98	ASP	8.7
9	RI	51	GLY	8.6
8	YH	105	ALA	8.6
30	Y3	20	GLY	8.6
7	YG	7	PRO	8.5
7	YG	83	THR	8.5
8	RH	79	THR	8.4
50	XS	71	GLY	8.4
8	RH	105	ALA	8.3
9	RI	78	LEU	8.3
50	XS	39	ILE	8.3
9	YI	25	PRO	8.3
27	Y0	56	LYS	8.3
21	YU	38	ILE	8.2
18	YR	96	VAL	8.2
8	RH	143	ILE	8.1
40	QI	42	THR	8.1
18	YR	103	ALA	8.0
31	Y4	20	ASP	8.0
7	YG	8	VAL	8.0
9	YI	14	ALA	8.0
5	YE	175	ILE	7.9
44	XM	95	PRO	7.9
21	YU	85	ARG	7.9
15	YO	61	GLN	7.9
8	YH	127	GLU	7.9
7	YG	51	PHE	7.9
9	YI	33	ASN	7.9
33	XB	87	ASP	7.9
6	YF	141	ASP	7.9
15	YO	62	LEU	7.8

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Mol	Chain	Res	Type	RSRZ
9	RI	13	ALA	7.8
50	XS	73	PHE	7.8
50	XS	60	PHE	7.7
9	YI	41	PHE	7.7
5	YE	119	ILE	7.7
38	XG	150	PHE	7.6
21	YU	78	LYS	7.6
9	YI	58	ILE	7.6
38	XG	151	ALA	7.5
9	RI	10	LEU	7.5
9	RI	12	VAL	7.5
50	XS	65	MET	7.5
12	YL	5	THR	7.5
21	YU	26	ASN	7.5
38	XG	7	GLY	7.5
21	YU	76	THR	7.4
44	XM	88	LEU	7.4
32	XA	210	C	7.4
8	RH	117	LEU	7.4
21	YU	31	GLY	7.4
1	RA	2138	G	7.3
9	YI	52	LEU	7.3
50	XS	75	PRO	7.3
8	RH	86	ASP	7.3
7	YG	56	GLY	7.3
50	XS	28	LYS	7.3
15	YO	52	SER	7.3
8	YH	87	GLU	7.3
21	YU	27	VAL	7.2
8	RH	85	GLY	7.2
49	QR	19	GLU	7.2
1	YA	613	A	7.2
5	YE	173	THR	7.2
8	RH	149	GLU	7.2
32	QA	86	G	7.1
1	RA	2143	C	7.1
50	XS	25	GLY	7.1
21	YU	24	VAL	7.1
8	RH	74	ALA	7.1
35	QD	35	GLN	7.1
21	YU	59	GLU	7.1
21	YU	11	ILE	7.1

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Mol	Chain	Res	Type	RSRZ
8	YH	82	SER	7.1
1	RA	2110	G	7.1
18	YR	50	GLY	7.1
8	YH	86	ASP	7.0
21	YU	70	ALA	7.0
8	RH	148	ALA	7.0
50	XS	63	ASP	6.9
8	YH	120	GLY	6.9
8	YH	119	ASN	6.9
44	XM	112	ARG	6.9
50	XS	58	PRO	6.8
19	YS	48	LYS	6.8
8	RH	123	ARG	6.8
5	YE	147	LEU	6.8
12	YL	82	LEU	6.8
28	Y1	52	LYS	6.8
8	YH	121	VAL	6.8
41	XJ	8	ILE	6.8
9	YI	60	VAL	6.8
25	YY	62	GLY	6.7
9	YI	48	ILE	6.7
9	YI	67	THR	6.7
9	YI	118	GLY	6.7
1	RA	2146	C	6.7
21	YU	75	ALA	6.7
5	YE	190	ALA	6.7
8	RH	125	THR	6.7
9	RI	30	GLN	6.7
9	YI	93	ASN	6.7
43	QL	123	ALA	6.7
9	RI	46	ASP	6.6
9	YI	50	LYS	6.6
21	YU	19	GLY	6.6
8	RH	91	PHE	6.6
20	YT	3	ARG	6.5
50	XS	64	GLU	6.5
3	RC	234	GLY	6.5
21	YU	51	LEU	6.5
9	YI	13	ALA	6.5
20	RT	1	MET	6.5
33	XB	147	LEU	6.4
7	YG	55	ASP	6.4

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Mol	Chain	Res	Type	RSRZ
20	YT	83	ALA	6.4
23	YW	42	THR	6.4
9	YI	29	GLN	6.3
15	YO	40	ILE	6.3
8	RH	145	ASN	6.3
9	RI	68	PHE	6.3
12	YL	92	LEU	6.3
30	Y3	21	PHE	6.3
50	XS	36	ARG	6.3
9	RI	21	PRO	6.2
8	YH	90	LEU	6.2
9	YI	16	MET	6.2
9	YI	83	ALA	6.2
16	YP	109	ILE	6.2
8	RH	81	ALA	6.2
44	XM	62	PHE	6.2
20	YT	42	GLU	6.2
9	YI	120	ASP	6.2
1	RA	2180	U	6.2
9	YI	44	LYS	6.2
33	QB	51	GLU	6.2
9	RI	114	ALA	6.2
42	XK	125	LYS	6.1
7	YG	41	GLU	6.1
1	YA	2799	A	6.1
30	Y3	19	GLY	6.1
9	YI	30	GLN	6.1
8	YH	106	ALA	6.1
44	XM	89	ARG	6.1
15	YO	60	GLU	6.1
8	RH	147	VAL	6.1
9	YI	81	LYS	6.1
32	XA	1224	U	6.0
45	XN	19	TYR	6.0
20	YT	2	ILE	6.0
30	Y3	13	PHE	6.0
12	YL	101	ILE	6.0
44	XM	82	LEU	6.0
5	YE	121	VAL	6.0
50	XS	26	ASP	6.0
5	YE	144	GLU	6.0
9	RI	33	ASN	6.0

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Mol	Chain	Res	Type	RSRZ
3	RC	236	GLY	5.9
31	Y4	1	MET	5.9
38	XG	72	VAL	5.9
9	YI	12	VAL	5.9
40	QI	89	TYR	5.9
44	XM	63	VAL	5.9
50	XS	24	SER	5.9
7	YG	165	ASP	5.9
15	YO	56	LYS	5.9
30	Y3	57	VAL	5.8
44	XM	107	THR	5.8
9	RI	53	PRO	5.8
9	YI	32	VAL	5.8
9	YI	75	ALA	5.8
23	YW	29	SER	5.8
8	RH	130	VAL	5.8
31	Y4	8	LYS	5.8
45	XN	48	GLN	5.8
12	YL	81	ASP	5.8
21	YU	86	PHE	5.8
9	RI	16	MET	5.7
1	YA	2146	C	5.7
15	YO	27	VAL	5.7
8	YH	133	GLN	5.7
18	YR	52	PRO	5.7
50	XS	37	SER	5.7
44	XM	104	ASN	5.7
21	YU	79	ALA	5.7
8	YH	147	VAL	5.7
1	YA	345	A	5.6
44	XM	111	PRO	5.6
25	YY	35	GLY	5.6
30	Y3	60	CYS	5.6
18	YR	26	ASP	5.6
1	RA	2139	U	5.6
9	YI	125	THR	5.6
38	XG	55	LYS	5.6
50	XS	11	ASP	5.6
8	RH	126	GLY	5.5
1	YA	2181	U	5.5
21	YU	88	ASP	5.5
38	XG	73	GLU	5.5

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Mol	Chain	Res	Type	RSRZ
47	QP	81	ALA	5.5
16	YP	114	ASN	5.5
21	YU	87	GLU	5.5
21	YU	34	ILE	5.5
6	YF	117	SER	5.5
21	YU	28	LEU	5.5
6	YF	152	ASP	5.5
4	YD	91	THR	5.5
21	YU	42	LYS	5.5
1	YA	1067	A	5.5
9	RI	57	VAL	5.5
7	YG	140	ILE	5.5
40	QI	40	ARG	5.5
8	RH	87	GLU	5.5
9	RI	139	VAL	5.5
40	XI	66	VAL	5.5
9	YI	53	PRO	5.5
15	YO	87	ILE	5.5
32	XA	86	G	5.4
9	RI	5	GLN	5.4
1	YA	1078	U	5.4
5	YE	171	ASP	5.4
28	Y1	46	VAL	5.4
51	XT	40	ALA	5.4
41	XJ	12	ALA	5.4
8	YH	131	SER	5.4
41	XJ	71	LEU	5.4
8	YH	143	ILE	5.4
9	RI	58	ILE	5.4
1	YA	1075	C	5.4
6	YF	41	GLU	5.4
9	RI	60	VAL	5.3
8	YH	85	GLY	5.3
8	YH	126	GLY	5.3
9	RI	29	GLN	5.3
8	YH	128	HIS	5.3
47	XP	52	LEU	5.3
20	YT	58	VAL	5.3
50	XS	30	LEU	5.3
41	QJ	102	LEU	5.3
20	YT	15	HIS	5.3
9	YI	10	LEU	5.3

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Mol	Chain	Res	Type	RSRZ
6	YF	115	GLY	5.3
9	YI	28	GLY	5.2
21	YU	5	ARG	5.2
44	XM	110	GLY	5.2
5	YE	25	GLU	5.2
35	QD	26	ALA	5.2
15	YO	41	ALA	5.2
8	RH	128	HIS	5.2
1	YA	2157	G	5.2
18	YR	88	GLY	5.2
7	YG	57	TYR	5.2
25	YY	36	GLN	5.2
1	RA	2149	U	5.2
1	YA	645	C	5.2
8	RH	146	VAL	5.2
48	QQ	6	THR	5.2
8	RH	88	GLY	5.1
9	YI	61	TYR	5.1
9	YI	54	ILE	5.1
7	YG	42	VAL	5.1
8	RH	106	ALA	5.1
31	Y4	10	LEU	5.1
9	YI	65	SER	5.1
38	XG	53	SER	5.1
9	RI	6	ALA	5.1
9	YI	22	PRO	5.1
13	YM	72	PRO	5.1
1	RA	139	U	5.1
38	XG	149	ALA	5.1
14	YN	29	VAL	5.1
9	RI	75	ALA	5.1
8	RH	116	ARG	5.1
8	RH	121	VAL	5.1
50	QS	2	ARG	5.1
31	Y4	25	VAL	5.1
18	YR	55	ASP	5.1
1	YA	1090	A	5.1
12	YL	80	SER	5.1
23	YW	62	ALA	5.1
29	Y2	33	ARG	5.1
33	QB	220	VAL	5.1
21	YU	37	GLY	5.1

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Mol	Chain	Res	Type	RSRZ
20	YT	34	VAL	5.0
8	YH	146	VAL	5.0
7	YG	61	TRP	5.0
9	RI	65	SER	5.0
45	XN	51	PRO	5.0
11	YK	89	ASN	5.0
22	YV	84	PRO	5.0
5	YE	180	LEU	5.0
1	RA	546	U	5.0
41	XJ	6	ILE	5.0
23	YW	52	CYS	5.0
38	XG	65	LEU	5.0
44	XM	92	ARG	5.0
5	YE	12	LEU	5.0
33	XB	186	VAL	4.9
6	YF	178	LYS	4.9
3	YC	238	ASN	4.9
5	YE	128	ALA	4.9
20	YT	35	ALA	4.9
11	RK	71	ARG	4.9
17	YQ	28	SER	4.9
18	YR	46	GLU	4.9
19	YS	3	THR	4.9
27	Y0	36	LYS	4.9
48	XQ	7	LEU	4.9
51	XT	2	ASN	4.9
1	YA	1077	A	4.9
9	YI	43	ALA	4.9
6	YF	34	THR	4.9
8	RH	73	ASN	4.9
19	YS	110	ARG	4.9
7	YG	1	SER	4.9
17	YQ	36	GLN	4.9
20	YT	43	ILE	4.9
9	YI	21	PRO	4.9
22	YV	69	GLU	4.9
5	YE	148	ILE	4.9
41	XJ	73	LEU	4.8
38	XG	64	ALA	4.8
1	RA	2155	U	4.8
1	YA	2307	G	4.8
4	YD	10	GLY	4.8

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Mol	Chain	Res	Type	RSRZ
9	YI	1	ALA	4.8
43	XL	122	LYS	4.8
14	YN	74	GLU	4.8
9	YI	138	VAL	4.8
9	YI	121	ILE	4.8
23	YW	39	GLN	4.8
5	YE	201	ALA	4.8
9	RI	132	ALA	4.8
6	YF	127	TYR	4.8
32	XA	461	A	4.8
21	YU	77	GLY	4.8
4	YD	73	VAL	4.8
8	YH	122	LEU	4.8
19	YS	47	VAL	4.8
39	QH	129	ALA	4.8
5	YE	24	ASN	4.8
21	YU	97	SER	4.8
15	YO	46	GLU	4.7
9	RI	77	VAL	4.7
44	XM	96	VAL	4.7
5	YE	104	ALA	4.7
21	YU	13	LEU	4.7
1	YA	846	U	4.7
9	RI	141	ASP	4.7
47	XP	47	GLU	4.7
21	YU	2	ALA	4.7
7	YG	85	LYS	4.7
9	YI	20	SER	4.7
20	YT	36	LYS	4.7
38	XG	132	THR	4.7
32	QA	85	U	4.7
18	YR	6	GLN	4.7
21	YU	32	LYS	4.7
18	YR	95	ASP	4.7
1	YA	139	U	4.7
5	YE	131	THR	4.6
9	YI	23	VAL	4.6
40	XI	3	ASN	4.6
50	XS	66	VAL	4.6
50	XS	43	MET	4.6
8	YH	144	VAL	4.6
33	QB	50	ASN	4.6

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Mol	Chain	Res	Type	RSRZ
9	YI	84	GLY	4.6
9	RI	7	TYR	4.6
1	RA	138	U	4.6
45	QN	20	PHE	4.6
25	YY	24	GLU	4.6
33	QB	135	MET	4.6
32	QA	1030	U	4.6
51	XT	3	ILE	4.6
9	YI	72	THR	4.6
44	XM	28	ARG	4.6
31	Y4	33	HIS	4.6
9	YI	27	LEU	4.6
33	XB	129	THR	4.6
21	YU	36	GLU	4.6
7	YG	102	ILE	4.6
15	YO	58	ILE	4.6
19	YS	5	ALA	4.6
4	YD	25	THR	4.6
1	YA	2402	U	4.6
8	RH	134	VAL	4.5
45	XN	26	LEU	4.5
50	XS	79	TYR	4.5
7	YG	32	LEU	4.5
38	XG	130	LYS	4.5
18	YR	22	LEU	4.5
21	YU	72	PHE	4.5
44	XM	83	GLY	4.5
50	XS	67	GLY	4.5
44	XM	108	ARG	4.5
8	RH	144	VAL	4.5
50	XS	59	VAL	4.5
20	YT	32	LEU	4.5
38	XG	54	GLY	4.5
20	YT	60	THR	4.5
50	XS	48	ILE	4.5
41	XJ	39	PRO	4.5
6	YF	154	THR	4.4
21	YU	41	VAL	4.4
41	XJ	40	ILE	4.4
4	YD	26	VAL	4.4
23	YW	37	VAL	4.4
9	RI	22	PRO	4.4

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Mol	Chain	Res	Type	RSRZ
1	YA	2306	C	4.4
15	YO	24	THR	4.4
32	QA	88	U	4.4
40	XI	65	THR	4.4
6	RF	79	ARG	4.4
9	RI	37	PHE	4.4
44	XM	81	ASP	4.4
1	YA	2104	C	4.4
1	YA	1172	C	4.4
4	YD	96	ILE	4.4
31	Y4	19	ARG	4.4
8	RH	119	ASN	4.4
8	YH	145	ASN	4.4
21	YU	20	LYS	4.4
45	XN	62	ARG	4.4
6	YF	17	THR	4.4
38	XG	83	THR	4.4
1	YA	1095	A	4.4
20	YT	72	GLN	4.4
50	XS	2	ARG	4.4
20	YT	81	LYS	4.4
40	XI	63	TYR	4.3
50	XS	40	PHE	4.3
33	QB	87	ASP	4.3
8	RH	64	ALA	4.3
5	YE	186	VAL	4.3
19	YS	4	ILE	4.3
33	QB	66	ILE	4.3
6	YF	153	ILE	4.3
8	RH	89	LYS	4.3
7	YG	164	ALA	4.3
8	RH	120	GLY	4.3
12	YL	89	VAL	4.3
1	YA	1175	A	4.3
7	YG	166	GLU	4.3
6	YF	112	ASP	4.3
47	XP	39	PHE	4.3
8	YH	79	THR	4.3
50	XS	13	HIS	4.3
15	YO	59	ALA	4.3
18	YR	19	THR	4.3
44	XM	22	TYR	4.3

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Mol	Chain	Res	Type	RSRZ
1	YA	546	U	4.3
22	YV	94	ALA	4.3
19	YS	6	LYS	4.2
9	RI	35	MET	4.2
23	YW	70	VAL	4.2
33	QB	152	ASP	4.2
30	Y3	22	LYS	4.2
52	QU	22	CYS	4.2
20	YT	31	VAL	4.2
35	QD	24	VAL	4.2
13	YM	103	TYR	4.2
1	YA	1536	C	4.2
6	YF	131	VAL	4.2
7	YG	40	VAL	4.2
32	QA	87	C	4.2
6	YF	78	ILE	4.2
9	YI	62	ALA	4.2
23	YW	41	GLY	4.2
6	YF	44	ALA	4.2
8	YH	84	ALA	4.2
18	YR	25	LEU	4.2
21	YU	89	GLY	4.2
38	XG	74	VAL	4.2
27	Y0	23	ALA	4.2
15	YO	25	ARG	4.2
20	YT	12	ARG	4.2
8	YH	94	ILE	4.2
21	YU	4	ILE	4.2
6	YF	130	GLY	4.2
9	YI	18	ASN	4.1
32	XA	94	G	4.1
3	YC	236	GLY	4.1
4	YD	27	ILE	4.1
9	RI	19	PRO	4.1
9	RI	23	VAL	4.1
41	XJ	7	ARG	4.1
33	QB	26	MET	4.1
19	YS	70	LYS	4.1
26	YZ	33	HIS	4.1
9	YI	31	GLY	4.1
9	YI	69	VAL	4.1
27	Y0	34	GLY	4.1

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Mol	Chain	Res	Type	RSRZ
40	XI	57	VAL	4.1
50	XS	27	LYS	4.1
9	YI	85	ILE	4.1
5	YE	193	VAL	4.1
8	YH	118	PRO	4.1
9	YI	78	LEU	4.1
5	YE	40	ARG	4.1
5	YE	188	MET	4.1
6	YF	140	ILE	4.1
1	RA	2150	C	4.1
15	YO	89	ASP	4.1
47	QP	82	ALA	4.1
32	XA	85	U	4.1
45	XN	25	GLU	4.1
33	QB	28	PRO	4.1
23	YW	67	LYS	4.1
34	XC	41	TYR	4.1
23	YW	58	LEU	4.1
45	QN	29	ILE	4.1
50	QS	48	ILE	4.1
3	RC	239	PHE	4.1
4	YD	55	LYS	4.0
21	YU	71	ILE	4.0
41	QJ	35	GLN	4.0
5	YE	143	LEU	4.0
23	YW	38	ARG	4.0
50	XS	41	PRO	4.0
5	YE	98	LYS	4.0
10	YJ	142	ILE	4.0
44	XM	79	LEU	4.0
50	XS	80	ARG	4.0
9	RI	32	VAL	4.0
38	QG	79	VAL	4.0
41	XJ	74	VAL	4.0
9	RI	119	ALA	4.0
45	XN	53	ASP	4.0
9	YI	49	GLU	4.0
47	QP	47	GLU	4.0
15	YO	113	ALA	4.0
38	XG	43	TYR	4.0
44	XM	70	ARG	4.0
23	YW	21	GLY	4.0

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Mol	Chain	Res	Type	RSRZ
31	Y4	9	LYS	4.0
40	XI	64	ILE	4.0
6	YF	114	ARG	4.0
41	XJ	72	ARG	4.0
1	RA	2144	G	4.0
44	XM	109	LYS	4.0
9	RI	20	SER	4.0
9	YI	139	VAL	3.9
6	YF	20	ASN	3.9
9	YI	46	ASP	3.9
3	RC	235	GLU	3.9
23	YW	69	GLU	3.9
23	YW	54	ARG	3.9
40	XI	67	LYS	3.9
18	YR	27	ILE	3.9
44	XM	71	GLU	3.9
33	QB	73	ARG	3.9
41	XJ	10	LEU	3.9
45	XN	22	LYS	3.9
47	QP	22	ALA	3.9
48	XQ	6	THR	3.9
51	XT	65	LEU	3.9
21	YU	50	ALA	3.9
41	XJ	11	LYS	3.9
24	YX	32	LEU	3.9
28	Y1	34	GLU	3.9
18	YR	43	ASN	3.9
18	YR	87	GLN	3.9
44	XM	84	CYS	3.9
9	RI	54	ILE	3.9
50	XS	31	ARG	3.9
15	YO	50	ALA	3.9
1	YA	1870	C	3.9
9	YI	128	ILE	3.9
7	YG	104	LEU	3.9
9	RI	120	ASP	3.9
44	XM	51	GLN	3.9
15	YO	26	LEU	3.9
16	YP	111	GLU	3.9
9	RI	113	ALA	3.9
7	YG	33	THR	3.9
7	YG	130	ILE	3.9

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Mol	Chain	Res	Type	RSRZ
33	XB	150	ILE	3.9
9	YI	45	THR	3.8
12	YL	88	GLY	3.8
44	QM	32	ILE	3.8
33	XB	66	ILE	3.8
9	YI	123	ALA	3.8
40	QI	39	GLY	3.8
44	XM	67	ASP	3.8
18	YR	62	GLU	3.8
50	XS	61	VAL	3.8
7	YG	103	ASN	3.8
9	RI	38	CYS	3.8
31	Y4	35	GLN	3.8
9	YI	42	ASN	3.8
4	YD	186	LEU	3.8
17	YQ	7	VAL	3.8
38	XG	15	PRO	3.8
7	YG	45	ALA	3.8
12	YL	108	ALA	3.8
13	YM	124	LEU	3.8
50	XS	16	LYS	3.8
14	YN	63	ARG	3.8
12	YL	74	THR	3.8
23	YW	56	HIS	3.8
6	YF	38	GLY	3.8
9	RI	86	LYS	3.8
13	YM	110	GLU	3.8
34	XC	160	GLU	3.8
45	XN	18	LYS	3.8
4	YD	97	SER	3.8
9	RI	98	GLY	3.8
30	Y3	48	MET	3.8
28	R1	52	LYS	3.8
3	RC	238	ASN	3.8
36	QE	102	THR	3.8
38	XG	143	MET	3.7
1	RA	2148	G	3.7
9	RI	138	VAL	3.7
51	XT	43	LYS	3.7
11	YK	68	GLY	3.7
18	YR	34	GLU	3.7
45	QN	51	PRO	3.7

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Mol	Chain	Res	Type	RSRZ
18	YR	63	VAL	3.7
20	YT	85	VAL	3.7
7	YG	129	GLU	3.7
23	YW	51	GLY	3.7
1	RA	1175	A	3.7
41	XJ	63	ASP	3.7
14	YN	73	ASN	3.7
17	YQ	1	ALA	3.7
21	YU	74	ALA	3.7
33	XB	82	ALA	3.7
5	YE	169	VAL	3.7
41	XJ	75	ASP	3.7
7	YG	35	THR	3.7
30	Y3	50	SER	3.7
51	XT	42	ASP	3.7
1	YA	228	C	3.7
5	YE	187	VAL	3.7
32	XA	1312	G	3.7
32	XA	81	A	3.7
8	RH	131	SER	3.7
15	YO	65	THR	3.7
21	YU	30	SER	3.7
5	YE	138	LEU	3.7
33	QB	29	PHE	3.7
51	XT	67	HIS	3.7
6	YF	10	GLU	3.7
8	RH	77	THR	3.7
14	YN	113	ILE	3.7
8	YH	20	ASN	3.7
1	YA	1066	U	3.7
25	YY	13	GLU	3.7
50	QS	38	THR	3.7
10	YJ	53	TYR	3.7
7	YG	147	LEU	3.6
48	QQ	3	LYS	3.6
6	YF	120	SER	3.6
6	YF	105	ILE	3.6
8	YH	148	ALA	3.6
19	YS	44	ALA	3.6
33	XB	115	ASP	3.6
7	YG	9	VAL	3.6
30	Y3	51	LYS	3.6

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Mol	Chain	Res	Type	RSRZ
13	YM	33	LEU	3.6
38	XG	57	GLU	3.6
9	YI	98	GLY	3.6
1	YA	1537	G	3.6
38	QG	3	ARG	3.6
1	RA	2108	A	3.6
9	YI	129	GLU	3.6
15	YO	88	LYS	3.6
25	YY	21	LEU	3.6
7	YG	19	ASN	3.6
15	YO	55	GLU	3.6
6	YF	156	THR	3.6
9	RI	47	SER	3.6
39	XH	1	SER	3.6
12	YL	107	PHE	3.6
5	YE	57	LYS	3.6
9	RI	27	LEU	3.6
44	XM	73	SER	3.6
6	YF	39	VAL	3.6
44	XM	30	LYS	3.6
50	XS	10	ILE	3.6
9	YI	26	ALA	3.6
23	YW	59	PHE	3.6
8	YH	141	LYS	3.6
38	XG	71	THR	3.6
44	XM	39	ALA	3.6
6	YF	51	ASN	3.6
7	YG	127	GLN	3.6
9	RI	48	ILE	3.6
32	XA	79	G	3.6
27	Y0	25	THR	3.6
15	YO	66	GLY	3.5
44	XM	68	LEU	3.5
48	XQ	43	LEU	3.5
23	YW	34	SER	3.5
1	YA	137	U	3.5
6	YF	155	ILE	3.5
20	RT	16	VAL	3.5
38	XG	85	GLN	3.5
8	YH	73	ASN	3.5
13	YM	41	LEU	3.5
35	QD	23	GLY	3.5

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Mol	Chain	Res	Type	RSRZ
12	YL	70	LYS	3.5
1	RA	2136	G	3.5
31	Y4	36	ARG	3.5
44	XM	97	ARG	3.5
17	YQ	87	VAL	3.5
1	RA	884	U	3.5
12	YL	77	ILE	3.5
5	YE	10	SER	3.5
1	RA	2145	C	3.5
13	YM	136	MET	3.5
45	XN	49	THR	3.5
23	RW	51	GLY	3.5
45	XN	77	GLY	3.5
52	QU	23	GLU	3.5
1	YA	1173	U	3.5
6	YF	59	ILE	3.5
11	YK	38	ILE	3.5
1	RA	2885	G	3.5
30	Y3	9	ALA	3.5
1	RA	2309	A	3.5
1	YA	2142	A	3.5
7	YG	16	VAL	3.5
48	XQ	22	VAL	3.5
20	YT	37	ASP	3.5
6	YF	128	SER	3.5
33	XB	124	THR	3.5
1	YA	2107	G	3.5
8	RH	78	VAL	3.5
9	RI	72	THR	3.5
52	QU	37	TYR	3.5
3	YC	240	GLY	3.5
48	XQ	5	ARG	3.5
29	R2	46	LYS	3.5
50	XS	74	ALA	3.5
20	YT	56	GLU	3.5
8	RH	94	ILE	3.5
18	YR	66	HIS	3.5
42	QK	20	ALA	3.5
8	YH	116	ARG	3.4
9	RI	59	THR	3.4
44	QM	113	LYS	3.4
1	RA	2153	C	3.4

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Mol	Chain	Res	Type	RSRZ
50	XS	62	THR	3.4
28	Y1	20	TYR	3.4
45	XN	3	GLN	3.4
6	YF	174	PHE	3.4
5	YE	198	GLU	3.4
5	YE	194	LYS	3.4
31	Y4	15	LYS	3.4
38	QG	4	ARG	3.4
6	YF	176	PHE	3.4
8	YH	77	THR	3.4
1	YA	1076	C	3.4
18	YR	21	ARG	3.4
15	YO	51	ALA	3.4
16	YP	11	GLN	3.4
21	YU	48	VAL	3.4
5	YE	120	VAL	3.4
23	YW	63	ASP	3.4
23	RW	84	GLU	3.4
38	XG	147	ASN	3.4
8	YH	142	VAL	3.4
40	XI	15	ALA	3.4
9	RI	121	ILE	3.4
7	YG	6	ALA	3.4
20	YT	20	ALA	3.4
33	XB	109	SER	3.4
44	XM	99	GLN	3.4
44	XM	98	GLY	3.4
8	RH	127	GLU	3.4
25	YY	10	SER	3.4
48	QQ	19	SER	3.4
1	YA	2602	A	3.4
31	Y4	21	GLY	3.4
6	YF	54	ALA	3.4
6	YF	77	LYS	3.4
9	YI	109	ALA	3.4
32	XA	1031	C	3.4
32	XA	1314	C	3.4
38	XG	61	PHE	3.4
5	YE	17	THR	3.4
6	YF	83	PRO	3.4
9	RI	137	LEU	3.4
25	RY	63	ALA	3.4

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Mol	Chain	Res	Type	RSRZ
44	XM	85	TYR	3.4
12	YL	121	THR	3.4
20	YT	16	VAL	3.3
44	QM	3	ILE	3.3
21	YU	21	ARG	3.3
42	QK	79	LYS	3.3
1	RA	277	G	3.3
1	YA	1171	G	3.3
15	YO	71	ALA	3.3
17	YQ	117	ALA	3.3
49	QR	63	TYR	3.3
9	YI	122	GLU	3.3
23	YW	71	LYS	3.3
32	XA	87	C	3.3
42	QK	17	ASP	3.3
25	YY	14	LEU	3.3
33	XB	135	MET	3.3
6	YF	84	ILE	3.3
30	Y3	58	ILE	3.3
7	YG	52	GLY	3.3
4	YD	43	ASP	3.3
5	YE	103	GLY	3.3
9	YI	24	GLY	3.3
26	YZ	32	GLY	3.3
9	YI	79	LEU	3.3
15	YO	19	GLN	3.3
6	YF	111	ARG	3.3
20	YT	33	LYS	3.3
33	QB	151	LYS	3.3
50	XS	57	VAL	3.3
33	XB	8	MET	3.3
38	XG	84	TYR	3.3
33	XB	151	LYS	3.3
12	YL	122	VAL	3.3
23	YW	50	VAL	3.3
9	YI	95	ASP	3.3
20	YT	79	ASP	3.3
17	YQ	37	ALA	3.3
19	YS	43	ALA	3.3
44	QM	4	ALA	3.3
5	YE	23	PHE	3.3
6	YF	172	PHE	3.3

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Mol	Chain	Res	Type	RSRZ
1	YA	2309	A	3.3
6	RF	118	ALA	3.3
38	XG	146	ALA	3.3
41	XJ	76	ILE	3.3
1	YA	2106	U	3.3
6	YF	22	ASN	3.3
20	YT	59	ASN	3.3
20	YT	14	PRO	3.3
38	XG	16	LYS	3.3
21	YU	9	GLU	3.3
33	XB	128	LEU	3.3
47	QP	19	VAL	3.3
1	YA	2147	A	3.2
8	YH	129	GLU	3.2
12	YL	106	GLU	3.2
44	XM	38	ILE	3.2
4	YD	75	ALA	3.2
6	YF	116	LEU	3.2
8	RH	71	LYS	3.2
33	XB	17	HIS	3.2
52	QU	31	VAL	3.2
4	YD	187	LEU	3.2
5	YE	48	THR	3.2
31	Y4	38	GLY	3.2
21	YU	94	PHE	3.2
33	QB	224	ARG	3.2
1	YA	1459	G	3.2
12	YL	143	GLU	3.2
20	YT	70	HIS	3.2
9	YI	11	GLN	3.2
7	YG	5	LYS	3.2
35	QD	27	ILE	3.2
37	XF	8	PHE	3.2
40	XI	36	GLN	3.2
9	RI	42	ASN	3.2
29	Y2	43	THR	3.2
38	XG	136	LYS	3.2
34	XC	195	ILE	3.2
44	XM	37	GLY	3.2
6	YF	76	PHE	3.2
41	XJ	66	GLU	3.2
40	XI	8	THR	3.2

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Mol	Chain	Res	Type	RSRZ
33	QB	8	MET	3.2
38	QG	84	TYR	3.2
5	YE	102	ARG	3.2
12	YL	78	ARG	3.2
6	RF	78	ILE	3.2
12	YL	142	ILE	3.2
14	YN	75	ILE	3.2
27	Y0	22	THR	3.2
33	QB	150	ILE	3.2
38	QG	80	GLY	3.2
50	QS	14	LEU	3.2
7	YG	131	VAL	3.2
19	YS	2	GLU	3.2
9	YI	70	THR	3.2
10	YJ	44	TYR	3.2
4	YD	188	LEU	3.2
21	YU	52	ASN	3.2
25	YY	1	MET	3.2
32	QA	1032	G	3.2
20	YT	10	VAL	3.2
21	YU	58	VAL	3.2
38	XG	8	GLN	3.2
5	YE	122	GLU	3.2
8	RH	75	LEU	3.2
19	YS	40	ASN	3.2
7	YG	50	THR	3.2
17	YQ	20	ALA	3.2
5	YE	164	LEU	3.1
6	RF	77	LYS	3.1
9	YI	64	ARG	3.1
5	YE	179	SER	3.1
9	YI	103	ALA	3.1
20	YT	1	MET	3.1
18	YR	33	VAL	3.1
23	YW	28	GLU	3.1
33	XB	209	VAL	3.1
5	YE	189	THR	3.1
30	Y3	23	HIS	3.1
1	RA	2106	U	3.1
21	YU	25	LYS	3.1
32	QA	79	G	3.1
33	XB	79	VAL	3.1

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Mol	Chain	Res	Type	RSRZ
44	XM	113	LYS	3.1
8	YH	74	ALA	3.1
7	YG	84	LYS	3.1
7	YG	72	ASN	3.1
11	YK	37	ASP	3.1
18	YR	102	SER	3.1
44	XM	20	SER	3.1
33	QB	124	THR	3.1
44	XM	78	ARG	3.1
33	QB	67	LEU	3.1
52	QU	3	ILE	3.1
33	XB	94	ARG	3.1
44	XM	46	GLU	3.1
5	YE	172	ALA	3.1
38	XG	102	TRP	3.1
19	YS	103	ILE	3.1
27	Y0	41	HIS	3.1
20	YT	80	TRP	3.1
5	YE	174	GLY	3.1
41	XJ	77	VAL	3.1
23	YW	18	LYS	3.1
5	YE	11	ALA	3.1
22	YV	74	ALA	3.1
38	XG	48	THR	3.1
23	YW	22	VAL	3.1
6	YF	28	PRO	3.1
18	YR	61	ALA	3.1
41	QJ	10	LEU	3.1
1	YA	2136	G	3.1
44	XM	87	GLY	3.1
20	YT	64	LYS	3.1
40	XI	128	LYS	3.1
9	RI	14	ALA	3.1
9	RI	40	ALA	3.1
15	YO	57	ALA	3.1
6	YF	113	PHE	3.0
18	YR	24	LYS	3.0
38	XG	44	SER	3.0
1	YA	2141	G	3.0
20	YT	61	LEU	3.0
25	YY	37	LEU	3.0
25	YY	56	LEU	3.0

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Mol	Chain	Res	Type	RSRZ
50	QS	12	LEU	3.0
6	YF	53	ALA	3.0
7	YG	173	ALA	3.0
9	YI	86	LYS	3.0
32	XA	1534	A	3.0
51	XT	41	GLY	3.0
13	YM	7	THR	3.0
48	QQ	22	VAL	3.0
19	YS	97	LEU	3.0
8	YH	89	LYS	3.0
26	YZ	55	LYS	3.0
38	XG	17	PHE	3.0
20	YT	75	GLY	3.0
34	XC	106	ARG	3.0
1	RA	1065	U	3.0
7	YG	170	THR	3.0
1	YA	2145	C	3.0
32	XA	207	C	3.0
13	YM	135	VAL	3.0
3	YC	241	LYS	3.0
33	XB	15	PHE	3.0
17	YQ	22	GLY	3.0
18	YR	29	THR	3.0
40	XI	27	ILE	3.0
48	XQ	37	ILE	3.0
14	YN	98	LEU	3.0
26	YZ	41	PRO	3.0
8	RH	47	PHE	3.0
23	YW	81	ILE	3.0
1	YA	1044	C	3.0
32	QA	841	C	3.0
5	YE	9	GLN	3.0
7	YG	49	LEU	3.0
19	YS	31	GLN	3.0
46	QO	2	LEU	3.0
24	YX	2	ARG	3.0
33	XB	34	ARG	3.0
6	YF	150	GLY	3.0
41	QJ	75	ASP	3.0
6	RF	74	ALA	3.0
14	YN	72	ASP	3.0
17	YQ	34	ALA	3.0

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Mol	Chain	Res	Type	RSRZ
40	QI	61	ASP	3.0
8	YH	115	VAL	3.0
9	RI	4	VAL	3.0
20	RT	92	ASN	3.0
8	RH	76	GLU	3.0
51	QT	3	ILE	3.0
10	YJ	128	ASN	3.0
48	XQ	28	VAL	3.0
51	XT	35	TYR	3.0
9	YI	94	LYS	3.0
16	YP	8	GLU	3.0
13	YM	106	ASP	2.9
6	YF	163	GLU	2.9
23	RW	45	HIS	2.9
23	YW	53	GLY	2.9
3	RC	241	LYS	2.9
31	Y4	34	LYS	2.9
9	YI	117	THR	2.9
32	XA	1271	A	2.9
33	XB	106	VAL	2.9
16	YP	42	PHE	2.9
19	YS	68	ASP	2.9
9	RI	134	SER	2.9
9	YI	137	LEU	2.9
7	YG	82	PHE	2.9
13	YM	39	GLY	2.9
15	YO	93	ASP	2.9
19	YS	16	LYS	2.9
21	YU	53	GLN	2.9
7	YG	161	VAL	2.9
13	YM	52	ALA	2.9
19	YS	72	THR	2.9
1	YA	1420	A	2.9
6	YF	16	MET	2.9
32	XA	1441	A	2.9
9	YI	97	VAL	2.9
18	YR	75	VAL	2.9
17	YQ	86	SER	2.9
23	YW	45	HIS	2.9
38	QG	17	PHE	2.9
14	YN	37	THR	2.9
20	YT	47	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
20	YT	76	ARG	2.9
1	YA	101	A	2.9
39	XH	129	ALA	2.9
1	YA	2585	U	2.9
8	YH	9	VAL	2.9
18	YR	60	LYS	2.9
23	YW	55	ASP	2.9
17	YQ	110	GLU	2.9
19	YS	108	SER	2.9
9	RI	118	GLY	2.9
29	Y2	1	MET	2.9
8	YH	140	ALA	2.9
15	YO	37	ALA	2.9
31	Y4	37	GLN	2.9
34	QC	167	TYR	2.9
12	YL	144	GLU	2.9
29	Y2	42	LEU	2.9
38	XG	95	ARG	2.9
3	YC	63	ILE	2.9
4	YD	185	ASN	2.9
1	YA	136	G	2.9
12	YL	75	ALA	2.9
40	XI	129	ARG	2.9
9	RI	71	LYS	2.9
41	XJ	41	PRO	2.9
20	RT	53	VAL	2.8
21	YU	69	VAL	2.8
41	QJ	74	VAL	2.8
9	RI	107	GLU	2.8
10	YJ	98	GLU	2.8
4	YD	6	GLY	2.8
33	XB	148	GLY	2.8
40	QI	34	LEU	2.8
11	YK	2	ILE	2.8
38	XG	76	SER	2.8
1	YA	12	U	2.8
33	XB	212	TYR	2.8
9	RI	63	ASP	2.8
33	XB	213	LEU	2.8
8	RH	139	PHE	2.8
9	RI	41	PHE	2.8
38	XG	87	PRO	2.8

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Mol	Chain	Res	Type	RSRZ
33	XB	127	LYS	2.8
3	YC	102	TYR	2.8
13	YM	60	GLN	2.8
45	XN	1	ALA	2.8
7	YG	86	LEU	2.8
8	YH	88	GLY	2.8
45	XN	15	LEU	2.8
21	YU	57	ILE	2.8
9	RI	87	SER	2.8
25	RY	7	ARG	2.8
38	XG	52	ARG	2.8
40	QI	129	ARG	2.8
1	YA	2151	U	2.8
13	YM	73	ILE	2.8
1	YA	2103	C	2.8
4	YD	47	ALA	2.8
14	YN	70	THR	2.8
44	XM	54	THR	2.8
9	YI	63	ASP	2.8
40	XI	56	MET	2.8
44	XM	26	LYS	2.8
30	Y3	27	ASN	2.8
48	XQ	60	ILE	2.8
1	YA	1535	A	2.8
4	YD	74	GLU	2.8
8	RH	112	LYS	2.8
9	RI	24	GLY	2.8
8	YH	3	VAL	2.8
32	QA	1031	C	2.8
3	YC	47	ARG	2.8
9	RI	111	THR	2.8
44	XM	80	MET	2.8
28	Y1	14	ALA	2.8
6	YF	75	GLY	2.8
7	YG	167	VAL	2.8
9	YI	47	SER	2.8
19	YS	84	ARG	2.8
32	XA	1305	G	2.8
38	XG	75	LYS	2.8
50	XS	76	THR	2.8
44	XM	31	ALA	2.8
20	YT	17	SER	2.8

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Mol	Chain	Res	Type	RSRZ
17	YQ	94	LEU	2.8
40	XI	62	LEU	2.8
6	YF	142	TYR	2.8
35	XD	27	ILE	2.8
3	YC	258	SER	2.8
22	YV	42	LEU	2.8
23	YW	19	ARG	2.8
24	YX	49	ARG	2.8
5	YE	90	GLN	2.7
10	YJ	92	MET	2.7
3	YC	237	ARG	2.7
5	YE	4	VAL	2.7
5	YE	126	VAL	2.7
44	QM	42	VAL	2.7
44	XM	103	THR	2.7
1	YA	2150	C	2.7
1	YA	2313	C	2.7
5	YE	87	ALA	2.7
8	YH	139	PHE	2.7
10	YJ	74	TYR	2.7
22	YV	22	ALA	2.7
4	YD	28	GLU	2.7
8	RH	70	GLU	2.7
8	YH	18	GLN	2.7
32	XA	80	A	2.7
30	Y3	46	LYS	2.7
5	YE	178	VAL	2.7
17	YQ	99	VAL	2.7
33	XB	33	ALA	2.7
10	RJ	142	ILE	2.7
28	Y1	45	HIS	2.7
6	YF	79	ARG	2.7
32	QA	1493	A	2.7
50	XS	78	THR	2.7
16	YP	90	ALA	2.7
44	XM	42	VAL	2.7
6	YF	31	GLU	2.7
5	YE	21	ARG	2.7
8	YH	78	VAL	2.7
32	QA	1362	A	2.7
32	XA	1302	C	2.7
42	QK	18	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
34	QC	79	LYS	2.7
41	XJ	98	VAL	2.7
44	XM	61	LYS	2.7
6	YF	108	PRO	2.7
33	XB	146	SER	2.7
6	YF	99	PHE	2.7
9	RI	96	LYS	2.7
9	YI	130	GLY	2.7
12	YL	91	ASP	2.7
19	YS	92	ARG	2.7
23	YW	43	LYS	2.7
1	RA	1094	U	2.7
1	RA	2402	U	2.7
1	YA	2152	G	2.7
9	YI	8	VAL	2.7
21	YU	56	GLY	2.7
32	XA	212	G	2.7
41	XJ	38	GLY	2.7
1	YA	1606	C	2.7
4	YD	151	THR	2.7
33	XB	83	ALA	2.7
16	YP	37	LYS	2.7
16	YP	73	PHE	2.7
25	YY	59	GLU	2.7
38	XG	56	SER	2.7
32	XA	208	U	2.7
14	YN	38	LEU	2.7
26	YZ	7	THR	2.7
6	RF	75	GLY	2.7
7	YG	110	HIS	2.7
5	YE	176	ASP	2.7
23	RW	40	ARG	2.7
32	XA	1313	U	2.7
45	XN	61	ASN	2.7
46	QO	16	ARG	2.7
38	XG	18	GLY	2.7
9	YI	39	LYS	2.6
23	YW	48	ALA	2.7
48	XQ	72	TRP	2.6
22	YV	45	ASP	2.6
31	Y4	14	CYS	2.6
40	QI	88	GLU	2.6

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Mol	Chain	Res	Type	RSRZ
47	QP	45	GLU	2.6
5	YE	47	LYS	2.6
8	RH	99	ILE	2.6
19	YS	98	LYS	2.6
1	YA	549	G	2.6
1	YA	2110	G	2.6
17	YQ	82	LEU	2.6
52	QU	34	ARG	2.6
19	YS	94	ASP	2.6
1	YA	1065	U	2.6
20	YT	82	LYS	2.6
22	YV	77	VAL	2.6
26	YZ	2	LYS	2.6
43	QL	24	GLU	2.6
52	QU	35	GLU	2.6
7	YG	18	ILE	2.6
17	YQ	97	ILE	2.6
6	RF	76	PHE	2.6
7	YG	168	VAL	2.6
19	YS	26	GLY	2.6
38	XG	121	ASN	2.6
17	YQ	70	GLN	2.6
24	YX	17	ARG	2.6
41	XJ	9	ARG	2.6
17	YQ	114	ALA	2.6
7	YG	99	GLY	2.6
33	QB	63	LYS	2.6
13	YM	131	VAL	2.6
33	QB	64	GLY	2.6
38	XG	81	GLY	2.6
23	YW	49	ASN	2.6
9	RI	79	LEU	2.6
34	XC	123	LEU	2.6
23	YW	73	PRO	2.6
33	QB	157	PRO	2.6
49	XR	73	HIS	2.6
45	XN	60	ARG	2.6
25	YY	45	GLN	2.6
40	QI	62	LEU	2.6
6	YF	52	ALA	2.6
15	YO	107	ALA	2.6
38	XG	38	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
9	YI	19	PRO	2.6
6	YF	30	VAL	2.6
19	YS	32	ALA	2.6
42	QK	125	LYS	2.6
9	RI	97	VAL	2.6
12	YL	28	GLY	2.6
12	YL	115	GLU	2.6
18	YR	8	GLY	2.6
21	YU	82	VAL	2.6
6	RF	102	LEU	2.6
6	RF	116	LEU	2.6
47	XP	57	ILE	2.6
6	YF	171	ALA	2.6
1	YA	343	C	2.6
5	YE	197	GLU	2.6
11	YK	110	GLU	2.6
20	YT	4	GLU	2.6
21	YU	14	THR	2.6
15	YO	47	VAL	2.6
22	YV	72	VAL	2.6
38	XG	49	LEU	2.6
25	YY	31	GLN	2.6
19	YS	49	LYS	2.6
22	YV	60	VAL	2.6
41	XJ	51	VAL	2.6
1	YA	344	A	2.6
37	QF	51	ILE	2.6
39	XH	60	LEU	2.6
6	YF	7	TYR	2.6
6	YF	23	SER	2.6
30	Y3	10	ALA	2.6
41	XJ	34	ALA	2.6
38	QG	7	GLY	2.6
7	YG	128	THR	2.6
26	YZ	9	THR	2.6
18	YR	98	ILE	2.6
1	RA	2152	G	2.6
1	YA	357	C	2.6
8	YH	19	VAL	2.6
36	XE	157	GLY	2.6
9	RI	102	ARG	2.6
41	XJ	91	ASP	2.6

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Mol	Chain	Res	Type	RSRZ
50	QS	63	ASP	2.6
3	YC	103	ILE	2.6
26	YZ	43	ILE	2.6
42	QK	110	THR	2.6
9	RI	112	LYS	2.5
5	YE	155	GLU	2.5
1	RA	140	C	2.5
7	YG	101	VAL	2.5
15	YO	53	THR	2.5
48	QQ	69	THR	2.5
17	YQ	43	GLN	2.5
21	YU	62	ALA	2.5
5	YE	14	VAL	2.5
20	YT	71	GLY	2.5
21	YU	80	ASP	2.5
52	QU	36	PHE	2.5
31	Y4	22	VAL	2.5
33	XB	91	VAL	2.5
12	YL	19	LEU	2.5
21	YU	40	LEU	2.5
45	XN	47	LEU	2.5
34	XC	36	PHE	2.5
40	XI	19	PHE	2.5
29	Y2	34	ARG	2.5
18	YR	37	GLU	2.5
10	YJ	45	THR	2.5
7	YG	23	ILE	2.5
27	Y0	26	SER	2.5
35	QD	28	ASP	2.5
3	YC	99	GLU	2.5
8	RH	129	GLU	2.5
38	XG	59	GLU	2.5
12	YL	113	ALA	2.5
1	YA	2143	C	2.5
17	YQ	111	LYS	2.5
32	QA	412	A	2.5
33	XB	154	GLY	2.5
34	XC	194	VAL	2.5
45	XN	59	GLN	2.5
14	YN	83	LEU	2.5
1	YA	914	G	2.5
21	YU	29	SER	2.5

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Mol	Chain	Res	Type	RSRZ
6	YF	32	LYS	2.5
15	YO	85	LYS	2.5
35	QD	1	ALA	2.5
6	YF	151	LEU	2.5
47	XP	50	THR	2.5
1	RA	613	A	2.5
33	XB	72	LYS	2.5
40	XI	41	GLU	2.5
3	YC	46	GLY	2.5
6	YF	146	ASP	2.5
9	RI	95	ASP	2.5
12	YL	62	PRO	2.5
13	YM	93	VAL	2.5
3	YC	109	LEU	2.5
7	YG	106	LEU	2.5
41	XJ	37	ARG	2.5
44	XM	90	HIS	2.5
50	QS	30	LEU	2.5
12	YL	99	ASN	2.5
21	YU	39	ASN	2.5
20	RT	24	MET	2.5
32	QA	81	A	2.5
35	QD	178	GLU	2.5
5	YE	168	ASP	2.5
6	YF	143	ASP	2.5
14	YN	111	ALA	2.5
28	Y1	33	LEU	2.5
34	XC	154	GLY	2.5
38	XG	131	GLY	2.5
46	XO	16	ARG	2.5
13	YM	46	ILE	2.5
33	XB	163	ILE	2.5
3	RC	237	ARG	2.5
11	YK	103	VAL	2.5
35	QD	36	ALA	2.5
47	QP	20	VAL	2.5
50	QS	50	VAL	2.5
13	YM	45	GLN	2.5
19	YS	8	ARG	2.5
12	YL	124	GLY	2.5
18	YR	51	VAL	2.5
23	YW	31	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
4	YD	38	LYS	2.5
22	YV	48	MET	2.5
38	XG	128	GLU	2.5
52	QU	30	GLU	2.5
52	XU	34	ARG	2.5
5	YE	13	THR	2.5
6	YF	89	THR	2.5
18	YR	38	VAL	2.5
19	YS	39	THR	2.5
47	XP	20	VAL	2.5
9	RI	103	ALA	2.5
8	RH	132	PHE	2.5
19	YS	67	ASP	2.5
26	YZ	8	GLN	2.5
28	Y1	47	ILE	2.5
9	YI	127	SER	2.5
34	QC	169	GLU	2.5
3	RC	233	GLY	2.4
18	RR	50	GLY	2.4
20	YT	45	ALA	2.4
32	QA	209	U	2.4
6	YF	175	PRO	2.4
8	YH	70	GLU	2.4
9	YI	141	ASP	2.4
31	Y4	26	ILE	2.4
5	YE	60	TRP	2.4
12	YL	22	GLY	2.4
33	QB	84	LEU	2.4
33	QB	186	VAL	2.4
1	RA	1072	C	2.4
9	YI	132	ALA	2.4
19	RS	110	ARG	2.4
26	YZ	36	GLU	2.4
27	Y0	35	GLU	2.4
33	XB	200	PRO	2.4
44	XM	72	ILE	2.4
34	XC	166	TRP	2.4
52	QU	27	VAL	2.4
6	YF	21	TYR	2.4
9	YI	7	TYR	2.4
38	XG	67	ASN	2.4
1	RA	2140	G	2.4

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Mol	Chain	Res	Type	RSRZ
20	YT	30	ILE	2.4
32	QA	844	G	2.4
32	QA	1534	A	2.4
8	YH	27	ARG	2.4
35	QD	21	LYS	2.4
30	Y3	56	LEU	2.4
40	XI	39	GLY	2.4
41	QJ	91	ASP	2.4
18	YR	35	PHE	2.4
33	XB	31	PHE	2.4
40	QI	19	PHE	2.4
23	YW	35	ILE	2.4
21	YU	73	ASN	2.4
7	YG	153	PRO	2.4
9	RI	25	PRO	2.4
26	YZ	54	VAL	2.4
38	XG	68	VAL	2.4
39	XH	82	LEU	2.4
41	XJ	80	THR	2.4
28	Y1	37	LYS	2.4
38	QG	10	LYS	2.4
45	XN	72	PHE	2.4
6	YF	33	ILE	2.4
20	YT	67	VAL	2.4
27	Y0	38	LEU	2.4
40	QI	28	VAL	2.4
42	QK	29	THR	2.4
42	QK	83	VAL	2.4
50	QS	15	LEU	2.4
44	QM	40	GLU	2.4
35	QD	20	LEU	2.4
39	XH	58	LEU	2.4
12	YL	114	GLY	2.4
28	Y1	23	THR	2.4
38	XG	69	ARG	2.4
1	YA	2180	U	2.4
5	YE	200	LEU	2.4
15	YO	103	VAL	2.4
34	XC	172	VAL	2.4
45	XN	11	LYS	2.4
14	YN	39	PRO	2.4
28	Y1	40	PRO	2.4

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Mol	Chain	Res	Type	RSRZ
32	QA	78	A	2.4
32	XA	1021	A	2.4
22	YV	82	TYR	2.4
34	QC	187	GLU	2.4
18	YR	92	TRP	2.4
39	QH	53	ASP	2.4
38	XG	78	ARG	2.4
40	QI	91	GLU	2.4
42	QK	65	ALA	2.4
44	XM	76	ILE	2.4
8	YH	117	LEU	2.4
9	YI	77	VAL	2.4
1	YA	138	U	2.4
15	YO	38	GLN	2.4
33	XB	153	MET	2.4
45	XN	23	ARG	2.4
9	YI	36	GLU	2.4
17	YQ	81	GLY	2.3
19	YS	34	ASP	2.3
7	YG	87	GLN	2.3
33	QB	48	MET	2.3
41	XJ	49	PHE	2.3
47	QP	21	VAL	2.3
16	YP	110	LYS	2.3
17	YQ	4	LYS	2.3
22	YV	55	GLU	2.3
3	YC	105	ALA	2.3
7	YG	58	ALA	2.3
52	XU	37	TYR	2.3
40	QI	32	ARG	2.3
1	YA	1407	G	2.3
6	YF	98	PHE	2.3
19	YS	42	LYS	2.3
20	RT	51	PHE	2.3
33	XB	27	LYS	2.3
50	QS	55	GLN	2.3
9	YI	87	SER	2.3
11	YK	60	ALA	2.3
33	XB	185	ILE	2.3
29	Y2	7	PRO	2.3
39	QH	60	LEU	2.3
12	YL	26	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
33	XB	32	GLY	2.3
5	YE	51	GLU	2.3
33	XB	117	GLU	2.3
17	YQ	90	ASP	2.3
40	XI	4	GLN	2.3
6	YF	177	ARG	2.3
19	YS	99	ARG	2.3
5	YE	125	SER	2.3
15	YO	28	VAL	2.3
38	XG	35	LYS	2.3
5	YE	43	THR	2.3
7	YG	100	ASN	2.3
9	RI	18	ASN	2.3
33	QB	118	THR	2.3
10	YJ	141	ASP	2.3
8	RH	8	LYS	2.3
34	XC	42	LEU	2.3
50	XS	14	LEU	2.3
5	YE	146	VAL	2.3
18	YR	54	VAL	2.3
26	YZ	56	VAL	2.3
1	RA	2141	G	2.3
32	XA	1270	G	2.3
3	YC	81	GLU	2.3
32	XA	1022	A	2.3
4	YD	52	THR	2.3
48	XQ	8	GLN	2.3
27	Y0	1	ALA	2.3
49	XR	63	TYR	2.3
8	YH	130	VAL	2.3
9	RI	122	GLU	2.3
11	YK	75	SER	2.3
40	QI	33	SER	2.3
44	XM	100	ARG	2.3
1	YA	321	U	2.3
1	YA	2140	G	2.3
8	RH	135	HIS	2.3
9	RI	99	LYS	2.3
44	XM	74	MET	2.3
33	QB	17	HIS	2.3
22	YV	3	THR	2.3
6	RF	174	PHE	2.3

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Mol	Chain	Res	Type	RSRZ
47	QP	39	PHE	2.3
12	YL	18	ARG	2.3
52	QU	50	SER	2.3
50	XS	15	LEU	2.3
7	YG	120	ILE	2.3
9	RI	26	ALA	2.3
11	YK	82	ASN	2.3
15	YO	73	ALA	2.3
18	YR	53	PHE	2.3
1	YA	2308	G	2.3
6	YF	173	ASP	2.3
14	YN	26	GLY	2.3
15	YO	16	ARG	2.3
25	YY	29	ARG	2.3
29	Y2	18	PHE	2.3
33	QB	193	ASP	2.3
28	Y1	36	LYS	2.3
33	QB	24	PRO	2.3
5	YE	41	GLN	2.3
42	XK	128	VAL	2.3
45	QN	19	TYR	2.3
20	RT	54	GLU	2.3
6	YF	35	LEU	2.3
12	YL	57	LEU	2.3
32	XA	466	A	2.3
4	YD	8	LYS	2.3
15	YO	117	PHE	2.3
18	YR	28	ALA	2.3
19	YS	73	LYS	2.3
1	YA	790	U	2.3
6	YF	160	LYS	2.3
8	RH	72	ILE	2.3
1	YA	2101	A	2.3
1	YA	2135	A	2.3
15	YO	90	VAL	2.3
18	YR	7	SER	2.3
3	YC	232	GLY	2.2
1	YA	1409	U	2.2
8	RH	83	LYS	2.2
19	YS	82	MET	2.2
33	QB	59	ILE	2.2
41	QJ	76	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
10	YJ	56	VAL	2.2
17	YQ	31	TYR	2.2
24	YX	6	VAL	2.2
4	YD	95	SER	2.2
39	QH	1	SER	2.2
43	XL	91	GLY	2.2
31	Y4	24	ARG	2.2
50	XS	35	ARG	2.2
5	YE	5	LEU	2.2
15	YO	63	LYS	2.2
32	XA	88	U	2.2
40	QI	31	GLN	2.2
9	RI	133	ARG	2.2
20	YT	11	LEU	2.2
28	Y1	49	LYS	2.2
33	XB	103	TRP	2.2
1	YA	1073	A	2.2
1	YA	1532	A	2.2
11	YK	112	PHE	2.2
13	YM	31	PHE	2.2
19	YS	85	ILE	2.2
1	YA	1094	U	2.2
28	Y1	6	GLU	2.2
29	Y2	32	ALA	2.2
38	XG	106	ALA	2.2
41	XJ	99	GLN	2.2
6	RF	105	ILE	2.2
3	YC	235	GLU	2.2
6	RF	177	ARG	2.2
32	QA	80	A	2.2
44	QM	114	PRO	2.2
47	QP	37	GLY	2.2
1	RA	2109	U	2.2
8	YH	136	SER	2.2
13	YM	96	ILE	2.2
22	YV	59	GLU	2.2
33	XB	41	ASN	2.2
44	XM	57	ASP	2.2
1	YA	290	U	2.2
5	YE	170	ARG	2.2
17	YQ	16	ILE	2.2
40	QI	27	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
8	YH	149	GLU	2.2
1	YA	1731	G	2.2
9	YI	40	ALA	2.2
40	QI	16	ALA	2.2
45	XN	93	PRO	2.2
1	YA	2109	U	2.2
33	XB	131	LYS	2.2
48	XQ	46	HIS	2.2
50	QS	16	LYS	2.2
33	XB	216	VAL	2.2
51	XT	66	ILE	2.2
6	YF	85	GLY	2.2
27	Y0	55	ALA	2.2
50	XS	49	ALA	2.2
5	YE	157	LEU	2.2
40	QI	50	PRO	2.2
17	YQ	32	ARG	2.2
3	YC	239	PHE	2.2
3	RC	240	GLY	2.2
22	YV	57	TYR	2.2
44	XM	45	SER	2.2
38	XG	51	GLN	2.2
36	QE	150	GLU	2.2
48	XQ	16	MET	2.2
50	QS	39	ILE	2.2
42	QK	41	LEU	2.2
10	YJ	136	GLN	2.2
6	RF	112	ASP	2.2
12	YL	31	GLY	2.2
7	YG	94	ARG	2.2
15	YO	64	TYR	2.2
33	XB	114	LYS	2.2
26	YZ	1	ALA	2.2
30	Y3	26	ALA	2.2
1	YA	1529	G	2.2
9	RI	55	PRO	2.2
50	XS	18	VAL	2.2
1	RA	2142	A	2.2
13	YM	17	ASN	2.2
18	YR	73	LYS	2.2
50	QS	13	HIS	2.2
1	RA	885	C	2.1

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Mol	Chain	Res	Type	RSRZ
45	XN	21	ALA	2.1
3	RC	250	GLN	2.1
9	YI	37	PHE	2.1
18	YR	5	PHE	2.1
22	YV	91	PHE	2.1
9	YI	74	PRO	2.1
22	YV	35	GLU	2.1
48	XQ	32	ILE	2.1
1	YA	1068	G	2.1
5	YE	42	GLY	2.1
23	YW	33	GLY	2.1
5	YE	150	THR	2.1
24	YX	21	LEU	2.1
24	YX	29	LEU	2.1
8	YH	81	ALA	2.1
21	RU	86	PHE	2.1
33	QB	89	PHE	2.1
1	YA	1043	C	2.1
15	YO	20	GLU	2.1
42	QK	73	VAL	2.1
5	YE	64	GLY	2.1
33	XB	152	ASP	2.1
32	XA	211	G	2.1
38	QG	61	PHE	2.1
13	YM	80	VAL	2.1
16	YP	4	ILE	2.1
42	QK	128	VAL	2.1
39	QH	9	MET	2.1
40	QI	92	SER	2.1
7	YG	71	LEU	2.1
40	XI	89	TYR	2.1
9	RI	80	LYS	2.1
45	XN	66	THR	2.1
6	YF	62	GLN	2.1
9	YI	34	ILE	2.1
20	YT	62	VAL	2.1
32	QA	1441	A	2.1
32	XA	1227	A	2.1
32	XA	1309	G	2.1
23	YW	14	ASP	2.1
1	YA	1064	C	2.1
32	XA	1320	C	2.1

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Mol	Chain	Res	Type	RSRZ
23	YW	57	THR	2.1
22	YV	33	GLY	2.1
5	YE	183	PHE	2.1
27	Y0	45	ASP	2.1
1	YA	2149	U	2.1
25	RY	24	GLU	2.1
33	XB	93	HIS	2.1
6	YF	66	ILE	2.1
33	XB	180	ILE	2.1
6	YF	2	LYS	2.1
22	YV	61	LEU	2.1
21	YU	47	PRO	2.1
33	QB	68	PHE	2.1
4	YD	14	ILE	2.1
11	YK	69	VAL	2.1
8	YH	40	THR	2.1
33	XB	67	LEU	2.1
41	XJ	102	LEU	2.1
52	QU	41	THR	2.1
50	QS	40	PHE	2.1
5	YE	35	TYR	2.1
5	YE	152	GLU	2.1
21	RU	59	GLU	2.1
40	XI	35	GLU	2.1
44	QM	31	ALA	2.1
13	YM	8	LYS	2.1
38	XG	90	VAL	2.1
33	XB	136	ARG	2.1
41	QJ	100	ILE	2.1
50	QS	5	LYS	2.1
1	RA	2137	U	2.1
47	XP	3	THR	2.1
7	YG	64	ALA	2.1
33	QB	33	ALA	2.1
40	QI	43	ALA	2.1
6	YF	148	VAL	2.1
7	YG	132	LEU	2.1
8	YH	12	LEU	2.1
52	QU	28	LEU	2.1
1	RA	2151	U	2.1
7	YG	54	ARG	2.1
12	YL	69	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
1	YA	1311	G	2.1
30	Y3	61	LEU	2.1
10	YJ	118	MET	2.1
37	XF	62	MET	2.1
1	YA	1174	U	2.1
12	YL	132	ARG	2.1
33	XB	144	GLU	2.1
45	QN	28	ALA	2.1
49	QR	50	TYR	2.1
50	QS	79	TYR	2.1
12	YL	61	LEU	2.1
30	Y3	52	GLY	2.1
50	XS	46	LEU	2.1
33	QB	158	ASP	2.1
9	RI	109	ALA	2.0
16	YP	91	VAL	2.0
17	YQ	98	ALA	2.0
1	YA	2182	U	2.0
6	YF	90	LEU	2.0
40	QI	20	ILE	2.0
51	QT	56	ILE	2.0
10	YJ	4	PHE	2.0
6	YF	9	ASP	2.0
14	YN	71	ARG	2.0
44	XM	91	ARG	2.0
45	QN	32	ASP	2.0
23	YW	60	ALA	2.0
28	Y1	42	VAL	2.0
41	XJ	26	VAL	2.0
51	XT	57	VAL	2.0
3	YC	92	LEU	2.0
27	Y0	43	THR	2.0
35	QD	179	GLY	2.0
40	XI	30	ASN	2.0
1	YA	1530	G	2.0
8	YH	83	LYS	2.0
50	XS	5	LYS	2.0
5	YE	141	MET	2.0
12	YL	21	ARG	2.0
22	YV	56	PHE	2.0
33	XB	99	MET	2.0
21	YU	61	GLU	2.0

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Mol	Chain	Res	Type	RSRZ
1	YA	1278	C	2.0
7	YG	4	ALA	2.0
44	XM	105	ALA	2.0
23	RW	75	ASN	2.0
23	YW	40	ARG	2.0
33	XB	64	GLY	2.0
50	XS	45	GLY	2.0
52	QU	4	LYS	2.0
10	YJ	5	THR	2.0
18	YR	68	ARG	2.0
20	YT	89	GLU	2.0
5	YE	55	SER	2.0
8	YH	6	LEU	2.0
15	YO	77	ALA	2.0
1	YA	2755	C	2.0
41	QJ	49	PHE	2.0
45	XN	76	PHE	2.0
32	XA	1308	U	2.0
16	YP	30	TRP	2.0
40	QI	57	VAL	2.0
47	XP	21	VAL	2.0
4	YD	31	ALA	2.0
17	YQ	116	LEU	2.0
37	XF	39	LEU	2.0
50	QS	10	ILE	2.0
1	YA	1074	G	2.0
15	YO	92	PHE	2.0
6	YF	158	THR	2.0
6	YF	164	GLU	2.0
21	YU	43	LYS	2.0
24	YX	13	THR	2.0
12	YL	85	VAL	2.0
38	XG	77	ARG	2.0

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

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

6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

6.4 Ligands ⓘ

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
53	MG	YA	3108	1/1	-0.03	0.81	217,217,217,217	0
53	MG	YA	3049	1/1	-0.02	0.45	243,243,243,243	0
53	MG	YJ	201	1/1	0.21	2.54	319,319,319,319	0
53	MG	XA	1636	1/1	0.27	0.37	224,224,224,224	0
53	MG	YA	3120	1/1	0.33	0.21	124,124,124,124	0
53	MG	YA	3109	1/1	0.37	1.54	227,227,227,227	0
53	MG	YA	3003	1/1	0.40	1.59	238,238,238,238	0
53	MG	YA	3002	1/1	0.43	0.53	231,231,231,231	0
53	MG	YA	3019	1/1	0.48	0.66	278,278,278,278	0
53	MG	XA	1617	1/1	0.49	0.12	202,202,202,202	0
53	MG	YA	3091	1/1	0.51	0.21	184,184,184,184	0
53	MG	YA	3125	1/1	0.52	0.36	200,200,200,200	0
53	MG	YA	3129	1/1	0.53	0.74	261,261,261,261	0
53	MG	QA	1627	1/1	0.54	0.16	132,132,132,132	0
53	MG	YA	3006	1/1	0.55	0.10	237,237,237,237	0
53	MG	YA	3087	1/1	0.57	0.10	199,199,199,199	0
53	MG	YA	3063	1/1	0.58	1.61	273,273,273,273	0
53	MG	XA	1622	1/1	0.58	0.09	187,187,187,187	0
53	MG	YA	3076	1/1	0.60	0.19	195,195,195,195	0
53	MG	YA	3023	1/1	0.62	0.09	130,130,130,130	0
53	MG	YA	3133	1/1	0.63	0.30	220,220,220,220	0
53	MG	YA	3078	1/1	0.65	0.26	214,214,214,214	0
53	MG	YA	3005	1/1	0.66	0.86	282,282,282,282	0
53	MG	QA	1619	1/1	0.66	0.54	230,230,230,230	0
53	MG	YA	3127	1/1	0.67	1.29	248,248,248,248	0
53	MG	YA	3057	1/1	0.67	0.30	205,205,205,205	0
53	MG	YA	3028	1/1	0.67	0.33	222,222,222,222	0
53	MG	RA	3058	1/1	0.68	0.22	100,100,100,100	0
53	MG	YA	3073	1/1	0.68	0.18	193,193,193,193	0
53	MG	YA	3130	1/1	0.69	1.80	271,271,271,271	0
53	MG	QA	1637	1/1	0.69	0.15	131,131,131,131	0
53	MG	YA	3062	1/1	0.69	0.55	190,190,190,190	0
53	MG	RA	3047	1/1	0.70	0.13	122,122,122,122	0
53	MG	YA	3085	1/1	0.71	0.23	158,158,158,158	0
53	MG	YA	3033	1/1	0.71	0.30	151,151,151,151	0
53	MG	RA	3129	1/1	0.71	1.07	285,285,285,285	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
53	MG	YA	3074	1/1	0.71	0.56	260,260,260,260	0
53	MG	YA	3064	1/1	0.72	0.88	256,256,256,256	0
53	MG	YA	3045	1/1	0.72	0.22	206,206,206,206	0
53	MG	YA	3097	1/1	0.72	0.21	159,159,159,159	0
53	MG	YA	3122	1/1	0.73	0.15	104,104,104,104	0
53	MG	YA	3059	1/1	0.74	0.18	232,232,232,232	0
53	MG	RA	3134	1/1	0.74	0.27	210,210,210,210	0
53	MG	XA	1619	1/1	0.74	0.12	212,212,212,212	0
53	MG	QA	1602	1/1	0.74	0.12	177,177,177,177	0
53	MG	XA	1614	1/1	0.74	0.64	236,236,236,236	0
53	MG	RA	3054	1/1	0.76	0.36	198,198,198,198	0
53	MG	YA	3008	1/1	0.77	0.24	147,147,147,147	0
53	MG	XA	1602	1/1	0.77	0.13	139,139,139,139	0
53	MG	YA	3031	1/1	0.77	0.21	80,80,80,80	0
53	MG	YA	3110	1/1	0.77	0.07	120,120,120,120	0
53	MG	XA	1634	1/1	0.78	0.13	165,165,165,165	0
53	MG	RA	3068	1/1	0.78	0.12	175,175,175,175	0
53	MG	YA	3039	1/1	0.79	0.19	105,105,105,105	0
53	MG	YA	3088	1/1	0.79	0.35	222,222,222,222	0
53	MG	YA	3083	1/1	0.79	0.10	214,214,214,214	0
53	MG	YA	3017	1/1	0.79	0.13	185,185,185,185	0
53	MG	YA	3036	1/1	0.79	0.16	205,205,205,205	0
53	MG	RA	3089	1/1	0.80	0.16	127,127,127,127	0
53	MG	XA	1610	1/1	0.80	0.13	168,168,168,168	0
53	MG	YA	3123	1/1	0.80	0.36	217,217,217,217	0
53	MG	XA	1616	1/1	0.80	0.62	195,195,195,195	0
53	MG	XA	1629	1/1	0.80	0.15	190,190,190,190	0
53	MG	RB	202	1/1	0.80	0.11	82,82,82,82	0
53	MG	YA	3050	1/1	0.80	0.16	154,154,154,154	0
53	MG	YA	3101	1/1	0.80	0.20	96,96,96,96	0
53	MG	YA	3010	1/1	0.80	1.07	272,272,272,272	0
53	MG	RA	3096	1/1	0.81	0.18	169,169,169,169	0
53	MG	RA	3069	1/1	0.81	0.24	197,197,197,197	0
53	MG	RA	3024	1/1	0.81	0.47	210,210,210,210	0
53	MG	YA	3082	1/1	0.82	0.19	164,164,164,164	0
53	MG	YA	3084	1/1	0.82	0.16	168,168,168,168	0
53	MG	XA	1620	1/1	0.82	0.19	182,182,182,182	0
53	MG	RA	3060	1/1	0.82	0.47	236,236,236,236	0
53	MG	RA	3011	1/1	0.82	0.18	129,129,129,129	0
53	MG	RA	3086	1/1	0.82	0.09	151,151,151,151	0
53	MG	XA	1624	1/1	0.83	0.37	146,146,146,146	0
53	MG	RA	3082	1/1	0.83	0.14	86,86,86,86	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
53	MG	XA	1635	1/1	0.83	0.11	76,76,76,76	0
53	MG	YA	3079	1/1	0.83	0.79	225,225,225,225	0
53	MG	YA	3038	1/1	0.83	0.07	234,234,234,234	0
53	MG	YA	3047	1/1	0.83	0.18	174,174,174,174	0
53	MG	YA	3007	1/1	0.83	0.45	232,232,232,232	0
53	MG	RA	3085	1/1	0.83	0.17	133,133,133,133	0
53	MG	YA	3128	1/1	0.84	0.81	163,163,163,163	0
53	MG	QA	1610	1/1	0.84	0.11	197,197,197,197	0
53	MG	RA	3090	1/1	0.84	0.17	135,135,135,135	0
53	MG	XA	1632	1/1	0.84	0.10	122,122,122,122	0
53	MG	YE	301	1/1	0.84	0.29	199,199,199,199	0
53	MG	YA	3071	1/1	0.84	0.20	102,102,102,102	0
53	MG	YA	3106	1/1	0.84	0.17	218,218,218,218	0
53	MG	RA	3020	1/1	0.85	0.37	200,200,200,200	0
53	MG	QA	1632	1/1	0.85	0.15	85,85,85,85	0
53	MG	YA	3060	1/1	0.85	0.76	235,235,235,235	0
53	MG	YA	3020	1/1	0.85	0.21	53,53,53,53	0
53	MG	YA	3098	1/1	0.85	0.21	183,183,183,183	0
53	MG	YA	3043	1/1	0.85	0.23	155,155,155,155	0
53	MG	YA	3072	1/1	0.86	0.12	183,183,183,183	0
53	MG	RA	3056	1/1	0.86	0.12	148,148,148,148	0
53	MG	YA	3004	1/1	0.86	0.17	134,134,134,134	0
53	MG	YA	3026	1/1	0.86	0.77	242,242,242,242	0
53	MG	XA	1601	1/1	0.86	0.08	106,106,106,106	0
53	MG	RA	3004	1/1	0.86	0.19	184,184,184,184	0
53	MG	QA	1630	1/1	0.86	0.14	196,196,196,196	0
53	MG	YA	3025	1/1	0.87	0.15	162,162,162,162	0
53	MG	YA	3093	1/1	0.87	0.36	188,188,188,188	0
53	MG	YA	3022	1/1	0.87	0.23	149,149,149,149	0
53	MG	QA	1641	1/1	0.87	0.16	171,171,171,171	0
53	MG	QA	1638	1/1	0.88	0.13	67,67,67,67	0
53	MG	YA	3132	1/1	0.88	0.49	240,240,240,240	0
53	MG	YA	3100	1/1	0.88	0.13	124,124,124,124	0
53	MG	RA	3070	1/1	0.89	0.34	137,137,137,137	0
53	MG	RA	3091	1/1	0.89	0.10	84,84,84,84	0
53	MG	YA	3092	1/1	0.89	0.16	169,169,169,169	0
53	MG	XA	1606	1/1	0.89	0.13	93,93,93,93	0
53	MG	XA	1611	1/1	0.89	0.11	110,110,110,110	0
53	MG	YA	3001	1/1	0.89	0.15	141,141,141,141	0
53	MG	YA	3077	1/1	0.89	0.07	109,109,109,109	0
53	MG	YA	3070	1/1	0.89	0.13	91,91,91,91	0
53	MG	RA	3103	1/1	0.89	0.15	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
53	MG	YA	3027	1/1	0.89	0.23	194,194,194,194	0
53	MG	RA	3131	1/1	0.89	0.60	187,187,187,187	0
53	MG	RA	3035	1/1	0.89	0.33	189,189,189,189	0
53	MG	YA	3015	1/1	0.89	0.19	219,219,219,219	0
53	MG	XA	1638	1/1	0.89	0.15	204,204,204,204	0
53	MG	QA	1624	1/1	0.89	0.14	143,143,143,143	0
53	MG	YA	3058	1/1	0.90	0.39	249,249,249,249	0
53	MG	XA	1618	1/1	0.90	0.11	136,136,136,136	0
53	MG	RA	3130	1/1	0.90	0.24	118,118,118,118	0
53	MG	QA	1605	1/1	0.90	0.18	72,72,72,72	0
53	MG	YA	3054	1/1	0.90	0.12	86,86,86,86	0
53	MG	QA	1625	1/1	0.90	0.14	101,101,101,101	0
53	MG	RA	3055	1/1	0.90	0.33	252,252,252,252	0
53	MG	YA	3114	1/1	0.90	0.12	182,182,182,182	0
53	MG	YA	3080	1/1	0.90	0.18	154,154,154,154	0
53	MG	XA	1623	1/1	0.90	0.11	108,108,108,108	0
53	MG	RA	3003	1/1	0.90	0.14	77,77,77,77	0
53	MG	YA	3042	1/1	0.90	0.17	81,81,81,81	0
53	MG	YA	3030	1/1	0.91	0.13	130,130,130,130	0
53	MG	RA	3014	1/1	0.91	0.18	38,38,38,38	0
53	MG	YA	3069	1/1	0.91	0.23	267,267,267,267	0
53	MG	RA	3051	1/1	0.91	0.16	70,70,70,70	0
53	MG	YA	3094	1/1	0.91	0.14	145,145,145,145	0
53	MG	YA	3029	1/1	0.91	0.21	178,178,178,178	0
53	MG	QA	1643	1/1	0.91	0.11	67,67,67,67	0
53	MG	XA	1628	1/1	0.91	0.44	224,224,224,224	0
53	MG	XA	1615	1/1	0.91	0.20	187,187,187,187	0
53	MG	RB	201	1/1	0.91	0.33	255,255,255,255	0
53	MG	YA	3089	1/1	0.91	0.21	101,101,101,101	0
53	MG	YA	3104	1/1	0.91	0.22	52,52,52,52	0
53	MG	YA	3011	1/1	0.91	0.21	150,150,150,150	0
53	MG	YA	3111	1/1	0.91	0.14	202,202,202,202	0
53	MG	YA	3096	1/1	0.91	0.14	127,127,127,127	0
53	MG	YA	3126	1/1	0.91	0.19	120,120,120,120	0
53	MG	YA	3034	1/1	0.91	0.09	88,88,88,88	0
53	MG	YA	3115	1/1	0.92	0.26	176,176,176,176	0
53	MG	XA	1627	1/1	0.92	0.23	197,197,197,197	0
53	MG	YA	3116	1/1	0.92	0.12	84,84,84,84	0
53	MG	YA	3021	1/1	0.92	0.28	183,183,183,183	0
53	MG	RA	3119	1/1	0.92	0.08	56,56,56,56	0
53	MG	XA	1640	1/1	0.92	0.17	137,137,137,137	0
53	MG	RA	3110	1/1	0.92	0.15	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
53	MG	QA	1640	1/1	0.92	0.05	79,79,79,79	0
53	MG	YA	3013	1/1	0.92	0.39	241,241,241,241	0
53	MG	QA	1609	1/1	0.92	0.08	77,77,77,77	0
53	MG	YA	3044	1/1	0.92	0.15	87,87,87,87	0
53	MG	RA	3100	1/1	0.92	0.27	119,119,119,119	0
53	MG	YA	3124	1/1	0.92	0.16	82,82,82,82	0
53	MG	YA	3081	1/1	0.92	0.10	83,83,83,83	0
53	MG	XA	1625	1/1	0.92	0.23	111,111,111,111	0
53	MG	YA	3016	1/1	0.92	0.10	60,60,60,60	0
53	MG	QA	1616	1/1	0.92	0.18	98,98,98,98	0
53	MG	QA	1606	1/1	0.92	0.13	80,80,80,80	0
53	MG	YA	3051	1/1	0.92	0.14	88,88,88,88	0
53	MG	YA	3103	1/1	0.92	0.13	86,86,86,86	0
53	MG	RA	3031	1/1	0.93	0.14	37,37,37,37	0
53	MG	QA	1621	1/1	0.93	0.13	131,131,131,131	0
54	EM1	RA	3135	60/60	0.93	0.26	0,23,85,88	0
53	MG	XA	1604	1/1	0.93	0.10	96,96,96,96	0
53	MG	RA	3117	1/1	0.93	0.16	162,162,162,162	0
53	MG	RA	3050	1/1	0.93	0.18	39,39,39,39	0
53	MG	RA	3046	1/1	0.93	0.08	176,176,176,176	0
53	MG	YA	3067	1/1	0.93	0.11	72,72,72,72	0
53	MG	YA	3035	1/1	0.93	0.09	90,90,90,90	0
53	MG	XA	1612	1/1	0.93	0.19	125,125,125,125	0
53	MG	RA	3113	1/1	0.93	0.14	190,190,190,190	0
53	MG	XA	1642	1/1	0.93	0.10	139,139,139,139	0
53	MG	RA	3083	1/1	0.93	0.16	53,53,53,53	0
53	MG	RB	203	1/1	0.93	0.12	58,58,58,58	0
53	MG	QA	1636	1/1	0.93	0.37	218,218,218,218	0
53	MG	YA	3009	1/1	0.93	0.28	157,157,157,157	0
53	MG	YA	3041	1/1	0.93	0.15	119,119,119,119	0
53	MG	RA	3018	1/1	0.94	0.34	32,32,32,32	0
53	MG	YA	3118	1/1	0.94	0.17	100,100,100,100	0
53	MG	RA	3072	1/1	0.94	0.05	61,61,61,61	0
53	MG	RA	3118	1/1	0.94	0.15	48,48,48,48	0
53	MG	QA	1607	1/1	0.94	0.13	136,136,136,136	0
53	MG	RA	3133	1/1	0.94	0.28	116,116,116,116	0
53	MG	XA	1637	1/1	0.94	0.13	94,94,94,94	0
53	MG	YA	3040	1/1	0.94	0.17	72,72,72,72	0
53	MG	RA	3061	1/1	0.94	0.12	18,18,18,18	0
53	MG	RA	3017	1/1	0.94	0.09	57,57,57,57	0
53	MG	YA	3113	1/1	0.94	0.07	128,128,128,128	0
53	MG	RA	3122	1/1	0.94	0.70	164,164,164,164	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
53	MG	RA	3045	1/1	0.94	0.14	25,25,25,25	0
53	MG	QA	1618	1/1	0.94	0.12	78,78,78,78	0
53	MG	RA	3057	1/1	0.94	0.08	71,71,71,71	0
53	MG	RA	3001	1/1	0.94	0.09	98,98,98,98	0
53	MG	QA	1634	1/1	0.94	0.15	94,94,94,94	0
53	MG	YA	3119	1/1	0.94	0.12	60,60,60,60	0
53	MG	XA	1613	1/1	0.94	0.17	147,147,147,147	0
53	MG	XA	1639	1/1	0.94	0.05	159,159,159,159	0
53	MG	QA	1635	1/1	0.95	0.10	87,87,87,87	0
53	MG	RA	3121	1/1	0.95	0.17	45,45,45,45	0
53	MG	RA	3041	1/1	0.95	0.14	38,38,38,38	0
53	MG	QA	1613	1/1	0.95	0.07	76,76,76,76	0
53	MG	RA	3088	1/1	0.95	0.08	59,59,59,59	0
53	MG	YA	3066	1/1	0.95	0.17	105,105,105,105	0
53	MG	RA	3030	1/1	0.95	0.11	56,56,56,56	0
53	MG	YA	3112	1/1	0.95	0.09	79,79,79,79	0
53	MG	RA	3071	1/1	0.95	0.11	16,16,16,16	0
53	MG	YA	3032	1/1	0.95	0.13	162,162,162,162	0
53	MG	YA	3107	1/1	0.95	0.20	91,91,91,91	0
53	MG	YA	3037	1/1	0.95	0.13	81,81,81,81	0
53	MG	YA	3086	1/1	0.95	0.13	109,109,109,109	0
53	MG	YA	3048	1/1	0.95	0.10	103,103,103,103	0
53	MG	QA	1629	1/1	0.95	0.06	97,97,97,97	0
53	MG	RA	3084	1/1	0.95	0.15	26,26,26,26	0
53	MG	YA	3131	1/1	0.95	0.14	94,94,94,94	0
53	MG	YA	3075	1/1	0.95	0.54	209,209,209,209	0
53	MG	RA	3002	1/1	0.95	0.10	75,75,75,75	0
53	MG	YA	3065	1/1	0.95	0.13	88,88,88,88	0
53	MG	YA	3134	1/1	0.95	0.33	201,201,201,201	0
53	MG	XA	1621	1/1	0.95	0.13	57,57,57,57	0
53	MG	XA	1607	1/1	0.95	0.13	167,167,167,167	0
53	MG	XA	1631	1/1	0.95	0.23	82,82,82,82	0
53	MG	RA	3052	1/1	0.95	0.14	34,34,34,34	0
53	MG	YA	3018	1/1	0.95	0.10	185,185,185,185	0
53	MG	QA	1604	1/1	0.96	0.04	139,139,139,139	0
53	MG	YA	3056	1/1	0.96	0.07	85,85,85,85	0
53	MG	RA	3065	1/1	0.96	0.15	35,35,35,35	0
53	MG	RA	3048	1/1	0.96	0.17	25,25,25,25	0
53	MG	XA	1633	1/1	0.96	0.10	79,79,79,79	0
53	MG	YA	3095	1/1	0.96	0.15	138,138,138,138	0
53	MG	RB	204	1/1	0.96	0.14	45,45,45,45	0
53	MG	QA	1628	1/1	0.96	0.24	142,142,142,142	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
53	MG	RA	3099	1/1	0.96	0.19	34,34,34,34	0
53	MG	RA	3105	1/1	0.96	0.21	66,66,66,66	0
53	MG	YA	3053	1/1	0.96	0.18	127,127,127,127	0
53	MG	RA	3028	1/1	0.96	0.14	92,92,92,92	0
53	MG	YA	3012	1/1	0.96	0.09	72,72,72,72	0
53	MG	RA	3049	1/1	0.96	0.14	76,76,76,76	0
53	MG	YA	3099	1/1	0.96	0.17	188,188,188,188	0
53	MG	RA	3095	1/1	0.96	0.16	139,139,139,139	0
53	MG	QA	1622	1/1	0.96	0.17	54,54,54,54	0
55	ZN	Y4	101	1/1	0.96	0.07	169,169,169,169	0
53	MG	RA	3120	1/1	0.96	0.31	45,45,45,45	0
53	MG	QA	1608	1/1	0.96	0.26	61,61,61,61	0
53	MG	RA	3008	1/1	0.96	0.14	45,45,45,45	0
53	MG	YA	3102	1/1	0.96	0.10	118,118,118,118	0
53	MG	XA	1630	1/1	0.96	0.16	160,160,160,160	0
53	MG	QA	1623	1/1	0.96	0.11	77,77,77,77	0
53	MG	RA	3116	1/1	0.96	0.10	72,72,72,72	0
53	MG	RA	3005	1/1	0.96	0.12	74,74,74,74	0
53	MG	RA	3029	1/1	0.96	0.19	14,14,14,14	0
53	MG	RA	3059	1/1	0.96	0.43	207,207,207,207	0
53	MG	QA	1631	1/1	0.96	0.19	228,228,228,228	0
53	MG	RA	3074	1/1	0.96	0.10	93,93,93,93	0
53	MG	RA	3112	1/1	0.96	0.10	49,49,49,49	0
53	MG	RA	3075	1/1	0.96	0.05	43,43,43,43	0
53	MG	RA	3124	1/1	0.97	0.20	63,63,63,63	0
53	MG	QA	1642	1/1	0.97	0.13	79,79,79,79	0
53	MG	RA	3132	1/1	0.97	0.12	20,20,20,20	0
53	MG	QA	1611	1/1	0.97	0.14	57,57,57,57	0
53	MG	YB	201	1/1	0.97	0.09	111,111,111,111	0
53	MG	RA	3037	1/1	0.97	0.14	30,30,30,30	0
53	MG	RA	3036	1/1	0.97	0.18	23,23,23,23	0
53	MG	YA	3105	1/1	0.97	0.19	97,97,97,97	0
53	MG	RA	3080	1/1	0.97	0.07	60,60,60,60	0
53	MG	RA	3063	1/1	0.97	0.13	26,26,26,26	0
53	MG	RA	3010	1/1	0.97	0.12	31,31,31,31	0
53	MG	RA	3109	1/1	0.97	0.16	46,46,46,46	0
53	MG	YA	3046	1/1	0.97	0.22	73,73,73,73	0
53	MG	RA	3108	1/1	0.97	0.13	95,95,95,95	0
53	MG	QA	1639	1/1	0.97	0.18	118,118,118,118	0
53	MG	RA	3077	1/1	0.97	0.10	63,63,63,63	0
53	MG	RA	3114	1/1	0.97	0.19	28,28,28,28	0
53	MG	RA	3067	1/1	0.97	0.14	28,28,28,28	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
53	MG	XA	1609	1/1	0.97	0.15	98,98,98,98	0
53	MG	QA	1620	1/1	0.97	0.08	116,116,116,116	0
53	MG	QA	1612	1/1	0.97	0.18	113,113,113,113	0
53	MG	XA	1603	1/1	0.97	0.09	136,136,136,136	0
53	MG	RA	3097	1/1	0.97	0.13	54,54,54,54	0
53	MG	XA	1605	1/1	0.97	0.19	54,54,54,54	0
53	MG	RA	3012	1/1	0.97	0.12	20,20,20,20	0
53	MG	YA	3061	1/1	0.97	0.14	110,110,110,110	0
53	MG	RA	3016	1/1	0.97	0.11	22,22,22,22	0
53	MG	RA	3064	1/1	0.97	0.14	28,28,28,28	0
53	MG	RA	3127	1/1	0.97	0.09	8,8,8,8	0
53	MG	YA	3024	1/1	0.97	0.15	102,102,102,102	0
53	MG	RA	3019	1/1	0.97	0.06	34,34,34,34	0
53	MG	YA	3117	1/1	0.97	0.17	73,73,73,73	0
53	MG	RA	3007	1/1	0.97	0.13	112,112,112,112	0
53	MG	RA	3073	1/1	0.97	0.24	43,43,43,43	0
53	MG	RA	3079	1/1	0.97	0.15	32,32,32,32	0
53	MG	RA	3098	1/1	0.97	0.07	49,49,49,49	0
53	MG	YA	3121	1/1	0.97	0.17	168,168,168,168	0
53	MG	RA	3025	1/1	0.97	0.06	40,40,40,40	0
53	MG	RA	3053	1/1	0.97	0.17	55,55,55,55	0
53	MG	RA	3101	1/1	0.97	0.11	48,48,48,48	0
53	MG	RA	3126	1/1	0.97	0.14	40,40,40,40	0
53	MG	RA	3006	1/1	0.97	0.13	54,54,54,54	0
53	MG	QA	1614	1/1	0.97	0.15	159,159,159,159	0
53	MG	RA	3081	1/1	0.97	0.17	99,99,99,99	0
53	MG	RA	3107	1/1	0.98	0.22	17,17,17,17	0
53	MG	RA	3027	1/1	0.98	0.12	33,33,33,33	0
53	MG	QA	1601	1/1	0.98	0.07	94,94,94,94	0
53	MG	RA	3111	1/1	0.98	0.15	31,31,31,31	0
53	MG	RA	3009	1/1	0.98	0.14	38,38,38,38	0
53	MG	QA	1633	1/1	0.98	0.12	70,70,70,70	0
53	MG	RA	3032	1/1	0.98	0.14	23,23,23,23	0
53	MG	RA	3115	1/1	0.98	0.07	22,22,22,22	0
53	MG	YA	3068	1/1	0.98	0.07	98,98,98,98	0
53	MG	XA	1626	1/1	0.98	0.24	20,20,20,20	0
53	MG	RA	3040	1/1	0.98	0.13	47,47,47,47	0
53	MG	RA	3136	1/1	0.98	0.07	61,61,61,61	0
53	MG	RA	3106	1/1	0.98	0.19	13,13,13,13	0
53	MG	YA	3014	1/1	0.98	0.20	113,113,113,113	0
53	MG	RA	3087	1/1	0.98	0.08	47,47,47,47	0
53	MG	QA	1603	1/1	0.98	0.09	65,65,65,65	0

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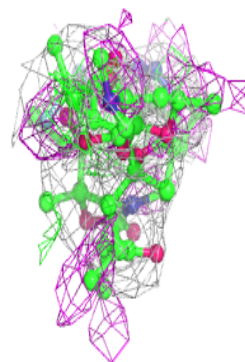
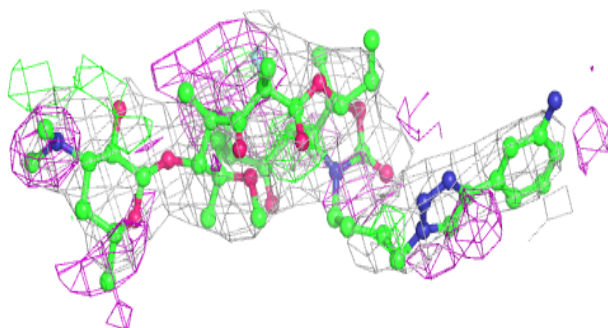
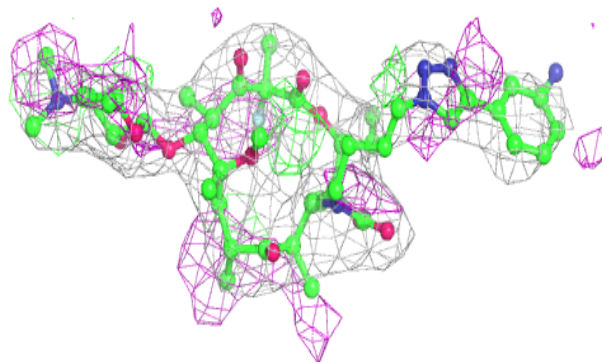
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
53	MG	QA	1617	1/1	0.98	0.17	129,129,129,129	0
53	MG	RA	3104	1/1	0.98	0.17	23,23,23,23	0
53	MG	RA	3033	1/1	0.98	0.15	159,159,159,159	0
53	MG	XA	1641	1/1	0.98	0.15	116,116,116,116	0
53	MG	RA	3039	1/1	0.98	0.24	7,7,7,7	0
53	MG	RA	3094	1/1	0.98	0.10	32,32,32,32	0
53	MG	RA	3125	1/1	0.98	0.14	40,40,40,40	0
53	MG	RA	3015	1/1	0.98	0.06	65,65,65,65	0
53	MG	RA	3066	1/1	0.98	0.16	32,32,32,32	0
53	MG	RA	3102	1/1	0.98	0.17	24,24,24,24	0
53	MG	RA	3078	1/1	0.98	0.13	58,58,58,58	0
53	MG	RA	3042	1/1	0.98	0.07	60,60,60,60	0
53	MG	RA	3038	1/1	0.98	0.17	19,19,19,19	0
53	MG	RA	3026	1/1	0.98	0.17	143,143,143,143	0
53	MG	YA	3090	1/1	0.98	0.10	112,112,112,112	0
53	MG	YA	3052	1/1	0.98	0.07	72,72,72,72	0
53	MG	YA	3055	1/1	0.98	0.16	103,103,103,103	0
53	MG	XA	1608	1/1	0.98	0.27	46,46,46,46	0
53	MG	RA	3022	1/1	0.98	0.12	27,27,27,27	0
53	MG	RA	3123	1/1	0.98	0.11	24,24,24,24	0
53	MG	QA	1615	1/1	0.98	0.11	152,152,152,152	0
53	MG	RA	3093	1/1	0.98	0.08	45,45,45,45	0
53	MG	RA	3044	1/1	0.98	0.14	34,34,34,34	0
53	MG	RA	3128	1/1	0.99	0.16	33,33,33,33	0
53	MG	RA	3021	1/1	0.99	0.12	24,24,24,24	0
53	MG	QA	1626	1/1	0.99	0.20	29,29,29,29	0
53	MG	RA	3043	1/1	0.99	0.26	11,11,11,11	0
53	MG	RA	3023	1/1	0.99	0.12	22,22,22,22	0
53	MG	RA	3034	1/1	0.99	0.10	11,11,11,11	0
55	ZN	R4	101	1/1	0.99	0.10	108,108,108,108	0
53	MG	RA	3013	1/1	0.99	0.16	18,18,18,18	0
53	MG	RA	3076	1/1	0.99	0.07	107,107,107,107	0
53	MG	RA	3092	1/1	0.99	0.09	68,68,68,68	0
53	MG	RA	3062	1/1	1.00	0.15	19,19,19,19	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.