



Full wwPDB X-ray Structure Validation Report ⓘ

Aug 31, 2020 – 09:01 AM BST

PDB ID : 6OF6
Title : Crystal structure of tRNA^{Ala}(GGC) bound to cognate 70S A-site
Authors : Nguyen, H.A.; Sunita, S.; Dunham, C.M.
Deposited on : 2019-03-28
Resolution : 3.20 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The 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 : **FAILED**
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.13

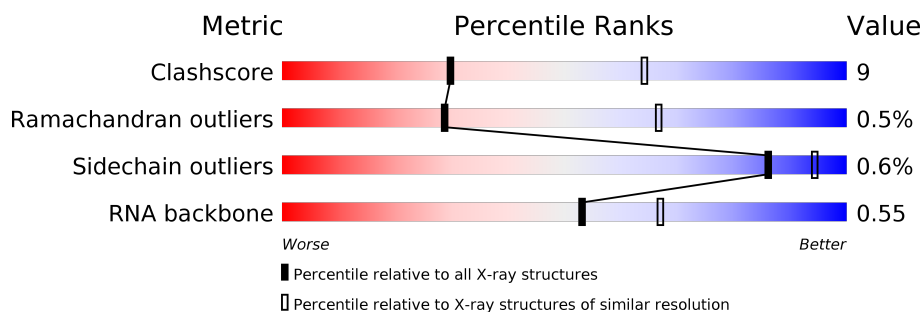
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.20 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	141614	1253 (3.20-3.20)
Ramachandran outliers	138981	1234 (3.20-3.20)
Sidechain outliers	138945	1233 (3.20-3.20)
RNA backbone	3102	1010 (3.50-2.90)


























The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments 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 $\leq 5\%$.

Note EDS failed to run properly.

Mol	Chain	Length	Quality of chain
1	QA	1522	52% 38% 8% .
1	XA	1522	52% 38% 8% .
2	QB	256	74% 18% 7%
2	XB	256	65% 27% 7%
3	QC	239	63% 23% 14%
3	XC	239	65% 21% 14%
4	QD	209	80% 19% .

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Mol	Chain	Length	Quality of chain
4	XD	209	
5	QE	162	
5	XE	162	
6	QF	101	
6	XF	101	
7	QG	156	
7	XG	156	
8	QH	138	
8	XH	138	
9	QI	128	
9	XI	128	
10	QJ	105	
10	XJ	105	
11	QK	129	
11	XK	129	
12	QL	131	
12	XL	131	
13	QM	126	
13	XM	126	
14	QN	61	
14	XN	61	
15	QO	89	
15	XO	89	
16	QP	88	
16	XP	88	















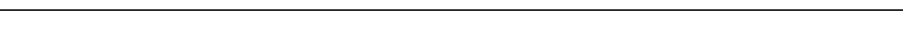




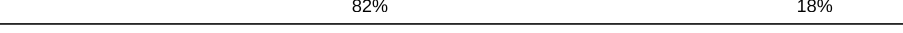





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Mol	Chain	Length	Quality of chain
17	QQ	105	
17	XQ	105	
18	QR	88	
18	XR	88	
19	QS	93	
19	XS	93	
20	QT	106	
20	XT	106	
21	QU	27	
21	XU	27	
22	QV	77	
22	XV	77	
23	QW	76	
23	XW	76	
24	QX	19	
24	XX	19	
25	QY	76	
25	XY	76	
26	R0	85	
26	Y0	85	
27	R1	98	
27	Y1	98	
28	R2	72	
28	Y2	72	
29	R3	60	


























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Mol	Chain	Length	Quality of chain
29	Y3	60	
30	R4	71	
30	Y4	71	
31	R5	60	
31	Y5	60	
32	R6	54	
32	Y6	54	
33	R7	49	
33	Y7	49	
34	R8	65	
34	Y8	65	
35	R9	37	
35	Y9	37	
36	RA	2915	
36	YA	2915	
37	RB	122	
37	YB	122	
38	RD	276	
38	YD	276	
39	RE	206	
39	YE	206	
40	RF	210	
40	YF	210	
41	RG	182	
41	YG	182	

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Mol	Chain	Length	Quality of chain
42	RH	180	
42	YH	180	
43	RI	148	
43	YI	148	
44	RN	140	
44	YN	140	
45	RO	122	
45	YO	122	
46	RP	150	
46	YP	150	
47	RQ	141	
47	YQ	141	
48	RR	118	
48	YR	118	
49	RS	112	
49	YS	112	
50	RT	146	
50	YT	146	
51	RU	118	
51	YU	118	
52	RV	101	
52	YV	101	
53	RW	113	
53	YW	113	
54	RX	96	

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Mol	Chain	Length	Quality of chain
54	YX	96	
55	RY	110	
55	YY	110	
56	RZ	206	
56	YZ	206	

2 Entry composition

There are 62 unique types of molecules in this entry. The entry contains 298675 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	QA	1500	Total	C	N	O	P	0	0	0
			32247	14353	5981	10414	1499			
1	XA	1500	Total	C	N	O	P	0	0	0
			32249	14354	5984	10412	1499			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	QB	237	Total	C	N	O	S	0	0	0
			1924	1228	344	347	5			
2	XB	237	Total	C	N	O	S	0	0	0
			1924	1228	344	347	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	QC	205	Total	C	N	O	S	0	0	0
			1605	1011	313	280	1			
3	XC	205	Total	C	N	O	S	0	0	0
			1605	1011	313	280	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	QD	208	Total	C	N	O	S	0	0	0
			1674	1050	333	284	7			
4	XD	208	Total	C	N	O	S	0	0	0
			1674	1050	333	284	7			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	QE	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			
5	XE	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	QJ	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	XJ	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	QL	125	Total	C	N	O	S	0	0	0
			975	614	196	164	1			
12	XL	125	Total	C	N	O	S	0	0	0
			975	614	196	164	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	QM	121	Total	C	N	O	S	0	0	0
			964	597	199	166	2			
13	XM	121	Total	C	N	O	S	0	0	0
			964	597	199	166	2			

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	QP	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			
16	XP	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	QQ	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			
17	XQ	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			

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

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

- Molecule 19 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	QS	84	Total	C	N	O	S	0	0	0
			674	430	126	116	2			
19	XS	84	Total	C	N	O	S	0	0	0
			674	430	126	116	2			

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

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

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	QU	25	Total	C	N	O	0	0	0
			217	134	52	31			
21	XU	25	Total	C	N	O	0	0	0
			217	134	52	31			

- Molecule 22 is a RNA chain called P-site tRNA^{fMet}.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	QV	77	Total	C	N	O	P	0	0	0
			1640	732	297	535	76			
22	XV	77	Total	C	N	O	P	0	0	0
			1640	732	297	535	76			

- Molecule 23 is a RNA chain called E-site tRNA^{Ala}(GGC).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	QW	76	Total	C	N	O	P	0	0	0
			1627	725	296	530	76			
23	XW	76	Total	C	N	O	P	0	0	0
			1627	725	296	530	76			

- Molecule 24 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	QX	19	Total	C	N	O	P	0	0	0
			416	186	85	126	19			
24	XX	18	Total	C	N	O	P	0	0	0
			394	176	80	120	18			

- Molecule 25 is a RNA chain called A-site tRNA^{Ala}(GGC).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	QY	75	Total	C	N	O	P	0	0	0
			1603	714	288	526	75			
25	XY	75	Total	C	N	O	P	0	0	0
			1603	714	288	526	75			

- Molecule 26 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	R0	82	Total	C	N	O	S	0	0	0
			648	401	138	108	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	Y0	82	Total	C	N	O	S	0	0	0
			648	401	138	108	1			

- Molecule 27 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	R1	97	Total	C	N	O	S	0	0	0
			763	481	150	131	1			
27	Y1	97	Total	C	N	O	S	0	0	0
			763	481	150	131	1			

- Molecule 28 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	R2	69	Total	C	N	O	S	0	0	0
			581	358	118	104	1			
28	Y2	69	Total	C	N	O	S	0	0	0
			581	358	118	104	1			

- Molecule 29 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
29	R3	59	Total	C	N	O	0	0	0
			469	298	90	81			
29	Y3	59	Total	C	N	O	0	0	0
			469	298	90	81			

- Molecule 30 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	R4	71	Total	C	N	O	S	0	0	0
			581	364	108	104	5			
30	Y4	71	Total	C	N	O	S	0	0	0
			581	364	108	104	5			

- Molecule 31 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	R5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			
31	Y5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			

- Molecule 32 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	R6	49	Total	C	N	O	S	0	0	0
			424	264	87	69	4			
32	Y6	49	Total	C	N	O	S	0	0	0
			424	264	87	69	4			

- Molecule 33 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	R7	49	Total	C	N	O	S	0	0	0
			430	263	108	57	2			
33	Y7	49	Total	C	N	O	S	0	0	0
			430	263	108	57	2			

- Molecule 34 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	R8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			
34	Y8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			

- Molecule 35 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	R9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			
35	Y9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	RA	2882	Total	C	N	O	P	0	0	0
			62071	27627	11611	19952	2881			
36	YA	2883	Total	C	N	O	P	0	0	0
			62091	27636	11613	19960	2882			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	RB	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			
37	YB	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	RD	272	Total	C	N	O	S	0	0	0
			2115	1335	420	357	3			
38	YD	275	Total	C	N	O	S	0	0	0
			2145	1353	428	361	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	RE	205	Total	C	N	O	S	0	0	0
			1568	991	300	271	6			
39	YE	205	Total	C	N	O	S	0	0	0
			1568	991	300	271	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	RF	202	Total	C	N	O	S	0	0	0
			1585	1011	297	275	2			
40	YF	202	Total	C	N	O	S	0	0	0
			1585	1011	297	275	2			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	RH	170	Total	C	N	O	S	0	0	0
			1307	829	245	232	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	YH	170	Total	C	N	O	S	0	0	0
			1307	829	245	232	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	RI	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			
43	YI	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			

- Molecule 44 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	RN	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			
44	YN	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			

- Molecule 45 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	RO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			
45	YO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			

- Molecule 46 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	RP	150	Total	C	N	O	S	0	0	0
			1145	712	232	198	3			
46	YP	150	Total	C	N	O	S	0	0	0
			1145	712	232	198	3			

- Molecule 47 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	RQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			
47	YQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			

- Molecule 48 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	RR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			
48	YR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			

- Molecule 49 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	RS	111	Total	C	N	O		0	0	0
			882	556	176	150				
49	YS	111	Total	C	N	O		0	0	0
			882	556	176	150				

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	RT	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			
50	YT	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			

- Molecule 51 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	RU	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			
51	YU	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			

- Molecule 52 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	RV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			
52	YV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 53 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	RW	113	Total	C	N	O	S	0	0	0
			900	566	177	155	2			
53	YW	113	Total	C	N	O	S	0	0	0
			900	566	177	155	2			

- Molecule 54 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	RX	92	Total	C	N	O	S	0	0	0
			725	471	131	123				
54	YX	92	Total	C	N	O	S	0	0	0
			725	471	131	123				

- Molecule 55 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	RY	102	Total	C	N	O	S	0	0	0
			785	505	150	125	5			
55	YY	102	Total	C	N	O	S	0	0	0
			785	505	150	125	5			

- Molecule 56 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	RZ	183	Total	C	N	O	S	0	0	0
			1461	933	260	265	3			
56	YZ	183	Total	C	N	O	S	0	0	0
			1461	933	260	265	3			

- Molecule 57 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	QA	124	Total	Mg	0	0
			124	124		
57	YV	1	Total	Mg	0	0
			1	1		
57	RP	3	Total	Mg	0	0
			3	3		
57	QX	1	Total	Mg	0	0
			1	1		
57	Y4	2	Total	Mg	0	0
			2	2		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	YA	457	Total 457	Mg 457	0	0
57	QM	1	Total 1	Mg 1	0	0
57	YH	5	Total 5	Mg 5	0	0
57	YR	2	Total 2	Mg 2	0	0
57	RT	2	Total 2	Mg 2	0	0
57	QD	1	Total 1	Mg 1	0	0
57	RG	1	Total 1	Mg 1	0	0
57	YD	4	Total 4	Mg 4	0	0
57	XX	1	Total 1	Mg 1	0	0
57	QV	6	Total 6	Mg 6	0	0
57	YE	6	Total 6	Mg 6	0	0
57	Y8	3	Total 3	Mg 3	0	0
57	YO	1	Total 1	Mg 1	0	0
57	XA	123	Total 123	Mg 123	0	0
57	YY	5	Total 5	Mg 5	0	0
57	R0	1	Total 1	Mg 1	0	0
57	QL	1	Total 1	Mg 1	0	0
57	YU	1	Total 1	Mg 1	0	0
57	XJ	1	Total 1	Mg 1	0	0
57	QH	1	Total 1	Mg 1	0	0
57	YG	2	Total 2	Mg 2	0	0

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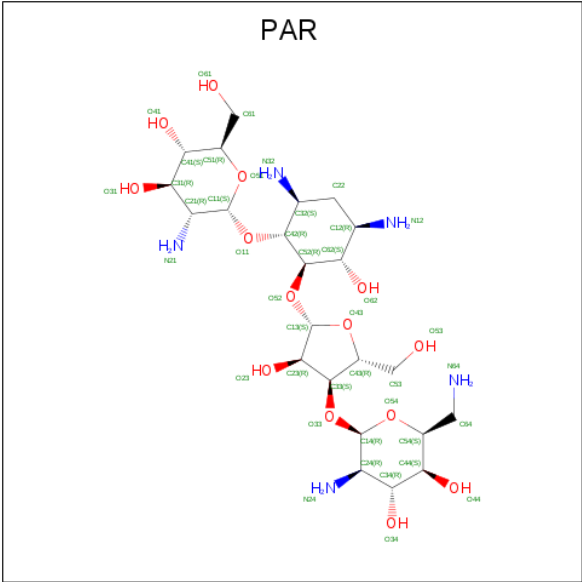
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	YQ	4	Total 4	Mg 4	0	0
57	YN	1	Total 1	Mg 1	0	0
57	R8	1	Total 1	Mg 1	0	0
57	YX	2	Total 2	Mg 2	0	0
57	RR	2	Total 2	Mg 2	0	0
57	RD	2	Total 2	Mg 2	0	0
57	R1	1	Total 1	Mg 1	0	0
57	XL	2	Total 2	Mg 2	0	0
57	Y7	1	Total 1	Mg 1	0	0
57	XB	2	Total 2	Mg 2	0	0
57	YT	2	Total 2	Mg 2	0	0
57	QF	1	Total 1	Mg 1	0	0
57	R5	1	Total 1	Mg 1	0	0
57	Y0	3	Total 3	Mg 3	0	0
57	RA	378	Total 378	Mg 378	0	0
57	QK	2	Total 2	Mg 2	0	0
57	YF	5	Total 5	Mg 5	0	0
57	YP	7	Total 7	Mg 7	0	0
57	Y5	1	Total 1	Mg 1	0	0
57	R9	1	Total 1	Mg 1	0	0
57	RE	8	Total 8	Mg 8	0	0

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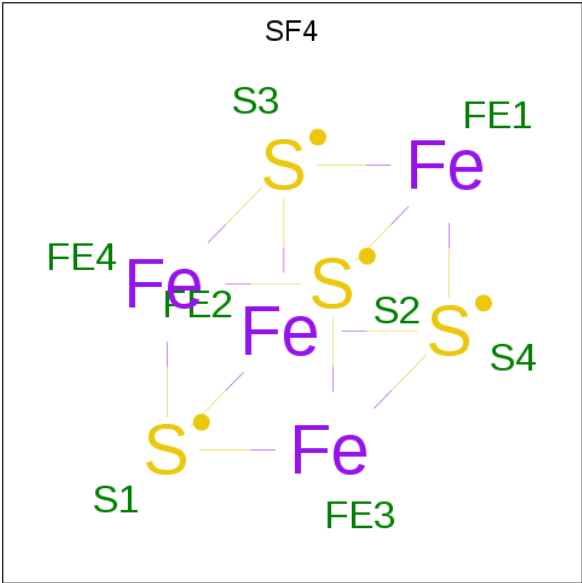
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	XK	1	Total 1	Mg 1	0	0
57	YB	8	Total 8	Mg 8	0	0
57	YW	1	Total 1	Mg 1	0	0
57	RI	1	Total 1	Mg 1	0	0
57	XV	7	Total 7	Mg 7	0	0
57	RB	4	Total 4	Mg 4	0	0
57	Y2	3	Total 3	Mg 3	0	0
57	YI	1	Total 1	Mg 1	0	0
57	XD	1	Total 1	Mg 1	0	0
57	XF	1	Total 1	Mg 1	0	0
57	RF	2	Total 2	Mg 2	0	0
57	XM	1	Total 1	Mg 1	0	0
57	Y3	1	Total 1	Mg 1	0	0

- Molecule 58 is PAROMOMYCIN (three-letter code: PAR) (formula: C₂₃H₄₅N₅O₁₄).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
58	QA	1	Total	C	N	O	0	0
			42	23	5	14		
58	XA	1	Total	C	N	O	0	0
			42	23	5	14		

- Molecule 59 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe₄S₄).

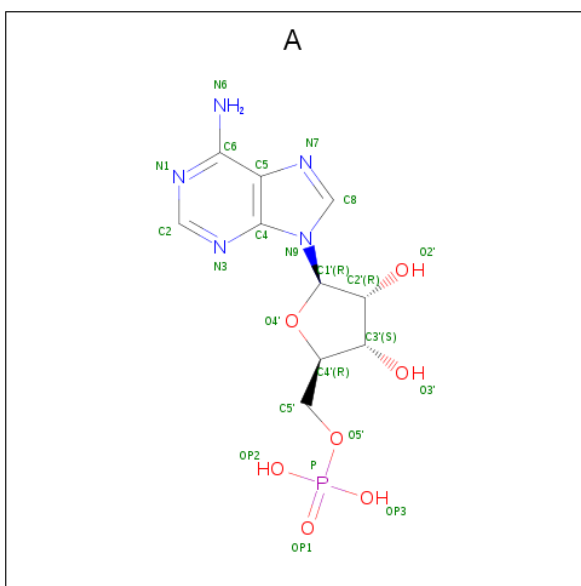


Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
59	QD	1	Total	Fe	S	0	0
			8	4	4		
59	XD	1	Total	Fe	S	0	0
			8	4	4		

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
60	QN	1	Total	Zn	0	0
			1	1		
60	XN	1	Total	Zn	0	0
			1	1		

- Molecule 61 is ADENOSINE-5'-MONOPHOSPHATE (three-letter code: A) (formula: C₁₀H₁₄N₅O₇P).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
61	QY	1	Total	C	N	O	P	0	0
			22	10	5	6	1		

- Molecule 62 is water.

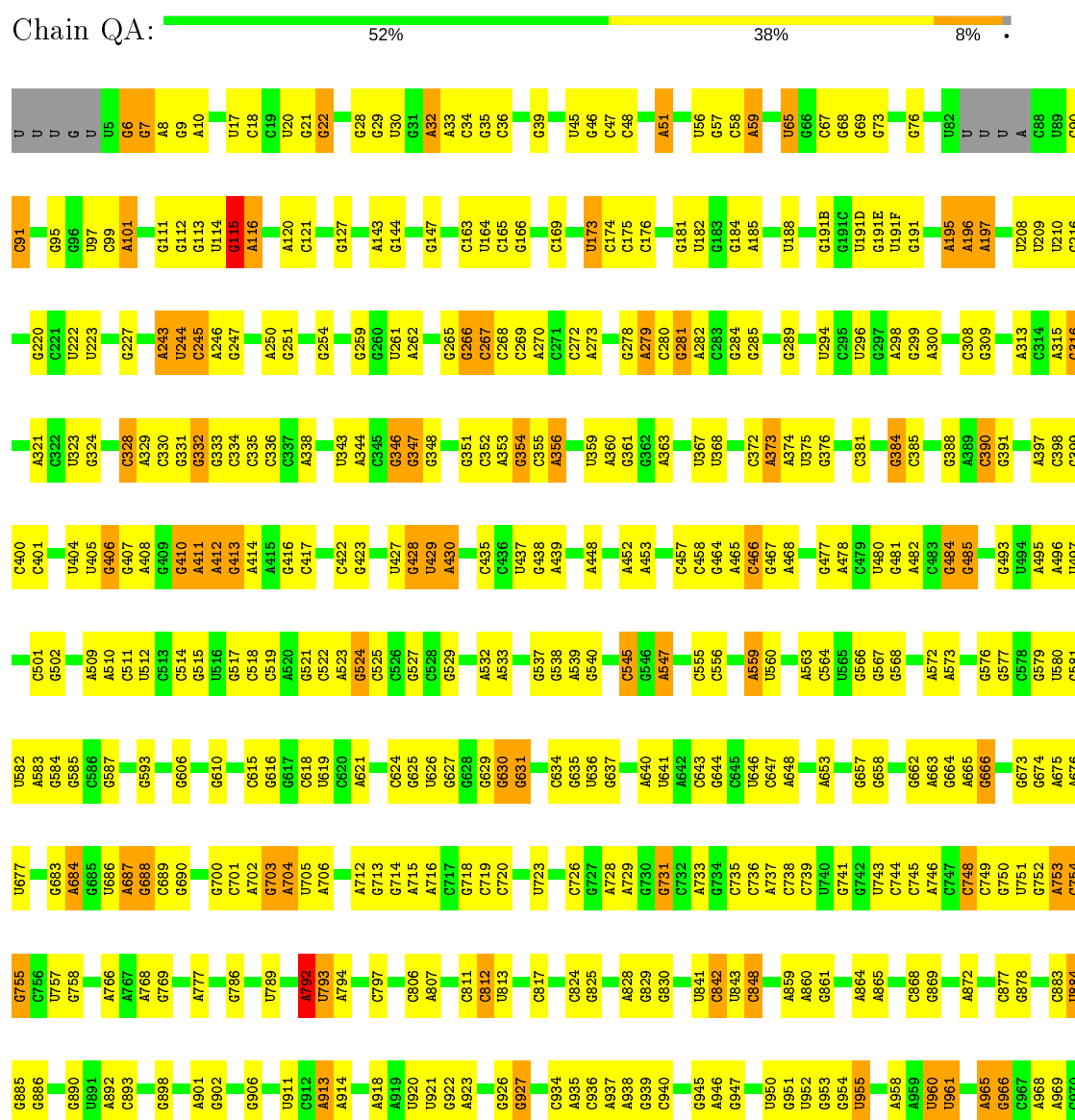
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
62	QA	1	Total	O	0	0
			1	1		
62	QX	1	Total	O	0	0
			1	1		

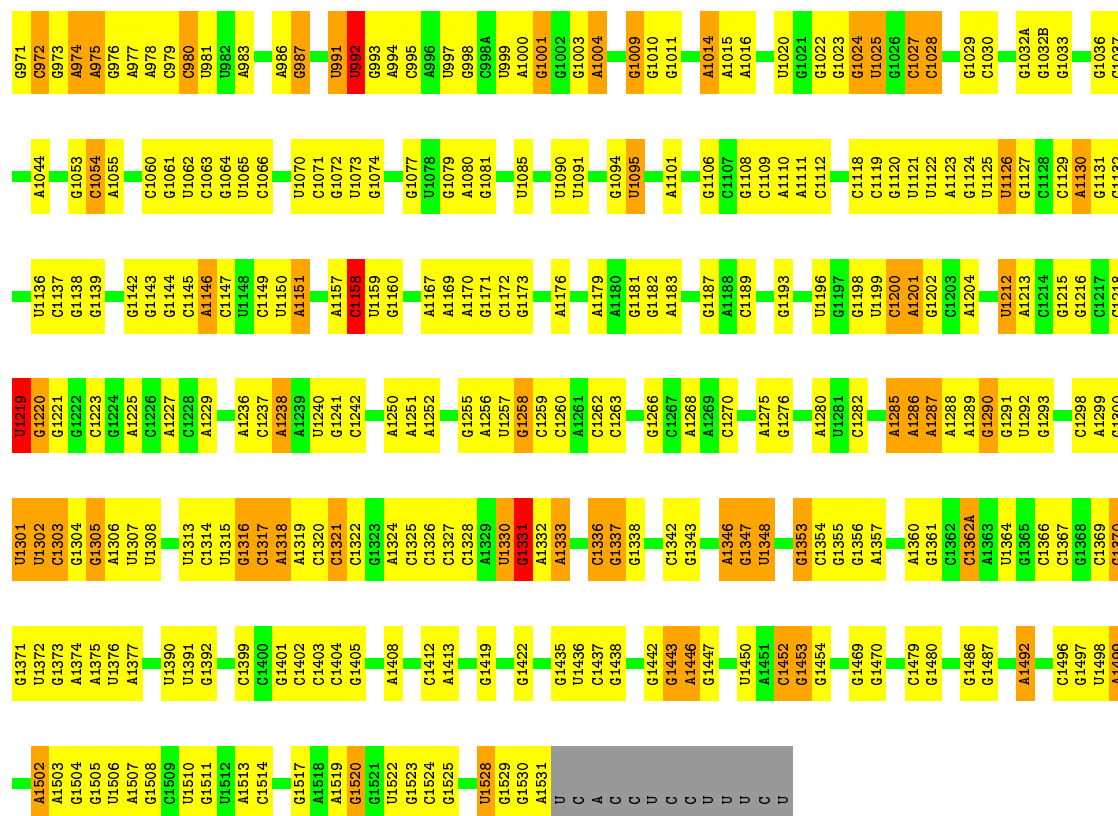
3 Residue-property plots

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

Note EDS failed to run properly.

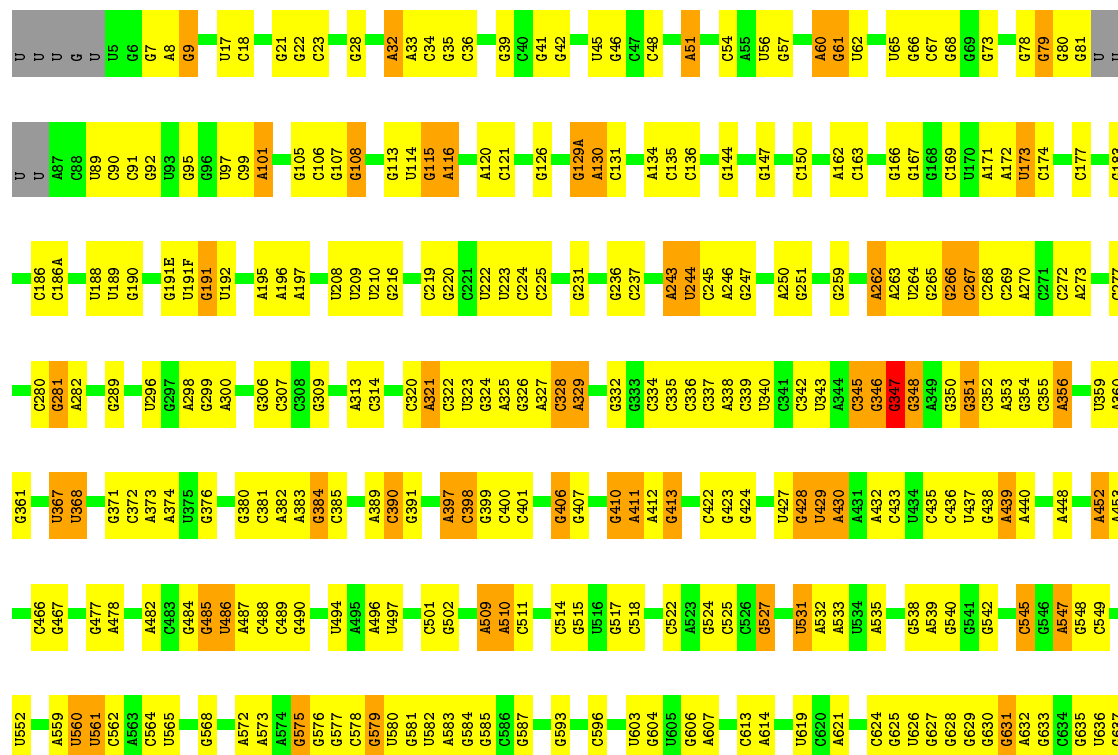
• Molecule 1: 16S rRNA

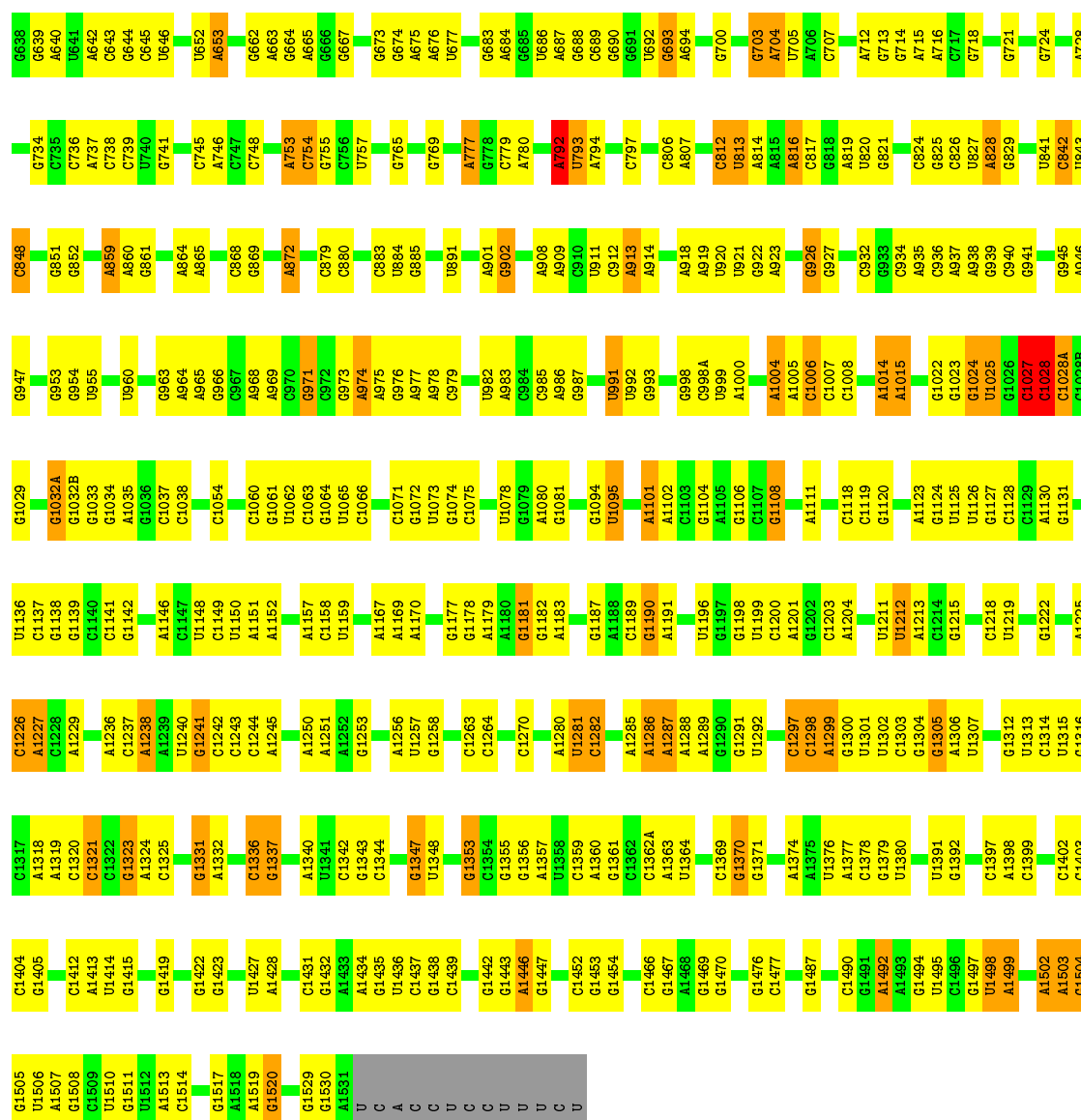


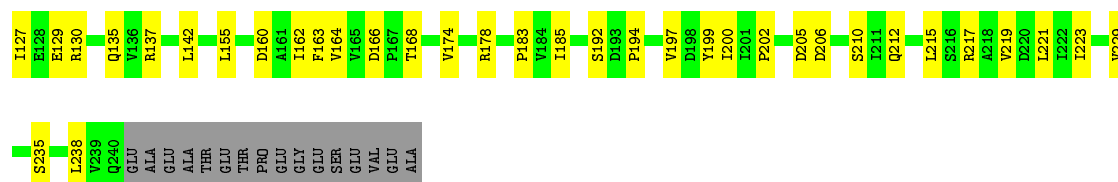


Molecule 1: 16S rRNA

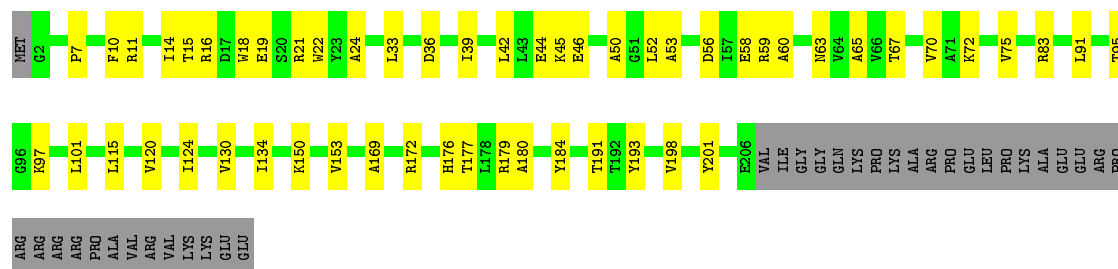
Chain XA: 52% 38% 8%



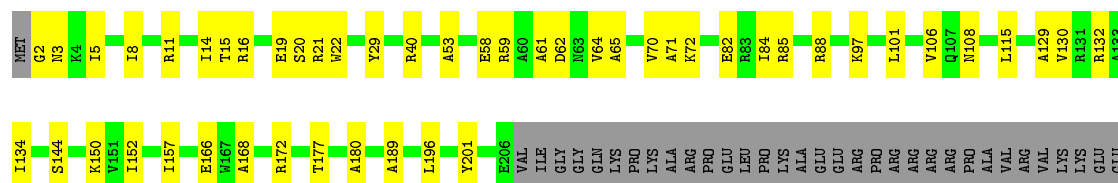




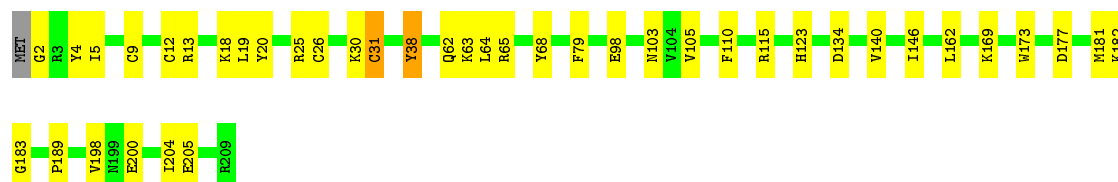
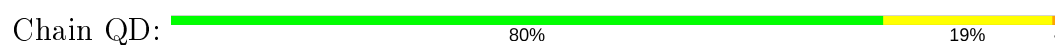
- Molecule 3: 30S ribosomal protein S3



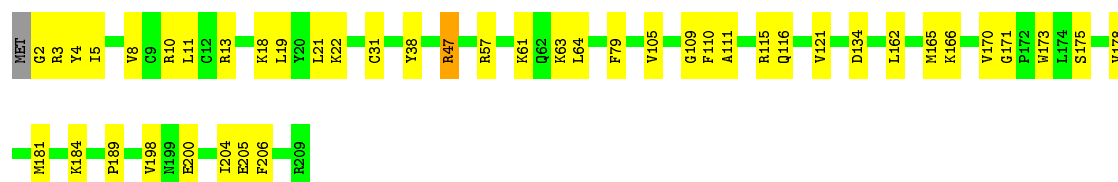
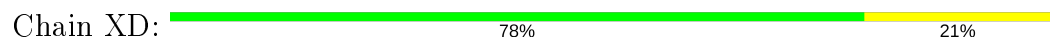
- Molecule 3: 30S ribosomal protein S3




- Molecule 4: 30S ribosomal protein S4

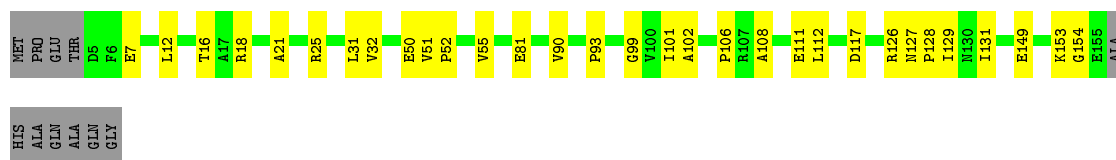


- Molecule 4: 30S ribosomal protein S4




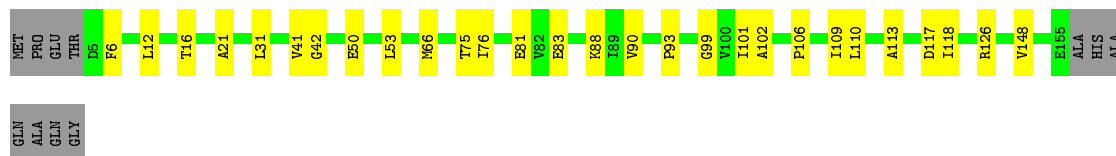
- Molecule 5: 30S ribosomal protein S5

Chain QE:  74% 19% 7%



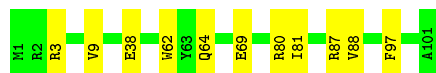
- Molecule 5: 30S ribosomal protein S5

Chain XE:  76% 17% 7%



- Molecule 6: 30S ribosomal protein S6

Chain QF:  89% 11%




- Molecule 6: 30S ribosomal protein S6

Chain XF:  72% 28%




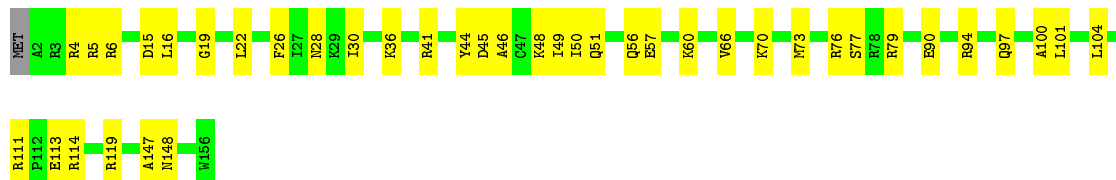
- Molecule 7: 30S ribosomal protein S7

Chain QG:  86% 13%



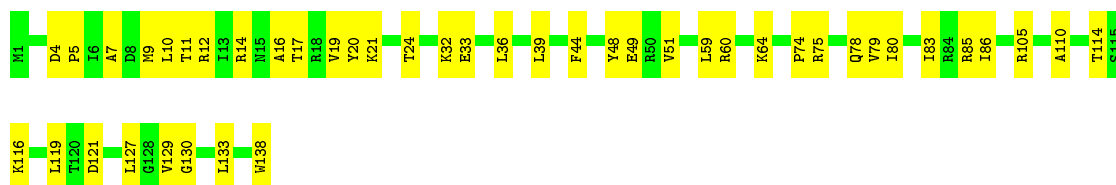
- Molecule 7: 30S ribosomal protein S7

Chain XG:  74% 26%



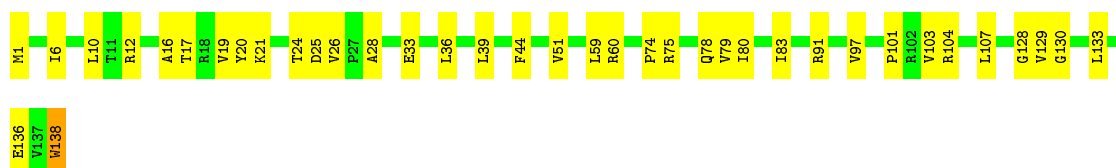
- Molecule 8: 30S ribosomal protein S8

Chain QH:  68% 32%



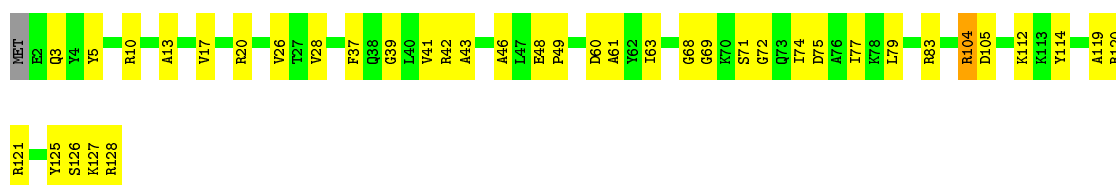
- Molecule 8: 30S ribosomal protein S8

Chain XH:  72% 27% .



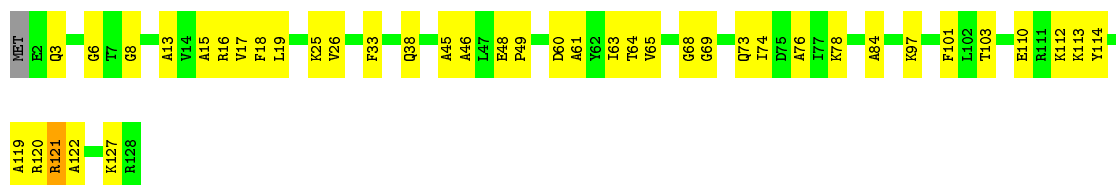
- Molecule 9: 30S ribosomal protein S9

Chain QI:  69% 30% ..



- Molecule 9: 30S ribosomal protein S9

Chain XI:  67% 31% ..



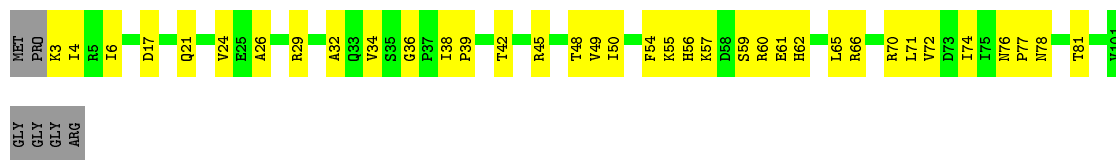
- Molecule 10: 30S ribosomal protein S10

Chain QJ:  68% 27% 6%



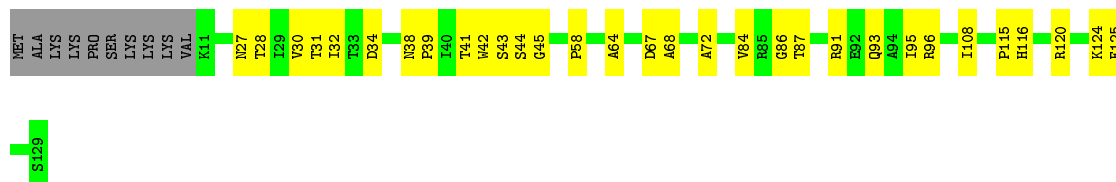
- Molecule 10: 30S ribosomal protein S10

Chain XJ: 



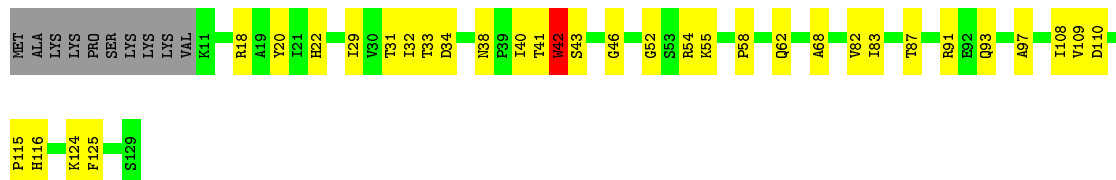
- Molecule 11: 30S ribosomal protein S11

Chain QK: 




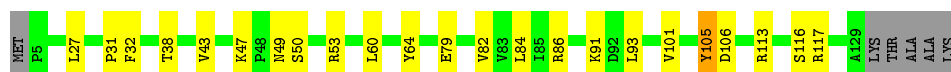
- Molecule 11: 30S ribosomal protein S11

Chain XK: 



- Molecule 12: 30S ribosomal protein S12

Chain QL: 



- Molecule 12: 30S ribosomal protein S12

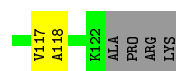
Chain XL: 



- Molecule 13: 30S ribosomal protein S13

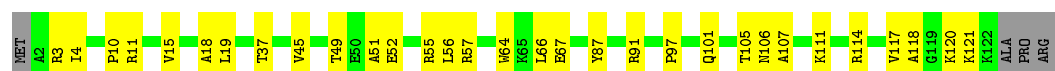
Chain QM: 





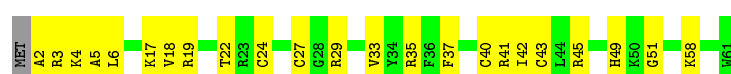
- Molecule 13: 30S ribosomal protein S13

Chain XM: 71% 25%



- Molecule 14: 30S ribosomal protein S14 type Z

Chain QN: 61% 38%



- Molecule 14: 30S ribosomal protein S14 type Z

Chain XN: 70% 28%



- Molecule 15: 30S ribosomal protein S15

Chain QO: 79% 20%



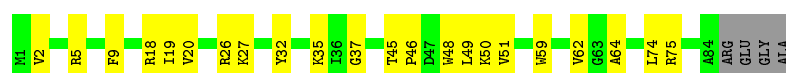
- Molecule 15: 30S ribosomal protein S15

Chain XO: 84% 15%



- Molecule 16: 30S ribosomal protein S16

Chain QP: 70% 25% 5%

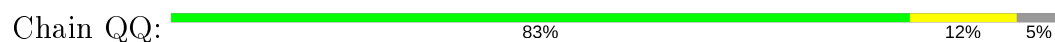


- Molecule 16: 30S ribosomal protein S16

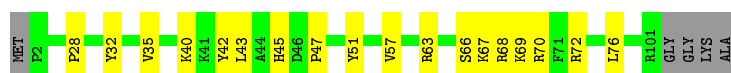
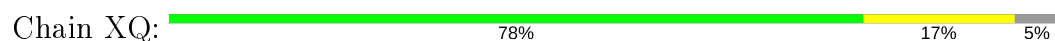
Chain XP: 60% 34% 5%



- Molecule 17: 30S ribosomal protein S17



- Molecule 17: 30S ribosomal protein S17



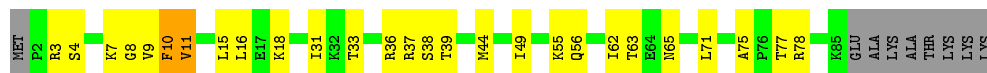
- Molecule 18: 30S ribosomal protein S18



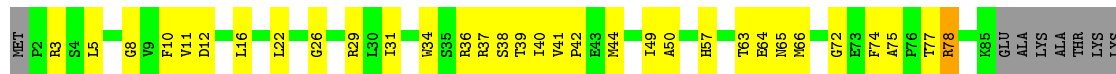
- Molecule 18: 30S ribosomal protein S18



- Molecule 19: 30S ribosomal protein S19




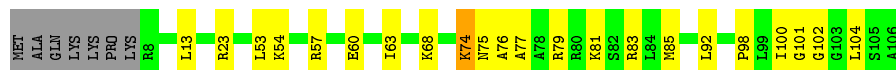
- Molecule 19: 30S ribosomal protein S19



LYS

- Molecule 20: 30S ribosomal protein S20

Chain QT:  73% 20% 7%



- Molecule 20: 30S ribosomal protein S20

Chain XT:  67% 25% 7%



- Molecule 21: 30S ribosomal protein Thx

Chain QU:  67% 26% 7%




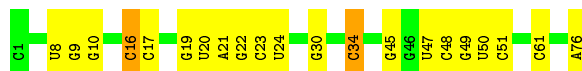
- Molecule 21: 30S ribosomal protein Thx

Chain XU:  70% 22% 7%




- Molecule 22: P-site tRNA^{fMet}

Chain QV:  73% 25% 2%



- Molecule 22: P-site tRNA^{fMet}

Chain XV:  73% 27% 0%



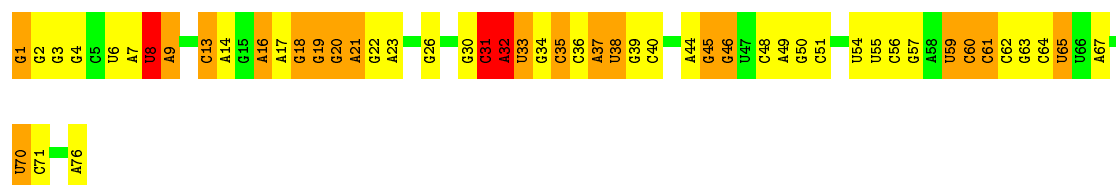
- Molecule 23: E-site tRNA^{Ala}(GGC)

Chain QW:  39% 47% 13%



- Molecule 23: E-site tRNA^{Ala}(GGC)

Chain XW:  32% 39% 25% 4%



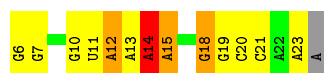
- Molecule 24: mRNA

Chain QX: 



- Molecule 24: mRNA

Chain XX: 



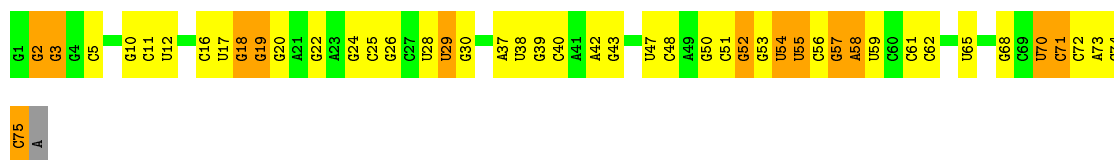
- Molecule 25: A-site tRNA^{Ala}(GGC)

Chain QY: 




- Molecule 25: A-site tRNA^{Ala}(GGC)

Chain XY: 



- Molecule 26: 50S ribosomal protein L27

Chain R0:  79% 18% 3%



- Molecule 26: 50S ribosomal protein L27

Chain Y0:  71% 25% . .



- Molecule 27: 50S ribosomal protein L28

Chain R1: 76% 23%



- Molecule 27: 50S ribosomal protein L28

Chain Y1: 72% 27%



- Molecule 28: 50S ribosomal protein L29

Chain R2: 68% 28%



- Molecule 28: 50S ribosomal protein L29

Chain Y2: 81% 15%



- Molecule 29: 50S ribosomal protein L30

Chain R3: 67% 32%



- Molecule 29: 50S ribosomal protein L30

Chain Y3: 67% 32%



- Molecule 30: 50S ribosomal protein L31

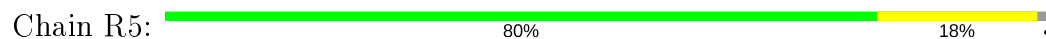
Chain R4: 66% 27% 7%



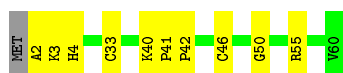
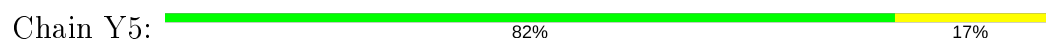
- Molecule 30: 50S ribosomal protein L31



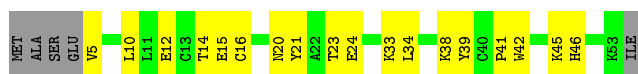
- Molecule 31: 50S ribosomal protein L32



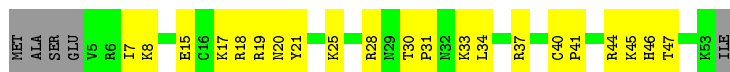
- Molecule 31: 50S ribosomal protein L32



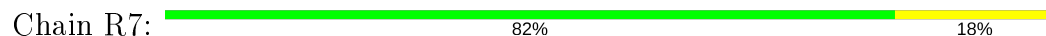
- Molecule 32: 50S ribosomal protein L33



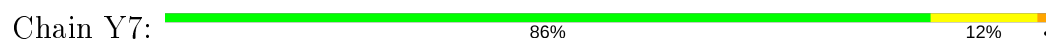
- Molecule 32: 50S ribosomal protein L33

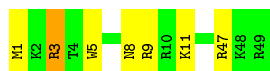


- Molecule 33: 50S ribosomal protein L34

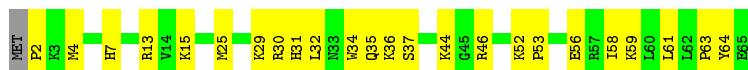


- Molecule 33: 50S ribosomal protein L34





- Molecule 34: 50S ribosomal protein L35



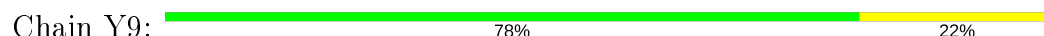
- Molecule 34: 50S ribosomal protein L35



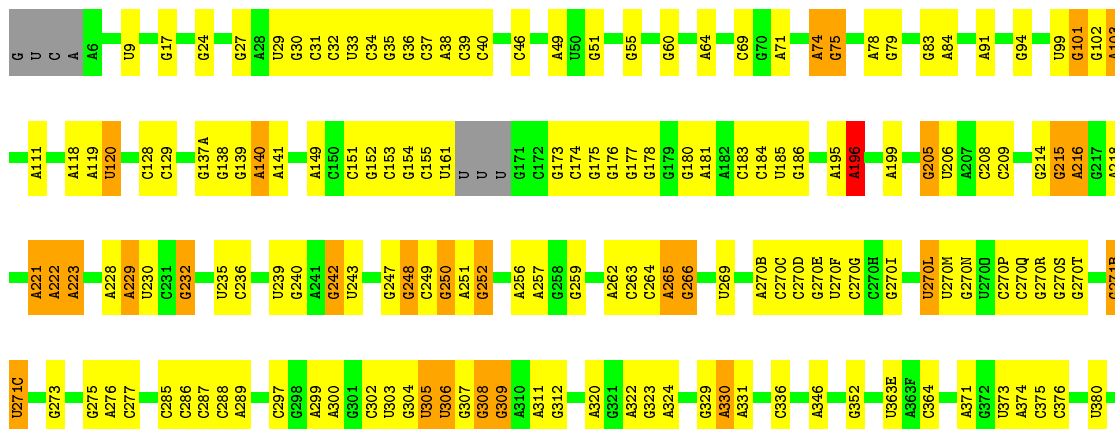
- Molecule 35: 50S ribosomal protein L36



- Molecule 35: 50S ribosomal protein L36



- Molecule 36: 23S rRNA



A1596	C1504	A1419	C1320	C1230	C1135	U1060	A983	C893	A820	G728	C	A483	G586
A1597	C1505	U1420	A1321	G1232	C1136	U1061	A980	A896	A821	G729	G	C484	G389
A1598	C1506	G1421	A1322	G1232	G1137	U1062	A990	A896	U822	C730	C	C485	A390
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A1781	C1882	C2008	G2104	G2184	G2302	C2380	A2475	C2568	G2570	U2746	C2828	C	A1781
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U1796	G1907	G2023	G2116	G2211	C2313	U2401	U2505	C2591	C2669	A2765	U2838	C	U1796
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C1799	C1914	C2025	A2118	G2213	C2315	C2403	U2507	U2593	C2671	C2769	G2840	C	C1799
G1800	G1929	C2026	U2119	G2215	C2316	C2404	U2511	C2594	C2672	G2770	A2851	C	G1800
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G1816	A1938	G2037	U2132	U2235	C2328	U2411	U2517	G2606	U2698	G2784	G2861	C	G1816
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A1825	U1955	C2055	G2146	U2244	A2335	G2427	A2533	A2611	C2704	C2704	G2866	C	A1825
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• Molecule 36: 23S rRNA

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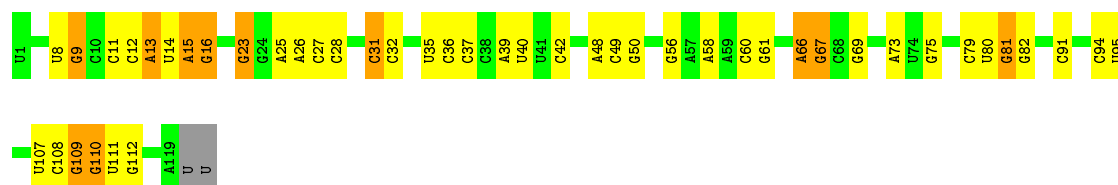
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U1431	A1331	G1212	C1041	C1041	A953	U858	G776	U657	G604	C510	U373	G274	G224	
C1432	G1332	A1220	G1042	G1042	G859	U859		C659		G512	G381	G275	G226	
A1434	G1344	G1231	A1129	A1045	G956	U860	A782	G660	U607	G513	G386	A276	A229	A118
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A1439	A1349	G1233	C1135	A1047	U958	A867	A784	G662	A609	U524	G388	C278	G125	
		G1235	U1136	A1048	A959	U871	G785		G609A	U525	G389	C279	A232	A127
A1444A	U1352	G1236	G1137	A1049	C961		U787	G665	U614	G527	C392	U284	A233	C128
C1445	A1353	A1237	G1138	A1050		G881	A788	G666		A528	C393	C285	C234	
	A1354	G1238	G1139	A1051	G966	G882	A789	C671	G617	A529	A394	C286	U235	
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G1449A	U1357	U1240	U1141	U1056	U969	C884	G791		G620	G530	C404	C288	C237	
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	A1360	A1254	G1143	A1059	G974	C887	C796		G623	G533	G411	C297		C141A
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	A1365	G1256		U1061		C889			G625	C535	A413	A300	G248	G143
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		G1151	C1064	G1064	A983	G892	U806	C691	G627	C537	A414	G301	G250	
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A1471	A1379	C1270	G1154	A1067	A988	U895	U811	G702	G630	C541		U306		U
		U1271	A1155	A1068	G989	A896	C812		A631		A423	G307		U
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G1483	G1385	U1273	C1166	G1071	C994	A900	C814	A718	A633	A547		A311	G258	G173
						A901				A548			G259	
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	U1406	A1301	U1188	G1087	A1011	A918	G832	A746	G	A578	G463	A331	U270L	C192
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G2854	A2758	A2665	U2554	C2442	G2340	A2266	G2152	A2062	A1969	A1854	C1754	A1637	A1528
G2864	G2762	G2673	C2558	C2443	G2341	A2267	G2153	C2063	A1970	G1854	C1755	C1638	A1529
G2867	G2763	G2674	C2559	A2448	G2342	A2268	G2154	C2064	A1971	G1858	G1756	U1639	G1534
A2868	A2764	G2675	C2560	U2449	U2344	G2270	G2155	C2065	G1972	U1639	C1640	U1535	U1536
G2871	G2765	G2676	U2563	U2450	U2345	G2271	G2156	G2066	G1980	G1869	A1762	G1645	A1537
C2881	C2771	C2680	U2563	A2451	A2346	U2272	G2157	G2067	G1981	C1870	G1763	G1646	G1538
U2882	C2772	A2686	A2566	C2452	U2347	A2273	A2158	U2068	A1982	A1871	G1764	G1647	G1540
G2883	C2773	G2687	C2567	G2455	U2348	A2274	C2163	G2069	G1983	A1872	C1773	C1648	
A2884	A2774	U2688	C2568	C2456	G2350	C2275	G2164	A2071	U1991	G1878	U1778	G1651	A1543
G2885	A2775	U2689	A2572	G2468	G2351	G2276	G2165	C2072	G1989	A1879	U1779	G1652	C1544
G2886	A2776	C2690	C2573	A2469	G2352	G2280	G2166	U2074	G1992	A1884	U1780	G1653	A1545
G2887	G2777	G2691	G2574	G2470	G2353	G2281	G2167	U2075	U1993	A1885		A1654	A1546
G2888	A2778	C2692	G2575	C2471	G2354	C2282	A2170	U2086	G2000	A1886	C1783	C1656	A1553
G2889	A2779	G2693	C2576	C2472	G2355	A2283	U2171	G2087	A2001	C1887	A1784	C1657	A1554
G2890	C2779	A2694	U2580	A2473	G2356	A2284	U2172	G2088	G2002	A1888	A1785	C1658	
G2891	C2780	G2695	U2581	C2474	G2357	A2285	A2173	G2089	C2008	A1889	A1786		C1557
G2892	C2781	U2696	C2582	A2475	G2358	A2286	U2180	G2100	G2009	A1890		A1668	
G2893	C2782	G2697	C2583	C2476	G2359	A2287	G2181	G2101	G2010	A1891	C1790	A1669	A1559
G2894	A2783	C2698	U2584	A2477	G2360	A2288	G2182	U2102	U2011	G1899	G1792	C1674	
G2895	C2784	U2699	C2585	G2478	G2361	A2289	G2183	U2103	G2012	C1902	C1793	C1675	A1566
G2896	C2785	G2700	C2586	A2479	G2362	A2290	G2184	G2104	C1905	A1905	U1794	A1676	A1567
G2897	U2786	C2701	U2587	C2480	G2363	C2293	G2185	C2105	G1906	C1906	U1795	A1677	A1568
G	G2787	U2702	C2588	A2481	G2364	C2294	G2186	C2106	A2015		C1797	G1678	A1570
A	C2788	C2703	C2589	G2482	G2365	C2295	G2187	G2107	A2020	C1914	U1798	G1681	A1571
C	C2789	C2704	C2590	U2483	G2366	A2296	G2188	U2108	G2021	A1919	G1799		A1572
C	A2790	U2705	C2591	C2484	G2367	C2297	G2189	C2109	U2022	C1924	C1800	U1688	C1575
U	C2791	C2706	C2592	A2485	G2368	A2298	G2190	G2110	G2023	C1925	G1801	A1689	U1576
C	G2792	C2707	C2593	G2486	G2369	A2299	G2191	G2111	G2024	C1926	A1802	C1694	C1577
C	U2793	C2708	C2594	C2487	G2370	C2300	G2192	U2112	C2025	G1929	A1814	G1695	U1578
C	G2794	C2709	C2595	A2488	G2371	A2301	G2193	A2114	C2026	G1930	G1815	G1696	A1579
C	C2795	U2700	C2596	C2489	G2372	C2302	G2194	G2115	A2030	U1931	A1816	G1697	C1585
C	U2796	C2701	C2597	U2490	G2373	A2303	G2195	G2116	A2031	A1932	G1817	G1698	A1586
C	C2797	U2702	C2598	C2491	G2374	A2304	G2196	U2117	G2032	G1933	A1819	G1699	A1587
C	C2798	C2703	C2599	G2492	G2375	A2305	G2197	A2118	A2033	A1936	A1820	A1701	G1595
C	C2799	C2704	C2600	U2493	G2376	A2306	G2198	G2119	G2037	A1937	G1823	U1709	
C	U2799	C2705	C2601	C2494	G2377	C2307	A2199	G2120	G2038	A1938	C1725	C1710	C1598
C	G2800	C2706	C2602	G2495	G2378	A2308	G2200	G2121	C2043	U1939	G1835	G1726	C1607
C	C2801	U2707	C2603	C2496	G2379	C2309	G2201	A2126	U2047	G1945	G1839	U1727	A1608
C	U2802	C2708	C2604	U2497	G2380	A2310	G2202	G2127	G2048	U1946	G1840	G1728	A1609
C	C2803	C2709	C2605	C2498	G2381	A2311	G2203	G2128	G2049	A1952	U1841	U1729	A1610
C	G2804	U2710	C2606	G2499	G2382	A2312	G2204	G2129	C2050	A1953	G1842	G1730	G1613
C	C2805	C2711	C2607	U2499	G2383	A2313	G2205	G2130	G2051	U1954	G1843	A1732	C1617
C	U2806	C2712	C2608	C2500	G2384	A2314	G2206	G2131	G2052	C1957	C1844	G1733	A1618
C	C2807	U2713	C2609	G2501	G2385	A2315	G2207	G2132	C2055	U1958	G1845		G1622
C	G2808	G2714	C2610	C2502	G2386	A2316	G2208	U2133	G2056	A1959	G1846	C1742	
C	C2809	U2715	C2611	U2503	G2387	C2317	G2209	G2134	A2059	A1960	A1847	G1743	U1629
C	A2810	C2716	C2612	G2504	G2388	A2318	G2210	G2135	G2060	C1961	A1853	G1750	G1630
C	G2811	U2717	C2613	C2505	G2389	C2319	G2211	G2136					
C	C2812	C2718	C2614	U2506	G2390	A2320	G2212	G2137					
C	U2813	U2719	C2615	G2507	G2391	C2321	G2213	G2138					
C	C2814	C2720	C2616	C2508	U2400	A2322	G2214	G2139					
C	G2815	U2721	C2617	G2509	G2401	G2323	G2215	G2140					
C	C2816	C2722	C2618	U2510	C2402	A2324	G2216	G2141					
C	U2817	U2723	C2619	C2511	G2403	A2325	G2217	G2142					
C	C2818	C2724	C2620	G2512	U2404	G2326	G2218	G2143					
C	G2819	U2725	C2621	C2513	C2405	C2327	G2219	G2144					
C	C2820	C2726	C2622	U2514	G2406	A2328	G2220	G2145					
C	U2821	U2727	C2623	G2515	G2407	C2329	G2221	G2146					
C	C2822	C2728	C2624	C2516	G2408	A2330	G2222	G2147					
C	U2823	U2729	C2625	U2517	U2409	C2331	G2223	G2148					
C	G2824	C2729	C2626	G2518	G2410	A2332	G2224	G2149					
C	C2825	U2730	C2627	C2519	G2411	C2333	G2225	G2150					
C	U2826	U2731	C2628	U2520	A2412	G2334	G2226	G2151					
C	C2827	C2732	C2629	G2521	G2413	G2335	G2227	G2152					
C	G2828	U2733	C2630	C2522	G2414	A2336	G2228	G2153					
C	C2829	C2734	C2631	U2523	G2415	C2337	G2229	G2154					
C	U2830	U2735	C2632	G2524	G2416	A2338	G2230	G2155					
C	C2831	C2736	C2633	C2525	U2417	C2339	G2231	G2156					
C	G2832	U2737	C2634	U2526	G2418	A2340	G2232	G2157					
C	C2833	C2738	C2635	G2527	G2419	C2341	G2233	G2158					
C	U2834	U2739	C2636	C2528	G2420	A2342	G2234	G2159					
C	C2835	C2740	C2637	U2529	G2421	G2343	G2235	G2160					
C	G2836	U2741	C2638	G2530	C2422	G2344	G2236	G2161					
C	C2837	C2742	C2639	A2531	G2423	A2345	G2237	G2162					
C	U2838	U2743	C2640	G2532	G2424	A2346	G2238	G2163					
C	C2839	C2744	C2641	A2533	G2425	A2347	G2239	G2164					
C	G2840	U2745	C2642	G2534	G2426	A2348	G2240	G2165					
C	C2841	C2746	C2643	C2535	U2427	A2349	G2241	G2166					
C	U2842	U2747	C2644	G2536	G2428	A2350	G2242	G2167					
C	C2843	C2748	C2645	C2537	G2429	C2351	G2243	G2168					
C	G2844	U2749	C2646	A2538	G2430	A2352	G2244	G2169					
C	C2845	C2750	C2647	G2539	A2431	A2353	G2245	G2170					
C	U2846	U2751	C2648	C2540	G2432	A2354	G2246	G2171					
C	C2847	C2752	C2649	A2541	G2433	A2355	G2247	G2172					
C	G2848	U2753	C2650	G2542	U2434	A2356	G2248	G2173					
C	C2849	C2754	C2651	C2543	G2435	A2357	G2249	G2174					
C	U2850	U2755	C2652	G2544	U2436	A2358	G2250	G2175					
C	C2851	C2756	C2653	G2545	G2437	A2359	G2251	G2176					

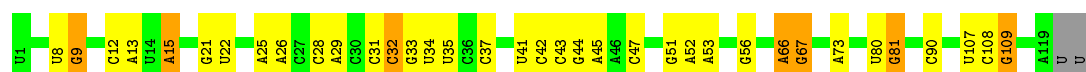
• Molecule 37: 5S rRNA

Chain RB: 



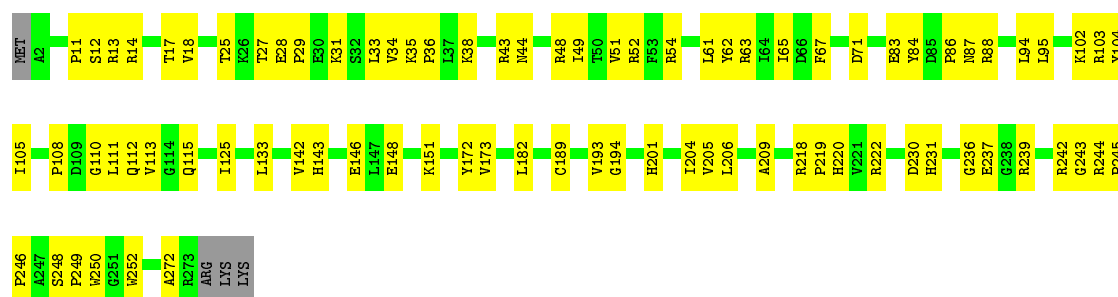
• Molecule 37: 5S rRNA

Chain YB: 




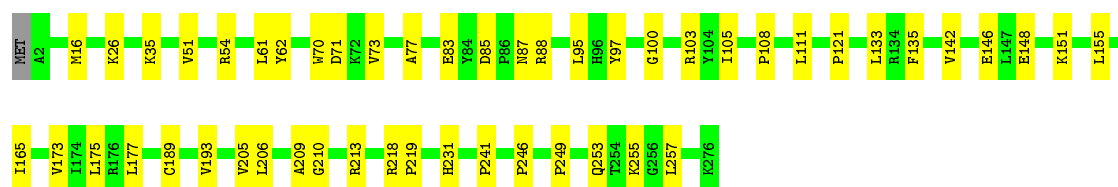
• Molecule 38: 50S ribosomal protein L2

Chain RD: 



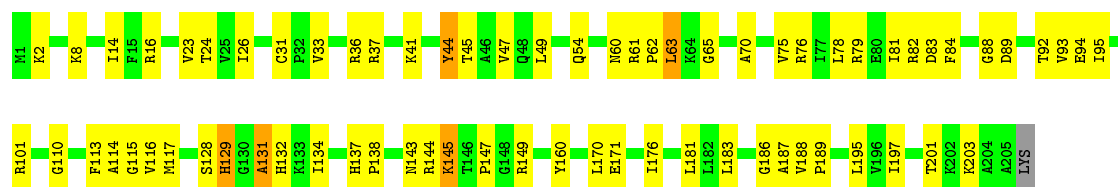
• Molecule 38: 50S ribosomal protein L2

Chain YD: 



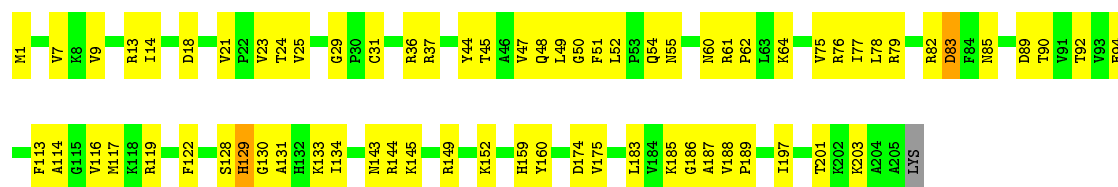
• Molecule 39: 50S ribosomal protein L3

Chain RE: 



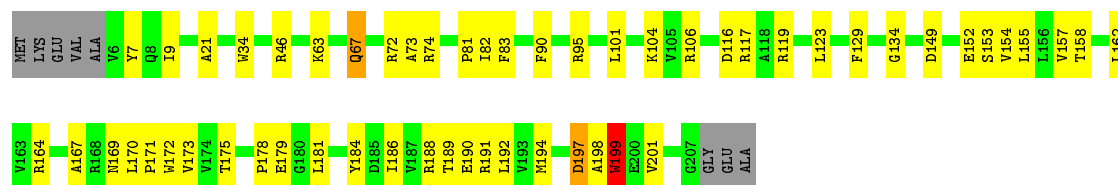
• Molecule 39: 50S ribosomal protein L3

Chain YE:  66% 33%



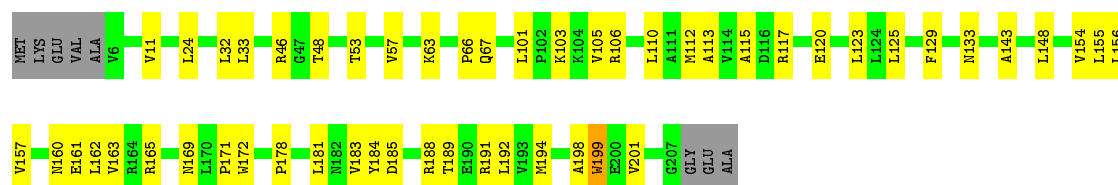
- Molecule 40: 50S ribosomal protein L4

Chain RF:  70% 25%



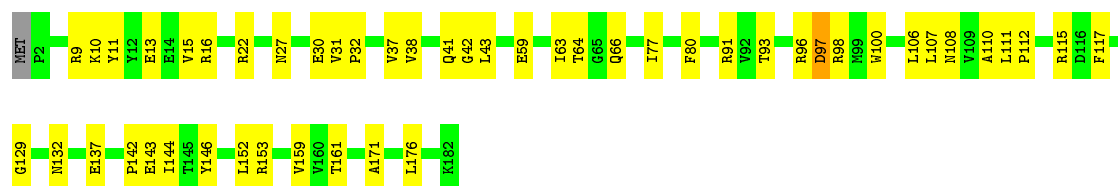
- Molecule 40: 50S ribosomal protein L4

Chain YF:  71% 24%




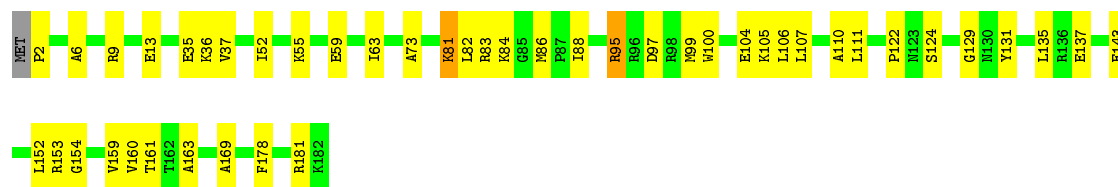
- Molecule 41: 50S ribosomal protein L5

Chain RG:  73% 26%



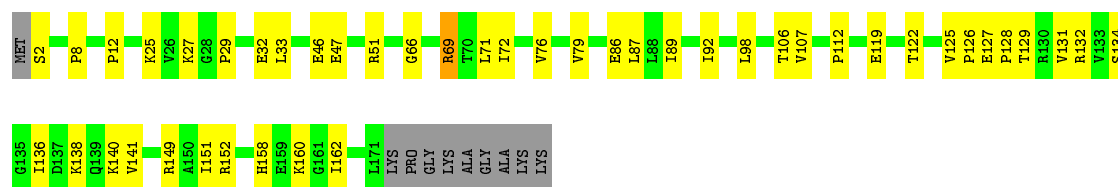
- Molecule 41: 50S ribosomal protein L5

Chain YG:  75% 24%



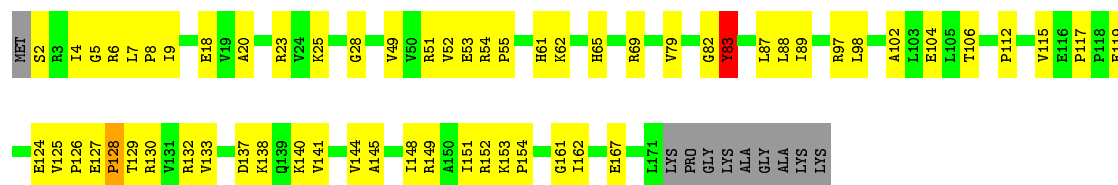
- Molecule 42: 50S ribosomal protein L6

Chain RH: 




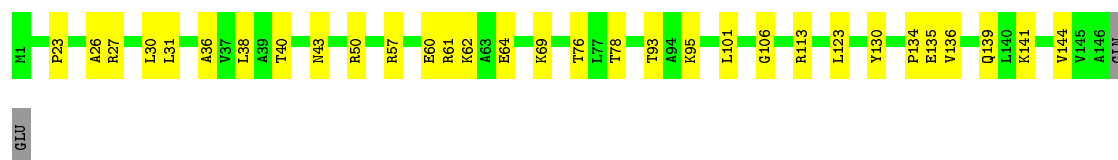
- Molecule 42: 50S ribosomal protein L6

Chain YH: 



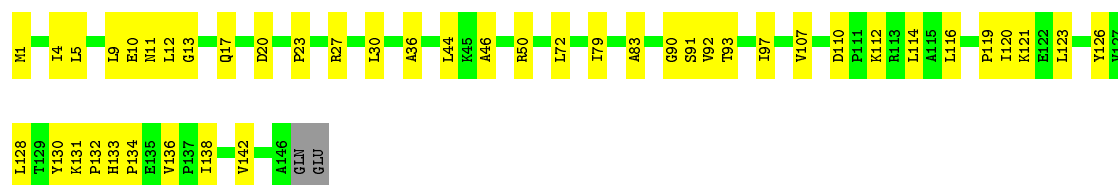
- Molecule 43: 50S ribosomal protein L9

Chain RI: 




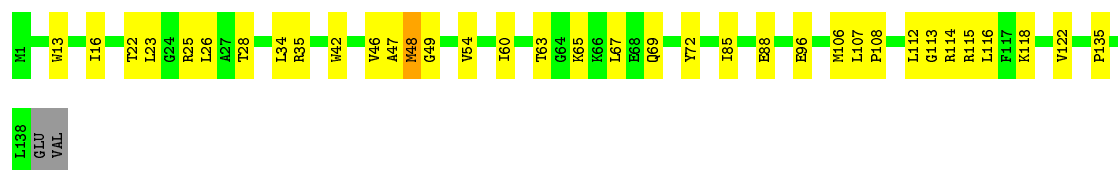
- Molecule 43: 50S ribosomal protein L9

Chain YI: 




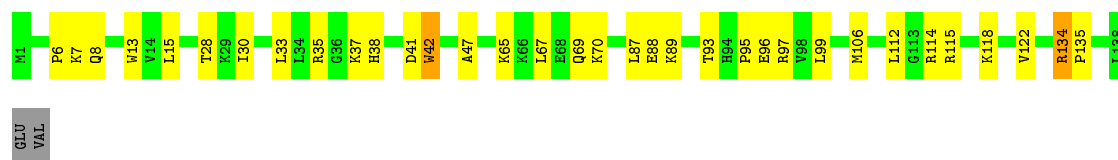
- Molecule 44: 50S ribosomal protein L13

Chain RN: 




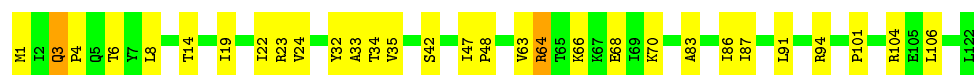
- Molecule 44: 50S ribosomal protein L13

Chain YN:  74% 23% ..




- Molecule 45: 50S ribosomal protein L14

Chain RO:  75% 23% .



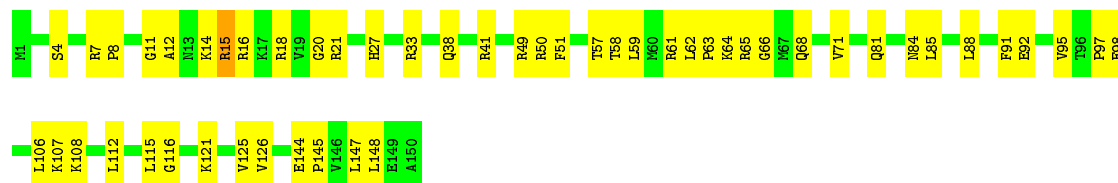
- Molecule 45: 50S ribosomal protein L14

Chain YO:  79% 21%



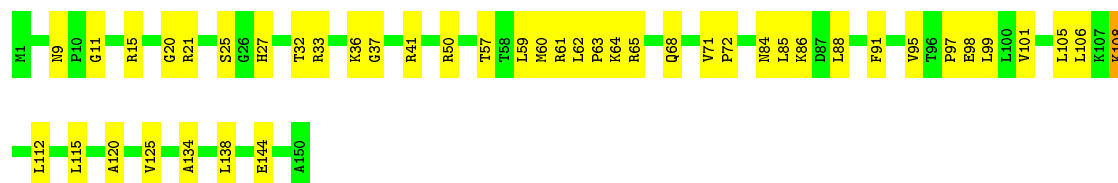
- Molecule 46: 50S ribosomal protein L15

Chain RP:  66% 33% .



- Molecule 46: 50S ribosomal protein L15

Chain YP:  71% 29% .



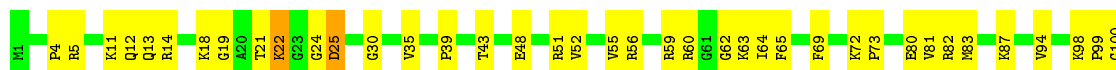
- Molecule 47: 50S ribosomal protein L16

Chain RQ:  64% 36%

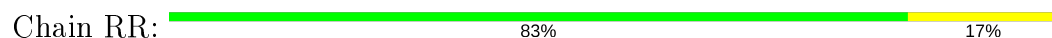




- Molecule 47: 50S ribosomal protein L16



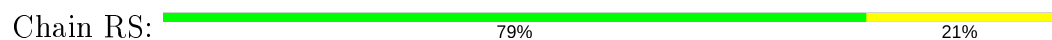
- Molecule 48: 50S ribosomal protein L17



- Molecule 48: 50S ribosomal protein L17



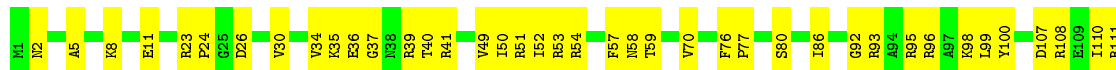
- Molecule 49: 50S ribosomal protein L18



- Molecule 49: 50S ribosomal protein L18



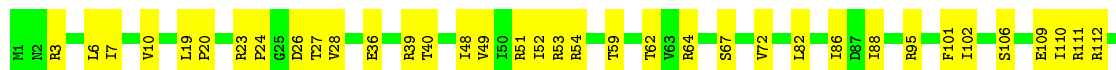
- Molecule 50: 50S ribosomal protein L19





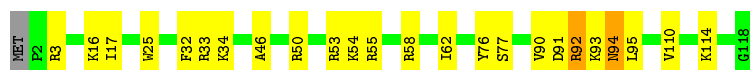
- Molecule 50: 50S ribosomal protein L19

Chain YT: 63% 31% 6%



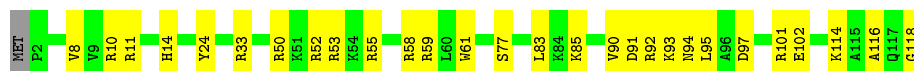
- Molecule 51: 50S ribosomal protein L20

Chain RU: 79% 19% ..



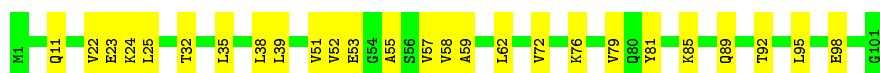
- Molecule 51: 50S ribosomal protein L20

Chain YU: 75% 24% .



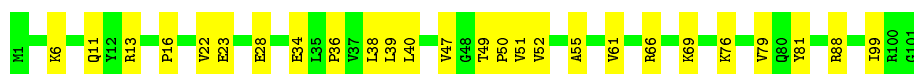
- Molecule 52: 50S ribosomal protein L21

Chain RV: 74% 26%



- Molecule 52: 50S ribosomal protein L21

Chain YV: 74% 26%




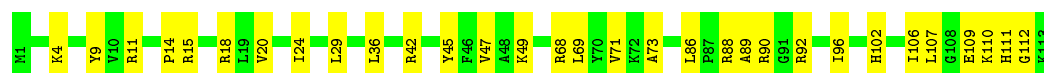
- Molecule 53: 50S ribosomal protein L22

Chain RW: 78% 22%




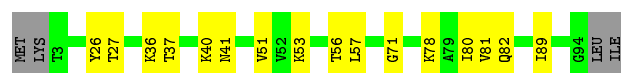
- Molecule 53: 50S ribosomal protein L22

Chain YW:  73% 27%




- Molecule 54: 50S ribosomal protein L23

Chain RX:  79% 17%



- Molecule 54: 50S ribosomal protein L23

Chain YX:  82% 14%



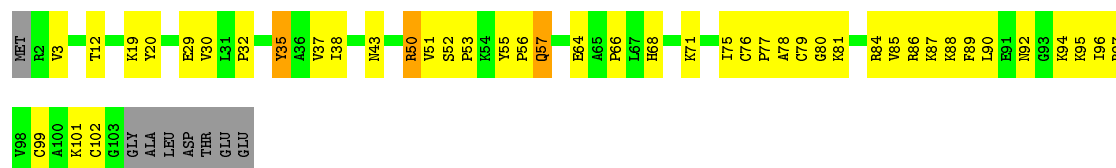
- Molecule 55: 50S ribosomal protein L24

Chain RY:  63% 28% 7%



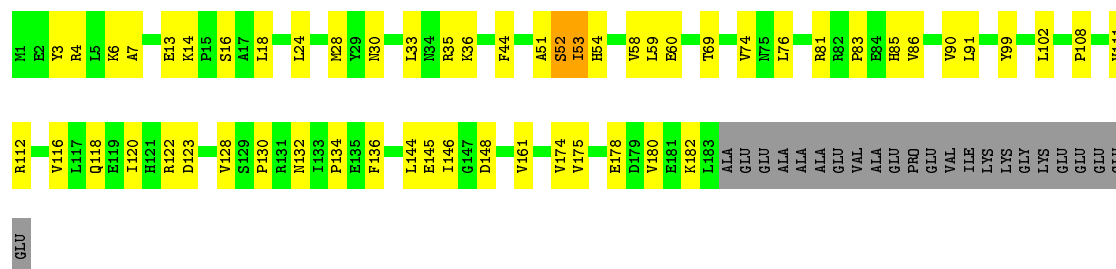
- Molecule 55: 50S ribosomal protein L24

Chain YY:  53% 37% 7%

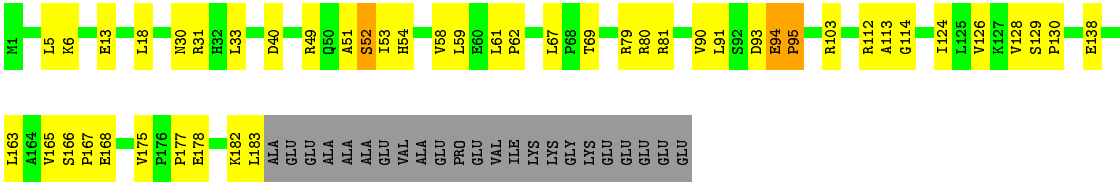
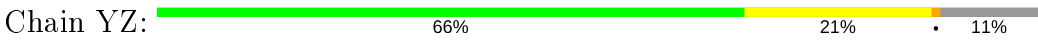


- Molecule 56: 50S ribosomal protein L25

Chain RZ:  62% 26% 11%



- Molecule 56: 50S ribosomal protein L25



4 Data and refinement statistics

EDS failed to run properly - this section is therefore incomplete.

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	211.26Å 452.33Å 626.52Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	44.53 – 3.20	Depositor
% Data completeness (in resolution range)	91.2 (44.53-3.20)	Depositor
R_{merge}	0.19	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.56 (at 3.19Å)	Xtriage
Refinement program	PHENIX 1.14_3260	Depositor
R, R_{free}	0.195 , 0.232	Depositor
Wilson B-factor (Å ²)	73.8	Xtriage
Anisotropy	0.170	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.45$, $\langle L^2 \rangle = 0.28$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	298675	wwPDB-VP
Average B, all atoms (Å ²)	90.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.41% 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, PAR, MG, SF4

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	QA	0.27	0/36098	0.78	21/56341 (0.0%)
1	XA	0.27	0/36101	0.77	11/56346 (0.0%)
2	QB	0.26	0/1959	0.48	0/2642
2	XB	0.27	0/1959	0.50	0/2642
3	QC	0.29	0/1629	0.49	0/2195
3	XC	0.30	0/1629	0.50	0/2195
4	QD	0.25	0/1704	0.46	0/2284
4	XD	0.33	1/1704 (0.1%)	0.49	0/2284
5	QE	0.25	0/1171	0.50	0/1576
5	XE	0.26	0/1171	0.50	0/1576
6	QF	0.24	0/856	0.46	0/1154
6	XF	0.26	0/856	0.50	0/1154
7	QG	0.27	0/1276	0.44	0/1709
7	XG	0.26	0/1276	0.48	0/1709
8	QH	0.26	0/1136	0.50	0/1527
8	XH	1.43	8/1136 (0.7%)	1.25	11/1527 (0.7%)
9	QI	0.27	0/1029	0.49	0/1379
9	XI	0.26	0/1029	0.48	0/1379
10	QJ	0.24	0/814	0.45	0/1095
10	XJ	0.24	0/814	0.47	0/1095
11	QK	0.30	0/900	0.50	0/1213
11	XK	2.12	11/900 (1.2%)	1.08	10/1213 (0.8%)
12	QL	0.25	0/991	0.53	0/1327
12	XL	0.26	0/991	0.55	0/1327
13	QM	0.24	0/974	0.55	0/1303
13	XM	0.24	0/974	0.56	0/1303
14	QN	0.28	0/501	0.49	0/664
14	XN	0.29	0/501	0.57	0/664
15	QO	0.23	0/745	0.43	0/992
15	XO	0.24	0/745	0.45	0/992
16	QP	0.28	0/721	0.51	0/970
16	XP	0.44	1/721 (0.1%)	0.58	0/970

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	QQ	0.24	0/847	0.44	0/1131
17	XQ	0.24	0/847	0.46	0/1131
18	QR	0.24	0/579	0.47	0/768
18	XR	0.25	0/579	0.49	0/768
19	QS	0.30	0/689	0.53	0/926
19	XS	0.29	0/689	0.53	0/926
20	QT	0.23	0/765	0.44	0/1007
20	XT	0.29	0/765	0.53	0/1007
21	QU	0.24	0/221	0.51	0/288
21	XU	0.22	0/221	0.47	0/288
22	QV	0.25	0/1832	0.78	1/2855 (0.0%)
22	XV	0.26	0/1832	0.77	0/2855
23	QW	0.32	1/1819 (0.1%)	0.82	0/2833
23	XW	0.42	3/1819 (0.2%)	0.89	2/2833 (0.1%)
24	QX	0.22	0/468	0.72	0/729
24	XX	0.27	0/443	0.88	2/690 (0.3%)
25	QY	0.17	0/1791	0.74	0/2791
25	XY	0.20	0/1791	0.73	0/2791
26	R0	0.25	0/657	0.54	0/874
26	Y0	0.26	0/657	0.50	0/874
27	R1	0.27	0/770	0.48	0/1022
27	Y1	0.27	0/770	0.50	0/1022
28	R2	0.24	0/583	0.46	0/771
28	Y2	0.26	0/583	0.54	0/771
29	R3	0.23	0/474	0.44	0/635
29	Y3	0.25	0/474	0.47	0/635
30	R4	0.28	0/594	0.62	1/795 (0.1%)
30	Y4	0.25	0/594	0.54	0/795
31	R5	0.26	0/473	0.49	0/639
31	Y5	0.28	0/473	0.54	0/639
32	R6	0.27	0/431	0.57	0/575
32	Y6	0.26	0/431	0.62	0/575
33	R7	0.27	0/438	0.53	0/575
33	Y7	0.32	0/438	0.61	0/575
34	R8	0.38	0/525	0.63	0/691
34	Y8	0.28	0/525	0.51	0/691
35	R9	0.21	0/310	0.40	0/407
35	Y9	0.21	0/310	0.44	0/407
36	RA	0.31	1/69521 (0.0%)	0.79	37/108529 (0.0%)
36	YA	0.35	1/69543 (0.0%)	0.81	34/108563 (0.0%)
37	RB	0.28	0/2878	0.76	2/4490 (0.0%)
37	YB	0.30	0/2878	0.83	5/4490 (0.1%)
38	RD	0.35	1/2165 (0.0%)	0.56	1/2919 (0.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	YD	0.31	0/2195	0.52	0/2955
39	RE	0.26	0/1601	0.58	0/2160
39	YE	0.27	0/1601	0.60	0/2160
40	RF	1.28	9/1620 (0.6%)	0.74	7/2194 (0.3%)
40	YF	2.62	13/1620 (0.8%)	1.04	13/2194 (0.6%)
41	RG	0.24	0/1499	0.49	0/2016
41	YG	0.25	0/1499	0.55	0/2016
42	RH	0.24	0/1332	0.49	0/1802
42	YH	0.27	0/1332	0.60	2/1802 (0.1%)
43	RI	0.24	0/1151	0.49	0/1558
43	YI	0.25	0/1151	0.58	0/1558
44	RN	0.29	0/1131	0.52	0/1525
44	YN	2.01	10/1131 (0.9%)	1.39	15/1525 (1.0%)
45	RO	0.28	0/943	0.52	0/1269
45	YO	0.27	0/943	0.51	0/1269
46	RP	0.27	0/1162	0.59	0/1544
46	YP	0.28	0/1162	0.62	0/1544
47	RQ	0.26	0/1143	0.54	0/1527
47	YQ	0.28	0/1143	0.57	0/1527
48	RR	0.25	0/982	0.51	0/1312
48	YR	0.26	0/982	0.54	0/1312
49	RS	0.25	0/892	0.53	0/1187
49	YS	0.26	0/892	0.55	0/1187
50	RT	0.25	0/1155	0.53	0/1542
50	YT	0.26	0/1155	0.58	0/1542
51	RU	0.27	0/982	0.47	0/1306
51	YU	0.26	0/982	0.49	0/1306
52	RV	0.26	0/790	0.53	0/1057
52	YV	0.28	0/790	0.55	0/1057
53	RW	0.25	0/911	0.50	0/1220
53	YW	0.26	0/911	0.53	0/1220
54	RX	0.30	0/739	0.49	0/993
54	YX	0.28	0/739	0.49	0/993
55	RY	0.26	0/798	0.54	0/1064
55	YY	0.27	0/798	0.58	0/1064
56	RZ	0.24	0/1493	0.51	0/2026
56	YZ	0.25	0/1493	0.56	0/2026
All	All	0.40	60/323346 (0.0%)	0.74	175/483882 (0.0%)

All (60) bond length outliers are listed below:

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
40	YF	199	TRP	CD2-CE3	58.05	2.27	1.40
40	YF	199	TRP	CE2-CZ2	48.67	2.22	1.39
40	YF	199	TRP	CD2-CE2	36.57	1.85	1.41
11	XK	42	TRP	CE3-CZ3	36.22	2.00	1.38
40	YF	199	TRP	CG-CD1	35.50	1.86	1.36
11	XK	42	TRP	CZ3-CH2	-35.31	0.83	1.40
44	YN	42	TRP	CG-CD2	35.22	2.03	1.43
44	YN	42	TRP	CE3-CZ3	33.96	1.96	1.38
44	YN	42	TRP	CD2-CE3	-28.47	0.97	1.40
40	RF	199	TRP	NE1-CE2	28.11	1.74	1.37
44	YN	42	TRP	CE2-CZ2	27.59	1.86	1.39
40	YF	199	TRP	CE3-CZ3	27.32	1.84	1.38
8	XH	138	TRP	CG-CD1	27.07	1.74	1.36
40	YF	199	TRP	CZ3-CH2	24.24	1.78	1.40
8	XH	138	TRP	CE3-CZ3	21.50	1.75	1.38
40	RF	199	TRP	CG-CD1	20.88	1.66	1.36
40	YF	172	TRP	CD2-CE2	19.90	1.65	1.41
8	XH	138	TRP	CD2-CE2	19.80	1.65	1.41
11	XK	42	TRP	CD2-CE2	18.73	1.63	1.41
40	RF	199	TRP	CZ3-CH2	18.43	1.69	1.40
11	XK	42	TRP	CD2-CE3	-18.25	1.12	1.40
40	YF	199	TRP	CZ2-CH2	18.24	1.72	1.37
40	RF	199	TRP	CD2-CE2	17.26	1.62	1.41
8	XH	138	TRP	CZ3-CH2	16.43	1.66	1.40
11	XK	42	TRP	CG-CD1	15.39	1.58	1.36
40	YF	172	TRP	CZ2-CH2	14.67	1.65	1.37
8	XH	138	TRP	CD1-NE1	14.05	1.61	1.38
11	XK	42	TRP	CE2-CZ2	13.15	1.62	1.39
40	YF	172	TRP	CD1-NE1	12.39	1.59	1.38
40	RF	199	TRP	CD1-NE1	12.26	1.58	1.38
40	RF	199	TRP	CE3-CZ3	11.99	1.58	1.38
40	RF	199	TRP	CD2-CE3	-11.74	1.22	1.40
44	YN	42	TRP	CD2-CE2	11.09	1.54	1.41
23	QW	1	G	OP3-P	-10.54	1.48	1.61
23	XW	1	G	OP3-P	-10.23	1.48	1.61
44	YN	42	TRP	NE1-CE2	9.80	1.50	1.37
11	XK	42	TRP	CB-CG	9.78	1.67	1.50
44	YN	42	TRP	CZ2-CH2	9.47	1.55	1.37
8	XH	138	TRP	CG-CD2	9.41	1.59	1.43
44	YN	42	TRP	CG-CD1	9.25	1.49	1.36
40	RF	199	TRP	CG-CD2	9.01	1.58	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
40	YF	172	TRP	CZ3-CH2	8.83	1.54	1.40
4	XD	38	TYR	C-N	8.74	1.50	1.34
16	XP	40	ASP	C-N	8.54	1.50	1.34
44	YN	42	TRP	CZ3-CH2	-8.40	1.26	1.40
40	YF	172	TRP	CG-CD2	7.98	1.57	1.43
11	XK	42	TRP	CZ2-CH2	7.38	1.51	1.37
11	XK	42	TRP	CA-CB	-7.00	1.38	1.53
36	YA	602	G	O3'-P	-6.79	1.53	1.61
44	YN	42	TRP	CD1-NE1	6.55	1.49	1.38
40	YF	199	TRP	CB-CG	6.43	1.61	1.50
40	RF	199	TRP	CZ2-CH2	6.39	1.49	1.37
8	XH	138	TRP	NE1-CE2	6.22	1.45	1.37
8	XH	138	TRP	CZ2-CH2	6.00	1.48	1.37
38	RD	252	TRP	CB-CG	5.89	1.60	1.50
11	XK	42	TRP	NE1-CE2	5.72	1.45	1.37
11	XK	42	TRP	CD1-NE1	-5.67	1.28	1.38
23	XW	32	A	C1'-N9	-5.62	1.39	1.46
23	XW	36	C	C1'-N1	5.46	1.56	1.48
36	RA	1824	G	O3'-P	-5.36	1.54	1.61

All (175) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
40	YF	199	TRP	CD1-CG-CD2	-22.65	88.18	106.30
44	YN	42	TRP	CE2-CD2-CG	-21.78	89.88	107.30
44	YN	42	TRP	NE1-CE2-CD2	20.45	127.75	107.30
8	XH	138	TRP	CG-CD2-CE3	-18.67	117.10	133.90
8	XH	138	TRP	CB-CG-CD2	18.35	150.46	126.60
11	XK	42	TRP	CG-CD2-CE3	17.18	149.37	133.90
44	YN	42	TRP	CB-CG-CD1	17.10	149.24	127.00
8	XH	138	TRP	CE2-CD2-CG	16.78	120.73	107.30
11	XK	42	TRP	CA-CB-CG	15.73	143.59	113.70
44	YN	42	TRP	CH2-CZ2-CE2	-14.58	102.82	117.40
36	YA	463	G	OP1-P-O3'	-14.56	73.17	105.20
40	YF	199	TRP	CD2-CE3-CZ3	-14.16	100.39	118.80
44	YN	42	TRP	CE2-CD2-CE3	13.52	134.93	118.70
8	XH	138	TRP	CH2-CZ2-CE2	13.48	130.88	117.40
44	YN	42	TRP	CG-CD1-NE1	13.38	123.48	110.10
8	XH	138	TRP	CD1-CG-CD2	-13.25	95.70	106.30
40	RF	199	TRP	NE1-CE2-CZ2	-12.65	116.49	130.40
40	YF	199	TRP	CG-CD2-CE3	-12.54	122.61	133.90
44	YN	42	TRP	NE1-CE2-CZ2	-12.51	116.64	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	XH	138	TRP	NE1-CE2-CZ2	12.40	144.04	130.40
44	YN	42	TRP	CD1-NE1-CE2	-12.28	97.95	109.00
1	QA	1220	G	N9-C1'-C2'	-11.83	98.62	114.00
8	XH	138	TRP	CB-CG-CD1	-11.73	111.75	127.00
8	XH	138	TRP	CD1-NE1-CE2	11.24	119.12	109.00
44	YN	42	TRP	CB-CG-CD2	-11.13	112.13	126.60
40	YF	199	TRP	NE1-CE2-CD2	-10.86	96.44	107.30
40	RF	199	TRP	CD1-NE1-CE2	-10.69	99.38	109.00
8	XH	138	TRP	NE1-CE2-CD2	-10.16	97.14	107.30
11	XK	42	TRP	CH2-CZ2-CE2	-10.11	107.29	117.40
40	YF	199	TRP	CA-CB-CG	-9.97	94.75	113.70
40	YF	199	TRP	CE2-CD2-CG	9.85	115.18	107.30
24	XX	14	A	O4'-C1'-N9	9.76	116.01	108.20
44	YN	42	TRP	CD1-CG-CD2	-9.71	98.53	106.30
40	YF	199	TRP	CB-CG-CD2	9.68	139.19	126.60
11	XK	42	TRP	CE2-CD2-CG	-9.65	99.58	107.30
36	YA	527	C	O5'-P-OP1	-9.58	97.08	105.70
36	RA	1992	G	C2'-C3'-O3'	9.51	130.41	109.50
1	QA	987	G	N9-C1'-C2'	-9.32	101.75	112.00
40	YF	199	TRP	CE3-CZ3-CH2	8.95	131.04	121.20
44	YN	42	TRP	CZ3-CH2-CZ2	8.92	132.30	121.60
11	XK	42	TRP	CD1-NE1-CE2	8.70	116.83	109.00
1	QA	1158	C	C2-N1-C1'	8.57	128.23	118.80
11	XK	42	TRP	CZ3-CH2-CZ2	8.51	131.81	121.60
40	RF	199	TRP	CG-CD2-CE3	-8.38	126.36	133.90
36	YA	1535	U	C2-N1-C1'	8.37	127.75	117.70
40	YF	199	TRP	CD1-NE1-CE2	8.17	116.35	109.00
36	YA	464	U	OP1-P-OP2	8.07	131.71	119.60
1	QA	1158	C	N1-C2-O2	8.00	123.70	118.90
37	YB	31	C	N1-C2-O2	7.91	123.65	118.90
36	RA	828	U	C2-N1-C1'	7.91	127.19	117.70
36	YA	1535	U	N1-C2-O2	7.64	128.15	122.80
36	RA	527	C	O5'-P-OP1	-7.64	98.83	105.70
37	YB	31	C	C2-N1-C1'	7.49	127.04	118.80
42	YH	82	GLY	N-CA-C	7.49	131.81	113.10
44	YN	42	TRP	CD2-CE3-CZ3	-7.48	109.08	118.80
40	YF	199	TRP	CD2-CE2-CZ2	-7.47	113.33	122.30
40	RF	199	TRP	CH2-CZ2-CE2	-7.41	109.99	117.40
1	QA	987	G	C1'-C2'-O2'	-7.41	88.37	110.60
8	XH	138	TRP	CZ3-CH2-CZ2	-7.34	112.79	121.60
40	YF	172	TRP	CH2-CZ2-CE2	-7.15	110.25	117.40
1	QA	1331	G	P-O3'-C3'	7.10	128.22	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	YA	1535	U	N3-C2-O2	-7.04	117.27	122.20
36	YA	463	G	OP2-P-O3'	-6.99	89.81	105.20
1	QA	1220	G	C4'-C3'-O3'	6.92	126.83	113.00
36	RA	1535	U	C2-N1-C1'	6.88	125.96	117.70
11	XK	42	TRP	CB-CG-CD1	-6.84	118.11	127.00
11	XK	42	TRP	CE2-CD2-CE3	-6.76	110.58	118.70
40	RF	199	TRP	CE2-CD2-CE3	6.74	126.78	118.70
36	YA	828	U	C2-N1-C1'	6.71	125.75	117.70
36	RA	527	C	O5'-P-OP2	6.69	118.73	110.70
36	YA	2474	C	N1-C2-O2	6.54	122.82	118.90
40	YF	199	TRP	CG-CD1-NE1	6.41	116.51	110.10
1	QA	792	A	P-O3'-C3'	6.40	127.38	119.70
44	YN	42	TRP	CD2-CE2-CZ2	-6.40	114.62	122.30
36	YA	2474	C	C2-N1-C1'	6.33	125.76	118.80
36	RA	1130	U	P-O3'-C3'	6.33	127.29	119.70
11	XK	42	TRP	CG-CD1-NE1	-6.32	103.78	110.10
8	XH	138	TRP	CG-CD1-NE1	-6.31	103.79	110.10
1	QA	1158	C	C6-N1-C1'	-6.31	113.23	120.80
36	YA	271(B)	G	P-O3'-C3'	6.29	127.25	119.70
36	RA	1558	A	C2'-C3'-O3'	6.25	123.71	113.70
36	YA	1313	U	C2-N1-C1'	6.19	125.13	117.70
36	RA	1824	G	P-O3'-C3'	6.15	127.08	119.70
36	RA	828	U	N1-C2-O2	6.14	127.10	122.80
40	RF	199	TRP	CB-CG-CD1	-6.08	119.09	127.00
37	YB	31	C	N3-C2-O2	-6.08	117.64	121.90
36	RA	1314	C	C2-N1-C1'	6.07	125.48	118.80
36	RA	2702	U	C2-N1-C1'	6.06	124.97	117.70
1	QA	1158	C	N3-C2-O2	-6.02	117.69	121.90
36	YA	1204	A	O4'-C1'-N9	6.02	113.02	108.20
36	RA	1411	C	C2-N1-C1'	5.88	125.27	118.80
36	RA	1535	U	N1-C2-O2	5.88	126.92	122.80
36	RA	1313	U	C2-N1-C1'	5.88	124.75	117.70
40	RF	199	TRP	CD2-CE3-CZ3	-5.86	111.19	118.80
11	XK	42	TRP	NE1-CE2-CD2	-5.82	101.48	107.30
36	YA	1992	G	P-O3'-C3'	5.79	126.64	119.70
36	YA	527	C	O5'-P-OP2	5.78	117.64	110.70
1	XA	347	G	O4'-C1'-N9	5.77	112.82	108.20
36	RA	828	U	C6-N1-C1'	-5.77	113.12	121.20
36	YA	1914	C	C2-N1-C1'	5.76	125.14	118.80
36	RA	1914	C	C2-N1-C1'	5.75	125.13	118.80
36	RA	2060	A	P-O3'-C3'	5.75	126.59	119.70
1	QA	328	C	P-O3'-C3'	5.65	126.48	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1028	C	N1-C2-O2	5.65	122.29	118.90
1	XA	812	C	P-O3'-C3'	5.62	126.44	119.70
36	YA	846	C	P-O3'-C3'	5.61	126.43	119.70
23	XW	31	C	P-O3'-C3'	5.61	126.43	119.70
1	QA	1528	U	P-O3'-C3'	5.58	126.40	119.70
36	RA	1992	G	P-O3'-C3'	5.58	126.40	119.70
1	XA	1297	C	P-O3'-C3'	5.58	126.39	119.70
1	QA	1014	A	N9-C1'-C2'	-5.55	105.89	112.00
36	RA	196	A	O4'-C1'-N9	5.55	112.64	108.20
36	RA	912	C	C2-N1-C1'	5.54	124.90	118.80
36	RA	1799	G	P-O3'-C3'	5.54	126.35	119.70
36	YA	1799	G	P-O3'-C3'	5.53	126.33	119.70
36	YA	1535	U	C6-N1-C1'	-5.49	113.51	121.20
1	QA	812	C	P-O3'-C3'	5.49	126.29	119.70
1	QA	1346	A	P-O3'-C3'	5.49	126.29	119.70
36	RA	456	C	P-O3'-C3'	5.47	126.27	119.70
1	QA	913	A	P-O3'-C3'	5.47	126.26	119.70
44	YN	42	TRP	CG-CD2-CE3	-5.46	128.98	133.90
36	RA	229	A	P-O3'-C3'	5.45	126.24	119.70
36	RA	242	G	P-O3'-C3'	5.43	126.22	119.70
37	YB	31	C	C6-N1-C2	-5.42	118.13	120.30
1	XA	1498	U	P-O3'-C3'	5.42	126.20	119.70
1	QA	1219	U	N1-C1'-C2'	-5.41	106.05	112.00
40	YF	172	TRP	CZ3-CH2-CZ2	-5.41	115.11	121.60
1	QA	91	C	C2-N1-C1'	5.41	124.75	118.80
36	YA	1774	C	N3-C2-O2	-5.41	118.12	121.90
36	RA	828	U	N3-C2-O2	-5.40	118.42	122.20
30	R4	43	TYR	CA-CB-CG	5.39	123.65	113.40
36	RA	1314	C	C6-N1-C1'	-5.39	114.33	120.80
44	YN	42	TRP	CE3-CZ3-CH2	-5.36	115.30	121.20
36	RA	1084	A	O4'-C1'-N9	5.35	112.48	108.20
1	QA	980	C	C2-N1-C1'	5.35	124.68	118.80
1	XA	1158	C	C2-N1-C1'	5.34	124.68	118.80
36	RA	205	G	P-O3'-C3'	5.34	126.11	119.70
1	QA	115	G	P-O3'-C3'	5.34	126.11	119.70
36	RA	229	A	OP2-P-O3'	5.33	116.93	105.20
37	RB	11	C	N3-C2-O2	-5.33	118.17	121.90
36	RA	2702	U	N3-C2-O2	-5.32	118.47	122.20
36	YA	404	C	P-O3'-C3'	5.31	126.07	119.70
1	XA	792	A	O4'-C1'-N9	5.30	112.44	108.20
36	YA	2610	C	P-O3'-C3'	5.29	126.05	119.70
36	RA	1022	G	P-O3'-C3'	5.28	126.04	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	RA	846	C	P-O3'-C3'	5.27	126.02	119.70
36	RA	1535	U	N3-C2-O2	-5.26	118.52	122.20
36	YA	859	G	P-O3'-C3'	5.26	126.01	119.70
37	YB	31	C	C6-N1-C1'	-5.26	114.49	120.80
36	YA	1653	G	P-O3'-C3'	5.25	126.00	119.70
36	YA	1558	A	P-O3'-C3'	5.25	126.00	119.70
37	RB	31	C	C2-N1-C1'	5.22	124.55	118.80
1	XA	1028(A)	C	N3-C2-O2	-5.22	118.25	121.90
1	XA	913	A	P-O3'-C3'	5.19	125.93	119.70
36	YA	242	G	P-O3'-C3'	5.19	125.93	119.70
38	RD	252	TRP	CA-CB-CG	5.17	123.53	113.70
36	YA	1022	G	P-O3'-C3'	5.15	125.88	119.70
36	RA	1462	C	N3-C2-O2	-5.14	118.30	121.90
36	YA	1395	A	O4'-C1'-N9	5.14	112.32	108.20
36	RA	637	A	P-O3'-C3'	5.14	125.87	119.70
1	XA	1028	C	N3-C2-O2	-5.13	118.31	121.90
36	YA	2439	A	P-O3'-C3'	5.13	125.86	119.70
36	YA	222	A	P-O3'-C3'	5.12	125.85	119.70
36	YA	828	U	N1-C2-O2	5.12	126.38	122.80
36	YA	1314	C	C2-N1-C1'	5.12	124.43	118.80
36	YA	2681	C	P-O3'-C3'	5.10	125.83	119.70
23	XW	8	U	C4'-C3'-O3'	5.09	123.19	113.00
22	QV	34	C	C2-N1-C1'	5.09	124.40	118.80
1	QA	992	U	P-O3'-C3'	5.09	125.81	119.70
36	RA	2126	A	P-O3'-C3'	5.08	125.79	119.70
42	YH	83	TYR	N-CA-C	5.07	124.69	111.00
36	RA	2702	U	N1-C2-O2	5.05	126.34	122.80
24	XX	18	G	P-O3'-C3'	5.03	125.74	119.70
1	XA	1027	C	P-O3'-C3'	5.01	125.71	119.70
36	YA	637	A	P-O3'-C3'	5.01	125.71	119.70

There are no chirality outliers.

There are no planarity outliers.

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	QA	32247	0	16278	512	0
1	XA	32249	0	16278	480	0
2	QB	1924	0	1975	31	0
2	XB	1924	0	1975	54	0
3	QC	1605	0	1668	44	0
3	XC	1605	0	1668	39	0
4	QD	1674	0	1716	33	0
4	XD	1674	0	1718	38	0
5	QE	1155	0	1213	23	0
5	XE	1155	0	1213	17	0
6	QF	843	0	857	7	0
6	XF	843	0	857	24	0
7	QG	1257	0	1296	17	0
7	XG	1257	0	1296	32	0
8	QH	1116	0	1177	34	0
8	XH	1116	0	1177	30	0
9	QI	1010	0	1037	28	0
9	XI	1010	0	1037	29	0
10	QJ	801	0	849	24	0
10	XJ	801	0	849	33	0
11	QK	885	0	904	37	0
11	XK	885	0	904	39	0
12	QL	975	0	1062	21	0
12	XL	975	0	1062	23	0
13	QM	964	0	1034	27	0
13	XM	964	0	1034	23	0
14	QN	492	0	532	23	0
14	XN	492	0	529	20	0
15	QO	734	0	771	14	0
15	XO	734	0	771	10	0
16	QP	705	0	725	16	0
16	XP	705	0	725	26	0
17	QQ	834	0	904	10	0
17	XQ	834	0	904	16	0
18	QR	574	0	644	12	0
18	XR	574	0	644	12	0
19	QS	674	0	699	30	0
19	XS	674	0	699	26	0
20	QT	763	0	861	16	0
20	XT	763	0	861	23	0
21	QU	217	0	234	8	0
21	XU	217	0	234	4	0
22	QV	1640	0	837	9	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	XV	1640	0	837	8	0
23	QW	1627	0	823	21	0
23	XW	1627	0	823	39	0
24	QX	416	0	208	4	0
24	XX	394	0	197	9	0
25	QY	1603	0	811	23	0
25	XY	1603	0	811	24	0
26	R0	648	0	672	10	0
26	Y0	648	0	672	19	0
27	R1	763	0	848	15	0
27	Y1	763	0	848	18	0
28	R2	581	0	629	13	0
28	Y2	581	0	629	7	0
29	R3	469	0	518	11	0
29	Y3	469	0	518	11	0
30	R4	581	0	577	24	0
30	Y4	581	0	577	19	0
31	R5	459	0	480	22	0
31	Y5	459	0	480	8	0
32	R6	424	0	450	20	0
32	Y6	424	0	450	17	0
33	R7	430	0	480	10	0
33	Y7	430	0	480	19	0
34	R8	517	0	582	36	0
34	Y8	517	0	582	27	0
35	R9	307	0	338	7	0
35	Y9	307	0	338	7	0
36	RA	62071	0	31289	870	0
36	YA	62091	0	31301	797	0
37	RB	2573	0	1306	33	0
37	YB	2573	0	1306	22	0
38	RD	2115	0	2195	69	0
38	YD	2145	0	2234	35	0
39	RE	1568	0	1633	54	0
39	YE	1568	0	1634	55	0
40	RF	1585	0	1632	42	0
40	YF	1585	0	1632	43	0
41	RG	1474	0	1535	36	0
41	YG	1474	0	1535	32	0
42	RH	1307	0	1382	30	0
42	YH	1307	0	1381	44	0
43	RI	1136	0	1223	18	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
43	YI	1136	0	1223	31	0
44	RN	1104	0	1180	25	0
44	YN	1104	0	1180	29	0
45	RO	933	0	996	24	0
45	YO	933	0	996	20	0
46	RP	1145	0	1227	52	0
46	YP	1145	0	1227	53	0
47	RQ	1122	0	1179	45	0
47	YQ	1122	0	1179	41	0
48	RR	968	0	1033	19	0
48	YR	968	0	1033	23	0
49	RS	882	0	943	18	0
49	YS	882	0	943	22	0
50	RT	1141	0	1202	32	0
50	YT	1141	0	1202	35	0
51	RU	964	0	1022	26	0
51	YU	964	0	1022	33	0
52	RV	779	0	852	18	0
52	YV	779	0	852	22	0
53	RW	900	0	964	18	0
53	YW	900	0	964	21	0
54	RX	725	0	778	11	0
54	YX	725	0	778	10	0
55	RY	785	0	878	28	0
55	YY	785	0	878	32	0
56	RZ	1461	0	1493	44	0
56	YZ	1461	0	1493	42	0
57	QA	124	0	0	0	0
57	QD	1	0	0	0	0
57	QF	1	0	0	0	0
57	QH	1	0	0	0	0
57	QK	2	0	0	0	0
57	QL	1	0	0	0	0
57	QM	1	0	0	0	0
57	QV	6	0	0	0	0
57	QX	1	0	0	0	0
57	R0	1	0	0	0	0
57	R1	1	0	0	0	0
57	R5	1	0	0	0	0
57	R8	1	0	0	0	0
57	R9	1	0	0	0	0
57	RA	378	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	RB	4	0	0	0	0
57	RD	2	0	0	0	0
57	RE	8	0	0	0	0
57	RF	2	0	0	0	0
57	RG	1	0	0	0	0
57	RI	1	0	0	0	0
57	RP	3	0	0	0	0
57	RR	2	0	0	0	0
57	RT	2	0	0	0	0
57	XA	123	0	0	0	0
57	XB	2	0	0	0	0
57	XD	1	0	0	0	0
57	XF	1	0	0	0	0
57	XJ	1	0	0	0	0
57	XK	1	0	0	0	0
57	XL	2	0	0	0	0
57	XM	1	0	0	0	0
57	XV	7	0	0	0	0
57	XX	1	0	0	0	0
57	Y0	3	0	0	0	0
57	Y2	3	0	0	0	0
57	Y3	1	0	0	0	0
57	Y4	2	0	0	0	0
57	Y5	1	0	0	0	0
57	Y7	1	0	0	0	0
57	Y8	3	0	0	0	0
57	YA	457	0	0	0	0
57	YB	8	0	0	0	0
57	YD	4	0	0	0	0
57	YE	6	0	0	0	0
57	YF	5	0	0	0	0
57	YG	2	0	0	0	0
57	YH	5	0	0	0	0
57	YI	1	0	0	0	0
57	YN	1	0	0	0	0
57	YO	1	0	0	0	0
57	YP	7	0	0	0	0
57	YQ	4	0	0	0	0
57	YR	2	0	0	0	0
57	YT	2	0	0	0	0
57	YU	1	0	0	0	0
57	YV	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	YW	1	0	0	0	0
57	YX	2	0	0	0	0
57	YY	5	0	0	0	0
58	QA	42	0	45	1	0
58	XA	42	0	45	2	0
59	QD	8	0	0	0	0
59	XD	8	0	0	0	0
60	QN	1	0	0	0	0
60	XN	1	0	0	0	0
61	QY	22	0	12	1	0
62	QA	1	0	0	0	0
62	QX	1	0	0	0	0
All	All	298675	0	201403	4630	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 9.

All (4630) 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)
40:YF:199:TRP:CH2	40:YF:199:TRP:CZ3	1.78	1.69
8:XH:138:TRP:CZ3	8:XH:138:TRP:CE3	1.75	1.64
40:YF:199:TRP:CG	40:YF:199:TRP:CD1	1.86	1.62
44:YN:42:TRP:CE2	44:YN:42:TRP:CZ2	1.86	1.62
40:YF:199:TRP:CE2	40:YF:199:TRP:CD2	1.85	1.61
40:YF:199:TRP:CE3	40:YF:199:TRP:CZ3	1.84	1.58
8:XH:138:TRP:CD1	8:XH:138:TRP:CG	1.74	1.54
44:YN:42:TRP:CZ3	44:YN:42:TRP:CE3	1.96	1.53
19:XS:36:ARG:CD	19:XS:72:GLY:HA2	1.41	1.51
11:XK:42:TRP:CE3	11:XK:42:TRP:CZ3	2.00	1.50
40:RF:199:TRP:CE2	40:RF:199:TRP:NE1	1.74	1.50
19:XS:36:ARG:HD2	19:XS:72:GLY:CA	1.49	1.42
44:YN:42:TRP:CD2	44:YN:42:TRP:CG	2.03	1.34
1:XA:1316:G:N2	1:XA:1318:A:H3'	1.38	1.33
11:XK:42:TRP:CZ2	11:XK:42:TRP:CZ3	2.15	1.32
40:YF:199:TRP:CE2	40:YF:199:TRP:CZ2	2.22	1.27
4:XD:166:LYS:CG	4:XD:178:VAL:HG11	1.67	1.22
4:QD:20:TYR:CD2	4:QD:26:CYS:SG	2.33	1.22
40:YF:199:TRP:CE3	40:YF:199:TRP:CD2	2.27	1.22
4:XD:166:LYS:HG2	4:XD:178:VAL:CG1	1.72	1.17
32:R6:10:LEU:HD22	34:R8:35:GLN:NE2	1.58	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YF:199:TRP:CD1	40:YF:199:TRP:CD2	2.33	1.14
16:QP:45:THR:CG2	16:QP:46:PRO:HD2	1.76	1.13
36:RA:1794:U:H3	36:RA:1825:A:N6	1.49	1.10
32:Y6:30:THR:HG22	32:Y6:31:PRO:HD2	1.31	1.07
36:RA:1667:G:H5''	36:RA:1667:G:H8	1.21	1.05
33:Y7:5:TRP:CD1	36:YA:464:U:H5'	1.92	1.04
11:QK:42:TRP:CZ3	11:QK:44:SER:HB3	1.92	1.04
19:QS:33:THR:HG22	19:QS:49:ILE:HD11	1.39	1.04
16:QP:45:THR:HG22	16:QP:46:PRO:CD	1.88	1.03
2:XB:25:ASN:OD1	2:XB:26:PRO:HD2	1.58	1.03
32:R6:10:LEU:HD22	34:R8:35:GLN:HE22	1.12	1.02
36:RA:1824:G:H2'	38:RD:220:HIS:CE1	1.93	1.02
1:XA:1316:G:H22	1:XA:1318:A:H3'	0.86	1.00
44:YN:42:TRP:CZ3	44:YN:42:TRP:CD2	2.45	0.99
6:XF:19:LEU:HD11	6:XF:59:TYR:CE1	1.96	0.99
36:RA:1434:A:H61	36:RA:1558:A:N6	1.62	0.97
11:QK:42:TRP:CE3	11:QK:44:SER:HB3	1.99	0.97
36:RA:1824:G:H2'	38:RD:220:HIS:HE1	1.24	0.97
19:QS:36:ARG:NH2	19:QS:75:ALA:HB3	1.80	0.96
36:RA:1667:G:C8	36:RA:1667:G:H5''	2.01	0.95
36:RA:676:A:H8	36:RA:2069:G:H21	1.12	0.95
1:XA:1316:G:N2	1:XA:1318:A:C3'	2.30	0.95
3:QC:22:TRP:HZ3	3:QC:24:ALA:CB	1.80	0.94
32:R6:10:LEU:CD2	34:R8:35:GLN:NE2	2.30	0.94
1:XA:1316:G:H22	1:XA:1318:A:C3'	1.79	0.92
33:Y7:5:TRP:HE1	36:YA:464:U:H4'	1.34	0.91
16:QP:45:THR:HG22	16:QP:46:PRO:HD2	0.93	0.91
19:QS:33:THR:CG2	19:QS:49:ILE:HD11	2.01	0.91
36:YA:67:U:H3	36:YA:74:A:H2	1.19	0.90
33:Y7:5:TRP:NE1	36:YA:464:U:H4'	1.86	0.89
36:YA:2168:G:C2	36:YA:2170:A:OP2	2.26	0.89
3:QC:22:TRP:HZ3	3:QC:24:ALA:HB3	1.38	0.88
33:Y7:5:TRP:CD1	36:YA:464:U:C4'	2.56	0.88
6:XF:19:LEU:HD11	6:XF:59:TYR:CD1	2.09	0.87
36:RA:1992:G:OP1	36:RA:1992:G:N2	2.08	0.87
27:Y1:87:PRO:HA	27:Y1:90:ILE:HG22	1.57	0.87
40:YF:199:TRP:NE1	40:YF:199:TRP:CD2	2.43	0.87
36:YA:676:A:H8	36:YA:2069:G:H21	1.20	0.86
37:RB:23:G:N2	37:RB:61:G:C4	2.44	0.86
33:Y7:5:TRP:CD1	36:YA:464:U:C5'	2.58	0.86
39:RE:62:PRO:O	39:RE:63:LEU:HD23	1.75	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:1514:U:H6	36:RA:1514:U:H5''	1.42	0.85
44:YN:35:ARG:NH2	44:YN:42:TRP:CZ2	2.44	0.85
11:QK:43:SER:HB2	11:QK:68:ALA:CA	2.06	0.85
36:YA:2168:G:H2'	36:YA:2168:G:N3	1.89	0.84
27:R1:80:LEU:HD12	27:R1:81:LYS:HG3	1.59	0.84
3:XC:29:TYR:OH	14:XN:54:PRO:HD2	1.76	0.84
11:XK:42:TRP:CH2	11:XK:42:TRP:CZ3	0.83	0.83
7:QG:152:ALA:O	7:QG:155:ARG:HG3	1.79	0.83
31:R5:4:HIS:NE2	36:RA:2577:A:H1'	1.95	0.82
36:RA:2635:C:H5''	39:RE:78:LEU:HA	1.62	0.82
7:XG:77:SER:HB3	23:XW:32:A:C2	2.14	0.82
20:XT:54:LYS:HA	20:XT:57:ARG:NH2	1.95	0.82
2:XB:24:TRP:HB2	2:XB:40:HIS:NE2	1.95	0.81
31:R5:4:HIS:HD2	36:RA:2056:G:H22	1.28	0.81
20:XT:89:ARG:HH21	20:XT:104:LEU:HD21	1.45	0.81
44:YN:42:TRP:CH2	44:YN:42:TRP:CE2	2.67	0.81
36:YA:602:G:N2	36:YA:655:A:C8	2.49	0.81
42:RH:87:LEU:HB3	42:RH:162:ILE:HD11	1.61	0.80
11:XK:42:TRP:CH2	11:XK:42:TRP:HZ3	1.51	0.80
37:YB:80:U:H2'	37:YB:81:G:H21	1.44	0.80
10:XJ:50:ILE:HA	10:XJ:60:ARG:HG2	1.63	0.80
36:RA:2115:G:N2	36:RA:2165:G:N7	2.30	0.79
33:Y7:5:TRP:NE1	36:YA:464:U:C5'	2.44	0.79
36:RA:2100:G:H1	36:RA:2189:U:H3	1.28	0.79
36:YA:2701:C:H3'	36:YA:2702:U:H5''	1.62	0.79
11:QK:43:SER:HB2	11:QK:68:ALA:HA	1.65	0.78
30:R4:38:LYS:HE2	41:RG:112:PRO:HG3	1.65	0.78
25:XY:54:U:H5''	56:YZ:182:LYS:HE2	1.64	0.78
38:RD:182:LEU:H	38:RD:272:ALA:HB3	1.49	0.78
1:XA:1356:G:H2'	1:XA:1357:A:C8	2.19	0.78
11:XK:42:TRP:CZ3	11:XK:42:TRP:CE2	2.71	0.78
11:XK:42:TRP:CE3	11:XK:42:TRP:CH2	2.55	0.78
11:XK:42:TRP:CZ3	11:XK:42:TRP:HH2	1.48	0.78
42:YH:106:THR:HG22	42:YH:112:PRO:HB3	1.66	0.78
13:QM:3:ARG:HD3	13:QM:9:ILE:HD13	1.66	0.77
6:XF:19:LEU:CD1	6:XF:59:TYR:CE1	2.67	0.77
1:XA:150:C:H42	1:XA:171:A:H62	1.29	0.77
53:YW:88:ARG:HB3	53:YW:92:ARG:HB2	1.65	0.77
7:XG:77:SER:HB3	23:XW:32:A:H2	1.49	0.77
23:XW:8:U:OP1	23:XW:13:C:H5	1.68	0.77
27:Y1:51:VAL:HG21	27:Y1:74:VAL:HG21	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:2701:C:H3'	36:RA:2702:U:H5''	1.66	0.77
4:QD:20:TYR:CE2	4:QD:26:CYS:SG	2.77	0.76
11:QK:43:SER:OG	11:QK:67:ASP:HB3	1.85	0.76
32:R6:12:GLU:HA	32:R6:23:THR:HA	1.67	0.76
32:R6:12:GLU:HB3	32:R6:23:THR:HG22	1.68	0.76
45:RO:64:ARG:HH12	50:RT:70:VAL:HG21	1.50	0.76
56:RZ:74:VAL:HG23	56:RZ:86:VAL:HG22	1.68	0.76
2:XB:168:THR:HB	2:XB:192:SER:HB3	1.67	0.76
36:RA:855:G:H1	36:RA:922:U:H3	1.34	0.76
23:QW:19:G:H22	23:QW:56:C:H42	1.32	0.75
46:RP:126:VAL:HG12	46:RP:145:PRO:HG2	1.69	0.75
28:Y2:15:LYS:H	28:Y2:67:LYS:HZ1	1.31	0.75
47:RQ:108:GLY:HA3	56:RZ:116:VAL:HG21	1.69	0.75
23:XW:33:U:O2'	23:XW:35:C:C5	2.40	0.75
38:RD:33:LEU:HD21	38:RD:102:LYS:HD2	1.68	0.75
47:RQ:81:VAL:O	47:RQ:82:ARG:NE	2.19	0.75
36:RA:1652:A:OP1	48:RR:8:ARG:NH1	2.20	0.75
2:XB:118:LEU:HB3	2:XB:142:LEU:HD12	1.69	0.75
23:QW:37:A:N6	23:QW:39:G:N7	2.34	0.75
34:Y8:62:LEU:HD13	36:YA:242:G:H5''	1.69	0.75
31:R5:4:HIS:HE1	36:RA:2577:A:H4'	1.52	0.75
8:XH:138:TRP:CD2	8:XH:138:TRP:CZ3	2.69	0.75
25:XY:75:C:O3'	36:YA:2573:C:N4	2.20	0.75
36:YA:598:G:H4'	46:YP:9:ASN:ND2	2.02	0.75
39:YE:9:VAL:HB	39:YE:25:VAL:HG13	1.69	0.75
37:RB:111:U:H2'	37:RB:112:G:H8	1.51	0.74
56:RZ:44:PHE:HE1	56:RZ:86:VAL:HG21	1.50	0.74
15:QO:33:THR:HG22	15:QO:63:ARG:HH11	1.51	0.74
4:XD:18:LYS:NZ	4:XD:31:CYS:SG	2.59	0.74
36:RA:140:A:H8	36:RA:1408:C:HO2'	1.36	0.74
33:Y7:5:TRP:NE1	36:YA:464:U:C4'	2.51	0.74
42:YH:9:ILE:HD12	42:YH:49:VAL:HG11	1.69	0.74
1:XA:1178:G:OP2	9:XI:97:LYS:NZ	2.20	0.74
36:RA:2438:U:O3'	36:RA:2439:A:H3'	1.88	0.74
6:XF:9:VAL:HB	6:XF:87:ARG:HB2	1.68	0.74
8:QH:114:THR:HG22	8:QH:130:GLY:O	1.87	0.74
1:XA:448:A:OP2	1:XA:485:G:N2	2.20	0.74
1:QA:1502:A:H2	1:QA:1505:G:H1	1.34	0.74
1:XA:277:C:H5''	17:XQ:68:ARG:HH21	1.53	0.74
1:XA:692:U:OP1	11:XK:124:LYS:NZ	2.20	0.74
36:YA:996:A:H4'	51:YU:92:ARG:HD3	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:559:A:OP1	5:QE:126:ARG:NH2	2.20	0.73
1:QA:1320:C:H42	19:QS:36:ARG:HG3	1.53	0.73
25:QY:53:G:O2'	47:RQ:51:ARG:NH2	2.20	0.73
32:R6:15:GLU:HG2	32:R6:16:CYS:H	1.53	0.73
33:Y7:5:TRP:NE1	36:YA:464:U:H5'	2.03	0.73
36:RA:507:A:H5''	36:RA:508:G:H5'	1.69	0.73
7:XG:113:GLU:HB2	7:XG:119:ARG:HG2	1.69	0.73
36:RA:1542:G:O6	36:RA:1543:A:N6	2.21	0.73
31:R5:4:HIS:CE1	36:RA:2577:A:O4'	2.42	0.73
31:R5:4:HIS:HB3	31:R5:5:PRO:HD3	1.70	0.73
31:Y5:46:CYS:HB3	31:Y5:50:GLY:HA3	1.70	0.73
1:QA:1200:C:O2'	1:QA:1201:A:OP2	2.06	0.73
31:R5:4:HIS:CE1	36:RA:2577:A:C4'	2.71	0.73
36:YA:2287:A:H62	36:YA:2344:U:H3	1.35	0.73
36:YA:587:C:N3	46:YP:33:ARG:NH1	2.37	0.73
39:YE:31:CYS:HB3	39:YE:49:LEU:HB3	1.70	0.73
43:YI:92:VAL:HG13	43:YI:120:ILE:HG13	1.71	0.73
1:QA:1238:A:N7	1:QA:1301:U:O4	2.21	0.73
31:Y5:4:HIS:O	36:YA:2056:G:N2	2.21	0.73
36:RA:2729:G:H1'	39:RE:187:ALA:HB2	1.70	0.73
47:RQ:56:ARG:HH21	47:RQ:59:ARG:HH11	1.37	0.73
55:YY:38:ILE:HG22	55:YY:66:PRO:HA	1.69	0.73
8:QH:129:VAL:HG23	8:QH:130:GLY:H	1.53	0.72
36:RA:2135:A:H62	36:RA:2156:G:N2	1.88	0.72
1:XA:522:C:H41	12:XL:53:ARG:HH22	1.34	0.72
8:XH:138:TRP:CD1	8:XH:138:TRP:CB	2.67	0.72
13:QM:105:THR:HG22	13:QM:106:ASN:H	1.54	0.72
36:YA:307:G:H21	36:YA:330:A:H62	1.34	0.72
55:RY:87:LYS:HD2	55:RY:92:ASN:HB3	1.72	0.72
7:XG:79:ARG:NH2	23:XW:34:G:O6	2.22	0.72
40:YF:143:ALA:HB1	40:YF:148:LEU:HB2	1.72	0.72
11:QK:43:SER:HB2	11:QK:68:ALA:N	2.05	0.72
1:QA:1123:A:H4'	10:QJ:36:GLY:HA3	1.71	0.72
1:XA:1007:C:H42	1:XA:1022:G:H22	1.36	0.72
34:Y8:46:ARG:NH2	36:YA:631:A:OP2	2.21	0.72
36:RA:993:G:N3	52:RV:89:GLN:NE2	2.32	0.72
45:RO:14:THR:HG21	45:RO:86:ILE:HD12	1.71	0.72
4:XD:162:LEU:O	4:XD:166:LYS:HG3	1.89	0.72
45:RO:3:GLN:HB2	45:RO:4:PRO:CD	2.20	0.72
1:XA:688:G:H5'	11:XK:46:GLY:HA3	1.70	0.72
36:YA:2680:C:H5'	39:YE:189:PRO:HA	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:64:LEU:HD13	4:XD:198:VAL:HG21	1.71	0.71
11:XK:32:ILE:HB	11:XK:41:THR:HG22	1.72	0.71
27:Y1:54:ALA:HB3	27:Y1:80:LEU:HD22	1.72	0.71
37:YB:9:G:OP1	49:YS:15:ARG:NH1	2.23	0.71
31:R5:4:HIS:NE2	36:RA:2577:A:C1'	2.53	0.71
4:QD:18:LYS:HE2	4:QD:26:CYS:SG	2.29	0.71
55:RY:76:CYS:SG	55:RY:77:PRO:HD2	2.30	0.71
1:XA:1356:G:H2'	1:XA:1357:A:H8	1.55	0.71
47:YQ:81:VAL:O	47:YQ:82:ARG:NE	2.22	0.71
13:XM:105:THR:HG22	13:XM:106:ASN:H	1.54	0.71
1:QA:689:C:H3'	1:QA:690:G:H21	1.56	0.71
36:RA:1794:U:H3	36:RA:1825:A:H61	0.76	0.71
1:QA:1204:A:OP1	14:QN:3:ARG:NH2	2.21	0.71
19:QS:49:ILE:HG22	19:QS:62:ILE:HD11	1.72	0.71
36:YA:1021:A:H8	36:YA:1022:G:H5''	1.55	0.71
3:QC:22:TRP:HZ3	3:QC:24:ALA:HB2	1.56	0.71
36:YA:574:C:N3	39:YE:145:LYS:NZ	2.39	0.71
36:YA:1359:A:H62	36:YA:1372:U:H3	1.36	0.70
33:R7:9:ARG:NE	36:RA:1310:G:OP2	2.24	0.70
47:RQ:135:ASP:OD2	56:RZ:81:ARG:NH1	2.24	0.70
1:XA:1422:G:H5''	45:YO:48:PRO:HB3	1.73	0.70
6:XF:30:LEU:HD23	6:XF:75:LEU:HD11	1.74	0.70
11:QK:42:TRP:HZ3	11:QK:44:SER:HB3	1.49	0.70
43:RI:60:GLU:HG3	43:RI:61:ARG:HE	1.56	0.70
53:RW:29:LEU:HD22	53:RW:69:LEU:HD11	1.74	0.70
41:YG:63:ILE:HG22	41:YG:143:GLU:HB2	1.73	0.70
42:YH:153:LYS:HB3	42:YH:161:GLY:HA2	1.72	0.70
1:QA:346:G:H1'	1:QA:347:G:H5'	1.73	0.70
19:QS:33:THR:HG22	19:QS:49:ILE:CD1	2.19	0.70
25:XY:55:U:H2'	56:YZ:182:LYS:HD3	1.71	0.70
7:XG:15:ASP:HB3	7:XG:19:GLY:H	1.55	0.70
1:QA:673:G:H2'	1:QA:674:G:C8	2.27	0.70
36:RA:270(I):G:H1	36:RA:270(Q):C:H42	1.40	0.70
38:RD:33:LEU:HD11	38:RD:102:LYS:HB2	1.72	0.70
42:YH:97:ARG:NH2	42:YH:104:GLU:OE1	2.25	0.70
1:QA:111:G:O6	1:QA:330:C:N4	2.25	0.70
50:RT:36:GLU:HG3	50:RT:41:ARG:HD3	1.74	0.70
36:RA:2849:U:OP1	50:RT:95:ARG:NH1	2.23	0.70
38:RD:248:SER:HB2	38:RD:249:PRO:HD2	1.73	0.70
19:XS:39:THR:HG22	19:XS:40:ILE:H	1.57	0.70
36:YA:1332:G:H21	36:YA:1610:A:H8	1.39	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:1899:G:H21	36:YA:1902:C:H41	1.40	0.70
11:QK:42:TRP:HZ3	11:QK:44:SER:CB	2.04	0.70
11:QK:87:THR:HA	11:QK:91:ARG:HD2	1.73	0.70
25:QY:1:G:H1	25:QY:72:C:H42	1.40	0.70
1:QA:1320:C:N4	19:QS:36:ARG:HG3	2.06	0.70
1:XA:406:G:H5'	4:XD:5:ILE:HD11	1.72	0.70
34:Y8:30:ARG:HH21	46:YP:62:LEU:HD12	1.57	0.70
17:QQ:66:SER:O	17:QQ:70:ARG:NH1	2.25	0.69
34:R8:46:ARG:NH2	36:RA:631:A:OP2	2.25	0.69
1:XA:738:C:H5''	6:XF:69:GLU:HB2	1.72	0.69
2:XB:21:ARG:HG2	2:XB:39:ILE:HA	1.74	0.69
36:YA:827:U:O2'	36:YA:2068:U:N3	2.24	0.69
56:YZ:5:LEU:H	56:YZ:59:LEU:HA	1.57	0.69
1:QA:1130:A:O2'	9:QI:3:GLN:NE2	2.25	0.69
2:XB:24:TRP:HB2	2:XB:40:HIS:CE1	2.26	0.69
36:YA:1045:A:O2'	36:YA:1046:A:OP2	2.09	0.69
53:YW:86:LEU:HD22	53:YW:96:ILE:HD11	1.74	0.69
36:RA:2135:A:H62	36:RA:2156:G:H21	1.40	0.69
32:R6:23:THR:HG21	36:RA:2419:U:H4'	1.74	0.69
44:YN:42:TRP:CE3	44:YN:42:TRP:CH2	2.74	0.69
55:YY:76:CYS:HB3	55:YY:77:PRO:HD2	1.74	0.69
13:QM:3:ARG:HA	13:QM:9:ILE:HG21	1.72	0.69
36:RA:642:G:N2	36:RA:645:C:OP2	2.24	0.69
46:RP:65:ARG:O	46:RP:68:GLN:NE2	2.24	0.69
54:RX:57:LEU:HD21	54:RX:78:LYS:HB2	1.75	0.69
50:YT:20:PRO:HD2	50:YT:86:ILE:HG23	1.73	0.69
1:QA:1356:G:H2'	1:QA:1357:A:C8	2.26	0.69
10:QJ:3:LYS:N	10:QJ:74:ILE:O	2.25	0.69
1:XA:346:G:H1'	1:XA:347:G:H5'	1.74	0.69
36:YA:2788:C:O2'	36:YA:2809:A:N3	2.25	0.69
11:QK:42:TRP:CZ3	11:QK:44:SER:CB	2.73	0.69
37:RB:9:G:OP1	49:RS:15:ARG:NH1	2.25	0.69
27:Y1:83:GLU:HG2	27:Y1:85:LEU:H	1.57	0.69
43:YI:133:HIS:CG	43:YI:134:PRO:HD3	2.27	0.69
40:YF:113:ALA:HB2	40:YF:183:VAL:HG23	1.75	0.69
1:QA:713:G:H2'	1:QA:714:G:C8	2.27	0.69
1:QA:522:C:H41	12:QL:53:ARG:HH22	1.41	0.69
1:XA:1014:A:H2'	1:XA:1015:A:C8	2.28	0.69
36:YA:1689:A:H62	36:YA:1698:A:H2	1.40	0.69
9:QI:112:LYS:HA	9:QI:119:ALA:HB2	1.75	0.69
42:RH:33:LEU:HD11	42:RH:136:ILE:HG12	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:674:G:H2'	1:XA:675:A:H8	1.58	0.69
20:XT:100:ILE:HG22	20:XT:102:GLY:H	1.56	0.69
36:YA:2789:C:OP1	36:YA:2789:C:H4'	1.93	0.69
42:YH:6:ARG:HH22	42:YH:62:LYS:HG2	1.57	0.69
56:YZ:91:LEU:HD12	56:YZ:130:PRO:HG3	1.75	0.69
1:XA:745:C:H2'	1:XA:746:A:C8	2.27	0.68
2:XB:54:THR:HG22	2:XB:199:TYR:HB3	1.74	0.68
11:QK:43:SER:HB3	11:QK:68:ALA:HB2	1.73	0.68
36:RA:1791:A:H5'	38:RD:206:LEU:HD12	1.75	0.68
7:XG:28:ASN:OD1	7:XG:36:LYS:NZ	2.25	0.68
39:YE:52:LEU:HB2	39:YE:75:VAL:HG22	1.74	0.68
41:YG:161:THR:HG22	41:YG:163:ALA:H	1.56	0.68
1:XA:269:C:H2'	1:XA:270:A:H8	1.57	0.68
11:XK:52:GLY:H	11:XK:55:LYS:HE2	1.58	0.68
18:XR:86:VAL:HG12	18:XR:87:ARG:HG2	1.75	0.68
11:QK:86:GLY:O	11:QK:91:ARG:NH1	2.26	0.68
1:QA:951:G:OP2	13:QM:102:ARG:NH1	2.27	0.68
31:R5:4:HIS:CE1	36:RA:2577:A:C1'	2.76	0.68
45:RO:34:THR:HG22	45:RO:35:VAL:H	1.58	0.68
10:XJ:48:THR:HG22	10:XJ:62:HIS:HB3	1.75	0.68
36:YA:2168:G:N2	36:YA:2170:A:OP2	2.26	0.68
36:YA:2438:U:O3'	36:YA:2439:A:H3'	1.93	0.68
20:QT:57:ARG:HH21	20:QT:102:GLY:HA3	1.58	0.68
31:R5:4:HIS:CE1	36:RA:2577:A:H4'	2.28	0.68
36:RA:1824:G:C2'	38:RD:220:HIS:HE1	2.02	0.68
1:QA:1422:G:H5''	45:RO:48:PRO:HB3	1.74	0.68
2:XB:129:GLU:OE2	2:XB:130:ARG:NH1	2.27	0.68
6:XF:37:VAL:HA	6:XF:65:VAL:HG12	1.74	0.68
20:XT:99:LEU:HG	20:XT:100:ILE:HG12	1.76	0.68
36:YA:1464:C:HO2'	36:YA:1528:A:H8	1.41	0.68
36:YA:993:G:OP1	51:YU:50:ARG:NH2	2.27	0.68
36:YA:1816:G:O6	38:YD:35:LYS:NZ	2.27	0.68
47:YQ:135:ASP:OD2	56:YZ:49:ARG:NH1	2.22	0.68
34:R8:32:LEU:HD13	36:RA:2391:G:OP2	1.93	0.68
1:XA:911:U:OP2	12:XL:97:ARG:NH2	2.26	0.68
30:Y4:26:SER:HB2	41:YG:105:LYS:HD3	1.76	0.68
52:YV:49:THR:OG1	52:YV:50:PRO:HD3	1.94	0.68
1:QA:714:G:H2'	1:QA:715:A:C8	2.29	0.68
42:RH:46:GLU:HG2	42:RH:47:GLU:H	1.58	0.68
36:YA:1728:G:H8	36:YA:1732:A:H62	1.41	0.68
3:QC:59:ARG:HH12	3:QC:97:LYS:HG3	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:738:C:H5''	6:QF:69:GLU:HB2	1.74	0.68
36:RA:2304:G:H22	36:RA:2312:U:H3	1.41	0.68
41:RG:59:GLU:OE2	41:RG:153:ARG:NH2	2.27	0.68
19:QS:36:ARG:NH2	19:QS:75:ALA:O	2.27	0.67
25:QY:58:A:H8	56:RZ:182:LYS:HD2	1.59	0.67
46:YP:91:PHE:HE2	46:YP:95:VAL:HG22	1.58	0.67
56:YZ:163:LEU:HD21	56:YZ:165:VAL:HG22	1.74	0.67
31:R5:4:HIS:HE1	36:RA:2577:A:C4'	2.07	0.67
36:RA:1353:A:H2'	36:RA:1354:A:C8	2.30	0.67
36:YA:2591:C:H2'	36:YA:2592:G:C8	2.30	0.67
50:YT:19:LEU:HD22	50:YT:86:ILE:HG22	1.77	0.67
21:QU:8:THR:HG23	21:QU:11:GLY:H	1.58	0.67
27:R1:12:PRO:HB3	27:R1:43:TYR:HD2	1.59	0.67
36:RA:1113:U:H5'	42:RH:2:SER:HA	1.76	0.67
36:RA:1192:G:OP1	46:RP:18:ARG:NH2	2.27	0.67
53:RW:86:LEU:HD22	53:RW:96:ILE:HD11	1.74	0.67
12:XL:49:ASN:ND2	12:XL:92:ASP:OD2	2.26	0.67
30:R4:40:HIS:O	30:R4:47:GLN:NE2	2.27	0.67
9:XI:46:ALA:HB2	9:XI:74:ILE:HG23	1.76	0.67
1:QA:606:G:H22	1:QA:631:G:H5'	1.58	0.67
8:QH:11:THR:HG22	8:QH:14:ARG:HH12	1.59	0.67
36:RA:1348:G:H2'	36:RA:1349:A:H5''	1.76	0.67
1:XA:745:C:H2'	1:XA:746:A:H8	1.60	0.67
39:YE:54:GLN:HG3	39:YE:55:ASN:H	1.58	0.67
7:QG:152:ALA:O	7:QG:155:ARG:NH2	2.28	0.67
8:QH:33:GLU:HG2	8:QH:59:LEU:HD21	1.76	0.67
50:RT:5:ALA:HA	50:RT:8:LYS:HD3	1.77	0.67
23:XW:8:U:H2'	23:XW:8:U:O2	1.95	0.67
1:QA:191(D):U:H2'	1:QA:191(E):G:H8	1.60	0.67
1:QA:501:C:H2'	1:QA:502:G:H8	1.59	0.67
2:QB:168:THR:HB	2:QB:192:SER:HB2	1.77	0.67
8:XH:17:THR:O	8:XH:78:GLN:NE2	2.28	0.67
9:XI:17:VAL:HG12	9:XI:63:ILE:HG12	1.76	0.67
19:XS:36:ARG:CG	19:XS:72:GLY:HA2	2.24	0.67
22:XV:9:G:O2'	22:XV:10:G:N7	2.28	0.67
8:QH:17:THR:O	8:QH:78:GLN:NE2	2.28	0.67
13:QM:49:THR:HG22	13:QM:51:ALA:H	1.60	0.67
36:RA:1802:A:H2'	36:RA:1803:A:C8	2.30	0.67
1:XA:1316:G:N1	1:XA:1319:A:OP2	2.21	0.67
1:QA:56:U:H2'	1:QA:57:G:H8	1.60	0.67
1:QA:406:G:H5'	4:QD:5:ILE:HD11	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:82:ARG:NH1	2:XB:86:GLU:OE2	2.28	0.67
55:YY:3:VAL:HG11	55:YY:32:PRO:HB2	1.77	0.67
55:YY:76:CYS:O	55:YY:78:ALA:N	2.27	0.67
3:QC:58:GLU:HB2	3:QC:65:ALA:HB3	1.77	0.66
13:QM:7:VAL:HB	41:RG:115:ARG:HE	1.60	0.66
36:RA:1113:U:H2'	36:RA:1114:G:H8	1.59	0.66
36:RA:2117:A:N7	36:RA:2172:U:N3	2.40	0.66
36:RA:2577:A:H5''	36:RA:2578:G:H5'	1.77	0.66
1:XA:880:C:OP1	12:XL:12:ARG:NH1	2.28	0.66
40:YF:198:ALA:HA	40:YF:201:VAL:HG12	1.77	0.66
45:YO:87:ILE:HD12	45:YO:91:LEU:HA	1.77	0.66
6:XF:6:VAL:HG22	6:XF:90:VAL:HG22	1.77	0.66
10:XJ:45:ARG:HB3	10:XJ:65:LEU:HB3	1.77	0.66
19:XS:42:PRO:HD2	19:XS:44:MET:HG2	1.77	0.66
1:XA:1312:G:H5'	19:XS:5:LEU:HD11	1.76	0.66
1:QA:593:G:H1	1:QA:646:U:H3	1.43	0.66
36:RA:1007:C:H5''	44:RN:35:ARG:HH12	1.60	0.66
16:XP:45:THR:HG23	16:XP:46:PRO:HD2	1.77	0.66
36:YA:1859:A:N6	36:YA:1883:G:O2'	2.29	0.66
36:YA:271(B):G:O2'	36:YA:271(C):U:OP2	2.14	0.66
56:YZ:31:ARG:HH22	56:YZ:95:PRO:HG3	1.61	0.66
56:YZ:69:THR:HG22	56:YZ:90:VAL:HG12	1.75	0.66
1:QA:811:C:O2'	1:QA:901:A:N1	2.28	0.66
3:QC:22:TRP:CZ3	3:QC:24:ALA:HB3	2.26	0.66
4:QD:63:LYS:HD2	4:QD:198:VAL:HG12	1.78	0.66
36:RA:2086:U:H2'	36:RA:2087:G:C8	2.30	0.66
38:RD:35:LYS:HE2	38:RD:63:ARG:HG3	1.78	0.66
36:YA:2635:C:H5''	39:YE:78:LEU:HA	1.77	0.66
2:QB:74:LYS:NZ	2:QB:206:ASP:OD1	2.25	0.66
13:XM:120:LYS:HG2	13:XM:121:LYS:H	1.59	0.66
36:RA:1992:G:H21	36:RA:1992:G:P	2.17	0.66
36:YA:1348:G:H2'	36:YA:1349:A:H5''	1.78	0.66
53:YW:29:LEU:HD22	53:YW:69:LEU:HD11	1.77	0.66
10:QJ:61:GLU:OE1	14:QN:58:LYS:NZ	2.29	0.66
61:QY:101:A:H8	36:RA:2583:G:H21	1.44	0.66
36:RA:530:G:O2'	36:RA:532:A:N7	2.28	0.66
55:YY:88:LYS:HG3	55:YY:89:PHE:H	1.60	0.66
1:QA:1301:U:O2	1:QA:1301:U:H2'	1.96	0.66
4:QD:20:TYR:HD2	4:QD:26:CYS:SG	2.14	0.66
36:RA:2135:A:N6	36:RA:2156:G:H21	1.93	0.66
55:RY:39:VAL:HG12	55:RY:40:GLU:H	1.59	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:223:ILE:HG23	2:XB:229:VAL:HG22	1.78	0.66
36:YA:2267:A:H5''	36:YA:2268:A:H5'	1.78	0.66
36:RA:1514:U:C6	36:RA:1514:U:H5''	2.30	0.65
36:RA:2788:C:O2'	36:RA:2809:A:N3	2.29	0.65
19:XS:3:ARG:NH1	19:XS:8:GLY:O	2.27	0.65
36:YA:2308:G:H22	36:YA:2311:A:H2	1.44	0.65
36:RA:674:G:H1'	40:RF:74:ARG:HH11	1.60	0.65
46:RP:91:PHE:HE2	46:RP:95:VAL:HG22	1.61	0.65
52:RV:24:LYS:HA	52:RV:92:THR:HG23	1.78	0.65
36:YA:2832:U:H4'	36:YA:2833:G:H5''	1.76	0.65
37:YB:44:G:H1'	37:YB:47:C:H42	1.61	0.65
42:YH:124:GLU:HB3	42:YH:132:ARG:HB3	1.78	0.65
1:QA:1304:G:O5'	1:QA:1304:G:H8	1.79	0.65
11:QK:44:SER:O	11:QK:64:ALA:HB1	1.97	0.65
36:RA:598:G:H5'	46:RP:11:GLY:HA3	1.77	0.65
36:RA:958:U:OP2	47:RQ:14:ARG:NH1	2.29	0.65
55:RY:14:LEU:HB2	55:RY:75:ILE:HD11	1.78	0.65
4:QD:162:LEU:HG	4:QD:181:MET:HG2	1.79	0.65
36:RA:2876:G:H5'	50:RT:2:ASN:HB3	1.78	0.65
1:QA:677:U:H3	1:QA:713:G:H22	1.43	0.65
3:QC:70:VAL:HG12	3:QC:72:LYS:H	1.61	0.65
25:QY:4:G:H1	25:QY:69:C:H42	1.42	0.65
36:RA:1754:C:OP1	50:RT:96:ARG:NH1	2.29	0.65
36:RA:2287:A:H62	36:RA:2344:U:H3	1.45	0.65
1:XA:673:G:H2'	1:XA:674:G:C8	2.31	0.65
11:XK:58:PRO:HB2	11:XK:93:GLN:HG3	1.79	0.65
1:QA:1106:G:H5''	3:QC:172:ARG:HG2	1.79	0.65
1:QA:227:G:N2	16:QP:62:VAL:O	2.23	0.65
19:QS:9:VAL:C	19:QS:11:VAL:H	2.00	0.65
36:RA:1434:A:H61	36:RA:1558:A:H62	1.42	0.65
36:RA:1598:C:H5'	54:RX:37:THR:HG23	1.79	0.65
36:YA:2068:U:H3	36:YA:2430:A:H2	1.43	0.65
43:YI:72:LEU:HD11	43:YI:107:VAL:HG11	1.78	0.65
47:YQ:65:PHE:HB2	47:YQ:105:GLU:HB3	1.77	0.65
36:YA:2495:G:H5''	47:YQ:81:VAL:HG12	1.78	0.65
25:XY:18:G:N2	25:XY:57:G:N7	2.44	0.65
40:YF:133:ASN:H	40:YF:162:LEU:HD23	1.62	0.65
56:YZ:114:GLY:HA3	56:YZ:177:PRO:HG3	1.77	0.65
1:QA:59:A:H3'	1:QA:331:G:H22	1.62	0.65
36:RA:1332:G:H21	36:RA:1610:A:H8	1.45	0.65
39:RE:8:LYS:HA	39:RE:26:ILE:HG22	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RN:47:ALA:HB2	44:RN:112:LEU:HD11	1.76	0.65
26:Y0:7:LEU:HD21	47:YQ:81:VAL:H	1.60	0.65
51:YU:97:ASP:OD1	51:YU:101:ARG:NH1	2.30	0.65
36:RA:2853:C:H2'	36:RA:2854:G:H8	1.59	0.65
51:RU:92:ARG:HD3	52:RV:11:GLN:HB2	1.78	0.65
11:XK:42:TRP:CD2	11:XK:42:TRP:CZ3	2.74	0.65
20:XT:89:ARG:NH2	20:XT:104:LEU:HD21	2.12	0.65
1:QA:687:A:N6	1:QA:703:G:N2	2.45	0.65
1:XA:973:G:H1'	10:XJ:55:LYS:HE3	1.79	0.65
13:XM:15:VAL:HB	13:XM:45:VAL:HB	1.79	0.65
1:QA:547:A:OP2	4:QD:2:GLY:N	2.29	0.64
5:QE:81:GLU:HG2	5:QE:90:VAL:HG12	1.80	0.64
4:XD:166:LYS:HA	4:XD:178:VAL:HG21	1.78	0.64
29:Y3:2:PRO:HA	29:Y3:39:ASP:HB2	1.79	0.64
39:RE:176:ILE:HB	39:RE:181:LEU:HB2	1.79	0.64
56:RZ:69:THR:HG22	56:RZ:90:VAL:HG12	1.79	0.64
1:XA:664:G:H22	1:XA:741:G:H1	1.44	0.64
3:QC:22:TRP:CZ3	3:QC:24:ALA:CB	2.71	0.64
2:QB:22:LYS:HD2	2:QB:22:LYS:O	1.97	0.64
42:RH:106:THR:HG22	42:RH:112:PRO:HB3	1.78	0.64
42:RH:126:PRO:HB2	42:RH:128:PRO:HD2	1.80	0.64
36:RA:2816:C:O3'	48:RR:99:LYS:NZ	2.31	0.64
54:RX:57:LEU:CD2	54:RX:78:LYS:HB2	2.27	0.64
55:YY:29:GLU:HB3	55:YY:38:ILE:HG12	1.79	0.64
1:QA:8:A:N6	4:QD:205:GLU:O	2.29	0.64
36:RA:1565:C:H5''	38:RD:18:VAL:HG21	1.80	0.64
34:Y8:29:LYS:HG2	34:Y8:30:ARG:H	1.63	0.64
42:YH:51:ARG:NH2	42:YH:53:GLU:OE2	2.31	0.64
1:QA:953:G:H5'	1:QA:965:A:H61	1.63	0.64
36:RA:1078:U:O2'	36:RA:1079:C:OP2	2.16	0.64
36:RA:75:G:H22	36:RA:111:A:H2	1.46	0.64
44:RN:96:GLU:HB2	44:RN:122:VAL:HG12	1.80	0.64
8:XH:12:ARG:HD2	8:XH:26:VAL:HG12	1.79	0.64
36:YA:2131:G:H4'	36:YA:2132:U:H4'	1.79	0.64
1:QA:582:U:OP1	15:QO:68:ARG:NH2	2.27	0.64
3:QC:124:ILE:HD12	3:QC:130:VAL:HG22	1.78	0.64
9:QI:13:ALA:HB2	9:QI:68:GLY:HA3	1.78	0.64
36:RA:2502:G:H5''	36:RA:2503:A:H5''	1.80	0.64
30:R4:31:ILE:HD12	41:RG:142:PRO:HB2	1.80	0.64
1:XA:714:G:H2'	1:XA:715:A:C8	2.33	0.64
38:YD:142:VAL:HG23	38:YD:193:VAL:HA	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:38:ILE:HD11	10:QJ:71:LEU:HD23	1.78	0.64
19:QS:36:ARG:NH2	19:QS:75:ALA:CB	2.60	0.64
36:RA:1824:G:C2'	38:RD:220:HIS:CE1	2.78	0.64
53:RW:69:LEU:HD13	53:RW:107:LEU:HD13	1.79	0.64
36:YA:2882:A:OP1	48:YR:96:ARG:NH1	2.30	0.64
53:YW:68:ARG:NH2	53:YW:109:GLU:OE1	2.30	0.64
3:QC:14:ILE:HG22	3:QC:15:THR:HG23	1.79	0.64
36:RA:2630:G:H2'	36:RA:2631:G:C8	2.33	0.64
36:RA:2659:G:OP1	42:RH:158:HIS:NE2	2.31	0.64
7:XG:77:SER:CB	23:XW:32:A:H2	2.11	0.64
1:QA:346:G:OP1	50:RT:41:ARG:NH2	2.28	0.64
1:QA:1291:G:H4'	9:QI:39:GLY:HA3	1.79	0.64
34:R8:29:LYS:HD2	34:R8:44:LYS:HB2	1.79	0.64
45:RO:3:GLN:HB2	45:RO:4:PRO:HD3	1.79	0.64
7:XG:51:GLN:NE2	7:XG:56:GLN:O	2.31	0.64
42:YH:126:PRO:HB3	42:YH:130:ARG:O	1.97	0.64
36:YA:1138:G:H21	44:YN:106:MET:HE3	1.63	0.64
1:XA:713:G:H2'	1:XA:714:G:C8	2.32	0.63
1:XA:824:C:O2'	8:XH:1:MET:N	2.31	0.63
36:YA:1405:U:H2'	36:YA:1406:U:H6	1.64	0.63
40:YF:185:ASP:OD1	40:YF:188:ARG:NH1	2.30	0.63
2:QB:88:ALA:HA	2:QB:223:ILE:HD11	1.81	0.63
35:R9:10:ILE:HD13	36:RA:2477:C:H41	1.63	0.63
47:YQ:12:GLN:HG2	47:YQ:73:PRO:HD2	1.80	0.63
18:QR:53:ARG:HA	18:QR:56:THR:HG22	1.80	0.63
55:RY:95:LYS:HB2	55:RY:100:ALA:HA	1.79	0.63
32:Y6:15:GLU:OE1	32:Y6:20:ASN:ND2	2.31	0.63
33:Y7:8:ASN:HB3	33:Y7:11:LYS:HB3	1.80	0.63
36:YA:363:G:H2'	36:YA:363(A):A:H8	1.63	0.63
33:Y7:5:TRP:CD1	36:YA:464:U:H4'	2.29	0.63
40:YF:178:PRO:HB3	40:YF:198:ALA:HB2	1.80	0.63
36:YA:587:C:OP2	46:YP:21:ARG:NH2	2.30	0.63
47:YQ:43:THR:HG22	47:YQ:94:VAL:HG12	1.81	0.63
1:QA:1147:C:HO2'	9:QI:5:TYR:HH	1.46	0.63
38:RD:35:LYS:HG3	38:RD:63:ARG:HA	1.79	0.63
1:XA:1250:A:N3	1:XA:1370:G:O2'	2.27	0.63
23:XW:30:G:O2'	23:XW:31:C:O2	2.17	0.63
1:QA:700:G:H4'	1:QA:704:A:H1'	1.81	0.63
36:RA:1403:C:H5''	36:RA:1471:A:H1'	1.79	0.63
36:RA:1496:A:H8	36:RA:1577:C:HO2'	1.46	0.63
26:Y0:27:GLU:HG3	26:Y0:68:GLU:HA	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:34:C:N4	36:YA:454:A:O2'	2.32	0.63
3:QC:22:TRP:CZ3	3:QC:24:ALA:HB2	2.33	0.63
28:R2:47:ASN:O	28:R2:48:HIS:ND1	2.32	0.63
36:RA:1026:U:H4'	36:RA:1027:A:OP1	1.99	0.63
46:RP:58:THR:O	46:RP:61:ARG:NH2	2.31	0.63
19:XS:36:ARG:CD	19:XS:72:GLY:CA	2.34	0.63
36:YA:221:A:N1	36:YA:265:A:O2'	2.32	0.63
56:YZ:112:ARG:HG3	56:YZ:113:ALA:H	1.63	0.63
36:RA:1796:U:H2'	36:RA:1797:C:C6	2.33	0.63
36:RA:998:C:OP1	51:RU:93:LYS:NZ	2.32	0.63
1:XA:67:C:H2'	1:XA:68:G:C8	2.34	0.63
32:Y6:33:LYS:HG2	32:Y6:34:LEU:H	1.64	0.63
1:QA:1129:C:O2	1:QA:1132:C:N4	2.29	0.63
12:QL:60:LEU:HD21	12:QL:64:TYR:HB2	1.79	0.63
23:XW:55:U:O5'	23:XW:55:U:H6	1.81	0.63
36:YA:819:A:OP2	36:YA:1187:G:N2	2.24	0.63
55:YY:51:VAL:HG22	55:YY:57:GLN:HA	1.79	0.63
8:QH:19:VAL:HG13	8:QH:21:LYS:HG3	1.81	0.63
34:R8:25:MET:HG3	46:RP:64:LYS:HB2	1.80	0.63
36:RA:1047:G:H1'	36:RA:1111:A:H61	1.64	0.63
36:RA:2630:G:H2'	36:RA:2631:G:H8	1.64	0.63
42:RH:46:GLU:OE1	42:RH:51:ARG:NH2	2.31	0.63
3:XC:189:ALA:HB3	3:XC:196:LEU:HB2	1.81	0.63
19:XS:36:ARG:O	19:XS:36:ARG:HG2	1.99	0.63
30:Y4:40:HIS:H	30:Y4:41:PRO:HD3	1.63	0.63
36:YA:1403:C:H5''	36:YA:1471:A:H1'	1.81	0.63
36:YA:2591:C:H2'	36:YA:2592:G:H8	1.64	0.63
2:XB:21:ARG:CZ	2:XB:37:ASN:O	2.46	0.62
45:YO:104:ARG:NH1	50:YT:36:GLU:OE2	2.32	0.62
36:RA:1796:U:H2'	36:RA:1797:C:H6	1.64	0.62
36:RA:1860:G:H1	36:RA:1882:C:H42	1.47	0.62
1:XA:501:C:H2'	1:XA:502:G:H8	1.65	0.62
19:XS:36:ARG:HH11	19:XS:75:ALA:HB3	1.65	0.62
47:YQ:24:GLY:HA3	47:YQ:102:VAL:HG12	1.81	0.62
1:QA:687:A:H62	1:QA:703:G:N2	1.98	0.62
3:QC:60:ALA:O	3:QC:63:ASN:ND2	2.33	0.62
14:QN:24:CYS:HB2	14:QN:27:CYS:O	2.00	0.62
14:QN:41:ARG:HG3	14:QN:42:ILE:H	1.64	0.62
36:RA:1155:A:H5''	51:RU:55:ARG:HH11	1.65	0.62
1:XA:17:U:H2'	1:XA:18:C:C6	2.34	0.62
2:XB:25:ASN:OD1	2:XB:26:PRO:CD	2.43	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:XW:20:G:H2'	23:XW:21:A:H4'	1.80	0.62
36:YA:796:C:H2'	36:YA:797:C:C6	2.34	0.62
42:YH:2:SER:HA	42:YH:7:LEU:HD22	1.80	0.62
36:YA:958:U:OP2	47:YQ:14:ARG:NH1	2.33	0.62
36:RA:1991:U:H2'	36:RA:1992:G:H5''	1.80	0.62
55:RY:95:LYS:HA	55:RY:101:LYS:HB3	1.80	0.62
1:XA:560:U:O2'	1:XA:561:U:OP2	2.17	0.62
1:XA:578:C:O2'	1:XA:728:A:N3	2.27	0.62
36:YA:83:G:N2	36:YA:103:A:OP2	2.31	0.62
39:YE:79:ARG:HD2	39:YE:197:ILE:HD11	1.80	0.62
9:QI:104:ARG:NH1	9:QI:105:ASP:O	2.31	0.62
46:RP:95:VAL:HB	46:RP:125:VAL:HG23	1.81	0.62
49:YS:15:ARG:HG3	49:YS:19:LYS:HE3	1.80	0.62
1:QA:1023:G:H3'	1:QA:1024:G:H5''	1.81	0.62
1:QA:56:U:H2'	1:QA:57:G:C8	2.35	0.62
5:QE:102:ALA:HB1	5:QE:106:PRO:HG2	1.80	0.62
1:XA:8:A:N6	4:XD:205:GLU:O	2.32	0.62
34:Y8:14:VAL:HG13	34:Y8:22:VAL:HG13	1.82	0.62
36:YA:1449:A:C4	36:YA:1529:A:H2	2.18	0.62
39:YE:131:ALA:O	39:YE:134:ILE:HG12	2.00	0.62
39:YE:201:THR:HG22	39:YE:203:LYS:H	1.65	0.62
45:YO:47:ILE:HG13	45:YO:48:PRO:HD2	1.80	0.62
1:QA:1318:A:O3'	19:QS:11:VAL:HG11	2.00	0.62
20:QT:53:LEU:HD22	20:QT:100:ILE:HG23	1.81	0.62
36:RA:807:U:OP2	46:RP:41:ARG:NH1	2.33	0.62
4:QD:64:LEU:HD13	4:QD:198:VAL:HG21	1.81	0.62
2:QB:178:ARG:HH22	8:QH:74:PRO:HB3	1.65	0.62
23:QW:20:G:H3'	23:QW:21:A:H4'	1.82	0.62
23:QW:62:C:H2'	23:QW:63:G:H8	1.64	0.62
36:RA:1203:G:H3'	36:RA:1204:A:H5''	1.82	0.62
36:RA:2701:C:H3'	36:RA:2702:U:C5'	2.29	0.62
51:RU:90:VAL:HA	52:RV:39:LEU:HD23	1.80	0.62
13:XM:37:THR:O	13:XM:55:ARG:NH1	2.33	0.62
36:YA:2849:U:OP1	50:YT:95:ARG:NH1	2.32	0.62
34:R8:7:HIS:CD2	46:RP:50:ARG:NH2	2.68	0.62
36:RA:2052:G:H4'	39:RE:143:ASN:O	2.00	0.62
49:RS:29:PHE:HB3	49:RS:36:TYR:HB2	1.82	0.62
3:XC:59:ARG:HH12	3:XC:97:LYS:HE3	1.63	0.62
10:XJ:61:GLU:OE1	14:YN:58:LYS:NZ	2.25	0.62
36:YA:1652:A:OP1	48:YR:8:ARG:NH1	2.33	0.62
39:YE:75:VAL:HG23	39:YE:76:ARG:HG3	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:1666:G:H4'	45:RO:6:THR:HG23	1.81	0.62
1:XA:677:U:H3	1:XA:713:G:H22	1.48	0.62
36:YA:1405:U:H2'	36:YA:1406:U:C6	2.35	0.62
19:QS:10:PHE:HZ	19:QS:15:LEU:HD22	1.65	0.61
27:R1:7:ILE:HD13	27:R1:91:LYS:HZ2	1.64	0.61
33:R7:7:PRO:HB2	36:RA:1309:G:H4'	1.81	0.61
35:Y9:2:LYS:HG3	36:YA:2526:G:H21	1.64	0.61
36:YA:848:G:H2'	36:YA:849:A:C8	2.35	0.61
1:QA:501:C:H2'	1:QA:502:G:C8	2.35	0.61
13:QM:10:PRO:HB2	13:QM:18:ALA:HB1	1.80	0.61
1:XA:792:A:H4'	1:XA:793:U:O5'	2.00	0.61
36:YA:49:A:N7	36:YA:120:U:H5	1.97	0.61
39:YE:119:ARG:NH1	39:YE:159:HIS:O	2.33	0.61
10:QJ:34:VAL:HG23	10:QJ:74:ILE:HA	1.82	0.61
14:YN:43:CYS:O	14:YN:44:LEU:HG	2.00	0.61
36:YA:1359:A:N6	36:YA:1372:U:H3	1.97	0.61
42:YH:5:GLY:O	42:YH:8:PRO:HD2	1.99	0.61
1:XA:579:G:H5'	1:XA:728:A:H1'	1.80	0.61
33:Y7:5:TRP:HD1	36:YA:464:U:O4'	1.83	0.61
36:YA:2421:G:H5'	36:YA:2422:A:OP2	1.99	0.61
2:QB:54:THR:HG22	2:QB:199:TYR:HB3	1.81	0.61
50:RT:24:PRO:HA	50:RT:49:VAL:HG23	1.82	0.61
53:RW:25:ARG:NH2	53:RW:74:ALA:O	2.31	0.61
1:XA:973:G:H3'	1:XA:974:A:H5"	1.81	0.61
44:YN:42:TRP:CH2	44:YN:42:TRP:CD2	2.86	0.61
46:YP:59:LEU:HA	46:YP:61:ARG:HH21	1.66	0.61
55:YY:79:CYS:SG	55:YY:80:GLY:N	2.73	0.61
36:RA:1005:C:O2'	44:RN:28:THR:HG21	2.01	0.61
36:RA:969:U:H2'	36:RA:970:C:C6	2.35	0.61
40:RF:198:ALA:HA	40:RF:201:VAL:HG22	1.83	0.61
36:RA:1454:U:H5'	48:RR:63:ARG:HH12	1.65	0.61
4:XD:109:GLY:HA3	4:XD:165:MET:HG3	1.82	0.61
44:YN:35:ARG:NH2	44:YN:42:TRP:HZ2	1.94	0.61
14:QN:45:ARG:O	14:QN:49:HIS:ND1	2.28	0.61
34:R8:59:LYS:HE2	46:RP:50:ARG:HG3	1.81	0.61
1:XA:1060:C:H3'	3:XC:2:GLY:HA3	1.81	0.61
1:XA:1355:G:H2'	1:XA:1356:G:H8	1.65	0.61
1:XA:814:A:H2'	1:XA:816:A:H5"	1.82	0.61
2:XB:84:GLU:HB3	2:XB:219:VAL:HG21	1.82	0.61
36:YA:1021:A:H3'	36:YA:1022:G:H5"	1.82	0.61
36:YA:1155:A:H5"	51:YU:55:ARG:HH11	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:2118:U:H3	36:YA:2148:G:H4'	1.65	0.61
1:QA:1391:U:H2'	1:QA:1392:G:C8	2.35	0.61
2:QB:88:ALA:HB2	2:QB:219:VAL:HG13	1.81	0.61
45:RO:87:ILE:HD12	45:RO:91:LEU:HA	1.83	0.61
28:Y2:15:LYS:H	28:Y2:67:LYS:NZ	1.98	0.61
36:YA:180:G:N2	36:YA:215:G:O6	2.34	0.61
36:YA:2392:A:H2	36:YA:2424:C:H42	1.47	0.61
1:QA:448:A:OP2	1:QA:485:G:N2	2.34	0.61
30:R4:22:ILE:HG13	30:R4:23:GLU:H	1.65	0.61
36:RA:2022:U:O2'	36:RA:2617:C:H5'	2.00	0.61
1:XA:269:C:H2'	1:XA:270:A:C8	2.36	0.61
8:XH:10:LEU:HD22	8:XH:83:ILE:HD11	1.82	0.61
23:XW:33:U:O2'	23:XW:35:C:C4	2.54	0.61
36:YA:2836:U:H2'	36:YA:2837:G:C8	2.35	0.61
1:QA:1348:U:H3	1:QA:1374:A:H2	1.48	0.61
19:QS:38:SER:HB2	19:QS:71:LEU:HD12	1.82	0.61
16:XP:82:GLN:HG2	16:XP:83:GLU:H	1.65	0.61
14:QN:40:CYS:SG	14:QN:41:ARG:N	2.74	0.60
37:RB:27:C:H6	37:RB:27:C:O5'	1.84	0.60
41:RG:11:TYR:HA	41:RG:15:VAL:HB	1.83	0.60
50:RT:50:ILE:HD11	50:RT:100:TYR:HA	1.83	0.60
1:XA:1305:G:O2'	1:XA:1332:A:N6	2.34	0.60
36:YA:827:U:O2'	36:YA:2068:U:C2	2.54	0.60
55:YY:50:ARG:HH12	55:YY:55:TYR:HD2	1.48	0.60
36:RA:2680:C:H5'	39:RE:189:PRO:HA	1.83	0.60
36:RA:2821:A:OP2	48:RR:3:HIS:HE1	1.84	0.60
1:XA:191(F):U:H2'	1:XA:191:G:H8	1.65	0.60
7:XG:15:ASP:OD2	7:XG:16:LEU:N	2.34	0.60
14:XN:21:TYR:OH	14:XN:23:ARG:NH2	2.33	0.60
36:YA:2199:A:N1	36:YA:2226:C:N4	2.47	0.60
36:YA:557:U:H2'	36:YA:558:G:H8	1.67	0.60
38:YD:148:GLU:HB2	38:YD:151:LYS:HD2	1.83	0.60
48:YR:2:ARG:HB3	48:YR:5:LYS:HD3	1.82	0.60
1:QA:116:A:H61	1:QA:313:A:H1'	1.64	0.60
36:RA:1434:A:H61	36:RA:1558:A:H61	1.48	0.60
41:RG:137:GLU:HG2	41:RG:152:LEU:HD11	1.84	0.60
1:XA:1060:C:O2'	10:XJ:56:HIS:ND1	2.33	0.60
1:XA:1436:U:OP1	20:XT:23:ARG:NH2	2.34	0.60
18:XR:23:LYS:HD2	18:XR:58:LEU:HD23	1.83	0.60
19:XS:40:ILE:HG22	19:XS:41:VAL:H	1.65	0.60
36:YA:127:A:H5''	36:YA:128:C:C6	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:2393:A:H5'	46:YP:62:LEU:HB3	1.83	0.60
46:YP:59:LEU:HA	46:YP:61:ARG:NH2	2.15	0.60
49:YS:59:LYS:HG2	49:YS:60:GLY:H	1.66	0.60
1:QA:414:A:OP2	1:QA:428:G:N2	2.32	0.60
1:QA:705:U:N3	1:QA:706:A:N7	2.49	0.60
1:QA:806:C:H2'	1:QA:807:A:H8	1.65	0.60
10:QJ:12:ASP:HB3	10:QJ:15:THR:HG22	1.82	0.60
11:QK:42:TRP:HE3	11:QK:44:SER:HB3	1.65	0.60
36:RA:38:A:H2'	36:RA:39:C:C6	2.37	0.60
36:RA:2495:G:H5''	47:RQ:81:VAL:HG12	1.84	0.60
1:XA:806:C:H2'	1:XA:807:A:H8	1.66	0.60
32:Y6:30:THR:CG2	32:Y6:31:PRO:HD2	2.20	0.60
36:YA:1028:A:H2'	36:YA:1029:A:C8	2.36	0.60
36:RA:1084:A:H5'	36:RA:1085:A:H5''	1.83	0.60
36:RA:9:U:OP1	44:RN:115:ARG:NH2	2.35	0.60
1:XA:517:G:O2'	1:XA:531:U:OP2	2.20	0.60
7:XG:77:SER:CB	23:XW:32:A:C2	2.83	0.60
37:YB:90:C:H5'	47:YQ:18:LYS:HA	1.84	0.60
35:R9:19:ARG:HB3	36:RA:2756:U:H5''	1.83	0.60
36:RA:247:G:H4'	36:RA:386:G:C5	2.37	0.60
1:XA:130:A:H5'	17:XQ:63:ARG:HE	1.67	0.60
2:QB:93:VAL:HG11	2:QB:97:TRP:HD1	1.66	0.60
36:RA:2308:G:H22	36:RA:2311:A:H2	1.48	0.60
39:RE:16:ARG:NH2	39:RE:171:GLU:OE2	2.28	0.60
36:YA:1063:G:H22	36:YA:1076:C:H1'	1.67	0.60
36:YA:2133:G:H1'	36:YA:2158:A:H61	1.66	0.60
47:YQ:63:LYS:HD2	56:YZ:175:VAL:HG11	1.82	0.60
1:QA:501:C:OP1	12:QL:117:ARG:NH2	2.34	0.60
11:QK:41:THR:HG21	11:QK:72:ALA:HA	1.84	0.60
54:RX:40:LYS:HG3	54:RX:51:VAL:HB	1.81	0.60
1:XA:1106:G:H5''	3:XC:172:ARG:HG2	1.83	0.60
1:XA:1412:C:H2'	1:XA:1413:A:C8	2.37	0.60
38:YD:231:HIS:CD2	38:YD:249:PRO:HG3	2.37	0.60
52:YV:66:ARG:HG2	52:YV:88:ARG:HB3	1.84	0.60
13:QM:37:THR:O	13:QM:55:ARG:NH1	2.34	0.60
36:RA:1405:U:H2'	36:RA:1406:U:H6	1.66	0.60
36:RA:1869:G:H5'	36:RA:1870:C:OP2	2.01	0.60
36:RA:2329:G:H2'	36:RA:2330:G:C8	2.37	0.60
44:RN:46:VAL:HG23	44:RN:48:MET:HG3	1.84	0.60
34:R8:30:ARG:HH21	46:RP:62:LEU:HD13	1.67	0.60
52:RV:52:VAL:O	52:RV:53:GLU:HG3	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:390:C:H2'	1:XA:391:G:C8	2.37	0.60
1:XA:946:A:H2'	1:XA:947:G:C8	2.37	0.60
23:XW:9:A:N3	23:XW:45:G:N2	2.47	0.60
42:YH:149:ARG:NH2	42:YH:167:GLU:OE2	2.33	0.60
48:YR:56:LYS:NZ	48:YR:87:TYR:O	2.26	0.60
4:QD:98:GLU:OE1	4:QD:103:ASN:ND2	2.30	0.60
36:RA:2111:C:N3	36:RA:2118:U:O2'	2.32	0.60
36:RA:2683:C:OP1	50:RT:53:ARG:NH2	2.34	0.60
47:RQ:75:THR:HG21	47:RQ:85:LYS:HE3	1.84	0.60
1:XA:1391:U:H2'	1:XA:1392:G:C8	2.37	0.60
12:XL:24:VAL:HG13	12:XL:98:TYR:HE1	1.67	0.60
34:Y8:12:LYS:NZ	36:YA:249:C:O2	2.35	0.60
36:YA:1165:U:H2'	36:YA:1166:C:C6	2.37	0.60
36:YA:1203:G:H3'	36:YA:1204:A:H5''	1.83	0.60
36:YA:1204:A:O2'	36:YA:1205:U:O5'	2.20	0.60
36:YA:214:G:N3	36:YA:216:A:O2'	2.35	0.60
1:QA:269:C:H2'	1:QA:270:A:H8	1.65	0.59
7:QG:82:GLY:HA3	24:QX:13:A:H5'	1.83	0.59
9:QI:28:VAL:HG12	9:QI:63:ILE:HB	1.84	0.59
9:QI:17:VAL:HG12	9:QI:63:ILE:HG12	1.84	0.59
36:RA:1668:A:N7	36:RA:1674:G:C6	2.69	0.59
31:R5:29:THR:HG21	36:RA:2815:C:H5'	1.84	0.59
36:RA:2638:G:OP1	39:RE:82:ARG:NH2	2.34	0.59
56:RZ:24:LEU:HD11	56:RZ:83:PRO:HB2	1.82	0.59
1:XA:150:C:N4	1:XA:171:A:H62	1.98	0.59
36:YA:881:G:C5'	36:YA:881:G:C8	2.85	0.59
55:YY:76:CYS:HB2	55:YY:96:ILE:HD13	1.84	0.59
36:RA:2591:C:H2'	36:RA:2592:G:C8	2.37	0.59
36:RA:2797:U:OP1	36:RA:2798:C:N4	2.35	0.59
36:YA:278:A:H2'	36:YA:279:C:C6	2.37	0.59
41:YG:106:LEU:HD12	41:YG:110:ALA:HB3	1.84	0.59
10:QJ:61:GLU:OE2	14:QN:45:ARG:NH1	2.35	0.59
49:RS:26:LEU:HB3	49:RS:87:PHE:HA	1.83	0.59
10:XJ:6:ILE:HG23	10:XJ:72:VAL:HB	1.85	0.59
12:XL:60:LEU:HD12	12:XL:62:SER:H	1.68	0.59
1:XA:926:G:N2	24:XX:15:A:OP2	2.35	0.59
30:Y4:23:GLU:O	30:Y4:25:TYR:N	2.35	0.59
1:QA:1060:C:OP1	14:QN:45:ARG:NH2	2.35	0.59
36:RA:1316:U:H2'	36:RA:1317:A:H8	1.67	0.59
36:RA:2690:C:OP2	48:RR:17:ARG:NH1	2.35	0.59
9:XI:6:GLY:HA3	9:XI:84:ALA:HB2	1.82	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:2836:U:H2'	36:YA:2837:G:H8	1.67	0.59
36:YA:2469:A:O2'	47:YQ:56:ARG:HG2	2.03	0.59
23:XW:62:C:H2'	23:XW:63:G:H8	1.66	0.59
36:YA:1516:U:H2'	36:YA:1517:G:H8	1.67	0.59
36:YA:1815:A:OP2	38:YD:54:ARG:NH2	2.35	0.59
39:YE:116:VAL:O	39:YE:117:MET:HG2	2.03	0.59
46:YP:62:LEU:H	46:YP:62:LEU:HD23	1.67	0.59
36:RA:2557:G:H2'	36:RA:2558:C:C6	2.37	0.59
36:RA:2591:C:H2'	36:RA:2592:G:H8	1.66	0.59
36:RA:529:A:H8	36:RA:530:G:C6	2.21	0.59
36:RA:582:G:H2'	36:RA:583:G:H8	1.68	0.59
36:YA:2784:C:H1'	39:YE:37:ARG:HH12	1.67	0.59
46:YP:85:LEU:HD13	46:YP:120:ALA:HB2	1.84	0.59
10:QJ:44:VAL:HG22	10:QJ:66:ARG:HG2	1.83	0.59
36:RA:1689:A:H62	36:RA:1698:A:H2	1.51	0.59
36:RA:2563:U:H1'	36:RA:2566:A:N6	2.17	0.59
36:RA:259:G:H21	36:RA:621:A:H8	1.49	0.59
39:RE:201:THR:HG22	39:RE:203:LYS:H	1.67	0.59
40:RF:167:ALA:HB1	40:RF:173:VAL:HG11	1.83	0.59
46:RP:147:LEU:O	46:RP:148:LEU:HD22	2.03	0.59
1:XA:1359:C:H3'	14:XN:35:ARG:NH2	2.18	0.59
4:XD:166:LYS:HG2	4:XD:178:VAL:HG11	0.75	0.59
36:YA:1802:A:H2'	36:YA:1803:A:C8	2.37	0.59
50:YT:39:ARG:HG2	50:YT:40:THR:H	1.68	0.59
3:QC:153:VAL:HG22	3:QC:198:VAL:HG22	1.82	0.59
33:R7:24:THR:HG23	33:R7:27:GLY:H	1.67	0.59
36:RA:2816:C:O2	36:RA:2883:A:O2'	2.20	0.59
55:RY:76:CYS:O	55:RY:78:ALA:N	2.32	0.59
1:XA:56:U:H2'	1:XA:57:G:C8	2.37	0.59
13:XM:107:ALA:HB3	13:XM:111:LYS:HE2	1.84	0.59
36:YA:1657:C:H2'	36:YA:1658:C:H6	1.67	0.59
36:YA:588:U:H2'	36:YA:589:C:C6	2.37	0.59
8:QH:48:TYR:O	8:QH:49:GLU:HG3	2.03	0.59
36:RA:1824:G:H8	36:RA:1824:G:OP2	1.86	0.59
52:RV:52:VAL:HG21	52:RV:55:ALA:HB3	1.84	0.59
1:XA:1226:C:H4'	1:XA:1227:A:OP1	2.03	0.59
1:XA:34:C:H2'	1:XA:35:G:H8	1.68	0.59
1:XA:56:U:H2'	1:XA:57:G:H8	1.66	0.59
2:XB:88:ALA:HB2	2:XB:219:VAL:HG13	1.85	0.59
5:XE:102:ALA:HB1	5:XE:106:PRO:HG2	1.85	0.59
11:XK:87:THR:HA	11:XK:91:ARG:HD2	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:XY:5:C:H42	25:XY:68:G:H1	1.50	0.59
36:YA:75:G:H22	36:YA:111:A:H2	1.50	0.59
36:YA:969:U:H2'	36:YA:970:C:C6	2.38	0.59
1:QA:752:G:H1'	1:QA:754:C:H41	1.67	0.59
1:QA:1492:A:OP1	12:QL:47:LYS:N	2.36	0.59
1:QA:1360:A:OP2	14:QN:35:ARG:NH2	2.36	0.59
36:RA:1419:A:O2'	36:RA:1421:G:N7	2.30	0.59
36:RA:265:A:H2'	36:RA:266:G:H4'	1.85	0.59
36:YA:1645:G:H5''	36:YA:1646:C:H5'	1.84	0.59
36:YA:2789:C:H5''	36:YA:2789:C:H6	1.68	0.59
1:QA:674:G:H2'	1:QA:675:A:H8	1.68	0.58
3:QC:150:LYS:HB3	3:QC:201:TYR:HB2	1.85	0.58
7:QG:50:ILE:HG21	7:QG:61:VAL:HG21	1.84	0.58
1:XA:339:C:OP2	45:YO:97:ARG:NH1	2.33	0.58
17:XQ:66:SER:O	17:XQ:70:ARG:NH1	2.36	0.58
36:YA:639:U:H2'	36:YA:640:C:C6	2.38	0.58
44:YN:115:ARG:HA	44:YN:118:LYS:HB2	1.83	0.58
55:YY:101:LYS:HG2	55:YY:102:CYS:H	1.67	0.58
4:XD:4:TYR:HE2	4:XD:11:LEU:HD11	1.66	0.58
36:YA:1930:G:N2	36:YA:1969:A:OP2	2.29	0.58
36:YA:252:G:OP2	46:YP:50:ARG:NH1	2.36	0.58
36:YA:890:A:H2'	36:YA:892:G:C8	2.38	0.58
39:YE:174:ASP:OD1	39:YE:175:VAL:N	2.35	0.58
50:YT:24:PRO:HA	50:YT:49:VAL:HG13	1.83	0.58
3:XC:130:VAL:O	3:XC:134:ILE:HG12	2.03	0.58
4:XD:63:LYS:HD2	4:XD:198:VAL:HG12	1.84	0.58
9:XI:26:VAL:HG12	9:XI:61:ALA:HB3	1.85	0.58
20:XT:49:ALA:HA	20:XT:52:ALA:HB3	1.83	0.58
36:YA:2064:C:H2'	36:YA:2065:C:C6	2.38	0.58
36:YA:2304:G:H22	36:YA:2312:U:H3	1.51	0.58
36:YA:2469:A:H2	36:YA:2481:G:H21	1.51	0.58
36:YA:2508:G:H1	36:YA:2580:U:H3	1.51	0.58
33:Y7:5:TRP:CD1	36:YA:464:U:O4'	2.57	0.58
36:YA:589:C:H2'	36:YA:590:A:H8	1.68	0.58
51:YU:92:ARG:HE	51:YU:95:LEU:HG	1.66	0.58
52:YV:52:VAL:HG21	52:YV:55:ALA:HB3	1.86	0.58
1:QA:1316:G:H4'	14:QN:18:VAL:HG11	1.85	0.58
36:RA:1068:G:N2	36:RA:1096:A:OP2	2.35	0.58
36:RA:1405:U:H2'	36:RA:1406:U:C6	2.38	0.58
1:XA:367:U:O2'	1:XA:368:U:OP1	2.20	0.58
1:XA:501:C:OP1	12:XL:117:ARG:NH2	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:49:THR:HG22	13:XM:51:ALA:H	1.67	0.58
36:YA:2674:G:H5''	45:YO:26:LYS:HE2	1.83	0.58
1:QA:191(D):U:H2'	1:QA:191(E):G:C8	2.38	0.58
23:QW:43:G:H2'	23:QW:44:A:H8	1.67	0.58
43:RI:61:ARG:NH1	43:RI:64:GLU:OE1	2.36	0.58
56:RZ:30:ASN:HD22	56:RZ:90:VAL:HG21	1.69	0.58
47:YQ:24:GLY:H	47:YQ:101:ARG:HD2	1.67	0.58
1:QA:1111:A:H61	3:QC:177:THR:HG22	1.67	0.58
36:RA:2809:A:H2'	36:RA:2810:A:C8	2.38	0.58
37:RB:91:C:OP1	47:RQ:19:GLY:HA2	2.04	0.58
51:RU:91:ASP:HA	51:RU:95:LEU:HD12	1.86	0.58
4:XD:162:LEU:HD23	4:XD:181:MET:HG2	1.86	0.58
36:YA:2212:A:H1'	36:YA:2215:G:C5	2.38	0.58
40:YF:160:ASN:HB3	40:YF:163:VAL:HG22	1.85	0.58
1:QA:978:A:OP2	1:QA:1362(A):C:N4	2.35	0.58
1:QA:279:A:OP1	1:QA:280:C:O2'	2.13	0.58
56:RZ:69:THR:HA	56:RZ:90:VAL:HA	1.85	0.58
2:XB:27:LYS:O	2:XB:194:PRO:HD2	2.04	0.58
8:XH:36:LEU:HD12	8:XH:59:LEU:HD23	1.86	0.58
32:Y6:37:ARG:NH2	36:YA:2286:A:O2'	2.36	0.58
36:YA:2327:A:H2'	36:YA:2328:A:C8	2.38	0.58
36:YA:2023:G:H5'	36:YA:2617:C:H4'	1.86	0.58
43:YI:110:ASP:N	43:YI:130:TYR:OH	2.35	0.58
51:YU:90:VAL:HG22	52:YV:39:LEU:HD12	1.84	0.58
36:RA:2328:A:H2'	36:RA:2329:G:C8	2.38	0.58
40:RF:154:VAL:HG22	40:RF:191:ARG:HB2	1.84	0.58
1:XA:1287:A:H2'	1:XA:1288:A:C8	2.37	0.58
23:XW:3:G:H2'	23:XW:4:G:H8	1.68	0.58
13:XM:120:LYS:HE3	25:XY:40:C:H5''	1.85	0.58
36:YA:2505:G:HO2'	36:YA:2506:U:H6	1.51	0.58
36:YA:78:A:H2'	36:YA:79:G:H8	1.67	0.58
2:QB:153:ARG:HG3	2:QB:154:LEU:HD12	1.86	0.58
11:QK:30:VAL:O	11:QK:42:TRP:HB2	2.04	0.58
36:RA:2023:G:H5'	36:RA:2617:C:H4'	1.84	0.58
30:R4:38:LYS:HG3	41:RG:108:ASN:HA	1.86	0.58
10:XJ:3:LYS:N	10:XJ:74:ILE:O	2.37	0.58
36:YA:1204:A:H1'	36:YA:1206:G:N7	2.17	0.58
36:YA:1678:G:H22	36:YA:1989:G:H22	1.50	0.58
49:YS:37:ALA:HB1	49:YS:73:LEU:HD22	1.86	0.58
51:YU:92:ARG:O	51:YU:95:LEU:N	2.28	0.58
1:QA:272:C:H2'	1:QA:273:A:H8	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:390:C:H2'	1:QA:391:G:C8	2.39	0.58
36:RA:479:A:HO2'	36:RA:481:G:H8	1.52	0.58
36:RA:848:G:H2'	36:RA:849:A:H8	1.68	0.58
37:RB:26:A:H8	37:RB:26:A:O5'	1.86	0.58
39:RE:37:ARG:NH2	39:RE:41:LYS:HB2	2.18	0.58
1:XA:134:A:H1'	1:XA:325:A:C5	2.39	0.58
1:XA:28:G:O2'	1:XA:296:U:OP1	2.22	0.58
1:XA:985:C:H2'	1:XA:986:A:H8	1.69	0.58
24:XX:14:A:O2'	24:XX:15:A:OP1	2.21	0.58
36:YA:918:A:N3	37:YB:80:U:O2'	2.32	0.58
1:QA:439:A:OP2	1:QA:493:G:N1	2.37	0.57
1:QA:514:C:H2'	1:QA:515:G:H8	1.69	0.57
5:QE:51:VAL:HG23	5:QE:52:PRO:HD3	1.85	0.57
36:RA:1528:A:H2'	36:RA:1529:A:H8	1.69	0.57
31:R5:4:HIS:CD2	36:RA:2056:G:H22	2.17	0.57
36:RA:27:G:N2	36:RA:513:A:OP2	2.37	0.57
36:RA:627:A:H62	46:RP:116:GLY:HA2	1.68	0.57
49:RS:77:ALA:HB1	49:RS:82:ILE:HB	1.85	0.57
1:XA:390:C:H4'	16:XP:28:ARG:HH21	1.68	0.57
39:YE:48:GLN:OE1	39:YE:64:LYS:NZ	2.37	0.57
1:QA:1268:A:N3	1:QA:1326:C:O2'	2.32	0.57
3:QC:19:GLU:HB3	14:QN:51:GLY:HA3	1.85	0.57
36:RA:305:U:H2'	36:RA:306:U:C6	2.39	0.57
38:RD:148:GLU:HB2	38:RD:151:LYS:HD2	1.84	0.57
11:XK:43:SER:HB3	11:XK:68:ALA:HB2	1.86	0.57
29:Y3:11:SER:OG	29:Y3:13:ILE:HG12	2.04	0.57
36:YA:2749:A:OP1	42:YH:4:ILE:HG23	2.04	0.57
44:YN:7:LYS:HG2	44:YN:8:GLN:H	1.69	0.57
47:YQ:30:GLY:HA2	47:YQ:107:ALA:HB2	1.85	0.57
34:R8:7:HIS:HD2	46:RP:50:ARG:NH2	2.01	0.57
36:RA:1528:A:H2'	36:RA:1529:A:C8	2.39	0.57
9:XI:13:ALA:HB2	9:XI:68:GLY:HA3	1.85	0.57
19:XS:10:PHE:HE2	19:XS:16:LEU:HB2	1.69	0.57
36:YA:2698:U:H2'	36:YA:2699:C:C6	2.38	0.57
36:YA:2809:A:H2'	36:YA:2810:A:C8	2.39	0.57
1:QA:757:U:H2'	1:QA:758:G:O4'	2.04	0.57
36:RA:2059:A:H5'	36:RA:2060:A:OP2	2.05	0.57
38:RD:31:LYS:HG2	38:RD:34:VAL:HG12	1.87	0.57
43:RI:76:THR:HG22	43:RI:139:GLN:HG3	1.86	0.57
47:RQ:31:ASP:OD1	47:RQ:134:ARG:NH1	2.37	0.57
1:XA:1299:A:C8	1:XA:1301:U:H1'	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:15:ALA:HB2	9:XI:65:VAL:HG23	1.86	0.57
3:XC:29:TYR:OH	14:XN:54:PRO:CD	2.49	0.57
23:XW:26:G:H22	23:XW:44:A:H61	1.52	0.57
36:YA:1332:G:N2	36:YA:1609:A:O2'	2.37	0.57
36:YA:2001:A:H2'	36:YA:2002:G:C8	2.40	0.57
36:YA:2845:G:H2'	36:YA:2846:G:H8	1.69	0.57
36:YA:630:G:N2	36:YA:633:A:OP2	2.34	0.57
47:YQ:64:ILE:HG12	47:YQ:106:VAL:HG12	1.87	0.57
47:YQ:81:VAL:HG23	47:YQ:82:ARG:H	1.69	0.57
50:YT:54:ARG:HA	50:YT:59:THR:HG23	1.86	0.57
1:QA:1229:A:OP2	13:QM:114:ARG:NH2	2.36	0.57
1:QA:259:G:OP2	20:QT:83:ARG:NH1	2.38	0.57
36:RA:1028:A:H2'	36:RA:1029:A:C8	2.39	0.57
36:RA:1693:U:O2'	38:RD:14:ARG:NH2	2.38	0.57
36:RA:535:C:O3'	51:RU:53:ARG:NH1	2.36	0.57
14:QN:22:THR:HB	14:QN:33:VAL:HG21	1.86	0.57
15:QO:87:ILE:HG22	15:QO:88:ARG:H	1.69	0.57
36:RA:2853:C:H2'	36:RA:2854:G:C8	2.39	0.57
36:RA:691:C:H4'	38:RD:43:ARG:HD3	1.85	0.57
42:RH:92:ILE:HG12	42:RH:160:LYS:HE2	1.85	0.57
1:XA:347:G:O2'	1:XA:348:G:H5''	2.05	0.57
1:XA:407:G:H5''	4:XD:115:ARG:HB3	1.85	0.57
1:XA:514:C:H2'	1:XA:515:G:H8	1.69	0.57
1:XA:705:U:H3	11:XK:42:TRP:HE1	1.51	0.57
4:XD:19:LEU:HB3	4:XD:21:LEU:HD13	1.85	0.57
1:XA:1222:G:H5''	19:XS:78:ARG:HD2	1.87	0.57
36:YA:2108:C:H1'	36:YA:2182:G:H22	1.70	0.57
39:YE:24:THR:OG1	39:YE:186:GLY:HA2	2.05	0.57
36:YA:2637:U:OP1	39:YE:82:ARG:NH1	2.37	0.57
52:RV:62:LEU:HD11	52:RV:95:LEU:HB2	1.86	0.57
1:XA:427:U:OP1	4:XD:13:ARG:NH2	2.37	0.57
4:XD:105:VAL:HG13	4:XD:110:PHE:HB2	1.87	0.57
23:XW:8:U:OP1	23:XW:13:C:C5	2.55	0.57
36:YA:820:A:H4'	36:YA:836:G:N2	2.19	0.57
32:R6:15:GLU:HG2	32:R6:16:CYS:N	2.19	0.57
36:RA:2572:A:H2'	39:RE:144:ARG:HD3	1.85	0.57
27:Y1:12:PRO:HB3	27:Y1:43:TYR:HD2	1.69	0.57
36:YA:1508:A:O2'	36:YA:1509:C:O4'	2.22	0.57
36:YA:2291:U:H2'	36:YA:2292:C:C6	2.40	0.57
38:YD:108:PRO:HD2	38:YD:111:LEU:HD13	1.85	0.57
39:YE:144:ARG:HG2	39:YE:145:LYS:H	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:731:G:OP1	1:QA:766:A:H1'	2.05	0.57
36:RA:1204:A:H1'	36:RA:1206:G:C8	2.40	0.57
36:RA:1858:G:O2'	36:RA:1884:A:N6	2.37	0.57
1:XA:1355:G:H2'	1:XA:1356:G:C8	2.39	0.57
2:XB:21:ARG:NH2	2:XB:37:ASN:O	2.37	0.57
36:YA:2114:A:N7	36:YA:2119:A:N6	2.51	0.57
36:YA:2468:G:O2'	36:YA:2469:A:O5'	2.22	0.57
38:YD:231:HIS:HD2	38:YD:249:PRO:HG3	1.68	0.57
39:YE:7:VAL:HG13	39:YE:51:PHE:HE1	1.70	0.57
46:YP:115:LEU:HA	46:YP:134:ALA:HB2	1.87	0.57
46:YP:88:LEU:HD11	46:YP:95:VAL:HG11	1.86	0.57
47:YQ:59:ARG:O	47:YQ:60:ARG:HG2	2.04	0.57
55:YY:30:VAL:HG22	55:YY:37:VAL:HG12	1.86	0.57
1:QA:1391:U:H2'	1:QA:1392:G:H8	1.68	0.57
8:QH:51:VAL:HG21	8:QH:60:ARG:HG3	1.87	0.57
13:QM:31:LYS:HD2	13:QM:34:LEU:HD11	1.87	0.57
13:QM:3:ARG:O	13:QM:57:ARG:NH2	2.38	0.57
32:R6:15:GLU:OE1	32:R6:20:ASN:ND2	2.37	0.57
47:RQ:4:PRO:HG3	47:RQ:69:PHE:HE2	1.70	0.57
47:RQ:81:VAL:HG23	47:RQ:82:ARG:H	1.70	0.57
51:RU:58:ARG:O	51:RU:62:ILE:HG12	2.05	0.57
1:XA:1023:G:H3'	1:XA:1024:G:H5''	1.87	0.57
36:YA:1796:U:H2'	36:YA:1797:C:C6	2.40	0.57
44:YN:13:TRP:O	44:YN:135:PRO:HD2	2.04	0.57
51:YU:61:TRP:CD2	51:YU:94:ASN:HA	2.40	0.57
53:YW:69:LEU:HD13	53:YW:107:LEU:HD13	1.86	0.57
1:QA:1412:C:H2'	1:QA:1413:A:C8	2.40	0.56
1:QA:191:G:O2'	20:QT:101:GLY:O	2.22	0.56
6:QF:3:ARG:NH1	6:QF:38:GLU:OE1	2.38	0.56
39:RE:79:ARG:HD2	39:RE:197:ILE:HG21	1.86	0.56
56:RZ:30:ASN:HB3	56:RZ:90:VAL:HG22	1.87	0.56
1:XA:1427:U:H2'	1:XA:1428:A:C8	2.40	0.56
1:XA:17:U:H2'	1:XA:18:C:H6	1.69	0.56
5:XE:148:VAL:HG21	8:XH:107:LEU:HD12	1.86	0.56
36:YA:2151:G:H2'	36:YA:2152:G:H8	1.70	0.56
37:YB:15:A:H1'	37:YB:109:G:C8	2.40	0.56
36:YA:1791:A:H5'	38:YD:206:LEU:HD12	1.87	0.56
42:YH:6:ARG:HD2	42:YH:65:HIS:ND1	2.20	0.56
46:YP:84:ASN:HA	46:YP:115:LEU:O	2.05	0.56
1:QA:1435:G:H2'	1:QA:1436:U:C6	2.40	0.56
20:QT:85:MET:HB2	20:QT:104:LEU:HD21	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:2327:A:H2'	36:RA:2328:A:C8	2.40	0.56
36:RA:2329:G:H2'	36:RA:2330:G:H8	1.69	0.56
36:RA:848:G:H2'	36:RA:849:A:C8	2.40	0.56
1:XA:1510:U:H2'	1:XA:1511:G:C8	2.40	0.56
10:XJ:55:LYS:HD2	10:XJ:55:LYS:H	1.70	0.56
32:Y6:45:LYS:HE3	36:YA:2371:G:H5'	1.86	0.56
36:YA:1019:U:HO2'	36:YA:1021:A:H2	1.53	0.56
36:YA:142:G:H2'	36:YA:143:C:H6	1.70	0.56
36:YA:1796:U:H2'	36:YA:1797:C:H6	1.70	0.56
36:YA:2729:G:H1'	39:YE:187:ALA:HB2	1.85	0.56
1:QA:954:G:H21	1:QA:1227:A:H62	1.52	0.56
1:QA:1372:U:OP1	9:QI:72:GLY:N	2.38	0.56
34:R8:58:ILE:HG22	46:RP:49:ARG:HH11	1.70	0.56
36:RA:1113:U:H2'	36:RA:1114:G:C8	2.38	0.56
19:XS:77:THR:HG22	19:XS:78:ARG:HD3	1.86	0.56
36:YA:1048:A:OP2	36:YA:1110:G:N2	2.21	0.56
50:YT:118:ARG:HH21	50:YT:121:ILE:HG21	1.69	0.56
1:QA:991:U:O4	1:QA:1212:U:O2'	2.22	0.56
5:QE:93:PRO:HG2	8:QH:105:ARG:HH21	1.71	0.56
9:QI:26:VAL:HG13	9:QI:61:ALA:HB3	1.86	0.56
1:QA:966:G:C2	22:QV:34:C:H5'	2.41	0.56
36:RA:2010:G:H5''	53:RW:42:ARG:HB2	1.87	0.56
36:RA:2185:C:H2'	36:RA:2186:G:C8	2.40	0.56
56:RZ:30:ASN:OD1	56:RZ:33:LEU:N	2.38	0.56
1:XA:1034:G:H2'	1:XA:1035:A:H8	1.70	0.56
1:XA:1178:G:N2	1:XA:1181:G:N7	2.53	0.56
10:XJ:42:THR:HG21	10:XJ:66:ARG:HG3	1.87	0.56
36:YA:1400:G:H2'	36:YA:1401:G:C8	2.40	0.56
36:YA:1454:U:O2'	36:YA:1455:G:N7	2.35	0.56
36:YA:2661:G:H2'	36:YA:2662:A:C8	2.40	0.56
36:YA:627:A:H4'	36:YA:628:G:H5'	1.87	0.56
56:YZ:166:SER:HB2	56:YZ:168:GLU:N	2.21	0.56
36:RA:9:U:H3	36:RA:2629:A:H62	1.52	0.56
1:XA:737:A:H2'	1:XA:738:C:C6	2.41	0.56
7:XG:73:MET:HG2	7:XG:90:GLU:HA	1.88	0.56
36:YA:1020:A:N6	36:YA:1141:U:O2'	2.38	0.56
39:YE:117:MET:HA	39:YE:122:PHE:H	1.70	0.56
46:YP:101:VAL:HA	46:YP:105:LEU:O	2.05	0.56
1:QA:1095:U:OP2	1:QA:1108:G:N1	2.38	0.56
4:QD:4:TYR:O	4:QD:115:ARG:NH1	2.32	0.56
27:R1:83:GLU:HG2	27:R1:85:LEU:H	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:R4:39:CYS:SG	30:R4:40:HIS:N	2.78	0.56
36:RA:2008:C:H2'	36:RA:2009:G:H8	1.70	0.56
36:YA:535:C:O3'	51:YU:53:ARG:NH1	2.39	0.56
36:YA:662:G:OP1	46:YP:15:ARG:NH1	2.38	0.56
49:YS:56:LEU:HG	49:YS:58:LEU:HD22	1.87	0.56
1:QA:1251:A:H2'	1:QA:1252:A:C8	2.40	0.56
1:QA:825:G:O2'	8:QH:12:ARG:NH1	2.39	0.56
36:RA:1286:A:O2'	36:RA:1288:U:OP2	2.22	0.56
36:RA:288:C:H2'	36:RA:289:A:H8	1.71	0.56
49:RS:49:VAL:HG21	49:RS:77:ALA:HA	1.87	0.56
5:XE:41:VAL:HG11	5:XE:109:ILE:HG23	1.86	0.56
27:Y1:97:LEU:HD22	36:YA:270(T):G:H5''	1.87	0.56
34:Y8:12:LYS:HG2	46:YP:68:GLN:HG2	1.87	0.56
54:YX:40:LYS:HG3	54:YX:51:VAL:HB	1.86	0.56
1:QA:728:A:H2'	1:QA:729:A:C8	2.40	0.56
1:QA:745:C:H2'	1:QA:746:A:H8	1.71	0.56
36:RA:1044:G:H1'	36:RA:1048:A:H1'	1.87	0.56
38:RD:108:PRO:HB3	38:RD:143:HIS:CE1	2.40	0.56
56:RZ:111:VAL:HG13	56:RZ:112:ARG:HE	1.71	0.56
33:Y7:9:ARG:NH1	36:YA:1310:G:OP2	2.39	0.56
36:YA:142:G:H2'	36:YA:143:C:C6	2.41	0.56
1:QA:1513:A:H2'	1:QA:1514:C:C6	2.40	0.56
1:QA:17:U:H2'	1:QA:18:C:C6	2.41	0.56
1:QA:705:U:C2	1:QA:706:A:C8	2.94	0.56
1:QA:973:G:H3'	1:QA:974:A:H5''	1.87	0.56
3:QC:50:ALA:HB2	3:QC:75:VAL:HB	1.88	0.56
36:RA:2313:C:H5'	41:RG:91:ARG:HD3	1.86	0.56
36:RA:2517:C:N3	36:RA:2542:A:N6	2.54	0.56
40:RF:116:ASP:OD1	40:RF:119:ARG:NH2	2.39	0.56
34:R8:59:LYS:CE	46:RP:50:ARG:HG3	2.36	0.56
1:XA:390:C:H2'	1:XA:391:G:H8	1.70	0.56
1:XA:130:A:H5'	17:XQ:63:ARG:NE	2.20	0.56
36:YA:1165:U:H2'	36:YA:1166:C:H6	1.70	0.56
36:YA:2022:U:O2'	36:YA:2617:C:H5'	2.06	0.56
36:YA:639:U:H2'	36:YA:640:C:H6	1.71	0.56
43:YI:93:THR:HG22	43:YI:119:PRO:HB3	1.87	0.56
2:QB:164:VAL:HG12	2:QB:166:ASP:H	1.71	0.56
28:R2:47:ASN:ND2	36:RA:94:G:N3	2.54	0.56
36:RA:30:G:H2'	36:RA:31:C:C6	2.40	0.56
38:RD:65:ILE:HG22	38:RD:104:TYR:HB3	1.88	0.56
38:RD:108:PRO:HD2	38:RD:111:LEU:HD22	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:86:C:H4'	36:YA:104:U:H1'	1.88	0.56
39:YE:13:ARG:NE	39:YE:21:VAL:HG21	2.20	0.56
1:QA:1238:A:H62	1:QA:1301:U:H3	1.53	0.56
1:QA:718:G:N2	18:QR:49:LYS:HG2	2.19	0.56
2:QB:74:LYS:O	2:QB:78:GLN:HG3	2.06	0.56
36:RA:1406:U:H2'	36:RA:1407:C:H6	1.71	0.56
36:RA:588:U:H2'	36:RA:589:C:C6	2.41	0.56
38:RD:231:HIS:HD2	38:RD:249:PRO:HB3	1.71	0.56
39:RE:23:VAL:HG21	39:RE:183:LEU:HD23	1.88	0.56
50:RT:30:VAL:HG12	50:RT:86:ILE:HG12	1.88	0.56
25:XY:74:C:H2'	25:XY:75:C:O4'	2.07	0.56
36:YA:28:A:N6	36:YA:512:G:O2'	2.39	0.56
1:QA:664:G:H22	1:QA:741:G:H1	1.53	0.55
1:QA:745:C:H2'	1:QA:746:A:C8	2.41	0.55
1:QA:619:U:N3	4:QD:134:ASP:OD1	2.30	0.55
9:QI:37:PHE:HB3	9:QI:43:ALA:HB1	1.87	0.55
28:R2:22:GLU:OE2	28:R2:68:ARG:NH2	2.39	0.55
36:RA:1537:C:H2'	36:RA:1538:G:C8	2.41	0.55
1:XA:1028:C:H2'	1:XA:1028(A):C:C6	2.41	0.55
23:XW:16:A:N6	23:XW:19:G:OP1	2.39	0.55
36:YA:1657:C:H2'	36:YA:1658:C:C6	2.40	0.55
35:Y9:1:MET:HG3	36:YA:2477:C:H2'	1.89	0.55
1:QA:28:G:O2'	1:QA:296:U:OP1	2.23	0.55
12:QL:86:ARG:HB2	12:QL:101:VAL:HG23	1.88	0.55
24:QX:12:A:O2'	24:QX:13:A:O3'	2.24	0.55
31:R5:4:HIS:CD2	36:RA:2577:A:H1'	2.40	0.55
36:RA:1513:C:O2	36:RA:1513:C:H2'	2.06	0.55
1:XA:985:C:H2'	1:XA:986:A:C8	2.42	0.55
23:XW:31:C:H1'	23:XW:32:A:H5'	1.87	0.55
36:YA:1400:G:H2'	36:YA:1401:G:H8	1.71	0.55
36:YA:882:G:H8	36:YA:882:G:OP2	1.89	0.55
40:YF:32:LEU:HD11	40:YF:105:VAL:HG13	1.87	0.55
42:YH:18:GLU:HB3	42:YH:25:LYS:HB2	1.87	0.55
50:YT:24:PRO:HD3	50:YT:52:ILE:HD12	1.88	0.55
16:QP:2:VAL:HG23	16:QP:64:ALA:HA	1.86	0.55
1:XA:45:U:H2'	1:XA:46:G:H8	1.71	0.55
19:XS:64:GLU:O	30:Y4:60:GLN:NE2	2.39	0.55
26:Y0:10:THR:HG22	26:Y0:12:ASN:H	1.72	0.55
36:YA:1353:A:H2'	36:YA:1354:A:C8	2.42	0.55
36:YA:1430:C:H2'	36:YA:1431:U:C6	2.41	0.55
36:YA:547:A:H2'	36:YA:548:A:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1372:U:H5''	9:QI:71:SER:HB3	1.89	0.55
1:QA:624:C:H2'	1:QA:625:G:H8	1.71	0.55
12:QL:113:ARG:HH21	12:QL:116:SER:HB2	1.71	0.55
36:RA:2291:U:H2'	36:RA:2292:C:C6	2.41	0.55
36:RA:2844:G:H3'	36:RA:2845:G:H8	1.71	0.55
37:RB:23:G:C2	37:RB:61:G:C2	2.94	0.55
38:RD:244:ARG:HB2	38:RD:245:PRO:HD2	1.88	0.55
1:XA:1435:G:H2'	1:XA:1436:U:C6	2.42	0.55
36:YA:1021:A:C8	36:YA:1022:G:H5''	2.40	0.55
36:YA:658:C:H2'	36:YA:659:C:H6	1.71	0.55
1:QA:529:G:O6	12:QL:49:ASN:ND2	2.36	0.55
26:R0:73:GLY:HA3	37:RB:12:C:H2'	1.89	0.55
36:RA:1980:G:O5'	36:RA:1980:G:H2'	2.07	0.55
36:RA:1991:U:O5'	36:RA:1991:U:H6	1.89	0.55
36:RA:2185:C:H2'	36:RA:2186:G:H8	1.70	0.55
36:RA:2212:A:H1'	36:RA:2215:G:C5	2.41	0.55
36:RA:2469:A:H5''	36:RA:2470:G:H8	1.71	0.55
39:RE:144:ARG:HG2	39:RE:145:LYS:H	1.70	0.55
1:XA:825:G:O2'	8:XH:12:ARG:NH2	2.37	0.55
36:YA:1116:C:H2'	36:YA:1117:G:H8	1.71	0.55
46:YP:57:THR:O	46:YP:59:LEU:N	2.37	0.55
26:Y0:51:VAL:O	49:YS:20:ARG:NH2	2.39	0.55
1:QA:1032(B):G:H2'	1:QA:1033:G:H8	1.71	0.55
1:QA:715:A:H2'	1:QA:716:A:C8	2.42	0.55
9:QI:79:LEU:HD11	9:QI:83:ARG:HH21	1.71	0.55
1:QA:975:A:H61	10:QJ:48:THR:HB	1.71	0.55
36:RA:1752:C:H2'	36:RA:1753:G:C8	2.41	0.55
40:RF:152:GLU:OE1	40:RF:191:ARG:NE	2.37	0.55
43:RI:40:THR:HG23	43:RI:43:ASN:H	1.71	0.55
46:RP:84:ASN:HA	46:RP:115:LEU:O	2.07	0.55
1:XA:1236:A:H4'	1:XA:1304:G:H4'	1.88	0.55
1:XA:21:G:H2'	1:XA:22:G:C8	2.41	0.55
36:YA:1266:G:O5'	53:YW:15:ARG:NH2	2.39	0.55
36:YA:598:G:H5'	46:YP:11:GLY:HA3	1.87	0.55
44:YN:96:GLU:HB2	44:YN:122:VAL:HG12	1.87	0.55
55:YY:68:HIS:HB3	55:YY:71:LYS:HG2	1.89	0.55
1:QA:21:G:H2'	1:QA:22:G:C8	2.42	0.55
1:QA:34:C:H2'	1:QA:35:G:H8	1.70	0.55
36:RA:30:G:H2'	36:RA:31:C:H6	1.71	0.55
4:XD:79:PHE:HE2	4:XD:204:ILE:HD13	1.70	0.55
11:XK:83:ILE:HG12	11:XK:109:VAL:HB	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:2468:G:H2'	36:YA:2476:A:C2	2.41	0.55
1:QA:1004:A:OP1	1:QA:1025:U:N3	2.34	0.55
1:QA:1219:U:OP1	14:QN:19:ARG:NH1	2.40	0.55
8:QH:9:MET:HB2	8:QH:32:LYS:NZ	2.22	0.55
20:QT:60:GLU:HG3	20:QT:81:LYS:HD2	1.89	0.55
30:R4:40:HIS:H	30:R4:41:PRO:HD3	1.71	0.55
46:RP:81:GLN:HE22	46:RP:107:LYS:HB2	1.71	0.55
1:XA:73:G:H1	1:XA:97:U:H3	1.55	0.55
11:XK:62:GLN:HG3	11:XK:97:ALA:HB2	1.88	0.55
36:YA:1022:G:N2	36:YA:1023:U:O4	2.40	0.55
36:YA:2298:A:H62	36:YA:2318:G:H8	1.52	0.55
44:YN:35:ARG:HG3	44:YN:37:LYS:HG3	1.88	0.55
56:YZ:30:ASN:OD1	56:YZ:33:LEU:N	2.39	0.55
1:QA:1302:U:H2'	1:QA:1302:U:O2	2.05	0.55
1:QA:728:A:H2'	1:QA:729:A:H8	1.72	0.55
8:QH:5:PRO:O	8:QH:32:LYS:NZ	2.39	0.55
47:RQ:17:LEU:HB3	47:RQ:39:PRO:HB2	1.89	0.55
1:XA:736:C:H2'	1:XA:737:A:H8	1.71	0.55
48:YR:79:LEU:HD12	48:YR:83:ILE:HB	1.89	0.55
1:QA:960:U:H4'	1:QA:961:U:H5''	1.88	0.55
19:QS:77:THR:HG23	19:QS:78:ARG:HG3	1.89	0.55
36:RA:1138:G:H21	44:RN:106:MET:HE3	1.72	0.55
36:RA:259:G:HO2'	36:RA:621:A:HO2'	1.55	0.55
36:RA:270(R):G:H2'	36:RA:270(S):G:H8	1.72	0.55
50:RT:23:ARG:HB2	50:RT:24:PRO:HD2	1.89	0.55
52:RV:76:LYS:HB2	52:RV:81:TYR:HB3	1.89	0.55
1:XA:359:U:H2'	1:XA:360:A:H8	1.72	0.55
3:XC:177:THR:OG1	3:XC:180:ALA:HB2	2.07	0.55
21:XU:8:THR:O	21:XU:12:LYS:HG2	2.07	0.55
36:YA:807:U:OP2	46:YP:41:ARG:NH1	2.40	0.55
54:YX:27:THR:HB	54:YX:80:ILE:HG12	1.89	0.55
1:QA:1119:C:H2'	1:QA:1120:G:H8	1.72	0.54
1:QA:1250:A:H2'	1:QA:1251:A:C8	2.42	0.54
1:QA:579:G:H5'	1:QA:728:A:H1'	1.89	0.54
25:QY:16:C:H3'	25:QY:17:U:H5'	1.88	0.54
36:RA:2837:G:H21	48:RR:45:ARG:HH21	1.53	0.54
43:RI:26:ALA:HA	43:RI:30:LEU:HB2	1.89	0.54
1:XA:1371:G:O3'	9:XI:69:GLY:HA3	2.06	0.54
1:XA:918:A:H2'	1:XA:919:A:C8	2.42	0.54
2:XB:84:GLU:HG3	2:XB:215:LEU:HB3	1.88	0.54
2:XB:4:GLU:HG2	2:XB:5:ILE:H	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:103:VAL:HG23	8:XH:138:TRP:HD1	1.72	0.54
1:XA:1348:U:H4'	9:XI:120:ARG:HD2	1.89	0.54
29:Y3:6:VAL:HB	29:Y3:54:VAL:HG21	1.89	0.54
36:YA:987:G:O2'	36:YA:1000:A:N3	2.36	0.54
36:YA:2789:C:C6	36:YA:2789:C:H5''	2.42	0.54
36:YA:620:G:H4'	36:YA:621:A:H5''	1.89	0.54
36:YA:764:A:H5'	38:YD:210:GLY:HA2	1.89	0.54
36:YA:2311:A:C8	41:YG:82:LEU:HD22	2.42	0.54
36:YA:2012:G:OP1	53:YW:11:ARG:NH2	2.39	0.54
1:QA:429:U:H3'	4:QD:9:CYS:SG	2.46	0.54
1:QA:634:C:H2'	1:QA:635:G:H8	1.71	0.54
4:QD:173:TRP:CD1	4:QD:189:PRO:HG3	2.42	0.54
18:QR:56:THR:HG23	18:QR:58:LEU:H	1.72	0.54
36:RA:2749:A:OP2	36:RA:2750:A:O2'	2.21	0.54
36:RA:494:G:H4'	53:RW:6:ILE:HB	1.89	0.54
5:XE:99:GLY:N	5:XE:117:ASP:OD1	2.40	0.54
28:Y2:41:ILE:HD11	28:Y2:44:LEU:HD22	1.89	0.54
25:QY:58:A:C8	56:RZ:182:LYS:HD2	2.41	0.54
36:RA:1550:C:H5'	36:RA:1733:G:H22	1.72	0.54
36:RA:1332:G:N2	36:RA:1609:A:O2'	2.41	0.54
36:RA:2468:G:H2'	36:RA:2476:A:C2	2.42	0.54
56:RZ:3:TYR:O	56:RZ:58:VAL:HG22	2.08	0.54
1:XA:45:U:H2'	1:XA:46:G:C8	2.43	0.54
4:XD:166:LYS:HE2	4:XD:178:VAL:HG12	1.89	0.54
4:XD:57:ARG:HB3	4:XD:206:PHE:HB2	1.89	0.54
16:XP:20:VAL:HG21	16:XP:32:TYR:CG	2.42	0.54
29:Y3:8:LEU:HG	29:Y3:28:LEU:HD13	1.88	0.54
36:YA:589:C:H2'	36:YA:590:A:C8	2.42	0.54
36:YA:897:C:OP1	36:YA:897:C:H6	1.91	0.54
1:QA:555:C:H2'	1:QA:556:C:C6	2.43	0.54
11:QK:58:PRO:HB2	11:QK:93:GLN:HG3	1.90	0.54
36:RA:1942:C:OP2	36:RA:1943:U:O2'	2.19	0.54
38:RD:112:GLN:N	38:RD:115:GLN:OE1	2.33	0.54
1:XA:126:G:H5'	1:XA:633:G:N2	2.23	0.54
1:XA:188:U:H2'	1:XA:189:U:H5''	1.90	0.54
3:XC:70:VAL:HG12	3:XC:72:LYS:H	1.73	0.54
41:YG:35:GLU:HA	41:YG:99:MET:SD	2.48	0.54
43:YI:13:GLY:HA2	43:YI:17:GLN:HB3	1.89	0.54
1:QA:1240:U:OP1	7:QG:119:ARG:NH2	2.41	0.54
36:RA:1019:U:HO2'	36:RA:1021:A:H2	1.55	0.54
36:RA:1228:G:OP2	51:RU:16:LYS:NZ	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:2066:C:H2'	36:RA:2067:G:H5'	1.89	0.54
36:RA:2636:U:HO2'	39:RE:44:TYR:HH	1.54	0.54
41:RG:63:ILE:HG13	41:RG:64:THR:HG23	1.88	0.54
1:XA:1111:A:H61	3:XC:177:THR:HG22	1.72	0.54
1:XA:501:C:H2'	1:XA:502:G:C8	2.43	0.54
4:XD:173:TRP:CD1	4:XD:189:PRO:HG3	2.42	0.54
10:XJ:4:ILE:HD11	10:XJ:74:ILE:HD12	1.89	0.54
23:XW:70:U:H2'	23:XW:71:C:C6	2.43	0.54
30:Y4:39:CYS:SG	30:Y4:41:PRO:HD3	2.48	0.54
36:YA:1329:U:H5''	36:YA:1330:C:H5	1.71	0.54
52:YV:38:LEU:H	52:YV:51:VAL:HG13	1.72	0.54
36:YA:1188:U:H4'	52:YV:79:VAL:HG22	1.89	0.54
3:QC:177:THR:OG1	3:QC:180:ALA:HB2	2.08	0.54
8:QH:119:LEU:HD21	8:QH:127:LEU:HD12	1.89	0.54
1:XA:851:G:H2'	1:XA:852:G:H8	1.73	0.54
2:XB:93:VAL:HG11	2:XB:97:TRP:HD1	1.72	0.54
9:XI:127:LYS:NZ	22:XV:34:C:OP2	2.28	0.54
23:XW:9:A:O4'	23:XW:45:G:N2	2.41	0.54
36:YA:2328:A:H2'	36:YA:2329:G:C8	2.42	0.54
36:YA:2693:A:H2'	36:YA:2694:G:H8	1.73	0.54
43:YI:1:MET:N	43:YI:20:ASP:OD1	2.34	0.54
45:YO:120:GLU:OE1	50:YT:67:SER:OG	2.24	0.54
1:QA:1436:U:OP1	20:QT:23:ARG:NH2	2.41	0.54
1:QA:946:A:H2'	1:QA:947:G:C8	2.42	0.54
10:QJ:4:ILE:HD12	10:QJ:100:THR:HG22	1.89	0.54
16:QP:20:VAL:HG21	16:QP:32:TYR:CG	2.42	0.54
29:R3:8:LEU:HG	29:R3:28:LEU:HD13	1.90	0.54
36:RA:1165:U:H2'	36:RA:1166:C:C6	2.42	0.54
36:RA:2798:C:N3	36:RA:2799:A:N6	2.55	0.54
36:RA:307:G:H21	36:RA:330:A:H62	1.56	0.54
39:RE:62:PRO:C	39:RE:63:LEU:HD23	2.28	0.54
43:RI:101:LEU:O	43:RI:106:GLY:N	2.41	0.54
45:RO:22:ILE:HD11	45:RO:42:SER:HB2	1.90	0.54
48:RR:38:VAL:HG22	48:RR:112:ALA:HB2	1.88	0.54
1:XA:1005:A:H5''	1:XA:1006:C:C5	2.42	0.54
1:XA:1074:G:H2'	1:XA:1075:C:H6	1.73	0.54
1:XA:1251:A:N3	1:XA:1369:C:O2'	2.33	0.54
36:YA:1056:G:H5''	36:YA:1057:A:H5'	1.89	0.54
36:YA:1359:A:H2'	36:YA:1360:A:H5'	1.90	0.54
44:YN:15:LEU:HB2	44:YN:134:ARG:HB3	1.90	0.54
53:YW:68:ARG:HD2	53:YW:112:GLY:HA3	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1305:G:H5'	21:QU:4:GLY:C	2.28	0.54
2:QB:22:LYS:C	2:QB:22:LYS:HD2	2.27	0.54
16:QP:20:VAL:HG23	16:QP:35:LYS:HA	1.88	0.54
17:QQ:53:LEU:HD23	17:QQ:85:VAL:HG11	1.89	0.54
41:RG:16:ARG:HG3	41:RG:31:VAL:HG11	1.89	0.54
53:RW:92:ARG:NH1	53:RW:94:ASP:OD2	2.41	0.54
1:XA:1218:C:H2'	1:XA:1219:U:C6	2.43	0.54
1:XA:107:G:O6	20:XT:15:ARG:NH1	2.41	0.54
34:Y8:62:LEU:HD13	36:YA:242:G:C5'	2.37	0.54
36:YA:2010:G:H5''	53:YW:42:ARG:HB2	1.90	0.54
36:YA:38:A:N3	40:YF:48:THR:OG1	2.39	0.54
42:YH:52:VAL:HG13	42:YH:65:HIS:HE2	1.73	0.54
44:YN:114:ARG:O	44:YN:115:ARG:HB3	2.08	0.54
54:YX:28:PHE:CE1	54:YX:92:LEU:HD11	2.43	0.54
1:QA:537:G:H2'	1:QA:538:G:H8	1.71	0.54
1:QA:560:U:H5'	1:QA:566:G:N2	2.23	0.54
1:QA:580:U:H2'	1:QA:581:G:O4'	2.07	0.54
1:QA:965:A:OP1	1:QA:1198:G:H5''	2.07	0.54
4:QD:169:LYS:NZ	6:XF:25:ILE:HD11	2.23	0.54
8:QH:36:LEU:HD23	8:QH:39:LEU:HD12	1.90	0.54
23:QW:19:G:N2	23:QW:56:C:H42	2.04	0.54
26:R0:23:VAL:HG21	36:RA:857:C:H4'	1.90	0.54
34:R8:15:LYS:HB2	46:RP:65:ARG:HE	1.73	0.54
36:RA:304:G:H2'	36:RA:305:U:C6	2.43	0.54
36:RA:581:C:H2'	36:RA:582:G:H8	1.73	0.54
36:RA:690:G:O2'	38:RD:43:ARG:NH1	2.41	0.54
40:RF:101:LEU:O	40:RF:106:ARG:NH1	2.41	0.54
1:XA:953:G:H5'	1:XA:965:A:H61	1.72	0.54
2:XB:164:VAL:HG12	2:XB:166:ASP:H	1.73	0.54
49:YS:88:ASP:O	49:YS:89:ARG:HG2	2.08	0.54
1:QA:1221:G:O3'	19:QS:77:THR:OG1	2.25	0.54
18:QR:58:LEU:HD23	18:QR:62:GLU:HB3	1.90	0.54
34:R8:34:TRP:HB2	36:RA:2419:U:OP1	2.08	0.54
36:RA:1817:G:OP1	38:RD:88:ARG:NH2	2.40	0.54
36:RA:2836:U:H2'	36:RA:2837:G:C8	2.43	0.54
41:RG:77:ILE:HG22	41:RG:80:PHE:H	1.73	0.54
41:RG:97:ASP:HA	41:RG:100:TRP:HD1	1.73	0.54
1:XA:401:C:O2'	1:XA:621:A:N3	2.37	0.54
3:XC:21:ARG:HB2	3:XC:21:ARG:NH2	2.23	0.54
7:XG:5:ARG:HH22	7:XG:6:ARG:NH1	2.06	0.54
19:XS:66:MET:HB2	19:XS:74:PHE:CZ	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:2164:C:H2'	36:YA:2164:C:O2	2.08	0.54
36:YA:956:G:OP2	47:YQ:14:ARG:NH2	2.41	0.54
41:YG:37:VAL:HG22	41:YG:159:VAL:HG12	1.89	0.54
48:YR:37:THR:HG22	48:YR:39:PRO:HD2	1.89	0.54
51:YU:90:VAL:HG13	52:YV:39:LEU:HB3	1.90	0.54
55:YY:81:LYS:HD3	55:YY:97:ARG:H	1.73	0.54
36:RA:796:C:H2'	36:RA:797:C:C6	2.43	0.53
47:RQ:48:GLU:OE2	47:RQ:51:ARG:NH2	2.33	0.53
7:XG:46:ALA:O	7:XG:50:ILE:HG12	2.08	0.53
10:XJ:17:ASP:OD1	10:XJ:70:ARG:NH1	2.41	0.53
14:XN:29:ARG:HD3	14:XN:40:CYS:HB2	1.90	0.53
13:XM:3:ARG:NH1	30:Y4:32:TYR:O	2.42	0.53
36:YA:1607:C:N4	36:YA:1622:G:OP2	2.27	0.53
36:YA:2008:C:H2'	36:YA:2009:G:H8	1.72	0.53
36:YA:2469:A:H5'	36:YA:2470:G:OP2	2.08	0.53
40:YF:125:LEU:HD21	40:YF:199:TRP:CE3	2.43	0.53
1:QA:262:A:H5''	20:QT:76:ALA:HB2	1.90	0.53
1:QA:657:G:H21	15:QO:22:THR:HG23	1.72	0.53
16:QP:45:THR:CG2	16:QP:46:PRO:CD	2.66	0.53
36:RA:1090:U:H3	36:RA:1102:C:H1'	1.73	0.53
36:RA:1316:U:H2'	36:RA:1317:A:C8	2.43	0.53
36:RA:1464:C:HO2'	36:RA:1528:A:H8	1.55	0.53
36:RA:1586:A:H3'	36:RA:1587:A:H8	1.72	0.53
36:RA:1795:C:H42	36:RA:1824:G:N2	2.06	0.53
36:RA:29:U:H2'	36:RA:30:G:C8	2.42	0.53
36:RA:922:U:H2'	36:RA:923:C:H6	1.73	0.53
37:RB:37:C:O2	49:RS:95:HIS:NE2	2.33	0.53
38:RD:146:GLU:HB2	38:RD:189:CYS:HB3	1.90	0.53
39:RE:24:THR:OG1	39:RE:186:GLY:HA2	2.09	0.53
1:XA:1286:A:H2'	1:XA:1287:A:H4'	1.89	0.53
1:XA:1291:G:O2'	9:XI:38:GLN:OE1	2.26	0.53
1:XA:1502:A:H2	1:XA:1505:G:H22	1.54	0.53
1:XA:1494:G:N7	58:XA:1717:PAR:N32	2.56	0.53
6:XF:97:PHE:HB2	18:XR:32:ARG:HE	1.71	0.53
19:XS:40:ILE:HG22	19:XS:41:VAL:N	2.24	0.53
33:Y7:5:TRP:CE3	36:YA:1613:G:OP1	2.61	0.53
36:YA:2648:C:H2'	36:YA:2649:U:H6	1.73	0.53
36:YA:259:G:H21	36:YA:621:A:H8	1.56	0.53
36:YA:65:C:H2'	36:YA:66:C:H6	1.73	0.53
36:YA:881:G:H5''	36:YA:881:G:C8	2.43	0.53
41:YG:83:ARG:HG3	41:YG:84:LYS:H	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YH:28:GLY:HA3	42:YH:79:VAL:HB	1.90	0.53
55:YY:84:ARG:HH12	55:YY:97:ARG:HA	1.73	0.53
36:RA:263:C:H2'	36:RA:264:C:O4'	2.07	0.53
40:RF:158:THR:O	40:RF:164:ARG:NH2	2.33	0.53
42:RH:126:PRO:HD2	42:RH:131:VAL:HA	1.89	0.53
1:XA:1289:A:N1	1:XA:1371:G:O2'	2.37	0.53
1:XA:1314:C:H2'	1:XA:1315:U:C6	2.43	0.53
1:XA:1502:A:H2	1:XA:1505:G:H1	1.56	0.53
30:Y4:40:HIS:O	30:Y4:47:GLN:NE2	2.40	0.53
36:YA:1205:U:C2	40:YF:171:PRO:HB3	2.42	0.53
36:YA:1853:A:H2'	36:YA:1854:A:C8	2.44	0.53
36:YA:2168:G:O6	36:YA:2171:A:N7	2.41	0.53
36:YA:1006:C:H5'	44:YN:28:THR:HG23	1.90	0.53
56:YZ:61:LEU:HD13	56:YZ:67:LEU:H	1.72	0.53
1:QA:524:G:H2'	1:QA:525:C:C6	2.44	0.53
5:QE:32:VAL:HG21	5:QE:55:VAL:HG13	1.90	0.53
36:RA:1657:C:H2'	36:RA:1658:C:H6	1.73	0.53
36:RA:2109:U:H2'	36:RA:2110:G:C8	2.43	0.53
36:RA:236:C:O2'	36:RA:431:U:H4'	2.08	0.53
36:RA:2012:G:OP1	53:RW:11:ARG:NH2	2.41	0.53
1:XA:1427:U:H2'	1:XA:1428:A:H8	1.73	0.53
1:XA:62:U:OP1	1:XA:385:C:O2'	2.26	0.53
1:XA:736:C:H2'	1:XA:737:A:C8	2.44	0.53
10:XJ:49:VAL:HG23	14:XN:41:ARG:HB2	1.90	0.53
23:XW:62:C:H2'	23:XW:63:G:C8	2.43	0.53
36:YA:2031:A:C6	36:YA:2498:C:H1'	2.43	0.53
36:YA:602:G:N2	36:YA:655:A:N7	2.41	0.53
36:YA:881:G:H3'	36:YA:882:G:H8	1.72	0.53
42:YH:6:ARG:HD2	42:YH:65:HIS:CG	2.42	0.53
56:YZ:128:VAL:HG22	56:YZ:129:SER:H	1.73	0.53
1:QA:1142:G:H2'	1:QA:1143:G:O4'	2.08	0.53
26:R0:27:GLU:HG3	26:R0:68:GLU:HA	1.90	0.53
28:R2:69:ARG:HH22	36:RA:111:A:H4'	1.73	0.53
36:RA:1839:G:C2	36:RA:1840:G:C8	2.97	0.53
47:RQ:39:PRO:HB3	47:RQ:99:PRO:HD3	1.90	0.53
20:XT:29:LYS:O	20:XT:33:ILE:HG12	2.08	0.53
36:YA:1021:A:H61	36:YA:1142(A):A:H61	1.57	0.53
36:YA:2163:C:H2'	36:YA:2164:C:C5	2.43	0.53
36:YA:2845:G:H2'	36:YA:2846:G:C8	2.44	0.53
39:YE:92:THR:HG23	39:YE:94:GLU:H	1.74	0.53
25:QY:38:U:H2'	25:QY:39:G:H8	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:2066:C:C2'	36:RA:2067:G:H5'	2.39	0.53
43:RI:123:LEU:HD21	43:RI:144:VAL:HG13	1.91	0.53
49:RS:37:ALA:HB2	49:RS:101:LEU:HD21	1.91	0.53
11:XK:20:TYR:HB2	11:XK:31:THR:HG23	1.91	0.53
36:YA:1000:A:H2'	36:YA:1001:A:C8	2.44	0.53
36:YA:247:G:H4'	36:YA:386:G:C5	2.43	0.53
42:YH:126:PRO:CG	42:YH:130:ARG:H	2.22	0.53
36:YA:1252:G:N3	51:YU:33:ARG:HD2	2.23	0.53
1:QA:427:U:OP1	4:QD:13:ARG:NH2	2.42	0.53
30:R4:23:GLU:O	30:R4:24:THR:HG22	2.09	0.53
36:RA:1429:G:H2'	36:RA:1430:C:C6	2.43	0.53
41:RG:129:GLY:O	41:RG:161:THR:OG1	2.20	0.53
36:RA:2684:U:O2'	45:RO:68:GLU:OE2	2.27	0.53
1:XA:266:G:O2'	1:XA:267:C:OP2	2.24	0.53
1:XA:700:G:H4'	1:XA:704:A:H1'	1.90	0.53
2:XB:197:VAL:HG13	2:XB:200:ILE:HG13	1.89	0.53
13:XM:87:TYR:O	13:XM:91:ARG:HG2	2.09	0.53
36:YA:2648:C:H2'	36:YA:2649:U:C6	2.44	0.53
52:YV:28:GLU:O	52:YV:61:VAL:HG21	2.09	0.53
55:YY:96:ILE:HG13	55:YY:99:CYS:H	1.74	0.53
3:QC:11:ARG:O	3:QC:16:ARG:HB3	2.09	0.53
36:RA:997:G:OP1	51:RU:93:LYS:HB2	2.08	0.53
40:YF:101:LEU:O	40:YF:106:ARG:NH1	2.41	0.53
44:YN:47:ALA:HB2	44:YN:112:LEU:HD11	1.90	0.53
1:QA:1219:U:H2'	1:QA:1220:G:C8	2.43	0.53
13:QM:91:ARG:HB2	13:QM:98:VAL:HG12	1.91	0.53
1:QA:376:G:H5''	16:QP:5:ARG:HB2	1.90	0.53
19:QS:63:THR:HG23	19:QS:65:ASN:H	1.74	0.53
32:R6:38:LYS:HE2	32:R6:46:HIS:HB3	1.90	0.53
36:RA:1427:A:H4'	36:RA:1428:C:O5'	2.08	0.53
26:R0:18:ALA:HB1	36:RA:2271:G:H5''	1.89	0.53
38:RD:133:LEU:HB3	38:RD:173:VAL:HG11	1.91	0.53
52:RV:38:LEU:HD11	52:RV:57:VAL:HG23	1.91	0.53
2:XB:238:LEU:HD23	2:XB:238:LEU:H	1.74	0.53
18:XR:37:VAL:HG22	18:XR:78:LEU:HB3	1.90	0.53
36:YA:1639:U:H2'	36:YA:1640:C:H5''	1.90	0.53
36:YA:363:G:H2'	36:YA:363(A):A:C8	2.42	0.53
36:YA:581:C:H2'	36:YA:582:G:H8	1.74	0.53
41:YG:36:LYS:HB3	41:YG:160:VAL:HB	1.90	0.53
1:QA:1492:A:N6	12:QL:50:SER:OG	2.42	0.53
1:QA:1510:U:H2'	1:QA:1511:G:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:437:U:H2'	1:QA:438:G:O4'	2.08	0.53
23:QW:9:A:OP2	23:QW:46:G:N2	2.39	0.53
32:R6:39:TYR:O	32:R6:46:HIS:HA	2.09	0.53
36:RA:1678:G:H22	36:RA:1989:G:H22	1.57	0.53
36:RA:2064:C:H2'	36:RA:2065:C:C6	2.43	0.53
36:RA:605:C:O2	36:RA:657:U:O2'	2.27	0.53
36:RA:673:C:H5''	40:RF:81:PRO:HD2	1.90	0.53
50:RT:99:LEU:O	50:RT:99:LEU:HD12	2.09	0.53
9:XI:110:GLU:OE2	9:XI:113:LYS:NZ	2.42	0.53
1:XA:1128:C:H5'	9:XI:16:ARG:HH12	1.74	0.53
13:XM:15:VAL:HA	13:XM:18:ALA:HB3	1.91	0.53
11:XK:110:ASP:HB2	18:XR:88:LYS:HG3	1.91	0.53
36:YA:1130:U:O2	39:YE:149:ARG:NH2	2.42	0.53
36:YA:1204:A:H1'	36:YA:1206:G:C8	2.42	0.53
36:YA:590:A:H2'	36:YA:591:C:C6	2.44	0.53
36:YA:607:U:H3	36:YA:621:A:H2	1.57	0.53
41:YG:73:ALA:HB2	41:YG:82:LEU:HD11	1.90	0.53
47:YQ:30:GLY:H	47:YQ:105:GLU:HG2	1.74	0.53
47:YQ:48:GLU:OE2	47:YQ:51:ARG:NH2	2.38	0.53
1:QA:1522:U:H2'	1:QA:1523:G:H8	1.73	0.52
1:QA:452:A:H2'	1:QA:453:A:H8	1.74	0.52
3:QC:56:ASP:HB2	3:QC:67:THR:HB	1.91	0.52
14:QN:41:ARG:HG3	14:QN:42:ILE:N	2.24	0.52
31:R5:4:HIS:NE2	36:RA:2577:A:O4'	2.43	0.52
36:RA:1243:G:H4'	46:RP:7:ARG:HH21	1.72	0.52
36:RA:2086:U:H2'	36:RA:2087:G:H8	1.74	0.52
36:RA:2176:A:H2'	36:RA:2177:C:C6	2.45	0.52
36:RA:2648:C:H2'	36:RA:2649:U:H6	1.75	0.52
36:RA:2250:G:C4	47:RQ:82:ARG:HG3	2.44	0.52
1:XA:1123:A:H4'	10:XJ:36:GLY:HA3	1.91	0.52
1:XA:452:A:O2'	16:XP:72:ARG:NE	2.43	0.52
1:XA:964:A:H4'	10:XJ:54:PHE:HZ	1.74	0.52
23:XW:45:G:O2'	23:XW:46:G:H5''	2.09	0.52
36:YA:1535:U:H2'	36:YA:1536:A:C8	2.44	0.52
36:YA:2011:U:OP1	53:YW:42:ARG:NH1	2.42	0.52
36:YA:2112:G:O6	36:YA:2169:A:N6	2.42	0.52
36:YA:582:G:H2'	36:YA:583:G:H8	1.74	0.52
1:QA:769:G:H4'	1:QA:1513:A:H4'	1.91	0.52
1:QA:752:G:H1'	1:QA:754:C:N4	2.24	0.52
36:RA:2469:A:H5''	36:RA:2470:G:C8	2.43	0.52
36:RA:29:U:H2'	36:RA:30:G:H8	1.72	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:RB:111:U:H2'	37:RB:112:G:C8	2.37	0.52
37:RB:80:U:H2'	37:RB:81:G:H21	1.74	0.52
39:RE:170:LEU:HD21	39:RE:187:ALA:HB3	1.91	0.52
44:RN:114:ARG:O	44:RN:115:ARG:HG2	2.09	0.52
51:RU:54:LYS:O	51:RU:58:ARG:HD3	2.08	0.52
2:XB:68:ILE:HD11	2:XB:163:PHE:HB2	1.92	0.52
34:Y8:62:LEU:HD13	36:YA:242:G:H3'	1.90	0.52
36:YA:1496:A:H8	36:YA:1577:C:HO2'	1.56	0.52
36:YA:1681:G:O2'	36:YA:1762:A:O2'	2.26	0.52
36:YA:2629:A:O2'	36:YA:2630:G:H5''	2.08	0.52
36:YA:823:G:H2'	36:YA:824:A:H8	1.73	0.52
41:YG:97:ASP:HA	41:YG:100:TRP:HD1	1.74	0.52
1:QA:269:C:H2'	1:QA:270:A:C8	2.42	0.52
1:QA:45:U:H2'	1:QA:46:G:C8	2.44	0.52
1:QA:739:C:HO2'	15:QO:42:HIS:HD1	1.57	0.52
1:QA:842:C:O2'	1:QA:848:C:N4	2.42	0.52
7:QG:73:MET:HG2	7:QG:90:GLU:HA	1.90	0.52
25:QY:14:A:H62	25:QY:15:G:H21	1.57	0.52
36:RA:140:A:H8	36:RA:1408:C:O2'	1.91	0.52
36:RA:2392:A:H2	36:RA:2424:C:H42	1.57	0.52
36:RA:270(B):A:H8	36:RA:270(C):C:C6	2.27	0.52
36:RA:270(S):G:H2'	36:RA:270(T):G:H8	1.74	0.52
56:RZ:76:LEU:HA	56:RZ:83:PRO:HA	1.91	0.52
1:XA:1032(A):G:H2'	1:XA:1032(B):G:C8	2.45	0.52
9:XI:45:ALA:O	9:XI:78:LYS:HD3	2.09	0.52
12:XL:104:VAL:HG23	12:XL:105:TYR:H	1.74	0.52
36:YA:307:G:H21	36:YA:330:A:N6	2.04	0.52
38:YD:26:LYS:HB3	38:YD:83:GLU:HG2	1.89	0.52
36:YA:1823:G:OP1	38:YD:54:ARG:NH1	2.42	0.52
47:YQ:13:GLN:O	47:YQ:72:LYS:NZ	2.42	0.52
56:YZ:6:LYS:O	56:YZ:62:PRO:HD3	2.09	0.52
1:QA:1355:G:H2'	1:QA:1356:G:C8	2.44	0.52
1:QA:522:C:H41	12:QL:53:ARG:NH2	2.06	0.52
13:QM:93:ARG:NH1	36:RA:887:A:OP1	2.43	0.52
6:XF:4:TYR:CE1	6:XF:92:LYS:HG2	2.45	0.52
36:YA:1509:C:H3'	36:YA:1510:A:H5''	1.90	0.52
36:YA:686:G:N2	36:YA:788:A:H61	2.07	0.52
39:YE:89:ASP:OD1	39:YE:90:THR:N	2.43	0.52
40:YF:32:LEU:HB3	40:YF:112:MET:HE1	1.91	0.52
43:YI:83:ALA:HB3	43:YI:123:LEU:HD11	1.91	0.52
44:YN:6:PRO:HG3	44:YN:41:ASP:HB2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:20:TYR:CE2	8:QH:75:ARG:HD2	2.45	0.52
7:QG:16:LEU:HD21	9:QI:41:VAL:HG12	1.92	0.52
36:RA:1107:G:H2'	36:RA:1108:U:C6	2.44	0.52
36:RA:1543:A:H1'	36:RA:1545:A:H5''	1.90	0.52
36:RA:1571:A:H2'	36:RA:1572:A:C8	2.44	0.52
1:XA:1347:G:H22	1:XA:1374:A:P	2.32	0.52
4:XD:200:GLU:O	4:XD:204:ILE:HG12	2.09	0.52
5:XE:81:GLU:HG3	5:XE:90:VAL:HG22	1.92	0.52
1:XA:1298:C:H2'	7:XG:114:ARG:HH12	1.75	0.52
10:XJ:61:GLU:OE2	14:XN:45:ARG:NH1	2.42	0.52
19:XS:63:THR:OG1	19:XS:65:ASN:OD1	2.20	0.52
36:YA:1952:A:C5	45:YO:22:ILE:HD12	2.45	0.52
36:YA:219:G:N3	36:YA:234:C:O2'	2.42	0.52
36:YA:844:C:H2'	36:YA:845:G:O4'	2.09	0.52
1:QA:646:U:H2'	1:QA:647:C:C6	2.45	0.52
1:QA:883:C:O2'	1:QA:884:U:H5'	2.10	0.52
18:QR:86:VAL:HG12	18:QR:87:ARG:HG2	1.91	0.52
36:RA:1853:A:H2'	36:RA:1854:A:C8	2.45	0.52
26:R0:43:THR:HG22	36:RA:2331:G:O2'	2.09	0.52
36:RA:851:U:H2'	36:RA:852:G:H8	1.75	0.52
1:XA:1466:C:H2'	1:XA:1467:G:O4'	2.10	0.52
2:XB:69:LEU:HB3	2:XB:162:ILE:HG22	1.91	0.52
20:XT:76:ALA:O	20:XT:80:ARG:HG2	2.10	0.52
26:Y0:43:THR:HG22	36:YA:2331:G:O2'	2.10	0.52
36:YA:2074:U:H2'	36:YA:2075:U:C6	2.44	0.52
36:YA:900:A:H3'	36:YA:901:A:H8	1.75	0.52
42:YH:119:GLU:O	42:YH:140:LYS:NZ	2.32	0.52
42:YH:126:PRO:HG3	42:YH:130:ARG:H	1.75	0.52
30:R4:42:PHE:HE2	41:RG:117:PHE:HB3	1.74	0.52
36:RA:2064:C:H2'	36:RA:2065:C:H6	1.73	0.52
36:RA:2635:C:OP1	39:RE:78:LEU:HB3	2.10	0.52
40:RF:157:VAL:HB	40:RF:194:MET:HG2	1.91	0.52
41:RG:11:TYR:OH	41:RG:32:PRO:O	2.27	0.52
53:RW:88:ARG:HB2	53:RW:92:ARG:HB2	1.91	0.52
1:XA:1225:A:N3	1:XA:1225:A:H2'	2.24	0.52
1:XA:32:A:H2'	1:XA:33:A:C8	2.44	0.52
8:XH:97:VAL:HG21	8:XH:128:GLY:HA2	1.92	0.52
36:YA:1538:G:H2'	36:YA:1539:G:H8	1.74	0.52
36:YA:2455:G:H2'	36:YA:2456:C:C6	2.45	0.52
36:YA:823:G:H2'	36:YA:824:A:C8	2.45	0.52
1:QA:687:A:N6	1:QA:703:G:H21	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:21:ARG:HB3	2:QB:39:ILE:HG13	1.92	0.52
3:QC:7:PRO:HG2	3:QC:184:TYR:HB2	1.92	0.52
1:QA:1229:A:O2'	22:QV:30:G:OP1	2.26	0.52
36:RA:1479:G:H5'	36:RA:1558:A:H2	1.75	0.52
36:RA:1639:U:H2'	36:RA:1640:C:H5''	1.92	0.52
36:RA:665:C:H2'	36:RA:666:G:H8	1.74	0.52
36:RA:627:A:N6	46:RP:116:GLY:HA2	2.24	0.52
1:XA:1027:C:O2'	1:XA:1028:C:O5'	2.27	0.52
1:XA:1399:C:C2	1:XA:1502:A:N6	2.78	0.52
1:XA:1513:A:H2'	1:XA:1514:C:C6	2.45	0.52
1:XA:359:U:H2'	1:XA:360:A:C8	2.44	0.52
34:Y8:15:LYS:HB2	46:YP:65:ARG:HE	1.75	0.52
36:YA:1464:C:O2'	36:YA:1528:A:H8	1.91	0.52
36:YA:2030:A:H4'	36:YA:2031:A:C8	2.44	0.52
1:QA:266:G:H5'	1:QA:268:C:H41	1.74	0.52
3:QC:191:THR:HG23	3:QC:193:TYR:H	1.75	0.52
10:QJ:7:LYS:HB2	10:QJ:97:GLU:HB3	1.92	0.52
11:QK:41:THR:HG23	11:QK:41:THR:O	2.09	0.52
36:RA:1827:C:OP2	38:RD:222:ARG:NH1	2.43	0.52
36:RA:1853:A:H2'	36:RA:1854:A:H8	1.74	0.52
36:RA:330:A:H2	36:RA:1210:A:HO2'	1.57	0.52
36:RA:587:C:N3	46:RP:33:ARG:NH1	2.58	0.52
36:RA:660:G:H21	46:RP:12:ALA:HB2	1.73	0.52
36:RA:709:U:H2'	36:RA:710:G:H8	1.74	0.52
44:RN:16:ILE:HG21	44:RN:26:LEU:HD11	1.92	0.52
47:RQ:55:VAL:HG23	56:RZ:178:GLU:HB3	1.91	0.52
1:XA:1250:A:H2'	1:XA:1251:A:C8	2.45	0.52
1:XA:689:C:H3'	1:XA:690:G:H21	1.75	0.52
2:XB:212:GLN:NE2	2:XB:235:SER:OG	2.42	0.52
2:XB:93:VAL:HG11	2:XB:97:TRP:CD1	2.45	0.52
1:XA:1191:A:P	3:XC:3:ASN:HD22	2.33	0.52
36:YA:1210:A:H4'	36:YA:1211:U:O5'	2.09	0.52
36:YA:1292:U:H2'	36:YA:1293:C:H6	1.75	0.52
53:YW:24:ILE:HD13	53:YW:36:LEU:HD11	1.91	0.52
55:YY:50:ARG:HG2	55:YY:50:ARG:O	2.10	0.52
3:QC:91:LEU:HD11	3:QC:101:LEU:HD12	1.92	0.52
4:QD:140:VAL:HG11	4:QD:146:ILE:HD11	1.92	0.52
19:QS:10:PHE:HE1	19:QS:44:MET:HE3	1.74	0.52
32:R6:5:VAL:N	36:RA:2283:C:OP1	2.43	0.52
35:R9:1:MET:HG3	36:RA:2477:C:H2'	1.92	0.52
36:RA:2298:A:H62	36:RA:2318:G:H8	1.56	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:336:C:O2'	55:RY:35:TYR:OH	2.27	0.52
36:RA:2839:G:H5'	48:RR:46:GLY:HA2	1.92	0.52
1:XA:688:G:H5'	11:XK:46:GLY:CA	2.38	0.52
8:XH:136:GLU:CD	8:XH:138:TRP:HE1	2.13	0.52
34:Y8:54:GLU:HG3	34:Y8:57:ARG:HH21	1.74	0.52
36:YA:1509:C:H2'	36:YA:1511:A:C8	2.45	0.52
5:QE:149:GLU:O	5:QE:153:LYS:HG3	2.10	0.51
11:QK:31:THR:HA	11:QK:42:TRP:HB3	1.92	0.51
1:QA:718:G:H21	18:QR:49:LYS:HG2	1.76	0.51
36:RA:1056:G:H5''	36:RA:1057:A:H5'	1.92	0.51
36:RA:1289:C:H2'	36:RA:1290:C:H6	1.75	0.51
36:RA:1453:A:N6	36:RA:2702:U:H1'	2.25	0.51
36:RA:2650:U:H2'	36:RA:2651:C:H6	1.75	0.51
39:RE:36:ARG:HH22	39:RE:88:GLY:HA2	1.74	0.51
44:RN:115:ARG:HA	44:RN:118:LYS:HD2	1.92	0.51
45:RO:1:MET:HB2	45:RO:32:TYR:HB3	1.91	0.51
46:RP:106:LEU:HD21	46:RP:112:LEU:HD13	1.91	0.51
1:XA:1080:A:H5''	5:XE:16:THR:HG21	1.92	0.51
1:XA:1238:A:H2	1:XA:1241:G:N3	2.09	0.51
1:XA:1404:C:H2'	1:XA:1405:G:C8	2.45	0.51
1:XA:674:G:H2'	1:XA:675:A:C8	2.41	0.51
1:XA:737:A:H2'	1:XA:738:C:H6	1.75	0.51
3:XC:29:TYR:OH	14:XN:54:PRO:HG2	2.10	0.51
46:YP:144:GLU:N	46:YP:144:GLU:OE1	2.44	0.51
1:QA:751:U:H2'	1:QA:752:G:O4'	2.09	0.51
32:R6:23:THR:O	34:R8:34:TRP:NE1	2.44	0.51
36:RA:1105:U:H2'	36:RA:1106:G:H8	1.75	0.51
26:R0:9:SER:HB3	36:RA:2255:G:H21	1.75	0.51
36:RA:2692:C:H2'	36:RA:2693:A:H8	1.76	0.51
36:RA:270(F):U:H2'	36:RA:270(G):C:C6	2.45	0.51
40:RF:184:TYR:CE2	40:RF:188:ARG:HD2	2.46	0.51
47:RQ:34:LEU:HB2	47:RQ:118:LEU:HD22	1.92	0.51
1:XA:191(E):G:H2'	1:XA:191(F):U:C6	2.46	0.51
1:XA:686:U:O4	1:XA:703:G:H1'	2.10	0.51
36:YA:1429:G:H2'	36:YA:1430:C:C6	2.46	0.51
36:YA:2305:A:N1	41:YG:154:GLY:N	2.54	0.51
41:YG:137:GLU:HG2	41:YG:152:LEU:HD12	1.93	0.51
1:QA:1218:C:H2'	1:QA:1219:U:C6	2.45	0.51
1:QA:1333:A:O5'	1:QA:1333:A:H8	1.93	0.51
1:QA:1452:C:H4'	1:QA:1453:G:H5'	1.93	0.51
1:QA:537:G:H2'	1:QA:538:G:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:57:G:H2'	1:QA:58:C:H6	1.74	0.51
30:R4:61:ARG:HD3	30:R4:62:ARG:HG2	1.92	0.51
36:RA:2823:A:OP1	39:RE:113:PHE:HB2	2.09	0.51
36:RA:2851:A:O2'	48:RR:64:ARG:NH2	2.43	0.51
54:RX:36:LYS:HG2	54:RX:56:THR:HG23	1.92	0.51
55:RY:38:ILE:HG22	55:RY:66:PRO:HA	1.91	0.51
56:RZ:128:VAL:HG22	56:RZ:161:VAL:HA	1.93	0.51
1:XA:1213:A:N6	1:XA:1215:G:N3	2.58	0.51
8:XH:19:VAL:HG13	8:XH:21:LYS:HG3	1.92	0.51
36:YA:1406:U:H2'	36:YA:1407:C:H6	1.75	0.51
36:YA:1678:G:H22	36:YA:1989:G:N2	2.08	0.51
36:YA:894:C:H2'	36:YA:895:U:C6	2.44	0.51
52:YV:34:GLU:O	52:YV:36:PRO:HD3	2.10	0.51
36:RA:1709:U:O2'	36:RA:2859:G:H1'	2.10	0.51
36:RA:2129:C:N4	36:RA:2130:U:O4	2.42	0.51
32:R6:45:LYS:HG3	36:RA:2371:G:H4'	1.92	0.51
36:RA:38:A:H2'	36:RA:39:C:H6	1.74	0.51
36:RA:590:A:OP1	40:RF:95:ARG:NH1	2.42	0.51
36:RA:634:C:H2'	36:RA:635:C:C6	2.45	0.51
37:RB:23:G:N2	37:RB:61:G:N3	2.58	0.51
40:RF:164:ARG:HG3	40:RF:175:THR:OG1	2.11	0.51
50:RT:51:ARG:HG3	50:RT:100:TYR:OH	2.10	0.51
52:RV:38:LEU:H	52:RV:51:VAL:HG23	1.76	0.51
1:XA:135:C:H2'	1:XA:136:C:H5'	1.93	0.51
28:Y2:28:LYS:HD2	28:Y2:53:LEU:HD11	1.92	0.51
30:Y4:23:GLU:C	30:Y4:25:TYR:H	2.14	0.51
36:YA:2695:C:H2'	36:YA:2696:U:C6	2.46	0.51
36:YA:658:C:H2'	36:YA:659:C:C6	2.44	0.51
39:YE:23:VAL:HG21	39:YE:183:LEU:HD23	1.91	0.51
45:YO:80:ASP:OD2	50:YT:64:ARG:NH2	2.43	0.51
1:QA:1143:G:H2'	1:QA:1144:G:C8	2.45	0.51
13:QM:15:VAL:HA	13:QM:18:ALA:HB3	1.91	0.51
35:R9:11:CYS:SG	35:R9:12:ASP:N	2.84	0.51
36:RA:2503:A:O2'	36:RA:2505:G:OP2	2.22	0.51
56:RZ:132:ASN:O	56:RZ:134:PRO:HD3	2.11	0.51
36:YA:2168:G:H21	36:YA:2169:A:H3'	1.74	0.51
45:YO:107:ARG:HG3	45:YO:115:VAL:HG11	1.92	0.51
5:QE:31:LEU:HD11	5:QE:129:ILE:HG13	1.93	0.51
11:QK:43:SER:CB	11:QK:68:ALA:HB2	2.39	0.51
19:QS:55:LYS:HG2	19:QS:56:GLN:HG2	1.92	0.51
29:R3:12:PRO:HA	29:R3:15:TYR:HD1	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:1026:U:H1'	36:RA:1027:A:H5''	1.92	0.51
36:RA:221:A:H4'	36:RA:222:A:O5'	2.11	0.51
36:RA:2328:A:H2'	36:RA:2329:G:H8	1.75	0.51
38:RD:25:THR:HG21	38:RD:113:VAL:HG21	1.92	0.51
42:RH:8:PRO:HG2	42:RH:69:ARG:CZ	2.41	0.51
1:XA:753:A:H4'	1:XA:754:C:O5'	2.11	0.51
15:XO:26:GLU:HG3	15:XO:81:LEU:HD22	1.93	0.51
36:YA:631:A:H61	36:YA:2402:C:N4	2.07	0.51
39:YE:117:MET:HA	39:YE:122:PHE:N	2.26	0.51
13:QM:15:VAL:HB	13:QM:45:VAL:HB	1.93	0.51
36:RA:1165:U:H2'	36:RA:1166:C:H6	1.75	0.51
36:RA:137(A):G:N3	54:RX:41:ASN:ND2	2.59	0.51
36:RA:1510:A:H2'	36:RA:1510:A:N3	2.25	0.51
36:RA:2025:C:H2'	36:RA:2026:C:C6	2.45	0.51
36:RA:547:A:H2'	36:RA:548:A:C8	2.45	0.51
36:RA:589:C:H2'	36:RA:590:A:H8	1.75	0.51
39:RE:78:LEU:H	39:RE:78:LEU:HD23	1.76	0.51
36:RA:2394:C:OP1	46:RP:63:PRO:HD2	2.11	0.51
47:RQ:65:PHE:HB2	47:RQ:105:GLU:HB2	1.92	0.51
49:RS:19:LYS:O	49:RS:20:ARG:HG2	2.10	0.51
1:XA:938:A:N3	1:XA:1376:U:O2'	2.34	0.51
16:XP:59:TRP:HA	16:XP:62:VAL:HG22	1.91	0.51
28:Y2:65:ASN:ND2	36:YA:72:U:O4	2.44	0.51
32:Y6:17:LYS:O	32:Y6:18:ARG:HG2	2.11	0.51
36:YA:1231:G:H2'	36:YA:1232:G:H8	1.74	0.51
36:YA:1991:U:H2'	36:YA:1992:G:H5''	1.92	0.51
36:YA:288:C:H2'	36:YA:289:A:H8	1.76	0.51
36:YA:839:U:H1'	36:YA:1191:G:H1'	1.93	0.51
37:YB:32:C:C2	37:YB:51:G:N2	2.78	0.51
56:YZ:51:ALA:O	56:YZ:52:SER:OG	2.24	0.51
36:RA:1130:U:O2	39:RE:149:ARG:NH2	2.40	0.51
36:RA:1709:U:H2'	36:RA:1710:C:C6	2.46	0.51
36:RA:2346:A:H5''	36:RA:2383:G:H1'	1.92	0.51
36:RA:414:C:H2'	36:RA:415:A:H8	1.76	0.51
33:R7:33:ARG:NH1	36:RA:467:G:OP1	2.43	0.51
36:RA:49:A:N7	36:RA:120:U:H5	2.09	0.51
36:RA:590:A:H2'	36:RA:591:C:C6	2.46	0.51
36:RA:874:G:O6	36:RA:904:C:N4	2.44	0.51
42:RH:25:LYS:NZ	42:RH:32:GLU:HB2	2.26	0.51
51:RU:110:VAL:HG12	51:RU:114:LYS:HE2	1.93	0.51
54:RX:53:LYS:HB3	54:RX:82:GLN:HB3	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:243:A:H4'	1:XA:244:U:O5'	2.11	0.51
1:XA:327:A:HO2'	1:XA:329:A:H8	1.58	0.51
5:XE:110:LEU:HD13	5:XE:118:ILE:HG21	1.92	0.51
8:XH:104:ARG:HD2	8:XH:138:TRP:HB2	1.91	0.51
24:XX:14:A:HO2'	24:XX:15:A:P	2.34	0.51
40:YF:125:LEU:HA	40:YF:194:MET:O	2.11	0.51
1:QA:1306:A:H1'	1:QA:1332:A:C2	2.45	0.51
1:QA:922:G:H2'	1:QA:923:A:C8	2.46	0.51
3:QC:46:GLU:O	3:QC:83:ARG:NH2	2.43	0.51
29:R3:39:ASP:OD1	29:R3:44:ARG:NE	2.44	0.51
36:RA:2074:U:H2'	36:RA:2075:U:C6	2.46	0.51
34:R8:34:TRP:HH2	36:RA:2348:U:OP1	1.94	0.51
36:RA:2696:U:H2'	36:RA:2697:G:C8	2.46	0.51
36:RA:589:C:H2'	36:RA:590:A:C8	2.46	0.51
38:RD:17:THR:HB	38:RD:205:VAL:H	1.76	0.51
36:RA:1790:C:H4'	38:RD:209:ALA:HB2	1.93	0.51
40:RF:117:ARG:NH2	40:RF:189:THR:O	2.43	0.51
46:RP:20:GLY:HA2	46:RP:27:HIS:O	2.10	0.51
1:XA:1414:U:H2'	1:XA:1415:G:H8	1.76	0.51
30:Y4:39:CYS:SG	30:Y4:40:HIS:N	2.81	0.51
36:YA:1528:A:H2'	36:YA:1529:A:C8	2.46	0.51
36:YA:2688:U:OP1	36:YA:2713:A:N6	2.44	0.51
39:YE:45:THR:OG1	39:YE:83:ASP:OD2	2.29	0.51
46:YP:20:GLY:HA2	46:YP:27:HIS:O	2.11	0.51
47:YQ:116:GLU:OE2	47:YQ:119:ARG:NH2	2.43	0.51
1:QA:1376:U:H2'	1:QA:1377:A:C8	2.45	0.51
1:QA:32:A:H2'	1:QA:33:A:C8	2.46	0.51
2:QB:32:ILE:HD11	2:QB:190:THR:HG22	1.92	0.51
15:QO:70:LEU:HD11	15:QO:77:ARG:HG3	1.92	0.51
36:RA:2168:G:N2	36:RA:2170:A:N7	2.59	0.51
36:RA:2402:C:H5	36:RA:2415:G:H22	1.59	0.51
36:RA:2557:G:H2'	36:RA:2558:C:H6	1.75	0.51
36:RA:2696:U:H2'	36:RA:2697:G:H8	1.76	0.51
6:XF:39:LYS:NZ	6:XF:64:GLN:OE1	2.28	0.51
36:YA:1412:A:H2'	36:YA:1413:G:C8	2.46	0.51
36:YA:1586:A:H3'	36:YA:1587:A:H8	1.75	0.51
1:QA:1014:A:H8	1:QA:1014:A:OP1	1.94	0.50
1:QA:1288:A:H2'	1:QA:1289:A:C8	2.46	0.50
1:QA:636:U:H2'	1:QA:637:G:H8	1.74	0.50
1:QA:945:G:C2	1:QA:946:A:C8	3.00	0.50
4:QD:105:VAL:HG13	4:QD:110:PHE:HB2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:9:MET:HB2	8:QH:32:LYS:HZ2	1.76	0.50
22:QV:9:G:O2'	22:QV:10:G:N7	2.41	0.50
36:RA:1329:U:H5''	36:RA:1330:C:H5	1.76	0.50
36:RA:1608:A:H1'	36:RA:1610:A:OP2	2.11	0.50
36:RA:1655:A:H4'	39:RE:115:GLY:H	1.74	0.50
36:RA:2233:U:H2'	36:RA:2234:G:C8	2.45	0.50
56:RZ:108:PRO:HB3	56:RZ:144:LEU:HB3	1.93	0.50
1:XA:1281:U:H5''	1:XA:1282:C:H5	1.76	0.50
4:XD:162:LEU:CD2	4:XD:181:MET:HG2	2.42	0.50
25:XY:38:U:H2'	25:XY:39:G:C8	2.46	0.50
36:YA:1028:A:H2'	36:YA:1029:A:H8	1.76	0.50
36:YA:1427:A:H4'	36:YA:1428:C:O5'	2.11	0.50
36:YA:69:C:H4'	36:YA:75:G:N7	2.26	0.50
44:YN:35:ARG:NH2	44:YN:42:TRP:CH2	2.79	0.50
1:QA:1238:A:C8	1:QA:1301:U:O4	2.63	0.50
27:R1:87:PRO:O	27:R1:91:LYS:HG2	2.11	0.50
27:R1:90:ILE:HA	27:R1:94:LEU:HD12	1.93	0.50
36:RA:1045:A:O2'	36:RA:1046:A:OP2	2.27	0.50
36:RA:2850:A:N7	36:RA:2868:A:O2'	2.31	0.50
36:RA:674:G:H1'	40:RF:74:ARG:NH1	2.26	0.50
36:RA:2303:G:O2'	41:RG:132:ASN:HB2	2.12	0.50
1:XA:376:G:H5''	16:XP:5:ARG:HB2	1.92	0.50
23:XW:59:U:H6	23:XW:59:U:OP1	1.95	0.50
36:YA:577:G:O2'	36:YA:1254:A:OP1	2.26	0.50
36:YA:1416:G:H2'	36:YA:1417:C:C6	2.47	0.50
36:YA:1869:G:H5'	36:YA:1870:C:OP2	2.11	0.50
36:YA:2728:U:H2'	36:YA:2729:G:H8	1.75	0.50
42:YH:151:ILE:O	42:YH:154:PRO:HD2	2.10	0.50
44:YN:89:LYS:O	44:YN:93:THR:HG22	2.11	0.50
36:YA:2392:A:C8	46:YP:60:MET:HG2	2.46	0.50
51:YU:114:LYS:HA	51:YU:118:GLY:HA3	1.94	0.50
36:YA:71:A:H2	54:YX:31:HIS:HE2	1.54	0.50
54:YX:57:LEU:HG	54:YX:78:LYS:HB2	1.92	0.50
1:QA:113:G:H2'	1:QA:114:U:C6	2.46	0.50
2:QB:166:ASP:HB3	2:QB:169:LYS:HB3	1.92	0.50
22:QV:16:C:O2'	22:QV:61:C:OP1	2.28	0.50
36:RA:1210:A:H5''	36:RA:1211:U:H3'	1.93	0.50
36:RA:256:A:H2'	36:RA:257:A:H8	1.76	0.50
36:RA:582:G:H2'	36:RA:583:G:C8	2.46	0.50
36:RA:814:C:H1'	36:RA:1226:G:H21	1.77	0.50
37:RB:109:G:H2'	37:RB:110:G:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RF:170:LEU:HD12	40:RF:172:TRP:CE2	2.46	0.50
40:RF:63:LYS:HE2	40:RF:67:GLN:HB2	1.93	0.50
54:RX:27:THR:HB	54:RX:80:ILE:HG13	1.94	0.50
55:RY:86:ARG:HG3	55:RY:95:LYS:HD2	1.93	0.50
1:XA:963:G:H21	10:XJ:55:LYS:HE2	1.76	0.50
13:XM:19:LEU:HD21	13:XM:56:LEU:HD21	1.94	0.50
16:XP:82:GLN:O	16:XP:83:GLU:HG3	2.10	0.50
36:YA:978:G:O4'	36:YA:1001:A:H2	1.94	0.50
36:YA:1316:U:H2'	36:YA:1317:A:H8	1.76	0.50
36:YA:1728:G:N1	36:YA:1730:U:OP2	2.44	0.50
36:YA:2064:C:H2'	36:YA:2065:C:H6	1.76	0.50
36:YA:582:G:H2'	36:YA:583:G:C8	2.46	0.50
38:YD:121:PRO:HB3	38:YD:135:PHE:CE2	2.46	0.50
42:YH:102:ALA:HA	42:YH:117:PRO:HD3	1.94	0.50
36:YA:389:G:H1	46:YP:72:PRO:HD3	1.76	0.50
1:XA:1443:G:C6	50:YT:118:ARG:HB2	2.46	0.50
52:YV:76:LYS:HB2	52:YV:81:TYR:HB3	1.93	0.50
1:QA:1404:C:H2'	1:QA:1405:G:C8	2.46	0.50
1:QA:410:G:H2'	1:QA:429:U:C5	2.46	0.50
1:QA:1322:C:OP1	19:QS:78:ARG:NH2	2.44	0.50
23:QW:55:U:H2'	23:QW:56:C:C5	2.46	0.50
36:RA:1990:C:H2'	36:RA:1991:U:C6	2.47	0.50
36:RA:844:C:H2'	36:RA:845:G:O4'	2.12	0.50
36:RA:949:C:H2'	36:RA:950:G:H8	1.77	0.50
36:YA:2853:C:H2'	36:YA:2854:G:H8	1.76	0.50
43:YI:131:LYS:HB3	43:YI:132:PRO:HA	1.94	0.50
1:QA:1036:G:N7	1:QA:1037:C:N4	2.59	0.50
36:RA:69:C:H4'	36:RA:75:G:N7	2.27	0.50
36:RA:709:U:H2'	36:RA:710:G:C8	2.47	0.50
36:RA:946:G:O6	36:RA:972:G:N2	2.45	0.50
37:RB:8:U:H5'	49:RS:15:ARG:HH12	1.75	0.50
1:XA:1006:C:H2'	1:XA:1007:C:C6	2.47	0.50
1:XA:177:C:OP2	20:XT:65:LYS:HD3	2.11	0.50
36:YA:598:G:H4'	46:YP:9:ASN:HD21	1.76	0.50
40:YF:184:TYR:CE2	40:YF:188:ARG:HD2	2.47	0.50
1:QA:1241:G:H2'	1:QA:1242:C:C6	2.46	0.50
1:QA:243:A:H4'	1:QA:244:U:O5'	2.12	0.50
8:QH:116:LYS:HG2	8:QH:129:VAL:HG11	1.93	0.50
23:QW:30:G:H1	23:QW:40:C:H42	1.60	0.50
40:RF:9:ILE:HD12	40:RF:123:LEU:HD23	1.93	0.50
42:RH:29:PRO:HD2	42:RH:79:VAL:HG11	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:RI:30:LEU:HB3	43:RI:36:ALA:HB3	1.94	0.50
25:XY:55:U:H3	25:XY:57:G:H8	1.59	0.50
43:YI:5:LEU:HD21	43:YI:12:LEU:HB3	1.92	0.50
1:QA:1288:A:H2'	1:QA:1289:A:H8	1.76	0.50
1:QA:739:C:O2'	15:QO:42:HIS:ND1	2.43	0.50
25:QY:38:U:H2'	25:QY:39:G:C8	2.47	0.50
36:RA:128:C:H2'	36:RA:129:C:C6	2.47	0.50
36:RA:1889:A:H2'	36:RA:1890:A:C8	2.46	0.50
36:RA:2111:C:C2	36:RA:2118:U:H4'	2.46	0.50
37:RB:109:G:H2'	37:RB:110:G:H8	1.77	0.50
40:RF:101:LEU:HD23	40:RF:106:ARG:HG2	1.94	0.50
55:RY:35:TYR:CE2	55:RY:69:ALA:HB3	2.47	0.50
17:XQ:28:PRO:HA	17:XQ:35:VAL:HA	1.93	0.50
17:XQ:45:HIS:NE2	17:XQ:47:PRO:HG3	2.27	0.50
36:YA:2059:A:H5'	36:YA:2060:A:OP2	2.11	0.50
36:YA:2246:G:H2'	36:YA:2247:A:C8	2.46	0.50
36:YA:571:A:O5'	36:YA:2030:A:N6	2.41	0.50
36:YA:608:A:H2'	36:YA:609:A:C8	2.46	0.50
36:YA:607:U:O2	36:YA:621:A:N1	2.45	0.50
40:YF:154:VAL:HG22	40:YF:191:ARG:HB2	1.93	0.50
40:YF:185:ASP:HA	40:YF:188:ARG:HD3	1.94	0.50
53:YW:110:LYS:HG3	53:YW:111:HIS:H	1.77	0.50
1:QA:1374:A:O2'	7:QG:28:ASN:HB3	2.12	0.50
1:QA:222:U:H2'	1:QA:223:U:H6	1.77	0.50
1:QA:407:G:H2'	1:QA:408:A:H8	1.76	0.50
1:QA:57:G:H2'	1:QA:58:C:C6	2.47	0.50
1:QA:939:G:H5''	7:QG:102:ARG:CZ	2.42	0.50
1:QA:952:U:H2'	1:QA:953:G:H8	1.77	0.50
1:QA:995:C:H1'	14:QN:4:LYS:HE3	1.93	0.50
15:QO:4:THR:HG23	15:QO:7:GLU:H	1.77	0.50
36:RA:1009:A:H1'	36:RA:1153:C:O2'	2.10	0.50
36:RA:1930:G:N2	36:RA:1969:A:OP2	2.34	0.50
36:RA:620:G:H4'	36:RA:621:A:H5''	1.92	0.50
38:RD:142:VAL:HG12	38:RD:193:VAL:HA	1.92	0.50
42:RH:25:LYS:HE3	42:RH:27:LYS:HE2	1.94	0.50
1:XA:343:U:O2	1:XA:346:G:N1	2.43	0.50
2:XB:118:LEU:HD23	2:XB:142:LEU:HB2	1.93	0.50
8:XH:6:ILE:O	8:XH:10:LEU:HG	2.12	0.50
1:XA:676:A:H1'	11:XK:115:PRO:HB3	1.94	0.50
36:YA:2788:C:OP1	39:YE:61:ARG:NH2	2.45	0.50
42:YH:89:ILE:HG12	42:YH:129:THR:HB	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1513:A:H2'	1:QA:1514:C:H6	1.76	0.50
1:QA:191(E):G:H2'	1:QA:191(F):U:C6	2.47	0.50
1:QA:737:A:H2'	1:QA:738:C:H6	1.77	0.50
1:QA:824:C:H2'	1:QA:825:G:H8	1.76	0.50
1:QA:892:A:H2'	1:QA:893:C:H6	1.76	0.50
1:QA:954:G:H2'	1:QA:955:U:C6	2.46	0.50
15:QO:75:PRO:HA	15:QO:78:TYR:HB3	1.94	0.50
36:RA:1400:G:H2'	36:RA:1401:G:C8	2.47	0.50
36:RA:2648:C:H2'	36:RA:2649:U:C6	2.47	0.50
36:RA:892:G:H2'	36:RA:893:C:H6	1.77	0.50
41:RG:27:ASN:HB3	41:RG:30:GLU:HG3	1.93	0.50
47:RQ:111:GLU:HA	47:RQ:114:ALA:HB3	1.94	0.50
50:RT:26:ASP:HB3	50:RT:92:GLY:H	1.76	0.50
1:XA:323:U:H2'	1:XA:324:G:O4'	2.12	0.50
10:XJ:34:VAL:HG23	10:XJ:74:ILE:HG12	1.94	0.50
16:XP:67:THR:HG22	16:XP:68:ASP:H	1.76	0.50
22:XV:50:U:H2'	22:XV:51:C:C6	2.47	0.50
36:YA:2728:U:H2'	36:YA:2729:G:C8	2.47	0.50
36:YA:546:C:H3'	36:YA:547:A:C8	2.47	0.50
42:YH:88:LEU:HA	42:YH:130:ARG:HA	1.92	0.50
42:YH:89:ILE:HG22	42:YH:162:ILE:HG23	1.94	0.50
46:YP:37:GLY:O	46:YP:41:ARG:HG2	2.12	0.50
56:YZ:103:ARG:HB2	56:YZ:138:GLU:HB3	1.94	0.50
56:YZ:52:SER:O	56:YZ:54:HIS:N	2.45	0.50
1:QA:1238:A:C5	1:QA:1303:C:O4'	2.65	0.49
1:QA:1316:G:N2	1:QA:1319:A:OP2	2.45	0.49
1:QA:65:U:H2'	1:QA:381:C:H41	1.77	0.49
20:QT:13:LEU:HD23	20:QT:13:LEU:H	1.77	0.49
36:RA:1794:U:H2'	36:RA:1795:C:H6	1.77	0.49
36:RA:2740:A:H2'	36:RA:2741:A:C8	2.47	0.49
36:RA:922:U:H2'	36:RA:923:C:C6	2.46	0.49
38:RD:25:THR:O	38:RD:27:THR:N	2.44	0.49
36:RA:2511:U:O2'	39:RE:138:PRO:O	2.23	0.49
39:RE:33:VAL:HG12	39:RE:89:ASP:HA	1.94	0.49
1:XA:1305:G:N2	1:XA:1332:A:OP2	2.44	0.49
16:XP:20:VAL:HG23	16:XP:35:LYS:HA	1.94	0.49
1:XA:134:A:N6	16:XP:25:ARG:HH12	2.09	0.49
36:YA:1264:G:H3'	36:YA:1265:A:H5''	1.94	0.49
36:YA:2168:G:C2'	36:YA:2168:G:N3	2.70	0.49
36:YA:2346:A:H5''	36:YA:2383:G:H1'	1.94	0.49
1:QA:1399:C:C2	1:QA:1502:A:N6	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:6:G:H4'	1:QA:298:A:H4'	1.94	0.49
19:QS:36:ARG:HH21	19:QS:75:ALA:HB3	1.70	0.49
28:R2:65:ASN:ND2	36:RA:111:A:O3'	2.45	0.49
36:RA:1899:G:H21	36:RA:1902:C:H41	1.60	0.49
36:RA:2065:C:H2'	36:RA:2066:C:H6	1.77	0.49
36:RA:262:A:N3	36:RA:430:G:O2'	2.32	0.49
44:RN:16:ILE:HB	44:RN:54:VAL:HG22	1.94	0.49
47:RQ:12:GLN:HG2	47:RQ:73:PRO:HD2	1.93	0.49
49:RS:87:PHE:CZ	49:RS:102:ALA:HB2	2.47	0.49
1:XA:80:G:H22	1:XA:89:U:H3	1.59	0.49
3:XC:108:ASN:ND2	3:XC:144:SER:OG	2.45	0.49
4:XD:8:VAL:HB	4:XD:22:LYS:HE2	1.94	0.49
34:Y8:26:LYS:HD3	34:Y8:47:LYS:HD3	1.94	0.49
36:YA:1980:G:H2'	36:YA:1980:G:O5'	2.13	0.49
34:Y8:31:HIS:HE1	36:YA:2422:A:N7	2.10	0.49
36:YA:2543:G:H2'	36:YA:2544:G:C8	2.47	0.49
36:YA:813:U:H2'	36:YA:814:C:C6	2.47	0.49
36:YA:994:C:OP1	51:YU:53:ARG:NH2	2.45	0.49
50:YT:28:VAL:HG12	50:YT:88:ILE:HA	1.94	0.49
1:QA:410:G:H3'	4:QD:25:ARG:HH12	1.77	0.49
36:RA:1028:A:H2'	36:RA:1029:A:H8	1.77	0.49
36:RA:140:A:C8	36:RA:1408:C:O2'	2.62	0.49
36:RA:1638:C:OP1	36:RA:2710:C:O2'	2.30	0.49
36:RA:1668:A:C8	36:RA:1674:G:C6	3.01	0.49
36:RA:2892:A:H2'	36:RA:2893:G:O4'	2.12	0.49
36:RA:910:A:H62	47:RQ:12:GLN:HA	1.76	0.49
1:XA:1342:C:H2'	1:XA:1343:G:C8	2.46	0.49
1:XA:299:G:H2'	1:XA:300:A:C8	2.47	0.49
17:XQ:57:VAL:HG12	17:XQ:76:LEU:HA	1.93	0.49
36:YA:143:C:H2'	36:YA:144:C:H6	1.77	0.49
36:YA:2394:C:OP1	46:YP:63:PRO:HD2	2.11	0.49
36:YA:581:C:H2'	36:YA:582:G:C8	2.47	0.49
36:YA:814:C:H41	46:YP:25:SER:HA	1.77	0.49
36:YA:922:U:H2'	36:YA:923:C:C6	2.47	0.49
1:QA:737:A:H2'	1:QA:738:C:C6	2.47	0.49
1:QA:946:A:H2'	1:QA:947:G:H8	1.77	0.49
10:QJ:7:LYS:HD3	10:QJ:71:LEU:HD13	1.93	0.49
36:RA:1020:A:N1	36:RA:1141:U:H2'	2.27	0.49
36:RA:1429:G:H2'	36:RA:1430:C:H6	1.78	0.49
37:RB:75:G:HO2'	56:RZ:85:HIS:HE2	1.58	0.49
1:XA:1198:G:H2'	1:XA:1199:U:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:23:LYS:HG2	6:XF:61:LEU:HD21	1.93	0.49
14:YN:4:LYS:HA	14:YN:7:ILE:HG22	1.94	0.49
39:YE:29:GLY:H	39:YE:51:PHE:HE2	1.60	0.49
1:QA:1109:C:OP2	3:QC:176:HIS:ND1	2.38	0.49
1:QA:1316:G:O2'	1:QA:1317:C:OP1	2.24	0.49
1:QA:384:G:H2'	1:QA:385:C:C6	2.48	0.49
1:QA:452:A:H62	1:QA:480:U:H3	1.59	0.49
1:QA:890:G:O2'	1:QA:906:G:O6	2.20	0.49
6:QF:62:TRP:HH2	6:QF:64:GLN:HE21	1.61	0.49
25:QY:55:U:O2'	25:QY:57:G:OP2	2.30	0.49
36:RA:1399:C:H2'	36:RA:1400:G:H8	1.77	0.49
36:RA:2308:G:HO2'	36:RA:2310:A:H2	1.61	0.49
36:RA:2783:G:H2'	36:RA:2784:C:C6	2.47	0.49
45:RO:3:GLN:CB	45:RO:4:PRO:CD	2.90	0.49
36:RA:831:G:O2'	46:RP:38:GLN:OE1	2.29	0.49
1:XA:337:C:H2'	1:XA:338:A:C8	2.47	0.49
1:XA:438:G:O2'	1:XA:494:U:O4	2.29	0.49
1:XA:973:G:O4'	10:XJ:55:LYS:HG3	2.12	0.49
1:XA:97:U:H2'	1:XA:99:C:C6	2.48	0.49
2:XB:58:ILE:HD11	2:XB:185:ILE:HD13	1.94	0.49
15:XO:87:ILE:HG22	15:XO:88:ARG:H	1.78	0.49
22:XV:28:C:H2'	22:XV:29:G:H8	1.77	0.49
36:YA:1204:A:HO2'	36:YA:1205:U:P	2.35	0.49
36:YA:1506:C:H3'	36:YA:1507:A:H5''	1.94	0.49
36:YA:1535:U:H2'	36:YA:1536:A:H8	1.76	0.49
36:YA:690:G:H2'	36:YA:691:C:C6	2.47	0.49
1:QA:1000:A:O2'	1:QA:1001:G:H5'	2.13	0.49
1:QA:173:U:H5''	1:QA:197:A:O4'	2.12	0.49
1:QA:45:U:H2'	1:QA:46:G:H8	1.76	0.49
1:QA:523:A:C2	12:QL:91:LYS:HB3	2.47	0.49
12:QL:43:VAL:HG13	12:QL:93:LEU:HD22	1.95	0.49
36:RA:1007:C:H5''	44:RN:35:ARG:NH1	2.26	0.49
36:RA:1130:U:O2'	36:RA:1131:G:O5'	2.30	0.49
36:RA:2552:U:H2'	36:RA:2554:U:OP2	2.12	0.49
36:RA:265:A:H2'	36:RA:266:G:C4'	2.42	0.49
36:RA:2821:A:OP2	48:RR:3:HIS:CE1	2.66	0.49
36:RA:639:U:H2'	36:RA:640:C:C6	2.48	0.49
36:RA:1142(A):A:H4'	44:RN:25:ARG:HH22	1.77	0.49
45:RO:86:ILE:HG22	45:RO:94:ARG:HD3	1.94	0.49
1:XA:1118:C:H1'	1:XA:1179:A:C5	2.47	0.49
1:XA:384:G:H2'	1:XA:385:C:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:427:U:OP2	1:XA:428:G:O2'	2.25	0.49
1:XA:662:G:H2'	1:XA:663:A:C8	2.48	0.49
1:XA:667:G:H4'	15:XO:51:HIS:CE1	2.48	0.49
1:XA:704:A:H61	11:XK:42:TRP:HZ2	1.59	0.49
25:XY:38:U:H2'	25:XY:39:G:H8	1.77	0.49
27:Y1:91:LYS:O	27:Y1:93:GLU:N	2.45	0.49
36:YA:1499:C:C2	36:YA:1500:G:C8	3.00	0.49
46:YP:101:VAL:HG23	46:YP:106:LEU:HD23	1.93	0.49
53:YW:73:ALA:HB3	53:YW:106:ILE:HG12	1.95	0.49
1:QA:1145:C:H4'	1:QA:1146:A:H8	1.77	0.49
4:QD:13:ARG:HB3	4:QD:38:TYR:O	2.12	0.49
36:RA:1231:G:H2'	36:RA:1232:G:H8	1.78	0.49
36:RA:1678:G:N2	36:RA:1989:G:H22	2.10	0.49
36:RA:414:C:H2'	36:RA:415:A:C8	2.48	0.49
36:RA:49:A:H61	36:RA:177:G:H2'	1.78	0.49
37:RB:13:A:N1	37:RB:69:G:O2'	2.43	0.49
40:RF:149:ASP:N	40:RF:149:ASP:OD1	2.45	0.49
45:RO:47:ILE:HG13	45:RO:48:PRO:HD2	1.95	0.49
55:RY:52:SER:HB3	55:RY:53:PRO:HD3	1.94	0.49
2:XB:71:VAL:HG23	2:XB:93:VAL:HB	1.94	0.49
3:XC:157:ILE:HD13	3:XC:166:GLU:HG2	1.93	0.49
4:XD:47:ARG:H	4:XD:47:ARG:HD3	1.78	0.49
1:XA:1360:A:OP2	14:XN:35:ARG:NH2	2.46	0.49
30:Y4:15:ILE:HG13	30:Y4:32:TYR:HD1	1.78	0.49
34:Y8:28:GLY:O	34:Y8:36:LYS:NZ	2.46	0.49
34:Y8:15:LYS:HD3	34:Y8:46:ARG:HH12	1.77	0.49
36:YA:1430:C:H2'	36:YA:1431:U:H6	1.77	0.49
36:YA:191:A:H2'	36:YA:192:C:C6	2.47	0.49
43:YI:30:LEU:HB3	43:YI:36:ALA:HB3	1.95	0.49
55:YY:84:ARG:NH1	55:YY:97:ARG:HA	2.27	0.49
36:YA:297:C:H5"	55:YY:85:VAL:HG21	1.94	0.49
56:YZ:6:LYS:HD2	56:YZ:40:ASP:HB2	1.95	0.49
1:QA:1305:G:H8	1:QA:1305:G:H5"	1.77	0.49
1:QA:539:A:H2'	1:QA:540:G:C8	2.48	0.49
1:QA:683:G:H2'	1:QA:684:A:C8	2.47	0.49
11:QK:44:SER:O	11:QK:64:ALA:CB	2.60	0.49
46:RP:85:LEU:HD13	46:RP:88:LEU:HD12	1.94	0.49
1:XA:264:U:H4'	17:XQ:63:ARG:HD3	1.94	0.49
1:XA:439:A:C5	1:XA:440:A:H1'	2.48	0.49
1:XA:860:A:H2'	1:XA:861:G:O4'	2.12	0.49
2:XB:127:ILE:O	2:XB:135:GLN:NE2	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:66:VAL:O	7:XG:70:LYS:HG3	2.12	0.49
16:XP:8:ARG:HB3	16:XP:28:ARG:HH12	1.77	0.49
19:XS:50:ALA:HB1	19:XS:57:HIS:HB3	1.94	0.49
36:YA:1153:C:H2'	36:YA:1154:G:O4'	2.13	0.49
36:YA:1265:A:H8	36:YA:1265:A:OP1	1.96	0.49
36:YA:2266:A:H4'	36:YA:2267:A:N3	2.28	0.49
36:YA:2747:G:O6	36:YA:2755:C:H5''	2.12	0.49
36:YA:626:U:O2	46:YP:105:LEU:HD22	2.12	0.49
40:YF:33:LEU:HD22	40:YF:183:VAL:HG21	1.94	0.49
43:YI:110:ASP:HB3	43:YI:112:LYS:N	2.28	0.49
56:YZ:94:GLU:H	56:YZ:95:PRO:HD3	1.78	0.49
8:QH:51:VAL:HG11	8:QH:60:ARG:HD2	1.93	0.49
19:QS:18:LYS:HD3	19:QS:31:ILE:HD11	1.95	0.49
25:QY:11:C:H2'	25:QY:12:U:C6	2.47	0.49
36:RA:1331:A:O2'	36:RA:1332:G:H8	1.96	0.49
36:RA:1636:C:H2'	36:RA:1637:A:C8	2.48	0.49
36:RA:2134:A:N6	36:RA:2157:G:O2'	2.45	0.49
36:RA:2183:C:H2'	36:RA:2184:G:H8	1.78	0.49
36:RA:2393:A:H5''	46:RP:62:LEU:HB3	1.94	0.49
36:RA:813:U:H2'	36:RA:814:C:H6	1.76	0.49
36:RA:934:G:H2'	36:RA:935:C:H6	1.78	0.49
55:RY:97:ARG:HH11	55:RY:98:VAL:HB	1.78	0.49
25:XY:25:C:H2'	25:XY:26:G:H8	1.77	0.49
36:YA:2502:G:H5''	36:YA:2503:A:H5''	1.93	0.49
36:YA:747:U:O2	36:YA:2014:A:H1'	2.13	0.49
36:YA:881:G:H8	36:YA:881:G:O5'	1.96	0.49
36:YA:888:C:H3'	36:YA:889:C:H4'	1.94	0.49
45:YO:25:LEU:HB2	45:YO:38:VAL:HG13	1.94	0.49
36:YA:1009:A:O4'	51:YU:59:ARG:NH1	2.46	0.49
1:QA:1360:A:H8	1:QA:1360:A:OP1	1.96	0.49
1:QA:1392:G:N2	1:QA:1502:A:H8	2.10	0.49
32:R6:24:GLU:OE2	32:R6:39:TYR:HE2	1.95	0.49
36:RA:1941:C:N4	36:RA:1965:C:O4'	2.46	0.49
36:RA:9:U:O4	36:RA:2629:A:N7	2.46	0.49
55:RY:39:VAL:HG12	55:RY:40:GLU:N	2.27	0.49
1:XA:1402:C:H2'	1:XA:1403:C:O4'	2.13	0.49
1:XA:298:A:H8	1:XA:298:A:OP1	1.96	0.49
1:XA:954:G:H2'	1:XA:955:U:C6	2.48	0.49
1:XA:974:A:P	14:YN:29:ARG:HH21	2.36	0.49
8:XH:101:PRO:HG2	8:XH:133:LEU:HD11	1.94	0.49
11:XK:124:LYS:HE3	11:XK:125:PHE:CE2	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:49:LEU:HD22	16:XP:73:LEU:HD22	1.94	0.49
36:YA:1316:U:H5''	36:YA:1536:A:H2	1.78	0.49
36:YA:2784:C:H2'	36:YA:2785:C:H6	1.77	0.49
36:YA:721:C:H2'	36:YA:722:A:C8	2.47	0.49
36:YA:837:C:N3	36:YA:941:A:N6	2.60	0.49
1:QA:404:U:H2'	1:QA:405:U:H6	1.77	0.48
1:QA:452:A:H2'	1:QA:453:A:C8	2.47	0.48
1:QA:736:C:H2'	1:QA:737:A:C8	2.48	0.48
12:QL:60:LEU:HD23	12:QL:60:LEU:H	1.78	0.48
20:QT:74:LYS:HG3	20:QT:75:ASN:H	1.77	0.48
28:R2:14:ARG:NH1	28:R2:66:GLU:OE2	2.46	0.48
36:RA:1430:C:H2'	36:RA:1431:U:C6	2.48	0.48
36:RA:1465:G:H5'	36:RA:1528:A:H1'	1.95	0.48
36:RA:1512:G:H2'	36:RA:1513:C:C6	2.48	0.48
36:RA:271(B):G:H4'	36:RA:271(C):U:O5'	2.13	0.48
36:RA:2728:U:H2'	36:RA:2729:G:C8	2.48	0.48
45:RO:64:ARG:HE	45:RO:83:ALA:HB3	1.77	0.48
47:RQ:135:ASP:HB3	47:RQ:137:TYR:HD1	1.77	0.48
1:XA:1320:C:H2'	1:XA:1321:C:C6	2.47	0.48
1:XA:489:C:H2'	1:XA:490:G:H8	1.77	0.48
1:XA:514:C:H2'	1:XA:515:G:C8	2.48	0.48
9:XI:112:LYS:HA	9:XI:119:ALA:HB2	1.94	0.48
10:XJ:21:GLN:HA	10:XJ:24:VAL:HG12	1.95	0.48
10:XJ:57:LYS:O	10:XJ:60:ARG:NE	2.46	0.48
20:XT:57:ARG:NH1	20:XT:102:GLY:O	2.42	0.48
36:YA:263:C:H2'	36:YA:264:C:O4'	2.13	0.48
36:YA:2783:G:H2'	36:YA:2784:C:H6	1.77	0.48
42:YH:88:LEU:CB	42:YH:130:ARG:HG2	2.43	0.48
42:YH:4:ILE:HG22	42:YH:6:ARG:H	1.78	0.48
1:QA:1009:G:C2	1:QA:1010:G:C8	3.01	0.48
1:QA:1032(A):G:H2'	1:QA:1032(B):G:C8	2.47	0.48
1:QA:1306:A:N6	1:QA:1331:G:H1'	2.28	0.48
1:QA:806:C:H2'	1:QA:807:A:C8	2.47	0.48
1:QA:860:A:H2'	1:QA:861:G:O4'	2.13	0.48
10:QJ:21:GLN:HA	10:QJ:24:VAL:HG12	1.94	0.48
1:QA:127:G:HO2'	17:QQ:2:PRO:N	2.11	0.48
36:RA:698:C:O2'	36:RA:734:A:N6	2.46	0.48
36:RA:864:G:H21	36:RA:866:A:H61	1.60	0.48
40:RF:172:TRP:CE3	40:RF:173:VAL:HG23	2.48	0.48
46:RP:144:GLU:OE1	46:RP:144:GLU:N	2.47	0.48
1:XA:1391:U:H2'	1:XA:1392:G:H8	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:19:LEU:CD1	6:XF:59:TYR:CD1	2.88	0.48
11:XK:34:ASP:HB3	11:XK:40:ILE:HD11	1.95	0.48
13:XM:97:PRO:HB3	13:XM:101:GLN:OE1	2.13	0.48
36:YA:102:G:H4'	36:YA:103:A:O5'	2.13	0.48
36:YA:1292:U:H2'	36:YA:1293:C:C6	2.48	0.48
36:YA:1291:C:H2'	36:YA:1292:U:H6	1.79	0.48
36:YA:1668:A:O2'	36:YA:1674:G:N7	2.44	0.48
36:YA:1688:U:H1'	36:YA:1701:A:C6	2.47	0.48
36:YA:2329:G:H2'	36:YA:2330:G:C8	2.47	0.48
36:YA:2637:U:H2'	36:YA:2638:G:O4'	2.13	0.48
36:YA:2789:C:H6	36:YA:2789:C:C5'	2.26	0.48
37:YB:37:C:O2	49:YS:95:HIS:NE2	2.37	0.48
39:YE:14:ILE:O	39:YE:21:VAL:HG12	2.12	0.48
34:Y8:25:MET:HG3	46:YP:64:LYS:HB2	1.94	0.48
48:YR:67:LEU:HD23	48:YR:76:VAL:HG21	1.95	0.48
1:QA:368:U:OP1	43:YI:91:SER:OG	2.30	0.48
1:QA:555:C:H2'	1:QA:556:C:H6	1.76	0.48
1:QA:892:A:H2'	1:QA:893:C:C6	2.48	0.48
30:R4:23:GLU:C	30:R4:25:TYR:H	2.17	0.48
36:RA:1013:C:O2'	36:RA:1014:U:H5'	2.13	0.48
36:RA:1499:C:C2	36:RA:1500:G:C8	3.02	0.48
36:RA:2287:A:N6	36:RA:2344:U:H3	2.08	0.48
1:XA:1062:U:H2'	1:XA:1063:C:C6	2.48	0.48
1:XA:1229:A:OP2	13:XM:114:ARG:NH1	2.47	0.48
3:XC:150:LYS:HB3	3:XC:201:TYR:HB2	1.94	0.48
1:XA:1492:A:OP1	12:XL:47:LYS:N	2.45	0.48
36:YA:1084:A:H5'	36:YA:1085:A:OP2	2.14	0.48
36:YA:1086:A:OP1	36:YA:1104:C:O2'	2.32	0.48
36:YA:389:G:N1	46:YP:71:VAL:HG12	2.28	0.48
36:YA:686:G:H21	36:YA:788:A:H61	1.59	0.48
41:YG:129:GLY:HA2	41:YG:169:ALA:HB2	1.94	0.48
45:YO:36:GLY:HA3	45:YO:109:LYS:HG3	1.95	0.48
46:YP:9:ASN:HD22	46:YP:11:GLY:H	1.61	0.48
48:YR:104:ARG:HD2	48:YR:111:LEU:HD21	1.93	0.48
1:QA:877:C:H2'	1:QA:878:G:H8	1.78	0.48
5:QE:7:GLU:HB3	5:QE:112:LEU:HD22	1.94	0.48
1:QA:750:G:N3	15:QO:23:GLY:HA3	2.28	0.48
15:QO:87:ILE:HG22	15:QO:88:ARG:N	2.27	0.48
30:R4:37:SER:OG	30:R4:41:PRO:HG2	2.13	0.48
36:RA:1384:A:N3	36:RA:1405:U:H1'	2.29	0.48
36:RA:1971:A:OP2	38:RD:242:ARG:NH2	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:2695:C:H2'	36:RA:2696:U:C6	2.49	0.48
36:RA:521:G:H2'	36:RA:522:G:H8	1.78	0.48
36:RA:760:G:H2'	36:RA:761:A:O4'	2.14	0.48
42:RH:107:VAL:HG11	42:RH:151:ILE:HG21	1.95	0.48
50:RT:111:ARG:C	50:RT:113:LYS:H	2.15	0.48
53:RW:10:VAL:HG13	53:RW:101:SER:HB2	1.96	0.48
56:RZ:30:ASN:ND2	56:RZ:33:LEU:HB3	2.28	0.48
1:XA:162:A:H2	1:XA:348:G:H4'	1.79	0.48
1:XA:224:C:H2'	1:XA:225:C:H6	1.78	0.48
1:XA:22:G:H4'	1:XA:885:G:C8	2.48	0.48
1:XA:452:A:H2'	1:XA:453:A:C8	2.48	0.48
2:XB:174:VAL:O	2:XB:178:ARG:HG2	2.13	0.48
2:XB:178:ARG:NH2	8:XH:74:PRO:HB3	2.27	0.48
3:XC:58:GLU:HB2	3:XC:65:ALA:HB3	1.94	0.48
5:XE:42:GLY:HA3	5:XE:66:MET:HG2	1.96	0.48
10:XJ:78:ASN:HB2	10:XJ:81:THR:HG23	1.95	0.48
36:YA:1278:A:H2'	36:YA:1279:G:H8	1.78	0.48
36:YA:1570:A:H2'	36:YA:1571:A:C8	2.49	0.48
36:YA:2455:G:H2'	36:YA:2456:C:H6	1.79	0.48
36:YA:2533:A:OP1	36:YA:2665:A:O2'	2.24	0.48
36:YA:463:G:N2	36:YA:466:A:OP2	2.39	0.48
36:YA:624:C:H1'	36:YA:657:U:H5'	1.94	0.48
37:YB:32:C:C4	37:YB:51:G:N2	2.81	0.48
1:QA:1366:C:H2'	1:QA:1367:C:C6	2.48	0.48
1:QA:7:G:H5'	1:QA:298:A:O4'	2.13	0.48
9:QI:42:ARG:NH2	9:QI:75:ASP:OD1	2.26	0.48
27:R1:8:SER:HB3	27:R1:66:HIS:CD2	2.48	0.48
31:R5:20:ARG:HA	31:R5:23:HIS:ND1	2.28	0.48
1:XA:1359:C:H3'	14:XN:35:ARG:HH21	1.79	0.48
1:XA:345:C:H4'	1:XA:346:G:O5'	2.13	0.48
1:XA:593:G:H1	1:XA:646:U:H3	1.60	0.48
1:XA:714:G:H2'	1:XA:715:A:H8	1.79	0.48
1:XA:1104:G:H4'	2:XB:111:ARG:NH1	2.28	0.48
1:XA:9:G:H5''	5:XE:126:ARG:HE	1.78	0.48
8:XH:91:ARG:NE	17:XQ:32:TYR:O	2.47	0.48
36:YA:1027:A:C2	36:YA:2488:A:H5'	2.49	0.48
55:YY:81:LYS:HD3	55:YY:97:ARG:N	2.27	0.48
56:YZ:112:ARG:HG3	56:YZ:113:ALA:N	2.28	0.48
1:QA:411:A:C8	1:QA:413:G:H1'	2.48	0.48
1:QA:559:A:H4'	1:QA:560:U:H3'	1.95	0.48
4:QD:79:PHE:HE2	4:QD:204:ILE:HD13	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:43:SER:CB	11:QK:68:ALA:N	2.74	0.48
36:RA:330:A:H2	36:RA:1210:A:O2'	1.96	0.48
36:RA:2728:U:H2'	36:RA:2729:G:H8	1.78	0.48
36:RA:2743:C:OP2	36:RA:2755:C:N4	2.44	0.48
36:RA:581:C:H2'	36:RA:582:G:C8	2.48	0.48
39:RE:65:GLY:HA2	39:RE:70:ALA:HB1	1.95	0.48
41:RG:106:LEU:HA	41:RG:110:ALA:HB3	1.96	0.48
46:RP:91:PHE:CE2	46:RP:95:VAL:HG22	2.45	0.48
47:RQ:24:GLY:H	47:RQ:101:ARG:HD2	1.79	0.48
36:RA:2319:G:O6	49:RS:4:LEU:HB2	2.13	0.48
1:XA:1119:C:H2'	1:XA:1120:G:H8	1.78	0.48
4:XD:170:VAL:HG22	4:XD:171:GLY:H	1.78	0.48
10:XJ:32:ALA:HB3	10:XJ:76:ASN:HB2	1.96	0.48
11:XK:18:ARG:HB3	11:XK:33:THR:HG23	1.95	0.48
11:XK:108:ILE:O	18:XR:87:ARG:N	2.43	0.48
23:XW:63:G:H2'	23:XW:64:C:C6	2.49	0.48
30:Y4:40:HIS:N	30:Y4:41:PRO:HD3	2.26	0.48
36:YA:31:C:O2'	36:YA:1238:G:H5'	2.14	0.48
36:YA:1557:C:OP2	36:YA:1558:A:O2'	2.25	0.48
50:YT:106:SER:HA	50:YT:110:ILE:HD11	1.96	0.48
21:QU:5:ASP:O	21:QU:11:GLY:HA3	2.12	0.48
34:R8:61:LEU:HD22	36:RA:593:G:H4'	1.96	0.48
36:RA:1048:A:N1	42:RH:2:SER:OG	2.36	0.48
36:RA:856:C:O2'	36:RA:857:C:OP1	2.23	0.48
37:RB:14:U:O3'	37:RB:107:U:O2'	2.27	0.48
37:RB:15:A:H5'	37:RB:16:G:C8	2.49	0.48
39:RE:81:ILE:HB	39:RE:84:PHE:HB3	1.95	0.48
1:XA:360:A:H2'	1:XA:361:G:C8	2.49	0.48
3:XC:150:LYS:NZ	3:XC:152:ILE:HD11	2.29	0.48
36:YA:593:G:H2'	36:YA:594:U:C6	2.48	0.48
36:YA:722:A:H2'	36:YA:723:G:C8	2.49	0.48
38:YD:85:ASP:OD2	38:YD:88:ARG:NH1	2.47	0.48
42:YH:83:TYR:CE1	42:YH:138:LYS:HB2	2.49	0.48
42:YH:8:PRO:O	42:YH:69:ARG:NE	2.36	0.48
26:Y0:7:LEU:HD22	47:YQ:83:MET:HG2	1.96	0.48
1:QA:113:G:H2'	1:QA:114:U:H6	1.79	0.48
1:QA:1525:G:OP1	11:QK:120:ARG:NH2	2.43	0.48
1:QA:735:C:H2'	1:QA:736:C:H6	1.79	0.48
1:QA:864:A:H2'	1:QA:865:A:C8	2.49	0.48
13:QM:60:VAL:HG13	13:QM:64:TRP:HE1	1.79	0.48
15:QO:11:VAL:HG21	15:QO:34:LEU:HD22	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:QW:12:U:O2	23:QW:24:G:N2	2.43	0.48
34:R8:29:LYS:HD2	34:R8:44:LYS:CB	2.43	0.48
34:R8:64:TYR:HB3	36:RA:625:G:P	2.54	0.48
36:RA:1103:A:H5''	36:RA:1104:C:H5	1.79	0.48
36:RA:1598:C:H2'	36:RA:1599:C:H6	1.79	0.48
36:RA:2859:G:H2'	36:RA:2860:A:C8	2.49	0.48
41:RG:9:ARG:O	41:RG:13:GLU:HG2	2.14	0.48
1:XA:477:G:H2'	1:XA:478:A:H8	1.78	0.48
2:XB:24:TRP:HZ2	2:XB:29:ALA:HB2	1.78	0.48
36:YA:1086:A:H4'	36:YA:1103:A:H62	1.79	0.48
36:YA:1516:U:H2'	36:YA:1517:G:C8	2.47	0.48
36:YA:1654:A:H2'	36:YA:1655:A:H8	1.79	0.48
36:YA:330:A:HO2'	36:YA:331:A:H8	1.61	0.48
36:YA:579:G:H2'	36:YA:580:C:C6	2.49	0.48
36:YA:78:A:H2'	36:YA:79:G:C8	2.47	0.48
36:YA:910:A:H62	47:YQ:12:GLN:HA	1.78	0.48
42:YH:87:LEU:HD11	42:YH:145:ALA:HA	1.94	0.48
51:YU:102:GLU:OE2	52:YV:13:ARG:NH2	2.47	0.48
1:QA:1010:G:H2'	1:QA:1011:G:H8	1.79	0.48
1:QA:986:A:H2'	1:QA:987:G:C8	2.48	0.48
1:QA:986:A:H4'	19:QS:55:LYS:HG3	1.94	0.48
4:QD:18:LYS:HE3	4:QD:31:CYS:SG	2.53	0.48
19:QS:3:ARG:HG3	30:R4:64:GLY:HA3	1.96	0.48
36:RA:1667:G:C8	36:RA:1667:G:C5'	2.88	0.48
1:XA:1095:U:P	1:XA:1108:G:H1	2.37	0.48
1:XA:1263:C:H2'	1:XA:1264:C:C6	2.49	0.48
1:XA:1313:U:H2'	1:XA:1314:C:H6	1.79	0.48
1:XA:1315:U:O2'	1:XA:1360:A:O2'	2.25	0.48
1:XA:41:G:H2'	1:XA:42:G:H8	1.77	0.48
1:XA:624:C:H2'	1:XA:625:G:H8	1.77	0.48
2:XB:55:PHE:CD1	2:XB:221:LEU:HD22	2.49	0.48
1:XA:1191:A:OP1	3:XC:3:ASN:HB2	2.14	0.48
38:YD:71:ASP:OD2	38:YD:103:ARG:NH2	2.43	0.48
40:YF:24:LEU:HD23	40:YF:115:ALA:HA	1.95	0.48
40:YF:148:LEU:HD22	40:YF:154:VAL:HG21	1.96	0.48
50:YT:6:LEU:O	50:YT:10:VAL:HG23	2.14	0.48
1:QA:115:G:H4'	1:QA:116:A:O5'	2.13	0.48
1:QA:143:A:H2	1:QA:220:G:H1	1.62	0.48
25:QY:14:A:N6	25:QY:15:G:H21	2.12	0.48
33:R7:49:ARG:NH1	36:RA:128:C:C4'	2.77	0.48
36:RA:1570:A:H2'	36:RA:1571:A:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:1709:U:H2'	36:RA:1710:C:H6	1.78	0.48
36:RA:1756:G:H4'	36:RA:1758:G:O4'	2.14	0.48
36:RA:1935:G:H1'	36:RA:1964:G:N2	2.29	0.48
36:RA:2131:G:H4'	36:RA:2132:U:H4'	1.96	0.48
36:RA:2693:A:H2'	36:RA:2694:G:H8	1.79	0.48
36:RA:2704:C:H2'	36:RA:2705:A:O4'	2.14	0.48
36:RA:2836:U:H2'	36:RA:2837:G:H8	1.78	0.48
36:RA:1815:A:P	38:RD:54:ARG:HH22	2.37	0.48
50:RT:50:ILE:HG13	50:RT:99:LEU:HD12	1.96	0.48
56:RZ:99:TYR:HB3	56:RZ:123:ASP:HB2	1.96	0.48
56:RZ:91:LEU:HD12	56:RZ:130:PRO:HB3	1.96	0.48
1:XA:946:A:H2'	1:XA:947:G:H8	1.75	0.48
7:XG:57:GLU:HB3	7:XG:60:LYS:HG2	1.95	0.48
15:XO:45:VAL:HG23	15:XO:46:HIS:CD2	2.49	0.48
30:Y4:47:GLN:N	30:Y4:47:GLN:OE1	2.46	0.48
36:YA:1204:A:H1'	36:YA:1206:G:C5	2.49	0.48
36:YA:1727:U:H2'	36:YA:1728:G:O4'	2.13	0.48
36:YA:602:G:HO2'	36:YA:604:G:HO2'	1.61	0.48
44:YN:67:LEU:O	44:YN:88:GLU:HG3	2.14	0.48
53:YW:45:TYR:CZ	53:YW:49:LYS:HD2	2.48	0.48
1:QA:1286:A:H2'	1:QA:1287:A:H4'	1.96	0.47
1:QA:17:U:H2'	1:QA:18:C:H6	1.79	0.47
1:QA:20:U:H2'	1:QA:21:G:O4'	2.14	0.47
36:RA:83:G:N2	36:RA:103:A:OP2	2.36	0.47
36:RA:1206:G:H2'	36:RA:1207:C:H6	1.79	0.47
36:RA:2348:U:O4	36:RA:2382:G:C2	2.67	0.47
36:RA:2404:C:H2'	36:RA:2405:G:O4'	2.13	0.47
36:RA:374:A:H1'	36:RA:401:A:N6	2.29	0.47
37:RB:94:C:H2'	37:RB:95:U:C6	2.49	0.47
52:RV:72:VAL:HG13	52:RV:85:LYS:HB3	1.94	0.47
55:RY:8:LYS:HG2	55:RY:9:LYS:H	1.79	0.47
55:RY:99:CYS:SG	55:RY:100:ALA:N	2.87	0.47
1:XA:320:C:H2'	1:XA:321:A:C8	2.49	0.47
12:XL:32:PHE:HE1	12:XL:86:ARG:HG3	1.79	0.47
32:Y6:25:LYS:HG3	34:Y8:34:TRP:CZ2	2.48	0.47
36:YA:1321:A:H2'	36:YA:1322:A:H8	1.78	0.47
36:YA:70:G:H21	36:YA:71:A:H62	1.62	0.47
49:YS:66:ALA:HA	49:YS:69:VAL:HG12	1.95	0.47
50:YT:23:ARG:HB2	50:YT:24:PRO:HD2	1.96	0.47
1:QA:1149:C:H2'	1:QA:1150:U:H6	1.78	0.47
1:QA:261:U:OP2	20:QT:79:ARG:NH2	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:936:C:C2	1:QA:937:A:C8	3.02	0.47
8:QH:20:TYR:HE2	8:QH:75:ARG:HD2	1.79	0.47
11:QK:28:THR:O	11:QK:45:GLY:HA3	2.14	0.47
36:RA:17:G:H4'	51:RU:25:TRP:NE1	2.29	0.47
36:RA:689:A:H2'	36:RA:690:G:C8	2.50	0.47
39:RE:92:THR:HG23	39:RE:94:GLU:H	1.79	0.47
1:XA:1318:A:H4'	19:XS:11:VAL:HG21	1.96	0.47
1:XA:1320:C:C2	19:XS:72:GLY:HA3	2.49	0.47
36:YA:1571:A:H2'	36:YA:1572:A:C8	2.49	0.47
36:YA:2823:A:OP1	39:YE:113:PHE:HB2	2.13	0.47
36:YA:582:G:OP1	51:YU:14:HIS:ND1	2.40	0.47
36:YA:671:C:H2'	36:YA:672:C:H6	1.78	0.47
36:YA:2822:G:OP1	39:YE:159:HIS:NE2	2.46	0.47
41:YG:9:ARG:O	41:YG:13:GLU:HG2	2.13	0.47
34:Y8:13:ARG:HB3	46:YP:63:PRO:HB3	1.96	0.47
47:YQ:4:PRO:HG3	47:YQ:69:PHE:HE2	1.79	0.47
50:YT:111:ARG:O	50:YT:112:ARG:HG2	2.14	0.47
52:YV:52:VAL:HG23	52:YV:55:ALA:H	1.78	0.47
1:QA:1305:G:N2	1:QA:1331:G:H2'	2.29	0.47
1:QA:452:A:O2'	1:QA:453:A:O4'	2.32	0.47
28:R2:7:ARG:HH12	36:RA:101:G:H2'	1.78	0.47
33:R7:10:ARG:NH1	36:RA:771:G:OP1	2.47	0.47
36:RA:1512:G:H2'	36:RA:1513:C:H6	1.78	0.47
36:RA:1571:A:H2'	36:RA:1572:A:H8	1.78	0.47
36:RA:2037:G:H2'	36:RA:2038:G:C8	2.50	0.47
36:RA:390:A:H4'	36:RA:391:G:H5'	1.95	0.47
36:RA:638:G:H2'	36:RA:639:U:C6	2.49	0.47
36:RA:813:U:H2'	36:RA:814:C:C6	2.49	0.47
37:RB:48:A:H2'	37:RB:49:C:C6	2.49	0.47
50:RT:24:PRO:HD3	50:RT:52:ILE:HG21	1.95	0.47
55:RY:81:LYS:HD2	55:RY:97:ARG:HD2	1.95	0.47
1:XA:186:C:H2'	1:XA:186(A):C:H6	1.79	0.47
2:XB:7:VAL:HG22	2:XB:217:ARG:HH11	1.79	0.47
5:XE:83:GLU:HG2	5:XE:88:LYS:HB2	1.97	0.47
36:YA:1853:A:H2'	36:YA:1854:A:H8	1.80	0.47
36:YA:2838:G:C4	36:YA:2839:G:C8	3.02	0.47
36:YA:698:C:O2'	36:YA:734:A:N6	2.47	0.47
42:YH:126:PRO:CB	42:YH:130:ARG:H	2.25	0.47
1:QA:1354:C:H2'	1:QA:1355:G:H8	1.79	0.47
1:QA:712:A:H2'	1:QA:713:G:C8	2.49	0.47
14:QN:29:ARG:HD3	14:QN:40:CYS:SG	2.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:QY:14:A:N7	25:QY:15:G:N2	2.62	0.47
36:RA:1268:A:H2'	36:RA:1269:A:O4'	2.14	0.47
36:RA:1406:U:H2'	36:RA:1407:C:C6	2.49	0.47
36:RA:1266:G:O2'	36:RA:2012:G:O6	2.25	0.47
36:RA:2863:C:H2'	36:RA:2864:G:H8	1.79	0.47
38:RD:108:PRO:HB3	38:RD:143:HIS:HE1	1.79	0.47
39:RE:114:ALA:HB3	39:RE:160:TYR:HB3	1.97	0.47
1:XA:1037:C:H2'	1:XA:1038:C:H6	1.78	0.47
1:XA:1074:G:H2'	1:XA:1075:C:C6	2.49	0.47
1:XA:411:A:N9	1:XA:413:G:H1'	2.29	0.47
1:XA:41:G:H2'	1:XA:42:G:C8	2.50	0.47
3:XC:53:ALA:HB2	3:XC:115:LEU:CD1	2.45	0.47
10:XJ:26:ALA:HA	10:XJ:29:ARG:HG2	1.95	0.47
1:XA:966:G:C2	22:XV:34:C:H5'	2.50	0.47
36:YA:1677:A:H2'	36:YA:1678:G:O4'	2.15	0.47
36:YA:2105:C:H2'	36:YA:2106:G:C8	2.50	0.47
36:YA:2688:U:H5	36:YA:2720:U:OP2	1.97	0.47
36:YA:796:C:H2'	36:YA:797:C:H6	1.78	0.47
36:YA:881:G:H3'	36:YA:882:G:C8	2.49	0.47
51:YU:8:VAL:HG12	51:YU:11:ARG:NH2	2.30	0.47
54:YX:57:LEU:HD11	54:YX:78:LYS:HD2	1.95	0.47
15:QO:33:THR:HG21	15:QO:85:LEU:HD23	1.97	0.47
27:R1:18:ILE:HG12	27:R1:37:ILE:HG12	1.96	0.47
36:RA:1412:A:H2'	36:RA:1413:G:C8	2.50	0.47
36:RA:1588:C:H2'	36:RA:1589:C:H6	1.80	0.47
36:RA:175:G:O2'	36:RA:176:G:H5'	2.15	0.47
39:RE:36:ARG:HG2	39:RE:47:VAL:HG12	1.97	0.47
34:R8:25:MET:HG3	46:RP:64:LYS:CB	2.43	0.47
56:RZ:4:ARG:HG2	56:RZ:60:GLU:HB2	1.96	0.47
1:XA:262:A:H2'	1:XA:263:A:C8	2.50	0.47
12:XL:24:VAL:HG13	12:XL:98:TYR:CE1	2.46	0.47
24:XX:6:G:O2'	24:XX:7:G:N7	2.44	0.47
26:Y0:23:VAL:HG22	26:Y0:38:VAL:HG22	1.97	0.47
31:Y5:3:LYS:HD2	36:YA:2611:U:O2	2.14	0.47
36:YA:2001:A:H2'	36:YA:2002:G:H8	1.80	0.47
36:YA:270(U):C:H2'	36:YA:270(V):G:H8	1.80	0.47
47:YQ:19:GLY:O	47:YQ:98:LYS:HD3	2.15	0.47
48:YR:58:GLY:HA2	48:YR:80:PHE:CE1	2.49	0.47
1:QA:927:G:H1	1:QA:1390:U:H3	1.61	0.47
12:QL:32:PHE:HE1	12:QL:86:ARG:HG3	1.79	0.47
36:RA:128:C:H2'	36:RA:129:C:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:2811:G:OP1	39:RE:61:ARG:N	2.45	0.47
36:RA:39:C:O2	40:RF:46:ARG:NH2	2.48	0.47
36:RA:820:A:H4'	36:RA:836:G:N2	2.30	0.47
46:RP:97:PRO:O	46:RP:98:GLU:HG2	2.13	0.47
47:RQ:56:ARG:NH2	47:RQ:59:ARG:HD3	2.29	0.47
50:RT:107:ASP:O	50:RT:110:ILE:HG12	2.15	0.47
36:RA:297:C:H5''	55:RY:85:VAL:HG21	1.97	0.47
1:XA:1306:A:N6	1:XA:1331:G:O2'	2.46	0.47
1:XA:173:U:H5''	1:XA:197:A:O4'	2.14	0.47
1:XA:603:U:H2'	1:XA:604:G:H8	1.79	0.47
9:XI:121:ARG:NH1	9:XI:122:ALA:O	2.48	0.47
23:XW:64:C:H2'	23:XW:65:U:C5	2.49	0.47
32:Y6:25:LYS:HG3	34:Y8:34:TRP:HZ2	1.80	0.47
35:Y9:27:CYS:SG	35:Y9:28:GLU:N	2.88	0.47
36:YA:2050:C:H2'	36:YA:2051:A:C8	2.50	0.47
36:YA:2086:U:H2'	36:YA:2087:G:C8	2.50	0.47
36:YA:2649:U:H2'	36:YA:2650:U:H6	1.80	0.47
37:YB:43:C:O2	41:YG:95:ARG:NH2	2.47	0.47
48:YR:34:ILE:HG22	48:YR:36:THR:HG23	1.96	0.47
1:QA:222:U:H2'	1:QA:223:U:C6	2.50	0.47
1:QA:464:G:C6	1:QA:466:C:H5'	2.50	0.47
1:QA:748:C:H1'	1:QA:749:C:H5	1.80	0.47
13:QM:40:ASN:O	13:QM:43:THR:HG22	2.14	0.47
1:QA:719:C:O2'	18:QR:49:LYS:HB3	2.14	0.47
18:QR:37:VAL:HG22	18:QR:78:LEU:HB3	1.95	0.47
36:RA:218:A:C2	36:RA:235:U:H4'	2.50	0.47
36:RA:2243:U:H2'	36:RA:2244:U:C6	2.50	0.47
36:RA:2599:G:OP2	38:RD:236:GLY:N	2.47	0.47
36:RA:2821:A:O2'	36:RA:2826:A:N1	2.42	0.47
36:RA:2847:U:OP1	50:RT:98:LYS:HE2	2.13	0.47
36:RA:389:G:N1	46:RP:71:VAL:HG12	2.30	0.47
41:RG:11:TYR:O	41:RG:16:ARG:HB2	2.13	0.47
49:RS:108:GLY:O	49:RS:110:LEU:HD12	2.15	0.47
50:RT:111:ARG:O	50:RT:112:ARG:HG3	2.14	0.47
1:XA:1101:A:H4'	1:XA:1102:A:O5'	2.14	0.47
1:XA:186:C:H2'	1:XA:186(A):C:C6	2.50	0.47
1:XA:371:G:H21	1:XA:373:A:N6	2.11	0.47
1:XA:939:G:H2'	1:XA:940:C:C6	2.50	0.47
1:XA:1111:A:N1	3:XC:177:THR:HG22	2.30	0.47
20:XT:22:ARG:O	20:XT:26:ASN:ND2	2.48	0.47
31:Y5:33:CYS:HB2	31:Y5:40:LYS:HD3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:2531:A:H61	36:YA:2662:A:H61	1.62	0.47
30:Y4:26:SER:OG	41:YG:143:GLU:OE2	2.26	0.47
1:QA:1255:G:O2'	1:QA:1258:G:H1'	2.15	0.47
1:QA:1496:C:H2'	1:QA:1497:G:C8	2.50	0.47
1:QA:643:C:H2'	1:QA:644:G:H8	1.80	0.47
12:QL:38:THR:O	12:QL:79:GLU:HG3	2.14	0.47
14:QN:40:CYS:HB3	14:QN:43:CYS:HB2	1.97	0.47
24:QX:7:G:H2'	24:QX:8:A:C8	2.50	0.47
36:RA:1205:U:C4	40:RF:171:PRO:HA	2.49	0.47
36:RA:1321:A:C4	36:RA:1322:A:C8	3.03	0.47
51:RU:46:ALA:O	51:RU:50:ARG:HB2	2.14	0.47
36:RA:64:A:O3'	54:RX:71:GLY:HA3	2.15	0.47
55:RY:97:ARG:NH1	55:RY:98:VAL:HB	2.30	0.47
1:XA:1167:A:H8	1:XA:1167:A:OP1	1.97	0.47
1:XA:851:G:H2'	1:XA:852:G:C8	2.49	0.47
3:XC:84:ILE:HG13	3:XC:101:LEU:HD23	1.97	0.47
8:XH:20:TYR:CE2	8:XH:75:ARG:HD2	2.50	0.47
1:XA:390:C:O3'	16:XP:28:ARG:NH2	2.48	0.47
30:Y4:12:ALA:HB1	30:Y4:29:PRO:HA	1.96	0.47
36:YA:2712:U:OP1	36:YA:2714:G:H4'	2.15	0.47
36:YA:557:U:H2'	36:YA:558:G:C8	2.48	0.47
39:YE:60:ASN:CG	39:YE:62:PRO:HD2	2.34	0.47
52:YV:40:LEU:HG	52:YV:47:VAL:HG12	1.96	0.47
1:QA:1292:U:H2'	1:QA:1293:G:H8	1.80	0.47
1:QA:980:C:H5''	1:QA:981:U:C5	2.50	0.47
3:QC:120:VAL:O	3:QC:124:ILE:HG12	2.15	0.47
3:QC:150:LYS:HG3	3:QC:169:ALA:HB2	1.97	0.47
4:QD:200:GLU:O	4:QD:204:ILE:HG12	2.14	0.47
4:QD:62:GLN:HE22	4:QD:65:ARG:HH21	1.62	0.47
9:QI:126:SER:C	9:QI:128:ARG:H	2.18	0.47
19:QS:9:VAL:C	19:QS:11:VAL:N	2.67	0.47
28:R2:22:GLU:HB3	28:R2:26:ARG:HH12	1.78	0.47
30:R4:11:PRO:HG3	30:R4:25:TYR:CE1	2.50	0.47
36:RA:859:G:H4'	36:RA:860:U:O2	2.15	0.47
47:RQ:85:LYS:HG2	47:RQ:86:GLY:H	1.80	0.47
53:RW:9:TYR:H	53:RW:102:HIS:CE1	2.33	0.47
1:XA:1469:G:H2'	1:XA:1470:G:H8	1.80	0.47
1:XA:486:U:H2'	1:XA:487:A:H8	1.80	0.47
1:XA:738:C:H2'	1:XA:739:C:C6	2.49	0.47
2:XB:101:MET:HA	2:XB:108:ILE:HG13	1.96	0.47
15:XO:87:ILE:HG22	15:XO:88:ARG:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Y7:1:MET:CE	33:Y7:3:ARG:HH12	2.27	0.47
36:YA:824:A:H1'	36:YA:2358:G:N7	2.30	0.47
36:YA:948:G:H1	36:YA:969:U:H3	1.62	0.47
38:YD:121:PRO:HB3	38:YD:135:PHE:HE2	1.79	0.47
47:YQ:35:VAL:HG21	56:YZ:81:ARG:HD2	1.95	0.47
53:YW:14:PRO:O	53:YW:18:ARG:HG3	2.15	0.47
1:QA:1109:C:C2	1:QA:1110:A:C8	3.03	0.47
1:QA:1401:G:H2'	1:QA:1402:C:O4'	2.15	0.47
1:QA:323:U:H2'	1:QA:324:G:O4'	2.14	0.47
26:R0:21:LEU:HD21	26:R0:41:ARG:NH2	2.30	0.47
31:R5:4:HIS:CE1	36:RA:2577:A:H1'	2.45	0.47
32:R6:10:LEU:HD21	34:R8:35:GLN:NE2	2.27	0.47
36:RA:1188:U:H4'	52:RV:79:VAL:HG22	1.97	0.47
36:RA:2439:A:H5'	36:RA:2439:A:C8	2.50	0.47
36:RA:978:G:O4'	36:RA:1001:A:H2	1.98	0.47
1:XA:636:U:H2'	1:XA:637:G:H8	1.80	0.47
27:Y1:78:LYS:HE3	36:YA:270(I):G:H21	1.80	0.47
36:YA:1063:G:H2'	36:YA:1064:C:C6	2.50	0.47
36:YA:1270:C:H5''	36:YA:1271:G:H5'	1.96	0.47
36:YA:1287:A:N7	48:YR:107:ASP:HB2	2.29	0.47
36:YA:1694:C:H4'	36:YA:1695:G:O5'	2.15	0.47
36:YA:1885:A:H3'	36:YA:1886:C:H6	1.80	0.47
36:YA:1899:G:H21	36:YA:1902:C:N4	2.09	0.47
36:YA:573:G:N1	36:YA:2031:A:OP2	2.32	0.47
36:YA:2475:C:O2'	36:YA:2477:C:OP2	2.30	0.47
36:YA:836:G:H2'	36:YA:837:C:H6	1.80	0.47
44:YN:30:ILE:HD13	44:YN:99:LEU:HD21	1.96	0.47
50:YT:109:GLU:HG3	50:YT:112:ARG:HH12	1.80	0.47
55:YY:81:LYS:HD3	55:YY:97:ARG:HB3	1.97	0.47
1:QA:412:A:H4'	1:QA:413:G:O5'	2.15	0.47
1:QA:676:A:H2'	1:QA:677:U:H6	1.79	0.47
11:QK:31:THR:HA	11:QK:42:TRP:CB	2.45	0.47
11:QK:84:VAL:HG21	11:QK:95:ILE:HD11	1.95	0.47
18:QR:22:VAL:O	18:QR:25:THR:HG22	2.15	0.47
30:R4:22:ILE:HG13	30:R4:23:GLU:N	2.30	0.47
36:RA:1417:C:H2'	36:RA:1418:G:O4'	2.15	0.47
36:RA:177:G:H3'	36:RA:178:G:H8	1.80	0.47
36:RA:1790:C:H5''	36:RA:1791:A:OP1	2.15	0.47
36:RA:185:U:H2'	36:RA:186:G:H8	1.80	0.47
36:RA:587:C:OP2	46:RP:21:ARG:NH1	2.46	0.47
36:RA:1814:G:H4'	38:RD:51:VAL:HG21	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:RT:35:LYS:HG3	50:RT:37:GLY:H	1.79	0.47
1:XA:281:G:OP2	1:XA:281:G:H8	1.98	0.47
1:XA:7:G:H5'	1:XA:298:A:O4'	2.14	0.47
36:YA:1412:A:H2'	36:YA:1413:G:H8	1.80	0.47
36:YA:2610:C:H4'	36:YA:2611:U:OP2	2.15	0.47
36:YA:637:A:H4'	36:YA:638:G:O5'	2.15	0.47
36:YA:729:G:O2'	36:YA:763:G:H4'	2.15	0.47
36:YA:836:G:H2'	36:YA:837:C:C6	2.50	0.47
55:YY:19:LYS:HG3	55:YY:20:TYR:CD1	2.50	0.47
3:QC:95:THR:HG22	3:QC:97:LYS:H	1.79	0.46
26:R0:32:ARG:H	26:R0:35:ASN:ND2	2.13	0.46
36:RA:2291:U:H2'	36:RA:2292:C:H6	1.79	0.46
36:RA:2698:U:H2'	36:RA:2699:C:C6	2.50	0.46
36:RA:576:U:H2'	36:RA:577:G:C8	2.50	0.46
36:RA:74:A:H4'	36:RA:75:G:O5'	2.15	0.46
36:RA:970:C:H2'	36:RA:971:C:C6	2.50	0.46
39:RE:76:ARG:HD3	39:RE:195:LEU:HD22	1.97	0.46
36:RA:662:G:H5'	46:RP:15:ARG:HA	1.96	0.46
47:RQ:58:PHE:CD2	47:RQ:61:GLY:HA3	2.50	0.46
56:RZ:6:LYS:HG3	56:RZ:7:ALA:H	1.80	0.46
1:XA:1250:A:H2	1:XA:1370:G:H1'	1.80	0.46
1:XA:613:C:H2'	1:XA:614:A:H8	1.80	0.46
1:XA:827:U:H5	1:XA:872:A:N1	2.13	0.46
4:XD:166:LYS:HE2	4:XD:178:VAL:CG1	2.45	0.46
25:XY:19:G:C6	36:YA:881:G:H4'	2.50	0.46
36:YA:2008:C:H2'	36:YA:2009:G:C8	2.50	0.46
36:YA:273(F):C:H2'	36:YA:274:G:H5''	1.98	0.46
36:YA:646:A:H3'	36:YA:647:G:H8	1.80	0.46
36:YA:671:C:H2'	36:YA:672:C:C6	2.49	0.46
1:QA:332:G:C2	1:QA:333:G:C8	3.03	0.46
1:QA:363:A:C6	12:QL:31:PRO:HD2	2.50	0.46
36:RA:2341:G:H2'	36:RA:2342:C:C6	2.49	0.46
36:RA:2556:C:H2'	36:RA:2557:G:O4'	2.15	0.46
36:RA:2783:G:H2'	36:RA:2784:C:H6	1.80	0.46
36:RA:755:C:H2'	36:RA:756:C:C6	2.50	0.46
39:RE:131:ALA:O	39:RE:134:ILE:HG12	2.15	0.46
39:RE:44:TYR:HB2	39:RE:82:ARG:NH1	2.31	0.46
44:RN:65:LYS:O	44:RN:69:GLN:HG2	2.15	0.46
1:XA:280:C:H3'	1:XA:281:G:H5'	1.97	0.46
1:XA:350:G:H2'	1:XA:351:G:C8	2.49	0.46
1:XA:389:A:H3'	1:XA:390:C:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:738:C:H2'	1:XA:739:C:H6	1.81	0.46
2:XB:67:THR:HG21	2:XB:155:LEU:HG	1.98	0.46
3:XC:88:ARG:HE	3:XC:101:LEU:HB3	1.80	0.46
23:XW:37:A:H5'	23:XW:38:U:OP2	2.15	0.46
30:Y4:9:LEU:HA	30:Y4:27:THR:HG22	1.96	0.46
34:Y8:61:LEU:HD13	36:YA:593:G:H4'	1.95	0.46
36:YA:270(R):G:H2'	36:YA:270(S):G:H8	1.80	0.46
36:YA:834:C:C2	36:YA:835:A:C8	3.04	0.46
40:YF:110:LEU:HD11	40:YF:181:LEU:HB3	1.97	0.46
41:YG:124:SER:HB2	41:YG:131:TYR:CE1	2.51	0.46
42:YH:144:VAL:O	42:YH:148:ILE:HG12	2.14	0.46
44:YN:42:TRP:CZ2	44:YN:42:TRP:CD2	2.87	0.46
53:YW:9:TYR:H	53:YW:102:HIS:CE1	2.33	0.46
25:XY:61:C:N4	56:YZ:183:LEU:O	2.39	0.46
1:QA:1172:C:H2'	1:QA:1173:G:H8	1.81	0.46
1:QA:1402:C:H2'	1:QA:1403:C:O4'	2.16	0.46
1:QA:736:C:H2'	1:QA:737:A:H8	1.79	0.46
1:QA:768:A:H4'	1:QA:1523:G:N2	2.30	0.46
8:QH:11:THR:HG22	8:QH:14:ARG:NH1	2.28	0.46
9:QI:46:ALA:HB2	9:QI:74:ILE:HG23	1.96	0.46
28:R2:32:LEU:HD11	28:R2:50:ILE:HG23	1.98	0.46
33:R7:49:ARG:HH11	36:RA:128:C:H4'	1.81	0.46
36:RA:2591:C:OP1	38:RD:239:ARG:HD2	2.15	0.46
36:RA:536:A:H2'	36:RA:537:C:C6	2.50	0.46
42:RH:8:PRO:HG2	42:RH:69:ARG:NE	2.30	0.46
45:RO:63:VAL:HG12	45:RO:106:LEU:HD11	1.98	0.46
36:RA:1454:U:H5'	48:RR:63:ARG:NH1	2.29	0.46
51:RU:94:ASN:HD22	51:RU:94:ASN:C	2.17	0.46
56:RZ:4:ARG:HE	56:RZ:60:GLU:HG3	1.80	0.46
1:XA:1189:C:H5''	3:XC:5:ILE:HD13	1.96	0.46
1:XA:328:C:H4'	1:XA:329:A:O5'	2.13	0.46
10:XJ:38:ILE:HG12	10:XJ:71:LEU:O	2.15	0.46
23:XW:22:G:C2	23:XW:23:A:C8	3.04	0.46
36:YA:1308:A:H3'	36:YA:1309:G:H8	1.80	0.46
36:YA:2153:G:H2'	36:YA:2154:G:H8	1.81	0.46
36:YA:232:G:OP2	36:YA:232:G:H8	1.98	0.46
36:YA:39:C:H2'	36:YA:40:C:C6	2.50	0.46
36:YA:65:C:H2'	36:YA:66:C:C6	2.51	0.46
36:YA:1190:G:H5'	46:YP:32:THR:HA	1.98	0.46
26:Y0:47:PRO:HB2	49:YS:20:ARG:HH22	1.79	0.46
1:QA:1015:A:H2'	1:QA:1016:A:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1112:C:H1'	3:QC:179:ARG:HH11	1.81	0.46
1:QA:1369:C:H2'	1:QA:1370:G:C8	2.50	0.46
1:QA:35:G:H2'	1:QA:36:C:C6	2.50	0.46
1:QA:407:G:H2'	1:QA:408:A:C8	2.51	0.46
36:RA:1534:G:H2'	36:RA:1534:G:N3	2.31	0.46
36:RA:1607:C:N4	36:RA:1622:G:OP2	2.43	0.46
36:RA:2130:U:H4'	36:RA:2133:G:H4'	1.96	0.46
36:RA:2637:U:H2'	36:RA:2638:G:O4'	2.16	0.46
51:RU:91:ASP:HA	51:RU:95:LEU:HB2	1.97	0.46
55:RY:98:VAL:HG13	55:RY:99:CYS:H	1.80	0.46
1:XA:1360:A:H2'	1:XA:1361:G:C8	2.51	0.46
3:XC:14:ILE:HG12	3:XC:15:THR:HG23	1.98	0.46
7:XG:148:ASN:HA	11:XK:54:ARG:HH12	1.81	0.46
20:XT:13:LEU:HD12	20:XT:14:LYS:HD3	1.96	0.46
36:YA:2100:G:H1	36:YA:2189:U:H3	1.63	0.46
36:YA:2636:U:HO2'	39:YE:44:TYR:HH	1.64	0.46
36:YA:576:U:H2'	36:YA:577:G:C8	2.51	0.46
36:YA:740:U:H2'	36:YA:741:G:C8	2.50	0.46
42:YH:98:LEU:HD22	42:YH:125:VAL:HB	1.97	0.46
1:QA:1147:C:H4'	9:QI:5:TYR:CE1	2.51	0.46
1:QA:243:A:H4'	1:QA:244:U:H3'	1.98	0.46
1:QA:714:G:H2'	1:QA:715:A:H8	1.80	0.46
1:QA:938:A:N3	1:QA:1376:U:O2'	2.39	0.46
11:QK:41:THR:HG21	11:QK:72:ALA:CA	2.46	0.46
10:QJ:49:VAL:HG23	14:QN:41:ARG:HB2	1.98	0.46
23:QW:29:U:H2'	23:QW:30:G:C8	2.50	0.46
36:RA:2566:A:H4'	36:RA:2567:G:O5'	2.15	0.46
36:RA:2540:C:O2'	36:RA:2740:A:N3	2.40	0.46
36:RA:479:A:N3	36:RA:481:G:H5''	2.31	0.46
36:RA:900:A:H3'	36:RA:901:A:H8	1.81	0.46
36:RA:2599:G:N7	38:RD:237:GLU:HG2	2.31	0.46
43:RI:31:LEU:HD21	43:RI:38:LEU:HG	1.97	0.46
53:RW:6:ILE:HG22	53:RW:8:ARG:HG3	1.97	0.46
47:RQ:63:LYS:HE2	56:RZ:175:VAL:HG13	1.98	0.46
1:XA:1073:U:C2	1:XA:1074:G:C8	3.04	0.46
1:XA:1507:A:H2'	1:XA:1508:G:C8	2.51	0.46
1:XA:584:G:H2'	1:XA:585:G:H8	1.81	0.46
3:XC:8:ILE:HD12	3:XC:16:ARG:CZ	2.46	0.46
25:XY:2:G:H2'	25:XY:3:G:C8	2.51	0.46
36:YA:1278:A:H2'	36:YA:1279:G:C8	2.51	0.46
36:YA:1568:G:H5''	38:YD:61:LEU:HG	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:2173:A:H8	36:YA:2173:A:P	2.38	0.46
28:Y2:47:ASN:HD22	36:YA:94:G:H21	1.62	0.46
49:YS:56:LEU:HD11	49:YS:58:LEU:HD13	1.97	0.46
50:YT:123:GLN:C	50:YT:125:ARG:H	2.19	0.46
36:YA:141(A):C:O2'	54:YX:37:THR:HG21	2.14	0.46
1:QA:1071:C:H2'	1:QA:1072:G:H8	1.80	0.46
1:QA:1355:G:H2'	1:QA:1356:G:H8	1.80	0.46
1:QA:563:A:H2'	1:QA:567:G:C8	2.51	0.46
4:QD:68:TYR:OH	4:QD:98:GLU:OE2	2.27	0.46
1:QA:1124:G:H5'	10:QJ:35:SER:HB2	1.98	0.46
16:QP:49:LEU:HD12	16:QP:50:LYS:H	1.80	0.46
36:RA:1278:A:H2'	36:RA:1279:G:C8	2.50	0.46
36:RA:2105:C:H2'	36:RA:2106:G:H8	1.80	0.46
36:RA:679:C:H2'	36:RA:680:G:C8	2.51	0.46
36:RA:679:C:H2'	36:RA:680:G:H8	1.80	0.46
36:RA:729:G:OP2	38:RD:13:ARG:NH1	2.47	0.46
38:RD:28:GLU:HG2	38:RD:29:PRO:HD3	1.98	0.46
38:RD:65:ILE:HD11	38:RD:67:PHE:CZ	2.51	0.46
40:RF:7:TYR:O	40:RF:21:ALA:HA	2.16	0.46
1:XA:1490:C:OP2	58:XA:1717:PAR:N64	2.45	0.46
1:XA:266:G:H5'	1:XA:268:C:H41	1.80	0.46
2:XB:197:VAL:HG13	2:XB:200:ILE:CG1	2.46	0.46
2:XB:24:TRP:CB	2:XB:40:HIS:NE2	2.73	0.46
12:XL:32:PHE:CE1	12:XL:86:ARG:HG3	2.51	0.46
29:Y3:7:LYS:HB2	29:Y3:34:GLU:HG2	1.98	0.46
32:Y6:7:ILE:O	32:Y6:8:LYS:HE2	2.16	0.46
36:YA:2110:G:N1	36:YA:2180:U:O4	2.49	0.46
36:YA:646:A:H3'	36:YA:647:G:C8	2.50	0.46
39:YE:7:VAL:HG13	39:YE:51:PHE:CE1	2.50	0.46
36:YA:1454:U:H5	48:YR:73:VAL:HG12	1.80	0.46
55:YY:52:SER:OG	55:YY:53:PRO:HD3	2.15	0.46
1:QA:923:A:OP1	5:QE:21:ALA:HB2	2.15	0.46
5:QE:12:LEU:HD22	5:QE:128:PRO:HB2	1.98	0.46
23:QW:18:G:H8	23:QW:60:C:HO2'	1.63	0.46
36:RA:1400:G:H2'	36:RA:1401:G:H8	1.81	0.46
36:RA:2514:U:H2'	36:RA:2515:C:C6	2.50	0.46
36:RA:37:C:H2'	36:RA:38:A:H8	1.81	0.46
36:RA:495:G:N3	53:RW:61:ASN:ND2	2.64	0.46
36:RA:834:C:C2	36:RA:835:A:C8	3.04	0.46
56:RZ:53:ILE:HG13	56:RZ:54:HIS:N	2.30	0.46
1:XA:1443:G:H5'	1:XA:1446:A:OP2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:32:A:H2'	1:XA:33:A:H8	1.81	0.46
1:XA:986:A:H2'	1:XA:987:G:H8	1.81	0.46
10:XJ:50:ILE:HG12	10:XJ:60:ARG:HD3	1.98	0.46
25:XY:11:C:H2'	25:XY:12:U:C6	2.51	0.46
36:YA:191:A:H2'	36:YA:192:C:H6	1.80	0.46
36:YA:2476:A:H2'	36:YA:2477:C:C6	2.51	0.46
42:YH:55:PRO:HG2	42:YH:61:HIS:ND1	2.31	0.46
1:QA:1000:A:H2'	1:QA:1001:G:H8	1.81	0.46
1:QA:1090:U:H2'	1:QA:1091:U:C6	2.50	0.46
1:QA:979:C:OP1	1:QA:1223:C:N4	2.48	0.46
1:QA:1314:C:H2'	1:QA:1315:U:H6	1.80	0.46
1:QA:477:G:H2'	1:QA:478:A:H8	1.81	0.46
1:QA:753:A:H4'	1:QA:754:C:O5'	2.16	0.46
1:QA:886:G:H1	1:QA:911:U:H3	1.64	0.46
2:QB:47:THR:HG22	2:QB:202:PRO:HG2	1.98	0.46
3:QC:42:LEU:HD13	3:QC:45:LYS:HD3	1.98	0.46
36:RA:1063:G:H2'	36:RA:1064:C:C6	2.50	0.46
36:RA:1651:G:H2'	36:RA:1652:A:O4'	2.15	0.46
36:RA:1657:C:H2'	36:RA:1658:C:C6	2.51	0.46
36:RA:2748:A:H4'	42:RH:66:GLY:HA3	1.96	0.46
36:RA:691:C:H2'	36:RA:692:C:H6	1.81	0.46
38:RD:231:HIS:CD2	38:RD:249:PRO:HB3	2.51	0.46
39:RE:134:ILE:HA	39:RE:137:HIS:CD2	2.51	0.46
44:RN:108:PRO:HG2	44:RN:113:GLY:HA2	1.97	0.46
1:XA:34:C:H2'	1:XA:35:G:C8	2.48	0.46
1:XA:545:C:O2'	1:XA:549:C:OP1	2.24	0.46
1:XA:769:G:H4'	1:XA:1513:A:H4'	1.97	0.46
1:XA:864:A:H2'	1:XA:865:A:C8	2.51	0.46
7:XG:77:SER:HB3	23:XW:32:A:N3	2.31	0.46
14:XN:43:CYS:C	14:XN:45:ARG:H	2.19	0.46
36:YA:141:A:C8	36:YA:1408:C:H1'	2.51	0.46
36:YA:1839:G:C2	36:YA:1840:G:C8	3.04	0.46
36:YA:2065:C:H2'	36:YA:2066:C:H6	1.80	0.46
36:YA:2243:U:H2'	36:YA:2244:U:C6	2.50	0.46
36:YA:2740:A:H2'	36:YA:2741:A:C8	2.51	0.46
36:YA:278:A:H2'	36:YA:279:C:H6	1.80	0.46
40:YF:67:GLN:HG3	40:YF:67:GLN:O	2.15	0.46
36:RA:1991:U:C6	36:RA:1991:U:C5'	2.99	0.46
36:RA:2487:G:H2'	36:RA:2488:A:H8	1.81	0.46
37:RB:66:A:HO2'	37:RB:67:G:P	2.39	0.46
1:XA:99:C:H2'	1:XA:101:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:107:G:C2	1:XA:108:G:H1'	2.51	0.46
1:XA:1263:C:H2'	1:XA:1264:C:H6	1.81	0.46
1:XA:60:A:H4'	1:XA:61:G:O5'	2.16	0.46
4:XD:121:VAL:O	4:XD:134:ASP:HA	2.16	0.46
36:YA:1212:G:O2'	36:YA:1236:G:N2	2.40	0.46
36:YA:1501:C:H2'	36:YA:1502:C:H6	1.80	0.46
22:XV:13:C:O2'	36:YA:1924:C:H4'	2.16	0.46
36:YA:2086:U:H2'	36:YA:2087:G:H8	1.80	0.46
36:YA:2329:G:H2'	36:YA:2330:G:H8	1.81	0.46
36:YA:442:G:H4'	40:YF:46:ARG:HG3	1.98	0.46
36:YA:534:U:H2'	36:YA:535:C:C6	2.51	0.46
27:Y1:71:TYR:CZ	43:YI:27:ARG:HB2	2.51	0.46
36:YA:2250:G:C4	47:YQ:82:ARG:HG3	2.50	0.46
1:QA:196:A:OP1	20:QT:68:LYS:NZ	2.38	0.46
16:QP:19:ILE:N	16:QP:37:GLY:O	2.49	0.46
19:QS:4:SER:HB2	19:QS:8:GLY:HA2	1.98	0.46
25:QY:19:G:H3'	25:QY:20:G:C8	2.50	0.46
36:RA:1303:G:H1'	36:RA:1641:A:N1	2.31	0.46
36:RA:1668:A:C8	36:RA:1674:G:O6	2.69	0.46
31:R5:2:ALA:HA	36:RA:2015:A:H1'	1.97	0.46
36:RA:286:C:H2'	36:RA:287:C:H6	1.80	0.46
47:RQ:4:PRO:HG3	47:RQ:69:PHE:CE2	2.50	0.46
1:XA:1435:G:H2'	1:XA:1436:U:H6	1.79	0.46
1:XA:116:A:H61	1:XA:313:A:H1'	1.81	0.46
1:XA:628:G:H2'	1:XA:629:G:C8	2.50	0.46
1:XA:8:A:H8	5:XE:101:ILE:HG23	1.81	0.46
6:XF:4:TYR:HE1	6:XF:92:LYS:HG2	1.79	0.46
13:XM:11:ARG:HA	13:XM:45:VAL:HG11	1.98	0.46
23:XW:19:G:H5'	23:XW:20:G:C8	2.51	0.46
36:YA:1212:G:H1'	36:YA:1237:A:N6	2.31	0.46
36:YA:1406:U:H2'	36:YA:1407:C:C6	2.51	0.46
36:YA:1971:A:C4	38:YD:241:PRO:HG3	2.51	0.46
36:YA:2783:G:H2'	36:YA:2784:C:C6	2.51	0.46
36:YA:381:G:C6	36:YA:394:A:C6	3.04	0.46
36:YA:721:C:H2'	36:YA:722:A:H8	1.81	0.46
1:QA:1189:C:OP1	10:QJ:51:ARG:NH2	2.46	0.45
1:QA:1408:A:N1	58:QA:1711:PAR:O61	2.43	0.45
1:QA:191(E):G:H2'	1:QA:191(F):U:H6	1.80	0.45
1:QA:294:U:OP1	1:QA:610:G:O2'	2.28	0.45
1:QA:360:A:H2'	1:QA:361:G:C8	2.51	0.45
1:QA:587:G:N2	1:QA:754:C:OP2	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:23:VAL:O	7:QG:27:ILE:HG12	2.16	0.45
33:R7:49:ARG:NH1	36:RA:128:C:H4'	2.31	0.45
36:RA:78:A:H2'	36:RA:79:G:H8	1.80	0.45
36:RA:839:U:H2'	36:RA:840:C:C6	2.51	0.45
36:RA:84:A:C2	36:RA:103:A:C5	3.04	0.45
37:RB:50:G:OP1	49:RS:63:THR:HG23	2.16	0.45
36:RA:1902:C:H5'	38:RD:246:PRO:HD3	1.97	0.45
41:RG:11:TYR:HB2	41:RG:176:LEU:HD21	1.96	0.45
36:RA:662:G:OP1	46:RP:15:ARG:HG2	2.16	0.45
56:RZ:145:GLU:HB2	56:RZ:148:ASP:HB3	1.99	0.45
1:XA:105:G:H2'	1:XA:106:C:C6	2.51	0.45
1:XA:115:G:H4'	1:XA:116:A:O5'	2.15	0.45
1:XA:97:U:H2'	1:XA:99:C:H6	1.80	0.45
6:XF:10:LEU:HD23	6:XF:85:VAL:HA	1.98	0.45
18:XR:73:ALA:HB1	18:XR:79:LEU:HD23	1.97	0.45
34:Y8:6:THR:HG21	34:Y8:63:PRO:HD3	1.97	0.45
36:YA:1252:G:C2	51:YU:33:ARG:HB3	2.52	0.45
36:YA:336:C:O2'	55:YY:35:TYR:OH	2.32	0.45
36:YA:754:C:H2'	36:YA:755:C:H6	1.81	0.45
36:YA:2032:G:H1'	39:YE:145:LYS:HD3	1.98	0.45
39:YE:36:ARG:HG2	39:YE:47:VAL:HG12	1.97	0.45
33:Y7:47:ARG:NH2	54:YX:60:ARG:HH12	2.14	0.45
1:QA:279:A:OP2	17:QQ:95:TYR:OH	2.28	0.45
3:QC:7:PRO:HG3	3:QC:201:TYR:HE2	1.81	0.45
36:RA:1164:G:H2'	36:RA:1165:U:C6	2.52	0.45
36:RA:1412:A:H2'	36:RA:1413:G:H8	1.81	0.45
36:RA:2306:C:H3'	36:RA:2307:G:C5'	2.47	0.45
36:RA:2674:G:H2'	36:RA:2675:A:C8	2.50	0.45
36:RA:302:C:H2'	36:RA:303:U:H6	1.82	0.45
36:RA:892:G:H2'	36:RA:893:C:C6	2.51	0.45
39:RE:24:THR:HG21	39:RE:188:VAL:HG22	1.98	0.45
47:RQ:31:ASP:H	47:RQ:107:ALA:HB2	1.81	0.45
56:RZ:51:ALA:O	56:RZ:52:SER:OG	2.27	0.45
1:XA:1422:G:H2'	1:XA:1423:G:H8	1.81	0.45
3:XC:21:ARG:O	3:XC:21:ARG:HG2	2.15	0.45
7:XG:44:TYR:O	7:XG:48:LYS:HG2	2.16	0.45
8:XH:129:VAL:HG23	8:XH:130:GLY:H	1.81	0.45
12:XL:89:ARG:HD2	12:XL:90:VAL:C	2.37	0.45
17:XQ:45:HIS:HB3	17:XQ:72:ARG:HG2	1.99	0.45
33:Y7:5:TRP:HE3	36:YA:1613:G:OP1	1.97	0.45
36:YA:1187:G:H5''	52:YV:81:TYR:CE2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:1553:A:HO2'	36:YA:1554:A:H8	1.62	0.45
36:YA:2210:G:H2'	36:YA:2210:G:N3	2.31	0.45
40:YF:117:ARG:NH1	40:YF:120:GLU:OE2	2.48	0.45
40:YF:63:LYS:CE	40:YF:67:GLN:HB2	2.45	0.45
43:YI:133:HIS:ND1	43:YI:134:PRO:HD3	2.31	0.45
55:YY:86:ARG:HB2	55:YY:95:LYS:HD3	1.97	0.45
1:QA:1118:C:H1'	1:QA:1179:A:C5	2.52	0.45
2:QB:222:ILE:O	2:QB:226:ARG:HG3	2.16	0.45
8:QH:10:LEU:HD22	8:QH:83:ILE:HD11	1.99	0.45
11:QK:27:ASN:OD1	11:QK:28:THR:N	2.50	0.45
30:R4:40:HIS:N	30:R4:41:PRO:CD	2.79	0.45
30:R4:53:GLU:HG2	30:R4:53:GLU:O	2.15	0.45
34:R8:59:LYS:NZ	46:RP:50:ARG:HG3	2.30	0.45
36:RA:1159:U:C2	36:RA:1160:G:C8	3.04	0.45
36:RA:1336:A:H2'	36:RA:1337:G:C8	2.51	0.45
36:RA:173:G:H2'	36:RA:174:C:C6	2.51	0.45
36:RA:1791:A:H3'	36:RA:1792:G:H8	1.80	0.45
36:RA:2315:G:H2'	36:RA:2316:C:C6	2.52	0.45
36:RA:2584:U:H2'	36:RA:2585:U:H2'	1.99	0.45
36:RA:2882:A:OP1	48:RR:96:ARG:NH1	2.40	0.45
36:RA:608:A:H2'	36:RA:609:A:C8	2.51	0.45
36:RA:690:G:H2'	36:RA:691:C:C6	2.51	0.45
38:RD:44:ASN:HB3	38:RD:49:ILE:HA	1.98	0.45
43:RI:130:TYR:HB3	43:RI:135:GLU:HB2	1.99	0.45
47:RQ:32:TYR:CE1	47:RQ:133:ARG:HG3	2.51	0.45
50:RT:108:ARG:HG2	50:RT:111:ARG:NH2	2.32	0.45
50:RT:77:PRO:HB2	50:RT:80:SER:HB3	1.98	0.45
7:XG:70:LYS:HE2	7:XG:97:GLN:HG2	1.98	0.45
36:YA:1467:C:C5	36:YA:1546:C:H2'	2.52	0.45
1:XA:1495:U:O2'	36:YA:1919:A:N1	2.39	0.45
36:YA:2291:U:H2'	36:YA:2292:C:H6	1.80	0.45
36:YA:2364:C:H2'	36:YA:2365:G:O4'	2.16	0.45
36:YA:248:G:H5'	36:YA:250:G:N7	2.31	0.45
36:YA:2566:A:H4'	36:YA:2567:G:O5'	2.15	0.45
36:YA:38:A:H2'	36:YA:39:C:C6	2.52	0.45
36:YA:478:A:N1	36:YA:500:G:H4'	2.31	0.45
36:YA:621:A:OP2	46:YP:108:LYS:NZ	2.49	0.45
36:YA:934:G:H2'	36:YA:935:C:H6	1.82	0.45
36:YA:1790:C:H4'	38:YD:209:ALA:HB2	1.96	0.45
41:YG:97:ASP:HA	41:YG:100:TRP:CD1	2.52	0.45
50:YT:112:ARG:HA	50:YT:115:ARG:NE	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1315:U:H2'	1:QA:1316:G:C8	2.51	0.45
1:QA:410:G:H4'	1:QA:411:A:OP1	2.16	0.45
1:QA:715:A:H2'	1:QA:716:A:H8	1.81	0.45
6:QF:9:VAL:HB	6:QF:87:ARG:HB2	1.97	0.45
11:QK:43:SER:CB	11:QK:68:ALA:CA	2.88	0.45
36:RA:1210:A:H5'	36:RA:1212:G:O4'	2.16	0.45
36:RA:2649:U:H2'	36:RA:2650:U:C6	2.51	0.45
40:RF:153:SER:OG	40:RF:190:GLU:HG3	2.17	0.45
36:RA:322:A:OP2	40:RF:169:ASN:HB2	2.16	0.45
44:RN:72:TYR:N	44:RN:85:ILE:O	2.43	0.45
55:RY:3:VAL:HG12	55:RY:5:MET:HG2	1.98	0.45
1:XA:191:G:H2'	1:XA:192:U:H6	1.81	0.45
1:XA:693:G:H2'	1:XA:694:A:C8	2.51	0.45
1:XA:936:C:C2	1:XA:937:A:C8	3.05	0.45
2:XB:205:ASP:OD1	2:XB:206:ASP:N	2.50	0.45
4:XD:79:PHE:CE2	4:XD:204:ILE:HD13	2.51	0.45
26:Y0:30:VAL:HG22	26:Y0:66:VAL:HG12	1.98	0.45
36:YA:1357:U:H2'	36:YA:1358:G:O4'	2.16	0.45
36:YA:2729:G:H4'	39:YE:185:LYS:HB3	1.98	0.45
36:YA:942:G:H3'	46:YP:36:LYS:HE3	1.98	0.45
55:YY:75:ILE:HG22	55:YY:80:GLY:HA2	1.98	0.45
1:QA:1150:U:O4	1:QA:1151:A:N6	2.50	0.45
1:QA:662:G:H2'	1:QA:663:A:C8	2.52	0.45
1:QA:676:A:H1'	11:QK:115:PRO:HB3	1.97	0.45
7:QG:5:ARG:HH11	7:QG:7:ALA:HA	1.82	0.45
9:QI:3:GLN:OE1	9:QI:20:ARG:NH2	2.49	0.45
35:R9:2:LYS:O	35:R9:35:ARG:HB3	2.17	0.45
36:RA:1248:G:C2	51:RU:3:ARG:HD2	2.52	0.45
36:RA:1354:A:H3'	36:RA:1355:G:H8	1.82	0.45
36:RA:1854:A:H62	36:RA:1888:G:H8	1.63	0.45
36:RA:2688:U:H1'	36:RA:2721:A:N6	2.31	0.45
36:RA:2837:G:H21	48:RR:45:ARG:NH2	2.15	0.45
36:RA:540:G:H5'	36:RA:541:C:OP2	2.16	0.45
36:RA:74:A:H8	36:RA:74:A:H5''	1.82	0.45
39:RE:2:LYS:HD2	39:RE:95:ILE:HG12	1.98	0.45
40:RF:82:ILE:HG13	40:RF:83:PHE:HD1	1.81	0.45
36:RA:587:C:O2	46:RP:33:ARG:NH1	2.50	0.45
52:RV:25:LEU:H	52:RV:92:THR:HG21	1.81	0.45
1:XA:1469:G:H2'	1:XA:1470:G:C8	2.51	0.45
1:XA:429:U:H1'	1:XA:430:A:H5''	1.98	0.45
1:XA:718:G:C8	11:XK:116:HIS:HB3	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:757:U:O2'	1:XA:879:C:O2	2.32	0.45
1:XA:911:U:H2'	1:XA:912:C:C6	2.52	0.45
1:XA:1104:G:O5'	2:XB:111:ARG:HD2	2.17	0.45
7:XG:26:PHE:O	7:XG:30:ILE:HG12	2.16	0.45
1:XA:562:C:H1'	12:XL:15:ARG:HD2	1.97	0.45
19:XS:12:ASP:OD2	19:XS:38:SER:HB3	2.16	0.45
22:XV:23:C:H2'	22:XV:24:U:C6	2.52	0.45
25:XY:24:G:H2'	25:XY:25:C:O4'	2.15	0.45
36:YA:1310:G:N2	36:YA:1313:U:C4	2.85	0.45
36:YA:185:U:H2'	36:YA:186:G:H8	1.80	0.45
36:YA:320:A:N3	40:YF:169:ASN:ND2	2.57	0.45
36:YA:659:C:H2'	36:YA:660:G:H8	1.82	0.45
56:YZ:163:LEU:CD2	56:YZ:165:VAL:HG22	2.44	0.45
1:QA:1032(A):G:H2'	1:QA:1032(B):G:H8	1.82	0.45
1:QA:1198:G:H2'	1:QA:1199:U:C6	2.52	0.45
1:QA:299:G:H2'	1:QA:300:A:C8	2.51	0.45
1:QA:32:A:H2'	1:QA:33:A:H8	1.80	0.45
1:QA:705:U:H2'	1:QA:705:U:O2	2.16	0.45
1:QA:438:G:H4'	4:QD:123:HIS:CG	2.51	0.45
24:QX:12:A:H8	24:QX:14:A:OP1	2.00	0.45
29:R3:7:LYS:NZ	29:R3:32:GLN:HG3	2.32	0.45
36:RA:2115:G:H8	36:RA:2171:A:H62	1.64	0.45
36:RA:270(D):C:H2'	36:RA:270(E):G:H8	1.82	0.45
36:RA:949:C:H2'	36:RA:950:G:C8	2.52	0.45
41:RG:107:LEU:HD23	41:RG:111:LEU:HD22	1.98	0.45
42:RH:98:LEU:HB3	42:RH:125:VAL:HG21	1.97	0.45
42:RH:138:LYS:HA	42:RH:141:VAL:HG12	1.99	0.45
36:RA:871:U:OP1	47:RQ:5:ARG:HG2	2.17	0.45
1:XA:1313:U:H2'	1:XA:1314:C:C6	2.51	0.45
1:XA:1323:G:H2'	1:XA:1324:A:C8	2.52	0.45
1:XA:191:G:H2'	1:XA:192:U:C6	2.51	0.45
1:XA:645:C:H2'	1:XA:646:U:C6	2.52	0.45
7:XG:45:ASP:O	7:XG:49:ILE:HG12	2.17	0.45
23:XW:60:C:H5''	23:XW:61:C:C5	2.52	0.45
23:XW:8:U:C2'	23:XW:8:U:O2	2.64	0.45
35:Y9:36:GLN:HG2	36:YA:1124:C:O2'	2.17	0.45
36:YA:1528:A:H2'	36:YA:1529:A:H8	1.82	0.45
36:YA:270(U):C:H2'	36:YA:270(V):G:C8	2.51	0.45
36:YA:363(A):A:H2'	36:YA:363(B):G:H8	1.81	0.45
36:YA:66:C:H2'	36:YA:67:U:H6	1.81	0.45
36:YA:755:C:H2'	36:YA:756:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YD:62:TYR:HA	38:YD:87:ASN:ND2	2.32	0.45
41:YG:59:GLU:OE1	41:YG:153:ARG:NH2	2.50	0.45
50:YT:26:ASP:O	50:YT:49:VAL:HG12	2.16	0.45
52:YV:6:LYS:HB2	52:YV:39:LEU:HD21	1.98	0.45
1:QA:1238:A:N7	1:QA:1301:U:C4	2.84	0.45
1:QA:67:C:H2'	1:QA:68:G:C8	2.52	0.45
1:QA:705:U:N3	1:QA:706:A:C8	2.85	0.45
1:QA:792:A:H4'	1:QA:793:U:O5'	2.17	0.45
5:QE:154:GLY:HA2	8:QH:64:LYS:HE3	1.98	0.45
11:QK:108:ILE:O	18:QR:87:ARG:N	2.50	0.45
12:QL:82:VAL:O	12:QL:106:ASP:HB2	2.16	0.45
27:R1:91:LYS:O	27:R1:94:LEU:N	2.35	0.45
36:RA:2478:A:C8	36:RA:2529:G:C5	3.05	0.45
36:RA:2828:C:O2'	36:RA:2829:C:H5'	2.17	0.45
38:RD:143:HIS:ND1	38:RD:194:GLY:O	2.37	0.45
36:RA:84:A:OP2	55:RY:8:LYS:HE2	2.17	0.45
1:XA:1503:A:H1'	24:XX:12:A:N6	2.32	0.45
1:XA:272:C:H2'	1:XA:273:A:H8	1.80	0.45
1:XA:908:A:H2'	1:XA:909:A:C8	2.52	0.45
3:XC:71:ALA:HA	3:XC:106:VAL:HG22	1.97	0.45
1:XA:1179:A:H4'	9:XI:103:THR:HA	1.99	0.45
9:XI:3:GLN:NE2	9:XI:18:PHE:HB3	2.31	0.45
26:Y0:73:GLY:HA3	37:YB:12:C:H2'	1.97	0.45
30:Y4:37:SER:HA	30:Y4:41:PRO:HG2	1.98	0.45
36:YA:29:U:H2'	36:YA:30:G:C8	2.52	0.45
36:YA:765:G:H2'	36:YA:766:C:C6	2.52	0.45
41:YG:86:MET:O	41:YG:88:ILE:HG23	2.17	0.45
36:YA:2563:U:H4'	45:YO:28:SER:HA	1.99	0.45
47:YQ:62:GLY:HA3	47:YQ:107:ALA:O	2.17	0.45
53:YW:71:VAL:HA	53:YW:107:LEU:HD23	1.97	0.45
1:QA:1479:C:H2'	1:QA:1480:G:H8	1.81	0.45
1:QA:284:G:H2'	1:QA:285:G:H8	1.81	0.45
1:QA:359:U:H2'	1:QA:360:A:H8	1.82	0.45
1:QA:618:C:H5'	1:QA:619:U:H5''	1.98	0.45
1:QA:972:C:OP2	10:QJ:57:LYS:HE2	2.17	0.45
3:QC:14:ILE:O	3:QC:15:THR:OG1	2.31	0.45
8:QH:114:THR:HG22	8:QH:130:GLY:C	2.37	0.45
34:R8:4:MET:HE3	34:R8:61:LEU:HD13	1.98	0.45
36:RA:1141:U:H1'	36:RA:1142(A):A:C6	2.52	0.45
36:RA:2650:U:H2'	36:RA:2651:C:C6	2.51	0.45
36:RA:39:C:H2'	36:RA:40:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:R7:34:ARG:NH1	36:RA:467:G:OP2	2.50	0.45
36:RA:686:G:N2	36:RA:788:A:H61	2.15	0.45
38:RD:110:GLY:O	38:RD:112:GLN:NE2	2.49	0.45
40:RF:123:LEU:HD13	40:RF:192:LEU:HD23	1.98	0.45
36:RA:2306:C:N4	41:RG:42:GLY:O	2.48	0.45
43:RI:78:THR:HA	43:RI:141:LYS:O	2.16	0.45
50:RT:54:ARG:HA	50:RT:59:THR:HG23	1.99	0.45
1:XA:224:C:H2'	1:XA:225:C:C6	2.52	0.45
1:XA:452:A:OP1	16:XP:43:LYS:NZ	2.43	0.45
1:XA:639:G:C2	1:XA:640:A:C8	3.05	0.45
1:XA:643:C:H2'	1:XA:644:G:H8	1.82	0.45
1:XA:1292:U:P	7:XG:41:ARG:HH22	2.40	0.45
16:XP:79:VAL:HG23	16:XP:80:PHE:HD2	1.81	0.45
36:YA:1085:A:O2'	36:YA:1086:A:O5'	2.32	0.45
36:YA:1116:C:H2'	36:YA:1117:G:C8	2.50	0.45
36:YA:1709:U:H2'	36:YA:1710:C:H6	1.81	0.45
36:YA:1778:U:H2'	36:YA:1784:A:N6	2.32	0.45
36:YA:1932:A:H2'	36:YA:1933:G:O4'	2.17	0.45
36:YA:2701:C:H3'	36:YA:2702:U:C5'	2.41	0.45
36:YA:2853:C:H2'	36:YA:2854:G:C8	2.51	0.45
36:YA:527:C:N3	36:YA:2779:U:H2'	2.32	0.45
36:YA:754:C:H2'	36:YA:755:C:C6	2.52	0.45
46:YP:84:ASN:HD22	46:YP:86:LYS:HE3	1.82	0.45
50:YT:3:ARG:HG3	50:YT:7:ILE:HG12	1.98	0.45
1:QA:1060:C:H2'	1:QA:1061:G:H8	1.81	0.45
1:QA:797:C:OP1	11:QK:124:LYS:HD3	2.17	0.45
3:QC:18:TRP:HB2	3:QC:21:ARG:HB2	1.99	0.45
27:R1:91:LYS:O	27:R1:93:GLU:N	2.50	0.45
30:R4:11:PRO:HA	30:R4:25:TYR:HA	1.99	0.45
36:RA:1668:A:C5	36:RA:1674:G:C6	3.04	0.45
36:RA:1824:G:H3'	38:RD:220:HIS:CE1	2.52	0.45
36:RA:320:A:H4'	36:RA:322:A:C8	2.51	0.45
36:RA:373:U:H2'	36:RA:374:A:H8	1.81	0.45
36:RA:655:A:H8	36:RA:656:G:C8	2.34	0.45
38:RD:94:LEU:HB2	38:RD:104:TYR:HE2	1.82	0.45
42:RH:151:ILE:HG22	42:RH:152:ARG:H	1.82	0.45
56:RZ:28:MET:HE1	56:RZ:59:LEU:HD23	1.99	0.45
1:XA:135:C:O2	16:XP:1:MET:HB3	2.16	0.45
1:XA:1431:C:H2'	1:XA:1432:G:O4'	2.17	0.45
1:XA:1504:G:OP1	1:XA:1507:A:H4'	2.17	0.45
1:XA:626:U:C2	1:XA:627:G:C8	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:883:C:O2'	1:XA:884:U:H5'	2.17	0.45
2:XB:26:PRO:C	2:XB:28:PHE:H	2.20	0.45
6:XF:33:TYR:HB2	6:XF:75:LEU:HD12	1.98	0.45
8:XH:28:ALA:HA	8:XH:59:LEU:HD13	1.99	0.45
8:XH:51:VAL:HG21	8:XH:60:ARG:HG3	1.99	0.45
9:XI:114:TYR:CE2	10:XJ:59:SER:HA	2.52	0.45
14:XN:6:LEU:HB3	14:XN:23:ARG:HH22	1.81	0.45
32:Y6:41:PRO:HD2	32:Y6:46:HIS:H	1.82	0.45
34:Y8:26:LYS:HE2	34:Y8:47:LYS:HB3	1.99	0.45
36:YA:1639:U:C2'	36:YA:1640:C:H5''	2.47	0.45
36:YA:2696:U:H2'	36:YA:2697:G:C8	2.52	0.45
36:YA:37:C:H2'	36:YA:38:A:C8	2.52	0.45
37:YB:32:C:N3	37:YB:51:G:N2	2.65	0.45
39:YE:50:GLY:HA2	39:YE:76:ARG:O	2.17	0.45
42:YH:83:TYR:CZ	42:YH:138:LYS:HD2	2.52	0.45
1:QA:384:G:H2'	1:QA:385:C:H6	1.80	0.45
10:QJ:6:ILE:HD12	10:QJ:98:ILE:HG22	1.98	0.45
1:QA:950:U:O4	13:QM:105:THR:HG21	2.16	0.45
20:QT:92:LEU:HD23	20:QT:98:PRO:HG3	1.99	0.45
23:QW:55:U:H2'	23:QW:56:C:H5	1.82	0.45
30:R4:6:HIS:CE1	41:RG:66:GLN:HA	2.52	0.45
34:R8:34:TRP:O	34:R8:34:TRP:CD1	2.70	0.45
36:RA:1431:U:H2'	36:RA:1432:C:C6	2.51	0.45
36:RA:1501:C:H2'	36:RA:1502:C:H6	1.82	0.45
36:RA:1467:C:H5	36:RA:1546:C:H2'	1.82	0.45
36:RA:2532:G:N2	36:RA:2663:G:O2'	2.50	0.45
36:RA:270(B):A:N1	36:RA:273:G:O2'	2.40	0.45
36:RA:672:C:H2'	36:RA:673:C:C6	2.52	0.45
38:RD:44:ASN:HB2	38:RD:48:ARG:O	2.17	0.45
39:RE:110:GLY:O	48:RR:3:HIS:CE1	2.70	0.45
44:RN:13:TRP:O	44:RN:135:PRO:HD2	2.17	0.45
34:R8:30:ARG:NH2	46:RP:62:LEU:HD13	2.31	0.45
1:XA:1095:U:OP2	1:XA:1108:G:N1	2.50	0.45
1:XA:1203:C:H2'	1:XA:1204:A:H8	1.81	0.45
8:XH:39:LEU:HD12	8:XH:44:PHE:HB2	1.99	0.45
23:XW:54:U:H2'	23:XW:55:U:C6	2.51	0.45
27:Y1:18:ILE:HG12	27:Y1:37:ILE:HG12	1.99	0.45
36:YA:1231:G:H2'	36:YA:1232:G:C8	2.51	0.45
36:YA:1754:C:H5'	50:YT:101:PHE:CZ	2.52	0.45
36:YA:1791:A:H3'	36:YA:1792:G:H8	1.81	0.45
36:YA:2014:A:H2'	36:YA:2015:A:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Y0:75:LEU:HD21	36:YA:2334:G:C6	2.52	0.45
36:YA:415:A:H2'	36:YA:416:C:C6	2.50	0.45
44:YN:70:LYS:HD3	44:YN:87:LEU:HD11	1.99	0.45
50:YT:102:ILE:HB	50:YT:110:ILE:HD12	1.98	0.45
50:YT:27:THR:HB	50:YT:48:ILE:HG13	1.97	0.45
36:YA:1152:C:H4'	51:YU:77:SER:HA	1.98	0.45
51:YU:92:ARG:O	51:YU:94:ASN:N	2.50	0.45
53:YW:4:LYS:CB	53:YW:106:ILE:HG22	2.47	0.45
56:YZ:166:SER:HB2	56:YZ:168:GLU:H	1.81	0.45
1:QA:1124:G:H2'	1:QA:1145:C:C4	2.52	0.44
1:QA:266:G:O2'	1:QA:267:C:OP2	2.29	0.44
2:QB:97:TRP:HZ2	2:QB:102:LEU:HD13	1.82	0.44
5:QE:108:ALA:HA	5:QE:111:GLU:HG2	1.99	0.44
6:QF:81:ILE:HD11	38:RD:125:ILE:HD13	1.99	0.44
6:QF:97:PHE:HB2	18:QR:32:ARG:NH1	2.32	0.44
11:QK:34:ASP:OD1	11:QK:38:ASN:N	2.50	0.44
36:RA:1889:A:N3	36:RA:2086:U:O2'	2.46	0.44
36:RA:2564:A:N7	36:RA:2647:U:O2'	2.50	0.44
36:RA:672:C:H2'	36:RA:673:C:H6	1.82	0.44
36:RA:875:G:O6	36:RA:903:C:N4	2.50	0.44
36:RA:960:A:C8	36:RA:962:G:C8	3.06	0.44
36:RA:968:G:H2'	36:RA:969:U:C6	2.52	0.44
39:RE:128:SER:OG	39:RE:129:HIS:N	2.48	0.44
43:RI:69:LYS:HG3	43:RI:136:VAL:HB	1.99	0.44
48:RR:28:LEU:HD23	48:RR:48:VAL:HG21	1.99	0.44
48:RR:57:ARG:HE	48:RR:62:ALA:HB2	1.82	0.44
1:XA:1015:A:N3	1:XA:1218:C:O2'	2.39	0.44
7:XG:111:ARG:HB3	7:XG:113:GLU:OE1	2.16	0.44
36:YA:1081:U:H3'	36:YA:1082:U:H4'	1.99	0.44
36:YA:1467:C:H5	36:YA:1546:C:H2'	1.81	0.44
36:YA:2047:U:H2'	36:YA:2048:G:H8	1.82	0.44
36:YA:2154:G:H2'	36:YA:2155:G:H8	1.81	0.44
36:YA:2173:A:OP1	36:YA:2173:A:C8	2.70	0.44
36:YA:2273:A:H2'	36:YA:2274:A:C8	2.51	0.44
36:YA:229:A:OP1	36:YA:229:A:H4'	2.17	0.44
36:YA:1783:A:H5'	36:YA:2608:G:H4'	1.99	0.44
36:YA:273:G:C2	36:YA:273(A):G:C8	3.05	0.44
40:YF:157:VAL:HG21	40:YF:181:LEU:HD21	1.99	0.44
43:YI:93:THR:O	43:YI:97:ILE:HG12	2.18	0.44
44:YN:33:LEU:HD23	44:YN:38:HIS:CE1	2.51	0.44
46:YP:91:PHE:CE2	46:YP:95:VAL:HG22	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:YR:10:LEU:O	48:YR:12:ARG:NH1	2.50	0.44
49:YS:87:PHE:CZ	49:YS:102:ALA:HB2	2.52	0.44
55:YY:12:THR:O	55:YY:75:ILE:HG12	2.17	0.44
1:QA:1027:C:C2	1:QA:1028:C:H5	2.35	0.44
1:QA:1126:U:H5	1:QA:1127:G:C5	2.35	0.44
1:QA:1372:U:H2'	1:QA:1373:G:O4'	2.17	0.44
1:QA:1437:C:H2'	1:QA:1438:G:H8	1.82	0.44
1:QA:629:G:H2'	1:QA:630:G:C8	2.52	0.44
1:QA:640:A:N6	1:QA:641:U:O4	2.51	0.44
5:QE:51:VAL:CG2	5:QE:52:PRO:HD3	2.46	0.44
8:QH:110:ALA:HB3	8:QH:121:ASP:HB3	1.98	0.44
9:QI:48:GLU:N	9:QI:49:PRO:HD2	2.31	0.44
25:QY:40:C:H2'	25:QY:41:A:C8	2.52	0.44
29:R3:16:PRO:HB2	29:R3:18:ASP:OD1	2.17	0.44
36:RA:1794:U:H2'	36:RA:1795:C:C6	2.52	0.44
36:RA:2014:A:H2'	36:RA:2015:A:C8	2.53	0.44
36:RA:180:G:N2	36:RA:215:G:O6	2.51	0.44
36:RA:286:C:H2'	36:RA:287:C:C6	2.52	0.44
41:RG:38:VAL:HG22	41:RG:93:THR:HG22	1.99	0.44
49:RS:26:LEU:HD22	49:RS:87:PHE:HD1	1.82	0.44
52:RV:32:THR:OG1	52:RV:59:ALA:O	2.35	0.44
1:XA:712:A:H2'	1:XA:713:G:C8	2.52	0.44
1:XA:765:G:N2	1:XA:813:U:OP2	2.45	0.44
1:XA:936:C:C4	1:XA:937:A:N7	2.86	0.44
3:XC:134:ILE:HG22	3:XC:168:ALA:HB3	1.99	0.44
11:XK:82:VAL:HB	11:XK:108:ILE:HD13	1.98	0.44
16:XP:21:VAL:HG11	16:XP:59:TRP:CE2	2.52	0.44
19:XS:22:LEU:O	19:XS:26:GLY:HA3	2.18	0.44
19:XS:39:THR:HG22	19:XS:40:ILE:N	2.29	0.44
30:Y4:40:HIS:N	30:Y4:41:PRO:CD	2.81	0.44
36:YA:1021:A:H3'	36:YA:1021:A:C8	2.52	0.44
36:YA:1794:U:H2'	36:YA:1795:C:H6	1.81	0.44
36:YA:530:G:C5	36:YA:2022:U:H5''	2.51	0.44
36:YA:665:C:H2'	36:YA:666:G:H8	1.81	0.44
36:YA:719:C:H2'	36:YA:720:C:H6	1.82	0.44
37:YB:66:A:HO2'	37:YB:67:G:P	2.40	0.44
44:YN:65:LYS:O	44:YN:69:GLN:HG2	2.18	0.44
47:YQ:21:THR:HB	47:YQ:22:LYS:H	1.60	0.44
1:QA:1167:A:H8	1:QA:1167:A:OP1	2.00	0.44
1:QA:1356:G:H2'	1:QA:1357:A:H8	1.77	0.44
1:QA:97:U:H2'	1:QA:99:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:QI:114:TYR:CE2	10:QJ:59:SER:HA	2.52	0.44
11:QK:124:LYS:HE3	11:QK:125:PHE:CE1	2.53	0.44
13:QM:19:LEU:HD21	13:QM:56:LEU:HD21	1.99	0.44
14:QN:2:ALA:N	14:QN:6:LEU:HD12	2.32	0.44
20:QT:54:LYS:HG2	20:QT:57:ARG:HH12	1.82	0.44
22:QV:50:U:H2'	22:QV:51:C:C6	2.52	0.44
33:R7:5:TRP:NE1	33:R7:7:PRO:HG3	2.32	0.44
36:RA:184:C:H2'	36:RA:185:U:C6	2.52	0.44
36:RA:185:U:H2'	36:RA:186:G:C8	2.53	0.44
36:RA:2152:G:H2'	36:RA:2153:G:H8	1.82	0.44
36:RA:2400:G:H2'	36:RA:2401:U:C6	2.52	0.44
40:RF:34:TRP:CE3	46:RP:8:PRO:HB3	2.52	0.44
45:RO:64:ARG:HD2	45:RO:101:PRO:O	2.17	0.44
25:QY:53:G:HO2'	47:RQ:51:ARG:HH22	1.54	0.44
1:XA:246:A:C2	1:XA:282:A:C5	3.06	0.44
1:XA:667:G:H4'	15:XO:51:HIS:ND1	2.32	0.44
1:XA:986:A:H2'	1:XA:987:G:C8	2.52	0.44
19:XS:22:LEU:HD11	19:XS:29:ARG:HB3	1.99	0.44
23:XW:8:U:OP2	23:XW:8:U:C6	2.70	0.44
36:YA:2401:U:H2'	36:YA:2402:C:H5''	1.99	0.44
36:YA:2689:U:H4'	36:YA:2690:C:O5'	2.17	0.44
36:YA:297:C:H2'	36:YA:298:G:O4'	2.18	0.44
36:YA:960:A:H5''	36:YA:961:C:OP1	2.17	0.44
42:YH:115:VAL:HG11	42:YH:148:ILE:HD11	1.98	0.44
42:YH:127:GLU:HB2	42:YH:128:PRO:HD3	2.00	0.44
42:YH:137:ASP:O	42:YH:141:VAL:HG23	2.18	0.44
34:Y8:13:ARG:HD2	46:YP:61:ARG:CZ	2.47	0.44
47:YQ:30:GLY:CA	47:YQ:107:ALA:HB2	2.47	0.44
1:QA:1169:A:H2'	1:QA:1170:A:C8	2.53	0.44
1:QA:1289:A:H2'	1:QA:1290:G:H5'	1.99	0.44
1:QA:1523:G:H2'	1:QA:1524:C:C6	2.53	0.44
1:QA:184:G:H2'	1:QA:185:A:H8	1.82	0.44
1:QA:674:G:H2'	1:QA:675:A:C8	2.51	0.44
3:QC:33:LEU:HD22	14:QN:37:PHE:O	2.18	0.44
23:QW:60:C:OP1	23:QW:62:C:N4	2.51	0.44
36:RA:1284:A:H2'	36:RA:1285:G:O4'	2.17	0.44
36:RA:270(S):G:H2'	36:RA:270(T):G:C8	2.53	0.44
36:RA:302:C:H2'	36:RA:303:U:C6	2.52	0.44
37:RB:25:A:H2'	37:RB:26:A:C8	2.53	0.44
45:RO:63:VAL:HG23	45:RO:64:ARG:HD3	1.98	0.44
47:RQ:109:VAL:HG13	47:RQ:114:ALA:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:922:G:H2'	1:XA:923:A:C8	2.53	0.44
4:XD:111:ALA:HB1	4:XD:116:GLN:HB3	1.99	0.44
6:XF:78:GLU:O	6:XF:81:ILE:HG22	2.17	0.44
10:XJ:3:LYS:HD2	10:XJ:77:PRO:HG3	1.99	0.44
20:XT:11:SER:HA	20:XT:14:LYS:NZ	2.32	0.44
23:XW:18:G:OP2	23:XW:18:G:C8	2.70	0.44
27:Y1:11:ARG:HB2	27:Y1:12:PRO:HD2	2.00	0.44
36:YA:2320:A:N3	36:YA:2320:A:H2'	2.32	0.44
37:YB:28:C:H2'	37:YB:29:A:C8	2.53	0.44
1:QA:1080:A:H5''	5:QE:16:THR:HG21	2.00	0.44
1:QA:1316:G:H2'	1:QA:1318:A:OP2	2.18	0.44
1:QA:481:G:O2'	1:QA:482:A:C8	2.69	0.44
1:QA:51:A:N7	1:QA:114:U:O2'	2.48	0.44
1:QA:666:G:H5'	1:QA:726:C:H1'	1.99	0.44
1:QA:703:G:H4'	1:QA:704:A:O5'	2.16	0.44
2:QB:93:VAL:HG11	2:QB:97:TRP:CD1	2.49	0.44
36:RA:1201:C:H2'	36:RA:1202:C:H6	1.82	0.44
36:RA:1204:A:H1'	36:RA:1206:G:N7	2.32	0.44
36:RA:2126:A:H1'	36:RA:2127:G:OP2	2.18	0.44
36:RA:2448:A:HO2'	36:RA:2449:U:H5	1.64	0.44
36:RA:2821:A:H2'	36:RA:2822:G:C8	2.53	0.44
36:RA:312:G:H5'	36:RA:331:A:O2'	2.16	0.44
36:RA:484:C:H2'	36:RA:485:C:H6	1.82	0.44
36:RA:84:A:C8	36:RA:99:U:C4	3.05	0.44
36:RA:780:G:N1	38:RD:230:ASP:OD2	2.45	0.44
40:RF:155:LEU:HD23	40:RF:186:ILE:HD13	1.99	0.44
42:RH:149:ARG:HG3	42:RH:162:ILE:HG23	1.99	0.44
50:RT:57:PHE:CG	50:RT:58:ASN:N	2.85	0.44
1:XA:51:A:N1	1:XA:314:C:O2'	2.39	0.44
5:XE:50:GLU:HB2	5:XE:53:LEU:HD13	2.00	0.44
9:XI:48:GLU:N	9:XI:49:PRO:HD2	2.33	0.44
10:XJ:55:LYS:HD2	10:XJ:55:LYS:N	2.32	0.44
30:Y4:53:GLU:HA	30:Y4:71:ARG:HH21	1.82	0.44
32:Y6:19:ARG:HB3	32:Y6:21:TYR:CE1	2.53	0.44
36:YA:2023:G:H4'	36:YA:2617:C:O3'	2.17	0.44
36:YA:919:G:N2	36:YA:2269:A:OP2	2.47	0.44
27:Y1:28:GLY:HA2	36:YA:2397:G:H5''	2.00	0.44
36:YA:2563:U:H1'	36:YA:2566:A:N6	2.33	0.44
42:YH:52:VAL:HG13	42:YH:65:HIS:NE2	2.33	0.44
43:YI:128:LEU:O	43:YI:138:ILE:N	2.38	0.44
49:YS:42:ASP:C	49:YS:44:LYS:H	2.21	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:YZ:13:GLU:HB3	56:YZ:18:LEU:HD21	2.00	0.44
1:QA:1014:A:C8	1:QA:1014:A:OP1	2.70	0.44
1:QA:1225:A:H2'	1:QA:1225:A:N3	2.32	0.44
1:QA:1499:A:H1'	1:QA:1520:G:H5'	2.00	0.44
2:QB:21:ARG:O	2:QB:23:ARG:HG2	2.18	0.44
1:QA:537:G:H5''	12:QL:113:ARG:NH1	2.32	0.44
12:QL:32:PHE:HB3	12:QL:84:LEU:HD21	1.98	0.44
17:QQ:45:HIS:NE2	17:QQ:47:PRO:HG3	2.32	0.44
1:QA:278:G:O6	17:QQ:92:ARG:NH1	2.50	0.44
22:QV:23:C:H2'	22:QV:24:U:C6	2.53	0.44
36:RA:1048:A:H2'	36:RA:1048:A:N3	2.33	0.44
36:RA:1278:A:H2'	36:RA:1279:G:H8	1.82	0.44
36:RA:1287:A:N7	48:RR:107:ASP:HB2	2.33	0.44
36:RA:1550:C:H5'	36:RA:1733:G:N2	2.31	0.44
36:RA:2314:C:H2'	36:RA:2315:G:H8	1.83	0.44
36:RA:2364:C:H2'	36:RA:2365:G:O4'	2.18	0.44
36:RA:2514:U:H2'	36:RA:2515:C:H6	1.83	0.44
36:RA:304:G:H2'	36:RA:305:U:H6	1.80	0.44
36:RA:443:A:H1'	36:RA:1201:C:O4'	2.18	0.44
36:RA:508:G:H4'	36:RA:509:C:OP2	2.18	0.44
25:QY:19:G:N2	36:RA:881:G:H4'	2.33	0.44
40:RF:154:VAL:HG22	40:RF:191:ARG:CB	2.46	0.44
42:RH:127:GLU:N	42:RH:128:PRO:HD2	2.33	0.44
45:RO:24:VAL:HG13	45:RO:33:ALA:HB2	1.98	0.44
45:RO:8:LEU:HB2	45:RO:19:ILE:HG13	2.00	0.44
1:XA:1392:G:H21	1:XA:1502:A:H8	1.65	0.44
2:XB:16:HIS:HD2	2:XB:210:SER:HA	1.82	0.44
16:XP:53:VAL:HG12	16:XP:79:VAL:HG12	2.00	0.44
18:XR:53:ARG:HH21	18:XR:59:SER:HA	1.83	0.44
36:YA:1045:A:HO2'	36:YA:1046:A:P	2.38	0.44
36:YA:1510:A:OP1	36:YA:1511:A:H8	2.00	0.44
36:YA:1651:G:H5'	48:YR:39:PRO:HG2	1.99	0.44
36:YA:185:U:H2'	36:YA:186:G:C8	2.53	0.44
43:YI:46:ALA:O	43:YI:50:ARG:HG2	2.17	0.44
49:YS:26:LEU:HB3	49:YS:87:PHE:HA	1.99	0.44
1:QA:1302:U:H4'	1:QA:1302:U:OP2	2.17	0.44
1:QA:246:A:C2	1:QA:282:A:C5	3.05	0.44
1:QA:484:G:H4'	1:QA:485:G:O5'	2.17	0.44
7:QG:116:ALA:HA	7:QG:119:ARG:HE	1.82	0.44
23:QW:27:C:H2'	23:QW:28:U:H6	1.83	0.44
36:RA:1520:U:H2'	36:RA:1521:G:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:1794:U:O2	36:RA:1825:A:N1	2.50	0.44
40:RF:178:PRO:HG2	40:RF:179:GLU:OE1	2.18	0.44
42:RH:71:LEU:HD12	42:RH:72:ILE:HG23	1.98	0.44
50:RT:39:ARG:HG2	50:RT:40:THR:H	1.82	0.44
51:RU:17:ILE:HG13	51:RU:32:PHE:HE1	1.83	0.44
56:RZ:102:LEU:HA	56:RZ:136:PHE:CD2	2.53	0.44
1:XA:1287:A:N3	1:XA:1353:G:O2'	2.33	0.44
1:XA:477:G:H2'	1:XA:478:A:C8	2.52	0.44
2:XB:21:ARG:HE	2:XB:38:GLY:HA3	1.83	0.44
9:XI:65:VAL:HG21	9:XI:73:GLN:HB3	2.00	0.44
11:XK:32:ILE:HB	11:XK:41:THR:CG2	2.45	0.44
13:XM:117:VAL:HG22	13:XM:118:ALA:H	1.82	0.44
16:XP:38:TYR:CD1	16:XP:38:TYR:O	2.70	0.44
19:XS:31:ILE:HG23	19:XS:49:ILE:HG12	2.00	0.44
36:YA:172:C:H2'	36:YA:173:G:C8	2.52	0.44
36:YA:2692:C:H2'	36:YA:2693:A:H8	1.83	0.44
36:YA:529:A:H8	36:YA:530:G:C6	2.35	0.44
36:YA:811:U:H2'	46:YP:21:ARG:O	2.17	0.44
47:YQ:11:LYS:HE2	47:YQ:87:LYS:HA	1.99	0.44
47:YQ:39:PRO:HB3	47:YQ:99:PRO:HD3	2.00	0.44
1:QA:992:U:H3	1:QA:1044:A:H62	1.66	0.44
1:QA:1120:G:C4	1:QA:1121:U:C5	3.06	0.44
1:QA:112:G:HO2'	1:QA:354:G:HO2'	1.65	0.44
1:QA:1262:C:H2'	1:QA:1263:C:H6	1.83	0.44
1:QA:1507:A:H2'	1:QA:1508:G:C8	2.53	0.44
1:QA:244:U:H4'	1:QA:245:C:O5'	2.18	0.44
29:R3:46:ASN:O	29:R3:50:VAL:HG22	2.18	0.44
32:R6:14:THR:HG22	32:R6:21:TYR:H	1.82	0.44
36:RA:1116:C:H2'	36:RA:1117:G:H8	1.83	0.44
36:RA:214:G:H1'	36:RA:216:A:O2'	2.18	0.44
36:RA:222:A:H61	36:RA:232:G:H1'	1.83	0.44
36:RA:858:U:O2	36:RA:2268:A:H2'	2.18	0.44
36:RA:2439:A:P	36:RA:2439:A:H3'	2.58	0.44
36:RA:840:C:H2'	36:RA:841:A:H8	1.82	0.44
48:RR:74:LYS:C	48:RR:76:VAL:H	2.21	0.44
1:XA:945:G:C2	1:XA:946:A:C8	3.05	0.44
9:XI:26:VAL:HG23	9:XI:33:PHE:HB2	2.00	0.44
20:XT:54:LYS:HA	20:XT:57:ARG:CZ	2.46	0.44
23:XW:59:U:C6	23:XW:59:U:OP1	2.71	0.44
36:YA:1291:C:H2'	36:YA:1292:U:C6	2.52	0.44
36:YA:2025:C:H2'	36:YA:2026:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:2055:C:H5'	36:YA:2056:G:H5''	2.00	0.44
36:YA:2574:G:N3	39:YE:143:ASN:ND2	2.62	0.44
41:YG:107:LEU:HD23	41:YG:111:LEU:HD12	1.99	0.44
43:YI:116:LEU:HD23	43:YI:116:LEU:H	1.82	0.44
46:YP:98:GLU:HA	46:YP:101:VAL:HB	2.00	0.44
52:YV:22:VAL:HG12	52:YV:23:GLU:N	2.33	0.44
55:YY:88:LYS:C	55:YY:90:LEU:H	2.21	0.44
1:QA:688:G:H2'	1:QA:689:C:H6	1.82	0.44
2:QB:69:LEU:HD13	2:QB:91:PRO:HB2	2.00	0.44
3:QC:44:GLU:HA	3:QC:52:LEU:HD21	2.00	0.44
36:RA:1292:U:H2'	36:RA:1293:C:H6	1.83	0.44
36:RA:251:A:C5	36:RA:252:G:H1'	2.53	0.44
36:RA:2537:U:H2'	36:RA:2538:C:C6	2.53	0.44
36:RA:2562:U:H1'	45:RO:23:ARG:NH1	2.32	0.44
36:RA:1825:A:OP1	38:RD:249:PRO:HD3	2.18	0.44
39:RE:45:THR:O	39:RE:83:ASP:N	2.49	0.44
44:RN:34:LEU:HD12	44:RN:107:LEU:HD21	1.99	0.44
47:RQ:19:GLY:O	47:RQ:21:THR:HG23	2.17	0.44
54:RX:26:TYR:CG	54:RX:89:ILE:HD12	2.52	0.44
56:RZ:102:LEU:HA	56:RZ:136:PHE:CE2	2.53	0.44
1:XA:1244:C:H2'	1:XA:1245:A:H8	1.82	0.44
1:XA:322:C:H2'	1:XA:323:U:C6	2.53	0.44
1:XA:652:U:H1'	1:XA:653:A:H2	1.83	0.44
1:XA:686:U:O2'	1:XA:687:A:O5'	2.32	0.44
1:XA:693:G:C2	24:XX:13:A:N6	2.86	0.44
4:XD:10:ARG:HG3	4:XD:11:LEU:HD12	2.00	0.44
7:XG:5:ARG:HH22	7:XG:6:ARG:HH11	1.66	0.44
36:YA:1316:U:H2'	36:YA:1317:A:C8	2.52	0.44
36:YA:1434:A:H61	36:YA:1558:A:N6	2.16	0.44
36:YA:176:G:O2'	36:YA:177:G:H5'	2.18	0.44
36:YA:2864:G:OP1	50:YT:119:LYS:HD2	2.18	0.44
36:YA:30:G:H2'	36:YA:31:C:C6	2.53	0.44
36:YA:71:A:C8	36:YA:71:A:H5'	2.53	0.44
1:QA:1286:A:H5''	21:QU:26:LYS:HD2	2.00	0.43
1:QA:191(F):U:C2	1:QA:191:G:C8	3.05	0.43
1:QA:333:G:H2'	1:QA:334:C:H6	1.83	0.43
1:QA:687:A:H1'	1:QA:688:G:OP2	2.17	0.43
1:QA:8:A:H8	5:QE:101:ILE:HG23	1.82	0.43
7:QG:26:PHE:CE2	7:QG:30:ILE:HD11	2.53	0.43
8:QH:79:VAL:HG23	8:QH:80:ILE:HG13	2.00	0.43
27:R1:58:ILE:HD11	27:R1:86:SER:HB2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:R3:8:LEU:HA	29:R3:54:VAL:HG12	1.99	0.43
31:R5:19:ARG:NH2	36:RA:1264:G:OP1	2.23	0.43
36:RA:141:A:H8	36:RA:1595:G:H21	1.66	0.43
36:RA:1639:U:H4'	36:RA:2699:C:H4'	1.99	0.43
36:RA:2142:C:H2'	36:RA:2143:C:C6	2.52	0.43
36:RA:2540:C:H2'	36:RA:2541:A:O4'	2.18	0.43
38:RD:201:HIS:O	38:RD:204:ILE:HG12	2.18	0.43
46:RP:92:GLU:HG3	46:RP:121:LYS:HE2	1.99	0.43
56:RZ:118:GLN:OE1	56:RZ:120:ILE:HG23	2.18	0.43
1:XA:1499:A:H1'	1:XA:1520:G:H5'	1.99	0.43
1:XA:1502:A:H2	1:XA:1505:G:N2	2.16	0.43
1:XA:150:C:H42	1:XA:171:A:N6	2.05	0.43
1:XA:489:C:H2'	1:XA:490:G:C8	2.53	0.43
1:XA:715:A:H2'	1:XA:716:A:C8	2.53	0.43
2:XB:47:THR:HA	2:XB:202:PRO:HG2	2.00	0.43
9:XI:16:ARG:HB2	9:XI:64:THR:HG22	2.00	0.43
9:XI:69:GLY:O	9:XI:73:GLN:HG3	2.18	0.43
1:XA:690:G:H22	11:XK:55:LYS:HZ1	1.65	0.43
33:Y7:5:TRP:CD2	33:Y7:5:TRP:O	2.70	0.43
36:YA:1792:G:H5'	38:YD:205:VAL:HG13	2.00	0.43
36:YA:2296:U:OP2	49:YS:9:ARG:NH1	2.51	0.43
36:YA:657:U:H2'	36:YA:658:C:C6	2.53	0.43
36:YA:897:C:OP1	36:YA:897:C:C6	2.70	0.43
26:Y0:74:ARG:HD2	37:YB:12:C:O2'	2.17	0.43
43:YI:10:GLU:O	43:YI:11:ASN:HB2	2.18	0.43
47:YQ:52:VAL:HA	47:YQ:55:VAL:HG22	1.99	0.43
51:YU:90:VAL:HG22	52:YV:39:LEU:HB3	1.99	0.43
1:QA:1111:A:N1	3:QC:177:THR:HG22	2.33	0.43
1:QA:112:G:H22	1:QA:315:A:H2	1.66	0.43
1:QA:789:U:H1'	1:QA:792:A:H2	1.83	0.43
1:QA:920:U:H2'	1:QA:921:U:C6	2.52	0.43
2:QB:4:GLU:HG3	2:QB:6:THR:H	1.82	0.43
2:QB:55:PHE:HA	2:QB:58:ILE:HG12	2.00	0.43
5:QE:99:GLY:N	5:QE:117:ASP:OD1	2.46	0.43
8:QH:48:TYR:O	8:QH:49:GLU:CG	2.66	0.43
16:QP:9:PHE:CE2	16:QP:18:ARG:HD2	2.52	0.43
25:QY:18:G:N2	25:QY:55:U:O4	2.51	0.43
36:RA:1024:G:OP2	36:RA:1025:G:O2'	2.36	0.43
36:RA:1401:G:H2'	36:RA:1402:C:C6	2.52	0.43
36:RA:2150:U:H2'	36:RA:2151:G:C8	2.53	0.43
36:RA:2051:A:H5'	36:RA:2578:G:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:993:G:OP1	51:RU:50:ARG:NH2	2.49	0.43
39:RE:14:ILE:O	39:RE:14:ILE:HG13	2.19	0.43
55:RY:75:ILE:HG22	55:RY:76:CYS:N	2.33	0.43
56:RZ:6:LYS:HG3	56:RZ:7:ALA:N	2.33	0.43
1:XA:1060:C:H2'	1:XA:1061:G:H8	1.82	0.43
1:XA:1141:C:H2'	1:XA:1142:G:H8	1.83	0.43
1:XA:606:G:H22	1:XA:631:G:H5'	1.84	0.43
1:XA:626:U:H2'	1:XA:627:G:H8	1.83	0.43
1:XA:828:A:H2'	1:XA:829:G:O4'	2.18	0.43
2:XB:163:PHE:HA	2:XB:185:ILE:O	2.17	0.43
6:XF:50:TYR:OH	18:XR:74:ARG:O	2.24	0.43
21:XU:6:ARG:O	21:XU:12:LYS:HD3	2.19	0.43
36:YA:1501:C:H2'	36:YA:1502:C:C6	2.54	0.43
36:YA:1668:A:H5''	36:YA:1669:A:C5	2.53	0.43
36:YA:2315:G:H2'	36:YA:2316:C:C6	2.53	0.43
36:YA:2441:C:OP2	36:YA:2586:C:O2'	2.35	0.43
36:YA:347:A:H2'	36:YA:348:G:C8	2.53	0.43
36:YA:583:G:OP2	51:YU:10:ARG:HD2	2.18	0.43
36:YA:638:G:H2'	36:YA:639:U:C6	2.53	0.43
40:YF:103:LYS:HG2	40:YF:106:ARG:NH2	2.33	0.43
52:YV:16:PRO:HD3	52:YV:99:ILE:HD11	2.00	0.43
55:YY:87:LYS:HD3	55:YY:92:ASN:HB3	1.99	0.43
56:YZ:124:ILE:HG22	56:YZ:126:VAL:HG13	1.99	0.43
1:QA:1073:U:C2	1:QA:1074:G:C8	3.06	0.43
1:QA:468:A:OP1	16:QP:75:ARG:NH2	2.51	0.43
1:QA:583:A:H2'	1:QA:584:G:O4'	2.18	0.43
3:QC:53:ALA:HB2	3:QC:115:LEU:HD23	1.99	0.43
10:QJ:57:LYS:HE3	10:QJ:60:ARG:NH2	2.33	0.43
36:RA:151:C:H2'	36:RA:152:G:H8	1.83	0.43
36:RA:459:U:H2'	36:RA:460:A:H8	1.83	0.43
36:RA:504:U:H5''	36:RA:505:A:H5'	2.00	0.43
36:RA:864:G:OP2	47:RQ:22:LYS:HD3	2.18	0.43
37:RB:28:C:O5'	37:RB:28:C:H6	2.00	0.43
47:RQ:18:LYS:HG2	47:RQ:19:GLY:H	1.82	0.43
49:RS:69:VAL:HG13	49:RS:101:LEU:HD13	1.99	0.43
1:XA:1071:C:H2'	1:XA:1072:G:H8	1.83	0.43
1:XA:1378:C:N3	7:XG:76:ARG:NH2	2.66	0.43
1:XA:259:G:OP1	20:XT:83:ARG:NE	2.51	0.43
1:XA:397:A:H5'	1:XA:398:C:OP1	2.18	0.43
8:XH:33:GLU:HG2	8:XH:59:LEU:HD21	1.99	0.43
1:XA:690:G:H22	11:XK:55:LYS:NZ	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:XL:83:VAL:HG22	12:XL:84:LEU:H	1.82	0.43
28:Y2:29:LYS:HE3	28:Y2:57:ILE:HG21	2.00	0.43
36:YA:1005:C:H1'	36:YA:1012:U:H3	1.83	0.43
36:YA:1344:G:O2'	36:YA:1385:G:H2'	2.17	0.43
36:YA:1598:C:O3'	54:YX:35:THR:OG1	2.35	0.43
36:YA:184:C:O2'	36:YA:217:G:N3	2.49	0.43
36:YA:2784:C:H2'	36:YA:2785:C:C6	2.53	0.43
36:YA:2805:G:H2'	36:YA:2807:G:C8	2.53	0.43
36:YA:882:G:C8	36:YA:882:G:OP2	2.70	0.43
25:XY:52:G:H4'	47:YQ:56:ARG:NE	2.33	0.43
36:YA:533:G:H5'	51:YU:24:TYR:CE2	2.53	0.43
1:QA:1303:C:H6	1:QA:1303:C:C5'	2.31	0.43
1:QA:1326:C:H2'	1:QA:1327:C:H6	1.83	0.43
1:QA:1366:C:O2'	10:QJ:60:ARG:NH1	2.51	0.43
1:QA:308:C:H2'	1:QA:309:G:H8	1.83	0.43
1:QA:416:G:H2'	1:QA:417:C:H6	1.83	0.43
34:R8:2:PRO:HA	36:RA:591:C:H1'	1.99	0.43
36:RA:1152:C:H2'	36:RA:1153:C:H6	1.82	0.43
36:RA:1291:C:H2'	36:RA:1292:U:H6	1.83	0.43
36:RA:185:U:H4'	36:RA:218:A:H4'	2.00	0.43
36:RA:2308:G:N3	36:RA:2308:G:H2'	2.34	0.43
36:RA:2756:U:H1'	36:RA:2757:A:C8	2.54	0.43
36:RA:740:U:H2'	36:RA:741:G:C8	2.54	0.43
1:XA:1032(B):G:H2'	1:XA:1033:G:C8	2.53	0.43
1:XA:1064:G:H21	1:XA:1190:G:H2'	1.82	0.43
1:XA:1434:A:H2'	1:XA:1435:G:O4'	2.18	0.43
1:XA:166:G:H2'	1:XA:167:G:H8	1.83	0.43
1:XA:825:G:H2'	1:XA:826:C:H6	1.83	0.43
1:XA:920:U:H2'	1:XA:921:U:C6	2.52	0.43
1:XA:963:G:N2	10:XJ:55:LYS:HE2	2.32	0.43
2:XB:26:PRO:C	2:XB:28:PHE:N	2.70	0.43
3:XC:29:TYR:OH	14:XN:54:PRO:CG	2.66	0.43
8:XH:16:ALA:HB2	8:XH:24:THR:HG21	2.01	0.43
9:XI:8:GLY:O	9:XI:76:ALA:HB1	2.17	0.43
1:XA:552:U:H4'	12:XL:86:ARG:HG2	1.99	0.43
13:XM:52:GLU:HG2	13:XM:55:ARG:NH2	2.33	0.43
20:XT:84:LEU:O	20:XT:88:VAL:HG23	2.19	0.43
34:Y8:10:ALA:O	34:Y8:14:VAL:HB	2.19	0.43
36:YA:1419:A:C8	36:YA:1579:A:N6	2.86	0.43
36:YA:609:A:H2'	36:YA:609(A):G:O4'	2.19	0.43
36:YA:75:G:N3	36:YA:75:G:H2'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:YI:4:ILE:HD11	43:YI:44:LEU:HD23	1.99	0.43
51:YU:83:LEU:HD13	51:YU:91:ASP:HB3	2.01	0.43
56:YZ:5:LEU:HB2	56:YZ:59:LEU:HA	2.00	0.43
56:YZ:94:GLU:OE1	56:YZ:129:SER:OG	2.29	0.43
1:QA:958:A:C2	19:QS:55:LYS:HB2	2.54	0.43
14:QN:40:CYS:HB3	14:QN:43:CYS:CB	2.49	0.43
36:RA:1079:C:H2'	36:RA:1080:C:O4'	2.19	0.43
36:RA:1178:C:O2'	36:RA:1179:C:H5'	2.18	0.43
36:RA:2543:G:H2'	36:RA:2544:G:C8	2.53	0.43
36:RA:2745:C:H2'	36:RA:2746:U:H6	1.84	0.43
36:RA:2745:C:H2'	36:RA:2746:U:C6	2.52	0.43
36:RA:1568:G:H5''	38:RD:61:LEU:HG	2.00	0.43
1:XA:707:C:H4'	11:XK:20:TYR:CD1	2.54	0.43
25:XY:29:U:H2'	25:XY:30:G:H8	1.83	0.43
36:YA:2180:U:H2'	36:YA:2181:G:C8	2.53	0.43
36:YA:2698:U:H2'	36:YA:2699:C:H6	1.82	0.43
36:YA:278:A:O2'	36:YA:279:C:OP1	2.33	0.43
36:YA:285:C:H2'	36:YA:286:C:H6	1.82	0.43
36:YA:573:G:O2'	36:YA:574:C:H3'	2.18	0.43
39:YE:144:ARG:CG	39:YE:145:LYS:H	2.31	0.43
48:YR:74:LYS:C	48:YR:76:VAL:H	2.21	0.43
49:YS:14:VAL:O	49:YS:18:ILE:HG12	2.17	0.43
50:YT:125:ARG:O	50:YT:128:GLU:HG2	2.19	0.43
53:YW:88:ARG:HG3	53:YW:89:ALA:H	1.83	0.43
25:XY:58:A:N6	56:YZ:183:LEU:H	2.16	0.43
1:QA:21:G:H2'	1:QA:22:G:H8	1.84	0.43
1:QA:59:A:H1'	1:QA:354:G:N2	2.33	0.43
3:QC:130:VAL:O	3:QC:134:ILE:HG12	2.19	0.43
9:QI:126:SER:O	9:QI:128:ARG:N	2.52	0.43
28:R2:14:ARG:O	28:R2:15:LYS:HG2	2.19	0.43
28:R2:52:ASP:O	28:R2:56:GLN:HG3	2.19	0.43
29:R3:11:SER:OG	29:R3:13:ILE:HG12	2.18	0.43
34:R8:52:LYS:N	34:R8:53:PRO:CD	2.81	0.43
36:RA:1535:U:H5'	36:RA:1537:C:N3	2.34	0.43
36:RA:1930:G:HO2'	36:RA:1931:U:P	2.41	0.43
36:RA:2001:A:H2'	36:RA:2002:G:C8	2.53	0.43
36:RA:2188:C:H2'	36:RA:2189:U:O4'	2.18	0.43
36:RA:320:A:H4'	36:RA:322:A:N7	2.33	0.43
36:RA:183:C:O2'	36:RA:432:A:N3	2.41	0.43
52:RV:35:LEU:HD12	52:RV:35:LEU:O	2.19	0.43
53:RW:4:LYS:HB3	53:RW:106:ILE:HG22	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1148:U:H2'	1:XA:1149:C:O4'	2.18	0.43
1:XA:884:U:H4'	1:XA:885:G:H5''	2.00	0.43
21:XU:25:LYS:NZ	21:XU:26:LYS:O	2.45	0.43
25:XY:28:U:H2'	25:XY:29:U:C6	2.53	0.43
26:Y0:47:PRO:HB2	49:YS:20:ARG:NH2	2.34	0.43
29:Y3:29:ARG:HH22	36:YA:1183:G:H4'	1.84	0.43
36:YA:141:A:H8	36:YA:1408:C:H1'	1.84	0.43
36:YA:2478:A:C8	36:YA:2529:G:C5	3.07	0.43
36:YA:2649:U:H2'	36:YA:2650:U:C6	2.54	0.43
36:YA:284:U:H2'	36:YA:285:C:H6	1.84	0.43
1:QA:1298:C:H1'	1:QA:1299:A:C6	2.53	0.43
1:QA:29:G:O2'	1:QA:30:U:H5'	2.19	0.43
1:QA:743:U:H2'	1:QA:744:C:H6	1.84	0.43
1:QA:792:A:H2'	1:QA:792:A:N3	2.34	0.43
1:QA:10:A:OP2	5:QE:126:ARG:HD3	2.19	0.43
7:QG:66:VAL:O	7:QG:70:LYS:HG3	2.18	0.43
9:QI:63:ILE:HG21	9:QI:77:ILE:HD12	1.99	0.43
25:QY:5:C:H2'	25:QY:6:U:C6	2.54	0.43
34:R8:58:ILE:HG22	46:RP:49:ARG:NH1	2.33	0.43
36:RA:1515:C:H2'	36:RA:1516:U:H6	1.84	0.43
36:RA:1786:A:H1'	36:RA:1938:A:N6	2.33	0.43
36:RA:303:U:C2	36:RA:304:G:C8	3.07	0.43
36:RA:36:G:H4'	36:RA:451:C:C2	2.53	0.43
38:RD:71:ASP:HB2	38:RD:103:ARG:HH12	1.84	0.43
41:RG:37:VAL:HG23	41:RG:159:VAL:HG12	2.00	0.43
42:RH:119:GLU:O	42:RH:140:LYS:NZ	2.27	0.43
46:RP:84:ASN:OD1	46:RP:116:GLY:HA3	2.18	0.43
1:XA:1307:U:O4	1:XA:1331:G:N2	2.51	0.43
1:XA:389:A:H3'	1:XA:390:C:C6	2.54	0.43
1:XA:991:U:O4	1:XA:1212:U:O2'	2.30	0.43
8:XH:25:ASP:OD1	8:XH:60:ARG:HG2	2.18	0.43
33:Y7:5:TRP:CG	33:Y7:5:TRP:O	2.71	0.43
36:YA:1656:C:H2'	36:YA:1657:C:H6	1.84	0.43
36:YA:2154:G:H2'	36:YA:2155:G:C8	2.53	0.43
36:YA:2656:U:N3	36:YA:2665:A:H2	2.17	0.43
36:YA:2735:G:H2'	36:YA:2736:G:H8	1.84	0.43
36:YA:305:U:H2'	36:YA:306:U:C6	2.54	0.43
37:YB:107:U:H2'	37:YB:108:C:H5''	2.01	0.43
38:YD:146:GLU:HB2	38:YD:189:CYS:HB3	2.00	0.43
51:YU:52:ARG:HA	51:YU:55:ARG:HE	1.83	0.43
1:QA:1289:A:OP1	21:QU:9:ARG:NH2	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:QP:51:VAL:HG11	16:QP:74:LEU:HD23	2.01	0.43
31:R5:4:HIS:HB3	31:R5:5:PRO:CD	2.45	0.43
36:RA:1067:A:H5''	36:RA:1068:G:N7	2.34	0.43
36:RA:1231:G:H2'	36:RA:1232:G:C8	2.53	0.43
36:RA:1384:A:H1'	36:RA:1405:U:O4'	2.18	0.43
36:RA:1453:A:C6	36:RA:2702:U:H1'	2.54	0.43
36:RA:1655:A:H3'	36:RA:1656:C:C6	2.54	0.43
36:RA:2183:C:H2'	36:RA:2184:G:C8	2.53	0.43
36:RA:2210:G:H2'	36:RA:2210:G:N3	2.34	0.43
36:RA:2629:A:O2'	36:RA:2630:G:H5''	2.19	0.43
36:RA:532:A:H4'	36:RA:533:G:C8	2.53	0.43
36:RA:875:G:N1	36:RA:903:C:N3	2.67	0.43
39:RE:54:GLN:HB2	39:RE:75:VAL:HG13	2.00	0.43
40:RF:157:VAL:HG11	40:RF:181:LEU:HD21	2.00	0.43
1:XA:22:G:H2'	1:XA:23:C:C6	2.53	0.43
1:XA:978:A:C4	1:XA:1319:A:C2	3.06	0.43
1:XA:33:A:N3	12:XL:32:PHE:HE2	2.15	0.43
36:YA:1080:C:H2'	36:YA:1081:U:C6	2.53	0.43
36:YA:1289:C:H2'	36:YA:1290:C:H6	1.84	0.43
36:YA:218:A:C2	36:YA:235:U:H4'	2.54	0.43
36:YA:36:G:N3	36:YA:450:G:O2'	2.50	0.43
36:YA:1500:G:O2'	38:YD:100:GLY:O	2.33	0.43
40:YF:53:THR:O	40:YF:57:VAL:HG23	2.18	0.43
48:YR:74:LYS:O	48:YR:75:LEU:HB3	2.18	0.43
56:YZ:79:ARG:HD2	56:YZ:80:ARG:NH1	2.32	0.43
1:QA:1342:C:H2'	1:QA:1343:G:C8	2.54	0.43
36:RA:1204:A:O2'	36:RA:1205:U:O5'	2.36	0.43
36:RA:1430:C:H2'	36:RA:1431:U:H6	1.83	0.43
36:RA:1870:C:H2'	36:RA:1871:A:O4'	2.19	0.43
36:RA:827:U:O2'	36:RA:2068:U:C2	2.69	0.43
36:RA:2219:G:OP1	38:RD:172:TYR:OH	2.31	0.43
36:RA:2680:C:O2'	36:RA:2681:C:H5'	2.18	0.43
36:RA:631:A:H61	36:RA:2402:C:N4	2.17	0.43
36:RA:971:C:H2'	36:RA:972:G:O4'	2.19	0.43
38:RD:35:LYS:N	38:RD:36:PRO:HD3	2.34	0.43
39:RE:60:ASN:CG	39:RE:62:PRO:HD2	2.39	0.43
51:RU:92:ARG:NH1	52:RV:11:GLN:HB2	2.34	0.43
55:RY:76:CYS:SG	55:RY:96:ILE:HD13	2.59	0.43
5:XE:12:LEU:HB3	5:XE:31:LEU:HB2	1.99	0.43
9:XI:19:LEU:HD23	9:XI:61:ALA:HB2	1.99	0.43
26:Y0:32:ARG:H	26:Y0:35:ASN:ND2	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Y6:41:PRO:HG3	32:Y6:44:ARG:HB3	2.01	0.43
36:YA:177:G:H3'	36:YA:178:G:H8	1.84	0.43
36:YA:2030:A:H4'	36:YA:2031:A:H8	1.82	0.43
36:YA:2477:C:H1'	36:YA:2481:G:O6	2.19	0.43
36:YA:2774:C:H2'	36:YA:2775:A:O4'	2.18	0.43
36:YA:270(N):G:H21	43:YI:50:ARG:NH2	2.17	0.43
46:YP:106:LEU:HD13	46:YP:112:LEU:HD13	2.01	0.43
49:YS:26:LEU:HD22	49:YS:87:PHE:CD1	2.53	0.43
1:QA:1320:C:H2'	1:QA:1321:C:C6	2.54	0.43
1:QA:636:U:H2'	1:QA:637:G:C8	2.53	0.43
2:QB:146:GLN:O	2:QB:150:SER:HB3	2.19	0.43
5:QE:93:PRO:HG2	8:QH:105:ARG:HE	1.84	0.43
8:QH:4:ASP:OD1	8:QH:85:ARG:NH1	2.51	0.43
1:QA:1330:U:H4'	13:QM:23:TYR:CE2	2.53	0.43
27:R1:16:ASN:HB2	36:RA:380:U:O3'	2.18	0.43
36:RA:1186:G:H2'	36:RA:1187:G:O4'	2.19	0.43
36:RA:2347:C:H2'	36:RA:2348:U:C6	2.54	0.43
36:RA:247:G:H4'	36:RA:386:G:C4	2.53	0.43
36:RA:2735:G:H2'	36:RA:2736:G:H8	1.83	0.43
37:RB:49:C:H2'	37:RB:50:G:C8	2.54	0.43
42:RH:12:PRO:HA	42:RH:76:VAL:HG21	2.01	0.43
1:XA:527:G:O2'	1:XA:535:A:N1	2.45	0.43
5:XE:41:VAL:HG21	5:XE:113:ALA:HB2	2.00	0.43
6:XF:44:GLY:HA2	6:XF:59:TYR:CE2	2.54	0.43
13:XM:66:LEU:HB3	13:XM:67:GLU:H	1.74	0.43
14:XN:23:ARG:HD2	14:XN:28:GLY:O	2.19	0.43
31:Y5:3:LYS:HB3	31:Y5:4:HIS:H	1.63	0.43
32:Y6:40:CYS:HA	32:Y6:46:HIS:HA	2.01	0.43
36:YA:1331:A:O2'	36:YA:1332:G:H8	2.02	0.43
36:YA:1417:C:H2'	36:YA:1418:G:O4'	2.18	0.43
36:YA:765:G:H2'	36:YA:766:C:H6	1.84	0.43
38:YD:165:ILE:HG13	38:YD:175:LEU:HD21	2.00	0.43
41:YG:6:ALA:HB3	41:YG:104:GLU:OE2	2.18	0.43
36:YA:389:G:H22	46:YP:72:PRO:CG	2.32	0.43
49:YS:18:ILE:HG13	49:YS:88:ASP:HA	2.00	0.43
49:YS:49:VAL:HG12	49:YS:73:LEU:HD12	2.01	0.43
13:QM:49:THR:HB	13:QM:52:GLU:HG3	2.00	0.42
26:R0:7:LEU:HD12	47:RQ:83:MET:HB2	2.00	0.42
36:RA:1021:A:H3'	36:RA:1022:G:H5''	2.01	0.42
36:RA:103:A:OP2	36:RA:103:A:H8	2.02	0.42
36:RA:1054:A:N6	36:RA:1106:G:O6	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:223:A:H5'	36:RA:422:A:H5'	2.01	0.42
36:RA:2720:U:C2	36:RA:2721:A:C8	3.07	0.42
36:RA:2779:U:H5'	36:RA:2779:U:O2	2.19	0.42
36:RA:2870:C:H2'	36:RA:2871:C:O4'	2.19	0.42
36:RA:824:A:H1'	36:RA:2358:G:N7	2.34	0.42
36:RA:875:G:H2'	36:RA:876:C:C6	2.54	0.42
42:RH:89:ILE:HD11	42:RH:129:THR:HB	2.01	0.42
42:RH:151:ILE:HG22	42:RH:152:ARG:N	2.34	0.42
51:RU:91:ASP:O	51:RU:93:LYS:N	2.52	0.42
1:XA:538:G:H2'	1:XA:539:A:H8	1.83	0.42
1:XA:580:U:H2'	1:XA:581:G:O4'	2.18	0.42
9:XI:25:LYS:N	9:XI:60:ASP:OD1	2.52	0.42
11:XK:22:HIS:HB3	11:XK:29:ILE:CG2	2.49	0.42
24:XX:13:A:C6	24:XX:14:A:N7	2.87	0.42
36:YA:1085:A:H4'	36:YA:1086:A:OP1	2.19	0.42
36:YA:2037:G:H2'	36:YA:2038:G:C8	2.54	0.42
36:YA:2105:C:H2'	36:YA:2106:G:H8	1.84	0.42
36:YA:2173:A:OP1	36:YA:2173:A:H8	2.02	0.42
26:Y0:43:THR:HG22	36:YA:2336:A:H61	1.84	0.42
40:YF:11:VAL:HG22	40:YF:125:LEU:HB2	2.01	0.42
40:YF:66:PRO:O	40:YF:67:GLN:HB3	2.19	0.42
1:QA:1120:G:H2'	1:QA:1121:U:H6	1.83	0.42
1:QA:1122:U:O4	1:QA:1123:A:N6	2.52	0.42
1:QA:1327:C:H2'	1:QA:1328:C:H6	1.85	0.42
1:QA:165:C:H2'	1:QA:166:G:H8	1.84	0.42
1:QA:647:C:H2'	1:QA:648:A:H8	1.85	0.42
6:QF:80:ARG:NH1	6:QF:88:VAL:O	2.51	0.42
36:RA:1030:G:C6	36:RA:1125:G:N2	2.87	0.42
36:RA:1264:G:H1'	36:RA:2015:A:N6	2.34	0.42
36:RA:769:G:H5'	36:RA:1379:A:N6	2.34	0.42
36:RA:1449:A:C5	36:RA:1529:A:H2	2.37	0.42
36:RA:248:G:H5'	36:RA:250:G:N7	2.34	0.42
36:RA:536:A:H2'	36:RA:537:C:H6	1.84	0.42
36:RA:579:G:H2'	36:RA:580:C:C6	2.53	0.42
36:RA:704:G:H1'	36:RA:727:A:N6	2.34	0.42
37:RB:75:G:O2'	56:RZ:85:HIS:NE2	2.50	0.42
44:RN:112:LEU:O	44:RN:116:LEU:HD13	2.18	0.42
46:RP:57:THR:C	46:RP:59:LEU:H	2.20	0.42
1:XA:1236:A:H2'	1:XA:1237:C:C6	2.54	0.42
1:XA:1374:A:O2'	7:XG:28:ASN:HB3	2.19	0.42
1:XA:262:A:H5'	20:XT:74:LYS:HG3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:186:C:O2'	20:XT:85:MET:SD	2.57	0.42
36:YA:2226:C:C2	36:YA:2227:A:C8	3.07	0.42
36:YA:2340:G:H2'	36:YA:2341:G:H8	1.84	0.42
36:YA:2469:A:H4'	36:YA:2469:A:OP1	2.19	0.42
36:YA:314:A:O2'	36:YA:315:G:H5'	2.19	0.42
36:YA:347:A:H2'	36:YA:348:G:H8	1.84	0.42
36:YA:532:A:H4'	36:YA:533:G:C8	2.54	0.42
38:YD:218:ARG:HB3	38:YD:219:PRO:HD2	2.01	0.42
48:YR:17:ARG:HG2	48:YR:21:TYR:CE1	2.55	0.42
48:YR:24:GLN:HB3	48:YR:44:LEU:HD22	2.01	0.42
52:YV:69:LYS:HA	52:YV:88:ARG:HG2	2.01	0.42
1:QA:1121:U:C2	1:QA:1122:U:C5	3.07	0.42
1:QA:1199:U:O2'	1:QA:1202:G:OP1	2.30	0.42
1:QA:1371:G:O3'	9:QI:69:GLY:HA3	2.19	0.42
1:QA:939:G:N3	1:QA:1375:A:H2	2.17	0.42
25:QY:7:A:H61	25:QY:67:A:H2	1.66	0.42
36:RA:1022:G:N2	36:RA:1023:U:O4	2.47	0.42
36:RA:1851:U:H2'	36:RA:1852:C:O4'	2.20	0.42
36:RA:2655:G:HO2'	36:RA:2656:U:H5	1.65	0.42
36:RA:270(E):G:H2'	36:RA:270(F):U:C6	2.55	0.42
38:RD:218:ARG:HB3	38:RD:219:PRO:HD2	2.01	0.42
30:R4:1:MET:HB2	41:RG:98:ARG:HH12	1.84	0.42
46:RP:14:LYS:O	46:RP:16:ARG:HG3	2.18	0.42
51:RU:50:ARG:HG3	51:RU:53:ARG:NH2	2.34	0.42
1:XA:129(A):G:O2'	1:XA:189:U:H3'	2.19	0.42
1:XA:35:G:H2'	1:XA:36:C:C6	2.54	0.42
1:XA:380:G:N2	1:XA:383:A:OP2	2.51	0.42
1:XA:436:C:H2'	1:XA:437:U:C6	2.55	0.42
1:XA:603:U:H2'	1:XA:604:G:C8	2.54	0.42
1:XA:864:A:OP1	1:XA:864:A:H8	2.03	0.42
9:XI:16:ARG:HB2	9:XI:64:THR:CG2	2.49	0.42
17:XQ:43:LEU:O	17:XQ:69:LYS:HG3	2.19	0.42
25:XY:54:U:OP1	47:YQ:51:ARG:NH1	2.47	0.42
26:Y0:21:LEU:HD11	26:Y0:41:ARG:NH2	2.34	0.42
36:YA:2349:G:H2'	36:YA:2350:C:O4'	2.19	0.42
36:YA:2392:A:H8	46:YP:60:MET:HG2	1.84	0.42
36:YA:2693:A:H2'	36:YA:2694:G:C8	2.51	0.42
36:YA:2803:C:H2'	36:YA:2804:C:C6	2.54	0.42
36:YA:363(B):G:H2'	36:YA:363(C):G:H8	1.84	0.42
36:YA:769:G:H5'	36:YA:1379:A:N6	2.34	0.42
36:YA:893:C:H2'	36:YA:894:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YD:16:MET:HG3	38:YD:206:LEU:O	2.19	0.42
41:YG:52:ILE:HA	41:YG:55:LYS:HB3	2.00	0.42
1:QA:1120:G:H2'	1:QA:1121:U:C6	2.54	0.42
1:QA:1306:A:H62	1:QA:1331:G:H1'	1.84	0.42
1:QA:1360:A:H2'	1:QA:1361:G:C8	2.55	0.42
1:QA:626:U:C2	1:QA:627:G:C8	3.07	0.42
1:QA:950:U:H2'	1:QA:951:G:C8	2.55	0.42
1:QA:1158:C:O2'	2:QB:133:LYS:HD3	2.20	0.42
1:QA:8:A:H5'	5:QE:101:ILE:HG22	2.01	0.42
29:R3:8:LEU:HB3	29:R3:31:LEU:HD23	2.01	0.42
34:R8:52:LYS:N	34:R8:53:PRO:HD3	2.35	0.42
34:R8:61:LEU:C	34:R8:63:PRO:HD3	2.40	0.42
36:RA:1291:C:H2'	36:RA:1292:U:C6	2.55	0.42
36:RA:1370:C:H2'	36:RA:1371:G:O4'	2.19	0.42
36:RA:2660:A:H2'	36:RA:2661:G:C8	2.54	0.42
36:RA:270(F):U:H3	36:RA:270(T):G:H1	1.65	0.42
36:RA:307:G:H21	36:RA:330:A:N6	2.18	0.42
36:RA:920:G:H2'	36:RA:921:G:H8	1.84	0.42
40:RF:134:GLY:H	40:RF:162:LEU:HB3	1.85	0.42
44:RN:35:ARG:HB2	44:RN:42:TRP:CZ3	2.53	0.42
36:RA:1243:G:H1'	46:RP:4:SER:O	2.18	0.42
36:RA:482:A:H4'	55:RY:47:LYS:HG3	2.01	0.42
1:XA:1032(A):G:H2'	1:XA:1032(B):G:H8	1.84	0.42
1:XA:222:U:H2'	1:XA:223:U:H6	1.84	0.42
1:XA:345:C:H5''	1:XA:346:G:C5	2.54	0.42
1:XA:432:A:H2'	1:XA:433:C:O4'	2.19	0.42
1:XA:524:G:H2'	1:XA:525:C:C6	2.55	0.42
1:XA:79:G:H2'	1:XA:80:G:O4'	2.18	0.42
1:XA:824:C:H2'	1:XA:825:G:H8	1.84	0.42
1:XA:908:A:H2'	1:XA:909:A:H8	1.84	0.42
1:XA:973:G:C1'	10:XJ:55:LYS:HE3	2.48	0.42
11:XK:34:ASP:OD1	11:XK:38:ASN:N	2.53	0.42
35:Y9:24:TYR:CE1	35:Y9:35:ARG:HG3	2.54	0.42
36:YA:1085:A:O2'	36:YA:1086:A:O4'	2.36	0.42
36:YA:1385:G:O2'	36:YA:1396:U:H6	2.03	0.42
36:YA:1638:C:OP1	36:YA:2710:C:O2'	2.38	0.42
36:YA:1842:G:H2'	36:YA:1843:C:C6	2.54	0.42
36:YA:2011:U:H2'	36:YA:2012:G:O4'	2.20	0.42
36:YA:2647:U:H2'	36:YA:2648:C:H6	1.85	0.42
36:YA:504:U:H5''	36:YA:505:A:H5'	2.01	0.42
36:YA:580:C:H2'	36:YA:581:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:67:U:N3	36:YA:74:A:H2	2.01	0.42
36:YA:943:U:P	46:YP:36:LYS:HG3	2.59	0.42
37:YB:28:C:H2'	37:YB:29:A:H8	1.84	0.42
39:YE:1:MET:HB3	39:YE:83:ASP:O	2.18	0.42
42:YH:52:VAL:O	42:YH:65:HIS:NE2	2.53	0.42
42:YH:54:ARG:HB3	42:YH:65:HIS:ND1	2.35	0.42
47:YQ:25:ASP:HA	47:YQ:100:GLY:O	2.20	0.42
26:Y0:7:LEU:HD21	47:YQ:80:GLU:HB3	2.02	0.42
50:YT:118:ARG:NH2	50:YT:121:ILE:HG21	2.34	0.42
51:YU:91:ASP:OD1	51:YU:92:ARG:N	2.42	0.42
55:YY:94:LYS:HD2	55:YY:101:LYS:HZ3	1.83	0.42
1:QA:1000:A:H2'	1:QA:1001:G:C8	2.55	0.42
1:QA:1321:C:H3'	1:QA:1322:C:H2'	2.01	0.42
1:QA:33:A:H2'	1:QA:34:C:C6	2.55	0.42
1:QA:704:A:H2'	1:QA:704:A:N3	2.35	0.42
16:QP:26:ARG:HG3	16:QP:27:LYS:N	2.34	0.42
22:QV:9:G:H21	22:QV:45:G:H3'	1.85	0.42
36:RA:1105:U:H2'	36:RA:1106:G:C8	2.53	0.42
36:RA:1395:A:H4'	36:RA:1397:U:C5	2.54	0.42
36:RA:153:C:H2'	36:RA:154:G:C8	2.55	0.42
36:RA:1653:G:H1'	36:RA:1654:A:OP2	2.20	0.42
36:RA:2314:C:H5''	41:RG:38:VAL:HG21	2.00	0.42
36:RA:37:C:H2'	36:RA:38:A:C8	2.54	0.42
39:RE:92:THR:OG1	39:RE:93:VAL:N	2.53	0.42
1:XA:613:C:H2'	1:XA:614:A:C8	2.53	0.42
1:XA:779:C:H2'	1:XA:780:A:O4'	2.19	0.42
2:XB:16:HIS:CD2	2:XB:210:SER:HA	2.55	0.42
1:XA:979:C:O2	14:YN:19:ARG:HG2	2.19	0.42
18:XR:71:LYS:O	18:XR:75:ILE:HG12	2.19	0.42
23:XW:50:G:H2'	23:XW:51:C:C6	2.55	0.42
36:YA:1041:C:H2'	36:YA:1042:G:H8	1.83	0.42
36:YA:1438:U:H2'	36:YA:1439:A:H8	1.83	0.42
36:YA:1709:U:H2'	36:YA:1710:C:C6	2.54	0.42
36:YA:205:G:O2'	36:YA:206:U:OP2	2.38	0.42
36:YA:2328:A:H2'	36:YA:2329:G:H8	1.82	0.42
36:YA:860:U:H5	36:YA:917:A:C2	2.36	0.42
36:YA:2311:A:H8	41:YG:82:LEU:HD22	1.83	0.42
51:YU:92:ARG:NE	51:YU:94:ASN:HB3	2.35	0.42
53:YW:20:VAL:HG23	53:YW:47:VAL:HG21	2.00	0.42
54:YX:43:VAL:HG21	54:YX:51:VAL:HG21	2.01	0.42
56:YZ:126:VAL:HG12	56:YZ:163:LEU:HA	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:XY:62:C:C2	56:YZ:183:LEU:HG	2.55	0.42
1:QA:1200:C:HO2'	1:QA:1201:A:P	2.36	0.42
1:QA:1318:A:OP1	19:QS:7:LYS:NZ	2.51	0.42
3:QC:191:THR:HG21	3:QC:193:TYR:CE1	2.55	0.42
13:QM:117:VAL:HG22	13:QM:118:ALA:H	1.84	0.42
23:QW:1:G:H2'	23:QW:2:G:H8	1.84	0.42
23:QW:30:G:H1	23:QW:40:C:N4	2.17	0.42
25:QY:16:C:C5	25:QY:18:G:H3'	2.53	0.42
28:R2:38:GLN:HB3	28:R2:45:SER:HB2	2.02	0.42
30:R4:38:LYS:HA	30:R4:38:LYS:HD3	1.82	0.42
36:RA:1676:A:H2'	36:RA:1677:A:O4'	2.19	0.42
36:RA:2300:G:H2'	36:RA:2301:C:C6	2.54	0.42
36:RA:2547:U:H2'	36:RA:2548:G:C8	2.55	0.42
36:RA:1783:A:H5'	36:RA:2608:G:H4'	2.02	0.42
36:RA:2838:G:C4	36:RA:2839:G:C8	3.08	0.42
36:RA:639:U:C2	36:RA:640:C:C5	3.06	0.42
37:RB:94:C:H2'	37:RB:95:U:H6	1.84	0.42
39:RE:82:ARG:O	39:RE:83:ASP:HB2	2.20	0.42
36:RA:270(L):U:O4	43:RI:50:ARG:NH2	2.53	0.42
47:RQ:52:VAL:HA	47:RQ:55:VAL:HG12	2.02	0.42
52:RV:58:VAL:HB	52:RV:98:GLU:HB2	2.00	0.42
56:RZ:146:ILE:HG23	56:RZ:174:VAL:HG21	2.02	0.42
1:XA:411:A:C4	1:XA:413:G:H1'	2.55	0.42
1:XA:575:G:O2'	1:XA:820:U:H5''	2.19	0.42
5:XE:75:THR:OG1	5:XE:76:ILE:N	2.52	0.42
6:XF:23:LYS:NZ	6:XF:42:GLU:OE2	2.36	0.42
13:XM:4:ILE:HD12	13:XM:10:PRO:HG2	2.02	0.42
13:XM:4:ILE:HD13	13:XM:19:LEU:HD23	2.00	0.42
13:XM:49:THR:HB	13:XM:52:GLU:HG3	2.00	0.42
15:XO:56:LEU:O	15:XO:60:VAL:HG23	2.20	0.42
16:XP:39:TYR:HB2	16:XP:49:LEU:HD13	2.02	0.42
27:Y1:40:ARG:HH12	36:YA:2232:U:P	2.40	0.42
36:YA:1086:A:O2'	36:YA:1087:G:N7	2.52	0.42
36:YA:1198:U:C2	36:YA:1199:U:C5	3.07	0.42
36:YA:1957:C:H2'	36:YA:1958:C:H6	1.83	0.42
36:YA:2647:U:H2'	36:YA:2648:C:C6	2.53	0.42
36:YA:581:C:OP1	51:YU:33:ARG:HG3	2.20	0.42
36:YA:598:G:C5'	46:YP:11:GLY:HA3	2.50	0.42
52:YV:66:ARG:HD2	52:YV:88:ARG:CZ	2.48	0.42
1:QA:1095:U:P	1:QA:1108:G:H1	2.42	0.42
1:QA:1287:A:H2	1:QA:1353:G:H1'	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:978:A:C4	1:QA:1319:A:C2	3.08	0.42
7:QG:152:ALA:HB1	7:QG:155:ARG:HH21	1.84	0.42
10:QJ:32:ALA:HB3	10:QJ:76:ASN:ND2	2.35	0.42
22:QV:23:C:H2'	22:QV:24:U:H6	1.83	0.42
27:R1:71:TYR:CZ	43:RI:27:ARG:HB2	2.55	0.42
31:R5:3:LYS:HB3	31:R5:4:HIS:H	1.57	0.42
36:RA:1431:U:H2'	36:RA:1432:C:H6	1.84	0.42
36:RA:677:A:O2'	36:RA:2070:G:O2'	2.38	0.42
36:RA:2359:C:H2'	36:RA:2360:A:O4'	2.19	0.42
36:RA:2376:A:H2'	36:RA:2377:A:O4'	2.19	0.42
36:RA:2462:U:H1'	36:RA:2491:U:O4	2.19	0.42
36:RA:2485:G:O3'	47:RQ:126:PRO:HB3	2.19	0.42
36:RA:308:G:H2'	36:RA:309:G:C8	2.54	0.42
36:RA:469:G:H2'	36:RA:470:A:H5''	2.00	0.42
36:RA:796:C:H2'	36:RA:797:C:H6	1.83	0.42
1:XA:373:A:C2	1:XA:374:A:C8	3.08	0.42
1:XA:309:G:O2'	1:XA:607:A:N1	2.52	0.42
1:XA:932:C:H5'	7:XG:4:ARG:HG2	2.02	0.42
13:XM:3:ARG:O	13:XM:57:ARG:NH1	2.52	0.42
17:XQ:45:HIS:CD2	17:XQ:47:PRO:HG3	2.55	0.42
20:XT:43:LEU:HB3	20:XT:52:ALA:HB2	2.02	0.42
34:Y8:10:ALA:HA	46:YP:61:ARG:NH1	2.34	0.42
36:YA:1321:A:C4	36:YA:1322:A:C8	3.08	0.42
36:YA:1629:U:H2'	36:YA:1630:G:C8	2.55	0.42
36:YA:2071:A:H2'	36:YA:2072:G:H8	1.85	0.42
36:YA:2492:U:H2'	36:YA:2493:U:C6	2.54	0.42
36:YA:271:G:H2'	36:YA:272:G:H8	1.85	0.42
37:YB:15:A:H1'	37:YB:109:G:C5	2.54	0.42
37:YB:15:A:H1'	37:YB:109:G:N7	2.35	0.42
39:YE:36:ARG:NH1	39:YE:85:ASN:OD1	2.52	0.42
46:YP:125:VAL:CG1	46:YP:138:LEU:HD21	2.50	0.42
49:YS:109:GLY:C	49:YS:111:GLU:H	2.21	0.42
55:YY:38:ILE:HG22	55:YY:66:PRO:CA	2.45	0.42
56:YZ:103:ARG:HB2	56:YZ:138:GLU:CB	2.49	0.42
1:QA:1032(B):G:H2'	1:QA:1033:G:C8	2.53	0.42
1:QA:1054:C:H2'	1:QA:1055:A:H5''	2.02	0.42
1:QA:1219:U:H2'	1:QA:1220:G:H8	1.84	0.42
1:QA:1303:C:H6	1:QA:1303:C:H5'	1.85	0.42
1:QA:1486:G:H2'	1:QA:1487:G:C8	2.55	0.42
1:QA:175:C:H2'	1:QA:176:C:H6	1.83	0.42
1:QA:254:G:C6	1:QA:273:A:C6	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:390:C:H2'	1:QA:391:G:H8	1.83	0.42
2:QB:98:LEU:HB2	2:QB:101:MET:SD	2.59	0.42
5:QE:18:ARG:HH21	5:QE:25:ARG:HD2	1.85	0.42
16:QP:59:TRP:HA	16:QP:62:VAL:HG22	2.02	0.42
1:QA:720:C:H5''	18:QR:52:PRO:HA	2.02	0.42
27:R1:11:ARG:HB2	27:R1:12:PRO:HD2	2.02	0.42
30:R4:15:ILE:HG22	30:R4:20:ASN:HB3	2.01	0.42
36:RA:1446:C:H2'	36:RA:1447:G:H8	1.83	0.42
36:RA:1542:G:H5''	36:RA:1543:A:OP2	2.19	0.42
36:RA:2393:A:H2'	36:RA:2394:C:O4'	2.20	0.42
36:RA:2567:G:H2'	36:RA:2568:C:C6	2.54	0.42
36:RA:2649:U:H2'	36:RA:2650:U:H6	1.83	0.42
36:RA:2692:C:H2'	36:RA:2693:A:C8	2.54	0.42
27:R1:78:LYS:NZ	36:RA:270(I):G:H21	2.18	0.42
36:RA:534:U:H2'	36:RA:535:C:C6	2.54	0.42
36:RA:638:G:H2'	36:RA:639:U:H6	1.85	0.42
36:RA:822:U:H2'	36:RA:823:G:H8	1.85	0.42
30:R4:42:PHE:CE2	41:RG:117:PHE:HB3	2.54	0.42
50:RT:30:VAL:HG21	50:RT:76:PHE:CE1	2.55	0.42
1:XA:1242:C:H2'	1:XA:1243:C:H6	1.84	0.42
1:XA:1336:C:O2'	1:XA:1337:G:P	2.78	0.42
1:XA:389:A:C6	1:XA:390:C:H1'	2.54	0.42
1:XA:399:G:H2'	1:XA:400:C:C6	2.54	0.42
1:XA:584:G:H2'	1:XA:585:G:C8	2.54	0.42
1:XA:842:C:O2'	1:XA:848:C:N4	2.52	0.42
1:XA:923:A:OP1	5:XE:21:ALA:HB2	2.19	0.42
11:XK:22:HIS:HB3	11:XK:29:ILE:HG23	2.02	0.42
15:XO:16:ALA:HB1	15:XO:21:ASP:HB3	2.02	0.42
15:XO:39:LEU:HD23	15:XO:56:LEU:HB2	2.02	0.42
36:YA:1882:C:H5'	36:YA:1883:G:OP2	2.20	0.42
36:YA:2439:A:H3'	36:YA:2439:A:P	2.60	0.42
36:YA:2687:U:H2'	36:YA:2688:U:O4'	2.19	0.42
1:QA:373:A:C2	1:QA:482:A:C6	3.07	0.42
1:QA:401:C:O2'	1:QA:621:A:N3	2.37	0.42
2:QB:187:LEU:HD12	2:QB:201:ILE:O	2.20	0.42
26:R0:77:ARG:NH2	36:RA:857:C:OP2	2.51	0.42
36:RA:839:U:H1'	36:RA:1191:G:H1'	2.01	0.42
36:RA:1449:A:C4	36:RA:1529:A:C2	3.08	0.42
36:RA:1494:A:O2'	36:RA:1495:A:H5'	2.20	0.42
36:RA:1636:C:H2'	36:RA:1637:A:H8	1.84	0.42
36:RA:807:U:O2'	36:RA:2060:A:N1	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:2445:G:OP1	40:RF:74:ARG:NH2	2.53	0.42
36:RA:2700:C:O2'	36:RA:2701:C:H5'	2.20	0.42
36:RA:529:A:H2'	36:RA:529:A:N3	2.35	0.42
36:RA:606:U:OP2	40:RF:104:LYS:NZ	2.49	0.42
36:RA:609(A):G:H2'	36:RA:610:C:C6	2.55	0.42
38:RD:95:LEU:HD11	38:RD:105:ILE:HD13	2.02	0.42
42:RH:122:THR:OG1	42:RH:134:SER:O	2.34	0.42
44:RN:67:LEU:O	44:RN:88:GLU:HG3	2.20	0.42
36:RA:2727:G:O3'	45:RO:70:LYS:HE2	2.20	0.42
1:XA:859:A:OP2	1:XA:869:G:N1	2.51	0.42
2:XB:160:ASP:O	2:XB:183:PRO:HD2	2.19	0.42
2:XB:21:ARG:HG2	2:XB:38:GLY:O	2.19	0.42
1:XA:547:A:OP2	4:XD:2:GLY:N	2.53	0.42
8:XH:44:PHE:HB3	8:XH:80:ILE:HG12	2.02	0.42
27:Y1:86:SER:N	27:Y1:87:PRO:CD	2.82	0.42
29:Y3:16:PRO:HB2	29:Y3:18:ASP:OD1	2.20	0.42
31:Y5:41:PRO:HA	31:Y5:42:PRO:HD3	1.93	0.42
36:YA:1327:C:H2'	36:YA:1328:G:O4'	2.20	0.42
36:YA:1575:C:H2'	36:YA:1576:U:C6	2.54	0.42
36:YA:1902:C:H5'	38:YD:246:PRO:HD3	2.01	0.42
36:YA:2474:C:O2	36:YA:2474:C:H2'	2.19	0.42
36:YA:2584:U:H2'	36:YA:2585:U:H2'	2.01	0.42
36:YA:2867:G:OP2	50:YT:119:LYS:NZ	2.25	0.42
36:YA:881:G:O5'	36:YA:881:G:C8	2.73	0.42
36:YA:890:A:H2'	36:YA:892:G:H8	1.83	0.42
36:YA:904:C:H2'	36:YA:905:U:H6	1.85	0.42
37:YB:32:C:C4	37:YB:33:G:N7	2.87	0.42
38:YD:133:LEU:HB3	38:YD:173:VAL:HG21	2.02	0.42
39:YE:18:ASP:HB3	50:YT:82:LEU:HD11	2.01	0.42
40:YF:155:LEU:HB2	40:YF:189:THR:HG21	2.02	0.42
40:YF:129:PHE:CE1	40:YF:156:LEU:HD11	2.55	0.42
41:YG:81:LYS:O	41:YG:82:LEU:HB3	2.20	0.42
36:YA:2319:G:H1	49:YS:4:LEU:HD12	1.85	0.42
1:QA:34:C:H2'	1:QA:35:G:C8	2.51	0.42
1:QA:584:G:H2'	1:QA:585:G:H8	1.83	0.42
1:QA:865:A:H2	1:QA:918:A:H4'	1.84	0.42
1:QA:1112:C:H1'	3:QC:179:ARG:NH1	2.35	0.42
12:QL:27:LEU:HA	12:QL:27:LEU:HD23	1.92	0.42
36:RA:1013:C:C2'	36:RA:1014:U:H5'	2.50	0.42
36:RA:1252:G:N3	51:RU:33:ARG:HD2	2.34	0.42
36:RA:2308:G:H1	36:RA:2311:A:H2	1.65	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:2373:G:H2'	36:RA:2374:C:C6	2.54	0.42
36:RA:2487:G:H2'	36:RA:2488:A:C8	2.55	0.42
36:RA:2513:G:H2'	36:RA:2514:U:C6	2.55	0.42
36:RA:39:C:H2'	36:RA:40:C:H6	1.84	0.42
36:RA:586:A:N1	36:RA:809:G:O2'	2.44	0.42
36:RA:587:C:H5'	40:RF:90:PHE:CE2	2.55	0.42
51:RU:62:ILE:HD12	51:RU:76:TYR:OH	2.19	0.42
1:XA:113:G:H2'	1:XA:114:U:H6	1.85	0.42
1:XA:1151:A:O4'	10:XJ:39:PRO:HB2	2.20	0.42
1:XA:306:G:C2	1:XA:307:C:C5	3.07	0.42
1:XA:604:G:C6	1:XA:635:G:C6	3.08	0.42
1:XA:688:G:H2'	1:XA:689:C:H6	1.84	0.42
1:XA:868:C:H2'	1:XA:869:G:O4'	2.19	0.42
4:XD:175:SER:OG	4:XD:184:LYS:HB2	2.20	0.42
4:XD:61:LYS:HE2	4:XD:206:PHE:CE2	2.54	0.42
7:XG:22:LEU:HD21	7:XG:66:VAL:HG21	2.02	0.42
8:XH:79:VAL:HG13	8:XH:80:ILE:HG13	2.01	0.42
17:XQ:51:TYR:CD2	17:XQ:57:VAL:HG11	2.55	0.42
34:Y8:29:LYS:HD2	34:Y8:44:LYS:CB	2.50	0.42
36:YA:1142(A):A:C4	36:YA:1144:G:C8	3.07	0.42
36:YA:143:C:H2'	36:YA:144:C:C6	2.54	0.42
36:YA:1697:G:OP2	36:YA:1698:A:O2'	2.31	0.42
36:YA:1854:A:H62	36:YA:1888:G:H8	1.68	0.42
36:YA:184:C:H2'	36:YA:185:U:H6	1.85	0.42
36:YA:2000:G:C2	36:YA:2001:A:C8	3.08	0.42
36:YA:2292:C:H2'	36:YA:2293:C:H6	1.85	0.42
36:YA:270(N):G:H21	43:YI:50:ARG:HH22	1.68	0.42
36:YA:774:A:H2	36:YA:787:U:O2'	2.03	0.42
37:YB:44:G:O2'	37:YB:47:C:N4	2.53	0.42
41:YG:82:LEU:HD13	41:YG:88:ILE:HG21	2.01	0.42
43:YI:9:LEU:HD12	43:YI:9:LEU:O	2.19	0.42
51:YU:58:ARG:HA	51:YU:61:TRP:CE3	2.55	0.42
56:YZ:59:LEU:HD21	56:YZ:69:THR:HG21	2.02	0.42
1:QA:1275:A:H2'	1:QA:1276:G:O4'	2.20	0.41
1:QA:1469:G:H2'	1:QA:1470:G:H8	1.84	0.41
1:QA:164:U:H2'	1:QA:165:C:H6	1.85	0.41
1:QA:405:U:H5''	1:QA:495:A:H2	1.85	0.41
1:QA:635:G:C6	1:QA:636:U:C4	3.08	0.41
1:QA:22:G:H4'	1:QA:885:G:C8	2.55	0.41
8:QH:86:ILE:HG21	8:QH:133:LEU:HD23	2.01	0.41
10:QJ:38:ILE:HG13	10:QJ:71:LEU:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:195:A:H4'	20:QT:68:LYS:HE3	2.02	0.41
36:RA:1802:A:H2'	36:RA:1803:A:H8	1.80	0.41
36:RA:2065:C:H2'	36:RA:2066:C:C6	2.54	0.41
36:RA:2647:U:H2'	36:RA:2648:C:C6	2.55	0.41
36:RA:2655:G:H2'	36:RA:2664:G:C6	2.55	0.41
36:RA:755:C:H2'	36:RA:756:C:H6	1.84	0.41
37:RB:15:A:H1'	37:RB:109:G:C8	2.55	0.41
38:RD:11:PRO:O	38:RD:12:SER:OG	2.34	0.41
39:RE:36:ARG:HH22	39:RE:88:GLY:CA	2.32	0.41
41:RG:22:ARG:HH21	41:RG:171:ALA:HB1	1.84	0.41
42:RH:86:GLU:HA	42:RH:132:ARG:HG2	2.02	0.41
44:RN:114:ARG:C	44:RN:116:LEU:H	2.24	0.41
36:RA:17:G:H4'	51:RU:25:TRP:HE1	1.85	0.41
52:RV:22:VAL:HG12	52:RV:23:GLU:N	2.35	0.41
1:XA:971:G:N2	1:XA:1363:A:OP2	2.38	0.41
1:XA:162:A:C2	1:XA:348:G:H4'	2.54	0.41
1:XA:334:C:H2'	1:XA:335:C:C6	2.55	0.41
1:XA:410:G:H2'	1:XA:429:U:C5	2.55	0.41
1:XA:509:A:H2'	1:XA:510:A:C8	2.55	0.41
1:XA:539:A:H2'	1:XA:540:G:C8	2.55	0.41
1:XA:582:U:H2'	1:XA:583:A:H8	1.84	0.41
3:XC:19:GLU:HB3	3:XC:40:ARG:NH2	2.35	0.41
23:XW:1:G:H2'	23:XW:2:G:C8	2.55	0.41
29:Y3:9:VAL:HG11	29:Y3:55:ARG:HG3	2.01	0.41
36:YA:1021:A:H3'	36:YA:1021:A:H8	1.85	0.41
36:YA:1049:C:H2'	36:YA:1050:A:H5''	2.02	0.41
36:YA:1431:U:H2'	36:YA:1432:C:C6	2.55	0.41
36:YA:2102:U:H2'	36:YA:2103:C:C6	2.55	0.41
36:YA:270(G):C:H2'	36:YA:270(H):C:C6	2.55	0.41
38:YD:70:TRP:O	38:YD:73:VAL:HG23	2.20	0.41
48:YR:38:VAL:HB	48:YR:39:PRO:HD3	2.01	0.41
51:YU:92:ARG:CD	51:YU:94:ASN:HB3	2.49	0.41
1:QA:517:G:H5'	1:QA:519:C:C2	2.55	0.41
1:QA:675:A:H1'	11:QK:116:HIS:CD2	2.56	0.41
21:QU:8:THR:O	21:QU:12:LYS:HG2	2.20	0.41
25:QY:55:U:H3'	56:RZ:180:VAL:HG11	2.02	0.41
36:RA:2076:U:OP2	36:RA:2238:G:N2	2.45	0.41
36:RA:2533:A:H2'	36:RA:2534:A:O4'	2.20	0.41
39:RE:116:VAL:HG22	39:RE:117:MET:H	1.85	0.41
39:RE:143:ASN:HD22	39:RE:147:PRO:HD3	1.85	0.41
43:RI:57:ARG:HA	43:RI:60:GLU:HG2	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RN:23:LEU:HD13	44:RN:60:ILE:HD12	2.02	0.41
47:RQ:43:THR:HG22	47:RQ:94:VAL:HG12	2.02	0.41
1:XA:1342:C:H2'	1:XA:1343:G:H8	1.85	0.41
1:XA:677:U:O2	1:XA:777:A:O2'	2.38	0.41
2:XB:21:ARG:HG2	2:XB:39:ILE:CA	2.47	0.41
3:XC:21:ARG:CB	3:XC:21:ARG:NH2	2.83	0.41
15:XO:43:LEU:HD12	15:XO:56:LEU:HD22	2.02	0.41
16:XP:20:VAL:HG21	16:XP:32:TYR:CD2	2.55	0.41
16:XP:9:PHE:CE2	16:XP:18:ARG:HD2	2.55	0.41
1:XA:267:C:OP2	17:XQ:67:LYS:HD2	2.19	0.41
18:XR:44:LEU:HD12	18:XR:79:LEU:HD12	2.02	0.41
31:Y5:55:ARG:HG2	48:YR:33:ARG:HH21	1.85	0.41
29:Y3:30:ARG:NH1	36:YA:1184:G:OP1	2.50	0.41
36:YA:1186:G:H2'	36:YA:1187:G:O4'	2.19	0.41
36:YA:1637:A:H4'	36:YA:2711:A:O2'	2.20	0.41
36:YA:1786:A:H1'	36:YA:1938:A:N6	2.35	0.41
36:YA:1878:G:H2'	36:YA:1879:C:H6	1.84	0.41
36:YA:2087:G:O2'	36:YA:2088:G:H5'	2.20	0.41
36:YA:2102:U:H2'	36:YA:2103:C:H6	1.84	0.41
36:YA:2233:U:H2'	36:YA:2234:G:C8	2.55	0.41
36:YA:2353:G:H2'	36:YA:2354:G:O4'	2.21	0.41
36:YA:2611:U:H6	36:YA:2611:U:OP2	2.03	0.41
36:YA:270(G):C:H2'	36:YA:270(H):C:H6	1.85	0.41
36:YA:29:U:H2'	36:YA:30:G:H8	1.85	0.41
36:YA:373:U:O2'	36:YA:423:A:H1'	2.20	0.41
36:YA:443:A:H5''	36:YA:444:C:OP1	2.20	0.41
36:YA:658:C:C2	36:YA:659:C:C5	3.07	0.41
36:YA:817:C:H2'	36:YA:818:G:O4'	2.20	0.41
38:YD:209:ALA:O	38:YD:213:ARG:HG2	2.20	0.41
39:YE:24:THR:HG21	39:YE:188:VAL:CG1	2.50	0.41
41:YG:107:LEU:HD11	41:YG:178:PHE:CE1	2.56	0.41
43:YI:120:ILE:HB	43:YI:126:TYR:HE1	1.85	0.41
43:YI:79:ILE:HG23	43:YI:142:VAL:HG23	2.01	0.41
50:YT:124:ASP:HA	50:YT:127:ALA:HB3	2.02	0.41
45:YO:122:LEU:HD13	50:YT:72:VAL:HG11	2.01	0.41
1:QA:1301:U:H2'	1:QA:1302:U:H5'	2.02	0.41
1:QA:359:U:H2'	1:QA:360:A:C8	2.54	0.41
1:QA:416:G:H2'	1:QA:417:C:C6	2.55	0.41
1:QA:69:G:H2'	1:QA:73:G:H8	1.85	0.41
1:QA:999:U:O4	1:QA:1000:A:N6	2.53	0.41
1:QA:99:C:H2'	1:QA:101:A:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:146:ILE:N	4:QD:183:GLY:O	2.51	0.41
13:QM:98:VAL:HG23	13:QM:99:ARG:HG3	2.02	0.41
17:QQ:45:HIS:CD2	17:QQ:47:PRO:HG3	2.54	0.41
29:R3:37:LEU:HB3	29:R3:43:ILE:HD13	2.02	0.41
34:R8:35:GLN:OE1	34:R8:35:GLN:HA	2.21	0.41
34:R8:4:MET:HE2	36:RA:592:G:N3	2.34	0.41
36:RA:1153:C:H2'	36:RA:1154:G:O4'	2.19	0.41
36:RA:1255:U:C5	40:RF:73:ALA:HA	2.55	0.41
36:RA:1434:A:H2'	36:RA:1435:G:C8	2.55	0.41
36:RA:270(Q):C:C2	36:RA:270(R):G:C8	3.08	0.41
36:RA:550:G:H2'	36:RA:551:G:H8	1.84	0.41
39:RE:79:ARG:HE	39:RE:195:LEU:HD21	1.86	0.41
36:RA:2093:G:OP1	43:RI:23:PRO:HG2	2.21	0.41
49:RS:3:ARG:HG2	49:RS:4:LEU:HD23	2.02	0.41
1:XA:236:G:H5''	17:XQ:42:TYR:OH	2.19	0.41
1:XA:825:G:H2'	1:XA:826:C:C6	2.55	0.41
1:XA:982:U:H4'	1:XA:983:A:O5'	2.20	0.41
1:XA:406:G:C5'	4:XD:5:ILE:HD11	2.44	0.41
4:QD:169:LYS:HZ1	6:XF:25:ILE:HD11	1.84	0.41
1:XA:718:G:H21	18:XR:49:LYS:HG2	1.85	0.41
29:Y3:7:LYS:HA	29:Y3:33:GLN:O	2.21	0.41
36:YA:1385:G:HO2'	36:YA:1396:U:H6	1.69	0.41
36:YA:1688:U:O2	36:YA:1700:A:H5''	2.21	0.41
36:YA:1802:A:H2'	36:YA:1803:A:H8	1.80	0.41
36:YA:2246:G:H2'	36:YA:2247:A:H8	1.83	0.41
36:YA:256:A:H2'	36:YA:257:A:H8	1.84	0.41
36:YA:2630:G:H2'	36:YA:2631:G:H8	1.85	0.41
36:YA:37:C:H2'	36:YA:38:A:H8	1.84	0.41
36:YA:524:U:H2'	36:YA:525:U:C6	2.55	0.41
36:YA:841:A:H2'	36:YA:842:G:H8	1.85	0.41
38:YD:155:LEU:HD13	38:YD:177:LEU:HD21	2.02	0.41
38:YD:253:GLN:HB2	38:YD:257:LEU:HD22	2.01	0.41
36:YA:1814:G:H4'	38:YD:51:VAL:HG21	2.03	0.41
39:YE:128:SER:OG	39:YE:129:HIS:N	2.52	0.41
45:YO:107:ARG:HG2	45:YO:115:VAL:HG21	2.03	0.41
1:QA:997:U:H2'	1:QA:998:G:C8	2.55	0.41
3:QC:39:ILE:HD12	3:QC:91:LEU:HD22	2.01	0.41
3:QC:36:ASP:CG	3:QC:59:ARG:HH21	2.23	0.41
4:QD:12:CYS:SG	4:QD:19:LEU:HB2	2.60	0.41
12:QL:82:VAL:HG13	12:QL:105:TYR:HB2	2.02	0.41
36:RA:1050:A:H3'	36:RA:1051:G:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:1230:C:H2'	36:RA:1231:G:H8	1.85	0.41
36:RA:1668:A:C5	36:RA:1674:G:C5	3.08	0.41
36:RA:2019:A:H1'	51:RU:34:LYS:HE2	2.02	0.41
36:RA:2105:C:H2'	36:RA:2106:G:C8	2.56	0.41
36:RA:2181:G:H2'	36:RA:2182:G:H8	1.85	0.41
36:RA:2241:A:H2'	36:RA:2242:G:C8	2.55	0.41
36:RA:222:A:N6	36:RA:232:G:H1'	2.36	0.41
36:RA:463:G:N2	36:RA:466:A:OP2	2.47	0.41
36:RA:747:U:O2	36:RA:2014:A:H1'	2.20	0.41
36:RA:911:A:H2'	47:RQ:9:TYR:CE1	2.55	0.41
41:RG:10:LYS:HG2	41:RG:15:VAL:HG23	2.02	0.41
1:XA:1203:C:H2'	1:XA:1204:A:C8	2.55	0.41
1:XA:688:G:H2'	1:XA:689:C:C6	2.55	0.41
1:XA:998:G:H2'	1:XA:998(A):C:H6	1.84	0.41
7:XG:100:ALA:O	7:XG:104:LEU:HD23	2.20	0.41
36:YA:2347:C:H2'	36:YA:2348:U:H6	1.85	0.41
36:YA:2790:A:N3	36:YA:2790:A:H2'	2.36	0.41
36:YA:835:A:C4	36:YA:836:G:C8	3.08	0.41
39:YE:114:ALA:HB3	39:YE:160:TYR:HB3	2.02	0.41
45:YO:105:GLU:N	45:YO:105:GLU:OE1	2.54	0.41
46:YP:97:PRO:C	46:YP:99:LEU:H	2.23	0.41
55:YY:43:ASN:HB3	55:YY:64:GLU:HA	2.02	0.41
1:QA:1443:G:O2'	1:QA:1446:A:H5''	2.20	0.41
1:QA:545:C:OP2	4:QD:62:GLN:NE2	2.53	0.41
1:QA:657:G:C2	1:QA:658:G:C8	3.08	0.41
1:QA:868:C:H2'	1:QA:869:G:O4'	2.20	0.41
5:QE:127:ASN:O	5:QE:131:ILE:HG12	2.21	0.41
1:QA:1250:A:H4'	9:QI:68:GLY:N	2.35	0.41
25:QY:28:U:H2'	25:QY:29:U:H6	1.86	0.41
36:RA:1130:U:HO2'	36:RA:1131:G:P	2.43	0.41
36:RA:1567:A:OP2	38:RD:84:TYR:OH	2.32	0.41
36:RA:208:C:H2'	36:RA:209:C:H6	1.85	0.41
36:RA:2119:A:N6	36:RA:2170:A:N7	2.55	0.41
36:RA:2370:G:H2'	36:RA:2371:G:C8	2.55	0.41
36:RA:270(R):G:H2'	36:RA:270(S):G:C8	2.51	0.41
36:RA:309:G:OP2	36:RA:309:G:H8	2.04	0.41
36:RA:632:A:H2'	36:RA:633:A:C8	2.55	0.41
39:RE:31:CYS:HB3	39:RE:49:LEU:HD12	2.02	0.41
1:XA:171:A:H2'	1:XA:172:A:C8	2.54	0.41
1:XA:335:C:H2'	1:XA:336:C:H6	1.84	0.41
1:XA:398:C:H2'	1:XA:399:G:H8	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:552:U:O2	12:XL:31:PRO:HB3	2.20	0.41
13:XM:37:THR:HG22	13:XM:55:ARG:NH1	2.36	0.41
14:YN:6:LEU:HB3	14:YN:23:ARG:NH2	2.34	0.41
36:YA:1952:A:N3	36:YA:2560:C:O2'	2.40	0.41
35:Y9:3:VAL:HG11	36:YA:2539:C:H5'	2.02	0.41
36:YA:414:C:H2'	36:YA:415:A:H8	1.84	0.41
36:YA:503:A:H4'	36:YA:504:U:O5'	2.20	0.41
36:YA:540:G:H5'	36:YA:541:C:OP2	2.20	0.41
40:YF:123:LEU:HD13	40:YF:192:LEU:HD23	2.01	0.41
42:YH:133:VAL:HG11	42:YH:144:VAL:HG23	2.02	0.41
43:YI:114:LEU:HD13	43:YI:130:TYR:HD1	1.86	0.41
45:YO:71:ARG:NH2	45:YO:77:ILE:HG21	2.35	0.41
1:QA:1149:C:H2'	1:QA:1150:U:C6	2.54	0.41
1:QA:978:A:O2'	1:QA:1322:C:N3	2.47	0.41
8:QH:16:ALA:HA	8:QH:19:VAL:HG12	2.02	0.41
36:RA:1321:A:H2'	36:RA:1322:A:H8	1.85	0.41
36:RA:1441:G:H2'	36:RA:1442:G:C8	2.56	0.41
36:RA:1931:U:H2'	36:RA:1931:U:H6	1.65	0.41
36:RA:2401:U:H2'	36:RA:2402:C:H5''	2.02	0.41
36:RA:2415:G:H4'	46:RP:66:GLY:HA3	2.03	0.41
36:RA:2467:C:H4'	47:RQ:123:HIS:CD2	2.55	0.41
36:RA:2695:C:H2'	36:RA:2696:U:H6	1.86	0.41
36:RA:512:G:H1'	36:RA:513:A:OP2	2.20	0.41
39:RE:24:THR:HG21	39:RE:188:VAL:CG2	2.51	0.41
36:RA:495:G:H21	53:RW:61:ASN:HD21	1.67	0.41
56:RZ:35:ARG:HH21	56:RZ:36:LYS:HG2	1.86	0.41
56:RZ:44:PHE:CE1	56:RZ:86:VAL:HG21	2.42	0.41
1:XA:355:C:C4	1:XA:356:A:N7	2.89	0.41
3:XC:61:ALA:O	3:XC:62:ASP:HB2	2.21	0.41
7:XG:26:PHE:HD1	7:XG:101:LEU:HD22	1.84	0.41
26:Y0:18:ALA:HB1	36:YA:2271:G:OP1	2.20	0.41
30:Y4:21:VAL:HB	30:Y4:24:THR:HG22	2.02	0.41
36:YA:2347:C:H2'	36:YA:2348:U:C6	2.56	0.41
36:YA:34:C:H41	36:YA:447:A:H61	1.68	0.41
36:YA:363(D):G:H2'	36:YA:363(E):U:H6	1.86	0.41
36:YA:751:A:H5'	53:YW:90:ARG:HG2	2.03	0.41
43:YI:23:PRO:HB3	43:YI:27:ARG:HH21	1.85	0.41
56:YZ:163:LEU:HD21	56:YZ:165:VAL:CG2	2.44	0.41
1:QA:1022:G:H2'	1:QA:1023:G:C8	2.56	0.41
1:QA:35:G:H2'	1:QA:36:C:H6	1.86	0.41
1:QA:265:G:H5'	17:QQ:64:PRO:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1318:A:H1'	19:QS:37:ARG:NH1	2.35	0.41
32:R6:15:GLU:CD	32:R6:41:PRO:HB3	2.41	0.41
32:R6:24:GLU:HA	32:R6:24:GLU:OE1	2.20	0.41
32:R6:33:LYS:HG2	32:R6:34:LEU:H	1.85	0.41
36:RA:1509:C:H3'	36:RA:1510:A:H5''	2.03	0.41
36:RA:2103:C:H2'	36:RA:2104:G:C8	2.56	0.41
36:RA:2291:U:OP1	36:RA:2380:C:O2'	2.36	0.41
36:RA:2502:G:H5''	36:RA:2503:A:C5'	2.49	0.41
36:RA:2685:G:P	50:RT:51:ARG:HH22	2.44	0.41
36:RA:2769:C:H2'	36:RA:2770:G:O4'	2.19	0.41
36:RA:2863:C:H2'	36:RA:2864:G:C8	2.55	0.41
36:RA:265:A:N6	36:RA:428:A:C8	2.89	0.41
36:RA:900:A:C2	36:RA:901:A:H1'	2.56	0.41
38:RD:52:ARG:NH2	38:RD:250:TRP:CH2	2.88	0.41
40:RF:72:ARG:HD2	40:RF:72:ARG:HA	1.91	0.41
41:RG:41:GLN:HG2	41:RG:43:LEU:HG	2.01	0.41
47:RQ:81:VAL:HG23	47:RQ:82:ARG:N	2.34	0.41
56:RZ:13:GLU:HB3	56:RZ:18:LEU:HD11	2.03	0.41
1:XA:1004:A:H2	1:XA:1025:U:H1'	1.84	0.41
1:XA:1325:C:H4'	21:XU:17:THR:HG21	2.02	0.41
1:XA:626:U:H2'	1:XA:627:G:C8	2.55	0.41
3:XC:82:GLU:OE1	3:XC:85:ARG:NH2	2.54	0.41
4:XD:3:ARG:HH21	4:XD:5:ILE:HD12	1.86	0.41
5:XE:75:THR:OG1	5:XE:93:PRO:HA	2.21	0.41
36:YA:1019:U:O2'	36:YA:1021:A:H2	2.02	0.41
36:YA:1394:U:H2'	36:YA:1395:A:O4'	2.21	0.41
36:YA:1449:A:C4	36:YA:1529:A:C2	3.04	0.41
36:YA:1889:A:H2'	36:YA:1890:A:C8	2.56	0.41
36:YA:1972:A:H2'	36:YA:1973:G:H8	1.84	0.41
36:YA:2292:C:H2'	36:YA:2293:C:C6	2.56	0.41
36:YA:2294:C:H2'	36:YA:2295:C:H6	1.86	0.41
38:YD:77:ALA:HA	38:YD:97:TYR:HA	2.02	0.41
36:YA:661:C:H5''	46:YP:15:ARG:NH2	2.35	0.41
56:YZ:58:VAL:O	56:YZ:59:LEU:HG	2.21	0.41
1:QA:1252:A:H61	1:QA:1285:A:H61	1.69	0.41
2:QB:76:GLN:O	2:QB:208:ILE:HG22	2.20	0.41
8:QH:44:PHE:HB3	8:QH:80:ILE:HD11	2.03	0.41
1:QA:33:A:N3	12:QL:32:PHE:HE2	2.19	0.41
1:QA:755:G:OP2	15:QO:65:ARG:HD2	2.20	0.41
36:RA:819:A:N6	36:RA:1189:A:H1'	2.36	0.41
36:RA:1655:A:H3'	36:RA:1656:C:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:1742:C:H5'	36:RA:1743:G:OP2	2.21	0.41
36:RA:270(S):G:C2	36:RA:270(T):G:C5	3.09	0.41
36:RA:2712:U:O2'	36:RA:2712(A):A:P	2.79	0.41
36:RA:835:A:C4	36:RA:836:G:C8	3.08	0.41
36:RA:982:C:H1'	36:RA:2029:G:H5'	2.02	0.41
36:RA:1353:A:H5''	38:RD:38:LYS:NZ	2.36	0.41
56:RZ:14:LYS:O	56:RZ:16:SER:N	2.49	0.41
1:XA:1149:C:H2'	1:XA:1150:U:C6	2.55	0.41
1:XA:222:U:H2'	1:XA:223:U:C6	2.55	0.41
1:XA:265:G:H2'	1:XA:266:G:H5''	2.02	0.41
1:XA:973:G:H3'	1:XA:974:A:C5'	2.48	0.41
3:XC:20:SER:HB3	3:XC:22:TRP:CD1	2.56	0.41
36:YA:1429:G:H2'	36:YA:1430:C:H6	1.84	0.41
36:YA:236:C:H2'	36:YA:237:C:H6	1.85	0.41
36:YA:66:C:H2'	36:YA:67:U:C6	2.56	0.41
36:YA:2619:C:OP1	39:YE:152:LYS:HE2	2.20	0.41
42:YH:128:PRO:HG2	42:YH:129:THR:H	1.85	0.41
43:YI:130:TYR:HB3	43:YI:136:VAL:HG13	2.01	0.41
43:YI:72:LEU:HD23	43:YI:138:ILE:HD12	2.02	0.41
47:YQ:81:VAL:HG23	47:YQ:82:ARG:N	2.33	0.41
48:YR:58:GLY:HA2	48:YR:80:PHE:HE1	1.84	0.41
56:YZ:30:ASN:HB3	56:YZ:90:VAL:HG22	2.01	0.41
1:QA:1062:U:H2'	1:QA:1063:C:C6	2.55	0.41
1:QA:1127:G:N1	1:QA:1145:C:O2	2.50	0.41
1:QA:343:U:O2	1:QA:346:G:N2	2.40	0.41
36:RA:1103:A:H5''	36:RA:1104:C:C5	2.56	0.41
36:RA:1791:A:H4'	38:RD:206:LEU:HB2	2.03	0.41
36:RA:2150:U:H2'	36:RA:2151:G:H8	1.85	0.41
36:RA:2803:C:H2'	36:RA:2804:C:H6	1.85	0.41
36:RA:861:A:N3	37:RB:79:C:O2'	2.52	0.41
36:RA:921:G:H2'	36:RA:922:U:H6	1.85	0.41
36:RA:84:A:N7	36:RA:99:U:N3	2.68	0.41
37:RB:60:C:H2'	37:RB:61:G:H8	1.86	0.41
36:RA:1567:A:H3'	38:RD:86:PRO:HG3	2.03	0.41
53:RW:29:LEU:HD21	53:RW:33:ARG:NH2	2.36	0.41
36:RA:24:G:H1'	53:RW:77:ASP:HB3	2.02	0.41
55:RY:28:LYS:HD2	55:RY:40:GLU:OE2	2.21	0.41
1:XA:1347:G:N2	1:XA:1374:A:OP2	2.43	0.41
1:XA:339:C:H2'	1:XA:340:U:H6	1.85	0.41
3:XC:14:ILE:O	3:XC:15:THR:OG1	2.34	0.41
1:XA:963:G:N2	10:XJ:55:LYS:HG2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:XT:13:LEU:HD13	20:XT:17:ARG:HH12	1.86	0.41
24:XX:20:C:H2'	24:XX:21:C:C6	2.56	0.41
36:YA:511:U:H4'	36:YA:1235:G:H4'	2.02	0.41
36:YA:1518:C:H2'	36:YA:1519:G:H8	1.86	0.41
36:YA:141:A:H8	36:YA:1595:G:H21	1.62	0.41
36:YA:1608:A:H1'	36:YA:1610:A:OP2	2.21	0.41
36:YA:2123:G:H2'	36:YA:2124:G:C8	2.56	0.41
36:YA:2850:A:N7	36:YA:2868:A:O2'	2.46	0.41
36:YA:304:G:H2'	36:YA:305:U:C6	2.55	0.41
36:YA:657:U:H2'	36:YA:658:C:H6	1.86	0.41
36:YA:813:U:H2'	36:YA:814:C:H6	1.85	0.41
36:YA:820:A:H4'	36:YA:836:G:H22	1.83	0.41
38:YD:95:LEU:HD11	38:YD:105:ILE:HD13	2.03	0.41
42:YH:20:ALA:HB3	42:YH:23:ARG:O	2.21	0.41
45:YO:8:LEU:HB2	45:YO:19:ILE:HG13	2.03	0.41
50:YT:53:ARG:O	50:YT:59:THR:HG23	2.21	0.41
45:YO:79:PHE:CD2	50:YT:72:VAL:HG22	2.56	0.41
52:YV:51:VAL:HG12	52:YV:52:VAL:N	2.36	0.41
56:YZ:165:VAL:HG23	56:YZ:167:PRO:HB3	2.03	0.41
1:QA:1010:G:H2'	1:QA:1011:G:C8	2.56	0.41
1:QA:1236:A:H2'	1:QA:1237:C:C6	2.56	0.41
1:QA:1292:U:H2'	1:QA:1293:G:C8	2.56	0.41
1:QA:1314:C:H2'	1:QA:1315:U:C6	2.56	0.41
1:QA:281:G:OP2	1:QA:281:G:H8	2.04	0.41
1:QA:411:A:OP2	4:QD:30:LYS:HE3	2.21	0.41
2:QB:98:LEU:O	2:QB:101:MET:HG2	2.21	0.41
3:QC:10:PHE:HD2	3:QC:11:ARG:NH1	2.19	0.41
13:QM:14:ARG:HB3	13:QM:16:ASP:OD2	2.21	0.41
19:QS:10:PHE:CD1	19:QS:39:THR:O	2.74	0.41
36:RA:1407:C:C2	36:RA:1596:A:C2	3.08	0.41
36:RA:1694:C:H4'	36:RA:1695:G:O5'	2.20	0.41
36:RA:1769:G:O2'	36:RA:1958:C:OP1	2.32	0.41
36:RA:2168:G:H2'	36:RA:2169:A:H5''	2.03	0.41
36:RA:2455:G:H2'	36:RA:2456:C:C6	2.56	0.41
36:RA:32:C:O2'	36:RA:33:U:H5'	2.21	0.41
36:RA:580:C:H2'	36:RA:581:C:C6	2.56	0.41
36:RA:635:C:O2'	36:RA:639:U:OP1	2.38	0.41
38:RD:245:PRO:HA	38:RD:246:PRO:HD3	1.97	0.41
38:RD:83:GLU:OE1	38:RD:104:TYR:OH	2.35	0.41
41:RG:63:ILE:HG22	41:RG:143:GLU:HB2	2.02	0.41
41:RG:96:ARG:HD3	41:RG:96:ARG:HA	1.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:RS:25:ARG:HH21	49:RS:40:ILE:HG21	1.86	0.41
45:RO:104:ARG:NH2	50:RT:34:VAL:HG11	2.36	0.41
54:RX:26:TYR:O	54:RX:81:VAL:N	2.51	0.41
1:XA:606:G:N2	1:XA:631:G:H8	2.18	0.41
1:XA:940:C:H2'	1:XA:941:G:C8	2.56	0.41
3:XC:129:ALA:HB3	3:XC:132:ARG:HB3	2.03	0.41
3:XC:59:ARG:HG2	3:XC:64:VAL:HG12	2.03	0.41
1:XA:619:U:N3	4:XD:134:ASP:OD1	2.44	0.41
12:XL:38:THR:HG22	12:XL:57:LYS:O	2.21	0.41
27:Y1:7:ILE:HD12	27:Y1:62:VAL:HG21	2.02	0.41
36:YA:1239:G:H2'	36:YA:1240:U:O4'	2.20	0.41
36:YA:2567:G:H2'	36:YA:2568:C:C6	2.55	0.41
36:YA:2771:C:H2'	36:YA:2772:C:H6	1.86	0.41
36:YA:392:C:C2	36:YA:393:C:C5	3.09	0.41
36:YA:841:A:H2'	36:YA:842:G:C8	2.55	0.41
36:YA:871:U:OP1	47:YQ:5:ARG:HG2	2.20	0.41
36:YA:1657:C:H4'	39:YE:133:LYS:HB3	2.02	0.41
41:YG:135:LEU:O	41:YG:154:GLY:HA3	2.20	0.41
43:YI:90:GLY:O	43:YI:121:LYS:HE2	2.21	0.41
46:YP:101:VAL:HG11	46:YP:108:LYS:HG2	2.03	0.41
1:QA:1292:U:C2	1:QA:1293:G:C8	3.09	0.41
1:QA:1307:U:H2'	1:QA:1308:U:C6	2.56	0.41
1:QA:1324:A:H2'	1:QA:1325:C:O4'	2.21	0.41
1:QA:1336:C:H1'	1:QA:1337:G:C2	2.56	0.41
1:QA:1347:G:H4'	1:QA:1348:U:O5'	2.21	0.41
1:QA:584:G:H2'	1:QA:585:G:C8	2.56	0.41
1:QA:615:C:H2'	1:QA:616:G:O4'	2.21	0.41
1:QA:939:G:H2'	1:QA:940:C:C6	2.56	0.41
4:QD:177:ASP:HB3	4:QD:182:LYS:HB2	2.03	0.41
23:QW:66:U:C2	23:QW:67:A:C8	3.09	0.41
31:R5:4:HIS:O	36:RA:2056:G:N2	2.54	0.41
36:RA:1357:U:H2'	36:RA:1358:G:O4'	2.21	0.41
36:RA:1451:C:H4'	36:RA:1453:A:C8	2.56	0.41
36:RA:1535:U:H5'	36:RA:1537:C:C2	2.55	0.41
36:RA:2693:A:H2'	36:RA:2694:G:C8	2.55	0.41
36:RA:2840:C:H2'	36:RA:2841:C:C6	2.56	0.41
34:R8:56:GLU:OE2	46:RP:61:ARG:NH2	2.54	0.41
56:RZ:118:GLN:HE22	56:RZ:120:ILE:HG23	1.86	0.41
1:XA:325:A:H2'	1:XA:326:G:O4'	2.21	0.41
1:XA:501:C:H1'	1:XA:549:C:H1'	2.03	0.41
1:XA:538:G:H2'	1:XA:539:A:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:587:G:N2	1:XA:754:C:OP2	2.50	0.41
2:XB:27:LYS:O	2:XB:194:PRO:CD	2.68	0.41
3:XC:11:ARG:NH2	3:XC:177:THR:O	2.53	0.41
6:XF:62:TRP:CH2	6:XF:64:GLN:HB2	2.56	0.41
12:XL:117:ARG:HB3	12:XL:122:THR:O	2.21	0.41
1:XA:1492:A:N6	12:XL:50:SER:OG	2.53	0.41
12:XL:32:PHE:HB3	12:XL:84:LEU:HD11	2.02	0.41
16:XP:82:GLN:HG2	16:XP:83:GLU:N	2.32	0.41
25:XY:70:U:O2'	25:XY:71:C:OP1	2.34	0.41
32:Y6:41:PRO:HD3	32:Y6:47:THR:HG22	2.02	0.41
36:YA:184:C:H2'	36:YA:185:U:C6	2.56	0.41
36:YA:2167:U:C2'	36:YA:2167:U:O2	2.69	0.41
34:Y8:39:LYS:HG3	36:YA:2351:G:O6	2.21	0.41
36:YA:2639:A:H1'	36:YA:2778:A:C2	2.56	0.41
36:YA:529:A:N3	36:YA:529:A:H2'	2.36	0.41
36:YA:822:U:H2'	36:YA:823:G:H8	1.86	0.41
36:YA:848:G:H2'	36:YA:849:A:H8	1.81	0.41
40:YF:161:GLU:O	40:YF:165:ARG:HG3	2.20	0.41
47:YQ:104:PHE:O	47:YQ:106:VAL:N	2.53	0.41
48:YR:29:LEU:HD22	48:YR:79:LEU:HD13	2.02	0.41
1:QA:1077:G:N2	1:QA:1080:A:OP2	2.49	0.40
1:QA:1321:C:H4'	13:QM:87:TYR:CZ	2.56	0.40
1:QA:1412:C:H2'	1:QA:1413:A:H8	1.85	0.40
1:QA:355:C:C4	1:QA:356:A:N7	2.89	0.40
1:QA:374:A:C6	1:QA:375:U:C4	3.09	0.40
1:QA:735:C:H2'	1:QA:736:C:C6	2.55	0.40
2:QB:87:ARG:NH1	2:QB:220:ASP:OD1	2.42	0.40
8:QH:7:ALA:O	8:QH:11:THR:HG23	2.21	0.40
1:QA:1348:U:H4'	9:QI:120:ARG:HD2	2.03	0.40
28:R2:43:GLN:O	28:R2:44:LEU:HD22	2.21	0.40
30:R4:49:PHE:CD2	30:R4:50:VAL:HG23	2.55	0.40
36:RA:1106:G:H2'	36:RA:1107:G:C8	2.55	0.40
36:RA:1141:U:OP2	44:RN:63:THR:OG1	2.31	0.40
36:RA:1394:U:C3'	36:RA:1394:U:C6	3.04	0.40
36:RA:1449:A:C4	36:RA:1529:A:H2	2.39	0.40
36:RA:1539:G:H2'	36:RA:1540:G:H8	1.85	0.40
35:R9:3:VAL:HG21	36:RA:2539:C:H4'	2.03	0.40
36:RA:375:C:H2'	36:RA:376:C:C6	2.56	0.40
37:RB:15:A:H5'	37:RB:16:G:H8	1.84	0.40
37:RB:39:A:H2'	37:RB:40:U:C6	2.56	0.40
44:RN:34:LEU:O	44:RN:49:GLY:HA3	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:1152:C:H4'	51:RU:77:SER:HA	2.03	0.40
1:XA:1314:C:H2'	1:XA:1315:U:H6	1.86	0.40
1:XA:1422:G:H2'	1:XA:1423:G:C8	2.56	0.40
1:XA:334:C:H2'	1:XA:335:C:H6	1.87	0.40
1:XA:335:C:H2'	1:XA:336:C:C6	2.56	0.40
1:XA:486:U:H2'	1:XA:487:A:C8	2.56	0.40
1:XA:645:C:H2'	1:XA:646:U:H6	1.85	0.40
9:XI:49:PRO:HD3	9:XI:101:PHE:HE1	1.86	0.40
13:XM:49:THR:HG22	13:XM:51:ALA:N	2.36	0.40
16:XP:67:THR:HG22	16:XP:68:ASP:N	2.36	0.40
27:Y1:73:LEU:HB3	27:Y1:90:ILE:HG12	2.03	0.40
29:Y3:43:ILE:O	29:Y3:47:VAL:HG23	2.21	0.40
35:Y9:2:LYS:NZ	36:YA:2526:G:N3	2.69	0.40
36:YA:1432:C:H2'	36:YA:1433:U:O4'	2.21	0.40
36:YA:1728:G:H3'	36:YA:1729:A:H5''	2.03	0.40
36:YA:1844:C:H2'	36:YA:1845:G:H8	1.85	0.40
27:Y1:97:LEU:CD2	36:YA:270(T):G:H5''	2.51	0.40
36:YA:2752:C:H2'	36:YA:2753:A:O4'	2.21	0.40
36:YA:2771:C:H2'	36:YA:2772:C:C6	2.56	0.40
36:YA:301:G:C6	36:YA:317:G:C6	3.10	0.40
45:YO:2:ILE:HB	45:YO:33:ALA:HB3	2.02	0.40
1:QA:399:G:H2'	1:QA:400:C:C6	2.55	0.40
1:QA:65:U:C6	1:QA:381:C:N4	2.89	0.40
2:QB:54:THR:HB	2:QB:185:ILE:HD11	2.03	0.40
10:QJ:98:ILE:HG13	10:QJ:98:ILE:O	2.21	0.40
1:QA:974:A:P	14:QN:41:ARG:HH12	2.44	0.40
1:QA:127:G:N2	17:QQ:61:GLU:OE1	2.52	0.40
35:R9:18:ARG:CZ	35:R9:21:GLY:HA2	2.51	0.40
36:RA:1035:U:H2'	36:RA:1036:G:C8	2.56	0.40
36:RA:1046:A:N3	36:RA:1046:A:H3'	2.37	0.40
36:RA:239:U:H2'	36:RA:240:G:O4'	2.21	0.40
36:RA:2593:U:H2'	36:RA:2594:C:C6	2.56	0.40
36:RA:794:G:H2'	36:RA:795:C:H6	1.87	0.40
36:RA:906:G:H2'	36:RA:907:U:O4'	2.22	0.40
38:RD:62:TYR:HA	38:RD:87:ASN:ND2	2.36	0.40
39:RE:101:ARG:CZ	39:RE:171:GLU:HB2	2.50	0.40
40:RF:117:ARG:NH2	40:RF:186:ILE:O	2.54	0.40
41:RG:144:ILE:HG22	41:RG:146:TYR:H	1.85	0.40
1:XA:999:U:H2'	1:XA:1000:A:C8	2.56	0.40
1:XA:134:A:C4	1:XA:135:C:C6	3.09	0.40
1:XA:673:G:O3'	6:XF:87:ARG:NH2	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:1651:G:C4	36:YA:1652:A:C8	3.09	0.40
36:YA:1732:A:C2	36:YA:1733:G:H1'	2.57	0.40
36:YA:2308:G:N3	36:YA:2308:G:H2'	2.35	0.40
36:YA:2287:A:N6	36:YA:2344:U:H3	2.10	0.40
36:YA:2389:G:H5''	36:YA:2390:U:O4'	2.21	0.40
36:YA:2580:U:H4'	39:YE:130:GLY:HA3	2.03	0.40
36:YA:2630:G:H2'	36:YA:2631:G:C8	2.57	0.40
36:YA:270(Q):C:C2	36:YA:270(R):G:C8	3.10	0.40
36:YA:270(G):C:H42	36:YA:270(S):G:H1	1.68	0.40
36:YA:623:G:H2'	36:YA:624:C:H6	1.86	0.40
36:YA:675:A:N3	36:YA:2443:C:O2'	2.49	0.40
51:YU:92:ARG:NH1	52:YV:11:GLN:H	2.20	0.40
51:YU:92:ARG:NE	51:YU:95:LEU:HG	2.33	0.40
56:YZ:103:ARG:H	56:YZ:138:GLU:HA	1.85	0.40
25:XY:54:U:H5'	56:YZ:178:GLU:HG2	2.02	0.40
1:QA:1250:A:C2	1:QA:1370:G:H1'	2.57	0.40
1:QA:335:C:H2'	1:QA:336:C:H6	1.87	0.40
1:QA:429:U:H4'	1:QA:430:A:O5'	2.21	0.40
1:QA:898:G:N2	1:QA:901:A:OP2	2.47	0.40
1:QA:939:G:OP1	7:QG:102:ARG:NH1	2.49	0.40
9:QI:10:ARG:HD3	9:QI:75:ASP:HB3	2.03	0.40
9:QI:20:ARG:O	9:QI:60:ASP:N	2.42	0.40
20:QT:63:ILE:HG22	20:QT:77:ALA:HB1	2.03	0.40
22:QV:50:U:H2'	22:QV:51:C:H6	1.87	0.40
23:QW:63:G:H2'	23:QW:64:C:H6	1.87	0.40
23:QW:64:C:H2'	23:QW:65:U:H6	1.85	0.40
36:RA:1513:C:O2	36:RA:1513:C:C2'	2.70	0.40
34:R8:32:LEU:HD12	36:RA:2391:G:H3'	2.02	0.40
43:RI:62:LYS:HE3	43:RI:134:PRO:HG2	2.03	0.40
43:RI:93:THR:HG23	43:RI:95:LYS:HG2	2.03	0.40
53:RW:82:LEU:HD23	53:RW:84:ARG:NH2	2.37	0.40
55:RY:29:GLU:HB3	55:RY:38:ILE:HG12	2.02	0.40
1:XA:1169:A:H2'	1:XA:1170:A:C8	2.57	0.40
1:XA:1412:C:H2'	1:XA:1413:A:H8	1.80	0.40
1:XA:1437:C:H2'	1:XA:1438:G:H8	1.87	0.40
1:XA:1492:A:H1'	24:XX:20:C:O2'	2.20	0.40
1:XA:237:C:OP2	17:XQ:40:LYS:NZ	2.53	0.40
7:XG:147:ALA:O	11:XK:54:ARG:NH1	2.54	0.40
27:Y1:58:ILE:HD12	27:Y1:87:PRO:HD3	2.03	0.40
31:Y5:2:ALA:HA	36:YA:2015:A:H1'	2.03	0.40
36:YA:571:A:C5'	36:YA:2030:A:H62	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:2168:G:N2	36:YA:2170:A:P	2.95	0.40
36:YA:2442:C:H2'	36:YA:2443:C:C6	2.57	0.40
36:YA:271(A):C:H1'	36:YA:272:G:H1'	2.04	0.40
36:YA:833:U:H2'	36:YA:834:C:C6	2.57	0.40
41:YG:122:PRO:HD3	41:YG:181:ARG:HB3	2.03	0.40
50:YT:51:ARG:HB3	50:YT:62:THR:HG22	2.03	0.40
51:YU:85:LYS:HE3	51:YU:116:ALA:HB1	2.01	0.40
1:QA:1003:G:H2'	1:QA:1003:G:N3	2.36	0.40
1:QA:1298:C:N4	7:QG:114:ARG:HB3	2.37	0.40
1:QA:1302:U:C4'	1:QA:1302:U:OP2	2.70	0.40
1:QA:1305:G:H5'	21:QU:4:GLY:CA	2.51	0.40
1:QA:17:U:O2'	1:QA:1079:G:H1'	2.21	0.40
1:QA:316:G:N1	1:QA:338:A:C6	2.89	0.40
1:QA:458:C:H2'	1:QA:464:G:O4'	2.22	0.40
1:QA:624:C:H2'	1:QA:625:G:C8	2.52	0.40
5:QE:50:GLU:HG3	5:QE:52:PRO:CD	2.52	0.40
8:QH:16:ALA:HB2	8:QH:24:THR:HG21	2.03	0.40
13:QM:44:ARG:HB2	13:QM:47:ASP:OD1	2.20	0.40
17:QQ:57:VAL:HG12	17:QQ:76:LEU:HA	2.04	0.40
19:QS:10:PHE:CE2	19:QS:16:LEU:HG	2.57	0.40
29:R3:15:TYR:CE1	29:R3:53:LEU:HD21	2.57	0.40
31:R5:41:PRO:HA	31:R5:42:PRO:HD3	1.96	0.40
36:RA:700:G:O2'	36:RA:1632:A:N3	2.36	0.40
36:RA:570:G:H2'	36:RA:2030:A:C5	2.56	0.40
36:RA:2108:C:H2'	36:RA:2109:U:C6	2.57	0.40
36:RA:439:G:H2'	36:RA:440:G:C8	2.57	0.40
36:RA:492:A:H2'	36:RA:493:G:O4'	2.22	0.40
36:RA:259:G:N2	36:RA:621:A:H8	2.18	0.40
36:RA:657:U:C2	36:RA:658:C:C5	3.09	0.40
48:RR:34:ILE:HG22	48:RR:36:THR:HG23	2.04	0.40
36:RA:2296:U:OP2	49:RS:9:ARG:NH1	2.54	0.40
55:RY:5:MET:SD	55:RY:35:TYR:CD1	3.14	0.40
47:RQ:139:GLU:HG2	56:RZ:53:ILE:HD13	2.03	0.40
1:XA:1244:C:H2'	1:XA:1245:A:C8	2.57	0.40
1:XA:1376:U:H2'	1:XA:1377:A:C8	2.56	0.40
1:XA:1476:G:H2'	1:XA:1477:C:C6	2.56	0.40
1:XA:219:C:C4	1:XA:220:G:C8	3.09	0.40
1:XA:429:U:H4'	1:XA:430:A:O5'	2.21	0.40
1:XA:797:C:OP1	11:XK:124:LYS:HD3	2.21	0.40
23:XW:20:G:C2'	23:XW:21:A:H4'	2.50	0.40
36:YA:1201:C:H2'	36:YA:1202:C:H6	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:1315:C:O2'	36:YA:1392:A:N3	2.47	0.40
36:YA:1438:U:H2'	36:YA:1439:A:C8	2.56	0.40
36:YA:2290:G:H2'	36:YA:2291:U:C6	2.56	0.40
36:YA:2515:C:H2'	36:YA:2516:G:H8	1.87	0.40
36:YA:2700:C:O2'	36:YA:2701:C:H5'	2.21	0.40
36:YA:746:A:H2'	36:YA:2612:C:H5''	2.03	0.40
36:YA:903:C:H2'	36:YA:904:C:H6	1.85	0.40
36:YA:93:C:H2'	36:YA:94:G:O4'	2.21	0.40
41:YG:82:LEU:HA	41:YG:86:MET:SD	2.61	0.40
1:QA:1215:G:C2	1:QA:1216:G:C8	3.09	0.40
1:QA:1216:G:H5''	14:QN:5:ALA:CB	2.52	0.40
1:QA:1258:G:H2'	1:QA:1259:C:C6	2.56	0.40
1:QA:1326:C:C2	1:QA:1327:C:C5	3.09	0.40
1:QA:954:G:H2'	1:QA:955:U:H6	1.85	0.40
11:QK:32:ILE:CD1	11:QK:68:ALA:HB1	2.51	0.40
1:QA:684:A:O2'	11:QK:39:PRO:O	2.33	0.40
13:QM:19:LEU:HD11	13:QM:56:LEU:HD21	2.02	0.40
1:QA:1305:G:H5'	21:QU:4:GLY:HA3	2.03	0.40
23:QW:26:G:N3	23:QW:26:G:H2'	2.36	0.40
36:RA:1009:A:H1'	36:RA:1153:C:HO2'	1.86	0.40
36:RA:1803:A:H2	36:RA:1823:G:O4'	2.05	0.40
36:RA:1889:A:H2'	36:RA:1890:A:H8	1.87	0.40
36:RA:1939:U:OP1	36:RA:2604:U:O2'	2.38	0.40
40:RF:197:ASP:O	40:RF:198:ALA:HB3	2.22	0.40
41:RG:106:LEU:HG	41:RG:111:LEU:HD13	2.03	0.40
36:RA:1666:G:OP1	45:RO:66:LYS:HG3	2.22	0.40
36:RA:196:A:C2	46:RP:51:PHE:HZ	2.38	0.40
34:R8:13:ARG:HG3	46:RP:61:ARG:HE	1.85	0.40
50:RT:93:ARG:N	50:RT:115:ARG:O	2.41	0.40
36:RA:1754:C:P	50:RT:96:ARG:HH12	2.45	0.40
1:XA:105:G:H2'	1:XA:106:C:H6	1.86	0.40
1:XA:1167:A:H2'	1:XA:1169:A:C8	2.57	0.40
1:XA:1343:G:H2'	1:XA:1344:C:C6	2.56	0.40
1:XA:381:C:H2'	1:XA:382:A:O4'	2.21	0.40
1:XA:411:A:C8	1:XA:413:G:H1'	2.56	0.40
1:XA:683:G:C6	1:XA:684:A:C6	3.10	0.40
1:XA:901:A:C5	1:XA:902:G:H1'	2.57	0.40
2:XB:82:ARG:NH1	2:XB:92:TYR:OH	2.54	0.40
1:XA:542:G:P	4:XD:10:ARG:HH22	2.45	0.40
12:XL:70:ILE:HG12	12:XL:100:ILE:HD12	2.02	0.40
16:XP:14:ASN:OD1	16:XP:42:ARG:NH2	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:XT:26:ASN:HA	20:XT:29:LYS:HG2	2.03	0.40
22:XV:23:C:H2'	22:XV:24:U:H6	1.86	0.40
26:Y0:54:GLY:O	26:Y0:57:PHE:N	2.54	0.40
32:Y6:28:ARG:NH1	36:YA:2286:A:OP1	2.54	0.40
32:Y6:8:LYS:NZ	36:YA:2283:C:H5'	2.36	0.40
36:YA:1945:G:H2'	36:YA:1946:U:C6	2.57	0.40
36:YA:2164:C:C2'	36:YA:2165:G:H5'	2.52	0.40
36:YA:2244:U:H2'	36:YA:2245:U:O4'	2.21	0.40
36:YA:966:G:O4'	36:YA:2267:A:N6	2.55	0.40
36:YA:2702:U:OP1	36:YA:2702:U:H6	2.04	0.40
36:YA:2784:C:H1'	39:YE:37:ARG:NH1	2.35	0.40
37:YB:34:U:OP1	41:YG:2:PRO:HB3	2.22	0.40
38:YD:246:PRO:HG2	38:YD:255:LYS:HG3	2.04	0.40
39:YE:50:GLY:HA3	39:YE:77:ILE:HD12	2.03	0.40
39:YE:78:LEU:HG	39:YE:79:ARG:N	2.35	0.40
44:YN:95:PRO:C	44:YN:97:ARG:H	2.25	0.40
36:YA:1327:C:O2'	48:YR:105:ARG:NH2	2.54	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	QB	235/256 (92%)	212 (90%)	21 (9%)	2 (1%)	17	56
2	XB	235/256 (92%)	208 (88%)	27 (12%)	0	100	100
3	QC	203/239 (85%)	191 (94%)	12 (6%)	0	100	100
3	XC	203/239 (85%)	185 (91%)	18 (9%)	0	100	100
4	QD	206/209 (99%)	203 (98%)	3 (2%)	0	100	100
4	XD	206/209 (99%)	201 (98%)	5 (2%)	0	100	100
5	QE	149/162 (92%)	145 (97%)	4 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	XE	149/162 (92%)	143 (96%)	6 (4%)	0	100	100
6	QF	99/101 (98%)	98 (99%)	1 (1%)	0	100	100
6	XF	99/101 (98%)	97 (98%)	2 (2%)	0	100	100
7	QG	153/156 (98%)	150 (98%)	3 (2%)	0	100	100
7	XG	153/156 (98%)	146 (95%)	7 (5%)	0	100	100
8	QH	136/138 (99%)	128 (94%)	8 (6%)	0	100	100
8	XH	136/138 (99%)	127 (93%)	9 (7%)	0	100	100
9	QI	125/128 (98%)	117 (94%)	7 (6%)	1 (1%)	19	58
9	XI	125/128 (98%)	116 (93%)	9 (7%)	0	100	100
10	QJ	97/105 (92%)	84 (87%)	13 (13%)	0	100	100
10	XJ	97/105 (92%)	91 (94%)	6 (6%)	0	100	100
11	QK	117/129 (91%)	104 (89%)	13 (11%)	0	100	100
11	XK	117/129 (91%)	110 (94%)	7 (6%)	0	100	100
12	QL	123/131 (94%)	110 (89%)	13 (11%)	0	100	100
12	XL	123/131 (94%)	114 (93%)	9 (7%)	0	100	100
13	QM	119/126 (94%)	98 (82%)	21 (18%)	0	100	100
13	XM	119/126 (94%)	98 (82%)	21 (18%)	0	100	100
14	QN	58/61 (95%)	50 (86%)	7 (12%)	1 (2%)	9	42
14	XN	58/61 (95%)	50 (86%)	7 (12%)	1 (2%)	9	42
15	QO	86/89 (97%)	83 (96%)	3 (4%)	0	100	100
15	XO	86/89 (97%)	80 (93%)	6 (7%)	0	100	100
16	QP	82/88 (93%)	80 (98%)	2 (2%)	0	100	100
16	XP	82/88 (93%)	78 (95%)	4 (5%)	0	100	100
17	QQ	98/105 (93%)	94 (96%)	4 (4%)	0	100	100
17	XQ	98/105 (93%)	92 (94%)	6 (6%)	0	100	100
18	QR	68/88 (77%)	66 (97%)	2 (3%)	0	100	100
18	XR	68/88 (77%)	66 (97%)	2 (3%)	0	100	100
19	QS	82/93 (88%)	73 (89%)	7 (8%)	2 (2%)	6	34
19	XS	82/93 (88%)	72 (88%)	10 (12%)	0	100	100
20	QT	97/106 (92%)	87 (90%)	10 (10%)	0	100	100
20	XT	97/106 (92%)	87 (90%)	10 (10%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
21	QU	23/27 (85%)	22 (96%)	1 (4%)	0	100	100
21	XU	23/27 (85%)	23 (100%)	0	0	100	100
26	R0	80/85 (94%)	74 (92%)	6 (8%)	0	100	100
26	Y0	80/85 (94%)	76 (95%)	4 (5%)	0	100	100
27	R1	95/98 (97%)	84 (88%)	10 (10%)	1 (1%)	14	51
27	Y1	95/98 (97%)	85 (90%)	9 (10%)	1 (1%)	14	51
28	R2	67/72 (93%)	64 (96%)	3 (4%)	0	100	100
28	Y2	67/72 (93%)	62 (92%)	4 (6%)	1 (2%)	10	44
29	R3	57/60 (95%)	55 (96%)	2 (4%)	0	100	100
29	Y3	57/60 (95%)	53 (93%)	4 (7%)	0	100	100
30	R4	69/71 (97%)	41 (59%)	25 (36%)	3 (4%)	2	20
30	Y4	69/71 (97%)	45 (65%)	21 (30%)	3 (4%)	2	20
31	R5	57/60 (95%)	48 (84%)	9 (16%)	0	100	100
31	Y5	57/60 (95%)	51 (90%)	6 (10%)	0	100	100
32	R6	47/54 (87%)	30 (64%)	17 (36%)	0	100	100
32	Y6	47/54 (87%)	35 (74%)	12 (26%)	0	100	100
33	R7	47/49 (96%)	45 (96%)	2 (4%)	0	100	100
33	Y7	47/49 (96%)	43 (92%)	4 (8%)	0	100	100
34	R8	62/65 (95%)	51 (82%)	10 (16%)	1 (2%)	9	43
34	Y8	62/65 (95%)	49 (79%)	13 (21%)	0	100	100
35	R9	35/37 (95%)	34 (97%)	1 (3%)	0	100	100
35	Y9	35/37 (95%)	34 (97%)	1 (3%)	0	100	100
38	RD	270/276 (98%)	245 (91%)	24 (9%)	1 (0%)	34	69
38	YD	273/276 (99%)	263 (96%)	10 (4%)	0	100	100
39	RE	203/206 (98%)	170 (84%)	28 (14%)	5 (2%)	5	32
39	YE	203/206 (98%)	166 (82%)	35 (17%)	2 (1%)	15	54
40	RF	200/210 (95%)	185 (92%)	12 (6%)	3 (2%)	10	44
40	YF	200/210 (95%)	187 (94%)	13 (6%)	0	100	100
41	RG	179/182 (98%)	166 (93%)	12 (7%)	1 (1%)	25	64
41	YG	179/182 (98%)	154 (86%)	24 (13%)	1 (1%)	25	64
42	RH	168/180 (93%)	157 (94%)	11 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
42	YH	168/180 (93%)	143 (85%)	22 (13%)	3 (2%)	8	41
43	RI	144/148 (97%)	132 (92%)	12 (8%)	0	100	100
43	YI	144/148 (97%)	121 (84%)	23 (16%)	0	100	100
44	RN	136/140 (97%)	122 (90%)	13 (10%)	1 (1%)	22	61
44	YN	136/140 (97%)	125 (92%)	11 (8%)	0	100	100
45	RO	120/122 (98%)	114 (95%)	5 (4%)	1 (1%)	19	58
45	YO	120/122 (98%)	116 (97%)	4 (3%)	0	100	100
46	RP	148/150 (99%)	131 (88%)	16 (11%)	1 (1%)	22	61
46	YP	148/150 (99%)	117 (79%)	30 (20%)	1 (1%)	22	61
47	RQ	139/141 (99%)	113 (81%)	26 (19%)	0	100	100
47	YQ	139/141 (99%)	121 (87%)	15 (11%)	3 (2%)	6	35
48	RR	116/118 (98%)	114 (98%)	2 (2%)	0	100	100
48	YR	116/118 (98%)	107 (92%)	9 (8%)	0	100	100
49	RS	109/112 (97%)	96 (88%)	13 (12%)	0	100	100
49	YS	109/112 (97%)	92 (84%)	17 (16%)	0	100	100
50	RT	135/146 (92%)	119 (88%)	16 (12%)	0	100	100
50	YT	135/146 (92%)	120 (89%)	15 (11%)	0	100	100
51	RU	115/118 (98%)	110 (96%)	4 (4%)	1 (1%)	17	56
51	YU	115/118 (98%)	110 (96%)	4 (4%)	1 (1%)	17	56
52	RV	99/101 (98%)	86 (87%)	13 (13%)	0	100	100
52	YV	99/101 (98%)	89 (90%)	10 (10%)	0	100	100
53	RW	111/113 (98%)	105 (95%)	6 (5%)	0	100	100
53	YW	111/113 (98%)	103 (93%)	8 (7%)	0	100	100
54	RX	90/96 (94%)	86 (96%)	4 (4%)	0	100	100
54	YX	90/96 (94%)	87 (97%)	3 (3%)	0	100	100
55	RY	100/110 (91%)	75 (75%)	24 (24%)	1 (1%)	15	54
55	YY	100/110 (91%)	76 (76%)	22 (22%)	2 (2%)	7	38
56	RZ	181/206 (88%)	155 (86%)	24 (13%)	2 (1%)	14	51
56	YZ	181/206 (88%)	147 (81%)	29 (16%)	5 (3%)	5	29
All	All	11473/12126 (95%)	10363 (90%)	1058 (9%)	52 (0%)	29	67

All (52) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
44	RN	22	THR
51	RU	92	ARG
30	Y4	24	THR
42	YH	128	PRO
47	YQ	105	GLU
56	YZ	53	ILE
19	QS	11	VAL
27	R1	92	LYS
38	RD	243	GLY
46	RP	108	LYS
56	RZ	53	ILE
27	Y1	92	LYS
46	YP	108	LYS
51	YU	93	LYS
56	YZ	93	ASP
2	QB	22	LYS
9	QI	127	LYS
14	QN	17	LYS
39	RE	131	ALA
39	RE	145	LYS
40	RF	197	ASP
45	RO	3	GLN
14	XN	17	LYS
39	YE	83	ASP
41	YG	81	LYS
42	YH	83	TYR
42	YH	152	ARG
47	YQ	22	LYS
55	YY	57	GLN
2	QB	208	ILE
34	R8	31	HIS
39	RE	63	LEU
40	RF	67	GLN
41	RG	97	ASP
55	RY	56	PRO
39	YE	129	HIS
47	YQ	25	ASP
55	YY	56	PRO
56	YZ	52	SER
30	R4	24	THR
56	RZ	52	SER
19	QS	10	PHE
39	RE	129	HIS

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Mol	Chain	Res	Type
39	RE	132	HIS
40	RF	129	PHE
30	Y4	40	HIS
56	YZ	94	GLU
56	YZ	95	PRO
30	R4	40	HIS
30	R4	41	PRO
30	Y4	41	PRO
28	Y2	18	PRO

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	QB	205/220 (93%)	204 (100%)	1 (0%)	88	95
2	XB	205/220 (93%)	203 (99%)	2 (1%)	76	90
3	QC	159/188 (85%)	159 (100%)	0	100	100
3	XC	159/188 (85%)	159 (100%)	0	100	100
4	QD	173/181 (96%)	171 (99%)	2 (1%)	71	88
4	XD	173/181 (96%)	172 (99%)	1 (1%)	86	94
5	QE	116/123 (94%)	116 (100%)	0	100	100
5	XE	116/123 (94%)	115 (99%)	1 (1%)	78	91
6	QF	90/90 (100%)	90 (100%)	0	100	100
6	XF	90/90 (100%)	90 (100%)	0	100	100
7	QG	126/127 (99%)	126 (100%)	0	100	100
7	XG	126/127 (99%)	125 (99%)	1 (1%)	81	93
8	QH	119/119 (100%)	118 (99%)	1 (1%)	81	93
8	XH	119/119 (100%)	119 (100%)	0	100	100
9	QI	98/99 (99%)	95 (97%)	3 (3%)	40	72
9	XI	98/99 (99%)	97 (99%)	1 (1%)	76	90
10	QJ	89/92 (97%)	89 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
10	XJ	89/92 (97%)	89 (100%)	0	100	100
11	QK	90/99 (91%)	89 (99%)	1 (1%)	73	88
11	XK	90/99 (91%)	89 (99%)	1 (1%)	73	88
12	QL	104/108 (96%)	103 (99%)	1 (1%)	76	90
12	XL	104/108 (96%)	104 (100%)	0	100	100
13	QM	97/101 (96%)	96 (99%)	1 (1%)	76	90
13	XM	97/101 (96%)	96 (99%)	1 (1%)	76	90
14	QN	49/50 (98%)	49 (100%)	0	100	100
14	XN	49/50 (98%)	49 (100%)	0	100	100
15	QO	79/80 (99%)	79 (100%)	0	100	100
15	XO	79/80 (99%)	79 (100%)	0	100	100
16	QP	72/74 (97%)	71 (99%)	1 (1%)	67	86
16	XP	72/74 (97%)	71 (99%)	1 (1%)	67	86
17	QQ	95/97 (98%)	95 (100%)	0	100	100
17	XQ	95/97 (98%)	95 (100%)	0	100	100
18	QR	61/77 (79%)	61 (100%)	0	100	100
18	XR	61/77 (79%)	61 (100%)	0	100	100
19	QS	73/80 (91%)	73 (100%)	0	100	100
19	XS	73/80 (91%)	70 (96%)	3 (4%)	30	66
20	QT	76/82 (93%)	75 (99%)	1 (1%)	69	87
20	XT	76/82 (93%)	74 (97%)	2 (3%)	46	76
21	QU	20/22 (91%)	20 (100%)	0	100	100
21	XU	20/22 (91%)	20 (100%)	0	100	100
26	R0	65/67 (97%)	63 (97%)	2 (3%)	40	72
26	Y0	65/67 (97%)	64 (98%)	1 (2%)	65	85
27	R1	82/83 (99%)	82 (100%)	0	100	100
27	Y1	82/83 (99%)	82 (100%)	0	100	100
28	R2	64/67 (96%)	63 (98%)	1 (2%)	62	84
28	Y2	64/67 (96%)	64 (100%)	0	100	100
29	R3	51/52 (98%)	51 (100%)	0	100	100
29	Y3	51/52 (98%)	51 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
30	R4	63/63 (100%)	61 (97%)	2 (3%)	39	71
30	Y4	63/63 (100%)	63 (100%)	0	100	100
31	R5	51/52 (98%)	50 (98%)	1 (2%)	55	80
31	Y5	51/52 (98%)	51 (100%)	0	100	100
32	R6	48/52 (92%)	47 (98%)	1 (2%)	53	79
32	Y6	48/52 (92%)	48 (100%)	0	100	100
33	R7	42/42 (100%)	42 (100%)	0	100	100
33	Y7	42/42 (100%)	41 (98%)	1 (2%)	49	77
34	R8	54/55 (98%)	52 (96%)	2 (4%)	34	68
34	Y8	54/55 (98%)	54 (100%)	0	100	100
35	R9	34/34 (100%)	34 (100%)	0	100	100
35	Y9	34/34 (100%)	34 (100%)	0	100	100
38	RD	214/218 (98%)	214 (100%)	0	100	100
38	YD	217/218 (100%)	217 (100%)	0	100	100
39	RE	165/166 (99%)	164 (99%)	1 (1%)	86	94
39	YE	165/166 (99%)	165 (100%)	0	100	100
40	RF	161/166 (97%)	160 (99%)	1 (1%)	86	94
40	YF	161/166 (97%)	161 (100%)	0	100	100
41	RG	155/156 (99%)	155 (100%)	0	100	100
41	YG	155/156 (99%)	154 (99%)	1 (1%)	86	94
42	RH	142/148 (96%)	141 (99%)	1 (1%)	84	94
42	YH	142/148 (96%)	142 (100%)	0	100	100
43	RI	122/124 (98%)	121 (99%)	1 (1%)	81	93
43	YI	122/124 (98%)	122 (100%)	0	100	100
44	RN	117/119 (98%)	116 (99%)	1 (1%)	78	91
44	YN	117/119 (98%)	116 (99%)	1 (1%)	78	91
45	RO	100/100 (100%)	99 (99%)	1 (1%)	76	90
45	YO	100/100 (100%)	100 (100%)	0	100	100
46	RP	116/116 (100%)	115 (99%)	1 (1%)	78	91
46	YP	116/116 (100%)	116 (100%)	0	100	100
47	RQ	111/111 (100%)	111 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
47	YQ	111/111 (100%)	111 (100%)	0	100	100
48	RR	101/101 (100%)	101 (100%)	0	100	100
48	YR	101/101 (100%)	101 (100%)	0	100	100
49	RS	87/88 (99%)	87 (100%)	0	100	100
49	YS	87/88 (99%)	86 (99%)	1 (1%)	73	88
50	RT	120/127 (94%)	118 (98%)	2 (2%)	60	83
50	YT	120/127 (94%)	120 (100%)	0	100	100
51	RU	93/94 (99%)	92 (99%)	1 (1%)	73	88
51	YU	93/94 (99%)	93 (100%)	0	100	100
52	RV	82/82 (100%)	82 (100%)	0	100	100
52	YV	82/82 (100%)	82 (100%)	0	100	100
53	RW	92/92 (100%)	92 (100%)	0	100	100
53	YW	92/92 (100%)	92 (100%)	0	100	100
54	RX	74/78 (95%)	74 (100%)	0	100	100
54	YX	74/78 (95%)	74 (100%)	0	100	100
55	RY	85/91 (93%)	83 (98%)	2 (2%)	49	77
55	YY	85/91 (93%)	83 (98%)	2 (2%)	49	77
56	RZ	162/179 (90%)	161 (99%)	1 (1%)	86	94
56	YZ	162/179 (90%)	162 (100%)	0	100	100
All	All	9691/10064 (96%)	9636 (99%)	55 (1%)	86	94

All (55) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	QB	22	LYS
4	QD	31	CYS
4	QD	38	TYR
8	QH	138	TRP
9	QI	104	ARG
9	QI	121	ARG
9	QI	125	TYR
11	QK	96	ARG
12	QL	105	TYR
13	QM	64	TRP
16	QP	48	TRP

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Mol	Chain	Res	Type
20	QT	74	LYS
26	R0	74	ARG
26	R0	82	ARG
28	R2	5	GLU
30	R4	53	GLU
30	R4	61	ARG
31	R5	40	LYS
32	R6	42	TRP
34	R8	36	LYS
34	R8	37	SER
39	RE	44	TYR
40	RF	199	TRP
42	RH	69	ARG
43	RI	113	ARG
44	RN	48	MET
45	RO	64	ARG
46	RP	15	ARG
50	RT	11	GLU
50	RT	112	ARG
51	RU	94	ASN
55	RY	76	CYS
55	RY	97	ARG
56	RZ	122	ARG
2	XB	122	PHE
2	XB	137	ARG
4	XD	47	ARG
5	XE	6	PHE
7	XG	94	ARG
9	XI	121	ARG
11	XK	42	TRP
13	XM	64	TRP
16	XP	40	ASP
19	XS	34	TRP
19	XS	37	ARG
19	XS	78	ARG
20	XT	57	ARG
20	XT	83	ARG
26	Y0	74	ARG
33	Y7	3	ARG
41	YG	95	ARG
44	YN	134	ARG
49	YS	42	ASP

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Mol	Chain	Res	Type
55	YY	35	TYR
55	YY	50	ARG

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (14) such sidechains are listed below:

Mol	Chain	Res	Type
16	QP	76	GLN
30	R4	6	HIS
31	R5	4	HIS
33	R7	8	ASN
42	RH	65	HIS
44	RN	130	HIS
46	RP	81	GLN
47	RQ	123	HIS
48	RR	3	HIS
53	RW	60	ASN
53	RW	62	HIS
7	XG	51	GLN
28	Y2	47	ASN
46	YP	9	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	QA	1498/1522 (98%)	262 (17%)	31 (2%)
1	XA	1498/1522 (98%)	257 (17%)	30 (2%)
22	QV	76/77 (98%)	11 (14%)	0
22	XV	76/77 (98%)	11 (14%)	0
23	QW	75/76 (98%)	25 (33%)	2 (2%)
23	XW	75/76 (98%)	33 (44%)	7 (9%)
24	QX	18/19 (94%)	9 (50%)	1 (5%)
24	XX	17/19 (89%)	7 (41%)	1 (5%)
25	QY	74/76 (97%)	22 (29%)	0
25	XY	74/76 (97%)	31 (41%)	1 (1%)
36	RA	2879/2915 (98%)	542 (18%)	44 (1%)
36	YA	2880/2915 (98%)	541 (18%)	45 (1%)
37	RB	119/122 (97%)	18 (15%)	2 (1%)
37	YB	119/122 (97%)	20 (16%)	1 (0%)
All	All	9478/9614 (98%)	1789 (18%)	165 (1%)

All (1789) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	QA	6	G
1	QA	7	G
1	QA	9	G
1	QA	22	G
1	QA	32	A
1	QA	39	G
1	QA	47	C
1	QA	48	C
1	QA	51	A
1	QA	59	A
1	QA	65	U
1	QA	76	G
1	QA	90	C
1	QA	91	C
1	QA	95	G
1	QA	101	A
1	QA	116	A
1	QA	120	A
1	QA	121	C
1	QA	144	G
1	QA	147	G
1	QA	163	C
1	QA	169	C
1	QA	173	U
1	QA	174	C
1	QA	182	U
1	QA	188	U
1	QA	191(B)	G
1	QA	195	A
1	QA	196	A
1	QA	197	A
1	QA	208	U
1	QA	209	U
1	QA	210	U
1	QA	216	G
1	QA	244	U
1	QA	245	C
1	QA	247	G
1	QA	251	G
1	QA	267	C
1	QA	279	A
1	QA	281	G

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Mol	Chain	Res	Type
1	QA	289	G
1	QA	316	G
1	QA	321	A
1	QA	328	C
1	QA	329	A
1	QA	332	G
1	QA	344	A
1	QA	346	G
1	QA	347	G
1	QA	348	G
1	QA	351	G
1	QA	352	C
1	QA	353	A
1	QA	354	G
1	QA	356	A
1	QA	367	U
1	QA	372	C
1	QA	373	A
1	QA	384	G
1	QA	388	G
1	QA	390	C
1	QA	397	A
1	QA	398	C
1	QA	406	G
1	QA	410	G
1	QA	411	A
1	QA	412	A
1	QA	413	G
1	QA	422	C
1	QA	423	G
1	QA	429	U
1	QA	430	A
1	QA	435	C
1	QA	457	C
1	QA	465	A
1	QA	466	C
1	QA	467	G
1	QA	485	G
1	QA	496	A
1	QA	497	U
1	QA	509	A
1	QA	510	A

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Mol	Chain	Res	Type
1	QA	511	C
1	QA	512	U
1	QA	518	C
1	QA	521	G
1	QA	524	G
1	QA	527	G
1	QA	532	A
1	QA	533	A
1	QA	545	C
1	QA	547	A
1	QA	559	A
1	QA	564	C
1	QA	568	G
1	QA	572	A
1	QA	573	A
1	QA	576	G
1	QA	577	G
1	QA	630	G
1	QA	631	G
1	QA	653	A
1	QA	665	A
1	QA	666	G
1	QA	684	A
1	QA	686	U
1	QA	688	G
1	QA	701	C
1	QA	702	A
1	QA	703	G
1	QA	704	A
1	QA	723	U
1	QA	731	G
1	QA	733	A
1	QA	748	C
1	QA	754	C
1	QA	755	G
1	QA	777	A
1	QA	786	G
1	QA	792	A
1	QA	793	U
1	QA	794	A
1	QA	812	C
1	QA	813	U

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Mol	Chain	Res	Type
1	QA	817	C
1	QA	828	A
1	QA	830	G
1	QA	841	U
1	QA	842	C
1	QA	843	U
1	QA	848	C
1	QA	859	A
1	QA	872	A
1	QA	884	U
1	QA	902	G
1	QA	914	A
1	QA	926	G
1	QA	927	G
1	QA	934	C
1	QA	935	A
1	QA	955	U
1	QA	960	U
1	QA	961	U
1	QA	965	A
1	QA	966	G
1	QA	968	A
1	QA	969	A
1	QA	971	G
1	QA	972	C
1	QA	974	A
1	QA	975	A
1	QA	976	G
1	QA	977	A
1	QA	983	A
1	QA	991	U
1	QA	992	U
1	QA	993	G
1	QA	994	A
1	QA	1001	G
1	QA	1004	A
1	QA	1009	G
1	QA	1020	U
1	QA	1024	G
1	QA	1025	U
1	QA	1028	C
1	QA	1029	G

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Mol	Chain	Res	Type
1	QA	1030	C
1	QA	1053	G
1	QA	1054	C
1	QA	1064	G
1	QA	1065	U
1	QA	1066	C
1	QA	1070	U
1	QA	1081	G
1	QA	1085	U
1	QA	1094	G
1	QA	1095	U
1	QA	1101	A
1	QA	1125	U
1	QA	1126	U
1	QA	1130	A
1	QA	1131	G
1	QA	1136	U
1	QA	1137	C
1	QA	1138	G
1	QA	1139	G
1	QA	1146	A
1	QA	1151	A
1	QA	1157	A
1	QA	1158	C
1	QA	1159	U
1	QA	1160	G
1	QA	1171	G
1	QA	1176	A
1	QA	1181	G
1	QA	1182	G
1	QA	1183	A
1	QA	1187	G
1	QA	1193	G
1	QA	1196	U
1	QA	1200	C
1	QA	1201	A
1	QA	1212	U
1	QA	1213	A
1	QA	1219	U
1	QA	1238	A
1	QA	1256	A
1	QA	1257	U

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Mol	Chain	Res	Type
1	QA	1258	G
1	QA	1260	C
1	QA	1266	G
1	QA	1270	C
1	QA	1280	A
1	QA	1282	C
1	QA	1286	A
1	QA	1287	A
1	QA	1290	G
1	QA	1300	G
1	QA	1301	U
1	QA	1302	U
1	QA	1303	C
1	QA	1305	G
1	QA	1313	U
1	QA	1317	C
1	QA	1318	A
1	QA	1321	C
1	QA	1330	U
1	QA	1331	G
1	QA	1333	A
1	QA	1336	C
1	QA	1337	G
1	QA	1338	G
1	QA	1346	A
1	QA	1347	G
1	QA	1348	U
1	QA	1353	G
1	QA	1362(A)	C
1	QA	1364	U
1	QA	1370	G
1	QA	1419	G
1	QA	1442	G
1	QA	1443	G
1	QA	1446	A
1	QA	1447	G
1	QA	1450	U
1	QA	1452	C
1	QA	1453	G
1	QA	1454	G
1	QA	1492	A
1	QA	1499	A

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Mol	Chain	Res	Type
1	QA	1502	A
1	QA	1503	A
1	QA	1504	G
1	QA	1506	U
1	QA	1517	G
1	QA	1519	A
1	QA	1520	G
1	QA	1529	G
1	QA	1530	G
1	QA	1531	A
22	QV	8	U
22	QV	16	C
22	QV	17	C
22	QV	19	G
22	QV	20	U
22	QV	21	A
22	QV	22	G
22	QV	47	U
22	QV	48	C
22	QV	49	G
22	QV	76	A
23	QW	8	U
23	QW	9	A
23	QW	13	C
23	QW	14	A
23	QW	15	G
23	QW	17	A
23	QW	19	G
23	QW	20	G
23	QW	21	A
23	QW	22	G
23	QW	36	C
23	QW	37	A
23	QW	38	U
23	QW	39	G
23	QW	40	C
23	QW	46	G
23	QW	47	U
23	QW	48	C
23	QW	49	A
23	QW	52	G
23	QW	56	C

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Mol	Chain	Res	Type
23	QW	57	G
23	QW	59	U
23	QW	61	C
23	QW	70	U
24	QX	7	G
24	QX	10	G
24	QX	11	U
24	QX	12	A
24	QX	13	A
24	QX	14	A
24	QX	19	G
24	QX	23	A
24	QX	24	A
25	QY	2	G
25	QY	8	U
25	QY	14	A
25	QY	17	U
25	QY	18	G
25	QY	19	G
25	QY	21	A
25	QY	23	A
25	QY	27	C
25	QY	28	U
25	QY	29	U
25	QY	30	G
25	QY	46	G
25	QY	47	U
25	QY	48	C
25	QY	54	U
25	QY	55	U
25	QY	56	C
25	QY	59	U
25	QY	67	A
25	QY	71	C
25	QY	74	C
36	RA	34	C
36	RA	35	G
36	RA	46	C
36	RA	51	G
36	RA	55	G
36	RA	60	G
36	RA	71	A

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Mol	Chain	Res	Type
36	RA	74	A
36	RA	75	G
36	RA	91	A
36	RA	101	G
36	RA	102	G
36	RA	103	A
36	RA	118	A
36	RA	119	A
36	RA	120	U
36	RA	138	G
36	RA	140	A
36	RA	149	A
36	RA	155	C
36	RA	161	U
36	RA	181	A
36	RA	196	A
36	RA	199	A
36	RA	205	G
36	RA	206	U
36	RA	215	G
36	RA	216	A
36	RA	221	A
36	RA	222	A
36	RA	223	A
36	RA	228	A
36	RA	229	A
36	RA	230	U
36	RA	232	G
36	RA	242	G
36	RA	243	U
36	RA	248	G
36	RA	249	C
36	RA	250	G
36	RA	252	G
36	RA	265	A
36	RA	266	G
36	RA	269	U
36	RA	270(L)	U
36	RA	270(M)	U
36	RA	270(N)	G
36	RA	270(P)	C
36	RA	271(C)	U

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Mol	Chain	Res	Type
36	RA	275	G
36	RA	276	A
36	RA	277	C
36	RA	285	C
36	RA	299	A
36	RA	300	A
36	RA	306	U
36	RA	308	G
36	RA	309	G
36	RA	311	A
36	RA	323	G
36	RA	324	A
36	RA	329	G
36	RA	330	A
36	RA	346	A
36	RA	352	G
36	RA	363(E)	U
36	RA	364	C
36	RA	371	A
36	RA	386	G
36	RA	394	A
36	RA	395	U
36	RA	404	C
36	RA	405	U
36	RA	411	G
36	RA	428	A
36	RA	435	C
36	RA	444	C
36	RA	448	U
36	RA	454	A
36	RA	457	A
36	RA	470	A
36	RA	478	A
36	RA	481	G
36	RA	504	U
36	RA	505	A
36	RA	508	G
36	RA	509	C
36	RA	513	A
36	RA	528	A
36	RA	529	A
36	RA	532	A

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Mol	Chain	Res	Type
36	RA	533	G
36	RA	539	G
36	RA	540	G
36	RA	546	C
36	RA	547	A
36	RA	563	G
36	RA	573	G
36	RA	574	C
36	RA	575	A
36	RA	583	G
36	RA	586	A
36	RA	603	A
36	RA	607	U
36	RA	614	U
36	RA	615	G
36	RA	617	G
36	RA	621	A
36	RA	627	A
36	RA	637	A
36	RA	638	G
36	RA	645	C
36	RA	646	A
36	RA	650	C
36	RA	651	G
36	RA	654	A
36	RA	654(A)	G
36	RA	658	C
36	RA	686	G
36	RA	702	G
36	RA	708	C
36	RA	721	C
36	RA	722	A
36	RA	726	G
36	RA	730	C
36	RA	748	G
36	RA	753	C
36	RA	764	A
36	RA	765	G
36	RA	775	G
36	RA	776	G
36	RA	782	A
36	RA	784	A

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Mol	Chain	Res	Type
36	RA	785	G
36	RA	790	C
36	RA	791	C
36	RA	792	G
36	RA	793	A
36	RA	805	G
36	RA	812	C
36	RA	819	A
36	RA	827	U
36	RA	828	U
36	RA	832	G
36	RA	847	U
36	RA	854	G
36	RA	856	C
36	RA	857	C
36	RA	859	G
36	RA	866	A
36	RA	877	U
36	RA	881	G
36	RA	884	C
36	RA	885	C
36	RA	886	C
36	RA	888	C
36	RA	889	C
36	RA	896	A
36	RA	897	C
36	RA	900	A
36	RA	907	U
36	RA	910	A
36	RA	917	A
36	RA	932	G
36	RA	938	G
36	RA	941	A
36	RA	945	A
36	RA	946	G
36	RA	959	A
36	RA	961	C
36	RA	974	G
36	RA	974(A)	C
36	RA	980	A
36	RA	983	A
36	RA	990	A

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Mol	Chain	Res	Type
36	RA	991	C
36	RA	996	A
36	RA	1003	G
36	RA	1005	C
36	RA	1008	C
36	RA	1011	G
36	RA	1012	U
36	RA	1013	C
36	RA	1014	U
36	RA	1023	U
36	RA	1026	U
36	RA	1027	A
36	RA	1033	U
36	RA	1042	G
36	RA	1045	A
36	RA	1046	A
36	RA	1047	G
36	RA	1050	A
36	RA	1055	G
36	RA	1060	U
36	RA	1061	U
36	RA	1065	U
36	RA	1067	A
36	RA	1068	G
36	RA	1071	G
36	RA	1073	A
36	RA	1074	G
36	RA	1076	C
36	RA	1077	A
36	RA	1078	U
36	RA	1079	C
36	RA	1082	U
36	RA	1083	U
36	RA	1084	A
36	RA	1085	A
36	RA	1086	A
36	RA	1088	A
36	RA	1090	U
36	RA	1095	A
36	RA	1096	A
36	RA	1097	U
36	RA	1104	C

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Mol	Chain	Res	Type
36	RA	1110	G
36	RA	1111	A
36	RA	1112	G
36	RA	1122	G
36	RA	1129	A
36	RA	1131	G
36	RA	1135	C
36	RA	1136	G
36	RA	1140	C
36	RA	1142(A)	A
36	RA	1170	G
36	RA	1173	G
36	RA	1174	A
36	RA	1175	U
36	RA	1176	G
36	RA	1177	A
36	RA	1179	C
36	RA	1195	G
36	RA	1204	A
36	RA	1205	U
36	RA	1206	G
36	RA	1212	G
36	RA	1220	A
36	RA	1236	G
36	RA	1238	G
36	RA	1250	G
36	RA	1253	A
36	RA	1256	G
36	RA	1265	A
36	RA	1271	G
36	RA	1272	A
36	RA	1273	U
36	RA	1300	U
36	RA	1301	A
36	RA	1312	U
36	RA	1313	U
36	RA	1314	C
36	RA	1320	C
36	RA	1329	U
36	RA	1341	U
36	RA	1349	A
36	RA	1365	A

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Mol	Chain	Res	Type
36	RA	1368	G
36	RA	1378	A
36	RA	1379	A
36	RA	1384	A
36	RA	1385	G
36	RA	1395	A
36	RA	1408	C
36	RA	1411	C
36	RA	1416	G
36	RA	1417	C
36	RA	1419	A
36	RA	1420	U
36	RA	1421	G
36	RA	1428	C
36	RA	1444(A)	A
36	RA	1449	A
36	RA	1455	G
36	RA	1460	A
36	RA	1461	G
36	RA	1467	C
36	RA	1471	A
36	RA	1478	G
36	RA	1483	G
36	RA	1487	G
36	RA	1490	A
36	RA	1493	C
36	RA	1494	A
36	RA	1495	A
36	RA	1497	U
36	RA	1504	C
36	RA	1506	C
36	RA	1507	A
36	RA	1508	A
36	RA	1510	A
36	RA	1511	A
36	RA	1514	U
36	RA	1515	C
36	RA	1522	G
36	RA	1535	U
36	RA	1536	A
36	RA	1537	C
36	RA	1538	G

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Mol	Chain	Res	Type
36	RA	1543	A
36	RA	1544	C
36	RA	1545	A
36	RA	1558	A
36	RA	1559	G
36	RA	1560	G
36	RA	1566	A
36	RA	1569	A
36	RA	1578	U
36	RA	1586	A
36	RA	1598	C
36	RA	1608	A
36	RA	1610	A
36	RA	1615	C
36	RA	1616	A
36	RA	1617	C
36	RA	1618	A
36	RA	1640	C
36	RA	1648	C
36	RA	1654	A
36	RA	1667	G
36	RA	1668	A
36	RA	1674	G
36	RA	1693	U
36	RA	1695	G
36	RA	1725	G
36	RA	1728	G
36	RA	1729	A
36	RA	1730	U
36	RA	1731	G
36	RA	1733	G
36	RA	1742	C
36	RA	1743	G
36	RA	1756	G
36	RA	1762	A
36	RA	1763	G
36	RA	1764	G
36	RA	1773	A
36	RA	1780	A
36	RA	1781	C
36	RA	1782	C
36	RA	1786	A

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Mol	Chain	Res	Type
36	RA	1791	A
36	RA	1799	G
36	RA	1800	C
36	RA	1801	G
36	RA	1816	G
36	RA	1820	U
36	RA	1824	G
36	RA	1825	A
36	RA	1835	G
36	RA	1843	C
36	RA	1847	A
36	RA	1848	A
36	RA	1858	G
36	RA	1869	G
36	RA	1870	C
36	RA	1872	A
36	RA	1878	G
36	RA	1882	C
36	RA	1884	A
36	RA	1888	G
36	RA	1889	A
36	RA	1899	G
36	RA	1906	G
36	RA	1913	A
36	RA	1929	G
36	RA	1930	G
36	RA	1931	U
36	RA	1936	A
36	RA	1937	A
36	RA	1938	A
36	RA	1955	U
36	RA	1963	U
36	RA	1967	C
36	RA	1969	A
36	RA	1970	A
36	RA	1971	A
36	RA	1972	A
36	RA	1982	C
36	RA	1991	U
36	RA	1992	G
36	RA	1993	U
36	RA	2023	G

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Mol	Chain	Res	Type
36	RA	2031	A
36	RA	2032	G
36	RA	2033	A
36	RA	2043	C
36	RA	2055	C
36	RA	2056	G
36	RA	2059	A
36	RA	2060	A
36	RA	2061	G
36	RA	2062	A
36	RA	2067	G
36	RA	2069	G
36	RA	2099	U
36	RA	2107	C
36	RA	2111	C
36	RA	2113	U
36	RA	2114	A
36	RA	2115	G
36	RA	2116	G
36	RA	2117	A
36	RA	2126	A
36	RA	2127	G
36	RA	2131	G
36	RA	2132	U
36	RA	2133	G
36	RA	2146	C
36	RA	2148	G
36	RA	2165	G
36	RA	2166	G
36	RA	2167	U
36	RA	2168	G
36	RA	2169	A
36	RA	2171	A
36	RA	2173	A
36	RA	2189	U
36	RA	2190	G
36	RA	2192	G
36	RA	2198	A
36	RA	2210	G
36	RA	2211	G
36	RA	2212	A
36	RA	2213	U

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Mol	Chain	Res	Type
36	RA	2215	G
36	RA	2225	A
36	RA	2238	G
36	RA	2239	G
36	RA	2243	U
36	RA	2269	A
36	RA	2275	C
36	RA	2280	G
36	RA	2283	C
36	RA	2287	A
36	RA	2288	A
36	RA	2307	G
36	RA	2308	G
36	RA	2311	A
36	RA	2312	U
36	RA	2320	A
36	RA	2321	G
36	RA	2325	G
36	RA	2334	G
36	RA	2336	A
36	RA	2342	C
36	RA	2346	A
36	RA	2347	C
36	RA	2350	C
36	RA	2383	G
36	RA	2385	C
36	RA	2394	C
36	RA	2402	C
36	RA	2403	C
36	RA	2406	U
36	RA	2410	G
36	RA	2423	U
36	RA	2425	A
36	RA	2429	G
36	RA	2430	A
36	RA	2434	A
36	RA	2435	A
36	RA	2439	A
36	RA	2440	C
36	RA	2441	C
36	RA	2445	G
36	RA	2448	A

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Mol	Chain	Res	Type
36	RA	2459	A
36	RA	2469	A
36	RA	2470	G
36	RA	2494	G
36	RA	2502	G
36	RA	2505	G
36	RA	2506	U
36	RA	2518	A
36	RA	2519	U
36	RA	2529	G
36	RA	2542	A
36	RA	2543	G
36	RA	2554	U
36	RA	2558	C
36	RA	2564	A
36	RA	2567	G
36	RA	2569	G
36	RA	2573	C
36	RA	2574	G
36	RA	2602	A
36	RA	2609	U
36	RA	2610	C
36	RA	2611	U
36	RA	2612	C
36	RA	2614	A
36	RA	2615	U
36	RA	2629	A
36	RA	2636	U
36	RA	2652	C
36	RA	2654	A
36	RA	2655	G
36	RA	2665	A
36	RA	2673	G
36	RA	2689	U
36	RA	2691	C
36	RA	2702	U
36	RA	2703	C
36	RA	2712	U
36	RA	2712(A)	A
36	RA	2713	A
36	RA	2714	G
36	RA	2726	U

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Mol	Chain	Res	Type
36	RA	2732	G
36	RA	2733	A
36	RA	2734	A
36	RA	2748	A
36	RA	2758	A
36	RA	2764	A
36	RA	2765	A
36	RA	2766	G
36	RA	2770	G
36	RA	2776	A
36	RA	2777	G
36	RA	2778	A
36	RA	2779	U
36	RA	2789	C
36	RA	2790	A
36	RA	2791	C
36	RA	2797	U
36	RA	2798	C
36	RA	2807	G
36	RA	2808	U
36	RA	2818	G
36	RA	2820	A
36	RA	2821	A
36	RA	2833	G
36	RA	2834	G
36	RA	2845	G
36	RA	2849	U
36	RA	2872	G
36	RA	2880	C
36	RA	2891	G
36	RA	2892	A
37	RB	9	G
37	RB	13	A
37	RB	15	A
37	RB	16	G
37	RB	23	G
37	RB	31	C
37	RB	32	C
37	RB	36	C
37	RB	42	C
37	RB	56	G
37	RB	58	A

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Mol	Chain	Res	Type
37	RB	67	G
37	RB	73	A
37	RB	81	G
37	RB	82	G
37	RB	108	C
37	RB	109	G
37	RB	110	G
1	XA	9	G
1	XA	32	A
1	XA	39	G
1	XA	48	C
1	XA	51	A
1	XA	54	C
1	XA	61	G
1	XA	65	U
1	XA	66	G
1	XA	79	G
1	XA	81	G
1	XA	90	C
1	XA	91	C
1	XA	92	G
1	XA	95	G
1	XA	101	A
1	XA	108	G
1	XA	116	A
1	XA	120	A
1	XA	121	C
1	XA	129(A)	G
1	XA	130	A
1	XA	131	C
1	XA	144	G
1	XA	147	G
1	XA	163	C
1	XA	169	C
1	XA	173	U
1	XA	174	C
1	XA	183	G
1	XA	190	G
1	XA	191	G
1	XA	195	A
1	XA	196	A
1	XA	208	U

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Mol	Chain	Res	Type
1	XA	209	U
1	XA	210	U
1	XA	216	G
1	XA	231	G
1	XA	244	U
1	XA	245	C
1	XA	247	G
1	XA	251	G
1	XA	262	A
1	XA	267	C
1	XA	281	G
1	XA	289	G
1	XA	321	A
1	XA	328	C
1	XA	329	A
1	XA	332	G
1	XA	342	C
1	XA	345	C
1	XA	346	G
1	XA	347	G
1	XA	348	G
1	XA	351	G
1	XA	352	C
1	XA	353	A
1	XA	354	G
1	XA	356	A
1	XA	367	U
1	XA	368	U
1	XA	372	C
1	XA	384	G
1	XA	390	C
1	XA	397	A
1	XA	398	C
1	XA	406	G
1	XA	411	A
1	XA	412	A
1	XA	413	G
1	XA	422	C
1	XA	423	G
1	XA	424	G
1	XA	429	U
1	XA	430	A

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Mol	Chain	Res	Type
1	XA	435	C
1	XA	439	A
1	XA	452	A
1	XA	466	C
1	XA	467	G
1	XA	482	A
1	XA	485	G
1	XA	486	U
1	XA	488	C
1	XA	496	A
1	XA	497	U
1	XA	509	A
1	XA	510	A
1	XA	511	C
1	XA	518	C
1	XA	527	G
1	XA	531	U
1	XA	532	A
1	XA	533	A
1	XA	545	C
1	XA	547	A
1	XA	548	G
1	XA	559	A
1	XA	561	U
1	XA	564	C
1	XA	565	U
1	XA	568	G
1	XA	572	A
1	XA	573	A
1	XA	576	G
1	XA	577	G
1	XA	579	G
1	XA	596	C
1	XA	630	G
1	XA	631	G
1	XA	632	A
1	XA	642	A
1	XA	653	A
1	XA	665	A
1	XA	693	G
1	XA	704	A
1	XA	721	G

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Mol	Chain	Res	Type
1	XA	724	G
1	XA	734	G
1	XA	748	C
1	XA	754	C
1	XA	755	G
1	XA	777	A
1	XA	792	A
1	XA	793	U
1	XA	794	A
1	XA	813	U
1	XA	816	A
1	XA	817	C
1	XA	819	A
1	XA	821	G
1	XA	828	A
1	XA	841	U
1	XA	842	C
1	XA	843	U
1	XA	848	C
1	XA	859	A
1	XA	872	A
1	XA	891	U
1	XA	902	G
1	XA	914	A
1	XA	926	G
1	XA	927	G
1	XA	934	C
1	XA	935	A
1	XA	960	U
1	XA	968	A
1	XA	969	A
1	XA	971	G
1	XA	974	A
1	XA	975	A
1	XA	976	G
1	XA	977	A
1	XA	991	U
1	XA	992	U
1	XA	993	G
1	XA	1004	A
1	XA	1006	C
1	XA	1008	C

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Mol	Chain	Res	Type
1	XA	1014	A
1	XA	1015	A
1	XA	1024	G
1	XA	1025	U
1	XA	1028	C
1	XA	1029	G
1	XA	1032(A)	G
1	XA	1054	C
1	XA	1065	U
1	XA	1066	C
1	XA	1078	U
1	XA	1081	G
1	XA	1094	G
1	XA	1095	U
1	XA	1101	A
1	XA	1108	G
1	XA	1124	G
1	XA	1125	U
1	XA	1126	U
1	XA	1127	G
1	XA	1130	A
1	XA	1131	G
1	XA	1136	U
1	XA	1137	C
1	XA	1138	G
1	XA	1139	G
1	XA	1146	A
1	XA	1152	A
1	XA	1157	A
1	XA	1159	U
1	XA	1177	G
1	XA	1181	G
1	XA	1182	G
1	XA	1183	A
1	XA	1187	G
1	XA	1190	G
1	XA	1196	U
1	XA	1201	A
1	XA	1211	U
1	XA	1212	U
1	XA	1226	C
1	XA	1227	A

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Mol	Chain	Res	Type
1	XA	1238	A
1	XA	1240	U
1	XA	1241	G
1	XA	1253	G
1	XA	1256	A
1	XA	1257	U
1	XA	1258	G
1	XA	1270	C
1	XA	1280	A
1	XA	1281	U
1	XA	1282	C
1	XA	1286	A
1	XA	1287	A
1	XA	1298	C
1	XA	1299	A
1	XA	1300	G
1	XA	1302	U
1	XA	1303	C
1	XA	1305	G
1	XA	1321	C
1	XA	1323	G
1	XA	1331	G
1	XA	1336	C
1	XA	1337	G
1	XA	1340	A
1	XA	1347	G
1	XA	1353	G
1	XA	1362(A)	C
1	XA	1364	U
1	XA	1370	G
1	XA	1379	G
1	XA	1380	U
1	XA	1398	A
1	XA	1419	G
1	XA	1439	C
1	XA	1442	G
1	XA	1446	A
1	XA	1447	G
1	XA	1452	C
1	XA	1453	G
1	XA	1454	G
1	XA	1487	G

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Mol	Chain	Res	Type
1	XA	1492	A
1	XA	1497	G
1	XA	1499	A
1	XA	1502	A
1	XA	1503	A
1	XA	1504	G
1	XA	1506	U
1	XA	1517	G
1	XA	1519	A
1	XA	1520	G
1	XA	1529	G
1	XA	1530	G
22	XV	3	C
22	XV	8	U
22	XV	17(A)	U
22	XV	18	G
22	XV	19	G
22	XV	20	U
22	XV	21	A
22	XV	47	U
22	XV	48	C
22	XV	61	C
22	XV	76	A
23	XW	6	U
23	XW	7	A
23	XW	8	U
23	XW	9	A
23	XW	13	C
23	XW	14	A
23	XW	16	A
23	XW	17	A
23	XW	18	G
23	XW	19	G
23	XW	20	G
23	XW	21	A
23	XW	31	C
23	XW	32	A
23	XW	33	U
23	XW	35	C
23	XW	37	A
23	XW	38	U
23	XW	39	G

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Mol	Chain	Res	Type
23	XW	40	C
23	XW	45	G
23	XW	46	G
23	XW	48	C
23	XW	49	A
23	XW	56	C
23	XW	57	G
23	XW	59	U
23	XW	60	C
23	XW	61	C
23	XW	65	U
23	XW	67	A
23	XW	70	U
23	XW	76	A
24	XX	10	G
24	XX	11	U
24	XX	12	A
24	XX	14	A
24	XX	15	A
24	XX	19	G
24	XX	23	A
25	XY	2	G
25	XY	3	G
25	XY	10	G
25	XY	16	C
25	XY	17	U
25	XY	18	G
25	XY	19	G
25	XY	20	G
25	XY	22	G
25	XY	29	U
25	XY	37	A
25	XY	42	A
25	XY	43	G
25	XY	47	U
25	XY	48	C
25	XY	50	G
25	XY	51	C
25	XY	52	G
25	XY	53	G
25	XY	54	U
25	XY	55	U

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Mol	Chain	Res	Type
25	XY	56	C
25	XY	57	G
25	XY	58	A
25	XY	59	U
25	XY	65	U
25	XY	70	U
25	XY	71	C
25	XY	72	C
25	XY	73	A
25	XY	75	C
36	YA	9	U
36	YA	15	G
36	YA	34	C
36	YA	35	G
36	YA	46	C
36	YA	51	G
36	YA	63	U
36	YA	71	A
36	YA	74	A
36	YA	75	G
36	YA	83	G
36	YA	91	A
36	YA	95	G
36	YA	101	G
36	YA	102	G
36	YA	103	A
36	YA	118	A
36	YA	119	A
36	YA	120	U
36	YA	125	G
36	YA	131	G
36	YA	140	A
36	YA	161	U
36	YA	162	U
36	YA	181	A
36	YA	196	A
36	YA	199	A
36	YA	214	G
36	YA	216	A
36	YA	221	A
36	YA	222	A
36	YA	223	A

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Mol	Chain	Res	Type
36	YA	225	A
36	YA	226	G
36	YA	229	A
36	YA	230	U
36	YA	233	A
36	YA	242	G
36	YA	243	U
36	YA	248	G
36	YA	249	C
36	YA	252	G
36	YA	265	A
36	YA	266	G
36	YA	269	U
36	YA	270(L)	U
36	YA	270(M)	U
36	YA	270(P)	C
36	YA	271(C)	U
36	YA	271	G
36	YA	274	G
36	YA	276	A
36	YA	277	C
36	YA	278	A
36	YA	279	C
36	YA	299	A
36	YA	311	A
36	YA	323	G
36	YA	324	A
36	YA	329	G
36	YA	330	A
36	YA	342	G
36	YA	352	G
36	YA	363	G
36	YA	363(E)	U
36	YA	371	A
36	YA	372	G
36	YA	373	U
36	YA	386	G
36	YA	387	U
36	YA	405	U
36	YA	411	G
36	YA	412	A
36	YA	428	A

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Mol	Chain	Res	Type
36	YA	443	A
36	YA	444	C
36	YA	448	U
36	YA	454	A
36	YA	455	C
36	YA	457	A
36	YA	464	U
36	YA	470	A
36	YA	481	G
36	YA	504	U
36	YA	505	A
36	YA	508	G
36	YA	509	C
36	YA	512	G
36	YA	518	G
36	YA	530	G
36	YA	531	C
36	YA	532	A
36	YA	533	G
36	YA	537	C
36	YA	539	G
36	YA	540	G
36	YA	546	C
36	YA	547	A
36	YA	563	G
36	YA	573	G
36	YA	575	A
36	YA	586	A
36	YA	588	U
36	YA	603	A
36	YA	607	U
36	YA	614	U
36	YA	617	G
36	YA	621	A
36	YA	622	G
36	YA	627	A
36	YA	637	A
36	YA	638	G
36	YA	645	C
36	YA	646	A
36	YA	647	G
36	YA	654	A

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Mol	Chain	Res	Type
36	YA	654(A)	G
36	YA	686	G
36	YA	702	G
36	YA	717	G
36	YA	722	A
36	YA	730	C
36	YA	734	A
36	YA	748	G
36	YA	753	C
36	YA	775	G
36	YA	776	G
36	YA	782	A
36	YA	784	A
36	YA	785	G
36	YA	790	C
36	YA	792	G
36	YA	805	G
36	YA	812	C
36	YA	819	A
36	YA	827	U
36	YA	831	G
36	YA	846	C
36	YA	847	U
36	YA	856	C
36	YA	857	C
36	YA	859	G
36	YA	860	U
36	YA	866	A
36	YA	881	G
36	YA	882	G
36	YA	884	C
36	YA	886	C
36	YA	887	A
36	YA	888	C
36	YA	889	C
36	YA	896	A
36	YA	897	C
36	YA	900	A
36	YA	901	A
36	YA	907	U
36	YA	910	A
36	YA	911	A

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Mol	Chain	Res	Type
36	YA	915	C
36	YA	917	A
36	YA	932	G
36	YA	941	A
36	YA	943	U
36	YA	945	A
36	YA	946	G
36	YA	953	A
36	YA	959	A
36	YA	961	C
36	YA	974	G
36	YA	974(A)	C
36	YA	983	A
36	YA	989	G
36	YA	996	A
36	YA	1003	G
36	YA	1005	C
36	YA	1011	G
36	YA	1012	U
36	YA	1013	C
36	YA	1015	G
36	YA	1016	G
36	YA	1022	G
36	YA	1023	U
36	YA	1026	U
36	YA	1027	A
36	YA	1033	U
36	YA	1045	A
36	YA	1046	A
36	YA	1047	G
36	YA	1050	A
36	YA	1051	G
36	YA	1059	G
36	YA	1060	U
36	YA	1061	U
36	YA	1065	U
36	YA	1067	A
36	YA	1068	G
36	YA	1070	A
36	YA	1071	G
36	YA	1077	A
36	YA	1078	U

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Mol	Chain	Res	Type
36	YA	1081	U
36	YA	1082	U
36	YA	1083	U
36	YA	1084	A
36	YA	1085	A
36	YA	1086	A
36	YA	1088	A
36	YA	1093	G
36	YA	1095	A
36	YA	1096	A
36	YA	1097	U
36	YA	1103	A
36	YA	1104	C
36	YA	1110	G
36	YA	1111	A
36	YA	1112	G
36	YA	1122	G
36	YA	1129	A
36	YA	1135	C
36	YA	1136	G
36	YA	1139	G
36	YA	1142	U
36	YA	1142(A)	A
36	YA	1149	G
36	YA	1151	G
36	YA	1155	A
36	YA	1170	G
36	YA	1171	G
36	YA	1173	G
36	YA	1174	A
36	YA	1175	U
36	YA	1176	G
36	YA	1195	G
36	YA	1204	A
36	YA	1205	U
36	YA	1210	A
36	YA	1211	U
36	YA	1220	A
36	YA	1238	G
36	YA	1253	A
36	YA	1255	U
36	YA	1256	G

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Mol	Chain	Res	Type
36	YA	1265	A
36	YA	1272	A
36	YA	1273	U
36	YA	1300	U
36	YA	1301	A
36	YA	1329	U
36	YA	1349	A
36	YA	1352	U
36	YA	1365	A
36	YA	1368	G
36	YA	1379	A
36	YA	1384	A
36	YA	1385	G
36	YA	1391	U
36	YA	1395	A
36	YA	1407	C
36	YA	1411	C
36	YA	1416	G
36	YA	1417	C
36	YA	1419	A
36	YA	1420	U
36	YA	1421	G
36	YA	1428	C
36	YA	1444(A)	A
36	YA	1445	C
36	YA	1449	A
36	YA	1449(A)	G
36	YA	1455	G
36	YA	1461	G
36	YA	1467	C
36	YA	1471	A
36	YA	1478	G
36	YA	1483	G
36	YA	1487	G
36	YA	1493	C
36	YA	1495	A
36	YA	1497	U
36	YA	1507	A
36	YA	1508	A
36	YA	1510	A
36	YA	1511	A
36	YA	1514	U

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Mol	Chain	Res	Type
36	YA	1522	G
36	YA	1534	G
36	YA	1535	U
36	YA	1536	A
36	YA	1537	C
36	YA	1538	G
36	YA	1540	G
36	YA	1543	A
36	YA	1544	C
36	YA	1545	A
36	YA	1554	A
36	YA	1558	A
36	YA	1559	G
36	YA	1566	A
36	YA	1569	A
36	YA	1578	U
36	YA	1585	C
36	YA	1586	A
36	YA	1598	C
36	YA	1608	A
36	YA	1609	A
36	YA	1610	A
36	YA	1617	C
36	YA	1618	A
36	YA	1640	C
36	YA	1648	C
36	YA	1654	A
36	YA	1668	A
36	YA	1674	G
36	YA	1675	C
36	YA	1695	G
36	YA	1699	G
36	YA	1700	A
36	YA	1725	G
36	YA	1728	G
36	YA	1729	A
36	YA	1730	U
36	YA	1731	G
36	YA	1742	C
36	YA	1743	G
36	YA	1750	G
36	YA	1754	C

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Mol	Chain	Res	Type
36	YA	1756	G
36	YA	1762	A
36	YA	1763	G
36	YA	1764	G
36	YA	1773	A
36	YA	1780	A
36	YA	1791	A
36	YA	1799	G
36	YA	1800	C
36	YA	1801	G
36	YA	1816	G
36	YA	1820	U
36	YA	1829	A
36	YA	1835	G
36	YA	1847	A
36	YA	1858	G
36	YA	1869	G
36	YA	1870	C
36	YA	1872	A
36	YA	1878	G
36	YA	1882	C
36	YA	1888	G
36	YA	1889	A
36	YA	1899	G
36	YA	1905	C
36	YA	1906	G
36	YA	1929	G
36	YA	1930	G
36	YA	1931	U
36	YA	1936	A
36	YA	1938	A
36	YA	1939	U
36	YA	1955	U
36	YA	1963	U
36	YA	1967	C
36	YA	1969	A
36	YA	1970	A
36	YA	1971	A
36	YA	1972	A
36	YA	1982	C
36	YA	1991	U
36	YA	1993	U

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Mol	Chain	Res	Type
36	YA	2020	A
36	YA	2021	C
36	YA	2023	G
36	YA	2031	A
36	YA	2033	A
36	YA	2043	C
36	YA	2049	G
36	YA	2052	G
36	YA	2055	C
36	YA	2056	G
36	YA	2059	A
36	YA	2060	A
36	YA	2061	G
36	YA	2062	A
36	YA	2069	G
36	YA	2093	G
36	YA	2100	G
36	YA	2101	G
36	YA	2111	C
36	YA	2112	G
36	YA	2113	U
36	YA	2114	A
36	YA	2115	G
36	YA	2116	G
36	YA	2118	U
36	YA	2119	A
36	YA	2120	G
36	YA	2126	A
36	YA	2127	G
36	YA	2131	G
36	YA	2132	U
36	YA	2133	G
36	YA	2136	C
36	YA	2146	C
36	YA	2147	G
36	YA	2148	G
36	YA	2157	G
36	YA	2158	A
36	YA	2164	C
36	YA	2165	G
36	YA	2166	G
36	YA	2167	U

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Mol	Chain	Res	Type
36	YA	2168	G
36	YA	2169	A
36	YA	2171	A
36	YA	2172	U
36	YA	2173	A
36	YA	2186	G
36	YA	2187	G
36	YA	2189	U
36	YA	2190	G
36	YA	2192	G
36	YA	2198	A
36	YA	2210	G
36	YA	2211	G
36	YA	2212	A
36	YA	2213	U
36	YA	2215	G
36	YA	2225	A
36	YA	2238	G
36	YA	2239	G
36	YA	2243	U
36	YA	2275	C
36	YA	2278	A
36	YA	2280	G
36	YA	2283	C
36	YA	2286	A
36	YA	2287	A
36	YA	2288	A
36	YA	2305	A
36	YA	2307	G
36	YA	2308	G
36	YA	2309	A
36	YA	2311	A
36	YA	2319	G
36	YA	2320	A
36	YA	2325	G
36	YA	2334	G
36	YA	2335	A
36	YA	2336	A
36	YA	2342	C
36	YA	2345	G
36	YA	2346	A
36	YA	2347	C

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Mol	Chain	Res	Type
36	YA	2350	C
36	YA	2354	G
36	YA	2383	G
36	YA	2385	C
36	YA	2402	C
36	YA	2403	C
36	YA	2406	U
36	YA	2410	G
36	YA	2411	A
36	YA	2422	A
36	YA	2423	U
36	YA	2425	A
36	YA	2429	G
36	YA	2430	A
36	YA	2435	A
36	YA	2439	A
36	YA	2440	C
36	YA	2441	C
36	YA	2448	A
36	YA	2450	A
36	YA	2452	C
36	YA	2469	A
36	YA	2475	C
36	YA	2478	A
36	YA	2494	G
36	YA	2502	G
36	YA	2505	G
36	YA	2518	A
36	YA	2529	G
36	YA	2542	A
36	YA	2554	U
36	YA	2558	C
36	YA	2566	A
36	YA	2567	G
36	YA	2572	A
36	YA	2578	G
36	YA	2585	U
36	YA	2602	A
36	YA	2611	U
36	YA	2612	C
36	YA	2615	U
36	YA	2629	A

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Mol	Chain	Res	Type
36	YA	2665	A
36	YA	2673	G
36	YA	2674	G
36	YA	2682	U
36	YA	2689	U
36	YA	2690	C
36	YA	2702	U
36	YA	2703	C
36	YA	2712	U
36	YA	2713	A
36	YA	2714	G
36	YA	2726	U
36	YA	2733	A
36	YA	2748	A
36	YA	2751	G
36	YA	2752	C
36	YA	2758	A
36	YA	2762	G
36	YA	2764	A
36	YA	2765	A
36	YA	2771	C
36	YA	2776	A
36	YA	2777	G
36	YA	2778	A
36	YA	2779	U
36	YA	2787	C
36	YA	2789	C
36	YA	2790	A
36	YA	2791	C
36	YA	2792	G
36	YA	2797	U
36	YA	2802	G
36	YA	2807	G
36	YA	2808	U
36	YA	2820	A
36	YA	2821	A
36	YA	2823	A
36	YA	2832	U
36	YA	2833	G
36	YA	2834	G
36	YA	2835	A
36	YA	2872	G

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Mol	Chain	Res	Type
36	YA	2880	C
36	YA	2892	A
36	YA	2893	G
36	YA	2894	G
36	YA	2895	U
37	YB	8	U
37	YB	9	G
37	YB	13	A
37	YB	15	A
37	YB	21	G
37	YB	22	U
37	YB	25	A
37	YB	26	A
37	YB	32	C
37	YB	35	U
37	YB	41	U
37	YB	42	C
37	YB	45	A
37	YB	52	A
37	YB	53	A
37	YB	56	G
37	YB	67	G
37	YB	73	A
37	YB	81	G
37	YB	109	G

All (165) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	QA	115	G
1	QA	181	G
1	QA	243	A
1	QA	244	U
1	QA	250	A
1	QA	266	G
1	QA	328	C
1	QA	410	G
1	QA	412	A
1	QA	428	G
1	QA	429	U
1	QA	484	G
1	QA	509	A

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Mol	Chain	Res	Type
1	QA	687	A
1	QA	703	G
1	QA	753	A
1	QA	792	A
1	QA	812	C
1	QA	829	G
1	QA	913	A
1	QA	992	U
1	QA	1027	C
1	QA	1065	U
1	QA	1200	C
1	QA	1285	A
1	QA	1316	G
1	QA	1336	C
1	QA	1346	A
1	QA	1347	G
1	QA	1498	U
1	QA	1528	U
23	QW	14	A
23	QW	58	A
24	QX	18	G
36	RA	74	A
36	RA	102	G
36	RA	139	G
36	RA	195	A
36	RA	205	G
36	RA	221	A
36	RA	229	A
36	RA	242	G
36	RA	271(B)	G
36	RA	305	U
36	RA	404	C
36	RA	503	A
36	RA	512	G
36	RA	637	A
36	RA	752	A
36	RA	846	C
36	RA	856	C
36	RA	1022	G
36	RA	1026	U
36	RA	1045	A
36	RA	1078	U

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Mol	Chain	Res	Type
36	RA	1085	A
36	RA	1130	U
36	RA	1178	C
36	RA	1204	A
36	RA	1312	U
36	RA	1427	A
36	RA	1558	A
36	RA	1559	G
36	RA	1653	G
36	RA	1667	G
36	RA	1694	C
36	RA	1799	G
36	RA	1819	A
36	RA	1824	G
36	RA	1930	G
36	RA	1992	G
36	RA	2060	A
36	RA	2126	A
36	RA	2439	A
36	RA	2566	A
36	RA	2610	C
36	RA	2712	U
36	RA	2776	A
37	RB	35	U
37	RB	66	A
1	XA	60	A
1	XA	78	G
1	XA	115	G
1	XA	243	A
1	XA	250	A
1	XA	266	G
1	XA	328	C
1	XA	345	C
1	XA	410	G
1	XA	428	G
1	XA	429	U
1	XA	484	G
1	XA	485	G
1	XA	509	A
1	XA	560	U
1	XA	575	G
1	XA	703	G

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Mol	Chain	Res	Type
1	XA	753	A
1	XA	812	C
1	XA	913	A
1	XA	992	U
1	XA	1027	C
1	XA	1065	U
1	XA	1200	C
1	XA	1285	A
1	XA	1297	C
1	XA	1336	C
1	XA	1379	G
1	XA	1397	C
1	XA	1498	U
23	XW	6	U
23	XW	7	A
23	XW	20	G
23	XW	31	C
23	XW	48	C
23	XW	59	U
23	XW	60	C
24	XX	18	G
25	XY	70	U
36	YA	99	U
36	YA	102	G
36	YA	195	A
36	YA	222	A
36	YA	229	A
36	YA	242	G
36	YA	271(B)	G
36	YA	278	A
36	YA	404	C
36	YA	503	A
36	YA	587	C
36	YA	637	A
36	YA	653	A
36	YA	752	A
36	YA	846	C
36	YA	856	C
36	YA	859	G
36	YA	881	G
36	YA	1022	G
36	YA	1026	U

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Mol	Chain	Res	Type
36	YA	1045	A
36	YA	1085	A
36	YA	1204	A
36	YA	1210	A
36	YA	1427	A
36	YA	1558	A
36	YA	1653	G
36	YA	1694	C
36	YA	1698	A
36	YA	1799	G
36	YA	1819	A
36	YA	1930	G
36	YA	1992	G
36	YA	2126	A
36	YA	2166	G
36	YA	2167	U
36	YA	2406	U
36	YA	2439	A
36	YA	2566	A
36	YA	2610	C
36	YA	2681	C
36	YA	2689	U
36	YA	2776	A
36	YA	2789	C
36	YA	2832	U
37	YB	66	A

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 monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 1222 ligands modelled in this entry, 1217 are monoatomic - leaving 5 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
58	PAR	QA	1711	-	45,45,45	0.54	0	64,67,67	0.95	2 (3%)
59	SF4	XD	501	4	0,12,12	0.00	-	-		
59	SF4	QD	501	4	0,12,12	0.00	-	-		
58	PAR	XA	1717	-	45,45,45	0.53	0	64,67,67	0.86	1 (1%)

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
59	SF4	QD	501	4	-	-	0/6/5/5
59	SF4	XD	501	4	-	-	0/6/5/5
58	PAR	QA	1711	-	-	3/18/94/94	0/4/4/4
58	PAR	XA	1717	-	-	2/18/94/94	0/4/4/4

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
58	QA	1711	PAR	C13-O52-C52	-2.82	110.99	117.96
58	XA	1717	PAR	C13-O52-C52	-2.71	111.26	117.96
58	QA	1711	PAR	O52-C13-C23	2.56	113.28	107.96

There are no chirality outliers.

All (5) torsion outliers are listed below:

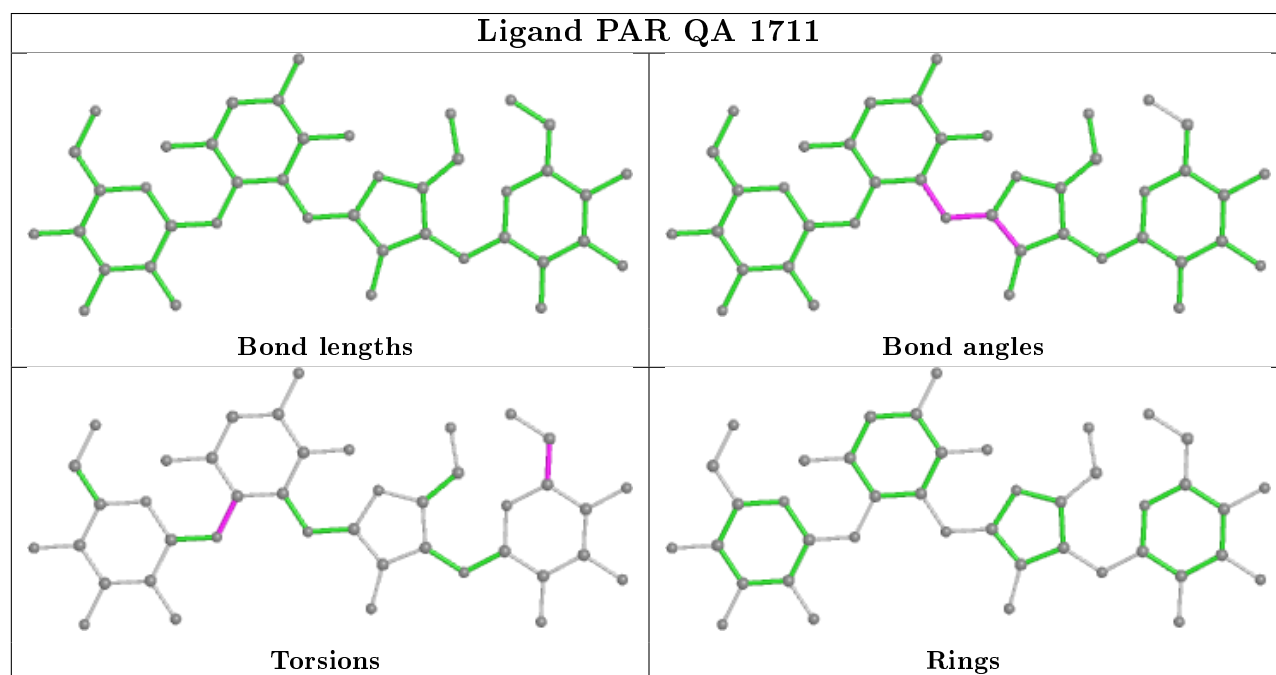
Mol	Chain	Res	Type	Atoms
58	QA	1711	PAR	O54-C54-C64-N64
58	XA	1717	PAR	C23-C33-O33-C14
58	QA	1711	PAR	C52-C42-O11-C11
58	XA	1717	PAR	C52-C42-O11-C11
58	QA	1711	PAR	C44-C54-C64-N64

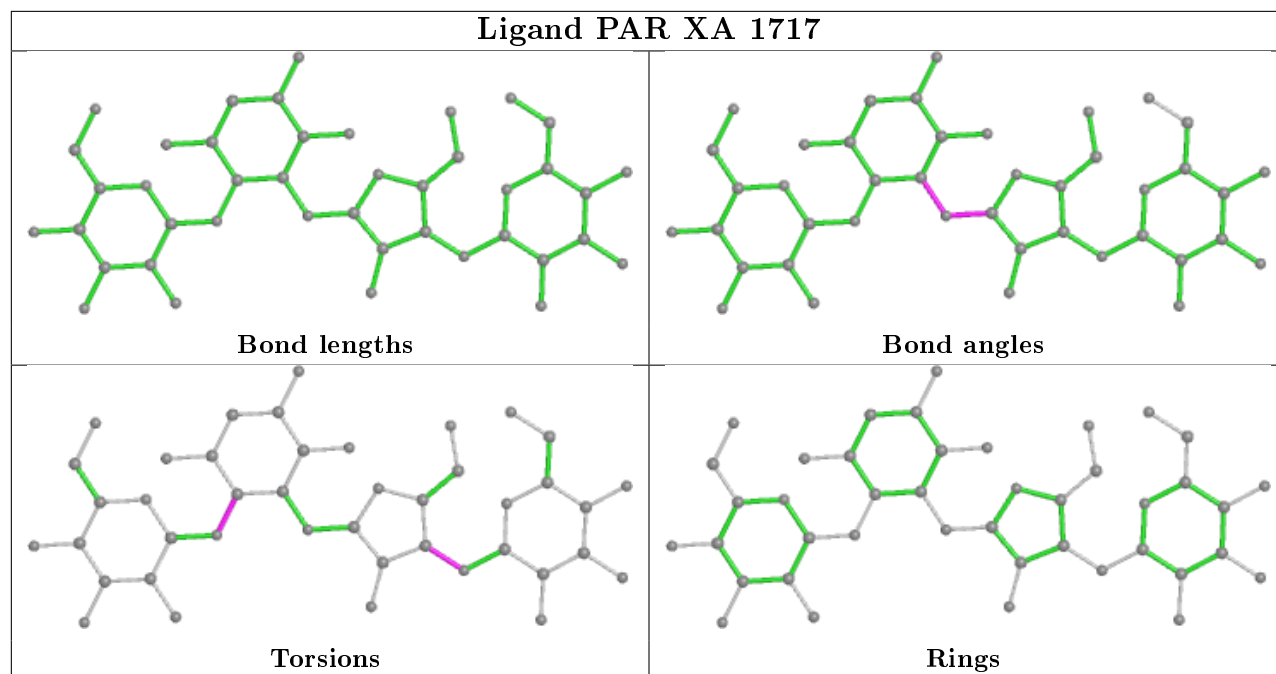
There are no ring outliers.

2 monomers are involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
58	QA	1711	PAR	1	0
58	XA	1717	PAR	2	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 [i](#)

6.1 Protein, DNA and RNA chains [i](#)

EDS failed to run properly - this section is therefore empty.

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

EDS failed to run properly - this section is therefore empty.

6.3 Carbohydrates [i](#)

EDS failed to run properly - this section is therefore empty.

6.4 Ligands [i](#)

EDS failed to run properly - this section is therefore empty.

6.5 Other polymers [i](#)

EDS failed to run properly - this section is therefore empty.