



Full wwPDB X-ray Structure Validation Report ⓘ

Aug 4, 2026 – 06:42 PM EDT

PDB ID : 6OF6 / pdb_00006of6
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 types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4-5-2 with Phenix2.0
Mogul : 2022.3.0, CSD as543be (2022)
Xtriage (Phenix) : 2.0
EDS : 3.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4 : 9.0.015 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.50

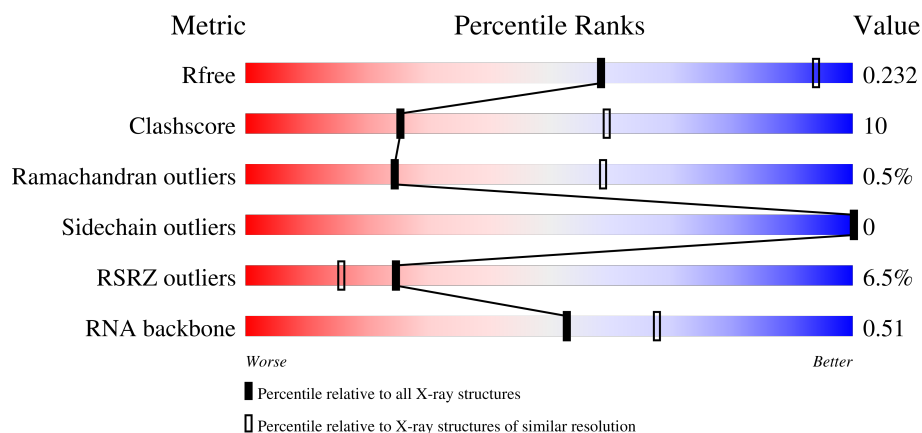
1 Overall quality at a glance

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))
R_{free}	180053	1466 (3.20-3.20)
Clashscore	190562	1573 (3.20-3.20)
Ramachandran outliers	187476	1548 (3.20-3.20)
Sidechain outliers	187428	1547 (3.20-3.20)
RSRZ outliers	180081	1466 (3.20-3.20)
RNA backbone	3983	1222 (3.50-2.90)

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

Mol	Chain	Length	Quality of chain
1	QA	1522	2% 51% 39% 8%
1	XA	1522	2% 52% 38% 8%
2	QB	256	10% 73% 19% 7%
2	XB	256	8% 65% 27% 7%

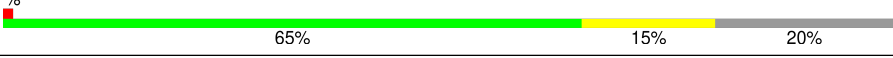
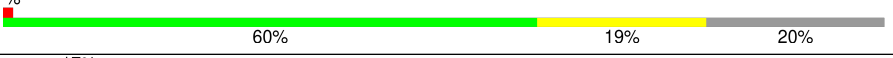
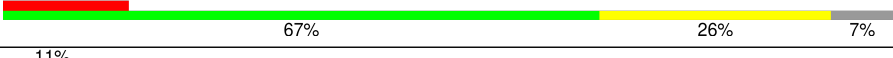
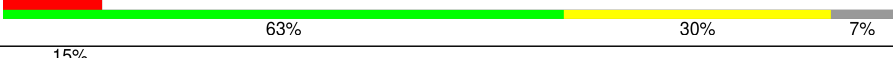
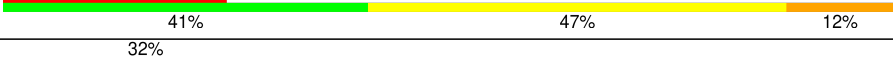
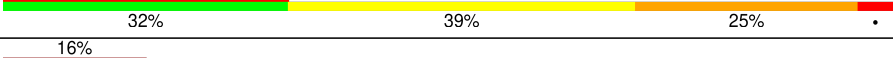
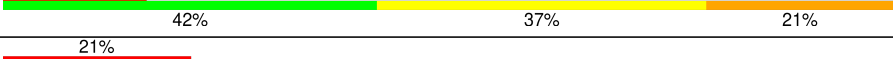
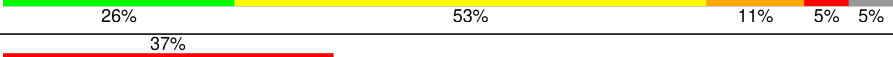
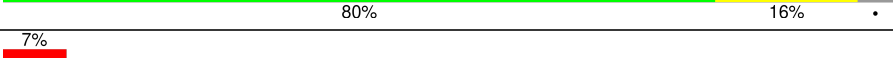
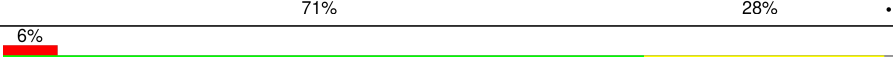
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Mol	Chain	Length	Quality of chain
3	QC	239	
3	XC	239	
4	QD	209	
4	XD	209	
5	QE	162	
5	XE	162	
6	QF	101	
6	XF	101	
7	QG	156	
7	XG	156	
8	QH	138	
8	XH	138	
9	QI	128	
9	XI	128	
10	QJ	105	
10	XJ	105	
11	QK	129	
11	XK	129	
12	QL	131	
12	XL	131	
13	QM	126	
13	XM	126	
14	QN	61	
14	XN	61	
15	QO	89	

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Mol	Chain	Length	Quality of chain
15	XO	89	
16	QP	88	
16	XP	88	
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	

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Mol	Chain	Length	Quality of chain
28	R2	72	
28	Y2	72	
29	R3	60	
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	

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Mol	Chain	Length	Quality of chain
40	YF	210	
41	RG	182	
41	YG	182	
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	

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Mol	Chain	Length	Quality of chain
53	RW	113	
53	YW	113	
54	RX	96	
54	YX	96	
55	RY	110	
55	YY	110	
56	RZ	206	
56	YZ	206	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
57	MG	QA	1610	-	-	-	X
57	MG	QA	1612	-	-	-	X
57	MG	QA	1617	-	-	-	X
57	MG	QA	1618	-	-	-	X
57	MG	QA	1619	-	-	-	X
57	MG	QA	1636	-	-	-	X
57	MG	QA	1638	-	-	-	X
57	MG	QA	1644	-	-	-	X
57	MG	QA	1647	-	-	-	X
57	MG	QA	1649	-	-	-	X
57	MG	QA	1654	-	-	-	X
57	MG	QA	1662	-	-	-	X
57	MG	QA	1688	-	-	-	X
57	MG	QA	1706	-	-	-	X
57	MG	QA	1725	-	-	-	X
57	MG	QV	103	-	-	-	X
57	MG	RA	3010	-	-	-	X
57	MG	RA	3098	-	-	-	X
57	MG	RA	3115	-	-	-	X
57	MG	RA	3125	-	-	-	X
57	MG	RA	3196	-	-	-	X
57	MG	RA	3205	-	-	-	X
57	MG	RA	3225	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
57	MG	RA	3250	-	-	-	X
57	MG	RA	3269	-	-	-	X
57	MG	RA	3277	-	-	-	X
57	MG	RA	3302	-	-	-	X
57	MG	RA	3307	-	-	-	X
57	MG	RA	3319	-	-	-	X
57	MG	RA	3323	-	-	-	X
57	MG	RA	3361	-	-	-	X
57	MG	RA	3366	-	-	-	X
57	MG	XA	1614	-	-	-	X
57	MG	XA	1618	-	-	-	X
57	MG	XA	1682	-	-	-	X
57	MG	XA	1689	-	-	-	X
57	MG	XA	1692	-	-	-	X
57	MG	XA	1694	-	-	-	X
57	MG	XA	1710	-	-	-	X
57	MG	XA	1711	-	-	-	X
57	MG	XM	201	-	-	-	X
57	MG	XV	103	-	-	-	X
57	MG	YA	3013	-	-	-	X
57	MG	YA	3105	-	-	-	X
57	MG	YA	3141	-	-	-	X
57	MG	YA	3162	-	-	-	X
57	MG	YA	3166	-	-	-	X
57	MG	YA	3172	-	-	-	X
57	MG	YA	3191	-	-	-	X
57	MG	YA	3203	-	-	-	X
57	MG	YA	3231	-	-	-	X
57	MG	YA	3241	-	-	-	X
57	MG	YA	3248	-	-	-	X
57	MG	YA	3281	-	-	-	X
57	MG	YA	3289	-	-	-	X
57	MG	YA	3305	-	-	-	X
57	MG	YA	3312	-	-	-	X
57	MG	YA	3323	-	-	-	X
57	MG	YA	3332	-	-	-	X
57	MG	YA	3339	-	-	-	X
57	MG	YA	3342	-	-	-	X
57	MG	YA	3346	-	-	-	X
57	MG	YA	3350	-	-	-	X
57	MG	YA	3356	-	-	-	X
57	MG	YA	3362	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
57	MG	YA	3368	-	-	-	X
57	MG	YA	3382	-	-	-	X
57	MG	YA	3413	-	-	-	X
57	MG	YA	3437	-	-	-	X
57	MG	YA	3444	-	-	-	X
57	MG	YB	201	-	-	-	X
57	MG	YQ	202	-	-	-	X
57	MG	YX	101	-	-	-	X

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		0	0	0
			725	471	131	123				
54	YX	92	Total	C	N	O		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 (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	QA	124	Total	Mg	0	0
			124	124		
57	QD	1	Total	Mg	0	0
			1	1		
57	QF	1	Total	Mg	0	0
			1	1		
57	QH	1	Total	Mg	0	0
			1	1		
57	QK	2	Total	Mg	0	0
			2	2		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	QL	1	Total 1	Mg 1	0	0
57	QM	1	Total 1	Mg 1	0	0
57	QV	6	Total 6	Mg 6	0	0
57	QX	1	Total 1	Mg 1	0	0
57	R0	1	Total 1	Mg 1	0	0
57	R1	1	Total 1	Mg 1	0	0
57	R5	1	Total 1	Mg 1	0	0
57	R8	1	Total 1	Mg 1	0	0
57	R9	1	Total 1	Mg 1	0	0
57	RA	378	Total 378	Mg 378	0	0
57	RB	4	Total 4	Mg 4	0	0
57	RD	2	Total 2	Mg 2	0	0
57	RE	8	Total 8	Mg 8	0	0
57	RF	2	Total 2	Mg 2	0	0
57	RG	1	Total 1	Mg 1	0	0
57	RI	1	Total 1	Mg 1	0	0
57	RP	3	Total 3	Mg 3	0	0
57	RR	2	Total 2	Mg 2	0	0
57	RT	2	Total 2	Mg 2	0	0
57	XA	123	Total 123	Mg 123	0	0
57	XB	2	Total 2	Mg 2	0	0

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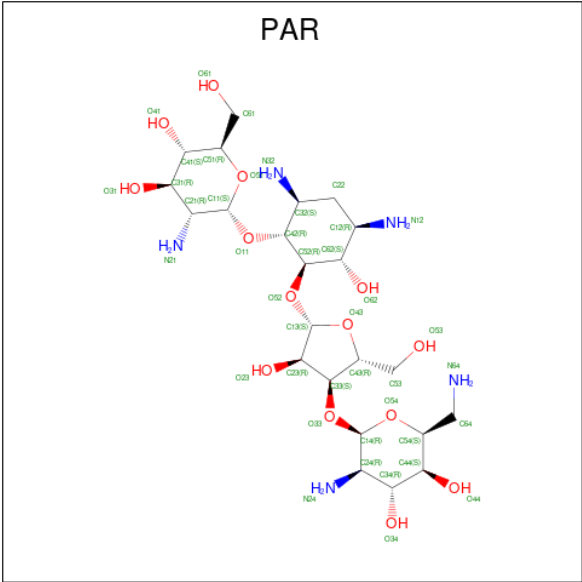
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	XD	1	Total 1	Mg 1	0	0
57	XF	1	Total 1	Mg 1	0	0
57	XJ	1	Total 1	Mg 1	0	0
57	XK	1	Total 1	Mg 1	0	0
57	XL	2	Total 2	Mg 2	0	0
57	XM	1	Total 1	Mg 1	0	0
57	XV	7	Total 7	Mg 7	0	0
57	XX	1	Total 1	Mg 1	0	0
57	Y0	3	Total 3	Mg 3	0	0
57	Y2	3	Total 3	Mg 3	0	0
57	Y3	1	Total 1	Mg 1	0	0
57	Y4	2	Total 2	Mg 2	0	0
57	Y5	1	Total 1	Mg 1	0	0
57	Y7	1	Total 1	Mg 1	0	0
57	Y8	3	Total 3	Mg 3	0	0
57	YA	457	Total 457	Mg 457	0	0
57	YB	8	Total 8	Mg 8	0	0
57	YD	4	Total 4	Mg 4	0	0
57	YE	6	Total 6	Mg 6	0	0
57	YF	5	Total 5	Mg 5	0	0
57	YG	2	Total 2	Mg 2	0	0

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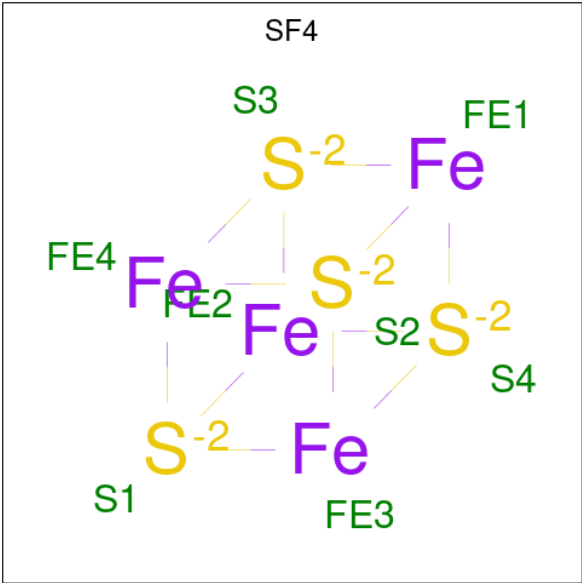
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	YH	5	Total 5	Mg 5	0	0
57	YI	1	Total 1	Mg 1	0	0
57	YN	1	Total 1	Mg 1	0	0
57	YO	1	Total 1	Mg 1	0	0
57	YP	7	Total 7	Mg 7	0	0
57	YQ	4	Total 4	Mg 4	0	0
57	YR	2	Total 2	Mg 2	0	0
57	YT	2	Total 2	Mg 2	0	0
57	YU	1	Total 1	Mg 1	0	0
57	YV	1	Total 1	Mg 1	0	0
57	YW	1	Total 1	Mg 1	0	0
57	YX	2	Total 2	Mg 2	0	0
57	YY	5	Total 5	Mg 5	0	0

- Molecule 58 is PAROMOMYCIN (CCD ID: PAR) (formula: $C_{23}H_{45}N_5O_{14}$).



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 (CCD ID: SF4) (formula: Fe₄S₄).

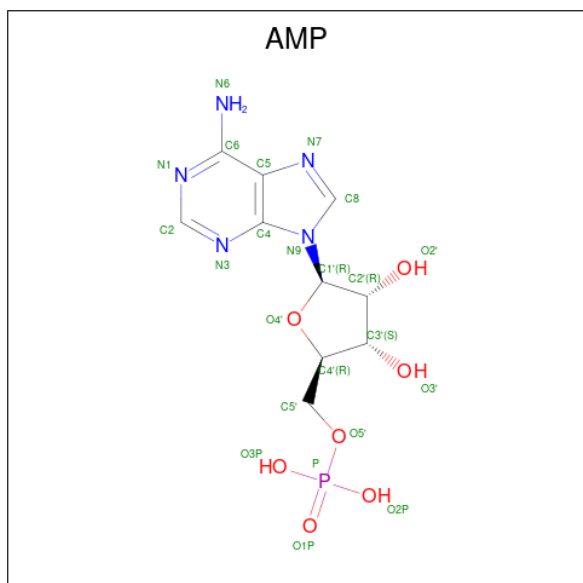


Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
59	QD	1	Total	Fe	S	0	0
			8	4	4		
59	XD	1	Total	Fe	S	0	0
			8	4	4		

- Molecule 60 is ZINC ION (CCD ID: 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 MONOPHOSPHATE (CCD ID: AMP) (formula: C₁₀H₁₄N₅O₇P).



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

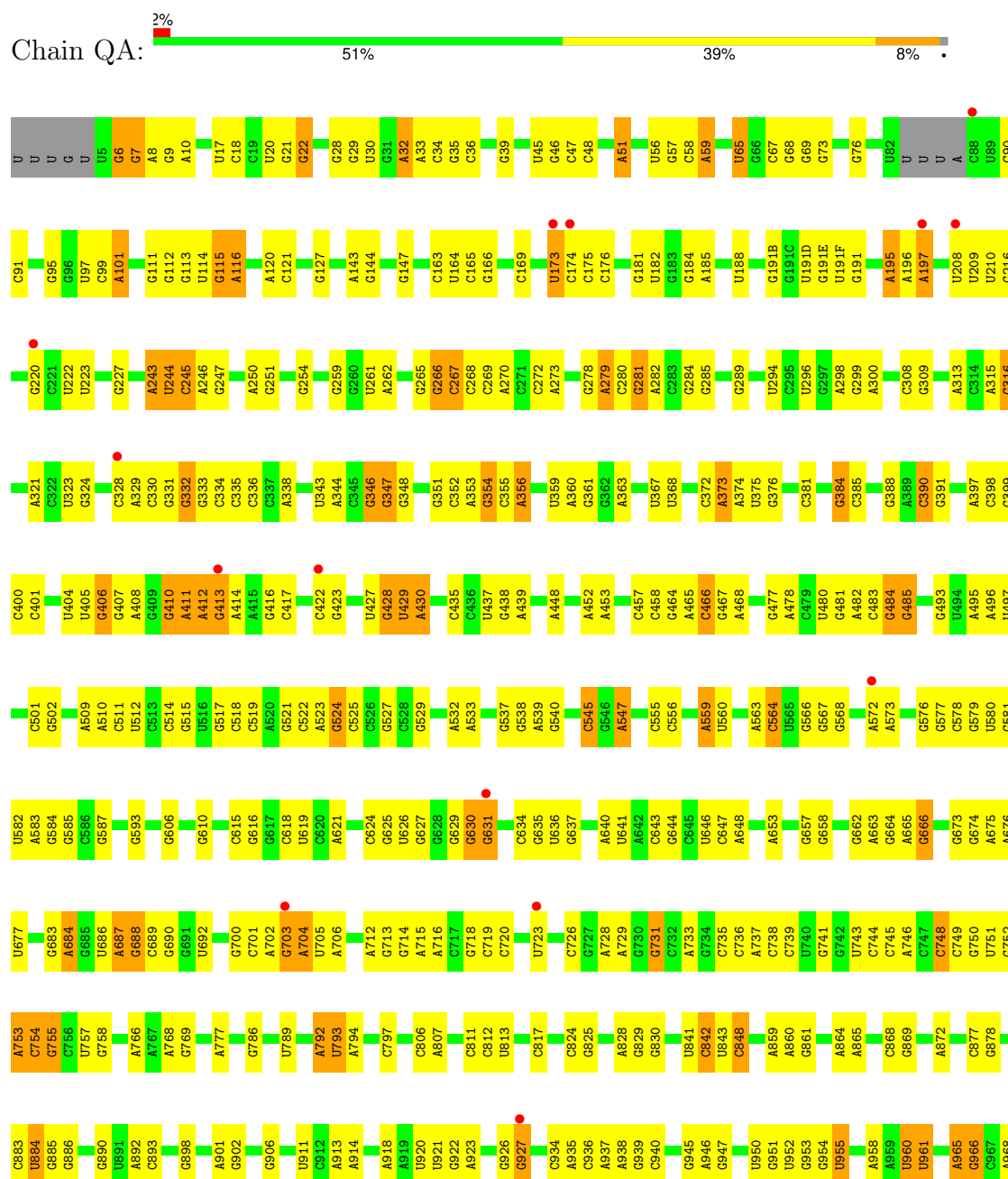
- Molecule 62 is water.

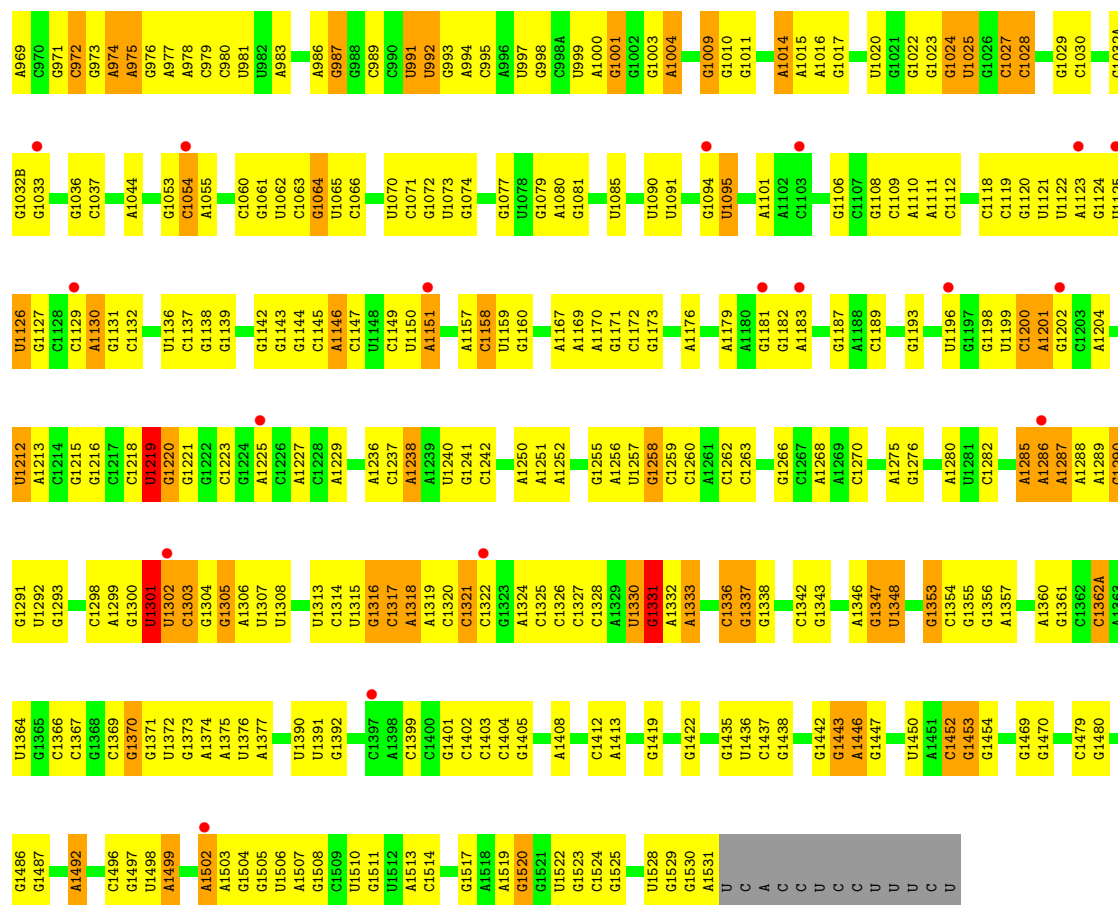
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
62	QA	1	Total	O	0	0
			1	1		
62	QX	1	Total	O	0	0
			1	1		

3 Residue-property plots

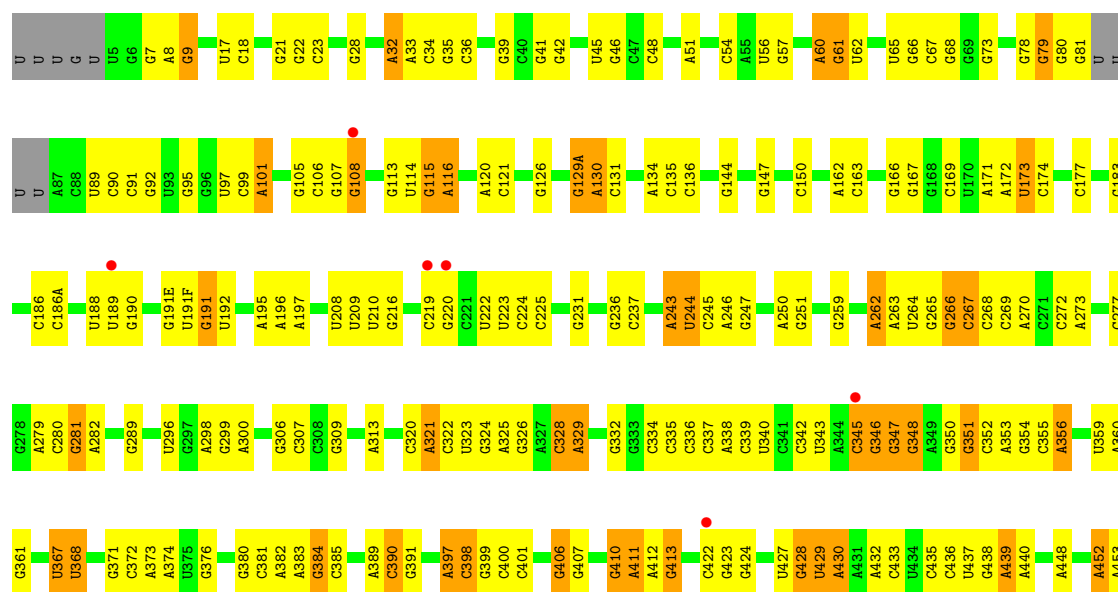
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density.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

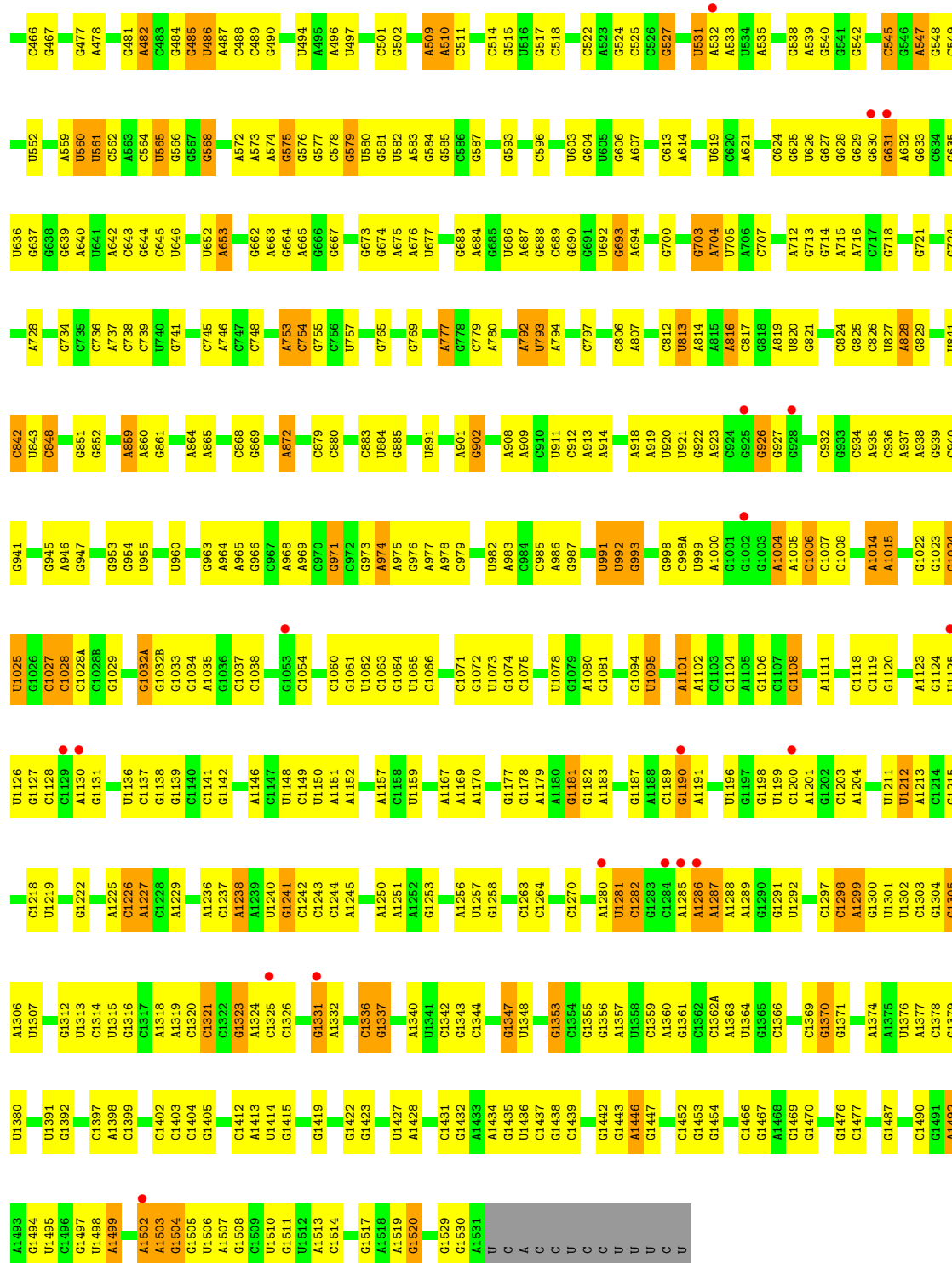
• Molecule 1: 16S rRNA



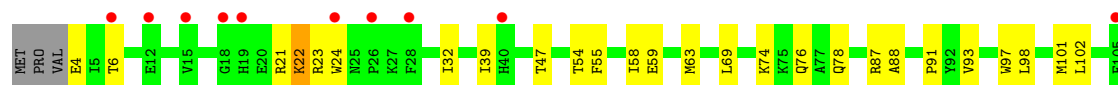
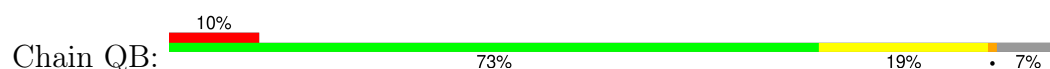


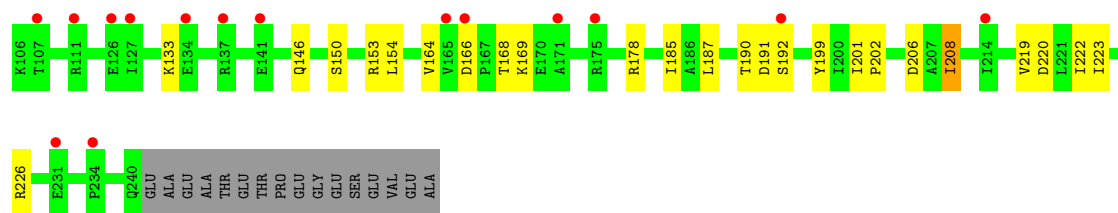
• Molecule 1: 16S rRNA





• Molecule 2: 30S ribosomal protein S2

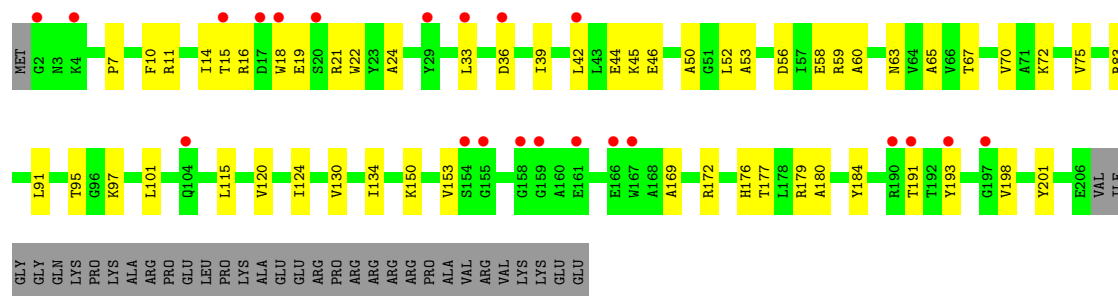




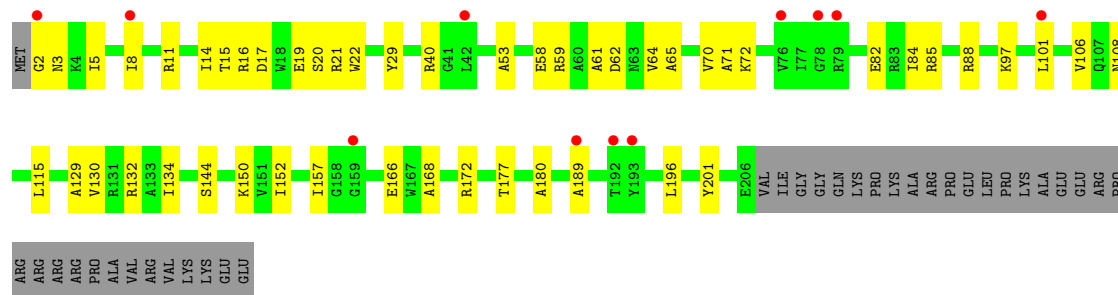
• Molecule 2: 30S ribosomal protein S2



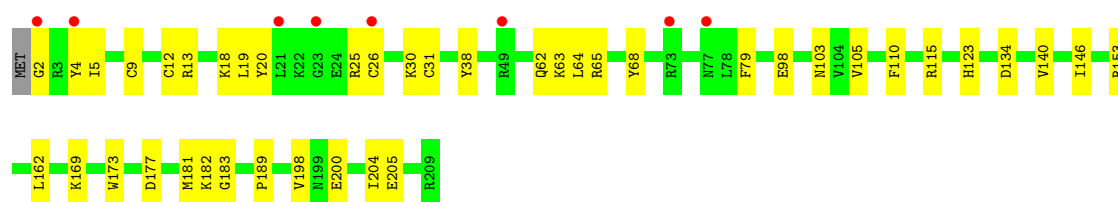
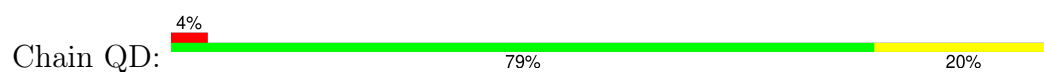
• Molecule 3: 30S ribosomal protein S3



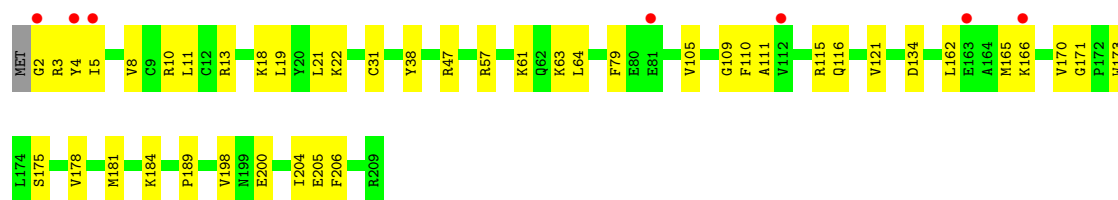
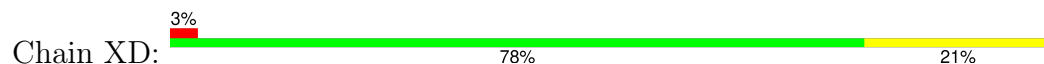
• Molecule 3: 30S ribosomal protein S3



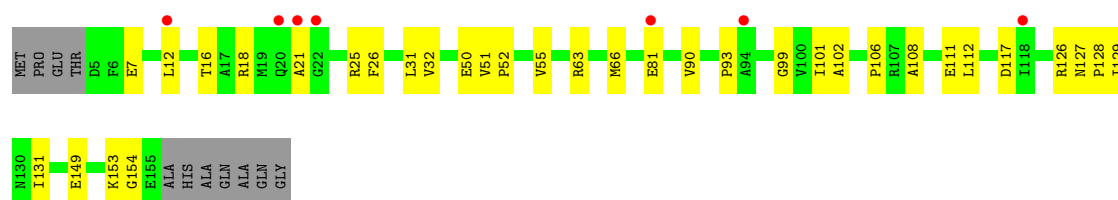
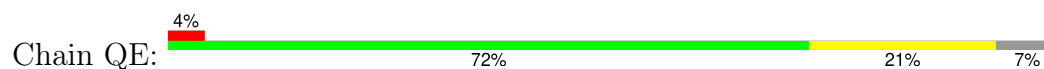
• Molecule 4: 30S ribosomal protein S4



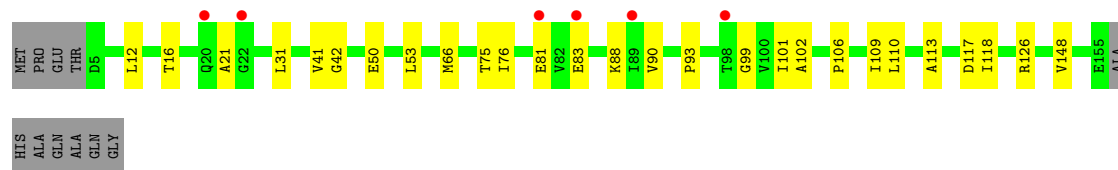
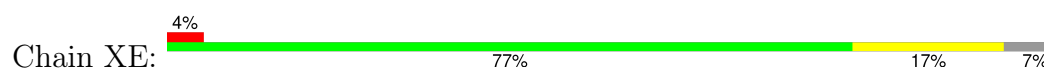
- Molecule 4: 30S ribosomal protein S4



- Molecule 5: 30S ribosomal protein S5



- Molecule 5: 30S ribosomal protein S5



- Molecule 6: 30S ribosomal protein S6



- Molecule 6: 30S ribosomal protein S6

Chain XF:  69% 31%



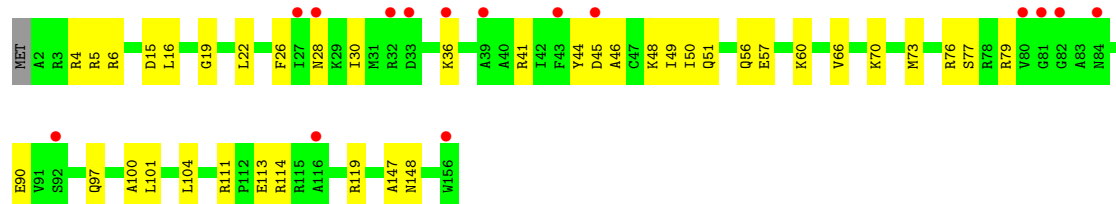
- Molecule 7: 30S ribosomal protein S7

Chain QG:  4% 86% 13%



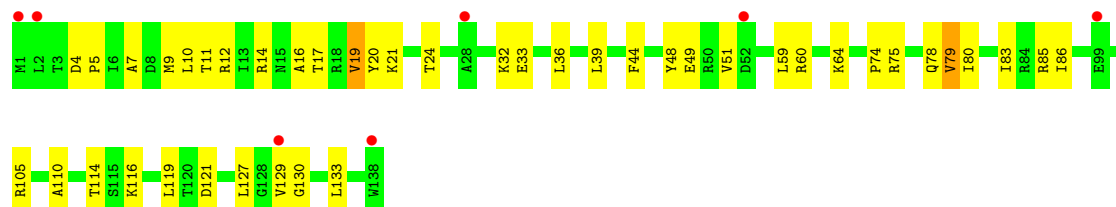
- Molecule 7: 30S ribosomal protein S7

Chain XG:  10% 74% 25%



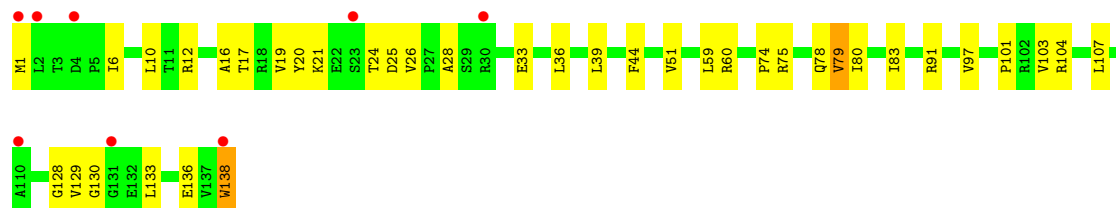
- Molecule 8: 30S ribosomal protein S8

Chain QH:  5% 69% 30%



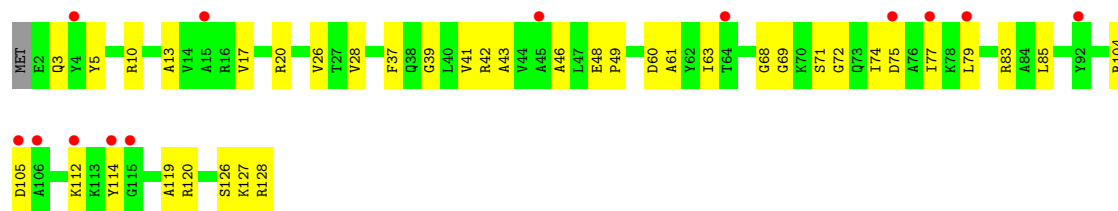
- Molecule 8: 30S ribosomal protein S8

Chain XH:  6% 72% 26%

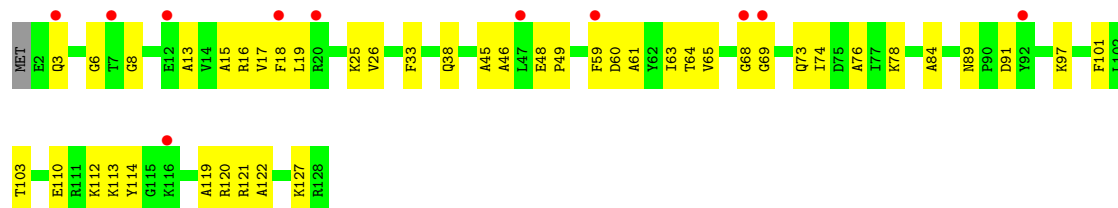


- Molecule 9: 30S ribosomal protein S9

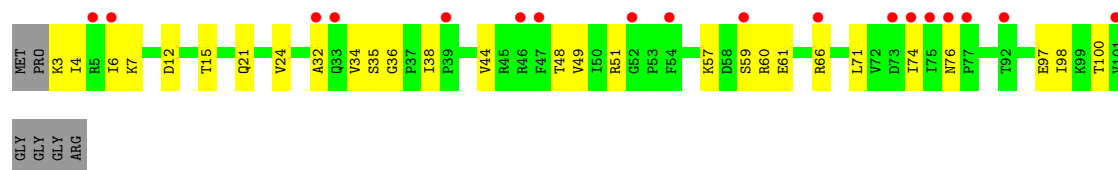
Chain QI:  10% 70% 30%



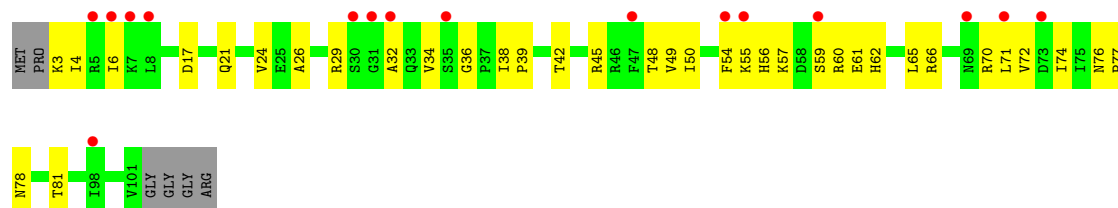
• Molecule 9: 30S ribosomal protein S9



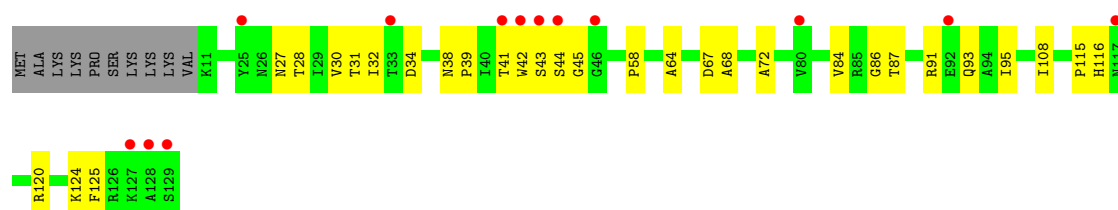
• Molecule 10: 30S ribosomal protein S10



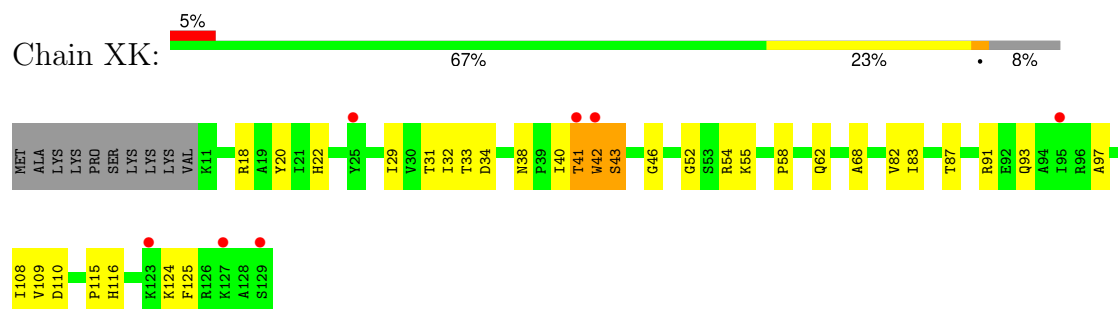
• Molecule 10: 30S ribosomal protein S10



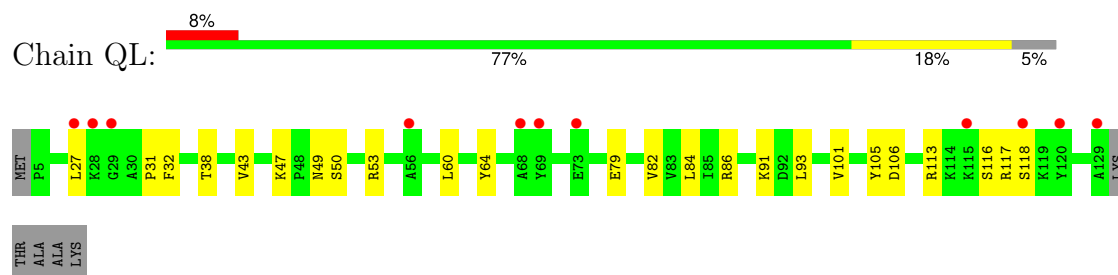
• Molecule 11: 30S ribosomal protein S11



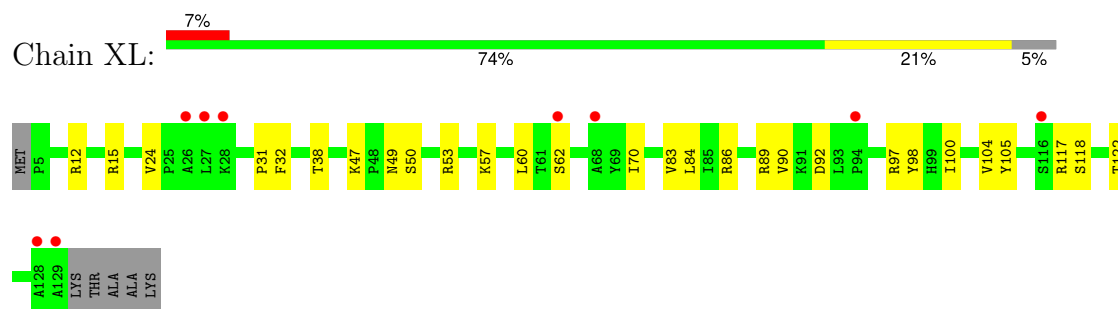
- Molecule 11: 30S ribosomal protein S11



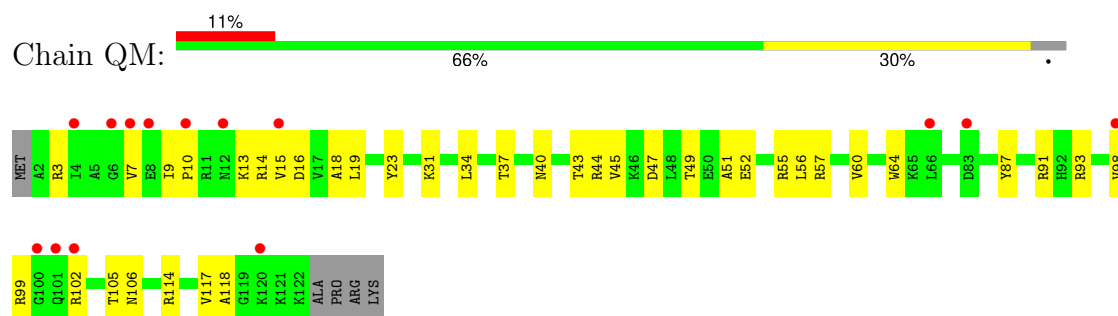
- Molecule 12: 30S ribosomal protein S12



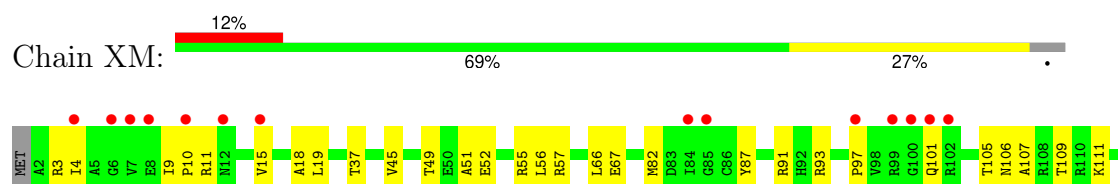
- Molecule 12: 30S ribosomal protein S12

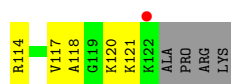


- Molecule 13: 30S ribosomal protein S13



- Molecule 13: 30S ribosomal protein S13

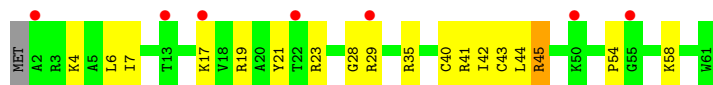




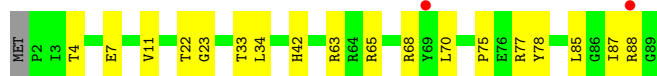
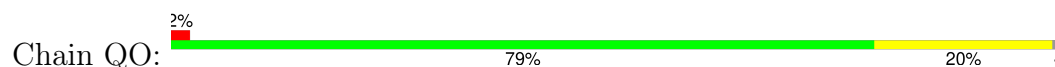
- Molecule 14: 30S ribosomal protein S14 type Z



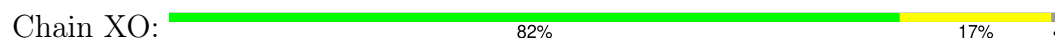
- Molecule 14: 30S ribosomal protein S14 type Z



- Molecule 15: 30S ribosomal protein S15



- Molecule 15: 30S ribosomal protein S15



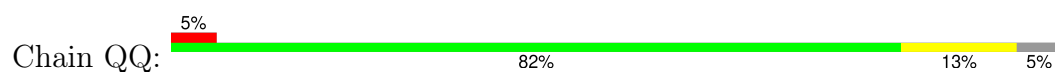
- Molecule 16: 30S ribosomal protein S16



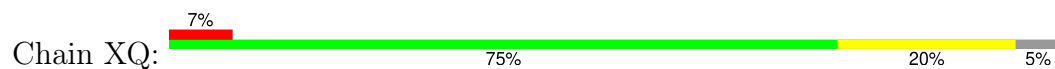
- Molecule 16: 30S ribosomal protein S16



- Molecule 17: 30S ribosomal protein S17



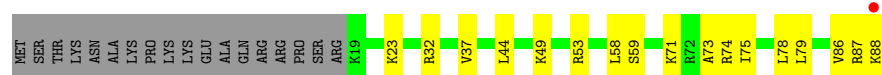
- Molecule 17: 30S ribosomal protein S17



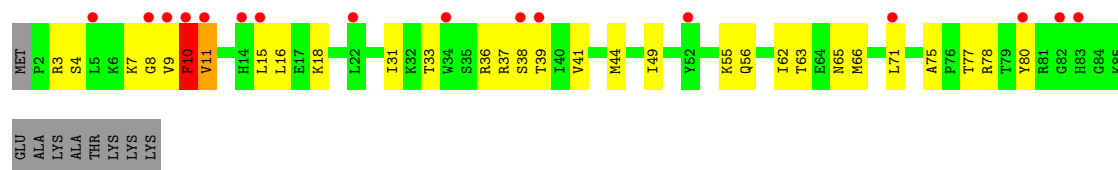
- Molecule 18: 30S ribosomal protein S18



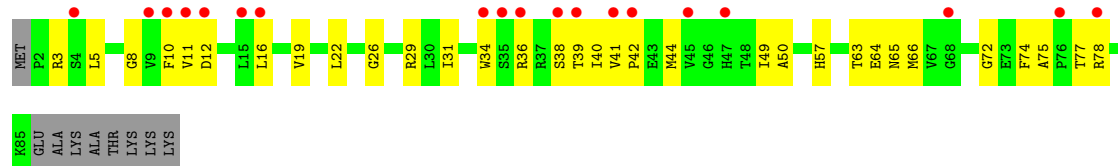
- Molecule 18: 30S ribosomal protein S18



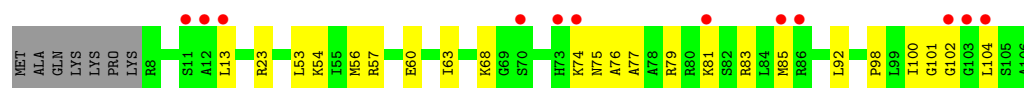
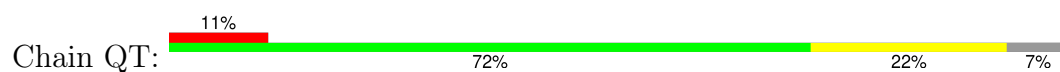
- Molecule 19: 30S ribosomal protein S19



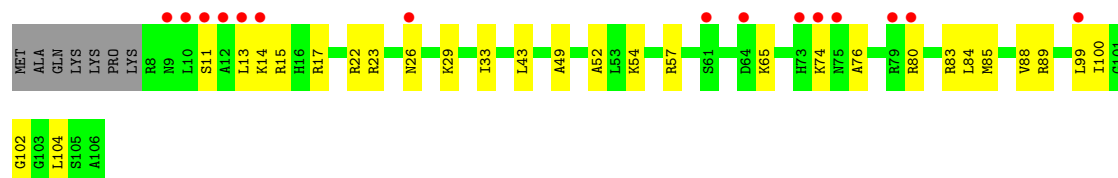
- Molecule 19: 30S ribosomal protein S19



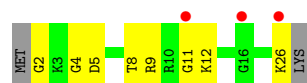
- Molecule 20: 30S ribosomal protein S20



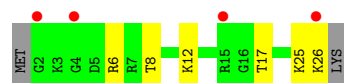
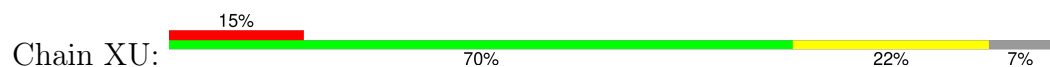
- Molecule 20: 30S ribosomal protein S20



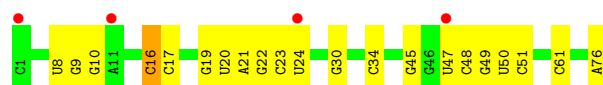
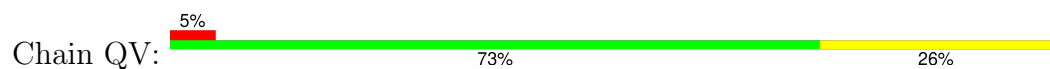
- Molecule 21: 30S ribosomal protein Thx



- Molecule 21: 30S ribosomal protein Thx



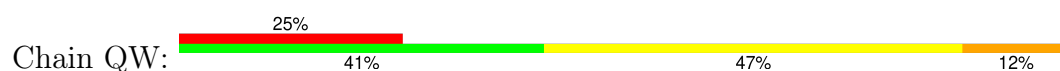
- Molecule 22: P-site tRNA^{fMet}

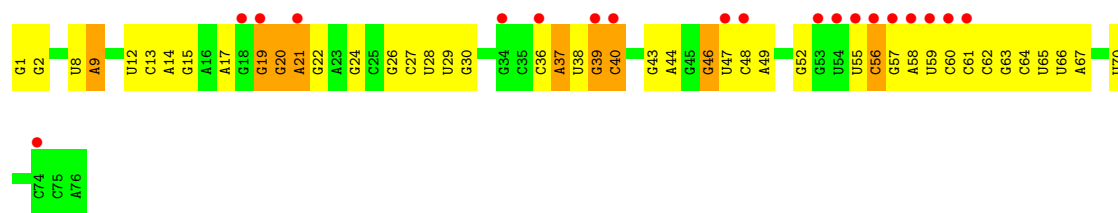


- Molecule 22: P-site tRNA^{fMet}

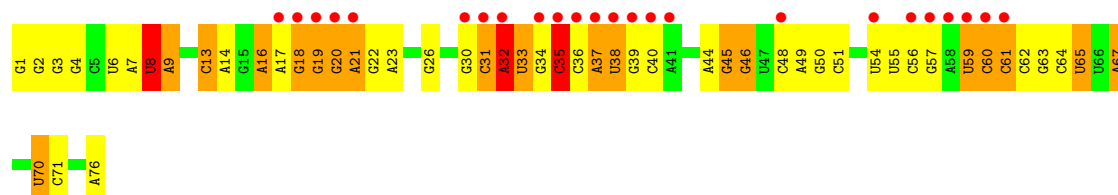


- Molecule 23: E-site tRNA^{Ala}(GGC)

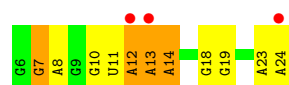




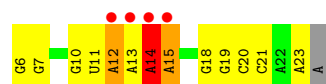
- Molecule 23: E-site tRNAAla(GGC)



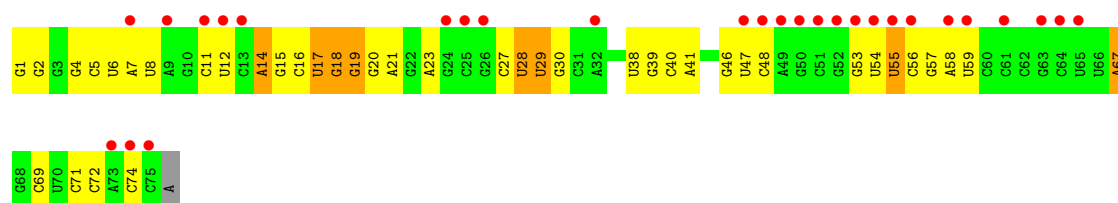
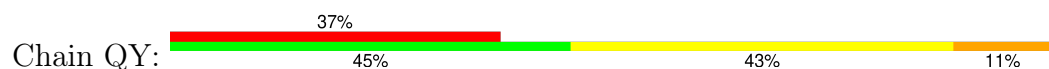
- Molecule 24: mRNA



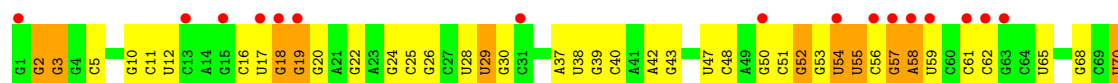
- Molecule 24: mRNA



- Molecule 25: A-site tRNAAla(GGC)

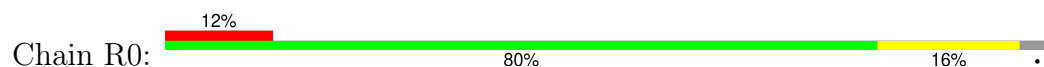


- Molecule 25: A-site tRNAAla(GGC)





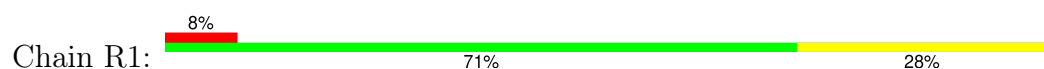
- Molecule 26: 50S ribosomal protein L27



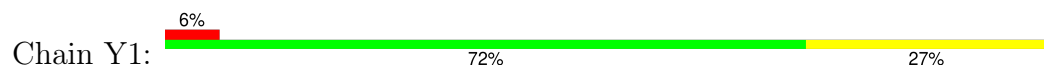
- Molecule 26: 50S ribosomal protein L27



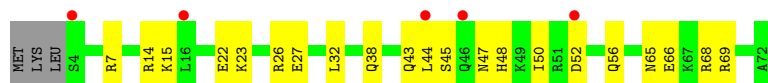
- Molecule 27: 50S ribosomal protein L28



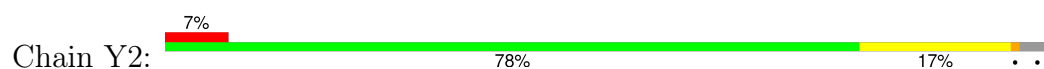
- Molecule 27: 50S ribosomal protein L28



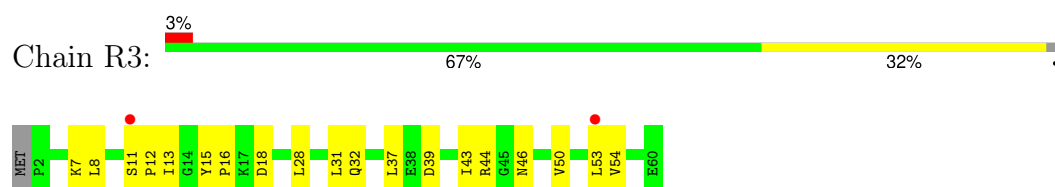
- Molecule 28: 50S ribosomal protein L29



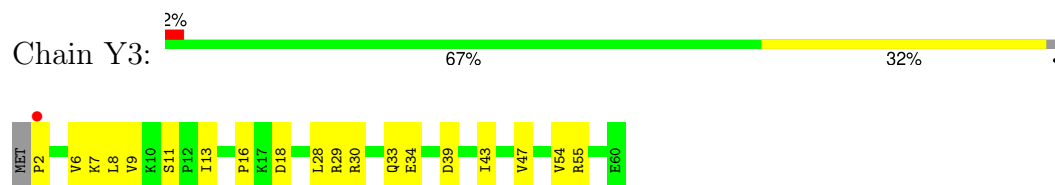
- Molecule 28: 50S ribosomal protein L29



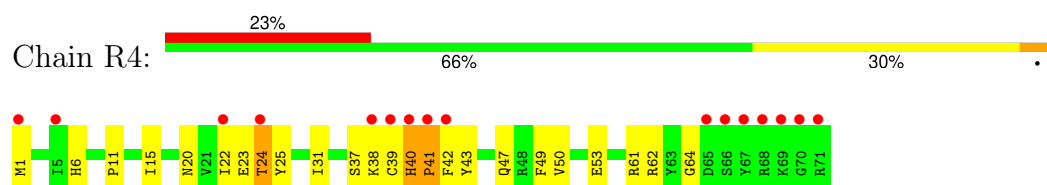
- Molecule 29: 50S ribosomal protein L30



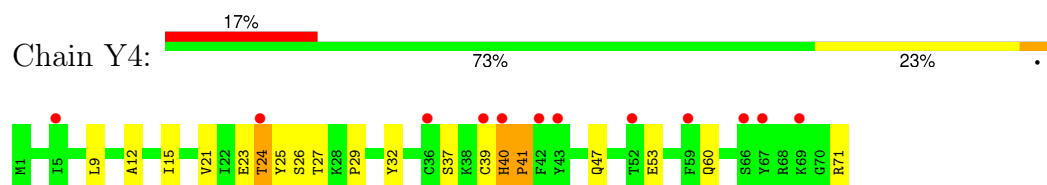
- Molecule 29: 50S ribosomal protein L30



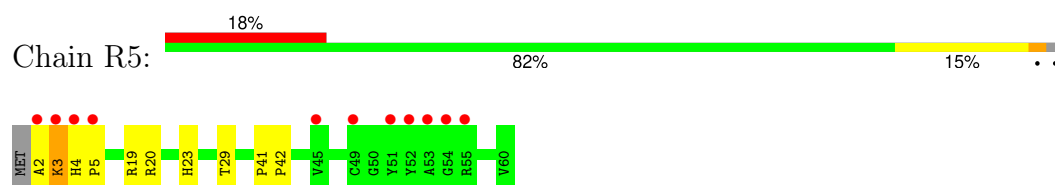
- Molecule 30: 50S ribosomal protein L31



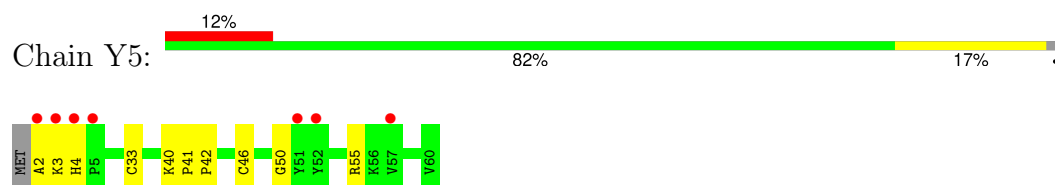
- Molecule 30: 50S ribosomal protein L31



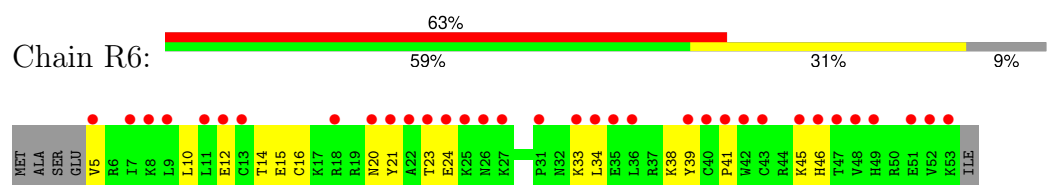
- Molecule 31: 50S ribosomal protein L32



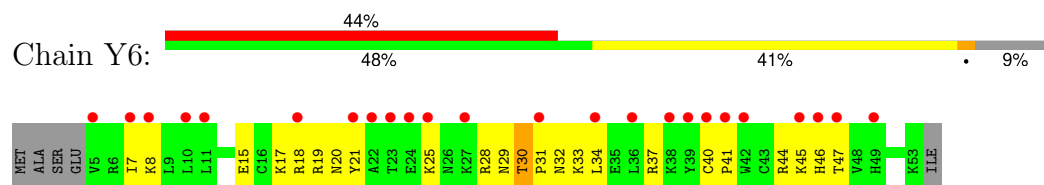
- Molecule 31: 50S ribosomal protein L32



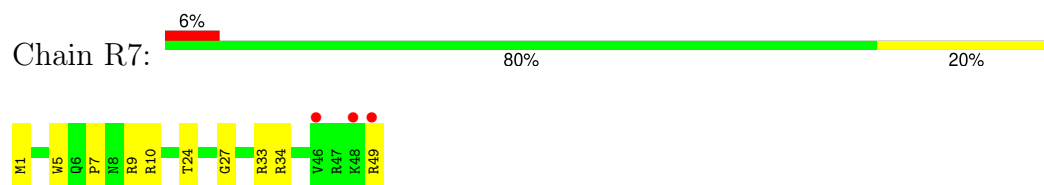
- Molecule 32: 50S ribosomal protein L33



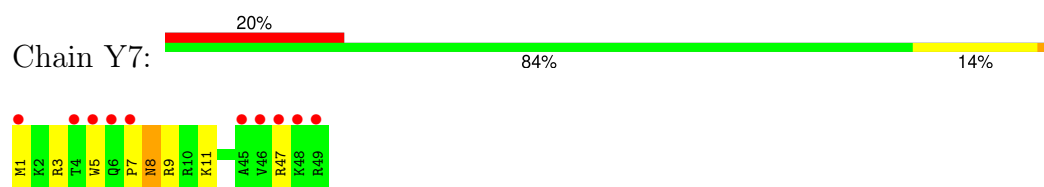
- Molecule 32: 50S ribosomal protein L33



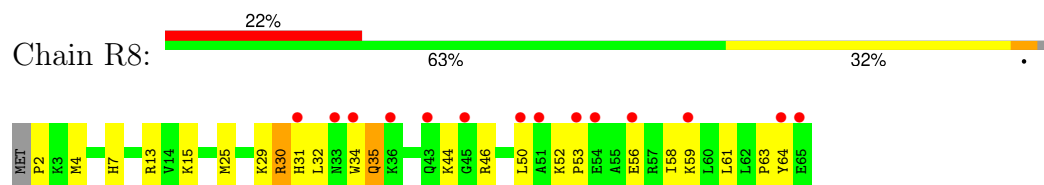
- Molecule 33: 50S ribosomal protein L34



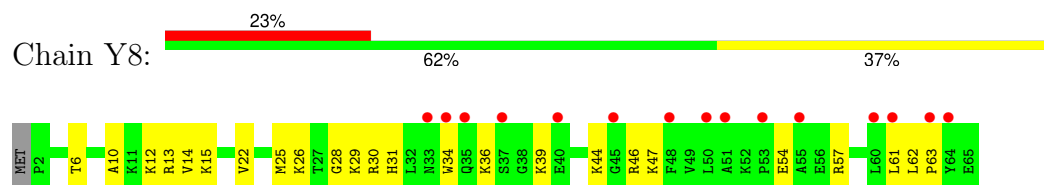
- Molecule 33: 50S ribosomal protein L34



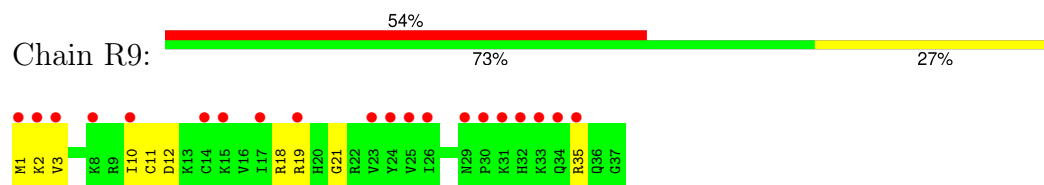
- Molecule 34: 50S ribosomal protein L35



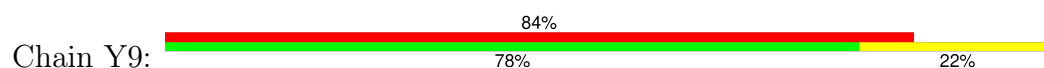
- Molecule 34: 50S ribosomal protein L35

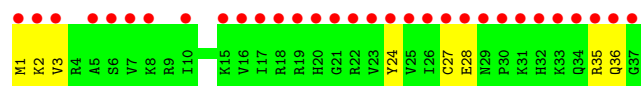


- Molecule 35: 50S ribosomal protein L36

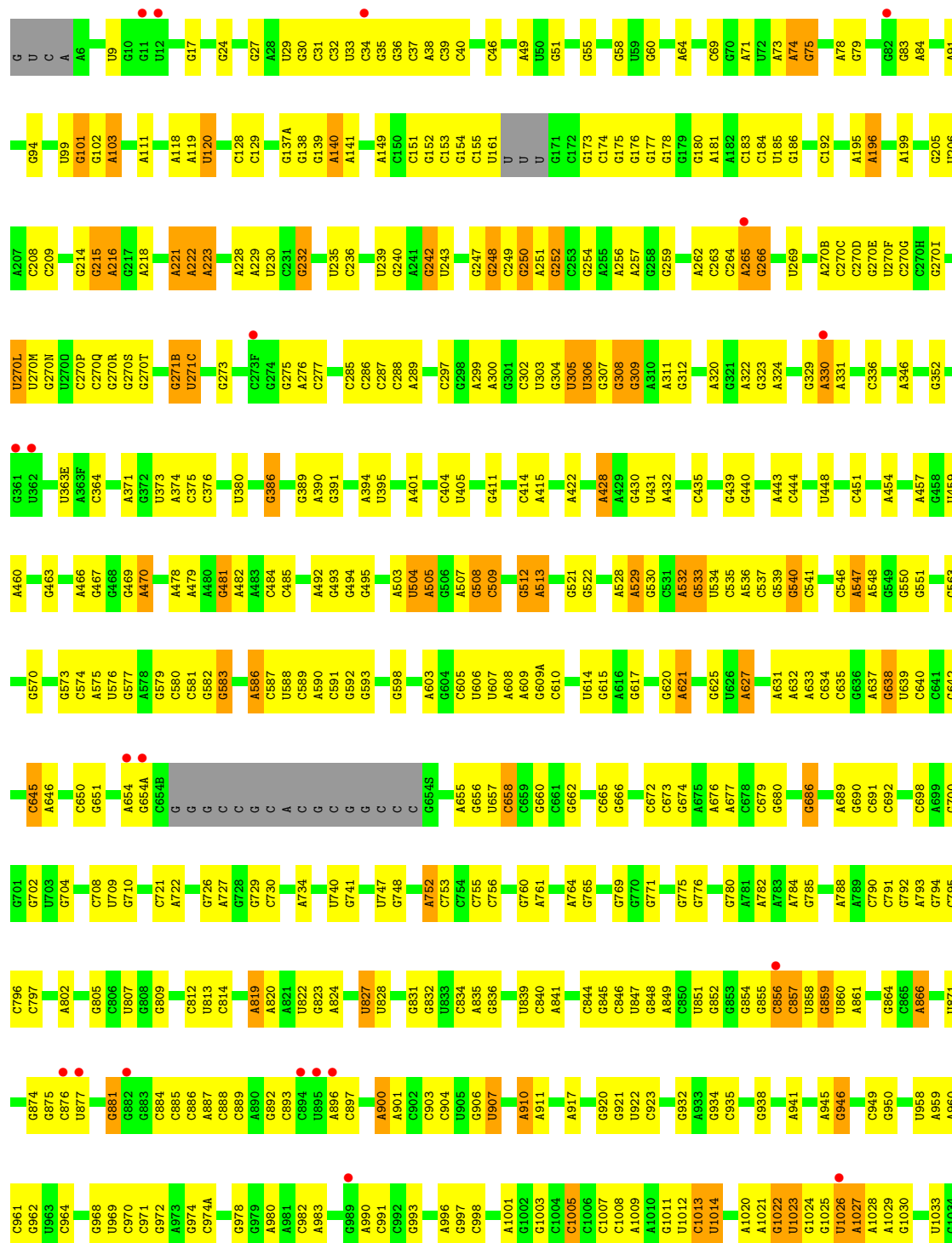


- Molecule 35: 50S ribosomal protein L36

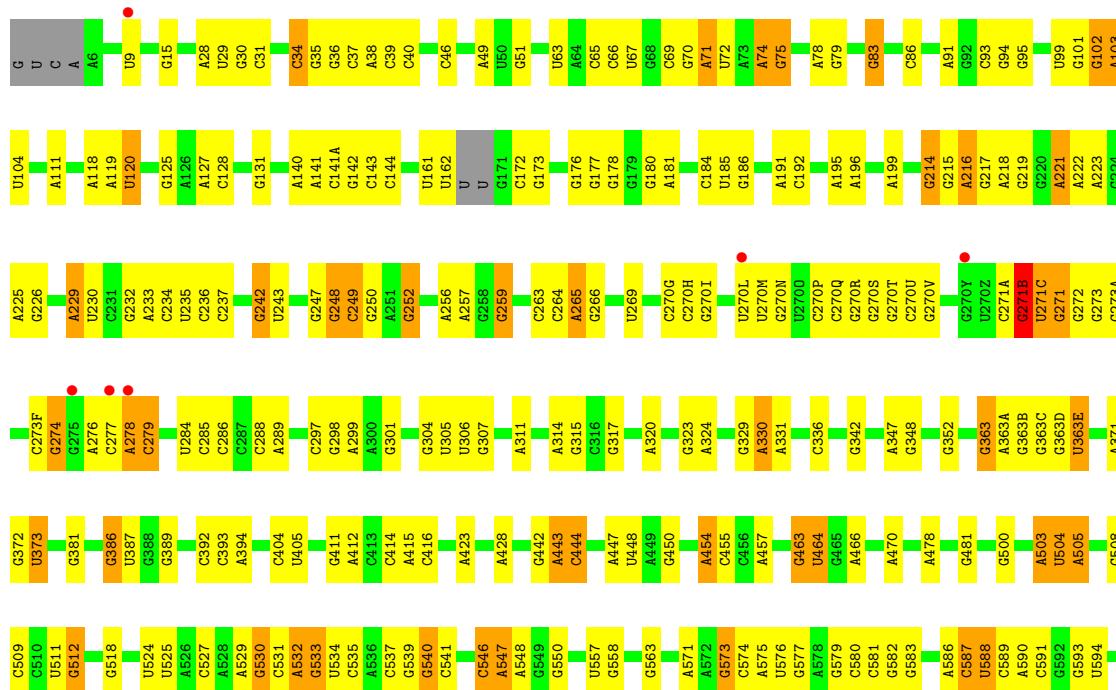
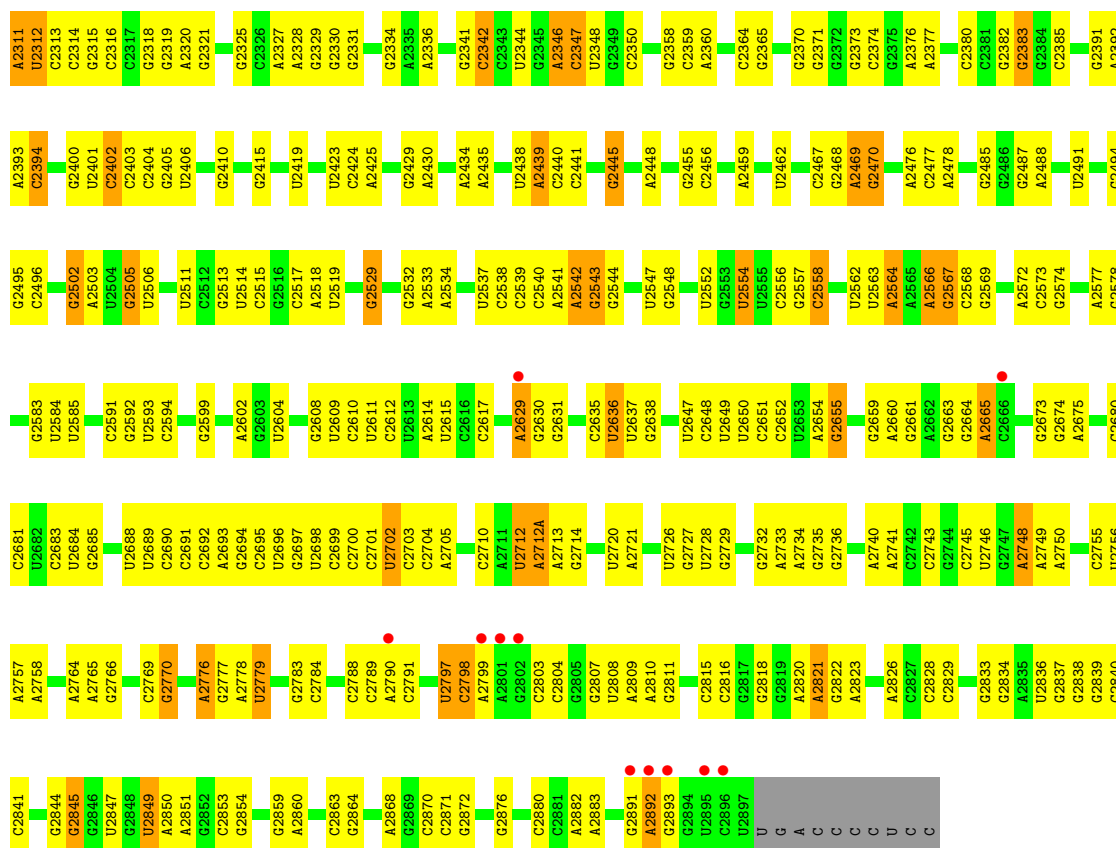




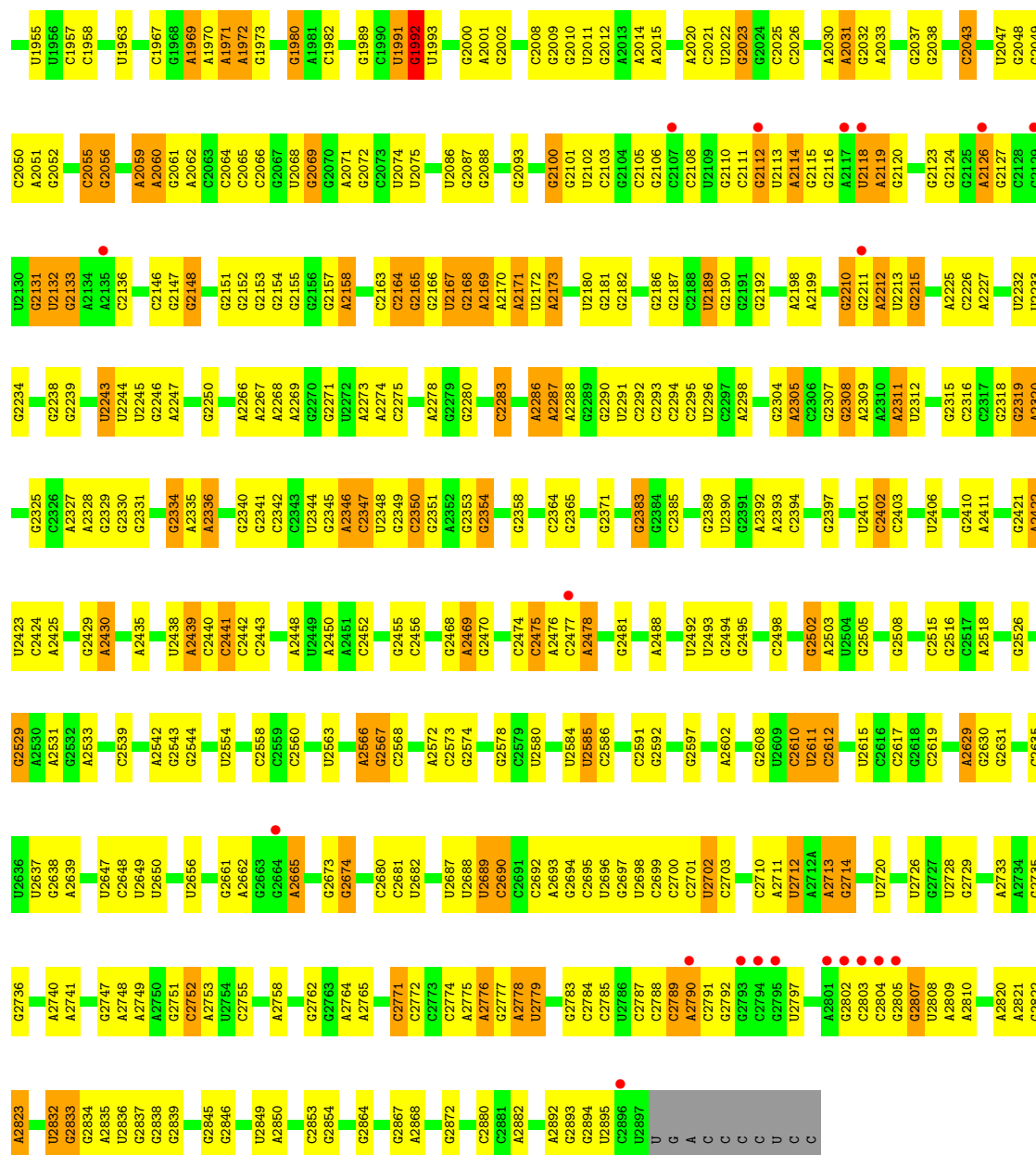
• Molecule 36: 23S rRNA



A2198	G2115	U2022	C1797	G1560	G1478	U1396	C1289	G195	G1106	U1035
G2210	G2116	G2023	U1798	C1674	G1479	U1397	C1290	G196	G1107	G1036
G2211	A2117	G2024	C1675	C1566	G1483	C1398	C1291	C1201	C1108	G1042
G2212	U2118	C2025	G1676	A1565	G1487	G1400	C1292	G1202	C1109	G1043
G2213	A2119	C2026	G1677	A1567	G1490	G1401	C1293	G1203	A1111	G1044
G2215	A2126	G2029	A1689	A1569	A1490	C1402	U1300	A1204	G1112	A1045
G2217	G2127	A2030	U1693	A1570	A1494	C1403	A1301	U1205	G1113	A1046
G2219	C2129	G2032	U1694	A1571	C1493	C1404	A1302	G1206	G1114	G1047
A2225	U2130	A2033	G1694	A1572	A1494	U1405	G1303	U1406	G1115	G1048
G2233	G2131	G2037	G1695	C1577	A1495	C1407	G1309	U1210	G1116	C1049
G2234	U2132	G2038	A1698	U1578	U1497	C1408	G1310	U1211	G1117	A1050
A2238	A2134	C2043	U1698	A1586	C1498		G1311	G1212		G1051
G2239	G2140	A2051	U1709	A1587	C1499	C1411	U1312		G1122	A1054
G2240	G2141	G2052	U1710	A1588	A1412	G1413	U1313		G1125	G1055
G2242	C2142	C2055	C1710	C1589	G1500	G1416	C1314	G1226	A1129	A1057
U2244	C2143	G2056	G1725	C1590	C1501	C1417	G1315	A1227	U1130	G1058
G2250	C2146	C1958	G1728	G1595	U1503	G1418	U1316	G1228	G1131	G1059
G2255	G2147	U1963	U1729	A1596	C1504	G1419	A1317	C1230	C1135	U1060
A2268	G2148	G1964	A1731	A1597	C1505	U1417	C1320	G1231	G1136	U1061
G2270	C2149	C1965	G1733	A1598	G1506	G1418	A1321	G1232	G1137	G1062
G2271	C2142	A1966	G1734	C1599	C1507	G1419	A1322		G1138	C1063
U2272	C2143	G1967	C1752	G1607	A1508	G1421	U1329	G1236	G1139	U1065
A2273	C2146	U1968	G1753	A1608	C1510	C1427	C1330	A1237	C1140	U1066
C2274	G2147	G1969	G1754	A1609	A1511	C1428	G1331	G1238	U1141	A1067
C2275	U2166	C1970	C1755	A1610	G1512	C1430	G1332	G1243	U1142	G1068
G2280	U2167	A1971	A1756	G1615	C1513	C1431	A1336		A1142A	A1069
C2283	G2168	A1972	U1757	A1616	U1514	C1432	G1337	G1248	C1152	A1070
A2287	A2170	G1980	G1758	C1617	C1515	U1433	U1341	U1249	C1153	G1071
A2288	U2172	A1981	U1759	A1618	U1516	G1435	U1348	G1251	G1154	G1072
U2291	A2173	C1982	G1769	G1622	G1520	G1441	G1349	G1252	A1155	G1074
C2292	G2176	U1993	A1773	A1632	G1521	G1442	A1353	A1254	U1159	G1075
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G2300	G2183	G2009	U1769	U1639	U1535	G1447	U1357	G1264	C1166	U1081
C2301	G2185	U2011	G1769	A1640	A1536	G1448	G1358	G1265	G1170	U1082
G2302	C2186	G1883	A1786	A1641	C1537	A1449		G1266	G1171	U1083
G2303	G2187	A1884	C1780	C1648	G1538		A1365	U1267	G1173	A1084
G2304	U2189	G1888	C1781	A1652	G1539	A1451	G1368	A1268	A1174	A1085
A2305	G2190	A1889	C1782	A1653	G1540	U1454	G1369	A1269	U1175	G1087
G2306	G2191	A1890	A1783	G1654	U1541	G1455	C1370	G1271	G1176	A1088
G2307	G2192	G1793	U1794	A1655	G1542		G1371	A1272	A1177	G1089
G2308	G2199	U1795	U1796	C1656	A1543	A1460		U1273	C1178	U1090
	G2192	A2019	U1796	C1657	C1544	G1461	A1378		C1179	A1095
				C1658	A1545	G1465	A1379	G1278	G1186	A1096
				G1666	A1546	G1466	G1384	A1284	G1187	U1097
				A1667	C1546	C1467	G1385	G1285	U1188	
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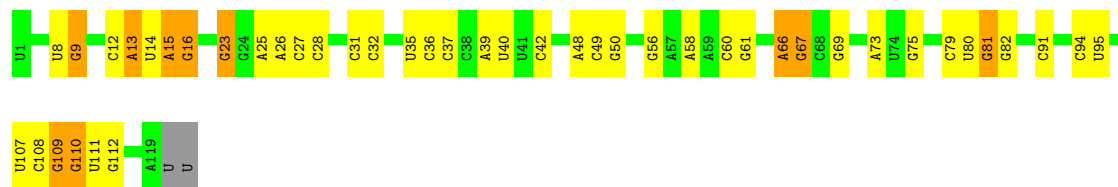






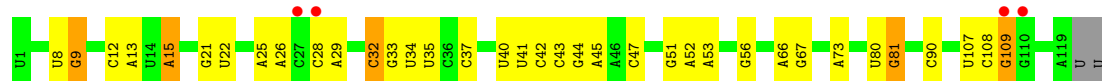
• Molecule 37: 5S rRNA

Chain RB: 61% 29% 8%

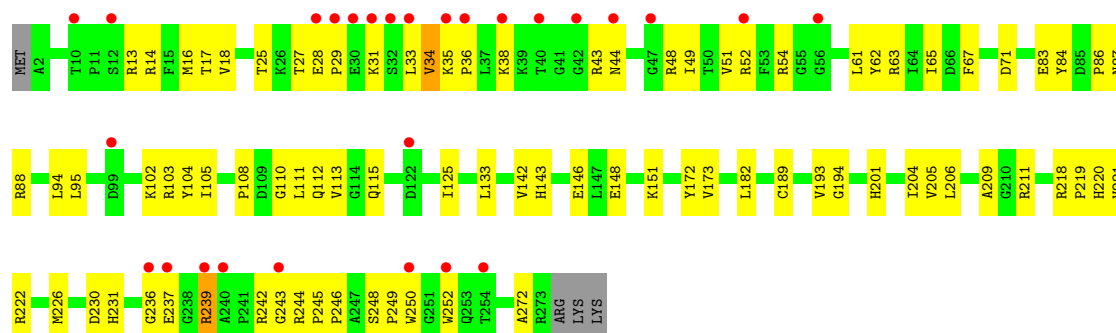


• Molecule 37: 5S rRNA

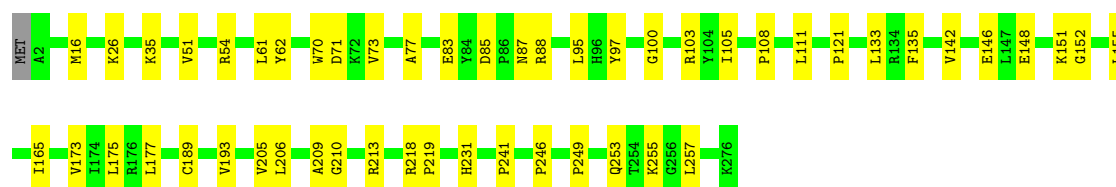
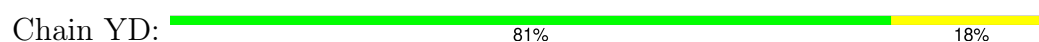
Chain YB: 3% 69% 25%



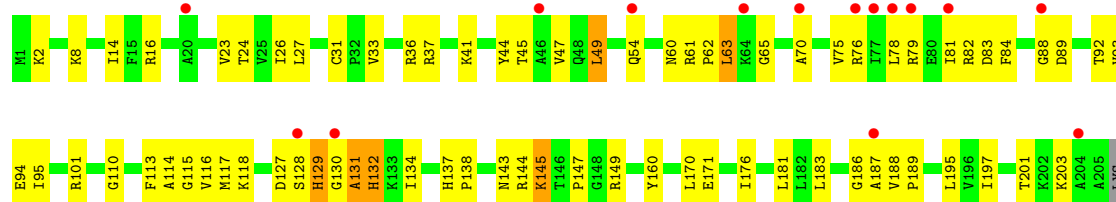
- Molecule 38: 50S ribosomal protein L2



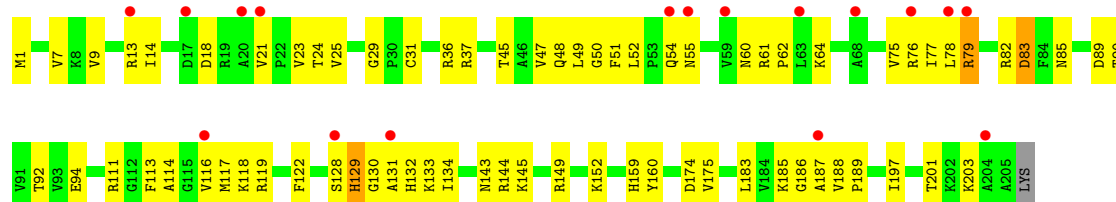
- Molecule 38: 50S ribosomal protein L2



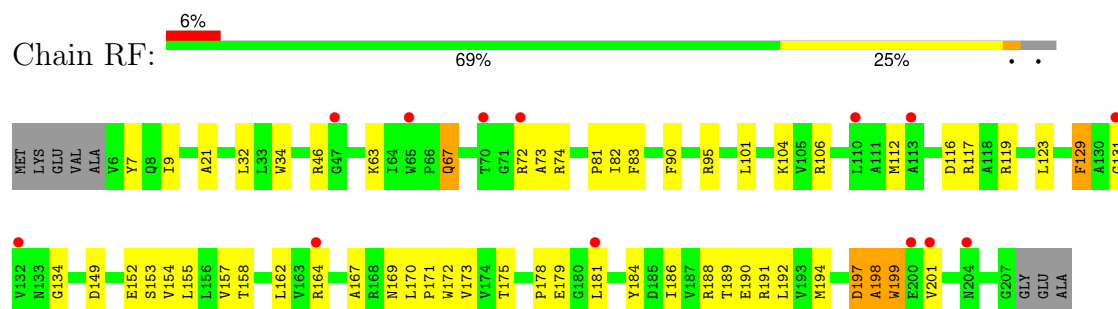
- Molecule 39: 50S ribosomal protein L3



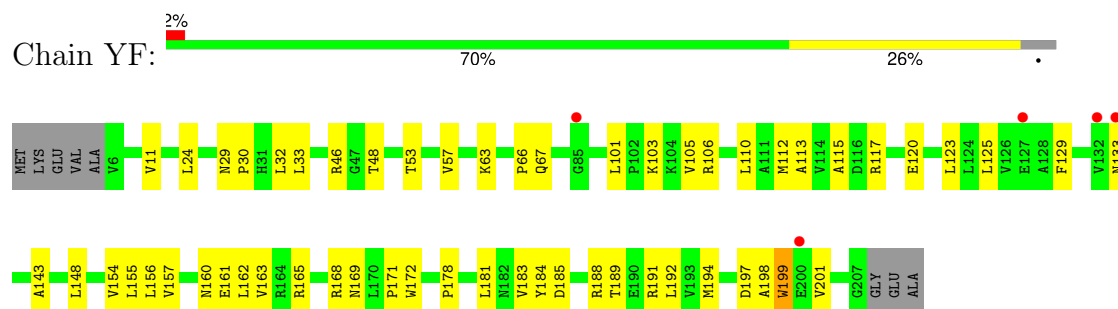
- Molecule 39: 50S ribosomal protein L3



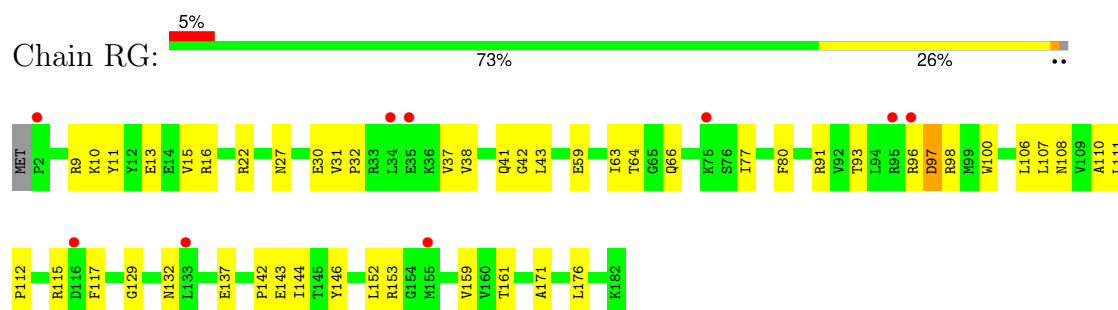
- Molecule 40: 50S ribosomal protein L4



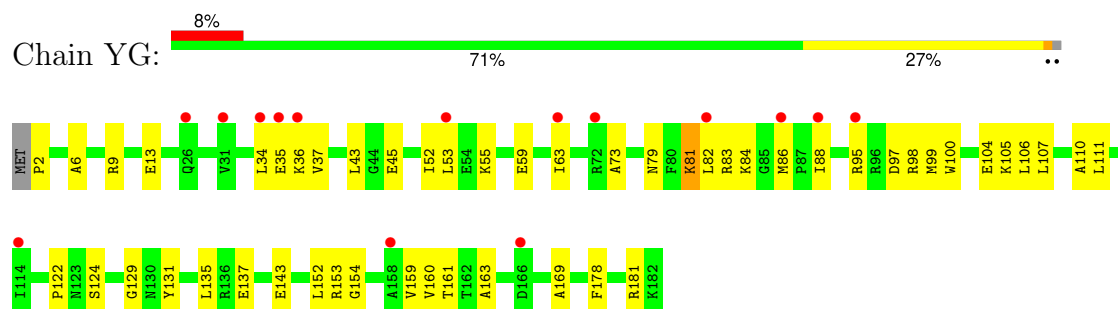
- Molecule 40: 50S ribosomal protein L4



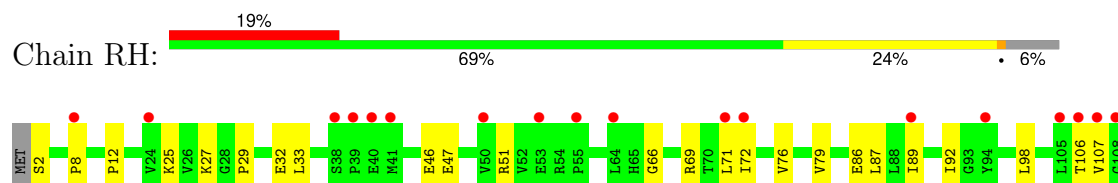
- Molecule 41: 50S ribosomal protein L5

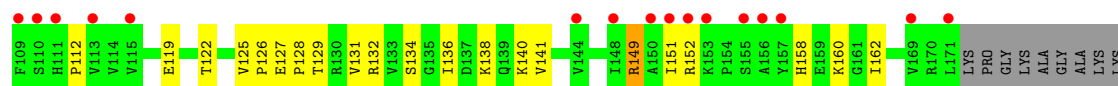


- Molecule 41: 50S ribosomal protein L5



- Molecule 42: 50S ribosomal protein L6

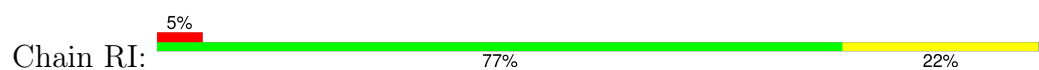




- Molecule 42: 50S ribosomal protein L6



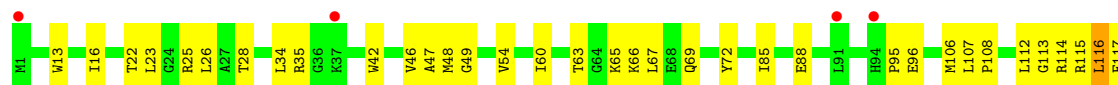
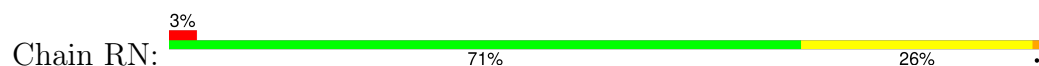
- Molecule 43: 50S ribosomal protein L9



- Molecule 43: 50S ribosomal protein L9

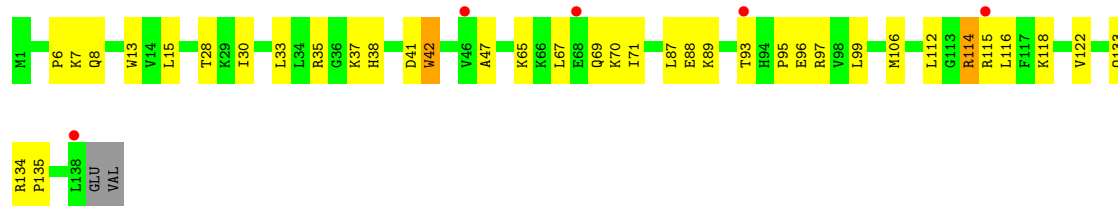


- Molecule 44: 50S ribosomal protein L13

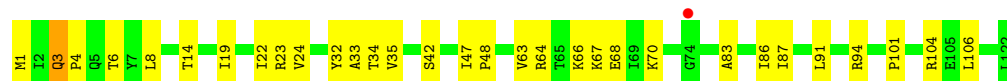
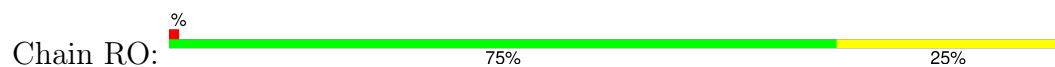


- Molecule 44: 50S ribosomal protein L13

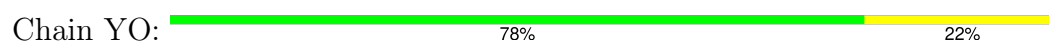




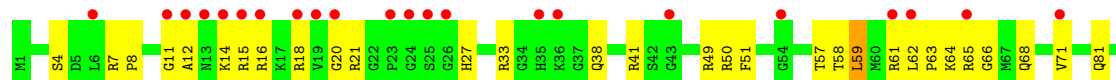
- Molecule 45: 50S ribosomal protein L14



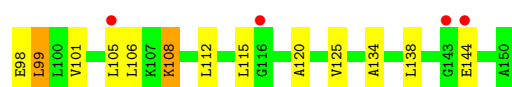
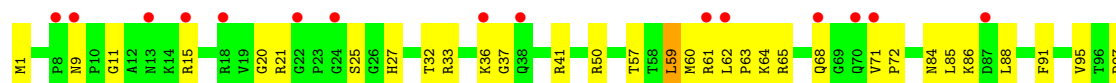
- Molecule 45: 50S ribosomal protein L14



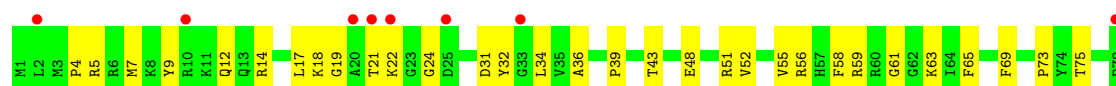
- Molecule 46: 50S ribosomal protein L15



- Molecule 46: 50S ribosomal protein L15



- Molecule 47: 50S ribosomal protein L16

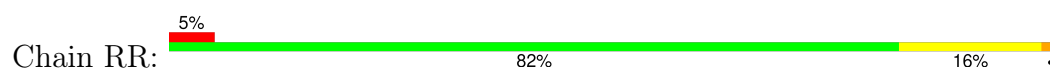




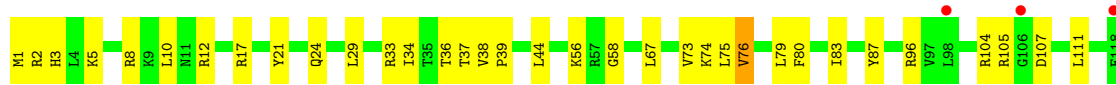
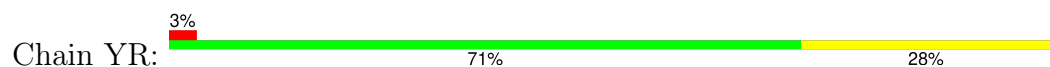
- Molecule 47: 50S ribosomal protein L16



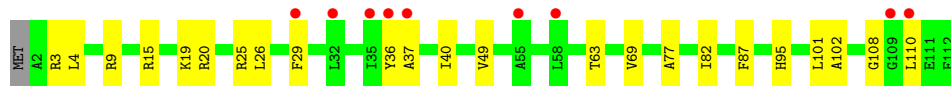
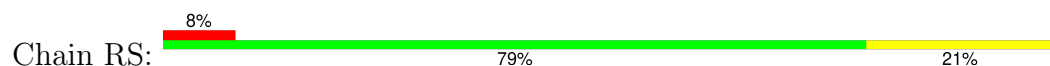
- Molecule 48: 50S ribosomal protein L17



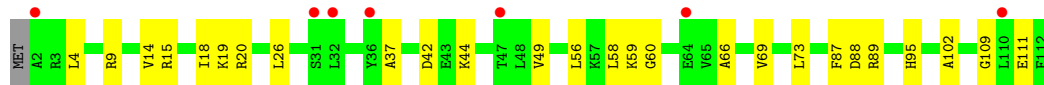
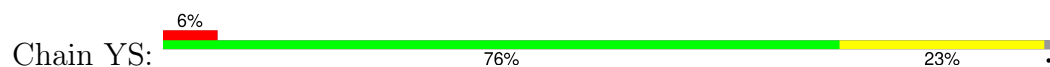
- Molecule 48: 50S ribosomal protein L17



- Molecule 49: 50S ribosomal protein L18

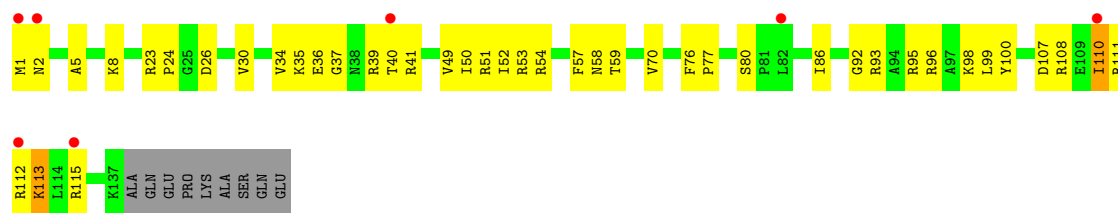


- Molecule 49: 50S ribosomal protein L18

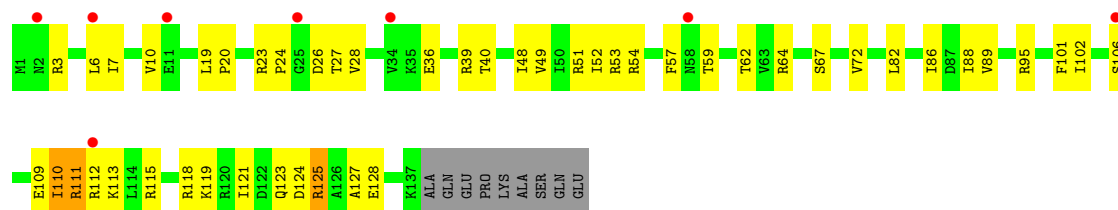


- Molecule 50: 50S ribosomal protein L19

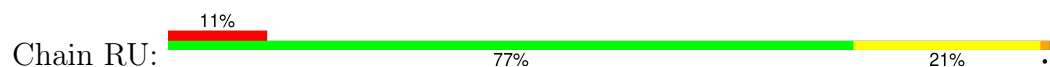




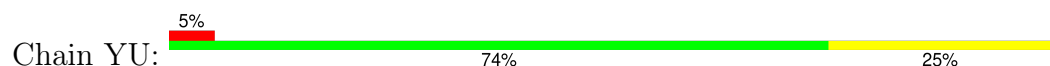
- Molecule 50: 50S ribosomal protein L19



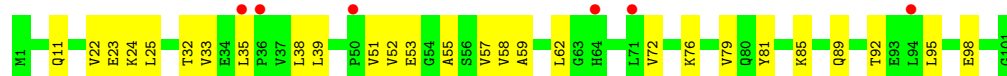
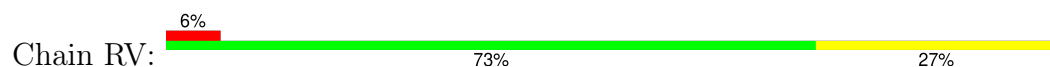
- Molecule 51: 50S ribosomal protein L20



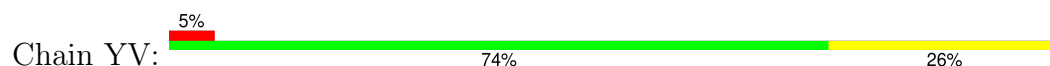
- Molecule 51: 50S ribosomal protein L20



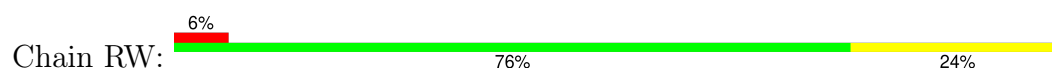
- Molecule 52: 50S ribosomal protein L21



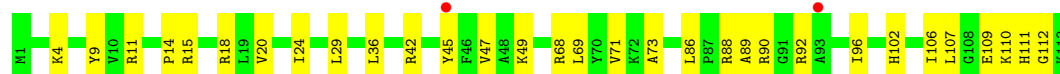
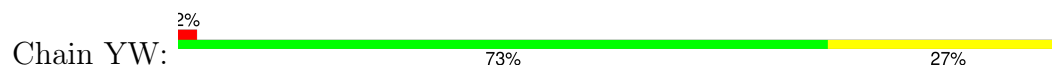
- Molecule 52: 50S ribosomal protein L21



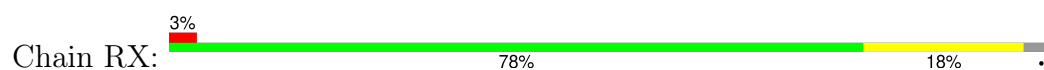
- Molecule 53: 50S ribosomal protein L22



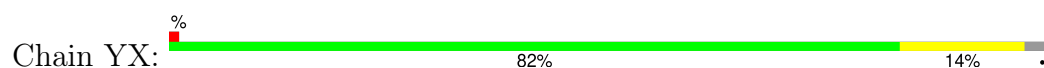
- Molecule 53: 50S ribosomal protein L22



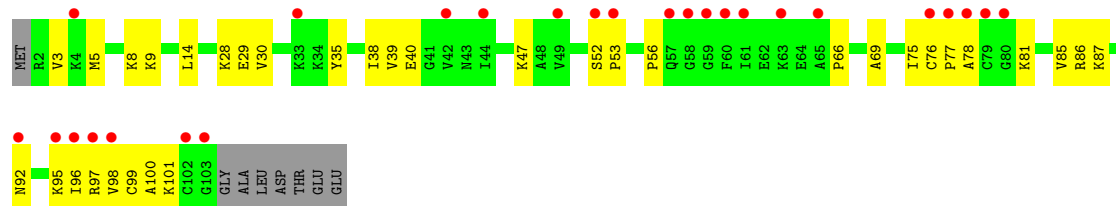
- Molecule 54: 50S ribosomal protein L23



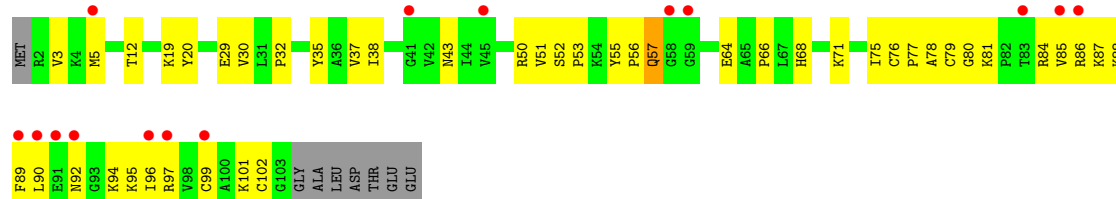
- Molecule 54: 50S ribosomal protein L23



- Molecule 55: 50S ribosomal protein L24

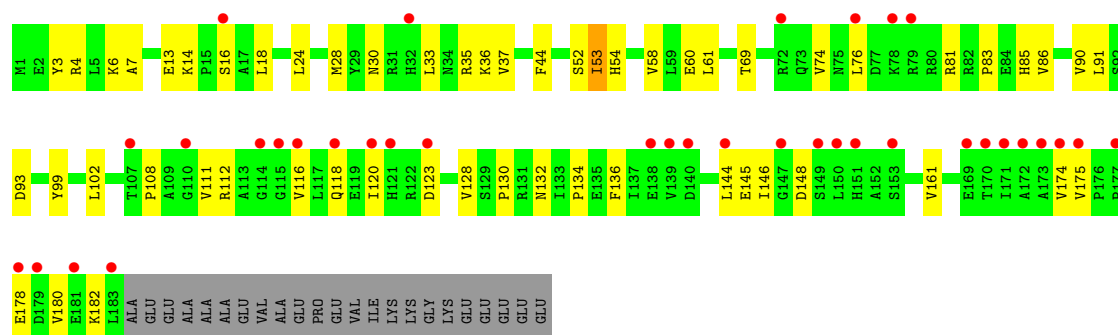


- Molecule 55: 50S ribosomal protein L24



● Molecule 56: 50S ribosomal protein L25

Chain RZ: 



4 Data and refinement statistics

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 44.53 – 3.20	Depositor EDS
% Data completeness (in resolution range)	91.2 (44.53-3.20) 91.2 (44.53-3.20)	Depositor EDS
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 0.195 , 0.232	Depositor DCC
R_{free} test set	41783 reflections (4.28%)	wwPDB-VP
Wilson B-factor (Å ²)	73.8	Xtriage
Anisotropy	0.170	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.29 , 74.2	EDS
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
F_o, F_c correlation	0.92	EDS
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: SF4, AMP, PAR, MG, ZN

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	QA	0.18	0/36098	0.39	10/56341 (0.0%)
1	XA	0.18	0/36101	0.37	0/56346
2	QB	0.19	0/1959	0.65	0/2642
2	XB	0.21	0/1959	0.65	0/2642
3	QC	0.25	0/1629	0.62	0/2195
3	XC	0.31	1/1629 (0.1%)	0.62	0/2195
4	QD	0.14	0/1704	0.57	0/2284
4	XD	0.40	1/1704 (0.1%)	0.67	3/2284 (0.1%)
5	QE	0.15	0/1171	0.63	1/1576 (0.1%)
5	XE	0.15	0/1171	0.61	0/1576
6	QF	0.12	0/856	0.56	0/1154
6	XF	0.16	0/856	0.61	1/1154 (0.1%)
7	QG	0.18	0/1276	0.56	0/1709
7	XG	0.16	0/1276	0.61	0/1709
8	QH	0.18	0/1136	0.64	2/1527 (0.1%)
8	XH	0.95	8/1136 (0.7%)	1.12	12/1527 (0.8%)
9	QI	0.20	0/1029	0.69	1/1379 (0.1%)
9	XI	0.14	0/1029	0.65	1/1379 (0.1%)
10	QJ	0.13	0/814	0.60	0/1095
10	XJ	0.14	0/814	0.60	0/1095
11	QK	0.29	0/900	0.66	0/1213
11	XK	1.51	12/900 (1.3%)	1.09	8/1213 (0.7%)
12	QL	0.14	0/991	0.69	1/1327 (0.1%)
12	XL	0.17	0/991	0.71	1/1327 (0.1%)
13	QM	0.15	0/974	0.72	1/1303 (0.1%)
13	XM	0.16	0/974	0.73	1/1303 (0.1%)
14	QN	0.22	0/501	0.67	0/664
14	XN	0.29	0/501	0.80	2/664 (0.3%)
15	QO	0.13	0/745	0.60	0/992
15	XO	0.15	0/745	0.57	0/992
16	QP	0.27	0/721	0.64	0/970
16	XP	0.60	1/721 (0.1%)	1.07	2/970 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	QQ	0.12	0/847	0.57	1/1131 (0.1%)
17	XQ	0.13	0/847	0.61	0/1131
18	QR	0.12	0/579	0.61	0/768
18	XR	0.13	0/579	0.60	0/768
19	QS	0.35	0/689	0.75	2/926 (0.2%)
19	XS	0.32	0/689	0.77	2/926 (0.2%)
20	QT	0.12	0/765	0.63	0/1007
20	XT	0.27	0/765	0.75	0/1007
21	QU	0.16	0/221	0.51	0/288
21	XU	0.13	0/221	0.50	0/288
22	QV	0.16	0/1832	0.32	0/2855
22	XV	0.16	0/1832	0.31	0/2855
23	QW	0.12	0/1819	0.31	0/2833
23	XW	0.33	3/1819 (0.2%)	0.64	3/2833 (0.1%)
24	QX	0.14	0/468	0.36	0/729
24	XX	0.18	0/443	0.50	2/690 (0.3%)
25	QY	0.10	0/1791	0.23	0/2791
25	XY	0.13	0/1791	0.27	0/2791
26	R0	0.14	0/657	0.70	1/874 (0.1%)
26	Y0	0.16	0/657	0.66	0/874
27	R1	0.20	0/770	0.65	0/1022
27	Y1	0.18	0/770	0.61	0/1022
28	R2	0.15	0/583	0.66	0/771
28	Y2	0.18	0/583	0.72	1/771 (0.1%)
29	R3	0.12	0/474	0.60	0/635
29	Y3	0.18	0/474	0.63	0/635
30	R4	0.23	0/594	0.82	1/795 (0.1%)
30	Y4	0.18	0/594	0.77	0/795
31	R5	0.20	0/473	0.67	1/639 (0.2%)
31	Y5	0.20	0/473	0.69	0/639
32	R6	0.29	0/431	0.85	0/575
32	Y6	0.27	0/431	0.97	3/575 (0.5%)
33	R7	0.27	0/438	0.65	0/575
33	Y7	0.39	0/438	0.87	2/575 (0.3%)
34	R8	0.46	0/525	0.98	2/691 (0.3%)
34	Y8	0.21	0/525	0.70	0/691
35	R9	0.11	0/310	0.54	0/407
35	Y9	0.11	0/310	0.53	0/407
36	RA	0.22	0/69521	0.41	8/108529 (0.0%)
36	YA	0.24	1/69543 (0.0%)	0.43	11/108563 (0.0%)
37	RB	0.20	0/2878	0.36	0/4490
37	YB	0.20	0/2878	0.39	0/4490
38	RD	0.29	0/2165	0.74	3/2919 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	YD	0.24	0/2195	0.64	0/2955
39	RE	0.17	0/1601	0.75	3/2160 (0.1%)
39	YE	0.20	0/1601	0.79	2/2160 (0.1%)
40	RF	1.14	9/1620 (0.6%)	0.83	9/2194 (0.4%)
40	YF	2.10	13/1620 (0.8%)	1.00	13/2194 (0.6%)
41	RG	0.13	0/1499	0.61	0/2016
41	YG	0.16	0/1499	0.71	3/2016 (0.1%)
42	RH	0.13	0/1332	0.65	1/1802 (0.1%)
42	YH	0.21	0/1332	0.78	4/1802 (0.2%)
43	RI	0.15	0/1151	0.70	2/1558 (0.1%)
43	YI	0.18	0/1151	0.74	1/1558 (0.1%)
44	RN	0.27	0/1131	0.78	2/1525 (0.1%)
44	YN	1.67	10/1131 (0.9%)	1.27	15/1525 (1.0%)
45	RO	0.24	0/943	0.64	0/1269
45	YO	0.15	0/943	0.63	0/1269
46	RP	0.19	0/1162	0.77	2/1544 (0.1%)
46	YP	0.23	0/1162	0.84	2/1544 (0.1%)
47	RQ	0.16	0/1143	0.72	0/1527
47	YQ	0.19	0/1143	0.76	1/1527 (0.1%)
48	RR	0.16	0/982	0.74	3/1312 (0.2%)
48	YR	0.19	0/982	0.77	2/1312 (0.2%)
49	RS	0.14	0/892	0.71	0/1187
49	YS	0.17	0/892	0.71	0/1187
50	RT	0.16	0/1155	0.67	2/1542 (0.1%)
50	YT	0.18	0/1155	0.78	6/1542 (0.4%)
51	RU	0.20	0/982	0.73	2/1306 (0.2%)
51	YU	0.17	0/982	0.67	2/1306 (0.2%)
52	RV	0.17	0/790	0.70	0/1057
52	YV	0.19	0/790	0.68	0/1057
53	RW	0.14	0/911	0.59	0/1220
53	YW	0.17	0/911	0.65	0/1220
54	RX	0.27	0/739	0.67	1/993 (0.1%)
54	YX	0.16	0/739	0.64	0/993
55	RY	0.19	0/798	0.74	0/1064
55	YY	0.19	0/798	0.78	0/1064
56	RZ	0.15	0/1493	0.65	1/2026 (0.0%)
56	YZ	0.18	0/1493	0.75	1/2026 (0.0%)
All	All	0.30	59/323346 (0.0%)	0.51	170/483882 (0.0%)

All (59) bond length outliers are listed below:

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
40	YF	199	TRP	CD2-CE3	54.49	2.27	1.40
40	YF	199	TRP	CE2-CZ2	39.35	2.22	1.39
40	RF	199	TRP	NE1-CE2	33.31	1.74	1.37
44	YN	42	TRP	CG-CD2	33.21	2.03	1.43
44	YN	42	TRP	CD2-CE3	-26.63	0.97	1.40
40	YF	199	TRP	CD2-CE2	25.82	1.85	1.41
11	XK	42	TRP	CZ3-CH2	-22.76	0.83	1.40
44	YN	42	TRP	CE2-CZ2	22.29	1.86	1.39
11	XK	42	TRP	CE3-CZ3	20.46	2.00	1.38
40	YF	199	TRP	CG-CD1	19.80	1.86	1.36
44	YN	42	TRP	CE3-CZ3	19.18	1.96	1.38
40	YF	199	TRP	CZ2-CH2	18.30	1.72	1.37
11	XK	42	TRP	CD2-CE3	-17.05	1.12	1.40
40	YF	199	TRP	CE3-CZ3	15.42	1.84	1.38
40	YF	199	TRP	CZ3-CH2	15.35	1.78	1.40
8	XH	138	TRP	CG-CD1	15.08	1.74	1.36
4	XD	38	TYR	C-N	14.82	1.50	1.33
40	YF	172	TRP	CZ2-CH2	14.72	1.65	1.37
40	YF	172	TRP	CD2-CE2	14.05	1.65	1.41
8	XH	138	TRP	CD2-CE2	13.98	1.65	1.41
11	XK	42	TRP	CD2-CE2	13.22	1.63	1.41
16	XP	40	ASP	C-N	13.15	1.50	1.34
40	RF	199	TRP	CD2-CE2	12.19	1.62	1.41
8	XH	138	TRP	CE3-CZ3	12.12	1.75	1.38
44	YN	42	TRP	NE1-CE2	11.68	1.50	1.37
40	RF	199	TRP	CZ3-CH2	11.64	1.69	1.40
40	RF	199	TRP	CG-CD1	11.61	1.66	1.36
8	XH	138	TRP	CD1-NE1	11.42	1.61	1.37
40	RF	199	TRP	CD2-CE3	-10.94	1.22	1.40
11	XK	42	TRP	CE2-CZ2	10.60	1.62	1.39
8	XH	138	TRP	CZ3-CH2	10.35	1.66	1.40
40	YF	172	TRP	CD1-NE1	10.08	1.59	1.37
40	RF	199	TRP	CD1-NE1	9.97	1.58	1.37
44	YN	42	TRP	CZ2-CH2	9.53	1.55	1.37
11	XK	42	TRP	CA-CB	-9.50	1.38	1.53
8	XH	138	TRP	CG-CD2	8.84	1.59	1.43
11	XK	42	TRP	CG-CD1	8.54	1.58	1.36
40	RF	199	TRP	CG-CD2	8.45	1.58	1.43
44	YN	42	TRP	CD2-CE2	7.83	1.54	1.41
40	YF	172	TRP	CG-CD2	7.48	1.57	1.43
8	XH	138	TRP	NE1-CE2	7.45	1.45	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	XK	42	TRP	C-O	-7.44	1.14	1.23
11	XK	42	TRP	CZ2-CH2	7.44	1.51	1.37
11	XK	42	TRP	NE1-CE2	6.86	1.45	1.37
40	RF	199	TRP	CE3-CZ3	6.72	1.58	1.38
3	XC	17	ASP	CA-C	6.58	1.62	1.53
40	RF	199	TRP	CZ2-CH2	6.44	1.49	1.37
8	XH	138	TRP	CZ2-CH2	6.05	1.48	1.37
11	XK	41	THR	CA-C	5.78	1.59	1.52
23	XW	35	C	C1'-N1	5.71	1.56	1.47
11	XK	42	TRP	CB-CG	5.68	1.67	1.50
23	XW	36	C	C1'-N1	5.66	1.56	1.48
40	YF	199	TRP	N-CA	-5.62	1.39	1.46
44	YN	42	TRP	CZ3-CH2	-5.53	1.26	1.40
40	YF	172	TRP	CZ3-CH2	5.49	1.54	1.40
36	YA	602	G	O3'-P	-5.43	1.53	1.61
44	YN	42	TRP	CD1-NE1	5.35	1.49	1.37
23	XW	32	A	C1'-N9	-5.31	1.39	1.47
44	YN	42	TRP	CG-CD1	5.10	1.49	1.36

All (170) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	XH	138	TRP	CB-CG-CD2	16.90	150.46	126.80
8	XH	138	TRP	CG-CD2-CE3	-16.80	117.10	133.90
44	YN	42	TRP	CE2-CD2-CE3	16.13	134.93	118.80
16	XP	40	ASP	CA-C-N	15.96	135.67	119.56
16	XP	40	ASP	C-N-CA	15.96	135.67	119.56
11	XK	42	TRP	CA-CB-CG	15.78	143.59	113.60
44	YN	42	TRP	NE1-CE2-CD2	15.66	127.75	107.40
11	XK	42	TRP	CG-CD2-CE3	15.47	149.37	133.90
44	YN	42	TRP	CB-CG-CD1	14.89	149.24	126.90
44	YN	42	TRP	CE2-CD2-CG	-14.44	89.88	107.20
40	YF	199	TRP	CD2-CE3-CZ3	-14.01	100.39	118.60
36	RA	1992	G	C2'-C3'-O3'	13.94	130.41	109.50
1	QA	987	G	C1'-C2'-O2'	-13.35	88.37	108.40
36	YA	463	G	OP1-P-O3'	-11.61	73.17	108.00
40	YF	199	TRP	CD1-CG-CD2	-11.33	88.18	106.30
44	YN	42	TRP	CH2-CZ2-CE2	-11.29	102.82	117.50
40	YF	199	TRP	CG-CD2-CE3	-11.29	122.61	133.90
8	XH	138	TRP	CE2-CD2-CG	11.27	120.73	107.20
4	XD	38	TYR	CA-C-N	10.82	131.52	120.38
4	XD	38	TYR	C-N-CA	10.82	131.52	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
48	RR	76	VAL	N-CA-C	-10.63	102.33	112.96
44	YN	42	TRP	CB-CG-CD2	-10.48	112.13	126.80
8	XH	138	TRP	CH2-CZ2-CE2	10.29	130.88	117.50
44	YN	42	TRP	CG-CD1-NE1	10.21	123.48	110.20
8	XH	138	TRP	CB-CG-CD1	-10.10	111.75	126.90
40	YF	199	TRP	CA-CB-CG	-9.92	94.75	113.60
36	RA	1558	A	C2'-C3'-O3'	9.47	123.71	109.50
8	XH	138	TRP	NE1-CE2-CZ2	9.30	144.04	130.10
1	QA	1220	G	C4'-C3'-O3'	9.22	126.83	113.00
40	RF	199	TRP	NE1-CE2-CZ2	-9.08	116.49	130.10
40	YF	199	TRP	CD2-CE2-CZ2	-9.07	113.33	122.40
44	YN	42	TRP	NE1-CE2-CZ2	-8.97	116.64	130.10
46	YP	99	LEU	N-CA-C	-8.96	100.66	111.69
1	QA	1220	G	N9-C1'-C2'	-8.92	98.62	112.00
40	YF	199	TRP	CB-CG-CD2	8.85	139.19	126.80
36	YA	2126	A	C4'-C3'-O3'	8.43	122.05	109.40
40	YF	199	TRP	NE1-CE2-CD2	-8.43	96.44	107.40
44	YN	42	TRP	CZ3-CH2-CZ2	8.31	132.30	121.50
33	Y7	7	PRO	N-CA-C	8.27	123.16	111.33
48	YR	76	VAL	N-CA-C	-8.26	102.83	111.58
11	XK	42	TRP	CE2-CD2-CE3	-8.21	110.58	118.80
46	YP	59	LEU	N-CA-C	-8.20	101.37	112.94
23	XW	67	A	C1'-C2'-O2'	-8.19	96.11	108.40
40	RF	199	TRP	CE2-CD2-CE3	7.98	126.78	118.80
11	XK	42	TRP	CZ3-CH2-CZ2	7.93	131.81	121.50
44	RN	116	LEU	N-CA-C	-7.89	103.78	113.41
8	XH	138	TRP	NE1-CE2-CD2	-7.89	97.14	107.40
42	YH	82	GLY	N-CA-C	7.86	131.81	113.18
11	XK	42	TRP	CH2-CZ2-CE2	-7.85	107.29	117.50
48	RR	3	HIS	N-CA-C	7.79	119.47	110.97
44	YN	42	TRP	CD2-CE2-CZ2	-7.78	114.62	122.40
26	R0	17	GLN	N-CA-C	7.76	121.12	107.61
40	YF	199	TRP	CE3-CZ3-CH2	7.65	131.04	121.10
36	YA	2776	A	C2'-C3'-O3'	7.61	120.91	109.50
40	RF	199	TRP	CG-CD2-CE3	-7.54	126.36	133.90
44	YN	116	LEU	N-CA-C	-7.43	102.86	112.23
4	XD	38	TYR	O-C-N	-7.42	115.42	121.80
36	RA	2776	A	C2'-C3'-O3'	7.37	120.56	109.50
47	YQ	21	THR	N-CA-C	7.34	118.20	108.07
44	YN	42	TRP	CD2-CE3-CZ3	-7.33	109.08	118.60
12	QL	118	SER	N-CA-C	-7.29	103.42	111.36
1	QA	1220	G	C2'-C3'-O3'	-7.27	102.80	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
43	YI	120	ILE	N-CA-C	7.19	118.72	109.30
11	XK	43	SER	N-CA-C	7.03	119.20	108.52
48	YR	3	HIS	N-CA-C	7.02	121.92	111.04
39	YE	79	ARG	N-CA-C	7.00	119.10	110.91
50	YT	125	ARG	N-CA-C	-6.93	102.94	111.40
1	QA	987	G	N9-C1'-C2'	-6.83	101.75	112.00
23	XW	8	U	C4'-C3'-O3'	6.79	123.19	113.00
42	YH	81	GLU	N-CA-C	-6.76	103.00	110.91
8	XH	138	TRP	CZ3-CH2-CZ2	-6.70	112.79	121.50
40	YF	199	TRP	CE2-CD2-CG	6.65	115.18	107.20
1	QA	1219	U	C4'-C3'-O3'	6.64	122.96	113.00
8	XH	138	TRP	CD1-CG-CD2	-6.63	95.70	106.30
14	XN	45	ARG	N-CA-C	-6.61	103.34	111.40
32	Y6	29	ASN	N-CA-C	-6.56	104.86	112.92
42	YH	83	TYR	N-CA-C	6.52	124.69	110.80
50	YT	113	LYS	N-CA-C	-6.43	104.37	112.93
40	RF	199	TRP	N-CA-C	-6.41	103.80	111.69
11	XK	42	TRP	CE2-CD2-CG	-6.35	99.58	107.20
36	YA	271(B)	G	P-O3'-C3'	6.29	127.25	119.70
38	RD	34	VAL	N-CA-C	-6.29	100.78	109.46
36	RA	2776	A	C4'-C3'-O3'	6.25	118.78	109.40
39	YE	118	LYS	N-CA-C	-6.22	104.90	113.18
32	Y6	30	THR	N-CA-C	-6.20	103.00	110.13
36	YA	2043	C	C2'-C3'-O3'	-6.19	104.42	113.70
44	YN	114	ARG	N-CA-C	-6.17	100.45	110.20
50	RT	113	LYS	N-CA-C	-6.17	104.83	112.72
51	RU	9	VAL	N-CA-C	6.14	116.81	110.36
14	XN	42	ILE	N-CA-C	-6.14	104.52	110.72
9	QI	85	LEU	N-CA-C	-6.09	105.89	113.38
44	YN	42	TRP	CD1-NE1-CE2	-6.08	97.95	108.90
36	YA	463	G	OP2-P-O3'	-6.06	89.81	108.00
31	R5	3	LYS	N-CA-C	6.04	116.41	108.07
46	RP	59	LEU	N-CA-C	-6.02	105.79	113.02
1	QA	1220	G	C3'-C2'-O2'	6.01	119.71	110.70
41	YG	79	ASN	N-CA-C	-6.00	104.86	111.82
38	RD	239	ARG	N-CA-C	5.96	118.47	111.02
36	YA	2776	A	C4'-C3'-O3'	5.93	118.30	109.40
19	QS	10	PHE	CA-C-N	5.91	132.61	121.97
19	QS	10	PHE	C-N-CA	5.91	132.61	121.97
40	RF	198	ALA	N-CA-C	-5.90	105.36	113.56
12	XL	118	SER	N-CA-C	-5.90	104.03	111.11
11	XK	42	TRP	CB-CG-CD1	-5.86	118.11	126.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
51	YU	89	GLU	N-CA-C	-5.85	105.73	112.92
40	RF	199	TRP	CH2-CZ2-CE2	-5.78	109.99	117.50
51	RU	97	ASP	N-CA-C	-5.77	105.74	112.89
8	QH	79	VAL	N-CA-C	-5.72	104.64	113.16
51	YU	9	VAL	N-CA-C	5.71	115.90	110.42
40	RF	199	TRP	CD2-CE3-CZ3	-5.70	111.19	118.60
46	RP	99	LEU	N-CA-C	-5.70	107.32	114.56
8	XH	138	TRP	CD1-NE1-CE2	5.68	119.12	108.90
6	XF	60	PHE	N-CA-C	5.67	117.97	108.73
40	YF	199	TRP	N-CA-C	-5.66	104.73	111.69
8	QH	19	VAL	N-CA-C	-5.63	107.49	112.90
39	RE	49	LEU	N-CA-C	5.58	119.78	112.13
40	YF	172	TRP	CH2-CZ2-CE2	-5.58	110.25	117.50
17	QQ	62	SER	N-CA-C	5.57	115.46	108.45
19	XS	34	TRP	CA-C-N	-5.56	114.87	122.93
19	XS	34	TRP	C-N-CA	-5.56	114.87	122.93
36	YA	259	G	C2'-C3'-O3'	-5.54	105.40	113.70
50	YT	57	PHE	N-CA-C	-5.52	103.41	110.53
9	XI	59	PHE	N-CA-C	5.52	117.42	108.26
42	YH	157	TYR	N-CA-C	-5.51	106.23	113.17
50	RT	110	ILE	N-CA-C	-5.50	104.22	111.09
28	Y2	47	ASN	N-CA-C	5.50	120.39	111.37
13	XM	9	ILE	N-CA-C	5.49	114.53	108.05
42	RH	149	ARG	N-CA-C	-5.49	106.63	113.38
34	R8	30	ARG	N-CA-C	5.46	117.98	108.76
44	YN	71	ILE	N-CA-C	5.42	116.11	108.36
30	R4	43	TYR	CA-CB-CG	5.42	123.65	113.90
36	YA	1992	G	C2'-C3'-O3'	5.40	117.60	109.50
50	YT	89	VAL	N-CA-C	-5.40	108.24	113.53
8	XH	79	VAL	N-CA-C	-5.39	104.21	111.44
33	Y7	8	ASN	N-CA-C	-5.38	99.33	110.80
5	QE	26	PHE	N-CA-C	5.37	117.62	110.53
23	XW	67	A	C4'-C3'-O3'	5.37	121.05	113.00
40	YF	168	ARG	N-CA-C	5.37	117.13	111.28
50	YT	111	ARG	N-CA-C	-5.37	103.30	110.55
1	QA	1331	G	P-O3'-C3'	5.34	128.22	120.20
44	RN	117	PHE	N-CA-C	-5.34	106.27	112.89
56	RZ	93	ASP	N-CA-C	-5.33	104.67	110.91
36	RA	2043	C	C2'-C3'-O3'	-5.33	105.70	113.70
54	RX	5	TYR	N-CA-C	-5.29	106.67	113.02
40	RF	199	TRP	CD1-NE1-CE2	-5.29	99.38	108.90
36	RA	1130	U	C2'-C3'-O3'	5.28	117.42	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	YA	271(B)	G	C2'-C3'-O3'	5.28	117.41	109.50
39	RE	118	LYS	N-CA-C	-5.27	105.97	112.72
43	RI	68	LEU	N-CA-C	-5.26	106.86	113.28
39	RE	127	ASP	N-CA-C	-5.25	105.12	112.25
38	RD	252	TRP	CA-CB-CG	5.22	123.53	113.60
40	YF	197	ASP	N-CA-C	-5.22	103.14	110.50
40	RF	199	TRP	CB-CG-CD1	-5.20	119.09	126.90
56	YZ	180	VAL	N-CA-C	5.19	114.86	108.53
1	QA	1014	A	C4'-C3'-O3'	5.18	120.78	113.00
41	YG	98	ARG	N-CA-C	-5.17	105.33	111.69
41	YG	53	LEU	N-CA-C	-5.15	99.83	110.80
36	RA	1825	A	C2'-C3'-O3'	-5.14	105.98	113.70
36	YA	1980	G	C2'-C3'-O3'	5.13	117.20	109.50
50	YT	110	ILE	N-CA-C	-5.11	105.72	110.53
48	RR	77	ARG	N-CA-C	-5.10	105.81	112.23
34	R8	35	GLN	N-CA-C	-5.09	104.89	111.71
13	QM	13	LYS	N-CA-C	5.05	121.55	110.80
36	RA	1510	A	C2'-C3'-O3'	-5.05	106.13	113.70
43	RI	67	ARG	N-CA-C	-5.04	106.63	112.89
24	XX	14	A	N9-C1'-C2'	5.04	119.55	112.00
1	QA	1301	U	N1-C1'-C2'	5.03	119.55	112.00
32	Y6	32	ASN	N-CA-C	-5.03	104.11	111.30
8	XH	138	TRP	CA-CB-CG	5.01	123.12	113.60
24	XX	14	A	O4'-C1'-N9	5.00	116.01	108.50

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	QA	32247	0	16278	520	0
1	XA	32249	0	16278	485	0
2	QB	1924	0	1975	34	0
2	XB	1924	0	1975	57	0
3	QC	1605	0	1668	44	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	XC	1605	0	1668	38	0
4	QD	1674	0	1716	35	0
4	XD	1674	0	1718	38	0
5	QE	1155	0	1213	24	0
5	XE	1155	0	1213	17	0
6	QF	843	0	857	7	0
6	XF	843	0	857	25	0
7	QG	1257	0	1296	17	0
7	XG	1257	0	1296	32	0
8	QH	1116	0	1177	35	0
8	XH	1116	0	1177	30	0
9	QI	1010	0	1037	30	0
9	XI	1010	0	1037	30	0
10	QJ	801	0	849	24	0
10	XJ	801	0	849	34	0
11	QK	885	0	904	38	0
11	XK	885	0	904	38	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	25	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	11	0
16	QP	705	0	725	17	0
16	XP	705	0	725	26	0
17	QQ	834	0	904	10	0
17	XQ	834	0	904	19	0
18	QR	574	0	644	12	0
18	XR	574	0	644	12	0
19	QS	674	0	699	32	0
19	XS	674	0	699	27	0
20	QT	763	0	861	16	0
20	XT	763	0	861	23	0
21	QU	217	0	234	10	0
21	XU	217	0	234	5	0
22	QV	1640	0	837	9	0
22	XV	1640	0	837	9	0
23	QW	1627	0	823	20	0
23	XW	1627	0	823	39	0
24	QX	416	0	208	4	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
24	XX	394	0	197	9	0
25	QY	1603	0	811	24	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	17	0
27	Y1	763	0	848	19	0
28	R2	581	0	629	14	0
28	Y2	581	0	629	8	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	11	0
33	Y7	430	0	480	21	0
34	R8	517	0	582	36	0
34	Y8	517	0	582	28	0
35	R9	307	0	338	7	0
35	Y9	307	0	338	7	0
36	RA	62071	0	31289	871	0
36	YA	62091	0	31301	801	0
37	RB	2573	0	1306	33	0
37	YB	2573	0	1306	22	0
38	RD	2115	0	2195	71	0
38	YD	2145	0	2234	36	0
39	RE	1568	0	1633	56	0
39	YE	1568	0	1634	56	0
40	RF	1585	0	1632	45	0
40	YF	1585	0	1632	46	0
41	RG	1474	0	1535	36	0
41	YG	1474	0	1535	34	0
42	RH	1307	0	1382	30	0
42	YH	1307	0	1381	47	0
43	RI	1136	0	1223	18	0
43	YI	1136	0	1223	31	0
44	RN	1104	0	1180	27	0
44	YN	1104	0	1180	31	0
45	RO	933	0	996	26	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
45	YO	933	0	996	23	0
46	RP	1145	0	1227	53	0
46	YP	1145	0	1227	56	0
47	RQ	1122	0	1179	48	0
47	YQ	1122	0	1179	42	0
48	RR	968	0	1033	19	0
48	YR	968	0	1033	24	0
49	RS	882	0	943	18	0
49	YS	882	0	943	22	0
50	RT	1141	0	1202	34	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	19	0
52	YV	779	0	852	22	0
53	RW	900	0	964	19	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	29	0
55	YY	785	0	878	33	0
56	RZ	1461	0	1493	44	0
56	YZ	1461	0	1493	45	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
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

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
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
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

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
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	4712	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 10.

All (4712) 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:CE3	8:XH:138:TRP:CZ3	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:CZ3	40:YF:199:TRP:CE3	1.84	1.58
8:XH:138:TRP:CG	8:XH:138:TRP:CD1	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:CZ3	11:XK:42:TRP:CZ2	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:CD2	40:YF:199:TRP:CE3	2.27	1.22
32:R6:10:LEU:HD22	34:R8:35:GLN:NE2	1.58	1.17
4:XD:166:LYS:HG2	4:XD:178:VAL:CG1	1.72	1.17
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:1667:G:H8	36:RA:1667:G:H5''	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:H5''	36:RA:1667:G:C8	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:CD2	40:YF:199:TRP:NE1	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:CZ3	11:XK:42:TRP:CH2	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:CE2	44:YN:42:TRP:CH2	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:YA:1138:G:H21	44:YN:106:MET:HE3	1.50	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
36:RA:1652:A:OP1	48:RR:8:ARG:NH1	2.20	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
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:CZ3	8:XH:138:TRP:CD2	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
33:Y7:1:MET:HE3	33:Y7:3:ARG:HH12	1.54	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
19:QS:41:VAL:HG22	19:QS:44:MET:HE3	1.72	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
38:RD:16:MET:HE3	38:RD:211:ARG:HD2	1.71	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:RA:1138:G:H21	44:RN:106:MET:HE3	1.54	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
36:RA:2849:U:OP1	50:RT:95:ARG:NH1	2.23	0.70
50:RT:36:GLU:HG3	50:RT:41:ARG:HD3	1.74	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
32:R6:23:THR:HG21	36:RA:2419:U:H4'	1.74	0.69
36:RA:2135:A:H62	36:RA:2156:G:H21	1.40	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
19:QS:9:VAL:C	19:QS:11:VAL:H	2.00	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
40:YF:113:ALA:HB2	40:YF:183:VAL:HG23	1.75	0.69
43:YI:133:HIS:CG	43:YI:134:PRO:HD3	2.27	0.69
1:QA:522:C:H41	12:QL:53:ARG:HH22	1.41	0.69
1:QA:713:G:H2'	1:QA:714:G:C8	2.27	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RH:33:LEU:HD11	42:RH:136:ILE:HG12	1.74	0.69
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:H4'	36:YA:2789:C:OP1	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
61:QY:101:AMP:H8	36:RA:2583:G:H21	1.42	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
1:QA:951:G:OP2	13:QM:102:ARG:NH1	2.27	0.68
11:QK:86:GLY:O	11:QK:91:ARG:NH1	2.26	0.68
31:R5:4:HIS:CE1	36:RA:2577:A:C1'	2.76	0.68
1:XA:1178:G:OP2	9:XI:97:LYS:NZ	2.20	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:1728:G:H8	36:YA:1732:A:H62	1.41	0.68
1:QA:738:C:H5''	6:QF:69:GLU:HB2	1.74	0.68
3:QC:59:ARG:HH12	3:QC:97:LYS:HG3	1.59	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
1:XA:578:C:O2'	1:XA:728:A:N3	2.27	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
2:XB:98:LEU:HB2	2:XB:101:MET:HE3	1.77	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
25:QY:53:G:HO2'	47:RQ:51:ARG:HH22	1.41	0.67
39:RE:27:LEU:HD11	50:RT:1:MET:HE1	1.77	0.67
50:RT:5:ALA:HA	50:RT:8:LYS:HD3	1.77	0.67
23:XW:8:U:O2	23:XW:8:U:H2'	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:1496:A:H8	36:RA:1577:C:HO2'	1.43	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
1:XA:1312:G:H5'	19:XS:5:LEU:HD11	1.76	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: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:271(B):G:O2'	36:YA:271(C):U:OP2	2.14	0.66
36:YA:1859:A:N6	36:YA:1883:G:O2'	2.29	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:QE:63:ARG:HA	5:QE:66:MET:HE2	1.78	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
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:H5''	36:RA:1514:U:C6	2.30	0.65
36:RA:2788:C:O2'	36:RA:2809:A:N3	2.29	0.65
1:XA:1250:A:N3	1:XA:1370:G:O2'	2.27	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
33:Y7:1:MET:HE3	33:Y7:3:ARG:NH1	2.10	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:H8	1:QA:1304:G:O5'	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:227:G:N2	16:QP:62:VAL:O	2.23	0.65
1:QA:1106:G:H5''	3:QC:172:ARG:HG2	1.79	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
36:YA:2495:G:H5''	47:YQ:81:VAL:HG12	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
55:YY:5:MET:HE2	55:YY:30:VAL:HG13	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
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:CZ3	11:XK:42:TRP:CD2	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:O	2:QB:22:LYS:HD2	1.97	0.64
36:RA:2816:C:O3'	48:RR:99:LYS:NZ	2.31	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
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:75:G:H22	36:RA:111:A:H2	1.46	0.64
36:RA:1078:U:O2'	36:RA:1079:C:OP2	2.16	0.64
44:RN:96:GLU:HB2	44:RN:122:VAL:HG12	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:R4:31:ILE:HD12	41:RG:142:PRO:HB2	1.80	0.64
36:RA:2502:G:H5''	36:RA:2503:A:H5''	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
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
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:Y7:5:TRP:CD1	36:YA:464:U:H4'	2.29	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
36:YA:587:C:OP2	46:YP:21:ARG:NH2	2.30	0.63
40:YF:178:PRO:HB3	40:YF:198:ALA:HB2	1.80	0.63
47:YQ:43:THR:HG22	47:YQ:94:VAL:HG12	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RD:35:LYS:HG3	38:RD:63:ARG:HA	1.79	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
26:Y0:27:GLU:HG3	26:Y0:68:GLU:HA	1.80	0.63
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:998:C:OP1	51:RU:93:LYS:NZ	2.32	0.63
36:RA:1796:U:H2'	36:RA:1797:C:C6	2.33	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:HG2	19:XS:36:ARG:O	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
36:YA:958:U:OP2	47:YQ:14:ARG:NH1	2.33	0.62
42:YH:2:SER:HA	42:YH:7:LEU:HD22	1.80	0.62
36:RA:1991:U:H2'	36:RA:1992:G:H5''	1.80	0.62
42:RH:119:GLU:O	42:RH:140:LYS:NZ	2.27	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
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:56:U:H2'	1:QA:57:G:C8	2.35	0.62
1:QA:1023:G:H3'	1:QA:1024:G:H5''	1.81	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
2:QB:178:ARG:HH22	8:QH:74:PRO:HB3	1.65	0.62
4:QD:64:LEU:HD13	4:QD:198:VAL:HG21	1.81	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
20:QT:56:MET:HE1	20:QT:104:LEU:HG	1.82	0.62
34:R8:7:HIS:CD2	46:RP:50:ARG:NH2	2.68	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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:XN:43:CYS:O	14:XN: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:CD2	44:YN:42:TRP:CH2	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:969:U:H2'	36:RA:970:C:C6	2.35	0.61
36:RA:1005:C:O2'	44:RN:28:THR:HG21	2.01	0.61
36:RA:1454:U:H5'	48:RR:63:ARG:HH12	1.65	0.61
40:RF:198:ALA:HA	40:RF:201:VAL:HG22	1.83	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:814:A:H2'	1:XA:816:A:H5''	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1060:C:H3'	3:XC:2:GLY:HA3	1.81	0.61
1:XA:1326:C:OP1	21:XU:12:LYS:NZ	2.30	0.61
1:XA:1355:G:H2'	1:XA:1356:G:H8	1.65	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
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:O5'	37:RB:27:C:H6	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:557:U:H2'	36:YA:558:G:H8	1.67	0.60
36:YA:2199:A:N1	36:YA:2226:C:N4	2.47	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:9:U:OP1	44:RN:115:ARG:NH2	2.35	0.60
36:RA:1084:A:H5'	36:RA:1085:A:H5''	1.83	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
1:QA:1147:C:HO2'	9:QI:5:TYR:HH	1.49	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:37:THR:O	13:QM:55:ARG:NH1	2.34	0.60
34:R8:30:ARG:HH21	46:RP:62:LEU:HD13	1.67	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
52:RV:52:VAL:O	52:RV:53:GLU:HG3	2.01	0.60
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:214:G:N3	36:YA:216:A: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
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:17:VAL:HG12	9:QI:63:ILE:HG12	1.84	0.59
9:QI:28:VAL:HG12	9:QI:63:ILE:HB	1.84	0.59
31:R5:29:THR:HG21	36:RA:2815:C:H5'	1.84	0.59
36:RA:1668:A:N7	36:RA:1674:G:C6	2.69	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
1:XA:926:G:N2	24:XX:15:A:OP2	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
13:XM:82:MET:HE3	13:XM:93:ARG:HG2	1.83	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
2:QB:22:LYS:HD2	2:QB:22:LYS:C	2.27	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
36:YA:2469:A:O2'	47:YQ:56:ARG:HG2	2.03	0.59
36:YA:2836:U:H2'	36:YA:2837:G:H8	1.67	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:HD23	46:YP:62:LEU:H	1.67	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: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: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:259:G:H21	36:RA:621:A:H8	1.49	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
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:YN: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:588:U:H2'	36:YA:589:C:C6	2.37	0.59
36:YA:1657:C:H2'	36:YA:1658:C:H6	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
1:XA:1226:C:H4'	1:XA:1227:A:OP1	2.03	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
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:1360:A:OP2	14:QN:35:ARG:NH2	2.36	0.59
1:QA:1492:A:OP1	12:QL:47:LYS:N	2.36	0.59
36:RA:265:A:H2'	36:RA:266:G:H4'	1.85	0.59
36:RA:1419:A:O2'	36:RA:1421:G:N7	2.30	0.59
36:YA:1645:G:H5''	36:YA:1646:C:H5'	1.84	0.59
36:YA:2789:C:H6	36:YA:2789:C:H5''	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
39:RE:62:PRO:C	39:RE:63:LEU:HD23	2.28	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
1:QA:1305:G:H5'	21:QU:4:GLY:C	2.28	0.58
4:XD:4:TYR:HE2	4:XD:11:LEU:HD11	1.66	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
36:YA:1930:G:N2	36:YA:1969:A:OP2	2.29	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
33:R7:1:MET:HE1	36:RA:752:A:H3'	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
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
1:QA:890:G:O2'	1:QA:906:G:O6	2.20	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:279:A:OP1	1:QA:280:C:O2'	2.13	0.58
1:QA:978:A:OP2	1:QA:1362(A):C:N4	2.35	0.58
36:RA:262:A:N3	36:RA:430:G:O2'	2.32	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:2023:G:H5'	36:YA:2617:C:H4'	1.86	0.58
36:YA:2327:A:H2'	36:YA:2328:A:C8	2.38	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:120:LYS:HE3	25:XY:40:C:H5''	1.85	0.58
23:XW:3:G:H2'	23:XW:4:G:H8	1.68	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
30:R4:38:LYS:HG3	41:RG:108:ASN:HA	1.86	0.58
36:RA:2023:G:H5'	36:RA:2617:C:H4'	1.84	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
1:QA:390:C:H2'	1:QA:391:G:C8	2.39	0.58
34:R8:4:MET:HE2	36:RA:592:G:N3	2.19	0.58
36:RA:848:G:H2'	36:RA:849:A:H8	1.68	0.58
37:RB:26:A:O5'	37:RB:26:A:H8	1.86	0.58
39:RE:37:ARG:NH2	39:RE:41:LYS:HB2	2.18	0.58
1:XA:28:G:O2'	1:XA:296:U:OP1	2.22	0.58
1:XA:134:A:H1'	1:XA:325:A:C5	2.39	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
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
36:RA:1528:A:H2'	36:RA:1529:A:H8	1.69	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
41:YG:34:LEU:HG	41:YG:99:MET:HE1	1.86	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
1:XA:186:C:O2'	20:XT:85:MET:SD	2.57	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:XC:29:TYR:OH	14:YN:54:PRO:CD	2.49	0.57
9:XI:15:ALA:HB2	9:XI:65:VAL:HG23	1.86	0.57
23:XW:26:G:H22	23:XW:44:A:H61	1.52	0.57
36:YA:630:G:N2	36:YA:633:A:OP2	2.34	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
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:259:G:OP2	20:QT:83:ARG:NH1	2.38	0.57
1:QA:1229:A:OP2	13:QM:114:ARG:NH2	2.36	0.57
36:RA:535:C:O3'	51:RU:53:ARG:NH1	2.36	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:2749:A:OP2	36:RA:2750:A:O2'	2.21	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:691:C:H4'	38:RD:43:ARG:HD3	1.85	0.57
36:RA:2853:C:H2'	36:RA:2854:G:C8	2.39	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
1:XA:1222:G:H5''	19:XS:78:ARG:HD2	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:19:LEU:HB3	4:XD:21:LEU:HD13	1.85	0.57
36:YA:2108:C:H1'	36:YA:2182:G:H22	1.70	0.57
36:YA:2637:U:OP1	39:YE:82:ARG:NH1	2.37	0.57
39:YE:24:THR:OG1	39:YE:186:GLY:HA2	2.05	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
10:XJ:61:GLU:OE1	14:YN:58:LYS:NZ	2.25	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
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:88:LEU:HD11	46:YP:95:VAL:HG11	1.86	0.57
46:YP:115:LEU:HA	46:YP:134:ALA:HB2	1.87	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:3:ARG:O	13:QM:57:ARG:NH2	2.38	0.57
13:QM:31:LYS:HD2	13:QM:34:LEU:HD11	1.87	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:191:G:O2'	20:QT:101:GLY:O	2.22	0.56
1:QA:1412:C:H2'	1:QA:1413:A:C8	2.40	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:17:U:H2'	1:XA:18:C:H6	1.69	0.56
1:XA:1427:U:H2'	1:XA:1428:A:C8	2.40	0.56
5:XE:148:VAL:HG21	8:XH:107:LEU:HD12	1.86	0.56
36:YA:1454:U:O2'	36:YA:1455:G:N7	2.35	0.56
36:YA:1791:A:H5'	38:YD:206:LEU:HD12	1.87	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
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
36:RA:848:G:H2'	36:RA:849:A:C8	2.40	0.56
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
1:XA:1510:U:H2'	1:XA:1511:G:C8	2.40	0.56
10:XJ:55:LYS:H	10:XJ:55:LYS:HD2	1.70	0.56
32:Y6:45:LYS:HE3	36:YA:2371:G:H5'	1.86	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:966:G:C2	22:QV:34:C:H5'	2.41	0.56
1:QA:991:U:O4	1:QA:1212:U:O2'	2.22	0.56
1:QA:1372:U:OP1	9:QI:72:GLY:N	2.38	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
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
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
8:XH:136:GLU:CD	8:XH:138:TRP:HE1	2.13	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:42:THR:HG21	10:XJ:66:ARG:HG3	1.87	0.56
19:XS:77:THR:HG22	19:XS:78:ARG:HD3	1.86	0.56
36:YA:627:A:H4'	36:YA:628:G:H5'	1.87	0.56
36:YA:1048:A:OP2	36:YA:1110:G:N2	2.21	0.56
36:YA:1400:G:H2'	36:YA:1401:G:C8	2.40	0.56
36:YA:2661:G:H2'	36:YA:2662:A:C8	2.40	0.56
50:YT:118:ARG:HH21	50:YT:121:ILE:HG21	1.69	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
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:825:G:O2'	8:QH:12:ARG:NH1	2.39	0.56
1:QA:1251:A:H2'	1:QA:1252:A:C8	2.40	0.56
36:RA:288:C:H2'	36:RA:289:A:H8	1.71	0.56
36:RA:1286:A:O2'	36:RA:1288:U:OP2	2.22	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
30:Y4:23:GLU:C	30:Y4:25:TYR:H	2.14	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:973:G:H3'	1:QA:974:A:H5''	1.87	0.56
1:QA:1513:A:H2'	1:QA:1514:C:C6	2.40	0.56
3:QC:50:ALA:HB2	3:QC:75:VAL:HB	1.88	0.56
34:R8:59:LYS:CE	46:RP:50:ARG:HG3	2.36	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
1:XA:130:A:H5'	17:XQ:63:ARG:NE	2.20	0.56
1:XA:390:C:H2'	1:XA:391:G:H8	1.70	0.56
36:YA:639:U:H2'	36:YA:640:C:H6	1.71	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
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
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:718:G:N2	18:QR:49:LYS:HG2	2.19	0.56
1:QA:1238:A:H62	1:QA:1301:U:H3	1.53	0.56
2:QB:74:LYS:O	2:QB:78:GLN:HG3	2.06	0.56
36:RA:588:U:H2'	36:RA:589:C:C6	2.41	0.56
36:RA:1406:U:H2'	36:RA:1407:C:H6	1.71	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:619:U:N3	4:QD:134:ASP:OD1	2.30	0.55
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
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
35:Y9:1:MET:HG3	36:YA:2477:C:H2'	1.89	0.55
36:YA:1657:C:H2'	36:YA:1658:C:C6	2.40	0.55
1:QA:28:G:O2'	1:QA:296:U:OP1	2.23	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:882:G:H8	36:YA:882:G:OP2	1.89	0.55
36:YA:1400:G:H2'	36:YA:1401:G:H8	1.71	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:547:A:H2'	36:YA:548:A:C8	2.41	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
1:QA:624:C:H2'	1:QA:625:G:H8	1.71	0.55
1:QA:1372:U:H5''	9:QI:71:SER:HB3	1.89	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:658:C:H2'	36:YA:659:C:H6	1.71	0.55
36:YA:1021:A:C8	36:YA:1022:G:H5''	2.40	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:H2'	36:RA:1980:G:O5'	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
26:Y0:51:VAL:O	49:YS:20:ARG:NH2	2.39	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
1:QA:715:A:H2'	1:QA:716:A:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:975:A:H61	10:QJ:48:THR:HB	1.71	0.55
1:QA:1032(B):G:H2'	1:QA:1033:G:H8	1.71	0.55
9:QI:79:LEU:HD11	9:QI:83:ARG:HH21	1.71	0.55
19:QS:63:THR:HG22	19:QS:66:MET:HE3	1.88	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:21:G:H2'	1:XA:22:G:C8	2.41	0.55
1:XA:1236:A:H4'	1:XA:1304:G:H4'	1.88	0.55
36:YA:598:G:H5'	46:YP:11:GLY:HA3	1.87	0.55
36:YA:1266:G:O5'	53:YW:15:ARG:NH2	2.39	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
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:728:A:H2'	1:QA:729:A:H8	1.72	0.55
1:QA:1302:U:O2	1:QA:1302:U:H2'	2.05	0.55
8:QH:5:PRO:O	8:QH:32:LYS:NZ	2.39	0.55
36:RA:700:G:O2'	36:RA:1632:A:N3	2.36	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:579:G:H5'	1:QA:728:A:H1'	1.89	0.54
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
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:918:A:H2'	1:XA:919:A:C8	2.42	0.54
1:XA:1348:U:H4'	9:XI:120:ARG:HD2	1.89	0.54
1:XA:1371:G:O3'	9:XI:69:GLY:HA3	2.06	0.54
2:XB:4:GLU:HG2	2:XB:5:ILE:H	1.72	0.54
2:XB:84:GLU:HG3	2:XB:215:LEU:HB3	1.88	0.54
8:XH:103:VAL:HG23	8:XH:138:TRP:HD1	1.72	0.54
29:Y3:6:VAL:HB	29:Y3:54:VAL:HG21	1.89	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:987:G:O2'	36:YA:1000:A:N3	2.36	0.54
36:YA:2012:G:OP1	53:YW:11:ARG:NH2	2.39	0.54
36:YA:2311:A:C8	41:YG:82:LEU:HD22	2.42	0.54
36:YA:2789:C:H5''	36:YA:2789:C:C6	2.42	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: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:1332:G:N2	36:RA:1609:A:O2'	2.41	0.54
36:RA:1550:C:H5'	36:RA:1733:G:H22	1.72	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:57:ARG:HB3	4:XD:206:PHE:HB2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:166:LYS:HE2	4:XD:178:VAL:HG12	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:H6	36:YA:897:C:OP1	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:739:C:HO2'	15:QO:42:HIS:HD1	1.56	0.54
1:QA:1240:U:OP1	7:QG:119:ARG:NH2	2.41	0.54
36:RA:1228:G:OP2	51:RU:16:LYS:NZ	2.40	0.54
36:RA:2066:C:H2'	36:RA:2067:G:H5'	1.89	0.54
41:RG:63:ILE:HG13	41:RG:64:THR:HG23	1.88	0.54
1:XA:501:C:H2'	1:XA:502:G:C8	2.43	0.54
1:XA:1111:A:H61	3:XC:177:THR:HG22	1.72	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:1188:U:H4'	52:YV:79:VAL:HG22	1.89	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
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
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
45:YO:120:GLU:OE1	50:YT:67:SER:OG	2.24	0.54
1:QA:946:A:H2'	1:QA:947:G:C8	2.42	0.54
1:QA:1436:U:OP1	20:QT:23:ARG:NH2	2.41	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:307:G:H21	36:RA:330:A:H62	1.56	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
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
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
38:RD:221:VAL:HG23	38:RD:226:MET:HE2	1.90	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:107:G:O6	20:XT:15:ARG:NH1	2.41	0.54
1:XA:1218:C:H2'	1:XA:1219:U:C6	2.43	0.54
34:Y8:62:LEU:HD13	36:YA:242:G:C5'	2.37	0.54
36:YA:38:A:N3	40:YF:48:THR:OG1	2.39	0.54
36:YA:2010:G:H5''	53:YW:42:ARG:HB2	1.90	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:NH2	3:XC:21:ARG:HB2	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
36:YA:956:G:OP2	47:YQ:14:ARG:NH2	2.41	0.54
36:YA:2164:C:H2'	36:YA:2164:C:O2	2.08	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
13:XM:3:ARG:NH1	30:Y4:32:TYR:O	2.42	0.53
14:XN:29:ARG:HD3	14:XN:40:CYS:HB2	1.90	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: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
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: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1291:G:O2'	9:XI:38:GLN:OE1	2.26	0.53
1:XA:1494:G:N7	58:XA:1717:PAR:N32	2.56	0.53
1:XA:1502:A:H2	1:XA:1505:G:H22	1.54	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:65:C:H2'	36:YA:66:C:H6	1.73	0.53
36:YA:259:G:H21	36:YA:621:A:H8	1.56	0.53
36:YA:881:G:C8	36:YA:881:G:H5''	2.43	0.53
36:YA:2648:C:H2'	36:YA:2649:U:H6	1.73	0.53
41:YG:83:ARG:HG3	41:YG:84:LYS:H	1.72	0.53
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
36:RA:2636:U:HO2'	39:RE:44:TYR:HH	1.54	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
9:XI:127:LYS:NZ	22:XV:34:C:OP2	2.28	0.53
30:Y4:40:HIS:O	30:Y4:47:GLN:NE2	2.40	0.53
36:YA:1006:C:H5'	44:YN:28:THR:HG23	1.90	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
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:236:C:O2'	36:RA:431:U:H4'	2.08	0.53
36:RA:1657:C:H2'	36:RA:1658:C:H6	1.73	0.53
36:RA:2012:G:OP1	53:RW:11:ARG:NH2	2.41	0.53
36:RA:2109:U:H2'	36:RA:2110:G:C8	2.43	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
1:XA:1427:U:H2'	1:XA:1428:A:H8	1.73	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: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
36:YA:2031:A:C6	36:YA:2498:C:H1'	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:R4:23:GLU:C	30:R4:25:TYR:H	2.17	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
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
1:XA:427:U:OP2	1:XA:428:G:O2'	2.25	0.53
11:XK:20:TYR:HB2	11:XK:31:THR:HG23	1.91	0.53
36:YA:247:G:H4'	36:YA:386:G:C5	2.43	0.53
36:YA:1000:A:H2'	36:YA:1001:A:C8	2.44	0.53
36:YA:1252:G:N3	51:YU:33:ARG:HD2	2.23	0.53
42:YH:126:PRO:CG	42:YH:130:ARG:H	2.22	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
36:RA:2684:U:O2'	45:RO:68:GLU:OE2	2.27	0.53
41:RG:129:GLY:O	41:RG:161:THR:OG1	2.20	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
50:RT:111:ARG:C	50:RT:113:LYS:H	2.15	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:376:G:H5''	16:QP:5:ARG:HB2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
19:QS:63:THR:HG23	19:QS:65:ASN:H	1.74	0.53
26:R0:18:ALA:HB1	36:RA:2271:G:H5''	1.89	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
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: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
36:YA:1639:U:H2'	36:YA:1640:C:H5''	1.90	0.53
41:YG:36:LYS:HB3	41:YG:160:VAL:HB	1.90	0.53
1:QA:437:U:H2'	1:QA:438:G:O4'	2.08	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
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: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
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
50:RT:99:LEU:HD12	50:RT:99:LEU:O	2.09	0.53
1:XA:1128:C:H5'	9:XI:16:ARG:HH12	1.74	0.53
9:XI:110:GLU:OE2	9:XI:113:LYS:NZ	2.42	0.53
11:XK:110:ASP:HB2	18:XR:88:LYS:HG3	1.91	0.53
13:XM:15:VAL:HA	13:XM:18:ALA:HB3	1.91	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
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
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:452:A:H2'	1:QA:453:A:H8	1.74	0.52
1:QA:1522:U:H2'	1:QA:1523:G:H8	1.73	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:2250:G:C4	47:RQ:82:ARG:HG3	2.44	0.52
36:RA:2648:C:H2'	36:RA:2649:U:H6	1.75	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
1:XA:1123:A:H4'	10:XJ:36:GLY:HA3	1.91	0.52
23:XW:45:G:O2'	23:XW:46:G:H5''	2.09	0.52
36:YA:582:G:H2'	36:YA:583:G:H8	1.74	0.52
36:YA:1464:C:O2'	36:YA:1528:A:H8	1.91	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
1:QA:752:G:H1'	1:QA:754:C:N4	2.24	0.52
1:QA:769:G:H4'	1:QA:1513:A:H4'	1.91	0.52
36:RA:29:U:H2'	36:RA:30:G:H8	1.72	0.52
36:RA:2469:A:H5''	36:RA:2470:G:C8	2.43	0.52
37:RB:80:U:H2'	37:RB:81:G:H21	1.74	0.52
37:RB:111:U:H2'	37:RB:112:G:C8	2.37	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:823:G:H2'	36:YA:824:A:H8	1.73	0.52
36:YA:2629:A:O2'	36:YA:2630:G:H5''	2.08	0.52
41:YG:97:ASP:HA	41:YG:100:TRP:HD1	1.74	0.52
1:QA:45:U:H2'	1:QA:46:G:C8	2.44	0.52
1:QA:269:C:H2'	1:QA:270:A:C8	2.42	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: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
36:RA:2392:A:H2	36:RA:2424:C:H42	1.57	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:1823:G:OP1	38:YD:54:ARG:NH1	2.42	0.52
38:YD:26:LYS:HB3	38:YD:83:GLU:HG2	1.89	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:522:C:H41	12:QL:53:ARG:NH2	2.06	0.52
1:QA:1355:G:H2'	1:QA:1356:G:C8	2.44	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:686:G:N2	36:YA:788:A:H61	2.07	0.52
36:YA:1509:C:H3'	36:YA:1510:A:H5''	1.90	0.52
39:YE:89:ASP:OD1	39:YE:90:THR:N	2.43	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
7:QG:16:LEU:HD21	9:QI:41:VAL:HG12	1.92	0.52
8:QH:20:TYR:CE2	8:QH:75:ARG:HD2	2.45	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:1298:C:H2'	7:XG:114:ARG:HH12	1.75	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
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: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
36:YA:1952:A:C5	45:YO:22:ILE:HD12	2.45	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
19:QS:9:VAL:C	19:QS:11:VAL:N	2.67	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
36:RA:1853:A:H2'	36:RA:1854:A:C8	2.45	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:900:A:H3'	36:YA:901:A:H8	1.75	0.52
36:YA:2074:U:H2'	36:YA:2075:U:C6	2.44	0.52
42:YH:119:GLU:O	42:YH:140:LYS:NZ	2.32	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
53:RW:88:ARG:HB2	53:RW:92:ARG:HB2	1.91	0.52
1:XA:32:A:H2'	1:XA:33:A:C8	2.44	0.52
1:XA:1225:A:N3	1:XA:1225:A:H2'	2.24	0.52
8:XH:97:VAL:HG21	8:XH:128:GLY:HA2	1.92	0.52
36:YA:823:G:H2'	36:YA:824:A:C8	2.45	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
1:QA:687:A:N6	1:QA:703:G:H21	2.08	0.52
1:QA:1229:A:O2'	22:QV:30:G:OP1	2.26	0.52
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
36:RA:627:A:N6	46:RP:116:GLY:HA2	2.24	0.52
36:RA:665:C:H2'	36:RA:666:G:H8	1.74	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
1:XA:279:A:OP2	17:XQ:95:TYR:OH	2.23	0.52
1:XA:359:U:H2'	1:XA:360:A:C8	2.44	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
34:Y8:15:LYS:HB2	46:YP:65:ARG:HE	1.75	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: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
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
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:689:C:H3'	1:XA:690:G:H21	1.75	0.52
1:XA:1191:A:P	3:XC:3:ASN:HD22	2.33	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1250:A:H2'	1:XA:1251:A:C8	2.45	0.52
2:XB:93:VAL:HG11	2:XB:97:TRP:CD1	2.45	0.52
2:XB:212:GLN:NE2	2:XB:235:SER:OG	2.42	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
1:QA:989:C:O2'	1:QA:1017:G:O2'	2.24	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
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:336:C:O2'	55:RY:35:TYR:OH	2.27	0.52
36:RA:2298:A:H62	36:RA:2318:G:H8	1.56	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
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
39:YE:60:ASN:CG	39:YE:62:PRO:HD2	2.34	0.52
1:QA:718:G:H21	18:QR:49:LYS:HG2	1.76	0.51
5:QE:149:GLU:O	5:QE:153:LYS:HG3	2.10	0.51
9:QI:126:SER:C	9:QI:128:ARG:H	2.18	0.51
11:QK:31:THR:HA	11:QK:42:TRP:HB3	1.92	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: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
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
3:XC:29:TYR:OH	14:XN:54:PRO:HG2	2.10	0.51
46:YP:144:GLU:OE1	46:YP:144:GLU:N	2.44	0.51
1:QA:751:U:H2'	1:QA:752:G:O4'	2.09	0.51
26:R0:9:SER:HB3	36:RA:2255:G:H21	1.75	0.51
32:R6:23:THR:O	34:R8:34:TRP:NE1	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:270(F):U:H2'	36:RA:270(G):C:C6	2.45	0.51
36:RA:1105:U:H2'	36:RA:1106:G:H8	1.75	0.51
36:RA:2692:C:H2'	36:RA:2693:A:H8	1.76	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
17:XQ:15:MET:HE1	17:XQ:43:LEU:HD22	1.91	0.51
36:YA:330:A:HO2'	36:YA:331:A:H8	1.58	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
42:YH:41:MET:HE3	42:YH:64:LEU:HB3	1.91	0.51
1:QA:57:G:H2'	1:QA:58:C:H6	1.74	0.51
1:QA:537:G:H2'	1:QA:538:G:C8	2.45	0.51
1:QA:1218:C:H2'	1:QA:1219:U:C6	2.45	0.51
1:QA:1333:A:H8	1:QA:1333:A:O5'	1.93	0.51
1:QA:1452:C:H4'	1:QA:1453:G:H5'	1.93	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
6:XF:50:TYR:OH	18:XR:74:ARG:O	2.24	0.51
8:XH:19:VAL:HG13	8:XH:21:LYS:HG3	1.92	0.51
36:YA:894:C:H2'	36:YA:895:U:C6	2.44	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
52:YV:34:GLU:O	52:YV:36:PRO:HD3	2.10	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
36:YA:658:C:H2'	36:YA:659:C:C6	2.44	0.51
36:YA:2695:C:H2'	36:YA:2696:U:C6	2.46	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:437:U:O2'	4:QD:123:HIS:ND1	2.38	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
51:RU:94:ASN:HD22	51:RU:94:ASN:C	2.17	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
36:RA:221:A:H4'	36:RA:222:A:O5'	2.11	0.51
36:RA:1026:U:H1'	36:RA:1027:A:H5''	1.92	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:137(A):G:N3	54:RX:41:ASN:ND2	2.59	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
36:RA:1165:U:H2'	36:RA:1166:C:H6	1.75	0.51
36:RA:1510:A:N3	36:RA:1510:A:H2'	2.25	0.51
36:RA:2025:C:H2'	36:RA:2026:C:C6	2.45	0.51
36:RA:2394:C:OP1	46:RP:63:PRO:HD2	2.11	0.51
39:RE:78:LEU:HD23	39:RE:78:LEU:H	1.76	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
24:XX:6:G:O2'	24:XX:7:G:N7	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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
37:YB:32:C:C2	37:YB:51:G:N2	2.78	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:414:C:H2'	36:RA:415:A:H8	1.76	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
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
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
1:XA:243:A:H4'	1:XA:244:U:O5'	2.11	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
50:YT:123:GLN:C	50:YT:125:ARG:H	2.19	0.51
1:QA:922:G:H2'	1:QA:923:A:C8	2.46	0.51
1:QA:1306:A:H1'	1:QA:1332:A:C2	2.45	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
34:R8:34:TRP:HH2	36:RA:2348:U:OP1	1.94	0.51
36:RA:589:C:H2'	36:RA:590:A:C8	2.46	0.51
36:RA:1790:C:H4'	38:RD:209:ALA:HB2	1.93	0.51
36:RA:2074:U:H2'	36:RA:2075:U:C6	2.46	0.51
36:RA:2696:U:H2'	36:RA:2697:G:C8	2.46	0.51
38:RD:17:THR:HB	38:RD:205:VAL:H	1.76	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:YQ:54:MET:HE1	47:YQ:104:PHE:HB3	1.93	0.51
47:YQ:116:GLU:OE2	47:YQ:119:ARG:NH2	2.43	0.51
1:QA:32:A:H2'	1:QA:33:A:C8	2.46	0.51
1:QA:1147:C:O2'	9:QI:5:TYR:OH	2.23	0.51
1:QA:1376:U:H2'	1:QA:1377:A:C8	2.45	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
14:XN:43:CYS:C	14:XN:45:ARG:H	2.19	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: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
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
4:QD:105:VAL:HG13	4:QD:110:PHE:HB2	1.93	0.50
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:69:C:H4'	36:YA:75:G:N7	2.26	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
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:674:G:H1'	40:RF:74:ARG:NH1	2.26	0.50
36:RA:1045:A:O2'	36:RA:1046:A:OP2	2.27	0.50
36:RA:2303:G:O2'	41:RG:132:ASN:HB2	2.12	0.50
36:RA:2503:A:O2'	36:RA:2505:G:OP2	2.22	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:2850:A:N7	36:RA:2868:A:O2'	2.31	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:71:A:H2	54:YX:31:HIS:HE2	1.54	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:2392:A:C8	46:YP:60:MET:HG2	2.46	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
51:YU:114:LYS:HA	51:YU:118:GLY:HA3	1.94	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
16:QP:1:MET:SD	16:QP:3:LYS:NZ	2.71	0.50
22:QV:16:C:O2'	22:QV:61:C:OP1	2.28	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
36:RA:1210:A:H5''	36:RA:1211:U:H3'	1.93	0.50
37:RB:109:G:H2'	37:RB:110:G:C8	2.46	0.50
40:RF:63:LYS:HE2	40:RF:67:GLN:HB2	1.93	0.50
40:RF:170:LEU:HD12	40:RF:172:TRP:CE2	2.46	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
1:XA:1443:G:C6	50:YT:118:ARG:HB2	2.46	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:389:G:H1	46:YP:72:PRO:HD3	1.76	0.50
36:YA:582:G:H2'	36:YA:583:G:C8	2.46	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
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
52:YV:76:LYS:HB2	52:YV:81:TYR:HB3	1.93	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1404:C:H2'	1:QA:1405:G:C8	2.46	0.50
23:QW:55:U:H2'	23:QW:56:C:C5	2.46	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:RA:1990:C:H2'	36:RA:1991:U:C6	2.47	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:177:C:OP2	20:XT:65:LYS:HD3	2.11	0.50
1:XA:1006:C:H2'	1:XA:1007:C:C6	2.47	0.50
12:XL:89:ARG:HD2	12:XL:90:VAL:C	2.37	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:243:A:H4'	1:QA:244:U:O5'	2.12	0.50
1:QA:1241:G:H2'	1:QA:1242:C:C6	2.46	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
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
30:Y4:39:CYS:SG	30:Y4:40:HIS:N	2.81	0.50
43:YI:5:LEU:HD21	43:YI:12:LEU:HB3	1.92	0.50
1:QA:739:C:O2'	15:QO:42:HIS:ND1	2.43	0.50
1:QA:1288:A:H2'	1:QA:1289:A:H8	1.76	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:75:G:HO2'	56:RZ:85:HIS:HE2	1.57	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
56:RZ:28:MET:HE1	56:RZ:61:LEU:HD21	1.94	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:571:A:O5'	36:YA:2030:A:N6	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:607:U:O2	36:YA:621:A:N1	2.45	0.50
36:YA:608:A:H2'	36:YA:609:A:C8	2.46	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
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:57:G:H2'	1:QA:58:C:C6	2.47	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: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
1:QA:1374:A:O2'	7:QG:28:ASN:HB3	2.12	0.50
15:QO:4:THR:HG23	15:QO:7:GLU:H	1.77	0.50
36:RA:620:G:H4'	36:RA:621:A:H5''	1.92	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
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
1:XA:676:A:H1'	11:XK:115:PRO:HB3	1.94	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
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
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
1:QA:1513:A:H2'	1:QA:1514:C:H6	1.76	0.50
15:QO:75:PRO:HA	15:QO:78:TYR:HB3	1.94	0.50
36:RA:892:G:H2'	36:RA:893:C:H6	1.77	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:546:C:H3'	36:YA:547:A:C8	2.47	0.50
36:YA:2728:U:H2'	36:YA:2729:G: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
43:YI:1:MET:N	43:YI:20:ASP:OD1	2.34	0.50
46:YP:37:GLY:O	46:YP:41:ARG:HG2	2.12	0.50
56:YZ:52:SER:O	56:YZ:54:HIS:N	2.45	0.50
56:YZ:103:ARG:HB2	56:YZ:138:GLU:HB3	1.94	0.50
1:QA:65:U:H2'	1:QA:381:C:H41	1.77	0.49
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
20:QT:13:LEU:HD23	20:QT:13:LEU:H	1.77	0.49
36:RA:922:U:H2'	36:RA:923:C:C6	2.46	0.49
36:RA:1794:U:H2'	36:RA:1795:C:H6	1.77	0.49
36:RA:2511:U:O2'	39:RE:138:PRO:O	2.23	0.49
36:RA:2740:A:H2'	36:RA:2741:A:C8	2.47	0.49
38:RD:25:THR:O	38:RD:27:THR:N	2.44	0.49
39:RE:33:VAL:HG12	39:RE:89:ASP:HA	1.94	0.49
1:XA:134:A:N6	16:XP:25:ARG:HH12	2.09	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
36:YA:1264:G:H3'	36:YA:1265:A:H5''	1.94	0.49
36:YA:2168:G:N3	36:YA:2168:G:C2'	2.70	0.49
36:YA:2346:A:H5''	36:YA:2383:G:H1'	1.94	0.49
1:QA:6:G:H4'	1:QA:298:A:H4'	1.94	0.49
1:QA:1399:C:C2	1:QA:1502:A:N6	2.80	0.49
8:QH:114:THR:HG22	8:QH:130:GLY:C	2.37	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
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
34:Y8:31:HIS:HE1	36:YA:2422:A:N7	2.10	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
36:YA:1266:G:O2'	36:YA:2012:G:O6	2.28	0.49
36:YA:1980:G:O5'	36:YA:1980:G:H2'	2.13	0.49
36:YA:2543:G:H2'	36:YA:2544:G:C8	2.47	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:140:A:C8	36:RA:1408:C:O2'	2.62	0.49
36:RA:910:A:H62	47:RQ:12:GLN:HA	1.76	0.49
36:RA:1028:A:H2'	36:RA:1029:A:H8	1.77	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
56:RZ:28:MET:HE3	56:RZ:37:VAL:HG11	1.95	0.49
1:XA:299:G:H2'	1:XA:300:A:C8	2.47	0.49
1:XA:1342:C:H2'	1:XA:1343:G:C8	2.46	0.49
2:XB:26:PRO:C	2:XB:28:PHE:H	2.20	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: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
36:YA:2074:U:HO2'	36:YA:2597:G:HO2'	1.59	0.49
36:YA:2394:C:OP1	46:YP:63:PRO:HD2	2.11	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
1:XA:1198:G:H2'	1:XA:1199:U:C6	2.47	0.49
6:XF:23:LYS:HG2	6:XF:61:LEU:HD21	1.93	0.49
14:XN:4:LYS:HA	14:XN:7:ILE:HG22	1.94	0.49
39:YE:29:GLY:H	39:YE:51:PHE:HE2	1.60	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: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
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:831:G:O2'	46:RP:38:GLN:OE1	2.29	0.49
36:RA:1399:C:H2'	36:RA:1400:G:H8	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:XA:97:U:H2'	1:XA:99:C:C6	2.48	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
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:690:G:H2'	36:YA:691:C:C6	2.47	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
40:YF:29:ASN:HB3	40:YF:112:MET:HE1	1.93	0.49
1:QA:45:U:H2'	1:QA:46:G:H8	1.76	0.49
1:QA:173:U:H5''	1:QA:197:A:O4'	2.12	0.49
1:QA:523:A:C2	12:QL:91:LYS:HB3	2.47	0.49
1:QA:1000:A:O2'	1:QA:1001:G:H5'	2.13	0.49
12:QL:43:VAL:HG13	12:QL:93:LEU:HD22	1.95	0.49
36:RA:265:A:H2'	36:RA:266:G:C4'	2.42	0.49
36:RA:639:U:H2'	36:RA:640:C:C6	2.48	0.49
36:RA:1007:C:H5''	44:RN:35:ARG:NH1	2.26	0.49
36:RA:1142(A):A:H4'	44:RN:25:ARG:HH22	1.77	0.49
36:RA:2552:U:H2'	36:RA:2554:U:OP2	2.12	0.49
36:RA:2821:A:OP2	48:RR:3:HIS:CE1	2.66	0.49
45:RO:86:ILE:HG22	45:RO:94:ARG:HD3	1.94	0.49
55:RY:5:MET:HE2	55:RY:30:VAL:HG13	1.94	0.49
1:XA:384:G:H2'	1:XA:385:C:C6	2.47	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
1:XA:1118:C:H1'	1:XA:1179:A:C5	2.47	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:49:A:H61	36:RA:177:G:H2'	1.78	0.49
36:RA:414:C:H2'	36:RA:415:A:C8	2.48	0.49
36:RA:1231:G:H2'	36:RA:1232:G:H8	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:1678:G:N2	36:RA:1989:G:H22	2.10	0.49
40:RF:149:ASP:OD1	40:RF:149:ASP:N	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
1:XA:1360:A:OP2	14:YN:35:ARG:NH2	2.46	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:HD3	4:XD:47:ARG:H	1.78	0.49
30:Y4:15:ILE:HG13	30:Y4:32:TYR:HD1	1.78	0.49
34:Y8:15:LYS:HD3	34:Y8:46:ARG:HH12	1.77	0.49
34:Y8:28:GLY:O	34:Y8:36:LYS:NZ	2.46	0.49
36:YA:191:A:H2'	36:YA:192:C:C6	2.47	0.49
36:YA:297:C:H5''	55:YY:85:VAL:HG21	1.94	0.49
36:YA:1430:C:H2'	36:YA:1431:U:H6	1.77	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
56:YZ:6:LYS:HD2	56:YZ:40:ASP:HB2	1.95	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
1:QA:1305:G:H8	1:QA:1305:G:H5''	1.77	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
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:626:U:O2	46:YP:105:LEU:HD22	2.12	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
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
1:QA:1199:U:O2'	1:QA:1202:G:OP1	2.30	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:QY:53:G:HO2'	47:RQ:51:ARG:NH2	2.07	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
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
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:747:U:O2	36:YA:2014:A:H1'	2.13	0.49
36:YA:881:G:O5'	36:YA:881:G:H8	1.96	0.49
36:YA:888:C:H3'	36:YA:889:C:H4'	1.94	0.49
36:YA:1009:A:O4'	51:YU:59:ARG:NH1	2.46	0.49
36:YA:2502:G:H5''	36:YA:2503:A:H5''	1.93	0.49
45:YO:25:LEU:HB2	45:YO:38:VAL:HG13	1.94	0.49
49:YS:42:ASP:C	49:YS:44:LYS:H	2.21	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:9:U:O4	36:RA:2629:A:N7	2.46	0.49
36:RA:1941:C:N4	36:RA:1965:C:O4'	2.46	0.49
55:RY:39:VAL:HG12	55:RY:40:GLU:N	2.27	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:XN:29:ARG:HH21	2.36	0.49
1:XA:1402:C:H2'	1:XA:1403:C:O4'	2.13	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
16:XP:49:LEU:HD22	16:XP:73:LEU:HD22	1.94	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
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
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:271(B):G:H4'	36:RA:271(C):U:O5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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: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
1:XA:947:G:O3'	13:XM:109:THR:OG1	2.30	0.48
1:XA:1320:C:H2'	1:XA:1321:C:C6	2.47	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:4:ILE:HG22	42:YH:6:ARG:H	1.78	0.48
42:YH:88:LEU:CB	42:YH:130:ARG:HG2	2.43	0.48
55:YY:88:LYS:C	55:YY:90:LEU:H	2.21	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
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
10:QJ:21:GLN:HA	10:QJ:24:VAL:HG12	1.94	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
48:RR:74:LYS:C	48:RR:76:VAL:H	2.21	0.48
1:XA:1391:U:H2'	1:XA:1392:G:H8	1.77	0.48
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
34:Y8:25:MET:HG3	46:YP:64:LYS:HB2	1.94	0.48
36:YA:102:G:H4'	36:YA:103:A:O5'	2.13	0.48
36:YA:1291:C:H2'	36:YA:1292:U:H6	1.79	0.48
36:YA:1292:U:H2'	36:YA:1293:C:C6	2.48	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
1:XA:1492:A:OP1	12:XL:47:LYS:N	2.45	0.48
3:XC:150:LYS:HB3	3:XC:201:TYR:HB2	1.94	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
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
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:750:G:N3	15:QO:23:GLY:HA3	2.28	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
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: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
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
36:RA:2695:C:H2'	36:RA:2696:U:C6	2.49	0.48
42:RH:107:VAL:HG11	42:RH:151:ILE:HG21	1.95	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:22:G:H4'	1:XA:885:G:C8	2.48	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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
37:YB:32:C:C4	37:YB:51:G:N2	2.81	0.48
1:QA:7:G:H5'	1:QA:298:A:O4'	2.13	0.48
1:QA:294:U:OP1	1:QA:610:G:O2'	2.28	0.48
1:QA:1366:C:H2'	1:QA:1367:C:C6	2.48	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
46:RP:57:THR:C	46:RP:59:LEU:H	2.20	0.48
1:XA:9:G:H5''	5:XE:126:ARG:HE	1.78	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:1359:C:H3'	14:XN:35:ARG:HH21	1.79	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
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:581:C:H2'	36:RA:582:G:C8	2.48	0.48
36:RA:2319:G:O6	49:RS:4:LEU:HB2	2.13	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
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
1:XA:1119:C:H2'	1:XA:1120:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:856:C:O2'	36:RA:857:C:OP1	2.23	0.48
36:RA:1048:A:N1	42:RH:2:SER:OG	2.36	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
26:Y0:7:LEU:HD22	47:YQ:83:MET:HG2	1.96	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:8:PRO:O	42:YH:69:ARG:NE	2.36	0.48
42:YH:83:TYR:CE1	42:YH:138:LYS:HB2	2.49	0.48
1:QA:113:G:H2'	1:QA:114:U:H6	1.79	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
1:QA:1525:G:OP1	11:QK:120:ARG:NH2	2.43	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
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:78:A:H2'	36:YA:79:G:C8	2.47	0.48
36:YA:579:G:H2'	36:YA:580:C:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:910:A:H62	47:YQ:12:GLN:HA	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
42:YH:87:LEU:HD11	42:YH:145:ALA:HA	1.94	0.48
48:YR:74:LYS:C	48:YR:76:VAL:H	2.21	0.48
51:YU:102:GLU:OE2	52:YV:13:ARG:NH2	2.47	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
1:QA:1010:G:H2'	1:QA:1011:G:H8	1.79	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: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
1:XA:1095:U:P	1:XA:1108:G:H1	2.37	0.48
1:XA:1191:A:OP1	3:XC:3:ASN:HB2	2.14	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
2:XB:55:PHE:CD1	2:XB:221:LEU:HD22	2.49	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
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:1815:A:P	38:RD:54:ARG:HH22	2.37	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
50:RT:50:ILE:HG13	50:RT:99:LEU:HD12	1.96	0.48
56:RZ:91:LEU:HD12	56:RZ:130:PRO:HB3	1.96	0.48
56:RZ:99:TYR:HB3	56:RZ:123:ASP:HB2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:602:G:HO2'	36:YA:604:G:HO2'	1.61	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
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: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
1:QA:1286:A:H2'	1:QA:1287:A:H4'	1.96	0.47
36:RA:83:G:N2	36:RA:103:A:OP2	2.36	0.47
36:RA:374:A:H1'	36:RA:401:A:N6	2.29	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
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
17:XQ:18:THR:OG1	17:XQ:69:LYS:NZ	2.31	0.47
32:Y6:25:LYS:HG3	34:Y8:34:TRP:CZ2	2.48	0.47
36:YA:70:G:H21	36:YA:71:A:H62	1.62	0.47
36:YA:1321:A:H2'	36:YA:1322:A:H8	1.78	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:127:G:HO2'	17:QQ:2:PRO:N	2.12	0.47
1:QA:261:U:OP2	20:QT:79:ARG:NH2	2.48	0.47
1:QA:936:C:C2	1:QA:937:A:C8	3.02	0.47
1:QA:1149:C:H2'	1:QA:1150:U:H6	1.78	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:60:ASN:CG	39:RE:62:PRO:HD2	2.39	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Y8:13:ARG:HB3	46:YP:63:PRO:HB3	1.96	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:1571:A:H2'	36:YA:1572:A:C8	2.49	0.47
36:YA:2822:G:OP1	39:YE:159:HIS:NE2	2.46	0.47
36:YA:2823:A:OP1	39:YE:113:PHE:HB2	2.13	0.47
41:YG:9:ARG:O	41:YG:13:GLU:HG2	2.13	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:452:A:O2'	1:QA:453:A:O4'	2.32	0.47
1:QA:684:A:O2'	11:QK:39:PRO:O	2.33	0.47
1:QA:1305:G:N2	1:QA:1331:G:H2'	2.29	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:390:A:H4'	36:RA:391:G:H5'	1.95	0.47
36:RA:586:A:N1	36:RA:809:G:O2'	2.44	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
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
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:698:C:O2'	36:YA:734:A:N6	2.47	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
42:YH:126:PRO:CB	42:YH:130:ARG:H	2.25	0.47
1:QA:712:A:H2'	1:QA:713:G:C8	2.49	0.47
1:QA:1354:C:H2'	1:QA:1355:G:H8	1.79	0.47
14:QN:29:ARG:HD3	14:QN:40:CYS:SG	2.54	0.47
25:QY:14:A:N7	25:QY:15:G:N2	2.62	0.47
36:RA:1266:G:O2'	36:RA:2012:G:O6	2.25	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RE:114:ALA:HB3	39:RE:160:TYR:HB3	1.97	0.47
1:XA:41:G:H2'	1:XA:42:G:C8	2.50	0.47
1:XA:411:A:N9	1:XA:413:G:H1'	2.29	0.47
1:XA:966:G:C2	22:XV:34:C:H5'	2.50	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
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
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
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
49:YS:109:GLY:C	49:YS:111:GLU:H	2.21	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
34:R8:25:MET:HG3	46:RP:64:LYS:CB	2.43	0.47
36:RA:175:G:O2'	36:RA:176:G:H5'	2.15	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
39:RE:36:ARG:HG2	39:RE:47:VAL:HG12	1.97	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
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:270(U):C:H2'	36:YA:270(V):G:H8	1.80	0.47
36:YA:1664:A:H2	45:YO:1:MET:HE1	1.78	0.47
36:YA:2001:A:H2'	36:YA:2002: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
1:QA:1408:A:N1	58:QA:1711:PAR:O61	2.43	0.47
12:QL:32:PHE:HE1	12:QL:86:ARG:HG3	1.79	0.47
36:RA:39:C:O2	40:RF:46:ARG:NH2	2.48	0.47
36:RA:128:C:H2'	36:RA:129:C:H6	1.79	0.47
36:RA:297:C:H5''	55:RY:85:VAL:HG21	1.97	0.47
36:RA:820:A:H4'	36:RA:836:G:N2	2.30	0.47
36:RA:2811:G:OP1	39:RE:61:ARG:N	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
1:XA:1306:A:N6	1:XA:1331:G:O2'	2.46	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:643:C:H2'	1:QA:644:G:H8	1.80	0.47
1:QA:719:C:O2'	18:QR:49:LYS:HB3	2.14	0.47
1:QA:748:C:H1'	1:QA:749:C:H5	1.80	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
12:QL:38:THR:O	12:QL:79:GLU:HG3	2.14	0.47
13:QM:40:ASN:O	13:QM:43:THR:HG22	2.14	0.47
14:QN:40:CYS:HB3	14:QN:43:CYS:HB2	1.97	0.47
18:QR:37:VAL:HG22	18:QR:78:LEU:HB3	1.95	0.47
24:QX:7:G:H2'	24:QX:8:A:C8	2.50	0.47
34:R8:61:LEU:C	34:R8:63:PRO:HD3	2.40	0.47
36:RA:64:A:O3'	54:RX:71:GLY:HA3	2.15	0.47
36:RA:218:A:C2	36:RA:235:U:H4'	2.50	0.47
36:RA:389:G:N1	46:RP:71:VAL:HG12	2.30	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
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
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
51:RU:46:ALA:O	51:RU:50:ARG:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:RY:97:ARG:NH1	55:RY:98:VAL:HB	2.30	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:390:C:O3'	16:XP:28:ARG:NH2	2.48	0.47
1:XA:851:G:H2'	1:XA:852:G:C8	2.49	0.47
1:XA:939:G:H2'	1:XA:940:C:C6	2.50	0.47
1:XA:1101:A:H4'	1:XA:1102:A:O5'	2.14	0.47
1:XA:1111:A:N1	3:XC:177:THR:HG22	2.30	0.47
1:XA:1167:A:H8	1:XA:1167:A:OP1	1.97	0.47
2:XB:26:PRO:C	2:XB:28:PHE:N	2.70	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
20:XT:22:ARG:O	20:XT:26:ASN:ND2	2.48	0.47
30:Y4:12:ALA:HB1	30:Y4:29:PRO:HA	1.96	0.47
30:Y4:26:SER:OG	41:YG:143:GLU:OE2	2.26	0.47
31:Y5:33:CYS:HB2	31:Y5:40:LYS:HD3	1.97	0.47
36:YA:557:U:H2'	36:YA:558:G:C8	2.48	0.47
36:YA:2531:A:H61	36:YA:2662:A:H61	1.62	0.47
36:YA:2712:U:OP1	36:YA:2714:G:H4'	2.15	0.47
52:YV:40:LEU:HG	52:YV:47:VAL:HG12	1.96	0.47
1:QA:980:C:H5''	1:QA:981:U:C5	2.50	0.47
1:QA:1292:U:H2'	1:QA:1293:G:H8	1.80	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:62:GLN:HE22	4:QD:65:ARG:HH21	1.62	0.47
4:QD:200:GLU:O	4:QD:204:ILE:HG12	2.14	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: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
1:XA:1469:G:H2'	1:XA:1470:G:H8	1.80	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:323:U:H2'	1:QA:324:G:O4'	2.14	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
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:978:G:O4'	36:RA:1001:A:H2	1.98	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
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:573:G:N1	36:YA:2031:A:OP2	2.32	0.47
36:YA:836:G:H2'	36:YA:837:C:H6	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:2475:C:O2'	36:YA:2477:C:OP2	2.30	0.47
40:YF:32:LEU:HD23	40:YF:112:MET:HE2	1.97	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:177:G:H3'	36:RA:178:G:H8	1.80	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:1417:C:H2'	36:RA:1418:G:O4'	2.15	0.47
36:RA:1790:C:H5''	36:RA:1791:A:OP1	2.15	0.47
36:RA:1814:G:H4'	38:RD:51:VAL:HG21	1.97	0.47
50:RT:35:LYS:HG3	50:RT:37:GLY:H	1.79	0.47
1:XA:7:G:H5'	1:XA:298:A:O4'	2.14	0.47
1:XA:281:G:OP2	1:XA:281:G:H8	1.98	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:836:G:H2'	36:YA:837:C:C6	2.50	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
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:74:A:H4'	36:RA:75:G:O5'	2.15	0.46
36:RA:576:U:H2'	36:RA:577:G:C8	2.50	0.46
36:RA:662:G:H5'	46:RP:15:ARG:HA	1.96	0.46
36:RA:970:C:H2'	36:RA:971:C:C6	2.50	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
39:RE:76:ARG:HD3	39:RE:195:LEU:HD22	1.97	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: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
1:XA:1250:A:H2	1:XA:1370:G:H1'	1.80	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: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
36:YA:2008:C:H2'	36:YA:2009:G:C8	2.50	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:755:C:H2'	36:RA:756:C:C6	2.50	0.46
36:RA:1140:C:OP2	44:RN:66:LYS:NZ	2.33	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
39:RE:44:TYR:HB2	39:RE:82:ARG:NH1	2.31	0.46
39:RE:131:ALA:O	39:RE:134:ILE:HG12	2.15	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:XY:61:C:N4	56:YZ:183:LEU:O	2.39	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
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
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
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:536:A:H2'	36:RA:537:C:C6	2.50	0.46
36:RA:1454:U:H5'	48:RR:63:ARG:NH1	2.29	0.46
36:RA:2591:C:OP1	38:RD:239:ARG:HD2	2.15	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
56:RZ:4:ARG:HE	56:RZ:60:GLU:HG3	1.80	0.46
1:XA:328:C:H4'	1:XA:329:A:O5'	2.13	0.46
1:XA:1189:C:H5''	3:XC:5:ILE:HD13	1.96	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
26:Y0:47:PRO:HB2	49:YS:20:ARG:HH22	1.79	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:232:G:H8	36:YA:232:G:OP2	1.98	0.46
36:YA:1190:G:H5'	46:YP:32:THR:HA	1.98	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
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
1:QA:1015:A:H2'	1:QA:1016:A:C8	2.50	0.46
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
36:RA:1534:G:N3	36:RA:1534:G:H2'	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
36:YA:2100:G:H1	36:YA:2189:U:H3	1.63	0.46
42:YH:98:LEU:HD22	42:YH:125:VAL:HB	1.97	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
1:QA:1147:C:H4'	9:QI:5:TYR:CE1	2.51	0.46
10:QJ:49:VAL:HG23	14:QN:41:ARG:HB2	1.98	0.46
11:QK:41:THR:HG21	11:QK:72:ALA:CA	2.46	0.46
23:QW:29:U:H2'	23:QW:30:G:C8	2.50	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:2540:C:O2'	36:RA:2740:A:N3	2.40	0.46
36:RA:2566:A:H4'	36:RA:2567:G:O5'	2.15	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
47:RQ:63:LYS:HE2	56:RZ:175:VAL:HG13	1.98	0.46
53:RW:6:ILE:HG22	53:RW:8:ARG:HG3	1.97	0.46
1:XA:584:G:H2'	1:XA:585:G:H8	1.81	0.46
1:XA:1073:U:C2	1:XA:1074:G:C8	3.04	0.46
1:XA:1074:G:O2'	1:XA:1101:A:N1	2.43	0.46
1:XA:1507:A:H2'	1:XA:1508:G:C8	2.51	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
28:Y2:47:ASN:HD22	36:YA:94:G:H21	1.62	0.46
36:YA:141(A):C:O2'	54:YX:37:THR:HG21	2.14	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
36:YA:2173:A:P	36:YA:2173:A:H8	2.38	0.46
49:YS:56:LEU:HD11	49:YS:58:LEU:HD13	1.97	0.46
1:QA:563:A:H2'	1:QA:567:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1071:C:H2'	1:QA:1072:G:H8	1.80	0.46
1:QA:1124:G:H5'	10:QJ:35:SER:HB2	1.98	0.46
1:QA:1355:G:H2'	1:QA:1356:G:H8	1.80	0.46
3:QC:36:ASP:CG	3:QC:59:ARG:HH21	2.23	0.46
4:QD:68:TYR:OH	4:QD:98:GLU:OE2	2.27	0.46
16:QP:49:LEU:HD12	16:QP:50:LYS:H	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
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
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
40:RF:32:LEU:HB3	40:RF:112:MET:HE1	1.97	0.46
1:XA:266:G:H5'	1:XA:268:C:H41	1.80	0.46
1:XA:1490:C:OP2	58:XA:1717:PAR:N64	2.45	0.46
2:XB:24:TRP:CB	2:XB:40:HIS:NE2	2.73	0.46
2:XB:197:VAL:HG13	2:XB:200:ILE:CG1	2.46	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:646:A:H3'	36:YA:647:G:C8	2.50	0.46
36:YA:1454:U:H5	48:YR:73:VAL:HG12	1.80	0.46
36:YA:2110:G:N1	36:YA:2180:U:O4	2.49	0.46
39:YE:7:VAL:HG13	39:YE:51:PHE:CE1	2.50	0.46
46:YP:97:PRO:C	46:YP:99:LEU:H	2.23	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
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
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
56:RZ:53:ILE:HG13	56:RZ:54:HIS:N	2.30	0.46
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
1:XA:1443:G:H5'	1:XA:1446:A:OP2	2.16	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
56:YZ:98:MET:HE2	56:YZ:100:VAL:HG22	1.97	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
1:QA:979:C:OP1	1:QA:1223:C:N4	2.48	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:1314:C:H2'	1:QA:1315:U:H6	1.80	0.46
2:QB:24:TRP:CD1	2:QB:24:TRP:H	2.33	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:691:C:H2'	36:RA:692:C:H6	1.81	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
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
36:YA:141:A:C8	36:YA:1408:C:H1'	2.51	0.46
36:YA:278:A:H2'	36:YA:279:C:H6	1.80	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
32:R6:15:GLU:CD	32:R6:41:PRO:HB3	2.41	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
53:RW:1:MET:HE3	53:RW:2:GLU:H	1.81	0.46
1:XA:60:A:H4'	1:XA:61:G:O5'	2.16	0.46
1:XA:99:C:H2'	1:XA:101:A:C8	2.51	0.46
1:XA:107:G:C2	1:XA:108:G:H1'	2.51	0.46
1:XA:481:G:O2'	1:XA:482:A:N7	2.42	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:991:U:O4	1:XA:1212:U:O2'	2.30	0.46
1:XA:1263:C:H2'	1:XA:1264:C:H6	1.81	0.46
4:XD:121:VAL:O	4:XD:134:ASP:HA	2.16	0.46
22:XV:13:C:O2'	36:YA:1924:C:H4'	2.16	0.46
27:Y1:71:TYR:CZ	43:YI:27:ARG:HB2	2.51	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
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
36:YA:2086:U:H2'	36:YA:2087:G:H8	1.80	0.46
36:YA:2250:G:C4	47:YQ:82:ARG:HG3	2.50	0.46
36:YA:2329:G:H2'	36:YA:2330:G:H8	1.81	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
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
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
47:RQ:4:PRO:HG3	47:RQ:69:PHE:CE2	2.50	0.46
1:XA:8:A:H8	5:XE:101:ILE:HG23	1.81	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:1435:G:H2'	1:XA:1436:U:H6	1.79	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: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
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
1:QA:191(E):G:H2'	1:QA:191(F):U:H6	1.80	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
1:QA:1189:C:OP1	10:QJ:51:ARG:NH2	2.46	0.45
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:84:A:C2	36:RA:103:A:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:662:G:OP1	46:RP:15:ARG:HG2	2.16	0.45
36:RA:839:U:H2'	36:RA:840:C:C6	2.51	0.45
36:RA:1902:C:H5'	38:RD:246:PRO:HD3	1.97	0.45
37:RB:50:G:OP1	49:RS:63:THR:HG23	2.16	0.45
41:RG:11:TYR:HB2	41:RG:176:LEU:HD21	1.96	0.45
56:RZ:145:GLU:HB2	56:RZ:148:ASP:HB3	1.99	0.45
1:XA:97:U:H2'	1:XA:99:C:H6	1.80	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
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
33:Y7:47:ARG:NH2	54:YX:60:ARG:HH12	2.14	0.45
34:Y8:6:THR:HG21	34:Y8:63:PRO:HD3	1.97	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:1252:G:C2	51:YU:33:ARG:HB3	2.52	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
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: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
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
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
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
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
36:YA:2210:G:H2'	36:YA:2210:G:N3	2.31	0.45
40:YF:63:LYS:CE	40:YF:67:GLN:HB2	2.45	0.45
40:YF:117:ARG:NH1	40:YF:120:GLU:OE2	2.48	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:O	30:R4:53:GLU:HG2	2.15	0.45
34:R8:59:LYS:NZ	46:RP:50:ARG:HG3	2.30	0.45
36:RA:173:G:H2'	36:RA:174:C:C6	2.51	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
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: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
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
44:RN:114:ARG:C	44:RN:116:LEU:H	2.24	0.45
47:RQ:32:TYR:CE1	47:RQ:133:ARG:HG3	2.51	0.45
50:RT:77:PRO:HB2	50:RT:80:SER:HB3	1.98	0.45
50:RT:108:ARG:HG2	50:RT:111:ARG:NH2	2.32	0.45
1:XA:1495:U:O2'	36:YA:1919:A:N1	2.39	0.45
7:XG:70:LYS:HE2	7:XG:97:GLN:HG2	1.98	0.45
33:Y7:1:MET:CE	33:Y7:3:ARG:HH12	2.27	0.45
36:YA:38:A:H2'	36:YA:39:C:C6	2.52	0.45
36:YA:248:G:H5'	36:YA:250:G:N7	2.31	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:1467:C:C5	36:YA:1546:C:H2'	2.52	0.45
36:YA:1790:C:H4'	38:YD:209:ALA:HB2	1.96	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:2566:A:H4'	36:YA:2567:G:O5'	2.15	0.45
40:YF:67:GLN:HG3	40:YF:67:GLN:O	2.15	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
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
1:QA:1315:U:H2'	1:QA:1316:G:C8	2.51	0.45
6:QF:9:VAL:HB	6:QF:87:ARG:HB2	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:43:SER:CB	11:QK:68:ALA:CA	2.88	0.45
36:RA:322:A:OP2	40:RF:169:ASN:HB2	2.16	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
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:942:G:H3'	46:YP:36:LYS:HE3	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
55:YY:75:ILE:HG22	55:YY:80:GLY:HA2	1.98	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
1:QA:1150:U:O4	1:QA:1151:A:N6	2.50	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:74:A:H5''	36:RA:74:A:H8	1.82	0.45
36:RA:540:G:H5'	36:RA:541:C:OP2	2.16	0.45
36:RA:587:C:O2	46:RP:33:ARG:NH1	2.50	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
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
52:RV:25:LEU:H	52:RV:92:THR:HG21	1.81	0.45
1:XA:429:U:H1'	1:XA:430:A:H5''	1.98	0.45
1:XA:562:C:H1'	12:XL:15:ARG:HD2	1.97	0.45
1:XA:718:G:C8	11:XK:116:HIS:HB3	2.52	0.45
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
1:XA:1469:G:H2'	1:XA:1470:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:26:PHE:O	7:XG:30:ILE:HG12	2.16	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: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
36:YA:1310:G:N2	36:YA:1313:U:C4	2.85	0.45
56:YZ:163:LEU:CD2	56:YZ:165:VAL:HG22	2.44	0.45
1:QA:32:A:H2'	1:QA:33:A:H8	1.80	0.45
1:QA:299:G:H2'	1:QA:300:A:C8	2.51	0.45
1:QA:438:G:H4'	4:QD:123:HIS:CG	2.51	0.45
1:QA:705:U:H2'	1:QA:705:U:O2	2.16	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
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:270(D):C:H2'	36:RA:270(E):G:H8	1.82	0.45
36:RA:871:U:OP1	47:RQ:5:ARG:HG2	2.17	0.45
36:RA:949:C:H2'	36:RA:950:G:C8	2.52	0.45
36:RA:2115:G:H8	36:RA:2171:A:H62	1.64	0.45
41:RG:11:TYR:OH	41:RG:32:PRO:O	2.27	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
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
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
7:XG:45:ASP:O	7:XG:49:ILE:HG12	2.17	0.45
23:XW:8:U:O2	23:XW:8:U:C2'	2.64	0.45
23:XW:60:C:H5''	23:XW:61:C:C5	2.52	0.45
35:Y9:36:GLN:HG2	36:YA:1124:C:O2'	2.17	0.45
36:YA:66:C:H2'	36:YA:67:U:H6	1.81	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:755:C:H2'	36:YA:756:C:C6	2.52	0.45
36:YA:1528:A:H2'	36:YA:1529:A:H8	1.82	0.45
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:YV:6:LYS:HB2	52:YV:39:LEU:HD21	1.98	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
1:QA:1238:A:N7	1:QA:1301:U:C4	2.84	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:84:A:OP2	55:RY:8:LYS:HE2	2.17	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
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
1:XA:1179:A:H4'	9:XI:103:THR:HA	1.99	0.45
1:XA:1503:A:H1'	24:XX:12:A:N6	2.32	0.45
3:XC:71:ALA:HA	3:XC:106:VAL:HG22	1.97	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
36:YA:2563:U:H4'	45:YO:28:SER:HA	1.99	0.45
40:YF:32:LEU:HB3	40:YF:112:MET:HE1	1.98	0.45
41:YG:86:MET:O	41:YG:88:ILE:HG23	2.17	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: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
1:QA:1479:C:H2'	1:QA:1480:G:H8	1.81	0.45
33:R7:34:ARG:NH1	36:RA:467:G:OP2	2.50	0.45
36:RA:39:C:H2'	36:RA:40:C:C6	2.52	0.45
36:RA:686:G:N2	36:RA:788:A:H61	2.15	0.45
36:RA:1141:U:H1'	36:RA:1142(A):A:C6	2.52	0.45
36:RA:2306:C:N4	41:RG:42:GLY:O	2.48	0.45
36:RA:2650:U:H2'	36:RA:2651:C:C6	2.51	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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: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
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
44:YN:95:PRO:C	44:YN:97:ARG:H	2.25	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:797:C:OP1	11:QK:124:LYS:HD3	2.17	0.45
1:QA:1060:C:H2'	1:QA:1061:G:H8	1.81	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: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
36:RA:1130:U:HO2'	36:RA:1131:G:P	2.39	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
37:RB:66:A:HO2'	37:RB:67:G:P	2.40	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
1:XA:135:C:O2	16:XP:1:MET:HB3	2.16	0.45
1:XA:626:U:C2	1:XA:627:G:C8	3.05	0.45
1:XA:883:C:O2'	1:XA:884:U:H5'	2.17	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:114:TYR:CE2	10:XJ:59:SER:HA	2.52	0.45
14:YN:6:LEU:HB3	14:YN: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:37:C:H2'	36:YA:38:A:C8	2.52	0.45
36:YA:1138:G:N2	44:YN:106:MET:HE3	2.27	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
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
1:QA:950:U:O4	13:QM:105:THR:HG21	2.16	0.45
10:QJ:6:ILE:HD12	10:QJ:98:ILE:HG22	1.98	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:R8:30:ARG:NH2	46:RP:62:LEU:HD13	2.31	0.45
34:R8:34:TRP:CD1	34:R8:34:TRP:O	2.70	0.45
36:RA:242:G:O2'	36:RA:254:G:O6	2.33	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
36:RA:1431:U:H2'	36:RA:1432:C:C6	2.51	0.45
36:RA:1467:C:H5	36:RA:1546:C:H2'	1.82	0.45
36:RA:1501:C:H2'	36:RA:1502:C:H6	1.82	0.45
36:RA:2532:G:N2	36:RA:2663:G:O2'	2.50	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
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
26:Y0:75:LEU:HD21	36:YA:2334:G:C6	2.52	0.45
27:Y1:18:ILE:HG12	27:Y1:37:ILE:HG12	1.99	0.45
36:YA:415:A:H2'	36:YA:416:C:C6	2.50	0.45
36:YA:1152:C:H4'	51:YU:77:SER:HA	1.98	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)
39:YE:111:ARG:HA	48:YR:1:MET:HE2	1.99	0.45
44:YN:70:LYS:HD3	44:YN:87:LEU:HD11	1.99	0.45
50:YT:27:THR:HB	50:YT:48:ILE:HG13	1.97	0.45
50:YT:102:ILE:HB	50:YT:110:ILE:HD12	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:266:G:O2'	1:QA:267:C:OP2	2.29	0.44
1:QA:1124:G:H2'	1:QA:1145:C:C4	2.52	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: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
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
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:229:A:OP1	36:YA:229:A:H4'	2.17	0.44
36:YA:273:G:C2	36:YA:273(A):G:C8	3.05	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:1783:A:H5'	36:YA:2608:G:H4'	1.99	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:YY:12:THR:O	55:YY:75:ILE:HG12	2.17	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
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
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: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
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
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: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
36:YA:1021:A:H3'	36:YA:1021:A:C8	2.52	0.44
36:YA:1204:A:HO2'	36:YA:1205:U:P	2.39	0.44
36:YA:1794:U:H2'	36:YA:1795:C:H6	1.81	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:97:U:H2'	1:QA:99:C:C6	2.53	0.44
1:QA:578:C:O2'	1:QA:728:A:N3	2.47	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
9:QI:114:TYR:CE2	10:QJ:59:SER:HA	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1833:U:O2'	36:RA:1969:A:N1	2.44	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
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
34:Y8:13:ARG:HD2	46:YP:61:ARG:CZ	2.47	0.44
34:Y8:25:MET:HE2	46:YP:64:LYS:HD2	2.00	0.44
36:YA:297:C:H2'	36:YA:298:G:O4'	2.18	0.44
36:YA:550:G:O2'	36:YA:1220:A:N3	2.50	0.44
36:YA:960:A:H5''	36:YA:961:C:OP1	2.17	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
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
47:YQ:30:GLY:CA	47:YQ:107:ALA:HB2	2.47	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
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
2:QB:59:GLU:HG2	2:QB:63:MET:HE2	1.99	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: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
36:RA:1284:A:H2'	36:RA:1285:G:O4'	2.17	0.44
37:RB:25:A:H2'	37:RB:26:A:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:C8	23:XW:18:G:OP2	2.70	0.44
27:Y1:11:ARG:HB2	27:Y1:12:PRO:HD2	2.00	0.44
36:YA:2320:A:H2'	36:YA:2320:A:N3	2.32	0.44
37:YB:28:C:H2'	37:YB:29:A:C8	2.53	0.44
1:QA:51:A:N7	1:QA:114:U:O2'	2.48	0.44
1:QA:481:G:O2'	1:QA:482:A:C8	2.69	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
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
2:QB:93:VAL:HG11	2:QB:97:TRP:CD1	2.49	0.44
36:RA:84:A:C8	36:RA:99:U:C4	3.05	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:780:G:N1	38:RD:230:ASP:OD2	2.45	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:2821:A:H2'	36:RA:2822:G:C8	2.53	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
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
27:Y1:28:GLY:HA2	36:YA:2397:G:H5''	2.00	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:919:G:N2	36:YA:2269:A:OP2	2.47	0.44
36:YA:2023:G:H4'	36:YA:2617:C:O3'	2.17	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
56:YZ:13:GLU:HB3	56:YZ:18:LEU:HD21	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:278:G:O6	17:QQ:92:ARG:NH1	2.50	0.44
1:QA:537:G:H5''	12:QL:113:ARG:NH1	2.32	0.44
1:QA:1014:A:OP1	1:QA:1014:A:C8	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
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
22:QV:23:C:H2'	22:QV:24:U:C6	2.53	0.44
25:QY:19:G:N2	36:RA:881:G:H4'	2.33	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
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
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:8:LEU:HB2	45:RO:19:ILE:HG13	2.00	0.44
45:RO:24:VAL:HG13	45:RO:33:ALA:HB2	1.98	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
6:XF:14:LEU:HD11	6:XF:84:ASN:CG	2.43	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:185:U:H2'	36:YA:186:G:C8	2.53	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
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: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
1:QA:1302:U:OP2	1:QA:1302:U:H4'	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:477:G:H2'	1:XA:478:A:C8	2.52	0.44
1:XA:1287:A:N3	1:XA:1353:G:O2'	2.33	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:19:VAL:HG11	19:XS:44:MET:HE2	2.00	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: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
36:YA:2031:A:N3	36:YA:2455:G:O2'	2.39	0.44
36:YA:2692:C:H2'	36:YA:2693:A:H8	1.83	0.44
41:YG:43:LEU:C	41:YG:45:GLU:H	2.25	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:112:G:HO2'	1:QA:354:G:HO2'	1.65	0.44
1:QA:244:U:H4'	1:QA:245:C:O5'	2.18	0.44
1:QA:692:U:OP1	11:QK:124:LYS:NZ	2.38	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: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
4:QD:153:ARG:HB3	4:QD:181:MET:HE1	1.99	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: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:840:C:H2'	36:RA:841:A:H8	1.82	0.44
36:RA:858:U:O2	36:RA:2268:A:H2'	2.18	0.44
36:RA:1116:C:H2'	36:RA:1117:G:H8	1.83	0.44
36:RA:2439:A:H3'	36:RA:2439:A:P	2.58	0.44
1:XA:945:G:C2	1:XA:946:A:C8	3.05	0.44
1:XA:992:U:O2'	1:XA:993:G:OP2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:OP1	23:XW:59:U:C6	2.71	0.44
36:YA:184:C:O2'	36:YA:217:G:N3	2.49	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
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
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:14:ILE:O	3:QC:15:THR:OG1	2.31	0.44
3:QC:44:GLU:HA	3:QC:52:LEU:HD21	2.00	0.44
36:RA:251:A:C5	36:RA:252:G:H1'	2.53	0.44
36:RA:1292:U:H2'	36:RA:1293:C:H6	1.83	0.44
36:RA:1825:A:OP1	38:RD:249:PRO:HD3	2.18	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
39:RE:45:THR:O	39:RE:83:ASP:N	2.49	0.44
40:RF:129:PHE:C	40:RF:131:GLY:H	2.26	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: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
1:XA:1244:C:H2'	1:XA:1245:A:H8	1.82	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:30:G:H2'	36:YA:31:C:C6	2.53	0.44
36:YA:71:A:H5'	36:YA:71:A:C8	2.53	0.44
36:YA:176:G:O2'	36:YA:177:G:H5'	2.18	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:2864:G:OP1	50:YT:119:LYS:HD2	2.18	0.44
1:QA:8:A:H8	5:QE:101:ILE:HG23	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1286:A:H5''	21:QU:26:LYS:HD2	2.00	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
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
39:RE:130:GLY:C	39:RE:132:HIS:H	2.26	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: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
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
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
26:Y0:74:ARG:HD2	37:YB:12:C:O2'	2.17	0.43
33:Y7:5:TRP:CD2	33:Y7:5:TRP:O	2.70	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
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
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: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
1:QA:1111:A:N1	3:QC:177:THR:HG22	2.33	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:993:G:OP1	51:RU:50:ARG:NH2	2.49	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:2051:A:H5'	36:RA:2578:G:O4'	2.18	0.43
36:RA:2150:U:H2'	36:RA:2151:G:C8	2.53	0.43
37:RB:13:A:N1	37:RB:69:G:O2'	2.43	0.43
39:RE:14:ILE:HG13	39:RE:14:ILE:O	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: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
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
2:XB:163:PHE:HA	2:XB:185:ILE:O	2.17	0.43
21:XU:6:ARG:O	21:XU:12:LYS:HD3	2.19	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
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
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: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
1:QA:1073:U:C2	1:QA:1074:G:C8	3.06	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:RS:69:VAL:HG13	49:RS:101:LEU:HD13	1.99	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
1:XA:690:G:H22	11:XK:55:LYS:NZ	2.16	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
8:XH:33:GLU:HG2	8:XH:59:LEU:HD21	1.99	0.43
12:XL:83:VAL:HG22	12:XL:84:LEU:H	1.82	0.43
25:XY:52:G:H4'	47:YQ:56:ARG:NE	2.33	0.43
28:Y2:29:LYS:HE3	28:Y2:57:ILE:HG21	2.00	0.43
36:YA:533:G:H5'	51:YU:24:TYR:CE2	2.53	0.43
36:YA:882:G:OP2	36:YA:882:G:C8	2.70	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:1664:A:C2	45:YO:1:MET:HE1	2.53	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
42:YH:41:MET:HE3	42:YH:64:LEU:HD23	2.00	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
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
34:R8:2:PRO:HA	36:RA:591:C:H1'	1.99	0.43
36:RA:185:U:H4'	36:RA:218:A:H4'	2.00	0.43
36:RA:740:U:H2'	36:RA:741:G:C8	2.54	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: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
1:XA:166:G:H2'	1:XA:167:G:H8	1.83	0.43
1:XA:552:U:H4'	12:XL:86:ARG:HG2	1.99	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:8:GLY:O	9:XI:76:ALA:HB1	2.17	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:75:G:H2'	36:YA:75:G:N3	2.33	0.43
36:YA:609:A:H2'	36:YA:609(A):G:O4'	2.19	0.43
36:YA:1419:A:C8	36:YA:1579:A:N6	2.86	0.43
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
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:1568:G:H5''	38:RD:61:LEU:HG	2.00	0.43
36:RA:2250:G:O2'	36:RA:2496:C:OP1	2.34	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
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
25:XY:58:A:N6	56:YZ:183:LEU:H	2.16	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
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
39:YE:144:ARG:CG	39:YE:145:LYS:H	2.31	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
56:YZ:6:LYS:NZ	56:YZ:43:GLU:OE2	2.50	0.43
56:YZ:58:VAL:C	56:YZ:60:GLU:H	2.26	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
1:QA:401:C:O2'	1:QA:621:A:N3	2.37	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:R8:52:LYS:N	34:R8:53:PRO:CD	2.81	0.43
36:RA:58:G:O2'	36:RA:73:A:N1	2.46	0.43
36:RA:183:C:O2'	36:RA:432:A:N3	2.41	0.43
36:RA:320:A:H4'	36:RA:322:A:N7	2.33	0.43
36:RA:1535:U:H5'	36:RA:1537:C:N3	2.34	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:2533:A:OP1	36:RA:2665:A:O2'	2.35	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
1:XA:884:U:H4'	1:XA:885:G:H5''	2.00	0.43
1:XA:1148:U:H2'	1:XA:1149:C:O4'	2.18	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:284:U:H2'	36:YA:285:C:H6	1.84	0.43
36:YA:1665:A:H1'	45:YO:1:MET:HE3	1.99	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
1:QA:10:A:OP2	5:QE:126:ARG:HD3	2.19	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:1063:C:OP2	1:QA:1064:G:O2'	2.32	0.43
1:QA:1227:A:OP1	19:QS:80:TYR:OH	2.32	0.43
1:QA:1298:C:H1'	1:QA:1299:A:C6	2.53	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:36:G:H4'	36:RA:451:C:C2	2.53	0.43
36:RA:303:U:C2	36:RA:304:G:C8	3.07	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
38:RD:71:ASP:HB2	38:RD:103:ARG:HH12	1.84	0.43
40:RF:172:TRP:CD1	40:RF:172:TRP:H	2.36	0.43
41:RG:37:VAL:HG23	41:RG:159:VAL:HG12	2.00	0.43
46:RP:84:ASN:OD1	46:RP:116:GLY:HA3	2.18	0.43
1:XA:389:A:H3'	1:XA:390:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1307:U:O4	1:XA:1331:G:N2	2.51	0.43
8:XH:25:ASP:OD1	8:XH:60:ARG:HG2	2.18	0.43
33:Y7:5:TRP:O	33:Y7:5:TRP:CG	2.71	0.43
36:YA:305:U:H2'	36:YA:306:U:C6	2.54	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
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
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: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
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
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:33:A:N3	12:XL:32:PHE:HE2	2.15	0.43
1:XA:978:A:C4	1:XA:1319:A:C2	3.06	0.43
36:YA:36:G:N3	36:YA:450:G:O2'	2.50	0.43
36:YA:218:A:C2	36:YA:235:U:H4'	2.54	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:1500:G:O2'	38:YD:100:GLY:O	2.33	0.43
37:YB:40:U:O2'	37:YB:43:C:OP2	2.36	0.43
40:YF:53:THR:O	40:YF:57:VAL:HG23	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:631:A:H61	36:RA:2402:C:N4	2.17	0.43
36:RA:827:U:O2'	36:RA:2068:U:C2	2.69	0.43
36:RA:971:C:H2'	36:RA:972:G:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
38:RD:35:LYS:N	38:RD:36:PRO:HD3	2.34	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
22:XV:24:U:O2'	36:YA:1923:U:OP1	2.34	0.43
26:Y0:32:ARG:H	26:Y0:35:ASN:ND2	2.16	0.43
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:270(N):G:H21	43:YI:50:ARG:NH2	2.17	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
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:636:U:H2'	1:QA:637:G:C8	2.53	0.43
1:QA:1320:C:H2'	1:QA:1321:C:C6	2.54	0.43
1:QA:1330:U:H4'	13:QM:23:TYR:CE2	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
27:R1:16:ASN:HB2	36:RA:380:U:O3'	2.18	0.43
36:RA:247:G:H4'	36:RA:386:G:C4	2.53	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: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
2:XB:97:TRP:HH2	2:XB:176:GLU:CD	2.26	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:389:G:H22	46:YP:72:PRO:CG	2.32	0.43
36:YA:765:G:H2'	36:YA:766:C:H6	1.84	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
38:YD:165:ILE:HG13	38:YD:175:LEU:HD21	2.00	0.43
40:YF:30:PRO:HB3	46:YP:1:MET:HE1	2.00	0.43
41:YG:6:ALA:HB3	41:YG:104:GLU:OE2	2.18	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:103:A:OP2	36:RA:103:A:H8	2.02	0.42
36:RA:223:A:H5''	36:RA:422:A:H5'	2.01	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
36:RA:1021:A:H3'	36:RA:1022:G:H5''	2.01	0.42
36:RA:1054:A:N6	36:RA:1106:G:O6	2.52	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
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
26:Y0:43:THR:HG22	36:YA:2336:A:H61	1.84	0.42
36:YA:1083:U:O2'	36:YA:1085:A:OP2	2.30	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:H8	36:YA:2173:A:OP1	2.02	0.42
40:YF:11:VAL:HG22	40:YF:125:LEU:HB2	2.01	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
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
6:QF:80:ARG:NH1	6:QF:88:VAL:O	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
36:RA:769:G:H5'	36:RA:1379:A:N6	2.34	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:1449:A:C5	36:RA:1529:A:H2	2.37	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
1:XA:262:A:H5'	20:XT:74:LYS:HG3	2.01	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
28:Y2:71:ASN:CG	28:Y2:72:ALA:H	2.26	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
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
38:YD:146:GLU:HG2	38:YD:152:GLY:C	2.44	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:939:G:N3	1:QA:1375:A:H2	2.17	0.42
1:QA:1121:U:C2	1:QA:1122:U:C5	3.07	0.42
1:QA:1371:G:O3'	9:QI:69:GLY:HA3	2.19	0.42
25:QY:7:A:H61	25:QY:67:A:H2	1.66	0.42
30:R4:1:MET:HB2	41:RG:98:ARG:HH12	1.84	0.42
36:RA:270(E):G:H2'	36:RA:270(F):U:C6	2.55	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
38:RD:218:ARG:HB3	38:RD:219:PRO:HD2	2.01	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:35:G:H2'	1:XA:36:C:C6	2.54	0.42
1:XA:129(A):G:O2'	1:XA:189:U:H3'	2.19	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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
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
48:YR:74:LYS:O	48:YR:75:LEU:HB3	2.18	0.42
1:QA:8:A:H5'	5:QE:101:ILE:HG22	2.01	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:1120:G:H2'	1:QA:1121:U:C6	2.54	0.42
1:QA:1158:C:O2'	2:QB:133:LYS:HD3	2.20	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
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
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:482:A:H4'	55:RY:47:LYS:HG3	2.01	0.42
36:RA:920:G:H2'	36:RA:921:G:H8	1.84	0.42
36:RA:1243:G:H1'	46:RP:4:SER:O	2.18	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
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
1:XA:79:G:H2'	1:XA:80:G:O4'	2.18	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:565:U:OP2	1:XA:566:G:O2'	2.35	0.42
1:XA:824:C:H2'	1:XA:825:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:XA:1032(A):G:H2'	1:XA:1032(B):G:H8	1.84	0.42
11:XK:34:ASP:OD1	11:XK:38:ASN:N	2.53	0.42
26:Y0:7:LEU:HD21	47:YQ:80:GLU:HB3	2.02	0.42
35:Y9:24:TYR:CE1	35:Y9:35:ARG:HG3	2.54	0.42
36:YA:67:U:N3	36:YA:74:A:H2	2.01	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
36:YA:943:U:P	46:YP:36:LYS:HG3	2.59	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
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
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
1:QA:33:A:H2'	1:QA:34:C:C6	2.55	0.42
1:QA:704:A:N3	1:QA:704:A:H2'	2.35	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
16:QP:26:ARG:HG3	16:QP:27:LYS:N	2.34	0.42
21:QU:2:GLY:C	21:QU:4:GLY:N	2.76	0.42
22:QV:9:G:H21	22:QV:45:G:H3'	1.85	0.42
28:R2:23:LYS:NZ	28:R2:27:GLU:OE2	2.52	0.42
36:RA:37:C:H2'	36:RA:38:A:C8	2.54	0.42
36:RA:153:C:H2'	36:RA:154:G:C8	2.55	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: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
39:RE:92:THR:OG1	39:RE:93:VAL:N	2.53	0.42
47:RQ:7:MET:HE1	47:RQ:73:PRO:HG3	2.01	0.42
50:RT:111:ARG:C	50:RT:113:LYS:N	2.78	0.42
1:XA:613:C:H2'	1:XA:614:A:C8	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:779:C:H2'	1:XA:780:A:O4'	2.19	0.42
1:XA:979:C:O2	14:YN:19:ARG:HG2	2.19	0.42
2:XB:16:HIS:CD2	2:XB:210:SER:HA	2.55	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
25:XY:62:C:C2	56:YZ:183:LEU:HG	2.55	0.42
36:YA:860:U:H5	36:YA:917:A:C2	2.36	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:2311:A:H8	41:YG:82:LEU:HD22	1.83	0.42
36:YA:2328:A:H2'	36:YA:2329:G:H8	1.82	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
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
21:QU:2:GLY:C	21:QU:4:GLY:H	2.26	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:HD3	30:R4:38:LYS:HA	1.82	0.42
36:RA:270(L):U:O4	43:RI:50:ARG:NH2	2.53	0.42
36:RA:639:U:C2	36:RA:640:C:C5	3.06	0.42
36:RA:1676:A:H2'	36:RA:1677:A:O4'	2.19	0.42
36:RA:1783:A:H5'	36:RA:2608:G:H4'	2.02	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:2838:G:C4	36:RA:2839:G:C8	3.08	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
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:568:G:O2'	1:XA:574:A:N1	2.51	0.42
1:XA:575:G:O2'	1:XA:820:U:H5''	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:21:ARG:HG2	2:XB:38:GLY:C	2.45	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: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
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
52:YV:66:ARG:HD2	52:YV:88:ARG:CZ	2.48	0.42
1:QA:978:A:C4	1:QA:1319:A:C2	3.08	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
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:RI: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: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:550:G:O2'	36:RA:1220:A:N3	2.52	0.42
36:RA:677:A:O2'	36:RA:2070:G:O2'	2.38	0.42
36:RA:796:C:H2'	36:RA:797:C:H6	1.83	0.42
36:RA:1431:U:H2'	36:RA:1432:C:H6	1.84	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
1:XA:309:G:O2'	1:XA:607:A:N1	2.52	0.42
1:XA:373:A:C2	1:XA:374:A:C8	3.08	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:271:G:H2'	36:YA:272:G:H8	1.85	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
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
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: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
1:QA:390:C:H2'	1:QA:391:G:H8	1.83	0.42
1:QA:720:C:H5''	18:QR:52:PRO:HA	2.02	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
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
27:R1:11:ARG:HB2	27:R1:12:PRO:HD2	2.02	0.42
27:R1:50:ARG:HD2	27:R1:57:GLU:CD	2.45	0.42
27:R1:78:LYS:NZ	36:RA:270(I):G:H21	2.18	0.42
30:R4:15:ILE:HG22	30:R4:20:ASN:HB3	2.01	0.42
30:R4:42:PHE:CE2	41:RG:117:PHE:HB3	2.54	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
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
50:RT:30:VAL:HG21	50:RT:76:PHE:CE1	2.55	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
40:YF:66:PRO:O	40:YF:67:GLN:HB3	2.19	0.42
55:YY:94:LYS:HD2	55:YY:101:LYS:HZ3	1.84	0.42
1:QA:373:A:C2	1:QA:482:A:C6	3.07	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: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
36:RA:807:U:O2'	36:RA:2060:A:N1	2.49	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: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:2727:G:O3'	45:RO:70:LYS:HE2	2.20	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
1:XA:547:A:OP2	4:XD:2:GLY:N	2.53	0.42
1:XA:859:A:OP2	1:XA:869:G:N1	2.51	0.42
2:XB:21:ARG:HG2	2:XB:38:GLY:O	2.19	0.42
2:XB:160:ASP:O	2:XB:183:PRO:HD2	2.19	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:881:G:C8	36:YA:881:G:O5'	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
36:YA:1327:C:H2'	36:YA:1328:G:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:2319:G:H1	49:YS:4:LEU:HD12	1.85	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
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:129:PHE:CE1	40:YF:156:LEU:HD11	2.55	0.42
40:YF:155:LEU:HB2	40:YF:189:THR:HG21	2.02	0.42
41:YG:81:LYS:O	41:YG:82:LEU:HB3	2.20	0.42
56:YZ:150:LEU:HB2	56:YZ:154:ASP:CG	2.45	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:HD23	12:QL:27:LEU:HA	1.92	0.42
36:RA:39:C:H2'	36:RA:40:C:H6	1.84	0.42
36:RA:587:C:H5'	40:RF:90:PHE:CE2	2.55	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
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
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: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
1:XA:1151:A:O4'	10:XJ:39:PRO:HB2	2.20	0.42
4:XD:61:LYS:HE2	4:XD:206:PHE:CE2	2.54	0.42
4:XD:175:SER:OG	4:XD:184:LYS:HB2	2.20	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:143:C:H2'	36:YA:144:C:C6	2.54	0.42
36:YA:184:C:H2'	36:YA:185:U:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
36:YA:1142(A):A:C4	36:YA:1144:G:C8	3.07	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: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
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:22:G:H4'	1:QA:885:G:C8	2.55	0.41
1:QA:164:U:H2'	1:QA:165:C:H6	1.85	0.41
1:QA:195:A:H4'	20:QT:68:LYS:HE3	2.02	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: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
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
36:RA:17:G:H4'	51:RU:25:TRP:HE1	1.85	0.41
36:RA:755:C:H2'	36:RA:756:C:H6	1.84	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
37:RB:15:A:H1'	37:RB:109:G:C8	2.55	0.41
38:RD:34:VAL:C	38:RD:36:PRO:HD3	2.44	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
45:RO:1:MET:HE3	45:RO:67:LYS:HG2	2.02	0.41
52:RV:22:VAL:HG12	52:RV:23:GLU:N	2.35	0.41
52:RV:32:THR:HG1	52:RV:33:VAL:H	1.68	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:971:G:N2	1:XA:1363:A:OP2	2.38	0.41
1:XA:1366:C:HO2'	10:XJ:60:ARG:HH12	1.64	0.41
3:XC:19:GLU:HB3	3:XC:40:ARG:NH2	2.35	0.41
9:XI:89:ASN:C	9:XI:91:ASP:H	2.28	0.41
23:XW:1:G:H2'	23:XW:2:G:C8	2.55	0.41
27:Y1:91:LYS:C	27:Y1:93:GLU:N	2.77	0.41
29:Y3:9:VAL:HG11	29:Y3:55:ARG:HG3	2.01	0.41
36:YA:270(G):C:H2'	36:YA:270(H):C:C6	2.55	0.41
36:YA:1021:A:H8	36:YA:1021:A:H3'	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
38:YD:70:TRP:O	38:YD:73:VAL:HG23	2.20	0.41
44:YN:133:GLN:C	44:YN:134:ARG:HD3	2.45	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
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:267:C:OP2	17:XQ:67:LYS:HD2	2.19	0.41
1:XA:677:U:O2	1:XA:777:A:O2'	2.38	0.41
1:XA:1342:C:H2'	1:XA:1343:G:H8	1.85	0.41
2:XB:21:ARG:HG2	2:XB:39:ILE:CA	2.47	0.41
3:XC:21:ARG:NH2	3:XC:21:ARG:CB	2.83	0.41
15:XO:43:LEU:HD12	15:XO:56:LEU:HD22	2.02	0.41
16:XP:9:PHE:CE2	16:XP:18:ARG:HD2	2.55	0.41
16:XP:20:VAL:HG21	16:XP:32:TYR:CD2	2.55	0.41
18:XR:44:LEU:HD12	18:XR:79:LEU:HD12	2.02	0.41
29:Y3:30:ARG:NH1	36:YA:1184:G:OP1	2.50	0.41
31:Y5:55:ARG:HG2	48:YR:33:ARG:HH21	1.85	0.41
36:YA:29:U:H2'	36:YA:30:G:H8	1.85	0.41
36:YA:270(G):C:H2'	36:YA:270(H):C:H6	1.85	0.41
36:YA:373:U:O2'	36:YA:423:A:H1'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
36:YA:1019:U:O2'	36:YA:1021:A:H2	2.02	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:OP2	36:YA:2611:U:H6	2.03	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:79:ILE:HG23	43:YI:142:VAL:HG23	2.01	0.41
43:YI:120:ILE:HB	43:YI:126:TYR:HE1	1.85	0.41
45:YO:122:LEU:HD13	50:YT:72:VAL:HG11	2.01	0.41
50:YT:124:ASP:HA	50:YT:127:ALA:HB3	2.02	0.41
1:QA:69:G:H2'	1:QA:73:G:H8	1.85	0.41
1:QA:99:C:H2'	1:QA:101:A:C8	2.56	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:999:U:O4	1:QA:1000:A:N6	2.53	0.41
1:QA:1301:U:H2'	1:QA:1302:U:H5'	2.02	0.41
4:QD:146:ILE:N	4:QD:183:GLY:O	2.51	0.41
4:QD:169:LYS:HZ1	6:XF:25:ILE:HD11	1.84	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
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
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:2093:G:OP1	43:RI:23:PRO:HG2	2.21	0.41
39:RE:79:ARG:HE	39:RE:195:LEU:HD21	1.86	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:406:G:C5'	4:XD:5:ILE:HD11	2.44	0.41
1:XA:718:G:H21	18:XR:49:LYS:HG2	1.85	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
29:Y3:7:LYS:HA	29:Y3:33:GLN:O	2.21	0.41
36:YA:37:C:H2'	36:YA:38:A:H8	1.84	0.41
36:YA:256:A:H2'	36:YA:257: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
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:1814:G:H4'	38:YD:51:VAL:HG21	2.03	0.41
36:YA:2246:G:H2'	36:YA:2247:A:H8	1.83	0.41
36:YA:2630:G:H2'	36:YA:2631: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
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
4:QD:12:CYS:SG	4:QD:19:LEU:HB2	2.60	0.41
9:QI:126:SER:C	9:QI:128:ARG:N	2.78	0.41
12:QL:82:VAL:HG13	12:QL:105:TYR:HB2	2.02	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
36:RA:1050:A:H3'	36:RA:1051:G:H8	1.85	0.41
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
41:RG:10:LYS:HG2	41:RG:15:VAL:HG23	2.02	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
1:XA:1203:C:H2'	1:XA:1204:A:C8	2.55	0.41
7:XG:100:ALA:O	7:XG:104:LEU:HD23	2.20	0.41
36:YA:835:A:C4	36:YA:836:G:C8	3.08	0.41
36:YA:2347:C:H2'	36:YA:2348:U:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:2790:A:H2'	36:YA:2790:A:N3	2.36	0.41
39:YE:114:ALA:HB3	39:YE:160:TYR:HB3	2.02	0.41
45:YO:105:GLU:OE1	45:YO:105:GLU:N	2.54	0.41
55:YY:43:ASN:HB3	55:YY:64:GLU:HA	2.02	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
1:QA:1250:A:H4'	9:QI:68:GLY:N	2.35	0.41
1:QA:1443:G:O2'	1:QA:1446:A:H5''	2.20	0.41
5:QE:127:ASN:O	5:QE:131:ILE:HG12	2.21	0.41
25:QY:28:U:H2'	25:QY:29:U:H6	1.86	0.41
36:RA:208:C:H2'	36:RA:209:C:H6	1.85	0.41
36:RA:270(R):G:H2'	36:RA:270(S):G:C8	2.51	0.41
36:RA:309:G:H8	36:RA:309:G:OP2	2.04	0.41
36:RA:632:A:H2'	36:RA:633:A:C8	2.55	0.41
36:RA:1567:A:OP2	38:RD:84:TYR:OH	2.32	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
39:RE:31:CYS:HB3	39:RE:49:LEU:HD12	2.02	0.41
44:RN:95:PRO:O	44:RN:96:GLU:CD	2.63	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
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:XN:6:LEU:HB3	14:XN:23:ARG:NH2	2.34	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
36:YA:1952:A:N3	36:YA:2560:C:O2'	2.40	0.41
36:YA:2392:A:H1'	46:YP:60:MET:HE3	2.03	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:978:A:O2'	1:QA:1322:C:N3	2.47	0.41
1:QA:1149:C:H2'	1:QA:1150:U:C6	2.54	0.41
8:QH:16:ALA:HA	8:QH:19:VAL:HG12	2.02	0.41
36:RA:495:G:H21	53:RW:61:ASN:HD21	1.67	0.41
36:RA:512:G:H1'	36:RA:513:A:OP2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:964:C:O2'	36:RA:2273:A:N3	2.44	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:H6	36:RA:1931:U:H2'	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
39:RE:24:THR:HG21	39:RE:188:VAL:CG2	2.51	0.41
45:RO:1:MET:H1	45:RO:67:LYS:HB3	1.85	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: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
36:YA:1769:G:O2'	36:YA:1958:C:OP1	2.39	0.41
36:YA:2347:C:H2'	36:YA:2348:U:C6	2.56	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: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
1:QA:1022:G:H2'	1:QA:1023:G:C8	2.56	0.41
1:QA:1318:A:H1'	19:QS:37:ARG:NH1	2.35	0.41
32:R6:24:GLU:OE1	32:R6:24:GLU:HA	2.20	0.41
32:R6:33:LYS:HG2	32:R6:34:LEU:H	1.85	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
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
38:RD:52:ARG:NH2	38:RD:250:TRP:CH2	2.88	0.41
40:RF:72:ARG:HA	40:RF:72:ARG:HD2	1.91	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RG:41:GLN:HG2	41:RG:43:LEU:HG	2.01	0.41
47:RQ:36:ALA:HB2	47:RQ:103:MET:HE3	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:626:U:H2'	1:XA:627:G:C8	2.55	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
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:661:C:H5''	46:YP:15:ARG:NH2	2.35	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
36:YA:2533:A:OP1	36:YA:2665:A:O2'	2.24	0.41
38:YD:77:ALA:HA	38:YD:97:TYR:HA	2.02	0.41
56:YZ:58:VAL:O	56:YZ:59:LEU:HG	2.21	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
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
36:RA:270(S):G:C2	36:RA:270(T):G:C5	3.09	0.41
36:RA:819:A:N6	36:RA:1189:A:H1'	2.36	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
36:RA:1655:A:H3'	36:RA:1656:C:H6	1.86	0.41
36:RA:1742:C:H5'	36:RA:1743:G:OP2	2.21	0.41
36:RA:2712:U:O2'	36:RA:2712(A):A:P	2.79	0.41
46:RP:147:LEU:C	46:RP:148:LEU:HD22	2.45	0.41
56:RZ:14:LYS:O	56:RZ:16:SER:N	2.49	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
1:XA:1149:C:H2'	1:XA:1150:U:C6	2.55	0.41
3:XC:20:SER:HB3	3:XC:22:TRP:CD1	2.56	0.41
36:YA:66:C:H2'	36:YA:67:U:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YA:236:C:H2'	36:YA:237:C:H6	1.85	0.41
36:YA:1429:G:H2'	36:YA:1430:C:H6	1.84	0.41
36:YA:2619:C:OP1	39:YE:152:LYS:HE2	2.20	0.41
39:YE:131:ALA:O	39:YE:132:HIS:C	2.63	0.41
42:YH:128:PRO:HG2	42:YH:129:THR:H	1.85	0.41
43:YI:72:LEU:HD23	43:YI:138:ILE:HD12	2.02	0.41
43:YI:130:TYR:HB3	43:YI:136:VAL:HG13	2.01	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:281:G:OP2	1:QA:281:G:H8	2.04	0.41
1:QA:300:A:O2'	1:QA:564:C:N3	2.49	0.41
1:QA:343:U:O2	1:QA:346:G:N2	2.40	0.41
1:QA:411:A:OP2	4:QD:30:LYS:HE3	2.21	0.41
1:QA:1010:G:H2'	1:QA:1011:G:C8	2.56	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: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
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
34:R8:50:LEU:C	34:R8:52:LYS:H	2.29	0.41
36:RA:24:G:H1'	53:RW:77:ASP:HB3	2.02	0.41
36:RA:32:C:O2'	36:RA:33:U:H5'	2.21	0.41
36:RA:84:A:N7	36:RA:99:U:N3	2.68	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
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:1103:A:H5''	36:RA:1104:C:C5	2.56	0.41
36:RA:1407:C:C2	36:RA:1596:A:C2	3.08	0.41
36:RA:1567:A:H3'	38:RD:86:PRO:HG3	2.03	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: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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RA:2803:C:H2'	36:RA:2804:C:H6	1.85	0.41
37:RB:60:C:H2'	37:RB:61:G:H8	1.86	0.41
38:RD:83:GLU:OE1	38:RD:104:TYR:OH	2.35	0.41
38:RD:245:PRO:HA	38:RD:246:PRO:HD3	1.97	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
45:RO:104:ARG:NH2	50:RT:34:VAL:HG11	2.36	0.41
49:RS:25:ARG:HH21	49:RS:40:ILE:HG21	1.86	0.41
53:RW:29:LEU:HD21	53:RW:33:ARG:NH2	2.36	0.41
54:RX:26:TYR:O	54:RX:81:VAL:N	2.51	0.41
55:RY:28:LYS:HD2	55:RY:40:GLU:OE2	2.21	0.41
1:XA:339:C:H2'	1:XA:340:U:H6	1.85	0.41
1:XA:606:G:N2	1:XA:631:G:H8	2.18	0.41
1:XA:619:U:N3	4:XD:134:ASP:OD1	2.44	0.41
1:XA:940:C:H2'	1:XA:941:G:C8	2.56	0.41
1:XA:963:G:N2	10:XJ:55:LYS:HG2	2.36	0.41
1:XA:1347:G:N2	1:XA:1374:A:OP2	2.43	0.41
3:XC:59:ARG:HG2	3:XC:64:VAL:HG12	2.03	0.41
3:XC:129:ALA:HB3	3:XC:132:ARG:HB3	2.03	0.41
12:XL:38:THR:HG22	12:XL:57:LYS:O	2.21	0.41
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
27:Y1:7:ILE:HD12	27:Y1:62:VAL:HG21	2.02	0.41
36:YA:141:A:H8	36:YA:1595:G:H21	1.62	0.41
36:YA:304:G:H2'	36:YA:305:U:C6	2.55	0.41
36:YA:392:C:C2	36:YA:393:C:C5	3.09	0.41
36:YA:511:U:H4'	36:YA:1235:G:H4'	2.02	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
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:1239:G:H2'	36:YA:1240:U:O4'	2.20	0.41
36:YA:1518:C:H2'	36:YA:1519:G:H8	1.86	0.41
36:YA:1608:A:H1'	36:YA:1610:A:OP2	2.21	0.41
36:YA:1657:C:H4'	39:YE:133:LYS:HB3	2.02	0.41
36:YA:2123:G:H2'	36:YA:2124:G:C8	2.56	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:2850:A:N7	36:YA:2868:A:O2'	2.46	0.41
38:YD:95:LEU:HD11	38:YD:105:ILE:HD13	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YG:135:LEU:O	41:YG:154:GLY:HA3	2.20	0.41
42:YH:20:ALA:HB3	42:YH:23:ARG:O	2.21	0.41
42:YH:157:TYR:HA	42:YH:171:LEU:C	2.45	0.41
43:YI:90:GLY:O	43:YI:121:LYS:HE2	2.21	0.41
45:YO:8:LEU:HB2	45:YO:19:ILE:HG13	2.03	0.41
45:YO:79:PHE:CD2	50:YT:72:VAL:HG22	2.56	0.41
46:YP:101:VAL:HG11	46:YP:108:LYS:HG2	2.03	0.41
50:YT:53:ARG:O	50:YT:59:THR:HG23	2.21	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:483:C:OP2	1:QA:484:G:O2'	2.32	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
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
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
34:R8:56:GLU:OE2	46:RP:61:ARG:NH2	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
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
1:XA:587:G:N2	1:XA:754:C:OP2	2.50	0.41
1:XA:1492:A:N6	12:XL:50:SER:OG	2.53	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:32:PHE:HB3	12:XL:84:LEU:HD11	2.02	0.41
12:XL:117:ARG:HB3	12:XL:122:THR:O	2.21	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Y6:41:PRO:HD3	32:Y6:47:THR:HG22	2.02	0.41
34:Y8:39:LYS:HG3	36:YA:2351:G:O6	2.21	0.41
36:YA:184:C:H2'	36:YA:185:U:C6	2.56	0.41
36:YA:529:A:H2'	36:YA:529:A:N3	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
36:YA:2167:U:O2	36:YA:2167:U:C2'	2.69	0.41
36:YA:2639:A:H1'	36:YA:2778:A:C2	2.56	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
56:YZ:94:GLU:OE1	56:YZ:129:SER:OG	2.29	0.41
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
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:1348:U:H4'	9:QI:120:ARG:HD2	2.03	0.40
1:QA:1412:C:H2'	1:QA:1413:A:H8	1.85	0.40
2:QB:87:ARG:NH1	2:QB:220:ASP:OD1	2.42	0.40
2:QB:168:THR:HG21	2:QB:191:ASP:CG	2.46	0.40
8:QH:7:ALA:O	8:QH:11:THR:HG23	2.21	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
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
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:1152:C:H4'	51:RU:77:SER:HA	2.03	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
36:RA:1954:G:O2'	36:RA:1956:U:O4	2.33	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
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
1:XA:1314:C:H2'	1:XA:1315:U:H6	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1422:G:H2'	1:XA:1423:G:C8	2.56	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
27:Y1:97:LEU:CD2	36:YA:270(T):G:H5''	2.51	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:301:G:C6	36:YA:317:G:C6	3.10	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
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
45:YO:2:ILE:HB	45:YO:33:ALA:HB3	2.02	0.40
1:QA:65:U:C6	1:QA:381:C:N4	2.89	0.40
1:QA:127:G:N2	17:QQ:61:GLU:OE1	2.52	0.40
1:QA:399:G:H2'	1:QA:400:C:C6	2.55	0.40
1:QA:974:A:P	14:QN:41:ARG:HH12	2.44	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
35:R9:18:ARG:CZ	35:R9:21:GLY:HA2	2.51	0.40
36:RA:239:U:H2'	36:RA:240:G:O4'	2.21	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
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:2593:U:H2'	36:RA:2594:C:C6	2.56	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: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
1:XA:999:U:H2'	1:XA:1000:A:C8	2.56	0.40
15:XO:55:GLY:HA2	15:XO:58:MET:HE3	2.04	0.40
16:XP:48:TRP:CD1	16:XP:48:TRP:H	2.38	0.40
25:XY:54:U:H5'	56:YZ:178:GLU:HG2	2.02	0.40
36:YA:192:C:O2'	36:YA:802:A:N3	2.51	0.40
36:YA:270(G):C:H42	36:YA:270(S):G:H1	1.68	0.40
36:YA:270(Q):C:C2	36:YA:270(R):G:C8	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
36:YA:1315:C:O2'	36:YA:1392:A:N3	2.47	0.40
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:2287:A:N6	36:YA:2344:U:H3	2.10	0.40
36:YA:2308:G:H2'	36:YA:2308:G:N3	2.35	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
51:YU:92:ARG:NE	51:YU:95:LEU:HG	2.33	0.40
51:YU:92:ARG:NH1	52:YV:11:GLN:H	2.20	0.40
56:YZ:103:ARG:H	56:YZ:138:GLU:HA	1.85	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
1:QA:1250:A:C2	1:QA:1370:G:H1'	2.57	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
27:R1:25:LYS:NZ	27:R1:30:VAL:O	2.52	0.40
34:R8:32:LEU:HD12	36:RA:2391:G:H3'	2.02	0.40
36:RA:1513:C:O2	36:RA:1513:C:C2'	2.70	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:237:C:OP2	17:XQ:40:LYS:NZ	2.53	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
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:271(A):C:H1'	36:YA:272:G:H1'	2.04	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:833:U:H2'	36:YA:834:C:C6	2.57	0.40
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
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: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
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:OP2	1:QA:1302:U:C4'	2.70	0.40
1:QA:1305:G:H5'	21:QU:4:GLY:CA	2.51	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
8:QH:48:TYR:C	8:QH:49:GLU:HG3	2.46	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:192:C:O2'	36:RA:802:A:N3	2.50	0.40
36:RA:259:G:N2	36:RA:621:A:H8	2.18	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:570:G:H2'	36:RA:2030:A:C5	2.56	0.40
36:RA:657:U:C2	36:RA:658:C:C5	3.09	0.40
36:RA:2108:C:H2'	36:RA:2109:U:C6	2.57	0.40
36:RA:2296:U:OP2	49:RS:9:ARG:NH1	2.54	0.40
47:RQ:139:GLU:HG2	56:RZ:53:ILE:HD13	2.03	0.40
48:RR:34:ILE:HG22	48:RR:36:THR:HG23	2.04	0.40
55:RY:5:MET:SD	55:RY:35:TYR:CD1	3.14	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
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
23:XW:20:G:C2'	23:XW:21:A:H4'	2.50	0.40
36:YA:93:C:H2'	36:YA:94:G:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1201:C:H2'	36:YA:1202:C:H6	1.87	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
41:YG:82:LEU:HA	41:YG:86:MET:SD	2.61	0.40
1:QA:954:G:H2'	1:QA:955:U:H6	1.85	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:1305:G:H5'	21:QU:4:GLY:HA3	2.03	0.40
1:QA:1326:C:C2	1:QA:1327:C:C5	3.09	0.40
11:QK:32:ILE:CD1	11:QK:68:ALA:HB1	2.51	0.40
13:QM:19:LEU:HD11	13:QM:56:LEU:HD21	2.02	0.40
23:QW:26:G:N3	23:QW:26:G:H2'	2.36	0.40
34:R8:13:ARG:HG3	46:RP:61:ARG:HE	1.85	0.40
36:RA:196:A:C2	46:RP:51:PHE:HZ	2.38	0.40
36:RA:1666:G:OP1	45:RO:66:LYS:HG3	2.22	0.40
36:RA:1754:C:P	50:RT:96:ARG:HH12	2.45	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
50:RT:93:ARG:N	50:RT:115:ARG:O	2.41	0.40
1:XA:105:G:H2'	1:XA:106:C:H6	1.86	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:542:G:P	4:XD:10:ARG:HH22	2.45	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
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
2:XB:82:ARG:NH1	2:XB:92:TYR:OH	2.54	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Y6:8:LYS:NZ	36:YA:2283:C:H5'	2.36	0.40
32:Y6:28:ARG:NH1	36:YA:2286:A:OP1	2.54	0.40
36:YA:966:G:O4'	36:YA:2267:A:N6	2.55	0.40
36:YA:1327:C:O2'	48:YR:105:ARG:NH2	2.54	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:2702:U:H6	36:YA:2702:U:OP1	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

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%)	14	47
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
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

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
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%)	16	50
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%)	7	35
14	XN	58/61 (95%)	50 (86%)	7 (12%)	1 (2%)	7	35
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%)	4	28
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
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

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
26	Y0	80/85 (94%)	76 (95%)	4 (5%)	0	100	100
27	R1	95/98 (97%)	84 (88%)	10 (10%)	1 (1%)	11	43
27	Y1	95/98 (97%)	85 (90%)	9 (10%)	1 (1%)	11	43
28	R2	67/72 (93%)	64 (96%)	3 (4%)	0	100	100
28	Y2	67/72 (93%)	62 (92%)	4 (6%)	1 (2%)	8	37
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	16
30	Y4	69/71 (97%)	45 (65%)	21 (30%)	3 (4%)	2	16
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%)	7	36
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%)	30	62
38	YD	273/276 (99%)	263 (96%)	10 (4%)	0	100	100
39	RE	203/206 (98%)	170 (84%)	28 (14%)	5 (2%)	4	27
39	YE	203/206 (98%)	166 (82%)	35 (17%)	2 (1%)	12	45
40	RF	200/210 (95%)	185 (92%)	12 (6%)	3 (2%)	8	37
40	YF	200/210 (95%)	187 (94%)	13 (6%)	0	100	100
41	RG	179/182 (98%)	166 (93%)	12 (7%)	1 (1%)	21	56
41	YG	179/182 (98%)	154 (86%)	24 (13%)	1 (1%)	21	56
42	RH	168/180 (93%)	157 (94%)	11 (6%)	0	100	100
42	YH	168/180 (93%)	143 (85%)	22 (13%)	3 (2%)	6	34
43	RI	144/148 (97%)	132 (92%)	12 (8%)	0	100	100
43	YI	144/148 (97%)	121 (84%)	23 (16%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
44	RN	136/140 (97%)	122 (90%)	13 (10%)	1 (1%)	18	52
44	YN	136/140 (97%)	125 (92%)	11 (8%)	0	100	100
45	RO	120/122 (98%)	114 (95%)	5 (4%)	1 (1%)	16	50
45	YO	120/122 (98%)	116 (97%)	4 (3%)	0	100	100
46	RP	148/150 (99%)	131 (88%)	16 (11%)	1 (1%)	18	52
46	YP	148/150 (99%)	117 (79%)	30 (20%)	1 (1%)	18	52
47	RQ	139/141 (99%)	113 (81%)	26 (19%)	0	100	100
47	YQ	139/141 (99%)	121 (87%)	15 (11%)	3 (2%)	5	29
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%)	14	47
51	YU	115/118 (98%)	110 (96%)	4 (4%)	1 (1%)	14	47
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%)	12	45
55	YY	100/110 (91%)	76 (76%)	22 (22%)	2 (2%)	6	31
56	RZ	181/206 (88%)	155 (86%)	24 (13%)	2 (1%)	11	43
56	YZ	181/206 (88%)	147 (81%)	29 (16%)	5 (3%)	4	25
All	All	11473/12126 (95%)	10363 (90%)	1058 (9%)	52 (0%)	24	59

All (52) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
44	RN	22	THR
51	RU	92	ARG

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Mol	Chain	Res	Type
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
39	RE	132	HIS

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Mol	Chain	Res	Type
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 [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	QB	205/220 (93%)	205 (100%)	0	100	100
2	XB	205/220 (93%)	205 (100%)	0	100	100
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%)	173 (100%)	0	100	100
4	XD	173/181 (96%)	173 (100%)	0	100	100
5	QE	116/123 (94%)	116 (100%)	0	100	100
5	XE	116/123 (94%)	116 (100%)	0	100	100
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%)	126 (100%)	0	100	100
8	QH	119/119 (100%)	119 (100%)	0	100	100
8	XH	119/119 (100%)	119 (100%)	0	100	100
9	QI	98/99 (99%)	98 (100%)	0	100	100
9	XI	98/99 (99%)	98 (100%)	0	100	100
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%)	90 (100%)	0	100	100
11	XK	90/99 (91%)	90 (100%)	0	100	100
12	QL	104/108 (96%)	104 (100%)	0	100	100
12	XL	104/108 (96%)	104 (100%)	0	100	100
13	QM	97/101 (96%)	97 (100%)	0	100	100
13	XM	97/101 (96%)	97 (100%)	0	100	100
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%)	72 (100%)	0	100	100
16	XP	72/74 (97%)	72 (100%)	0	100	100
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%)	73 (100%)	0	100	100
20	QT	76/82 (93%)	76 (100%)	0	100	100
20	XT	76/82 (93%)	76 (100%)	0	100	100
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%)	65 (100%)	0	100	100
26	Y0	65/67 (97%)	65 (100%)	0	100	100
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%)	64 (100%)	0	100	100
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%)	63 (100%)	0	100	100
30	Y4	63/63 (100%)	63 (100%)	0	100	100
31	R5	51/52 (98%)	51 (100%)	0	100	100
31	Y5	51/52 (98%)	51 (100%)	0	100	100
32	R6	48/52 (92%)	48 (100%)	0	100	100
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%)	42 (100%)	0	100	100
34	R8	54/55 (98%)	54 (100%)	0	100	100
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%)	165 (100%)	0	100	100
39	YE	165/166 (99%)	165 (100%)	0	100	100
40	RF	161/166 (97%)	161 (100%)	0	100	100
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%)	155 (100%)	0	100	100
42	RH	142/148 (96%)	142 (100%)	0	100	100
42	YH	142/148 (96%)	142 (100%)	0	100	100
43	RI	122/124 (98%)	122 (100%)	0	100	100
43	YI	122/124 (98%)	122 (100%)	0	100	100
44	RN	117/119 (98%)	117 (100%)	0	100	100
44	YN	117/119 (98%)	117 (100%)	0	100	100
45	RO	100/100 (100%)	100 (100%)	0	100	100
45	YO	100/100 (100%)	100 (100%)	0	100	100
46	RP	116/116 (100%)	116 (100%)	0	100	100
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%)	87 (100%)	0	100	100
50	RT	120/127 (94%)	120 (100%)	0	100	100
50	YT	120/127 (94%)	120 (100%)	0	100	100
51	RU	93/94 (99%)	93 (100%)	0	100	100
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%)	85 (100%)	0	100	100
55	YY	85/91 (93%)	85 (100%)	0	100	100
56	RZ	162/179 (90%)	162 (100%)	0	100	100
56	YZ	162/179 (90%)	162 (100%)	0	100	100
All	All	9691/10064 (96%)	9691 (100%)	0	100	100

There are no protein residues with a non-rotameric sidechain to report.

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (67) such sidechains are listed below:

Mol	Chain	Res	Type
3	QC	28	GLN
3	QC	118	GLN
6	QF	13	ASN
6	QF	64	GLN
7	QG	28	ASN
8	QH	81	HIS
8	QH	82	HIS
9	QI	31	GLN
9	QI	38	GLN

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Mol	Chain	Res	Type
12	QL	49	ASN
15	QO	9	GLN
15	QO	50	HIS
15	QO	62	GLN
16	QP	76	GLN
20	QT	16	HIS
31	R5	4	HIS
34	R8	43	GLN
35	R9	34	GLN
38	RD	96	HIS
38	RD	112	GLN
39	RE	55	ASN
39	RE	66	HIS
40	RF	8	GLN
41	RG	58	GLN
41	RG	79	ASN
43	RI	17	GLN
43	RI	105	HIS
44	RN	128	HIS
46	RP	13	ASN
46	RP	81	GLN
47	RQ	113	GLN
48	RR	3	HIS
48	RR	31	HIS
51	RU	72	HIS
51	RU	75	ASN
52	RV	11	GLN
52	RV	64	HIS
3	XC	136	GLN
6	XF	18	GLN
7	XG	37	ASN
7	XG	64	GLN
9	XI	73	GLN
19	XS	47	HIS
20	XT	26	ASN
26	Y0	12	ASN
28	Y2	47	ASN
38	YD	87	ASN
38	YD	227	ASN
39	YE	180	ASN
43	YI	105	HIS
44	YN	69	GLN

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Mol	Chain	Res	Type
44	YN	101	HIS
44	YN	130	HIS
46	YP	9	ASN
46	YP	35	HIS
46	YP	84	ASN
47	YQ	141	GLN
48	YR	11	ASN
48	YR	31	HIS
48	YR	50	HIS
48	YR	71	GLN
49	YS	84	GLN
50	YT	84	GLN
52	YV	11	GLN
53	YW	40	ASN
56	YZ	32	HIS
56	YZ	151	HIS

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%)	258 (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%)	543 (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%)	1791 (18%)	165 (1%)

All (1791) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	QA	6	G
1	QA	7	G

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Mol	Chain	Res	Type
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
1	QA	289	G
1	QA	316	G

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Mol	Chain	Res	Type
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
1	QA	511	C
1	QA	512	U

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Mol	Chain	Res	Type
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
1	QA	817	C
1	QA	828	A

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Mol	Chain	Res	Type
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
1	QA	1030	C
1	QA	1053	G

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Mol	Chain	Res	Type
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
1	QA	1258	G
1	QA	1260	C

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Mol	Chain	Res	Type
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
1	QA	1502	A
1	QA	1503	A

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Mol	Chain	Res	Type
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
23	QW	57	G
23	QW	59	U

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Mol	Chain	Res	Type
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
36	RA	74	A
36	RA	75	G

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Mol	Chain	Res	Type
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
36	RA	275	G
36	RA	276	A

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Mol	Chain	Res	Type
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
36	RA	533	G
36	RA	539	G

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Mol	Chain	Res	Type
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	752	A
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
36	RA	785	G

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Mol	Chain	Res	Type
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
36	RA	991	C

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Mol	Chain	Res	Type
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
36	RA	1110	G

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Mol	Chain	Res	Type
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
36	RA	1368	G

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Mol	Chain	Res	Type
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
36	RA	1543	A

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Mol	Chain	Res	Type
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
36	RA	1791	A

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Mol	Chain	Res	Type
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
36	RA	2031	A

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Mol	Chain	Res	Type
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
36	RA	2215	G

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Mol	Chain	Res	Type
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
36	RA	2459	A

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Mol	Chain	Res	Type
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
36	RA	2732	G

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Mol	Chain	Res	Type
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
37	RB	67	G

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Mol	Chain	Res	Type
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
1	XA	209	U

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Mol	Chain	Res	Type
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
1	XA	435	C

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Mol	Chain	Res	Type
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	575	G
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 oligosaccharides 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	-	44,45,45	0.53	0	63,67,67	0.90	1 (1%)
59	SF4	QD	501	4	0,12,12	-	-	-		
61	AMP	QY	101	-	21,24,25	0.28	0	30,35,38	0.47	0
58	PAR	XA	1717	-	44,45,45	0.53	0	63,67,67	0.86	1 (1%)
59	SF4	XD	501	4	0,12,12	-	-	-		

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
58	PAR	QA	1711	-	-	3/18/94/94	0/4/4/4
59	SF4	QD	501	4	-	-	0/6/5/5
61	AMP	QY	101	-	-	0/7/25/26	0/3/3/3
58	PAR	XA	1717	-	-	2/18/94/94	0/4/4/4
59	SF4	XD	501	4	-	-	0/6/5/5

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
58	QA	1711	PAR	C13-O52-C52	-2.95	110.99	117.98
58	XA	1717	PAR	C13-O52-C52	-2.83	111.26	117.98

There are no chirality outliers.

All (5) torsion outliers are listed below:

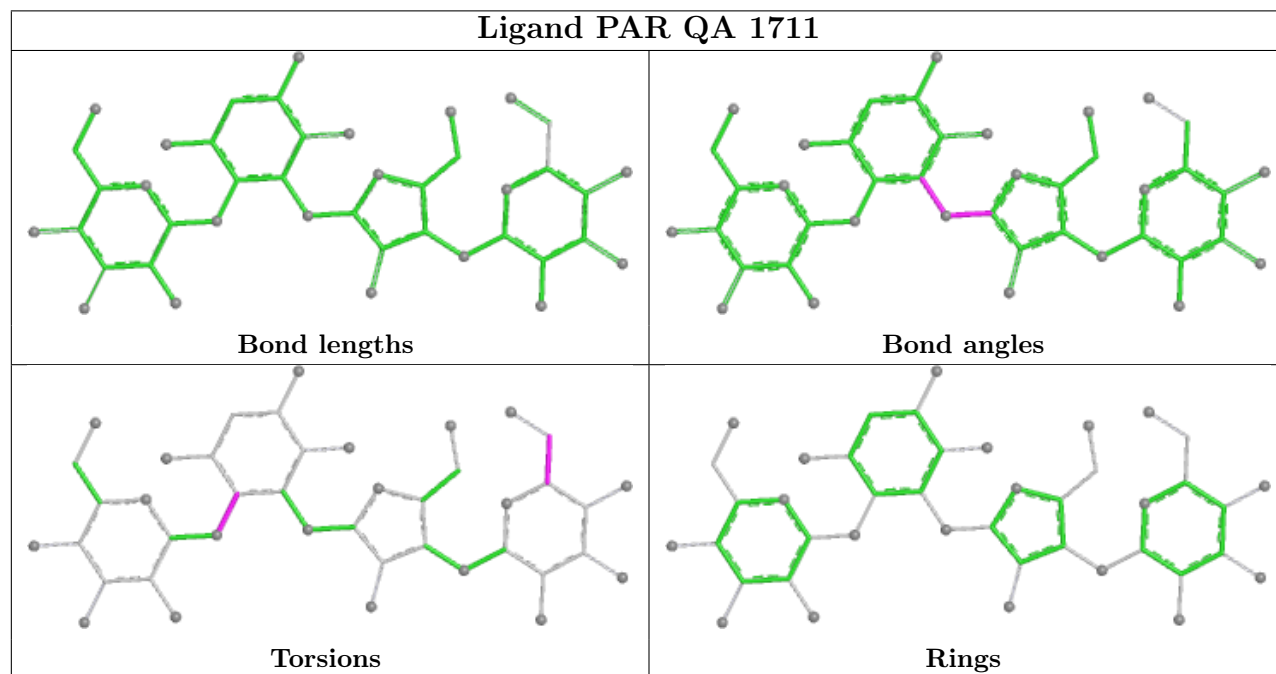
Mol	Chain	Res	Type	Atoms
58	QA	1711	PAR	O54-C54-C64-N64
58	XA	1717	PAR	C23-C33-O33-C14
58	QA	1711	PAR	C52-C42-O11-C11
58	XA	1717	PAR	C52-C42-O11-C11
58	QA	1711	PAR	C44-C54-C64-N64

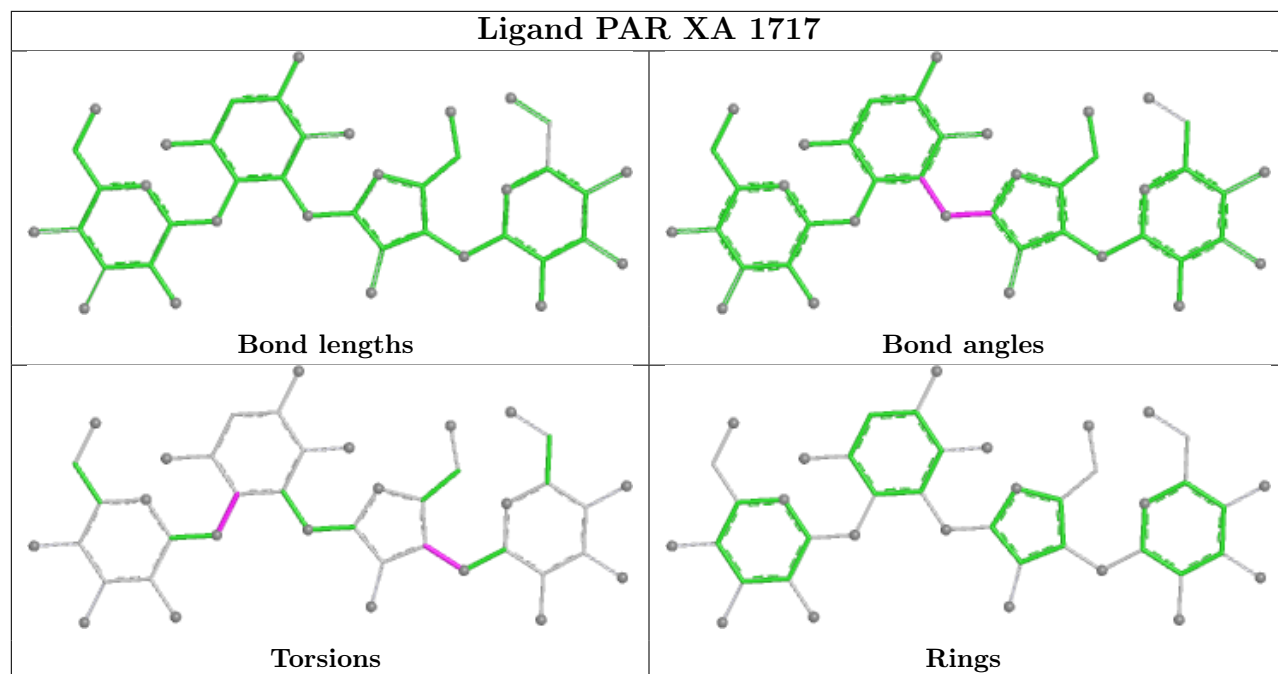
There are no ring outliers.

3 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
58	QA	1711	PAR	1	0
61	QY	101	AMP	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 ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	QA	1500/1522 (98%)	-0.00	32 (2%) 63 43	50, 86, 165, 319	0
1	XA	1500/1522 (98%)	0.01	25 (1%) 69 49	44, 83, 171, 304	0
2	QB	237/256 (92%)	0.69	25 (10%) 11 8	81, 123, 178, 221	0
2	XB	237/256 (92%)	0.64	20 (8%) 17 11	83, 116, 166, 197	0
3	QC	205/239 (85%)	0.72	22 (10%) 11 7	93, 122, 161, 210	0
3	XC	205/239 (85%)	0.41	11 (5%) 31 20	69, 101, 144, 222	0
4	QD	208/209 (99%)	0.18	8 (3%) 44 27	57, 74, 105, 133	0
4	XD	208/209 (99%)	0.25	7 (3%) 48 30	64, 81, 117, 193	0
5	QE	151/162 (93%)	0.23	7 (4%) 37 23	65, 94, 132, 164	0
5	XE	151/162 (93%)	0.32	6 (3%) 42 26	56, 84, 127, 206	0
6	QF	101/101 (100%)	-0.04	0 100 100	68, 82, 110, 150	0
6	XF	101/101 (100%)	-0.04	0 100 100	59, 79, 106, 162	0
7	QG	155/156 (99%)	0.37	7 (4%) 38 24	80, 99, 135, 209	0
7	XG	155/156 (99%)	0.52	15 (9%) 13 9	78, 100, 143, 177	0
8	QH	138/138 (100%)	0.43	7 (5%) 33 21	68, 93, 129, 145	0
8	XH	138/138 (100%)	0.32	8 (5%) 29 18	62, 86, 114, 130	0
9	QI	127/128 (99%)	0.81	13 (10%) 12 8	77, 120, 157, 184	0
9	XI	127/128 (99%)	0.70	11 (8%) 16 11	72, 119, 161, 179	0
10	QJ	99/105 (94%)	1.05	18 (18%) 3 3	100, 135, 178, 190	0
10	XJ	99/105 (94%)	0.97	16 (16%) 4 3	85, 128, 170, 183	0
11	QK	119/129 (92%)	0.60	13 (10%) 10 7	61, 84, 131, 191	0
11	XK	119/129 (92%)	0.39	7 (5%) 28 18	59, 82, 126, 175	0
12	QL	125/131 (95%)	0.77	11 (8%) 15 10	61, 85, 133, 201	0
12	XL	125/131 (95%)	0.40	9 (7%) 21 14	49, 67, 121, 168	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	QM	121/126 (96%)	0.76	14 (11%) 9 7	78, 113, 154, 201	0
13	XM	121/126 (96%)	0.82	15 (12%) 8 6	80, 106, 154, 223	0
14	QN	60/61 (98%)	1.32	13 (21%) 2 2	104, 120, 160, 181	0
14	XN	60/61 (98%)	0.77	7 (11%) 9 6	75, 97, 139, 194	0
15	QO	88/89 (98%)	0.22	2 (2%) 61 41	58, 79, 111, 122	0
15	XO	88/89 (98%)	0.18	0 100 100	54, 77, 112, 132	0
16	QP	84/88 (95%)	0.48	6 (7%) 22 14	58, 77, 115, 157	0
16	XP	84/88 (95%)	0.55	7 (8%) 17 11	69, 92, 135, 169	0
17	QQ	100/105 (95%)	0.46	5 (5%) 34 22	64, 86, 125, 145	0
17	XQ	100/105 (95%)	0.54	7 (7%) 22 14	57, 84, 112, 129	0
18	QR	70/88 (79%)	0.12	1 (1%) 73 54	62, 82, 125, 145	0
18	XR	70/88 (79%)	0.05	1 (1%) 73 54	57, 83, 124, 148	0
19	QS	84/93 (90%)	1.26	16 (19%) 3 2	97, 135, 177, 242	0
19	XS	84/93 (90%)	1.15	19 (22%) 2 2	93, 119, 158, 206	0
20	QT	99/106 (93%)	0.84	12 (12%) 8 6	65, 97, 155, 183	0
20	XT	99/106 (93%)	0.90	15 (15%) 5 4	81, 106, 157, 185	0
21	QU	25/27 (92%)	1.08	3 (12%) 9 6	82, 105, 139, 150	0
21	XU	25/27 (92%)	0.96	4 (16%) 5 3	82, 97, 121, 135	0
22	QV	77/77 (100%)	0.13	4 (5%) 33 21	68, 107, 144, 184	0
22	XV	77/77 (100%)	-0.09	2 (2%) 57 37	61, 91, 133, 174	0
23	QW	76/76 (100%)	1.27	19 (25%) 2 2	87, 201, 260, 298	0
23	XW	76/76 (100%)	1.46	24 (31%) 1 1	72, 216, 282, 293	0
24	QX	19/19 (100%)	1.00	3 (15%) 5 4	73, 137, 257, 258	0
24	XX	18/19 (94%)	1.16	4 (22%) 2 2	59, 141, 233, 233	0
25	QY	75/76 (98%)	1.61	28 (37%) 1 1	92, 218, 273, 304	0
25	XY	75/76 (98%)	1.29	20 (26%) 1 1	80, 196, 262, 284	0
26	R0	82/85 (96%)	0.83	10 (12%) 8 6	59, 77, 116, 189	0
26	Y0	82/85 (96%)	0.44	6 (7%) 21 13	44, 62, 89, 130	0
27	R1	97/98 (98%)	0.49	8 (8%) 17 11	43, 63, 127, 177	0
27	Y1	97/98 (98%)	0.43	6 (6%) 26 17	39, 59, 129, 160	0
28	R2	69/72 (95%)	0.55	5 (7%) 21 14	61, 79, 141, 197	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	Y2	69/72 (95%)	0.39	5 (7%) 21 14	54, 67, 126, 180	0
29	R3	59/60 (98%)	0.38	2 (3%) 48 30	67, 87, 125, 143	0
29	Y3	59/60 (98%)	0.08	1 (1%) 69 49	47, 62, 110, 135	0
30	R4	71/71 (100%)	1.30	16 (22%) 2 2	95, 143, 218, 262	0
30	Y4	71/71 (100%)	1.19	12 (16%) 4 3	98, 146, 221, 235	0
31	R5	59/60 (98%)	0.70	11 (18%) 3 3	51, 73, 187, 215	0
31	Y5	59/60 (98%)	0.62	7 (11%) 9 6	37, 65, 183, 200	0
32	R6	49/54 (90%)	3.40	34 (69%) 0 0	121, 168, 217, 225	0
32	Y6	49/54 (90%)	2.80	24 (48%) 0 1	129, 162, 210, 239	0
33	R7	49/49 (100%)	0.16	3 (6%) 27 17	37, 51, 125, 177	0
33	Y7	49/49 (100%)	0.78	10 (20%) 3 2	31, 45, 140, 169	0
34	R8	64/65 (98%)	1.11	14 (21%) 2 2	50, 69, 126, 175	0
34	Y8	64/65 (98%)	1.05	15 (23%) 2 2	44, 62, 113, 195	0
35	R9	37/37 (100%)	2.40	20 (54%) 0 0	151, 187, 223, 236	0
35	Y9	37/37 (100%)	4.39	31 (83%) 0 0	130, 195, 223, 237	0
36	RA	2882/2915 (98%)	-0.08	71 (2%) 58 39	41, 70, 193, 312	0
36	YA	2883/2915 (98%)	-0.22	56 (1%) 66 46	30, 57, 185, 306	0
37	RB	120/122 (98%)	0.10	0 100 100	85, 104, 132, 152	0
37	YB	120/122 (98%)	0.06	4 (3%) 49 30	64, 86, 111, 140	0
38	RD	272/276 (98%)	0.37	27 (9%) 13 8	39, 56, 87, 225	0
38	YD	275/276 (99%)	-0.06	0 100 100	33, 48, 73, 160	0
39	RE	205/206 (99%)	0.57	15 (7%) 21 13	46, 82, 142, 230	0
39	YE	205/206 (99%)	0.49	17 (8%) 17 11	38, 70, 144, 192	0
40	RF	202/210 (96%)	0.47	13 (6%) 25 16	41, 77, 136, 181	0
40	YF	202/210 (96%)	0.20	5 (2%) 58 39	36, 61, 111, 174	0
41	RG	181/182 (99%)	0.49	9 (4%) 34 22	77, 99, 138, 181	0
41	YG	181/182 (99%)	0.58	15 (8%) 17 11	71, 91, 136, 171	0
42	RH	170/180 (94%)	1.28	34 (20%) 3 2	115, 164, 200, 231	0
42	YH	170/180 (94%)	0.65	18 (10%) 11 8	65, 88, 142, 214	0
43	RI	146/148 (98%)	0.51	8 (5%) 30 19	66, 99, 138, 221	0
43	YI	146/148 (98%)	0.51	6 (4%) 41 25	61, 103, 136, 185	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å ²)	Q<0.9
44	RN	138/140 (98%)	0.42	4 (2%)	53	35	60, 91, 130, 160	0
44	YN	138/140 (98%)	0.34	5 (3%)	46	28	42, 69, 115, 163	0
45	RO	122/122 (100%)	0.10	1 (0%)	82	67	55, 72, 97, 130	0
45	YO	122/122 (100%)	-0.24	0	100	100	40, 60, 81, 93	0
46	RP	150/150 (100%)	0.99	25 (16%)	4	3	46, 85, 136, 194	0
46	YP	150/150 (100%)	0.83	19 (12%)	8	6	36, 75, 123, 207	0
47	RQ	141/141 (100%)	1.11	21 (14%)	5	4	69, 94, 156, 223	0
47	YQ	141/141 (100%)	0.56	14 (9%)	13	8	49, 69, 133, 188	0
48	RR	118/118 (100%)	0.35	6 (5%)	33	21	53, 65, 96, 143	0
48	YR	118/118 (100%)	0.31	3 (2%)	58	39	43, 66, 92, 148	0
49	RS	111/112 (99%)	0.84	9 (8%)	18	11	66, 95, 141, 211	0
49	YS	111/112 (99%)	0.62	7 (6%)	26	17	68, 87, 122, 225	0
50	RT	137/146 (93%)	0.38	7 (5%)	33	21	61, 83, 161, 224	0
50	YT	137/146 (93%)	0.48	8 (5%)	29	18	55, 72, 139, 176	0
51	RU	117/118 (99%)	0.77	13 (11%)	10	7	44, 86, 141, 229	0
51	YU	117/118 (99%)	0.24	6 (5%)	33	21	39, 63, 107, 191	0
52	RV	101/101 (100%)	0.59	6 (5%)	28	18	52, 102, 139, 241	0
52	YV	101/101 (100%)	0.36	5 (4%)	34	22	39, 77, 124, 209	0
53	RW	113/113 (100%)	0.16	7 (6%)	26	17	49, 64, 105, 187	0
53	YW	113/113 (100%)	0.14	2 (1%)	67	48	42, 54, 94, 176	0
54	RX	92/96 (95%)	0.40	3 (3%)	49	30	50, 66, 92, 125	0
54	YX	92/96 (95%)	0.26	1 (1%)	78	61	46, 56, 84, 128	0
55	RY	102/110 (92%)	1.28	26 (25%)	1	2	67, 95, 162, 213	0
55	YY	102/110 (92%)	1.03	15 (14%)	6	4	48, 81, 172, 197	0
56	RZ	183/206 (88%)	1.27	36 (19%)	3	2	97, 144, 217, 255	0
56	YZ	183/206 (88%)	1.24	40 (21%)	2	2	69, 115, 199, 232	0
All	All	21167/21740 (97%)	0.31	1376 (6%)	25	16	30, 82, 180, 319	0

All (1376) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
32	Y6	40	CYS	12.8
35	Y9	23	VAL	10.9

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Mol	Chain	Res	Type	RSRZ
35	Y9	7	VAL	10.3
46	RP	13	ASN	10.0
32	R6	42	TRP	9.8
36	RA	1824	G	9.6
42	RH	152	ARG	9.4
4	XD	4	TYR	8.9
32	R6	40	CYS	8.7
35	R9	32	HIS	8.2
35	Y9	17	ILE	8.2
32	Y6	42	TRP	8.1
7	QG	81	GLY	8.0
35	Y9	24	TYR	7.8
35	Y9	36	GLN	7.8
35	Y9	31	LYS	7.6
36	YA	1061	U	7.5
38	RD	237	GLU	7.2
56	YZ	149	SER	7.2
32	R6	5	VAL	7.1
35	Y9	19	ARG	7.1
42	RH	153	LYS	7.0
32	R6	43	CYS	7.0
32	Y6	41	PRO	6.9
47	RQ	83	MET	6.9
55	RY	79	CYS	6.8
33	Y7	5	TRP	6.8
36	YA	1060	U	6.8
13	XM	101	GLN	6.8
36	YA	1059	G	6.7
23	QW	58	A	6.7
47	RQ	25	ASP	6.6
14	XN	2	ALA	6.6
11	QK	128	ALA	6.6
35	Y9	34	GLN	6.6
10	XJ	59	SER	6.5
32	Y6	23	THR	6.5
56	YZ	97	GLU	6.5
23	XW	37	A	6.5
48	RR	3	HIS	6.5
35	Y9	20	HIS	6.4
32	Y6	5	VAL	6.4
47	YQ	140	ALA	6.3
35	Y9	30	PRO	6.3

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Mol	Chain	Res	Type	RSRZ
47	RQ	80	GLU	6.3
56	YZ	147	GLY	6.2
32	Y6	25	LYS	6.1
38	RD	36	PRO	6.1
47	RQ	87	LYS	6.1
35	Y9	21	GLY	6.0
51	RU	90	VAL	6.0
30	R4	67	TYR	6.0
47	RQ	21	THR	6.0
35	Y9	2	LYS	5.9
51	RU	93	LYS	5.9
39	RE	20	ALA	5.9
25	QY	50	G	5.8
32	Y6	39	TYR	5.8
56	RZ	174	VAL	5.8
20	XT	73	HIS	5.8
38	RD	252	TRP	5.8
13	XM	8	GLU	5.8
3	QC	154	SER	5.7
19	QS	9	VAL	5.7
17	QQ	24	GLU	5.7
47	RQ	91	GLU	5.7
12	QL	27	LEU	5.7
42	YH	152	ARG	5.7
8	XH	138	TRP	5.7
3	QC	15	THR	5.7
32	R6	7	ILE	5.6
56	YZ	148	ASP	5.6
47	RQ	140	ALA	5.6
42	YH	155	SER	5.6
32	R6	39	TYR	5.6
9	QI	75	ASP	5.6
30	Y4	69	LYS	5.6
33	Y7	49	ARG	5.5
55	RY	58	GLY	5.5
32	R6	25	LYS	5.5
52	RV	71	LEU	5.5
35	R9	30	PRO	5.5
34	R8	36	LYS	5.5
49	YS	2	ALA	5.5
35	R9	31	LYS	5.5
34	Y8	35	GLN	5.4

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Mol	Chain	Res	Type	RSRZ
32	R6	41	PRO	5.4
55	RY	98	VAL	5.4
40	RF	131	GLY	5.4
10	QJ	59	SER	5.4
55	YY	92	ASN	5.3
3	QC	158	GLY	5.3
49	RS	36	TYR	5.3
32	R6	13	CYS	5.2
13	XM	12	ASN	5.2
35	Y9	26	ILE	5.2
12	QL	28	LYS	5.2
13	XM	100	GLY	5.2
32	R6	22	ALA	5.1
35	Y9	22	ARG	5.1
47	YQ	91	GLU	5.1
32	Y6	46	HIS	5.1
36	YA	2804	C	5.1
56	YZ	170	THR	5.0
35	Y9	32	HIS	5.0
36	RA	1026	U	5.0
31	Y5	2	ALA	5.0
32	R6	24	GLU	5.0
36	YA	1536	A	5.0
19	XS	42	PRO	5.0
50	RT	2	ASN	5.0
14	QN	2	ALA	4.9
49	RS	110	LEU	4.9
32	R6	23	THR	4.9
38	RD	38	LYS	4.9
56	YZ	175	VAL	4.9
23	XW	20	G	4.9
39	RE	79	ARG	4.8
32	R6	45	LYS	4.8
23	XW	17	A	4.8
32	R6	11	LEU	4.8
34	R8	53	PRO	4.8
56	YZ	92	SER	4.8
56	YZ	169	GLU	4.7
24	XX	14	A	4.7
56	RZ	121	HIS	4.7
27	R1	98	LEU	4.7
56	YZ	174	VAL	4.7

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Mol	Chain	Res	Type	RSRZ
36	YA	1058	G	4.7
47	RQ	88	GLY	4.7
19	XS	10	PHE	4.7
48	YR	106	GLY	4.6
35	Y9	28	GLU	4.6
46	RP	24	GLY	4.6
31	R5	2	ALA	4.6
1	XA	1286	A	4.6
55	YY	91	GLU	4.6
12	XL	26	ALA	4.6
30	Y4	67	TYR	4.5
36	YA	2795	G	4.5
2	XB	24	TRP	4.5
42	RH	113	VAL	4.5
38	RD	52	ARG	4.5
47	RQ	84	GLY	4.5
32	R6	26	ASN	4.5
23	XW	31	C	4.4
26	R0	3	HIS	4.4
56	YZ	120	ILE	4.4
10	XJ	54	PHE	4.4
24	QX	24	A	4.4
20	QT	12	ALA	4.4
51	YU	118	GLY	4.4
42	RH	105	LEU	4.4
36	YA	2803	C	4.4
42	YH	5	GLY	4.4
35	R9	26	ILE	4.4
35	R9	2	LYS	4.4
38	RD	35	LYS	4.4
7	XG	32	ARG	4.4
39	YE	21	VAL	4.4
47	RQ	20	ALA	4.4
33	Y7	48	LYS	4.4
36	YA	2794	C	4.4
30	Y4	39	CYS	4.3
56	YZ	172	ALA	4.3
26	R0	7	LEU	4.3
38	RD	236	GLY	4.3
56	RZ	175	VAL	4.3
36	RA	12	U	4.3
32	R6	9	LEU	4.3

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Mol	Chain	Res	Type	RSRZ
10	XJ	6	ILE	4.3
1	XA	1053	G	4.3
36	RA	11	G	4.3
3	QC	18	TRP	4.3
55	RY	42	VAL	4.3
13	QM	100	GLY	4.3
42	RH	155	SER	4.3
10	XJ	32	ALA	4.2
42	RH	157	TYR	4.2
38	RD	30	GLU	4.2
12	QL	68	ALA	4.2
32	Y6	7	ILE	4.2
55	RY	103	GLY	4.2
25	XY	18	G	4.2
8	QH	99	GLU	4.2
23	QW	57	G	4.2
19	QS	83	HIS	4.2
35	Y9	25	VAL	4.2
20	XT	9	ASN	4.2
51	RU	91	ASP	4.2
7	XG	39	ALA	4.2
55	YY	83	THR	4.2
34	R8	64	TYR	4.2
47	YQ	141	GLN	4.1
32	Y6	22	ALA	4.1
36	YA	2477	C	4.1
55	RY	97	ARG	4.1
11	QK	129	SER	4.1
27	Y1	97	LEU	4.1
47	YQ	80	GLU	4.1
36	RA	1061	U	4.1
26	R0	8	GLY	4.1
19	QS	38	SER	4.0
23	XW	36	C	4.0
55	RY	76	CYS	4.0
1	XA	1130	A	4.0
50	YT	6	LEU	4.0
7	QG	79	ARG	4.0
20	XT	79	ARG	4.0
30	R4	5	ILE	4.0
55	YY	89	PHE	4.0
49	RS	32	LEU	4.0

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Mol	Chain	Res	Type	RSRZ
35	Y9	3	VAL	4.0
55	RY	95	LYS	4.0
30	R4	70	GLY	4.0
25	QY	51	C	4.0
9	QI	105	ASP	4.0
14	QN	30	ALA	4.0
32	R6	21	TYR	4.0
32	Y6	24	GLU	4.0
20	XT	13	LEU	4.0
7	QG	80	VAL	4.0
24	XX	13	A	4.0
8	QH	28	ALA	4.0
35	R9	25	VAL	3.9
2	QB	18	GLY	3.9
55	YY	59	GLY	3.9
17	XQ	98	LEU	3.9
46	RP	18	ARG	3.9
19	XS	12	ASP	3.9
2	QB	214	ILE	3.9
23	QW	39	G	3.9
23	XW	57	G	3.9
19	QS	34	TRP	3.9
46	RP	26	GLY	3.9
34	R8	31	HIS	3.9
39	YE	76	ARG	3.9
41	YG	63	ILE	3.9
55	RY	57	GLN	3.9
56	RZ	183	LEU	3.9
3	QC	193	TYR	3.8
9	XI	18	PHE	3.8
3	QC	190	ARG	3.8
42	RH	150	ALA	3.8
11	QK	127	LYS	3.8
12	QL	69	TYR	3.8
46	RP	20	GLY	3.8
27	Y1	98	LEU	3.8
30	R4	66	SER	3.8
44	YN	46	VAL	3.8
23	QW	34	G	3.8
25	QY	63	G	3.8
35	R9	10	ILE	3.8
20	XT	11	SER	3.8

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Mol	Chain	Res	Type	RSRZ
40	RF	201	VAL	3.8
41	YG	35	GLU	3.8
42	RH	151	ILE	3.8
3	QC	17	ASP	3.8
30	R4	65	ASP	3.7
12	QL	29	GLY	3.7
32	R6	34	LEU	3.7
46	YP	24	GLY	3.7
42	YH	8	PRO	3.7
56	YZ	150	LEU	3.7
5	XE	83	GLU	3.7
34	Y8	34	TRP	3.7
40	RF	65	TRP	3.7
28	R2	52	ASP	3.7
55	RY	92	ASN	3.7
13	QM	66	LEU	3.7
47	YQ	88	GLY	3.7
1	XA	345	C	3.7
30	Y4	52	THR	3.7
13	QM	7	VAL	3.7
27	Y1	85	LEU	3.7
16	XP	12	LYS	3.7
32	Y6	45	LYS	3.7
46	RP	118	GLY	3.7
36	YA	2801	A	3.7
17	QQ	23	VAL	3.7
48	RR	35	THR	3.7
38	RD	33	LEU	3.7
46	YP	22	GLY	3.7
32	R6	31	PRO	3.6
25	XY	63	G	3.6
31	R5	51	TYR	3.6
34	R8	54	GLU	3.6
50	YT	11	GLU	3.6
41	YG	82	LEU	3.6
46	RP	14	LYS	3.6
1	XA	1129	C	3.6
42	RH	115	VAL	3.6
56	YZ	173	ALA	3.6
42	YH	2	SER	3.6
46	RP	19	VAL	3.6
27	R1	95	LEU	3.6

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Mol	Chain	Res	Type	RSRZ
35	Y9	33	LYS	3.6
32	R6	46	HIS	3.6
40	RF	200	GLU	3.6
47	YQ	104	PHE	3.6
55	YY	58	GLY	3.6
46	YP	61	ARG	3.6
20	XT	12	ALA	3.6
42	RH	107	VAL	3.6
42	RH	144	VAL	3.6
2	XB	190	THR	3.6
26	Y0	57	PHE	3.6
33	Y7	46	VAL	3.6
39	RE	46	ALA	3.6
56	YZ	95	PRO	3.6
10	QJ	75	ILE	3.6
42	RH	110	SER	3.6
50	RT	40	THR	3.6
23	QW	53	G	3.5
36	RA	1510	A	3.5
30	R4	69	LYS	3.5
32	Y6	34	LEU	3.5
13	QM	8	GLU	3.5
42	YH	9	ILE	3.5
55	RY	96	ILE	3.5
13	QM	102	ARG	3.5
49	RS	37	ALA	3.5
24	XX	15	A	3.5
30	Y4	36	CYS	3.5
16	XP	29	ASP	3.5
51	YU	91	ASP	3.5
16	QP	48	TRP	3.5
19	QS	71	LEU	3.5
32	R6	36	LEU	3.5
42	YH	168	PRO	3.5
23	QW	61	C	3.5
31	R5	54	GLY	3.5
47	RQ	141	GLN	3.5
56	RZ	115	GLY	3.5
42	RH	171	LEU	3.5
39	YE	79	ARG	3.5
34	R8	56	GLU	3.5
4	QD	4	TYR	3.5

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Mol	Chain	Res	Type	RSRZ
26	R0	5	LYS	3.5
32	R6	8	LYS	3.5
9	QI	106	ALA	3.5
26	Y0	2	ALA	3.5
34	Y8	51	ALA	3.5
39	YE	68	ALA	3.5
25	XY	75	C	3.5
1	XA	630	G	3.5
1	XA	631	G	3.5
25	QY	54	U	3.5
14	QN	28	GLY	3.4
20	QT	73	HIS	3.4
54	RX	79	ALA	3.4
35	Y9	18	ARG	3.4
39	RE	81	ILE	3.4
23	XW	58	A	3.4
36	RA	2801	A	3.4
38	RD	122	ASP	3.4
32	Y6	27	LYS	3.4
23	XW	39	G	3.4
25	QY	47	U	3.4
34	R8	45	GLY	3.4
46	RP	62	LEU	3.4
19	QS	39	THR	3.4
13	XM	4	ILE	3.4
36	YA	1528	A	3.4
22	XV	67	C	3.4
51	RU	92	ARG	3.4
51	RU	38	THR	3.4
2	XB	202	PRO	3.4
13	QM	10	PRO	3.4
14	QN	29	ARG	3.4
34	R8	43	GLN	3.4
47	YQ	21	THR	3.4
32	R6	20	ASN	3.4
53	RW	60	ASN	3.4
25	QY	59	U	3.4
10	XJ	71	LEU	3.4
13	QM	15	VAL	3.4
13	QM	83	ASP	3.4
25	QY	7	A	3.3
36	YA	1510	A	3.3

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Mol	Chain	Res	Type	RSRZ
13	XM	7	VAL	3.3
4	XD	166	LYS	3.3
23	QW	19	G	3.3
36	RA	2112	G	3.3
46	RP	61	ARG	3.3
55	YY	97	ARG	3.3
2	QB	165	VAL	3.3
32	Y6	8	LYS	3.3
7	QG	82	GLY	3.3
47	YQ	83	MET	3.3
50	RT	1	MET	3.3
56	RZ	172	ALA	3.3
56	YZ	179	ASP	3.3
23	QW	48	C	3.3
36	RA	2802	G	3.3
3	QC	159	GLY	3.3
11	QK	44	SER	3.3
42	RH	72	ILE	3.3
30	R4	71	ARG	3.3
3	QC	33	LEU	3.3
46	YP	13	ASN	3.3
39	RE	187	ALA	3.3
42	RH	108	GLY	3.3
52	YV	36	PRO	3.3
25	XY	15	G	3.3
34	Y8	60	LEU	3.3
49	YS	110	LEU	3.3
35	Y9	16	VAL	3.3
47	RQ	90	VAL	3.3
24	QX	13	A	3.3
12	XL	129	ALA	3.3
25	QY	13	C	3.3
4	QD	26	CYS	3.2
34	Y8	63	PRO	3.2
42	RH	55	PRO	3.2
8	XH	23	SER	3.2
19	XS	35	SER	3.2
22	XV	1	C	3.2
35	R9	33	LYS	3.2
36	YA	1052	C	3.2
2	QB	40	HIS	3.2
49	RS	55	ALA	3.2

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Mol	Chain	Res	Type	RSRZ
4	XD	163	GLU	3.2
36	RA	2895	U	3.2
23	XW	18	G	3.2
42	YH	169	VAL	3.2
56	RZ	170	THR	3.2
13	QM	4	ILE	3.2
42	RH	89	ILE	3.2
4	XD	81	GLU	3.2
35	Y9	8	LYS	3.2
11	XK	129	SER	3.2
56	RZ	151	HIS	3.2
3	QC	191	THR	3.2
25	QY	49	A	3.2
34	R8	51	ALA	3.2
39	YE	187	ALA	3.2
32	R6	51	GLU	3.2
15	QO	69	TYR	3.2
38	RD	29	PRO	3.2
35	R9	19	ARG	3.2
16	QP	11	SER	3.2
56	RZ	171	ILE	3.2
39	YE	20	ALA	3.2
10	QJ	73	ASP	3.1
25	XY	17	U	3.1
56	RZ	78	LYS	3.1
43	YI	9	LEU	3.1
3	XC	193	TYR	3.1
36	YA	2805	G	3.1
17	XQ	68	ARG	3.1
31	R5	55	ARG	3.1
2	XB	127	ILE	3.1
30	R4	40	HIS	3.1
39	YE	128	SER	3.1
19	XS	9	VAL	3.1
30	Y4	59	PHE	3.1
33	R7	46	VAL	3.1
33	R7	48	LYS	3.1
1	QA	1322	C	3.1
2	QB	192	SER	3.1
25	QY	53	G	3.1
47	YQ	139	GLU	3.1
56	YZ	178	GLU	3.1

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Mol	Chain	Res	Type	RSRZ
47	YQ	90	VAL	3.1
10	QJ	46	ARG	3.1
16	QP	12	LYS	3.1
23	QW	59	U	3.1
23	XW	59	U	3.1
55	RY	63	LYS	3.1
39	RE	78	LEU	3.1
46	YP	62	LEU	3.1
3	XC	78	GLY	3.1
36	RA	654	A	3.1
52	YV	45	THR	3.1
25	XY	61	C	3.1
25	XY	62	C	3.1
33	Y7	47	ARG	3.1
46	RP	71	VAL	3.1
2	XB	5	ILE	3.1
54	RX	70	LEU	3.1
9	XI	69	GLY	3.1
26	R0	55	ARG	3.1
11	XK	127	LYS	3.1
12	QL	73	GLU	3.1
12	XL	28	LYS	3.1
25	QY	73	A	3.1
36	RA	1057	A	3.1
36	RA	1210	A	3.1
23	QW	40	C	3.0
23	XW	60	C	3.0
34	R8	33	ASN	3.0
36	RA	989	G	3.0
56	RZ	147	GLY	3.0
31	Y5	3	LYS	3.0
51	RU	89	GLU	3.0
41	RG	2	PRO	3.0
46	RP	23	PRO	3.0
47	YQ	1	MET	3.0
39	YE	78	LEU	3.0
42	YH	171	LEU	3.0
36	RA	1103	A	3.0
10	XJ	5	ARG	3.0
35	Y9	35	ARG	3.0
40	RF	72	ARG	3.0
46	RP	65	ARG	3.0

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Mol	Chain	Res	Type	RSRZ
19	XS	68	GLY	3.0
51	YU	117	GLN	3.0
7	XG	36	LYS	3.0
19	QS	11	VAL	3.0
8	QH	138	TRP	3.0
11	XK	42	TRP	3.0
7	XG	27	ILE	3.0
28	Y2	4	SER	3.0
35	Y9	1	MET	3.0
2	QB	26	PRO	3.0
36	RA	1083	U	3.0
25	QY	24	G	3.0
36	YA	881	G	3.0
49	RS	58	LEU	3.0
5	QE	94	ALA	3.0
39	YE	131	ALA	3.0
34	Y8	33	ASN	3.0
1	QA	1129	C	3.0
35	R9	17	ILE	3.0
36	YA	1178	C	3.0
12	XL	116	SER	3.0
2	QB	171	ALA	3.0
31	Y5	51	TYR	3.0
32	Y6	21	TYR	3.0
23	XW	38	U	3.0
25	QY	65	U	3.0
19	XS	45	VAL	3.0
3	XC	192	THR	3.0
31	Y5	5	PRO	3.0
27	R1	21	ARG	3.0
35	R9	35	ARG	3.0
55	YY	86	ARG	3.0
56	YZ	52	SER	3.0
2	QB	166	ASP	3.0
51	RU	118	GLY	3.0
56	YZ	121	HIS	3.0
42	RH	109	PHE	3.0
28	Y2	41	ILE	3.0
19	XS	36	ARG	2.9
41	RG	96	ARG	2.9
46	RP	15	ARG	2.9
25	XY	57	G	2.9

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Mol	Chain	Res	Type	RSRZ
36	RA	1063	G	2.9
47	RQ	78	PRO	2.9
55	RY	78	ALA	2.9
7	XG	81	GLY	2.9
38	RD	47	GLY	2.9
3	QC	104	GLN	2.9
22	QV	1	C	2.9
44	RN	1	MET	2.9
19	QS	5	LEU	2.9
28	Y2	44	LEU	2.9
36	RA	362	U	2.9
36	YA	2118	U	2.9
42	YH	3	ARG	2.9
2	QB	12	GLU	2.9
19	XS	34	TRP	2.9
41	RG	35	GLU	2.9
46	RP	36	LYS	2.9
43	RI	130	TYR	2.9
2	QB	15	VAL	2.9
46	RP	25	SER	2.9
13	XM	6	GLY	2.9
1	QA	413	G	2.9
1	XA	925	G	2.9
23	XW	19	G	2.9
25	XY	50	G	2.9
28	R2	46	GLN	2.9
1	XA	532	A	2.9
36	RA	2629	A	2.9
47	RQ	10	ARG	2.9
36	RA	1064	C	2.9
11	XK	25	TYR	2.9
14	QN	25	VAL	2.9
35	Y9	37	GLY	2.9
17	XQ	101	ARG	2.9
27	R1	85	LEU	2.9
7	XG	45	ASP	2.9
13	QM	120	LYS	2.9
1	QA	1181	G	2.9
3	XC	189	ALA	2.9
34	Y8	55	ALA	2.9
4	XD	112	VAL	2.9
23	QW	55	U	2.9

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Mol	Chain	Res	Type	RSRZ
42	YH	6	ARG	2.9
2	XB	19	HIS	2.9
7	XG	92	SER	2.9
35	Y9	15	LYS	2.9
56	RZ	144	LEU	2.9
7	XG	33	ASP	2.9
38	RD	99	ASP	2.9
51	RU	97	ASP	2.9
10	QJ	32	ALA	2.9
14	XN	22	THR	2.9
40	RF	204	ASN	2.9
56	YZ	168	GLU	2.9
27	R1	28	GLY	2.9
11	XK	95	ILE	2.9
26	R0	4	LYS	2.9
36	RA	1472	A	2.9
48	RR	4	LEU	2.9
25	QY	55	U	2.8
50	YT	106	SER	2.8
36	RA	2896	C	2.8
31	R5	45	VAL	2.8
54	YX	76	ARG	2.8
26	R0	76	GLY	2.8
41	YG	36	LYS	2.8
56	YZ	160	GLY	2.8
1	XA	189	U	2.8
36	YA	275	G	2.8
46	YP	87	ASP	2.8
13	QM	98	VAL	2.8
23	XW	40	C	2.8
35	R9	3	VAL	2.8
50	YT	34	VAL	2.8
35	R9	8	LYS	2.8
35	Y9	29	ASN	2.8
10	QJ	6	ILE	2.8
46	RP	43	GLY	2.8
51	RU	7	GLY	2.8
56	YZ	151	HIS	2.8
11	QK	43	SER	2.8
12	XL	62	SER	2.8
14	QN	23	ARG	2.8
19	XS	78	ARG	2.8

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Mol	Chain	Res	Type	RSRZ
52	RV	36	PRO	2.8
19	XS	41	VAL	2.8
41	YG	31	VAL	2.8
36	RA	330	A	2.8
9	XI	59	PHE	2.8
23	QW	54	U	2.8
42	RH	64	LEU	2.8
40	YF	133	ASN	2.8
1	XA	1325	C	2.8
23	QW	56	C	2.8
36	RA	1059	G	2.8
2	XB	165	VAL	2.8
14	XN	50	LYS	2.8
47	RQ	22	LYS	2.8
14	QN	22	THR	2.8
27	R1	94	LEU	2.8
32	R6	12	GLU	2.8
44	YN	68	GLU	2.8
11	QK	46	GLY	2.8
1	XA	422	C	2.8
25	QY	25	C	2.8
1	XA	928	G	2.8
36	RA	361	G	2.8
37	YB	110	G	2.8
55	YY	85	VAL	2.8
42	RH	53	GLU	2.8
56	YZ	146	ILE	2.8
4	XD	2	GLY	2.7
7	QG	156	TRP	2.7
20	XT	64	ASP	2.7
32	R6	18	ARG	2.7
10	XJ	55	LYS	2.7
36	YA	2117	A	2.7
47	RQ	113	GLN	2.7
56	RZ	118	GLN	2.7
10	QJ	77	PRO	2.7
20	QT	104	LEU	2.7
56	YZ	155	LEU	2.7
1	QA	88	C	2.7
7	XG	43	PHE	2.7
26	R0	16	SER	2.7
38	RD	40	THR	2.7

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Mol	Chain	Res	Type	RSRZ
34	R8	34	TRP	2.7
1	QA	1094	G	2.7
36	RA	1087	G	2.7
34	Y8	64	TYR	2.7
31	R5	4	HIS	2.7
2	XB	136	VAL	2.7
42	RH	71	LEU	2.7
43	YI	132	PRO	2.7
17	XQ	71	PHE	2.7
56	YZ	137	ILE	2.7
2	QB	107	THR	2.7
34	Y8	45	GLY	2.7
36	YA	1057	A	2.7
50	YT	112	ARG	2.7
23	QW	74	C	2.7
23	XW	56	C	2.7
37	YB	28	C	2.7
32	R6	49	HIS	2.7
39	RE	204	ALA	2.7
14	QN	18	VAL	2.7
42	RH	24	VAL	2.7
10	XJ	8	LEU	2.7
23	XW	34	G	2.7
36	RA	82	G	2.7
14	QN	24	CYS	2.7
38	RD	243	GLY	2.7
46	YP	15	ARG	2.7
11	QK	42	TRP	2.7
38	RD	250	TRP	2.7
46	YP	36	LYS	2.7
25	XY	54	U	2.7
36	RA	1088	A	2.7
30	Y4	43	TYR	2.7
53	RW	93	ALA	2.7
9	XI	47	LEU	2.7
20	XT	10	LEU	2.7
31	Y5	4	HIS	2.7
41	RG	133	LEU	2.7
50	RT	82	LEU	2.7
1	QA	174	C	2.7
1	XA	1200	C	2.7
42	RH	8	PRO	2.7

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Mol	Chain	Res	Type	RSRZ
30	Y4	42	PHE	2.7
31	R5	3	LYS	2.7
55	YY	99	CYS	2.7
56	RZ	149	SER	2.7
33	Y7	45	ALA	2.7
31	Y5	52	TYR	2.7
35	R9	24	TYR	2.7
47	YQ	79	LEU	2.7
12	XL	94	PRO	2.6
36	YA	2135	A	2.6
38	RD	239	ARG	2.6
55	RY	80	GLY	2.6
36	YA	885	C	2.6
31	R5	49	CYS	2.6
32	R6	47	THR	2.6
26	Y0	9	SER	2.6
38	RD	240	ALA	2.6
55	RY	49	VAL	2.6
19	QS	80	TYR	2.6
1	QA	631	G	2.6
51	YU	97	ASP	2.6
10	QJ	47	PHE	2.6
20	XT	75	ASN	2.6
36	RA	895	U	2.6
46	YP	9	ASN	2.6
56	YZ	136	PHE	2.6
20	QT	103	GLY	2.6
40	YF	85	GLY	2.6
25	XY	73	A	2.6
32	R6	52	VAL	2.6
55	RY	65	ALA	2.6
55	YY	90	LEU	2.6
25	QY	11	C	2.6
28	Y2	17	SER	2.6
11	QK	25	TYR	2.6
20	XT	14	LYS	2.6
35	Y9	10	ILE	2.6
34	Y8	48	PHE	2.6
35	R9	1	MET	2.6
42	RH	41	MET	2.6
3	QC	2	GLY	2.6
23	QW	47	U	2.6

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Mol	Chain	Res	Type	RSRZ
23	QW	18	G	2.6
36	YA	2112	G	2.6
2	XB	155	LEU	2.6
28	R2	44	LEU	2.6
32	Y6	10	LEU	2.6
33	Y7	4	THR	2.6
41	RG	34	LEU	2.6
35	Y9	5	ALA	2.6
18	QR	88	LYS	2.6
23	XW	41	A	2.6
25	QY	58	A	2.6
30	R4	22	ILE	2.6
42	YH	153	LYS	2.6
32	Y6	49	HIS	2.6
10	XJ	47	PHE	2.6
42	YH	128	PRO	2.6
25	QY	64	C	2.6
56	RZ	140	ASP	2.6
4	QD	2	GLY	2.6
5	XE	22	GLY	2.6
7	XG	28	ASN	2.6
38	RD	56	GLY	2.6
50	YT	58	ASN	2.6
56	RZ	114	GLY	2.6
34	R8	50	LEU	2.6
39	YE	59	VAL	2.6
56	YZ	7	ALA	2.6
56	YZ	96	VAL	2.6
43	RI	131	LYS	2.6
2	QB	105	PHE	2.6
25	QY	52	G	2.6
36	RA	1056	G	2.6
36	YA	1055	G	2.6
36	YA	1177	A	2.6
16	QP	10	GLY	2.6
13	QM	12	ASN	2.6
5	XE	81	GLU	2.6
2	XB	27	LYS	2.6
4	QD	73	ARG	2.6
32	R6	48	VAL	2.6
42	RH	169	VAL	2.6
18	XR	88	LYS	2.6

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Mol	Chain	Res	Type	RSRZ
55	RY	4	LYS	2.6
5	XE	98	THR	2.6
16	XP	80	PHE	2.5
22	QV	47	U	2.5
30	R4	39	CYS	2.5
36	RA	1060	U	2.5
36	YA	1535	U	2.5
43	RI	34	GLY	2.5
2	XB	187	LEU	2.5
56	RZ	150	LEU	2.5
56	YZ	183	LEU	2.5
10	QJ	76	ASN	2.5
25	QY	26	G	2.5
34	R8	59	LYS	2.5
36	RA	1825	A	2.5
49	YS	47	THR	2.5
1	XA	219	C	2.5
25	QY	74	C	2.5
25	QY	75	C	2.5
36	YA	886	C	2.5
47	RQ	104	PHE	2.5
2	QB	19	HIS	2.5
43	RI	133	HIS	2.5
8	XH	131	GLY	2.5
12	QL	118	SER	2.5
22	QV	24	U	2.5
41	YG	26	GLN	2.5
52	YV	35	LEU	2.5
9	XI	116	LYS	2.5
13	XM	99	ARG	2.5
2	QB	231	GLU	2.5
43	RI	7	GLU	2.5
53	RW	5	ALA	2.5
56	RZ	107	THR	2.5
36	RA	2799	A	2.5
1	XA	1002	G	2.5
36	RA	654(A)	G	2.5
9	QI	114	TYR	2.5
9	XI	92	TYR	2.5
3	XC	42	LEU	2.5
3	XC	2	GLY	2.5
16	XP	71	ARG	2.5

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Mol	Chain	Res	Type	RSRZ
49	YS	32	LEU	2.5
52	RV	94	LEU	2.5
45	RO	74	GLY	2.5
13	QM	101	GLN	2.5
39	RE	128	SER	2.5
55	RY	52	SER	2.5
56	RZ	16	SER	2.5
56	YZ	180	VAL	2.5
12	XL	68	ALA	2.5
1	XA	1125	U	2.5
36	RA	1065	U	2.5
3	QC	36	ASP	2.5
8	QH	52	ASP	2.5
39	YE	55	ASN	2.5
56	RZ	179	ASP	2.5
2	QB	24	TRP	2.5
19	XS	47	HIS	2.5
21	XU	26	LYS	2.5
32	Y6	18	ARG	2.5
38	RD	31	LYS	2.5
40	RF	181	LEU	2.5
56	RZ	79	ARG	2.5
10	QJ	52	GLY	2.5
22	QV	11	A	2.5
36	RA	2114	A	2.5
36	YA	654(U)	A	2.5
48	RR	106	GLY	2.5
13	XM	15	VAL	2.5
1	XA	1190	G	2.5
12	XL	128	ALA	2.5
35	Y9	6	SER	2.5
36	YA	2211	G	2.5
56	RZ	173	ALA	2.5
55	YY	96	ILE	2.5
1	QA	1397	C	2.5
36	RA	1957	C	2.5
1	QA	208	U	2.5
14	XN	13	THR	2.5
12	QL	115	LYS	2.5
20	QT	74	LYS	2.5
20	XT	74	LYS	2.5
43	YI	113	ARG	2.5

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Mol	Chain	Res	Type	RSRZ
46	RP	16	ARG	2.5
55	RY	33	LYS	2.5
9	QI	115	GLY	2.5
33	Y7	6	GLN	2.5
35	R9	34	GLN	2.5
47	YQ	66	ILE	2.4
49	YS	31	SER	2.4
56	YZ	171	ILE	2.4
36	RA	2117	A	2.4
56	RZ	169	GLU	2.4
11	QK	117	ASN	2.4
1	QA	927	G	2.4
1	QA	1033	G	2.4
8	QH	2	LEU	2.4
11	QK	41	THR	2.4
53	RW	94	ASP	2.4
23	XW	35	C	2.4
34	Y8	61	LEU	2.4
36	RA	273(F)	C	2.4
36	RA	894	C	2.4
36	RA	1062	G	2.4
36	YA	9	U	2.4
5	QE	22	GLY	2.4
19	QS	82	GLY	2.4
27	Y1	79	GLY	2.4
42	YH	107	VAL	2.4
10	QJ	33	GLN	2.4
50	RT	110	ILE	2.4
10	QJ	5	ARG	2.4
27	Y1	95	LEU	2.4
3	QC	167	TRP	2.4
9	QI	64	THR	2.4
36	RA	1471	A	2.4
36	RA	2119	A	2.4
36	RA	2892	A	2.4
36	YA	900	A	2.4
56	YZ	159	PRO	2.4
8	QH	129	VAL	2.4
16	XP	13	HIS	2.4
30	Y4	40	HIS	2.4
2	XB	172	ILE	2.4
51	YU	116	ALA	2.4

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Mol	Chain	Res	Type	RSRZ
23	XW	54	U	2.4
36	RA	877	U	2.4
36	YA	882	G	2.4
46	YP	68	GLN	2.4
30	R4	1	MET	2.4
9	QI	112	LYS	2.4
2	QB	141	GLU	2.4
30	R4	42	PHE	2.4
39	YE	13	ARG	2.4
50	RT	115	ARG	2.4
51	RU	58	ARG	2.4
56	YZ	80	ARG	2.4
19	XS	4	SER	2.4
19	QS	22	LEU	2.4
35	Y9	27	CYS	2.4
51	RU	94	ASN	2.4
40	RF	132	VAL	2.4
19	QS	8	GLY	2.4
39	RE	88	GLY	2.4
40	RF	47	GLY	2.4
50	YT	25	GLY	2.4
55	RY	59	GLY	2.4
12	QL	129	ALA	2.4
40	RF	113	ALA	2.4
1	QA	1183	A	2.4
24	QX	12	A	2.4
33	Y7	1	MET	2.4
21	XU	15	ARG	2.4
35	R9	15	LYS	2.4
55	RY	60	PHE	2.4
1	QA	422	C	2.4
1	QA	1196	U	2.4
14	QN	39	LEU	2.4
36	RA	876	C	2.4
36	RA	1066	U	2.4
46	YP	105	LEU	2.4
48	YR	118	GLU	2.4
35	R9	14	CYS	2.4
36	RA	2211	G	2.4
16	XP	67	THR	2.4
19	XS	11	VAL	2.4
47	RQ	81	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
55	RY	77	PRO	2.4
20	QT	102	GLY	2.4
26	Y0	8	GLY	2.4
47	YQ	19	GLY	2.4
52	RV	64	HIS	2.4
10	XJ	98	ILE	2.4
12	QL	56	ALA	2.4
12	QL	120	TYR	2.4
31	R5	52	TYR	2.4
41	YG	88	ILE	2.4
13	XM	122	LYS	2.4
2	QB	175	ARG	2.4
8	XH	30	ARG	2.4
51	RU	117	GLN	2.4
19	XS	16	LEU	2.4
20	QT	13	LEU	2.4
41	YG	34	LEU	2.4
52	RV	35	LEU	2.4
1	QA	1225	A	2.4
5	QE	81	GLU	2.4
23	XW	32	A	2.4
30	Y4	66	SER	2.4
34	Y8	37	SER	2.4
35	R9	23	VAL	2.4
46	YP	8	PRO	2.4
55	RY	102	CYS	2.4
21	XU	2	GLY	2.3
39	RE	77	ILE	2.3
43	YI	121	LYS	2.3
9	QI	4	TYR	2.3
40	RF	164	ARG	2.3
8	XH	1	MET	2.3
41	YG	86	MET	2.3
55	YY	5	MET	2.3
36	RA	882	G	2.3
36	YA	270(Y)	G	2.3
36	YA	1106	G	2.3
36	YA	2802	G	2.3
2	QB	28	PHE	2.3
20	XT	99	LEU	2.3
43	RI	72	LEU	2.3
46	RP	6	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
3	QC	161	GLU	2.3
56	YZ	60	GLU	2.3
3	XC	76	VAL	2.3
7	QG	105	VAL	2.3
36	RA	1069	A	2.3
36	YA	1529	A	2.3
10	QJ	74	ILE	2.3
27	R1	90	ILE	2.3
42	RH	148	ILE	2.3
19	QS	14	HIS	2.3
8	QH	1	MET	2.3
20	XT	26	ASN	2.3
25	XY	59	U	2.3
3	XC	101	LEU	2.3
23	QW	36	C	2.3
36	YA	277	C	2.3
39	YE	54	GLN	2.3
46	YP	70	GLN	2.3
40	YF	127	GLU	2.3
36	RA	1058	G	2.3
36	RA	2149	G	2.3
46	YP	71	VAL	2.3
14	XN	17	LYS	2.3
21	QU	26	LYS	2.3
32	R6	27	LYS	2.3
3	XC	79	ARG	2.3
41	RG	95	ARG	2.3
20	XT	61	SER	2.3
21	QU	11	GLY	2.3
39	RE	130	GLY	2.3
39	RE	70	ALA	2.3
56	RZ	32	HIS	2.3
7	QG	37	ASN	2.3
9	QI	79	LEU	2.3
10	XJ	69	ASN	2.3
35	R9	29	ASN	2.3
25	QY	48	C	2.3
25	XY	31	C	2.3
31	Y5	57	VAL	2.3
36	RA	34	C	2.3
13	XM	84	ILE	2.3
7	XG	116	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
41	RG	155	MET	2.3
2	XB	11	LEU	2.3
5	QE	12	LEU	2.3
17	XQ	6	LEU	2.3
19	XS	15	LEU	2.3
42	RH	111	HIS	2.3
44	RN	94	HIS	2.3
26	Y0	26	TYR	2.3
10	QJ	54	PHE	2.3
19	QS	10	PHE	2.3
36	YA	2664	G	2.3
4	QD	77	ASN	2.3
9	XI	3	GLN	2.3
39	YE	17	ASP	2.3
56	RZ	123	ASP	2.3
32	R6	33	LYS	2.3
10	QJ	66	ARG	2.3
13	XM	102	ARG	2.3
30	R4	68	ARG	2.3
36	RA	2790	A	2.3
36	YA	896	A	2.3
36	YA	1070	A	2.3
41	YG	95	ARG	2.3
56	RZ	72	ARG	2.3
1	QA	1125	U	2.3
4	XD	5	ILE	2.3
10	QJ	39	PRO	2.3
13	XM	10	PRO	2.3
29	Y3	2	PRO	2.3
31	R5	5	PRO	2.3
26	R0	6	GLY	2.3
46	RP	12	ALA	2.3
23	XW	48	C	2.3
32	Y6	36	LEU	2.3
32	Y6	47	THR	2.3
54	RX	3	THR	2.3
20	QT	11	SER	2.3
53	YW	45	TYR	2.3
9	XI	20	ARG	2.3
41	YG	72	ARG	2.3
41	RG	116	ASP	2.3
48	RR	73	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
55	YY	45	VAL	2.3
56	YZ	123	ASP	2.3
46	RP	119	GLU	2.2
1	QA	1202	G	2.2
1	XA	108	G	2.2
1	XA	220	G	2.2
25	XY	19	G	2.2
36	YA	1056	G	2.2
19	XS	76	PRO	2.2
1	XA	1502	A	2.2
25	QY	12	U	2.2
36	YA	1096	A	2.2
36	YA	1729	A	2.2
41	YG	53	LEU	2.2
30	Y4	24	THR	2.2
38	RD	254	THR	2.2
3	QC	4	LYS	2.2
10	XJ	30	SER	2.2
19	XS	38	SER	2.2
47	RQ	128	LYS	2.2
15	QO	88	ARG	2.2
36	RA	856	C	2.2
11	QK	80	VAL	2.2
16	XP	79	VAL	2.2
42	RH	50	VAL	2.2
56	RZ	116	VAL	2.2
2	QB	126	GLU	2.2
2	QB	134	GLU	2.2
27	Y1	27	GLU	2.2
14	XN	55	GLY	2.2
46	RP	11	GLY	2.2
46	RP	54	GLY	2.2
56	RZ	110	GLY	2.2
56	RZ	177	PRO	2.2
14	QN	4	LYS	2.2
39	RE	64	LYS	2.2
49	YS	36	TYR	2.2
1	QA	1151	A	2.2
1	QA	1502	A	2.2
10	XJ	35	SER	2.2
23	QW	21	A	2.2
36	RA	1847	A	2.2

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Mol	Chain	Res	Type	RSRZ
42	YH	11	VAL	2.2
46	YP	38	GLN	2.2
32	R6	35	GLU	2.2
55	RY	44	ILE	2.2
55	RY	61	ILE	2.2
56	YZ	124	ILE	2.2
1	XA	1284	C	2.2
10	XJ	73	ASP	2.2
36	RA	1781	C	2.2
37	YB	27	C	2.2
8	XH	110	ALA	2.2
9	XI	68	GLY	2.2
21	QU	16	GLY	2.2
41	YG	158	ALA	2.2
56	YZ	113	ALA	2.2
53	RW	111	HIS	2.2
14	QN	21	TYR	2.2
17	QQ	85	VAL	2.2
17	XQ	97	SER	2.2
20	QT	70	SER	2.2
28	R2	4	SER	2.2
5	QE	20	GLN	2.2
36	YA	270(L)	U	2.2
2	QB	127	ILE	2.2
50	YT	2	ASN	2.2
1	QA	1286	A	2.2
24	XX	12	A	2.2
29	R3	53	LEU	2.2
32	Y6	11	LEU	2.2
34	Y8	50	LEU	2.2
36	YA	2126	A	2.2
44	RN	91	LEU	2.2
44	YN	138	LEU	2.2
2	XB	131	PRO	2.2
3	XC	159	GLY	2.2
7	XG	82	GLY	2.2
13	QM	6	GLY	2.2
32	Y6	38	LYS	2.2
39	RE	76	ARG	2.2
1	QA	328	C	2.2
1	QA	1103	C	2.2
11	XK	41	THR	2.2

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Mol	Chain	Res	Type	RSRZ
26	Y0	3	HIS	2.2
17	XQ	42	TYR	2.2
9	QI	77	ILE	2.2
38	RD	32	SER	2.2
39	RE	54	GLN	2.2
42	RH	38	SER	2.2
4	QD	21	LEU	2.2
39	YE	63	LEU	2.2
56	RZ	76	LEU	2.2
56	YZ	144	LEU	2.2
7	XG	84	ASN	2.2
11	QK	92	GLU	2.2
17	QQ	49	GLU	2.2
39	YE	204	ALA	2.2
56	RZ	181	GLU	2.2
20	QT	81	LYS	2.2
49	RS	109	GLY	2.2
2	QB	111	ARG	2.2
43	YI	110	ASP	2.2
1	QA	197	A	2.2
23	XW	21	A	2.2
36	RA	2141	G	2.2
36	YA	2793	G	2.2
10	QJ	101	VAL	2.1
11	QK	33	THR	2.1
3	QC	29	TYR	2.1
3	XC	8	ILE	2.1
23	QW	60	C	2.1
25	XY	13	C	2.1
5	XE	20	GLN	2.1
47	RQ	2	LEU	2.1
56	YZ	28	MET	2.1
31	R5	53	ALA	2.1
34	R8	65	GLU	2.1
51	RU	37	GLU	2.1
51	YU	86	ALA	2.1
3	QC	155	GLY	2.1
16	QP	14	ASN	2.1
52	RV	50	PRO	2.1
55	RY	53	PRO	2.1
16	QP	68	ASP	2.1
36	YA	1026	U	2.1

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Mol	Chain	Res	Type	RSRZ
7	XG	156	TRP	2.1
19	XS	39	THR	2.1
1	QA	572	A	2.1
36	RA	896	A	2.1
36	RA	1786	A	2.1
2	XB	132	LYS	2.1
52	YV	38	LEU	2.1
1	QA	220	G	2.1
1	XA	1331	G	2.1
4	QD	49	ARG	2.1
36	RA	2891	G	2.1
50	RT	112	ARG	2.1
2	XB	203	GLY	2.1
38	RD	28	GLU	2.1
46	YP	116	GLY	2.1
46	YP	144	GLU	2.1
25	XY	56	C	2.1
36	RA	2140	C	2.1
36	YA	894	C	2.1
42	RH	39	PRO	2.1
2	XB	17	PHE	2.1
14	QN	33	VAL	2.1
1	QA	173	U	2.1
36	RA	1956	U	2.1
40	RF	70	THR	2.1
44	YN	93	THR	2.1
52	YV	44	LYS	2.1
14	XN	29	ARG	2.1
20	QT	85	MET	2.1
5	QE	21	ALA	2.1
1	XA	1285	A	2.1
9	XI	12	GLU	2.1
13	XM	85	GLY	2.1
33	Y7	7	PRO	2.1
34	Y8	40	GLU	2.1
36	RA	265	A	2.1
46	YP	143	GLY	2.1
47	RQ	33	GLY	2.1
3	QC	20	SER	2.1
1	QA	703	G	2.1
25	XY	1	G	2.1
36	RA	1176	G	2.1

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Mol	Chain	Res	Type	RSRZ
36	YA	1728	G	2.1
36	RA	1509	C	2.1
2	XB	191	ASP	2.1
43	RI	22	LYS	2.1
3	QC	42	LEU	2.1
19	QS	15	LEU	2.1
40	RF	110	LEU	2.1
46	RP	35	HIS	2.1
49	RS	35	ILE	2.1
20	XT	80	ARG	2.1
9	QI	92	TYR	2.1
19	QS	52	TYR	2.1
30	R4	24	THR	2.1
9	QI	15	ALA	2.1
36	YA	1175	U	2.1
17	QQ	2	PRO	2.1
42	YH	34	GLU	2.1
39	YE	116	VAL	2.1
11	XK	123	LYS	2.1
25	QY	32	A	2.1
32	R6	53	LYS	2.1
36	RA	1490	A	2.1
38	RD	44	ASN	2.1
44	RN	37	LYS	2.1
2	QB	137	ARG	2.1
26	R0	11	ARG	2.1
48	RR	2	ARG	2.1
8	XH	4	ASP	2.1
41	YG	166	ASP	2.1
10	QJ	92	THR	2.1
9	QI	45	ALA	2.1
25	QY	56	C	2.1
38	RD	42	GLY	2.1
55	YY	41	GLY	2.1
2	QB	234	PRO	2.1
13	XM	97	PRO	2.1
56	RZ	178	GLU	2.1
1	QA	723	U	2.0
7	XG	80	VAL	2.0
41	RG	75	LYS	2.0
43	YI	118	LYS	2.0
29	R3	11	SER	2.0

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Mol	Chain	Res	Type	RSRZ
38	RD	12	SER	2.0
5	XE	89	ILE	2.0
46	RP	106	LEU	2.0
56	RZ	120	ILE	2.0
2	XB	140	HIS	2.0
2	QB	6	THR	2.0
42	RH	106	THR	2.0
42	RH	156	ALA	2.0
3	QC	197	GLY	2.0
21	XU	4	GLY	2.0
32	Y6	31	PRO	2.0
49	RS	29	PHE	2.0
25	QY	61	C	2.0
25	XY	74	C	2.0
30	R4	38	LYS	2.0
40	YF	200	GLU	2.0
42	RH	40	GLU	2.0
42	YH	119	GLU	2.0
49	YS	64	GLU	2.0
56	YZ	181	GLU	2.0
36	YA	2896	C	2.0
40	YF	132	VAL	2.0
56	RZ	139	VAL	2.0
8	XH	2	LEU	2.0
20	QT	86	ARG	2.0
23	XW	30	G	2.0
33	R7	49	ARG	2.0
36	RA	2893	G	2.0
37	YB	109	G	2.0
46	YP	18	ARG	2.0
48	YR	98	LEU	2.0
5	QE	118	ILE	2.0
41	YG	114	ILE	2.0
56	RZ	153	SER	2.0
1	QA	1302	U	2.0
36	RA	2118	U	2.0
53	RW	40	ASN	2.0
9	XI	7	THR	2.0
28	Y2	72	ALA	2.0
38	RD	10	THR	2.0
53	YW	93	ALA	2.0
42	RH	94	TYR	2.0

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Mol	Chain	Res	Type	RSRZ
53	RW	63	ASP	2.0
4	QD	23	GLY	2.0
10	XJ	31	GLY	2.0
42	YH	108	GLY	2.0
2	XB	133	LYS	2.0
10	XJ	7	LYS	2.0
27	R1	92	LYS	2.0
30	R4	41	PRO	2.0
34	Y8	53	PRO	2.0
1	QA	1123	A	2.0
1	XA	1280	A	2.0
3	QC	166	GLU	2.0
25	QY	9	A	2.0
25	XY	58	A	2.0
36	RA	2169	A	2.0
36	YA	278	A	2.0
36	YA	2790	A	2.0
56	RZ	138	GLU	2.0
43	RI	27	ARG	2.0
44	YN	115	ARG	2.0
56	YZ	116	VAL	2.0
12	XL	27	LEU	2.0
28	R2	16	LEU	2.0
30	Y4	5	ILE	2.0
1	QA	1054	C	2.0
23	XW	61	C	2.0
25	XY	72	C	2.0
36	RA	2666	C	2.0
36	YA	2107	C	2.0
36	YA	2129	C	2.0

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

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands ⓘ

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
57	MG	XM	201	1/1	-0.07	0.42	139,139,139,139	0
57	MG	XA	1710	1/1	-0.01	0.60	139,139,139,139	0
57	MG	XA	1689	1/1	0.24	0.47	124,124,124,124	0
57	MG	RA	3195	1/1	0.28	0.28	91,91,91,91	0
57	MG	YA	3399	1/1	0.30	0.17	85,85,85,85	0
57	MG	YA	3166	1/1	0.37	0.46	134,134,134,134	0
57	MG	YA	3379	1/1	0.39	0.25	115,115,115,115	0
57	MG	YA	3281	1/1	0.39	0.54	86,86,86,86	0
57	MG	RA	3366	1/1	0.41	0.51	85,85,85,85	0
57	MG	RA	3125	1/1	0.42	0.52	98,98,98,98	0
57	MG	QA	1659	1/1	0.44	0.37	134,134,134,134	0
57	MG	YA	3350	1/1	0.44	0.43	90,90,90,90	0
57	MG	YA	3105	1/1	0.45	0.98	126,126,126,126	0
57	MG	XA	1668	1/1	0.45	0.25	142,142,142,142	0
57	MG	RA	3225	1/1	0.46	0.77	107,107,107,107	0
57	MG	RA	3361	1/1	0.47	0.95	179,179,179,179	0
57	MG	XA	1608	1/1	0.47	0.20	136,136,136,136	0
57	MG	RA	3269	1/1	0.49	0.45	106,106,106,106	0
57	MG	QA	1681	1/1	0.49	0.24	149,149,149,149	0
57	MG	YA	3437	1/1	0.49	0.91	116,116,116,116	0
57	MG	YA	3170	1/1	0.51	0.39	104,104,104,104	0
57	MG	QA	1644	1/1	0.51	0.48	122,122,122,122	0
57	MG	YY	205	1/1	0.51	0.30	167,167,167,167	0
57	MG	QA	1710	1/1	0.52	0.38	112,112,112,112	0
57	MG	RA	3258	1/1	0.54	0.35	116,116,116,116	0
57	MG	QA	1610	1/1	0.54	0.83	129,129,129,129	0
57	MG	XA	1694	1/1	0.55	0.54	136,136,136,136	0
57	MG	RA	3157	1/1	0.56	0.30	65,65,65,65	0
57	MG	YA	3342	1/1	0.57	0.48	135,135,135,135	0
57	MG	XA	1711	1/1	0.57	0.55	118,118,118,118	0
57	MG	XA	1703	1/1	0.58	0.32	124,124,124,124	0
57	MG	QA	1612	1/1	0.59	0.59	98,98,98,98	0
57	MG	RA	3323	1/1	0.59	0.51	95,95,95,95	0
57	MG	YH	205	1/1	0.60	0.14	105,105,105,105	0
57	MG	YA	3332	1/1	0.60	0.41	126,126,126,126	0
57	MG	YA	3413	1/1	0.61	0.72	162,162,162,162	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	YA	3382	1/1	0.62	0.46	108,108,108,108	0
57	MG	RA	3277	1/1	0.62	0.56	90,90,90,90	0
57	MG	RA	3187	1/1	0.62	0.34	165,165,165,165	0
57	MG	YA	3231	1/1	0.63	0.55	89,89,89,89	0
57	MG	QA	1615	1/1	0.63	0.26	111,111,111,111	0
57	MG	YA	3356	1/1	0.64	0.50	93,93,93,93	0
57	MG	YA	3191	1/1	0.64	0.59	125,125,125,125	0
57	MG	RA	3307	1/1	0.64	0.49	110,110,110,110	0
57	MG	XA	1691	1/1	0.64	0.34	88,88,88,88	0
57	MG	RA	3294	1/1	0.65	0.22	107,107,107,107	0
57	MG	QA	1619	1/1	0.65	0.72	74,74,74,74	0
57	MG	RA	3196	1/1	0.65	0.43	88,88,88,88	0
57	MG	RA	3344	1/1	0.65	0.34	106,106,106,106	0
57	MG	QA	1662	1/1	0.66	0.64	100,100,100,100	0
57	MG	YA	3172	1/1	0.66	0.48	51,51,51,51	0
57	MG	RA	3205	1/1	0.66	0.55	100,100,100,100	0
57	MG	XA	1674	1/1	0.66	0.35	91,91,91,91	0
57	MG	XA	1610	1/1	0.67	0.30	67,67,67,67	0
57	MG	RA	3166	1/1	0.67	0.25	81,81,81,81	0
57	MG	QA	1706	1/1	0.67	0.62	89,89,89,89	0
57	MG	RA	3143	1/1	0.67	0.15	73,73,73,73	0
57	MG	QA	1627	1/1	0.67	0.20	101,101,101,101	0
57	MG	XV	103	1/1	0.67	0.62	146,146,146,146	0
57	MG	XA	1712	1/1	0.68	0.31	80,80,80,80	0
57	MG	YA	3203	1/1	0.68	0.67	117,117,117,117	0
57	MG	RA	3302	1/1	0.68	0.49	94,94,94,94	0
57	MG	QA	1623	1/1	0.68	0.31	89,89,89,89	0
57	MG	YA	3013	1/1	0.68	0.50	54,54,54,54	0
57	MG	YA	3324	1/1	0.69	0.38	101,101,101,101	0
57	MG	XA	1720	1/1	0.69	0.29	89,89,89,89	0
57	MG	XA	1665	1/1	0.69	0.27	55,55,55,55	0
57	MG	YA	3168	1/1	0.69	0.19	74,74,74,74	0
57	MG	QA	1647	1/1	0.70	0.46	100,100,100,100	0
57	MG	QA	1618	1/1	0.70	0.71	66,66,66,66	0
57	MG	YA	3348	1/1	0.70	0.21	84,84,84,84	0
57	MG	RA	3206	1/1	0.70	0.34	74,74,74,74	0
57	MG	YA	3305	1/1	0.70	1.01	104,104,104,104	0
57	MG	RA	3115	1/1	0.70	0.47	71,71,71,71	0
57	MG	YA	3201	1/1	0.71	0.34	68,68,68,68	0
57	MG	QA	1654	1/1	0.71	0.45	106,106,106,106	0
57	MG	YA	3368	1/1	0.71	0.43	87,87,87,87	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	QA	1649	1/1	0.71	0.43	80,80,80,80	0
57	MG	YA	3109	1/1	0.71	0.29	78,78,78,78	0
57	MG	RA	3185	1/1	0.71	0.33	92,92,92,92	0
57	MG	QA	1713	1/1	0.71	0.26	95,95,95,95	0
57	MG	XV	101	1/1	0.71	0.32	142,142,142,142	0
57	MG	XA	1682	1/1	0.71	0.53	101,101,101,101	0
57	MG	YA	3003	1/1	0.71	0.17	71,71,71,71	0
57	MG	XA	1692	1/1	0.72	0.42	122,122,122,122	0
57	MG	RA	3319	1/1	0.72	0.84	111,111,111,111	0
57	MG	XA	1614	1/1	0.72	0.50	94,94,94,94	0
57	MG	YA	3301	1/1	0.72	0.34	80,80,80,80	0
57	MG	QA	1617	1/1	0.72	0.70	117,117,117,117	0
57	MG	YB	201	1/1	0.72	0.41	98,98,98,98	0
57	MG	YA	3362	1/1	0.72	0.82	100,100,100,100	0
57	MG	YO	201	1/1	0.72	0.25	62,62,62,62	0
57	MG	RA	3249	1/1	0.72	0.30	67,67,67,67	0
57	MG	YA	3426	1/1	0.73	0.29	104,104,104,104	0
57	MG	YA	3228	1/1	0.73	0.30	81,81,81,81	0
57	MG	QA	1704	1/1	0.73	0.23	90,90,90,90	0
57	MG	YG	202	1/1	0.73	0.26	79,79,79,79	0
57	MG	YA	3352	1/1	0.73	0.27	100,100,100,100	0
57	MG	RA	3112	1/1	0.73	0.27	120,120,120,120	0
57	MG	RA	3370	1/1	0.73	0.35	74,74,74,74	0
57	MG	YA	3244	1/1	0.74	0.19	79,79,79,79	0
57	MG	YA	3439	1/1	0.74	0.21	120,120,120,120	0
57	MG	YA	3444	1/1	0.74	0.52	85,85,85,85	0
57	MG	RA	3250	1/1	0.74	0.78	86,86,86,86	0
57	MG	QA	1712	1/1	0.74	0.22	67,67,67,67	0
57	MG	RA	3184	1/1	0.74	0.32	70,70,70,70	0
57	MG	YA	3414	1/1	0.74	0.39	89,89,89,89	0
57	MG	YA	3349	1/1	0.74	0.23	103,103,103,103	0
57	MG	QA	1688	1/1	0.75	0.44	106,106,106,106	0
57	MG	QA	1638	1/1	0.75	0.43	83,83,83,83	0
57	MG	YA	3346	1/1	0.75	0.69	90,90,90,90	0
57	MG	YA	3274	1/1	0.75	0.26	81,81,81,81	0
57	MG	XA	1702	1/1	0.75	0.29	86,86,86,86	0
57	MG	YA	3162	1/1	0.75	0.54	75,75,75,75	0
57	MG	Y0	101	1/1	0.75	0.30	99,99,99,99	0
57	MG	YQ	202	1/1	0.75	0.48	100,100,100,100	0
57	MG	YX	101	1/1	0.75	0.55	149,149,149,149	0
57	MG	RI	201	1/1	0.75	0.19	129,129,129,129	0
57	MG	YA	3180	1/1	0.76	0.28	103,103,103,103	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	YA	3312	1/1	0.76	0.60	100,100,100,100	0
57	MG	RA	3264	1/1	0.76	0.22	71,71,71,71	0
57	MG	QV	103	1/1	0.76	0.47	118,118,118,118	0
57	MG	RA	3272	1/1	0.76	0.36	115,115,115,115	0
57	MG	YA	3289	1/1	0.76	0.49	79,79,79,79	0
57	MG	QA	1723	1/1	0.76	0.30	123,123,123,123	0
57	MG	YA	3440	1/1	0.76	0.25	82,82,82,82	0
57	MG	QA	1667	1/1	0.77	0.39	71,71,71,71	0
57	MG	RA	3042	1/1	0.77	0.33	75,75,75,75	0
57	MG	RA	3079	1/1	0.77	0.28	89,89,89,89	0
57	MG	YE	304	1/1	0.77	0.20	112,112,112,112	0
57	MG	QA	1696	1/1	0.77	0.38	91,91,91,91	0
57	MG	YH	202	1/1	0.77	0.24	96,96,96,96	0
57	MG	YA	3236	1/1	0.77	0.21	86,86,86,86	0
57	MG	RA	3280	1/1	0.77	0.16	53,53,53,53	0
57	MG	RA	3290	1/1	0.77	0.36	89,89,89,89	0
57	MG	YA	3339	1/1	0.77	0.57	147,147,147,147	0
57	MG	YA	3363	1/1	0.77	0.23	97,97,97,97	0
57	MG	RA	3182	1/1	0.78	0.40	84,84,84,84	0
57	MG	RA	3010	1/1	0.78	0.51	103,103,103,103	0
57	MG	YA	3286	1/1	0.78	0.35	116,116,116,116	0
57	MG	QA	1725	1/1	0.78	0.96	107,107,107,107	0
57	MG	QA	1655	1/1	0.78	0.34	162,162,162,162	0
57	MG	RA	3191	1/1	0.78	0.27	68,68,68,68	0
57	MG	RA	3167	1/1	0.78	0.19	89,89,89,89	0
57	MG	YA	3320	1/1	0.78	0.39	58,58,58,58	0
57	MG	YA	3241	1/1	0.78	0.42	93,93,93,93	0
57	MG	RA	3286	1/1	0.78	0.22	103,103,103,103	0
57	MG	QA	1676	1/1	0.79	0.36	75,75,75,75	0
57	MG	XA	1618	1/1	0.79	0.56	68,68,68,68	0
57	MG	XA	1706	1/1	0.79	0.19	133,133,133,133	0
57	MG	QA	1636	1/1	0.79	0.44	87,87,87,87	0
57	MG	YA	3141	1/1	0.79	0.43	129,129,129,129	0
57	MG	YA	3142	1/1	0.79	0.21	50,50,50,50	0
57	MG	YA	3248	1/1	0.79	0.57	107,107,107,107	0
57	MG	QA	1621	1/1	0.79	0.19	84,84,84,84	0
57	MG	RA	3291	1/1	0.79	0.35	80,80,80,80	0
57	MG	QA	1692	1/1	0.79	0.40	94,94,94,94	0
57	MG	RF	302	1/1	0.79	0.33	79,79,79,79	0
57	MG	RA	3152	1/1	0.79	0.39	64,64,64,64	0
57	MG	RA	3212	1/1	0.79	0.17	85,85,85,85	0
57	MG	XV	105	1/1	0.79	0.35	133,133,133,133	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	RA	3098	1/1	0.79	0.54	96,96,96,96	0
57	MG	YA	3323	1/1	0.79	0.57	88,88,88,88	0
57	MG	RA	3063	1/1	0.80	0.38	55,55,55,55	0
57	MG	QA	1680	1/1	0.80	0.21	97,97,97,97	0
57	MG	XA	1644	1/1	0.80	0.29	73,73,73,73	0
57	MG	YA	3442	1/1	0.80	0.58	99,99,99,99	0
57	MG	XA	1645	1/1	0.80	0.25	79,79,79,79	0
57	MG	RA	3299	1/1	0.80	0.38	82,82,82,82	0
57	MG	QA	1607	1/1	0.80	0.15	28,28,28,28	0
57	MG	RB	203	1/1	0.80	0.25	69,69,69,69	0
57	MG	YA	3327	1/1	0.80	0.36	76,76,76,76	0
57	MG	RE	301	1/1	0.80	0.44	126,126,126,126	0
57	MG	RA	3305	1/1	0.80	0.32	80,80,80,80	0
57	MG	RA	3198	1/1	0.80	0.38	89,89,89,89	0
57	MG	QA	1656	1/1	0.80	0.46	103,103,103,103	0
57	MG	QA	1689	1/1	0.80	0.32	73,73,73,73	0
57	MG	RA	3068	1/1	0.81	0.39	90,90,90,90	0
57	MG	RA	3210	1/1	0.81	0.30	80,80,80,80	0
57	MG	XA	1693	1/1	0.81	0.55	87,87,87,87	0
57	MG	RA	3332	1/1	0.81	0.35	83,83,83,83	0
57	MG	RE	307	1/1	0.81	0.20	68,68,68,68	0
57	MG	YF	302	1/1	0.81	0.55	108,108,108,108	0
57	MG	RA	3340	1/1	0.81	0.36	78,78,78,78	0
57	MG	QA	1626	1/1	0.81	0.20	78,78,78,78	0
57	MG	YA	3008	1/1	0.81	0.29	80,80,80,80	0
57	MG	RR	201	1/1	0.81	0.21	121,121,121,121	0
57	MG	YA	3050	1/1	0.81	0.45	76,76,76,76	0
57	MG	RA	3174	1/1	0.81	0.22	101,101,101,101	0
57	MG	QA	1673	1/1	0.81	0.23	96,96,96,96	0
57	MG	YA	3223	1/1	0.82	0.33	62,62,62,62	0
57	MG	RA	3188	1/1	0.82	0.15	111,111,111,111	0
57	MG	YA	3419	1/1	0.82	0.34	100,100,100,100	0
57	MG	QA	1613	1/1	0.82	0.36	71,71,71,71	0
57	MG	QA	1620	1/1	0.82	0.25	78,78,78,78	0
57	MG	YA	3240	1/1	0.82	0.24	104,104,104,104	0
57	MG	QA	1693	1/1	0.82	0.35	101,101,101,101	0
57	MG	XA	1671	1/1	0.82	0.20	48,48,48,48	0
57	MG	YA	3161	1/1	0.82	0.37	109,109,109,109	0
57	MG	QA	1632	1/1	0.82	0.24	105,105,105,105	0
57	MG	YB	204	1/1	0.82	0.08	28,28,28,28	0
57	MG	QA	1625	1/1	0.82	0.28	58,58,58,58	0
57	MG	RA	3176	1/1	0.82	0.54	76,76,76,76	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	QK	201	1/1	0.82	0.32	138,138,138,138	0
57	MG	QA	1705	1/1	0.82	0.28	68,68,68,68	0
57	MG	YA	3365	1/1	0.82	0.33	78,78,78,78	0
57	MG	RA	3008	1/1	0.82	0.44	96,96,96,96	0
57	MG	YP	207	1/1	0.82	0.18	71,71,71,71	0
57	MG	QA	1637	1/1	0.82	0.24	64,64,64,64	0
57	MG	XA	1697	1/1	0.82	0.30	97,97,97,97	0
57	MG	XA	1643	1/1	0.82	0.28	100,100,100,100	0
57	MG	RA	3336	1/1	0.83	0.69	82,82,82,82	0
57	MG	YA	3188	1/1	0.83	0.28	86,86,86,86	0
57	MG	YA	3043	1/1	0.83	0.48	101,101,101,101	0
57	MG	YA	3048	1/1	0.83	0.14	17,17,17,17	0
57	MG	RG	201	1/1	0.83	0.27	81,81,81,81	0
57	MG	RA	3251	1/1	0.83	0.22	71,71,71,71	0
57	MG	YA	3293	1/1	0.83	0.26	48,48,48,48	0
57	MG	YA	3298	1/1	0.83	0.32	61,61,61,61	0
57	MG	QH	201	1/1	0.83	0.22	69,69,69,69	0
57	MG	YA	3115	1/1	0.83	0.35	74,74,74,74	0
57	MG	YA	3129	1/1	0.83	0.22	69,69,69,69	0
57	MG	YA	3175	1/1	0.83	0.30	101,101,101,101	0
57	MG	YA	3179	1/1	0.83	0.58	79,79,79,79	0
57	MG	RA	3077	1/1	0.84	0.46	60,60,60,60	0
57	MG	R8	101	1/1	0.84	0.17	39,39,39,39	0
57	MG	Y5	101	1/1	0.84	0.24	60,60,60,60	0
57	MG	YA	3428	1/1	0.84	0.52	72,72,72,72	0
57	MG	YA	3243	1/1	0.84	0.10	21,21,21,21	0
57	MG	RA	3204	1/1	0.84	0.25	72,72,72,72	0
57	MG	RA	3365	1/1	0.84	0.34	72,72,72,72	0
57	MG	YA	3266	1/1	0.84	0.49	83,83,83,83	0
57	MG	YA	3443	1/1	0.84	0.39	106,106,106,106	0
57	MG	QA	1677	1/1	0.84	0.23	66,66,66,66	0
57	MG	RA	3149	1/1	0.84	0.49	83,83,83,83	0
57	MG	RA	3377	1/1	0.84	0.54	73,73,73,73	0
57	MG	YB	206	1/1	0.84	0.30	91,91,91,91	0
57	MG	YB	208	1/1	0.84	0.46	114,114,114,114	0
57	MG	YA	3287	1/1	0.84	0.25	54,54,54,54	0
57	MG	RA	3209	1/1	0.84	0.26	44,44,44,44	0
57	MG	RA	3308	1/1	0.84	0.43	67,67,67,67	0
57	MG	QA	1678	1/1	0.84	0.35	55,55,55,55	0
57	MG	YH	204	1/1	0.84	0.12	103,103,103,103	0
57	MG	RA	3177	1/1	0.84	0.14	55,55,55,55	0
57	MG	RA	3330	1/1	0.84	0.37	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	YA	3380	1/1	0.84	0.53	69,69,69,69	0
57	MG	RA	3193	1/1	0.84	0.09	63,63,63,63	0
57	MG	RA	3179	1/1	0.84	0.16	99,99,99,99	0
57	MG	YA	3155	1/1	0.84	0.26	49,49,49,49	0
57	MG	RA	3172	1/1	0.85	0.26	59,59,59,59	0
57	MG	QA	1630	1/1	0.85	0.21	61,61,61,61	0
57	MG	YA	3216	1/1	0.85	0.11	66,66,66,66	0
57	MG	XA	1624	1/1	0.85	0.25	45,45,45,45	0
57	MG	YA	3114	1/1	0.85	0.19	23,23,23,23	0
57	MG	XA	1635	1/1	0.85	0.37	73,73,73,73	0
57	MG	QA	1721	1/1	0.85	0.22	52,52,52,52	0
57	MG	QA	1601	1/1	0.85	0.53	107,107,107,107	0
57	MG	RA	3312	1/1	0.85	0.36	68,68,68,68	0
57	MG	YA	3149	1/1	0.85	0.15	30,30,30,30	0
57	MG	YB	203	1/1	0.85	0.17	62,62,62,62	0
57	MG	XA	1651	1/1	0.85	0.14	141,141,141,141	0
57	MG	XA	1663	1/1	0.85	0.28	75,75,75,75	0
57	MG	RA	3316	1/1	0.85	0.46	78,78,78,78	0
57	MG	QA	1650	1/1	0.85	0.15	50,50,50,50	0
57	MG	RE	306	1/1	0.85	0.22	40,40,40,40	0
57	MG	QA	1646	1/1	0.85	0.42	69,69,69,69	0
57	MG	QA	1697	1/1	0.85	0.25	79,79,79,79	0
57	MG	RA	3120	1/1	0.85	0.34	70,70,70,70	0
57	MG	RA	3295	1/1	0.85	0.35	88,88,88,88	0
57	MG	YA	3295	1/1	0.85	0.39	71,71,71,71	0
57	MG	YA	3297	1/1	0.85	0.23	39,39,39,39	0
57	MG	RA	3171	1/1	0.85	0.56	81,81,81,81	0
57	MG	RA	3300	1/1	0.85	0.23	67,67,67,67	0
57	MG	RA	3356	1/1	0.85	0.32	101,101,101,101	0
57	MG	YA	3445	1/1	0.86	0.45	68,68,68,68	0
57	MG	YA	3452	1/1	0.86	0.29	100,100,100,100	0
57	MG	XF	301	1/1	0.86	0.25	64,64,64,64	0
57	MG	RA	3238	1/1	0.86	0.29	117,117,117,117	0
57	MG	YA	3336	1/1	0.86	0.13	42,42,42,42	0
57	MG	XA	1612	1/1	0.86	0.23	53,53,53,53	0
57	MG	RA	3298	1/1	0.86	0.15	36,36,36,36	0
57	MG	YD	302	1/1	0.86	0.39	97,97,97,97	0
57	MG	QA	1701	1/1	0.86	0.17	75,75,75,75	0
57	MG	QA	1639	1/1	0.86	0.46	73,73,73,73	0
57	MG	YA	3127	1/1	0.86	0.36	51,51,51,51	0
57	MG	XA	1629	1/1	0.86	0.16	73,73,73,73	0
57	MG	YA	3131	1/1	0.86	0.25	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	YA	3355	1/1	0.86	0.49	95,95,95,95	0
57	MG	RA	3181	1/1	0.86	0.31	88,88,88,88	0
57	MG	YA	3357	1/1	0.86	0.21	73,73,73,73	0
57	MG	RA	3213	1/1	0.86	0.23	86,86,86,86	0
57	MG	YQ	203	1/1	0.86	0.45	102,102,102,102	0
57	MG	RA	3219	1/1	0.86	0.52	159,159,159,159	0
57	MG	QA	1648	1/1	0.86	0.18	69,69,69,69	0
61	AMP	QY	101	22/23	0.86	0.18	121,122,134,149	0
57	MG	RA	3375	1/1	0.87	0.30	83,83,83,83	0
57	MG	YA	3232	1/1	0.87	0.20	83,83,83,83	0
57	MG	QA	1708	1/1	0.87	0.38	79,79,79,79	0
57	MG	QA	1643	1/1	0.87	0.15	63,63,63,63	0
57	MG	RA	3072	1/1	0.87	0.13	36,36,36,36	0
57	MG	YA	3375	1/1	0.87	0.51	75,75,75,75	0
57	MG	YA	3376	1/1	0.87	0.21	57,57,57,57	0
57	MG	RE	305	1/1	0.87	0.21	54,54,54,54	0
57	MG	XA	1683	1/1	0.87	0.24	72,72,72,72	0
57	MG	RA	3310	1/1	0.87	0.19	74,74,74,74	0
57	MG	YA	3388	1/1	0.87	0.31	75,75,75,75	0
57	MG	YA	3262	1/1	0.87	0.31	37,37,37,37	0
57	MG	QA	1669	1/1	0.87	0.19	48,48,48,48	0
57	MG	YA	3118	1/1	0.87	0.34	86,86,86,86	0
57	MG	RA	3313	1/1	0.87	0.23	70,70,70,70	0
57	MG	YA	3420	1/1	0.87	0.24	48,48,48,48	0
57	MG	YA	3282	1/1	0.87	0.24	57,57,57,57	0
57	MG	QA	1682	1/1	0.87	0.53	93,93,93,93	0
57	MG	YA	3429	1/1	0.87	0.16	48,48,48,48	0
57	MG	YA	3431	1/1	0.87	0.29	79,79,79,79	0
57	MG	RA	3202	1/1	0.87	0.33	86,86,86,86	0
57	MG	RA	3087	1/1	0.87	0.09	35,35,35,35	0
57	MG	RA	3328	1/1	0.87	0.19	63,63,63,63	0
57	MG	QA	1717	1/1	0.87	0.23	69,69,69,69	0
57	MG	QA	1695	1/1	0.87	0.38	89,89,89,89	0
57	MG	RA	3114	1/1	0.87	0.21	62,62,62,62	0
57	MG	RA	3009	1/1	0.87	0.10	43,43,43,43	0
57	MG	YA	3446	1/1	0.87	0.33	75,75,75,75	0
57	MG	QA	1722	1/1	0.87	0.09	122,122,122,122	0
57	MG	RA	3351	1/1	0.87	0.15	58,58,58,58	0
57	MG	YB	202	1/1	0.87	0.44	57,57,57,57	0
57	MG	YA	3315	1/1	0.87	0.66	100,100,100,100	0
57	MG	QA	1608	1/1	0.87	0.18	63,63,63,63	0
57	MG	XA	1637	1/1	0.87	0.08	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	XA	1638	1/1	0.87	0.08	55,55,55,55	0
57	MG	RA	3358	1/1	0.87	0.13	91,91,91,91	0
57	MG	YA	3328	1/1	0.87	0.32	46,46,46,46	0
57	MG	RA	3130	1/1	0.87	0.26	53,53,53,53	0
57	MG	YA	3182	1/1	0.87	0.10	14,14,14,14	0
57	MG	XV	106	1/1	0.87	0.35	90,90,90,90	0
57	MG	YA	3189	1/1	0.87	0.31	71,71,71,71	0
57	MG	YA	3344	1/1	0.87	0.28	72,72,72,72	0
57	MG	XX	101	1/1	0.87	0.28	65,65,65,65	0
57	MG	RA	3051	1/1	0.87	0.17	12,12,12,12	0
57	MG	Y4	101	1/1	0.87	0.16	103,103,103,103	0
57	MG	YA	3204	1/1	0.87	0.32	75,75,75,75	0
57	MG	RA	3147	1/1	0.87	0.36	58,58,58,58	0
57	MG	YY	202	1/1	0.87	0.28	147,147,147,147	0
57	MG	XA	1656	1/1	0.87	0.38	59,59,59,59	0
57	MG	RA	3060	1/1	0.87	0.21	80,80,80,80	0
57	MG	YA	3009	1/1	0.88	0.26	39,39,39,39	0
57	MG	YA	3195	1/1	0.88	0.40	54,54,54,54	0
57	MG	RA	3190	1/1	0.88	0.19	121,121,121,121	0
57	MG	XA	1620	1/1	0.88	0.23	79,79,79,79	0
57	MG	RA	3150	1/1	0.88	0.32	92,92,92,92	0
57	MG	XA	1695	1/1	0.88	0.26	75,75,75,75	0
57	MG	YA	3072	1/1	0.88	0.32	90,90,90,90	0
57	MG	RA	3192	1/1	0.88	0.67	88,88,88,88	0
57	MG	XA	1630	1/1	0.88	0.14	37,37,37,37	0
57	MG	RA	3007	1/1	0.88	0.06	12,12,12,12	0
57	MG	RA	3218	1/1	0.88	0.15	69,69,69,69	0
57	MG	YA	3117	1/1	0.88	0.54	80,80,80,80	0
57	MG	XA	1708	1/1	0.88	0.24	69,69,69,69	0
57	MG	RA	3284	1/1	0.88	0.46	86,86,86,86	0
57	MG	RB	204	1/1	0.88	0.23	54,54,54,54	0
57	MG	RA	3062	1/1	0.88	0.54	86,86,86,86	0
57	MG	RA	3287	1/1	0.88	0.24	83,83,83,83	0
57	MG	XA	1721	1/1	0.88	0.29	58,58,58,58	0
57	MG	RA	3164	1/1	0.88	0.11	35,35,35,35	0
57	MG	RA	3227	1/1	0.88	0.56	80,80,80,80	0
57	MG	RA	3135	1/1	0.88	0.11	79,79,79,79	0
57	MG	YF	301	1/1	0.88	0.15	49,49,49,49	0
57	MG	XV	102	1/1	0.88	0.37	83,83,83,83	0
57	MG	YG	201	1/1	0.88	0.23	60,60,60,60	0
57	MG	RA	3240	1/1	0.88	0.28	59,59,59,59	0
57	MG	QA	1635	1/1	0.88	0.42	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	YA	3292	1/1	0.88	0.24	55,55,55,55	0
57	MG	XA	1669	1/1	0.88	0.37	64,64,64,64	0
57	MG	RA	3146	1/1	0.88	0.14	62,62,62,62	0
57	MG	XA	1606	1/1	0.88	0.29	37,37,37,37	0
57	MG	YA	3396	1/1	0.88	0.29	108,108,108,108	0
57	MG	Y2	101	1/1	0.88	0.11	50,50,50,50	0
57	MG	RA	3083	1/1	0.88	0.14	46,46,46,46	0
57	MG	RA	3253	1/1	0.88	0.37	80,80,80,80	0
57	MG	RA	3303	1/1	0.88	0.51	104,104,104,104	0
57	MG	QA	1687	1/1	0.88	0.17	75,75,75,75	0
57	MG	RA	3082	1/1	0.89	0.29	41,41,41,41	0
57	MG	XA	1713	1/1	0.89	0.23	67,67,67,67	0
57	MG	YA	3314	1/1	0.89	0.35	83,83,83,83	0
57	MG	RA	3180	1/1	0.89	0.29	51,51,51,51	0
57	MG	RA	3232	1/1	0.89	0.23	68,68,68,68	0
57	MG	YA	3322	1/1	0.89	0.08	74,74,74,74	0
57	MG	YA	3205	1/1	0.89	0.17	66,66,66,66	0
57	MG	YA	3116	1/1	0.89	0.18	44,44,44,44	0
57	MG	YA	3220	1/1	0.89	0.11	41,41,41,41	0
57	MG	QA	1684	1/1	0.89	0.18	59,59,59,59	0
57	MG	XA	1623	1/1	0.89	0.15	51,51,51,51	0
57	MG	YA	3334	1/1	0.89	0.42	85,85,85,85	0
57	MG	YA	3229	1/1	0.89	0.20	28,28,28,28	0
57	MG	YA	3122	1/1	0.89	0.44	74,74,74,74	0
57	MG	YA	3341	1/1	0.89	0.35	100,100,100,100	0
57	MG	XA	1675	1/1	0.89	0.21	79,79,79,79	0
57	MG	QA	1602	1/1	0.89	0.53	86,86,86,86	0
57	MG	YA	3237	1/1	0.89	0.31	92,92,92,92	0
57	MG	YA	3239	1/1	0.89	0.11	48,48,48,48	0
57	MG	RA	3281	1/1	0.89	0.22	36,36,36,36	0
57	MG	QA	1628	1/1	0.89	0.41	71,71,71,71	0
57	MG	XA	1690	1/1	0.89	0.29	60,60,60,60	0
57	MG	XA	1631	1/1	0.89	0.26	57,57,57,57	0
57	MG	XA	1634	1/1	0.89	0.12	79,79,79,79	0
57	MG	QA	1683	1/1	0.89	0.08	31,31,31,31	0
57	MG	Y2	102	1/1	0.89	0.34	53,53,53,53	0
57	MG	RA	3309	1/1	0.89	0.34	53,53,53,53	0
57	MG	QL	201	1/1	0.89	0.08	24,24,24,24	0
57	MG	XA	1639	1/1	0.89	0.23	68,68,68,68	0
57	MG	RA	3252	1/1	0.89	0.27	73,73,73,73	0
57	MG	RA	3364	1/1	0.89	0.40	62,62,62,62	0
57	MG	XA	1704	1/1	0.89	0.22	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	YP	201	1/1	0.89	0.22	35,35,35,35	0
57	MG	YA	3020	1/1	0.89	0.33	72,72,72,72	0
57	MG	RR	202	1/1	0.89	0.17	38,38,38,38	0
57	MG	YA	3183	1/1	0.89	0.15	60,60,60,60	0
57	MG	YU	201	1/1	0.89	0.17	59,59,59,59	0
57	MG	YA	3395	1/1	0.89	0.17	54,54,54,54	0
57	MG	RA	3199	1/1	0.89	0.12	43,43,43,43	0
57	MG	RA	3144	1/1	0.89	0.17	35,35,35,35	0
57	MG	RA	3262	1/1	0.89	0.06	49,49,49,49	0
57	MG	QA	1675	1/1	0.90	0.46	97,97,97,97	0
57	MG	RA	3334	1/1	0.90	0.31	68,68,68,68	0
57	MG	YA	3387	1/1	0.90	0.09	22,22,22,22	0
57	MG	XA	1684	1/1	0.90	0.23	41,41,41,41	0
57	MG	RA	3335	1/1	0.90	0.44	68,68,68,68	0
57	MG	RA	3054	1/1	0.90	0.34	79,79,79,79	0
57	MG	QA	1634	1/1	0.90	0.14	92,92,92,92	0
57	MG	YA	3404	1/1	0.90	0.34	67,67,67,67	0
57	MG	RA	3341	1/1	0.90	0.42	104,104,104,104	0
57	MG	RA	3104	1/1	0.90	0.07	58,58,58,58	0
57	MG	RA	3111	1/1	0.90	0.31	81,81,81,81	0
57	MG	YA	3309	1/1	0.90	0.17	47,47,47,47	0
57	MG	YA	3421	1/1	0.90	0.33	82,82,82,82	0
57	MG	RA	3352	1/1	0.90	0.25	90,90,90,90	0
57	MG	R9	101	1/1	0.90	0.29	98,98,98,98	0
57	MG	XA	1700	1/1	0.90	0.21	68,68,68,68	0
57	MG	YA	3070	1/1	0.90	0.02	12,12,12,12	0
57	MG	YA	3434	1/1	0.90	0.39	66,66,66,66	0
57	MG	RA	3301	1/1	0.90	0.29	50,50,50,50	0
57	MG	YA	3215	1/1	0.90	0.21	96,96,96,96	0
57	MG	YA	3077	1/1	0.90	0.13	12,12,12,12	0
57	MG	YA	3218	1/1	0.90	0.12	63,63,63,63	0
57	MG	QA	1691	1/1	0.90	0.15	89,89,89,89	0
57	MG	QA	1660	1/1	0.90	0.12	119,119,119,119	0
57	MG	RA	3211	1/1	0.90	0.20	72,72,72,72	0
57	MG	RA	3162	1/1	0.90	0.27	95,95,95,95	0
57	MG	YA	3451	1/1	0.90	0.34	55,55,55,55	0
57	MG	RA	3116	1/1	0.90	0.18	43,43,43,43	0
57	MG	RA	3273	1/1	0.90	0.10	44,44,44,44	0
57	MG	RA	3275	1/1	0.90	0.40	74,74,74,74	0
57	MG	YA	3343	1/1	0.90	0.22	77,77,77,77	0
57	MG	RA	3311	1/1	0.90	0.14	50,50,50,50	0
57	MG	YA	3238	1/1	0.90	0.17	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	RA	3117	1/1	0.90	0.46	63,63,63,63	0
57	MG	QA	1624	1/1	0.90	0.27	82,82,82,82	0
57	MG	YE	301	1/1	0.90	0.11	21,21,21,21	0
57	MG	RA	3314	1/1	0.90	0.20	59,59,59,59	0
57	MG	XA	1662	1/1	0.90	0.21	88,88,88,88	0
57	MG	YA	3354	1/1	0.90	0.14	60,60,60,60	0
57	MG	RA	3169	1/1	0.90	0.13	69,69,69,69	0
57	MG	RA	3317	1/1	0.90	0.23	46,46,46,46	0
57	MG	YH	201	1/1	0.90	0.13	29,29,29,29	0
57	MG	YA	3259	1/1	0.90	0.42	66,66,66,66	0
57	MG	YA	3358	1/1	0.90	0.16	64,64,64,64	0
57	MG	QA	1674	1/1	0.90	0.46	85,85,85,85	0
57	MG	YA	3263	1/1	0.90	0.27	48,48,48,48	0
57	MG	RA	3019	1/1	0.90	0.17	30,30,30,30	0
57	MG	YA	3366	1/1	0.90	0.19	63,63,63,63	0
57	MG	YA	3367	1/1	0.90	0.42	96,96,96,96	0
57	MG	RA	3326	1/1	0.90	0.07	32,32,32,32	0
57	MG	YA	3370	1/1	0.90	0.19	70,70,70,70	0
57	MG	YA	3374	1/1	0.90	0.51	84,84,84,84	0
57	MG	YY	201	1/1	0.90	0.19	54,54,54,54	0
57	MG	RA	3236	1/1	0.90	0.09	40,40,40,40	0
57	MG	QV	102	1/1	0.90	0.28	78,78,78,78	0
57	MG	Y0	103	1/1	0.90	0.23	118,118,118,118	0
57	MG	YA	3302	1/1	0.91	0.29	60,60,60,60	0
57	MG	RA	3134	1/1	0.91	0.15	32,32,32,32	0
57	MG	RA	3254	1/1	0.91	0.23	68,68,68,68	0
57	MG	YA	3010	1/1	0.91	0.10	20,20,20,20	0
57	MG	RB	202	1/1	0.91	0.15	55,55,55,55	0
57	MG	RA	3327	1/1	0.91	0.27	12,12,12,12	0
57	MG	YA	3318	1/1	0.91	0.17	30,30,30,30	0
57	MG	YA	3424	1/1	0.91	0.28	110,110,110,110	0
57	MG	YA	3319	1/1	0.91	0.35	57,57,57,57	0
57	MG	QA	1699	1/1	0.91	0.56	91,91,91,91	0
57	MG	QA	1690	1/1	0.91	0.23	51,51,51,51	0
57	MG	YA	3430	1/1	0.91	0.31	149,149,149,149	0
57	MG	RA	3106	1/1	0.91	0.09	33,33,33,33	0
57	MG	RA	3333	1/1	0.91	0.26	63,63,63,63	0
57	MG	RA	3145	1/1	0.91	0.23	66,66,66,66	0
57	MG	YA	3075	1/1	0.91	0.51	70,70,70,70	0
57	MG	RA	3173	1/1	0.91	0.30	81,81,81,81	0
57	MG	YA	3096	1/1	0.91	0.29	35,35,35,35	0
57	MG	XA	1646	1/1	0.91	0.21	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	YA	3338	1/1	0.91	0.17	54,54,54,54	0
57	MG	QA	1719	1/1	0.91	0.30	51,51,51,51	0
57	MG	RA	3337	1/1	0.91	0.09	34,34,34,34	0
57	MG	YA	3450	1/1	0.91	0.20	43,43,43,43	0
57	MG	XA	1659	1/1	0.91	0.07	40,40,40,40	0
57	MG	RP	202	1/1	0.91	0.16	96,96,96,96	0
57	MG	RA	3121	1/1	0.91	0.13	25,25,25,25	0
57	MG	XB	301	1/1	0.91	0.22	96,96,96,96	0
57	MG	RA	3122	1/1	0.91	0.19	51,51,51,51	0
57	MG	YA	3124	1/1	0.91	0.25	25,25,25,25	0
57	MG	YA	3125	1/1	0.91	0.15	32,32,32,32	0
57	MG	XK	201	1/1	0.91	0.09	35,35,35,35	0
57	MG	RA	3124	1/1	0.91	0.15	47,47,47,47	0
57	MG	XA	1607	1/1	0.91	0.15	59,59,59,59	0
57	MG	RA	3200	1/1	0.91	0.23	55,55,55,55	0
57	MG	YE	305	1/1	0.91	0.13	89,89,89,89	0
57	MG	YA	3249	1/1	0.91	0.24	33,33,33,33	0
57	MG	XA	1673	1/1	0.91	0.64	60,60,60,60	0
57	MG	QA	1702	1/1	0.91	0.10	50,50,50,50	0
57	MG	RA	3285	1/1	0.91	0.19	56,56,56,56	0
57	MG	YA	3160	1/1	0.91	0.19	34,34,34,34	0
57	MG	RA	3247	1/1	0.91	0.24	44,44,44,44	0
57	MG	YA	3280	1/1	0.91	0.44	50,50,50,50	0
57	MG	RA	3153	1/1	0.91	0.39	52,52,52,52	0
57	MG	RA	3127	1/1	0.91	0.27	95,95,95,95	0
57	MG	XA	1685	1/1	0.91	0.23	72,72,72,72	0
57	MG	XA	1622	1/1	0.91	0.16	49,49,49,49	0
57	MG	RA	3096	1/1	0.91	0.08	25,25,25,25	0
57	MG	YA	3174	1/1	0.91	0.15	38,38,38,38	0
57	MG	RA	3132	1/1	0.91	0.36	79,79,79,79	0
57	MG	YA	3294	1/1	0.91	0.61	64,64,64,64	0
57	MG	Y8	102	1/1	0.91	0.21	106,106,106,106	0
57	MG	YA	3001	1/1	0.91	0.28	119,119,119,119	0
57	MG	YA	3181	1/1	0.91	0.20	54,54,54,54	0
57	MG	RA	3320	1/1	0.91	0.54	111,111,111,111	0
57	MG	RA	3186	1/1	0.92	0.07	28,28,28,28	0
57	MG	XA	1718	1/1	0.92	0.27	53,53,53,53	0
57	MG	QA	1651	1/1	0.92	0.18	64,64,64,64	0
57	MG	YA	3340	1/1	0.92	0.17	74,74,74,74	0
57	MG	RA	3207	1/1	0.92	0.19	61,61,61,61	0
57	MG	YA	3055	1/1	0.92	0.44	94,94,94,94	0
57	MG	YA	3059	1/1	0.92	0.22	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	QA	1622	1/1	0.92	0.15	62,62,62,62	0
57	MG	XA	1676	1/1	0.92	0.45	60,60,60,60	0
57	MG	RA	3085	1/1	0.92	0.25	62,62,62,62	0
57	MG	XA	1633	1/1	0.92	0.15	39,39,39,39	0
57	MG	RA	3086	1/1	0.92	0.07	23,23,23,23	0
57	MG	RA	3342	1/1	0.92	0.16	33,33,33,33	0
57	MG	YA	3285	1/1	0.92	0.24	37,37,37,37	0
57	MG	QA	1604	1/1	0.92	0.13	16,16,16,16	0
57	MG	RA	3043	1/1	0.92	0.10	20,20,20,20	0
57	MG	YA	3288	1/1	0.92	0.28	57,57,57,57	0
57	MG	YA	3194	1/1	0.92	0.26	101,101,101,101	0
57	MG	RA	3318	1/1	0.92	0.15	77,77,77,77	0
57	MG	YA	3196	1/1	0.92	0.18	34,34,34,34	0
57	MG	RA	3217	1/1	0.92	0.13	43,43,43,43	0
57	MG	RA	3119	1/1	0.92	0.14	54,54,54,54	0
57	MG	YA	3296	1/1	0.92	0.36	78,78,78,78	0
57	MG	RA	3359	1/1	0.92	0.15	41,41,41,41	0
57	MG	YA	3120	1/1	0.92	0.08	27,27,27,27	0
57	MG	YE	303	1/1	0.92	0.06	38,38,38,38	0
57	MG	YA	3208	1/1	0.92	0.24	113,113,113,113	0
57	MG	YA	3210	1/1	0.92	0.10	50,50,50,50	0
57	MG	RA	3160	1/1	0.92	0.27	61,61,61,61	0
57	MG	XA	1650	1/1	0.92	0.17	65,65,65,65	0
57	MG	RA	3142	1/1	0.92	0.30	65,65,65,65	0
57	MG	YA	3126	1/1	0.92	0.32	56,56,56,56	0
57	MG	XA	1655	1/1	0.92	0.22	47,47,47,47	0
57	MG	RA	3048	1/1	0.92	0.28	53,53,53,53	0
57	MG	YA	3389	1/1	0.92	0.21	16,16,16,16	0
57	MG	QA	1716	1/1	0.92	0.09	40,40,40,40	0
57	MG	YA	3133	1/1	0.92	0.09	29,29,29,29	0
57	MG	RA	3368	1/1	0.92	0.07	30,30,30,30	0
57	MG	YA	3402	1/1	0.92	0.13	49,49,49,49	0
57	MG	QA	1670	1/1	0.92	0.14	44,44,44,44	0
57	MG	YA	3408	1/1	0.92	0.16	67,67,67,67	0
57	MG	YT	201	1/1	0.92	0.16	79,79,79,79	0
57	MG	RA	3203	1/1	0.92	0.06	37,37,37,37	0
57	MG	YV	301	1/1	0.92	0.10	59,59,59,59	0
57	MG	YW	201	1/1	0.92	0.17	61,61,61,61	0
57	MG	RA	3168	1/1	0.92	0.12	36,36,36,36	0
57	MG	RA	3378	1/1	0.92	0.36	81,81,81,81	0
57	MG	YA	3017	1/1	0.92	0.21	12,12,12,12	0
57	MG	YA	3019	1/1	0.92	0.12	28,28,28,28	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	YA	3335	1/1	0.92	0.08	18,18,18,18	0
57	MG	RE	308	1/1	0.93	0.07	69,69,69,69	0
57	MG	YA	3173	1/1	0.93	0.07	60,60,60,60	0
57	MG	YA	3291	1/1	0.93	0.08	28,28,28,28	0
57	MG	YA	3394	1/1	0.93	0.07	42,42,42,42	0
57	MG	RA	3141	1/1	0.93	0.14	33,33,33,33	0
57	MG	XA	1699	1/1	0.93	0.25	51,51,51,51	0
57	MG	YA	3176	1/1	0.93	0.39	76,76,76,76	0
57	MG	YA	3178	1/1	0.93	0.44	83,83,83,83	0
57	MG	RA	3109	1/1	0.93	0.13	12,12,12,12	0
57	MG	QA	1698	1/1	0.93	0.19	53,53,53,53	0
57	MG	XA	1648	1/1	0.93	0.14	53,53,53,53	0
57	MG	YA	3031	1/1	0.93	0.12	44,44,44,44	0
57	MG	XA	1649	1/1	0.93	0.40	68,68,68,68	0
57	MG	YA	3304	1/1	0.93	0.06	24,24,24,24	0
57	MG	RA	3214	1/1	0.93	0.10	55,55,55,55	0
57	MG	RA	3289	1/1	0.93	0.38	85,85,85,85	0
57	MG	YA	3425	1/1	0.93	0.23	121,121,121,121	0
57	MG	YA	3190	1/1	0.93	0.15	41,41,41,41	0
57	MG	YA	3313	1/1	0.93	0.28	51,51,51,51	0
57	MG	XA	1709	1/1	0.93	0.35	77,77,77,77	0
57	MG	XA	1654	1/1	0.93	0.15	50,50,50,50	0
57	MG	YA	3067	1/1	0.93	0.13	34,34,34,34	0
57	MG	QA	1715	1/1	0.93	0.19	63,63,63,63	0
57	MG	YA	3436	1/1	0.93	0.20	54,54,54,54	0
57	MG	RA	3001	1/1	0.93	0.11	17,17,17,17	0
57	MG	YA	3073	1/1	0.93	0.21	18,18,18,18	0
57	MG	RA	3293	1/1	0.93	0.25	71,71,71,71	0
57	MG	RA	3052	1/1	0.93	0.23	50,50,50,50	0
57	MG	YA	3325	1/1	0.93	0.35	66,66,66,66	0
57	MG	YA	3093	1/1	0.93	0.15	12,12,12,12	0
57	MG	XA	1609	1/1	0.93	0.21	42,42,42,42	0
57	MG	YA	3097	1/1	0.93	0.05	12,12,12,12	0
57	MG	RA	3321	1/1	0.93	0.14	85,85,85,85	0
57	MG	XA	1667	1/1	0.93	0.16	51,51,51,51	0
57	MG	XB	302	1/1	0.93	0.09	80,80,80,80	0
57	MG	YA	3455	1/1	0.93	0.24	52,52,52,52	0
57	MG	RA	3224	1/1	0.93	0.24	48,48,48,48	0
57	MG	XJ	301	1/1	0.93	0.13	55,55,55,55	0
57	MG	RA	3012	1/1	0.93	0.11	33,33,33,33	0
57	MG	YA	3230	1/1	0.93	0.10	31,31,31,31	0
57	MG	XL	202	1/1	0.93	0.16	27,27,27,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	RA	3268	1/1	0.93	0.21	49,49,49,49	0
57	MG	RA	3369	1/1	0.93	0.14	33,33,33,33	0
57	MG	RA	3002	1/1	0.93	0.21	56,56,56,56	0
57	MG	RA	3371	1/1	0.93	0.32	84,84,84,84	0
57	MG	RA	3133	1/1	0.93	0.27	44,44,44,44	0
57	MG	RA	3331	1/1	0.93	0.07	56,56,56,56	0
57	MG	YA	3351	1/1	0.93	0.26	68,68,68,68	0
57	MG	QV	104	1/1	0.93	0.14	54,54,54,54	0
57	MG	RA	3108	1/1	0.93	0.17	74,74,74,74	0
57	MG	YA	3132	1/1	0.93	0.18	51,51,51,51	0
57	MG	RA	3276	1/1	0.93	0.27	58,58,58,58	0
57	MG	XA	1687	1/1	0.93	0.17	42,42,42,42	0
57	MG	XA	1688	1/1	0.93	0.15	38,38,38,38	0
57	MG	YA	3147	1/1	0.93	0.10	34,34,34,34	0
57	MG	Y3	101	1/1	0.93	0.20	119,119,119,119	0
57	MG	YA	3265	1/1	0.93	0.10	31,31,31,31	0
57	MG	YA	3151	1/1	0.93	0.19	62,62,62,62	0
57	MG	YA	3269	1/1	0.93	0.07	27,27,27,27	0
57	MG	RA	3140	1/1	0.93	0.10	25,25,25,25	0
57	MG	RA	3279	1/1	0.93	0.15	64,64,64,64	0
57	MG	RA	3243	1/1	0.93	0.28	60,60,60,60	0
57	MG	RA	3339	1/1	0.93	0.08	22,22,22,22	0
57	MG	YA	3284	1/1	0.93	0.30	52,52,52,52	0
57	MG	RA	3158	1/1	0.93	0.25	57,57,57,57	0
57	MG	YX	102	1/1	0.93	0.11	55,55,55,55	0
57	MG	YA	3005	1/1	0.93	0.18	12,12,12,12	0
57	MG	XA	1641	1/1	0.93	0.18	40,40,40,40	0
57	MG	YA	3385	1/1	0.93	0.07	19,19,19,19	0
57	MG	YA	3386	1/1	0.93	0.16	41,41,41,41	0
57	MG	YA	3390	1/1	0.94	0.20	65,65,65,65	0
57	MG	XA	1657	1/1	0.94	0.21	44,44,44,44	0
57	MG	RA	3229	1/1	0.94	0.24	62,62,62,62	0
57	MG	XA	1661	1/1	0.94	0.13	57,57,57,57	0
57	MG	YA	3398	1/1	0.94	0.15	36,36,36,36	0
57	MG	XA	1714	1/1	0.94	0.27	61,61,61,61	0
57	MG	YA	3068	1/1	0.94	0.17	25,25,25,25	0
57	MG	YA	3184	1/1	0.94	0.20	82,82,82,82	0
57	MG	XA	1715	1/1	0.94	0.20	62,62,62,62	0
57	MG	YA	3410	1/1	0.94	0.24	73,73,73,73	0
57	MG	YA	3412	1/1	0.94	0.14	80,80,80,80	0
57	MG	RA	3231	1/1	0.94	0.06	13,13,13,13	0
57	MG	YA	3303	1/1	0.94	0.34	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	YA	3415	1/1	0.94	0.17	53,53,53,53	0
57	MG	XA	1719	1/1	0.94	0.24	48,48,48,48	0
57	MG	RA	3353	1/1	0.94	0.22	159,159,159,159	0
57	MG	YA	3076	1/1	0.94	0.18	12,12,12,12	0
57	MG	YA	3422	1/1	0.94	0.13	62,62,62,62	0
57	MG	XA	1664	1/1	0.94	0.14	75,75,75,75	0
57	MG	QA	1640	1/1	0.94	0.16	47,47,47,47	0
57	MG	RA	3278	1/1	0.94	0.15	59,59,59,59	0
57	MG	RA	3011	1/1	0.94	0.36	57,57,57,57	0
57	MG	YA	3101	1/1	0.94	0.18	32,32,32,32	0
57	MG	YA	3102	1/1	0.94	0.08	36,36,36,36	0
57	MG	RA	3360	1/1	0.94	0.17	59,59,59,59	0
57	MG	YA	3433	1/1	0.94	0.52	80,80,80,80	0
57	MG	YA	3106	1/1	0.94	0.11	12,12,12,12	0
57	MG	RA	3237	1/1	0.94	0.06	18,18,18,18	0
57	MG	QA	1652	1/1	0.94	0.18	62,62,62,62	0
57	MG	YA	3438	1/1	0.94	0.08	18,18,18,18	0
57	MG	QA	1679	1/1	0.94	0.34	70,70,70,70	0
57	MG	RA	3241	1/1	0.94	0.20	33,33,33,33	0
57	MG	YA	3221	1/1	0.94	0.12	15,15,15,15	0
57	MG	YA	3329	1/1	0.94	0.14	44,44,44,44	0
57	MG	YA	3330	1/1	0.94	0.16	56,56,56,56	0
57	MG	RA	3242	1/1	0.94	0.19	35,35,35,35	0
57	MG	RA	3093	1/1	0.94	0.23	40,40,40,40	0
57	MG	YA	3447	1/1	0.94	0.27	37,37,37,37	0
57	MG	RA	3288	1/1	0.94	0.07	44,44,44,44	0
57	MG	YA	3121	1/1	0.94	0.07	29,29,29,29	0
57	MG	RA	3024	1/1	0.94	0.12	20,20,20,20	0
57	MG	YA	3123	1/1	0.94	0.26	44,44,44,44	0
57	MG	RA	3097	1/1	0.94	0.09	27,27,27,27	0
57	MG	RA	3041	1/1	0.94	0.21	33,33,33,33	0
57	MG	RA	3170	1/1	0.94	0.18	71,71,71,71	0
57	MG	RA	3099	1/1	0.94	0.11	27,27,27,27	0
57	MG	QA	1614	1/1	0.94	0.18	37,37,37,37	0
57	MG	RA	3297	1/1	0.94	0.05	41,41,41,41	0
57	MG	RA	3105	1/1	0.94	0.17	30,30,30,30	0
57	MG	RA	3194	1/1	0.94	0.23	62,62,62,62	0
57	MG	Y7	101	1/1	0.94	0.09	51,51,51,51	0
57	MG	QA	1700	1/1	0.94	0.31	50,50,50,50	0
57	MG	YA	3252	1/1	0.94	0.21	64,64,64,64	0
57	MG	YA	3254	1/1	0.94	0.30	55,55,55,55	0
57	MG	YA	3257	1/1	0.94	0.16	27,27,27,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	YF	304	1/1	0.94	0.29	85,85,85,85	0
57	MG	RA	3175	1/1	0.94	0.15	51,51,51,51	0
57	MG	YA	3148	1/1	0.94	0.11	65,65,65,65	0
57	MG	XA	1696	1/1	0.94	0.13	70,70,70,70	0
57	MG	RA	3267	1/1	0.94	0.18	54,54,54,54	0
57	MG	YH	203	1/1	0.94	0.14	89,89,89,89	0
57	MG	XA	1698	1/1	0.94	0.15	43,43,43,43	0
57	MG	RF	301	1/1	0.94	0.05	21,21,21,21	0
57	MG	YI	201	1/1	0.94	0.08	69,69,69,69	0
57	MG	YA	3273	1/1	0.94	0.30	53,53,53,53	0
57	MG	RA	3220	1/1	0.94	0.19	44,44,44,44	0
57	MG	YA	3277	1/1	0.94	0.22	58,58,58,58	0
57	MG	YA	3279	1/1	0.94	0.16	48,48,48,48	0
57	MG	RA	3078	1/1	0.94	0.13	19,19,19,19	0
57	MG	YA	3163	1/1	0.94	0.12	35,35,35,35	0
57	MG	RA	3306	1/1	0.94	0.26	53,53,53,53	0
57	MG	YA	3018	1/1	0.94	0.18	36,36,36,36	0
57	MG	XA	1652	1/1	0.94	0.24	55,55,55,55	0
57	MG	XA	1653	1/1	0.94	0.08	36,36,36,36	0
57	MG	YA	3027	1/1	0.94	0.22	42,42,42,42	0
57	MG	QA	1707	1/1	0.94	0.28	54,54,54,54	0
57	MG	YA	3032	1/1	0.94	0.05	14,14,14,14	0
57	MG	YY	204	1/1	0.94	0.05	48,48,48,48	0
57	MG	QV	105	1/1	0.94	0.09	32,32,32,32	0
58	PAR	QA	1711	42/42	0.94	0.10	62,62,86,94	0
57	MG	RA	3347	1/1	0.94	0.19	72,72,72,72	0
57	MG	YA	3256	1/1	0.95	0.14	59,59,59,59	0
57	MG	RA	3315	1/1	0.95	0.14	19,19,19,19	0
57	MG	YA	3258	1/1	0.95	0.08	40,40,40,40	0
57	MG	RA	3131	1/1	0.95	0.21	58,58,58,58	0
57	MG	YA	3130	1/1	0.95	0.12	41,41,41,41	0
57	MG	RA	3094	1/1	0.95	0.15	12,12,12,12	0
57	MG	RA	3270	1/1	0.95	0.05	49,49,49,49	0
57	MG	RE	302	1/1	0.95	0.08	15,15,15,15	0
57	MG	YA	3134	1/1	0.95	0.09	15,15,15,15	0
57	MG	YA	3270	1/1	0.95	0.14	19,19,19,19	0
57	MG	RA	3271	1/1	0.95	0.09	29,29,29,29	0
57	MG	QA	1665	1/1	0.95	0.14	35,35,35,35	0
57	MG	YA	3275	1/1	0.95	0.20	33,33,33,33	0
57	MG	YA	3391	1/1	0.95	0.25	58,58,58,58	0
57	MG	YA	3393	1/1	0.95	0.08	31,31,31,31	0
57	MG	YA	3145	1/1	0.95	0.15	12,12,12,12	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	YA	3278	1/1	0.95	0.28	49,49,49,49	0
57	MG	YA	3146	1/1	0.95	0.12	27,27,27,27	0
57	MG	QA	1657	1/1	0.95	0.06	18,18,18,18	0
57	MG	RA	3274	1/1	0.95	0.07	21,21,21,21	0
57	MG	YA	3401	1/1	0.95	0.21	12,12,12,12	0
57	MG	RA	3324	1/1	0.95	0.17	42,42,42,42	0
57	MG	YA	3403	1/1	0.95	0.24	65,65,65,65	0
57	MG	YA	3150	1/1	0.95	0.10	50,50,50,50	0
57	MG	YA	3406	1/1	0.95	0.20	68,68,68,68	0
57	MG	QA	1668	1/1	0.95	0.21	62,62,62,62	0
57	MG	RA	3137	1/1	0.95	0.09	16,16,16,16	0
57	MG	YA	3158	1/1	0.95	0.06	21,21,21,21	0
57	MG	Y8	101	1/1	0.95	0.09	70,70,70,70	0
57	MG	RA	3139	1/1	0.95	0.10	20,20,20,20	0
57	MG	YA	3290	1/1	0.95	0.21	39,39,39,39	0
57	MG	YA	3417	1/1	0.95	0.10	26,26,26,26	0
57	MG	YA	3418	1/1	0.95	0.15	82,82,82,82	0
57	MG	RP	201	1/1	0.95	0.47	63,63,63,63	0
57	MG	XA	1680	1/1	0.95	0.15	48,48,48,48	0
57	MG	QA	1709	1/1	0.95	0.18	40,40,40,40	0
57	MG	RA	3103	1/1	0.95	0.14	43,43,43,43	0
57	MG	YA	3423	1/1	0.95	0.30	49,49,49,49	0
57	MG	RA	3222	1/1	0.95	0.14	67,67,67,67	0
57	MG	RT	201	1/1	0.95	0.06	52,52,52,52	0
57	MG	XA	1686	1/1	0.95	0.06	22,22,22,22	0
57	MG	XA	1605	1/1	0.95	0.30	48,48,48,48	0
57	MG	YA	3299	1/1	0.95	0.17	61,61,61,61	0
57	MG	YA	3300	1/1	0.95	0.10	13,13,13,13	0
57	MG	QV	106	1/1	0.95	0.09	28,28,28,28	0
57	MG	RA	3018	1/1	0.95	0.08	14,14,14,14	0
57	MG	RA	3066	1/1	0.95	0.12	18,18,18,18	0
57	MG	YA	3025	1/1	0.95	0.17	12,12,12,12	0
57	MG	RA	3228	1/1	0.95	0.03	15,15,15,15	0
57	MG	YA	3308	1/1	0.95	0.11	41,41,41,41	0
57	MG	QX	101	1/1	0.95	0.14	33,33,33,33	0
57	MG	YA	3311	1/1	0.95	0.17	44,44,44,44	0
57	MG	YA	3441	1/1	0.95	0.18	54,54,54,54	0
57	MG	XA	1611	1/1	0.95	0.10	27,27,27,27	0
57	MG	YA	3042	1/1	0.95	0.21	12,12,12,12	0
57	MG	RA	3338	1/1	0.95	0.25	69,69,69,69	0
57	MG	RA	3071	1/1	0.95	0.10	21,21,21,21	0
57	MG	YA	3316	1/1	0.95	0.08	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	RA	3021	1/1	0.95	0.12	17,17,17,17	0
57	MG	XA	1619	1/1	0.95	0.13	37,37,37,37	0
57	MG	RA	3073	1/1	0.95	0.19	68,68,68,68	0
57	MG	YA	3066	1/1	0.95	0.11	31,31,31,31	0
57	MG	RA	3074	1/1	0.95	0.15	20,20,20,20	0
57	MG	QA	1631	1/1	0.95	0.04	31,31,31,31	0
57	MG	YA	3197	1/1	0.95	0.23	48,48,48,48	0
57	MG	YA	3069	1/1	0.95	0.11	21,21,21,21	0
57	MG	RA	3029	1/1	0.95	0.13	25,25,25,25	0
57	MG	RA	3349	1/1	0.95	0.11	30,30,30,30	0
57	MG	RA	3350	1/1	0.95	0.07	51,51,51,51	0
57	MG	YA	3331	1/1	0.95	0.08	56,56,56,56	0
57	MG	RA	3033	1/1	0.95	0.12	18,18,18,18	0
57	MG	RA	3036	1/1	0.95	0.09	20,20,20,20	0
57	MG	YA	3211	1/1	0.95	0.14	37,37,37,37	0
57	MG	RA	3159	1/1	0.95	0.17	48,48,48,48	0
57	MG	YE	306	1/1	0.95	0.15	55,55,55,55	0
57	MG	YA	3087	1/1	0.95	0.09	21,21,21,21	0
57	MG	YA	3217	1/1	0.95	0.06	19,19,19,19	0
57	MG	RA	3354	1/1	0.95	0.21	133,133,133,133	0
57	MG	YA	3219	1/1	0.95	0.12	47,47,47,47	0
57	MG	QA	1616	1/1	0.95	0.18	34,34,34,34	0
57	MG	RA	3248	1/1	0.95	0.12	40,40,40,40	0
57	MG	YA	3100	1/1	0.95	0.16	12,12,12,12	0
57	MG	RA	3161	1/1	0.95	0.09	36,36,36,36	0
57	MG	YA	3347	1/1	0.95	0.20	68,68,68,68	0
57	MG	QA	1703	1/1	0.95	0.15	83,83,83,83	0
57	MG	QA	1672	1/1	0.95	0.22	69,69,69,69	0
57	MG	YN	201	1/1	0.95	0.09	31,31,31,31	0
57	MG	RA	3362	1/1	0.95	0.42	32,32,32,32	0
57	MG	RA	3363	1/1	0.95	0.15	35,35,35,35	0
57	MG	YP	202	1/1	0.95	0.06	38,38,38,38	0
57	MG	YP	204	1/1	0.95	0.11	44,44,44,44	0
57	MG	RA	3045	1/1	0.95	0.26	35,35,35,35	0
57	MG	YQ	201	1/1	0.95	0.15	61,61,61,61	0
57	MG	RA	3088	1/1	0.95	0.15	17,17,17,17	0
57	MG	XA	1722	1/1	0.95	0.13	58,58,58,58	0
57	MG	RA	3126	1/1	0.95	0.15	42,42,42,42	0
57	MG	RA	3255	1/1	0.95	0.42	52,52,52,52	0
57	MG	RA	3090	1/1	0.95	0.09	15,15,15,15	0
57	MG	YA	3360	1/1	0.95	0.26	55,55,55,55	0
57	MG	YA	3361	1/1	0.95	0.43	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	RA	3261	1/1	0.95	0.25	53,53,53,53	0
57	MG	RA	3128	1/1	0.95	0.05	18,18,18,18	0
57	MG	RA	3208	1/1	0.95	0.07	48,48,48,48	0
57	MG	RA	3376	1/1	0.95	0.14	23,23,23,23	0
57	MG	RA	3266	1/1	0.95	0.13	52,52,52,52	0
57	MG	QA	1603	1/1	0.95	0.34	55,55,55,55	0
58	PAR	XA	1717	42/42	0.95	0.15	62,62,79,86	0
57	MG	YA	3369	1/1	0.95	0.17	51,51,51,51	0
57	MG	YA	3022	1/1	0.96	0.14	12,12,12,12	0
57	MG	YA	3024	1/1	0.96	0.13	13,13,13,13	0
57	MG	YA	3276	1/1	0.96	0.24	43,43,43,43	0
57	MG	YA	3153	1/1	0.96	0.07	35,35,35,35	0
57	MG	YA	3154	1/1	0.96	0.06	27,27,27,27	0
57	MG	RA	3178	1/1	0.96	0.14	29,29,29,29	0
57	MG	YA	3156	1/1	0.96	0.07	17,17,17,17	0
57	MG	YA	3157	1/1	0.96	0.09	12,12,12,12	0
57	MG	XA	1707	1/1	0.96	0.35	92,92,92,92	0
57	MG	QD	502	1/1	0.96	0.05	54,54,54,54	0
57	MG	YA	3400	1/1	0.96	0.23	40,40,40,40	0
57	MG	RA	3355	1/1	0.96	0.12	32,32,32,32	0
57	MG	YA	3037	1/1	0.96	0.13	12,12,12,12	0
57	MG	RA	3151	1/1	0.96	0.29	52,52,52,52	0
57	MG	YA	3165	1/1	0.96	0.17	41,41,41,41	0
57	MG	RT	202	1/1	0.96	0.05	54,54,54,54	0
57	MG	YA	3407	1/1	0.96	0.07	26,26,26,26	0
57	MG	YA	3046	1/1	0.96	0.12	17,17,17,17	0
57	MG	YA	3047	1/1	0.96	0.08	19,19,19,19	0
57	MG	XA	1658	1/1	0.96	0.20	53,53,53,53	0
57	MG	XA	1601	1/1	0.96	0.10	15,15,15,15	0
57	MG	XA	1660	1/1	0.96	0.10	52,52,52,52	0
57	MG	QA	1671	1/1	0.96	0.15	36,36,36,36	0
57	MG	YA	3416	1/1	0.96	0.10	35,35,35,35	0
57	MG	YA	3062	1/1	0.96	0.16	32,32,32,32	0
57	MG	YA	3065	1/1	0.96	0.05	12,12,12,12	0
57	MG	RA	3034	1/1	0.96	0.10	29,29,29,29	0
57	MG	QA	1642	1/1	0.96	0.11	39,39,39,39	0
57	MG	RA	3129	1/1	0.96	0.04	21,21,21,21	0
57	MG	RA	3215	1/1	0.96	0.22	55,55,55,55	0
57	MG	RA	3039	1/1	0.96	0.12	14,14,14,14	0
57	MG	XA	1724	1/1	0.96	0.17	31,31,31,31	0
57	MG	YA	3185	1/1	0.96	0.04	39,39,39,39	0
57	MG	YA	3187	1/1	0.96	0.12	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	RA	3256	1/1	0.96	0.15	45,45,45,45	0
57	MG	RA	3292	1/1	0.96	0.10	61,61,61,61	0
57	MG	YA	3310	1/1	0.96	0.32	69,69,69,69	0
57	MG	XD	502	1/1	0.96	0.12	74,74,74,74	0
57	MG	XA	1613	1/1	0.96	0.05	12,12,12,12	0
57	MG	YA	3083	1/1	0.96	0.06	16,16,16,16	0
57	MG	YA	3084	1/1	0.96	0.09	12,12,12,12	0
57	MG	XA	1672	1/1	0.96	0.11	21,21,21,21	0
57	MG	YA	3091	1/1	0.96	0.09	47,47,47,47	0
57	MG	YA	3199	1/1	0.96	0.06	53,53,53,53	0
57	MG	YA	3092	1/1	0.96	0.14	25,25,25,25	0
57	MG	QK	202	1/1	0.96	0.06	43,43,43,43	0
57	MG	RA	3367	1/1	0.96	0.24	68,68,68,68	0
57	MG	QA	1685	1/1	0.96	0.16	37,37,37,37	0
57	MG	YA	3207	1/1	0.96	0.04	42,42,42,42	0
57	MG	RA	3107	1/1	0.96	0.07	26,26,26,26	0
57	MG	YA	3209	1/1	0.96	0.07	28,28,28,28	0
57	MG	XA	1677	1/1	0.96	0.21	49,49,49,49	0
57	MG	YA	3449	1/1	0.96	0.04	30,30,30,30	0
57	MG	XA	1678	1/1	0.96	0.19	34,34,34,34	0
57	MG	YA	3212	1/1	0.96	0.06	32,32,32,32	0
57	MG	YA	3213	1/1	0.96	0.04	22,22,22,22	0
57	MG	YA	3453	1/1	0.96	0.15	17,17,17,17	0
57	MG	YA	3454	1/1	0.96	0.26	80,80,80,80	0
57	MG	YA	3214	1/1	0.96	0.04	25,25,25,25	0
57	MG	YA	3456	1/1	0.96	0.20	113,113,113,113	0
57	MG	YA	3457	1/1	0.96	0.11	28,28,28,28	0
57	MG	RA	3296	1/1	0.96	0.06	33,33,33,33	0
57	MG	XA	1681	1/1	0.96	0.05	27,27,27,27	0
57	MG	RA	3263	1/1	0.96	0.85	76,76,76,76	0
57	MG	YA	3337	1/1	0.96	0.09	21,21,21,21	0
57	MG	YA	3113	1/1	0.96	0.15	17,17,17,17	0
57	MG	YB	207	1/1	0.96	0.11	30,30,30,30	0
57	MG	RA	3373	1/1	0.96	0.06	34,34,34,34	0
57	MG	YD	301	1/1	0.96	0.15	58,58,58,58	0
57	MG	XA	1625	1/1	0.96	0.12	60,60,60,60	0
57	MG	RA	3163	1/1	0.96	0.27	69,69,69,69	0
57	MG	YA	3222	1/1	0.96	0.10	12,12,12,12	0
57	MG	QV	101	1/1	0.96	0.07	23,23,23,23	0
57	MG	Y2	103	1/1	0.96	0.07	19,19,19,19	0
57	MG	RA	3165	1/1	0.96	0.04	34,34,34,34	0
57	MG	QA	1633	1/1	0.96	0.25	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	Y4	102	1/1	0.96	0.11	29,29,29,29	0
57	MG	RB	201	1/1	0.96	0.08	52,52,52,52	0
57	MG	QA	1720	1/1	0.96	0.05	41,41,41,41	0
57	MG	RA	3049	1/1	0.96	0.07	21,21,21,21	0
57	MG	RA	3304	1/1	0.96	0.07	43,43,43,43	0
57	MG	YA	3353	1/1	0.96	0.12	115,115,115,115	0
57	MG	QA	1661	1/1	0.96	0.06	69,69,69,69	0
57	MG	YA	3002	1/1	0.96	0.24	66,66,66,66	0
57	MG	QA	1658	1/1	0.96	0.07	40,40,40,40	0
57	MG	RA	3053	1/1	0.96	0.02	12,12,12,12	0
57	MG	YA	3006	1/1	0.96	0.16	12,12,12,12	0
57	MG	YA	3359	1/1	0.96	0.09	46,46,46,46	0
57	MG	YA	3246	1/1	0.96	0.33	64,64,64,64	0
57	MG	QA	1664	1/1	0.96	0.15	50,50,50,50	0
57	MG	RA	3346	1/1	0.96	0.33	67,67,67,67	0
57	MG	YA	3135	1/1	0.96	0.05	25,25,25,25	0
57	MG	YA	3136	1/1	0.96	0.61	75,75,75,75	0
57	MG	YA	3255	1/1	0.96	0.17	12,12,12,12	0
57	MG	YA	3137	1/1	0.96	0.16	56,56,56,56	0
57	MG	YQ	204	1/1	0.96	0.13	18,18,18,18	0
57	MG	YA	3138	1/1	0.96	0.05	25,25,25,25	0
57	MG	YA	3139	1/1	0.96	0.06	34,34,34,34	0
57	MG	RA	3089	1/1	0.96	0.10	29,29,29,29	0
57	MG	YA	3261	1/1	0.96	0.15	18,18,18,18	0
57	MG	YA	3011	1/1	0.96	0.16	12,12,12,12	0
57	MG	YA	3143	1/1	0.96	0.05	29,29,29,29	0
57	MG	YA	3377	1/1	0.96	0.12	27,27,27,27	0
57	MG	YA	3264	1/1	0.96	0.23	47,47,47,47	0
57	MG	YY	203	1/1	0.96	0.05	62,62,62,62	0
57	MG	RA	3348	1/1	0.96	0.12	25,25,25,25	0
57	MG	RA	3056	1/1	0.96	0.14	53,53,53,53	0
57	MG	RA	3020	1/1	0.96	0.11	12,12,12,12	0
57	MG	QA	1724	1/1	0.96	0.08	25,25,25,25	0
57	MG	QA	1714	1/1	0.96	0.13	47,47,47,47	0
57	MG	YA	3167	1/1	0.97	0.05	33,33,33,33	0
57	MG	RA	3091	1/1	0.97	0.12	14,14,14,14	0
57	MG	YA	3392	1/1	0.97	0.10	42,42,42,42	0
57	MG	YA	3169	1/1	0.97	0.04	26,26,26,26	0
57	MG	RA	3092	1/1	0.97	0.07	19,19,19,19	0
57	MG	RA	3057	1/1	0.97	0.11	28,28,28,28	0
57	MG	QA	1666	1/1	0.97	0.17	48,48,48,48	0
57	MG	YA	3397	1/1	0.97	0.12	12,12,12,12	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	YA	3283	1/1	0.97	0.29	48,48,48,48	0
57	MG	RA	3095	1/1	0.97	0.12	12,12,12,12	0
57	MG	RA	3013	1/1	0.97	0.11	12,12,12,12	0
57	MG	RA	3037	1/1	0.97	0.19	18,18,18,18	0
57	MG	YA	3177	1/1	0.97	0.13	20,20,20,20	0
57	MG	RA	3038	1/1	0.97	0.14	12,12,12,12	0
57	MG	YA	3082	1/1	0.97	0.05	14,14,14,14	0
57	MG	RA	3015	1/1	0.97	0.13	14,14,14,14	0
57	MG	RA	3100	1/1	0.97	0.04	12,12,12,12	0
57	MG	YA	3085	1/1	0.97	0.09	12,12,12,12	0
57	MG	YA	3409	1/1	0.97	0.09	36,36,36,36	0
57	MG	YA	3086	1/1	0.97	0.08	14,14,14,14	0
57	MG	YA	3411	1/1	0.97	0.07	50,50,50,50	0
57	MG	RA	3322	1/1	0.97	0.09	22,22,22,22	0
57	MG	YA	3090	1/1	0.97	0.20	45,45,45,45	0
57	MG	YA	3186	1/1	0.97	0.04	28,28,28,28	0
57	MG	RA	3282	1/1	0.97	0.15	45,45,45,45	0
57	MG	RA	3283	1/1	0.97	0.16	59,59,59,59	0
57	MG	RA	3069	1/1	0.97	0.11	26,26,26,26	0
57	MG	YA	3095	1/1	0.97	0.10	15,15,15,15	0
57	MG	XA	1626	1/1	0.97	0.07	24,24,24,24	0
57	MG	YA	3193	1/1	0.97	0.09	39,39,39,39	0
57	MG	XA	1628	1/1	0.97	0.08	25,25,25,25	0
57	MG	YA	3099	1/1	0.97	0.12	26,26,26,26	0
57	MG	RA	3372	1/1	0.97	0.13	12,12,12,12	0
57	MG	YA	3306	1/1	0.97	0.03	27,27,27,27	0
57	MG	RA	3040	1/1	0.97	0.12	17,17,17,17	0
57	MG	YA	3198	1/1	0.97	0.03	55,55,55,55	0
57	MG	RA	3374	1/1	0.97	0.12	34,34,34,34	0
57	MG	YA	3103	1/1	0.97	0.12	12,12,12,12	0
57	MG	YA	3202	1/1	0.97	0.07	23,23,23,23	0
57	MG	RA	3244	1/1	0.97	0.05	35,35,35,35	0
57	MG	YA	3432	1/1	0.97	0.09	50,50,50,50	0
57	MG	RA	3245	1/1	0.97	0.18	30,30,30,30	0
57	MG	YA	3107	1/1	0.97	0.11	12,12,12,12	0
57	MG	YA	3108	1/1	0.97	0.22	21,21,21,21	0
57	MG	RA	3016	1/1	0.97	0.05	16,16,16,16	0
57	MG	QA	1653	1/1	0.97	0.04	41,41,41,41	0
57	MG	QA	1606	1/1	0.97	0.05	19,19,19,19	0
57	MG	YA	3321	1/1	0.97	0.25	55,55,55,55	0
57	MG	QA	1645	1/1	0.97	0.12	53,53,53,53	0
57	MG	RA	3046	1/1	0.97	0.11	12,12,12,12	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	XA	1642	1/1	0.97	0.13	26,26,26,26	0
57	MG	RA	3047	1/1	0.97	0.18	15,15,15,15	0
57	MG	YA	3326	1/1	0.97	0.22	48,48,48,48	0
57	MG	RD	302	1/1	0.97	0.16	45,45,45,45	0
57	MG	RA	3080	1/1	0.97	0.06	12,12,12,12	0
57	MG	RA	3081	1/1	0.97	0.15	19,19,19,19	0
57	MG	XA	1647	1/1	0.97	0.20	58,58,58,58	0
57	MG	YA	3016	1/1	0.97	0.18	12,12,12,12	0
57	MG	QA	1605	1/1	0.97	0.20	22,22,22,22	0
57	MG	XA	1705	1/1	0.97	0.13	51,51,51,51	0
57	MG	RA	3148	1/1	0.97	0.08	16,16,16,16	0
57	MG	YA	3128	1/1	0.97	0.09	22,22,22,22	0
57	MG	YA	3224	1/1	0.97	0.05	19,19,19,19	0
57	MG	YA	3227	1/1	0.97	0.05	29,29,29,29	0
57	MG	RA	3257	1/1	0.97	0.08	19,19,19,19	0
57	MG	RA	3022	1/1	0.97	0.19	23,23,23,23	0
57	MG	RA	3259	1/1	0.97	0.16	164,164,164,164	0
57	MG	RA	3345	1/1	0.97	0.07	26,26,26,26	0
57	MG	YA	3026	1/1	0.97	0.06	17,17,17,17	0
57	MG	YA	3233	1/1	0.97	0.16	37,37,37,37	0
57	MG	YA	3345	1/1	0.97	0.10	35,35,35,35	0
57	MG	YA	3235	1/1	0.97	0.13	108,108,108,108	0
57	MG	RA	3216	1/1	0.97	0.06	45,45,45,45	0
57	MG	YD	303	1/1	0.97	0.06	12,12,12,12	0
57	MG	YD	304	1/1	0.97	0.06	16,16,16,16	0
57	MG	YA	3028	1/1	0.97	0.22	12,12,12,12	0
57	MG	YA	3030	1/1	0.97	0.08	12,12,12,12	0
57	MG	RA	3050	1/1	0.97	0.12	19,19,19,19	0
57	MG	QM	201	1/1	0.97	0.05	53,53,53,53	0
57	MG	RA	3027	1/1	0.97	0.04	19,19,19,19	0
57	MG	YA	3242	1/1	0.97	0.43	80,80,80,80	0
57	MG	YA	3038	1/1	0.97	0.11	12,12,12,12	0
57	MG	YA	3039	1/1	0.97	0.16	12,12,12,12	0
57	MG	YF	305	1/1	0.97	0.08	31,31,31,31	0
57	MG	RP	203	1/1	0.97	0.12	12,12,12,12	0
57	MG	YA	3247	1/1	0.97	0.17	12,12,12,12	0
57	MG	XA	1716	1/1	0.97	0.18	43,43,43,43	0
57	MG	YA	3044	1/1	0.97	0.15	18,18,18,18	0
57	MG	YA	3045	1/1	0.97	0.07	12,12,12,12	0
57	MG	RA	3265	1/1	0.97	0.07	30,30,30,30	0
57	MG	RA	3028	1/1	0.97	0.05	12,12,12,12	0
57	MG	RA	3155	1/1	0.97	0.07	18,18,18,18	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	YA	3364	1/1	0.97	0.10	14,14,14,14	0
57	MG	YA	3049	1/1	0.97	0.14	12,12,12,12	0
57	MG	YA	3152	1/1	0.97	0.07	17,17,17,17	0
57	MG	RA	3223	1/1	0.97	0.18	35,35,35,35	0
57	MG	YA	3260	1/1	0.97	0.10	28,28,28,28	0
57	MG	YP	206	1/1	0.97	0.07	21,21,21,21	0
57	MG	YA	3051	1/1	0.97	0.10	12,12,12,12	0
57	MG	YA	3054	1/1	0.97	0.16	28,28,28,28	0
57	MG	YA	3371	1/1	0.97	0.34	68,68,68,68	0
57	MG	YA	3373	1/1	0.97	0.11	12,12,12,12	0
57	MG	R0	101	1/1	0.97	0.06	34,34,34,34	0
57	MG	YR	202	1/1	0.97	0.07	18,18,18,18	0
57	MG	YA	3056	1/1	0.97	0.15	12,12,12,12	0
57	MG	XA	1603	1/1	0.97	0.10	12,12,12,12	0
57	MG	YA	3159	1/1	0.97	0.11	36,36,36,36	0
57	MG	YA	3378	1/1	0.97	0.31	52,52,52,52	0
57	MG	YA	3268	1/1	0.97	0.15	18,18,18,18	0
57	MG	YA	3061	1/1	0.97	0.12	12,12,12,12	0
57	MG	YA	3381	1/1	0.97	0.22	59,59,59,59	0
57	MG	QA	1686	1/1	0.97	0.05	36,36,36,36	0
57	MG	YA	3383	1/1	0.97	0.20	59,59,59,59	0
57	MG	YA	3272	1/1	0.97	0.16	71,71,71,71	0
57	MG	YA	3064	1/1	0.97	0.04	30,30,30,30	0
57	MG	XA	1666	1/1	0.97	0.23	42,42,42,42	0
57	MG	RA	3226	1/1	0.97	0.08	16,16,16,16	0
57	MG	RA	3357	1/1	0.97	0.14	42,42,42,42	0
57	MG	XA	1616	1/1	0.98	0.12	13,13,13,13	0
57	MG	XL	201	1/1	0.98	0.04	21,21,21,21	0
57	MG	YA	3052	1/1	0.98	0.15	14,14,14,14	0
57	MG	YA	3144	1/1	0.98	0.17	32,32,32,32	0
57	MG	YA	3053	1/1	0.98	0.11	12,12,12,12	0
57	MG	XA	1617	1/1	0.98	0.05	12,12,12,12	0
57	MG	YA	3234	1/1	0.98	0.06	28,28,28,28	0
57	MG	RA	3061	1/1	0.98	0.23	12,12,12,12	0
57	MG	QA	1694	1/1	0.98	0.08	53,53,53,53	0
57	MG	YA	3058	1/1	0.98	0.12	12,12,12,12	0
57	MG	RA	3003	1/1	0.98	0.04	24,24,24,24	0
57	MG	RA	3064	1/1	0.98	0.07	24,24,24,24	0
57	MG	YA	3427	1/1	0.98	0.08	37,37,37,37	0
57	MG	RA	3329	1/1	0.98	0.05	23,23,23,23	0
57	MG	RA	3006	1/1	0.98	0.17	15,15,15,15	0
57	MG	XV	107	1/1	0.98	0.09	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	RA	3201	1/1	0.98	0.06	30,30,30,30	0
57	MG	RA	3067	1/1	0.98	0.31	52,52,52,52	0
57	MG	YA	3245	1/1	0.98	0.05	34,34,34,34	0
57	MG	Y0	102	1/1	0.98	0.04	20,20,20,20	0
57	MG	YA	3435	1/1	0.98	0.11	30,30,30,30	0
57	MG	XA	1627	1/1	0.98	0.04	20,20,20,20	0
57	MG	QA	1611	1/1	0.98	0.12	27,27,27,27	0
57	MG	QA	1609	1/1	0.98	0.06	24,24,24,24	0
57	MG	YA	3250	1/1	0.98	0.12	13,13,13,13	0
57	MG	YA	3251	1/1	0.98	0.08	12,12,12,12	0
57	MG	RA	3070	1/1	0.98	0.03	19,19,19,19	0
57	MG	YA	3253	1/1	0.98	0.13	12,12,12,12	0
57	MG	YA	3074	1/1	0.98	0.04	21,21,21,21	0
57	MG	RA	3044	1/1	0.98	0.04	14,14,14,14	0
57	MG	XA	1632	1/1	0.98	0.07	14,14,14,14	0
57	MG	QA	1641	1/1	0.98	0.04	29,29,29,29	0
57	MG	RA	3101	1/1	0.98	0.10	13,13,13,13	0
57	MG	RD	301	1/1	0.98	0.12	14,14,14,14	0
57	MG	XA	1636	1/1	0.98	0.10	18,18,18,18	0
57	MG	RA	3136	1/1	0.98	0.14	39,39,39,39	0
57	MG	Y8	103	1/1	0.98	0.12	27,27,27,27	0
57	MG	RA	3102	1/1	0.98	0.11	18,18,18,18	0
57	MG	YA	3088	1/1	0.98	0.10	13,13,13,13	0
57	MG	YA	3089	1/1	0.98	0.10	12,12,12,12	0
57	MG	RA	3138	1/1	0.98	0.06	18,18,18,18	0
57	MG	YA	3267	1/1	0.98	0.06	17,17,17,17	0
57	MG	XA	1640	1/1	0.98	0.05	19,19,19,19	0
57	MG	YA	3004	1/1	0.98	0.09	24,24,24,24	0
57	MG	RE	303	1/1	0.98	0.09	27,27,27,27	0
57	MG	YA	3094	1/1	0.98	0.09	18,18,18,18	0
57	MG	YB	205	1/1	0.98	0.18	39,39,39,39	0
57	MG	RA	3025	1/1	0.98	0.06	26,26,26,26	0
57	MG	RA	3343	1/1	0.98	0.10	88,88,88,88	0
57	MG	RA	3026	1/1	0.98	0.09	12,12,12,12	0
57	MG	XA	1701	1/1	0.98	0.06	27,27,27,27	0
57	MG	RA	3075	1/1	0.98	0.08	18,18,18,18	0
57	MG	RA	3076	1/1	0.98	0.05	35,35,35,35	0
57	MG	YA	3015	1/1	0.98	0.11	14,14,14,14	0
57	MG	YA	3372	1/1	0.98	0.29	24,24,24,24	0
57	MG	YE	302	1/1	0.98	0.10	29,29,29,29	0
57	MG	RA	3260	1/1	0.98	0.09	18,18,18,18	0
57	MG	QA	1629	1/1	0.98	0.07	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	R1	101	1/1	0.98	0.11	40,40,40,40	0
57	MG	R5	101	1/1	0.98	0.08	19,19,19,19	0
57	MG	YA	3192	1/1	0.98	0.11	28,28,28,28	0
57	MG	RA	3031	1/1	0.98	0.16	34,34,34,34	0
57	MG	YA	3021	1/1	0.98	0.05	15,15,15,15	0
57	MG	YA	3112	1/1	0.98	0.12	29,29,29,29	0
57	MG	RA	3032	1/1	0.98	0.06	12,12,12,12	0
57	MG	YA	3023	1/1	0.98	0.10	12,12,12,12	0
57	MG	RA	3221	1/1	0.98	0.16	16,16,16,16	0
57	MG	YA	3384	1/1	0.98	0.12	55,55,55,55	0
57	MG	RA	3183	1/1	0.98	0.05	22,22,22,22	0
57	MG	RA	3113	1/1	0.98	0.03	45,45,45,45	0
57	MG	QA	1718	1/1	0.98	0.15	72,72,72,72	0
57	MG	YA	3119	1/1	0.98	0.08	27,27,27,27	0
57	MG	RA	3014	1/1	0.98	0.18	12,12,12,12	0
57	MG	XA	1602	1/1	0.98	0.07	29,29,29,29	0
57	MG	YA	3206	1/1	0.98	0.08	26,26,26,26	0
57	MG	RA	3084	1/1	0.98	0.15	21,21,21,21	0
57	MG	YP	203	1/1	0.98	0.16	50,50,50,50	0
57	MG	XA	1604	1/1	0.98	0.27	44,44,44,44	0
57	MG	YP	205	1/1	0.98	0.04	45,45,45,45	0
57	MG	YA	3034	1/1	0.98	0.11	12,12,12,12	0
57	MG	YA	3035	1/1	0.98	0.09	23,23,23,23	0
57	MG	YA	3036	1/1	0.98	0.10	13,13,13,13	0
57	MG	QA	1663	1/1	0.98	0.08	18,18,18,18	0
57	MG	RA	3189	1/1	0.98	0.04	29,29,29,29	0
57	MG	QF	301	1/1	0.98	0.03	43,43,43,43	0
57	MG	YA	3040	1/1	0.98	0.10	12,12,12,12	0
57	MG	YA	3307	1/1	0.98	0.04	22,22,22,22	0
57	MG	YT	202	1/1	0.98	0.03	38,38,38,38	0
57	MG	YA	3041	1/1	0.98	0.04	12,12,12,12	0
57	MG	RA	3230	1/1	0.98	0.10	20,20,20,20	0
57	MG	XA	1723	1/1	0.98	0.15	38,38,38,38	0
57	MG	YA	3405	1/1	0.98	0.07	22,22,22,22	0
57	MG	RA	3058	1/1	0.98	0.08	12,12,12,12	0
57	MG	RA	3156	1/1	0.98	0.05	17,17,17,17	0
57	MG	RA	3233	1/1	0.98	0.12	27,27,27,27	0
57	MG	RA	3234	1/1	0.98	0.05	12,12,12,12	0
57	MG	RA	3059	1/1	0.98	0.08	13,13,13,13	0
57	MG	RA	3017	1/1	0.98	0.04	21,21,21,21	0
57	MG	YA	3317	1/1	0.98	0.04	36,36,36,36	0
57	MG	YA	3226	1/1	0.98	0.06	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
59	SF4	QD	501	8/8	0.98	0.05	62,62,74,92	0
60	ZN	QN	101	1/1	0.98	0.05	79,79,79,79	0
57	MG	YA	3140	1/1	0.98	0.05	20,20,20,20	0
57	MG	YA	3012	1/1	0.99	0.06	12,12,12,12	0
57	MG	YA	3104	1/1	0.99	0.07	12,12,12,12	0
57	MG	XA	1679	1/1	0.99	0.20	42,42,42,42	0
57	MG	YF	303	1/1	0.99	0.09	23,23,23,23	0
57	MG	YA	3014	1/1	0.99	0.03	12,12,12,12	0
57	MG	YA	3071	1/1	0.99	0.04	12,12,12,12	0
57	MG	XA	1621	1/1	0.99	0.06	17,17,17,17	0
57	MG	YA	3225	1/1	0.99	0.04	34,34,34,34	0
57	MG	RA	3123	1/1	0.99	0.07	32,32,32,32	0
57	MG	YA	3110	1/1	0.99	0.04	31,31,31,31	0
57	MG	YA	3111	1/1	0.99	0.03	19,19,19,19	0
57	MG	RA	3325	1/1	0.99	0.05	28,28,28,28	0
57	MG	YA	3271	1/1	0.99	0.08	14,14,14,14	0
57	MG	RA	3235	1/1	0.99	0.03	22,22,22,22	0
57	MG	RA	3154	1/1	0.99	0.04	39,39,39,39	0
57	MG	RA	3004	1/1	0.99	0.03	16,16,16,16	0
57	MG	YA	3078	1/1	0.99	0.06	14,14,14,14	0
57	MG	YA	3079	1/1	0.99	0.04	12,12,12,12	0
57	MG	YA	3448	1/1	0.99	0.10	12,12,12,12	0
57	MG	YA	3081	1/1	0.99	0.10	12,12,12,12	0
57	MG	RA	3065	1/1	0.99	0.07	24,24,24,24	0
57	MG	RA	3239	1/1	0.99	0.30	26,26,26,26	0
57	MG	RA	3023	1/1	0.99	0.04	17,17,17,17	0
57	MG	RA	3030	1/1	0.99	0.09	18,18,18,18	0
57	MG	RA	3118	1/1	0.99	0.04	24,24,24,24	0
57	MG	YA	3200	1/1	0.99	0.04	16,16,16,16	0
57	MG	XA	1670	1/1	0.99	0.08	31,31,31,31	0
57	MG	YR	201	1/1	0.99	0.05	25,25,25,25	0
57	MG	RA	3110	1/1	0.99	0.10	16,16,16,16	0
57	MG	RA	3055	1/1	0.99	0.06	12,12,12,12	0
57	MG	YA	3164	1/1	0.99	0.04	13,13,13,13	0
57	MG	YA	3029	1/1	0.99	0.04	20,20,20,20	0
57	MG	YA	3057	1/1	0.99	0.05	15,15,15,15	0
57	MG	XV	104	1/1	0.99	0.09	54,54,54,54	0
57	MG	YA	3333	1/1	0.99	0.03	26,26,26,26	0
57	MG	XA	1615	1/1	0.99	0.07	12,12,12,12	0
57	MG	YA	3060	1/1	0.99	0.06	14,14,14,14	0
57	MG	RA	3035	1/1	0.99	0.05	15,15,15,15	0
57	MG	YA	3171	1/1	0.99	0.18	38,38,38,38	0

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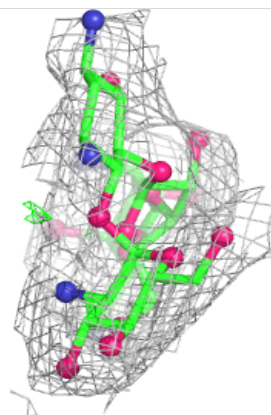
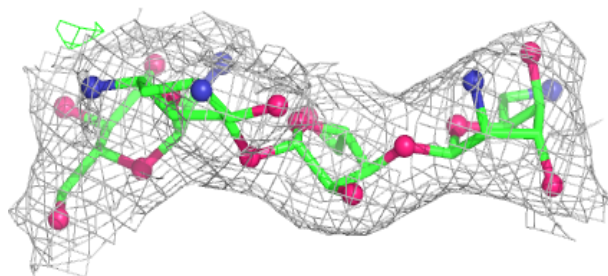
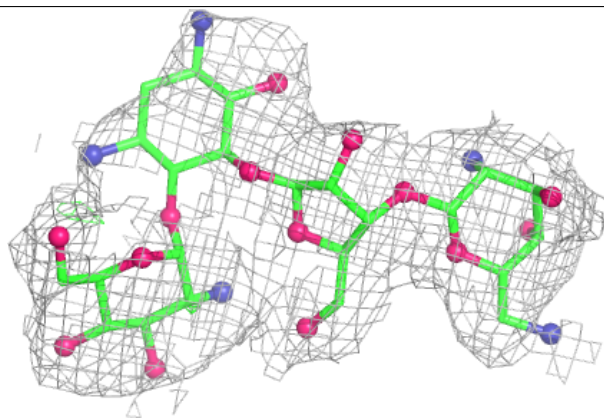
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	YA	3007	1/1	0.99	0.09	12,12,12,12	0
57	MG	YA	3063	1/1	0.99	0.04	12,12,12,12	0
57	MG	YA	3098	1/1	0.99	0.12	16,16,16,16	0
57	MG	RA	3246	1/1	0.99	0.04	22,22,22,22	0
57	MG	RA	3005	1/1	0.99	0.11	16,16,16,16	0
59	SF4	XD	501	8/8	0.99	0.05	62,62,66,70	0
57	MG	RA	3197	1/1	0.99	0.04	19,19,19,19	0
57	MG	RE	304	1/1	0.99	0.04	19,19,19,19	0
57	MG	YA	3080	1/1	1.00	0.17	12,12,12,12	0
60	ZN	XN	101	1/1	1.00	0.02	76,76,76,76	0
57	MG	YA	3033	1/1	1.00	0.09	15,15,15,15	0

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

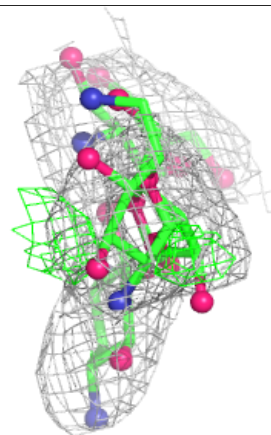
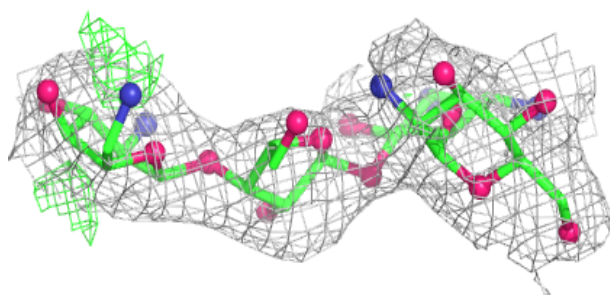
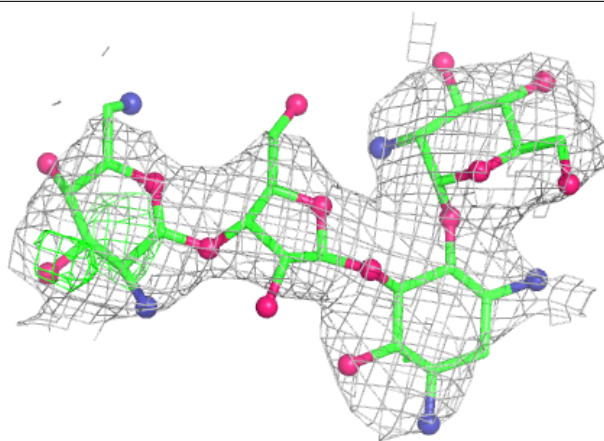
Electron density around PAR QA 1711:

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



Electron density around PAR XA 1717:

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



6.5 Other polymers [i](#)

There are no such residues in this entry.