Full wwPDB X-ray Structure Validation Report (i)

Mar 6, 2026 – 04:14 PM UTC

PDB ID	:	6NDK / pdb_00006ndk
Title	:	Structure of ASLSufA6 A37.5 bound to the 70S A site
Authors	:	Nguyen, H.T.; Hoffer, E.D.; Dunham, C.M.
Deposited on	:	2018-12-13
Resolution	:	3.64 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 (i) 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 (i)) were used in the production of this report:

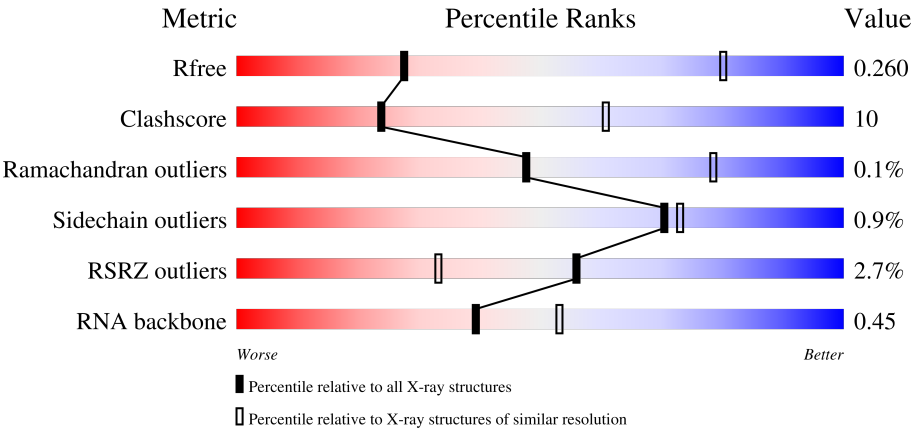
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry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

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.64 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	1132 (3.76-3.52)
Clashscore	190562	1014 (3.74-3.54)
Ramachandran outliers	187476	1123 (3.76-3.52)
Sidechain outliers	187428	1121 (3.76-3.52)
RSRZ outliers	180081	1130 (3.76-3.52)
RNA backbone	3983	1026 (4.22-3.06)

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

Mol	Chain	Length	Quality of chain
1	QA	1521	42% 47% 10%
1	XA	1521	46% 44% 9%
2	QB	256	4% 57% 32% 8%
2	XB	256	4% 61% 29% 8%

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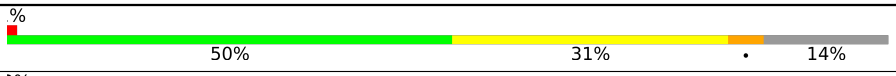
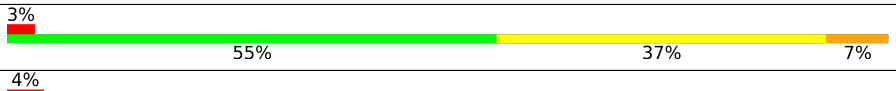
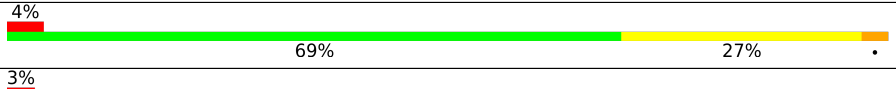
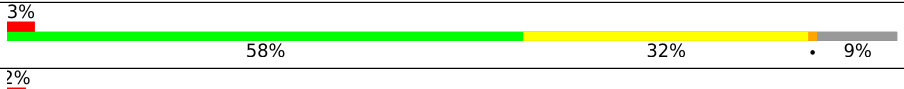
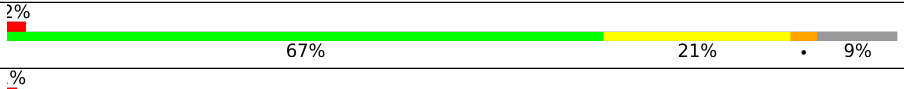
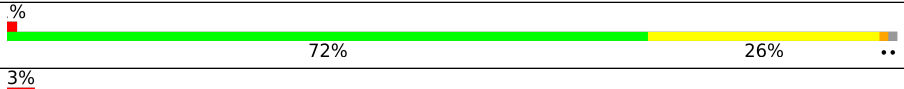
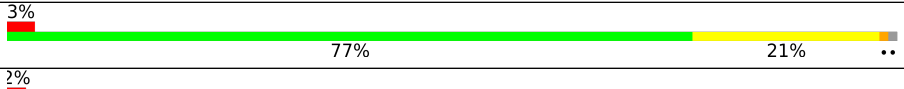
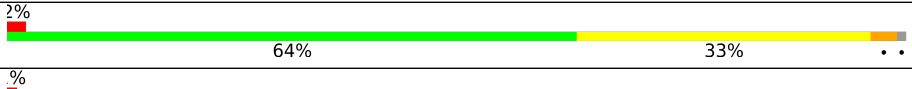
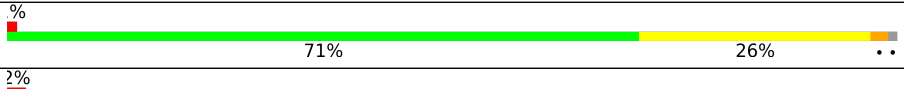
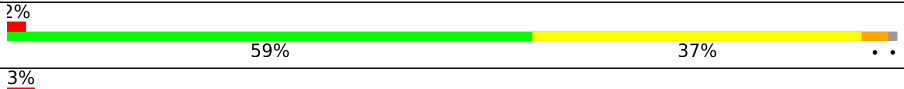
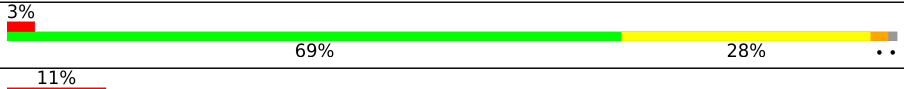
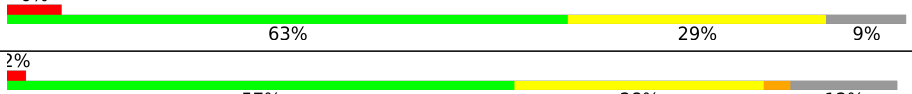
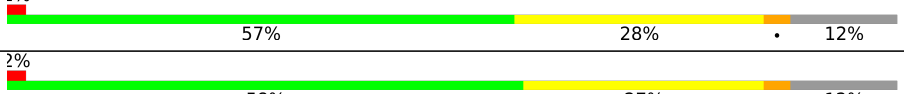
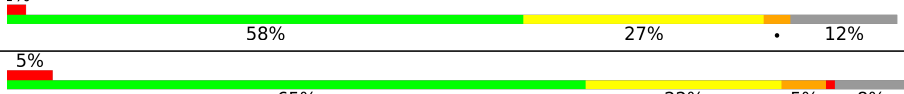
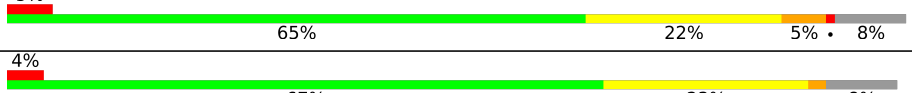
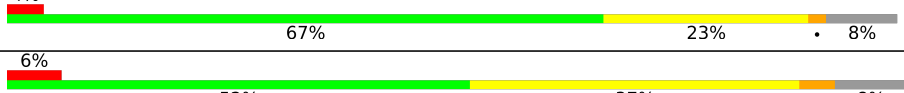
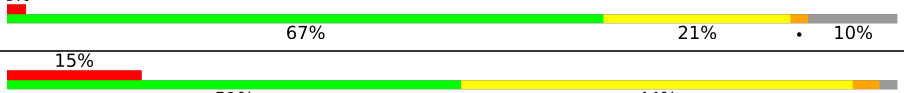
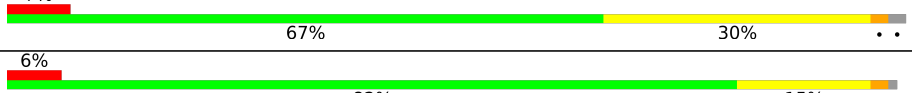
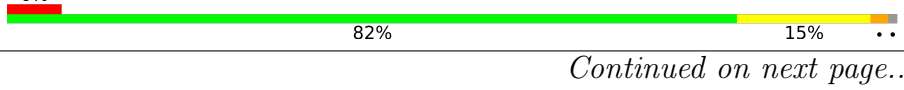
Mol	Chain	Length	Quality of chain
3	QC	239	
3	XC	239	
4	QD	209	
4	XD	209	
5	QE	162	
5	XE	162	
6	QF	101	
6	XF	101	
7	QG	156	
7	XG	156	
8	QH	138	
8	XH	138	
9	QI	128	
9	XI	128	
10	QJ	105	
10	XJ	105	
11	QK	129	
11	XK	129	
12	QL	132	
12	XL	132	
13	QM	126	
13	XM	126	
14	QN	61	
14	XN	61	
15	QO	89	

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Mol	Chain	Length	Quality of chain
15	XO	89	2% 83% 15%
16	QP	88	5% 57% 35% 7%
16	XP	88	9% 59% 33% 7%
17	QQ	105	67% 25% 6%
17	XQ	105	2% 66% 28% 6%
18	QR	88	55% 23% 23%
18	XR	88	61% 15% 23%
19	QS	93	13% 60% 27% 11%
19	XS	93	4% 58% 28% 11%
20	QT	106	14% 63% 25% 9%
20	XT	106	13% 62% 30% 8%
21	QU	27	7% 41% 37% 7% 15%
21	XU	27	11% 44% 41% 15%
22	QV	77	52% 36% 12%
22	XV	77	51% 43% 6%
23	QX	26	15% 15% 69%
23	XX	26	4% 12% 19% 12% 58%
24	QY	18	33% 17% 28% 22%
24	XY	18	6% 17% 56% 17% 11%
25	RA	2915	47% 43% 9%
25	YA	2915	48% 42% 9%
26	RB	122	48% 47%
26	YB	122	61% 27% 10%
27	RD	276	4% 74% 25%
27	YD	276	4% 75% 24%

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Mol	Chain	Length	Quality of chain
28	RE	206	4% 67% 29%
28	YE	206	2% 65% 32%
29	RF	210	4% 69% 23%
29	YF	210	2% 60% 31% 5%
30	RG	182	6% 55% 37% 7%
30	YG	182	% 70% 27%
31	RH	180	2% 61% 36%
31	YH	180	2% 71% 24%
32	RI	148	% 54% 41%
32	YI	148	% 73% 23%
33	RN	140	2% 72% 27%
33	YN	140	4% 84% 16%
34	RO	122	4% 64% 34%
34	YO	122	4% 78% 22%
35	RP	150	12% 61% 31% 7%
35	YP	150	9% 65% 31%
36	RQ	141	4% 65% 35%
36	YQ	141	3% 79% 21%
37	RR	118	2% 71% 26%
37	YR	118	3% 81% 17%
38	RS	112	7% 69% 27%
38	YS	112	% 68% 29%
39	RT	146	% 63% 25% 10%
39	YT	146	% 62% 27% 10%
40	RU	118	7% 66% 31%

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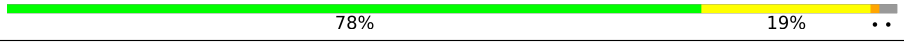
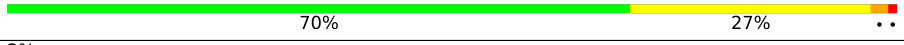
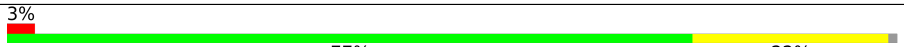
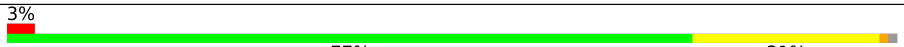
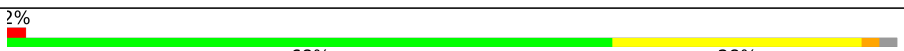
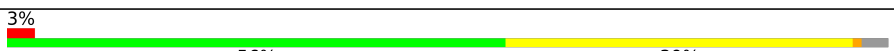
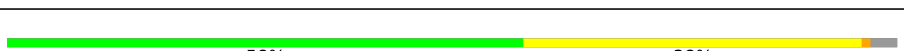
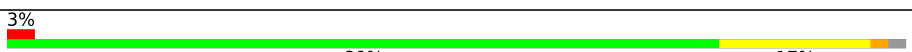
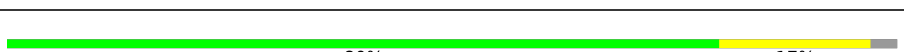
Mol	Chain	Length	Quality of chain
40	YU	118	
41	RV	101	
41	YV	101	
42	RW	113	
42	YW	113	
43	RX	96	
43	YX	96	
44	RY	110	
44	YY	110	
45	RZ	206	
45	YZ	206	
46	R0	85	
46	Y0	85	
47	R1	98	
47	Y1	98	
48	R2	72	
48	Y2	72	
49	R3	60	
49	Y3	60	
50	R4	71	
50	Y4	71	
51	R5	60	
51	Y5	60	
52	R6	54	
52	Y6	54	

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Mol	Chain	Length	Quality of chain
53	R7	49	6% 61% 35%
53	Y7	49	14% 76% 20%
54	R8	65	5% 71% 26%
54	Y8	65	5% 69% 28%
55	R9	37	32% 57% 41%
55	Y9	37	46% 70% 30%
56	ZA	3	33% 33% 33%
56	ZB	3	33% 67%

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	QN	101	-	-	X	-
57	MG	RA	3098	-	-	-	X
57	MG	RA	3234	-	-	-	X
57	MG	RB	203	-	-	X	-
57	MG	RD	303	-	-	X	-
57	MG	RN	202	-	-	-	X
57	MG	RP	202	-	-	-	X
57	MG	YA	3516	-	-	-	X
57	MG	YA	3536	-	-	-	X
58	SF4	QD	303	-	-	X	-
58	SF4	XD	302	-	-	X	-

2 Entry composition (i)

There are 59 unique types of molecules in this entry. The entry contains 291822 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
			32246	14358	5975	10413	1500			
1	XA	1504	Total	C	N	O	P	0	0	0
			32331	14396	5990	10441	1504			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	QB	235	Total	C	N	O	S	0	0	0
			1907	1217	342	343	5			
2	XB	236	Total	C	N	O	S	0	0	0
			1915	1223	343	344	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
			1703	1066	339	291	7			
4	XD	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	QE	148	Total	C	N	O	S	0	0	0
			1133	716	214	199	4			
5	XE	148	Total	C	N	O	S	0	0	0
			1133	716	214	199	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	QF	100	Total	C	N	O	S	0	0	0
			837	528	154	152	3			
6	XF	100	Total	C	N	O	S	0	0	0
			837	528	154	152	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	137	Total	C	N	O	S	0	0	0
			1108	700	214	192	2			
8	XH	137	Total	C	N	O	S	0	0	0
			1108	700	214	192	2			

- 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	126	Total	C	N	O	0	0	0
			998	633	193	172			

- 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	96	Total	C	N	O	S	0	0	0
			777	487	153	136	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	QK	114	Total	C	N	O	S	0	0	0
			844	525	158	158	3			
11	XK	114	Total	C	N	O	S	0	0	0
			844	525	158	158	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	QL	122	Total	C	N	O	S	0	0	0
			958	604	193	159	2			
12	XL	122	Total	C	N	O	S	0	0	0
			958	604	193	159	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	QM	116	Total	C	N	O	S	0	0	0
			928	574	191	161	2			
13	XM	114	Total	C	N	O	S	0	0	0
			916	566	189	159	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	82	Total	C	N	O	S	0	0	0
			691	438	138	114	1			
16	XP	82	Total	C	N	O	S	0	0	0
			691	438	138	114	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	QQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			
17	XQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	QR	68	Total	C	N	O	0	0	0
			555	355	108	92			
18	XR	68	Total	C	N	O	0	0	0
			555	355	108	92			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	QS	83	Total	C	N	O	S	0	0	0
			665	424	124	115	2			
19	XS	83	Total	C	N	O	S	0	0	0
			665	424	124	115	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	QT	96	Total	C	N	O	S	0	0	0
			743	458	159	124	2			
20	XT	98	Total	C	N	O	S	0	0	0
			759	469	162	126	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	QU	23	Total	C	N	O	0	0	0
			199	122	48	29			
21	XU	23	Total	C	N	O	0	0	0
			199	122	48	29			

- Molecule 22 is a RNA chain called P-site tRNAfMet.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	QV	77	Total	C	N	O	P	0	0	0
			1644	732	297	538	77			
22	XV	77	Total	C	N	O	P	0	0	0
			1644	732	297	538	77			

- Molecule 23 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	QX	8	Total	C	N	O	P	0	0	0
			167	75	28	56	8			
23	XX	11	Total	C	N	O	P	0	0	0
			233	105	43	74	11			

- Molecule 24 is a RNA chain called A-site ASLSufA6 A37.5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	QY	14	Total	C	N	O	P	0	0	0
			301	134	55	98	14			
24	XY	16	Total	C	N	O	P	0	0	0
			341	153	63	110	15			

- Molecule 25 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	RA	2870	Total	C	N	O	P	0	0	0
			61819	27519	11565	19867	2868			
25	YA	2870	Total	C	N	O	P	0	0	0
			61822	27520	11565	19869	2868			

- Molecule 26 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	RB	120	Total	C	N	O	P	0	0	0
			2572	1145	476	832	119			

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

- Molecule 27 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	RD	275	Total	C	N	O	S	0	0	0
			2144	1353	428	360	3			
27	YD	275	Total	C	N	O	S	0	0	0
			2145	1353	428	361	3			

- Molecule 28 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	RE	204	Total	C	N	O	S	0	0	0
			1563	988	299	270	6			
28	YE	204	Total	C	N	O	S	0	0	0
			1563	988	299	270	6			

- Molecule 29 is a protein called 50S ribosomal protein L4.

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

- Molecule 30 is a protein called 50S ribosomal protein L5.

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

- Molecule 31 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	RH	174	Total	C	N	O	S	0	0	0
			1336	848	251	236	1			
31	YH	173	Total	C	N	O	S	0	0	0
			1330	845	250	234	1			

- Molecule 32 is a protein called 50S ribosomal protein L9.

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

- Molecule 33 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	RN	140	Total	C	N	O	S	0	0	0
			1121	722	208	187	4			
33	YN	140	Total	C	N	O	S	0	0	0
			1121	722	208	187	4			

- Molecule 34 is a protein called 50S ribosomal protein L14.

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

- Molecule 35 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	RP	149	Total	C	N	O	S	0	0	0
			1139	709	231	196	3			
35	YP	149	Total	C	N	O	S	0	0	0
			1139	709	231	196	3			

- Molecule 36 is a protein called 50S ribosomal protein L16.

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

- Molecule 37 is a protein called 50S ribosomal protein L17.

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

- Molecule 38 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
38	RS	110	Total	C	N	O	0	0	0
			877	553	175	149			
38	YS	110	Total	C	N	O	0	0	0
			877	553	175	149			

- Molecule 39 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	RT	131	Total	C	N	O	S	0	0	0
			1091	680	225	185	1			
39	YT	131	Total	C	N	O	S	0	0	0
			1091	680	225	185	1			

- Molecule 40 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	RU	116	Total	C	N	O	S	0	0	0
			959	608	201	149	1			
40	YU	116	Total	C	N	O	S	0	0	0
			959	608	201	149	1			

- Molecule 41 is a protein called 50S ribosomal protein L21.

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

- Molecule 42 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	RW	112	Total	C	N	O	S	0	0	0
			890	560	175	153	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	YW	112	Total	C	N	O	S	0	0	0
			890	560	175	153	2			

- Molecule 43 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	RX	95	Total	C	N	O	S	0	0	0
			750	488	135	126	1			
43	YX	95	Total	C	N	O	S	0	0	0
			750	488	135	126	1			

- Molecule 44 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	RY	107	Total	C	N	O	S	0	0	0
			818	525	155	132	6			
44	YY	107	Total	C	N	O	S	0	0	0
			818	525	155	132	6			

- Molecule 45 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	RZ	196	Total	C	N	O	S	0	0	0
			1552	988	273	288	3			
45	YZ	183	Total	C	N	O	S	0	0	0
			1461	933	260	265	3			

- Molecule 46 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	R0	77	Total	C	N	O	S	0	0	0
			611	378	129	103	1			
46	Y0	77	Total	C	N	O	S	0	0	0
			611	378	129	103	1			

- Molecule 47 is a protein called 50S ribosomal protein L28.

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

- Molecule 48 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	R2	70	Total	C	N	O	S	0	0	0
			592	368	119	103	2			
48	Y2	70	Total	C	N	O	S	0	0	0
			592	368	119	103	2			

- Molecule 49 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	R3	59	Total	C	N	O	0	0	0
			469	298	90	81			
49	Y3	59	Total	C	N	O	0	0	0
			468	298	90	80			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	R4	69	Total	C	N	O	S	0	0	0
			565	356	103	101	5			
50	Y4	69	Total	C	N	O	S	0	0	0
			565	356	103	101	5			

- Molecule 51 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	R5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			
51	Y5	58	Total	C	N	O	S	0	0	0
			451	283	89	74	5			

- Molecule 52 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	R6	53	Total	C	N	O	S	0	0	0
			453	281	91	77	4			
52	Y6	53	Total	C	N	O	S	0	0	0
			453	281	91	77	4			

- Molecule 53 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	R7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			
53	Y7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

- Molecule 54 is a protein called 50S ribosomal protein L35.

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

- Molecule 55 is a protein called 50S ribosomal protein L36.

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

- Molecule 56 is a RNA chain called tRNA acceptor end mimic.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	ZA	3	Total	C	N	O	P	0	0	0
			74	40	13	19	2			
56	ZB	3	Total	C	N	O	P	0	0	0
			74	40	13	19	2			

- 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	QC	1	Total	Mg	0	0
			1	1		
57	QD	2	Total	Mg	0	0
			2	2		
57	QE	2	Total	Mg	0	0
			2	2		
57	QL	2	Total	Mg	0	0
			2	2		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	QM	2	Total Mg 2 2	0	0
57	QN	2	Total Mg 2 2	0	0
57	QO	1	Total Mg 1 1	0	0
57	QV	3	Total Mg 3 3	0	0
57	RA	414	Total Mg 414 414	0	0
57	RB	8	Total Mg 8 8	0	0
57	RD	5	Total Mg 5 5	0	0
57	RE	5	Total Mg 5 5	0	0
57	RF	5	Total Mg 5 5	0	0
57	RN	2	Total Mg 2 2	0	0
57	RO	1	Total Mg 1 1	0	0
57	RP	2	Total Mg 2 2	0	0
57	RQ	1	Total Mg 1 1	0	0
57	RR	1	Total Mg 1 1	0	0
57	RV	1	Total Mg 1 1	0	0
57	RW	1	Total Mg 1 1	0	0
57	RX	1	Total Mg 1 1	0	0
57	RZ	1	Total Mg 1 1	0	0
57	R0	2	Total Mg 2 2	0	0
57	R1	1	Total Mg 1 1	0	0
57	R3	1	Total Mg 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	R5	1	Total Mg 1 1	0	0
57	R6	1	Total Mg 1 1	0	0
57	R7	1	Total Mg 1 1	0	0
57	R8	1	Total Mg 1 1	0	0
57	R9	1	Total Mg 1 1	0	0
57	XA	128	Total Mg 128 128	0	0
57	XD	1	Total Mg 1 1	0	0
57	XJ	1	Total Mg 1 1	0	0
57	XK	2	Total Mg 2 2	0	0
57	XN	1	Total Mg 1 1	0	0
57	XV	1	Total Mg 1 1	0	0
57	XX	1	Total Mg 1 1	0	0
57	YA	544	Total Mg 544 544	0	0
57	YB	8	Total Mg 8 8	0	0
57	YD	8	Total Mg 8 8	0	0
57	YE	7	Total Mg 7 7	0	0
57	YF	1	Total Mg 1 1	0	0
57	YG	1	Total Mg 1 1	0	0
57	YP	3	Total Mg 3 3	0	0
57	YQ	2	Total Mg 2 2	0	0
57	YR	1	Total Mg 1 1	0	0

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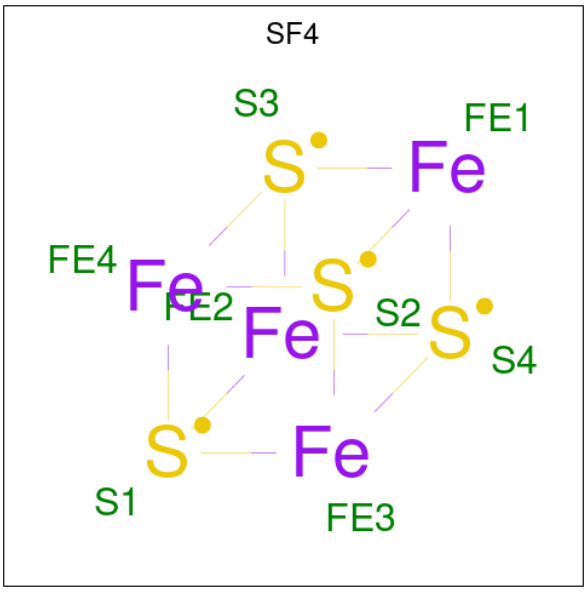
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	YT	1	Total Mg 1 1	0	0
57	YU	1	Total Mg 1 1	0	0
57	YV	1	Total Mg 1 1	0	0
57	YW	1	Total Mg 1 1	0	0
57	YX	1	Total Mg 1 1	0	0
57	Y0	1	Total Mg 1 1	0	0
57	Y1	3	Total Mg 3 3	0	0
57	Y3	1	Total Mg 1 1	0	0
57	Y5	1	Total Mg 1 1	0	0
57	Y6	1	Total Mg 1 1	0	0
57	Y7	1	Total Mg 1 1	0	0
57	Y8	1	Total Mg 1 1	0	0
57	Y9	1	Total Mg 1 1	0	0

- Molecule 58 is IRON/SULFUR CLUSTER (CCD ID: SF4) (formula: Fe_4S_4).



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

- Molecule 59 is ZINC ION (CCD ID: ZN) (formula: Zn).

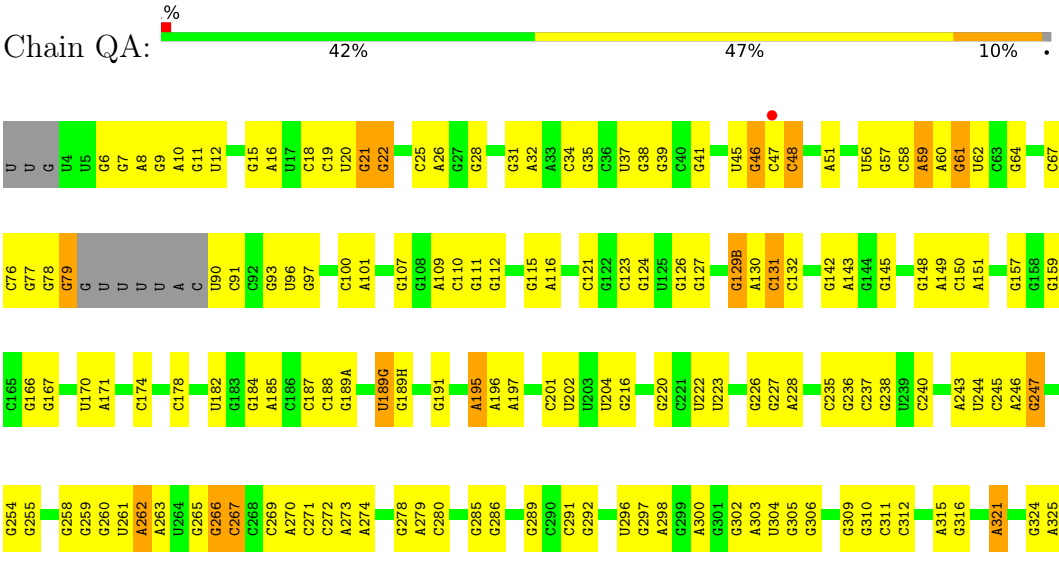
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	QN	1	Total Zn 1 1	0	0
59	R4	1	Total Zn 1 1	0	0
59	R9	1	Total Zn 1 1	0	0
59	XN	1	Total Zn 1 1	0	0
59	Y4	1	Total Zn 1 1	0	0

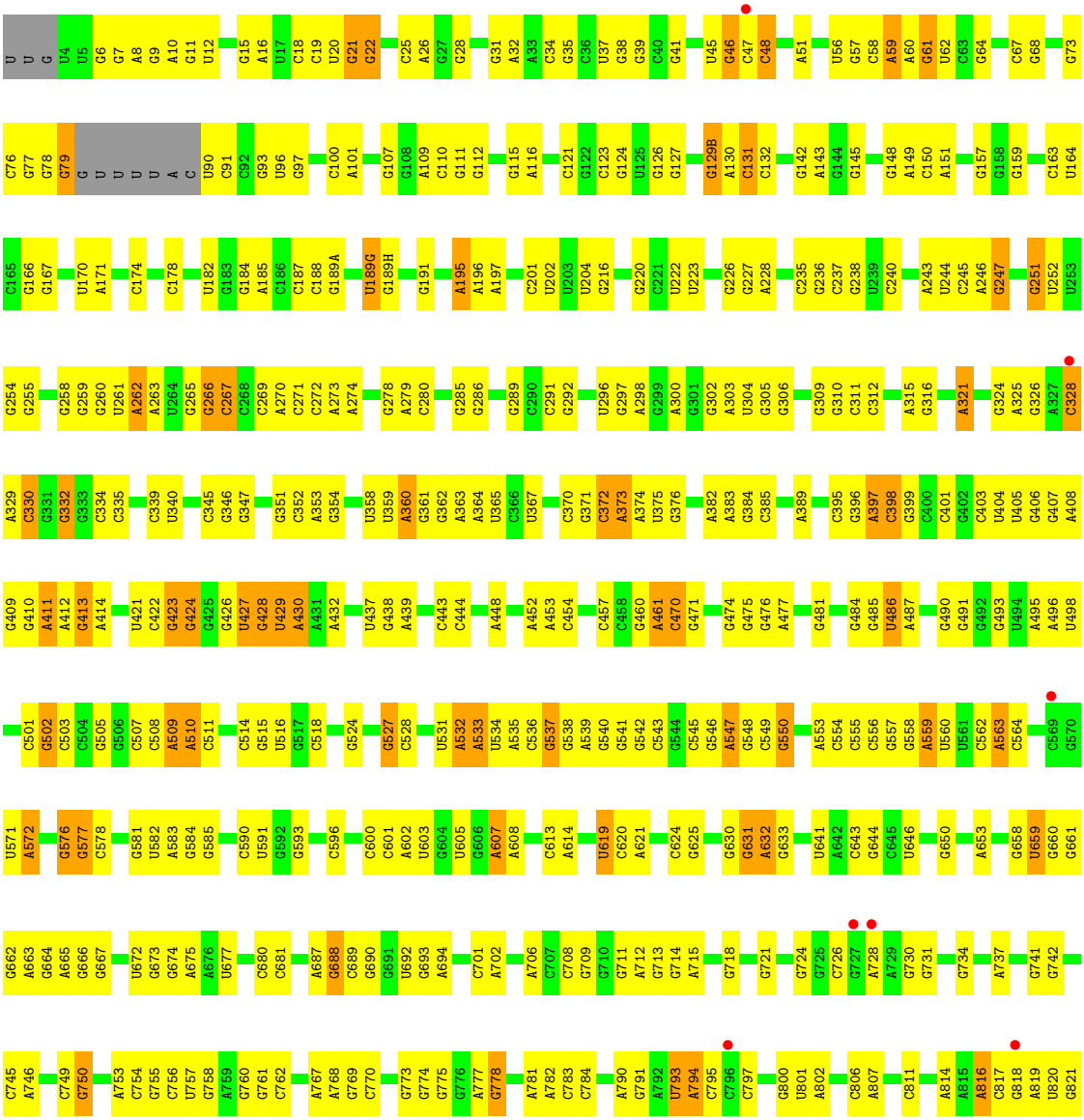
3 Residue-property plots (i)

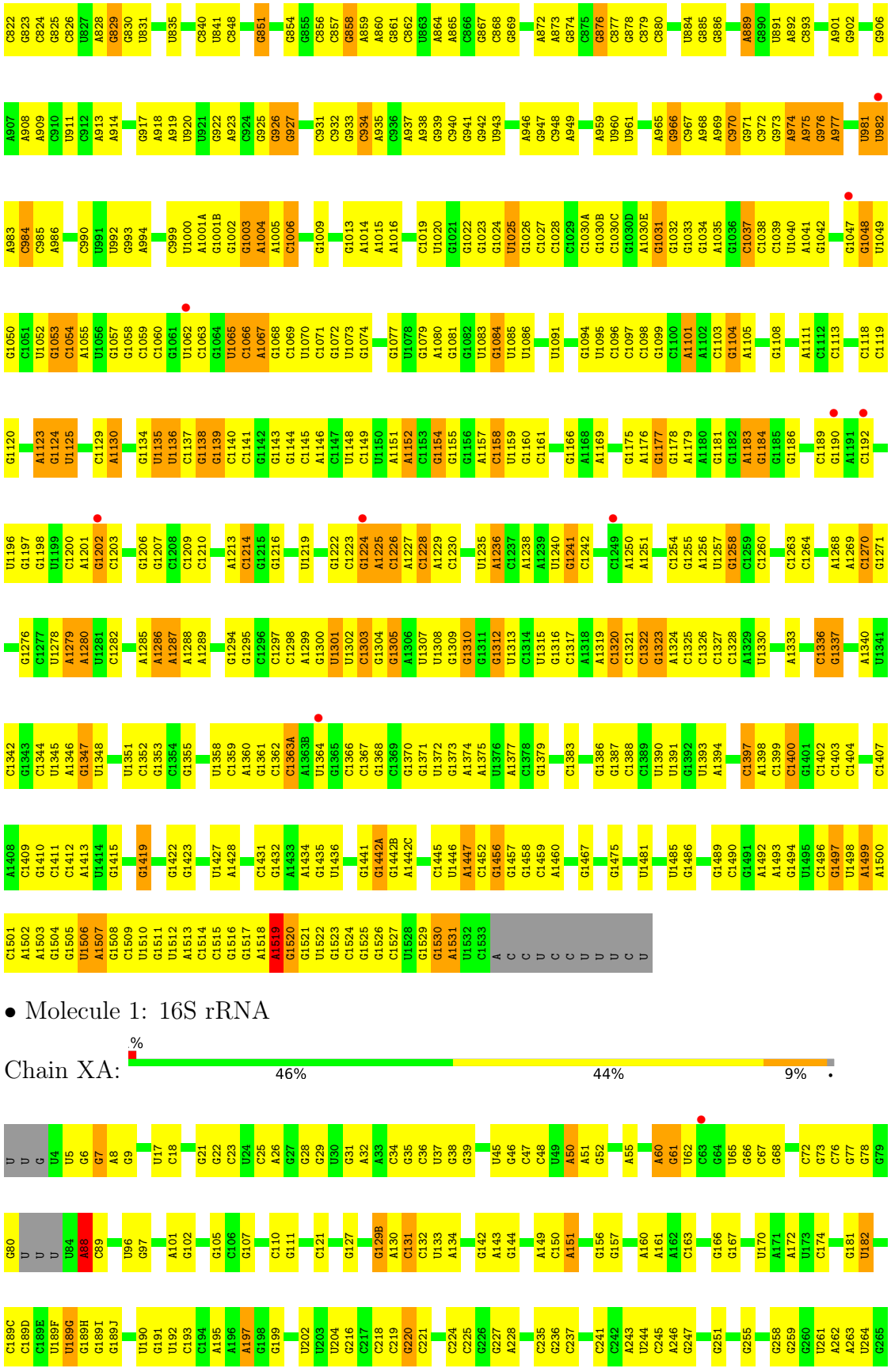
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density.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

- Molecule 1: 16S rRNA

Chain QA:

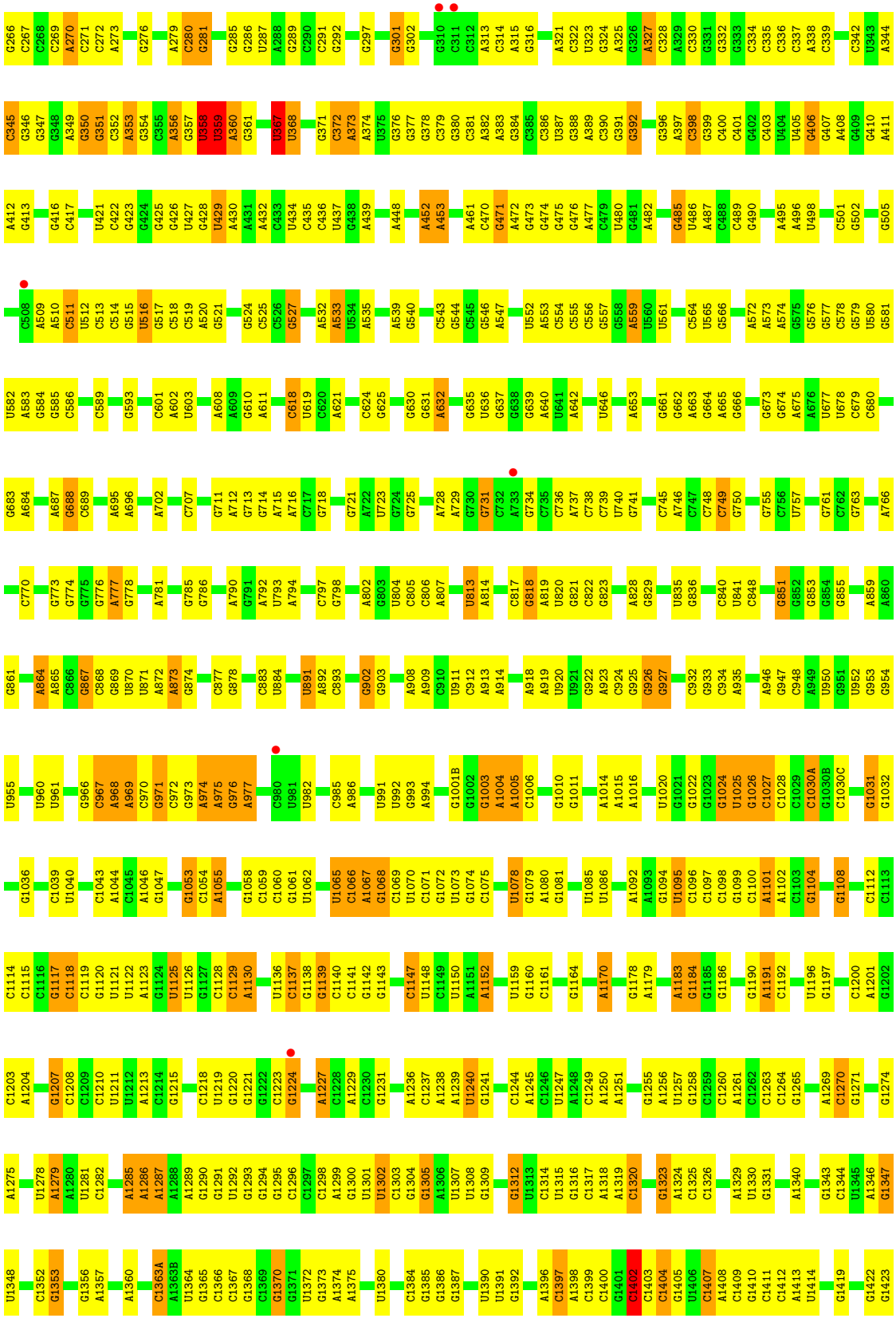






• Molecule 1: 16S rRNA

Chain XA:


G266 C267 C268 C269 A270 C271 C272 A273 G276 A279 C280 G281 G285 G286 U287 A288 G289 C290 C291 G292 G297 G301 G302 G310 C311 C312 A313 C314 A315 G316 A321 C322 U323 G324 A325 G326 A327 C328 A329 C330 G331 G332 G333 C334 C335 C336 C337 A338 C339 C342 U343 A344
C345 G346 G347 G348 A349 G350 G351 C352 A353 G354 C355 A356 G357 U358 U359 A360 G361 U367 U368 G371 C372 A373 A374 U375 G376 G377 G378 C379 G380 C381 A382 A383 G384 C385 C386 U387 G388 A389 C390 G391 G392 G396 A397 C398 G399 C400 C401 G402 C403 U404 U405 G406 C407 A408 G409 G410 A411
A412 G413 G416 C417 U421 C422 G423 G424 G425 G426 U427 G428 U429 A430 A431 A432 C433 U434 C435 C436 U437 G438 A439 A448 A452 A453 A461 C470 G471 A472 G473 G474 G475 G476 A477 C479 U480 G481 A482 G485 U486 A487 C488 G489 G490 A495 A496 U498 C501 G502 G505
C508 A509 A510 C511 U512 C513 C514 G515 U516 G517 C518 C519 A520 G521 G524 C525 C526 G527 A532 A533 U534 A535 A539 G540 C543 G544 C545 G546 A547 U552 A553 C554 C555 C556 G557 G558 A559 U560 U561 C564 U565 G566 A572 A573 A574 G575 G576 G577 C578 G579 U580 G581
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G683 A684 A687 G688 C689 A695 A696 A702 C707 G711 A712 G713 G714 A715 A716 C717 G718 G721 A722 U723 G724 G725 A728 A729 G730 G731 C732 A733 G734 C735 C736 A737 C738 C739 U740 G741 C745 A746 C747 C748 G749 G750 G755 C756 U757 G761 G762 G763 A766
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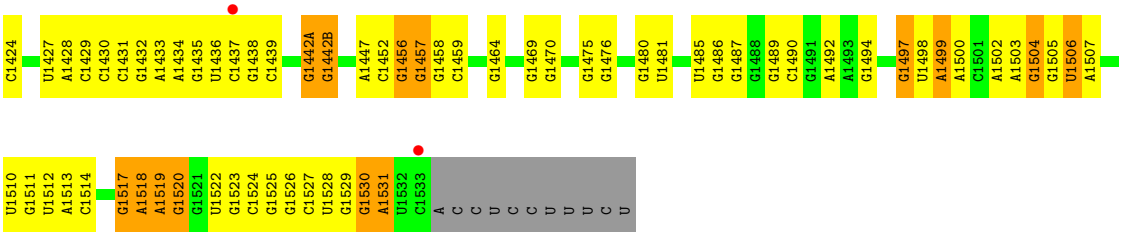
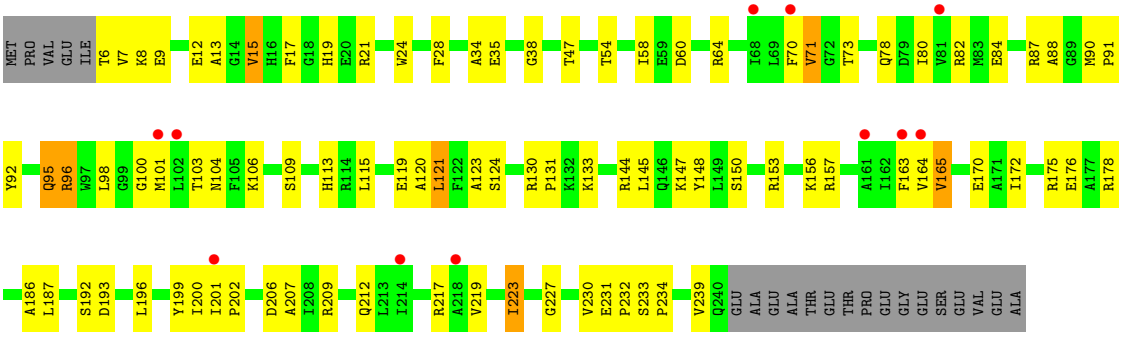
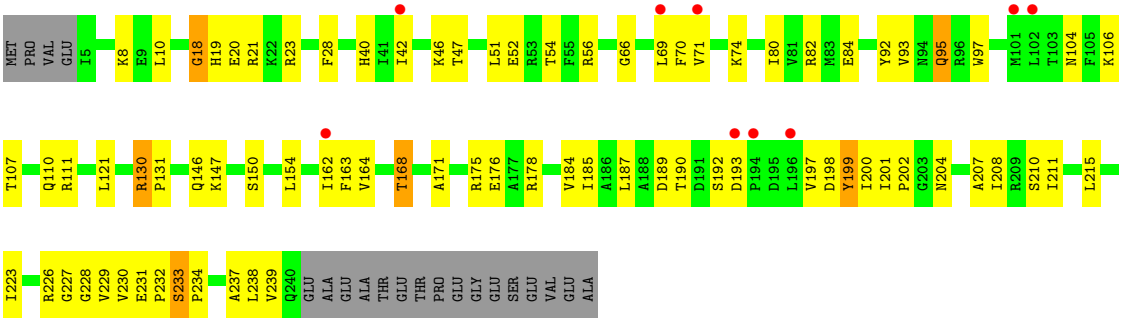


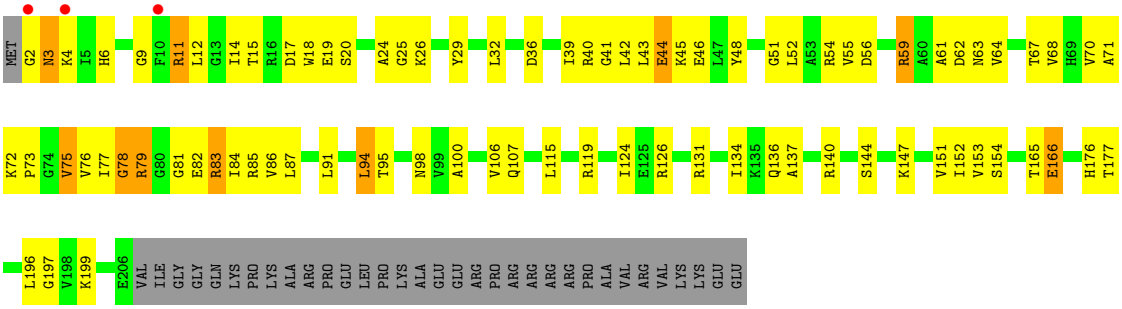
• Molecule 2: 30S ribosomal protein S2



• Molecule 2: 30S ribosomal protein S2

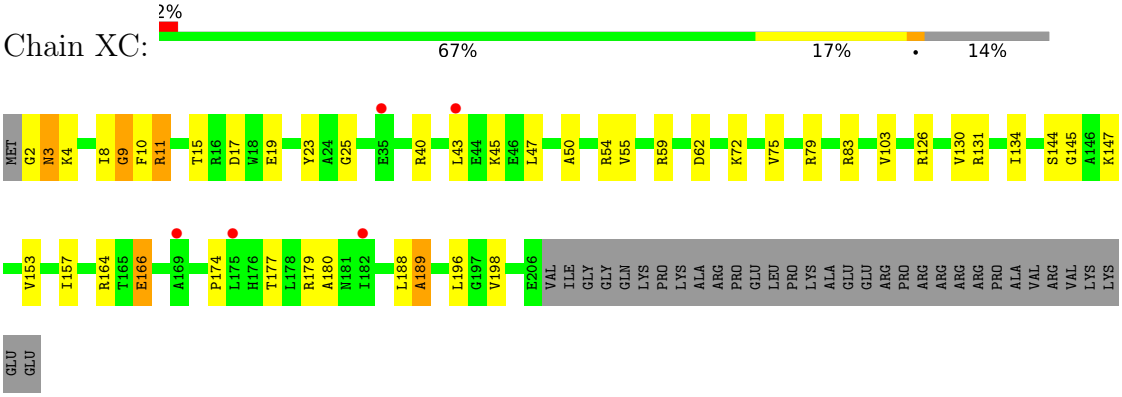


• Molecule 3: 30S ribosomal protein S3



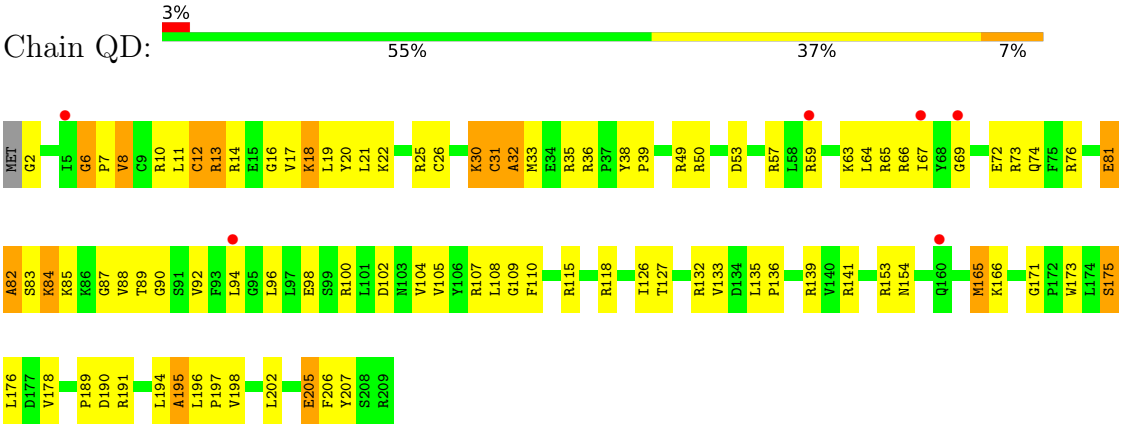
• Molecule 3: 30S ribosomal protein S3

Chain XC:



• Molecule 4: 30S ribosomal protein S4

Chain QD:



• Molecule 4: 30S ribosomal protein S4

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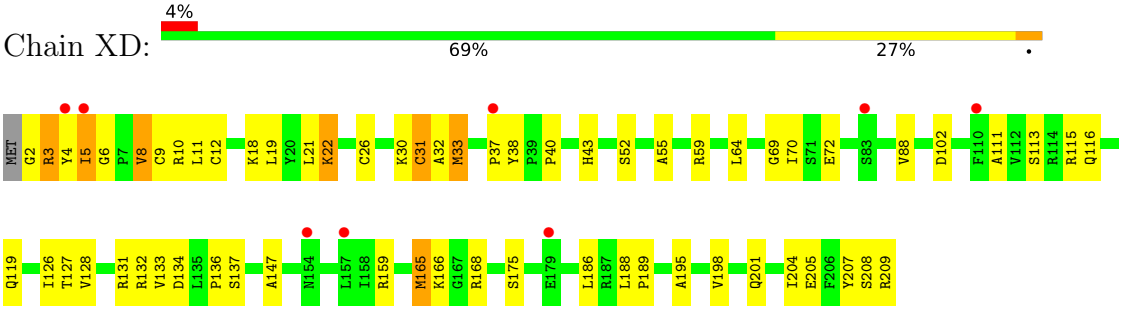
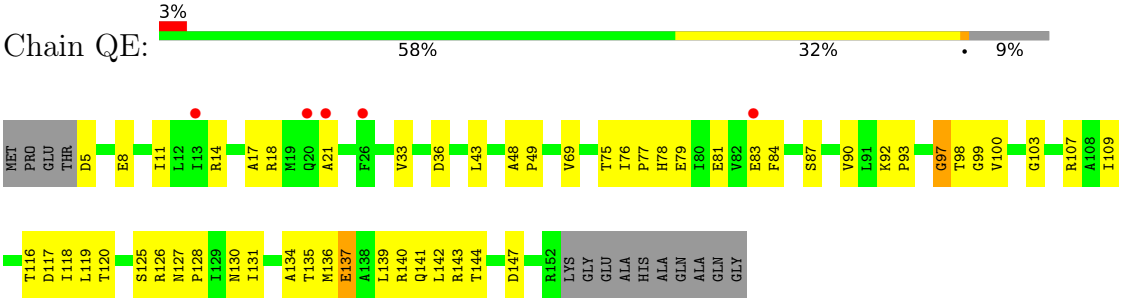


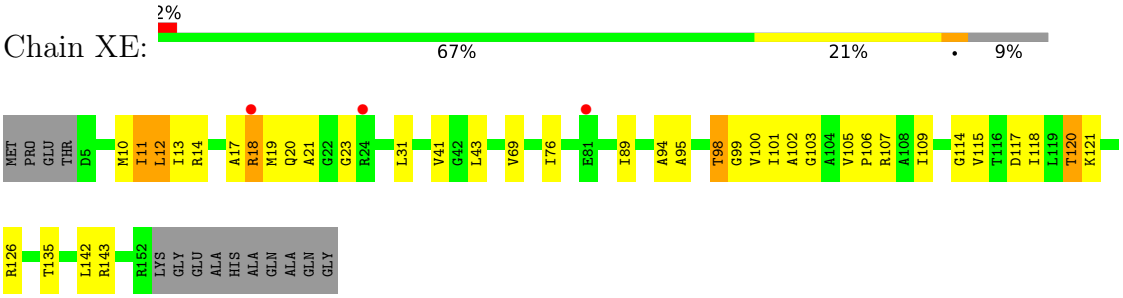
• Molecule 5: 30S ribosomal protein S5

Chain QE:



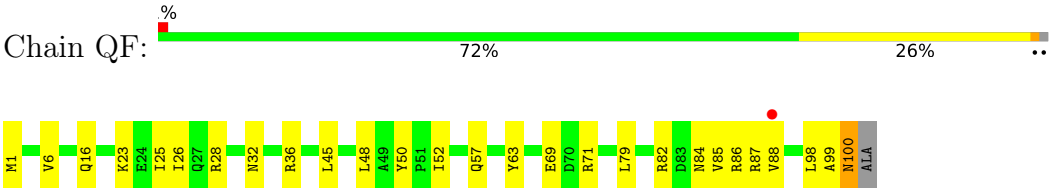
• Molecule 5: 30S ribosomal protein S5

Chain XE:



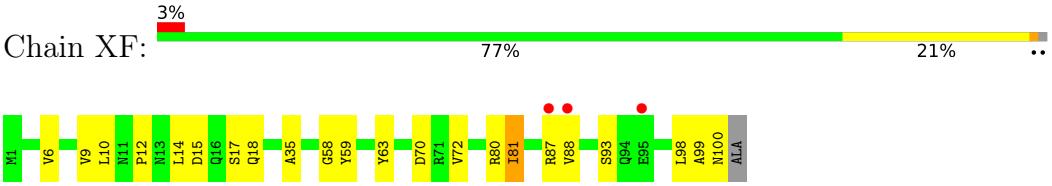
• Molecule 6: 30S ribosomal protein S6

Chain QF:



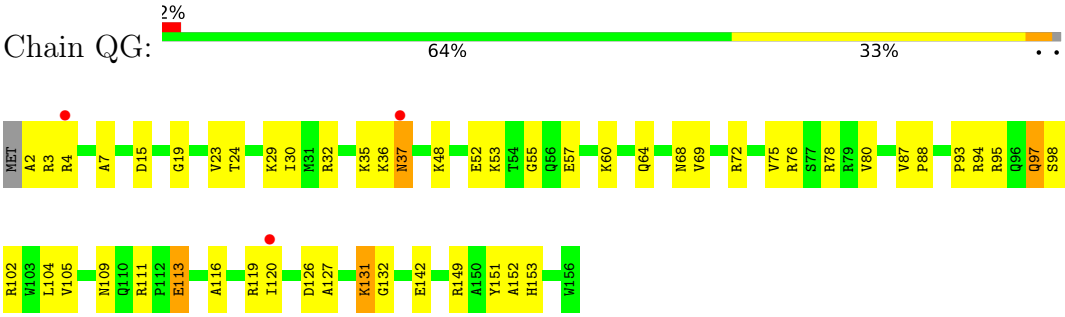
• Molecule 6: 30S ribosomal protein S6

Chain XF:



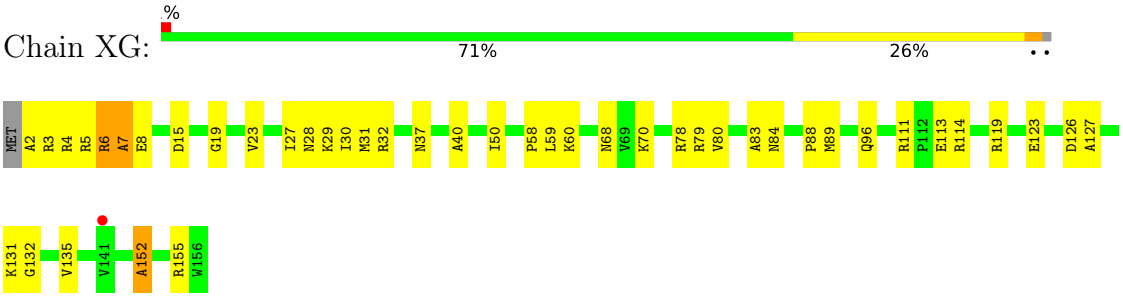
• Molecule 7: 30S ribosomal protein S7

Chain QG:



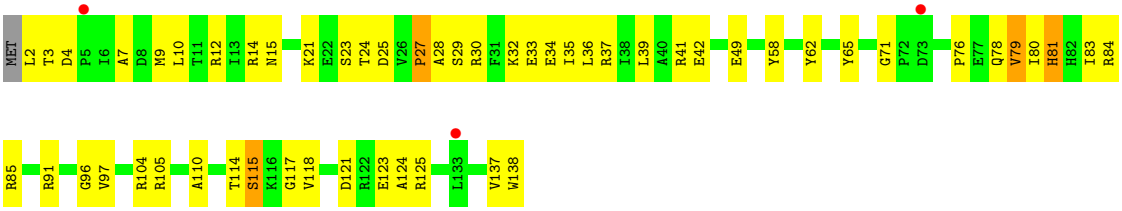
• Molecule 7: 30S ribosomal protein S7

Chain XG:

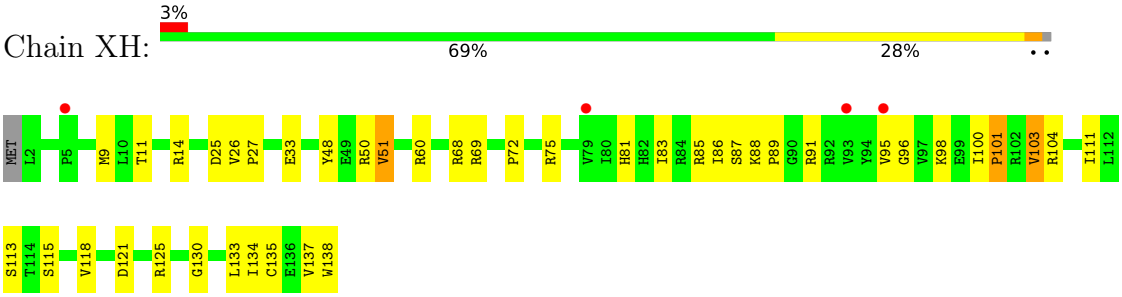


• Molecule 8: 30S ribosomal protein S8

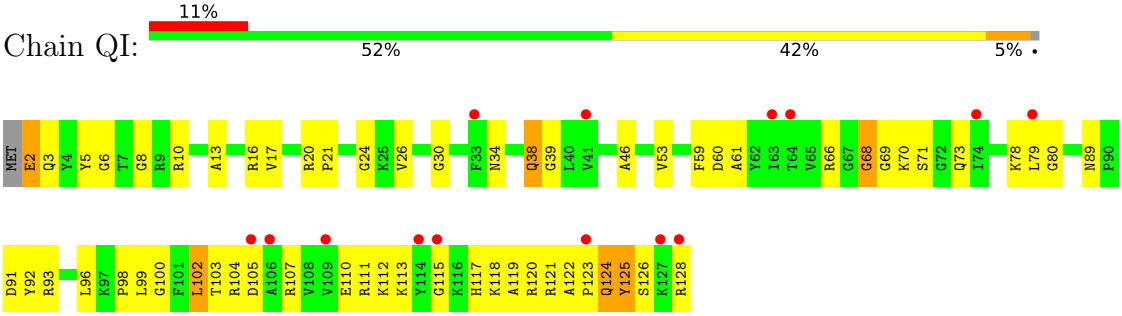
Chain QH:



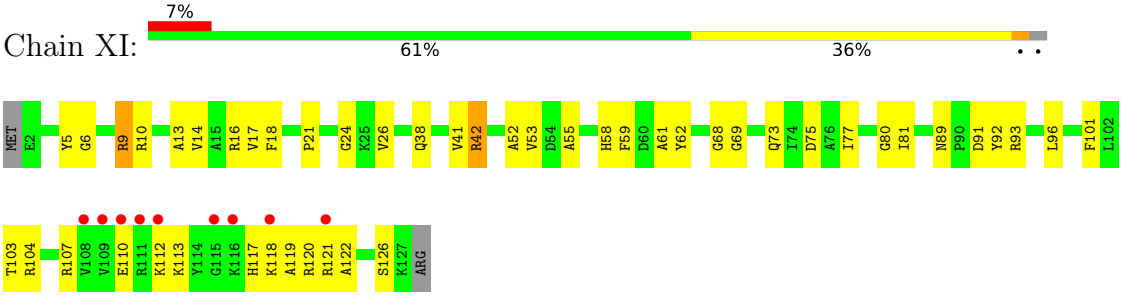
• Molecule 8: 30S ribosomal protein S8



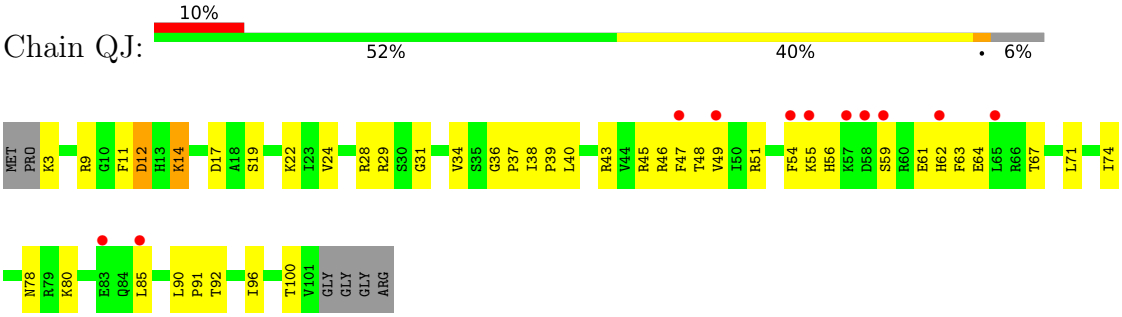
• Molecule 9: 30S ribosomal protein S9



• Molecule 9: 30S ribosomal protein S9

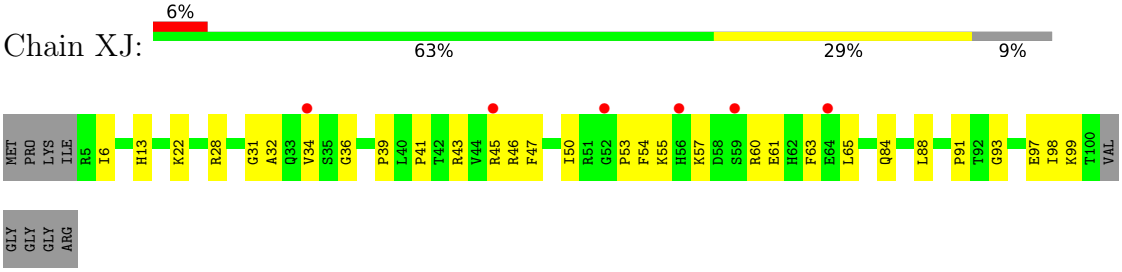


• Molecule 10: 30S ribosomal protein S10



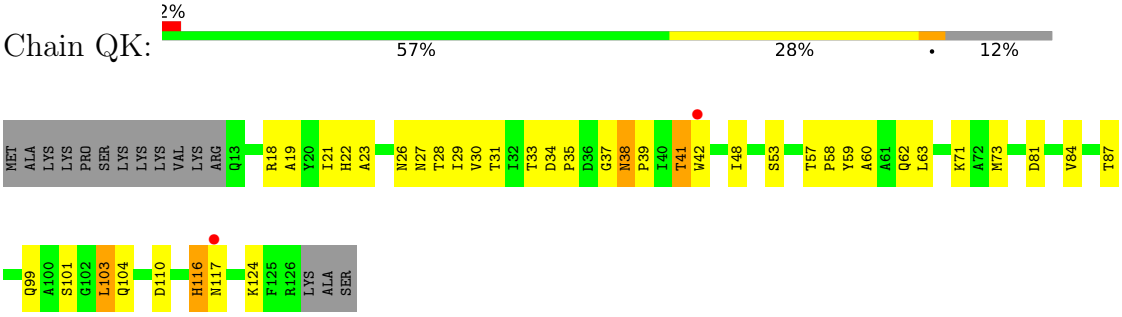
• Molecule 10: 30S ribosomal protein S10

Chain XJ:



• Molecule 11: 30S ribosomal protein S11

Chain QK:



• Molecule 11: 30S ribosomal protein S11

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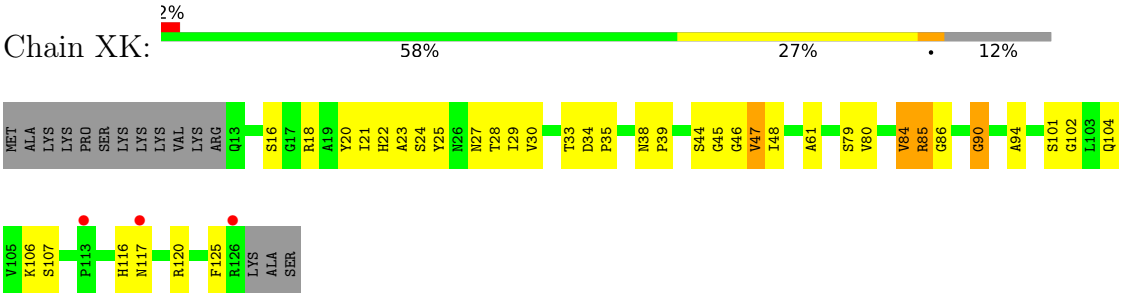
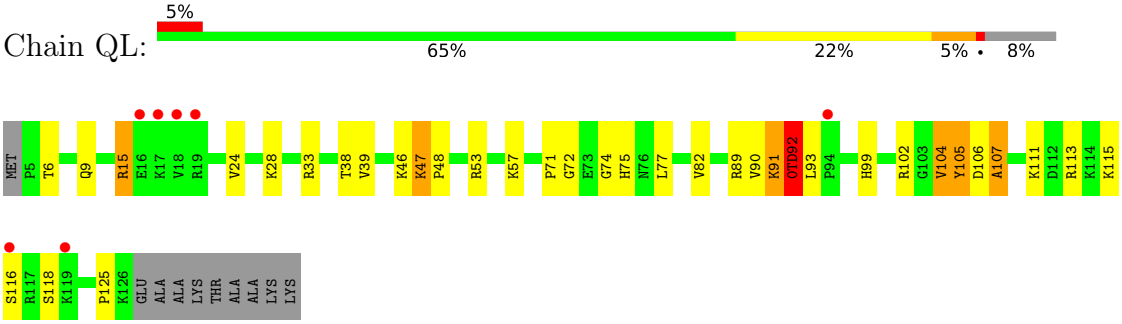


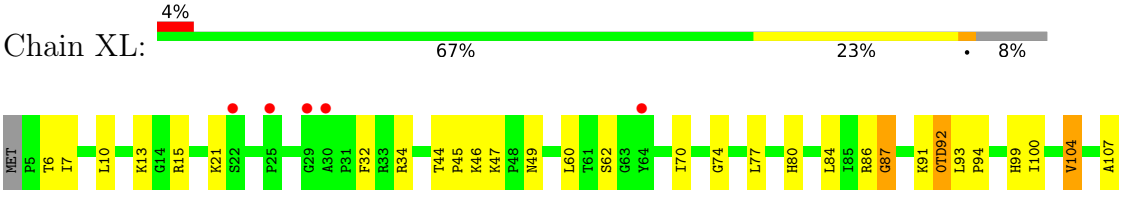
• Molecule 12: 30S ribosomal protein S12

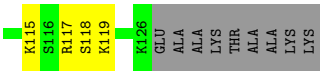
Chain QL:



• Molecule 12: 30S ribosomal protein S12

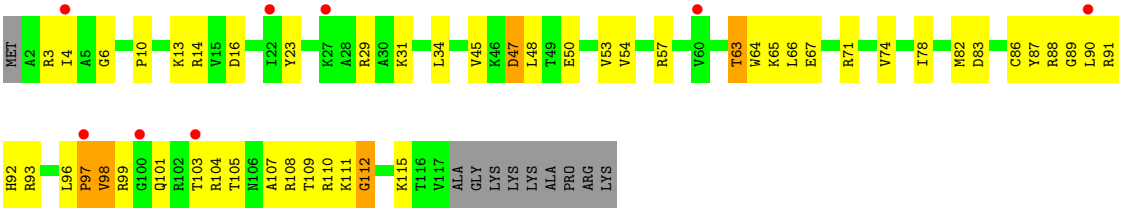
Chain XL:





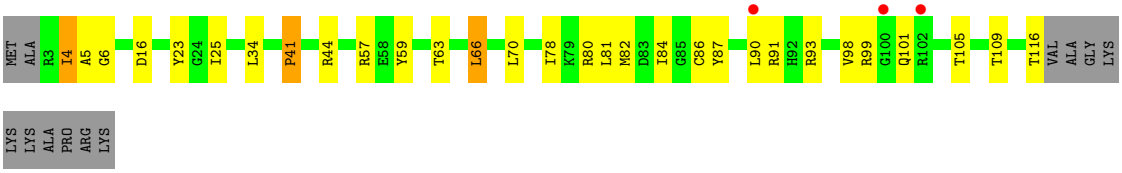
• Molecule 13: 30S ribosomal protein S13

Chain QM:



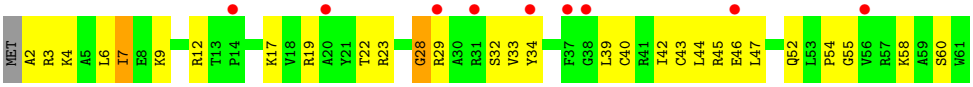
• Molecule 13: 30S ribosomal protein S13

Chain XM:



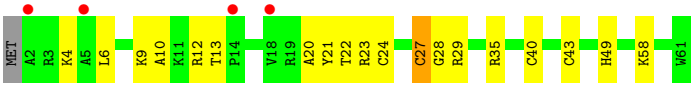
• Molecule 14: 30S ribosomal protein S14 type Z

Chain QN:



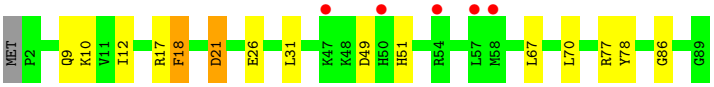
• Molecule 14: 30S ribosomal protein S14 type Z

Chain XN:



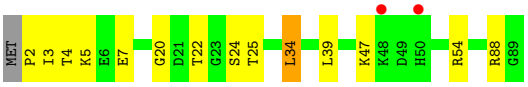
• Molecule 15: 30S ribosomal protein S15

Chain QO:



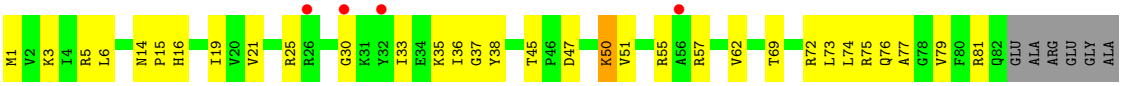
• Molecule 15: 30S ribosomal protein S15

Chain XO:



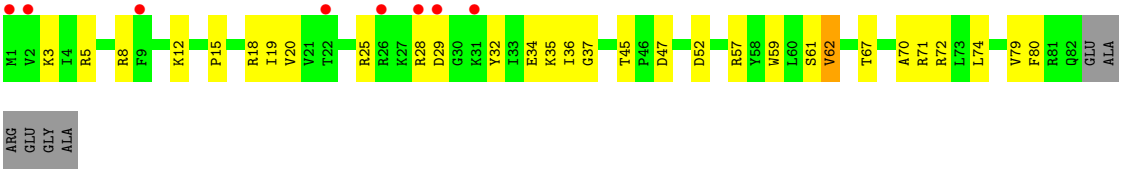
• Molecule 16: 30S ribosomal protein S16

Chain QP:



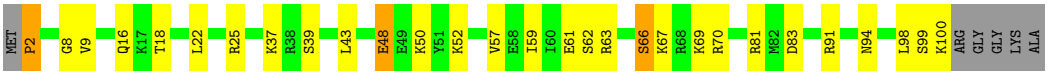
• Molecule 16: 30S ribosomal protein S16

Chain XP:



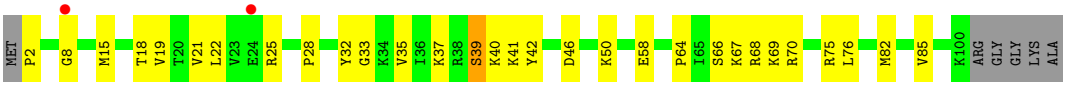
• Molecule 17: 30S ribosomal protein S17

Chain QQ:



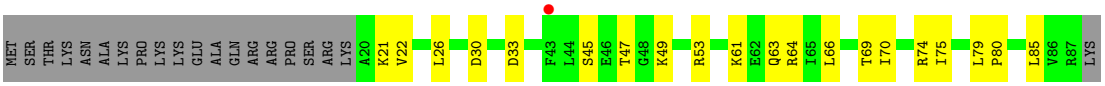
• Molecule 17: 30S ribosomal protein S17

Chain XQ:



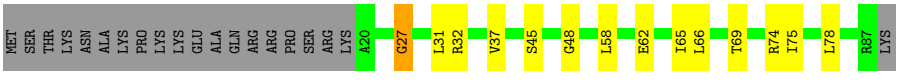
• Molecule 18: 30S ribosomal protein S18

Chain QR:



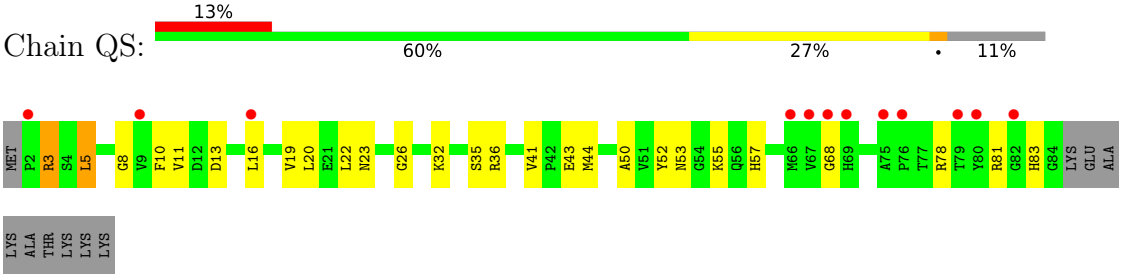
• Molecule 18: 30S ribosomal protein S18

Chain XR:



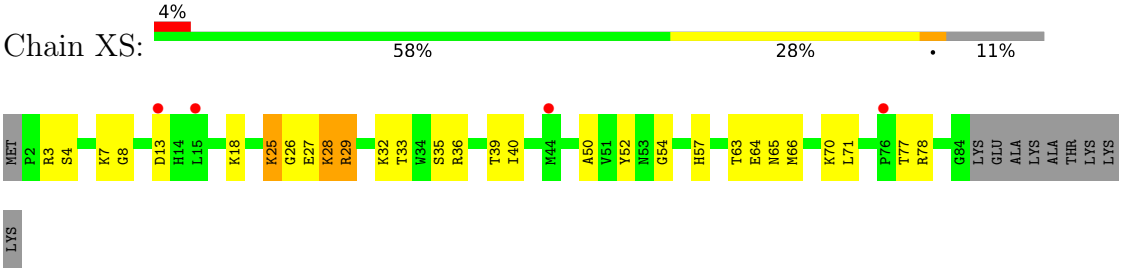
• Molecule 19: 30S ribosomal protein S19

Chain QS:



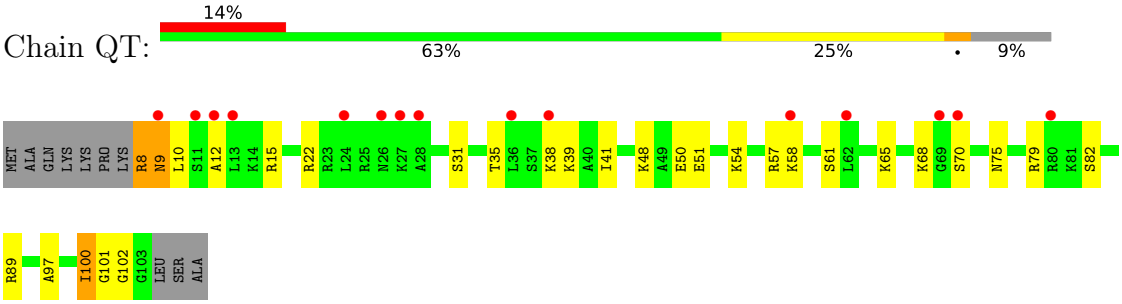
• Molecule 19: 30S ribosomal protein S19

Chain XS:



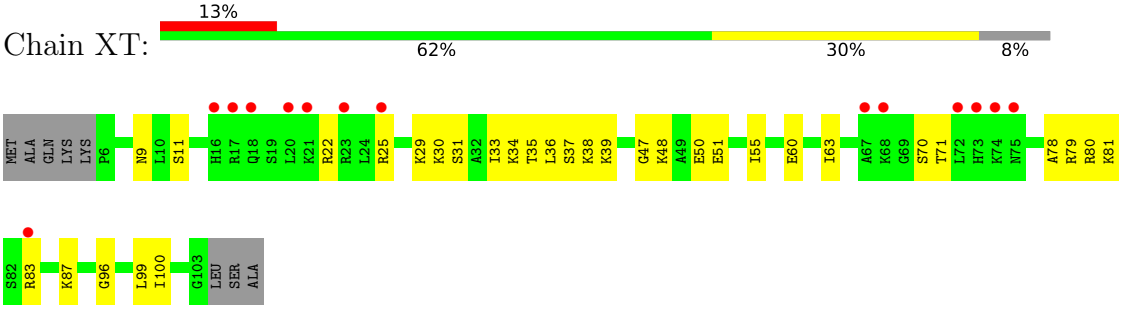
• Molecule 20: 30S ribosomal protein S20

Chain QT:



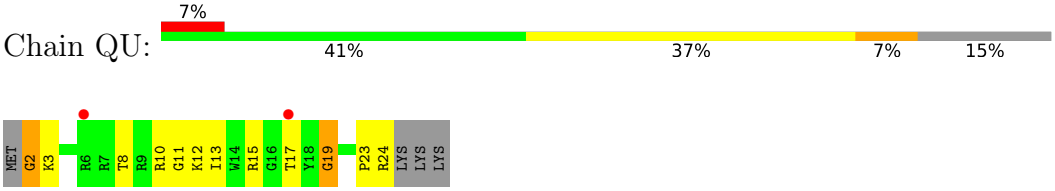
• Molecule 20: 30S ribosomal protein S20

Chain XT:



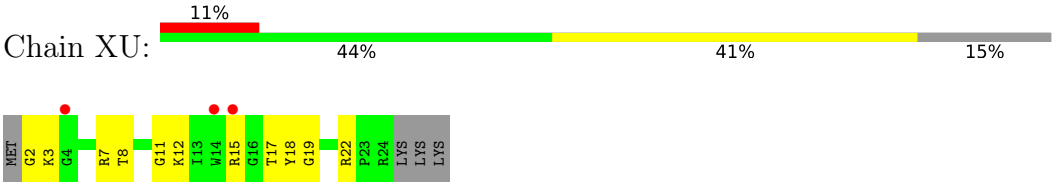
• Molecule 21: 30S ribosomal protein Thx

Chain QU:



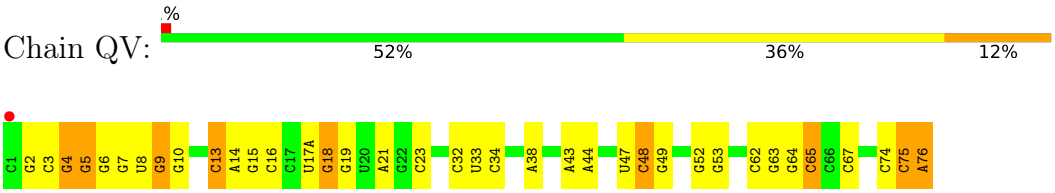
• Molecule 21: 30S ribosomal protein Thx

Chain XU:



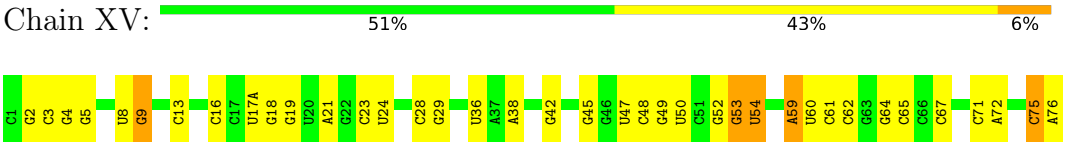
• Molecule 22: P-site tRNAfMet

Chain QV:



• Molecule 22: P-site tRNAfMet

Chain XV:

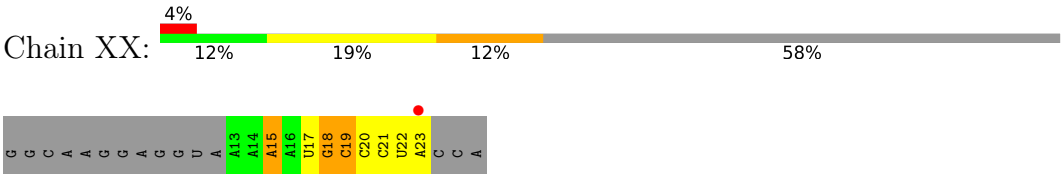


• Molecule 23: mRNA

Chain QX:

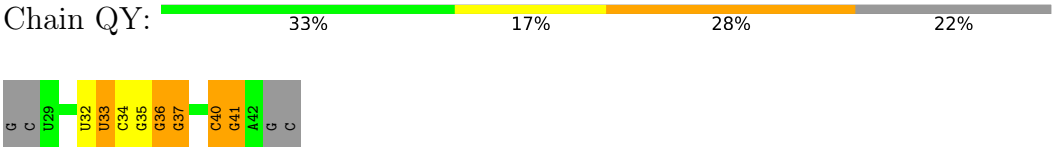
• Molecule 23: mRNA

Chain XX:



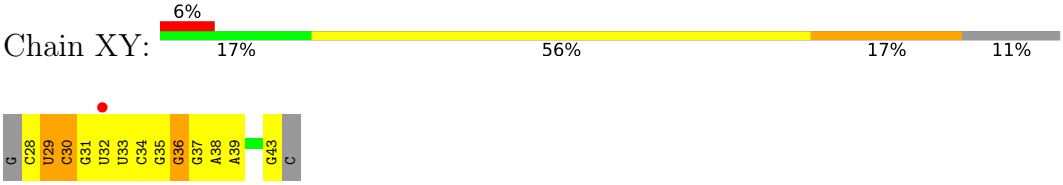
• Molecule 24: A-site ASLSufA6 A37.5

Chain QY:



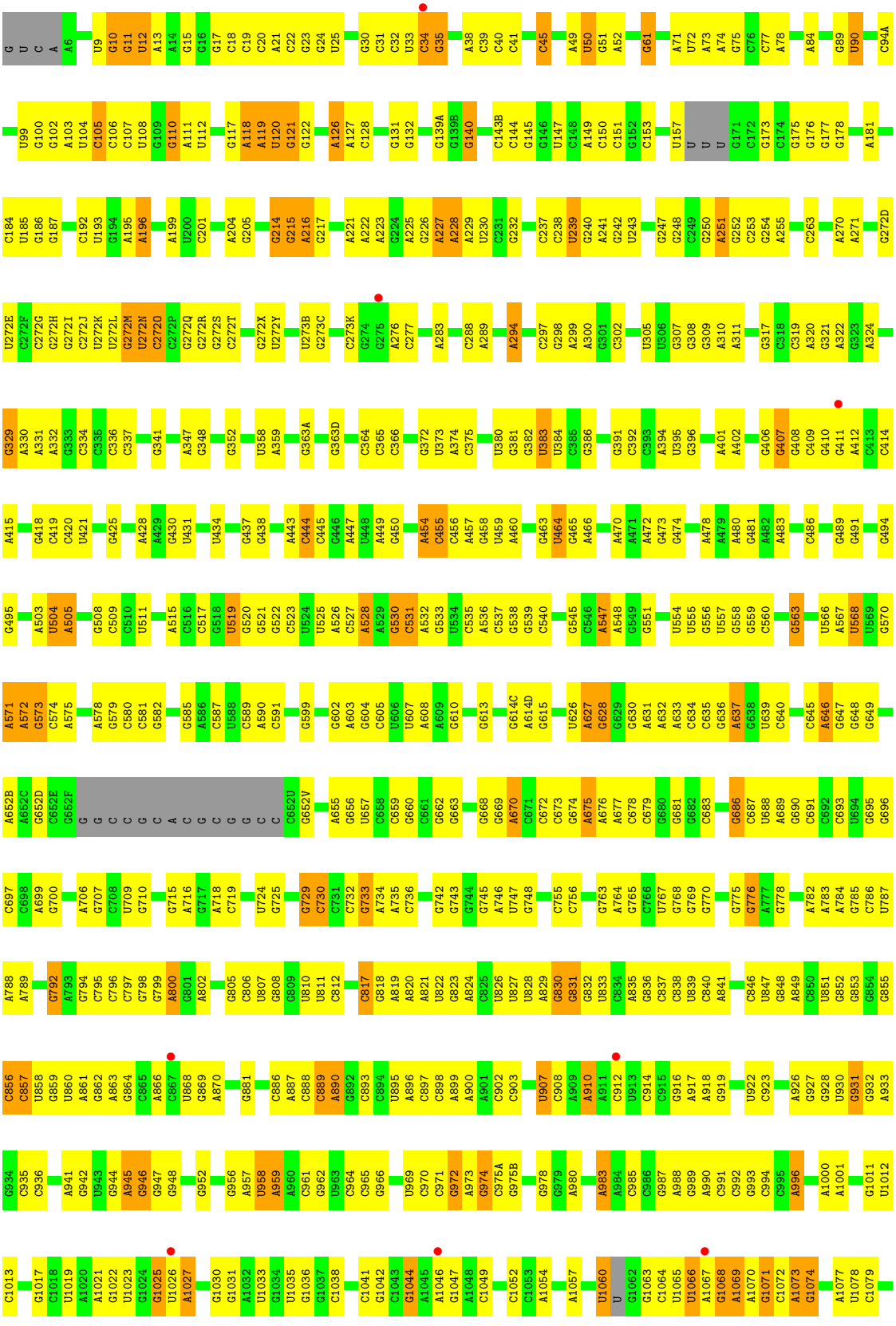
• Molecule 24: A-site ASLSufA6 A37.5

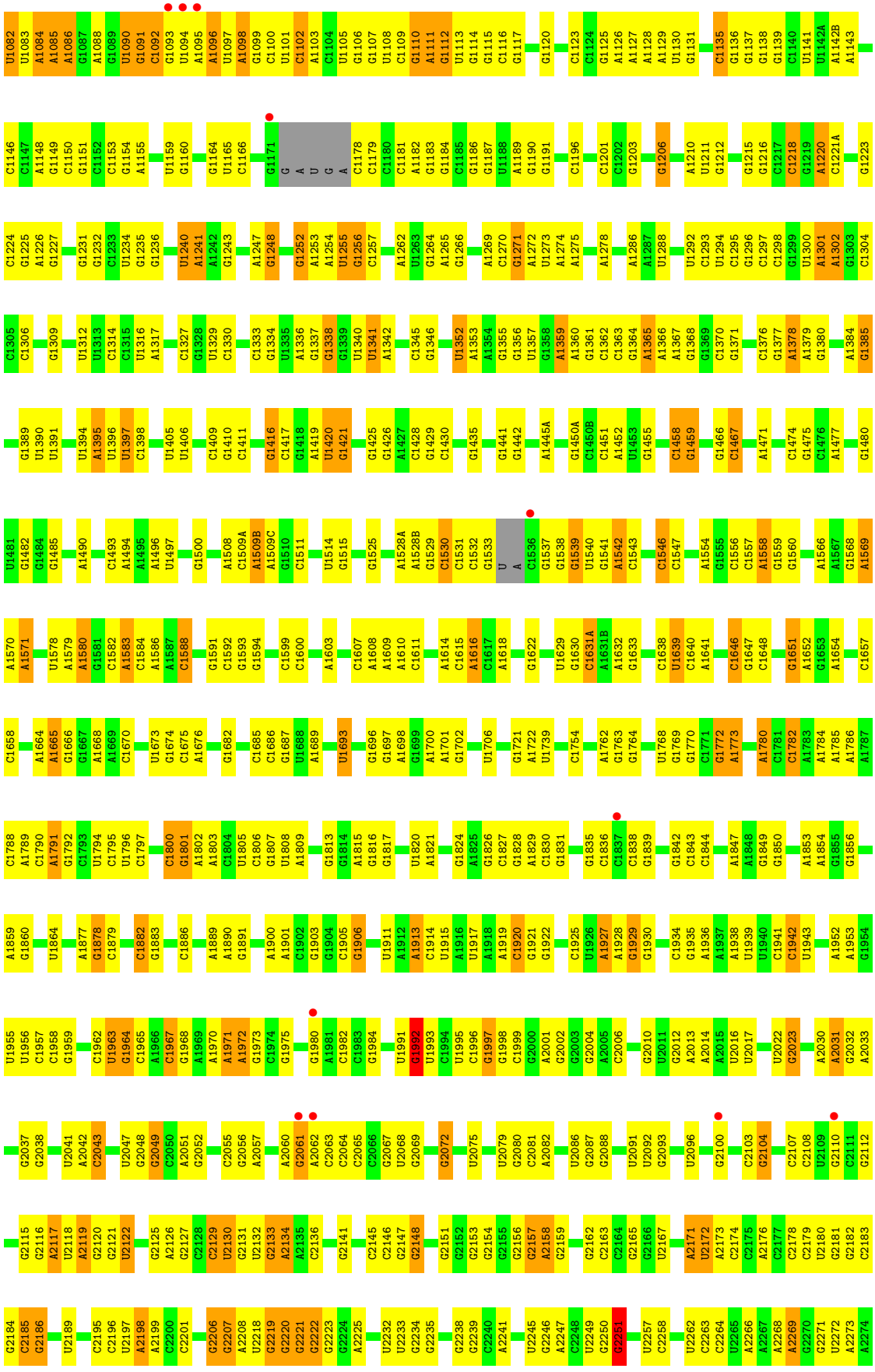
Chain XY:



• Molecule 25: 23S rRNA

Chain RA:

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C1146 C1147 A1148 G1149 C1150 G1151 C1152 C1153 G1154 A1155 U1159 G1160 G1164 U1165 C1166 G1171 G A U G A C1178 C1179 C1180 C1181 A1182 G1183 G1184 C1185 G1186 G1187 U1188 A1189 G1190 G1191 C1196 C1201 C1202 G1203 G1206 A1210 U1211 G1212 G1215 G1216 C1217 C1218 G1219 A1220 C1221A G1223
C1224 G1225 A1226 G1227 G1231 G1232 C1233 U1234 G1235 G1236 U1240 A1241 A1242 G1243 A1247 G1248 G1252 A1253 A1254 U1255 G1256 C1257 A1262 U1263 G1264 A1265 G1266 A1269 C1270 G1271 A1272 U1273 A1274 A1275 A1278 A1286 A1287 U1288 U1292 C1293 U1294 C1295 G1296 C1297 C1298 G1299 U1300 A1301 A1302 G1303 C1304
C1305 C1306 G1309 U1312 U1313 C1314 C1315 U1316 A1317 C1327 G1328 U1329 C1330 C1333 G1334 U1335 A1336 G1337 G1338 G1339 U1340 U1341 A1342 C1345 G1346 U1352 A1353 A1354 G1355 G1356 U1357 G1358 A1359 A1360 G1361 C1362 C1363 G1364 A1365 A1366 A1367 G1368 G1369 C1370 G1371 C1376 G1377 A1378 A1379 G1380 A1384 G1385
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U1481 G1482 G1484 G1485 A1490 C1493 A1494 A1495 A1496 U1497 G1500 A1508 C1509A A1509B A1509C G1510 C1511 U1514 G1515 G1525 A1528A A1528B G1529 C1530 C1531 C1532 G1533 U A 1536 G1537 G1538 G1539 U1540 G1541 A1542 C1543 C1546 C1547 A1554 G1555 C1556 C1557 C1558 G1559 C1560 A1566 A1567 G1568 A1569
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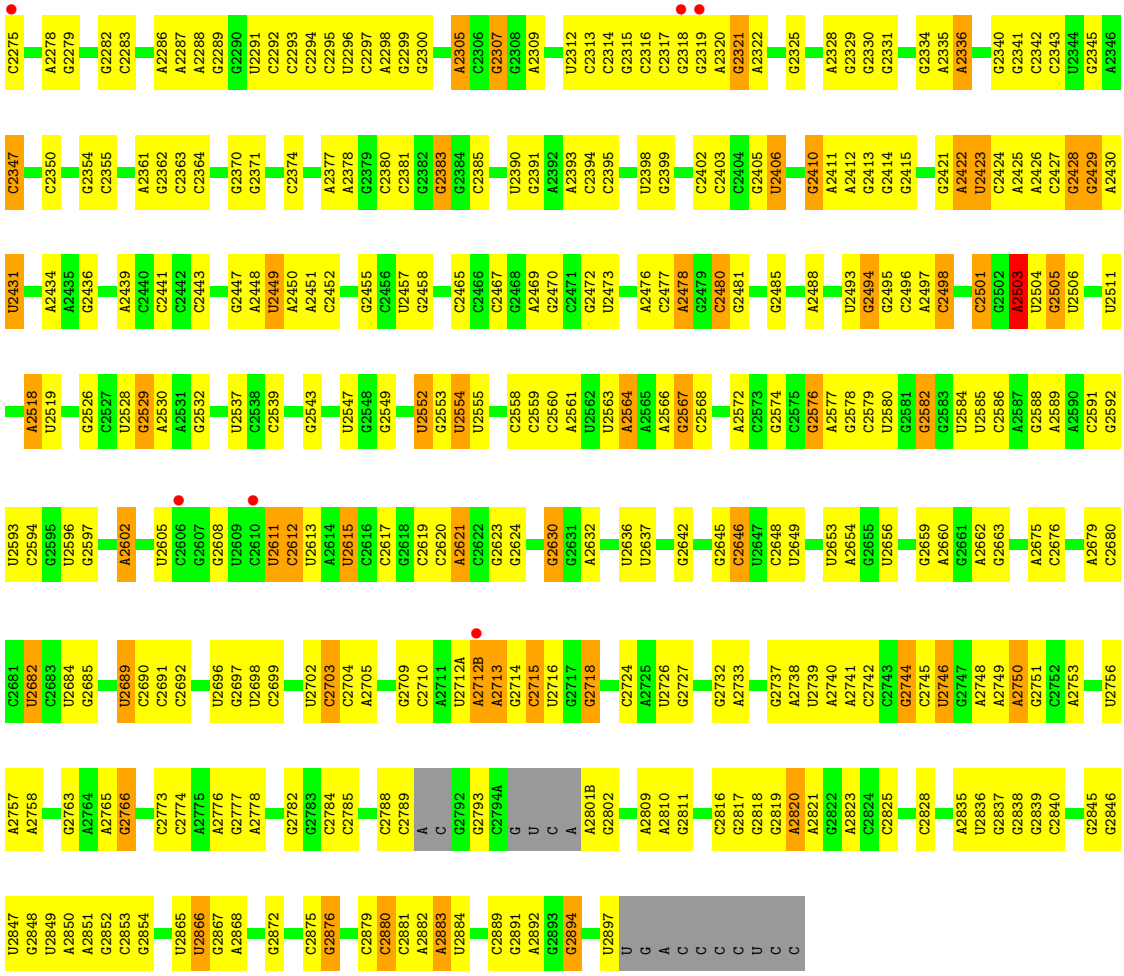
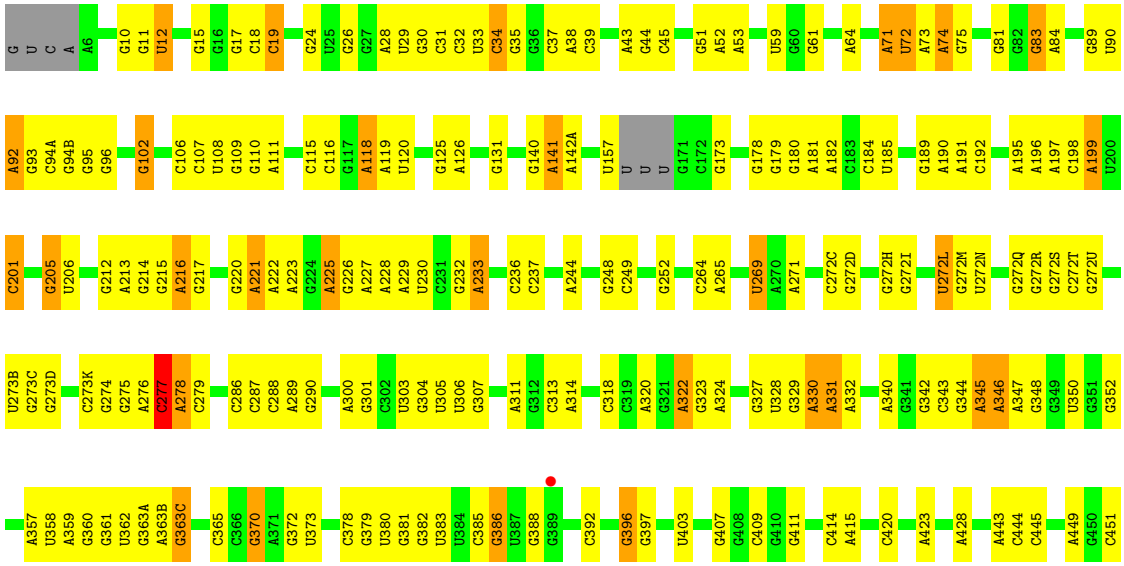
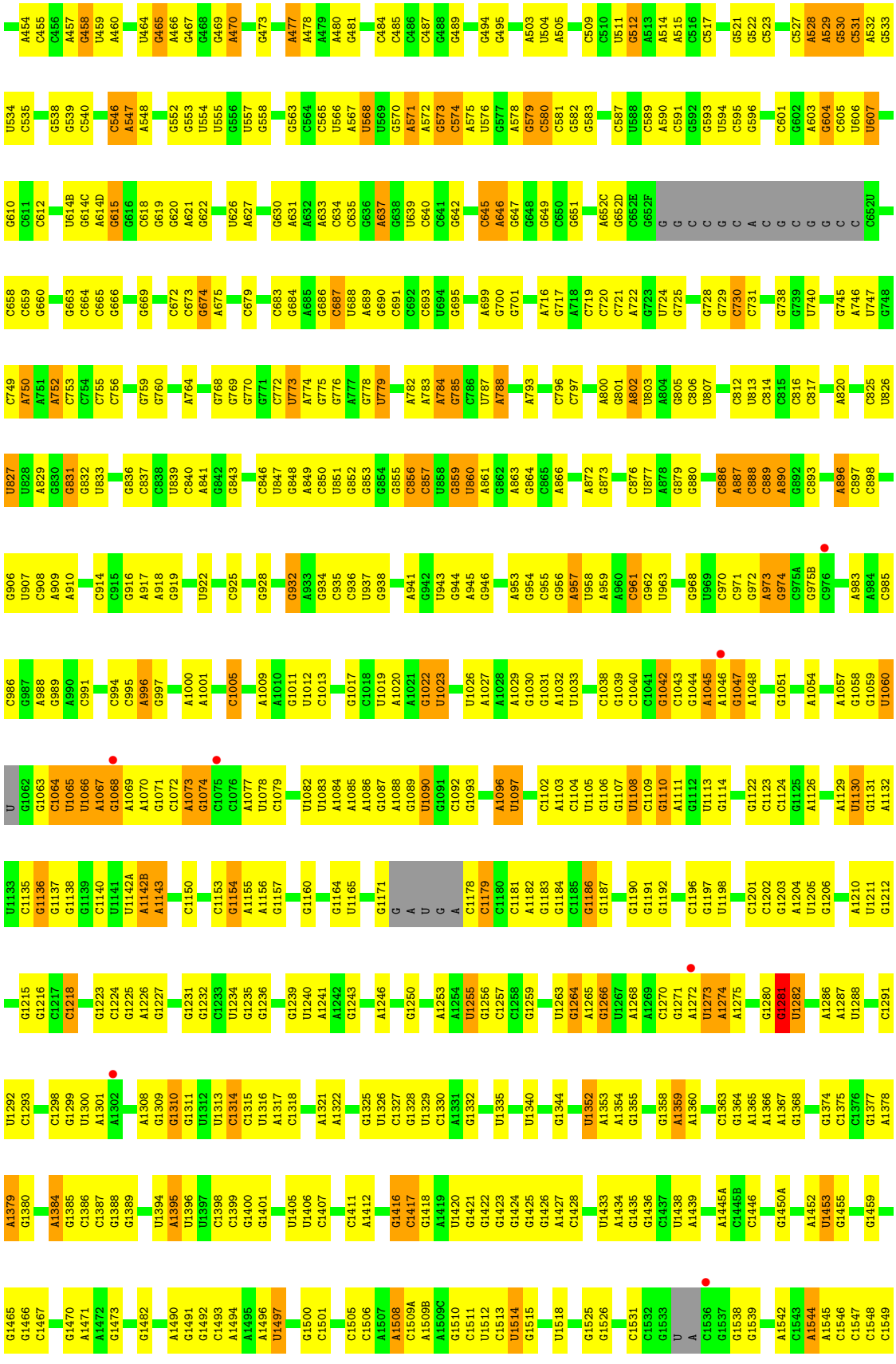
A1859 G1860 U1864 A1877 G1878 C1879 C1882 G1883 C1886 A1889 A1890 G1891 A1900 A1901 C1902 G1903 G1904 C1905 G1906 U1911 A1912 A1913 C1914 U1915 A1916 U1917 A1918 A1919 C1920 G1921 G1922 C1925 U1926 A1927 A1928 G1929 G1930 C1934 G1935 A1936 A1937 A1938 U1939 U1940 C1941 C1942 U1943 A1952 A1953 G1954
U1955 U1956 C1957 C1958 G1959 C1962 U1963 G1964 C1965 A1966 C1967 G1968 A1969 A1970 A1971 A1972 G1973 C1974 G1975 G1980 A1981 C1982 C1983 G1984 U1991 G1992 U1993 C1994 U1995 C1996 G1997 G1998 C1999 G2000 A2001 G2002 G2003 G2004 A2005 C2006 G2010 U2011 G2012 A2013 A2014 A2015 U2016 U2017 U2022 G2023 A2030 A2031 G2032 A2033
G2037 G2038 U2041 A2042 C2043 U2047 G2048 G2049 C2050 A2051 G2052 C2055 G2056 A2057 A2060 G2061 A2062 C2063 C2064 C2065 C2066 G2067 U2068 G2069 G2072 U2075 U2079 G2080 C2081 A2082 U2086 G2087 G2088 U2091 U2092 G2093 U2096 G2100 C2103 G2104 C2107 C2108 U2109 G2110 C2111 G2112
G2115 G2116 A2117 U2118 A2119 G2120 G2121 U2122 G2125 A2126 G2127 C2128 C2129 U2130 G2131 U2132 G2133 A2134 A2135 C2136 G2141 C2145 C2146 G2147 G2148 G2151 G2152 G2153 G2154 G2155 G2156 G2157 A2158 G2159 G2162 C2163 C2164 G2165 G2166 U2167 A2171 U2172 A2173 C2174 C2175 A2176 C2177 C2178 C2179 U2180 G2181 G2182 C2183
G2184 C2185 C2186 U2189 C2195 C2196 U2197 A2198 A2199 C2200 C2201 G2206 G2207 A2208 U2218 G2219 G2220 G2221 G2222 G2223 G2224 A2225 U2232 U2233 G2234 G2235 G2238 G2239 C2240 A2241 U2245 G2246 A2247 C2248 U2249 G2250 G2251 U2257 C2258 U2262 C2263 C2264 U2265 A2266 A2267 A2268 A2269 G2270 G2271 U2272 A2273 A2274

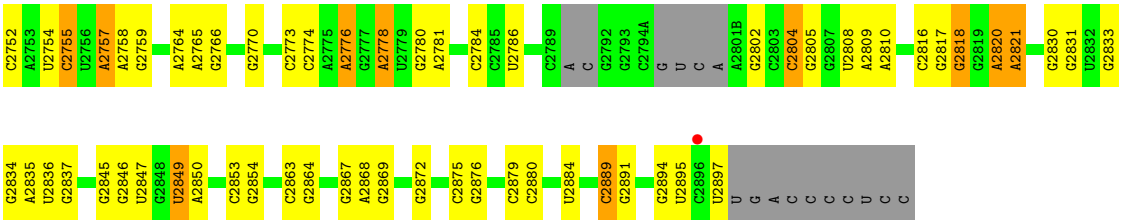


• Molecule 25: 23S rRNA

Chain YA:

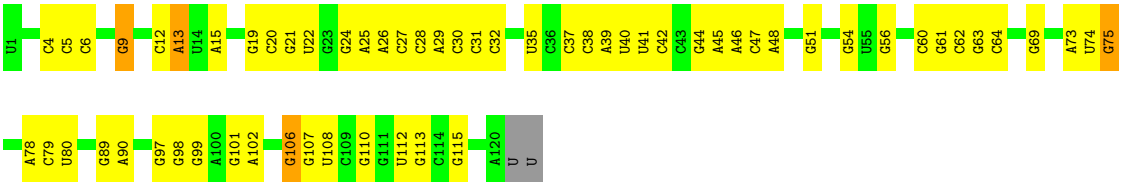






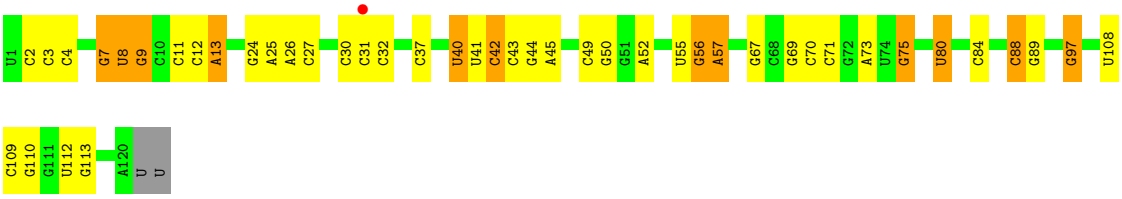
• Molecule 26: 5S rRNA

Chain RB:



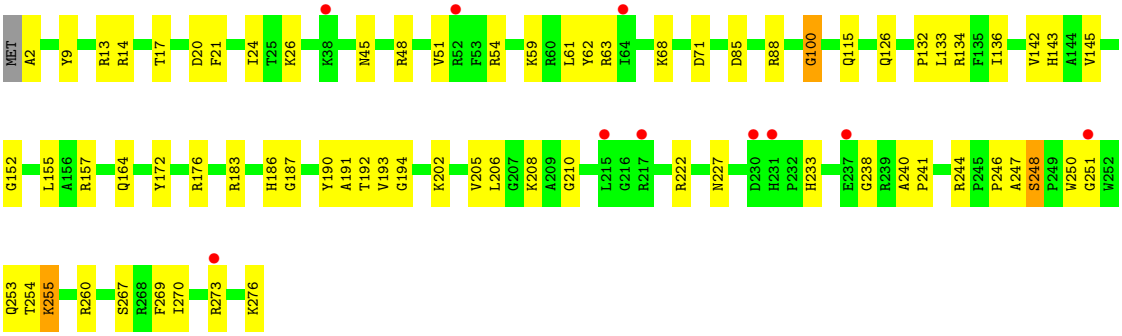
• Molecule 26: 5S rRNA

Chain YB:



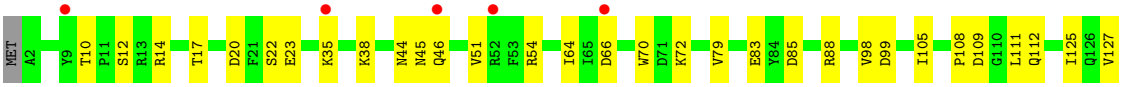
• Molecule 27: 50S ribosomal protein L2

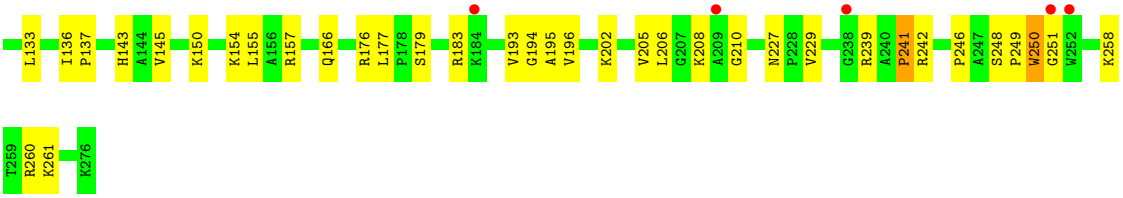
Chain RD:



• Molecule 27: 50S ribosomal protein L2

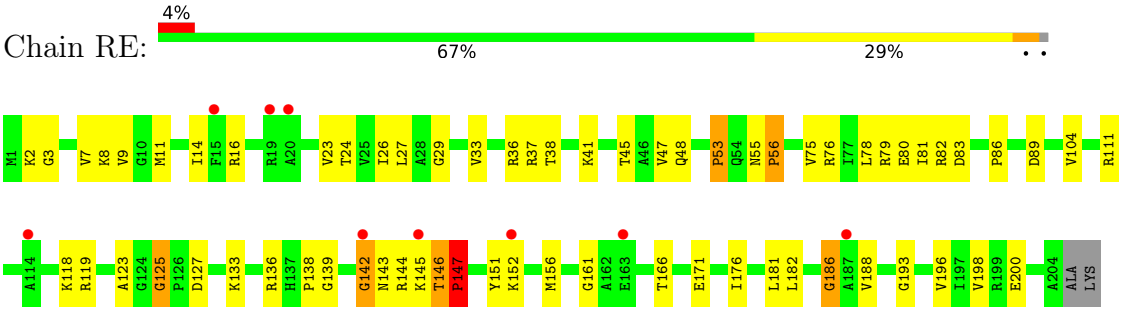
Chain YD:





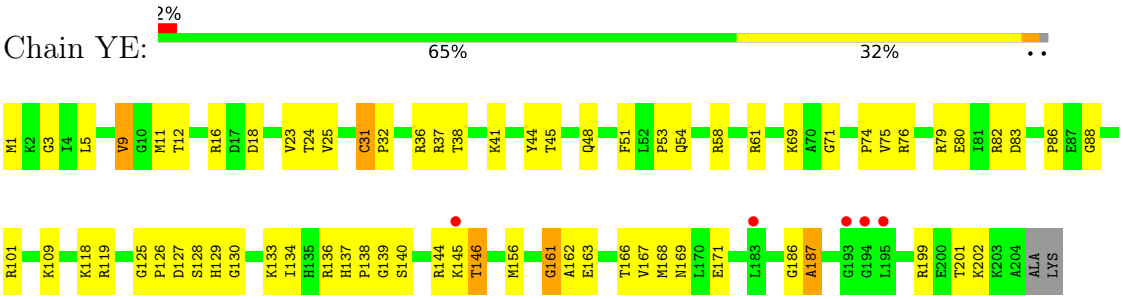
• Molecule 28: 50S ribosomal protein L3

Chain RE:



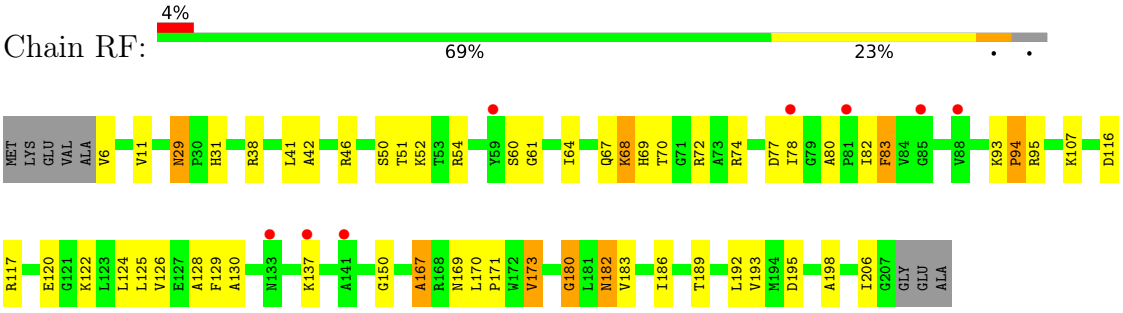
• Molecule 28: 50S ribosomal protein L3

Chain YE:



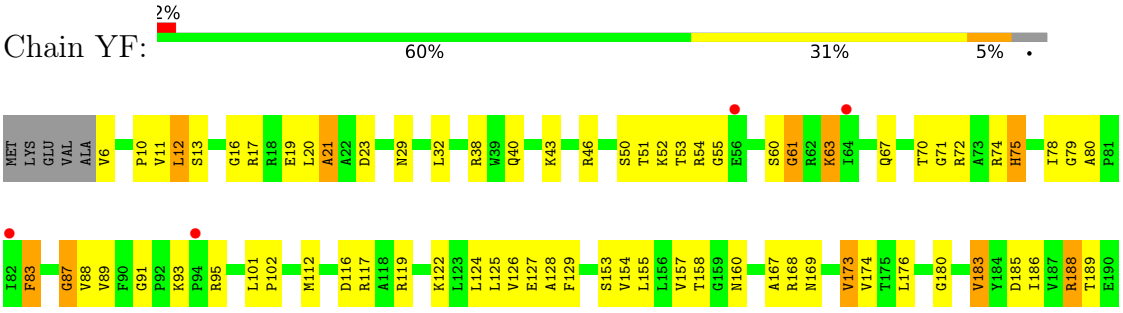
• Molecule 29: 50S ribosomal protein L4

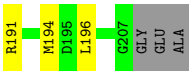
Chain RF:



• Molecule 29: 50S ribosomal protein L4

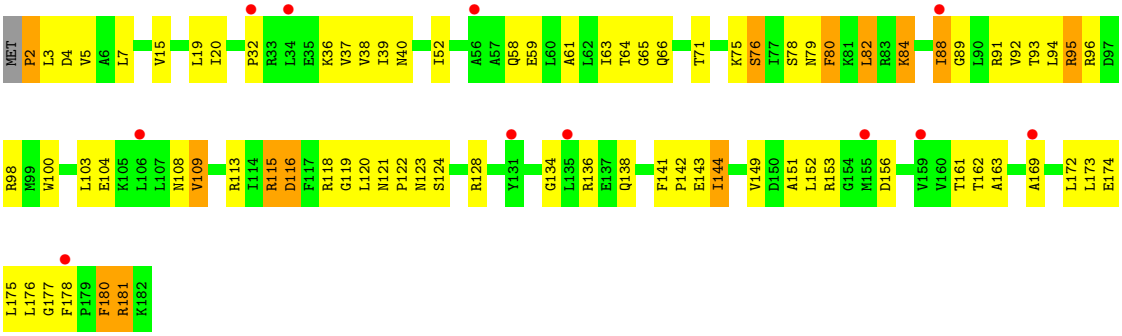
Chain YF:





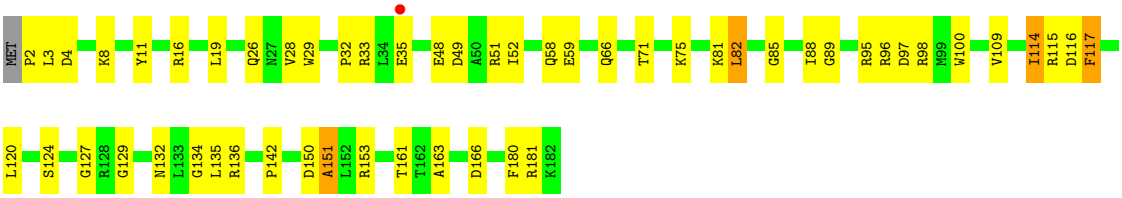
• Molecule 30: 50S ribosomal protein L5

Chain RG:



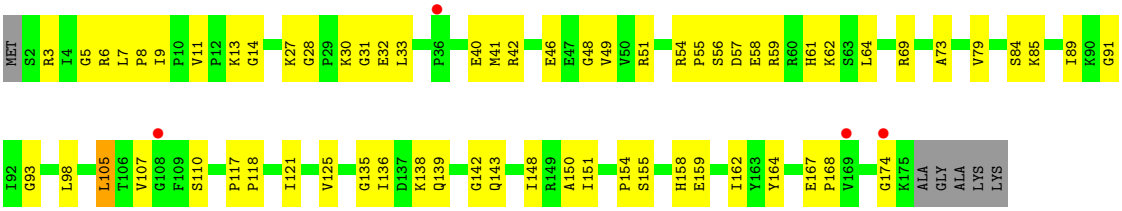
• Molecule 30: 50S ribosomal protein L5

Chain YG:



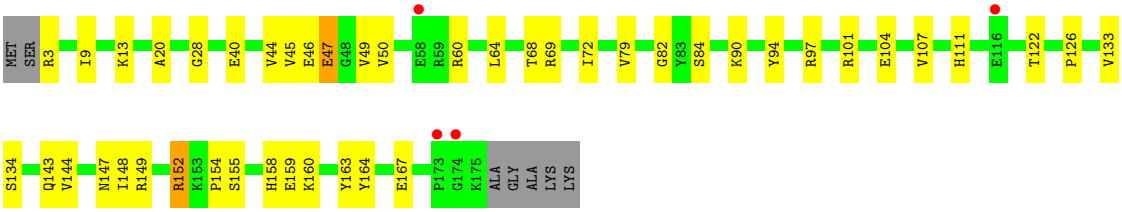
• Molecule 31: 50S ribosomal protein L6

Chain RH:



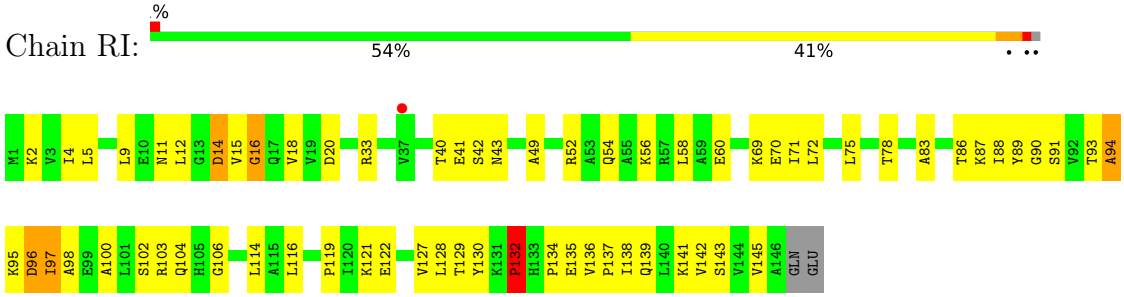
• Molecule 31: 50S ribosomal protein L6

Chain YH:



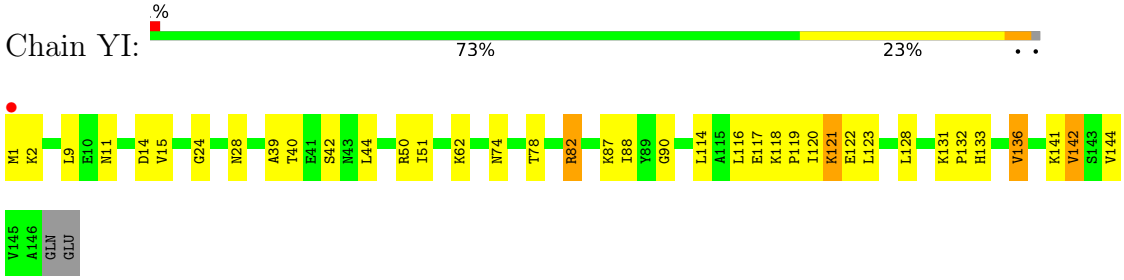
• Molecule 32: 50S ribosomal protein L9

Chain RI:



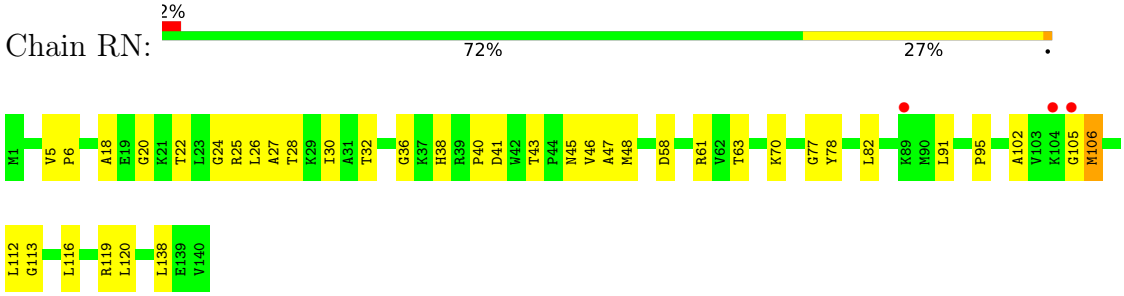
• Molecule 32: 50S ribosomal protein L9

Chain YI:



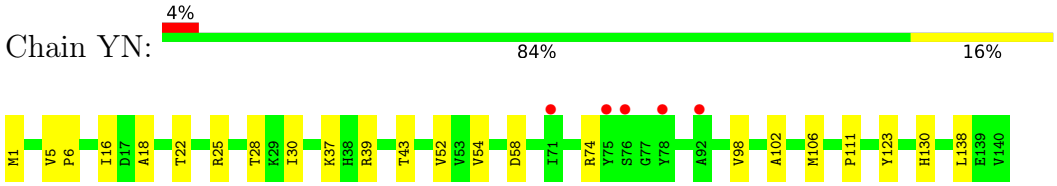
• Molecule 33: 50S ribosomal protein L13

Chain RN:



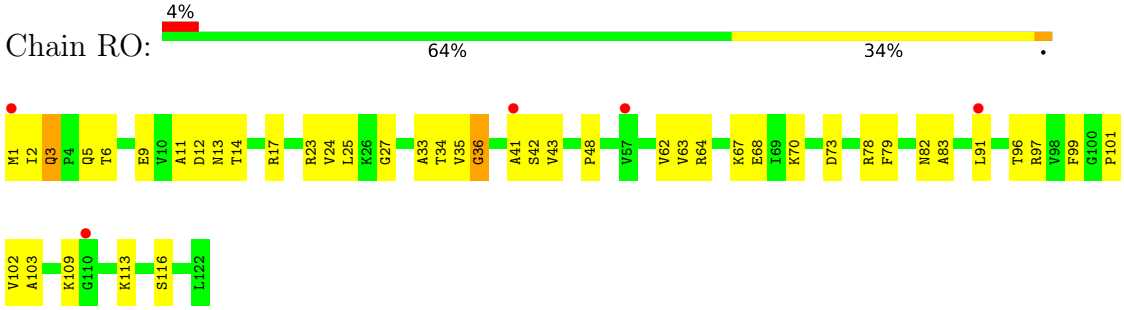
• Molecule 33: 50S ribosomal protein L13

Chain YN:



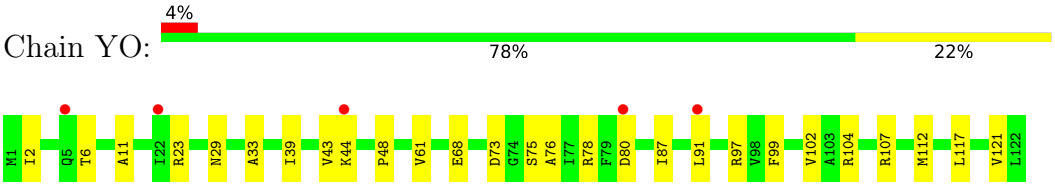
• Molecule 34: 50S ribosomal protein L14

Chain RO:



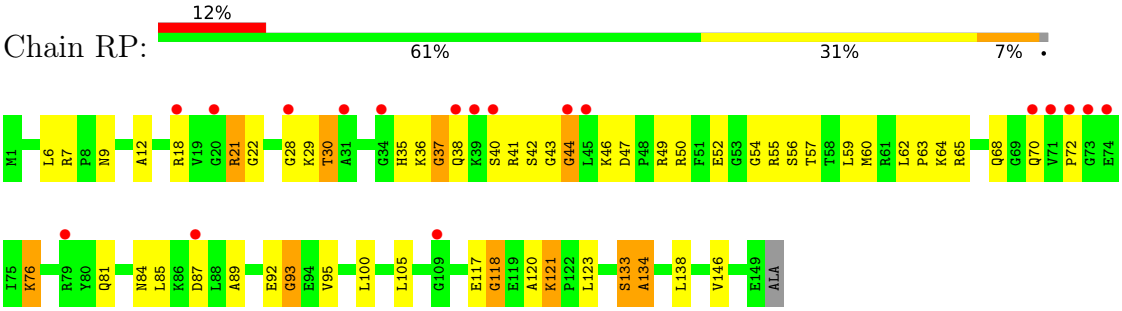
• Molecule 34: 50S ribosomal protein L14

Chain YO:



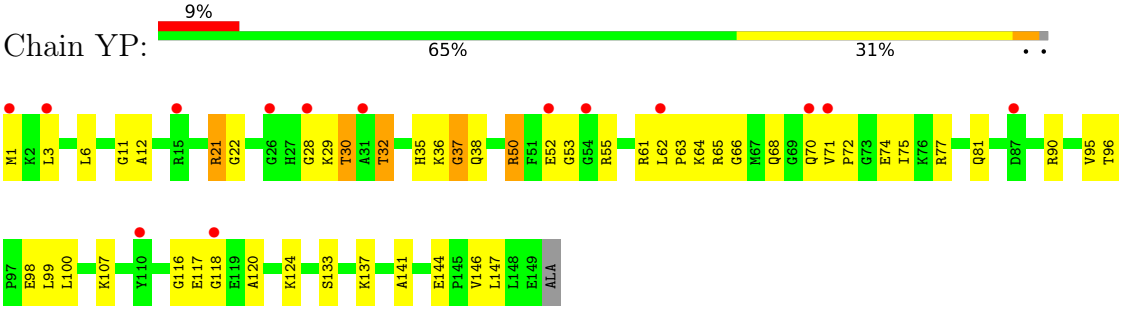
• Molecule 35: 50S ribosomal protein L15

Chain RP:



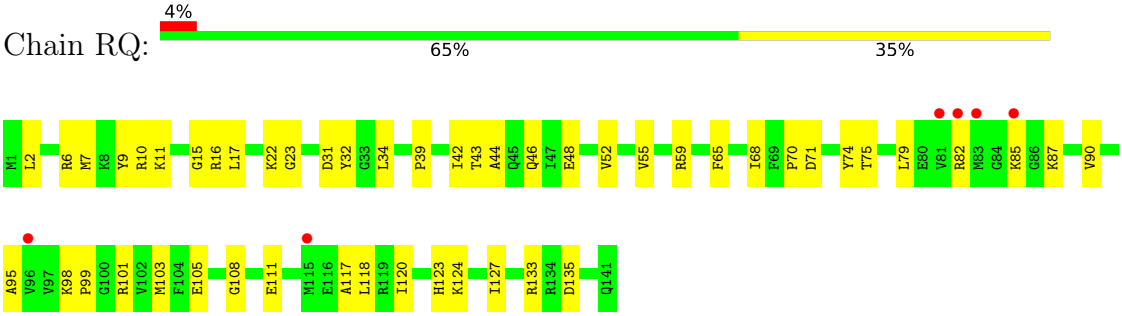
• Molecule 35: 50S ribosomal protein L15

Chain YP:



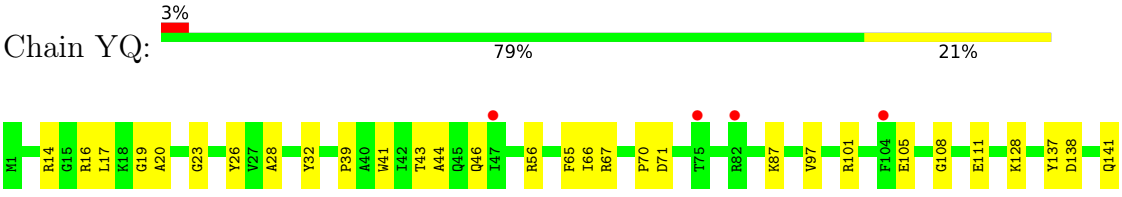
• Molecule 36: 50S ribosomal protein L16

Chain RQ:



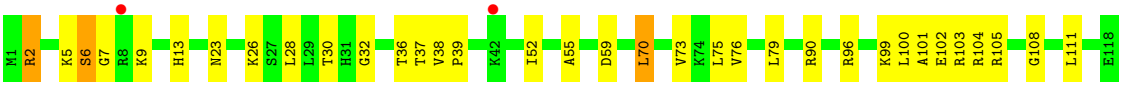
• Molecule 36: 50S ribosomal protein L16

Chain YQ:

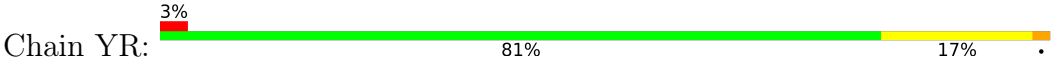


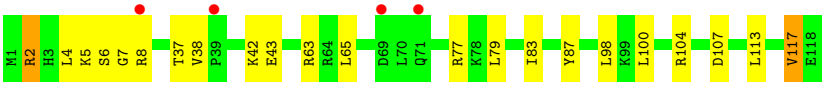
• Molecule 37: 50S ribosomal protein L17

Chain RR:

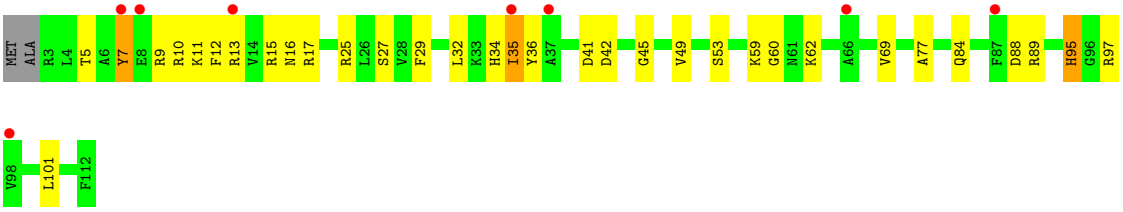


• Molecule 37: 50S ribosomal protein L17

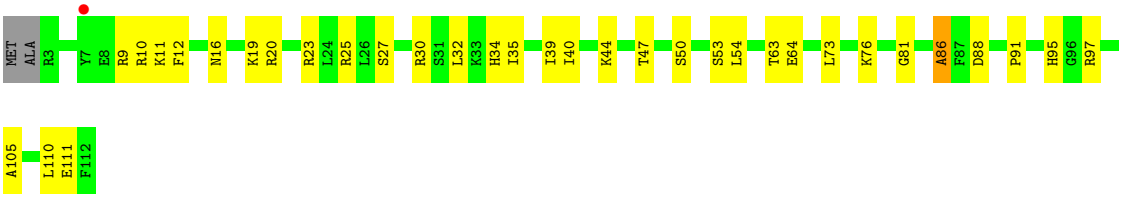




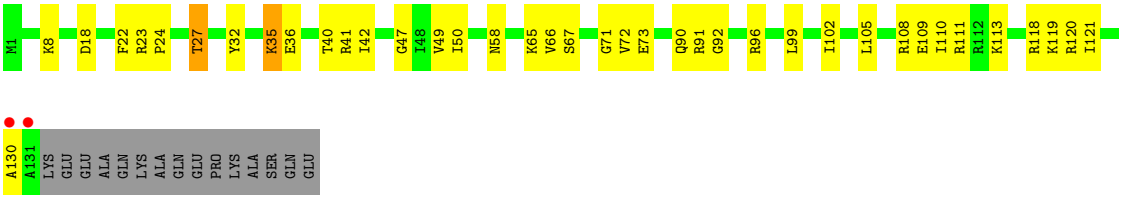
• Molecule 38: 50S ribosomal protein L18



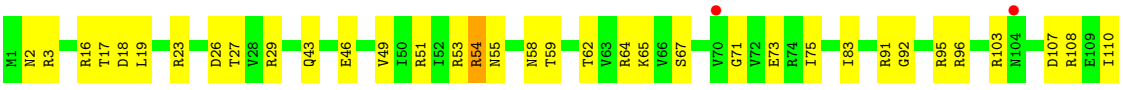
• Molecule 38: 50S ribosomal protein L18



• Molecule 39: 50S ribosomal protein L19

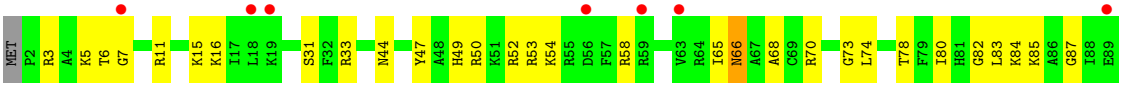


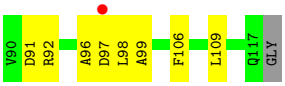
• Molecule 39: 50S ribosomal protein L19



• Molecule 40: 50S ribosomal protein L20

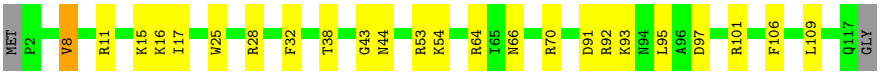
Chain RU:





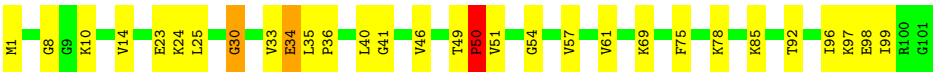
• Molecule 40: 50S ribosomal protein L20

Chain YU:



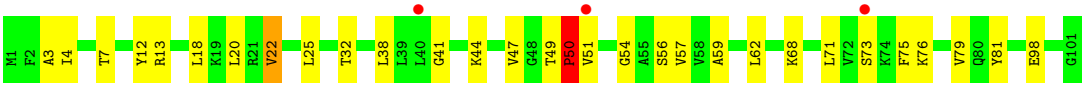
• Molecule 41: 50S ribosomal protein L21

Chain RV:



• Molecule 41: 50S ribosomal protein L21

Chain YV:

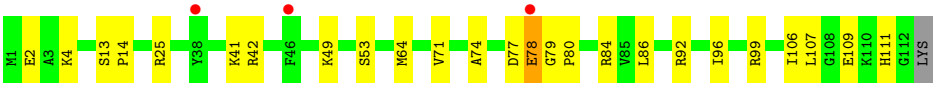


• Molecule 42: 50S ribosomal protein L22

Chain RW:

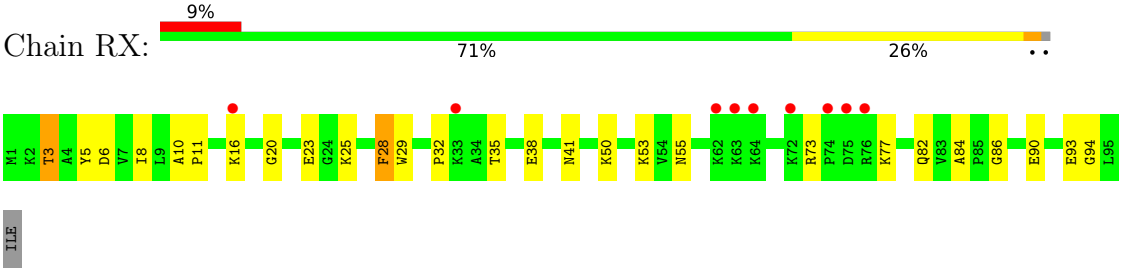
• Molecule 42: 50S ribosomal protein L22

Chain YW:



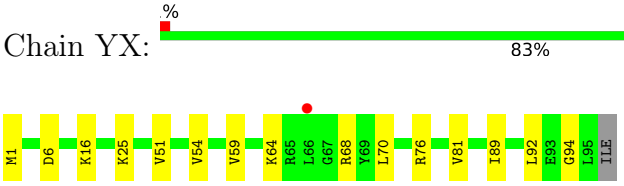
• Molecule 43: 50S ribosomal protein L23

Chain RX:



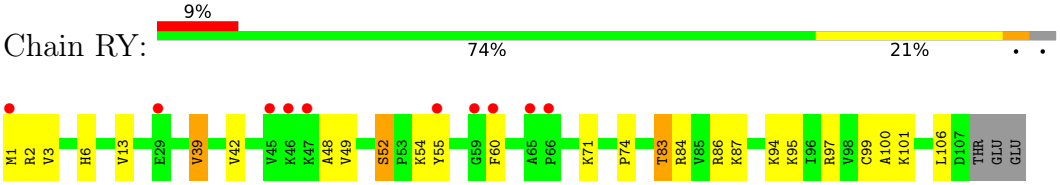
• Molecule 43: 50S ribosomal protein L23

Chain YX:



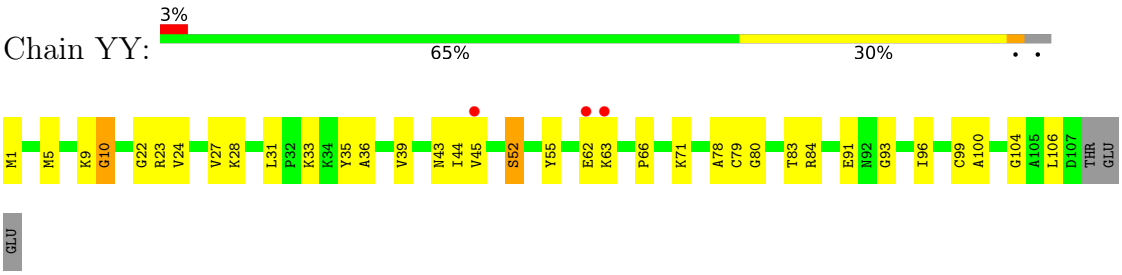
• Molecule 44: 50S ribosomal protein L24

Chain RY:



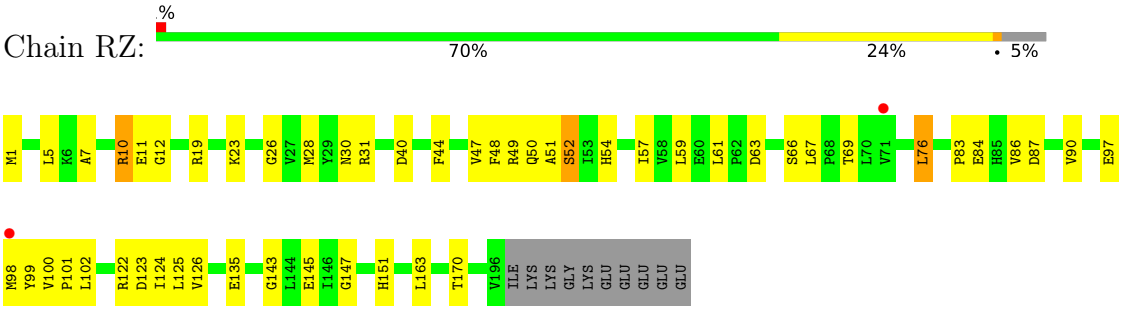
• Molecule 44: 50S ribosomal protein L24

Chain YY:



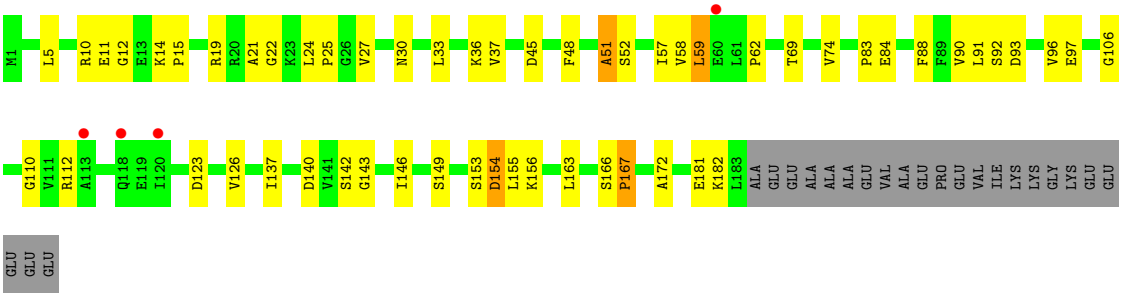
• Molecule 45: 50S ribosomal protein L25

Chain RZ:

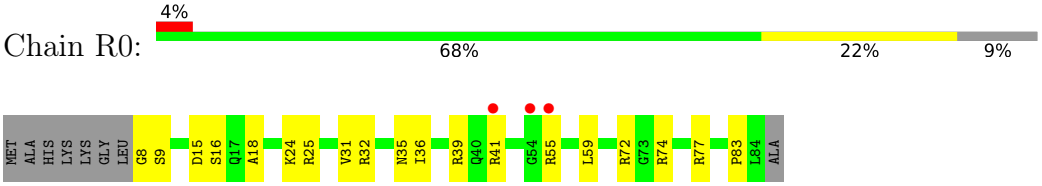


• Molecule 45: 50S ribosomal protein L25

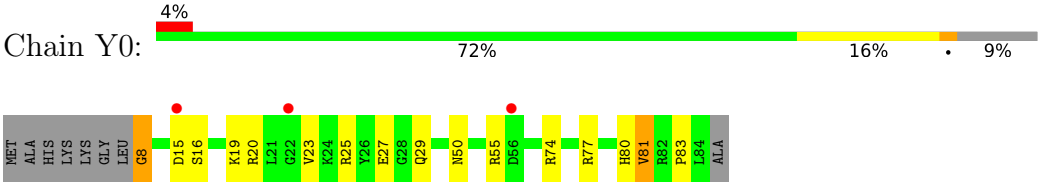
Chain YZ:



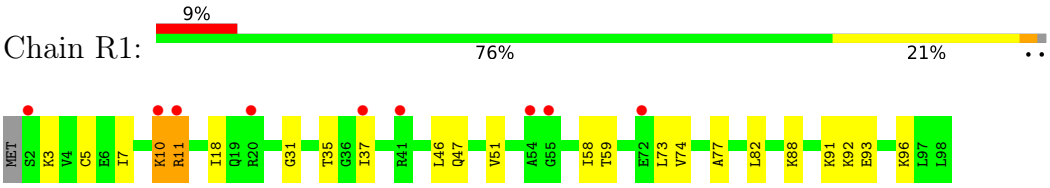
• Molecule 46: 50S ribosomal protein L27



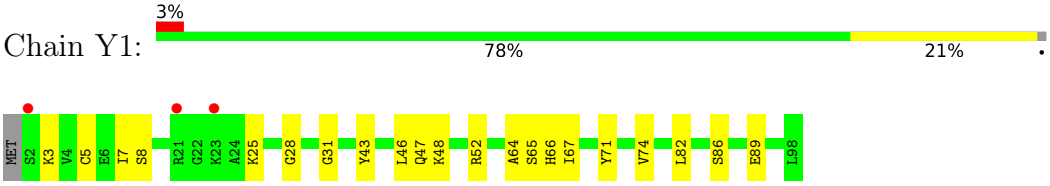
• Molecule 46: 50S ribosomal protein L27



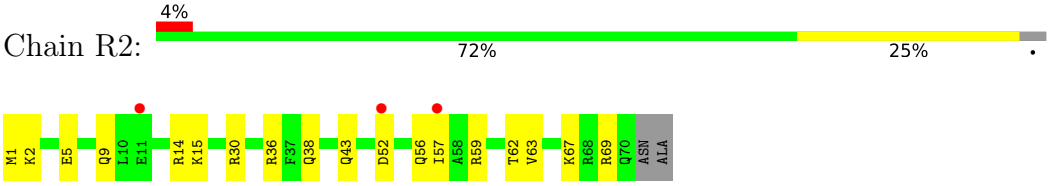
• Molecule 47: 50S ribosomal protein L28



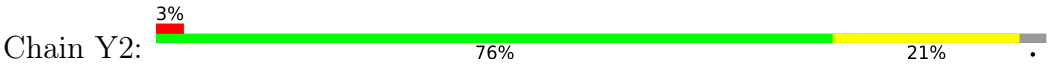
• Molecule 47: 50S ribosomal protein L28

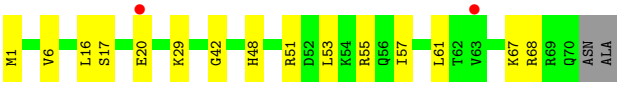


• Molecule 48: 50S ribosomal protein L29

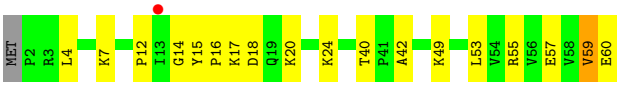


• Molecule 48: 50S ribosomal protein L29

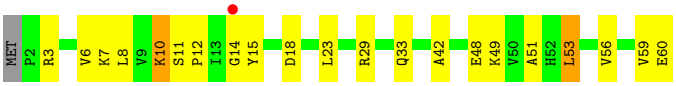




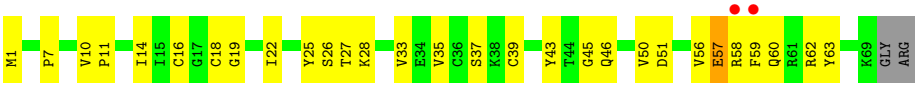
• Molecule 49: 50S ribosomal protein L30



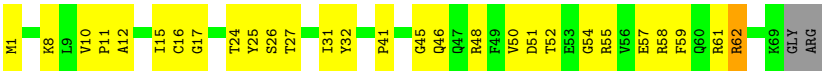
• Molecule 49: 50S ribosomal protein L30



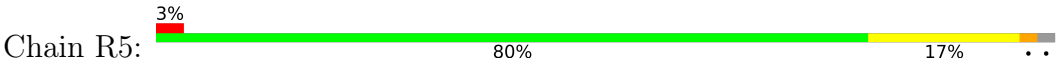
• Molecule 50: 50S ribosomal protein L31



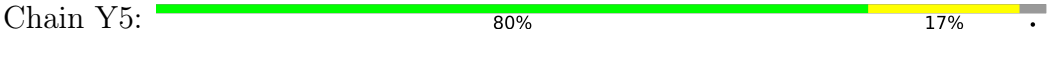
• Molecule 50: 50S ribosomal protein L31

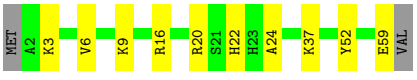


• Molecule 51: 50S ribosomal protein L32



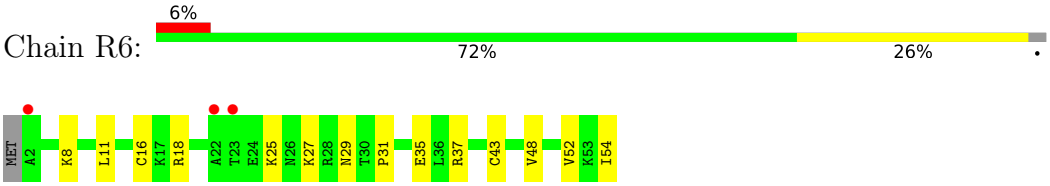
• Molecule 51: 50S ribosomal protein L32





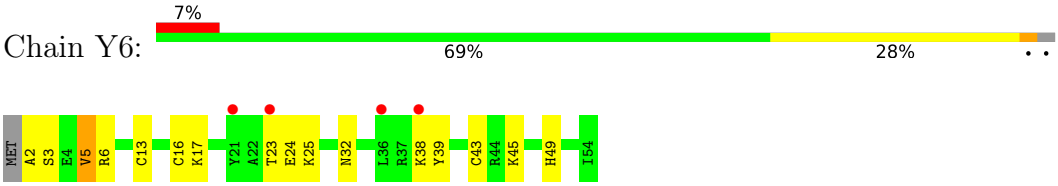
• Molecule 52: 50S ribosomal protein L33

Chain R6:



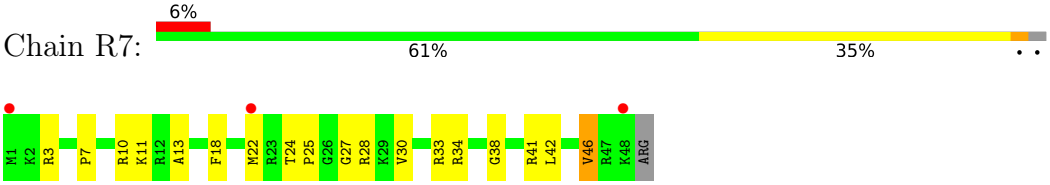
• Molecule 52: 50S ribosomal protein L33

Chain Y6:



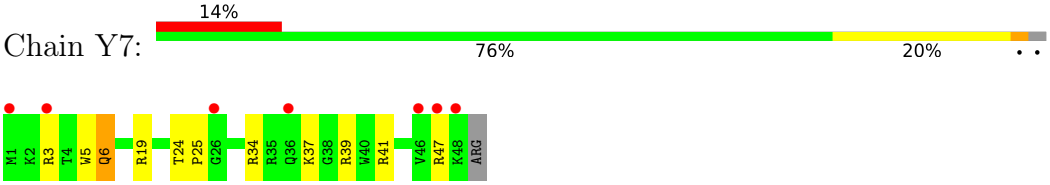
• Molecule 53: 50S ribosomal protein L34

Chain R7:



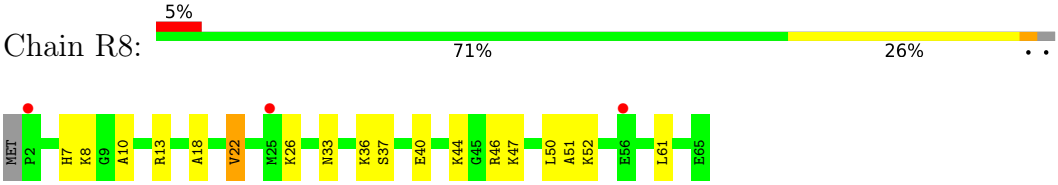
• Molecule 53: 50S ribosomal protein L34

Chain Y7:



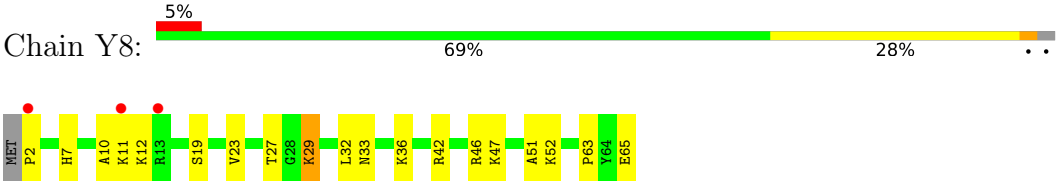
• Molecule 54: 50S ribosomal protein L35

Chain R8:



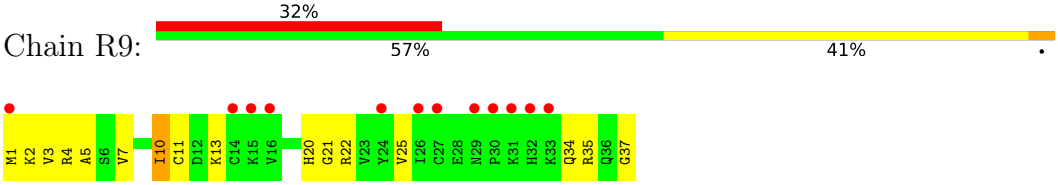
• Molecule 54: 50S ribosomal protein L35

Chain Y8:



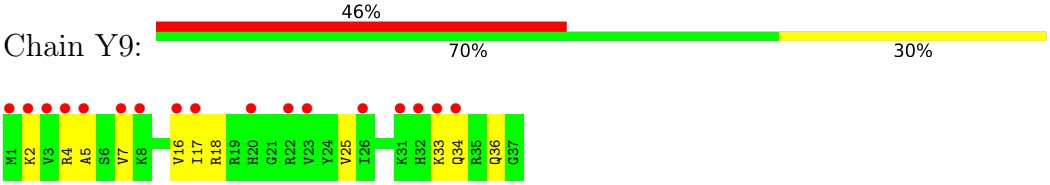
• Molecule 55: 50S ribosomal protein L36

Chain R9:



• Molecule 55: 50S ribosomal protein L36

Chain Y9:



• Molecule 56: tRNA acceptor end mimic

Chain ZA:

• Molecule 56: tRNA acceptor end mimic

Chain ZB:

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	208.91Å 445.91Å 617.31Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.17 – 3.64 49.17 – 3.64	Depositor EDS
% Data completeness (in resolution range)	93.4 (49.17-3.64) 93.3 (49.17-3.64)	Depositor EDS
R_{merge}	0.24	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.37 (at 3.67Å)	Xtriage
Refinement program	PHENIX 1.14_3260	Depositor
R, R_{free}	0.208 , 0.250 0.228 , 0.260	Depositor DCC
R_{free} test set	27131 reflections (4.55%)	wwPDB-VP
Wilson B-factor (Å^2)	123.8	Xtriage
Anisotropy	0.381	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.27 , 124.0	EDS
L-test for twinning[2]	$< \|L\| > = 0.37$, $< L^2 > = 0.20$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	291822	wwPDB-VP
Average B, all atoms (Å^2)	150.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.02% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, M2G, MA6, 2MG, PPU, G7M, 0TD, OMU, SF4, UR3, MG, 2MA, OMC, PSU, OMG, 4OC, 5MC, 5MU

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	0.44	0/35795	0.54	0/55864
1	XA	0.49	4/35890 (0.0%)	0.58	9/56012 (0.0%)
2	QB	0.33	0/1942	0.71	0/2619
2	XB	0.36	0/1950	0.64	0/2630
3	QC	0.31	0/1629	0.63	0/2195
3	XC	0.39	0/1629	0.62	0/2195
4	QD	0.48	0/1733	0.80	5/2318 (0.2%)
4	XD	0.47	0/1733	0.72	0/2318
5	QE	0.40	0/1149	0.66	0/1548
5	XE	0.48	0/1149	0.66	0/1548
6	QF	0.38	0/850	0.59	0/1147
6	XF	0.45	0/850	0.63	0/1147
7	QG	0.32	0/1276	0.62	0/1709
7	XG	0.39	0/1276	0.65	0/1709
8	QH	0.39	0/1128	0.61	0/1517
8	XH	0.43	0/1128	0.61	0/1517
9	QI	0.33	0/1029	0.66	0/1379
9	XI	0.39	0/1017	0.71	1/1365 (0.1%)
10	QJ	0.32	0/814	0.67	0/1095
10	XJ	0.37	0/790	0.53	0/1063
11	QK	0.39	0/859	0.58	0/1162
11	XK	0.40	0/859	0.62	0/1162
12	QL	0.48	1/963 (0.1%)	0.71	0/1287
12	XL	0.50	0/963	0.67	0/1287
13	QM	0.38	0/938	0.74	0/1258
13	XM	0.43	0/926	0.68	0/1241
14	QN	0.37	0/501	0.65	0/664
14	XN	0.43	0/501	0.66	0/664
15	QO	0.39	0/745	0.59	0/992
15	XO	0.43	0/745	0.65	0/992
16	QP	0.49	0/707	0.66	1/951 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
16	XP	0.43	0/707	0.63	0/951
17	QQ	0.42	0/836	0.59	0/1117
17	XQ	0.41	0/836	0.57	0/1117
18	QR	0.37	0/560	0.66	0/746
18	XR	0.47	0/560	0.61	0/746
19	QS	0.29	0/680	0.60	0/915
19	XS	0.41	0/680	0.62	0/915
20	QT	0.47	0/745	0.62	0/981
20	XT	0.35	0/762	0.73	0/1003
21	QU	0.34	0/203	0.56	0/266
21	XU	0.39	0/203	0.58	0/266
22	QV	0.42	0/1836	0.55	0/2859
22	XV	0.55	0/1836	0.67	0/2859
23	QX	0.37	0/185	0.66	0/285
23	XX	0.45	0/260	0.70	0/402
24	QY	0.36	0/336	0.55	0/522
24	XY	0.38	0/381	0.58	0/593
25	RA	0.57	0/68971	0.64	3/107656 (0.0%)
25	YA	0.66	0/68976	0.72	5/107668 (0.0%)
26	RB	0.38	0/2876	0.52	0/4486
26	YB	0.52	0/2878	0.61	0/4490
27	RD	0.62	0/2194	0.63	0/2955
27	YD	0.68	0/2195	0.68	0/2955
28	RE	0.57	0/1596	0.66	0/2153
28	YE	0.58	0/1596	0.73	0/2153
29	RF	0.58	0/1620	0.62	0/2194
29	YF	0.61	0/1620	0.66	0/2194
30	RG	0.38	0/1499	0.77	4/2016 (0.2%)
30	YG	0.55	0/1499	0.72	0/2016
31	RH	0.31	0/1362	0.59	0/1841
31	YH	0.53	0/1356	0.61	0/1833
32	RI	0.40	0/1151	0.73	2/1558 (0.1%)
32	YI	0.44	0/1151	0.75	0/1558
33	RN	0.54	0/1148	0.62	0/1547
33	YN	0.59	0/1148	0.57	0/1547
34	RO	0.56	0/943	0.69	1/1269 (0.1%)
34	YO	0.64	0/943	0.68	1/1269 (0.1%)
35	RP	0.51	0/1156	0.66	0/1537
35	YP	0.59	0/1156	0.69	0/1537
36	RQ	0.50	1/1143 (0.1%)	0.62	0/1527
36	YQ	0.56	0/1143	0.65	0/1527
37	RR	0.59	0/982	0.72	0/1312
37	YR	0.58	0/982	0.68	0/1312

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
38	RS	0.35	0/887	0.62	0/1180
38	YS	0.46	0/887	0.65	0/1180
39	RT	0.50	0/1105	0.59	0/1477
39	YT	0.57	0/1105	0.61	0/1477
40	RU	0.51	0/977	0.62	0/1301
40	YU	0.58	0/977	0.59	0/1301
41	RV	0.46	0/790	0.65	2/1057 (0.2%)
41	YV	0.55	0/790	0.71	1/1057 (0.1%)
42	RW	0.58	0/901	0.61	0/1209
42	YW	0.61	0/901	0.59	0/1209
43	RX	0.51	0/764	0.58	0/1025
43	YX	0.60	0/764	0.59	0/1025
44	RY	0.45	0/831	0.64	0/1108
44	YY	0.53	0/831	0.67	0/1108
45	RZ	0.38	0/1585	0.62	0/2153
45	YZ	0.47	0/1493	0.71	0/2026
46	R0	0.47	0/619	0.59	0/825
46	Y0	0.60	0/619	0.59	0/825
47	R1	0.53	0/770	0.62	0/1022
47	Y1	0.60	0/770	0.65	0/1022
48	R2	0.44	0/594	0.59	0/785
48	Y2	0.49	0/594	0.54	0/785
49	R3	0.51	1/474 (0.2%)	0.67	0/635
49	Y3	0.55	0/473	0.70	1/635 (0.2%)
50	R4	0.31	0/578	0.70	0/776
50	Y4	0.39	0/578	0.76	2/776 (0.3%)
51	R5	0.57	0/473	0.67	0/639
51	Y5	0.57	0/465	0.63	0/629
52	R6	0.26	0/460	0.57	0/613
52	Y6	0.28	0/460	0.68	0/613
53	R7	0.65	0/426	0.71	0/561
53	Y7	0.65	0/426	0.73	0/561
54	R8	0.54	0/525	0.65	0/691
54	Y8	0.64	0/525	0.74	0/691
55	R9	0.27	0/310	0.59	0/407
55	Y9	0.33	0/310	0.64	0/407
56	ZA	0.50	0/40	0.82	0/60
56	ZB	0.70	0/40	1.09	0/60
All	All	0.54	7/314471 (0.0%)	0.65	38/470119 (0.0%)

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

sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	XA	0	1
2	QB	0	30
2	XB	0	23
3	QC	0	24
3	XC	0	16
4	QD	0	18
4	XD	0	8
5	QE	0	13
5	XE	0	15
6	QF	0	6
6	XF	0	5
7	QG	0	10
7	XG	0	10
8	QH	0	14
8	XH	0	6
9	QI	0	22
9	XI	0	9
10	QJ	0	10
10	XJ	0	8
11	QK	0	6
11	XK	0	11
12	QL	0	13
12	XL	0	10
13	QM	0	12
13	XM	0	7
14	QN	0	5
14	XN	0	6
15	QO	0	4
15	XO	0	3
16	QP	0	10
16	XP	0	4
17	QQ	0	7
17	XQ	0	5
18	QR	0	3
18	XR	0	1
19	QS	0	10
19	XS	0	8
20	QT	0	6
20	XT	0	4
21	QU	0	3
21	XU	0	2
25	YA	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
27	RD	0	17
27	YD	0	9
28	RE	0	14
28	YE	0	16
29	RF	0	15
29	YF	0	19
30	RG	0	29
30	YG	0	19
31	RH	0	20
31	YH	0	5
32	RI	0	26
32	YI	0	19
33	RN	0	7
33	YN	0	5
34	RO	0	5
34	YO	0	1
35	RP	0	23
35	YP	0	18
36	RQ	0	4
36	YQ	0	4
37	RR	0	5
37	YR	0	5
38	RS	0	5
38	YS	0	5
39	RT	0	5
39	YT	0	5
40	RU	0	6
40	YU	0	1
41	RV	0	8
41	YV	0	9
42	RW	0	2
42	YW	0	5
43	RX	0	4
43	YX	0	3
44	RY	0	6
44	YY	0	6
45	RZ	0	13
45	YZ	0	22
46	R0	0	5
46	Y0	0	3
47	R1	0	5
47	Y1	0	4

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Mol	Chain	#Chirality outliers	#Planarity outliers
48	R2	0	3
48	Y2	0	1
49	R3	0	2
49	Y3	0	4
50	R4	0	10
50	Y4	0	11
51	R5	0	2
51	Y5	0	3
52	R6	0	5
52	Y6	0	5
53	R7	0	4
53	Y7	0	2
54	R8	0	1
54	Y8	0	4
55	R9	0	4
55	Y9	0	1
All	All	0	858

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	XA	88	A	C3'-C2'	8.79	1.66	1.52
1	XA	88	A	C1'-N9	8.49	1.59	1.47
36	RQ	124	LYS	C-N	-5.90	1.24	1.33
1	XA	88	A	C4'-O4'	5.87	1.54	1.45
1	XA	358	U	C3'-O3'	5.85	1.50	1.42
49	R3	14	GLY	C-N	-5.27	1.22	1.33
12	QL	47	LYS	C-N	5.12	1.38	1.33

All (38) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	XA	88	A	O4'-C1'-C2'	16.62	122.42	105.80
1	XA	358	U	N1-C1'-C2'	-9.77	97.35	112.00
25	YA	1281	G	N9-C1'-C2'	-8.44	99.35	112.00
1	XA	359	U	P-O5'-C5'	7.90	132.75	120.90
1	XA	367	U	N1-C1'-C2'	-7.43	102.85	114.00
16	QP	36	ILE	N-CA-C	-7.35	105.67	112.43
1	XA	88	A	C1'-O4'-C4'	-6.45	103.25	109.70
25	YA	752	A	C4'-C3'-O3'	6.43	119.05	109.40
25	RA	2220	G	N9-C1'-C2'	-6.41	102.38	112.00
1	XA	359	U	C2-N1-C1'	6.38	136.84	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	QD	30	LYS	O-C-N	6.16	129.74	122.34
25	RA	2220	G	P-O3'-C3'	5.86	128.99	120.20
41	YV	79	VAL	N-CA-C	-5.84	108.16	113.71
25	YA	1281	G	P-O3'-C3'	5.79	128.89	120.20
1	XA	359	U	C6-N1-C1'	-5.75	103.96	121.20
30	RG	80	PHE	N-CA-C	5.71	119.85	111.34
4	QD	30	LYS	CA-C-N	5.60	132.23	121.54
4	QD	30	LYS	C-N-CA	5.60	132.23	121.54
30	RG	79	ASN	CA-C-N	-5.60	114.85	121.90
30	RG	79	ASN	C-N-CA	-5.60	114.85	121.90
50	Y4	45	GLY	CA-C-N	5.54	132.13	121.54
50	Y4	45	GLY	C-N-CA	5.54	132.13	121.54
9	XI	53	VAL	N-CA-C	-5.51	107.76	113.10
4	QD	195	ALA	CA-C-N	5.48	128.45	120.51
4	QD	195	ALA	C-N-CA	5.48	128.45	120.51
25	YA	752	A	P-O3'-C3'	5.43	128.35	120.20
30	RG	116	ASP	N-CA-CB	-5.38	108.04	114.17
41	RV	34	GLU	CA-C-N	-5.37	111.77	122.40
41	RV	34	GLU	C-N-CA	-5.37	111.77	122.40
1	XA	358	U	O4'-C4'-C3'	-5.32	98.68	104.00
34	YO	91	LEU	CA-CB-CG	5.30	134.85	116.30
25	YA	465	G	N9-C1'-C2'	5.21	119.81	112.00
1	XA	358	U	C3'-C2'-O2'	5.18	118.47	110.70
32	RI	122	GLU	CA-C-N	5.18	128.43	120.82
32	RI	122	GLU	C-N-CA	5.18	128.43	120.82
34	RO	91	LEU	CA-CB-CG	5.14	134.28	116.30
49	Y3	14	GLY	N-CA-C	-5.13	107.90	114.37
25	RA	1992	G	C2'-C3'-O3'	5.03	117.05	109.50

There are no chirality outliers.

All (858) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	QB	101	MET	Peptide
2	QB	104	ASN	Peptide
2	QB	121	LEU	Peptide
2	QB	124	SER	Peptide
2	QB	13	ALA	Peptide
2	QB	15	VAL	Peptide
2	QB	156	LYS	Peptide
2	QB	157	ARG	Peptide
2	QB	17	PHE	Peptide

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Mol	Chain	Res	Type	Group
2	QB	186	ALA	Peptide
2	QB	19	HIS	Peptide
2	QB	192	SER	Peptide
2	QB	200	ILE	Peptide
2	QB	206	ASP	Peptide
2	QB	207	ALA	Peptide
2	QB	21	ARG	Peptide
2	QB	227	GLY	Peptide
2	QB	230	VAL	Peptide
2	QB	232	PRO	Peptide
2	QB	233	SER	Peptide
2	QB	234	PRO	Peptide
2	QB	239	VAL	Peptide
2	QB	24	TRP	Peptide
2	QB	28	PHE	Peptide
2	QB	34	ALA	Peptide
2	QB	35	GLU	Peptide
2	QB	38	GLY	Peptide
2	QB	71	VAL	Peptide
2	QB	95	GLN	Peptide
2	QB	96	ARG	Peptide
3	QC	107	GLN	Peptide
3	QC	11	ARG	Peptide
3	QC	124	ILE	Peptide
3	QC	126	ARG	Peptide
3	QC	144	SER	Peptide
3	QC	147	LYS	Peptide
3	QC	166	GLU	Peptide
3	QC	2	GLY	Peptide
3	QC	25	GLY	Peptide
3	QC	3	ASN	Peptide
3	QC	41	GLY	Peptide
3	QC	44	GLU	Peptide
3	QC	48	TYR	Peptide
3	QC	51	GLY	Peptide
3	QC	59	ARG	Peptide
3	QC	6	HIS	Peptide
3	QC	61	ALA	Peptide
3	QC	62	ASP	Peptide
3	QC	75	VAL	Peptide
3	QC	78	GLY	Peptide
3	QC	79	ARG	Peptide

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Mol	Chain	Res	Type	Group
3	QC	83	ARG	Peptide
3	QC	86	VAL	Peptide
3	QC	94	LEU	Peptide
4	QD	153	ARG	Peptide
4	QD	154	ASN	Peptide
4	QD	165	MET	Peptide
4	QD	171	GLY	Peptide
4	QD	175	SER	Peptide
4	QD	205	GLU	Peptide
4	QD	49	ARG	Peptide
4	QD	50	ARG	Peptide
4	QD	6	GLY	Peptide
4	QD	66	ARG	Peptide
4	QD	69	GLY	Peptide
4	QD	81	GLU	Peptide
4	QD	82	ALA	Peptide
4	QD	83	SER	Peptide
4	QD	84	LYS	Peptide
4	QD	87	GLY	Peptide
4	QD	88	VAL	Peptide
4	QD	90	GLY	Peptide
5	QE	103	GLY	Peptide
5	QE	11	ILE	Peptide
5	QE	116	THR	Peptide
5	QE	126	ARG	Peptide
5	QE	137	GLU	Peptide
5	QE	17	ALA	Peptide
5	QE	36	ASP	Peptide
5	QE	48	ALA	Peptide
5	QE	49	PRO	Peptide
5	QE	8	GLU	Peptide
5	QE	83	GLU	Peptide
5	QE	93	PRO	Peptide
5	QE	97	GLY	Peptide
6	QF	36	ARG	Peptide
6	QF	71	ARG	Peptide
6	QF	86	ARG	Peptide
6	QF	87	ARG	Peptide
6	QF	98	LEU	Peptide
6	QF	99	ALA	Peptide
7	QG	113	GLU	Peptide
7	QG	131	LYS	Peptide

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Mol	Chain	Res	Type	Group
7	QG	132	GLY	Peptide
7	QG	151	TYR	Peptide
7	QG	2	ALA	Peptide
7	QG	37	ASN	Peptide
7	QG	55	GLY	Peptide
7	QG	7	ALA	Peptide
7	QG	97	GLN	Peptide
7	QG	99	LEU	Peptide
8	QH	115	SER	Peptide
8	QH	118	VAL	Peptide
8	QH	124	ALA	Peptide
8	QH	137	VAL	Peptide
8	QH	2	LEU	Peptide
8	QH	27	PRO	Peptide
8	QH	28	ALA	Peptide
8	QH	42	GLU	Peptide
8	QH	71	GLY	Peptide
8	QH	76	PRO	Peptide
8	QH	78	GLN	Peptide
8	QH	81	HIS	Peptide
8	QH	91	ARG	Peptide
8	QH	96	GLY	Peptide
9	QI	102	LEU	Peptide
9	QI	110	GLU	Peptide
9	QI	118	LYS	Peptide
9	QI	119	ALA	Peptide
9	QI	123	PRO	Peptide
9	QI	124	GLN	Peptide
9	QI	125	TYR	Peptide
9	QI	126	SER	Peptide
9	QI	16	ARG	Peptide
9	QI	2	GLU	Peptide
9	QI	24	GLY	Peptide
9	QI	30	GLY	Peptide
9	QI	38	GLN	Peptide
9	QI	39	GLY	Peptide
9	QI	68	GLY	Peptide
9	QI	69	GLY	Peptide
9	QI	89	ASN	Peptide
9	QI	91	ASP	Peptide
9	QI	92	TYR	Peptide
9	QI	93	ARG	Peptide

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Mol	Chain	Res	Type	Group
9	QI	98	PRO	Peptide
9	QI	99	LEU	Peptide
10	QJ	100	THR	Peptide
10	QJ	12	ASP	Peptide
10	QJ	14	LYS	Peptide
10	QJ	31	GLY	Peptide
10	QJ	39	PRO	Peptide
10	QJ	85	LEU	Peptide
10	QJ	90	LEU	Peptide
10	QJ	91	PRO	Peptide
10	QJ	92	THR	Peptide
10	QJ	96	ILE	Peptide
11	QK	101	SER	Peptide
11	QK	103	LEU	Peptide
11	QK	104	GLN	Peptide
11	QK	116	HIS	Peptide
11	QK	38	ASN	Peptide
11	QK	87	THR	Peptide
12	QL	104	VAL	Peptide
12	QL	105	TYR	Peptide
12	QL	106	ASP	Peptide
12	QL	107	ALA	Peptide
12	QL	125	PRO	Peptide
12	QL	15	ARG	Peptide
12	QL	46	LYS	Peptide
12	QL	57	LYS	Peptide
12	QL	72	GLY	Peptide
12	QL	82	VAL	Peptide
12	QL	91	LYS	Peptide
12	QL	92	0TD	Peptide
12	QL	99	HIS	Peptide
13	QM	105	THR	Peptide
13	QM	107	ALA	Peptide
13	QM	112	GLY	Peptide
13	QM	3	ARG	Peptide
13	QM	4	ILE	Peptide
13	QM	47	ASP	Peptide
13	QM	6	GLY	Peptide
13	QM	63	THR	Peptide
13	QM	66	LEU	Peptide
13	QM	83	ASP	Peptide
13	QM	97	PRO	Peptide

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Mol	Chain	Res	Type	Group
13	QM	98	VAL	Peptide
14	QN	28	GLY	Peptide
14	QN	54	PRO	Peptide
14	QN	55	GLY	Peptide
14	QN	60	SER	Peptide
14	QN	7	ILE	Peptide
15	QO	10	LYS	Peptide
15	QO	18	PHE	Peptide
15	QO	21	ASP	Peptide
15	QO	86	GLY	Peptide
16	QP	15	PRO	Peptide
16	QP	19	ILE	Peptide
16	QP	25	ARG	Peptide
16	QP	30	GLY	Peptide
16	QP	50	LYS	Peptide
16	QP	51	VAL	Peptide
16	QP	62	VAL	Peptide
16	QP	69	THR	Peptide
16	QP	77	ALA	Peptide
16	QP	81	ARG	Peptide
17	QQ	2	PRO	Peptide
17	QQ	37	LYS	Peptide
17	QQ	43	LEU	Peptide
17	QQ	48	GLU	Peptide
17	QQ	52	LYS	Peptide
17	QQ	66	SER	Peptide
17	QQ	8	GLY	Peptide
18	QR	21	LYS	Peptide
18	QR	22	VAL	Peptide
18	QR	80	PRO	Peptide
19	QS	10	PHE	Peptide
19	QS	23	ASN	Peptide
19	QS	3	ARG	Peptide
19	QS	35	SER	Peptide
19	QS	5	LEU	Peptide
19	QS	53	ASN	Peptide
19	QS	55	LYS	Peptide
19	QS	68	GLY	Peptide
19	QS	81	ARG	Peptide
19	QS	83	HIS	Peptide
20	QT	100	ILE	Peptide
20	QT	101	GLY	Peptide

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Mol	Chain	Res	Type	Group
20	QT	48	LYS	Peptide
20	QT	8	ARG	Peptide
20	QT	9	ASN	Peptide
20	QT	97	ALA	Peptide
21	QU	19	GLY	Peptide
21	QU	2	GLY	Peptide
21	QU	23	PRO	Peptide
46	R0	18	ALA	Peptide
46	R0	31	VAL	Peptide
46	R0	72	ARG	Peptide
46	R0	83	PRO	Peptide
46	R0	9	SER	Peptide
47	R1	10	LYS	Peptide
47	R1	11	ARG	Peptide
47	R1	31	GLY	Peptide
47	R1	7	ILE	Peptide
47	R1	82	LEU	Peptide
48	R2	15	LYS	Peptide
48	R2	57	ILE	Peptide
48	R2	69	ARG	Peptide
49	R3	53	LEU	Peptide
49	R3	59	VAL	Peptide
50	R4	28	LYS	Peptide
50	R4	43	TYR	Peptide
50	R4	45	GLY	Peptide
50	R4	46	GLN	Peptide
50	R4	51	ASP	Peptide
50	R4	57	GLU	Peptide
50	R4	59	PHE	Peptide
50	R4	60	GLN	Peptide
50	R4	62	ARG	Peptide
50	R4	63	TYR	Peptide
51	R5	24	ALA	Peptide
51	R5	5	PRO	Peptide
52	R6	11	LEU	Peptide
52	R6	25	LYS	Peptide
52	R6	35	GLU	Peptide
52	R6	43	CYS	Peptide
52	R6	52	VAL	Peptide
53	R7	25	PRO	Peptide
53	R7	3	ARG	Peptide
53	R7	38	GLY	Peptide

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Mol	Chain	Res	Type	Group
53	R7	46	VAL	Peptide
54	R8	51	ALA	Peptide
55	R9	1	MET	Peptide
55	R9	10	ILE	Peptide
55	R9	21	GLY	Peptide
55	R9	4	ARG	Peptide
27	RD	100	GLY	Peptide
27	RD	115	GLN	Peptide
27	RD	126	GLN	Peptide
27	RD	152	GLY	Peptide
27	RD	191	ALA	Peptide
27	RD	192	THR	Peptide
27	RD	2	ALA	Peptide
27	RD	227	ASN	Peptide
27	RD	233	HIS	Peptide
27	RD	238	GLY	Peptide
27	RD	240	ALA	Peptide
27	RD	246	PRO	Peptide
27	RD	248	SER	Peptide
27	RD	255	LYS	Peptide
27	RD	26	LYS	Peptide
27	RD	71	ASP	Peptide
27	RD	9	TYR	Peptide
28	RE	123	ALA	Peptide
28	RE	125	GLY	Peptide
28	RE	139	GLY	Peptide
28	RE	14	ILE	Peptide
28	RE	142	GLY	Peptide
28	RE	146	THR	Peptide
28	RE	147	PRO	Peptide
28	RE	161	GLY	Peptide
28	RE	186	GLY	Peptide
28	RE	23	VAL	Peptide
28	RE	29	GLY	Peptide
28	RE	53	PRO	Peptide
28	RE	56	PRO	Peptide
28	RE	76	ARG	Peptide
29	RF	126	VAL	Peptide
29	RF	128	ALA	Peptide
29	RF	129	PHE	Peptide
29	RF	130	ALA	Peptide
29	RF	150	GLY	Peptide

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Mol	Chain	Res	Type	Group
29	RF	167	ALA	Peptide
29	RF	173	VAL	Peptide
29	RF	180	GLY	Peptide
29	RF	182	ASN	Peptide
29	RF	29	ASN	Peptide
29	RF	6	VAL	Peptide
29	RF	68	LYS	Peptide
29	RF	80	ALA	Peptide
29	RF	83	PHE	Peptide
29	RF	94	PRO	Peptide
30	RG	109	VAL	Peptide
30	RG	115	ARG	Peptide
30	RG	116	ASP	Peptide
30	RG	118	ARG	Peptide
30	RG	136	ARG	Peptide
30	RG	141	PHE	Peptide
30	RG	143	GLU	Peptide
30	RG	144	ILE	Peptide
30	RG	149	VAL	Peptide
30	RG	151	ALA	Peptide
30	RG	152	LEU	Peptide
30	RG	162	THR	Peptide
30	RG	176	LEU	Peptide
30	RG	180	PHE	Peptide
30	RG	181	ARG	Peptide
30	RG	2	PRO	Peptide
30	RG	39	ILE	Peptide
30	RG	4	ASP	Peptide
30	RG	40	ASN	Peptide
30	RG	52	ILE	Peptide
30	RG	58	GLN	Peptide
30	RG	75	LYS	Peptide
30	RG	76	SER	Peptide
30	RG	78	SER	Peptide
30	RG	80	PHE	Peptide
30	RG	82	LEU	Peptide
30	RG	84	LYS	Peptide
30	RG	88	ILE	Peptide
30	RG	95	ARG	Peptide
31	RH	105	LEU	Peptide
31	RH	117	PRO	Peptide
31	RH	13	LYS	Peptide

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Mol	Chain	Res	Type	Group
31	RH	135	GLY	Peptide
31	RH	14	GLY	Peptide
31	RH	150	ALA	Peptide
31	RH	154	PRO	Peptide
31	RH	159	GLU	Peptide
31	RH	164	TYR	Peptide
31	RH	167	GLU	Peptide
31	RH	168	PRO	Peptide
31	RH	174	GLY	Peptide
31	RH	30	LYS	Peptide
31	RH	33	LEU	Peptide
31	RH	55	PRO	Peptide
31	RH	7	LEU	Peptide
31	RH	8	PRO	Peptide
31	RH	84	SER	Peptide
31	RH	91	GLY	Peptide
31	RH	93	GLY	Peptide
32	RI	103	ARG	Peptide
32	RI	104	GLN	Peptide
32	RI	11	ASN	Peptide
32	RI	116	LEU	Peptide
32	RI	119	PRO	Peptide
32	RI	12	LEU	Peptide
32	RI	121	LYS	Peptide
32	RI	130	TYR	Peptide
32	RI	132	PRO	Peptide
32	RI	135	GLU	Peptide
32	RI	136	VAL	Peptide
32	RI	14	ASP	Peptide
32	RI	142	VAL	Peptide
32	RI	143	SER	Peptide
32	RI	145	VAL	Peptide
32	RI	15	VAL	Peptide
32	RI	16	GLY	Peptide
32	RI	41	GLU	Peptide
32	RI	42	SER	Peptide
32	RI	5	LEU	Peptide
32	RI	83	ALA	Peptide
32	RI	86	THR	Peptide
32	RI	9	LEU	Peptide
32	RI	94	ALA	Peptide
32	RI	96	ASP	Peptide

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Mol	Chain	Res	Type	Group
32	RI	97	ILE	Peptide
33	RN	138	LEU	Peptide
33	RN	18	ALA	Peptide
33	RN	22	THR	Peptide
33	RN	26	LEU	Peptide
33	RN	41	ASP	Peptide
33	RN	46	VAL	Peptide
33	RN	6	PRO	Peptide
34	RO	109	LYS	Peptide
34	RO	27	GLY	Peptide
34	RO	3	GLN	Peptide
34	RO	36	GLY	Peptide
34	RO	41	ALA	Peptide
35	RP	100	LEU	Peptide
35	RP	117	GLU	Peptide
35	RP	118	GLY	Peptide
35	RP	120	ALA	Peptide
35	RP	121	LYS	Peptide
35	RP	133	SER	Peptide
35	RP	134	ALA	Peptide
35	RP	18	ARG	Peptide
35	RP	21	ARG	Peptide
35	RP	22	GLY	Peptide
35	RP	28	GLY	Peptide
35	RP	30	THR	Peptide
35	RP	35	HIS	Peptide
35	RP	37	GLY	Peptide
35	RP	42	SER	Peptide
35	RP	43	GLY	Peptide
35	RP	44	GLY	Peptide
35	RP	54	GLY	Peptide
35	RP	6	LEU	Peptide
35	RP	72	PRO	Peptide
35	RP	76	LYS	Peptide
35	RP	92	GLU	Peptide
35	RP	93	GLY	Peptide
36	RQ	108	GLY	Peptide
36	RQ	15	GLY	Peptide
36	RQ	59	ARG	Peptide
36	RQ	98	LYS	Peptide
37	RR	13	HIS	Peptide
37	RR	2	ARG	Peptide

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Mol	Chain	Res	Type	Group
37	RR	6	SER	Peptide
37	RR	7	GLY	Peptide
37	RR	70	LEU	Peptide
38	RS	5	THR	Peptide
38	RS	60	GLY	Peptide
38	RS	7	TYR	Peptide
38	RS	84	GLN	Peptide
38	RS	95	HIS	Peptide
39	RT	111	ARG	Peptide
39	RT	130	ALA	Peptide
39	RT	27	THR	Peptide
39	RT	35	LYS	Peptide
39	RT	36	GLU	Peptide
40	RU	66	ASN	Peptide
40	RU	73	GLY	Peptide
40	RU	83	LEU	Peptide
40	RU	87	GLY	Peptide
40	RU	97	ASP	Peptide
40	RU	98	LEU	Peptide
41	RV	30	GLY	Peptide
41	RV	33	VAL	Peptide
41	RV	34	GLU	Peptide
41	RV	41	GLY	Peptide
41	RV	49	THR	Peptide
41	RV	50	PRO	Peptide
41	RV	54	GLY	Peptide
41	RV	98	GLU	Peptide
42	RW	111	HIS	Peptide
42	RW	3	ALA	Peptide
43	RX	28	PHE	Peptide
43	RX	3	THR	Peptide
43	RX	86	GLY	Peptide
43	RX	94	GLY	Peptide
44	RY	101	LYS	Peptide
44	RY	106	LEU	Peptide
44	RY	3	VAL	Peptide
44	RY	39	VAL	Peptide
44	RY	52	SER	Peptide
44	RY	83	THR	Peptide
45	RZ	1	MET	Peptide
45	RZ	10	ARG	Peptide
45	RZ	11	GLU	Peptide

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Mol	Chain	Res	Type	Group
45	RZ	12	GLY	Peptide
45	RZ	135	GLU	Peptide
45	RZ	143	GLY	Peptide
45	RZ	145	GLU	Peptide
45	RZ	147	GLY	Peptide
45	RZ	47	VAL	Peptide
45	RZ	50	GLN	Peptide
45	RZ	51	ALA	Peptide
45	RZ	52	SER	Peptide
45	RZ	76	LEU	Peptide
1	XA	88	A	Sidechain
2	XB	130	ARG	Peptide
2	XB	154	LEU	Peptide
2	XB	168	THR	Peptide
2	XB	18	GLY	Peptide
2	XB	19	HIS	Peptide
2	XB	190	THR	Peptide
2	XB	199	TYR	Peptide
2	XB	21	ARG	Peptide
2	XB	211	ILE	Peptide
2	XB	226	ARG	Peptide
2	XB	227	GLY	Peptide
2	XB	23	ARG	Peptide
2	XB	230	VAL	Peptide
2	XB	232	PRO	Peptide
2	XB	233	SER	Peptide
2	XB	234	PRO	Peptide
2	XB	237	ALA	Peptide
2	XB	238	LEU	Peptide
2	XB	239	VAL	Peptide
2	XB	28	PHE	Peptide
2	XB	66	GLY	Peptide
2	XB	74	LYS	Peptide
2	XB	95	GLN	Peptide
3	XC	103	VAL	Peptide
3	XC	11	ARG	Peptide
3	XC	126	ARG	Peptide
3	XC	144	SER	Peptide
3	XC	145	GLY	Peptide
3	XC	147	LYS	Peptide
3	XC	15	THR	Peptide
3	XC	166	GLU	Peptide

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Mol	Chain	Res	Type	Group
3	XC	189	ALA	Peptide
3	XC	2	GLY	Peptide
3	XC	23	TYR	Peptide
3	XC	25	GLY	Peptide
3	XC	3	ASN	Peptide
3	XC	59	ARG	Peptide
3	XC	62	ASP	Peptide
3	XC	9	GLY	Peptide
4	XD	126	ILE	Peptide
4	XD	128	VAL	Peptide
4	XD	165	MET	Peptide
4	XD	3	ARG	Peptide
4	XD	4	TYR	Peptide
4	XD	5	ILE	Peptide
4	XD	69	GLY	Peptide
4	XD	88	VAL	Peptide
5	XE	10	MET	Peptide
5	XE	101	ILE	Peptide
5	XE	11	ILE	Peptide
5	XE	114	GLY	Peptide
5	XE	12	LEU	Peptide
5	XE	120	THR	Peptide
5	XE	121	LYS	Peptide
5	XE	13	ILE	Peptide
5	XE	17	ALA	Peptide
5	XE	18	ARG	Peptide
5	XE	19	MET	Peptide
5	XE	21	ALA	Peptide
5	XE	23	GLY	Peptide
5	XE	95	ALA	Peptide
5	XE	98	THR	Peptide
6	XF	35	ALA	Peptide
6	XF	70	ASP	Peptide
6	XF	93	SER	Peptide
6	XF	98	LEU	Peptide
6	XF	99	ALA	Peptide
7	XG	132	GLY	Peptide
7	XG	152	ALA	Peptide
7	XG	31	MET	Peptide
7	XG	6	ARG	Peptide
7	XG	7	ALA	Peptide
7	XG	79	ARG	Peptide

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Mol	Chain	Res	Type	Group
7	XG	8	GLU	Peptide
7	XG	83	ALA	Peptide
7	XG	84	ASN	Peptide
7	XG	89	MET	Peptide
8	XH	101	PRO	Peptide
8	XH	103	VAL	Peptide
8	XH	137	VAL	Peptide
8	XH	25	ASP	Peptide
8	XH	27	PRO	Peptide
8	XH	48	TYR	Peptide
9	XI	16	ARG	Peptide
9	XI	24	GLY	Peptide
9	XI	42	ARG	Peptide
9	XI	52	ALA	Peptide
9	XI	6	GLY	Peptide
9	XI	69	GLY	Peptide
9	XI	89	ASN	Peptide
9	XI	9	ARG	Peptide
9	XI	92	TYR	Peptide
10	XJ	31	GLY	Peptide
10	XJ	32	ALA	Peptide
10	XJ	41	PRO	Peptide
10	XJ	53	PRO	Peptide
10	XJ	54	PHE	Peptide
10	XJ	55	LYS	Peptide
10	XJ	91	PRO	Peptide
10	XJ	93	GLY	Peptide
11	XK	104	GLN	Peptide
11	XK	106	LYS	Peptide
11	XK	107	SER	Peptide
11	XK	117	ASN	Peptide
11	XK	125	PHE	Peptide
11	XK	47	VAL	Peptide
11	XK	80	VAL	Peptide
11	XK	84	VAL	Peptide
11	XK	85	ARG	Peptide
11	XK	86	GLY	Peptide
11	XK	90	GLY	Peptide
12	XL	104	VAL	Peptide
12	XL	13	LYS	Peptide
12	XL	15	ARG	Peptide
12	XL	34	ARG	Peptide

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Mol	Chain	Res	Type	Group
12	XL	74	GLY	Peptide
12	XL	80	HIS	Peptide
12	XL	86	ARG	Peptide
12	XL	87	GLY	Peptide
12	XL	91	LYS	Peptide
12	XL	99	HIS	Peptide
13	XM	105	THR	Peptide
13	XM	25	ILE	Peptide
13	XM	4	ILE	Peptide
13	XM	41	PRO	Peptide
13	XM	5	ALA	Peptide
13	XM	6	GLY	Peptide
13	XM	66	LEU	Peptide
14	XN	13	THR	Peptide
14	XN	20	ALA	Peptide
14	XN	21	TYR	Peptide
14	XN	22	THR	Peptide
14	XN	27	CYS	Peptide
14	XN	28	GLY	Peptide
15	XO	20	GLY	Peptide
15	XO	22	THR	Peptide
15	XO	88	ARG	Peptide
16	XP	15	PRO	Peptide
16	XP	36	ILE	Peptide
16	XP	52	ASP	Peptide
16	XP	62	VAL	Peptide
17	XQ	19	VAL	Peptide
17	XQ	32	TYR	Peptide
17	XQ	39	SER	Peptide
17	XQ	76	LEU	Peptide
17	XQ	8	GLY	Peptide
18	XR	27	GLY	Peptide
19	XS	25	LYS	Peptide
19	XS	26	GLY	Peptide
19	XS	27	GLU	Peptide
19	XS	28	LYS	Peptide
19	XS	29	ARG	Peptide
19	XS	65	ASN	Peptide
19	XS	66	MET	Peptide
19	XS	8	GLY	Peptide
20	XT	100	ILE	Peptide
20	XT	47	GLY	Peptide

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Mol	Chain	Res	Type	Group
20	XT	48	LYS	Peptide
20	XT	96	GLY	Peptide
21	XU	18	TYR	Peptide
21	XU	2	GLY	Peptide
46	Y0	8	GLY	Peptide
46	Y0	80	HIS	Peptide
46	Y0	83	PRO	Peptide
47	Y1	31	GLY	Peptide
47	Y1	48	LYS	Peptide
47	Y1	7	ILE	Peptide
47	Y1	82	LEU	Peptide
48	Y2	42	GLY	Peptide
49	Y3	10	LYS	Peptide
49	Y3	53	LEU	Peptide
49	Y3	56	VAL	Peptide
49	Y3	59	VAL	Peptide
50	Y4	11	PRO	Peptide
50	Y4	41	PRO	Peptide
50	Y4	46	GLN	Peptide
50	Y4	48	ARG	Peptide
50	Y4	50	VAL	Peptide
50	Y4	52	THR	Peptide
50	Y4	54	GLY	Peptide
50	Y4	55	ARG	Peptide
50	Y4	57	GLU	Peptide
50	Y4	61	ARG	Peptide
50	Y4	62	ARG	Peptide
51	Y5	22	HIS	Peptide
51	Y5	24	ALA	Peptide
51	Y5	37	LYS	Peptide
52	Y6	16	CYS	Peptide
52	Y6	2	ALA	Peptide
52	Y6	39	TYR	Peptide
52	Y6	43	CYS	Peptide
52	Y6	5	VAL	Peptide
53	Y7	47	ARG	Peptide
53	Y7	6	GLN	Peptide
54	Y8	10	ALA	Peptide
54	Y8	27	THR	Peptide
54	Y8	29	LYS	Peptide
54	Y8	51	ALA	Peptide
55	Y9	5	ALA	Peptide

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Mol	Chain	Res	Type	Group
25	YA	277	C	Sidechain
27	YD	112	GLN	Peptide
27	YD	227	ASN	Peptide
27	YD	241	PRO	Peptide
27	YD	246	PRO	Peptide
27	YD	249	PRO	Peptide
27	YD	250	TRP	Peptide
27	YD	251	GLY	Peptide
27	YD	83	GLU	Peptide
27	YD	98	VAL	Peptide
28	YE	1	MET	Peptide
28	YE	125	GLY	Peptide
28	YE	130	GLY	Peptide
28	YE	139	GLY	Peptide
28	YE	146	THR	Peptide
28	YE	161	GLY	Peptide
28	YE	162	ALA	Peptide
28	YE	167	VAL	Peptide
28	YE	18	ASP	Peptide
28	YE	186	GLY	Peptide
28	YE	187	ALA	Peptide
28	YE	23	VAL	Peptide
28	YE	31	CYS	Peptide
28	YE	32	PRO	Peptide
28	YE	71	GLY	Peptide
28	YE	74	PRO	Peptide
29	YF	12	LEU	Peptide
29	YF	128	ALA	Peptide
29	YF	129	PHE	Peptide
29	YF	153	SER	Peptide
29	YF	167	ALA	Peptide
29	YF	176	LEU	Peptide
29	YF	188	ARG	Peptide
29	YF	20	LEU	Peptide
29	YF	21	ALA	Peptide
29	YF	61	GLY	Peptide
29	YF	63	LYS	Peptide
29	YF	75	HIS	Peptide
29	YF	80	ALA	Peptide
29	YF	83	PHE	Peptide
29	YF	87	GLY	Peptide
29	YF	88	VAL	Peptide

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Mol	Chain	Res	Type	Group
29	YF	89	VAL	Peptide
29	YF	91	GLY	Peptide
29	YF	93	LYS	Peptide
30	YG	109	VAL	Peptide
30	YG	114	ILE	Peptide
30	YG	115	ARG	Peptide
30	YG	116	ASP	Peptide
30	YG	117	PHE	Peptide
30	YG	127	GLY	Peptide
30	YG	135	LEU	Peptide
30	YG	136	ARG	Peptide
30	YG	151	ALA	Peptide
30	YG	181	ARG	Peptide
30	YG	2	PRO	Peptide
30	YG	3	LEU	Peptide
30	YG	35	GLU	Peptide
30	YG	4	ASP	Peptide
30	YG	48	GLU	Peptide
30	YG	52	ILE	Peptide
30	YG	82	LEU	Peptide
30	YG	85	GLY	Peptide
30	YG	95	ARG	Peptide
31	YH	111	HIS	Peptide
31	YH	152	ARG	Peptide
31	YH	20	ALA	Peptide
31	YH	3	ARG	Peptide
31	YH	82	GLY	Peptide
32	YI	11	ASN	Peptide
32	YI	114	LEU	Peptide
32	YI	116	LEU	Peptide
32	YI	117	GLU	Peptide
32	YI	118	LYS	Peptide
32	YI	119	PRO	Peptide
32	YI	121	LYS	Peptide
32	YI	122	GLU	Peptide
32	YI	128	LEU	Peptide
32	YI	131	LYS	Peptide
32	YI	132	PRO	Peptide
32	YI	136	VAL	Peptide
32	YI	14	ASP	Peptide
32	YI	142	VAL	Peptide
32	YI	144	VAL	Peptide

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Mol	Chain	Res	Type	Group
32	YI	15	VAL	Peptide
32	YI	82	ARG	Peptide
32	YI	9	LEU	Peptide
32	YI	90	GLY	Peptide
33	YN	138	LEU	Peptide
33	YN	18	ALA	Peptide
33	YN	22	THR	Peptide
33	YN	39	ARG	Peptide
33	YN	6	PRO	Peptide
34	YO	39	ILE	Peptide
35	YP	1	MET	Peptide
35	YP	107	LYS	Peptide
35	YP	11	GLY	Peptide
35	YP	118	GLY	Peptide
35	YP	12	ALA	Peptide
35	YP	141	ALA	Peptide
35	YP	146	VAL	Peptide
35	YP	147	LEU	Peptide
35	YP	21	ARG	Peptide
35	YP	22	GLY	Peptide
35	YP	28	GLY	Peptide
35	YP	30	THR	Peptide
35	YP	35	HIS	Peptide
35	YP	37	GLY	Peptide
35	YP	50	ARG	Peptide
35	YP	6	LEU	Peptide
35	YP	70	GLN	Peptide
35	YP	98	GLU	Peptide
36	YQ	108	GLY	Peptide
36	YQ	19	GLY	Peptide
36	YQ	20	ALA	Peptide
36	YQ	28	ALA	Peptide
37	YR	117	VAL	Peptide
37	YR	2	ARG	Peptide
37	YR	4	LEU	Peptide
37	YR	6	SER	Peptide
37	YR	7	GLY	Peptide
38	YS	111	GLU	Peptide
38	YS	19	LYS	Peptide
38	YS	20	ARG	Peptide
38	YS	81	GLY	Peptide
38	YS	86	ALA	Peptide

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Mol	Chain	Res	Type	Group
39	YT	127	ALA	Peptide
39	YT	17	THR	Peptide
39	YT	27	THR	Peptide
39	YT	54	ARG	Peptide
39	YT	55	ASN	Peptide
40	YU	8	VAL	Peptide
41	YV	18	LEU	Peptide
41	YV	41	GLY	Peptide
41	YV	47	VAL	Peptide
41	YV	49	THR	Peptide
41	YV	50	PRO	Peptide
41	YV	54	GLY	Peptide
41	YV	62	LEU	Peptide
41	YV	71	LEU	Peptide
41	YV	98	GLU	Peptide
42	YW	111	HIS	Peptide
42	YW	2	GLU	Peptide
42	YW	78	GLU	Peptide
42	YW	79	GLY	Peptide
42	YW	99	ARG	Peptide
43	YX	68	ARG	Peptide
43	YX	70	LEU	Peptide
43	YX	94	GLY	Peptide
44	YY	10	GLY	Peptide
44	YY	100	ALA	Peptide
44	YY	106	LEU	Peptide
44	YY	39	VAL	Peptide
44	YY	52	SER	Peptide
44	YY	93	GLY	Peptide
45	YZ	106	GLY	Peptide
45	YZ	11	GLU	Peptide
45	YZ	110	GLY	Peptide
45	YZ	112	ARG	Peptide
45	YZ	12	GLY	Peptide
45	YZ	140	ASP	Peptide
45	YZ	142	SER	Peptide
45	YZ	143	GLY	Peptide
45	YZ	153	SER	Peptide
45	YZ	154	ASP	Peptide
45	YZ	166	SER	Peptide
45	YZ	167	PRO	Peptide
45	YZ	181	GLU	Peptide

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Mol	Chain	Res	Type	Group
45	YZ	182	LYS	Peptide
45	YZ	21	ALA	Peptide
45	YZ	22	GLY	Peptide
45	YZ	51	ALA	Peptide
45	YZ	52	SER	Peptide
45	YZ	62	PRO	Peptide
45	YZ	91	LEU	Peptide
45	YZ	92	SER	Peptide
45	YZ	93	ASP	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	QA	32246	0	16294	686	0
1	XA	32331	0	16338	599	14
2	QB	1907	0	1958	42	0
2	XB	1915	0	1969	45	0
3	QC	1605	0	1668	48	0
3	XC	1605	0	1668	20	1
4	QD	1703	0	1762	85	0
4	XD	1703	0	1763	54	6
5	QE	1133	0	1190	33	0
5	XE	1133	0	1191	23	0
6	QF	837	0	852	12	1
6	XF	837	0	852	15	0
7	QG	1257	0	1296	34	0
7	XG	1257	0	1296	27	0
8	QH	1108	0	1165	31	0
8	XH	1108	0	1165	27	0
9	QI	1010	0	1037	35	0
9	XI	998	0	1024	29	0
10	QJ	801	0	849	32	0
10	XJ	777	0	815	17	0
11	QK	844	0	855	28	1
11	XK	844	0	855	24	0
12	QL	958	0	1047	24	0
12	XL	958	0	1047	18	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
13	QM	928	0	987	38	0
13	XM	916	0	973	21	0
14	QN	492	0	530	30	0
14	XN	492	0	528	11	0
15	QO	734	0	771	9	0
15	XO	734	0	771	10	0
16	QP	691	0	714	17	0
16	XP	691	0	714	19	0
17	QQ	823	0	891	25	0
17	XQ	823	0	891	20	0
18	QR	555	0	618	13	0
18	XR	555	0	618	8	0
19	QS	665	0	686	14	0
19	XS	665	0	686	20	0
20	QT	743	0	840	23	0
20	XT	759	0	861	25	0
21	QU	199	0	208	10	0
21	XU	199	0	208	8	0
22	QV	1644	0	835	29	0
22	XV	1644	0	836	26	0
23	QX	167	0	86	2	0
23	XX	233	0	120	4	0
24	QY	301	0	152	5	0
24	XY	341	0	175	8	0
25	RA	61819	0	31179	962	3
25	YA	61822	0	31176	968	3
26	RB	2572	0	1305	44	0
26	YB	2573	0	1306	28	0
27	RD	2144	0	2233	55	3
27	YD	2145	0	2234	54	0
28	RE	1563	0	1629	45	0
28	YE	1563	0	1628	45	0
29	RF	1585	0	1632	35	0
29	YF	1585	0	1632	44	0
30	RG	1474	0	1535	43	0
30	YG	1474	0	1535	31	0
31	RH	1336	0	1418	30	0
31	YH	1330	0	1413	28	13
32	RI	1136	0	1223	26	14
32	YI	1136	0	1223	15	0
33	RN	1121	0	1195	26	0
33	YN	1121	0	1195	15	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
34	RO	933	0	996	33	0
34	YO	933	0	996	22	0
35	RP	1139	0	1222	36	0
35	YP	1139	0	1222	37	0
36	RQ	1122	0	1179	34	0
36	YQ	1122	0	1179	20	0
37	RR	968	0	1033	23	0
37	YR	968	0	1033	18	0
38	RS	877	0	938	26	0
38	YS	877	0	938	28	0
39	RT	1091	0	1151	26	0
39	YT	1091	0	1151	32	0
40	RU	959	0	1019	29	0
40	YU	959	0	1019	25	0
41	RV	779	0	852	16	0
41	YV	779	0	852	13	6
42	RW	890	0	951	17	1
42	YW	890	0	951	18	0
43	RX	750	0	814	17	0
43	YX	750	0	814	9	0
44	RY	818	0	913	15	0
44	YY	818	0	911	18	14
45	RZ	1552	0	1573	32	0
45	YZ	1461	0	1493	23	0
46	R0	611	0	631	12	0
46	Y0	611	0	631	13	0
47	R1	763	0	848	15	0
47	Y1	763	0	848	11	0
48	R2	592	0	654	10	0
48	Y2	592	0	654	8	1
49	R3	469	0	518	12	0
49	Y3	468	0	518	16	0
50	R4	565	0	556	14	0
50	Y4	565	0	557	13	0
51	R5	459	0	480	9	0
51	Y5	451	0	471	5	3
52	R6	453	0	477	6	0
52	Y6	453	0	477	8	0
53	R7	418	0	467	13	0
53	Y7	418	0	467	8	0
54	R8	517	0	582	15	0
54	Y8	517	0	582	12	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
55	R9	307	0	335	11	0
55	Y9	307	0	338	8	0
56	ZA	74	0	51	13	0
56	ZB	74	0	51	5	0
57	QA	124	0	0	0	0
57	QC	1	0	0	0	0
57	QD	2	0	0	0	0
57	QE	2	0	0	0	0
57	QL	2	0	0	0	0
57	QM	2	0	0	0	0
57	QN	2	0	0	2	0
57	QO	1	0	0	0	0
57	QV	3	0	0	0	0
57	R0	2	0	0	0	0
57	R1	1	0	0	0	0
57	R3	1	0	0	0	0
57	R5	1	0	0	0	0
57	R6	1	0	0	0	0
57	R7	1	0	0	0	0
57	R8	1	0	0	0	0
57	R9	1	0	0	0	0
57	RA	414	0	0	2	0
57	RB	8	0	0	2	0
57	RD	5	0	0	2	0
57	RE	5	0	0	2	0
57	RF	5	0	0	0	0
57	RN	2	0	0	0	0
57	RO	1	0	0	0	0
57	RP	2	0	0	0	0
57	RQ	1	0	0	0	0
57	RR	1	0	0	0	0
57	RV	1	0	0	0	0
57	RW	1	0	0	0	0
57	RX	1	0	0	0	0
57	RZ	1	0	0	0	0
57	XA	128	0	0	0	0
57	XD	1	0	0	0	0
57	XJ	1	0	0	0	0
57	XK	2	0	0	0	0
57	XN	1	0	0	0	0
57	XV	1	0	0	0	0
57	XX	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	Y0	1	0	0	0	0
57	Y1	3	0	0	0	0
57	Y3	1	0	0	0	0
57	Y5	1	0	0	0	0
57	Y6	1	0	0	0	0
57	Y7	1	0	0	0	0
57	Y8	1	0	0	0	0
57	Y9	1	0	0	0	0
57	YA	544	0	0	1	0
57	YB	8	0	0	0	0
57	YD	8	0	0	0	0
57	YE	7	0	0	1	0
57	YF	1	0	0	0	0
57	YG	1	0	0	0	0
57	YP	3	0	0	0	0
57	YQ	2	0	0	0	0
57	YR	1	0	0	0	0
57	YT	1	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	1	0	0	0	0
58	QD	8	0	0	6	0
58	XD	8	0	0	4	0
59	QN	1	0	0	1	0
59	R4	1	0	0	0	0
59	R9	1	0	0	0	0
59	XN	1	0	0	0	0
59	Y4	1	0	0	0	0
All	All	291822	0	197739	4783	42

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 (4783) 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)
28:RE:152:LYS:HG3	33:RN:77:GLY:O	1.40	1.18
49:Y3:10:LYS:NZ	49:Y3:15:TYR:OH	1.81	1.13
25:YA:2228:G:OP1	27:YD:261:LYS:NZ	1.83	1.12
1:QA:982:U:H3	1:QA:1223:C:N4	1.52	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1055:A:H62	1:QA:1200:C:N4	1.56	1.04
28:RE:152:LYS:CG	33:RN:77:GLY:O	2.09	1.00
1:QA:1055:A:N6	1:QA:1200:C:H42	1.59	1.00
50:R4:18:CYS:HB3	50:R4:39:CYS:SG	2.02	0.99
26:YB:8:U:H3	26:YB:113:G:H1	1.07	0.99
22:QV:8:U:H3	22:QV:14:A:H62	0.99	0.99
1:QA:835:U:H3	1:QA:851:G:H1	1.10	0.97
1:XA:766:A:H62	1:XA:813:U:H3	1.12	0.97
1:QA:410:G:N2	1:QA:432:A:H62	1.62	0.96
25:RA:242:G:N2	25:RA:255:A:OP2	1.97	0.96
1:QA:372:C:N4	1:QA:389:A:H62	1.63	0.96
1:XA:1055:A:H62	1:XA:1200:C:H42	1.09	0.96
1:QA:410:G:H21	1:QA:432:A:H62	1.08	0.95
26:RB:51:G:H21	57:RB:203:MG:MG	0.72	0.95
1:QA:157:G:H1	1:QA:164:U:H3	1.13	0.94
27:RD:134:ARG:HG3	27:RD:187:GLY:HA3	1.46	0.94
1:QA:339:C:OP2	34:RO:97:ARG:NH2	2.03	0.92
25:RA:1255:U:H5"	25:RA:1256:G:H5"	1.48	0.92
25:RA:2526:G:H1	25:RA:2537:U:H3	0.96	0.92
1:QA:539:A:OP2	12:QL:115:LYS:NZ	2.03	0.92
1:XA:950:U:H3	1:XA:1231:G:H1	1.06	0.92
1:QA:73:G:H1	1:QA:96:U:H3	1.02	0.91
1:QA:503:C:OP2	12:QL:116:SER:OG	1.89	0.91
1:QA:429:U:OP2	4:QD:13:ARG:NH1	2.02	0.91
1:XA:580:U:H3	1:XA:761:G:H1	1.12	0.91
1:QA:437:U:H3	1:QA:495:A:H62	1.17	0.91
1:XA:1055:A:H62	1:XA:1200:C:N4	1.69	0.91
26:RB:80:U:H3	26:RB:97:G:H1	1.14	0.90
1:XA:430:A:OP2	4:XD:22:LYS:NZ	2.05	0.89
50:Y4:12:ALA:HB3	50:Y4:24:THR:O	1.72	0.89
1:XA:452:A:H62	1:XA:480:U:H3	0.91	0.89
1:QA:372:C:H42	1:QA:389:A:N6	1.69	0.88
25:RA:2478:A:OP2	55:R9:2:LYS:NZ	2.06	0.88
1:XA:1414:U:H3	1:XA:1486:G:H1	1.20	0.88
25:YA:1972:A:OP1	27:YD:239:ARG:NH2	2.07	0.87
25:YA:2637:U:H3	25:YA:2776:A:H62	1.20	0.87
1:QA:1415:G:H1	1:QA:1485:U:H3	1.21	0.87
25:RA:2637:U:H3	25:RA:2776:A:H62	1.23	0.87
49:Y3:12:PRO:HA	49:Y3:15:TYR:HD1	1.38	0.86
25:YA:1972:A:P	27:YD:239:ARG:HH21	1.98	0.86
25:YA:2099:U:H3	25:YA:2190:G:H1	0.87	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:47:GLU:OE1	31:YH:49:VAL:HG22	1.75	0.86
9:QI:20:ARG:O	9:QI:60:ASP:HB2	1.75	0.86
28:YE:127:ASP:OD2	57:YE:303:MG:MG	1.16	0.86
25:RA:969:U:H5'	49:R3:16:PRO:HA	1.58	0.85
1:QA:15:G:H1	1:QA:920:U:H3	1.19	0.85
1:XA:1240:U:OP1	7:XG:119:ARG:NH2	2.10	0.85
25:YA:269:U:H3	25:YA:370:G:H1	1.25	0.85
1:XA:452:A:N6	1:XA:480:U:H3	1.75	0.85
27:RD:14:ARG:NH1	57:RD:303:MG:MG	1.35	0.84
1:XA:927:G:H1	1:XA:1390:U:H3	1.22	0.84
1:XA:741:G:H5'	15:XO:39:LEU:HD21	1.60	0.84
1:QA:410:G:H21	1:QA:432:A:N6	1.75	0.84
25:YA:2809:A:OP2	25:YA:2891:G:N1	2.10	0.84
1:QA:372:C:H42	1:QA:389:A:H62	0.87	0.84
1:QA:959:A:HO2'	1:QA:984:C:HO2'	1.27	0.83
56:ZA:3:PPU:H5'	56:ZA:3:PPU:H8	1.60	0.83
27:RD:14:ARG:HH11	57:RD:303:MG:MG	0.84	0.83
25:RA:1815:A:OP2	27:RD:54:ARG:NH2	2.10	0.82
25:YA:578:A:OP1	25:YA:1255:U:O2'	1.96	0.82
4:XD:33:MET:O	4:XD:37:PRO:HB3	1.79	0.82
25:YA:2584:U:H5'	56:ZB:3:PPU:H103	1.61	0.82
1:XA:429:U:O3'	4:XD:22:LYS:NZ	2.13	0.81
22:QV:8:U:H3	22:QV:14:A:N6	1.77	0.81
25:RA:536:A:OP1	40:RU:53:ARG:NH1	2.13	0.81
1:QA:927:G:H1	1:QA:1390:U:H3	1.25	0.81
25:YA:1920:OMC:HM22	25:YA:1921:G:H5'	1.61	0.81
1:QA:130:A:H5'	17:QQ:63:ARG:HE	1.45	0.81
25:RA:1754:C:OP1	39:RT:96:ARG:NH1	2.12	0.81
25:RA:1792:G:O2'	25:RA:1830:C:OP1	1.98	0.81
25:YA:277:C:O2'	25:YA:278:A:OP1	1.97	0.81
26:RB:51:G:N2	57:RB:203:MG:MG	1.39	0.81
45:RZ:99:TYR:HA	45:RZ:124:ILE:O	1.81	0.81
1:QA:1422:G:H5"	34:RO:48:PRO:HB3	1.61	0.80
25:YA:2096:U:H3	25:YA:2193:G:H1	1.25	0.80
25:YA:2323:G:H1	25:YA:2332:U:H3	1.29	0.80
25:YA:1800:C:OP2	27:YD:183:ARG:NH2	2.15	0.80
25:RA:587:C:OP2	35:RP:21:ARG:NH1	2.13	0.79
25:YA:18:C:O2'	25:YA:554:U:OP1	2.00	0.79
25:RA:2198:A:OP1	32:RI:33:ARG:NH2	2.16	0.79
25:YA:607:U:O2	25:YA:621:A:N6	2.16	0.79
1:XA:1003:G:H2'	1:XA:1004:A:H4'	1.62	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:925:G:H1	1:XA:1391:U:H3	1.28	0.79
25:YA:2638:G:H21	25:YA:2778:A:H62	1.31	0.78
1:XA:1086:U:H3	1:XA:1099:G:H22	1.29	0.78
1:QA:1351:U:H3	1:QA:1371:G:H1	1.27	0.78
25:YA:568:U:O4	57:YA:3438:MG:MG	1.26	0.78
1:QA:429:U:O3'	4:QD:22:LYS:NZ	2.16	0.78
1:QA:1315:U:O2'	1:QA:1360:A:O2'	1.99	0.78
25:YA:2584:U:H4'	56:ZB:3:PPU:H92	1.63	0.78
47:Y1:65:SER:HG	47:Y1:66:HIS:HD1	1.31	0.78
25:RA:99:U:OP1	25:RA:100:G:O2'	2.01	0.77
25:YA:2572:A:OP2	28:YE:146:THR:OG1	2.00	0.77
22:QV:15:G:N2	22:QV:48:C:H42	1.82	0.77
25:YA:71:A:H4'	25:YA:72:U:H5"	1.64	0.77
1:QA:975:A:H4'	1:QA:976:G:H5"	1.66	0.77
1:XA:1055:A:N6	1:XA:1200:C:H42	1.82	0.77
25:YA:2640:G:O3'	33:YN:74:ARG:NH2	2.17	0.76
25:RA:2816:C:O3'	37:RR:99:LYS:NZ	2.17	0.76
25:RA:1264:G:OP1	51:R5:19:ARG:NH1	2.19	0.76
25:RA:2104:G:H22	25:RA:2185:C:H42	1.34	0.76
1:XA:324:G:N2	1:XA:327:A:OP2	2.18	0.76
25:YA:1972:A:P	27:YD:239:ARG:NH2	2.59	0.76
28:RE:125:GLY:O	57:RE:302:MG:MG	1.26	0.76
1:QA:244:U:O4	1:QA:893:C:N4	2.18	0.76
25:RA:1021:A:O2'	25:RA:1123:C:OP1	2.02	0.76
25:RA:807:U:OP2	35:RP:41:ARG:NH2	2.17	0.76
25:YA:1216:G:OP1	40:YU:11:ARG:NH2	2.17	0.76
1:QA:1053:G:H4'	1:QA:1054:C:H3'	1.67	0.76
25:YA:1446:C:H42	25:YA:1465:G:H1	1.33	0.76
1:XA:430:A:P	4:XD:22:LYS:NZ	2.59	0.75
1:QA:981:U:H3'	1:QA:982:U:H2'	1.68	0.75
25:YA:1823:G:OP1	27:YD:54:ARG:NH1	2.19	0.75
1:QA:60:A:N6	1:QA:110:C:N4	2.35	0.75
25:RA:1638:C:O2	25:RA:2698:U:O2'	2.03	0.75
1:QA:60:A:H62	1:QA:110:C:N4	1.83	0.75
25:RA:1223:G:N2	25:RA:1226:A:OP2	2.16	0.75
25:YA:1816:G:OP2	27:YD:38:LYS:NZ	2.19	0.75
1:QA:672:U:H3	1:QA:734:G:H1	1.33	0.74
14:QN:4:LYS:NZ	57:QN:101:MG:MG	1.44	0.74
25:RA:309:G:N3	25:RA:329:G:O2'	2.20	0.74
25:YA:2291:U:O2'	25:YA:2374:C:O2	2.05	0.74
1:QA:558:G:OP2	1:QA:559:A:O2'	2.04	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2577:A:OP2	51:R5:3:LYS:NZ	2.19	0.74
27:RD:134:ARG:HG3	27:RD:187:GLY:CA	2.18	0.74
22:QV:15:G:H22	22:QV:48:C:N4	1.86	0.74
25:RA:2553:G:N2	56:ZA:3:PPU:H2	2.02	0.74
4:QD:32:ALA:O	4:QD:35:ARG:N	2.17	0.74
25:RA:2134:A:N6	25:RA:2156:G:O2'	2.21	0.74
1:QA:514:C:H2'	1:QA:515:G:H8	1.53	0.73
25:RA:272(D):G:H1	25:RA:272(T):C:H42	1.36	0.73
25:YA:290:G:H1	25:YA:350:U:H3	1.35	0.73
25:RA:227:A:H61	25:RA:410:G:H21	1.35	0.73
25:RA:987:G:O2'	25:RA:1000:A:N3	2.21	0.73
25:YA:1059:G:H3'	25:YA:1060:U:H2'	1.71	0.73
4:XD:18:LYS:NZ	58:XD:302:SF4:S2	2.61	0.73
1:QA:429:U:O2'	4:QD:22:LYS:NZ	2.22	0.73
1:QA:9:G:O6	1:QA:558:G:O2'	2.05	0.73
1:QA:1399:C:N3	1:QA:1502:A:N1	2.37	0.73
25:RA:570:G:O6	57:RA:3097:MG:MG	1.31	0.73
25:YA:606:U:H3	25:YA:622:G:H1	1.37	0.73
25:YA:1466:G:H2'	25:YA:1547:C:H41	1.53	0.73
28:RE:127:ASP:OD2	57:RE:303:MG:MG	1.31	0.72
1:QA:578:C:O2'	1:QA:728:A:N3	2.20	0.72
25:YA:1065:U:O2'	25:YA:1066:U:OP2	2.06	0.72
25:YA:1218:C:OP2	40:YU:15:LYS:NZ	2.22	0.72
1:QA:982:U:C4	1:QA:1223:C:N3	2.57	0.72
25:RA:2364:C:OP1	46:R0:55:ARG:NH1	2.22	0.72
1:XA:357:G:H5"	1:XA:367:U:H3'	1.71	0.72
1:XA:975:A:H4'	1:XA:976:G:H5"	1.71	0.72
25:YA:1607:C:N4	25:YA:1622:G:OP2	2.22	0.72
25:RA:2221:G:C8	25:RA:2221:G:O5'	2.43	0.72
25:YA:635:C:O2'	25:YA:639:U:OP1	2.08	0.72
1:XA:877:C:H2'	1:XA:878:G:H8	1.55	0.72
1:XA:406:G:O3'	4:XD:3:ARG:NH2	2.22	0.72
25:YA:2638:G:N2	25:YA:2778:A:H62	1.88	0.72
25:YA:2100:G:H1	25:YA:2189:U:H3	1.37	0.71
25:YA:2875:C:OP1	39:YT:3:ARG:NH1	2.23	0.71
25:RA:11:G:H2'	25:RA:12:U:H5"	1.71	0.71
25:RA:1514:U:H2'	25:RA:1515:G:H8	1.54	0.71
1:XA:430:A:P	4:XD:22:LYS:HZ1	2.13	0.71
25:YA:1140:C:O3'	33:YN:25:ARG:NH1	2.22	0.71
1:QA:1040:U:H2'	1:QA:1041:A:H8	1.55	0.71
25:RA:2125:G:H21	25:RA:2173:A:H62	1.37	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2126:A:N6	25:YA:2162:G:O2'	2.22	0.71
25:RA:571:A:H5'	25:RA:2030:A:H62	1.55	0.71
1:XA:380:G:N2	1:XA:383:A:OP2	2.23	0.71
1:XA:544:G:OP1	4:XD:59:ARG:NH2	2.21	0.71
1:XA:618:C:H5'	1:XA:619:U:H5"	1.72	0.71
26:YB:49:C:OP2	38:YS:30:ARG:NH1	2.24	0.71
31:YH:47:GLU:OE1	31:YH:47:GLU:N	2.24	0.71
19:QS:11:VAL:HG12	19:QS:13:ASP:H	1.54	0.71
1:XA:339:C:OP2	34:YO:97:ARG:NH1	2.23	0.71
1:XA:437:U:H3	1:XA:495:A:H62	1.37	0.71
25:YA:2689:U:H4'	25:YA:2690:C:H5'	1.72	0.71
3:QC:14:ILE:HG22	3:QC:15:THR:HG23	1.73	0.71
25:RA:823:G:H2'	25:RA:824:A:C8	2.25	0.71
1:XA:107:G:OP1	1:XA:325:A:N6	2.23	0.71
25:YA:2134:A:H5"	25:YA:2156:G:H22	1.54	0.71
25:YA:83:G:N1	25:YA:102:G:O2'	2.24	0.71
1:QA:38:G:H22	1:QA:397:A:H5'	1.54	0.70
1:XA:359:U:H3'	1:XA:360:A:H8	1.55	0.70
25:YA:2296:U:OP2	38:YS:9:ARG:NH2	2.24	0.70
1:XA:1285:A:H4'	1:XA:1286:A:H5'	1.72	0.70
1:QA:982:U:H3	1:QA:1223:C:H42	0.77	0.70
25:YA:918:A:N3	26:YB:80:U:O2'	2.24	0.70
1:QA:403:C:OP2	4:QD:74:GLN:NE2	2.24	0.70
1:QA:1254:C:OP1	10:QJ:45:ARG:NE	2.24	0.70
1:QA:1399:C:N4	1:QA:1502:A:C2	2.59	0.70
1:QA:501:C:H1'	1:QA:549:C:H1'	1.74	0.70
25:YA:2786:U:OP1	28:YE:69:LYS:NZ	2.22	0.70
1:XA:358:U:C6	1:XA:358:U:H3'	2.26	0.70
1:XA:73:G:H1	1:XA:96:U:H3	1.40	0.70
25:YA:849:A:H5"	25:YA:850:C:OP2	1.92	0.70
25:YA:2059:A:H5"	25:YA:2060:A:OP2	1.92	0.70
1:QA:1203:C:OP1	14:QN:3:ARG:NE	2.25	0.70
4:QD:20:TYR:OH	6:XF:15:ASP:HA	1.92	0.70
25:RA:1084:A:N6	25:RA:1086:A:N7	2.40	0.70
4:XD:32:ALA:HB3	58:XD:302:SF4:S1	2.32	0.70
1:QA:427:U:OP1	4:QD:13:ARG:NH2	2.24	0.69
1:QA:547:A:OP1	4:QD:73:ARG:NH1	2.25	0.69
1:QA:908:A:H2'	1:QA:909:A:H8	1.58	0.69
25:RA:2122:U:H3	25:RA:2176:A:H61	1.39	0.69
25:YA:1514:U:H2'	25:YA:1515:G:H8	1.56	0.69
1:XA:1375:A:OP1	7:XG:28:ASN:ND2	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:131:C:O2'	1:QA:262:A:N3	2.22	0.69
25:YA:593:G:H4'	54:Y8:63:PRO:HB2	1.75	0.69
25:RA:270:A:OP2	25:RA:272(X):G:N1	2.25	0.69
1:XA:790:A:OP1	22:XV:38:A:O2'	2.11	0.69
1:XA:1326:C:OP1	21:XU:12:LYS:NZ	2.25	0.69
25:YA:1196:C:HO2'	25:YA:1227:G:HO2'	1.38	0.69
22:QV:15:G:N1	22:QV:48:C:N3	2.40	0.69
18:XR:58:LEU:HB3	18:XR:62:GLU:HG3	1.75	0.69
1:QA:315:A:HO2'	1:QA:330:C:HO2'	1.37	0.69
1:QA:673:G:H2'	1:QA:674:G:H8	1.56	0.69
1:QA:1055:A:H62	1:QA:1200:C:H42	0.78	0.69
1:XA:259:G:H5"	20:XT:83:ARG:HH12	1.58	0.69
4:QD:32:ALA:HB3	58:QD:303:SF4:S4	2.33	0.69
9:QI:128:ARG:NH2	22:QV:33:U:OP2	2.22	0.69
25:RA:243:U:OP2	54:R8:8:LYS:NZ	2.19	0.69
25:RA:1942:5MC:OP2	25:RA:1943:U:O2'	2.10	0.69
25:RA:2246:G:H2'	25:RA:2247:A:C8	2.28	0.68
1:XA:514:C:H2'	1:XA:515:G:H8	1.58	0.68
25:YA:2299:G:OP1	30:YG:75:LYS:NZ	2.26	0.68
1:QA:1086:U:H3	1:QA:1099:G:H22	1.39	0.68
25:YA:919:G:N2	25:YA:2269:A:OP2	2.24	0.68
25:YA:2404:C:O3'	35:YP:77:ARG:NH2	2.26	0.68
27:RD:134:ARG:HH11	27:RD:187:GLY:HA3	1.58	0.68
22:XV:2:G:O3'	46:Y0:8:GLY:N	2.27	0.68
1:XA:373:A:H2'	1:XA:374:A:H8	1.58	0.68
1:QA:1065:U:H5"	1:QA:1190:G:H22	1.59	0.68
1:QA:1344:C:H4'	9:QI:120:ARG:HB3	1.74	0.68
25:RA:1646:C:H5"	25:RA:1647:G:H5"	1.76	0.68
39:YT:65:LYS:HE3	39:YT:67:SER:HB2	1.76	0.68
25:YA:71:A:H5"	25:YA:73:A:C8	2.28	0.68
1:QA:959:A:H3'	1:QA:960:U:H5"	1.74	0.68
25:RA:2555:U:C2	56:ZA:1:C:C6	2.81	0.68
1:QA:631:G:H2'	1:QA:632:A:H8	1.59	0.68
25:YA:1473:G:H1	25:YA:1518:U:H3	1.40	0.68
25:RA:1093:G:N2	25:RA:1098:A:N7	2.42	0.68
25:YA:552:G:OP1	41:YV:68:LYS:NZ	2.26	0.68
5:QE:92:LYS:HB3	5:QE:119:LEU:HB2	1.76	0.67
25:RA:52:A:H62	25:RA:119:A:H62	1.42	0.67
1:XA:392:G:OP1	16:XP:8:ARG:NH2	2.27	0.67
9:QI:10:ARG:HH21	9:QI:107:ARG:HD3	1.59	0.67
1:XA:429:U:H3'	4:XD:9:CYS:SG	2.34	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1280:G:C2'	25:YA:1281:G:H5'	2.24	0.67
25:YA:2347:C:OP1	52:Y6:38:LYS:NZ	2.18	0.67
1:QA:60:A:N6	1:QA:110:C:H42	1.93	0.67
1:QA:1179:A:H4'	9:QI:103:THR:HA	1.76	0.67
25:RA:1693:U:O2'	27:RD:14:ARG:NH2	2.26	0.67
25:YA:489:G:N7	42:YW:49:LYS:NZ	2.40	0.67
25:YA:2105:C:H42	25:YA:2185:C:H42	1.40	0.67
1:QA:973:G:O2'	10:QJ:54:PHE:O	2.11	0.67
1:QA:1070:U:OP1	5:QE:18:ARG:NH2	2.26	0.67
22:XV:50:U:H3	22:XV:64:G:H1	1.41	0.67
25:YA:527:C:N4	25:YA:2043:C:OP2	2.26	0.67
25:YA:1165:U:H3	25:YA:1184:G:H1	1.41	0.67
1:QA:107:G:OP1	1:QA:325:A:N6	2.28	0.67
1:QA:673:G:H2'	1:QA:674:G:C8	2.29	0.67
1:QA:1073:U:H2'	1:QA:1074:G:H8	1.58	0.67
25:RA:570:G:OP1	25:RA:972:G:O2'	2.07	0.67
25:RA:1159:U:H2'	25:RA:1160:G:H8	1.58	0.67
26:RB:48:A:H4'	38:RS:95:HIS:HD2	1.59	0.67
1:XA:358:U:H2'	1:XA:359:U:C6	2.30	0.67
25:YA:787:U:H5"	25:YA:788:A:H5'	1.77	0.67
25:YA:2303:G:N3	30:YG:132:ASN:ND2	2.42	0.67
1:QA:429:U:P	4:QD:13:ARG:NH1	2.67	0.67
25:RA:2328:A:H2'	25:RA:2329:G:H8	1.59	0.67
1:QA:1183:A:H3'	1:QA:1184:G:H5"	1.75	0.67
25:RA:589:C:H2'	25:RA:590:A:C8	2.30	0.67
25:RA:2133:G:O2'	25:RA:2158:A:N1	2.25	0.67
1:QA:593:G:H1	1:QA:646:U:H3	1.43	0.67
38:RS:34:HIS:HD1	38:RS:53:SER:HG	1.42	0.67
25:YA:889:C:O2'	25:YA:890:A:O5'	2.13	0.67
1:QA:245:C:H2'	1:QA:246:A:H5"	1.77	0.67
25:RA:1864:U:OP1	25:RA:2410:G:O2'	2.06	0.67
25:YA:2475:C:H42	25:YA:2529:G:H22	1.42	0.67
25:RA:1247:A:OP1	29:RF:95:ARG:NH2	2.28	0.66
25:YA:1687:G:N2	25:YA:1702:G:O6	2.28	0.66
38:YS:34:HIS:HD1	38:YS:53:SER:HG	1.41	0.66
25:RA:1278:A:OP1	37:RR:36:THR:OG1	2.06	0.66
25:RA:1999:C:OP1	28:RE:118:LYS:NZ	2.16	0.66
25:RA:2198:A:H5'	32:RI:33:ARG:HH21	1.60	0.66
25:RA:2362:G:OP1	54:R8:44:LYS:NZ	2.27	0.66
1:XA:1005:A:O2'	1:XA:1036:G:N2	2.28	0.66
1:XA:1356:G:H2'	1:XA:1357:A:H8	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1005:C:O2'	33:YN:28:THR:HG21	1.95	0.66
1:QA:1151:A:O2'	1:QA:1152:A:O5'	2.13	0.66
1:XA:1286:A:H2'	1:XA:1287:A:H4'	1.75	0.66
25:YA:511:U:H4'	25:YA:1235:G:H4'	1.76	0.66
48:Y2:51:ARG:HG2	48:Y2:55:ARG:HE	1.60	0.66
8:QH:32:LYS:HA	8:QH:35:ILE:HD12	1.76	0.66
25:RA:2291:U:O2'	25:RA:2374:C:O2	2.13	0.66
25:YA:783:A:H2'	25:YA:784:A:H4'	1.77	0.66
1:QA:1347:G:N1	1:QA:1374:A:OP2	2.26	0.66
25:RA:228:A:OP1	35:RP:76:LYS:NZ	2.29	0.66
25:RA:1069:A:H5"	25:RA:1096:A:H5"	1.78	0.66
25:YA:2849:U:OP1	39:YT:95:ARG:NH2	2.29	0.66
25:RA:1952:A:N3	25:RA:2560:C:O2'	2.26	0.66
25:YA:2465:C:O2	25:YA:2486:G:N2	2.28	0.66
30:YG:150:ASP:OD1	30:YG:153:ARG:NH1	2.28	0.66
25:RA:1225:G:OP1	41:RV:69:LYS:NZ	2.24	0.66
25:YA:2206:G:H5"	25:YA:2207:G:C5	2.31	0.66
1:QA:1510:U:H3	1:QA:1525:G:H1	1.44	0.66
1:XA:359:U:C6	1:XA:359:U:O5'	2.49	0.66
1:XA:674:G:H2'	1:XA:675:A:H8	1.60	0.66
25:YA:2577:A:H5'	51:Y5:3:LYS:HE2	1.76	0.66
1:QA:1073:U:H2'	1:QA:1074:G:C8	2.31	0.66
25:RA:2727:G:O3'	34:RO:70:LYS:NZ	2.28	0.66
1:XA:1053:G:H4'	1:XA:1054:C:H3'	1.78	0.66
25:YA:848:G:OP2	25:YA:928:G:N2	2.29	0.66
1:QA:806:C:H2'	1:QA:807:A:H8	1.61	0.65
1:XA:1518:MA6:O5'	1:XA:1518:MA6:H8	1.96	0.65
25:YA:857:C:H4'	46:Y0:23:VAL:HG21	1.78	0.65
25:YA:1352:U:O2'	25:YA:1570:A:N3	2.27	0.65
9:QI:121:ARG:NH1	9:QI:122:ALA:O	2.29	0.65
14:QN:4:LYS:HZ1	57:QN:101:MG:MG	1.05	0.65
25:RA:860:U:H2'	25:RA:861:A:H8	1.61	0.65
25:YA:140:G:N2	25:YA:142(A):A:H62	1.94	0.65
25:YA:631:A:OP2	54:Y8:47:LYS:NZ	2.29	0.65
25:YA:829:A:N7	25:YA:2247:A:O2'	2.28	0.65
3:QC:77:ILE:HG13	3:QC:79:ARG:H	1.59	0.65
25:YA:2206:G:H3'	25:YA:2207:G:C8	2.31	0.65
26:YB:80:U:H3	26:YB:97:G:H1	1.44	0.65
25:RA:2450:A:H62	25:RA:2501:C:N4	1.95	0.65
1:XA:453:A:H4'	16:XP:72:ARG:HG3	1.77	0.65
1:XA:731:G:OP1	1:XA:766:A:H1'	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:524:G:H5”	12:QL:91:LYS:HE2	1.78	0.65
1:QA:946:A:O2’	1:QA:1333:A:N3	2.30	0.65
25:RA:2371:G:O6	57:RA:3376:MG:MG	1.37	0.65
40:RU:74:LEU:HD13	40:RU:78:THR:HB	1.79	0.65
25:YA:956:G:H2’	25:YA:957:A:H2’	1.78	0.65
25:YA:2134:A:H5”	25:YA:2156:G:N2	2.11	0.65
28:YE:128:SER:OG	28:YE:129:HIS:N	2.29	0.65
25:RA:2680:C:OP2	28:RE:111:ARG:NH2	2.30	0.65
26:YB:37:C:O2	38:YS:95:HIS:NE2	2.27	0.65
25:RA:635:C:O2’	25:RA:639:U:OP1	2.15	0.65
1:XA:502:G:OP1	12:XL:118:SER:N	2.28	0.65
1:XA:1247:U:H3	1:XA:1290:G:H1	1.45	0.65
7:XG:5:ARG:HG2	7:XG:7:ALA:H	1.62	0.65
25:YA:24:G:O2’	42:YW:78:GLU:O	2.12	0.65
1:XA:377:G:OP1	16:XP:3:LYS:NZ	2.29	0.65
25:YA:278:A:H3’	25:YA:278:A:OP2	1.96	0.65
25:YA:1939:5MU:OP1	25:YA:2604:U:O2’	2.09	0.65
1:QA:1069:C:O2’	1:QA:1192:C:O2	2.15	0.65
11:QK:48:ILE:HG12	11:QK:63:LEU:HD13	1.79	0.65
25:RA:1632:A:H8	25:RA:1632:A:O5’	1.80	0.65
25:YA:784:A:H62	27:YD:229:VAL:HG21	1.60	0.65
25:RA:2880:C:O2’	37:RR:90:ARG:NH1	2.30	0.64
28:RE:152:LYS:HG3	33:RN:77:GLY:C	2.21	0.64
37:RR:2:ARG:NH1	37:RR:5:LYS:O	2.30	0.64
1:QA:572:A:H5”	1:QA:917:G:H4’	1.79	0.64
25:RA:910:A:N3	25:RA:2264:C:O2’	2.30	0.64
25:RA:1038:C:H42	25:RA:1117:G:H1	1.45	0.64
26:YB:30:C:H1’	26:YB:57:A:H61	1.62	0.64
40:YU:97:ASP:OD1	40:YU:101:ARG:NH1	2.30	0.64
41:YV:20:LEU:HD22	41:YV:22:VAL:HG22	1.79	0.64
1:QA:195:A:H4’	20:QT:68:LYS:HZ1	1.63	0.64
1:XA:405:U:O4	4:XD:2:GLY:N	2.31	0.64
1:QA:376:G:H5”	16:QP:5:ARG:HB2	1.80	0.64
12:QL:71:PRO:O	12:QL:102:ARG:NH1	2.30	0.64
25:RA:2547:U:O2	34:RO:23:ARG:NH1	2.30	0.64
6:XF:12:PRO:HD3	6:XF:58:GLY:HA2	1.80	0.64
25:YA:458:G:N2	25:YA:470:A:OP2	2.31	0.64
25:YA:2711:A:H5”	25:YA:2712(A):U:H5”	1.78	0.64
56:ZA:3:PPU:H8	56:ZA:3:PPU:C5’	2.27	0.64
1:QA:1003:G:H2’	1:QA:1004:A:H4’	1.79	0.64
1:QA:1255:G:OP2	10:QJ:45:ARG:NH2	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:16:GLY:HA2	4:QD:33:MET:HE1	1.79	0.64
25:RA:1196:C:HO2'	25:RA:1227:G:HO2'	1.42	0.64
25:RA:2452:C:H42	25:RA:2504:U:H3	1.45	0.64
25:YA:213:A:H8	25:YA:213:A:H5"	1.62	0.64
1:QA:346:G:OP1	39:RT:41:ARG:NH2	2.31	0.64
1:QA:360:A:H2'	1:QA:361:G:C8	2.33	0.64
1:QA:1175:G:H2'	1:QA:1176:A:H8	1.62	0.64
27:RD:134:ARG:CG	27:RD:187:GLY:HA3	2.23	0.64
1:XA:334:C:HO2'	1:XA:1434:A:HO2'	1.41	0.64
22:XV:16:C:O2'	22:XV:61:C:OP1	2.15	0.64
1:QA:1227:A:H5'	13:QM:111:LYS:HD2	1.80	0.64
1:XA:1329:A:N7	21:XU:7:ARG:NH2	2.45	0.64
25:YA:1316:U:H2'	25:YA:1317:A:H8	1.61	0.64
25:RA:2746:U:H1'	31:RH:139:GLN:HB3	1.79	0.64
1:XA:357:G:O2'	1:XA:358:U:H5'	1.98	0.64
25:YA:1821:A:H2'	25:YA:1822:G:H8	1.61	0.64
25:YA:2328:A:H2'	25:YA:2329:G:C8	2.33	0.64
17:QQ:66:SER:O	17:QQ:70:ARG:NH1	2.31	0.64
25:RA:2394:C:H5"	35:RP:64:LYS:HE2	1.78	0.64
1:XA:358:U:H2'	1:XA:359:U:H6	1.62	0.64
25:YA:322:A:OP1	29:YF:168:ARG:NH1	2.31	0.64
25:YA:860:U:H2'	25:YA:861:A:H8	1.62	0.64
1:QA:677:U:H3	1:QA:713:G:H22	1.44	0.63
1:QA:757:U:H1'	1:QA:879:C:H1'	1.79	0.63
38:RS:10:ARG:HA	38:RS:13:ARG:HG2	1.80	0.63
25:YA:554:U:O2'	25:YA:555:U:H5'	1.98	0.63
31:YH:47:GLU:OE1	31:YH:49:VAL:CG2	2.45	0.63
1:QA:60:A:H4'	1:QA:61:G:H5'	1.80	0.63
1:QA:67:C:O2'	1:QA:171:A:N3	2.28	0.63
30:RG:134:GLY:HA2	30:RG:156:ASP:HA	1.80	0.63
25:YA:2291:U:OP1	25:YA:2380:C:O2'	2.16	0.63
28:YE:45:THR:O	28:YE:82:ARG:NH1	2.31	0.63
1:QA:1320:C:N3	19:QS:36:ARG:NH2	2.46	0.63
25:RA:2075:U:H4'	25:RA:2596:U:H3	1.63	0.63
1:XA:1427:U:H2'	1:XA:1428:A:C8	2.33	0.63
5:XE:12:LEU:HB3	5:XE:31:LEU:H	1.63	0.63
6:XF:87:ARG:NH1	18:XR:75:ILE:O	2.31	0.63
25:YA:1636:C:H2'	25:YA:1637:A:C8	2.34	0.63
25:YA:2099:U:O2	25:YA:2190:G:N2	2.27	0.63
25:YA:2641:G:P	33:YN:74:ARG:HH22	2.20	0.63
1:QA:1422:G:H2'	1:QA:1423:G:H8	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:335:C:O2'	1:XA:1433:A:N3	2.31	0.63
1:XA:1203:C:H2'	1:XA:1204:A:H8	1.61	0.63
1:QA:474:G:H2'	1:QA:475:G:H8	1.62	0.63
25:RA:2741:A:O3'	55:R9:35:ARG:NH1	2.31	0.63
1:XA:1291:G:OP1	7:XG:37:ASN:ND2	2.31	0.63
1:XA:1296:C:OP1	13:XM:44:ARG:NH2	2.31	0.63
1:XA:1301:U:O2'	1:XA:1302:U:H5'	1.98	0.63
25:RA:1770:G:H1	25:RA:1982:C:H42	1.47	0.63
25:RA:2659:G:N2	25:RA:2662:A:OP2	2.32	0.63
1:XA:448:A:OP2	1:XA:485:G:N1	2.26	0.63
25:YA:1438:U:H3	25:YA:1553:A:H2	1.44	0.63
31:YH:47:GLU:H	31:YH:47:GLU:CD	2.07	0.63
40:YU:97:ASP:O	40:YU:101:ARG:HB2	1.99	0.63
25:RA:700:G:H1	25:RA:732:C:H42	1.47	0.63
25:RA:1049:C:H1'	25:RA:1113:U:H4'	1.80	0.63
25:RA:1286:A:O2'	25:RA:1288:U:OP2	2.09	0.63
1:XA:292:G:H21	1:XA:608:A:H61	1.47	0.63
1:XA:1074:G:O2'	1:XA:1101:A:N1	2.31	0.63
1:XA:1098:C:H2'	1:XA:1099:G:H8	1.64	0.63
25:YA:806:C:O2	25:YA:2444:G:O2'	2.16	0.63
26:YB:27:C:H5"	38:YS:54:LEU:HD11	1.80	0.63
56:ZA:3:PPU:H93	56:ZA:3:PPU:N7	2.13	0.63
1:QA:401:C:O2'	1:QA:621:A:N3	2.32	0.63
11:QK:22:HIS:HB3	11:QK:29:ILE:HB	1.81	0.63
34:RO:2:ILE:HB	34:RO:33:ALA:HB3	1.81	0.63
25:YA:244:A:H4'	35:YP:74:GLU:HB2	1.80	0.63
25:YA:249:C:O2	54:Y8:12:LYS:NZ	2.30	0.63
25:YA:1569:A:H2'	25:YA:1570:A:C8	2.34	0.63
1:QA:405:U:O4	4:QD:2:GLY:N	2.32	0.63
25:RA:1920:OMC:HM22	25:RA:1921:G:H5'	1.81	0.63
1:XA:1499:A:H1'	1:XA:1520:G:H5'	1.81	0.63
31:YH:164:TYR:HB2	31:YH:167:GLU:HB2	1.80	0.63
1:QA:983:A:N1	1:QA:1222:G:N2	2.47	0.62
25:RA:24:G:O2'	42:RW:78:GLU:O	2.16	0.62
1:XA:258:G:OP1	20:XT:87:LYS:NZ	2.32	0.62
1:QA:1216:G:OP1	14:QN:2:ALA:N	2.32	0.62
7:QG:35:LYS:HE2	7:QG:37:ASN:H	1.64	0.62
25:RA:1361:G:H1	25:RA:1370:C:H42	1.47	0.62
1:XA:192:U:O2'	20:XT:60:GLU:OE2	2.16	0.62
1:XA:489:C:OP1	4:XD:131:ARG:NH2	2.32	0.62
25:YA:2818:G:OP2	37:YR:42:LYS:NZ	2.31	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YS:11:LYS:HG3	38:YS:91:PRO:HD3	1.81	0.62
1:QA:1367:C:OP1	9:QI:115:GLY:N	2.24	0.62
1:QA:1399:C:C4	1:QA:1502:A:N1	2.67	0.62
7:QG:75:VAL:HA	7:QG:88:PRO:HA	1.81	0.62
25:RA:139(A):G:N3	43:RX:41:ASN:ND2	2.47	0.62
25:RA:227:A:H61	25:RA:410:G:N2	1.96	0.62
25:RA:566:U:OP1	35:RP:29:LYS:NZ	2.23	0.62
25:RA:1203:G:N1	25:RA:1241:A:OP2	2.33	0.62
1:XA:410:G:H21	1:XA:432:A:H62	1.48	0.62
27:YD:166:GLN:HE22	27:YD:176:ARG:HH21	1.47	0.62
50:Y4:51:ASP:OD1	50:Y4:51:ASP:N	2.31	0.62
25:RA:2682:U:O2'	39:RT:58:ASN:OD1	2.17	0.62
25:YA:89:G:OP1	44:YY:33:LYS:NZ	2.30	0.62
25:YA:1833:U:O2'	25:YA:1969:A:N1	2.26	0.62
1:QA:265:G:N2	1:QA:267:C:H5'	2.14	0.62
1:QA:781:A:OP2	1:QA:800:G:N2	2.25	0.62
7:QG:72:ARG:NH2	7:QG:142:GLU:OE2	2.32	0.62
25:RA:857:C:OP2	46:R0:77:ARG:NH2	2.32	0.62
1:XA:390:C:O3'	16:XP:28:ARG:NH2	2.32	0.62
1:XA:870:U:H4'	1:XA:871:U:H5"	1.80	0.62
19:XS:28:LYS:HG3	19:XS:29:ARG:HG3	1.81	0.62
25:YA:273(K):C:H2'	25:YA:274:G:H8	1.64	0.62
25:YA:1821:A:H2'	25:YA:1822:G:C8	2.33	0.62
1:QA:1522:U:H2'	1:QA:1523:G:H8	1.63	0.62
8:QH:81:HIS:ND1	8:QH:138:TRP:OXT	2.32	0.62
12:QL:53:ARG:NH2	12:QL:92:0TD:OD2	2.32	0.62
25:RA:511:U:H4'	25:RA:1235:G:H4'	1.82	0.62
40:RU:66:ASN:HD21	40:RU:70:ARG:HH21	1.47	0.62
1:XA:279:A:H4'	1:XA:280:C:H5'	1.82	0.62
9:XI:18:PHE:HB2	9:XI:62:TYR:O	2.00	0.62
25:YA:674:G:OP1	29:YF:54:ARG:NH2	2.32	0.62
1:XA:376:G:H1	1:XA:387:U:H3	1.48	0.62
1:XA:1101:A:N7	2:XB:175:ARG:NH2	2.47	0.62
4:XD:19:LEU:HB3	4:XD:21:LEU:HD21	1.80	0.62
45:YZ:10:ARG:NH2	45:YZ:37:VAL:O	2.32	0.62
1:QA:514:C:H2'	1:QA:515:G:C8	2.34	0.62
25:RA:495:G:N3	42:RW:61:ASN:ND2	2.47	0.62
25:RA:1593:G:H2'	25:RA:1594:G:C8	2.34	0.62
45:RZ:101:PRO:HA	45:RZ:122:ARG:O	2.00	0.62
1:XA:1129:C:O2	1:XA:1130:A:N6	2.33	0.62
33:YN:58:ASP:OD1	33:YN:58:ASP:N	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2422:A:O2'	25:RA:2423:U:OP2	2.16	0.62
25:RA:2788:C:O2'	25:RA:2809:A:N3	2.32	0.62
34:RO:13:ASN:ND2	34:RO:96:THR:OG1	2.33	0.62
1:XA:261:U:OP2	20:XT:79:ARG:NH2	2.32	0.62
1:XA:728:A:H2'	1:XA:729:A:H8	1.64	0.62
12:XL:49:ASN:ND2	12:XL:92:0TD:SB	2.73	0.62
25:YA:2424:C:O2	25:YA:2429:G:O2'	2.18	0.62
1:QA:982:U:O4	1:QA:1223:C:N3	2.33	0.62
3:QC:42:LEU:HD23	3:QC:45:LYS:HD3	1.82	0.62
25:RA:535:C:H2'	25:RA:536:A:H8	1.65	0.62
32:RI:49:ALA:HA	32:RI:52:ARG:HG2	1.81	0.62
1:XA:1347:G:H5"	9:XI:107:ARG:HG2	1.80	0.62
34:YO:2:ILE:HB	34:YO:33:ALA:HB3	1.82	0.62
1:QA:908:A:H2'	1:QA:909:A:C8	2.35	0.61
25:RA:288:C:H2'	25:RA:289:A:H8	1.64	0.61
25:RA:819:A:OP2	25:RA:1187:G:N2	2.20	0.61
25:RA:964:C:O2'	25:RA:2273:A:N3	2.29	0.61
27:RD:133:LEU:HA	27:RD:136:ILE:HD12	1.81	0.61
1:XA:908:A:H2'	1:XA:909:A:H8	1.65	0.61
17:XQ:66:SER:O	17:XQ:70:ARG:NH1	2.33	0.61
25:YA:1754:C:OP1	39:YT:96:ARG:NH1	2.32	0.61
1:QA:127:G:O2'	17:QQ:2:PRO:O	2.17	0.61
1:QA:501:C:H2'	1:QA:502:G:H8	1.65	0.61
1:QA:1071:C:H2'	1:QA:1072:G:H8	1.65	0.61
2:QB:6:THR:O	2:QB:217:ARG:NH1	2.33	0.61
22:QV:8:U:O4	22:QV:14:A:N7	2.33	0.61
25:RA:2738:A:N1	25:RA:2766:G:O6	2.34	0.61
1:XA:1352:C:OP1	21:XU:3:LYS:NZ	2.27	0.61
1:QA:429:U:C3'	4:QD:22:LYS:NZ	2.63	0.61
1:QA:976:G:H5'	1:QA:1358:U:O2'	2.00	0.61
25:RA:2091:U:O2'	25:RA:2092:U:OP1	2.18	0.61
5:XE:76:ILE:HG12	5:XE:118:ILE:HD11	1.82	0.61
25:YA:1281:G:C8	25:YA:1281:G:H3'	2.35	0.61
42:YW:14:PRO:HG2	42:YW:78:GLU:HG2	1.83	0.61
1:QA:501:C:H2'	1:QA:502:G:C8	2.36	0.61
25:RA:807:U:H2'	25:RA:808:G:H8	1.66	0.61
25:RA:1420:U:O2'	25:RA:1421:G:OP1	2.18	0.61
25:RA:1639:U:O2'	25:RA:2699:C:H4'	2.01	0.61
25:RA:2328:A:H2'	25:RA:2329:G:C8	2.35	0.61
25:YA:574:C:N3	28:YE:145:LYS:NZ	2.47	0.61
25:YA:1438:U:H2'	25:YA:1439:A:H8	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1359:C:O2'	1:QA:1361:G:N7	2.32	0.61
25:RA:589:C:H2'	25:RA:590:A:H8	1.62	0.61
25:RA:833:U:O2	35:RP:55:ARG:NH2	2.33	0.61
36:RQ:34:LEU:HB2	36:RQ:118:LEU:HD23	1.82	0.61
1:XA:1318:A:OP1	19:XS:3:ARG:NH2	2.33	0.61
30:YG:98:ARG:NH1	50:Y4:1:MET:SD	2.73	0.61
1:QA:1412:C:H2'	1:QA:1413:A:C8	2.36	0.61
2:XB:107:THR:HA	2:XB:110:GLN:HG3	1.83	0.61
25:YA:1250:G:OP2	35:YP:21:ARG:NH1	2.32	0.61
49:R3:17:LYS:HA	49:R3:20:LYS:HB2	1.81	0.61
1:XA:367:U:H4'	1:XA:368:U:OP2	1.98	0.61
7:XG:50:ILE:HD11	7:XG:58:PRO:HB3	1.83	0.61
21:XU:8:THR:HG23	21:XU:11:GLY:H	1.65	0.61
25:YA:958:U:OP2	36:YQ:14:ARG:NH1	2.33	0.61
35:YP:96:THR:HG22	35:YP:99:LEU:HD23	1.82	0.61
1:QA:947:G:O3'	13:QM:109:THR:OG1	2.18	0.61
1:QA:1060:C:HO2'	10:QJ:56:HIS:HD1	1.47	0.61
1:QA:1279:A:OP2	10:QJ:9:ARG:NH1	2.33	0.61
1:QA:1328:C:O2'	13:QM:29:ARG:NH2	2.33	0.61
2:QB:47:THR:HA	2:QB:202:PRO:HG2	1.81	0.61
25:RA:489:G:N7	42:RW:49:LYS:NZ	2.45	0.61
25:RA:2809:A:OP2	25:RA:2891:G:N1	2.28	0.61
1:XA:1318:A:OP1	19:XS:7:LYS:NZ	2.32	0.61
31:YH:149:ARG:NH2	31:YH:167:GLU:OE2	2.34	0.61
1:QA:1496:C:H2'	1:QA:1497:G:C8	2.36	0.61
3:QC:64:VAL:N	3:QC:98:ASN:O	2.33	0.61
5:QE:33:VAL:HG21	5:QE:109:ILE:HA	1.82	0.61
25:RA:1651:G:H1	25:RA:2006:C:H42	1.48	0.61
25:YA:806:C:OP2	35:YP:37:GLY:HA2	2.01	0.61
28:YE:9:VAL:HG13	28:YE:25:VAL:HG13	1.83	0.61
29:YF:53:THR:HG23	29:YF:55:GLY:H	1.66	0.61
53:Y7:34:ARG:NH1	53:Y7:41:ARG:O	2.34	0.61
1:QA:1052:U:H3	1:QA:1206:G:H1	1.47	0.61
1:QA:1149:C:O2'	1:QA:1280:A:N1	2.34	0.61
1:QA:1268:A:N3	1:QA:1326:C:O2'	2.32	0.61
25:RA:329:G:OP1	44:RY:71:LYS:NZ	2.34	0.61
25:RA:2031:A:N3	25:RA:2455:G:O2'	2.33	0.61
45:RZ:100:VAL:O	45:RZ:123:ASP:HA	1.99	0.61
1:XA:358:U:C6	1:XA:358:U:C3'	2.84	0.61
1:XA:1128:C:O2'	1:XA:1147:C:N3	2.33	0.61
25:YA:2747:G:H21	25:YA:2757:A:H62	1.47	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YB:108:U:H2'	26:YB:109:C:H5"	1.83	0.61
1:QA:244:U:O4	1:QA:893:C:C4	2.54	0.60
1:QA:244:U:O4	1:QA:893:C:N3	2.33	0.60
25:RA:1190:G:H2'	25:RA:1191:G:H8	1.64	0.60
44:RY:99:CYS:SG	44:RY:100:ALA:N	2.74	0.60
3:XC:3:ASN:HB2	3:XC:4:LYS:HG2	1.83	0.60
16:XP:20:VAL:HG12	16:XP:35:LYS:HA	1.83	0.60
25:YA:2281:C:O2'	25:YA:2282:G:H5'	2.00	0.60
1:QA:750:G:O2'	15:QO:21:ASP:OD1	2.18	0.60
1:QA:1434:A:H62	1:QA:1467:G:H21	1.48	0.60
7:QG:101:LEU:HA	7:QG:104:LEU:HD12	1.82	0.60
25:RA:707:G:H1	25:RA:724:U:H3	1.48	0.60
27:RD:208:LYS:HG3	27:RD:210:GLY:H	1.66	0.60
1:XA:452:A:N7	1:XA:480:U:O4	2.34	0.60
27:YD:133:LEU:HA	27:YD:136:ILE:HD12	1.82	0.60
33:YN:1:MET:HG2	40:YU:93:LYS:HD3	1.84	0.60
1:QA:976:G:N2	1:QA:1363(A):C:OP2	2.28	0.60
1:QA:1286:A:H2'	1:QA:1287:A:H4'	1.82	0.60
3:QC:36:ASP:HA	3:QC:39:ILE:HD12	1.82	0.60
3:QC:63:ASN:HA	3:QC:98:ASN:HB3	1.83	0.60
25:RA:227:A:N6	25:RA:410:G:H21	1.99	0.60
25:RA:1340:U:OP1	43:RX:16:LYS:NZ	2.33	0.60
25:RA:1593:G:H2'	25:RA:1594:G:H8	1.66	0.60
50:R4:26:SER:OG	50:R4:27:THR:N	2.35	0.60
1:XA:1375:A:O2'	7:XG:29:LYS:NZ	2.32	0.60
10:XJ:28:ARG:NH2	10:XJ:34:VAL:O	2.34	0.60
25:YA:1263:U:O2'	25:YA:1264:G:H5'	2.01	0.60
1:QA:427:U:P	4:QD:13:ARG:HH22	2.24	0.60
1:QA:790:A:OP1	22:QV:38:A:O2'	2.19	0.60
2:QB:82:ARG:NH1	2:QB:150:SER:OG	2.34	0.60
25:RA:848:G:H2'	25:RA:849:A:H8	1.66	0.60
25:RA:1592:C:H2'	25:RA:1593:G:H8	1.66	0.60
25:RA:2246:G:H2'	25:RA:2247:A:H8	1.65	0.60
1:XA:1402:4OC:HM22	1:XA:1403:C:H5'	1.84	0.60
25:RA:247:G:O2'	25:RA:250:G:O6	2.19	0.60
25:RA:1341:U:OP1	25:RA:1397:U:N3	2.32	0.60
25:RA:1607:C:N4	25:RA:1622:G:OP2	2.34	0.60
10:XJ:84:GLN:O	10:XJ:88:LEU:HB2	2.01	0.60
20:XT:50:GLU:HB2	20:XT:99:LEU:HD12	1.82	0.60
25:YA:814:C:O2'	25:YA:1224:C:N3	2.34	0.60
25:YA:1030:G:OP2	36:YQ:128:LYS:NZ	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2099:U:O4	25:YA:2190:G:O6	2.19	0.60
29:YF:70:THR:OG1	29:YF:71:GLY:N	2.34	0.60
13:QM:14:ARG:NH2	13:QM:16:ASP:OD2	2.32	0.60
21:QU:10:ARG:HA	21:QU:13:ILE:HD12	1.82	0.60
25:RA:971:C:O2'	25:RA:983:A:N3	2.30	0.60
25:RA:1687:G:N2	25:RA:1702:G:O6	2.34	0.60
25:RA:1941:C:N4	25:RA:1965:C:O4'	2.35	0.60
45:RZ:28:MET:HE1	45:RZ:61:LEU:HD21	1.84	0.60
1:XA:689:C:OP1	11:XK:27:ASN:ND2	2.34	0.60
25:YA:1693:U:O2'	27:YD:14:ARG:NH2	2.35	0.60
25:YA:2845:G:H2'	25:YA:2846:G:H8	1.67	0.60
41:YV:56:SER:OG	41:YV:57:VAL:N	2.34	0.60
2:QB:144:ARG:NH1	2:QB:148:TYR:OH	2.35	0.60
16:QP:21:VAL:HG22	16:QP:33:ILE:HD12	1.83	0.60
25:RA:1592:C:H2'	25:RA:1593:G:C8	2.36	0.60
25:RA:2223:G:OP1	27:RD:172:TYR:OH	2.13	0.60
1:XA:579:G:O3'	15:XO:54:ARG:NH2	2.34	0.60
2:XB:80:ILE:HG22	2:XB:215:LEU:HD23	1.84	0.60
25:YA:380:U:H2'	25:YA:381:G:H8	1.67	0.60
25:YA:1009:A:OP2	33:YN:37:LYS:NZ	2.34	0.60
25:YA:1754:C:P	39:YT:96:ARG:HH12	2.24	0.60
25:YA:2451:A:C2	56:ZB:3:PPU:HD2	2.37	0.60
37:YR:8:ARG:NH1	37:YR:43:GLU:OE2	2.35	0.60
45:RZ:48:PHE:O	45:RZ:52:SER:HB3	2.01	0.60
1:XA:673:G:O3'	6:XF:87:ARG:NH2	2.34	0.60
29:YF:185:ASP:OD1	29:YF:188:ARG:NH1	2.34	0.60
1:QA:1103:C:H5'	2:QB:98:LEU:HD11	1.83	0.60
4:QD:20:TYR:CE2	6:XF:15:ASP:HB3	2.36	0.60
4:QD:31:CYS:HA	58:QD:303:SF4:S1	2.41	0.60
1:XA:1261:A:H62	1:XA:1274:G:H21	1.50	0.60
25:YA:392:C:H5"	25:YA:409:C:H5"	1.82	0.60
1:QA:297:G:N2	1:QA:300:A:OP2	2.35	0.60
11:QK:23:ALA:HA	11:QK:28:THR:HG23	1.83	0.60
25:RA:238:C:O2'	25:RA:608:A:N3	2.27	0.60
25:RA:1782:C:O2	25:RA:2608:G:O2'	2.14	0.60
1:XA:1026:G:N2	1:XA:1027:C:O2	2.35	0.60
1:XA:1442(A):G:O2'	1:XA:1442(B):G:O5'	2.17	0.60
25:YA:414:C:H2'	25:YA:415:A:H8	1.67	0.60
25:RA:1190:G:O2'	25:RA:1191:G:H5'	2.01	0.59
30:RG:173:LEU:O	30:RG:177:GLY:N	2.34	0.59
25:YA:1280:G:H2'	25:YA:1281:G:H5'	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:107:VAL:O	31:YH:152:ARG:NH2	2.35	0.59
35:YP:29:LYS:HD3	35:YP:30:THR:HG23	1.83	0.59
37:RR:104:ARG:HG3	37:RR:111:LEU:HD21	1.84	0.59
1:XA:1329:A:H62	21:XU:7:ARG:HH22	1.48	0.59
2:XB:168:THR:HA	2:XB:171:ALA:HB2	1.83	0.59
22:XV:53:G:O2'	22:XV:54:U:O5'	2.18	0.59
25:YA:633:A:O2'	25:YA:2404:C:OP1	2.18	0.59
25:YA:1696:G:N2	25:YA:1977:A:O2'	2.32	0.59
38:YS:27:SER:HA	38:YS:88:ASP:HB3	1.84	0.59
25:RA:1467:C:H5	25:RA:1546:C:H2'	1.65	0.59
28:YE:11:MET:HG2	28:YE:24:THR:HG22	1.84	0.59
45:YZ:5:LEU:H	45:YZ:59:LEU:HA	1.66	0.59
1:QA:324:G:H5'	20:QT:22:ARG:HH21	1.67	0.59
1:QA:632:A:H3'	1:QA:633:G:H8	1.68	0.59
14:QN:47:LEU:HD12	14:QN:52:GLN:HB2	1.84	0.59
25:RA:1110:G:OP2	25:RA:1110:G:H2'	2.02	0.59
1:XA:372:C:H42	1:XA:389:A:H62	1.51	0.59
25:YA:469:G:O6	53:Y7:37:LYS:NZ	2.34	0.59
25:RA:1337:G:H2'	25:RA:1338:G:H8	1.68	0.59
4:XD:5:ILE:O	4:XD:115:ARG:NH1	2.35	0.59
19:XS:77:THR:HG23	19:XS:78:ARG:HG3	1.84	0.59
1:QA:79:G:H1	1:QA:90:U:H3	1.51	0.59
26:RB:107:G:H5'	45:RZ:31:ARG:NH1	2.18	0.59
29:RF:124:LEU:HB2	29:RF:193:VAL:HG12	1.85	0.59
32:RI:88:ILE:HG22	32:RI:90:GLY:H	1.67	0.59
1:XA:1271:G:H5'	1:XA:1314:C:H5'	1.85	0.59
13:XM:34:LEU:HD11	13:XM:41:PRO:HA	1.85	0.59
25:YA:687:C:H42	25:YA:787:U:H4'	1.68	0.59
25:YA:2820:A:OP1	37:YR:2:ARG:NH2	2.36	0.59
1:QA:1304:G:OP1	21:QU:2:GLY:N	2.35	0.59
2:QB:54:THR:HG22	2:QB:199:TYR:HB3	1.84	0.59
32:RI:69:LYS:HG3	32:RI:70:GLU:HG2	1.85	0.59
1:XA:272:C:H2'	1:XA:273:A:H8	1.68	0.59
22:XV:3:C:O2'	22:XV:4:G:H5'	2.02	0.59
39:YT:16:ARG:NH2	39:YT:83:ILE:O	2.30	0.59
1:QA:559:A:H4'	1:QA:560:U:H3'	1.84	0.59
3:QC:81:GLY:O	3:QC:85:ARG:NH1	2.36	0.59
7:QG:68:ASN:ND2	7:QG:127:ALA:O	2.35	0.59
25:RA:826:U:H5"	25:RA:2429:G:OP2	2.03	0.59
25:RA:958:U:OP1	36:RQ:74:TYR:OH	2.10	0.59
34:RO:63:VAL:HB	34:RO:102:VAL:HG13	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1079:G:O3'	5:XE:14:ARG:NH2	2.35	0.59
4:XD:21:LEU:HD23	58:XD:302:SF4:S3	2.43	0.59
25:YA:1216:G:P	40:YU:11:ARG:HH21	2.24	0.59
25:YA:2452:C:H42	25:YA:2504:U:H3	1.50	0.59
54:Y8:11:LYS:NZ	54:Y8:65:GLU:OE2	2.32	0.59
1:QA:151:A:H62	1:QA:170:U:H3	1.48	0.59
1:QA:359:U:H2'	1:QA:360:A:H8	1.67	0.59
25:RA:2081:C:H2'	25:RA:2082:A:H8	1.68	0.59
29:RF:60:SER:OG	29:RF:61:GLY:N	2.36	0.59
30:RG:104:GLU:O	30:RG:108:ASN:ND2	2.35	0.59
31:RH:51:ARG:HG3	31:RH:69:ARG:HH22	1.68	0.59
1:XA:426:G:OP1	4:XD:38:TYR:OH	2.17	0.59
1:XA:673:G:H2'	1:XA:674:G:C8	2.37	0.59
1:XA:1010:G:H2'	1:XA:1011:G:H8	1.66	0.59
1:XA:1356:G:H2'	1:XA:1357:A:C8	2.37	0.59
4:XD:6:GLY:O	4:XD:8:VAL:HG12	2.03	0.59
25:YA:32:C:H2'	25:YA:33:U:C6	2.38	0.59
25:YA:856:C:O2'	25:YA:857:C:OP1	2.17	0.59
1:QA:1330:U:H4'	13:QM:23:TYR:CZ	2.37	0.59
50:R4:14:ILE:HB	50:R4:22:ILE:HB	1.84	0.59
4:XD:8:VAL:HA	4:XD:11:LEU:HD13	1.84	0.59
25:YA:301:G:OP2	44:YY:84:ARG:NH2	2.36	0.59
25:YA:1316:U:H2'	25:YA:1317:A:C8	2.38	0.59
25:YA:2468:G:O2'	25:YA:2469:A:OP2	2.20	0.59
25:YA:2737:G:H2'	25:YA:2738:A:C8	2.37	0.59
27:YD:108:PRO:HA	27:YD:196:VAL:HA	1.84	0.59
55:Y9:16:VAL:HG12	55:Y9:25:VAL:HG22	1.85	0.59
9:QI:128:ARG:NE	22:QV:32:C:OP2	2.36	0.58
45:RZ:151:HIS:HA	45:RZ:170:THR:HA	1.85	0.58
13:XM:78:ILE:HA	13:XM:81:LEU:HD12	1.85	0.58
1:QA:658:G:OP1	15:QO:31:LEU:HD11	2.03	0.58
1:QA:1079:G:O3'	5:QE:14:ARG:NH2	2.36	0.58
1:QA:1307:U:H2'	1:QA:1308:U:C6	2.38	0.58
1:QA:1323:G:HO2'	1:QA:1362:C:HO2'	1.46	0.58
25:RA:153:C:OP2	47:R1:92:LYS:NZ	2.35	0.58
29:RF:51:THR:OG1	29:RF:52:LYS:N	2.30	0.58
1:XA:337:C:H2'	1:XA:338:A:H8	1.69	0.58
1:XA:1236:A:H4'	1:XA:1304:G:H4'	1.84	0.58
1:QA:1202:G:H4'	14:QN:29:ARG:HE	1.68	0.58
2:QB:109:SER:O	2:QB:113:HIS:ND1	2.35	0.58
3:QC:3:ASN:HB2	3:QC:4:LYS:HG3	1.83	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:993:G:OP1	40:RU:50:ARG:NH2	2.37	0.58
25:RA:1035:U:H3	25:RA:1120:G:H1	1.51	0.58
1:XA:280:C:H42	17:XQ:39:SER:HB3	1.68	0.58
1:XA:1412:C:H2'	1:XA:1413:A:C8	2.38	0.58
19:XS:50:ALA:HB1	19:XS:57:HIS:HB3	1.85	0.58
53:Y7:34:ARG:HG2	53:Y7:39:ARG:HG3	1.85	0.58
1:QA:454:C:OP1	16:QP:75:ARG:NH2	2.36	0.58
1:QA:918:A:H2'	1:QA:919:A:C8	2.39	0.58
3:QC:19:GLU:O	3:QC:40:ARG:NH2	2.36	0.58
45:RZ:126:VAL:HG12	45:RZ:163:LEU:HA	1.85	0.58
1:XA:67:C:H2'	1:XA:68:G:C8	2.39	0.58
1:XA:1437:C:H2'	1:XA:1438:G:H8	1.69	0.58
9:XI:5:TYR:HA	9:XI:17:VAL:O	2.02	0.58
44:YY:31:LEU:HB2	44:YY:36:ALA:HB3	1.84	0.58
1:QA:187:C:O2	20:QT:89:ARG:NH2	2.37	0.58
1:QA:1326:C:OP1	21:QU:17:THR:OG1	2.17	0.58
17:QQ:66:SER:H	17:QQ:69:LYS:HB3	1.68	0.58
1:XA:325:A:OP2	20:XT:70:SER:OG	2.14	0.58
1:XA:593:G:H1	1:XA:646:U:H3	1.50	0.58
25:YA:320:A:N3	29:YF:169:ASN:ND2	2.52	0.58
25:YA:1639:U:H2'	25:YA:1640:C:H5"	1.84	0.58
25:YA:1794:U:H2'	25:YA:1795:C:H6	1.69	0.58
1:QA:631:G:H2'	1:QA:632:A:C8	2.38	0.58
1:QA:1397:C:O4'	23:QX:23:A:N6	2.36	0.58
13:QM:88:ARG:O	13:QM:92:HIS:ND1	2.34	0.58
22:QV:4:G:O2'	22:QV:5:G:O5'	2.22	0.58
25:RA:699:A:N3	25:RA:1633:G:O2'	2.34	0.58
25:RA:2065:C:H1'	25:RA:2449:U:H3	1.67	0.58
25:RA:2345:G:O6	25:RA:2371:G:N2	2.34	0.58
1:XA:359:U:H3'	1:XA:360:A:C8	2.38	0.58
1:XA:1422:G:H5"	34:YO:48:PRO:HB3	1.86	0.58
41:YV:76:LYS:HB2	41:YV:81:TYR:HB3	1.84	0.58
44:YY:9:LYS:NZ	44:YY:28:LYS:O	2.34	0.58
4:QD:191:ARG:HH12	4:QD:195:ALA:HA	1.67	0.58
25:RA:1529:G:H1	25:RA:1540:U:H3	1.49	0.58
1:XA:390:C:H2'	1:XA:391:G:C8	2.39	0.58
25:YA:1801:G:OP2	27:YD:154:LYS:NZ	2.35	0.58
1:QA:829:G:O6	1:QA:858:G:N2	2.36	0.58
1:QA:1059:C:O3'	14:QN:45:ARG:NH2	2.35	0.58
3:QC:18:TRP:HB3	3:QC:20:SER:H	1.69	0.58
12:QL:74:GLY:O	12:QL:102:ARG:NH2	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1790:C:H5”	25:RA:1791:A:OP1	2.03	0.58
25:RA:1856:G:H1	25:RA:1886:C:H42	1.50	0.58
25:RA:2355:C:H1’	46:R0:39:ARG:HE	1.68	0.58
25:RA:2511:U:O2’	28:RE:138:PRO:O	2.18	0.58
27:RD:134:ARG:NH1	27:RD:187:GLY:HA3	2.19	0.58
1:XA:461:A:O2’	1:XA:471:G:N7	2.31	0.58
1:XA:1071:C:H2’	1:XA:1072:G:H8	1.68	0.58
16:XP:18:ARG:NH1	16:XP:32:TYR:OH	2.37	0.58
25:YA:277:C:O3’	25:YA:278:A:C8	2.57	0.58
25:YA:1102:C:H2’	25:YA:1103:A:H8	1.69	0.58
25:YA:1818:U:OP2	27:YD:157:ARG:NE	2.27	0.58
25:YA:2446:G:H21	25:YA:2449:U:H3	1.52	0.58
29:YF:60:SER:OG	29:YF:61:GLY:N	2.34	0.58
1:QA:545:C:H5’	4:QD:72:GLU:HG3	1.85	0.58
13:QM:108:ARG:NH1	13:QM:112:GLY:O	2.37	0.58
1:QA:773:G:O3’	27:RD:202:LYS:NZ	2.37	0.58
5:QE:76:ILE:HG12	5:QE:118:ILE:HD11	1.86	0.58
25:RA:660:G:N2	35:RP:12:ALA:O	2.37	0.58
25:RA:848:G:H2’	25:RA:849:A:C8	2.38	0.58
26:RB:45:A:O4’	30:RG:95:ARG:NH1	2.36	0.58
29:YF:29:ASN:N	29:YF:112:MET:SD	2.76	0.58
41:YV:50:PRO:HB2	41:YV:51:VAL:HG22	1.85	0.58
1:QA:1342:C:H4’	9:QI:125:TYR:HB3	1.85	0.57
25:RA:889:C:O2’	25:RA:890:A:O5’	2.22	0.57
25:RA:1378:A:OP1	53:R7:10:ARG:NH2	2.37	0.57
25:RA:2555:U:N3	56:ZA:1:C:C6	2.71	0.57
28:RE:53:PRO:HA	28:RE:75:VAL:HA	1.85	0.57
1:XA:371:G:O2’	1:XA:373:A:N7	2.37	0.57
1:XA:514:C:H2’	1:XA:515:G:C8	2.38	0.57
5:XE:94:ALA:HB1	5:XE:98:THR:HG21	1.86	0.57
20:XT:22:ARG:HA	20:XT:25:ARG:HG2	1.86	0.57
25:YA:201:C:H4’	25:YA:386:G:C2	2.39	0.57
28:YE:119:ARG:NH1	28:YE:156:MET:O	2.37	0.57
1:QA:927:G:N2	1:QA:1390:U:O2	2.32	0.57
36:RQ:23:GLY:O	36:RQ:101:ARG:NH1	2.37	0.57
1:XA:373:A:H2’	1:XA:374:A:C8	2.38	0.57
10:XJ:61:GLU:OE1	14:XN:58:LYS:NZ	2.37	0.57
25:YA:277:C:O3’	25:YA:278:A:H8	1.87	0.57
25:YA:1137:G:H2’	25:YA:1138:G:C8	2.39	0.57
25:YA:2156:G:N7	25:YA:2157:G:N2	2.51	0.57
25:YA:2641:G:H2’	25:YA:2642:G:H8	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:Y3:12:PRO:HA	49:Y3:15:TYR:CD1	2.28	0.57
1:QA:877:C:H2'	1:QA:878:G:H8	1.68	0.57
25:RA:320:A:O2'	25:RA:322:A:OP2	2.15	0.57
26:RB:37:C:O2	38:RS:95:HIS:NE2	2.35	0.57
25:YA:272(Q):G:H2'	25:YA:272(R):G:H8	1.69	0.57
25:YA:1086:A:O2'	25:YA:1103:A:N1	2.37	0.57
30:YG:16:ARG:NH2	30:YG:28:VAL:O	2.37	0.57
36:YQ:141:GLN:NE2	45:YZ:74:VAL:O	2.37	0.57
1:QA:8:A:N6	4:QD:205:GLU:O	2.37	0.57
25:RA:1991:U:H2'	25:RA:1992:G:H5"	1.86	0.57
25:RA:2882:A:OP1	37:RR:96:ARG:NE	2.37	0.57
1:XA:36:C:O2'	12:XL:117:ARG:NH2	2.36	0.57
1:XA:1073:U:O2	2:XB:104:ASN:ND2	2.35	0.57
2:XB:178:ARG:HB3	8:XH:72:PRO:HA	1.85	0.57
24:XY:38:A:H2'	24:XY:39:A:C8	2.38	0.57
25:YA:1388:G:H2'	25:YA:1389:G:H8	1.69	0.57
25:YA:1813:G:H21	27:YD:51:VAL:HG23	1.70	0.57
25:YA:2162:G:OP1	25:YA:2172:U:O2'	2.22	0.57
1:QA:429:U:P	4:QD:13:ARG:HH12	2.25	0.57
10:QJ:14:LYS:NZ	10:QJ:17:ASP:OD2	2.36	0.57
25:RA:478:A:N7	25:RA:480:A:N6	2.53	0.57
25:RA:521:G:H2'	25:RA:522:G:H8	1.68	0.57
25:RA:1697:G:H3'	25:RA:1698:A:H2'	1.87	0.57
25:RA:1802:A:H2'	25:RA:1803:A:C8	2.40	0.57
25:RA:2305:A:H5"	30:RG:134:GLY:HA3	1.85	0.57
25:RA:2317:C:N4	25:RA:2318:G:O6	2.37	0.57
43:RX:8:ILE:O	48:R2:36:ARG:NH2	2.33	0.57
12:XL:60:LEU:HB3	12:XL:62:SER:H	1.70	0.57
25:YA:1816:G:O6	27:YD:35:LYS:NZ	2.38	0.57
25:YA:1853:A:N3	25:YA:2233:U:O2'	2.35	0.57
4:QD:64:LEU:HA	4:QD:67:ILE:HD12	1.86	0.57
5:QE:43:LEU:HD21	5:QE:109:ILE:HD12	1.87	0.57
25:RA:2818:G:H1	25:RA:2828:C:H42	1.51	0.57
30:RG:19:LEU:HD21	30:RG:32:PRO:HD2	1.87	0.57
1:XA:578:C:O2'	1:XA:728:A:N3	2.36	0.57
1:XA:580:U:O4	1:XA:761:G:O6	2.22	0.57
25:YA:1496:A:O2'	25:YA:1497:U:O2	2.22	0.57
25:YA:1761:C:H42	25:YA:1762:A:H62	1.53	0.57
25:YA:1853:A:H1'	25:YA:2234:G:H5'	1.86	0.57
28:YE:82:ARG:NH1	28:YE:83:ASP:OD1	2.37	0.57
49:Y3:3:ARG:HD3	49:Y3:60:GLU:HG2	1.84	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:132:C:H5'	1:QA:262:A:H1'	1.85	0.57
7:QG:29:LYS:HB3	7:QG:105:VAL:HG11	1.86	0.57
25:RA:61:G:H1	25:RA:94(A):C:H42	1.53	0.57
25:RA:1294:U:O2	37:RR:23:ASN:ND2	2.37	0.57
25:RA:2220:G:C8	25:RA:2220:G:H3'	2.39	0.57
25:RA:2405:G:O2'	25:RA:2406:U:OP1	2.18	0.57
25:RA:2698:U:H3	25:RA:2709:G:H1	1.53	0.57
1:XA:927:G:N2	1:XA:1390:U:O2	2.32	0.57
1:XA:1391:U:H2'	1:XA:1392:G:C8	2.40	0.57
11:XK:33:THR:HA	11:XK:39:PRO:HA	1.86	0.57
39:YT:73:GLU:OE1	39:YT:103:ARG:NE	2.37	0.57
9:QI:104:ARG:NH1	9:QI:105:ASP:O	2.38	0.57
25:RA:551:G:O2'	25:RA:1220:A:N3	2.30	0.57
25:RA:1528(B):A:H62	25:RA:1541:G:N2	2.03	0.57
28:RE:143:ASN:HD22	28:RE:147:PRO:HG3	1.70	0.57
1:XA:436:C:H2'	1:XA:437:U:H6	1.69	0.57
20:XT:31:SER:O	20:XT:35:THR:OG1	2.22	0.57
25:YA:639:U:H2'	25:YA:640:C:C6	2.40	0.57
25:YA:675:A:OP1	29:YF:63:LYS:NZ	2.36	0.57
25:YA:994:C:OP1	40:YU:53:ARG:NH2	2.37	0.57
29:YF:51:THR:OG1	29:YF:52:LYS:N	2.36	0.57
1:QA:28:G:OP1	4:QD:76:ARG:NH2	2.34	0.57
1:QA:246:A:N1	1:QA:278:G:O2'	2.36	0.57
25:RA:1389:G:H2'	25:RA:1390:U:C6	2.40	0.57
25:RA:1842:G:H2'	25:RA:1843:C:C6	2.39	0.57
25:RA:2221:G:H5"	25:RA:2222:G:OP2	2.05	0.57
1:XA:390:C:H2'	1:XA:391:G:H8	1.69	0.57
1:XA:781:A:H4'	1:XA:1522:U:O2'	2.04	0.57
1:XA:976:G:N2	1:XA:1363(A):C:OP2	2.29	0.57
25:YA:665:C:H2'	25:YA:666:G:H8	1.69	0.57
25:YA:2773:C:OP1	28:YE:166:THR:OG1	2.23	0.57
9:QI:46:ALA:HA	9:QI:78:LYS:HD3	1.86	0.57
13:QM:90:LEU:HA	13:QM:93:ARG:HE	1.69	0.57
25:RA:1385:G:O2'	25:RA:1396:U:O2	2.21	0.57
25:RA:2485:G:OP1	36:RQ:46:GLN:NE2	2.34	0.57
32:RI:129:THR:HA	32:RI:137:PRO:HA	1.87	0.57
35:RP:52:GLU:OE1	35:RP:55:ARG:NH1	2.38	0.57
25:YA:205:G:O2'	25:YA:206:U:OP2	2.23	0.57
25:YA:1790:C:H5"	25:YA:1791:A:OP1	2.05	0.57
29:YF:124:LEU:HD23	29:YF:191:ARG:HH12	1.69	0.57
40:YU:43:GLY:HA3	41:YV:73:SER:HB3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1295:G:O2'	13:QM:14:ARG:NH1	2.38	0.56
5:QE:139:LEU:HA	5:QE:142:LEU:HD13	1.87	0.56
25:RA:1754:C:P	39:RT:96:ARG:HH12	2.27	0.56
38:RS:34:HIS:ND1	38:RS:53:SER:OG	2.34	0.56
53:R7:34:ARG:NH1	53:R7:41:ARG:O	2.38	0.56
1:XA:1221:G:O3'	19:XS:77:THR:OG1	2.22	0.56
5:XE:102:ALA:O	5:XE:107:ARG:NH1	2.38	0.56
25:YA:860:U:H2'	25:YA:861:A:C8	2.40	0.56
25:YA:1065:U:HO2'	25:YA:1066:U:P	2.27	0.56
1:QA:184:G:H2'	1:QA:185:A:H8	1.69	0.56
4:QD:191:ARG:NH1	4:QD:194:LEU:O	2.37	0.56
25:RA:10:G:O2'	25:RA:2801(B):A:N6	2.37	0.56
25:RA:1227:G:OP2	40:RU:16:LYS:NZ	2.38	0.56
1:XA:773:G:O3'	27:YD:202:LYS:NZ	2.39	0.56
25:YA:615:G:OP2	29:YF:43:LYS:NZ	2.27	0.56
25:YA:2637:U:O4	25:YA:2776:A:N7	2.38	0.56
40:YU:44:ASN:ND2	41:YV:75:PHE:O	2.34	0.56
45:YZ:19:ARG:NH1	45:YZ:84:GLU:O	2.37	0.56
1:QA:384:G:H2'	1:QA:385:C:C6	2.40	0.56
1:QA:982:U:N3	1:QA:1223:C:N4	2.35	0.56
1:QA:1240:U:N3	7:QG:30:ILE:O	2.34	0.56
13:QM:67:GLU:OE1	13:QM:71:ARG:NH1	2.38	0.56
25:RA:1827:C:OP2	27:RD:222:ARG:NH1	2.38	0.56
25:RA:2080:G:OP1	47:R1:35:THR:HG21	2.06	0.56
25:RA:2572:A:OP2	28:RE:146:THR:OG1	2.20	0.56
27:RD:143:HIS:ND1	27:RD:194:GLY:O	2.37	0.56
30:RG:161:THR:HG22	30:RG:163:ALA:H	1.70	0.56
1:XA:584:G:H1	1:XA:757:U:H3	1.52	0.56
1:XA:736:C:H2'	1:XA:737:A:H8	1.69	0.56
6:XF:81:ILE:HG21	27:YD:125:ILE:HD13	1.86	0.56
13:XM:90:LEU:HD23	13:XM:93:ARG:HD2	1.86	0.56
25:YA:1137:G:H2'	25:YA:1138:G:H8	1.71	0.56
25:YA:1508:A:H4'	25:YA:1509(B):A:C4	2.40	0.56
27:YD:72:LYS:NZ	27:YD:99:ASP:OD2	2.34	0.56
25:RA:272(I):G:H1	25:RA:272(O):C:H42	1.54	0.56
25:RA:820:A:H2'	25:RA:821:A:C8	2.40	0.56
29:RF:195:ASP:HB2	29:RF:198:ALA:H	1.70	0.56
1:XA:1456:G:N1	20:XT:51:GLU:OE1	2.38	0.56
25:YA:1113:U:H2'	25:YA:1114:G:C8	2.41	0.56
56:ZB:3:PPU:H93	56:ZB:3:PPU:N7	2.19	0.56
1:QA:1099:G:OP2	2:QB:144:ARG:NH1	2.30	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:110:ASP:HB3	18:QR:85:LEU:HB2	1.87	0.56
13:QM:16:ASP:N	13:QM:16:ASP:OD1	2.38	0.56
25:RA:2591:C:H2'	25:RA:2592:G:C8	2.40	0.56
26:RB:19:G:H1	26:RB:64:C:H42	1.52	0.56
45:RZ:102:LEU:HD11	45:RZ:124:ILE:HG12	1.88	0.56
1:XA:1427:U:H2'	1:XA:1428:A:H8	1.69	0.56
25:YA:1299:G:H21	25:YA:1641:A:H62	1.52	0.56
1:QA:1119:C:H2'	1:QA:1120:G:H8	1.69	0.56
8:QH:36:LEU:HD13	8:QH:39:LEU:HD13	1.86	0.56
25:RA:358:U:H2'	25:RA:359:A:H8	1.70	0.56
25:RA:628:G:H5"	54:R8:18:ALA:HB2	1.87	0.56
25:RA:1800:C:OP2	27:RD:183:ARG:NH2	2.38	0.56
1:XA:8:A:N6	4:XD:205:GLU:O	2.39	0.56
1:XA:235:C:H2'	1:XA:236:G:H8	1.71	0.56
1:XA:489:C:H5"	4:XD:131:ARG:HH12	1.70	0.56
1:XA:1178:G:P	9:XI:93:ARG:HH21	2.29	0.56
1:XA:1524:C:H2'	1:XA:1525:G:C8	2.40	0.56
3:XC:17:ASP:O	3:XC:54:ARG:NH2	2.38	0.56
3:XC:189:ALA:HB3	3:XC:196:LEU:HB2	1.88	0.56
25:YA:1639:U:C2'	25:YA:1640:C:H5"	2.35	0.56
29:YF:11:VAL:HG22	29:YF:125:LEU:HB2	1.88	0.56
55:Y9:25:VAL:HB	55:Y9:34:GLN:HB2	1.88	0.56
1:QA:922:G:H2'	1:QA:923:A:H8	1.71	0.56
1:QA:1336:C:H5'	1:QA:1337:G:C2	2.40	0.56
14:QN:22:THR:OG1	14:QN:33:VAL:HG23	2.05	0.56
25:RA:626:U:O4	35:RP:81:GLN:NE2	2.39	0.56
25:RA:869:G:H5'	36:RQ:6:ARG:HH22	1.70	0.56
25:RA:1041:C:H42	25:RA:1114:G:H1	1.54	0.56
25:RA:1301:A:H4'	25:RA:1302:A:OP1	2.06	0.56
27:RD:134:ARG:HH11	27:RD:187:GLY:CA	2.19	0.56
27:RD:134:ARG:NH1	27:RD:187:GLY:CA	2.69	0.56
31:RH:89:ILE:HG22	31:RH:162:ILE:HG23	1.86	0.56
1:XA:344:A:H5"	1:XA:345:C:C5	2.41	0.56
1:XA:664:G:H22	1:XA:741:G:H1	1.54	0.56
1:QA:1373:G:OP2	9:QI:71:SER:OG	2.22	0.56
25:RA:1153:C:OP1	40:RU:92:ARG:NH2	2.39	0.56
25:RA:2867:G:OP2	39:RT:119:LYS:NZ	2.27	0.56
1:XA:737:A:H2'	1:XA:738:C:C6	2.40	0.56
1:XA:1095:U:OP1	1:XA:1108:G:N2	2.22	0.56
1:XA:1247:U:O4	1:XA:1290:G:O6	2.24	0.56
25:YA:330:A:O2'	25:YA:331:A:H8	1.89	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:922:U:O2'	46:Y0:29:GLN:OE1	2.23	0.56
25:YA:1573:G:H2'	25:YA:1574:C:H5'	1.88	0.56
1:QA:934:C:O2'	1:QA:1344:C:OP2	2.19	0.56
1:QA:1158:C:H5	1:QA:1181:G:H1	1.53	0.56
53:R7:24:THR:HG23	53:R7:27:GLY:H	1.70	0.56
1:XA:7:G:O2'	5:XE:120:THR:O	2.22	0.56
1:XA:1203:C:H2'	1:XA:1204:A:C8	2.41	0.56
1:XA:1320:C:H42	19:XS:36:ARG:HE	1.53	0.56
8:XH:111:ILE:HG22	8:XH:134:ILE:HD13	1.88	0.56
24:XY:37:G:O2'	25:YA:1913:A:N1	2.36	0.56
25:YA:851:U:OP1	49:Y3:49:LYS:NZ	2.27	0.56
40:YU:28:ARG:NH1	40:YU:38:THR:OG1	2.37	0.56
4:QD:166:LYS:HB2	4:QD:178:VAL:HG11	1.88	0.56
11:QK:33:THR:HA	11:QK:39:PRO:HA	1.88	0.56
25:RA:835:A:H2'	25:RA:836:G:H8	1.71	0.56
25:RA:1000:A:H2'	25:RA:1001:A:C8	2.41	0.56
36:RQ:75:THR:HA	36:RQ:90:VAL:HA	1.87	0.56
38:RS:25:ARG:NH1	38:RS:42:ASP:OD1	2.39	0.56
1:XA:62:U:O2'	1:XA:379:C:O2	2.24	0.56
1:XA:149:A:H61	1:XA:172:A:H62	1.52	0.56
1:XA:1231:G:O3'	9:XI:126:SER:OG	2.24	0.56
25:YA:693:C:O2'	25:YA:1353:A:N3	2.38	0.56
25:YA:855:G:O2'	46:Y0:27:GLU:OE2	2.20	0.56
25:YA:1453:U:H5'	37:YR:63:ARG:NE	2.20	0.56
25:YA:2266:A:H4'	25:YA:2267:A:N3	2.21	0.56
25:YA:2314:C:H2'	25:YA:2315:G:H8	1.71	0.56
38:YS:12:PHE:O	38:YS:16:ASN:ND2	2.38	0.56
1:QA:222:U:H2'	1:QA:223:U:C6	2.40	0.55
1:QA:501:C:O2	1:QA:549:C:O2'	2.24	0.55
1:QA:1422:G:H2'	1:QA:1423:G:C8	2.41	0.55
6:QF:1:MET:N	6:QF:69:GLU:OE1	2.39	0.55
25:RA:870:A:H5'	36:RQ:6:ARG:HB3	1.88	0.55
25:RA:881:G:H22	25:RA:895:U:H3	1.53	0.55
25:RA:2086:U:H2'	25:RA:2087:G:H8	1.71	0.55
11:XK:45:GLY:HA2	11:XK:48:ILE:HD12	1.87	0.55
25:YA:604:G:OP2	35:YP:90:ARG:NH1	2.39	0.55
25:YA:1625:C:H2'	25:YA:1626:G:O4'	2.07	0.55
25:YA:2017:U:H5"	25:YA:2018:G:OP2	2.06	0.55
29:YF:117:ARG:NH2	29:YF:189:THR:O	2.37	0.55
50:Y4:16:CYS:SG	50:Y4:17:GLY:N	2.79	0.55
1:QA:624:C:H2'	1:QA:625:G:H8	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:745:C:H2'	1:QA:746:A:C8	2.41	0.55
1:QA:1427:U:H2'	1:QA:1428:A:C8	2.41	0.55
25:RA:2345:G:N3	25:RA:2381:C:H2'	2.21	0.55
25:RA:2744:G:N2	31:RH:143:GLN:OE1	2.32	0.55
39:RT:102:ILE:HA	39:RT:105:LEU:HD13	1.88	0.55
1:XA:1137:C:O2	1:XA:1138:G:N2	2.39	0.55
1:XA:1183:A:H3'	1:XA:1184:G:H5"	1.87	0.55
1:XA:1380:U:O4	7:XG:2:ALA:N	2.39	0.55
9:XI:21:PRO:HA	9:XI:59:PHE:HA	1.88	0.55
22:XV:23:C:H2'	22:XV:24:U:H6	1.72	0.55
25:YA:17:G:H4'	40:YU:25:TRP:HE1	1.69	0.55
27:YD:85:ASP:OD2	27:YD:88:ARG:NH1	2.39	0.55
37:YR:107:ASP:N	37:YR:107:ASP:OD1	2.36	0.55
1:QA:7:G:O2'	5:QE:120:THR:O	2.23	0.55
1:QA:34:C:H2'	1:QA:35:G:H8	1.72	0.55
1:QA:583:A:O2'	17:QQ:91:ARG:NH2	2.28	0.55
1:QA:826:C:O2	8:QH:15:ASN:ND2	2.39	0.55
4:QD:104:VAL:HA	4:QD:107:ARG:HB2	1.88	0.55
54:R8:22:VAL:HG13	54:R8:50:LEU:HB2	1.89	0.55
1:XA:399:G:H2'	1:XA:400:C:C6	2.42	0.55
27:YD:66:ASP:HB3	27:YD:105:ILE:HG22	1.88	0.55
1:QA:1060:C:O2'	10:QJ:56:HIS:ND1	2.38	0.55
1:QA:1235:U:O2'	1:QA:1305:G:OP1	2.15	0.55
22:QV:75:C:H42	25:RA:2251:OMG:HN1	1.55	0.55
25:RA:952:G:OP1	36:RQ:16:ARG:NH2	2.39	0.55
25:RA:1143:A:OP1	33:RN:25:ARG:NH2	2.35	0.55
25:RA:1270:C:H5"	25:RA:1271:G:H5'	1.88	0.55
25:RA:1316:U:H2'	25:RA:1317:A:H8	1.71	0.55
29:RF:116:ASP:OD2	29:RF:117:ARG:NH1	2.40	0.55
35:RP:85:LEU:HB2	35:RP:118:GLY:HA3	1.88	0.55
1:XA:923:A:O2'	1:XA:1399:C:OP2	2.23	0.55
15:XO:3:ILE:HG21	15:XO:34:LEU:HD21	1.87	0.55
25:YA:637:A:OP2	35:YP:116:GLY:N	2.37	0.55
25:YA:658:C:O2'	25:YA:659:C:H5'	2.07	0.55
27:YD:44:ASN:ND2	27:YD:46:GLN:OE1	2.38	0.55
30:YG:29:TRP:O	30:YG:33:ARG:NH1	2.39	0.55
52:Y6:25:LYS:NZ	52:Y6:32:ASN:O	2.38	0.55
1:QA:187:C:OP1	20:QT:82:SER:OG	2.22	0.55
8:QH:29:SER:HB3	8:QH:32:LYS:HG3	1.87	0.55
9:QI:96:LEU:O	9:QI:100:GLY:N	2.39	0.55
20:QT:10:LEU:HG	20:QT:12:ALA:H	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:535:C:H2'	25:RA:536:A:C8	2.41	0.55
25:RA:787:U:H5"	25:RA:788:A:H5'	1.87	0.55
39:RT:105:LEU:HD23	39:RT:109:GLU:HB3	1.88	0.55
45:RZ:19:ARG:NH1	45:RZ:84:GLU:O	2.37	0.55
1:XA:403:C:OP1	4:XD:137:SER:OG	2.24	0.55
1:XA:1525:G:OP1	11:XK:120:ARG:NH2	2.40	0.55
1:XA:1527:C:O2'	1:XA:1528:U:H5'	2.05	0.55
25:YA:1817:G:OP1	27:YD:88:ARG:NH2	2.39	0.55
25:YA:2115:G:N2	25:YA:2117:A:N7	2.54	0.55
1:QA:222:U:H2'	1:QA:223:U:H6	1.71	0.55
1:QA:279:A:N6	17:QQ:98:LEU:O	2.39	0.55
25:RA:1838:C:H4'	25:RA:1839:G:H5'	1.86	0.55
25:RA:2314:C:H2'	25:RA:2315:G:H8	1.71	0.55
25:RA:2450:A:N6	25:RA:2501:C:N4	2.54	0.55
25:RA:2506:U:O2	56:ZA:3:PPU:O2'	2.24	0.55
32:RI:94:ALA:HB1	32:RI:114:LEU:HD23	1.88	0.55
39:RT:66:VAL:HA	39:RT:71:GLY:HA2	1.89	0.55
1:XA:1098:C:H2'	1:XA:1099:G:C8	2.41	0.55
1:XA:1330:U:H4'	13:XM:23:TYR:CZ	2.41	0.55
1:XA:1458:G:OP1	20:XT:35:THR:OG1	2.24	0.55
25:YA:223:A:O2'	25:YA:420:C:O2	2.24	0.55
25:YA:2635:C:O2	28:YE:37:ARG:NH2	2.39	0.55
31:YH:94:TYR:OH	31:YH:152:ARG:NH2	2.39	0.55
1:QA:188:C:H2'	1:QA:189(A):G:H8	1.72	0.55
1:QA:692:U:H3	11:QK:53:SER:HG	1.55	0.55
1:QA:938:A:H5'	7:QG:76:ARG:HH22	1.72	0.55
5:QE:140:ARG:O	5:QE:143:ARG:NH2	2.33	0.55
25:RA:700:G:O6	25:RA:733:G:N2	2.40	0.55
25:RA:991:C:OP2	25:RA:1186:G:H5'	2.07	0.55
25:RA:1066:U:O2'	25:RA:1068:G:OP2	2.23	0.55
25:RA:1889:A:H2'	25:RA:1890:A:C8	2.41	0.55
25:RA:2636:U:H3	25:RA:2782:G:H1	1.52	0.55
29:RF:117:ARG:NH2	29:RF:189:THR:O	2.38	0.55
40:RU:31:SER:OG	40:RU:33:ARG:N	2.39	0.55
47:R1:5:CYS:HB3	47:R1:10:LYS:H	1.70	0.55
7:XG:113:GLU:O	7:XG:119:ARG:NH1	2.38	0.55
20:XT:78:ALA:HA	20:XT:81:LYS:HD3	1.88	0.55
25:YA:1593:G:H2'	25:YA:1594:G:C8	2.41	0.55
25:YA:1667:G:N2	25:YA:1992:G:OP2	2.39	0.55
25:YA:1697:G:OP2	25:YA:1698:A:O2'	2.22	0.55
2:QB:73:THR:O	2:QB:78:GLN:NE2	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2845:G:H2'	25:RA:2846:G:H8	1.72	0.55
1:XA:376:G:O3'	16:XP:5:ARG:NH1	2.39	0.55
4:XD:102:ASP:N	4:XD:102:ASP:OD1	2.37	0.55
13:XM:16:ASP:OD1	13:XM:16:ASP:N	2.37	0.55
25:YA:190:A:N3	25:YA:679:C:O2'	2.36	0.55
25:YA:466:A:N3	25:YA:683:C:H1'	2.21	0.55
25:YA:1239:G:H2'	25:YA:1240:U:O4'	2.06	0.55
25:YA:1819:A:H4'	25:YA:1820:U:H5"	1.89	0.55
29:YF:183:VAL:HA	29:YF:186:ILE:HD12	1.87	0.55
1:QA:933:G:O6	7:QG:3:ARG:NH2	2.39	0.55
2:QB:178:ARG:NH2	2:QB:196:LEU:O	2.40	0.55
19:QS:22:LEU:O	19:QS:26:GLY:N	2.37	0.55
32:RI:40:THR:HG23	32:RI:43:ASN:H	1.71	0.55
37:RR:102:GLU:OE2	42:RW:37:ARG:NH2	2.39	0.55
1:XA:1070:U:OP1	5:XE:18:ARG:NH2	2.36	0.55
8:XH:9:MET:HG3	8:XH:26:VAL:HG11	1.88	0.55
11:XK:24:SER:OG	11:XK:25:TYR:N	2.39	0.55
25:YA:859:G:O2'	25:YA:916:G:O6	2.25	0.55
25:YA:906:G:O2'	36:YQ:67:ARG:NH2	2.37	0.55
25:YA:1405:U:H2'	25:YA:1406:U:H6	1.72	0.55
26:YB:52:A:H61	38:YS:32:LEU:HB3	1.70	0.55
28:YE:101:ARG:NH1	28:YE:169:ASN:O	2.39	0.55
30:YG:151:ALA:O	30:YG:153:ARG:NH1	2.40	0.55
20:QT:57:ARG:HH12	20:QT:100:ILE:HD12	1.71	0.55
25:RA:52:A:OP2	25:RA:117:G:N1	2.28	0.55
25:RA:1651:G:H5'	37:RR:39:PRO:HG2	1.89	0.55
1:XA:376:G:H2'	1:XA:377:G:H8	1.72	0.55
1:XA:745:C:H2'	1:XA:746:A:H8	1.72	0.55
6:XF:9:VAL:HB	6:XF:87:ARG:HB2	1.89	0.55
22:XV:23:C:H2'	22:XV:24:U:C6	2.41	0.55
31:YH:9:ILE:HD11	31:YH:69:ARG:HG2	1.89	0.55
1:QA:244:U:C4	1:QA:893:C:N3	2.75	0.54
7:QG:69:VAL:HG21	7:QG:104:LEU:HD21	1.89	0.54
25:RA:49:A:H4'	25:RA:50:U:H5"	1.87	0.54
25:RA:517:C:OP1	51:R5:16:ARG:NH2	2.40	0.54
25:RA:958:U:O2	26:RB:90:A:O2'	2.22	0.54
25:RA:1141:U:OP2	33:RN:63:THR:OG1	2.17	0.54
1:XA:1435:G:H2'	1:XA:1436:U:C6	2.42	0.54
4:XD:127:THR:HG23	4:XD:147:ALA:HB3	1.90	0.54
25:YA:2323:G:O6	25:YA:2332:U:O4	2.26	0.54
25:RA:1480:G:H1	25:RA:1511:C:H42	1.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1646:C:H5”	25:RA:1647:G:C5’	2.35	0.54
25:RA:2262:U:O2’	25:RA:2263:C:H5’	2.07	0.54
31:RH:118:PRO:HG2	31:RH:121:ILE:HG13	1.90	0.54
54:R8:33:ASN:HA	54:R8:36:LYS:HD2	1.89	0.54
9:XI:112:LYS:HA	9:XI:119:ALA:HB2	1.89	0.54
25:YA:140:G:H21	25:YA:142(A):A:H62	1.54	0.54
25:YA:1227:G:OP2	40:YU:16:LYS:NZ	2.37	0.54
25:YA:2303:G:H1’	30:YG:132:ASN:HD22	1.72	0.54
25:YA:2889:C:H3’	25:YA:2891:G:H8	1.71	0.54
30:YG:11:TYR:OH	30:YG:32:PRO:O	2.22	0.54
36:YQ:23:GLY:O	36:YQ:101:ARG:NH1	2.40	0.54
38:YS:34:HIS:ND1	38:YS:53:SER:OG	2.34	0.54
44:YY:43:ASN:ND2	44:YY:66:PRO:O	2.40	0.54
47:Y1:46:LEU:O	47:Y1:47:GLN:NE2	2.41	0.54
50:Y4:26:SER:OG	50:Y4:27:THR:N	2.39	0.54
56:ZA:3:PPU:C5’	56:ZA:3:PPU:C8	2.85	0.54
1:QA:148:G:H2’	1:QA:149:A:C8	2.42	0.54
1:QA:1077:G:N2	1:QA:1080:A:OP2	2.31	0.54
25:RA:675:A:N3	25:RA:2443:C:O2’	2.35	0.54
25:RA:745:G:OP1	28:RE:133:LYS:NZ	2.39	0.54
25:RA:2543:G:H21	25:RA:2646:C:H5”	1.69	0.54
25:RA:2637:U:O4	25:RA:2776:A:N7	2.40	0.54
30:RG:15:VAL:HG13	30:RG:175:LEU:HB3	1.89	0.54
51:R5:41:PRO:O	51:R5:44:THR:OG1	2.25	0.54
1:XA:323:U:H4’	20:XT:22:ARG:HB2	1.88	0.54
1:XA:407:G:H2’	1:XA:408:A:H8	1.72	0.54
17:XQ:66:SER:OG	17:XQ:67:LYS:N	2.41	0.54
25:YA:2066:C:C2’	25:YA:2067:G:H5’	2.37	0.54
2:QB:82:ARG:NH1	2:QB:92:TYR:OH	2.40	0.54
25:RA:635:C:H2’	25:RA:636:G:C8	2.42	0.54
25:RA:2206:G:OP1	27:RD:68:LYS:NZ	2.40	0.54
44:RY:52:SER:HG	44:RY:55:TYR:H	1.55	0.54
1:XA:399:G:H2’	1:XA:400:C:H6	1.73	0.54
1:XA:501:C:H2’	1:XA:502:G:H8	1.72	0.54
4:XD:201:GLN:HA	4:XD:204:ILE:HD12	1.89	0.54
5:XE:100:VAL:O	5:XE:107:ARG:NH2	2.40	0.54
25:YA:2469:A:O2’	36:YQ:56:ARG:NH1	2.40	0.54
25:YA:2740:A:H2’	25:YA:2741:A:H8	1.73	0.54
28:YE:5:LEU:HD21	28:YE:79:ARG:HB2	1.88	0.54
47:Y1:71:TYR:HA	47:Y1:74:VAL:HG12	1.90	0.54
1:QA:427:U:P	4:QD:13:ARG:NH2	2.80	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:922:G:H2'	1:QA:923:A:C8	2.42	0.54
1:QA:1525:G:H2'	1:QA:1526:G:H8	1.73	0.54
25:RA:144:C:H2'	25:RA:145:G:H8	1.72	0.54
25:RA:380:U:H5'	47:R1:18:ILE:HD13	1.89	0.54
25:RA:1231:G:H2'	25:RA:1232:G:C8	2.42	0.54
25:RA:1309:G:H4'	53:R7:7:PRO:HG2	1.90	0.54
25:RA:2561:A:H2	34:RO:23:ARG:HH11	1.55	0.54
25:RA:2684:U:O2'	34:RO:68:GLU:OE2	2.25	0.54
1:XA:236:G:OP1	17:XQ:40:LYS:NZ	2.41	0.54
1:XA:280:C:N3	17:XQ:39:SER:N	2.49	0.54
1:XA:1314:C:OP2	19:XS:4:SER:OG	2.16	0.54
9:XI:26:VAL:HG22	9:XI:61:ALA:HB3	1.90	0.54
25:YA:288:C:H2'	25:YA:289:A:H8	1.72	0.54
25:YA:396:G:O2'	47:Y1:43:TYR:O	2.26	0.54
25:YA:1011:G:OP2	40:YU:66:ASN:ND2	2.33	0.54
25:YA:1292:U:H2'	25:YA:1293:C:C6	2.43	0.54
25:YA:1433:U:H3	25:YA:1560:G:H1	1.55	0.54
25:YA:2037:G:O2'	25:YA:2038:G:H5'	2.07	0.54
25:YA:2334:G:O6	46:Y0:74:ARG:NH2	2.40	0.54
25:YA:2470:G:O6	25:YA:2476:A:O2'	2.25	0.54
26:YB:8:U:O4	26:YB:113:G:O6	2.26	0.54
28:YE:12:THR:HG23	39:YT:58:ASN:HD21	1.71	0.54
32:YI:62:LYS:HD2	32:YI:133:HIS:HE1	1.72	0.54
46:Y0:50:ASN:HB2	46:Y0:81:VAL:HG13	1.90	0.54
1:QA:263:A:OP1	20:QT:79:ARG:NH1	2.40	0.54
1:QA:977:A:N6	1:QA:1224:G:OP1	2.39	0.54
3:QC:131:ARG:NH1	3:QC:166:GLU:OE1	2.41	0.54
12:QL:53:ARG:HG3	12:QL:93:LEU:HD11	1.90	0.54
25:RA:2718:G:O2'	25:RA:2847:U:OP1	2.26	0.54
47:R1:59:THR:O	47:R1:91:LYS:NZ	2.37	0.54
49:R3:7:LYS:HB3	49:R3:55:ARG:HB3	1.88	0.54
9:XI:121:ARG:NH1	9:XI:122:ALA:O	2.40	0.54
25:YA:467:G:N7	53:Y7:39:ARG:NH2	2.56	0.54
25:YA:631:A:OP1	35:YP:65:ARG:NH1	2.40	0.54
25:YA:974:G:O2'	25:YA:975(B):G:N7	2.28	0.54
25:YA:1029:A:OP1	36:YQ:128:LYS:NZ	2.37	0.54
32:YI:1:MET:HE3	32:YI:2:LYS:H	1.71	0.54
1:QA:127:G:N2	17:QQ:61:GLU:OE1	2.40	0.54
1:QA:1179:A:H5'	9:QI:102:LEU:HG	1.90	0.54
24:QY:37:G:O2'	25:RA:1913:A:N1	2.41	0.54
25:RA:184:C:O3'	25:RA:217:G:N2	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1091:G:N2	25:RA:1100:C:O2	2.39	0.54
25:RA:1668:A:N3	25:RA:1670:C:N4	2.56	0.54
25:RA:2171:A:H4'	25:RA:2172:U:OP1	2.07	0.54
25:RA:2180:U:H2'	25:RA:2181:G:C8	2.42	0.54
26:RB:24:G:N3	26:RB:26:A:N6	2.56	0.54
27:RD:145:VAL:HB	27:RD:155:LEU:HB2	1.89	0.54
35:RP:65:ARG:O	35:RP:68:GLN:NE2	2.40	0.54
1:XA:737:A:H2'	1:XA:738:C:H6	1.71	0.54
2:XB:95:GLN:HG3	2:XB:147:LYS:HD2	1.90	0.54
25:YA:1721:G:N2	25:YA:1739:U:OP2	2.41	0.54
25:YA:2740:A:H2'	25:YA:2741:A:C8	2.42	0.54
38:YS:105:ALA:HB1	38:YS:110:LEU:HD23	1.90	0.54
55:Y9:2:LYS:HB3	55:Y9:4:ARG:HG3	1.90	0.54
4:QD:8:VAL:HG13	4:QD:22:LYS:HE3	1.89	0.54
26:RB:46:A:H2'	26:RB:47:C:C6	2.42	0.54
27:RD:248:SER:OG	27:RD:251:GLY:N	2.38	0.54
34:RO:64:ARG:HB3	34:RO:83:ALA:HB3	1.89	0.54
36:RQ:85:LYS:HE2	46:R0:8:GLY:HA3	1.90	0.54
4:XD:208:SER:O	4:XD:208:SER:OG	2.26	0.54
22:XV:50:U:O4	22:XV:64:G:O6	2.26	0.54
25:YA:581:C:H2'	25:YA:582:G:H8	1.72	0.54
25:YA:2552:OMU:H2'	25:YA:2554:U:OP2	2.07	0.54
1:QA:237:C:O3'	17:QQ:25:ARG:NH1	2.41	0.54
1:QA:267:C:OP1	17:QQ:67:LYS:HD3	2.08	0.54
1:QA:970:C:N4	9:QI:128:ARG:OXT	2.41	0.54
8:QH:3:THR:OG1	8:QH:4:ASP:N	2.38	0.54
11:QK:21:ILE:HG22	11:QK:30:VAL:HG12	1.89	0.54
25:RA:336:C:O2'	25:RA:337:C:H5'	2.07	0.54
26:RB:80:U:O2	26:RB:97:G:N2	2.31	0.54
1:XA:918:A:H2'	1:XA:919:A:C8	2.43	0.54
1:XA:926:G:H22	23:XX:15:A:H3'	1.71	0.54
2:XB:47:THR:HG23	2:XB:202:PRO:HG2	1.90	0.54
9:XI:13:ALA:HB2	9:XI:68:GLY:HA3	1.88	0.54
22:XV:75:C:OP1	25:YA:2602:A:H5"	2.08	0.54
29:YF:157:VAL:HB	29:YF:194:MET:HG2	1.90	0.54
44:YY:5:MET:HE1	44:YY:35:TYR:HA	1.90	0.54
1:QA:795:C:O2'	1:QA:1506:U:O2	2.17	0.54
1:QA:926:G:N2	23:QX:16:A:OP1	2.41	0.54
4:QD:53:ASP:HB3	5:QE:107:ARG:HH22	1.71	0.54
9:QI:5:TYR:HA	9:QI:17:VAL:O	2.08	0.54
12:QL:89:ARG:HB3	12:QL:91:LYS:HE3	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:106:C:H1'	44:RY:1:MET:HE2	1.90	0.54
25:RA:681:G:H1	25:RA:796:C:H42	1.56	0.54
1:XA:1255:G:N7	10:XJ:43:ARG:NH2	2.54	0.54
25:YA:274:G:H2'	25:YA:275:G:H8	1.73	0.54
25:YA:989:G:OP2	49:Y3:11:SER:OG	2.22	0.54
25:YA:997:G:OP1	40:YU:92:ARG:HD3	2.07	0.54
25:YA:1406:U:H2'	25:YA:1407:C:C6	2.43	0.54
25:YA:2716:U:H2'	25:YA:2717:G:H8	1.73	0.54
29:YF:50:SER:OG	29:YF:51:THR:N	2.39	0.54
1:QA:548:G:O5'	4:QD:73:ARG:NH2	2.42	0.53
1:QA:613:C:H2'	1:QA:614:A:H8	1.73	0.53
3:QC:44:GLU:HB3	3:QC:52:LEU:HD11	1.90	0.53
4:QD:81:GLU:OE2	4:QD:139:ARG:NH1	2.41	0.53
25:RA:1316:U:H2'	25:RA:1317:A:C8	2.43	0.53
1:XA:1112:C:H1'	3:XC:179:ARG:HH11	1.73	0.53
1:XA:1207:2MG:H2'	1:XA:1208:C:H6	1.71	0.53
1:XA:1525:G:H2'	1:XA:1526:G:H8	1.73	0.53
8:XH:103:VAL:HG12	8:XH:104:ARG:HB2	1.88	0.53
9:XI:17:VAL:HG21	9:XI:80:GLY:HA3	1.90	0.53
21:XU:17:THR:O	21:XU:22:ARG:NH1	2.39	0.53
25:YA:1265:A:H4'	25:YA:1266:G:OP1	2.07	0.53
25:YA:1308:A:H2'	25:YA:1309:G:O4'	2.09	0.53
54:Y8:32:LEU:O	54:Y8:36:LYS:NZ	2.40	0.53
1:QA:235:C:H2'	1:QA:236:G:H8	1.72	0.53
8:QH:4:ASP:OD2	8:QH:7:ALA:N	2.36	0.53
25:RA:463:G:N2	25:RA:466:A:OP2	2.40	0.53
25:RA:613:G:O2'	25:RA:614(D):A:N6	2.41	0.53
25:RA:1794:U:H2'	25:RA:1795:C:H6	1.73	0.53
25:RA:1801:G:O6	25:RA:2201:C:O2'	2.26	0.53
25:RA:1817:G:O5'	27:RD:157:ARG:NH2	2.41	0.53
25:RA:2648:C:H2'	25:RA:2649:U:C6	2.43	0.53
28:RE:2:LYS:HG2	28:RE:200:GLU:HB2	1.91	0.53
32:RI:14:ASP:N	32:RI:14:ASP:OD1	2.41	0.53
1:XA:501:C:H2'	1:XA:502:G:C8	2.43	0.53
1:XA:1229:A:OP1	13:XM:116:THR:OG1	2.18	0.53
2:XB:54:THR:HG22	2:XB:199:TYR:HB3	1.89	0.53
25:YA:443:A:H1'	25:YA:1201:C:O4'	2.09	0.53
25:YA:836:G:H2'	25:YA:837:C:C6	2.44	0.53
25:YA:1105:U:H2'	25:YA:1106:G:H8	1.74	0.53
25:YA:1826:G:H4'	27:YD:242:ARG:HH21	1.73	0.53
25:YA:2115:G:H21	25:YA:2171:A:H61	1.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2784:C:O2	28:YE:37:ARG:NH1	2.37	0.53
1:QA:184:G:H2'	1:QA:185:A:C8	2.44	0.53
1:QA:819:A:H5'	1:QA:820:U:H5	1.73	0.53
1:QA:1317:C:OP2	14:QN:17:LYS:NZ	2.39	0.53
1:QA:1500:A:H5"	1:QA:1508:G:H5"	1.89	0.53
25:RA:1031:G:O2'	55:R9:7:VAL:O	2.24	0.53
26:RB:42:C:H1'	30:RG:92:VAL:HG23	1.90	0.53
28:RE:38:THR:HG1	28:RE:41:LYS:H	1.55	0.53
31:RH:105:LEU:HB3	31:RH:107:VAL:HG23	1.89	0.53
38:RS:35:ILE:HG23	38:RS:97:ARG:HH21	1.73	0.53
1:XA:68:G:H22	1:XA:101:A:H2	1.56	0.53
3:XC:131:ARG:NH1	3:XC:166:GLU:OE1	2.40	0.53
13:XM:98:VAL:HG13	13:XM:99:ARG:HG3	1.89	0.53
20:XT:30:LYS:HA	20:XT:33:ILE:HD12	1.89	0.53
26:YB:8:U:O2	26:YB:113:G:N2	2.36	0.53
1:QA:237:C:H2'	1:QA:238:G:H8	1.74	0.53
1:QA:1321:C:OP2	1:QA:1322:C:O2'	2.26	0.53
1:QA:1360:A:H8	1:QA:1360:A:OP1	1.91	0.53
25:RA:449:A:H2'	25:RA:450:G:H5'	1.91	0.53
25:RA:590:A:H2'	25:RA:591:C:C6	2.43	0.53
25:RA:856:C:O2'	25:RA:857:C:OP1	2.24	0.53
25:RA:1224:C:O2	41:RV:85:LYS:NZ	2.41	0.53
25:RA:1363:C:O2'	25:RA:1809:A:N3	2.36	0.53
25:RA:2591:C:H2'	25:RA:2592:G:H8	1.73	0.53
25:RA:2746:U:H4'	31:RH:138:LYS:HD3	1.89	0.53
30:RG:61:ALA:O	30:RG:65:GLY:N	2.39	0.53
35:RP:62:LEU:O	54:R8:13:ARG:NH1	2.40	0.53
53:R7:13:ALA:HB2	53:R7:46:VAL:HG21	1.91	0.53
1:XA:740:U:O3'	15:XO:39:LEU:HD11	2.09	0.53
1:XA:1437:C:H2'	1:XA:1438:G:C8	2.44	0.53
25:YA:305:U:H2'	25:YA:306:U:C6	2.43	0.53
25:YA:690:G:H2'	25:YA:691:C:C6	2.44	0.53
25:YA:1593:G:H2'	25:YA:1594:G:H8	1.73	0.53
25:YA:1999:C:OP1	25:YA:2723:C:O2'	2.27	0.53
25:YA:2698:U:H2'	25:YA:2699:C:C6	2.44	0.53
39:YT:54:ARG:HA	39:YT:59:THR:HG23	1.91	0.53
1:QA:816:A:OP2	1:QA:1526:G:O2'	2.27	0.53
6:QF:100:ASN:ND2	18:QR:26:LEU:O	2.41	0.53
25:RA:300:A:OP1	44:RY:86:ARG:NH2	2.41	0.53
25:RA:1019:U:OP1	25:RA:1035:U:O2'	2.20	0.53
25:RA:1273:U:H5'	25:RA:1274:A:OP1	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1791:A:H4'	27:RD:206:LEU:HB2	1.89	0.53
29:RF:29:ASN:OD1	29:RF:31:HIS:N	2.40	0.53
29:RF:54:ARG:NH2	29:RF:77:ASP:OD1	2.42	0.53
37:RR:37:THR:OG1	37:RR:38:VAL:N	2.40	0.53
7:XG:111:ARG:NH1	7:XG:113:GLU:OE2	2.41	0.53
25:YA:272(C):C:H42	25:YA:272(U):G:H1	1.56	0.53
42:YW:64:MET:HE2	42:YW:109:GLU:HG3	1.90	0.53
1:QA:411:A:OP1	4:QD:30:LYS:NZ	2.23	0.53
1:QA:662:G:H2'	1:QA:663:A:C8	2.44	0.53
1:QA:1459:C:H2'	1:QA:1460:A:H8	1.74	0.53
1:QA:1519:MA6:H8	1:QA:1520:G:O4'	2.08	0.53
25:RA:1629:U:H2'	25:RA:1630:G:C8	2.44	0.53
25:RA:2493:U:H2'	25:RA:2494:G:O4'	2.09	0.53
33:RN:113:GLY:HA2	33:RN:116:LEU:HD12	1.88	0.53
1:XA:261:U:N3	1:XA:264:U:OP2	2.33	0.53
1:XA:1239:A:H4'	1:XA:1240:U:H5"	1.91	0.53
25:YA:1830:C:H2'	25:YA:1831:G:H8	1.74	0.53
33:YN:123:TYR:HH	33:YN:130:HIS:HE2	1.53	0.53
42:YW:25:ARG:NH2	42:YW:74:ALA:O	2.34	0.53
55:Y9:4:ARG:O	55:Y9:36:GLN:HA	2.09	0.53
1:QA:107:G:N7	20:QT:15:ARG:NH2	2.57	0.53
13:QM:86:CYS:SG	13:QM:89:GLY:N	2.77	0.53
24:QY:36:G:H2'	24:QY:37:G:H8	1.73	0.53
25:RA:676:A:H62	25:RA:802:A:H61	1.54	0.53
31:RH:41:MET:HE2	31:RH:64:LEU:HB2	1.91	0.53
33:RN:28:THR:O	33:RN:32:THR:OG1	2.24	0.53
33:RN:47:ALA:O	33:RN:119:ARG:NH1	2.41	0.53
1:XA:1073:U:O2'	2:XB:104:ASN:OD1	2.16	0.53
2:XB:80:ILE:HD11	2:XB:208:ILE:HG23	1.90	0.53
11:XK:34:ASP:OD1	11:XK:38:ASN:N	2.42	0.53
25:YA:2372:G:OP1	52:Y6:45:LYS:NZ	2.41	0.53
28:YE:53:PRO:HA	28:YE:75:VAL:HA	1.90	0.53
35:YP:95:VAL:HA	35:YP:99:LEU:HD21	1.90	0.53
3:QC:136:GLN:OE1	3:QC:140:ARG:NH2	2.42	0.53
4:QD:72:GLU:OE1	4:QD:207:TYR:OH	2.27	0.53
25:RA:530:G:H4'	25:RA:531:C:OP1	2.09	0.53
25:RA:1346:G:H1	25:RA:1600:C:H42	1.55	0.53
14:XN:24:CYS:SG	14:XN:27:CYS:CA	2.80	0.53
22:XV:53:G:H8	22:XV:53:G:OP2	1.92	0.53
25:YA:511:U:H2'	25:YA:512:G:H5'	1.91	0.53
25:YA:2294:C:H2'	25:YA:2295:C:H6	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2508:G:H1	25:YA:2580:U:H3	1.57	0.53
49:Y3:15:TYR:CE1	49:Y3:53:LEU:HD21	2.43	0.53
1:QA:1366:C:OP1	9:QI:117:HIS:NE2	2.41	0.53
4:QD:63:LYS:NZ	4:QD:197:PRO:O	2.41	0.53
25:RA:1216:G:OP1	40:RU:11:ARG:NH2	2.34	0.53
25:RA:2125:G:N2	25:RA:2173:A:H62	2.04	0.53
25:RA:2197:U:H1'	25:RA:2198:A:C8	2.44	0.53
26:RB:6:C:H42	26:RB:115:G:H1	1.57	0.53
30:RG:120:LEU:HB2	30:RG:180:PHE:HA	1.90	0.53
55:R9:22:ARG:HH22	55:R9:37:GLY:HA3	1.73	0.53
1:XA:486:U:H2'	1:XA:487:A:H8	1.73	0.53
1:XA:662:G:H2'	1:XA:663:A:C8	2.44	0.53
1:XA:1360:A:OP2	14:XN:35:ARG:NH2	2.42	0.53
25:YA:43:A:H2'	25:YA:44:G:C8	2.44	0.53
25:YA:807:U:OP1	35:YP:36:LYS:NZ	2.36	0.53
1:QA:404:U:OP1	4:QD:118:ARG:NH2	2.40	0.53
1:QA:667:G:O2'	15:QO:49:ASP:OD1	2.19	0.53
1:QA:1402:4OC:HM22	1:QA:1403:C:H5'	1.91	0.53
25:RA:706:A:N6	25:RA:725:G:O2'	2.41	0.53
25:RA:1859:A:N6	25:RA:1883:G:O2'	2.42	0.53
25:RA:1980:G:O2'	25:RA:1982:C:OP2	2.27	0.53
27:RD:45:ASN:OD1	27:RD:45:ASN:N	2.41	0.53
1:XA:974:A:H4'	1:XA:975:A:H5'	1.91	0.53
1:XA:1030(A):C:H42	1:XA:1031:G:H22	1.57	0.53
35:YP:52:GLU:OE1	35:YP:55:ARG:NH1	2.42	0.53
45:YZ:30:ASN:OD1	45:YZ:33:LEU:N	2.41	0.53
45:YZ:57:ILE:HG22	45:YZ:59:LEU:HG	1.91	0.53
1:QA:1079:G:H2'	1:QA:1080:A:C8	2.45	0.52
1:QA:1375:A:H4'	7:QG:29:LYS:NZ	2.24	0.52
4:QD:175:SER:OG	4:QD:176:LEU:N	2.41	0.52
25:RA:863:A:P	36:RQ:22:LYS:HG3	2.49	0.52
25:RA:1181:C:H2'	25:RA:1182:A:C8	2.44	0.52
26:RB:12:C:O2'	26:RB:13:A:OP2	2.23	0.52
28:RE:152:LYS:HG2	33:RN:77:GLY:O	2.03	0.52
1:XA:396:G:O2'	1:XA:398:C:OP1	2.16	0.52
1:XA:403:C:OP1	4:XD:136:PRO:HD2	2.09	0.52
25:YA:674:G:O2'	29:YF:74:ARG:HD3	2.09	0.52
25:YA:1190:G:H5"	35:YP:32:THR:HA	1.90	0.52
25:YA:2641:G:H2'	25:YA:2642:G:C8	2.45	0.52
1:QA:15:G:H2'	1:QA:16:A:C8	2.43	0.52
1:QA:673:G:H1'	18:QR:75:ILE:HD12	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:940:C:H2'	1:QA:941:G:C8	2.44	0.52
1:QA:1323:G:H2'	1:QA:1324:A:C8	2.44	0.52
4:QD:109:GLY:HA3	4:QD:165:MET:HE3	1.91	0.52
25:RA:972:G:H3'	25:RA:973:A:H2'	1.91	0.52
25:RA:1992:G:N2	25:RA:1996:C:O2	2.37	0.52
25:RA:2784:C:H2'	25:RA:2785:C:C6	2.44	0.52
26:RB:13:A:N1	26:RB:69:G:O2'	2.33	0.52
1:XA:804:U:H5"	1:XA:805:C:OP2	2.09	0.52
1:XA:1139:G:N2	1:XA:1143:G:O6	2.41	0.52
4:XD:165:MET:SD	4:XD:168:ARG:NH1	2.82	0.52
16:XP:5:ARG:O	16:XP:19:ILE:HA	2.09	0.52
25:YA:271:A:N3	25:YA:365:C:O2'	2.34	0.52
25:YA:380:U:H2'	25:YA:381:G:C8	2.44	0.52
25:YA:2246:G:H2'	25:YA:2247:A:C8	2.44	0.52
31:YH:90:LYS:NZ	31:YH:159:GLU:OE1	2.40	0.52
34:YO:104:ARG:HD3	34:YO:121:VAL:HG22	1.90	0.52
37:YR:79:LEU:HA	37:YR:83:ILE:HD12	1.92	0.52
1:QA:1269:A:OP1	21:QU:24:ARG:NH1	2.42	0.52
8:QH:121:ASP:HB2	8:QH:125:ARG:HH12	1.73	0.52
22:QV:15:G:O6	22:QV:48:C:O2	2.27	0.52
25:RA:297:C:H2'	25:RA:298:G:O4'	2.09	0.52
25:RA:1905:C:H5'	25:RA:1906:G:OP1	2.10	0.52
25:RA:2495:G:H5"	36:RQ:82:ARG:HG2	1.92	0.52
28:RE:143:ASN:ND2	28:RE:151:TYR:OH	2.42	0.52
31:RH:27:LYS:HD3	31:RH:32:GLU:HB3	1.91	0.52
32:RI:95:LYS:O	32:RI:98:ALA:N	2.36	0.52
43:RX:32:PRO:HA	43:RX:77:LYS:HD2	1.91	0.52
1:XA:372:C:N4	1:XA:389:A:H62	2.07	0.52
1:XA:642:A:N3	8:XH:113:SER:OG	2.40	0.52
1:XA:1060:C:H2'	1:XA:1061:G:H8	1.74	0.52
25:YA:221:A:N1	25:YA:265:A:O2'	2.41	0.52
25:YA:322:A:O4'	25:YA:340:A:H1'	2.10	0.52
25:YA:956:G:OP2	36:YQ:14:ARG:NH2	2.42	0.52
28:YE:36:ARG:NH2	28:YE:88:GLY:O	2.43	0.52
54:Y8:29:LYS:O	54:Y8:33:ASN:ND2	2.40	0.52
1:QA:321:A:H61	1:QA:332:G:H1	1.58	0.52
1:QA:461:A:O2'	1:QA:470:C:H5'	2.10	0.52
1:QA:1101:A:N6	2:QB:176:GLU:OE2	2.42	0.52
6:QF:82:ARG:HG3	6:QF:84:ASN:H	1.75	0.52
25:RA:571:A:O2'	41:RV:78:LYS:NZ	2.42	0.52
25:RA:1405:U:H2'	25:RA:1406:U:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2147:G:H2'	25:RA:2148:G:O4'	2.09	0.52
30:RG:71:THR:N	30:RG:89:GLY:O	2.42	0.52
14:XN:40:CYS:HB2	14:XN:43:CYS:H	1.74	0.52
25:YA:612:C:H42	25:YA:615:G:H1	1.56	0.52
25:YA:2305:A:H5"	30:YG:134:GLY:HA3	1.91	0.52
30:YG:49:ASP:OD1	30:YG:51:ARG:NE	2.42	0.52
39:YT:51:ARG:HB3	39:YT:62:THR:HB	1.90	0.52
1:QA:126:G:OP1	1:QA:605:U:O2'	2.18	0.52
1:QA:363:A:O2'	1:QA:364:A:H5'	2.08	0.52
1:QA:939:G:OP1	7:QG:102:ARG:NH1	2.43	0.52
1:QA:1432:G:OP1	39:RT:108:ARG:HG2	2.10	0.52
1:QA:1458:G:OP1	20:QT:35:THR:OG1	2.15	0.52
9:QI:70:LYS:HA	9:QI:73:GLN:HE21	1.75	0.52
1:XA:1269:A:N1	1:XA:1312:G:O2'	2.36	0.52
25:YA:345:A:N3	25:YA:347:A:N6	2.57	0.52
25:YA:1500:G:H2'	25:YA:1501:C:H6	1.72	0.52
25:YA:1557:C:H5"	25:YA:1558:A:OP2	2.10	0.52
50:Y4:59:PHE:O	50:Y4:62:ARG:NE	2.42	0.52
1:QA:777:A:H2'	1:QA:778:G:H8	1.74	0.52
3:QC:136:GLN:O	3:QC:140:ARG:N	2.36	0.52
14:QN:22:THR:CB	14:QN:33:VAL:HG23	2.38	0.52
25:RA:655:A:H3'	25:RA:656:G:H8	1.75	0.52
25:RA:2183:C:H2'	25:RA:2184:G:H8	1.74	0.52
30:RG:98:ARG:NH1	50:R4:1:MET:SD	2.82	0.52
1:XA:1386:G:H2'	1:XA:1387:G:H8	1.75	0.52
15:XO:4:THR:HG23	15:XO:7:GLU:H	1.74	0.52
24:XY:38:A:H2'	24:XY:39:A:H8	1.75	0.52
25:YA:213:A:H5"	25:YA:213:A:C8	2.44	0.52
25:YA:1937:A:O2'	25:YA:1938:A:O5'	2.25	0.52
29:YF:13:SER:OG	29:YF:16:GLY:N	2.42	0.52
36:YQ:71:ASP:OD1	36:YQ:71:ASP:N	2.43	0.52
1:QA:884:U:H4'	1:QA:885:G:H5"	1.91	0.52
1:QA:985:C:H2'	1:QA:986:A:H8	1.73	0.52
1:QA:1368:G:H5"	9:QI:112:LYS:HB3	1.92	0.52
17:QQ:99:SER:OG	17:QQ:100:LYS:N	2.43	0.52
25:RA:443:A:H1'	25:RA:1201:C:O4'	2.09	0.52
25:RA:693:C:OP2	27:RD:59:LYS:NZ	2.43	0.52
25:RA:1435:G:N2	25:RA:1477:A:O2'	2.32	0.52
25:RA:1958:C:O2'	25:RA:1959:G:H5'	2.09	0.52
30:RG:76:SER:H	30:RG:84:LYS:HG3	1.75	0.52
32:RI:2:LYS:HG2	32:RI:20:ASP:HB3	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:713:G:H2'	1:XA:714:G:C8	2.44	0.52
1:XA:946:A:H2'	1:XA:947:G:H8	1.75	0.52
4:XD:64:LEU:HD13	4:XD:198:VAL:HG11	1.92	0.52
7:XG:59:LEU:HD23	7:XG:60:LYS:HD2	1.90	0.52
22:XV:28:C:H2'	22:XV:29:G:H8	1.74	0.52
25:YA:478:A:N7	25:YA:480:A:N6	2.58	0.52
25:YA:503:A:H4'	25:YA:504:U:H5"	1.92	0.52
1:QA:9:G:H2'	1:QA:10:A:H8	1.75	0.52
1:QA:806:C:H2'	1:QA:807:A:C8	2.43	0.52
5:QE:87:SER:OG	5:QE:125:SER:O	2.24	0.52
8:QH:33:GLU:O	8:QH:36:LEU:N	2.43	0.52
10:QJ:28:ARG:NH2	10:QJ:34:VAL:O	2.43	0.52
25:RA:1364:G:O2'	25:RA:1808:U:O4	2.27	0.52
25:RA:1537:G:H2'	25:RA:1538:G:H8	1.75	0.52
25:RA:1632:A:O5'	25:RA:1632:A:C8	2.61	0.52
25:RA:2291:U:OP1	25:RA:2380:C:O2'	2.28	0.52
25:RA:2347:C:O2	25:RA:2370:G:N2	2.40	0.52
25:RA:2361:A:OP2	54:R8:26:LYS:NZ	2.39	0.52
25:RA:2619:C:H1'	28:RE:156:MET:HE1	1.92	0.52
39:RT:18:ASP:OD1	39:RT:18:ASP:N	2.41	0.52
1:XA:25:C:H2'	1:XA:26:A:C8	2.45	0.52
1:XA:619:U:N3	4:XD:134:ASP:OD1	2.38	0.52
1:XA:728:A:H2'	1:XA:729:A:C8	2.45	0.52
3:XC:9:GLY:HA3	14:XN:49:HIS:HA	1.92	0.52
25:YA:639:U:H3	25:YA:649:G:H1	1.57	0.52
25:YA:1066:U:O2'	25:YA:1068:G:OP2	2.20	0.52
29:YF:32:LEU:HD13	29:YF:112:MET:HE1	1.91	0.52
34:YO:80:ASP:OD2	39:YT:64:ARG:NH2	2.42	0.52
38:YS:50:SER:O	38:YS:76:LYS:NZ	2.39	0.52
1:QA:410:G:H3'	4:QD:25:ARG:HH22	1.75	0.52
1:QA:1037:C:O2'	1:QA:1038:C:O4'	2.24	0.52
1:QA:1071:C:H2'	1:QA:1072:G:C8	2.43	0.52
25:RA:1967:C:H2'	25:RA:1968:G:O4'	2.09	0.52
1:XA:131:C:O2'	1:XA:262:A:N3	2.38	0.52
2:XB:69:LEU:HD11	2:XB:93:VAL:HG23	1.92	0.52
10:XJ:45:ARG:O	10:XJ:65:LEU:N	2.40	0.52
25:YA:615:G:OP1	29:YF:40:GLN:NE2	2.43	0.52
25:YA:773:U:O2	25:YA:778:G:O2'	2.27	0.52
25:YA:1823:G:P	27:YD:54:ARG:HH22	2.32	0.52
30:YG:8:LYS:NZ	30:YG:97:ASP:OD1	2.40	0.52
1:QA:437:U:O4	1:QA:495:A:N7	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:82:ALA:O	4:QD:85:LYS:N	2.43	0.52
25:RA:2712(A):U:O2'	25:RA:2712(B):A:OP2	2.22	0.52
35:RP:60:MET:SD	54:R8:13:ARG:NH2	2.83	0.52
52:R6:8:LYS:HG3	52:R6:54:ILE:HD13	1.92	0.52
1:XA:421:U:OP2	1:XA:422:C:N4	2.42	0.52
25:YA:675:A:H4'	29:YF:67:GLN:OE1	2.09	0.52
25:YA:829:A:N7	25:YA:2248:C:H5'	2.25	0.52
25:YA:1286:A:H1'	25:YA:1288:U:OP2	2.10	0.52
25:YA:1326:U:O2'	25:YA:1327:C:H5'	2.09	0.52
25:YA:1425:G:O2'	25:YA:1426:G:H5'	2.10	0.52
29:YF:70:THR:OG1	29:YF:72:ARG:N	2.41	0.52
1:QA:19:C:OP2	5:QE:127:ASN:HB2	2.10	0.51
4:QD:53:ASP:O	4:QD:57:ARG:NH1	2.38	0.51
25:RA:581:C:H2'	25:RA:582:G:H8	1.75	0.51
25:RA:1853:A:H2'	25:RA:1854:A:C8	2.45	0.51
25:RA:1889:A:H2'	25:RA:1890:A:H8	1.75	0.51
32:RI:127:VAL:HA	32:RI:139:GLN:HA	1.92	0.51
53:R7:34:ARG:NH1	53:R7:42:LEU:O	2.43	0.51
1:XA:360:A:H2'	1:XA:361:G:C8	2.45	0.51
1:XA:1485:U:H2'	1:XA:1486:G:H8	1.74	0.51
25:YA:833:U:O2	35:YP:55:ARG:NH2	2.38	0.51
48:Y2:16:LEU:O	48:Y2:67:LYS:NZ	2.43	0.51
1:QA:429:U:O4'	1:QA:430:A:H8	1.94	0.51
1:QA:943:U:H1'	9:QI:124:GLN:HE22	1.76	0.51
1:QA:1393:U:HO2'	1:QA:1501:C:HO2'	1.43	0.51
14:QN:22:THR:C	14:QN:33:VAL:HG21	2.35	0.51
14:QN:22:THR:O	14:QN:33:VAL:HG21	2.10	0.51
25:RA:495:G:H4'	42:RW:4:LYS:HG3	1.90	0.51
25:RA:965:C:H2'	25:RA:966:G:H8	1.75	0.51
25:RA:974:G:O2'	25:RA:975(B):G:N7	2.36	0.51
25:RA:1139:G:OP2	33:RN:70:LYS:NZ	2.28	0.51
25:RA:1186:G:H2'	25:RA:1187:G:O4'	2.11	0.51
25:RA:1664:A:H61	25:RA:1996:C:N4	2.08	0.51
25:RA:1901:A:OP2	27:RD:255:LYS:NZ	2.37	0.51
38:RS:27:SER:HA	38:RS:88:ASP:HB3	1.92	0.51
1:XA:407:G:H5"	4:XD:115:ARG:HB3	1.91	0.51
12:XL:104:VAL:O	12:XL:107:ALA:N	2.43	0.51
25:YA:573:G:O2'	25:YA:574:C:H3'	2.10	0.51
25:YA:2115:G:N2	25:YA:2171:A:H61	2.08	0.51
27:YD:79:VAL:HG11	27:YD:111:LEU:HD21	1.91	0.51
33:YN:43:THR:OG1	40:YU:64:ARG:NH1	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:124:LYS:HA	35:YP:144:GLU:HB3	1.91	0.51
19:QS:3:ARG:NH1	19:QS:8:GLY:O	2.43	0.51
25:RA:2431:U:N3	25:RA:2434:A:OP2	2.31	0.51
25:RA:2648:C:H2'	25:RA:2649:U:H6	1.75	0.51
26:RB:78:A:H62	26:RB:99:G:H21	1.57	0.51
39:RT:35:LYS:HA	39:RT:40:THR:HA	1.92	0.51
50:R4:56:VAL:HB	50:R4:58:ARG:HG3	1.93	0.51
1:XA:552:U:H2'	1:XA:553:A:H8	1.74	0.51
1:XA:974:A:H8	1:XA:974:A:OP1	1.94	0.51
2:XB:231:GLU:HG3	2:XB:233:SER:H	1.75	0.51
8:XH:96:GLY:HA2	8:XH:130:GLY:HA3	1.93	0.51
25:YA:330:A:HO2'	25:YA:331:A:H8	1.57	0.51
25:YA:1782:C:H1'	25:YA:2609:U:H5"	1.93	0.51
25:YA:2206:G:H5"	25:YA:2207:G:N7	2.26	0.51
25:YA:2271:G:H5'	46:Y0:20:ARG:HG2	1.93	0.51
27:YD:127:VAL:HA	27:YD:193:VAL:HG23	1.92	0.51
49:Y3:10:LYS:CE	49:Y3:15:TYR:OH	2.57	0.51
1:QA:976:G:OP1	14:QN:32:SER:N	2.38	0.51
3:QC:78:GLY:O	3:QC:81:GLY:N	2.39	0.51
10:QJ:3:LYS:N	10:QJ:74:ILE:O	2.43	0.51
25:RA:45:C:OP2	25:RA:215:G:H5'	2.11	0.51
25:RA:307:G:N2	25:RA:310:A:OP2	2.42	0.51
25:RA:1390:U:O2'	25:RA:1391:U:H5'	2.10	0.51
25:RA:1569:A:H2'	25:RA:1570:A:C8	2.45	0.51
36:RQ:117:ALA:HA	36:RQ:120:ILE:HD12	1.91	0.51
1:XA:142:G:H1	1:XA:221:C:H42	1.58	0.51
2:XB:207:ALA:O	2:XB:210:SER:N	2.42	0.51
3:XC:19:GLU:O	3:XC:40:ARG:NH2	2.43	0.51
25:YA:17:G:H2'	25:YA:18:C:C6	2.45	0.51
25:YA:2816:C:H2'	25:YA:2817:G:H8	1.75	0.51
49:Y3:18:ASP:OD1	49:Y3:18:ASP:N	2.43	0.51
1:QA:1148:U:O2	9:QI:66:ARG:NH2	2.43	0.51
22:QV:15:G:N2	22:QV:48:C:N4	2.48	0.51
25:RA:678:C:O2'	25:RA:679:C:H5'	2.10	0.51
25:RA:688:U:O2	25:RA:786:C:O2'	2.27	0.51
25:RA:795:C:H2'	25:RA:796:C:C6	2.45	0.51
25:RA:851:U:OP1	49:R3:49:LYS:HE3	2.11	0.51
25:RA:1458:C:H4'	25:RA:1459:G:O4'	2.10	0.51
25:RA:2296:U:OP2	38:RS:9:ARG:NH2	2.43	0.51
1:XA:50:A:H8	1:XA:50:A:OP1	1.92	0.51
10:XJ:97:GLU:HB3	10:XJ:99:LYS:HE2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:XV:71:C:H2'	22:XV:72:A:H8	1.76	0.51
25:YA:216:A:H2'	25:YA:217:G:H8	1.75	0.51
25:YA:1395:A:O2'	25:YA:1396:U:H5"	2.09	0.51
25:YA:2355:C:OP1	46:Y0:25:ARG:NH2	2.39	0.51
25:YA:2804:C:H2'	25:YA:2805:G:C8	2.46	0.51
48:Y2:1:MET:HE3	48:Y2:6:VAL:HG22	1.92	0.51
1:QA:835:U:O4	1:QA:851:G:O6	2.28	0.51
1:QA:1049:U:H4'	1:QA:1050:G:H5"	1.93	0.51
2:QB:80:ILE:HD13	2:QB:212:GLN:HE21	1.75	0.51
3:QC:56:ASP:HB2	3:QC:67:THR:HB	1.92	0.51
25:RA:1025:G:C8	25:RA:1135:C:H1'	2.45	0.51
25:RA:1190:G:H2'	25:RA:1191:G:C8	2.46	0.51
25:RA:1352:U:O2'	25:RA:1353:A:H5'	2.11	0.51
25:RA:2250:G:O2'	25:RA:2496:C:OP1	2.23	0.51
1:XA:1101:A:N6	2:XB:176:GLU:OE2	2.43	0.51
25:YA:587:C:OP2	35:YP:21:ARG:NH2	2.43	0.51
25:YA:1400:G:H2'	25:YA:1401:G:C8	2.45	0.51
25:YA:1614:A:OP2	25:YA:1614:A:H8	1.92	0.51
25:YA:2392:A:OP2	25:YA:2422:A:N6	2.43	0.51
29:YF:6:VAL:N	29:YF:21:ALA:O	2.43	0.51
44:YY:44:ILE:HA	44:YY:63:LYS:O	2.11	0.51
1:QA:148:G:H2'	1:QA:149:A:H8	1.75	0.51
1:QA:556:C:H2'	1:QA:557:G:H8	1.76	0.51
1:QA:718:G:H5'	11:QK:117:ASN:OD1	2.11	0.51
1:QA:1224:G:C4	1:QA:1322:C:H5'	2.46	0.51
25:RA:33:U:H3	25:RA:447:A:H62	1.57	0.51
25:RA:271:A:N3	25:RA:365:C:O2'	2.43	0.51
25:RA:455:C:N3	25:RA:472:A:H2'	2.25	0.51
25:RA:1231:G:H2'	25:RA:1232:G:H8	1.76	0.51
25:RA:1657:C:OP1	28:RE:136:ARG:N	2.44	0.51
25:RA:1666:G:H4'	34:RO:6:THR:HG23	1.92	0.51
25:RA:2784:C:H2'	25:RA:2785:C:H6	1.76	0.51
25:RA:2850:A:N7	25:RA:2868:A:O2'	2.37	0.51
28:RE:7:VAL:HG12	28:RE:27:LEU:HB3	1.93	0.51
1:XA:1522:U:O2'	1:XA:1523:G:H5'	2.10	0.51
16:XP:28:ARG:NH1	16:XP:29:ASP:OD1	2.43	0.51
19:XS:64:GLU:OE2	50:Y4:58:ARG:NH2	2.44	0.51
25:YA:81:G:H21	44:YY:1:MET:HE2	1.75	0.51
25:YA:477:A:H8	25:YA:477:A:O5'	1.93	0.51
25:YA:863:A:O2'	25:YA:864:G:H5'	2.11	0.51
25:YA:1051:G:H5'	25:YA:2752:C:H1'	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1720:U:H3	25:YA:1742:G:H1	1.57	0.51
25:YA:2515:C:O2'	25:YA:2516:G:H5'	2.11	0.51
27:YD:143:HIS:ND1	27:YD:194:GLY:O	2.41	0.51
39:YT:18:ASP:OD1	39:YT:18:ASP:N	2.35	0.51
1:QA:973:G:H3'	1:QA:974:A:H5"	1.92	0.51
1:QA:1099:G:H5"	2:QB:96:ARG:HH12	1.76	0.51
3:QC:24:ALA:HB3	3:QC:29:TYR:HD1	1.74	0.51
4:QD:8:VAL:HG22	58:QD:303:SF4:S2	2.50	0.51
7:QG:105:VAL:O	7:QG:109:ASN:ND2	2.44	0.51
7:QG:113:GLU:HG2	7:QG:119:ARG:HG2	1.92	0.51
25:RA:1337:G:H2'	25:RA:1338:G:C8	2.44	0.51
25:RA:1615:C:O2'	25:RA:1616:A:H5"	2.11	0.51
25:RA:1796:U:H2'	25:RA:1797:C:H6	1.75	0.51
25:RA:2286:A:OP1	52:R6:29:ASN:ND2	2.35	0.51
28:RE:11:MET:HG2	28:RE:24:THR:HG23	1.92	0.51
28:RE:119:ARG:NH1	28:RE:156:MET:O	2.43	0.51
45:RZ:52:SER:O	45:RZ:54:HIS:ND1	2.42	0.51
1:XA:21:G:H2'	1:XA:22:G:H8	1.76	0.51
1:XA:357:G:C2'	1:XA:358:U:H5'	2.40	0.51
1:XA:371:G:H1'	1:XA:373:A:H62	1.76	0.51
1:XA:707:C:OP1	11:XK:85:ARG:NH1	2.42	0.51
1:XA:977:A:N6	1:XA:1224:G:OP1	2.43	0.51
10:XJ:45:ARG:HB3	10:XJ:65:LEU:HB3	1.92	0.51
24:XY:38:A:H5'	25:YA:1913:A:C6	2.46	0.51
25:YA:1048:A:OP2	25:YA:1110:G:N2	2.43	0.51
25:YA:1553:A:OP1	25:YA:1553:A:H4'	2.11	0.51
25:YA:1972:A:OP2	27:YD:239:ARG:NH2	2.43	0.51
28:YE:16:ARG:NH1	28:YE:171:GLU:OE2	2.34	0.51
44:YY:99:CYS:SG	44:YY:104:GLY:N	2.83	0.51
1:QA:1066:C:H2'	1:QA:1067:A:C8	2.46	0.51
1:QA:1111:A:N6	3:QC:176:HIS:O	2.44	0.51
1:QA:1288:A:O2'	21:QU:10:ARG:NH2	2.43	0.51
1:QA:1419:G:H1	1:QA:1481:U:H3	1.57	0.51
21:QU:12:LYS:HZ2	21:QU:19:GLY:HA3	1.76	0.51
25:RA:574:C:N3	28:RE:145:LYS:NZ	2.41	0.51
25:RA:852:G:H2'	25:RA:853:G:H8	1.75	0.51
28:RE:26:ILE:O	28:RE:182:LEU:N	2.42	0.51
37:RR:59:ASP:N	37:RR:59:ASP:OD1	2.40	0.51
1:XA:1330:U:H2'	1:XA:1331:G:H5'	1.91	0.51
8:XH:33:GLU:OE2	8:XH:50:ARG:NH2	2.35	0.51
25:YA:642:G:N2	25:YA:645:C:OP2	2.33	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1281:G:H2'	25:YA:1282:U:C6	2.45	0.51
25:YA:2657:A:O3'	31:YH:160:LYS:NZ	2.44	0.51
26:YB:56:G:H4'	26:YB:57:A:H5'	1.93	0.51
46:Y0:50:ASN:ND2	46:Y0:81:VAL:O	2.37	0.51
1:QA:974:A:H4'	1:QA:975:A:H5'	1.91	0.51
1:QA:1118:C:H1'	1:QA:1179:A:C6	2.46	0.51
8:QH:49:GLU:OE2	8:QH:62:TYR:OH	2.29	0.51
13:QM:71:ARG:HA	13:QM:74:VAL:HG12	1.92	0.51
25:RA:783:A:H4'	25:RA:2588:G:H4'	1.93	0.51
25:RA:821:A:O2'	25:RA:946:G:OP2	2.24	0.51
25:RA:1068:G:H5'	25:RA:1069:A:H2'	1.93	0.51
25:RA:1073:A:O2'	25:RA:1074:G:OP1	2.25	0.51
25:RA:1651:G:H2'	25:RA:1652:A:C8	2.46	0.51
25:RA:2361:A:OP1	54:R8:26:LYS:HD3	2.11	0.51
36:RQ:7:MET:HG3	36:RQ:9:TYR:H	1.76	0.51
1:XA:45:U:H2'	1:XA:46:G:H8	1.75	0.51
1:XA:908:A:H2'	1:XA:909:A:C8	2.44	0.51
1:XA:1101:A:H4'	1:XA:1102:A:O5'	2.10	0.51
1:XA:1368:G:H1'	10:XJ:46:ARG:HH22	1.76	0.51
16:XP:67:THR:HB	16:XP:70:ALA:H	1.76	0.51
25:YA:39:C:O2	29:YF:46:ARG:NH2	2.44	0.51
25:YA:126:A:H5'	53:Y7:19:ARG:HG3	1.93	0.51
25:YA:370:G:OP1	25:YA:403:U:N3	2.29	0.51
30:YG:71:THR:N	30:YG:89:GLY:O	2.36	0.51
31:YH:40:GLU:OE2	31:YH:60:ARG:NH1	2.43	0.51
34:YO:68:GLU:OE2	34:YO:78:ARG:NH1	2.44	0.51
1:QA:666:G:H5'	1:QA:726:C:H1'	1.92	0.50
1:QA:769:G:O2'	1:QA:770:C:H5'	2.11	0.50
1:QA:877:C:H2'	1:QA:878:G:C8	2.46	0.50
1:QA:1124:G:N2	1:QA:1125:U:O4	2.40	0.50
18:QR:74:ARG:HG3	18:QR:79:LEU:HB2	1.91	0.50
25:RA:627:A:N7	35:RP:84:ASN:ND2	2.47	0.50
25:RA:1794:U:H2'	25:RA:1795:C:C6	2.46	0.50
30:RG:119:GLY:HA3	30:RG:181:ARG:HG3	1.93	0.50
1:XA:662:G:H2'	1:XA:663:A:H8	1.75	0.50
1:XA:766:A:N7	1:XA:813:U:O4	2.45	0.50
1:XA:1372:U:H2'	1:XA:1373:G:O4'	2.10	0.50
2:XB:69:LEU:HB3	2:XB:162:ILE:HG22	1.93	0.50
5:XE:100:VAL:HG23	5:XE:118:ILE:HG22	1.92	0.50
7:XG:68:ASN:ND2	7:XG:127:ALA:O	2.42	0.50
11:XK:22:HIS:HB3	11:XK:29:ILE:HG23	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:672:C:H2'	25:YA:673:C:C6	2.46	0.50
25:YA:2115:G:N1	25:YA:2119:A:OP2	2.41	0.50
25:YA:2274:A:O2'	25:YA:2276:G:OP1	2.22	0.50
25:YA:2314:C:H2'	25:YA:2315:G:C8	2.45	0.50
49:Y3:8:LEU:HD13	49:Y3:23:LEU:HD11	1.93	0.50
1:QA:564:C:OP1	12:QL:15:ARG:NE	2.45	0.50
1:QA:1000:U:O4	1:QA:1001(A):A:N6	2.44	0.50
1:QA:1062:U:H2'	1:QA:1063:C:C6	2.47	0.50
4:QD:94:LEU:O	4:QD:98:GLU:N	2.42	0.50
8:QH:121:ASP:N	8:QH:121:ASP:OD1	2.43	0.50
25:RA:747:U:O2	25:RA:2014:A:H1'	2.11	0.50
25:RA:1186:G:H8	25:RA:1186:G:O5'	1.94	0.50
25:RA:1218:C:OP2	40:RU:15:LYS:NZ	2.43	0.50
25:RA:1797:C:OP1	27:RD:273:ARG:NH2	2.44	0.50
27:RD:17:THR:HG1	27:RD:205:VAL:H	1.58	0.50
40:RU:6:THR:OG1	40:RU:7:GLY:N	2.44	0.50
1:XA:241:C:H42	1:XA:285:G:H1	1.59	0.50
1:XA:861:G:O6	1:XA:869:G:N2	2.44	0.50
7:XG:111:ARG:NH2	7:XG:126:ASP:OD2	2.41	0.50
18:XR:45:SER:OG	18:XR:48:GLY:N	2.44	0.50
25:YA:546:C:H3'	25:YA:547:A:C8	2.46	0.50
25:YA:1204:A:N6	25:YA:1241:A:OP2	2.42	0.50
25:YA:1550:C:OP1	25:YA:1720:U:O2'	2.25	0.50
25:YA:2461:C:H2'	25:YA:2462:U:C6	2.46	0.50
1:QA:166:G:H2'	1:QA:167:G:H8	1.77	0.50
1:QA:524:G:H5"	12:QL:91:LYS:CE	2.42	0.50
1:QA:1517:G:H21	25:RA:1919:A:H2'	1.76	0.50
2:QB:165:VAL:HG23	2:QB:187:LEU:HD23	1.93	0.50
4:QD:105:VAL:HG13	4:QD:110:PHE:HB2	1.92	0.50
5:QE:5:ASP:N	5:QE:5:ASP:OD1	2.44	0.50
7:QG:57:GLU:HB2	7:QG:60:LYS:HG2	1.93	0.50
25:RA:272(M):G:O2'	25:RA:272(N):U:O5'	2.22	0.50
25:RA:807:U:H2'	25:RA:808:G:C8	2.47	0.50
25:RA:2294:C:P	38:RS:89:ARG:HH12	2.35	0.50
25:RA:2584:U:C5'	56:ZA:3:PPU:H92	2.41	0.50
25:RA:2712(B):A:H5"	25:RA:2713:A:OP2	2.11	0.50
39:RT:24:PRO:HA	39:RT:49:VAL:HG13	1.93	0.50
1:XA:160:A:N6	1:XA:346:G:O6	2.44	0.50
1:XA:714:G:H2'	1:XA:715:A:C8	2.46	0.50
1:XA:891:U:H2'	1:XA:892:A:H8	1.76	0.50
1:XA:1249:C:O2'	9:XI:73:GLN:NE2	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1517:G:N3	25:YA:1919:A:O2'	2.37	0.50
17:XQ:82:MET:HA	17:XQ:85:VAL:HG22	1.92	0.50
25:YA:1335:U:OP2	43:YX:64:LYS:NZ	2.32	0.50
25:YA:1580:A:H5'	25:YA:1581:G:OP2	2.11	0.50
25:YA:1609:A:O2'	25:YA:1610:A:H5'	2.11	0.50
43:YX:6:ASP:OD2	48:Y2:29:LYS:NZ	2.40	0.50
1:QA:6:G:H22	5:QE:98:THR:HG22	1.76	0.50
1:QA:21:G:N1	1:QA:22:G:O6	2.45	0.50
1:QA:237:C:H2'	1:QA:238:G:C8	2.47	0.50
25:RA:568:U:N3	25:RA:571:A:OP2	2.31	0.50
25:RA:635:C:H2'	25:RA:636:G:H8	1.77	0.50
25:RA:1824:G:N3	27:RD:254:THR:OG1	2.44	0.50
25:RA:1921:G:H2'	25:RA:1922:G:H8	1.77	0.50
25:RA:2467:C:H4'	36:RQ:123:HIS:ND1	2.27	0.50
31:RH:6:ARG:O	31:RH:51:ARG:NH1	2.44	0.50
31:RH:58:GLU:HB3	31:RH:61:HIS:HD1	1.76	0.50
41:RV:23:GLU:O	41:RV:92:THR:OG1	2.29	0.50
1:XA:410:G:N2	1:XA:432:A:H62	2.09	0.50
1:XA:950:U:H4'	1:XA:971:G:C2	2.47	0.50
1:XA:971:G:OP1	1:XA:972:C:H5"	2.12	0.50
1:XA:1431:C:H2'	1:XA:1432:G:O4'	2.11	0.50
25:YA:2154:G:H2'	25:YA:2155:G:H8	1.77	0.50
1:QA:56:U:H2'	1:QA:57:G:C8	2.47	0.50
4:QD:22:LYS:N	4:QD:26:CYS:SG	2.85	0.50
25:RA:30:G:H2'	25:RA:31:C:C6	2.47	0.50
25:RA:795:C:H2'	25:RA:796:C:H6	1.76	0.50
25:RA:1409:C:H2'	25:RA:1410:G:H8	1.77	0.50
41:RV:14:VAL:HB	41:RV:96:ILE:HD13	1.93	0.50
1:XA:110:C:O2'	16:XP:25:ARG:O	2.28	0.50
1:XA:574:A:N3	1:XA:883:C:H1'	2.26	0.50
1:XA:813:U:H2'	1:XA:814:A:H8	1.77	0.50
2:XB:82:ARG:NH1	2:XB:92:TYR:OH	2.44	0.50
25:YA:1538:G:H2'	25:YA:1539:G:H8	1.77	0.50
25:YA:2723:C:OP2	28:YE:109:LYS:NZ	2.41	0.50
1:QA:46:G:HO2'	1:QA:365:U:HO2'	1.44	0.50
1:QA:61:G:H2'	1:QA:62:U:C6	2.47	0.50
1:QA:1202:G:H2'	1:QA:1203:C:C6	2.47	0.50
22:QV:52:G:H1	22:QV:62:C:H42	1.60	0.50
25:RA:272(G):C:H2'	25:RA:272(H):G:H8	1.77	0.50
25:RA:299:A:N3	25:RA:319:C:O2'	2.42	0.50
25:RA:473:G:O2'	25:RA:474:G:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:659:C:H2'	25:RA:660:G:H8	1.75	0.50
25:RA:1509(B):A:H3'	25:RA:1509(C):A:H8	1.77	0.50
36:RQ:65:PHE:N	36:RQ:105:GLU:O	2.43	0.50
44:RY:6:HIS:O	44:RY:97:ARG:NH2	2.43	0.50
45:RZ:76:LEU:HA	45:RZ:83:PRO:HA	1.92	0.50
55:R9:25:VAL:HB	55:R9:34:GLN:HB2	1.93	0.50
1:XA:877:C:H2'	1:XA:878:G:C8	2.42	0.50
1:XA:1119:C:H2'	1:XA:1120:G:H8	1.75	0.50
7:XG:88:PRO:HG2	7:XG:152:ALA:HB2	1.94	0.50
25:YA:646:A:O2'	25:YA:647:G:H5'	2.11	0.50
25:YA:1794:U:H2'	25:YA:1795:C:C6	2.45	0.50
1:QA:269:C:H2'	1:QA:270:A:C8	2.47	0.50
1:QA:426:G:OP1	4:QD:36:ARG:NH1	2.45	0.50
1:QA:760:G:H22	17:QQ:94:ASN:HD22	1.59	0.50
13:QM:31:LYS:HA	13:QM:34:LEU:HD12	1.93	0.50
14:QN:22:THR:HB	14:QN:33:VAL:HG23	1.94	0.50
17:QQ:18:THR:OG1	17:QQ:69:LYS:NZ	2.35	0.50
25:RA:557:U:H2'	25:RA:558:G:C8	2.47	0.50
25:RA:637:A:OP1	35:RP:133:SER:OG	2.18	0.50
25:RA:1827:C:H2'	25:RA:1828:G:H5'	1.94	0.50
25:RA:2064:C:H2'	25:RA:2065:C:C6	2.47	0.50
1:XA:181:G:N2	1:XA:182:U:O4	2.37	0.50
1:XA:552:U:H4'	12:XL:87:GLY:HA3	1.94	0.50
1:XA:835:U:H3	1:XA:851:G:H1	1.60	0.50
2:XB:184:VAL:HG23	2:XB:198:ASP:H	1.76	0.50
3:XC:8:ILE:O	3:XC:11:ARG:N	2.45	0.50
4:XD:18:LYS:NZ	4:XD:31:CYS:SG	2.85	0.50
9:XI:117:HIS:HB3	9:XI:118:LYS:HE2	1.92	0.50
25:YA:93:G:H2'	25:YA:94(A):C:C6	2.47	0.50
25:YA:343:C:H2'	25:YA:344:G:H8	1.77	0.50
25:YA:646:A:H2'	25:YA:647:G:C8	2.47	0.50
25:YA:1164:G:H2'	25:YA:1165:U:C6	2.46	0.50
25:YA:1547:C:H2'	25:YA:1548:C:H6	1.77	0.50
25:YA:1826:G:H4'	27:YD:242:ARG:HE	1.77	0.50
25:YA:2152:G:H2'	25:YA:2153:G:C8	2.47	0.50
25:YA:2154:G:H2'	25:YA:2155:G:C8	2.46	0.50
30:YG:16:ARG:HH21	30:YG:28:VAL:HB	1.76	0.50
8:QH:34:GLU:OE2	8:QH:37:ARG:NH1	2.42	0.50
16:QP:45:THR:OG1	16:QP:47:ASP:OD1	2.28	0.50
25:RA:358:U:H2'	25:RA:359:A:C8	2.45	0.50
25:RA:822:U:H2'	25:RA:823:G:H8	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:832:G:P	35:RP:38:GLN:H	2.35	0.50
25:RA:1044:G:H21	25:RA:1111:A:H2	1.60	0.50
25:RA:2250:G:C8	25:RA:2496:C:H5"	2.47	0.50
25:RA:2495:G:H2'	25:RA:2496:C:H6	1.76	0.50
25:RA:2526:G:O6	25:RA:2537:U:O4	2.30	0.50
25:RA:2567:G:H2'	25:RA:2568:C:C6	2.46	0.50
43:RX:3:THR:OG1	43:RX:6:ASP:N	2.44	0.50
1:XA:892:A:H2'	1:XA:893:C:H6	1.77	0.50
4:XD:8:VAL:C	4:XD:10:ARG:N	2.70	0.50
25:YA:1281:G:C8	25:YA:1281:G:C3'	2.95	0.50
29:YF:17:ARG:NE	29:YF:19:GLU:OE2	2.43	0.50
38:YS:40:ILE:HG12	38:YS:47:THR:HG23	1.93	0.50
1:QA:932:C:H2'	1:QA:933:G:H8	1.77	0.50
1:QA:1223:C:OP2	19:QS:78:ARG:NH2	2.45	0.50
4:QD:14:ARG:HD2	4:QD:39:PRO:HB3	1.94	0.50
5:QE:98:THR:OG1	5:QE:99:GLY:N	2.45	0.50
25:RA:674:G:O2'	29:RF:67:GLN:NE2	2.33	0.50
25:RA:956:G:H2'	25:RA:957:A:H2'	1.93	0.50
25:RA:1935:G:H1'	25:RA:1964:G:N2	2.27	0.50
25:RA:2574:G:N2	28:RE:142:GLY:O	2.42	0.50
31:RH:79:VAL:HG12	31:RH:136:ILE:HD11	1.94	0.50
40:RU:49:HIS:HA	40:RU:52:ARG:HB3	1.93	0.50
45:RZ:69:THR:HA	45:RZ:90:VAL:HA	1.94	0.50
1:XA:261:U:H2'	1:XA:263:A:OP2	2.12	0.50
1:XA:954:G:H21	1:XA:1227:A:H62	1.60	0.50
2:XB:163:PHE:HA	2:XB:185:ILE:O	2.12	0.50
25:YA:2151:G:H2'	25:YA:2152:G:C8	2.47	0.50
25:YA:2845:G:H2'	25:YA:2846:G:C8	2.47	0.50
40:YU:106:PHE:HA	40:YU:109:LEU:HD12	1.93	0.50
45:YZ:137:ILE:HG23	45:YZ:156:LYS:HB3	1.94	0.50
1:QA:302:G:H2'	1:QA:303:A:C8	2.47	0.49
1:QA:360:A:H3'	1:QA:360:A:OP2	2.11	0.49
1:QA:1003:G:C2'	1:QA:1004:A:H4'	2.41	0.49
1:QA:1013:G:N2	1:QA:1016:A:OP2	2.33	0.49
1:QA:1226:C:O2'	13:QM:111:LYS:NZ	2.45	0.49
10:QJ:11:PHE:HE1	10:QJ:67:THR:HG22	1.76	0.49
25:RA:503:A:H4'	25:RA:504:U:H5"	1.93	0.49
25:RA:557:U:H2'	25:RA:558:G:H8	1.77	0.49
25:RA:2087:G:H2'	25:RA:2088:G:H8	1.75	0.49
1:XA:314:C:H2'	1:XA:315:A:C8	2.47	0.49
1:XA:1456:G:O3'	20:XT:39:LYS:NZ	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:121:ASP:OD1	8:XH:121:ASP:N	2.42	0.49
25:YA:746:A:O2'	25:YA:2611:U:O2'	2.30	0.49
25:YA:796:C:H2'	25:YA:797:C:C6	2.46	0.49
25:YA:1510:G:H2'	25:YA:1511:C:C6	2.47	0.49
25:YA:2510:C:O2'	25:YA:2511:U:H5'	2.12	0.49
30:YG:150:ASP:OD1	30:YG:150:ASP:N	2.38	0.49
36:YQ:65:PHE:HB2	36:YQ:105:GLU:HB2	1.92	0.49
1:QA:130:A:H5'	17:QQ:63:ARG:NE	2.22	0.49
1:QA:460:G:N2	1:QA:471:G:OP2	2.44	0.49
1:QA:591:U:OP2	8:QH:30:ARG:NE	2.45	0.49
4:QD:21:LEU:HD13	58:QD:303:SF4:S2	2.52	0.49
20:QT:31:SER:O	20:QT:35:THR:OG1	2.30	0.49
25:RA:861:A:N3	26:RB:79:C:O2'	2.44	0.49
25:RA:2129:C:H5'	25:RA:2130:U:OP2	2.12	0.49
25:RA:2297:C:H2'	25:RA:2298:A:H8	1.76	0.49
35:RP:93:GLY:H	35:RP:123:LEU:HG	1.78	0.49
40:RU:50:ARG:O	40:RU:54:LYS:NZ	2.41	0.49
47:R1:73:LEU:O	47:R1:77:ALA:N	2.45	0.49
1:XA:1366:C:O2'	1:XA:1367:C:H5'	2.12	0.49
25:YA:626:U:O4	35:YP:81:GLN:NE2	2.44	0.49
25:YA:2010:G:OP1	42:YW:41:LYS:HD2	2.12	0.49
31:YH:90:LYS:HD3	31:YH:159:GLU:HG2	1.94	0.49
1:QA:1104:G:H2'	1:QA:1105:A:O4'	2.12	0.49
1:QA:1358:U:H5'	14:QN:34:TYR:HA	1.94	0.49
8:QH:79:VAL:HG13	8:QH:80:ILE:HD12	1.94	0.49
9:QI:26:VAL:HG12	9:QI:61:ALA:HB3	1.93	0.49
25:RA:494:G:O2'	25:RA:495:G:H5'	2.12	0.49
25:RA:1127:A:H1'	25:RA:2518:A:H5"	1.94	0.49
25:RA:2219:G:H2'	25:RA:2220:G:H8	1.78	0.49
25:RA:2313:C:OP1	30:RG:91:ARG:NH1	2.44	0.49
26:RB:28:C:H2'	26:RB:29:A:C8	2.46	0.49
30:RG:36:LYS:H	30:RG:96:ARG:HH22	1.59	0.49
30:RG:37:VAL:HB	30:RG:94:LEU:HB2	1.94	0.49
33:RN:27:ALA:HA	33:RN:30:ILE:HD12	1.94	0.49
36:RQ:135:ASP:OD2	45:RZ:49:ARG:NH2	2.45	0.49
1:XA:67:C:H2'	1:XA:68:G:H8	1.76	0.49
1:XA:1065:U:H5"	1:XA:1190:G:H22	1.76	0.49
1:XA:1095:U:P	1:XA:1108:G:H1	2.34	0.49
1:XA:1315:U:H2'	1:XA:1316:G:O4'	2.12	0.49
2:XB:92:TYR:OH	2:XB:150:SER:OG	2.24	0.49
11:XK:61:ALA:HB1	11:XK:94:ALA:HB2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:11:G:H2'	25:YA:12:U:H5'	1.93	0.49
25:YA:140:G:N3	25:YA:142(A):A:N6	2.58	0.49
25:YA:1636:C:H2'	25:YA:1637:A:H8	1.74	0.49
25:YA:1672:C:O2'	25:YA:1673:U:OP1	2.27	0.49
25:YA:1970:A:H4'	25:YA:1971:A:OP1	2.11	0.49
25:YA:2328:A:H2'	25:YA:2329:G:H8	1.76	0.49
25:YA:2467:C:O2'	25:YA:2468:G:H5'	2.12	0.49
25:YA:2818:G:O2'	25:YA:2836:U:O2'	2.21	0.49
31:YH:154:PRO:HB3	31:YH:163:TYR:CZ	2.47	0.49
1:QA:582:U:H2'	1:QA:583:A:C8	2.48	0.49
1:QA:1113:C:H4'	3:QC:14:ILE:HD11	1.94	0.49
25:RA:835:A:H2'	25:RA:836:G:C8	2.47	0.49
25:RA:1376:C:H2'	25:RA:1377:G:C8	2.47	0.49
25:RA:2503:2MA:O2'	25:RA:2505:G:OP2	2.21	0.49
25:RA:2593:U:H2'	25:RA:2594:C:C6	2.48	0.49
28:RE:78:LEU:O	28:RE:79:ARG:NH1	2.42	0.49
29:RF:167:ALA:HB1	29:RF:173:VAL:HG11	1.93	0.49
34:RO:24:VAL:HG12	34:RO:33:ALA:HB2	1.93	0.49
45:RZ:7:ALA:HB2	45:RZ:59:LEU:HD12	1.95	0.49
1:XA:102:G:O2'	1:XA:151:A:N3	2.41	0.49
1:XA:1469:G:H2'	1:XA:1470:G:H8	1.78	0.49
7:XG:40:ALA:HB3	9:XI:41:VAL:HG21	1.93	0.49
11:XK:28:THR:HG21	11:XK:90:GLY:HA3	1.95	0.49
19:XS:40:ILE:HG13	19:XS:71:LEU:HD22	1.95	0.49
20:XT:9:ASN:OD1	20:XT:11:SER:OG	2.24	0.49
25:YA:886:C:H5'	25:YA:887:A:OP2	2.11	0.49
25:YA:972:G:OP1	25:YA:974:G:H5"	2.13	0.49
25:YA:1223:G:N2	25:YA:1226:A:OP2	2.46	0.49
25:YA:1273:U:O2'	25:YA:1274:A:H5"	2.13	0.49
25:YA:1363:C:H2'	25:YA:1364:G:H8	1.78	0.49
25:YA:1608:A:H1'	25:YA:1610:A:OP2	2.12	0.49
25:YA:2478:A:OP2	55:Y9:2:LYS:NZ	2.34	0.49
25:YA:2754:U:H2'	25:YA:2755:C:H5'	1.95	0.49
26:YB:112:U:H2'	26:YB:113:G:H8	1.78	0.49
1:QA:553:A:H5"	12:QL:24:VAL:HG21	1.93	0.49
1:QA:674:G:H2'	1:QA:675:A:H8	1.77	0.49
1:QA:977:A:O2'	1:QA:981:U:N3	2.45	0.49
6:QF:25:ILE:HG21	6:QF:82:ARG:HH21	1.77	0.49
13:QM:45:VAL:HA	13:QM:48:LEU:HG	1.95	0.49
25:RA:907:U:O2'	36:RQ:101:ARG:NH2	2.45	0.49
32:RI:132:PRO:HD2	32:RI:134:PRO:HD2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:10:VAL:N	50:R4:26:SER:O	2.43	0.49
1:XA:674:G:H2'	1:XA:675:A:C8	2.46	0.49
2:XB:192:SER:OG	2:XB:193:ASP:N	2.36	0.49
23:XX:19:C:H42	24:XY:36:G:H1	1.61	0.49
1:QA:856:C:H2'	1:QA:857:C:C6	2.47	0.49
1:QA:1320:C:H2'	1:QA:1321:C:O4'	2.13	0.49
1:QA:1456:G:O2'	20:QT:39:LYS:NZ	2.38	0.49
10:QJ:24:VAL:HG21	10:QJ:37:PRO:HG3	1.95	0.49
25:RA:106:C:HO2'	25:RA:294:A:HO2'	1.61	0.49
25:RA:486:C:O2'	42:RW:60:ASN:OD1	2.30	0.49
25:RA:734:A:O2'	25:RA:735:A:H5'	2.13	0.49
25:RA:806:C:O3'	25:RA:830:G:N2	2.45	0.49
25:RA:1429:G:H2'	25:RA:1430:C:C6	2.47	0.49
25:RA:1995:U:H3'	25:RA:1996:C:H2'	1.94	0.49
25:RA:2064:C:H2'	25:RA:2065:C:H6	1.77	0.49
25:RA:2555:U:C2	56:ZA:1:C:C5	3.00	0.49
26:RB:112:U:H2'	26:RB:113:G:H8	1.77	0.49
28:RE:16:ARG:NH2	28:RE:171:GLU:OE2	2.44	0.49
29:RF:120:GLU:HB3	29:RF:122:LYS:HD3	1.94	0.49
35:RP:47:ASP:OD2	35:RP:49:ARG:NH2	2.37	0.49
40:RU:106:PHE:HA	40:RU:109:LEU:HD12	1.94	0.49
48:R2:9:GLN:NE2	48:R2:56:GLN:OE1	2.39	0.49
52:R6:16:CYS:HB2	52:R6:18:ARG:HH11	1.77	0.49
1:XA:429:U:O4'	1:XA:430:A:H8	1.95	0.49
1:XA:434:U:H2'	1:XA:435:C:H6	1.78	0.49
1:XA:640:A:N3	8:XH:115:SER:OG	2.35	0.49
1:XA:1506:U:O2'	1:XA:1507:A:H5'	2.12	0.49
2:XB:189:ASP:OD1	2:XB:189:ASP:N	2.44	0.49
6:XF:10:LEU:HB2	6:XF:59:TYR:HB3	1.94	0.49
25:YA:313:C:H2'	25:YA:314:A:H8	1.77	0.49
25:YA:2544:G:H1'	25:YA:2646:C:H4'	1.93	0.49
25:YA:2693:A:H2'	25:YA:2694:G:H8	1.78	0.49
25:YA:2737:G:H2'	25:YA:2738:A:H8	1.77	0.49
1:QA:262:A:H2'	1:QA:263:A:C8	2.47	0.49
1:QA:334:C:H2'	1:QA:335:C:C6	2.48	0.49
1:QA:783:C:H2'	1:QA:784:C:H6	1.77	0.49
1:QA:1373:G:H5"	7:QG:36:LYS:HE2	1.95	0.49
25:RA:648:G:H2'	25:RA:649:G:C8	2.47	0.49
25:RA:1262:A:OP2	42:RW:97:LYS:NZ	2.45	0.49
25:RA:2314:C:H2'	25:RA:2315:G:C8	2.47	0.49
28:RE:26:ILE:HD12	28:RE:196:VAL:HG11	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:35:VAL:HG11	34:RO:103:ALA:HB3	1.95	0.49
1:XA:166:G:H2'	1:XA:167:G:H8	1.78	0.49
1:XA:1100:C:O2'	1:XA:1102:A:OP1	2.19	0.49
4:XD:8:VAL:HG23	4:XD:8:VAL:O	2.13	0.49
7:XG:111:ARG:HD2	7:XG:123:GLU:HB2	1.94	0.49
11:XK:44:SER:H	11:XK:47:VAL:HG12	1.78	0.49
25:YA:1102:C:H2'	25:YA:1103:A:C8	2.47	0.49
25:YA:1266:G:OP2	51:Y5:20:ARG:NE	2.37	0.49
25:YA:1291:C:H2'	25:YA:1292:U:H6	1.76	0.49
25:YA:1496:A:N3	25:YA:1577:C:O2'	2.42	0.49
1:QA:302:G:H2'	1:QA:303:A:H8	1.77	0.49
1:QA:490:G:H2'	1:QA:491:G:C8	2.48	0.49
1:QA:1005:A:OP2	1:QA:1006:C:N4	2.46	0.49
1:QA:1280:A:P	10:QJ:43:ARG:HH21	2.36	0.49
1:QA:1321:C:O2	19:QS:36:ARG:NH2	2.46	0.49
1:QA:1415:G:O6	1:QA:1485:U:O4	2.30	0.49
4:QD:20:TYR:HA	58:QD:303:SF4:S3	2.52	0.49
19:QS:50:ALA:HB1	19:QS:57:HIS:HB2	1.95	0.49
25:RA:322:A:P	29:RF:169:ASN:HD21	2.36	0.49
25:RA:614(D):A:C4	29:RF:180:GLY:HA2	2.47	0.49
25:RA:918:A:H4'	26:RB:98:G:N3	2.28	0.49
1:XA:227:G:H2'	1:XA:228:A:C8	2.48	0.49
1:XA:271:C:H2'	1:XA:272:C:C6	2.48	0.49
1:XA:285:G:H2'	1:XA:286:G:H8	1.78	0.49
25:YA:306:U:H2'	25:YA:307:G:O4'	2.13	0.49
25:YA:445:C:O2'	25:YA:449:A:N3	2.38	0.49
25:YA:570:G:H22	25:YA:2498:C:H4'	1.78	0.49
25:YA:2327:A:N7	25:YA:2388:A:N6	2.61	0.49
28:YE:5:LEU:HB2	28:YE:51:PHE:CD2	2.47	0.49
28:YE:161:GLY:HA2	28:YE:163:GLU:HG2	1.94	0.49
53:Y7:5:TRP:O	53:Y7:6:GLN:NE2	2.46	0.49
1:QA:672:U:H2'	1:QA:673:G:H8	1.77	0.49
1:QA:1144:G:H21	1:QA:1146:A:H62	1.59	0.49
1:QA:1226:C:OP2	13:QM:91:ARG:NH2	2.46	0.49
1:QA:1309:G:C2'	1:QA:1310:G:H5'	2.43	0.49
6:QF:79:LEU:HB3	6:QF:88:VAL:HG21	1.93	0.49
25:RA:216:A:H2'	25:RA:217:G:H8	1.78	0.49
25:RA:383:U:H5"	25:RA:384:U:OP2	2.12	0.49
25:RA:1206:G:H1	25:RA:1240:U:H3	1.60	0.49
25:RA:1963:U:H4'	25:RA:1964:G:OP1	2.12	0.49
26:RB:62:C:H2'	26:RB:63:G:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:47:VAL:HG11	28:RE:86:PRO:HD2	1.95	0.49
30:RG:173:LEU:HB3	30:RG:178:PHE:HB2	1.92	0.49
43:RX:20:GLY:O	43:RX:25:LYS:N	2.45	0.49
1:XA:45:U:H2'	1:XA:46:G:C8	2.48	0.49
1:XA:421:U:H5"	1:XA:422:C:H5	1.77	0.49
1:XA:555:C:H2'	1:XA:556:C:H6	1.78	0.49
1:XA:1439:C:OP1	20:XT:38:LYS:NZ	2.26	0.49
13:XM:87:TYR:OH	13:XM:91:ARG:NH2	2.46	0.49
25:YA:572:A:H61	25:YA:2029:G:H21	1.61	0.49
25:YA:630:G:N2	25:YA:633:A:OP2	2.44	0.49
25:YA:813:U:O2'	25:YA:1225:G:O2'	2.30	0.49
25:YA:932:G:OP2	49:Y3:29:ARG:NH2	2.46	0.49
1:QA:1103:C:H2'	1:QA:1104:G:O4'	2.13	0.49
3:QC:153:VAL:O	3:QC:166:GLU:N	2.41	0.49
4:QD:18:LYS:HD2	4:QD:20:TYR:CZ	2.47	0.49
9:QI:2:GLU:OE1	9:QI:20:ARG:NH2	2.46	0.49
12:QL:75:HIS:HB2	12:QL:77:LEU:HG	1.95	0.49
25:RA:184:C:H2'	25:RA:185:U:C6	2.48	0.49
25:RA:521:G:H2'	25:RA:522:G:C8	2.47	0.49
25:RA:646:A:H2'	25:RA:647:G:C8	2.48	0.49
25:RA:1243:G:O2'	35:RP:7:ARG:NH2	2.46	0.49
25:RA:1271:G:O2'	25:RA:1618:A:OP1	2.30	0.49
25:RA:1957:C:O2'	25:RA:1984:G:N2	2.45	0.49
25:RA:2576:G:OP2	25:RA:2576:G:N2	2.42	0.49
25:RA:2849:U:O4	39:RT:23:ARG:NH1	2.43	0.49
26:RB:30:C:OP2	38:RS:32:LEU:HD11	2.13	0.49
40:RU:65:ILE:O	40:RU:68:ALA:N	2.46	0.49
44:RY:87:LYS:HG2	44:RY:95:LYS:HE3	1.95	0.49
45:RZ:97:GLU:HA	45:RZ:126:VAL:O	2.13	0.49
1:XA:127:G:O2'	17:XQ:2:PRO:O	2.31	0.49
1:XA:539:A:H2'	1:XA:540:G:C8	2.48	0.49
1:XA:973:G:OP1	10:XJ:57:LYS:NZ	2.28	0.49
1:XA:1095:U:H2'	1:XA:1096:C:C6	2.48	0.49
25:YA:212:G:H2'	25:YA:213:A:O4'	2.13	0.49
25:YA:278:A:H3'	25:YA:278:A:P	2.53	0.49
25:YA:690:G:H2'	25:YA:691:C:H6	1.78	0.49
25:YA:2377:A:H2'	25:YA:2378:A:C8	2.47	0.49
38:YS:10:ARG:HG2	38:YS:91:PRO:HA	1.94	0.49
39:YT:29:ARG:NH2	39:YT:46:GLU:OE1	2.45	0.49
1:QA:254:G:O2'	17:QQ:16:GLN:O	2.31	0.48
1:QA:1123:A:H4'	10:QJ:36:GLY:HA3	1.93	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1256:A:OP1	3:QC:26:LYS:HD2	2.12	0.48
1:QA:1435:G:H2'	1:QA:1436:U:C6	2.48	0.48
7:QG:87:VAL:HG23	7:QG:152:ALA:HA	1.94	0.48
8:QH:110:ALA:HB3	8:QH:121:ASP:HB3	1.94	0.48
25:RA:32:C:O2'	25:RA:33:U:H5'	2.13	0.48
25:RA:590:A:OP1	29:RF:95:ARG:NH1	2.46	0.48
25:RA:863:A:H2'	25:RA:864:G:H8	1.78	0.48
25:RA:2017:U:H4'	51:R5:8:LYS:O	2.12	0.48
25:RA:2206:G:H5"	25:RA:2207:G:N7	2.28	0.48
25:RA:2315:G:H21	30:RG:128:ARG:HH11	1.61	0.48
29:RF:186:ILE:HD12	29:RF:192:LEU:HD21	1.94	0.48
33:RN:58:ASP:N	33:RN:58:ASP:OD1	2.44	0.48
1:XA:130:A:N3	1:XA:263:A:O2'	2.37	0.48
1:XA:533:A:O2'	1:XA:535:A:OP2	2.28	0.48
3:XC:43:LEU:O	3:XC:47:LEU:HB2	2.13	0.48
4:XD:72:GLU:OE1	4:XD:207:TYR:OH	2.30	0.48
5:XE:115:VAL:HG12	5:XE:117:ASP:H	1.78	0.48
18:XR:48:GLY:O	18:XR:74:ARG:NH2	2.45	0.48
25:YA:328:U:O2'	44:YY:71:LYS:NZ	2.45	0.48
25:YA:802:A:H5'	25:YA:803:U:OP2	2.13	0.48
25:YA:1340:U:OP1	43:YX:16:LYS:NZ	2.45	0.48
25:YA:2109:U:H2'	25:YA:2110:G:C8	2.48	0.48
25:YA:2137:C:N3	25:YA:2138:C:N4	2.60	0.48
25:YA:2317:C:H2'	25:YA:2318:G:H5'	1.95	0.48
25:YA:2757:A:O2'	25:YA:2758:A:H5'	2.12	0.48
25:YA:2867:G:OP2	39:YT:119:LYS:NZ	2.29	0.48
30:YG:97:ASP:H	30:YG:100:TRP:HD1	1.61	0.48
31:YH:122:THR:O	31:YH:134:SER:OG	2.30	0.48
1:QA:768:A:N3	1:QA:1512:U:O2'	2.45	0.48
1:QA:1014:A:H2'	1:QA:1015:A:C8	2.47	0.48
1:QA:1325:C:OP1	21:QU:15:ARG:NE	2.46	0.48
11:QK:31:THR:HA	11:QK:42:TRP:HA	1.94	0.48
25:RA:13:A:O2'	25:RA:15:G:N7	2.40	0.48
25:RA:1514:U:H2'	25:RA:1515:G:C8	2.43	0.48
26:RB:75:G:N2	45:RZ:87:ASP:OD1	2.45	0.48
31:RH:155:SER:OG	31:RH:158:HIS:O	2.31	0.48
35:RP:81:GLN:NE2	35:RP:105:LEU:O	2.44	0.48
1:XA:255:G:P	17:XQ:69:LYS:HZ3	2.36	0.48
1:XA:1457:G:H4'	20:XT:36:LEU:HD21	1.94	0.48
25:YA:1388:G:H2'	25:YA:1389:G:C8	2.48	0.48
25:YA:2065:C:H5"	25:YA:2252:G:H1'	1.93	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2096:U:O4	25:YA:2193:G:O6	2.31	0.48
1:QA:328:C:H4'	1:QA:329:A:H5'	1.95	0.48
1:QA:532:A:N6	1:QA:1206:G:O2'	2.46	0.48
1:QA:538:G:H2'	1:QA:539:A:H8	1.78	0.48
1:QA:1049:U:O4	14:QN:29:ARG:NH2	2.41	0.48
2:QB:71:VAL:HG11	2:QB:170:GLU:HG3	1.95	0.48
18:QR:53:ARG:HD2	18:QR:63:GLN:HG2	1.95	0.48
35:RP:37:GLY:N	35:RP:40:SER:OG	2.46	0.48
35:RP:59:LEU:HD21	54:R8:10:ALA:HB2	1.95	0.48
40:RU:44:ASN:ND2	41:RV:75:PHE:O	2.32	0.48
40:RU:96:ALA:O	40:RU:99:ALA:N	2.44	0.48
41:RV:8:GLY:O	41:RV:10:LYS:NZ	2.36	0.48
45:RZ:5:LEU:O	45:RZ:59:LEU:HA	2.14	0.48
1:XA:376:G:H2'	1:XA:377:G:C8	2.47	0.48
1:XA:434:U:H2'	1:XA:435:C:C6	2.48	0.48
1:XA:902:G:H2'	1:XA:903:G:H8	1.78	0.48
1:XA:946:A:H2'	1:XA:947:G:C8	2.48	0.48
10:XJ:22:LYS:NZ	10:XJ:88:LEU:O	2.46	0.48
16:XP:34:GLU:OE2	16:XP:59:TRP:NE1	2.38	0.48
25:YA:225:A:H2'	25:YA:226:G:H5'	1.95	0.48
25:YA:1000:A:H2'	25:YA:1001:A:C8	2.49	0.48
25:YA:1800:C:OP1	27:YD:260:ARG:NH2	2.45	0.48
25:YA:2494:G:H2'	25:YA:2495:G:H8	1.77	0.48
25:YA:2546:U:H4'	25:YA:2566:A:H2	1.78	0.48
25:YA:2627:G:O2'	25:YA:2781:A:N1	2.44	0.48
31:YH:9:ILE:HB	31:YH:50:VAL:HB	1.95	0.48
1:QA:272:C:H2'	1:QA:273:A:H8	1.78	0.48
1:QA:545:C:OP2	4:QD:65:ARG:NH2	2.47	0.48
1:QA:783:C:H2'	1:QA:784:C:C6	2.49	0.48
1:QA:1431:C:H2'	1:QA:1432:G:O4'	2.13	0.48
4:QD:19:LEU:HB2	4:QD:21:LEU:HD11	1.94	0.48
4:QD:202:LEU:O	4:QD:206:PHE:N	2.46	0.48
10:QJ:59:SER:O	10:QJ:59:SER:OG	2.29	0.48
13:QM:10:PRO:HB2	13:QM:13:LYS:HE2	1.95	0.48
25:RA:1364:G:N2	25:RA:1367:A:OP2	2.45	0.48
25:RA:2773:C:O2'	25:RA:2774:C:H5'	2.13	0.48
25:RA:2837:G:H2'	25:RA:2838:G:H8	1.78	0.48
36:RQ:39:PRO:HD3	36:RQ:99:PRO:HG3	1.95	0.48
1:XA:489:C:H2'	1:XA:490:G:H8	1.78	0.48
1:XA:543:C:OP2	4:XD:10:ARG:NH2	2.46	0.48
1:XA:864:A:O2'	1:XA:1078:U:O4	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1121:U:H2'	1:XA:1122:U:C6	2.49	0.48
7:XG:15:ASP:OD1	7:XG:19:GLY:N	2.47	0.48
8:XH:51:VAL:HG21	8:XH:60:ARG:HD3	1.96	0.48
13:XM:59:TYR:O	13:XM:63:THR:OG1	2.24	0.48
17:XQ:22:LEU:HA	17:XQ:41:LYS:HA	1.94	0.48
25:YA:90:U:H4'	25:YA:92:A:H5'	1.94	0.48
25:YA:382:G:O2'	25:YA:383:U:H5'	2.13	0.48
25:YA:565:C:O2'	25:YA:566:U:H5'	2.12	0.48
25:YA:851:U:O2'	49:Y3:42:ALA:O	2.27	0.48
25:YA:1799:G:O6	27:YD:179:SER:N	2.43	0.48
25:YA:2066:C:H2'	25:YA:2067:G:H5'	1.94	0.48
1:QA:130:A:OP2	17:QQ:63:ARG:NE	2.46	0.48
4:QD:18:LYS:HD2	4:QD:20:TYR:CE1	2.49	0.48
25:RA:1394:U:H4'	25:RA:1603:A:H4'	1.94	0.48
25:RA:2715:C:H2'	25:RA:2716:U:C6	2.49	0.48
28:RE:8:LYS:O	28:RE:193:GLY:N	2.43	0.48
30:RG:63:ILE:HG12	30:RG:144:ILE:HD11	1.95	0.48
30:RG:65:GLY:HA2	50:R4:7:PRO:HG2	1.95	0.48
1:XA:636:U:H5'	17:XQ:2:PRO:HG3	1.96	0.48
1:XA:986:A:N3	19:XS:52:TYR:OH	2.46	0.48
1:XA:1207:2MG:H2'	1:XA:1208:C:C6	2.48	0.48
1:XA:1289:A:H2'	1:XA:1290:G:H5'	1.96	0.48
1:XA:1348:U:H4'	9:XI:120:ARG:HD2	1.95	0.48
22:XV:28:C:H2'	22:XV:29:G:C8	2.48	0.48
25:YA:514:A:H2'	25:YA:515:A:C8	2.48	0.48
25:YA:1394:U:O2	43:YX:16:LYS:NZ	2.39	0.48
25:YA:2692:C:H2'	25:YA:2693:A:H8	1.78	0.48
29:YF:63:LYS:NZ	29:YF:75:HIS:O	2.37	0.48
36:YQ:17:LEU:HD21	36:YQ:41:TRP:HE1	1.79	0.48
1:QA:932:C:H5"	7:QG:4:ARG:HD2	1.95	0.48
1:QA:1280:A:H5"	10:QJ:40:LEU:HD21	1.94	0.48
1:QA:1510:U:H2'	1:QA:1511:G:C8	2.49	0.48
8:QH:114:THR:OG1	8:QH:117:GLY:O	2.28	0.48
13:QM:29:ARG:HB2	13:QM:64:TRP:CH2	2.48	0.48
16:QP:35:LYS:HD3	16:QP:37:GLY:H	1.77	0.48
25:RA:374:A:H2'	25:RA:375:C:H5'	1.94	0.48
25:RA:401:A:H2'	25:RA:402:A:C8	2.49	0.48
25:RA:718:A:H3'	25:RA:719:C:H6	1.79	0.48
25:RA:908:C:O2'	36:RQ:71:ASP:OD2	2.24	0.48
30:RG:2:PRO:HB2	30:RG:3:LEU:HD22	1.96	0.48
34:RO:68:GLU:OE1	34:RO:78:ARG:NH1	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:197:A:O2'	1:XA:220:G:N2	2.46	0.48
1:XA:269:C:H2'	1:XA:270:A:H8	1.79	0.48
1:XA:398:C:H2'	1:XA:399:G:H8	1.78	0.48
1:XA:1125:U:O2'	1:XA:1126:U:O5'	2.27	0.48
4:XD:111:ALA:HB1	4:XD:116:GLN:HB3	1.94	0.48
25:YA:414:C:H2'	25:YA:415:A:C8	2.47	0.48
25:YA:689:A:N3	25:YA:779:U:O2'	2.40	0.48
25:YA:1374:G:O2'	25:YA:1375:C:H5'	2.14	0.48
25:YA:2393:A:H5"	35:YP:63:PRO:HB3	1.96	0.48
25:YA:2692:C:H2'	25:YA:2693:A:C8	2.49	0.48
34:YO:73:ASP:OD1	34:YO:73:ASP:N	2.46	0.48
42:YW:86:LEU:HD22	42:YW:96:ILE:HD11	1.94	0.48
1:QA:502:G:H4'	1:QA:550:G:H4'	1.94	0.48
1:QA:613:C:H2'	1:QA:614:A:C8	2.48	0.48
8:QH:21:LYS:O	8:QH:65:TYR:OH	2.29	0.48
10:QJ:19:SER:HA	10:QJ:22:LYS:HE3	1.96	0.48
25:RA:40:C:H2'	25:RA:41:C:H6	1.78	0.48
25:RA:674:G:H1'	29:RF:74:ARG:HD3	1.96	0.48
25:RA:1529:G:O2'	25:RA:1530:C:H5'	2.14	0.48
25:RA:2048:G:H2'	25:RA:2049:G:O4'	2.14	0.48
25:RA:2295:C:OP1	38:RS:10:ARG:NH2	2.47	0.48
25:RA:2340:G:H2'	25:RA:2341:G:H8	1.78	0.48
5:XE:98:THR:OG1	5:XE:99:GLY:N	2.46	0.48
25:YA:1042:G:H5'	25:YA:1043:C:OP2	2.14	0.48
25:YA:1138:G:O2'	33:YN:102:ALA:O	2.32	0.48
25:YA:2345:G:OP2	52:Y6:38:LYS:HD2	2.12	0.48
25:YA:2495:G:H2'	25:YA:2496:C:C6	2.49	0.48
1:QA:227:G:H2'	1:QA:228:A:C8	2.49	0.48
1:QA:541:G:H2'	1:QA:542:G:H8	1.79	0.48
1:QA:1119:C:H2'	1:QA:1120:G:C8	2.48	0.48
1:QA:1270:C:H2'	1:QA:1271:G:H8	1.79	0.48
8:QH:27:PRO:HA	8:QH:58:TYR:HA	1.94	0.48
14:QN:6:LEU:HB3	14:QN:23:ARG:HH22	1.79	0.48
25:RA:237:C:O2'	25:RA:238:C:H5'	2.14	0.48
25:RA:519:U:H2'	25:RA:520:G:H8	1.79	0.48
25:RA:922:U:H2'	25:RA:923:C:C6	2.48	0.48
25:RA:1769:G:H2'	25:RA:1770:G:H8	1.78	0.48
25:RA:2162:G:HO2'	25:RA:2172:U:HO2'	1.55	0.48
1:XA:436:C:H2'	1:XA:437:U:C6	2.48	0.48
1:XA:1292:U:H2'	1:XA:1293:G:H8	1.77	0.48
1:XA:1305:G:N2	1:XA:1331:G:H1'	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1324:A:H2'	1:XA:1325:C:C6	2.48	0.48
1:XA:1412:C:H2'	1:XA:1413:A:H8	1.79	0.48
25:YA:140:G:N2	25:YA:142(A):A:N6	2.60	0.48
25:YA:876:C:H2'	25:YA:877:U:O4'	2.13	0.48
25:YA:988:A:H8	25:YA:988:A:O5'	1.97	0.48
25:YA:1298:C:H3'	25:YA:1299:G:H8	1.79	0.48
40:YU:44:ASN:OD1	41:YV:75:PHE:N	2.47	0.48
41:YV:7:THR:HG23	41:YV:22:VAL:HG11	1.96	0.48
45:YZ:149:SER:OG	45:YZ:172:ALA:O	2.23	0.48
25:RA:538:G:H2'	25:RA:539:G:H8	1.79	0.48
25:RA:1309:G:O2'	25:RA:1611:C:O2'	2.00	0.48
25:RA:2232:U:O2'	25:RA:2233:U:H5'	2.14	0.48
26:RB:22:U:H3	26:RB:61:G:H22	1.61	0.48
26:RB:37:C:N3	26:RB:48:A:O2'	2.44	0.48
1:XA:448:A:P	1:XA:485:G:H22	2.36	0.48
1:XA:1121:U:H2'	1:XA:1122:U:H6	1.77	0.48
1:XA:1347:G:N7	9:XI:10:ARG:NH2	2.62	0.48
3:XC:75:VAL:O	3:XC:83:ARG:NH1	2.45	0.48
25:YA:26:G:OP1	42:YW:80:PRO:HB3	2.13	0.48
25:YA:363(B):A:H2'	25:YA:363(C):G:H8	1.78	0.48
25:YA:2850:A:N7	25:YA:2868:A:O2'	2.46	0.48
45:YZ:163:LEU:HD22	45:YZ:167:PRO:HG3	1.95	0.48
47:Y1:64:ALA:HA	47:Y1:67:ILE:HG13	1.96	0.48
1:QA:334:C:H2'	1:QA:335:C:H6	1.79	0.48
1:QA:409:G:P	4:QD:22:LYS:O	2.72	0.48
1:QA:490:G:OP2	4:QD:132:ARG:NH2	2.36	0.48
1:QA:775:G:OP2	27:RD:276:LYS:NZ	2.45	0.48
1:QA:777:A:H2'	1:QA:778:G:C8	2.48	0.48
1:QA:984:C:H2'	1:QA:985:C:H6	1.79	0.48
1:QA:1209:C:H2'	1:QA:1210:C:C6	2.49	0.48
1:QA:1276:G:N3	1:QA:1282:C:O2'	2.37	0.48
25:RA:104:U:H2'	25:RA:105:C:H5'	1.96	0.48
25:RA:2377:A:H2'	25:RA:2378:A:C8	2.49	0.48
25:RA:2457:U:O2'	25:RA:2458:G:H5'	2.14	0.48
25:RA:2473:U:OP1	25:RA:2529:G:N2	2.46	0.48
55:R9:10:ILE:HG23	55:R9:11:CYS:HB2	1.96	0.48
1:XA:76:C:H2'	1:XA:77:G:H8	1.78	0.48
1:XA:1263:C:H2'	1:XA:1264:C:H6	1.79	0.48
1:XA:1324:A:H2'	1:XA:1325:C:H6	1.79	0.48
16:XP:61:SER:OG	16:XP:62:VAL:N	2.47	0.48
25:YA:52:A:H2'	25:YA:53:A:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:831:G:O2'	35:YP:38:GLN:OE1	2.31	0.48
25:YA:1561:G:H2'	25:YA:1562:A:H8	1.79	0.48
29:YF:6:VAL:HG23	29:YF:23:ASP:HA	1.96	0.48
29:YF:155:LEU:HD12	29:YF:174:VAL:HG23	1.96	0.48
35:YP:71:VAL:HG23	35:YP:72:PRO:HD3	1.94	0.48
39:YT:91:ARG:NE	39:YT:124:ASP:OD2	2.42	0.48
39:YT:92:GLY:O	39:YT:120:ARG:NH2	2.47	0.48
1:QA:110:C:H2'	1:QA:111:G:O4'	2.14	0.47
1:QA:195:A:H4'	20:QT:68:LYS:NZ	2.29	0.47
1:QA:730:G:O6	15:QO:51:HIS:NE2	2.41	0.47
1:QA:1098:C:H2'	1:QA:1099:G:C8	2.49	0.47
1:QA:1190:G:H5'	3:QC:176:HIS:CE1	2.48	0.47
1:QA:1386:G:H2'	1:QA:1387:G:H8	1.79	0.47
25:RA:573:G:O2'	25:RA:574:C:H3'	2.14	0.47
25:RA:1030:G:O6	25:RA:1125:G:N2	2.47	0.47
25:RA:1356:G:H2'	25:RA:1357:U:C6	2.50	0.47
25:RA:2041:U:H2'	25:RA:2042:A:H8	1.79	0.47
31:RH:54:ARG:NE	31:RH:56:SER:O	2.46	0.47
36:RQ:43:THR:N	36:RQ:46:GLN:OE1	2.41	0.47
1:XA:933:G:O6	7:XG:3:ARG:NH2	2.47	0.47
1:XA:1179:A:H4'	9:XI:103:THR:HA	1.96	0.47
1:XA:1343:G:H2'	1:XA:1344:C:C6	2.48	0.47
1:XA:1407:5MC:H2'	1:XA:1408:A:H8	1.79	0.47
11:XK:16:SER:HA	11:XK:79:SER:O	2.14	0.47
25:YA:110:G:O2'	25:YA:111:A:H5'	2.14	0.47
25:YA:839:U:O2'	25:YA:1191:G:N3	2.43	0.47
25:YA:1064:C:H3'	25:YA:1065:U:H5"	1.95	0.47
25:YA:1587:A:H2'	25:YA:1588:C:C6	2.49	0.47
25:YA:1791:A:H4'	27:YD:206:LEU:HB2	1.96	0.47
25:YA:1918:A:O2'	25:YA:1920:OMC:N4	2.46	0.47
25:YA:2397:G:OP1	47:Y1:25:LYS:HE2	2.14	0.47
25:YA:2405:G:H5'	35:YP:75:ILE:HD13	1.96	0.47
34:YO:104:ARG:NH2	39:YT:43:GLN:OE1	2.47	0.47
39:YT:16:ARG:HH11	39:YT:19:LEU:HD21	1.79	0.47
44:YY:52:SER:OG	44:YY:55:TYR:N	2.38	0.47
1:QA:1048:G:N2	1:QA:1214:C:O2'	2.46	0.47
1:QA:1160:G:H1	1:QA:1176:A:N6	2.12	0.47
4:QD:21:LEU:HD12	4:QD:21:LEU:N	2.29	0.47
25:RA:184:C:O2'	25:RA:217:G:N3	2.42	0.47
25:RA:579:G:H2'	25:RA:580:C:C6	2.48	0.47
25:RA:969:U:H2'	25:RA:970:C:C6	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1297:C:OP1	25:RA:2710:C:H4'	2.15	0.47
25:RA:1591:G:H2'	25:RA:1592:C:C6	2.49	0.47
25:RA:2852:G:H2'	25:RA:2853:C:C6	2.49	0.47
28:RE:104:VAL:HG11	28:RE:188:VAL:HG13	1.96	0.47
34:RO:36:GLY:N	34:RO:62:VAL:O	2.44	0.47
39:RT:22:PHE:HA	39:RT:91:ARG:HH12	1.79	0.47
43:RX:35:THR:HG1	43:RX:38:GLU:H	1.58	0.47
1:XA:22:G:H2'	1:XA:23:C:C6	2.49	0.47
1:XA:35:G:H2'	1:XA:36:C:C6	2.49	0.47
1:XA:382:A:H2'	1:XA:383:A:H8	1.79	0.47
1:XA:1352:C:H2'	1:XA:1353:G:C8	2.49	0.47
25:YA:961:C:O2'	25:YA:2031:A:N6	2.45	0.47
25:YA:2394:C:O2'	25:YA:2395:C:H5'	2.14	0.47
25:YA:2593:U:H2'	25:YA:2594:C:C6	2.49	0.47
1:QA:453:A:OP1	16:QP:76:GLN:NE2	2.47	0.47
1:QA:889:A:OP1	1:QA:891:U:H1'	2.14	0.47
1:QA:1135:U:H4'	1:QA:1136:U:H5	1.79	0.47
1:QA:1377:A:OP2	7:QG:94:ARG:NE	2.47	0.47
1:QA:1427:U:H2'	1:QA:1428:A:H8	1.79	0.47
2:QB:121:LEU:HB3	2:QB:130:ARG:HH22	1.79	0.47
4:QD:92:VAL:O	4:QD:96:LEU:N	2.36	0.47
7:QG:64:GLN:OE1	7:QG:68:ASN:ND2	2.45	0.47
9:QI:21:PRO:HA	9:QI:59:PHE:HA	1.95	0.47
25:RA:519:U:H2'	25:RA:520:G:C8	2.48	0.47
25:RA:1165:U:H3	25:RA:1184:G:H1	1.62	0.47
25:RA:1409:C:H2'	25:RA:1410:G:C8	2.49	0.47
25:RA:2451:A:C6	56:ZA:3:PPU:HE2	2.49	0.47
28:RE:24:THR:OG1	28:RE:186:GLY:O	2.30	0.47
32:RI:56:LYS:O	32:RI:60:GLU:N	2.46	0.47
42:RW:79:GLY:HA3	42:RW:100:THR:HG22	1.96	0.47
1:XA:189(C):C:H42	1:XA:189(J):G:H1	1.61	0.47
1:XA:474:G:H2'	1:XA:475:G:H8	1.80	0.47
25:YA:197:A:O2'	25:YA:2244:U:OP1	2.18	0.47
25:YA:360:G:H2'	25:YA:361:G:H8	1.79	0.47
25:YA:601:C:O2'	25:YA:605:C:OP1	2.30	0.47
25:YA:666:G:N2	54:Y8:2:PRO:O	2.47	0.47
25:YA:1142(B):A:O2'	25:YA:1143:A:H3'	2.14	0.47
25:YA:1466:G:H2'	25:YA:1547:C:N4	2.27	0.47
25:YA:2405:G:P	35:YP:77:ARG:HH21	2.38	0.47
25:YA:2804:C:H2'	25:YA:2805:G:H8	1.79	0.47
25:YA:2830:G:O3'	28:YE:58:ARG:NH2	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:9:VAL:HG23	39:YT:3:ARG:HB3	1.97	0.47
36:YQ:32:TYR:OH	36:YQ:111:GLU:OE1	2.29	0.47
1:QA:191:G:O2'	20:QT:102:GLY:N	2.45	0.47
1:QA:582:U:H2'	1:QA:583:A:H8	1.79	0.47
1:QA:1526:G:H2'	1:QA:1527:C:C6	2.48	0.47
6:QF:48:LEU:HD22	6:QF:52:ILE:HD12	1.96	0.47
7:QG:94:ARG:NH1	7:QG:98:SER:OG	2.42	0.47
9:QI:111:ARG:HG3	9:QI:113:LYS:HD3	1.96	0.47
12:QL:6:THR:HG1	12:QL:9:GLN:H	1.58	0.47
25:RA:272(Q):G:H2'	25:RA:272(R):G:H8	1.79	0.47
25:RA:1528(A):A:H2'	25:RA:1528(B):A:C8	2.49	0.47
28:RE:36:ARG:NH1	28:RE:86:PRO:O	2.39	0.47
31:RH:40:GLU:O	31:RH:42:ARG:NH1	2.46	0.47
39:RT:41:ARG:NH1	39:RT:42:ILE:O	2.48	0.47
44:RY:52:SER:OG	44:RY:54:LYS:N	2.47	0.47
45:RZ:10:ARG:HH21	45:RZ:26:GLY:H	1.62	0.47
45:RZ:23:LYS:NZ	45:RZ:40:ASP:OD1	2.37	0.47
1:XA:559:A:P	5:XE:126:ARG:HH22	2.38	0.47
1:XA:974:A:OP2	14:XN:29:ARG:NH2	2.47	0.47
1:XA:1010:G:H2'	1:XA:1011:G:C8	2.47	0.47
13:XM:93:ARG:NH1	25:YA:888:C:OP1	2.48	0.47
25:YA:783:A:O2'	25:YA:785:G:OP1	2.32	0.47
25:YA:1105:U:H2'	25:YA:1106:G:C8	2.50	0.47
25:YA:1405:U:H2'	25:YA:1406:U:C6	2.48	0.47
25:YA:1423:G:H2'	25:YA:1424:G:H8	1.80	0.47
25:YA:2526:G:O3'	55:Y9:33:LYS:NZ	2.46	0.47
26:YB:88:C:H2'	26:YB:89:G:C8	2.49	0.47
27:YD:35:LYS:HE3	27:YD:64:ILE:HD11	1.95	0.47
28:YE:38:THR:HG1	28:YE:41:LYS:H	1.59	0.47
28:YE:134:ILE:HA	28:YE:137:HIS:HD2	1.79	0.47
43:YX:89:ILE:HG22	43:YX:92:LEU:H	1.79	0.47
1:QA:280:C:N3	17:QQ:39:SER:OG	2.36	0.47
2:QB:70:PHE:HD2	2:QB:163:PHE:HB3	1.79	0.47
3:QC:91:LEU:O	3:QC:95:THR:OG1	2.30	0.47
19:QS:19:VAL:HB	19:QS:20:LEU:HD22	1.97	0.47
25:RA:195:A:H4'	25:RA:251:A:O2'	2.15	0.47
25:RA:459:U:H2'	25:RA:460:A:H8	1.80	0.47
25:RA:1398:C:O3'	43:RX:25:LYS:NZ	2.46	0.47
1:XA:297:G:H4'	1:XA:557:G:H4'	1.97	0.47
1:XA:378:G:O6	1:XA:386:C:N4	2.47	0.47
1:XA:1430:C:H2'	1:XA:1431:C:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1510:U:H2'	1:XA:1511:G:C8	2.50	0.47
2:XB:93:VAL:HG11	2:XB:97:TRP:HD1	1.79	0.47
4:XD:10:ARG:HB2	4:XD:40:PRO:HG3	1.96	0.47
25:YA:1798:U:O2'	25:YA:1802:A:N3	2.37	0.47
25:YA:2286:A:H4'	25:YA:2287:A:O4'	2.15	0.47
25:YA:2374:C:O2'	25:YA:2375:G:H5'	2.15	0.47
25:YA:2629:A:H1'	25:YA:2630:G:H5"	1.96	0.47
29:YF:122:LYS:HB3	29:YF:191:ARG:HG2	1.97	0.47
30:YG:97:ASP:H	30:YG:100:TRP:CD1	2.32	0.47
33:YN:30:ILE:HG23	33:YN:52:VAL:HG11	1.96	0.47
1:QA:932:C:H2'	1:QA:933:G:C8	2.49	0.47
1:QA:1226:C:H41	13:QM:104:ARG:HG2	1.79	0.47
5:QE:81:GLU:HG2	5:QE:90:VAL:HG13	1.96	0.47
8:QH:83:ILE:O	8:QH:84:ARG:NH1	2.40	0.47
25:RA:214:G:O2'	25:RA:215:G:OP2	2.28	0.47
37:RR:26:LYS:O	37:RR:30:THR:OG1	2.30	0.47
1:XA:259:G:OP1	20:XT:83:ARG:NH1	2.48	0.47
1:XA:269:C:H2'	1:XA:270:A:C8	2.49	0.47
1:XA:552:U:H2'	1:XA:553:A:C8	2.50	0.47
1:XA:1104:G:H4'	2:XB:111:ARG:CZ	2.44	0.47
18:XR:32:ARG:HA	18:XR:69:THR:HG21	1.95	0.47
25:YA:327:G:H2'	25:YA:328:U:C6	2.50	0.47
25:YA:1270:C:O2'	25:YA:1648:C:OP2	2.25	0.47
25:YA:1416:G:HO2'	25:YA:1417:C:H5	1.61	0.47
25:YA:1512:U:H2'	25:YA:1513:C:C6	2.49	0.47
25:YA:1538:G:H2'	25:YA:1539:G:C8	2.50	0.47
25:YA:2682:U:O2'	39:YT:58:ASN:OD1	2.32	0.47
30:YG:166:ASP:OD1	30:YG:166:ASP:N	2.45	0.47
1:QA:296:U:O2'	1:QA:556:C:O2	2.20	0.47
1:QA:410:G:N2	1:QA:432:A:N6	2.43	0.47
1:QA:437:U:H3	1:QA:495:A:N6	1.99	0.47
1:QA:474:G:H2'	1:QA:475:G:C8	2.47	0.47
1:QA:1083:U:H5"	1:QA:1084:G:C8	2.50	0.47
1:QA:1225:A:OP1	13:QM:103:THR:N	2.41	0.47
1:QA:1330:U:H4'	13:QM:23:TYR:CE2	2.48	0.47
1:QA:1499:A:H2'	1:QA:1500:A:H8	1.79	0.47
3:QC:11:ARG:NH2	3:QC:177:THR:O	2.46	0.47
8:QH:24:THR:OG1	8:QH:25:ASP:N	2.47	0.47
11:QK:34:ASP:OD1	11:QK:37:GLY:N	2.47	0.47
17:QQ:62:SER:OG	17:QQ:63:ARG:N	2.47	0.47
22:QV:76:A:H2'	25:RA:2602:A:N6	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:392:C:H5”	25:RA:409:C:H5”	1.97	0.47
25:RA:687:C:H42	25:RA:787:U:H4’	1.79	0.47
25:RA:851:U:O2’	49:R3:42:ALA:O	2.28	0.47
25:RA:898:C:H2’	25:RA:899:A:O4’	2.14	0.47
25:RA:1082:U:O4	25:RA:1086:A:N6	2.48	0.47
25:RA:1441:G:H2’	25:RA:1442:G:H8	1.78	0.47
25:RA:1541:G:H3’	25:RA:1542:A:H2’	1.96	0.47
25:RA:1697:G:OP2	25:RA:1698:A:O2’	2.23	0.47
25:RA:1995:U:O2	34:RO:3:GLN:NE2	2.47	0.47
25:RA:2685:G:H5’	34:RO:68:GLU:OE2	2.14	0.47
25:RA:2740:A:H2’	25:RA:2741:A:C8	2.49	0.47
28:RE:26:ILE:HB	28:RE:182:LEU:HB3	1.96	0.47
35:RP:57:THR:HG1	35:RP:60:MET:H	1.63	0.47
41:RV:97:LYS:HD2	41:RV:97:LYS:HA	1.66	0.47
1:XA:392:G:H5’	16:XP:12:LYS:HG3	1.96	0.47
1:XA:1220:G:N2	19:XS:54:GLY:O	2.47	0.47
1:XA:1347:G:H22	1:XA:1374:A:P	2.38	0.47
1:XA:1404:5MC:H2’	1:XA:1405:G:C8	2.50	0.47
2:XB:192:SER:OG	2:XB:193:ASP:OD1	2.33	0.47
2:XB:197:VAL:O	8:XH:68:ARG:NH2	2.43	0.47
7:XG:23:VAL:O	7:XG:27:ILE:HG12	2.15	0.47
25:YA:459:U:O2’	25:YA:460:A:H5’	2.14	0.47
25:YA:535:C:O3’	40:YU:53:ARG:NH1	2.48	0.47
25:YA:847:U:OP2	25:YA:928:G:O6	2.33	0.47
25:YA:872:A:O2’	25:YA:873:G:H5’	2.14	0.47
25:YA:985:C:O2’	25:YA:986:C:H5’	2.14	0.47
25:YA:1009:A:N3	25:YA:1153:C:O2’	2.43	0.47
25:YA:1096:A:H2’	25:YA:1097:U:H6	1.80	0.47
25:YA:1386:C:H2’	25:YA:1387:C:C6	2.49	0.47
25:YA:1394:U:H4’	25:YA:1603:A:H4’	1.97	0.47
25:YA:1842:G:O6	25:YA:1898:U:O4	2.33	0.47
25:YA:1844:C:O3’	27:YD:258:LYS:NZ	2.36	0.47
25:YA:2486:G:H8	25:YA:2486:G:O5’	1.97	0.47
25:YA:2537:U:H2’	25:YA:2538:C:C6	2.49	0.47
25:YA:2695:C:H2’	25:YA:2696:U:C6	2.49	0.47
28:YE:144:ARG:HG2	28:YE:145:LYS:H	1.78	0.47
44:YY:10:GLY:H	44:YY:27:VAL:HB	1.79	0.47
1:QA:25:C:H2’	1:QA:26:A:C8	2.50	0.47
1:QA:34:C:H2’	1:QA:35:G:C8	2.49	0.47
1:QA:67:C:H2’	1:QA:68:G:C8	2.50	0.47
1:QA:271:C:H2’	1:QA:272:C:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:619:U:H5”	1:QA:620:C:OP2	2.15	0.47
1:QA:938:A:O2’	7:QG:95:ARG:NH1	2.38	0.47
1:QA:1054:C:H4’	1:QA:1055:A:O5’	2.14	0.47
1:QA:1175:G:H2’	1:QA:1176:A:C8	2.48	0.47
1:QA:1355:G:H21	10:QJ:46:ARG:HH22	1.62	0.47
1:QA:1475:G:H4’	25:RA:1689:A:H4’	1.96	0.47
11:QK:18:ARG:HG3	11:QK:35:PRO:HA	1.97	0.47
11:QK:73:MET:HG2	11:QK:103:LEU:HD21	1.97	0.47
19:QS:41:VAL:HG23	19:QS:43:GLU:H	1.79	0.47
22:QV:18:G:H8	22:QV:18:G:OP1	1.97	0.47
29:RF:11:VAL:HG22	29:RF:125:LEU:HB2	1.97	0.47
29:RF:183:VAL:HA	29:RF:186:ILE:HG12	1.97	0.47
33:RN:43:THR:N	33:RN:48:MET:SD	2.83	0.47
39:RT:92:GLY:O	39:RT:120:ARG:NH2	2.48	0.47
1:XA:806:C:H2’	1:XA:807:A:H8	1.79	0.47
1:XA:1015:A:H2’	1:XA:1016:A:C8	2.50	0.47
2:XB:198:ASP:HA	8:XH:68:ARG:HH22	1.80	0.47
3:XC:10:PHE:HD1	3:XC:11:ARG:HD3	1.80	0.47
9:XI:91:ASP:OD1	9:XI:91:ASP:N	2.47	0.47
22:XV:75:C:OP2	22:XV:75:C:H6	1.98	0.47
25:YA:1842:G:H1	25:YA:1898:U:H3	1.61	0.47
25:YA:2537:U:H2’	25:YA:2538:C:H6	1.79	0.47
35:YP:65:ARG:O	35:YP:68:GLN:NE2	2.48	0.47
43:YX:59:VAL:HB	43:YX:76:ARG:HB2	1.97	0.47
45:YZ:24:LEU:HA	45:YZ:25:PRO:HD3	1.78	0.47
1:QA:37:U:H2’	1:QA:38:G:C8	2.50	0.47
1:QA:56:U:O2’	32:YI:82:ARG:NH1	2.47	0.47
1:QA:658:G:H2’	1:QA:659:U:C6	2.50	0.47
1:QA:659:U:H2’	1:QA:660:G:C8	2.50	0.47
1:QA:713:G:OP1	27:RD:176:ARG:NH2	2.48	0.47
1:QA:1009:G:O6	1:QA:1020:U:O2	2.32	0.47
6:QF:82:ARG:HB3	6:QF:85:VAL:HG23	1.97	0.47
8:QH:7:ALA:HA	8:QH:10:LEU:HB2	1.97	0.47
10:QJ:61:GLU:HG3	14:QN:58:LYS:HE3	1.97	0.47
25:RA:1070:A:O2’	25:RA:1071:G:H5’	2.14	0.47
25:RA:1149:G:H2’	25:RA:1150:C:C6	2.50	0.47
25:RA:1657:C:H2’	25:RA:1658:C:H6	1.80	0.47
25:RA:2086:U:H2’	25:RA:2087:G:C8	2.50	0.47
25:RA:2221:G:H3’	25:RA:2222:G:H8	1.80	0.47
29:RF:50:SER:OG	29:RF:51:THR:N	2.47	0.47
29:RF:180:GLY:O	29:RF:182:ASN:ND2	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:17:LEU:HD12	36:RQ:39:PRO:HB2	1.96	0.47
36:RQ:65:PHE:HB2	36:RQ:105:GLU:HB2	1.96	0.47
47:R1:46:LEU:O	47:R1:47:GLN:NE2	2.47	0.47
1:XA:276:G:O3'	17:XQ:68:ARG:NH1	2.47	0.47
1:XA:359:U:O5'	1:XA:359:U:H6	1.96	0.47
1:XA:1065:U:H5"	1:XA:1190:G:N2	2.30	0.47
1:XA:1480:G:H2'	1:XA:1481:U:O4'	2.15	0.47
2:XB:84:GLU:OE1	2:XB:233:SER:OG	2.31	0.47
7:XG:78:ARG:HE	7:XG:80:VAL:HG23	1.80	0.47
25:YA:595:C:H2'	25:YA:596:G:H8	1.80	0.47
25:YA:740:U:H5"	25:YA:1784:A:H3'	1.96	0.47
25:YA:827:U:O2	25:YA:2246:G:H4'	2.15	0.47
25:YA:955:C:OP1	36:YQ:87:LYS:NZ	2.43	0.47
25:YA:1089:G:N2	25:YA:1090:U:O4	2.48	0.47
25:YA:2542:A:H4'	25:YA:2543:G:H8	1.79	0.47
27:YD:145:VAL:HB	27:YD:155:LEU:HB2	1.97	0.47
31:YH:47:GLU:N	31:YH:47:GLU:CD	2.71	0.47
1:QA:57:G:H2'	1:QA:58:C:C6	2.50	0.47
1:QA:584:G:H2'	1:QA:585:G:H8	1.79	0.47
1:QA:925:G:H1	1:QA:1391:U:H3	1.63	0.47
1:QA:972:C:H1'	10:QJ:55:LYS:HE3	1.95	0.47
7:QG:15:ASP:HB3	7:QG:23:VAL:HB	1.97	0.47
15:QO:67:LEU:HD23	15:QO:78:TYR:HE1	1.80	0.47
20:QT:8:ARG:N	20:QT:9:ASN:OD1	2.48	0.47
22:QV:64:G:H4'	36:RQ:10:ARG:NH1	2.30	0.47
25:RA:972:G:OP2	25:RA:973:A:O2'	2.33	0.47
25:RA:1164:G:H2'	25:RA:1165:U:C6	2.50	0.47
25:RA:1269:A:O2'	25:RA:1270:C:H5'	2.15	0.47
1:XA:1067:A:H8	1:XA:1067:A:O5'	1.98	0.47
1:XA:1118:C:H2'	1:XA:1119:C:C6	2.50	0.47
1:XA:1239:A:O2'	7:XG:114:ARG:O	2.28	0.47
13:XM:78:ILE:HG22	13:XM:82:MET:HE2	1.97	0.47
17:XQ:58:GLU:OE2	17:XQ:75:ARG:NH2	2.48	0.47
22:XV:52:G:H1	22:XV:62:C:H42	1.63	0.47
25:YA:52:A:H2'	25:YA:53:A:C8	2.50	0.47
25:YA:286:C:H2'	25:YA:287:C:C6	2.50	0.47
25:YA:1123:C:O2'	25:YA:1124:C:H5'	2.15	0.47
25:YA:1547:C:H2'	25:YA:1548:C:C6	2.49	0.47
25:YA:2037:G:H2'	25:YA:2038:G:C8	2.49	0.47
25:YA:2133:G:N3	25:YA:2158:A:N6	2.63	0.47
25:YA:2495:G:H2'	25:YA:2496:C:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2730:C:O2'	28:YE:168:MET:O	2.26	0.47
36:YQ:26:TYR:O	36:YQ:67:ARG:NH1	2.46	0.47
39:YT:118:ARG:HA	39:YT:121:ILE:HD12	1.97	0.47
1:QA:20:U:H2'	1:QA:21:G:O4'	2.15	0.46
1:QA:370:C:H2'	1:QA:371:G:C8	2.50	0.46
1:QA:886:G:H1	1:QA:911:U:H3	1.64	0.46
16:QP:1:MET:SD	16:QP:1:MET:N	2.70	0.46
19:QS:13:ASP:HA	19:QS:16:LEU:HB3	1.96	0.46
25:RA:15:G:H1	25:RA:525:U:H3	1.63	0.46
25:RA:20:C:H2'	25:RA:21:A:H8	1.80	0.46
25:RA:186:G:H2'	25:RA:187:G:H8	1.80	0.46
25:RA:1094:U:O2'	25:RA:1096:A:O5'	2.31	0.46
25:RA:2195:C:H2'	25:RA:2196:C:H6	1.79	0.46
29:RF:38:ARG:O	29:RF:42:ALA:N	2.45	0.46
31:RH:5:GLY:C	31:RH:69:ARG:HE	2.24	0.46
1:XA:151:A:H62	1:XA:170:U:H3	1.63	0.46
1:XA:1074:G:H2'	1:XA:1075:C:C6	2.50	0.46
1:XA:1218:C:H2'	1:XA:1219:U:C6	2.50	0.46
1:XA:1292:U:H2'	1:XA:1293:G:C8	2.49	0.46
1:XA:1504:G:OP1	1:XA:1507:A:H4'	2.15	0.46
14:XN:9:LYS:HG2	14:XN:12:ARG:HH21	1.80	0.46
25:YA:34:C:H5"	25:YA:35:G:OP2	2.15	0.46
25:YA:530:G:H4'	25:YA:531:C:OP1	2.14	0.46
25:YA:934:G:H2'	25:YA:935:C:C6	2.50	0.46
25:YA:985:C:H2'	25:YA:986:C:H6	1.80	0.46
25:YA:1322:A:H4'	42:YW:84:ARG:HH21	1.80	0.46
25:YA:1434:A:H61	25:YA:1558:A:H61	1.63	0.46
25:YA:2397:G:H5'	47:Y1:28:GLY:O	2.15	0.46
25:YA:2847:U:H3	25:YA:2869:G:H1	1.64	0.46
25:YA:2863:C:H2'	25:YA:2864:G:H8	1.80	0.46
26:YB:13:A:N1	26:YB:69:G:O2'	2.39	0.46
1:QA:1226:C:H2'	13:QM:103:THR:HG22	1.97	0.46
3:QC:134:ILE:HG23	3:QC:151:VAL:HB	1.97	0.46
4:QD:57:ARG:HE	4:QD:205:GLU:HG3	1.78	0.46
5:QE:144:THR:H	5:QE:147:ASP:HB2	1.79	0.46
11:QK:58:PRO:O	11:QK:62:GLN:N	2.44	0.46
25:RA:648:G:H2'	25:RA:649:G:H8	1.79	0.46
25:RA:818:G:O2'	25:RA:838:C:H4'	2.15	0.46
25:RA:2313:C:H5"	30:RG:91:ARG:HD3	1.98	0.46
25:RA:2331:G:H21	25:RA:2336:A:H2	1.63	0.46
26:RB:62:C:H2'	26:RB:63:G:H8	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:100:TRP:O	30:RG:104:GLU:N	2.44	0.46
46:R0:15:ASP:OD1	46:R0:16:SER:N	2.48	0.46
1:XA:334:C:O2'	1:XA:1434:A:O2'	2.13	0.46
1:XA:1325:C:OP1	21:XU:15:ARG:NH1	2.48	0.46
5:XE:103:GLY:O	5:XE:107:ARG:HB3	2.15	0.46
25:YA:832:G:OP2	25:YA:944:G:N1	2.40	0.46
25:YA:1027:A:C2	25:YA:2488:A:H5'	2.51	0.46
25:YA:1579:A:H2'	25:YA:1580:A:C8	2.51	0.46
25:YA:2196:C:O2'	25:YA:2197:U:H5'	2.16	0.46
25:YA:2680:C:H1'	28:YE:187:ALA:HB1	1.96	0.46
26:YB:50:G:OP1	38:YS:63:THR:HG23	2.14	0.46
37:YR:2:ARG:O	37:YR:5:LYS:N	2.48	0.46
1:QA:262:A:H4'	20:QT:75:ASN:HB2	1.95	0.46
1:QA:822:C:H2'	1:QA:823:G:H8	1.80	0.46
1:QA:1328:C:HO2'	13:QM:29:ARG:HH21	1.63	0.46
1:QA:1410:G:H2'	1:QA:1411:C:H6	1.79	0.46
4:QD:108:LEU:HD23	4:QD:110:PHE:HE2	1.80	0.46
21:QU:8:THR:HG23	21:QU:11:GLY:H	1.79	0.46
25:RA:132:G:H1	25:RA:147:U:H3	1.63	0.46
25:RA:1138:G:O2'	33:RN:102:ALA:O	2.34	0.46
25:RA:2233:U:H2'	25:RA:2234:G:C8	2.50	0.46
25:RA:2836:U:H2'	25:RA:2837:G:C8	2.51	0.46
33:RN:40:PRO:HB3	40:RU:68:ALA:HB2	1.97	0.46
42:RW:71:VAL:HA	42:RW:107:LEU:HD23	1.98	0.46
44:RY:48:ALA:HA	44:RY:60:PHE:HD2	1.81	0.46
51:R5:13:LYS:HG2	51:R5:16:ARG:HH21	1.79	0.46
1:XA:407:G:H2'	1:XA:408:A:C8	2.50	0.46
1:XA:1141:C:H2'	1:XA:1142:G:H8	1.80	0.46
25:YA:347:A:H2'	25:YA:348:G:H8	1.80	0.46
25:YA:934:G:H2'	25:YA:935:C:H6	1.80	0.46
25:YA:1321:A:H2'	25:YA:1322:A:H8	1.81	0.46
25:YA:1748:G:H2'	25:YA:1749:A:C8	2.51	0.46
25:YA:2689:U:OP2	25:YA:2719:G:N2	2.38	0.46
1:QA:1184:G:OP1	1:QA:1184:G:H3'	2.15	0.46
5:QE:92:LYS:HE3	8:QH:105:ARG:HH21	1.81	0.46
5:QE:128:PRO:HA	5:QE:131:ILE:HD11	1.98	0.46
8:QH:12:ARG:NH1	8:QH:25:ASP:O	2.48	0.46
22:QV:8:U:C2	22:QV:14:A:N6	2.81	0.46
25:RA:251:A:OP1	54:R8:7:HIS:NE2	2.36	0.46
25:RA:672:C:O2'	25:RA:673:C:H5'	2.15	0.46
25:RA:1361:G:O2'	25:RA:1362:C:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2157:G:H5"	25:RA:2158:A:H5'	1.96	0.46
25:RA:2703:C:H2'	25:RA:2704:C:H6	1.80	0.46
25:RA:2851:A:H2'	25:RA:2852:G:C8	2.50	0.46
29:RF:68:LYS:HB3	29:RF:69:HIS:CG	2.50	0.46
42:RW:72:LYS:N	42:RW:106:ILE:O	2.45	0.46
44:RY:1:MET:HG2	44:RY:2:ARG:HB2	1.97	0.46
49:R3:18:ASP:OD1	49:R3:18:ASP:N	2.48	0.46
1:XA:556:C:H2'	1:XA:557:G:H8	1.81	0.46
1:XA:1305:G:H22	1:XA:1331:G:H1'	1.80	0.46
13:XM:80:ARG:HD2	50:Y4:58:ARG:HD3	1.96	0.46
25:YA:59:U:O2'	25:YA:74:A:OP2	2.27	0.46
25:YA:464:U:O2'	25:YA:465:G:H5'	2.16	0.46
25:YA:539:G:H2'	25:YA:540:C:C6	2.50	0.46
25:YA:572:A:H5"	25:YA:573:G:OP2	2.15	0.46
25:YA:2556:C:H2'	25:YA:2557:G:O4'	2.15	0.46
25:YA:2684:U:O2'	34:YO:68:GLU:OE1	2.32	0.46
47:Y1:86:SER:N	47:Y1:89:GLU:OE1	2.48	0.46
1:QA:885:G:H2'	1:QA:886:G:H8	1.80	0.46
4:QD:127:THR:HA	4:QD:132:ARG:HA	1.97	0.46
15:QO:17:ARG:HB2	15:QO:18:PHE:HD2	1.81	0.46
24:QY:32:U:H5'	24:QY:33:U:OP2	2.14	0.46
25:RA:332:A:O2'	25:RA:334:C:OP2	2.22	0.46
25:RA:554:U:O2'	25:RA:555:U:H5'	2.16	0.46
25:RA:578:A:O2'	25:RA:580:C:OP2	2.33	0.46
25:RA:1405:U:H2'	25:RA:1406:U:H6	1.78	0.46
25:RA:1952:A:H2'	25:RA:1953:A:C8	2.50	0.46
25:RA:2553:G:C2	56:ZA:3:PPU:H2	2.50	0.46
25:RA:2558:C:H2'	25:RA:2559:C:C6	2.51	0.46
30:RG:108:ASN:HA	50:R4:37:SER:HB3	1.97	0.46
1:XA:818:G:O2'	1:XA:820:U:OP2	2.16	0.46
1:XA:954:G:H2'	1:XA:955:U:C6	2.50	0.46
8:XH:101:PRO:O	8:XH:125:ARG:NH2	2.39	0.46
25:YA:286:C:H2'	25:YA:287:C:H6	1.79	0.46
25:YA:517:C:OP1	51:Y5:16:ARG:NH2	2.49	0.46
25:YA:1657:C:OP1	28:YE:136:ARG:N	2.44	0.46
25:YA:1748:G:H2'	25:YA:1749:A:H8	1.80	0.46
25:YA:2117:A:H2'	25:YA:2118:U:H2'	1.96	0.46
25:YA:2168:G:N2	25:YA:2170:A:H3'	2.30	0.46
32:YI:39:ALA:HB1	32:YI:44:LEU:HD11	1.97	0.46
54:Y8:42:ARG:O	54:Y8:46:ARG:NH2	2.49	0.46
1:QA:269:C:H2'	1:QA:270:A:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:407:G:H2'	1:QA:408:A:H8	1.79	0.46
1:QA:741:G:H2'	1:QA:742:G:H8	1.81	0.46
1:QA:830:G:H2'	1:QA:831:U:O4'	2.15	0.46
5:QE:84:PHE:N	5:QE:87:SER:O	2.45	0.46
19:QS:41:VAL:HG22	19:QS:44:MET:HE3	1.98	0.46
25:RA:226:G:H21	25:RA:228:A:H62	1.62	0.46
25:RA:443:A:H5"	25:RA:444:C:OP1	2.15	0.46
25:RA:988:A:H2'	25:RA:989:G:H5"	1.97	0.46
25:RA:2553:G:H1'	25:RA:2582:G:H21	1.80	0.46
25:RA:2846:G:H2'	25:RA:2847:U:C6	2.51	0.46
26:RB:60:C:H2'	26:RB:61:G:C8	2.51	0.46
28:RE:48:GLN:HA	28:RE:80:GLU:HA	1.98	0.46
34:RO:78:ARG:O	39:RT:73:GLU:N	2.40	0.46
1:XA:110:C:H3'	1:XA:111:G:H8	1.80	0.46
1:XA:684:A:O2'	11:XK:39:PRO:O	2.28	0.46
1:XA:689:C:OP1	11:XK:44:SER:OG	2.23	0.46
12:XL:6:THR:OG1	12:XL:7:ILE:N	2.46	0.46
19:XS:33:THR:OG1	19:XS:35:SER:OG	2.30	0.46
25:YA:108:U:H2'	25:YA:109:G:H8	1.80	0.46
25:YA:521:G:H2'	25:YA:522:G:H8	1.80	0.46
25:YA:1154:G:H8	25:YA:1154:G:O5'	1.99	0.46
25:YA:1266:G:O6	42:YW:13:SER:OG	2.28	0.46
25:YA:1505:C:H2'	25:YA:1506:C:C6	2.50	0.46
25:YA:2107:C:O2'	25:YA:2108:C:O4'	2.30	0.46
25:YA:2249:U:N3	25:YA:2253:G:OP2	2.38	0.46
25:YA:2849:U:O4	39:YT:23:ARG:NH1	2.37	0.46
38:YS:25:ARG:NH2	38:YS:88:ASP:OD2	2.49	0.46
1:QA:835:U:O2	1:QA:851:G:N2	2.43	0.46
9:QI:13:ALA:HB2	9:QI:68:GLY:HA3	1.98	0.46
13:QM:82:MET:HE1	13:QM:92:HIS:HB2	1.97	0.46
25:RA:30:G:H2'	25:RA:31:C:H6	1.80	0.46
25:RA:143(B):C:H2'	25:RA:144:C:H6	1.80	0.46
25:RA:587:C:P	35:RP:21:ARG:HH22	2.37	0.46
25:RA:1651:G:H2'	25:RA:1652:A:H8	1.81	0.46
25:RA:2530:A:O2'	25:RA:2532:G:OP2	2.30	0.46
25:RA:2852:G:H2'	25:RA:2853:C:H6	1.81	0.46
25:RA:2853:C:H2'	25:RA:2854:G:H8	1.81	0.46
30:RG:169:ALA:O	30:RG:172:LEU:N	2.49	0.46
1:XA:301:G:H2'	1:XA:302:G:C8	2.50	0.46
1:XA:1004:A:OP1	1:XA:1024:G:N2	2.49	0.46
1:XA:1307:U:OP1	13:XM:101:GLN:NE2	2.37	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:223:ILE:HB	2:XB:229:VAL:HG12	1.97	0.46
22:XV:36:U:H3	23:XX:17:U:H3	1.63	0.46
25:YA:852:G:H2'	25:YA:853:G:H8	1.81	0.46
25:YA:1452:A:O3'	37:YR:77:ARG:NH1	2.48	0.46
25:YA:2020:A:H4'	40:YU:25:TRP:HZ3	1.79	0.46
25:YA:2037:G:H2'	25:YA:2038:G:H8	1.81	0.46
25:YA:2638:G:H21	25:YA:2778:A:N6	2.06	0.46
32:YI:88:ILE:HD12	32:YI:121:LYS:HA	1.97	0.46
38:YS:25:ARG:HH21	38:YS:27:SER:HB2	1.81	0.46
1:QA:285:G:H2'	1:QA:286:G:H8	1.80	0.46
1:QA:413:G:H1'	1:QA:428:G:H21	1.80	0.46
1:QA:583:A:HO2'	17:QQ:91:ARG:HH21	1.59	0.46
1:QA:943:U:OP1	1:QA:1236:A:N6	2.49	0.46
1:QA:1228:C:OP1	13:QM:115:LYS:N	2.47	0.46
1:QA:1241:G:H2'	1:QA:1242:C:C6	2.50	0.46
1:QA:1316:G:N1	1:QA:1319:A:OP2	2.43	0.46
1:QA:1459:C:H2'	1:QA:1460:A:C8	2.50	0.46
12:QL:38:THR:OG1	12:QL:39:VAL:N	2.49	0.46
20:QT:61:SER:O	20:QT:65:LYS:HB2	2.16	0.46
25:RA:1345:C:N4	25:RA:1346:G:O6	2.48	0.46
25:RA:1882:C:H2'	25:RA:1883:G:O4'	2.14	0.46
25:RA:2002:G:H8	25:RA:2002:G:O5'	1.98	0.46
25:RA:2776:A:H4'	25:RA:2777:G:O5'	2.15	0.46
28:RE:176:ILE:HB	28:RE:181:LEU:HB2	1.98	0.46
35:RP:29:LYS:HD3	35:RP:30:THR:HG23	1.97	0.46
45:RZ:10:ARG:NH2	45:RZ:26:GLY:O	2.48	0.46
1:XA:556:C:H2'	1:XA:557:G:C8	2.50	0.46
1:XA:688:G:H2'	1:XA:689:C:C6	2.51	0.46
1:XA:1039:C:H2'	1:XA:1040:U:C6	2.50	0.46
25:YA:855:G:H2'	25:YA:856:C:C6	2.51	0.46
25:YA:995:C:OP2	40:YU:54:LYS:NZ	2.42	0.46
25:YA:1191:G:H2'	25:YA:1192:G:O4'	2.15	0.46
25:YA:1561:G:H2'	25:YA:1562:A:C8	2.50	0.46
25:YA:1983:C:H4'	25:YA:2606:C:H4'	1.98	0.46
25:YA:2119:A:H61	25:YA:2168:G:H21	1.64	0.46
25:YA:2334:G:H5'	38:YS:9:ARG:HG2	1.98	0.46
25:YA:2577:A:H5"	25:YA:2578:G:H5'	1.98	0.46
31:YH:28:GLY:HA3	31:YH:79:VAL:HB	1.96	0.46
33:YN:16:ILE:HB	33:YN:54:VAL:HG12	1.98	0.46
34:YO:78:ARG:NE	39:YT:73:GLU:OE2	2.41	0.46
1:QA:607:A:H2'	1:QA:608:A:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:714:G:H2'	1:QA:715:A:C8	2.51	0.46
1:QA:1355:G:H21	10:QJ:46:ARG:NH2	2.14	0.46
8:QH:4:ASP:OD1	8:QH:85:ARG:NH1	2.49	0.46
25:RA:639:U:H2'	25:RA:640:C:C6	2.51	0.46
25:RA:836:G:H2'	25:RA:837:C:C6	2.50	0.46
25:RA:1380:G:H8	25:RA:1380:G:O5'	1.98	0.46
25:RA:1429:G:H2'	25:RA:1430:C:H6	1.80	0.46
25:RA:2472:G:N2	25:RA:2529:G:O6	2.49	0.46
25:RA:2593:U:H2'	25:RA:2594:C:H6	1.80	0.46
25:RA:2882:A:P	37:RR:96:ARG:HE	2.38	0.46
37:RR:103:ARG:NH1	37:RR:108:GLY:O	2.46	0.46
45:RZ:67:LEU:HD12	45:RZ:90:VAL:HG21	1.98	0.46
50:R4:11:PRO:HA	50:R4:25:TYR:HD1	1.81	0.46
1:XA:489:C:P	4:XD:131:ARG:HH22	2.38	0.46
1:XA:718:G:C8	11:XK:116:HIS:HB3	2.51	0.46
1:XA:859:A:OP2	1:XA:869:G:N2	2.48	0.46
1:XA:1264:C:H2'	1:XA:1265:G:H8	1.80	0.46
12:XL:44:THR:HA	12:XL:45:PRO:HD3	1.79	0.46
25:YA:37:C:H2'	25:YA:38:A:H8	1.81	0.46
25:YA:2323:G:H2'	25:YA:2324:C:O4'	2.16	0.46
26:YB:40:U:H1'	26:YB:45:A:H61	1.81	0.46
32:YI:123:LEU:HD23	32:YI:142:VAL:HG22	1.97	0.46
41:YV:32:THR:HA	41:YV:59:ALA:O	2.16	0.46
45:YZ:97:GLU:HA	45:YZ:126:VAL:O	2.16	0.46
1:QA:304:U:H2'	1:QA:305:G:C8	2.51	0.46
1:QA:373:A:H2'	1:QA:374:A:H8	1.81	0.46
1:QA:486:U:H2'	1:QA:487:A:H8	1.80	0.46
1:QA:664:G:H2'	1:QA:666:G:OP1	2.16	0.46
1:QA:688:G:H2'	1:QA:689:C:C6	2.51	0.46
1:QA:706:A:H2	11:QK:39:PRO:HG2	1.81	0.46
1:QA:1530:G:H2'	1:QA:1531:A:C8	2.51	0.46
3:QC:64:VAL:O	3:QC:100:ALA:N	2.40	0.46
5:QE:137:GLU:O	5:QE:141:GLN:NE2	2.49	0.46
18:QR:47:THR:HG23	18:QR:49:LYS:HG3	1.98	0.46
25:RA:605:C:O2	25:RA:657:U:O2'	2.28	0.46
25:RA:1591:G:H2'	25:RA:1592:C:H6	1.81	0.46
25:RA:2245:U:O2'	25:RA:2436:G:OP2	2.23	0.46
25:RA:2330:G:O2'	46:R0:41:ARG:O	2.21	0.46
26:RB:21:G:H2'	26:RB:22:U:C6	2.51	0.46
26:RB:40:U:H1'	26:RB:45:A:H61	1.81	0.46
1:XA:142:G:H2'	1:XA:143:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:554:C:O2'	1:XA:555:C:H5'	2.16	0.46
1:XA:1240:U:N3	7:XG:30:ILE:O	2.42	0.46
2:XB:51:LEU:O	2:XB:54:THR:OG1	2.32	0.46
2:XB:200:ILE:HG22	2:XB:202:PRO:HD3	1.97	0.46
25:YA:991:C:OP2	25:YA:1186:G:H5'	2.16	0.46
25:YA:1406:U:H2'	25:YA:1407:C:H6	1.80	0.46
25:YA:1446:C:O2	25:YA:1545:A:O2'	2.29	0.46
27:YD:22:SER:OG	27:YD:23:GLU:OE2	2.32	0.46
36:YQ:43:THR:N	36:YQ:46:GLN:OE1	2.42	0.46
1:QA:310:G:H2'	1:QA:311:C:H6	1.81	0.45
1:QA:543:C:OP2	4:QD:10:ARG:NH1	2.30	0.45
1:QA:559:A:H4'	1:QA:560:U:H5"	1.98	0.45
1:QA:688:G:H2'	1:QA:689:C:H6	1.81	0.45
1:QA:811:C:O2'	1:QA:901:A:N1	2.49	0.45
2:QB:15:VAL:HG21	2:QB:209:ARG:HE	1.82	0.45
3:QC:32:LEU:HB3	3:QC:59:ARG:HH12	1.81	0.45
7:QG:48:LYS:HD3	7:QG:52:GLU:HG3	1.97	0.45
13:QM:91:ARG:HG3	13:QM:96:LEU:HB2	1.97	0.45
16:QP:57:ARG:NE	16:QP:79:VAL:O	2.47	0.45
25:RA:18:C:H2'	25:RA:19:C:C6	2.50	0.45
25:RA:38:A:H2'	25:RA:39:C:C6	2.50	0.45
25:RA:668:G:H2'	25:RA:670:A:H62	1.81	0.45
25:RA:709:U:H2'	25:RA:710:G:H8	1.81	0.45
25:RA:767:U:H2'	25:RA:768:G:H8	1.79	0.45
25:RA:862:G:O6	25:RA:916:G:N2	2.49	0.45
25:RA:1183:G:H2'	25:RA:1184:G:H8	1.79	0.45
25:RA:2047:U:H2'	25:RA:2048:G:H8	1.81	0.45
25:RA:2183:C:H2'	25:RA:2184:G:C8	2.50	0.45
25:RA:2251:OMG:H1'	25:RA:2251:OMG:HM23	1.71	0.45
25:RA:2552:OMU:H2'	25:RA:2554:U:OP2	2.16	0.45
25:RA:2738:A:H2	25:RA:2766:G:H1	1.63	0.45
27:RD:247:ALA:HA	27:RD:253:GLN:HA	1.97	0.45
30:RG:113:ARG:HH12	30:RG:142:PRO:HA	1.80	0.45
47:R1:51:VAL:O	47:R1:58:ILE:N	2.47	0.45
1:XA:344:A:H5"	1:XA:345:C:H5	1.80	0.45
1:XA:401:C:O2'	1:XA:621:A:N3	2.38	0.45
1:XA:1409:C:H2'	1:XA:1410:G:H8	1.81	0.45
1:XA:1458:G:H2'	1:XA:1459:C:C6	2.51	0.45
1:XA:1475:G:H2'	1:XA:1476:G:H8	1.80	0.45
2:XB:46:LYS:HE3	2:XB:46:LYS:HB3	1.82	0.45
25:YA:378:C:H2'	25:YA:379:G:H5'	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:724:U:H2'	25:YA:725:G:O4'	2.17	0.45
25:YA:729:G:C8	27:YD:208:LYS:HD2	2.51	0.45
25:YA:889:C:O2'	25:YA:890:A:O4'	2.33	0.45
25:YA:2193:G:H2'	25:YA:2194:G:H8	1.80	0.45
25:YA:2304:G:OP1	30:YG:124:SER:OG	2.35	0.45
32:YI:24:GLY:O	32:YI:28:ASN:ND2	2.48	0.45
49:Y3:48:GLU:HA	49:Y3:51:ALA:HB2	1.97	0.45
1:QA:711:G:H2'	1:QA:712:A:H8	1.81	0.45
1:QA:761:G:H2'	1:QA:762:C:O4'	2.16	0.45
1:QA:1508:G:H2'	1:QA:1509:C:C6	2.51	0.45
1:QA:1525:G:H2'	1:QA:1526:G:C8	2.51	0.45
2:QB:87:ARG:HH12	2:QB:231:GLU:HB2	1.81	0.45
4:QD:133:VAL:HG12	4:QD:135:LEU:H	1.82	0.45
10:QJ:43:ARG:O	10:QJ:67:THR:OG1	2.27	0.45
10:QJ:48:THR:HA	10:QJ:62:HIS:HA	1.98	0.45
16:QP:74:LEU:HD12	16:QP:79:VAL:HG21	1.99	0.45
25:RA:381:G:O2'	25:RA:382:G:H5'	2.16	0.45
25:RA:686:G:OP1	53:R7:11:LYS:NZ	2.48	0.45
25:RA:1675:C:H2'	25:RA:1676:A:O4'	2.16	0.45
25:RA:2002:G:OP2	37:RR:9:LYS:NZ	2.49	0.45
25:RA:2181:G:H2'	25:RA:2182:G:C8	2.51	0.45
39:RT:50:ILE:HA	39:RT:99:LEU:HD12	1.97	0.45
1:XA:133:U:O2'	1:XA:134:A:N7	2.44	0.45
1:XA:461:A:O2'	1:XA:470:C:H5'	2.16	0.45
1:XA:1047:G:OP1	14:XN:4:LYS:NZ	2.36	0.45
1:XA:1186:G:H4'	9:XI:110:GLU:OE2	2.17	0.45
1:XA:1512:U:H2'	1:XA:1513:A:H8	1.82	0.45
19:XS:39:THR:HA	19:XS:70:LYS:HA	1.98	0.45
25:YA:272(L):U:H5'	32:YI:50:ARG:HH12	1.81	0.45
25:YA:553:G:O2'	25:YA:554:U:H5'	2.16	0.45
25:YA:570:G:H2'	25:YA:2030:A:C6	2.51	0.45
25:YA:2110:G:OP1	25:YA:2118:U:N3	2.49	0.45
30:YG:114:ILE:HB	30:YG:117:PHE:HB2	1.98	0.45
31:YH:143:GLN:NE2	31:YH:147:ASN:OD1	2.49	0.45
1:QA:584:G:O6	1:QA:758:G:N2	2.50	0.45
1:QA:767:A:H2'	1:QA:768:A:H8	1.81	0.45
1:QA:959:A:N3	1:QA:985:C:H1'	2.32	0.45
22:QV:64:G:H2'	22:QV:65:C:C6	2.51	0.45
25:RA:1782:C:O5'	25:RA:1782:C:H6	1.99	0.45
25:RA:1996:C:H4'	25:RA:1997:G:OP1	2.15	0.45
25:RA:2839:G:H2'	25:RA:2840:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:R8:46:ARG:HH12	54:R8:47:LYS:HE2	1.82	0.45
1:XA:501:C:OP1	12:XL:117:ARG:NH1	2.50	0.45
1:XA:1114:C:H2'	1:XA:1115:C:H6	1.82	0.45
1:XA:1120:G:H2'	1:XA:1121:U:C6	2.51	0.45
1:XA:1170:A:H8	1:XA:1170:A:OP2	1.98	0.45
1:XA:1244:C:H2'	1:XA:1245:A:C8	2.52	0.45
2:XB:20:GLU:O	2:XB:40:HIS:ND1	2.50	0.45
22:XV:75:C:OP2	22:XV:75:C:C6	2.70	0.45
25:YA:1130:U:O2'	25:YA:1131:G:H5'	2.17	0.45
25:YA:1344:G:H4'	25:YA:1384:A:C5	2.51	0.45
25:YA:2298:A:H2'	25:YA:2299:G:O4'	2.16	0.45
1:QA:934:C:N3	1:QA:937:A:N6	2.64	0.45
1:QA:1001(B):G:H2'	1:QA:1002:G:H8	1.82	0.45
1:QA:1228:C:H2'	1:QA:1229:A:H8	1.82	0.45
5:QE:78:HIS:HD1	8:QH:104:ARG:HD2	1.81	0.45
19:QS:32:LYS:HZ1	19:QS:52:TYR:HD1	1.64	0.45
25:RA:184:C:H2'	25:RA:185:U:H6	1.81	0.45
25:RA:223:A:O2'	25:RA:420:C:O2	2.28	0.45
25:RA:646:A:H2'	25:RA:647:G:H8	1.81	0.45
25:RA:1215:G:H1	25:RA:1234:U:H3	1.64	0.45
25:RA:1341:U:H5	25:RA:1395:A:H2	1.65	0.45
25:RA:1500:G:O2'	27:RD:100:GLY:O	2.33	0.45
25:RA:1768:U:H2'	25:RA:1769:G:H8	1.82	0.45
25:RA:2067:G:O2'	25:RA:2068:U:H5'	2.16	0.45
1:XA:388:G:H4'	1:XA:390:C:H41	1.81	0.45
1:XA:546:G:P	4:XD:72:GLU:HB3	2.56	0.45
1:XA:639:G:H2'	1:XA:640:A:H8	1.81	0.45
1:XA:1122:U:O4	1:XA:1123:A:N6	2.49	0.45
1:XA:1261:A:H62	1:XA:1274:G:N2	2.15	0.45
1:XA:1319:A:O2'	1:XA:1323:G:N7	2.44	0.45
1:XA:1410:G:H2'	1:XA:1411:C:H6	1.82	0.45
5:XE:142:LEU:O	5:XE:143:ARG:NH1	2.45	0.45
16:XP:35:LYS:HE2	16:XP:37:GLY:HA2	1.98	0.45
25:YA:216:A:H2'	25:YA:217:G:C8	2.51	0.45
25:YA:397:G:O2'	25:YA:2230:G:N2	2.49	0.45
25:YA:1291:C:H2'	25:YA:1292:U:C6	2.52	0.45
25:YA:1946:U:H2'	25:YA:1947:C:H6	1.82	0.45
25:YA:2635:C:O2'	28:YE:48:GLN:NE2	2.50	0.45
1:QA:395:C:N4	1:QA:396:G:O6	2.49	0.45
1:QA:814:A:OP2	1:QA:816:A:N6	2.47	0.45
1:QA:946:A:H2'	1:QA:947:G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:948:C:H2'	1:QA:949:A:H8	1.80	0.45
1:QA:1031:G:H2'	1:QA:1032:G:H8	1.81	0.45
1:QA:1072:G:H2'	1:QA:1073:U:C6	2.52	0.45
1:QA:1255:G:O2'	1:QA:1258:G:N3	2.43	0.45
1:QA:1323:G:H2'	1:QA:1324:A:H8	1.80	0.45
2:QB:193:ASP:OD1	2:QB:193:ASP:N	2.49	0.45
18:QR:47:THR:O	18:QR:47:THR:OG1	2.32	0.45
25:RA:585:G:H21	25:RA:1254:A:H62	1.63	0.45
25:RA:1027:A:C2	25:RA:2488:A:H5'	2.52	0.45
25:RA:1337:G:OP2	43:RX:73:ARG:NH1	2.43	0.45
25:RA:2023:G:H5'	25:RA:2617:C:H4'	1.98	0.45
25:RA:2296:U:H2'	38:RS:9:ARG:HH12	1.81	0.45
25:RA:2472:G:H21	25:RA:2478:A:H62	1.62	0.45
26:RB:29:A:OP2	38:RS:32:LEU:HG	2.17	0.45
31:RH:9:ILE:HD12	31:RH:73:ALA:HB2	1.97	0.45
1:XA:301:G:H2'	1:XA:302:G:H8	1.81	0.45
1:XA:1323:G:H8	1:XA:1323:G:OP2	1.99	0.45
1:XA:1330:U:H4'	13:XM:23:TYR:CE2	2.52	0.45
1:XA:1469:G:H2'	1:XA:1470:G:C8	2.51	0.45
22:XV:52:G:H1	22:XV:62:C:N4	2.15	0.45
25:YA:357:A:H2'	25:YA:358:U:C6	2.52	0.45
25:YA:538:G:H2'	25:YA:539:G:H8	1.82	0.45
25:YA:576:U:H4'	25:YA:2502:G:C8	2.52	0.45
25:YA:658:C:H2'	25:YA:659:C:H6	1.80	0.45
25:YA:659:C:H2'	25:YA:660:G:H8	1.81	0.45
25:YA:719:C:H2'	25:YA:720:C:H6	1.82	0.45
25:YA:863:A:H2'	25:YA:864:G:H8	1.81	0.45
25:YA:1656:C:H2'	25:YA:1657:C:H6	1.82	0.45
25:YA:1842:G:H2'	25:YA:1843:C:H6	1.82	0.45
25:YA:2289:G:H2'	25:YA:2290:G:H8	1.80	0.45
30:YG:82:LEU:HD12	30:YG:88:ILE:HG21	1.98	0.45
35:YP:50:ARG:HD3	54:Y8:7:HIS:CD2	2.51	0.45
36:YQ:16:ARG:HD2	36:YQ:16:ARG:HA	1.67	0.45
1:QA:1059:C:OP2	3:QC:199:LYS:NZ	2.49	0.45
1:QA:1190:G:H5'	3:QC:176:HIS:HE1	1.82	0.45
2:QB:88:ALA:HA	2:QB:223:ILE:HD11	1.98	0.45
13:QM:54:VAL:HA	13:QM:57:ARG:HB2	1.98	0.45
14:QN:9:LYS:HA	14:QN:12:ARG:HG2	1.99	0.45
22:QV:13:C:H42	22:QV:23:C:H42	1.62	0.45
25:RA:1159:U:H2'	25:RA:1160:G:C8	2.47	0.45
25:RA:2615:U:H6	25:RA:2615:U:H5'	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RB:9:G:OP2	38:RS:15:ARG:NH1	2.50	0.45
26:RB:106:G:O2'	45:RZ:31:ARG:NH1	2.50	0.45
45:RZ:59:LEU:O	45:RZ:66:SER:HA	2.17	0.45
49:R3:59:VAL:HG22	49:R3:60:GLU:HB3	1.97	0.45
1:XA:149:A:H2'	1:XA:150:C:C6	2.52	0.45
1:XA:190:U:H2'	1:XA:191:G:H8	1.82	0.45
1:XA:259:G:H5"	20:XT:83:ARG:NH1	2.28	0.45
1:XA:519:C:H2'	1:XA:520:A:O4'	2.17	0.45
1:XA:581:G:N2	1:XA:582:U:O4	2.49	0.45
1:XA:923:A:H2'	1:XA:924:C:C6	2.51	0.45
1:XA:1263:C:H2'	1:XA:1264:C:C6	2.51	0.45
1:XA:1530:G:HO2'	1:XA:1531:A:H8	1.61	0.45
2:XB:18:GLY:O	2:XB:204:ASN:ND2	2.50	0.45
5:XE:99:GLY:O	5:XE:117:ASP:HA	2.16	0.45
6:XF:17:SER:OG	6:XF:18:GLN:N	2.48	0.45
6:XF:100:ASN:ND2	18:XR:27:GLY:O	2.43	0.45
17:XQ:15:MET:HB3	17:XQ:18:THR:HB	1.98	0.45
25:YA:43:A:H2'	25:YA:44:G:H8	1.80	0.45
25:YA:856:C:HO2'	25:YA:857:C:P	2.36	0.45
25:YA:1785:A:O2'	25:YA:1786:A:H2'	2.17	0.45
25:YA:2243:U:H2'	25:YA:2244:U:C6	2.52	0.45
25:YA:2409:G:H2'	25:YA:2410:G:O4'	2.16	0.45
25:YA:2641:G:P	33:YN:74:ARG:HH12	2.40	0.45
25:YA:2680:C:O2'	28:YE:11:MET:SD	2.75	0.45
25:YA:2684:U:H2'	25:YA:2685:G:O4'	2.16	0.45
50:Y4:10:VAL:N	50:Y4:26:SER:O	2.36	0.45
52:Y6:13:CYS:SG	52:Y6:17:LYS:N	2.89	0.45
1:QA:25:C:N4	1:QA:558:G:H21	2.15	0.45
1:QA:692:U:OP2	11:QK:26:ASN:ND2	2.49	0.45
1:QA:1001(B):G:H2'	1:QA:1002:G:C8	2.51	0.45
25:RA:857:C:O2'	25:RA:858:U:H5'	2.17	0.45
25:RA:860:U:H2'	25:RA:861:A:C8	2.48	0.45
25:RA:1528(B):A:H62	25:RA:1541:G:H21	1.61	0.45
25:RA:1640:C:H2'	25:RA:1641:A:H8	1.81	0.45
25:RA:2220:G:C8	25:RA:2220:G:C3'	2.99	0.45
38:RS:41:ASP:O	38:RS:45:GLY:N	2.45	0.45
1:XA:131:C:H2'	1:XA:132:C:H6	1.82	0.45
1:XA:381:C:H2'	1:XA:382:A:O4'	2.16	0.45
1:XA:813:U:H2'	1:XA:814:A:C8	2.51	0.45
1:XA:1442(A):G:H2'	1:XA:1442(A):G:N3	2.32	0.45
15:XO:24:SER:OG	15:XO:25:THR:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:XV:59:A:H2'	22:XV:60:U:H5'	1.98	0.45
25:YA:1287:A:H5'	37:YR:104:ARG:HD3	1.99	0.45
25:YA:1315:C:H2'	25:YA:1316:U:C6	2.52	0.45
25:YA:1605:C:H2'	25:YA:1606:G:O4'	2.17	0.45
25:YA:1842:G:H2'	25:YA:1843:C:C6	2.51	0.45
25:YA:2675:A:H2'	25:YA:2676:C:H6	1.81	0.45
45:YZ:48:PHE:HA	45:YZ:51:ALA:HB3	1.99	0.45
1:QA:251:G:N1	1:QA:266:G:O6	2.50	0.45
1:QA:407:G:H2'	1:QA:408:A:C8	2.52	0.45
1:QA:407:G:OP1	4:QD:115:ARG:NH2	2.49	0.45
1:QA:476:G:H2'	1:QA:477:A:H8	1.81	0.45
1:QA:659:U:OP1	15:QO:9:GLN:NE2	2.49	0.45
3:QC:70:VAL:HG12	3:QC:72:LYS:H	1.82	0.45
4:QD:173:TRP:CD2	4:QD:189:PRO:HB3	2.51	0.45
17:QQ:83:ASP:N	17:QQ:83:ASP:OD1	2.47	0.45
25:RA:18:C:O2'	25:RA:554:U:OP1	2.34	0.45
25:RA:77:C:O3'	48:R2:14:ARG:NH2	2.49	0.45
25:RA:196:A:OP2	35:RP:46:LYS:NZ	2.49	0.45
25:RA:829:A:N6	25:RA:2247:A:O2'	2.40	0.45
25:RA:848:G:OP2	25:RA:928:G:N2	2.46	0.45
27:RD:260:ARG:NH1	27:RD:267:SER:OG	2.40	0.45
28:RE:24:THR:HG21	28:RE:188:VAL:HB	1.98	0.45
28:RE:45:THR:OG1	28:RE:83:ASP:OD1	2.35	0.45
45:RZ:54:HIS:CG	45:RZ:101:PRO:HG3	2.52	0.45
46:R0:24:LYS:O	46:R0:25:ARG:NH1	2.41	0.45
1:XA:977:A:H8	1:XA:1223:C:C4	2.35	0.45
1:XA:1104:G:H4'	2:XB:111:ARG:NH1	2.31	0.45
1:XA:1287:A:H2	1:XA:1353:G:H1'	1.82	0.45
1:XA:1293:G:H2'	1:XA:1294:G:C8	2.51	0.45
4:XD:52:SER:OG	4:XD:55:ALA:N	2.42	0.45
8:XH:85:ARG:NH1	8:XH:87:SER:O	2.41	0.45
8:XH:86:ILE:HG12	8:XH:135:CYS:HA	1.98	0.45
25:YA:96:G:H4'	48:Y2:48:HIS:CD2	2.52	0.45
25:YA:357:A:H2'	25:YA:358:U:H6	1.82	0.45
25:YA:385:C:O2'	25:YA:388:G:N2	2.49	0.45
25:YA:721:C:H2'	25:YA:722:A:C8	2.52	0.45
25:YA:1022:G:N2	25:YA:1023:U:O4	2.41	0.45
25:YA:1281:G:H2'	25:YA:1282:U:H6	1.82	0.45
25:YA:1423:G:OP1	25:YA:1492:G:O2'	2.33	0.45
25:YA:1827:C:C2'	25:YA:1828:G:H5'	2.46	0.45
25:YA:2113:U:H2'	25:YA:2114:A:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2333:A:H4'	25:YA:2335:A:H5"	1.99	0.45
36:YQ:137:TYR:OH	45:YZ:45:ASP:OD1	2.34	0.45
42:YW:4:LYS:HB3	42:YW:106:ILE:HG12	1.98	0.45
45:YZ:163:LEU:HD13	45:YZ:167:PRO:HD3	1.99	0.45
1:QA:1135:U:O2'	1:QA:1138:G:N2	2.48	0.45
1:QA:1315:U:H2'	1:QA:1316:G:O4'	2.17	0.45
1:QA:1347:G:HO2'	1:QA:1348:U:P	2.40	0.45
5:QE:75:THR:OG1	5:QE:117:ASP:O	2.30	0.45
25:RA:24:G:H2'	25:RA:25:U:C6	2.52	0.45
25:RA:111:A:H2'	25:RA:112:U:C6	2.52	0.45
25:RA:769:G:O2'	25:RA:770:G:H5'	2.17	0.45
25:RA:919:G:N2	25:RA:2269:A:OP2	2.50	0.45
25:RA:1154:G:P	40:RU:58:ARG:HE	2.39	0.45
25:RA:1248:G:C5	40:RU:3:ARG:HB2	2.52	0.45
25:RA:2047:U:H2'	25:RA:2048:G:C8	2.52	0.45
41:RV:24:LYS:HA	41:RV:92:THR:HG23	1.99	0.45
1:XA:72:C:H2'	1:XA:73:G:H8	1.81	0.45
1:XA:580:U:H2'	1:XA:581:G:O4'	2.17	0.45
1:XA:695:A:H2'	1:XA:696:A:C8	2.51	0.45
12:XL:77:LEU:HD21	12:XL:107:ALA:HA	1.98	0.45
18:XR:31:LEU:HD23	18:XR:65:ILE:HB	1.99	0.45
25:YA:989:G:OP1	25:YA:1157:G:O2'	2.33	0.45
25:YA:1051:G:H4'	25:YA:2752:C:H4'	1.99	0.45
25:YA:1215:G:H1	25:YA:1234:U:H3	1.65	0.45
25:YA:1321:A:H2'	25:YA:1322:A:C8	2.52	0.45
25:YA:1760:A:O2'	25:YA:1761:C:H5'	2.16	0.45
25:YA:2119:A:N6	25:YA:2168:G:H21	2.14	0.45
1:QA:584:G:H2'	1:QA:585:G:C8	2.51	0.45
1:QA:1038:C:H2'	1:QA:1039:C:H6	1.82	0.45
1:QA:1367:C:H4'	10:QJ:48:THR:HG21	1.98	0.45
17:QQ:81:ARG:HD2	17:QQ:81:ARG:HA	1.84	0.45
25:RA:107:C:H2'	25:RA:108:U:C6	2.51	0.45
25:RA:1181:C:H2'	25:RA:1182:A:H8	1.80	0.45
25:RA:1336:A:H2'	25:RA:1337:G:C8	2.52	0.45
25:RA:1772:G:H5"	25:RA:1773:A:OP2	2.16	0.45
25:RA:2022:U:O2'	25:RA:2617:C:H5'	2.16	0.45
28:RE:55:ASN:HA	28:RE:56:PRO:HD3	1.87	0.45
32:RI:72:LEU:O	32:RI:75:LEU:N	2.48	0.45
49:R3:15:TYR:O	49:R3:20:LYS:NZ	2.42	0.45
1:XA:192:U:H2'	1:XA:193:C:C6	2.52	0.45
1:XA:539:A:H2'	1:XA:540:G:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:736:C:H2'	1:XA:737:A:C8	2.50	0.45
1:XA:1069:C:O2'	1:XA:1192:C:O2	2.33	0.45
1:XA:1525:G:P	11:XK:120:ARG:HH22	2.39	0.45
3:XC:40:ARG:HG2	3:XC:55:VAL:HG21	1.98	0.45
12:XL:70:ILE:HG13	12:XL:100:ILE:HD12	1.99	0.45
25:YA:658:C:H2'	25:YA:659:C:C6	2.52	0.45
25:YA:906:G:O3'	36:YQ:67:ARG:NH2	2.50	0.45
25:YA:1770:G:H2'	25:YA:1771:C:C6	2.51	0.45
25:YA:1818:U:H2'	27:YD:157:ARG:HB2	1.99	0.45
25:YA:1853:A:N6	25:YA:1889:A:N7	2.64	0.45
25:YA:2070:G:H2'	25:YA:2071:A:C8	2.52	0.45
25:YA:2119:A:H61	25:YA:2168:G:N2	2.15	0.45
25:YA:2578:G:N7	28:YE:140:SER:HB3	2.31	0.45
25:YA:2657:A:H62	25:YA:2664:G:H21	1.63	0.45
25:YA:2698:U:H2'	25:YA:2699:C:H6	1.81	0.45
30:YG:96:ARG:H	30:YG:96:ARG:HG2	1.46	0.45
1:QA:45:U:H2'	1:QA:46:G:H8	1.82	0.44
1:QA:247:G:P	17:QQ:99:SER:HG	2.38	0.44
1:QA:324:G:OP1	20:QT:70:SER:OG	2.22	0.44
1:QA:982:U:N3	1:QA:1223:C:C4	2.84	0.44
1:QA:1387:G:H2'	1:QA:1388:C:C6	2.52	0.44
3:QC:154:SER:HA	3:QC:165:THR:HA	1.99	0.44
4:QD:190:ASP:OD1	4:QD:191:ARG:N	2.50	0.44
25:RA:852:G:H2'	25:RA:853:G:C8	2.52	0.44
25:RA:1137:G:N2	33:RN:105:GLY:O	2.39	0.44
25:RA:1165:U:H2'	25:RA:1166:C:H6	1.82	0.44
25:RA:1333:C:H2'	25:RA:1334:G:H8	1.82	0.44
25:RA:2495:G:H2'	25:RA:2496:C:C6	2.52	0.44
25:RA:2528:U:O2'	25:RA:2530:A:OP1	2.28	0.44
25:RA:2696:U:H2'	25:RA:2697:G:C8	2.52	0.44
31:RH:57:ASP:OD1	31:RH:57:ASP:N	2.47	0.44
1:XA:264:U:O2'	17:XQ:64:PRO:O	2.27	0.44
1:XA:356:A:N3	1:XA:368:U:O2'	2.32	0.44
1:XA:555:C:H2'	1:XA:556:C:C6	2.52	0.44
1:XA:712:A:H2'	1:XA:713:G:C8	2.52	0.44
1:XA:1250:A:N3	1:XA:1370:G:O2'	2.40	0.44
1:XA:1423:G:H2'	1:XA:1424:C:C6	2.52	0.44
2:XB:187:LEU:HA	2:XB:201:ILE:HB	1.99	0.44
3:XC:45:LYS:HB3	3:XC:45:LYS:HE2	1.81	0.44
18:XR:37:VAL:HB	18:XR:78:LEU:HD23	1.98	0.44
25:YA:466:A:H1'	25:YA:683:C:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2245:U:H5"	25:YA:2246:G:H5'	1.99	0.44
25:YA:2502:G:H5"	25:YA:2503:2MA:H5"	1.99	0.44
36:YQ:39:PRO:HA	36:YQ:97:VAL:O	2.16	0.44
38:YS:40:ILE:HA	38:YS:47:THR:HA	1.99	0.44
39:YT:53:ARG:NH2	39:YT:58:ASN:O	2.50	0.44
39:YT:65:LYS:O	39:YT:71:GLY:HA2	2.17	0.44
43:YX:54:VAL:HG13	43:YX:81:VAL:HG12	1.99	0.44
45:YZ:154:ASP:H	45:YZ:155:LEU:HG	1.82	0.44
1:QA:558:G:H3'	1:QA:559:A:H2'	2.00	0.44
5:QE:84:PHE:HB2	5:QE:134:ALA:HB2	1.98	0.44
9:QI:6:GLY:O	9:QI:17:VAL:HB	2.18	0.44
15:QO:26:GLU:OE2	15:QO:77:ARG:NE	2.40	0.44
25:RA:139(A):G:H2'	25:RA:140:G:N7	2.32	0.44
25:RA:659:C:H2'	25:RA:660:G:C8	2.51	0.44
25:RA:1998:G:H4'	25:RA:2724:C:O2'	2.16	0.44
25:RA:2075:U:H4'	25:RA:2596:U:N3	2.31	0.44
25:RA:2526:G:H5'	25:RA:2742:C:O2'	2.16	0.44
25:RA:2853:C:H2'	25:RA:2854:G:C8	2.51	0.44
47:R1:51:VAL:HG11	47:R1:74:VAL:HG21	1.98	0.44
48:R2:2:LYS:NZ	48:R2:5:GLU:OE1	2.46	0.44
1:XA:715:A:H2'	1:XA:716:A:C8	2.52	0.44
1:XA:1058:G:H2'	1:XA:1059:C:C6	2.51	0.44
1:XA:1068:G:N2	1:XA:1191:A:N3	2.59	0.44
1:XA:1250:A:H2'	1:XA:1251:A:C8	2.52	0.44
5:XE:118:ILE:HD12	5:XE:118:ILE:HA	1.89	0.44
8:XH:81:HIS:ND1	8:XH:138:TRP:OXT	2.50	0.44
19:XS:32:LYS:HA	19:XS:50:ALA:HB3	1.99	0.44
20:XT:33:ILE:O	20:XT:37:SER:OG	2.26	0.44
25:YA:189:G:O6	25:YA:205:G:O2'	2.35	0.44
25:YA:197:A:H2	25:YA:2434:A:H62	1.65	0.44
25:YA:272(R):G:H2'	25:YA:272(S):G:H8	1.82	0.44
25:YA:274:G:H2'	25:YA:275:G:C8	2.50	0.44
25:YA:619:G:OP2	25:YA:620:G:N2	2.51	0.44
27:YD:109:ASP:N	27:YD:195:ALA:O	2.46	0.44
34:YO:61:VAL:HG12	34:YO:87:ILE:HD11	1.99	0.44
1:QA:9:G:H2'	1:QA:10:A:C8	2.52	0.44
1:QA:867:G:H2'	1:QA:868:C:H6	1.82	0.44
1:QA:1124:G:N7	1:QA:1145:C:O2'	2.50	0.44
1:QA:1347:G:N2	1:QA:1373:G:H2'	2.32	0.44
1:QA:1372:U:H2'	1:QA:1373:G:O4'	2.16	0.44
10:QJ:48:THR:HG23	10:QJ:62:HIS:HB3	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:QQ:57:VAL:HG23	17:QQ:59:ILE:HD11	1.99	0.44
22:QV:43:A:H2'	22:QV:44:A:C8	2.51	0.44
25:RA:39:C:H2'	25:RA:40:C:H6	1.82	0.44
25:RA:729:G:O2'	25:RA:763:G:H4'	2.18	0.44
25:RA:2355:C:H4'	46:R0:24:LYS:HG3	2.00	0.44
26:RB:12:C:O2	46:R0:74:ARG:NE	2.42	0.44
32:RI:93:THR:O	32:RI:96:ASP:N	2.47	0.44
1:XA:189(F):U:O2'	1:XA:189(G):U:H5'	2.17	0.44
1:XA:911:U:H2'	1:XA:912:C:C6	2.51	0.44
25:YA:833:U:O4'	35:YP:52:GLU:HA	2.17	0.44
25:YA:1565:C:O3'	25:YA:1566:A:H8	2.01	0.44
25:YA:2515:C:C2'	25:YA:2516:G:H5'	2.48	0.44
27:YD:72:LYS:HE3	27:YD:72:LYS:HB3	1.83	0.44
39:YT:26:ASP:OD1	39:YT:120:ARG:NH2	2.38	0.44
45:YZ:51:ALA:HB1	45:YZ:57:ILE:HD11	2.00	0.44
1:QA:45:U:H2'	1:QA:46:G:C8	2.52	0.44
1:QA:429:U:C3'	4:QD:22:LYS:HZ1	2.23	0.44
1:QA:791:G:N2	1:QA:1497:G:O3'	2.50	0.44
1:QA:793:U:O2	1:QA:1516:G:H4'	2.17	0.44
2:QB:100:GLY:O	2:QB:103:THR:N	2.49	0.44
4:QD:100:ARG:NH2	4:QD:136:PRO:O	2.50	0.44
5:QE:127:ASN:OD1	5:QE:130:ASN:ND2	2.45	0.44
14:QN:43:CYS:HB2	59:QN:102:ZN:ZN	1.48	0.44
22:QV:3:C:C2'	22:QV:4:G:H5'	2.47	0.44
25:RA:347:A:H2'	25:RA:348:G:H8	1.83	0.44
25:RA:373:U:H2'	25:RA:374:A:H8	1.83	0.44
25:RA:418:G:O2'	25:RA:419:C:H5'	2.18	0.44
25:RA:1255:U:H5"	25:RA:1256:G:C5'	2.35	0.44
25:RA:1467:C:C5	25:RA:1546:C:H2'	2.48	0.44
25:RA:1537:G:H2'	25:RA:1538:G:C8	2.51	0.44
25:RA:1853:A:H2'	25:RA:1854:A:H8	1.81	0.44
25:RA:2865:U:OP2	25:RA:2866:U:O2'	2.21	0.44
30:RG:121:ASN:OD1	30:RG:124:SER:OG	2.34	0.44
34:RO:34:THR:OG1	34:RO:35:VAL:N	2.51	0.44
37:RR:28:LEU:O	37:RR:32:GLY:N	2.43	0.44
1:XA:218:C:H2'	1:XA:219:C:C6	2.52	0.44
1:XA:688:G:H5'	11:XK:46:GLY:C	2.43	0.44
1:XA:1294:G:H2'	1:XA:1295:G:C8	2.52	0.44
1:XA:1396:A:H4'	1:XA:1397:C:H5"	1.98	0.44
3:XC:157:ILE:HG22	3:XC:164:ARG:HH21	1.81	0.44
25:YA:358:U:H2'	25:YA:359:A:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1525:G:H2'	25:YA:1526:G:H8	1.82	0.44
25:YA:1719:G:O2'	25:YA:1720:U:H5'	2.17	0.44
25:YA:1864:U:H2'	25:YA:1865:G:C8	2.53	0.44
25:YA:1946:U:O2'	25:YA:1947:C:H5'	2.16	0.44
25:YA:2393:A:H5'	35:YP:61:ARG:O	2.17	0.44
25:YA:2676:C:H2'	25:YA:2677:G:H8	1.82	0.44
48:Y2:51:ARG:HD3	48:Y2:55:ARG:HH11	1.82	0.44
1:QA:713:G:H2'	1:QA:714:G:C8	2.53	0.44
1:QA:868:C:H2'	1:QA:869:G:O4'	2.17	0.44
1:QA:1098:C:H2'	1:QA:1099:G:H8	1.83	0.44
1:QA:1263:C:H2'	1:QA:1264:C:H6	1.83	0.44
1:QA:1410:G:H2'	1:QA:1411:C:C6	2.52	0.44
12:QL:28:LYS:HA	12:QL:28:LYS:HD2	1.79	0.44
16:QP:47:ASP:OD1	16:QP:47:ASP:N	2.40	0.44
18:QR:30:ASP:HB3	18:QR:33:ASP:HB2	1.98	0.44
25:RA:127:A:H5"	25:RA:128:C:C6	2.52	0.44
25:RA:177:G:H3'	25:RA:178:G:H8	1.83	0.44
25:RA:696:G:O2'	25:RA:697:C:H5'	2.17	0.44
25:RA:1817:G:OP1	27:RD:88:ARG:NH2	2.51	0.44
25:RA:1925:C:H42	25:RA:1929:G:H22	1.66	0.44
25:RA:2584:U:H5"	56:ZA:3:PPU:H92	2.00	0.44
25:RA:2845:G:H2'	25:RA:2846:G:C8	2.51	0.44
32:RI:40:THR:O	32:RI:43:ASN:N	2.49	0.44
35:RP:134:ALA:O	35:RP:138:LEU:N	2.46	0.44
47:R1:93:GLU:HA	47:R1:96:LYS:HD2	1.98	0.44
1:XA:291:C:O2'	1:XA:292:G:H5'	2.18	0.44
1:XA:1014:A:H8	1:XA:1014:A:OP1	1.99	0.44
1:XA:1014:A:H8	1:XA:1014:A:P	2.41	0.44
25:YA:17:G:H4'	40:YU:25:TRP:NE1	2.33	0.44
25:YA:184:C:H2'	25:YA:185:U:H6	1.83	0.44
25:YA:191:A:O2'	25:YA:192:C:O4'	2.17	0.44
25:YA:236:C:H2'	25:YA:237:C:H6	1.82	0.44
25:YA:896:A:H5"	45:YZ:146:ILE:HB	1.99	0.44
25:YA:1906:G:H2'	25:YA:1907:G:H8	1.83	0.44
25:YA:2140:C:H2'	25:YA:2141:G:C8	2.53	0.44
25:YA:2266:A:H4'	25:YA:2267:A:C4	2.52	0.44
25:YA:2364:C:OP1	46:Y0:55:ARG:NH1	2.50	0.44
25:YA:2757:A:H5'	55:Y9:18:ARG:HH12	1.83	0.44
25:YA:2853:C:H2'	25:YA:2854:G:H8	1.83	0.44
26:YB:7:G:H3'	26:YB:8:U:H5"	1.99	0.44
1:QA:375:U:O2'	16:QP:6:LEU:O	2.34	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:115:LEU:HD13	2:QB:145:LEU:HB3	1.99	0.44
3:QC:73:PRO:O	3:QC:76:VAL:N	2.47	0.44
12:QL:92:0TD:H5	12:QL:92:0TD:H4	1.75	0.44
25:RA:252:G:O2'	25:RA:253:C:H5'	2.18	0.44
25:RA:1365:A:O2'	47:R1:11:ARG:NH2	2.33	0.44
25:RA:2377:A:H2'	25:RA:2378:A:H8	1.82	0.44
33:RN:20:GLY:HA2	33:RN:61:ARG:HB2	1.99	0.44
37:RR:52:ILE:O	37:RR:55:ALA:N	2.49	0.44
38:RS:12:PHE:HA	38:RS:15:ARG:HG2	1.99	0.44
1:XA:582:U:H2'	1:XA:583:A:H8	1.81	0.44
13:XM:66:LEU:O	13:XM:70:LEU:N	2.48	0.44
25:YA:269:U:O2	25:YA:370:G:N2	2.38	0.44
25:YA:637:A:OP1	35:YP:133:SER:OG	2.26	0.44
25:YA:759:G:H2'	25:YA:760:G:C8	2.52	0.44
25:YA:908:C:O2'	25:YA:909:A:H5'	2.17	0.44
25:YA:1107:G:H2'	25:YA:1108:U:H6	1.82	0.44
25:YA:1257:C:H4'	29:YF:83:PHE:CD1	2.52	0.44
25:YA:1651:G:OP1	37:YR:37:THR:HG21	2.17	0.44
25:YA:2726:U:HO2'	25:YA:2727:G:P	2.40	0.44
44:YY:36:ALA:HB1	44:YY:66:PRO:HB3	2.00	0.44
50:Y4:15:ILE:HG23	50:Y4:32:TYR:HA	2.00	0.44
1:QA:142:G:O2'	1:QA:196:A:N1	2.47	0.44
1:QA:398:C:H2'	1:QA:399:G:H8	1.83	0.44
1:QA:546:G:OP1	4:QD:73:ARG:N	2.50	0.44
1:QA:661:G:H2'	1:QA:662:G:H8	1.83	0.44
1:QA:966:M2G:HM12	22:QV:34:C:H5'	1.99	0.44
1:QA:1057:G:H2'	1:QA:1058:G:O4'	2.18	0.44
1:QA:1523:G:H2'	1:QA:1524:C:C6	2.53	0.44
5:QE:131:ILE:O	5:QE:135:THR:OG1	2.22	0.44
9:QI:128:ARG:HH22	22:QV:33:U:P	2.40	0.44
24:QY:36:G:H2'	24:QY:37:G:C8	2.51	0.44
25:RA:407:G:H2'	25:RA:408:G:C8	2.53	0.44
25:RA:729:G:H5'	25:RA:730:C:H5"	1.99	0.44
25:RA:902:C:H2'	25:RA:903:C:H6	1.82	0.44
25:RA:922:U:H2'	25:RA:923:C:H6	1.82	0.44
25:RA:1030:G:N2	55:R9:5:ALA:O	2.51	0.44
25:RA:1090:U:H3'	25:RA:1091:G:H8	1.83	0.44
25:RA:1092:C:H6	25:RA:1092:C:P	2.41	0.44
25:RA:2704:C:H2'	25:RA:2705:A:O4'	2.18	0.44
26:RB:38:C:H2'	26:RB:39:A:H8	1.81	0.44
27:RD:61:LEU:O	27:RD:63:ARG:NH1	2.45	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RI:71:ILE:HG23	32:RI:72:LEU:HD12	2.00	0.44
43:RX:11:PRO:HA	43:RX:28:PHE:HA	2.00	0.44
1:XA:129(B):G:N3	1:XA:189(G):U:H5"	2.32	0.44
1:XA:272:C:H2'	1:XA:273:A:C8	2.50	0.44
1:XA:411:A:OP1	4:XD:30:LYS:NZ	2.44	0.44
1:XA:416:G:H2'	1:XA:417:C:C6	2.53	0.44
1:XA:631:G:H2'	1:XA:632:A:C8	2.53	0.44
1:XA:1264:C:H2'	1:XA:1265:G:C8	2.53	0.44
6:XF:80:ARG:NH1	6:XF:88:VAL:O	2.51	0.44
7:XG:70:LYS:HG2	7:XG:96:GLN:HB3	1.99	0.44
22:XV:64:G:H2'	22:XV:65:C:C6	2.53	0.44
25:YA:1491:G:H2'	25:YA:1492:G:H8	1.82	0.44
25:YA:2071:A:H2'	25:YA:2072:G:H8	1.81	0.44
30:YG:129:GLY:HA2	30:YG:166:ASP:HA	2.00	0.44
37:YR:87:TYR:OH	37:YR:117:VAL:O	2.31	0.44
40:YU:17:ILE:HG13	40:YU:32:PHE:HE1	1.81	0.44
1:QA:77:G:H2'	1:QA:78:G:H5'	2.00	0.44
1:QA:254:G:H2'	1:QA:255:G:H8	1.83	0.44
1:QA:1096:C:H2'	1:QA:1097:C:H6	1.82	0.44
1:QA:1143:G:H2'	1:QA:1144:G:H8	1.82	0.44
20:QT:38:LYS:HA	20:QT:41:ILE:HG12	2.00	0.44
22:QV:74:C:O2'	22:QV:75:C:O5'	2.36	0.44
25:RA:599:G:P	35:RP:9:ASN:HD22	2.40	0.44
25:RA:1036:G:OP1	31:RH:59:ARG:HB2	2.18	0.44
25:RA:1425:G:H2'	25:RA:1426:G:C8	2.52	0.44
25:RA:1556:C:H2'	25:RA:1557:C:C6	2.53	0.44
25:RA:1682:G:H1	25:RA:1706:U:H3	1.66	0.44
27:RD:62:TYR:HE1	27:RD:88:ARG:HH22	1.65	0.44
30:RG:5:VAL:HG12	30:RG:7:LEU:H	1.82	0.44
34:RO:11:ALA:O	34:RO:99:PHE:N	2.47	0.44
35:RP:36:LYS:HA	35:RP:40:SER:OG	2.18	0.44
1:XA:968:A:C8	1:XA:1062:U:H4'	2.53	0.44
1:XA:1269:A:H3'	1:XA:1270:C:O4'	2.17	0.44
1:XA:1314:C:H2'	1:XA:1315:U:H6	1.83	0.44
11:XK:101:SER:OG	11:XK:102:GLY:N	2.50	0.44
17:XQ:28:PRO:HA	17:XQ:35:VAL:HA	1.99	0.44
25:YA:300:A:OP2	44:YY:84:ARG:NH1	2.49	0.44
25:YA:451:C:H41	25:YA:454:A:H5'	1.81	0.44
25:YA:484:C:H2'	25:YA:485:C:H6	1.83	0.44
25:YA:594:U:H2'	25:YA:595:C:C6	2.53	0.44
25:YA:1153:C:OP1	40:YU:92:ARG:NH2	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1769:G:H2'	25:YA:1770:G:H8	1.82	0.44
25:YA:2246:G:H2'	25:YA:2247:A:H8	1.82	0.44
28:YE:36:ARG:NH1	28:YE:86:PRO:O	2.40	0.44
28:YE:201:THR:OG1	28:YE:202:LYS:N	2.51	0.44
30:YG:59:GLU:OE1	30:YG:153:ARG:NH2	2.50	0.44
1:QA:6:G:O2'	1:QA:7:G:H5"	2.18	0.44
1:QA:37:U:H2'	1:QA:38:G:H8	1.83	0.44
1:QA:724:G:OP1	1:QA:854:G:O2'	2.33	0.44
1:QA:977:A:H3'	1:QA:977:A:N3	2.33	0.44
1:QA:1507:A:H2'	1:QA:1508:G:C8	2.53	0.44
2:QB:71:VAL:HG12	2:QB:164:VAL:HA	1.99	0.44
4:QD:105:VAL:HG21	4:QD:126:ILE:HD13	2.00	0.44
6:QF:50:TYR:OH	18:QR:74:ARG:O	2.24	0.44
25:RA:40:C:H2'	25:RA:41:C:C6	2.52	0.44
25:RA:689:A:H2'	25:RA:690:G:H8	1.83	0.44
25:RA:709:U:H2'	25:RA:710:G:C8	2.53	0.44
25:RA:926:A:H2'	25:RA:927:G:H8	1.81	0.44
25:RA:1111:A:O2'	25:RA:1112:G:OP2	2.35	0.44
36:RQ:68:ILE:HD13	36:RQ:103:MET:HG2	1.99	0.44
49:R3:4:LEU:HD23	49:R3:4:LEU:HA	1.83	0.44
1:XA:17:U:H2'	1:XA:18:C:H6	1.83	0.44
1:XA:96:U:H2'	1:XA:97:G:C8	2.53	0.44
1:XA:1244:C:H2'	1:XA:1245:A:H8	1.82	0.44
1:XA:1464:G:OP1	39:YT:108:ARG:NH2	2.47	0.44
3:XC:153:VAL:HG13	3:XC:198:VAL:HG12	2.00	0.44
6:XF:15:ASP:N	6:XF:15:ASP:OD1	2.50	0.44
24:XY:28:C:O2'	24:XY:29:U:O5'	2.35	0.44
25:YA:614(D):A:C4	29:YF:180:GLY:HA3	2.53	0.44
25:YA:1310:G:H2'	25:YA:1311:G:H5'	1.99	0.44
25:YA:1363:C:H2'	25:YA:1364:G:C8	2.53	0.44
30:YG:120:LEU:HB2	30:YG:180:PHE:HD1	1.82	0.44
34:YO:102:VAL:HG23	34:YO:121:VAL:HG23	2.00	0.44
1:QA:533:A:O2'	1:QA:535:A:OP2	2.33	0.43
1:QA:590:C:N4	1:QA:650:G:O6	2.51	0.43
1:QA:675:A:H1'	11:QK:116:HIS:CD2	2.53	0.43
1:QA:1129:C:O2'	1:QA:1139:G:O6	2.26	0.43
4:QD:102:ASP:OD1	4:QD:102:ASP:N	2.49	0.43
11:QK:57:THR:HG23	11:QK:60:ALA:H	1.83	0.43
25:RA:39:C:O2	29:RF:46:ARG:NH2	2.49	0.43
25:RA:2196:C:O2'	25:RA:2197:U:H5'	2.18	0.43
25:RA:2882:A:P	37:RR:96:ARG:HH21	2.40	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:20:ILE:H	30:RG:20:ILE:HG13	1.63	0.43
34:RO:42:SER:OG	34:RO:43:VAL:N	2.51	0.43
54:R8:37:SER:OG	54:R8:40:GLU:N	2.43	0.43
1:XA:34:C:H2'	1:XA:35:G:C8	2.53	0.43
1:XA:867:G:O2'	1:XA:873:A:N6	2.51	0.43
14:XN:6:LEU:HD13	14:XN:6:LEU:HA	1.86	0.43
19:XS:25:LYS:O	19:XS:25:LYS:NZ	2.47	0.43
25:YA:205:G:O2'	25:YA:206:U:P	2.76	0.43
25:YA:1666:G:H4'	34:YO:6:THR:HG23	2.00	0.43
25:YA:2010:G:H5"	42:YW:42:ARG:HB2	1.99	0.43
25:YA:2189:U:H2'	25:YA:2190:G:H8	1.82	0.43
25:YA:2489:G:N2	25:YA:2491:U:O4	2.44	0.43
26:YB:9:G:N1	26:YB:112:U:N3	2.61	0.43
26:YB:43:C:O4'	30:YG:66:GLN:NE2	2.51	0.43
31:YH:44:VAL:O	31:YH:50:VAL:HG13	2.18	0.43
52:Y6:38:LYS:HB2	52:Y6:49:HIS:CE1	2.53	0.43
1:QA:112:G:H4'	1:QA:389:A:H4'	2.00	0.43
1:QA:443:C:H2'	1:QA:444:C:C6	2.53	0.43
1:QA:672:U:O2	1:QA:734:G:N2	2.41	0.43
1:QA:1268:A:H2'	1:QA:1269:A:C8	2.53	0.43
1:QA:1441:G:H5"	1:QA:1442(A):G:H5'	1.99	0.43
5:QE:136:MET:HG3	5:QE:140:ARG:HH12	1.82	0.43
7:QG:126:ASP:O	7:QG:131:LYS:N	2.51	0.43
10:QJ:49:VAL:HG21	14:QN:44:LEU:HD22	2.01	0.43
16:QP:14:ASN:HD21	16:QP:16:HIS:CE1	2.34	0.43
25:RA:678:C:H2'	25:RA:679:C:H6	1.82	0.43
25:RA:868:U:H2'	25:RA:869:G:C8	2.53	0.43
25:RA:1011:G:OP2	40:RU:66:ASN:ND2	2.51	0.43
25:RA:1102:C:H2'	25:RA:1103:A:C8	2.53	0.43
25:RA:1568:G:H5"	27:RD:61:LEU:HG	1.99	0.43
25:RA:2294:C:H2'	25:RA:2295:C:H6	1.83	0.43
25:RA:2354:G:H21	46:R0:36:ILE:HD11	1.83	0.43
25:RA:2410:G:H3'	25:RA:2411:A:H8	1.82	0.43
25:RA:2480:C:H2'	25:RA:2481:G:H5'	2.00	0.43
25:RA:2745:C:H4'	31:RH:142:GLY:O	2.18	0.43
34:RO:12:ASP:OD1	34:RO:14:THR:OG1	2.35	0.43
45:RZ:26:GLY:HA2	45:RZ:86:VAL:O	2.18	0.43
52:R6:16:CYS:HB2	52:R6:18:ARG:HD2	2.01	0.43
1:XA:21:G:H2'	1:XA:22:G:C8	2.52	0.43
1:XA:338:A:H61	1:XA:351:G:H1	1.65	0.43
1:XA:822:C:O2'	1:XA:823:G:H5'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:106:LYS:H	2:XB:106:LYS:HG2	1.65	0.43
3:XC:130:VAL:O	3:XC:134:ILE:HG12	2.18	0.43
6:XF:6:VAL:HB	6:XF:63:TYR:HB2	1.99	0.43
8:XH:98:LYS:HE2	8:XH:98:LYS:HB2	1.89	0.43
9:XI:77:ILE:O	9:XI:81:ILE:HG12	2.18	0.43
19:XS:18:LYS:HA	19:XS:18:LYS:HD2	1.65	0.43
24:XY:28:C:HO2'	24:XY:29:U:C5'	2.30	0.43
25:YA:225:A:C2'	25:YA:226:G:H5'	2.48	0.43
25:YA:272(H):G:H2'	25:YA:272(I):G:C8	2.53	0.43
25:YA:1379:A:H4'	25:YA:1380:G:OP2	2.18	0.43
25:YA:1657:C:H2'	25:YA:1658:C:H6	1.82	0.43
25:YA:2014:A:O2'	42:YW:92:ARG:NH1	2.46	0.43
31:YH:155:SER:OG	31:YH:158:HIS:N	2.51	0.43
38:YS:39:ILE:HD11	38:YS:73:LEU:HD21	1.99	0.43
41:YV:4:ILE:HA	41:YV:12:TYR:O	2.18	0.43
42:YW:71:VAL:HA	42:YW:107:LEU:HD23	1.99	0.43
44:YY:83:THR:OG1	44:YY:84:ARG:O	2.33	0.43
45:YZ:69:THR:HG22	45:YZ:90:VAL:HA	1.98	0.43
1:QA:31:G:N2	1:QA:48:C:O5'	2.52	0.43
1:QA:460:G:N1	1:QA:471:G:OP2	2.43	0.43
1:QA:990:C:N4	1:QA:1216:G:O6	2.52	0.43
1:QA:1294:G:H2'	1:QA:1295:G:C8	2.53	0.43
4:QD:21:LEU:N	4:QD:26:CYS:SG	2.91	0.43
5:QE:77:PRO:HD2	5:QE:142:LEU:HD23	1.99	0.43
25:RA:272(E):U:H3	25:RA:272(S):G:H1	1.65	0.43
25:RA:414:C:H2'	25:RA:415:A:H8	1.83	0.43
25:RA:2258:C:O2'	25:RA:2427:C:OP2	2.32	0.43
25:RA:2637:U:H5"	28:RE:82:ARG:NH1	2.33	0.43
25:RA:2773:C:OP1	28:RE:166:THR:OG1	2.36	0.43
25:RA:2817:G:H21	25:RA:2836:U:H1'	1.82	0.43
26:RB:101:G:H2'	26:RB:102:A:C8	2.54	0.43
36:RQ:11:LYS:HB3	36:RQ:87:LYS:HZ2	1.83	0.43
37:RR:100:LEU:HD12	37:RR:101:ALA:H	1.83	0.43
44:RY:13:VAL:HG12	44:RY:74:PRO:HA	1.99	0.43
44:RY:39:VAL:HG13	44:RY:42:VAL:HB	1.99	0.43
1:XA:243:A:N6	1:XA:281:G:O2'	2.52	0.43
1:XA:337:C:H2'	1:XA:338:A:C8	2.51	0.43
3:XC:174:PRO:HB2	3:XC:177:THR:HG23	2.00	0.43
23:XX:18:G:H4'	23:XX:19:C:OP1	2.18	0.43
25:YA:18:C:H2'	25:YA:19:C:C6	2.52	0.43
25:YA:675:A:N3	25:YA:2443:C:O2'	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:729:G:H5'	25:YA:730:C:H5"	1.99	0.43
25:YA:996:A:O3'	40:YU:91:ASP:HB2	2.18	0.43
25:YA:2113:U:H2'	25:YA:2114:A:H8	1.84	0.43
25:YA:2303:G:H1'	30:YG:132:ASN:ND2	2.34	0.43
25:YA:2743:C:OP2	25:YA:2755:C:N4	2.50	0.43
26:YB:55:U:H2'	26:YB:56:G:C8	2.53	0.43
31:YH:101:ARG:H	31:YH:101:ARG:HG2	1.60	0.43
34:YO:29:ASN:OD1	34:YO:29:ASN:N	2.50	0.43
37:YR:37:THR:OG1	37:YR:38:VAL:N	2.49	0.43
1:QA:298:A:H8	1:QA:298:A:OP1	2.01	0.43
1:QA:536:C:H2'	1:QA:537:G:C8	2.53	0.43
1:QA:1351:U:O2	1:QA:1371:G:N2	2.43	0.43
25:RA:110:G:H2'	25:RA:111:A:H8	1.83	0.43
25:RA:126:A:OP1	53:R7:18:PHE:N	2.45	0.43
25:RA:239:U:H2'	25:RA:240:G:O4'	2.18	0.43
25:RA:241:A:H5'	25:RA:243:U:O4'	2.18	0.43
25:RA:437:G:H2'	25:RA:438:G:C8	2.53	0.43
25:RA:742:G:H2'	25:RA:743:G:C8	2.54	0.43
25:RA:840:C:H2'	25:RA:841:A:H8	1.83	0.43
25:RA:931:G:O3'	49:R3:24:LYS:NZ	2.52	0.43
25:RA:1557:C:H5"	25:RA:1558:A:OP2	2.18	0.43
25:RA:1956:U:H1'	25:RA:2552:OMU:OP1	2.18	0.43
25:RA:2660:A:P	25:RA:2660:A:H8	2.41	0.43
25:RA:2801(B):A:H5'	25:RA:2802:G:C8	2.53	0.43
31:RH:148:ILE:HA	31:RH:151:ILE:HD12	2.00	0.43
32:RI:54:GLN:O	32:RI:58:LEU:N	2.39	0.43
34:RO:9:GLU:N	34:RO:82:ASN:O	2.43	0.43
42:RW:47:VAL:HA	42:RW:50:VAL:HG12	2.00	0.43
45:RZ:57:ILE:O	45:RZ:69:THR:OG1	2.27	0.43
50:R4:56:VAL:HG12	50:R4:57:GLU:H	1.82	0.43
52:R6:37:ARG:HA	52:R6:48:VAL:HA	2.01	0.43
1:XA:725:G:OP1	1:XA:853:G:N2	2.35	0.43
11:XK:38:ASN:HA	11:XK:39:PRO:HD3	1.86	0.43
25:YA:673:C:OP1	29:YF:54:ARG:NH1	2.46	0.43
25:YA:816:C:H2'	25:YA:817:C:H6	1.83	0.43
25:YA:857:C:OP2	46:Y0:77:ARG:NH2	2.49	0.43
25:YA:1032:A:H2	25:YA:1122:G:H22	1.67	0.43
25:YA:1202:C:H42	25:YA:1243:G:H1	1.67	0.43
25:YA:1299:G:N2	25:YA:1641:A:H62	2.16	0.43
25:YA:1999:C:OP1	28:YE:118:LYS:NZ	2.51	0.43
25:YA:2393:A:H4'	35:YP:62:LEU:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:158:THR:HG23	29:YF:160:ASN:H	1.83	0.43
45:YZ:24:LEU:HD11	45:YZ:83:PRO:HB2	2.01	0.43
1:QA:273:A:O2'	1:QA:274:A:H5'	2.19	0.43
1:QA:404:U:P	4:QD:118:ARG:HH12	2.41	0.43
1:QA:672:U:H2'	1:QA:673:G:C8	2.53	0.43
1:QA:824:C:H2'	1:QA:825:G:C8	2.54	0.43
1:QA:1202:G:H2'	1:QA:1203:C:H6	1.84	0.43
1:QA:1270:C:H4'	1:QA:1313:U:O2'	2.18	0.43
2:QB:9:GLU:HA	2:QB:12:GLU:HG2	1.99	0.43
4:QD:8:VAL:CG1	4:QD:22:LYS:HE3	2.48	0.43
4:QD:89:THR:OG1	5:QE:97:GLY:O	2.36	0.43
11:QK:27:ASN:OD1	11:QK:28:THR:N	2.50	0.43
16:QP:1:MET:HG2	16:QP:3:LYS:HG3	2.01	0.43
25:RA:18:C:H2'	25:RA:19:C:H6	1.83	0.43
25:RA:120:U:H4'	25:RA:122:G:OP2	2.18	0.43
25:RA:447:A:N1	25:RA:454:A:O2'	2.41	0.43
25:RA:839:U:H2'	25:RA:840:C:H6	1.84	0.43
25:RA:947:G:H2'	25:RA:948:G:C8	2.53	0.43
25:RA:2543:G:O4'	25:RA:2766:G:H5'	2.18	0.43
25:RA:2750:A:OP2	31:RH:62:LYS:NZ	2.50	0.43
27:RD:132:PRO:HA	27:RD:190:TYR:HA	1.99	0.43
36:RQ:2:LEU:N	36:RQ:48:GLU:OE2	2.48	0.43
41:RV:35:LEU:HB3	41:RV:57:VAL:HG13	2.01	0.43
48:R2:38:GLN:O	48:R2:43:GLN:N	2.51	0.43
53:R7:22:MET:HE3	53:R7:22:MET:HB3	1.86	0.43
54:R8:52:LYS:HA	54:R8:52:LYS:HD3	1.79	0.43
1:XA:1499:A:H2'	1:XA:1500:A:H8	1.82	0.43
1:XA:1510:U:H2'	1:XA:1511:G:H8	1.84	0.43
13:XM:84:ILE:HG13	13:XM:86:CYS:H	1.84	0.43
25:YA:252:G:OP1	35:YP:50:ARG:NH1	2.48	0.43
25:YA:729:G:C6	27:YD:208:LYS:HB2	2.54	0.43
25:YA:852:G:O2'	25:YA:853:G:H5'	2.18	0.43
25:YA:1314:C:OP1	25:YA:1332:G:H5"	2.19	0.43
25:YA:1961:C:H2'	25:YA:1962:5MC:H5'	1.99	0.43
25:YA:2262:U:P	46:Y0:19:LYS:HZ3	2.42	0.43
25:YA:2590:A:H2'	25:YA:2591:C:H6	1.83	0.43
44:YY:96:ILE:HD12	44:YY:96:ILE:HA	1.89	0.43
1:QA:100:C:H2'	1:QA:101:A:C8	2.54	0.43
1:QA:266:G:H2'	1:QA:266:G:N3	2.33	0.43
5:QE:100:VAL:HG23	5:QE:118:ILE:HG22	1.99	0.43
6:QF:23:LYS:HA	6:QF:26:ILE:HD12	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:153:HIS:NE2	11:QK:57:THR:OG1	2.43	0.43
9:QI:17:VAL:HG21	9:QI:80:GLY:HA3	2.01	0.43
14:QN:32:SER:O	14:QN:32:SER:OG	2.33	0.43
17:QQ:48:GLU:HB2	17:QQ:50:LYS:HB3	2.00	0.43
25:RA:503:A:H4'	25:RA:505:A:H5"	2.01	0.43
25:RA:1266:G:O2'	25:RA:2012:G:O6	2.30	0.43
25:RA:1796:U:H2'	25:RA:1797:C:C6	2.53	0.43
25:RA:1826:G:H2'	25:RA:1827:C:H6	1.83	0.43
25:RA:2087:G:H2'	25:RA:2088:G:C8	2.54	0.43
25:RA:2222:G:H5"	27:RD:186:HIS:CD2	2.54	0.43
25:RA:2588:G:H2'	25:RA:2589:A:C8	2.53	0.43
27:RD:20:ASP:OD1	27:RD:20:ASP:N	2.50	0.43
27:RD:142:VAL:HG23	27:RD:193:VAL:HA	2.00	0.43
31:RH:9:ILE:HG12	31:RH:69:ARG:HH11	1.83	0.43
38:RS:7:TYR:O	38:RS:11:LYS:N	2.47	0.43
38:RS:62:LYS:HD2	38:RS:62:LYS:HA	1.65	0.43
41:RV:50:PRO:HB2	41:RV:51:VAL:HG23	1.99	0.43
1:XA:60:A:H4'	1:XA:61:G:O5'	2.19	0.43
1:XA:189(C):C:H2'	1:XA:189(D):C:H6	1.83	0.43
1:XA:565:U:OP2	1:XA:566:G:O2'	2.36	0.43
1:XA:582:U:H2'	1:XA:583:A:C8	2.53	0.43
1:XA:586:C:O3'	8:XH:89:PRO:HB3	2.18	0.43
1:XA:1523:G:H2'	1:XA:1524:C:C6	2.54	0.43
1:XA:1524:C:H2'	1:XA:1525:G:H8	1.84	0.43
11:XK:20:TYR:O	11:XK:30:VAL:HA	2.17	0.43
17:XQ:21:VAL:O	17:XQ:42:TYR:N	2.39	0.43
21:XU:19:GLY:N	21:XU:22:ARG:O	2.38	0.43
25:YA:180:G:N2	25:YA:215:G:O6	2.48	0.43
25:YA:659:C:H2'	25:YA:660:G:C8	2.54	0.43
25:YA:938:G:OP1	54:Y8:52:LYS:HD2	2.19	0.43
25:YA:1411:C:H2'	25:YA:1412:A:C8	2.53	0.43
25:YA:2327:A:H2'	25:YA:2328:A:C8	2.53	0.43
29:YF:154:VAL:O	29:YF:173:VAL:HA	2.18	0.43
30:YG:161:THR:HG22	30:YG:163:ALA:H	1.84	0.43
35:YP:32:THR:O	35:YP:32:THR:OG1	2.35	0.43
1:QA:571:U:H5"	1:QA:819:A:C6	2.53	0.43
1:QA:986:A:N3	19:QS:52:TYR:OH	2.49	0.43
1:QA:1134:G:O6	1:QA:1141:C:N4	2.50	0.43
12:QL:90:VAL:HG12	12:QL:93:LEU:H	1.83	0.43
25:RA:1107:G:H2'	25:RA:1108:U:C6	2.53	0.43
25:RA:1148:A:O2'	25:RA:1149:G:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1668:A:OP1	34:RO:5:GLN:NE2	2.45	0.43
25:RA:1827:C:C2'	25:RA:1828:G:H5'	2.49	0.43
25:RA:2291:U:H1'	25:RA:2374:C:H1'	2.00	0.43
25:RA:2579:C:H2'	25:RA:2580:U:O4'	2.18	0.43
26:RB:38:C:H2'	26:RB:39:A:C8	2.54	0.43
29:RF:64:ILE:HG21	29:RF:78:ILE:HG23	2.01	0.43
48:R2:2:LYS:HE2	48:R2:2:LYS:HB2	1.90	0.43
1:XA:34:C:H2'	1:XA:35:G:H8	1.84	0.43
1:XA:603:U:H3	1:XA:635:G:H1	1.66	0.43
1:XA:1123:A:H4'	10:XJ:36:GLY:HA3	2.00	0.43
1:XA:1458:G:H2'	1:XA:1459:C:H6	1.84	0.43
6:XF:14:LEU:HA	6:XF:14:LEU:HD23	1.82	0.43
22:XV:64:G:H2'	22:XV:65:C:H6	1.82	0.43
25:YA:28:A:H2'	25:YA:29:U:C6	2.54	0.43
25:YA:249:C:O2'	35:YP:64:LYS:NZ	2.42	0.43
25:YA:465:G:H21	25:YA:684:G:H1'	1.84	0.43
25:YA:755:C:H2'	25:YA:756:C:C6	2.53	0.43
25:YA:1366:A:H2'	25:YA:1367:A:O4'	2.19	0.43
25:YA:2108:C:H2'	25:YA:2109:U:H6	1.84	0.43
25:YA:2349:G:OP2	54:Y8:42:ARG:NE	2.41	0.43
25:YA:2357:U:H2'	25:YA:2358:G:H5"	2.01	0.43
25:YA:2511:U:O2'	28:YE:138:PRO:O	2.23	0.43
28:YE:54:GLN:HB3	28:YE:76:ARG:HG2	1.99	0.43
36:YQ:44:ALA:HB2	36:YQ:70:PRO:HG3	2.00	0.43
38:YS:110:LEU:HD13	38:YS:110:LEU:HA	1.91	0.43
1:QA:538:G:H2'	1:QA:539:A:C8	2.53	0.43
1:QA:554:C:H2'	1:QA:555:C:C6	2.53	0.43
1:QA:643:C:H2'	1:QA:644:G:H8	1.84	0.43
1:QA:861:G:O2'	1:QA:874:G:O2'	2.23	0.43
1:QA:1202:G:H5"	14:QN:29:ARG:NH2	2.34	0.43
1:QA:1229:A:H2'	1:QA:1230:C:C6	2.54	0.43
4:QD:8:VAL:HA	4:QD:11:LEU:HD13	2.00	0.43
11:QK:19:ALA:N	11:QK:81:ASP:O	2.45	0.43
14:QN:7:ILE:HG21	14:QN:28:GLY:HA2	2.00	0.43
25:RA:102:G:H1	44:RY:94:LYS:NZ	2.17	0.43
25:RA:787:U:OP1	25:RA:1780:A:N6	2.52	0.43
26:RB:107:G:H5'	45:RZ:31:ARG:HH12	1.84	0.43
29:RF:50:SER:HB2	29:RF:94:PRO:HD3	2.00	0.43
30:RG:64:THR:HG23	30:RG:66:GLN:H	1.83	0.43
32:RI:102:SER:O	32:RI:106:GLY:N	2.52	0.43
37:RR:6:SER:O	37:RR:6:SER:OG	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:313:A:H2'	1:XA:314:C:C6	2.54	0.43
2:XB:52:GLU:HB3	2:XB:56:ARG:HH21	1.84	0.43
2:XB:223:ILE:O	2:XB:228:GLY:N	2.52	0.43
4:XD:8:VAL:C	4:XD:10:ARG:H	2.25	0.43
25:YA:272(Q):G:H2'	25:YA:272(R):G:C8	2.52	0.43
25:YA:528:A:OP2	33:YN:111:PRO:HB3	2.19	0.43
25:YA:534:U:H2'	25:YA:535:C:C6	2.54	0.43
25:YA:589:C:H2'	25:YA:590:A:C8	2.53	0.43
25:YA:970:C:H2'	25:YA:971:C:C6	2.53	0.43
25:YA:1019:U:H2'	25:YA:1020:A:C8	2.53	0.43
25:YA:1136:G:H2'	25:YA:1137:G:H8	1.84	0.43
25:YA:1364:G:N7	47:Y1:3:LYS:HD2	2.33	0.43
25:YA:1754:C:P	39:YT:96:ARG:HH22	2.42	0.43
25:YA:2144:U:O2'	25:YA:2147:G:N1	2.43	0.43
26:YB:11:C:OP2	26:YB:12:C:N4	2.29	0.43
42:YW:86:LEU:HB2	42:YW:96:ILE:HG13	2.01	0.43
1:QA:358:U:H5"	32:YI:87:LYS:HZ3	1.84	0.43
1:QA:659:U:H2'	1:QA:660:G:H8	1.84	0.43
1:QA:892:A:H2'	1:QA:893:C:H6	1.83	0.43
1:QA:1014:A:P	1:QA:1014:A:H8	2.41	0.43
3:QC:153:VAL:HG12	3:QC:196:LEU:HD22	2.01	0.43
7:QG:111:ARG:HB2	7:QG:119:ARG:HD2	2.01	0.43
8:QH:9:MET:HE1	8:QH:32:LYS:HB3	2.00	0.43
25:RA:742:G:H2'	25:RA:743:G:H8	1.84	0.43
25:RA:942:G:H1'	25:RA:1189:A:C2	2.53	0.43
25:RA:1084:A:H8	25:RA:1085:A:H4'	1.84	0.43
25:RA:2063:C:H2'	25:RA:2064:C:H5'	2.01	0.43
26:RB:20:C:H2'	26:RB:21:G:C8	2.53	0.43
27:RD:21:PHE:HB3	27:RD:24:ILE:HG12	2.00	0.43
30:RG:38:VAL:HG13	30:RG:93:THR:HG22	2.01	0.43
36:RQ:42:ILE:HD11	36:RQ:127:ILE:HD11	2.00	0.43
42:RW:29:LEU:HG	42:RW:33:ARG:HD2	2.01	0.43
1:XA:610:G:H2'	1:XA:611:A:H8	1.83	0.43
1:XA:749:C:H2'	1:XA:750:G:H8	1.83	0.43
1:XA:969:A:H2'	1:XA:970:C:O4'	2.18	0.43
1:XA:1499:A:C1'	1:XA:1520:G:H5'	2.47	0.43
1:XA:1513:A:H2'	1:XA:1514:C:C6	2.54	0.43
12:XL:93:LEU:HA	12:XL:94:PRO:HD3	1.79	0.43
25:YA:93:G:H2'	25:YA:94(A):C:H6	1.83	0.43
25:YA:115:C:O2'	25:YA:116:C:H5'	2.19	0.43
25:YA:140:G:C2	25:YA:142(A):A:N6	2.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:557:U:H2'	25:YA:558:G:C8	2.54	0.43
25:YA:730:C:O2'	25:YA:731:C:H5'	2.19	0.43
25:YA:772:C:O2'	25:YA:773:U:H5'	2.18	0.43
25:YA:1358:G:O2'	25:YA:1359:A:H5"	2.18	0.43
25:YA:1645:G:H5"	25:YA:1646:C:O4'	2.18	0.43
25:YA:1963:U:H4'	25:YA:1964:G:OP1	2.19	0.43
25:YA:2317:C:C2'	25:YA:2318:G:H5'	2.49	0.43
1:QA:1154:G:H2'	1:QA:1155:G:H8	1.83	0.43
7:QG:93:PRO:O	7:QG:97:GLN:NE2	2.51	0.43
10:QJ:47:PHE:O	10:QJ:63:PHE:N	2.47	0.43
12:QL:33:ARG:HA	12:QL:33:ARG:HD2	1.81	0.43
20:QT:15:ARG:HD3	20:QT:15:ARG:HA	1.88	0.43
20:QT:51:GLU:HA	20:QT:54:LYS:HG2	2.01	0.43
25:RA:602:G:N2	25:RA:655:A:OP2	2.46	0.43
25:RA:2037:G:H2'	25:RA:2038:G:C8	2.54	0.43
25:RA:2292:C:OP1	38:RS:17:ARG:NH1	2.52	0.43
25:RA:2539:C:H4'	55:R9:35:ARG:NH2	2.34	0.43
25:RA:2620:C:H2'	25:RA:2621:A:O4'	2.19	0.43
28:RE:89:ASP:OD1	28:RE:89:ASP:N	2.41	0.43
30:RG:100:TRP:HA	30:RG:103:LEU:HB2	2.01	0.43
31:RH:46:GLU:HB3	31:RH:49:VAL:HG13	2.00	0.43
25:YA:272(S):G:O2'	25:YA:272(T):C:H5'	2.19	0.43
25:YA:1386:C:H2'	25:YA:1387:C:H6	1.84	0.43
25:YA:1647:G:H3'	25:YA:1647:G:P	2.59	0.43
25:YA:1778:U:H2'	25:YA:1784:A:H62	1.84	0.43
25:YA:2074:U:H2'	25:YA:2075:U:C6	2.53	0.43
25:YA:2259:G:O2'	25:YA:2260:C:H5'	2.18	0.43
25:YA:2378:A:H4'	38:YS:23:ARG:CZ	2.49	0.43
25:YA:2705:A:H2'	25:YA:2706:G:O4'	2.19	0.43
25:YA:2836:U:H2'	25:YA:2837:G:C8	2.54	0.43
34:YO:75:SER:OG	34:YO:76:ALA:N	2.51	0.43
35:YP:120:ALA:HB2	35:YP:137:LYS:HG3	2.00	0.43
45:YZ:123:ASP:OD1	45:YZ:123:ASP:N	2.51	0.43
47:Y1:52:ARG:HE	47:Y1:52:ARG:HB2	1.59	0.43
1:QA:73:G:H2'	1:QA:76:C:H6	1.84	0.42
1:QA:310:G:H2'	1:QA:311:C:C6	2.54	0.42
1:QA:562:C:H4'	1:QA:563:A:H5'	2.01	0.42
1:QA:782:A:O3'	1:QA:1515:C:H4'	2.19	0.42
1:QA:860:A:H2'	1:QA:861:G:O4'	2.18	0.42
1:QA:1130:A:O2'	9:QI:3:GLN:OE1	2.36	0.42
1:QA:1250:A:H2'	1:QA:1251:A:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1409:C:H2'	1:QA:1410:G:H8	1.84	0.42
1:QA:1445:C:O2'	1:QA:1447:A:N6	2.41	0.42
4:QD:139:ARG:HH21	4:QD:141:ARG:HH22	1.67	0.42
7:QG:53:LYS:HA	7:QG:53:LYS:HD2	1.93	0.42
20:QT:50:GLU:HG3	20:QT:100:ILE:HD13	2.00	0.42
25:RA:150:C:H2'	25:RA:151:C:H6	1.83	0.42
25:RA:175:G:O2'	25:RA:176:G:H5'	2.19	0.42
25:RA:444:C:H2'	25:RA:445:C:C6	2.54	0.42
25:RA:536:A:H2'	25:RA:537:C:C6	2.54	0.42
25:RA:558:G:H2'	25:RA:559:G:H8	1.84	0.42
25:RA:1342:A:H5'	43:RX:55:ASN:ND2	2.34	0.42
25:RA:2692:C:H1'	25:RA:2847:U:H1'	2.00	0.42
25:RA:2784:C:O2'	28:RE:37:ARG:NH1	2.52	0.42
38:RS:59:LYS:HD3	38:RS:59:LYS:HA	1.86	0.42
42:RW:11:ARG:HA	42:RW:11:ARG:HD2	1.90	0.42
46:R0:32:ARG:N	46:R0:35:ASN:OD1	2.44	0.42
50:R4:16:CYS:HB3	50:R4:19:GLY:H	1.83	0.42
1:XA:738:C:O2'	1:XA:739:C:H5'	2.19	0.42
1:XA:1148:U:H4'	9:XI:14:VAL:HG21	2.01	0.42
1:XA:1291:G:O2'	9:XI:38:GLN:OE1	2.37	0.42
22:XV:13:C:O2'	25:YA:1924:C:H4'	2.18	0.42
25:YA:578:A:H2'	25:YA:579:G:H5"	2.01	0.42
25:YA:1298:C:H3'	25:YA:1299:G:C8	2.53	0.42
25:YA:1399:C:OP1	43:YX:25:LYS:NZ	2.33	0.42
25:YA:1669:A:O3'	25:YA:2549:G:H5'	2.20	0.42
25:YA:2712(A):U:H1'	25:YA:2712(B):A:C8	2.54	0.42
29:YF:12:LEU:HB2	29:YF:126:VAL:HG12	2.01	0.42
37:YR:65:LEU:HD23	37:YR:65:LEU:HA	1.86	0.42
45:YZ:27:VAL:O	45:YZ:88:PHE:HB2	2.18	0.42
1:QA:73:G:H2'	1:QA:76:C:C6	2.54	0.42
1:QA:291:C:O2'	1:QA:292:G:H5'	2.18	0.42
1:QA:689:C:H2'	1:QA:690:G:O4'	2.19	0.42
1:QA:1352:C:H2'	1:QA:1353:G:C8	2.54	0.42
1:QA:1393:U:O2'	1:QA:1501:C:O2'	2.20	0.42
9:QI:20:ARG:HA	9:QI:21:PRO:HD3	1.85	0.42
22:QV:62:C:H2'	22:QV:63:G:H8	1.84	0.42
25:RA:30:G:P	40:RU:5:LYS:HZ1	2.41	0.42
25:RA:77:C:P	48:R2:59:ARG:HH11	2.42	0.42
25:RA:686:G:O5'	53:R7:11:LYS:NZ	2.45	0.42
25:RA:1275:A:N1	25:RA:1295:C:O2'	2.49	0.42
25:RA:1366:A:H2'	25:RA:1367:A:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1878:G:H2'	25:RA:1879:C:C6	2.55	0.42
25:RA:1890:A:H3'	25:RA:1891:G:H8	1.84	0.42
25:RA:2115:G:N1	25:RA:2119:A:OP2	2.44	0.42
25:RA:2839:G:H2'	25:RA:2840:C:H6	1.83	0.42
27:RD:85:ASP:OD2	27:RD:88:ARG:NH1	2.51	0.42
32:RI:4:ILE:HD11	32:RI:16:GLY:HA2	2.01	0.42
35:RP:50:ARG:HG3	54:R8:61:LEU:HD21	2.02	0.42
36:RQ:42:ILE:O	36:RQ:95:ALA:N	2.47	0.42
41:RV:1:MET:HB3	41:RV:99:ILE:HD12	2.00	0.42
44:RY:83:THR:OG1	44:RY:84:ARG:O	2.31	0.42
53:R7:22:MET:HA	53:R7:28:ARG:HG2	2.00	0.42
53:R7:30:VAL:HG22	53:R7:33:ARG:HH21	1.84	0.42
1:XA:286:G:H2'	1:XA:287:U:C6	2.54	0.42
1:XA:777:A:H2'	1:XA:778:G:H8	1.85	0.42
1:XA:1314:C:H2'	1:XA:1315:U:C6	2.54	0.42
4:XD:21:LEU:O	4:XD:113:SER:HB2	2.19	0.42
5:XE:11:ILE:HD12	5:XE:105:VAL:HG13	2.01	0.42
7:XG:6:ARG:H	7:XG:6:ARG:HG3	1.69	0.42
25:YA:595:C:H2'	25:YA:596:G:C8	2.54	0.42
25:YA:1197:G:O2'	25:YA:1198:U:H5'	2.19	0.42
25:YA:1843:C:O2'	25:YA:1844:C:H5'	2.20	0.42
25:YA:2197:U:H1'	25:YA:2198:A:C8	2.53	0.42
25:YA:2251:OMG:H1'	25:YA:2251:OMG:HM23	1.76	0.42
25:YA:2400:G:N2	25:YA:2417:C:N3	2.67	0.42
27:YD:20:ASP:OD1	27:YD:20:ASP:N	2.40	0.42
28:YE:44:TYR:OH	28:YE:80:GLU:OE2	2.36	0.42
38:YS:25:ARG:HA	38:YS:86:ALA:O	2.19	0.42
1:QA:129(B):G:N2	1:QA:189(G):U:H5"	2.34	0.42
1:QA:260:G:H2'	1:QA:261:U:C6	2.54	0.42
1:QA:370:C:H2'	1:QA:371:G:H8	1.83	0.42
3:QC:43:LEU:O	3:QC:46:GLU:N	2.52	0.42
3:QC:55:VAL:HG12	3:QC:68:VAL:HG22	2.01	0.42
5:QE:139:LEU:HD23	5:QE:142:LEU:HD13	2.01	0.42
7:QG:78:ARG:HG2	7:QG:80:VAL:HG13	2.01	0.42
10:QJ:46:ARG:HA	10:QJ:64:GLU:HA	2.01	0.42
13:QM:47:ASP:OD1	13:QM:47:ASP:N	2.51	0.42
25:RA:947:G:H2'	25:RA:948:G:H8	1.84	0.42
25:RA:1203:G:H1	25:RA:1241:A:P	2.41	0.42
25:RA:1252:G:H21	40:RU:33:ARG:HH21	1.67	0.42
25:RA:1380:G:O5'	25:RA:1380:G:C8	2.72	0.42
25:RA:1843:C:H2'	25:RA:1844:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2299:G:H2'	25:RA:2300:G:H8	1.85	0.42
25:RA:2881:C:H2'	25:RA:2882:A:H8	1.84	0.42
28:RE:104:VAL:HG22	28:RE:198:VAL:HG22	2.02	0.42
47:R1:3:LYS:HD2	47:R1:3:LYS:HA	1.79	0.42
1:XA:785:G:O2'	1:XA:786:G:H5'	2.19	0.42
1:XA:1357:A:H61	1:XA:1365:G:H1	1.68	0.42
12:XL:21:LYS:HA	12:XL:21:LYS:HD2	1.89	0.42
22:XV:71:C:H2'	22:XV:72:A:C8	2.55	0.42
25:YA:116:C:O2'	25:YA:126:A:H1'	2.19	0.42
25:YA:568:U:O4	25:YA:973:A:OP2	2.38	0.42
25:YA:582:G:H2'	25:YA:583:G:C8	2.54	0.42
25:YA:1060:U:H4'	25:YA:1070:A:N6	2.35	0.42
25:YA:1231:G:H2'	25:YA:1232:G:H8	1.83	0.42
25:YA:2012:G:O3'	42:YW:96:ILE:HG23	2.19	0.42
25:YA:2400:G:H2'	25:YA:2401:U:C6	2.54	0.42
25:YA:2547:U:O2	34:YO:23:ARG:NH2	2.51	0.42
25:YA:2646:C:OP2	25:YA:2732:G:O2'	2.29	0.42
27:YD:17:THR:OG1	27:YD:205:VAL:N	2.51	0.42
32:YI:74:ASN:OD1	32:YI:74:ASN:N	2.47	0.42
1:QA:59:A:H2	1:QA:330:C:H42	1.66	0.42
1:QA:227:G:H2'	1:QA:228:A:H8	1.83	0.42
1:QA:576:G:H3'	1:QA:577:G:H5"	2.01	0.42
1:QA:741:G:H2'	1:QA:742:G:C8	2.54	0.42
1:QA:1097:C:O2'	1:QA:1169:A:N3	2.45	0.42
1:QA:1288:A:H2'	1:QA:1289:A:C8	2.53	0.42
1:QA:1317:C:N4	14:QN:19:ARG:HH21	2.16	0.42
2:QB:8:LYS:HD2	2:QB:8:LYS:HA	1.92	0.42
2:QB:106:LYS:HE3	2:QB:106:LYS:HB3	1.88	0.42
2:QB:119:GLU:OE2	2:QB:153:ARG:NH2	2.50	0.42
3:QC:94:LEU:HB3	3:QC:95:THR:HG23	2.01	0.42
4:QD:84:LYS:HD3	4:QD:84:LYS:HA	1.88	0.42
10:QJ:38:ILE:HG13	10:QJ:71:LEU:HB3	2.02	0.42
13:QM:97:PRO:HG3	13:QM:110:ARG:HB3	2.01	0.42
25:RA:177:G:H3'	25:RA:178:G:C8	2.55	0.42
25:RA:776:G:N2	25:RA:2241:A:OP1	2.49	0.42
25:RA:792:G:H21	25:RA:2072:G:H2'	1.84	0.42
25:RA:799:G:C8	25:RA:800:A:H2'	2.54	0.42
25:RA:1153:C:H2'	25:RA:1154:G:O4'	2.19	0.42
25:RA:1269:A:H2'	25:RA:1270:C:C6	2.55	0.42
25:RA:1292:U:H2'	25:RA:1293:C:C6	2.55	0.42
25:RA:1390:U:O4	25:RA:1395:A:N7	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1806:C:H2'	25:RA:1807:G:C8	2.55	0.42
33:RN:43:THR:OG1	33:RN:48:MET:SD	2.70	0.42
33:RN:47:ALA:HB2	33:RN:112:LEU:HD11	2.01	0.42
37:RR:73:VAL:HA	37:RR:76:VAL:HG22	2.00	0.42
1:XA:673:G:H2'	1:XA:674:G:H8	1.83	0.42
1:XA:677:U:H2'	1:XA:678:U:H6	1.85	0.42
1:XA:688:G:H2'	1:XA:689:C:H6	1.83	0.42
1:XA:985:C:H2'	1:XA:986:A:C8	2.55	0.42
1:XA:1223:C:P	19:XS:78:ARG:HH12	2.41	0.42
1:XA:1309:G:OP2	13:XM:99:ARG:NH2	2.52	0.42
1:XA:1410:G:H2'	1:XA:1411:C:C6	2.54	0.42
4:XD:18:LYS:HG3	4:XD:33:MET:HB2	2.01	0.42
8:XH:100:ILE:HD12	8:XH:125:ARG:HG3	2.01	0.42
9:XI:9:ARG:HB3	9:XI:104:ARG:HH21	1.83	0.42
10:XJ:47:PHE:N	10:XJ:63:PHE:O	2.46	0.42
25:YA:487:C:H1'	42:YW:53:SER:HA	2.01	0.42
25:YA:529:A:H62	25:YA:2041:U:H3	1.67	0.42
25:YA:2884:U:C4	51:Y5:52:TYR:HE1	2.37	0.42
26:YB:9:G:OP1	38:YS:25:ARG:NH1	2.40	0.42
26:YB:70:C:H2'	26:YB:71:C:H6	1.84	0.42
31:YH:64:LEU:HD23	31:YH:64:LEU:HA	1.85	0.42
48:Y2:53:LEU:O	48:Y2:57:ILE:HG13	2.19	0.42
1:QA:426:G:OP1	4:QD:38:TYR:OH	2.32	0.42
1:QA:438:G:O2'	1:QA:493:G:N2	2.53	0.42
1:QA:641:U:O4'	8:QH:115:SER:OG	2.35	0.42
1:QA:708:C:H2'	1:QA:709:G:H8	1.84	0.42
2:QB:172:ILE:HA	2:QB:175:ARG:HB2	2.01	0.42
2:QB:187:LEU:HA	2:QB:201:ILE:HB	2.01	0.42
12:QL:77:LEU:HD21	12:QL:107:ALA:HB1	2.01	0.42
12:QL:111:LYS:HA	12:QL:111:LYS:HD3	1.79	0.42
20:QT:58:LYS:O	20:QT:61:SER:OG	2.35	0.42
25:RA:12:U:O4	25:RA:526:A:N7	2.52	0.42
25:RA:121:G:H4'	25:RA:149:A:H5'	2.01	0.42
25:RA:817:C:O2'	25:RA:839:U:OP1	2.20	0.42
25:RA:935:C:H2'	25:RA:936:C:H6	1.84	0.42
25:RA:1416:G:O2'	25:RA:1417:C:OP2	2.36	0.42
25:RA:2001:A:H4'	25:RA:2689:U:C6	2.54	0.42
25:RA:2552:OMU:N3	25:RA:2554:U:H5"	2.35	0.42
26:RB:74:U:H2'	26:RB:75:G:C8	2.55	0.42
1:XA:473:G:H2'	1:XA:474:G:H8	1.84	0.42
1:XA:948:C:OP1	13:XM:109:THR:HG22	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1030(A):C:H42	1:XA:1031:G:H1	1.67	0.42
1:XA:1117:G:H4'	9:XI:104:ARG:NH1	2.35	0.42
15:XO:47:LYS:HE2	15:XO:47:LYS:HB2	1.81	0.42
19:XS:13:ASP:OD1	19:XS:13:ASP:N	2.52	0.42
25:YA:106:C:H2'	25:YA:107:C:H6	1.84	0.42
25:YA:568:U:N3	25:YA:571:A:OP2	2.47	0.42
25:YA:1196:C:O2'	25:YA:1227:G:O2'	2.19	0.42
25:YA:1598:C:H2'	25:YA:1599:C:H6	1.85	0.42
25:YA:2773:C:H2'	25:YA:2774:C:H6	1.85	0.42
33:YN:102:ALA:O	33:YN:106:MET:HG3	2.19	0.42
34:YO:44:LYS:HA	34:YO:44:LYS:HD2	1.91	0.42
1:QA:243:A:H4'	1:QA:244:U:H3'	2.00	0.42
1:QA:581:G:N2	1:QA:582:U:O4	2.52	0.42
1:QA:584:G:H1	1:QA:757:U:H3	1.66	0.42
1:QA:1344:C:H5'	9:QI:120:ARG:O	2.19	0.42
1:QA:1489:G:H2'	1:QA:1490:C:O4'	2.20	0.42
8:QH:23:SER:OG	8:QH:24:THR:N	2.52	0.42
9:QI:8:GLY:HA2	9:QI:79:LEU:HD22	2.02	0.42
17:QQ:9:VAL:HG13	17:QQ:22:LEU:HB3	2.02	0.42
25:RA:232:G:N2	25:RA:420:C:OP1	2.50	0.42
25:RA:455:C:N3	25:RA:473:G:H5'	2.35	0.42
25:RA:1336:A:H2'	25:RA:1337:G:H8	1.84	0.42
25:RA:1826:G:H2'	25:RA:1827:C:C6	2.54	0.42
25:RA:1927:A:H2'	25:RA:1928:A:C8	2.54	0.42
25:RA:2061:G:H5"	25:RA:2503:2MA:C2	2.50	0.42
33:RN:24:GLY:O	33:RN:27:ALA:N	2.48	0.42
33:RN:36:GLY:HA2	33:RN:38:HIS:CE1	2.54	0.42
1:XA:22:G:O2'	1:XA:23:C:H5'	2.20	0.42
1:XA:406:G:N3	4:XD:119:GLN:NE2	2.63	0.42
5:XE:12:LEU:HD12	5:XE:12:LEU:HA	1.85	0.42
15:XO:4:THR:OG1	15:XO:5:LYS:N	2.52	0.42
25:YA:567:A:H2'	25:YA:568:U:O5'	2.19	0.42
25:YA:820:A:C2	25:YA:943:U:H4'	2.54	0.42
25:YA:1799:G:N7	27:YD:179:SER:OG	2.50	0.42
25:YA:2437:U:H2'	25:YA:2438:U:C6	2.55	0.42
27:YD:70:TRP:CE2	27:YD:150:LYS:HE3	2.53	0.42
29:YF:101:LEU:HA	29:YF:102:PRO:HD3	1.88	0.42
34:YO:97:ARG:HA	34:YO:117:LEU:HD13	2.01	0.42
38:YS:35:ILE:HG13	38:YS:97:ARG:HH21	1.83	0.42
44:YY:5:MET:HB2	44:YY:5:MET:HE2	1.72	0.42
1:QA:689:C:H2'	1:QA:690:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:84:ILE:HD12	3:QC:87:LEU:HD12	2.02	0.42
3:QC:115:LEU:O	3:QC:119:ARG:N	2.52	0.42
4:QD:59:ARG:O	4:QD:63:LYS:N	2.49	0.42
25:RA:319:C:OP2	29:RF:137:LYS:NZ	2.26	0.42
25:RA:1101:U:H2'	25:RA:1102:C:O4'	2.18	0.42
25:RA:1297:C:H2'	25:RA:1298:C:H6	1.84	0.42
25:RA:1451:C:H5'	25:RA:1452:A:H5'	2.01	0.42
25:RA:1785:A:O2'	25:RA:1786:A:H5'	2.19	0.42
25:RA:2398:U:H2'	25:RA:2399:G:H8	1.85	0.42
25:RA:2412:A:H2'	25:RA:2413:G:O4'	2.19	0.42
25:RA:2749:A:OP1	31:RH:3:ARG:NH1	2.53	0.42
30:RG:120:LEU:HB2	30:RG:180:PHE:HD1	1.84	0.42
36:RQ:31:ASP:OD2	36:RQ:133:ARG:NH1	2.52	0.42
36:RQ:52:VAL:HA	36:RQ:55:VAL:HG22	2.01	0.42
40:RU:82:GLY:O	40:RU:85:LYS:N	2.52	0.42
1:XA:160:A:H2'	1:XA:161:A:C8	2.54	0.42
1:XA:490:G:OP2	4:XD:132:ARG:NH2	2.53	0.42
1:XA:868:C:H2'	1:XA:869:G:O4'	2.20	0.42
1:XA:1250:A:H4'	9:XI:68:GLY:N	2.35	0.42
8:XH:134:ILE:HG22	8:XH:135:CYS:HB3	2.01	0.42
20:XT:29:LYS:HD3	20:XT:71:THR:HG21	2.02	0.42
25:YA:30:G:H2'	25:YA:31:C:C6	2.54	0.42
25:YA:673:C:O2'	25:YA:674:G:H5'	2.20	0.42
25:YA:961:C:H6	25:YA:961:C:H2'	1.63	0.42
25:YA:1065:U:H1'	25:YA:1066:U:O5'	2.20	0.42
25:YA:1066:U:O2'	25:YA:1067:A:O5'	2.37	0.42
26:YB:112:U:H2'	26:YB:113:G:C8	2.54	0.42
47:Y1:5:CYS:SG	47:Y1:8:SER:OG	2.66	0.42
1:QA:18:C:OP1	5:QE:127:ASN:ND2	2.53	0.42
1:QA:457:C:N4	1:QA:475:G:O6	2.53	0.42
1:QA:801:U:H2'	1:QA:802:A:H8	1.85	0.42
1:QA:1039:C:H2'	1:QA:1040:U:C6	2.54	0.42
1:QA:1506:U:N3	1:QA:1522:U:OP1	2.51	0.42
1:QA:1513:A:H2'	1:QA:1514:C:C6	2.55	0.42
13:QM:99:ARG:N	13:QM:101:GLN:OE1	2.52	0.42
25:RA:523:C:H4'	25:RA:540:C:O2	2.19	0.42
25:RA:690:G:H2'	25:RA:691:C:C6	2.55	0.42
25:RA:797:C:H2'	25:RA:798:G:C8	2.55	0.42
25:RA:1257:C:H4'	29:RF:83:PHE:CD2	2.55	0.42
25:RA:1539:G:H2'	25:RA:1540:U:C6	2.55	0.42
25:RA:1820:U:H4'	25:RA:1821:A:OP2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2041:U:H2'	25:RA:2042:A:C8	2.54	0.42
25:RA:2051:A:H5'	25:RA:2578:G:O4'	2.19	0.42
25:RA:2623:G:H4'	25:RA:2825:C:O2	2.20	0.42
27:RD:13:ARG:HD3	27:RD:13:ARG:HA	1.80	0.42
30:RG:76:SER:OG	30:RG:82:LEU:O	2.35	0.42
32:RI:78:THR:HG22	32:RI:141:LYS:HD2	2.02	0.42
34:RO:25:LEU:HA	34:RO:25:LEU:HD23	1.84	0.42
1:XA:28:G:H2'	1:XA:29:G:H8	1.84	0.42
1:XA:37:U:H2'	1:XA:38:G:H8	1.85	0.42
1:XA:1004:A:H5"	1:XA:1025:U:C4	2.55	0.42
1:XA:1065:U:O2'	1:XA:1066:C:OP2	2.28	0.42
5:XE:31:LEU:HD22	5:XE:43:LEU:HD11	2.01	0.42
25:YA:303:U:H2'	25:YA:304:G:H8	1.85	0.42
25:YA:1181:C:H2'	25:YA:1182:A:C8	2.54	0.42
25:YA:1813:G:H2'	25:YA:1814:G:H5'	2.02	0.42
25:YA:2163:C:OP1	25:YA:2172:U:H2'	2.20	0.42
25:YA:2329:G:H2'	25:YA:2330:G:C8	2.54	0.42
25:YA:2648:C:H2'	25:YA:2649:U:C6	2.54	0.42
25:YA:2820:A:OP2	25:YA:2821:A:N6	2.46	0.42
25:YA:2863:C:H2'	25:YA:2864:G:C8	2.55	0.42
1:QA:555:C:H2'	1:QA:556:C:C6	2.55	0.42
1:QA:999:C:H42	1:QA:1042:G:H1	1.68	0.42
2:QB:60:ASP:HB3	2:QB:64:ARG:NH1	2.35	0.42
6:QF:28:ARG:O	6:QF:32:ASN:N	2.36	0.42
14:QN:39:LEU:HD22	14:QN:43:CYS:HB3	2.02	0.42
25:RA:957:A:N6	25:RA:959:A:N1	2.67	0.42
25:RA:992:C:OP1	40:RU:47:TYR:OH	2.27	0.42
25:RA:996:A:O3'	40:RU:91:ASP:HB2	2.20	0.42
25:RA:1665:A:H4'	34:RO:67:LYS:HB2	2.02	0.42
25:RA:2134:A:O4'	25:RA:2156:G:N2	2.53	0.42
25:RA:2642:G:H5'	33:RN:78:TYR:CD2	2.55	0.42
28:RE:3:GLY:HA3	28:RE:81:ILE:HD13	2.01	0.42
30:RG:121:ASN:N	30:RG:181:ARG:HH21	2.18	0.42
33:RN:102:ALA:O	33:RN:106:MET:HG3	2.19	0.42
34:RO:17:ARG:HD3	34:RO:17:ARG:HA	1.82	0.42
40:RU:80:ILE:O	40:RU:84:LYS:N	2.41	0.42
55:R9:3:VAL:HG11	55:R9:35:ARG:HH21	1.85	0.42
1:XA:472:A:H4'	16:XP:80:PHE:O	2.19	0.42
1:XA:476:G:H2'	1:XA:477:A:H8	1.84	0.42
1:XA:559:A:OP1	5:XE:126:ARG:NH2	2.52	0.42
1:XA:776:G:H22	1:XA:802:A:P	2.43	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:188:LEU:HA	4:XD:189:PRO:HD3	1.84	0.42
11:XK:18:ARG:HG3	11:XK:35:PRO:HA	2.01	0.42
22:XV:9:G:N2	22:XV:45:G:N7	2.68	0.42
25:YA:195:A:H61	25:YA:198:C:H3'	1.85	0.42
25:YA:358:U:H2'	25:YA:359:A:C8	2.54	0.42
25:YA:1660:C:H42	25:YA:2000:G:H1	1.68	0.42
25:YA:1814:G:OP2	25:YA:1815:A:O2'	2.18	0.42
25:YA:1935:G:O2'	25:YA:1936:A:H5"	2.19	0.42
25:YA:2019:A:H8	25:YA:2019:A:O5'	2.03	0.42
25:YA:2589:A:N1	25:YA:2606:C:N4	2.68	0.42
26:YB:42:C:H2'	30:YG:66:GLN:HE21	1.84	0.42
32:YI:120:ILE:HD12	32:YI:120:ILE:HA	1.95	0.42
1:QA:56:U:H4'	32:YI:82:ARG:NH1	2.35	0.42
1:QA:142:G:H2'	1:QA:143:A:C8	2.55	0.42
1:QA:261:U:OP2	20:QT:79:ARG:NH2	2.53	0.42
1:QA:272:C:H2'	1:QA:273:A:C8	2.55	0.42
1:QA:632:A:H5'	1:QA:633:G:OP2	2.20	0.42
1:QA:756:C:H2'	1:QA:757:U:C6	2.55	0.42
1:QA:876:G:O5'	8:QH:14:ARG:NH1	2.53	0.42
1:QA:923:A:H5'	5:QE:21:ALA:HB2	2.02	0.42
1:QA:1031:G:H2'	1:QA:1032:G:C8	2.55	0.42
1:QA:1189:C:OP1	10:QJ:51:ARG:NH1	2.46	0.42
1:QA:1263:C:H2'	1:QA:1264:C:C6	2.55	0.42
7:QG:15:ASP:OD1	7:QG:19:GLY:N	2.53	0.42
14:QN:39:LEU:HD23	14:QN:39:LEU:HA	1.83	0.42
25:RA:118:A:OP2	25:RA:119:A:H5"	2.20	0.42
25:RA:254:G:H4'	25:RA:384:U:H5'	2.01	0.42
25:RA:839:U:H2'	25:RA:840:C:C6	2.55	0.42
25:RA:1466:G:H2'	25:RA:1547:C:H41	1.85	0.42
25:RA:1788:C:H2'	25:RA:1789:A:C8	2.54	0.42
25:RA:2315:G:H2'	25:RA:2316:C:C6	2.55	0.42
25:RA:2648:C:O2'	25:RA:2649:U:H5'	2.20	0.42
26:RB:4:C:H2'	26:RB:5:C:C6	2.55	0.42
32:RI:128:LEU:N	32:RI:138:ILE:O	2.34	0.42
33:RN:82:LEU:HD12	33:RN:82:LEU:HA	1.86	0.42
38:RS:29:PHE:HB3	38:RS:36:TYR:HB2	2.02	0.42
43:RX:23:GLU:H	43:RX:23:GLU:HG2	1.69	0.42
49:R3:12:PRO:HB2	49:R3:20:LYS:HG2	2.02	0.42
1:XA:23:C:OP2	1:XA:561:U:N3	2.44	0.42
1:XA:258:G:H2'	1:XA:259:G:H8	1.84	0.42
1:XA:584:G:H2'	1:XA:585:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:952:U:H2'	1:XA:953:G:H8	1.83	0.42
1:XA:1308:U:OP1	13:XM:98:VAL:HG12	2.20	0.42
4:XD:8:VAL:CG1	4:XD:115:ARG:NH1	2.83	0.42
4:XD:26:CYS:HA	58:XD:302:SF4:S2	2.60	0.42
25:YA:572:A:H2'	25:YA:573:G:O4'	2.19	0.42
25:YA:745:G:O6	25:YA:746:A:N6	2.53	0.42
25:YA:831:G:N2	35:YP:53:GLY:O	2.47	0.42
25:YA:973:A:HO2'	25:YA:974:G:C5'	2.30	0.42
25:YA:1085:A:H8	25:YA:1085:A:OP2	2.03	0.42
25:YA:1971:A:N3	27:YD:241:PRO:HD3	2.35	0.42
25:YA:2107:C:HO2'	25:YA:2108:C:H6	1.68	0.42
25:YA:2415:G:H4'	35:YP:66:GLY:C	2.44	0.42
25:YA:2637:U:O2'	25:YA:2638:G:H5'	2.19	0.42
30:YG:26:GLN:H	30:YG:26:GLN:HG3	1.65	0.42
32:YI:40:THR:HG22	32:YI:42:SER:H	1.84	0.42
38:YS:63:THR:OG1	38:YS:64:GLU:N	2.53	0.42
49:Y3:11:SER:O	49:Y3:15:TYR:CE1	2.73	0.42
52:Y6:23:THR:HG22	52:Y6:24:GLU:H	1.85	0.42
1:QA:1118:C:H1'	1:QA:1179:A:C5	2.55	0.41
1:QA:1301:U:OP2	1:QA:1303:C:N4	2.53	0.41
2:QB:60:ASP:HB3	2:QB:64:ARG:HH12	1.84	0.41
2:QB:88:ALA:HB2	2:QB:219:VAL:HG13	2.02	0.41
4:QD:6:GLY:HA3	4:QD:7:PRO:HD3	1.74	0.41
7:QG:149:ARG:HD3	11:QK:59:TYR:CZ	2.54	0.41
11:QK:41:THR:HG21	11:QK:71:LYS:HD3	2.01	0.41
13:QM:92:HIS:CE1	13:QM:98:VAL:HG21	2.54	0.41
25:RA:39:C:H2'	25:RA:40:C:C6	2.54	0.41
25:RA:144:C:H2'	25:RA:145:G:C8	2.53	0.41
25:RA:437:G:H2'	25:RA:438:G:H8	1.85	0.41
25:RA:810:U:H2'	35:RP:29:LYS:HA	2.02	0.41
25:RA:1091:G:H4'	55:R9:13:LYS:HZ1	1.84	0.41
25:RA:1105:U:H2'	25:RA:1106:G:H8	1.85	0.41
25:RA:1599:C:O2'	25:RA:1600:C:H5'	2.20	0.41
25:RA:2745:C:H2'	25:RA:2746:U:C6	2.55	0.41
29:RF:93:LYS:HD3	29:RF:93:LYS:HA	1.81	0.41
34:RO:101:PRO:HG3	39:RT:67:SER:HB3	2.01	0.41
36:RQ:32:TYR:OH	36:RQ:111:GLU:OE2	2.34	0.41
36:RQ:43:THR:OG1	36:RQ:46:GLN:N	2.44	0.41
48:R2:1:MET:N	48:R2:52:ASP:OD2	2.52	0.41
1:XA:96:U:H2'	1:XA:97:G:H8	1.85	0.41
1:XA:156:G:H2'	1:XA:157:G:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:262:A:H2'	1:XA:263:A:C8	2.55	0.41
1:XA:486:U:H2'	1:XA:487:A:C8	2.54	0.41
1:XA:524:G:H2'	1:XA:525:C:C6	2.55	0.41
1:XA:711:G:O2'	1:XA:712:A:H5'	2.20	0.41
1:XA:877:C:OP1	8:XH:88:LYS:NZ	2.44	0.41
1:XA:892:A:H2'	1:XA:893:C:C6	2.55	0.41
1:XA:1150:U:O2'	10:XJ:39:PRO:O	2.37	0.41
2:XB:18:GLY:H	2:XB:42:ILE:HG23	1.85	0.41
3:XC:50:ALA:HA	3:XC:72:LYS:HD2	2.01	0.41
8:XH:69:ARG:NH2	8:XH:75:ARG:O	2.47	0.41
25:YA:118:A:H1'	25:YA:178:G:O4'	2.20	0.41
25:YA:373:U:H1'	25:YA:423:A:N3	2.35	0.41
25:YA:796:C:H2'	25:YA:797:C:H6	1.85	0.41
25:YA:936:C:O2'	25:YA:937:U:H5'	2.20	0.41
25:YA:1044:G:H21	25:YA:1111:A:H2	1.68	0.41
25:YA:1548:C:H2'	25:YA:1549:C:C6	2.55	0.41
25:YA:1683:C:H2'	25:YA:1684:C:C6	2.55	0.41
25:YA:1753:G:OP1	39:YT:95:ARG:HD3	2.20	0.41
25:YA:2015:A:H8	25:YA:2015:A:O5'	2.03	0.41
25:YA:2081:C:H2'	25:YA:2082:A:H8	1.84	0.41
25:YA:2523:G:C2'	25:YA:2524:G:H5'	2.50	0.41
25:YA:2561:A:H2'	25:YA:2562:U:O4'	2.20	0.41
25:YA:2572:A:H2'	28:YE:144:ARG:HD3	2.01	0.41
30:YG:142:PRO:HB2	50:Y4:31:ILE:HG21	2.01	0.41
31:YH:144:VAL:O	31:YH:148:ILE:HG12	2.20	0.41
34:YO:11:ALA:O	34:YO:99:PHE:N	2.38	0.41
38:YS:44:LYS:HE2	38:YS:44:LYS:HB3	1.99	0.41
38:YS:76:LYS:HE2	38:YS:76:LYS:HB3	1.89	0.41
39:YT:107:ASP:HA	39:YT:110:ILE:HD12	2.01	0.41
1:QA:339:C:H2'	1:QA:340:U:H6	1.85	0.41
1:QA:375:U:O3'	16:QP:6:LEU:HB2	2.20	0.41
1:QA:632:A:H3'	1:QA:633:G:C8	2.52	0.41
1:QA:797:C:OP1	11:QK:124:LYS:HD3	2.20	0.41
1:QA:1005:A:N6	1:QA:1025:U:O2'	2.53	0.41
1:QA:1309:G:H4'	13:QM:74:VAL:HG23	2.03	0.41
1:QA:1400:5MC:H6	1:QA:1400:5MC:H2'	1.73	0.41
3:QC:78:GLY:HA3	3:QC:83:ARG:H	1.84	0.41
6:QF:45:LEU:HD11	6:QF:57:GLN:HB3	2.02	0.41
8:QH:41:ARG:NH2	8:QH:123:GLU:OE2	2.51	0.41
14:QN:42:ILE:O	14:QN:46:GLU:N	2.49	0.41
17:QQ:66:SER:OG	17:QQ:67:LYS:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:QY:40:C:H2'	24:QY:41:G:C8	2.55	0.41
25:RA:483:A:O2'	44:RY:49:VAL:O	2.33	0.41
25:RA:528:A:N7	25:RA:2043:C:H4'	2.35	0.41
25:RA:2117:A:O3'	25:RA:2147:G:O2'	2.36	0.41
25:RA:2623:G:H2'	25:RA:2624:G:H8	1.84	0.41
30:RG:174:GLU:HA	30:RG:178:PHE:H	1.85	0.41
39:RT:110:ILE:O	39:RT:113:LYS:N	2.52	0.41
43:RX:50:LYS:O	43:RX:84:ALA:N	2.52	0.41
43:RX:90:GLU:HA	43:RX:93:GLU:HB2	2.02	0.41
45:RZ:63:ASP:OD1	45:RZ:63:ASP:N	2.53	0.41
50:R4:18:CYS:CB	50:R4:39:CYS:SG	2.84	0.41
1:XA:578:C:H2'	1:XA:579:G:H8	1.85	0.41
1:XA:740:U:OP1	15:XO:2:PRO:HA	2.19	0.41
1:XA:883:C:N4	1:XA:884:U:O4	2.53	0.41
1:XA:1118:C:H2'	1:XA:1119:C:H6	1.86	0.41
1:XA:1183:A:O2'	1:XA:1184:G:OP1	2.29	0.41
20:XT:34:LYS:HG2	20:XT:80:ARG:HH12	1.85	0.41
25:YA:11:G:H2'	25:YA:11:G:N3	2.34	0.41
25:YA:140:G:N2	25:YA:1596:A:H4'	2.36	0.41
25:YA:879:G:H2'	25:YA:880:G:H8	1.84	0.41
25:YA:1203:G:H5'	35:YP:3:LEU:HD12	2.01	0.41
25:YA:1417:C:H2'	25:YA:1418:G:O4'	2.20	0.41
25:YA:1588:C:H2'	25:YA:1589:C:H6	1.85	0.41
25:YA:1645:G:H5"	25:YA:1646:C:H5'	2.02	0.41
25:YA:1843:C:H2'	25:YA:1844:C:H6	1.85	0.41
25:YA:2321:G:H2'	25:YA:2321:G:N3	2.35	0.41
25:YA:2531:A:H2'	25:YA:2532:G:H8	1.85	0.41
37:YR:98:LEU:HA	37:YR:98:LEU:HD23	1.75	0.41
1:QA:12:U:H3	1:QA:22:G:H1	1.68	0.41
1:QA:602:A:H2'	1:QA:603:U:C6	2.55	0.41
1:QA:689:C:OP1	11:QK:27:ASN:ND2	2.54	0.41
1:QA:994:A:H61	1:QA:1047:G:H4'	1.85	0.41
2:QB:95:GLN:HG3	2:QB:147:LYS:HD2	2.02	0.41
10:QJ:29:ARG:NH1	1:XA:1164:G:OP1	2.53	0.41
11:QK:38:ASN:HA	11:QK:39:PRO:HD3	1.83	0.41
25:RA:308:G:P	25:RA:308:G:H8	2.44	0.41
25:RA:394:A:H2'	25:RA:395:U:H5'	2.02	0.41
25:RA:494:G:H2'	25:RA:495:G:H8	1.85	0.41
25:RA:948:G:N2	25:RA:985:C:OP2	2.53	0.41
25:RA:1474:C:H2'	25:RA:1475:G:C8	2.55	0.41
25:RA:1687:G:O5'	25:RA:1687:G:H8	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1830:C:H2'	25:RA:1831:G:H8	1.85	0.41
25:RA:2271:G:H2'	25:RA:2272:U:C6	2.54	0.41
25:RA:2362:G:H2'	25:RA:2363:C:H5'	2.02	0.41
25:RA:2820:A:OP2	37:RR:2:ARG:NH2	2.54	0.41
34:RO:1:MET:HG3	34:RO:67:LYS:HG2	2.02	0.41
38:RS:12:PHE:O	38:RS:16:ASN:ND2	2.53	0.41
38:RS:35:ILE:HD12	38:RS:69:VAL:HG11	2.01	0.41
1:XA:425:G:O2'	1:XA:426:G:H5'	2.20	0.41
4:XD:175:SER:HB3	4:XD:186:LEU:HD21	2.03	0.41
8:XH:113:SER:HA	8:XH:118:VAL:HA	2.00	0.41
11:XK:23:ALA:HA	11:XK:28:THR:HG22	2.03	0.41
12:XL:119:LYS:H	12:XL:119:LYS:HG3	1.65	0.41
25:YA:534:U:H2'	25:YA:535:C:H6	1.85	0.41
25:YA:674:G:O2'	29:YF:67:GLN:NE2	2.44	0.41
25:YA:825:C:O2'	25:YA:826:U:H5'	2.20	0.41
25:YA:972:G:O5'	25:YA:972:G:H8	2.04	0.41
25:YA:1317:A:H2'	25:YA:1318:C:C6	2.55	0.41
25:YA:1317:A:O2'	25:YA:1318:C:H5'	2.20	0.41
25:YA:1500:G:H2'	25:YA:1501:C:C6	2.54	0.41
25:YA:1916:A:H2'	25:YA:1917:PSU:H6	1.85	0.41
29:YF:10:PRO:HG2	29:YF:124:LEU:HD13	2.02	0.41
31:YH:97:ARG:NH2	31:YH:104:GLU:OE2	2.53	0.41
32:YI:78:THR:HG22	32:YI:141:LYS:HB2	2.01	0.41
1:QA:68:G:H22	1:QA:101:A:H2	1.68	0.41
1:QA:360:A:H3'	1:QA:360:A:P	2.61	0.41
1:QA:537:G:H5'	12:QL:113:ARG:NH1	2.34	0.41
1:QA:601:C:H2'	1:QA:602:A:H8	1.86	0.41
1:QA:1346:A:H5"	9:QI:120:ARG:HH12	1.86	0.41
1:QA:1394:A:N6	1:QA:1500:A:O2'	2.45	0.41
2:QB:90:MET:HA	2:QB:91:PRO:HD3	1.94	0.41
13:QM:87:TYR:OH	13:QM:91:ARG:NH1	2.53	0.41
15:QO:9:GLN:O	15:QO:12:ILE:N	2.52	0.41
22:QV:13:C:H42	22:QV:23:C:N4	2.18	0.41
25:RA:420:C:O2'	25:RA:421:U:O5'	2.35	0.41
25:RA:560:C:H4'	40:RU:52:ARG:NH1	2.35	0.41
25:RA:631:A:H2'	25:RA:632:A:C8	2.55	0.41
25:RA:729:G:C8	27:RD:208:LYS:HD2	2.56	0.41
25:RA:839:U:H1'	25:RA:1191:G:H1'	2.03	0.41
25:RA:1529:G:O6	25:RA:1540:U:O4	2.38	0.41
25:RA:2563:U:H2'	25:RA:2564:A:H3'	2.01	0.41
31:RH:11:VAL:HB	31:RH:48:GLY:HA2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:113:LYS:O	34:RO:116:SER:OG	2.35	0.41
36:RQ:79:LEU:HA	36:RQ:79:LEU:HD23	1.83	0.41
48:R2:63:VAL:O	48:R2:67:LYS:N	2.50	0.41
1:XA:580:U:H2'	1:XA:581:G:C8	2.56	0.41
1:XA:861:G:O2'	1:XA:874:G:O2'	2.34	0.41
1:XA:1404:5MC:HN41	1:XA:1497:G:H1	1.68	0.41
1:XA:1429:C:O2'	1:XA:1430:C:H5'	2.20	0.41
5:XE:89:ILE:HD13	5:XE:135:THR:HG23	2.02	0.41
5:XE:106:PRO:HA	5:XE:109:ILE:HG22	2.01	0.41
25:YA:118:A:OP2	25:YA:119:A:H5"	2.21	0.41
25:YA:494:G:O2'	25:YA:495:G:H5'	2.20	0.41
25:YA:768:G:H2'	25:YA:769:G:H8	1.85	0.41
25:YA:1187:G:OP2	25:YA:1187:G:H8	2.02	0.41
25:YA:1544:A:O2'	25:YA:1545:A:H5'	2.20	0.41
25:YA:1572:A:H8	25:YA:1572:A:O5'	2.04	0.41
34:YO:104:ARG:HH11	34:YO:104:ARG:HD2	1.65	0.41
45:YZ:14:LYS:HA	45:YZ:15:PRO:HD3	1.90	0.41
1:QA:35:G:N3	12:QL:118:SER:HB2	2.36	0.41
1:QA:721:G:H8	1:QA:721:G:OP1	2.03	0.41
1:QA:1312:G:H5"	19:QS:5:LEU:HD13	2.01	0.41
3:QC:24:ALA:HB2	3:QC:32:LEU:HD12	2.01	0.41
4:QD:12:CYS:HB3	4:QD:19:LEU:H	1.85	0.41
10:QJ:78:ASN:ND2	10:QJ:80:LYS:HB2	2.35	0.41
25:RA:216:A:H2'	25:RA:217:G:C8	2.54	0.41
25:RA:831:G:H5"	35:RP:37:GLY:HA3	2.03	0.41
25:RA:918:A:H5"	26:RB:98:G:O2'	2.19	0.41
25:RA:1849:G:H2'	25:RA:1850:G:H8	1.84	0.41
25:RA:2300:G:N1	25:RA:2317:C:N3	2.68	0.41
25:RA:2660:A:H8	25:RA:2660:A:OP1	2.04	0.41
32:RI:97:ILE:H	32:RI:97:ILE:HG13	1.65	0.41
34:RO:2:ILE:HG23	34:RO:6:THR:HG21	2.03	0.41
39:RT:27:THR:N	39:RT:90:GLN:O	2.49	0.41
1:XA:22:G:H2'	1:XA:23:C:H6	1.85	0.41
1:XA:244:U:H4'	1:XA:245:C:H5"	2.02	0.41
1:XA:405:U:H3'	1:XA:406:G:H5'	2.03	0.41
1:XA:688:G:H5'	11:XK:47:VAL:N	2.36	0.41
1:XA:1489:G:H2'	1:XA:1490:C:O4'	2.20	0.41
6:XF:81:ILE:HG23	27:YD:137:PRO:HG2	2.01	0.41
8:XH:91:ARG:HH21	17:XQ:33:GLY:HA3	1.84	0.41
25:YA:182:A:H61	25:YA:215:G:H1	1.67	0.41
25:YA:343:C:H2'	25:YA:344:G:C8	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:820:A:H4'	25:YA:836:G:N2	2.35	0.41
25:YA:827:U:O2'	25:YA:2068:U:C2	2.73	0.41
25:YA:1011:G:OP2	40:YU:70:ARG:NH2	2.52	0.41
25:YA:1031:G:O2'	55:Y9:7:VAL:O	2.39	0.41
25:YA:1313:U:H4'	25:YA:1332:G:H4'	2.02	0.41
25:YA:1564:C:H2'	25:YA:1565:C:C6	2.56	0.41
25:YA:1613:G:O2'	53:Y7:3:ARG:NE	2.33	0.41
25:YA:1657:C:H2'	25:YA:1658:C:C6	2.55	0.41
25:YA:1789:A:O2'	25:YA:1790:C:H5'	2.20	0.41
25:YA:2593:U:H2'	25:YA:2594:C:H6	1.85	0.41
26:YB:75:G:H5'	45:YZ:36:LYS:HD2	2.03	0.41
27:YD:45:ASN:OD1	27:YD:45:ASN:N	2.51	0.41
27:YD:177:LEU:HA	27:YD:177:LEU:HD23	1.81	0.41
27:YD:208:LYS:HG3	27:YD:210:GLY:H	1.85	0.41
1:QA:793:U:C2	1:QA:1516:G:H4'	2.56	0.41
1:QA:1154:G:H2'	1:QA:1155:G:C8	2.55	0.41
3:QC:71:ALA:HB2	3:QC:106:VAL:HB	2.03	0.41
13:QM:50:GLU:HA	13:QM:53:VAL:HG22	2.03	0.41
13:QM:65:LYS:HD2	50:R4:50:VAL:HG12	2.02	0.41
16:QP:38:TYR:CZ	16:QP:50:LYS:HB2	2.55	0.41
25:RA:443:A:H61	29:RF:41:LEU:HB3	1.85	0.41
25:RA:778:G:H5'	27:RD:48:ARG:HH11	1.85	0.41
25:RA:864:G:O6	25:RA:912:C:N4	2.53	0.41
25:RA:930:U:H4'	25:RA:931:G:O4'	2.20	0.41
25:RA:996:A:H4'	40:RU:91:ASP:OD2	2.19	0.41
25:RA:1630:G:H2'	25:RA:1631(A):C:O5'	2.20	0.41
25:RA:1685:C:H2'	25:RA:1686:C:C6	2.55	0.41
25:RA:2222:G:H5"	27:RD:186:HIS:NE2	2.35	0.41
25:RA:2257:U:O2'	25:RA:2258:C:H5'	2.21	0.41
25:RA:2307:G:H8	25:RA:2307:G:OP1	2.02	0.41
25:RA:2558:C:H2'	25:RA:2559:C:H6	1.84	0.41
25:RA:2630:G:H1'	25:RA:2894:G:C8	2.56	0.41
25:RA:2653:U:O2	31:RH:110:SER:OG	2.30	0.41
25:RA:2737:G:H2'	25:RA:2738:A:C8	2.55	0.41
25:RA:2818:G:O2'	25:RA:2819:G:H5'	2.19	0.41
31:RH:28:GLY:N	31:RH:31:GLY:O	2.48	0.41
1:XA:237:C:H5"	17:XQ:25:ARG:CZ	2.50	0.41
1:XA:813:U:O2'	1:XA:814:A:H5'	2.21	0.41
1:XA:864:A:H2'	1:XA:865:A:C8	2.56	0.41
7:XG:152:ALA:O	7:XG:155:ARG:NE	2.54	0.41
9:XI:55:ALA:HB1	9:XI:58:HIS:HB2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:XL:6:THR:O	12:XL:10:LEU:HG	2.21	0.41
12:XL:46:LYS:HG2	12:XL:47:LYS:H	1.84	0.41
25:YA:140:G:O2'	25:YA:141:A:OP2	2.34	0.41
25:YA:637:A:H2'	35:YP:117:GLU:OE2	2.21	0.41
25:YA:663:G:H2'	25:YA:664:C:C6	2.56	0.41
25:YA:783:A:H4'	25:YA:2588:G:H4'	2.02	0.41
25:YA:836:G:H2'	25:YA:837:C:H6	1.84	0.41
25:YA:879:G:H1	25:YA:898:C:H42	1.67	0.41
25:YA:954:G:H1	25:YA:963:U:H3	1.68	0.41
25:YA:1203:G:OP2	25:YA:1204:A:O2'	2.17	0.41
25:YA:1548:C:H2'	25:YA:1549:C:H6	1.85	0.41
25:YA:1897:G:H2'	25:YA:1898:U:O4'	2.21	0.41
25:YA:2023:G:H5'	25:YA:2617:C:H4'	2.02	0.41
25:YA:2080:G:H1	25:YA:2240:C:H42	1.67	0.41
25:YA:2439:A:C5'	25:YA:2439:A:C8	3.03	0.41
31:YH:84:SER:HA	31:YH:133:VAL:O	2.20	0.41
48:Y2:17:SER:OG	48:Y2:20:GLU:OE1	2.38	0.41
56:ZB:1:C:O2'	56:ZB:2:C:H5'	2.21	0.41
1:QA:663:A:H5'	18:QR:61:LYS:HE3	2.02	0.41
1:QA:1001(A):A:H2'	1:QA:1001(B):G:C8	2.55	0.41
1:QA:1403:C:H1'	1:QA:1500:A:N1	2.36	0.41
4:QD:196:LEU:O	4:QD:198:VAL:N	2.53	0.41
12:QL:104:VAL:HG12	12:QL:105:TYR:CG	2.56	0.41
25:RA:21:A:O2'	25:RA:22:C:H5'	2.20	0.41
25:RA:272(I):G:H8	25:RA:272(I):G:O5'	2.03	0.41
25:RA:1356:G:H2'	25:RA:1357:U:H6	1.84	0.41
25:RA:1582:C:H2'	25:RA:1583:A:O4'	2.20	0.41
25:RA:2428:G:O2'	35:RP:56:SER:OG	2.38	0.41
25:RA:2529:G:C5'	25:RA:2530:A:H5"	2.51	0.41
25:RA:2881:C:H2'	25:RA:2882:A:C8	2.56	0.41
25:RA:2883:A:H5"	25:RA:2884:U:H5'	2.01	0.41
39:RT:8:LYS:HB3	39:RT:8:LYS:HE3	1.82	0.41
41:RV:25:LEU:H	41:RV:92:THR:HG21	1.85	0.41
1:XA:513:C:H2'	1:XA:514:C:H6	1.85	0.41
1:XA:1129:C:H2'	1:XA:1139:G:N7	2.35	0.41
1:XA:1298:C:H4'	1:XA:1299:A:C4	2.55	0.41
2:XB:8:LYS:HB3	2:XB:10:LEU:HD12	2.01	0.41
2:XB:146:GLN:O	2:XB:150:SER:HB2	2.21	0.41
16:XP:57:ARG:HH21	16:XP:79:VAL:HA	1.86	0.41
25:YA:579:G:H2'	25:YA:580:C:C6	2.56	0.41
25:YA:750:A:N3	25:YA:750:A:H2'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:840:C:H2'	25:YA:841:A:C8	2.55	0.41
25:YA:971:C:O2'	25:YA:972:G:H5'	2.20	0.41
25:YA:1073:A:O2'	25:YA:1074:G:OP1	2.31	0.41
25:YA:1266:G:O2'	25:YA:2012:G:O6	2.34	0.41
25:YA:1326:U:H2'	25:YA:1327:C:C6	2.56	0.41
25:YA:1411:C:H2'	25:YA:1412:A:H8	1.86	0.41
25:YA:2126:A:N6	25:YA:2163:C:O4'	2.53	0.41
25:YA:2323:G:N1	25:YA:2332:U:N3	2.56	0.41
25:YA:2876:G:OP1	39:YT:3:ARG:HG3	2.21	0.41
27:YD:12:SER:HB3	27:YD:208:LYS:HB3	2.03	0.41
29:YF:79:GLY:O	29:YF:87:GLY:N	2.38	0.41
29:YF:127:GLU:HA	29:YF:196:LEU:HG	2.02	0.41
41:YV:4:ILE:HG22	41:YV:38:LEU:HB2	2.03	0.41
52:Y6:3:SER:OG	52:Y6:5:VAL:N	2.53	0.41
1:QA:600:C:OP1	8:QH:97:VAL:HG22	2.21	0.41
1:QA:680:C:H2'	1:QA:681:C:H6	1.85	0.41
1:QA:749:C:H2'	1:QA:750:G:H8	1.85	0.41
1:QA:794:A:H4'	1:QA:1521:G:O2'	2.21	0.41
1:QA:984:C:H2'	1:QA:985:C:C6	2.56	0.41
1:QA:1485:U:H2'	1:QA:1486:G:C8	2.56	0.41
4:QD:33:MET:HG2	58:QD:303:SF4:S4	2.60	0.41
12:QL:47:LYS:HG2	12:QL:48:PRO:HD3	2.01	0.41
18:QR:45:SER:OG	18:QR:49:LYS:N	2.54	0.41
22:QV:6:G:H2'	22:QV:7:G:C8	2.56	0.41
25:RA:110:G:H2'	25:RA:111:A:C8	2.56	0.41
25:RA:630:G:N2	25:RA:633:A:OP2	2.53	0.41
25:RA:1149:G:H2'	25:RA:1150:C:H6	1.86	0.41
25:RA:1417:C:H4'	25:RA:1588:C:O2	2.20	0.41
25:RA:1570:A:H2'	25:RA:1571:A:C8	2.55	0.41
25:RA:2013:A:O2'	25:RA:2014:A:H5'	2.21	0.41
25:RA:2413:G:H21	35:RP:70:GLN:NE2	2.18	0.41
25:RA:2611:U:C4	51:R5:3:LYS:HG2	2.56	0.41
25:RA:2612:C:H2'	25:RA:2613:U:H5'	2.03	0.41
30:RG:113:ARG:O	30:RG:115:ARG:NH1	2.41	0.41
38:RS:49:VAL:HG11	38:RS:77:ALA:HB2	2.02	0.41
42:RW:58:ALA:HA	42:RW:62:HIS:HB2	2.02	0.41
43:RX:53:LYS:HB3	43:RX:82:GLN:HB3	2.03	0.41
1:XA:322:C:H2'	1:XA:323:U:C6	2.55	0.41
1:XA:357:G:C5'	1:XA:367:U:H3'	2.46	0.41
1:XA:584:G:O2'	1:XA:585:G:H5'	2.21	0.41
1:XA:679:C:H2'	1:XA:680:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1295:G:H21	1:XA:1302:U:H3	1.67	0.41
3:XC:130:VAL:HG11	3:XC:157:ILE:HG23	2.01	0.41
9:XI:96:LEU:HD22	9:XI:101:PHE:HB2	2.03	0.41
9:XI:110:GLU:OE2	9:XI:113:LYS:NZ	2.53	0.41
11:XK:21:ILE:HG23	11:XK:84:VAL:HA	2.01	0.41
14:XN:10:ALA:HB2	14:XN:23:ARG:HD2	2.03	0.41
15:XO:3:ILE:HD13	15:XO:34:LEU:HD21	2.03	0.41
24:XY:29:U:H2'	24:XY:30:C:C5	2.56	0.41
25:YA:345:A:N3	25:YA:346:A:N6	2.69	0.41
25:YA:590:A:OP1	29:YF:95:ARG:NH1	2.54	0.41
25:YA:688:U:H6	25:YA:688:U:O5'	2.04	0.41
25:YA:1039:G:O2'	25:YA:1040:C:H5'	2.21	0.41
25:YA:1045:A:N7	25:YA:1047:G:N2	2.69	0.41
25:YA:2147:G:H2'	25:YA:2148:G:O4'	2.21	0.41
25:YA:2172:U:H4'	25:YA:2173:A:OP2	2.20	0.41
32:YI:51:ILE:HD13	32:YI:51:ILE:HA	1.89	0.41
43:YX:1:MET:HE2	43:YX:1:MET:HB3	1.88	0.41
50:Y4:8:LYS:HA	50:Y4:8:LYS:HD2	1.96	0.41
1:QA:8:A:H4'	1:QA:9:G:OP1	2.21	0.41
1:QA:96:U:H2'	1:QA:97:G:C8	2.56	0.41
1:QA:375:U:H2'	1:QA:376:G:O4'	2.21	0.41
1:QA:423:G:H2'	1:QA:424:G:O4'	2.21	0.41
1:QA:481:G:H8	1:QA:481:G:H2'	1.71	0.41
1:QA:509:A:H2'	1:QA:510:A:C4	2.55	0.41
1:QA:601:C:H2'	1:QA:602:A:C8	2.56	0.41
1:QA:663:A:O2'	18:QR:64:ARG:NH2	2.54	0.41
1:QA:864:A:H2'	1:QA:865:A:C8	2.55	0.41
1:QA:867:G:H2'	1:QA:868:C:C6	2.55	0.41
1:QA:941:G:H2'	1:QA:942:G:O4'	2.21	0.41
1:QA:959:A:H3'	1:QA:960:U:C5'	2.48	0.41
1:QA:1014:A:H2	1:QA:1219:U:H1'	1.86	0.41
1:QA:1034:G:H2'	1:QA:1035:A:C4	2.56	0.41
1:QA:1157:A:C2	1:QA:1178:G:N2	2.88	0.41
1:QA:1235:U:H5"	21:QU:3:LYS:HD2	2.03	0.41
1:QA:1255:G:O2'	1:QA:1258:G:H1'	2.21	0.41
1:QA:1309:G:H5'	13:QM:78:ILE:HD11	2.03	0.41
1:QA:1330:U:H4'	13:QM:23:TYR:CE1	2.56	0.41
2:QB:54:THR:O	2:QB:58:ILE:HG12	2.21	0.41
3:QC:137:ALA:HA	3:QC:140:ARG:HB2	2.03	0.41
7:QG:116:ALA:O	7:QG:120:ILE:HG12	2.21	0.41
11:QK:117:ASN:N	11:QK:117:ASN:ND2	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:QV:9:G:O2'	22:QV:10:G:N7	2.52	0.41
25:RA:89:G:C6	25:RA:90:U:H5	2.39	0.41
25:RA:192:C:H2'	25:RA:193:U:H5'	2.02	0.41
25:RA:528:A:N6	25:RA:2042:A:H2'	2.36	0.41
25:RA:563:G:H5'	25:RA:572:A:H4'	2.03	0.41
25:RA:797:C:H2'	25:RA:798:G:H8	1.86	0.41
25:RA:944:G:H5"	25:RA:945:A:O5'	2.21	0.41
25:RA:994:C:OP1	40:RU:53:ARG:NH2	2.53	0.41
25:RA:1084:A:H3'	25:RA:1085:A:O4'	2.21	0.41
25:RA:1359:A:OP2	25:RA:1371:G:N1	2.40	0.41
25:RA:1813:G:H21	27:RD:51:VAL:HG13	1.86	0.41
25:RA:2010:G:H5"	42:RW:42:ARG:HB2	2.02	0.41
25:RA:2016:U:O2'	51:R5:7:PRO:O	2.37	0.41
25:RA:2075:U:OP1	27:RD:244:ARG:NH2	2.54	0.41
25:RA:2223:G:H5"	27:RD:269:PHE:CZ	2.56	0.41
25:RA:2292:C:H2'	25:RA:2293:C:C6	2.56	0.41
25:RA:2341:G:H2'	25:RA:2342:C:C6	2.56	0.41
25:RA:2363:C:O2'	25:RA:2364:C:H5'	2.20	0.41
25:RA:2477:C:N4	55:R9:10:ILE:HG13	2.36	0.41
25:RA:2848:G:N2	25:RA:2868:A:H62	2.19	0.41
28:RE:144:ARG:HB3	28:RE:145:LYS:H	1.70	0.41
29:RF:70:THR:HG1	29:RF:72:ARG:H	1.67	0.41
29:RF:107:LYS:HG2	29:RF:206:ILE:HA	2.01	0.41
35:RP:89:ALA:O	35:RP:121:LYS:NZ	2.43	0.41
36:RQ:44:ALA:HB2	36:RQ:70:PRO:HG3	2.03	0.41
38:RS:69:VAL:HG13	38:RS:101:LEU:HD13	2.03	0.41
39:RT:47:GLY:HA2	39:RT:65:LYS:HE2	2.03	0.41
39:RT:118:ARG:HA	39:RT:121:ILE:HG22	2.02	0.41
41:RV:40:LEU:HB2	41:RV:46:VAL:HB	2.03	0.41
43:RX:10:ALA:O	43:RX:29:TRP:N	2.54	0.41
45:RZ:44:PHE:O	45:RZ:48:PHE:HB2	2.20	0.41
46:R0:77:ARG:HE	46:R0:77:ARG:HB3	1.67	0.41
1:XA:26:A:H1'	4:XD:209:ARG:HH21	1.86	0.41
1:XA:224:C:H2'	1:XA:225:C:H6	1.83	0.41
1:XA:349:A:O2'	1:XA:350:G:H5'	2.19	0.41
1:XA:489:C:H2'	1:XA:490:G:C8	2.56	0.41
1:XA:511:C:O2	4:XD:43:HIS:NE2	2.53	0.41
1:XA:539:A:OP2	12:XL:115:LYS:NZ	2.54	0.41
1:XA:624:C:H2'	1:XA:625:G:H8	1.84	0.41
1:XA:932:C:O3'	7:XG:4:ARG:NH2	2.54	0.41
1:XA:1316:G:N1	1:XA:1319:A:OP2	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:14:ARG:HE	8:XH:83:ILE:HG23	1.84	0.41
19:XS:63:THR:OG1	19:XS:64:GLU:N	2.51	0.41
20:XT:51:GLU:O	20:XT:55:ILE:HG12	2.21	0.41
25:YA:18:C:O2'	25:YA:19:C:H5'	2.21	0.41
25:YA:24:G:H1'	42:YW:77:ASP:HB3	2.02	0.41
25:YA:198:C:O2'	25:YA:199:A:H5'	2.21	0.41
25:YA:378:C:C2'	25:YA:379:G:H5'	2.50	0.41
25:YA:730:C:H2'	25:YA:731:C:H6	1.85	0.41
25:YA:985:C:H2'	25:YA:986:C:C6	2.56	0.41
25:YA:1178:C:H2'	25:YA:1179:C:C6	2.56	0.41
25:YA:1183:G:O2'	49:Y3:29:ARG:NH1	2.43	0.41
25:YA:1186:G:H2'	25:YA:1187:G:O4'	2.21	0.41
25:YA:1246:A:OP1	29:YF:38:ARG:NH1	2.54	0.41
25:YA:1354:A:H2'	25:YA:1355:G:O4'	2.20	0.41
25:YA:1422:G:H1	25:YA:1576:U:H3	1.69	0.41
25:YA:1657:C:H4'	28:YE:133:LYS:HB3	2.02	0.41
25:YA:2018:G:OP1	51:Y5:9:LYS:NZ	2.54	0.41
25:YA:2144:U:HO2'	25:YA:2147:G:H1	1.66	0.41
25:YA:2259:G:H2'	25:YA:2260:C:H6	1.86	0.41
25:YA:2512:C:H2'	25:YA:2513:G:O4'	2.21	0.41
25:YA:2592:G:C2'	25:YA:2593:U:H5'	2.51	0.41
25:YA:2817:G:OP1	37:YR:42:LYS:NZ	2.51	0.41
25:YA:2831:G:P	28:YE:58:ARG:HH21	2.44	0.41
26:YB:3:C:H2'	26:YB:4:C:C6	2.55	0.41
29:YF:116:ASP:OD1	29:YF:119:ARG:NH2	2.49	0.41
1:QA:109:A:C6	1:QA:326:G:O6	2.74	0.41
1:QA:382:A:H2'	1:QA:383:A:H8	1.85	0.41
3:QC:9:GLY:HA2	3:QC:12:LEU:HG	2.03	0.41
25:RA:23:G:N2	42:RW:77:ASP:OD1	2.42	0.41
25:RA:746:A:O2'	25:RA:2611:U:O2'	2.29	0.41
25:RA:1178:C:H2'	25:RA:1179:C:H6	1.86	0.41
25:RA:1579:A:H2'	25:RA:1580:A:C8	2.56	0.41
25:RA:2079:U:O3'	47:R1:35:THR:OG1	2.29	0.41
25:RA:2321:G:H2'	25:RA:2321:G:N3	2.36	0.41
27:RD:164:GLN:OE1	27:RD:176:ARG:NH1	2.53	0.41
31:RH:98:LEU:HB2	31:RH:125:VAL:HG12	2.03	0.41
49:R3:55:ARG:NH2	49:R3:57:GLU:OE2	2.54	0.41
52:R6:27:LYS:NZ	52:R6:31:PRO:O	2.54	0.41
1:XA:925:G:O6	1:XA:1391:U:O4	2.39	0.41
1:XA:1003:G:N7	1:XA:1004:A:H1'	2.36	0.41
1:XA:1096:C:H2'	1:XA:1097:C:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1240:U:N3	7:XG:32:ARG:HD2	2.35	0.41
2:XB:70:PHE:O	2:XB:92:TYR:HA	2.20	0.41
2:XB:71:VAL:HG13	2:XB:164:VAL:HA	2.03	0.41
25:YA:220:G:O2'	25:YA:233:A:N3	2.47	0.41
25:YA:363(B):A:H2'	25:YA:363(C):G:C8	2.55	0.41
25:YA:651:G:OP1	54:Y8:19:SER:OG	2.29	0.41
25:YA:1433:U:O4	25:YA:1560:G:O6	2.39	0.41
25:YA:1952:A:OP1	34:YO:44:LYS:NZ	2.42	0.41
25:YA:2496:C:O2'	25:YA:2497:A:H5'	2.20	0.41
27:YD:248:SER:OG	27:YD:250:TRP:N	2.41	0.41
1:QA:384:G:H2'	1:QA:385:C:H6	1.85	0.40
1:QA:1177:G:H2'	1:QA:1178:G:C8	2.57	0.40
1:QA:1336:C:H4'	1:QA:1337:G:C4	2.56	0.40
2:QB:120:ALA:O	2:QB:123:ALA:N	2.50	0.40
3:QC:154:SER:O	3:QC:197:GLY:N	2.54	0.40
4:QD:16:GLY:CA	4:QD:33:MET:HE1	2.48	0.40
25:RA:150:C:H2'	25:RA:151:C:C6	2.56	0.40
25:RA:216:A:N7	25:RA:431:U:O4	2.54	0.40
25:RA:466:A:N3	25:RA:683:C:H1'	2.36	0.40
25:RA:557:U:O2'	33:RN:45:ASN:O	2.37	0.40
25:RA:639:U:H2'	25:RA:640:C:H6	1.86	0.40
25:RA:755:C:H2'	25:RA:756:C:C6	2.56	0.40
25:RA:848:G:C2	25:RA:933:A:H1'	2.56	0.40
25:RA:978:G:O4'	25:RA:1001:A:H2	2.04	0.40
25:RA:1017:G:O6	25:RA:1146:C:N4	2.53	0.40
25:RA:1341:U:OP2	25:RA:1394:U:O2'	2.27	0.40
25:RA:1805:U:H5"	27:RD:250:TRP:CD2	2.55	0.40
25:RA:1843:C:H2'	25:RA:1844:C:H6	1.86	0.40
25:RA:2282:G:H21	25:RA:2390:U:H3	1.69	0.40
25:RA:2340:G:H2'	25:RA:2341:G:C8	2.56	0.40
25:RA:2391:G:O2'	25:RA:2422:A:N7	2.54	0.40
25:RA:2414:G:H2'	25:RA:2415:G:H8	1.87	0.40
32:RI:97:ILE:O	32:RI:100:ALA:N	2.55	0.40
47:R1:18:ILE:HG13	47:R1:37:ILE:HG12	2.02	0.40
53:R7:24:THR:O	53:R7:27:GLY:N	2.54	0.40
1:XA:353:A:H5'	1:XA:353:A:C8	2.56	0.40
1:XA:797:C:O2'	1:XA:798:G:H5'	2.21	0.40
1:XA:1152:A:H5'	10:XJ:13:HIS:CE1	2.56	0.40
3:XC:11:ARG:HH21	3:XC:180:ALA:HB3	1.86	0.40
7:XG:126:ASP:O	7:XG:131:LYS:N	2.47	0.40
8:XH:95:VAL:HG21	8:XH:133:LEU:HD12	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:4:ILE:HD13	13:XM:57:ARG:HE	1.86	0.40
16:XP:71:ARG:HA	16:XP:74:LEU:HB2	2.03	0.40
17:XQ:46:ASP:OD2	17:XQ:50:LYS:N	2.45	0.40
22:XV:59:A:C2'	22:XV:60:U:H5'	2.51	0.40
25:YA:215:G:H4'	25:YA:216:A:H4'	2.02	0.40
25:YA:522:G:H2'	25:YA:523:C:C6	2.56	0.40
25:YA:539:G:H2'	25:YA:540:C:H6	1.86	0.40
25:YA:2591:C:H2'	25:YA:2592:G:C8	2.56	0.40
35:YP:100:LEU:HD23	35:YP:100:LEU:HA	1.84	0.40
49:Y3:7:LYS:HA	49:Y3:33:GLN:O	2.21	0.40
50:Y4:24:THR:OG1	50:Y4:25:TYR:N	2.54	0.40
53:Y7:24:THR:HA	53:Y7:25:PRO:HD3	1.90	0.40
1:QA:258:G:H2'	1:QA:259:G:H8	1.85	0.40
1:QA:486:U:H2'	1:QA:487:A:C8	2.56	0.40
1:QA:1048:G:OP1	14:QN:4:LYS:HG2	2.21	0.40
4:QD:17:VAL:C	4:QD:33:MET:HE2	2.46	0.40
10:QJ:12:ASP:OD1	10:QJ:12:ASP:N	2.40	0.40
18:QR:66:LEU:O	18:QR:69:THR:N	2.46	0.40
25:RA:17:G:H2'	25:RA:18:C:C6	2.56	0.40
25:RA:300:A:H2'	25:RA:334:C:H1'	2.03	0.40
25:RA:394:A:C2'	25:RA:395:U:H5'	2.52	0.40
25:RA:547:A:H3'	25:RA:548:A:C8	2.56	0.40
25:RA:715:G:H2'	25:RA:716:A:C8	2.55	0.40
25:RA:1614:A:N6	42:RW:92:ARG:O	2.49	0.40
25:RA:2057:A:C2	51:R5:4:HIS:HB3	2.55	0.40
25:RA:2125:G:N1	25:RA:2172:U:OP2	2.49	0.40
25:RA:2497:A:H1'	25:RA:2498:C:H5	1.86	0.40
30:RG:109:VAL:HG22	50:R4:33:VAL:HG21	2.03	0.40
30:RG:138:GLN:CD	30:RG:153:ARG:H	2.28	0.40
32:RI:78:THR:HG22	32:RI:141:LYS:HB2	2.02	0.40
1:XA:17:U:H2'	1:XA:18:C:C6	2.57	0.40
1:XA:335:C:H2'	1:XA:336:C:C6	2.56	0.40
1:XA:405:U:OP1	1:XA:406:G:H4'	2.22	0.40
1:XA:585:G:OP1	17:XQ:37:LYS:HD2	2.21	0.40
9:XI:42:ARG:NH2	9:XI:75:ASP:OD1	2.50	0.40
10:XJ:6:ILE:HG22	10:XJ:98:ILE:HA	2.03	0.40
20:XT:83:ARG:O	20:XT:87:LYS:HG2	2.21	0.40
25:YA:214:G:HO2'	25:YA:215:G:P	2.45	0.40
25:YA:370:G:H5"	25:YA:423:A:N6	2.36	0.40
25:YA:1113:U:H2'	25:YA:1114:G:H8	1.84	0.40
25:YA:1510:G:H2'	25:YA:1511:C:H6	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1791:A:H5'	27:YD:206:LEU:HD12	2.03	0.40
25:YA:2051:A:H5'	25:YA:2578:G:O4'	2.21	0.40
25:YA:2063:C:H2'	25:YA:2064:C:H5'	2.04	0.40
25:YA:2340:G:H2'	25:YA:2341:G:C8	2.56	0.40
25:YA:2875:C:O2'	39:YT:2:ASN:OD1	2.33	0.40
31:YH:68:THR:O	31:YH:72:ILE:HG12	2.21	0.40
46:Y0:15:ASP:OD1	46:Y0:16:SER:N	2.54	0.40
1:QA:123:C:H2'	1:QA:124:G:H8	1.87	0.40
1:QA:150:C:H2'	1:QA:151:A:H8	1.86	0.40
1:QA:539:A:H2'	1:QA:540:G:H8	1.86	0.40
1:QA:693:G:H2'	1:QA:694:A:C8	2.57	0.40
1:QA:959:A:O2'	1:QA:984:C:O2'	2.08	0.40
1:QA:1070:U:H2'	1:QA:1071:C:H6	1.87	0.40
2:QB:84:GLU:HB3	2:QB:219:VAL:HG21	2.03	0.40
2:QB:130:ARG:HA	2:QB:131:PRO:HD3	1.86	0.40
3:QC:17:ASP:O	3:QC:54:ARG:NH2	2.55	0.40
6:QF:6:VAL:HB	6:QF:63:TYR:HB2	2.03	0.40
11:QK:21:ILE:HG13	11:QK:84:VAL:HA	2.03	0.40
16:QP:72:ARG:HG2	16:QP:73:LEU:HD23	2.02	0.40
25:RA:34:C:H5"	25:RA:35:G:OP2	2.21	0.40
25:RA:263:C:H1'	25:RA:430:G:N3	2.36	0.40
25:RA:464:U:H2'	25:RA:465:G:O4'	2.21	0.40
25:RA:855:G:H1	25:RA:922:U:H3	1.69	0.40
25:RA:959:A:H1'	25:RA:2457:U:O2'	2.22	0.40
25:RA:1685:C:H2'	25:RA:1686:C:H6	1.86	0.40
25:RA:2393:A:O3'	35:RP:63:PRO:HA	2.21	0.40
25:RA:2703:C:H2'	25:RA:2704:C:C6	2.55	0.40
26:RB:78:A:H62	26:RB:99:G:N2	2.18	0.40
27:RD:254:THR:OG1	27:RD:254:THR:O	2.39	0.40
29:RF:78:ILE:H	29:RF:78:ILE:HG12	1.73	0.40
29:RF:170:LEU:HA	29:RF:171:PRO:HD3	1.90	0.40
30:RG:122:PRO:HG2	30:RG:123:ASN:ND2	2.35	0.40
31:RH:85:LYS:HD2	31:RH:85:LYS:HA	1.87	0.40
34:RO:73:ASP:OD2	39:RT:32:TYR:OH	2.33	0.40
34:RO:79:PHE:HD2	39:RT:72:VAL:HG12	1.86	0.40
41:RV:30:GLY:H	41:RV:61:VAL:HB	1.86	0.40
43:RX:5:TYR:OH	48:R2:30:ARG:NH1	2.53	0.40
1:XA:336:C:H2'	1:XA:337:C:H6	1.86	0.40
1:XA:967:5MC:H2'	1:XA:968:A:C8	2.57	0.40
1:XA:1118:C:H1'	1:XA:1179:A:C5	2.56	0.40
4:XD:70:ILE:HD12	4:XD:70:ILE:HA	1.79	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:XL:32:PHE:HB3	12:XL:84:LEU:HD21	2.03	0.40
20:XT:63:ILE:HG21	20:XT:81:LYS:HG3	2.01	0.40
25:YA:28:A:H2'	25:YA:29:U:H6	1.86	0.40
25:YA:61:G:O6	25:YA:94(B):G:N2	2.55	0.40
25:YA:360:G:H2'	25:YA:361:G:C8	2.56	0.40
25:YA:576:U:H4'	25:YA:2502:G:N7	2.36	0.40
25:YA:699:A:H2'	25:YA:700:G:O4'	2.21	0.40
25:YA:840:C:OP2	25:YA:932:G:N2	2.52	0.40
25:YA:1857:G:O6	25:YA:1858:G:N1	2.55	0.40
25:YA:1956:U:H1'	25:YA:2552:OMU:H5'	2.04	0.40
25:YA:2168:G:N2	25:YA:2171:A:OP2	2.45	0.40
34:YO:107:ARG:HG3	34:YO:112:MET:HE1	2.04	0.40
37:YR:2:ARG:NH1	37:YR:5:LYS:O	2.55	0.40
37:YR:79:LEU:HD12	37:YR:83:ILE:HB	2.04	0.40
1:QA:123:C:OP1	1:QA:312:C:H5'	2.22	0.40
1:QA:145:G:N1	1:QA:178:C:N3	2.69	0.40
1:QA:1057:G:OP1	3:QC:154:SER:OG	2.39	0.40
1:QA:1158:C:H4'	2:QB:133:LYS:HE3	2.04	0.40
1:QA:1179:A:H8	1:QA:1179:A:OP1	2.04	0.40
1:QA:1202:G:H4'	14:QN:29:ARG:NE	2.34	0.40
3:QC:82:GLU:O	3:QC:85:ARG:NH1	2.55	0.40
3:QC:152:ILE:HB	3:QC:199:LYS:HB2	2.03	0.40
7:QG:29:LYS:O	7:QG:32:ARG:NH1	2.54	0.40
9:QI:34:ASN:O	9:QI:38:GLN:HB2	2.20	0.40
16:QP:55:ARG:HA	16:QP:55:ARG:HD2	1.94	0.40
25:RA:515:A:H1'	25:RA:581:C:H1'	2.04	0.40
25:RA:823:G:H2'	25:RA:824:A:H8	1.78	0.40
25:RA:868:U:H2'	25:RA:869:G:H8	1.86	0.40
25:RA:991:C:O2'	25:RA:992:C:H5'	2.21	0.40
25:RA:1060:U:H4'	25:RA:1070:A:C8	2.56	0.40
25:RA:1150:C:H2'	25:RA:1151:G:C8	2.56	0.40
25:RA:1256:G:O2'	29:RF:82:ILE:HD11	2.22	0.40
25:RA:1296:G:O2'	25:RA:1297:C:H5'	2.21	0.40
25:RA:1842:G:H2'	25:RA:1843:C:H6	1.83	0.40
25:RA:1971:A:N3	27:RD:241:PRO:HD3	2.37	0.40
25:RA:1972:A:H2'	25:RA:1973:G:H8	1.87	0.40
25:RA:2153:G:H2'	25:RA:2154:G:C8	2.57	0.40
25:RA:2186:G:OP2	25:RA:2186:G:H8	2.04	0.40
25:RA:2289:G:H5'	25:RA:2383:G:H21	1.85	0.40
25:RA:2297:C:H2'	25:RA:2298:A:C8	2.55	0.40
25:RA:2395:C:N4	25:RA:2421:G:O6	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:59:GLU:OE1	30:RG:153:ARG:NH2	2.55	0.40
1:XA:922:G:H4'	5:XE:20:GLN:HA	2.04	0.40
1:XA:927:G:OP1	1:XA:1505:G:N2	2.51	0.40
1:XA:1079:G:H2'	1:XA:1080:A:C8	2.56	0.40
1:XA:1255:G:N1	1:XA:1279:A:N7	2.69	0.40
1:XA:1384:C:H2'	1:XA:1385:G:C8	2.56	0.40
1:XA:1409:C:H2'	1:XA:1410:G:C8	2.56	0.40
8:XH:11:THR:HG22	8:XH:14:ARG:NH1	2.36	0.40
10:XJ:50:ILE:HG22	10:XJ:60:ARG:HG2	2.03	0.40
10:XJ:63:PHE:HE1	14:XN:58:LYS:HG2	1.86	0.40
25:YA:118:A:O2'	25:YA:178:G:H5'	2.22	0.40
25:YA:277:C:O2'	25:YA:278:A:P	2.79	0.40
25:YA:313:C:H2'	25:YA:314:A:C8	2.56	0.40
25:YA:547:A:H2'	25:YA:548:A:C8	2.57	0.40
25:YA:772:C:C2'	25:YA:773:U:H5'	2.51	0.40
25:YA:1107:G:H2'	25:YA:1108:U:C6	2.57	0.40
25:YA:1435:G:H2'	25:YA:1436:G:C8	2.56	0.40
25:YA:1581:G:H2'	25:YA:1582:C:O4'	2.22	0.40
25:YA:2346:A:H5'	25:YA:2383:G:O4'	2.20	0.40
25:YA:2400:G:H8	25:YA:2400:G:O5'	2.04	0.40
25:YA:2810:A:H5"	28:YE:61:ARG:HD3	2.04	0.40
28:YE:3:GLY:HA3	28:YE:199:ARG:HG2	2.04	0.40
31:YH:47:GLU:OE1	31:YH:47:GLU:CA	2.69	0.40
41:YV:3:ALA:O	41:YV:13:ARG:HA	2.21	0.40
1:QA:362:G:N2	1:QA:365:U:OP2	2.52	0.40
1:QA:1236:A:OP1	21:QU:3:LYS:NZ	2.53	0.40
1:QA:1241:G:H2'	1:QA:1242:C:H6	1.86	0.40
1:QA:1326:C:H2'	1:QA:1327:C:H6	1.86	0.40
2:QB:7:VAL:HG22	2:QB:217:ARG:HD3	2.04	0.40
4:QD:12:CYS:HB3	4:QD:19:LEU:N	2.36	0.40
11:QK:34:ASP:OD1	11:QK:38:ASN:N	2.37	0.40
25:RA:185:U:H2'	25:RA:186:G:C8	2.57	0.40
25:RA:321:G:C4	25:RA:341:G:H4'	2.56	0.40
25:RA:902:C:H2'	25:RA:903:C:C6	2.56	0.40
25:RA:1090:U:H3'	25:RA:1091:G:C8	2.57	0.40
25:RA:1327:C:O2'	37:RR:105:ARG:NH1	2.53	0.40
25:RA:2362:G:C2'	25:RA:2363:C:H5'	2.52	0.40
25:RA:2675:A:H2'	25:RA:2676:C:H6	1.86	0.40
25:RA:2750:A:O2'	25:RA:2753:A:N6	2.53	0.40
25:RA:2875:C:H2'	25:RA:2876:G:O4'	2.22	0.40
26:RB:24:G:N3	26:RB:27:C:N4	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:91:LEU:HA	33:RN:95:PRO:HB3	2.02	0.40
41:RV:35:LEU:HA	41:RV:36:PRO:HD3	1.89	0.40
45:RZ:30:ASN:OD1	45:RZ:30:ASN:N	2.52	0.40
45:RZ:98:MET:O	45:RZ:125:LEU:HA	2.21	0.40
47:R1:88:LYS:HA	47:R1:88:LYS:HD2	1.91	0.40
1:XA:110:C:H2'	1:XA:111:G:O4'	2.22	0.40
1:XA:636:U:H2'	1:XA:637:G:H8	1.86	0.40
1:XA:1183:A:H3'	1:XA:1184:G:C5'	2.50	0.40
1:XA:1423:G:H2'	1:XA:1424:C:H6	1.87	0.40
2:XB:130:ARG:HA	2:XB:131:PRO:HD3	1.83	0.40
4:XD:18:LYS:HA	4:XD:33:MET:HG3	2.04	0.40
16:XP:45:THR:OG1	16:XP:47:ASP:OD1	2.36	0.40
25:YA:300:A:O2'	25:YA:318:C:O2	2.36	0.40
25:YA:565:C:H2'	25:YA:566:U:C6	2.57	0.40
25:YA:590:A:H2'	25:YA:591:C:C6	2.56	0.40
25:YA:769:G:H2'	25:YA:770:G:O4'	2.21	0.40
25:YA:1103:A:OP2	25:YA:1104:C:N4	2.55	0.40
25:YA:2145:C:OP2	25:YA:2146:C:N4	2.54	0.40
25:YA:2506:U:OP2	25:YA:2576:G:N2	2.49	0.40
25:YA:2693:A:H2'	25:YA:2694:G:C8	2.55	0.40
28:YE:126:PRO:HB2	28:YE:128:SER:H	1.87	0.40
37:YR:100:LEU:HD11	37:YR:113:LEU:HD23	2.02	0.40
44:YY:45:VAL:O	44:YY:62:GLU:HA	2.21	0.40

All (42) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:46:GLU:CG	44:YY:22:GLY:O[4_445]	1.23	0.97
31:YH:46:GLU:CB	44:YY:22:GLY:O[4_445]	1.41	0.79
32:RI:89:TYR:CD2	1:XA:55:A:C2[4_555]	1.42	0.78
27:RD:134:ARG:NE	4:XD:166:LYS:NZ[4_555]	1.53	0.67
32:RI:89:TYR:CE2	1:XA:55:A:N3[4_555]	1.58	0.62
6:QF:16:GLN:O	4:XD:195:ALA:CB[4_555]	1.62	0.58
31:YH:13:LYS:NZ	44:YY:78:ALA:O[4_445]	1.64	0.56
41:YV:51:VAL:CG2	51:Y5:59:GLU:OE2[4_445]	1.65	0.55
41:YV:51:VAL:CG2	51:Y5:59:GLU:CD[4_445]	1.67	0.53
27:RD:134:ARG:NE	4:XD:166:LYS:CE[4_555]	1.68	0.52
32:RI:89:TYR:CG	1:XA:55:A:N1[4_555]	1.69	0.51
32:RI:89:TYR:CG	1:XA:55:A:C2[4_555]	1.69	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:99:GLN:NE2	3:XC:79:ARG:CD[4_555]	1.77	0.43
31:YH:46:GLU:CA	44:YY:24:VAL:CG2[4_445]	1.78	0.42
32:RI:89:TYR:O	1:XA:357:G:O2'[4_555]	1.80	0.40
25:YA:1281:G:O3'	41:YV:44:LYS:NZ[4_545]	1.80	0.40
31:YH:13:LYS:NZ	44:YY:79:CYS:C[4_445]	1.80	0.40
25:RA:2220:G:O3'	4:XD:159:ARG:NH1[4_555]	1.82	0.38
27:RD:134:ARG:NH2	4:XD:166:LYS:CD[4_555]	1.85	0.35
31:YH:46:GLU:CG	44:YY:22:GLY:C[4_445]	1.85	0.35
31:YH:46:GLU:CG	44:YY:23:ARG:CA[4_445]	1.88	0.32
25:YA:1281:G:O2'	41:YV:44:LYS:NZ[4_545]	1.90	0.30
42:RW:60:ASN:ND2	44:YY:91:GLU:O[3_555]	1.93	0.27
41:YV:51:VAL:CG2	51:Y5:59:GLU:CG[4_445]	1.93	0.27
32:RI:87:LYS:NZ	1:XA:358:U:O3'[4_555]	1.94	0.26
32:RI:89:TYR:CZ	1:XA:55:A:N3[4_555]	1.95	0.25
32:RI:89:TYR:CD2	1:XA:55:A:N3[4_555]	2.00	0.20
32:RI:89:TYR:CE2	1:XA:55:A:C2[4_555]	2.02	0.18
25:RA:2220:G:O3'	4:XD:159:ARG:NH2[4_555]	2.03	0.17
31:YH:13:LYS:CE	44:YY:78:ALA:O[4_445]	2.07	0.13
32:RI:87:LYS:NZ	1:XA:359:U:O5'[4_555]	2.08	0.12
31:YH:13:LYS:NZ	44:YY:80:GLY:N[4_445]	2.08	0.12
32:RI:89:TYR:CD1	1:XA:55:A:N1[4_555]	2.09	0.11
31:YH:46:GLU:OE2	44:YY:23:ARG:CG[4_445]	2.09	0.11
31:YH:13:LYS:NZ	44:YY:79:CYS:CA[4_445]	2.12	0.08
31:YH:46:GLU:CG	44:YY:23:ARG:N[4_445]	2.12	0.08
32:RI:89:TYR:CZ	1:XA:55:A:C4[4_555]	2.14	0.06
32:RI:89:TYR:CB	1:XA:55:A:N1[4_555]	2.15	0.05
31:YH:13:LYS:NZ	44:YY:78:ALA:C[4_445]	2.15	0.05
25:RA:305:U:OP1	48:Y2:68:ARG:NH1[3_555]	2.16	0.04
25:YA:1282:U:O5'	41:YV:44:LYS:NZ[4_545]	2.17	0.03
32:RI:91:SER:OG	1:XA:368:U:O5'[4_555]	2.18	0.02

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	QB	233/256 (91%)	204 (88%)	29 (12%)	0	100	100
2	XB	234/256 (91%)	204 (87%)	30 (13%)	0	100	100
3	QC	203/239 (85%)	184 (91%)	19 (9%)	0	100	100
3	XC	203/239 (85%)	183 (90%)	20 (10%)	0	100	100
4	QD	206/209 (99%)	183 (89%)	21 (10%)	2 (1%)	12	41
4	XD	206/209 (99%)	196 (95%)	10 (5%)	0	100	100
5	QE	146/162 (90%)	134 (92%)	12 (8%)	0	100	100
5	XE	146/162 (90%)	134 (92%)	12 (8%)	0	100	100
6	QF	98/101 (97%)	96 (98%)	2 (2%)	0	100	100
6	XF	98/101 (97%)	96 (98%)	2 (2%)	0	100	100
7	QG	153/156 (98%)	145 (95%)	8 (5%)	0	100	100
7	XG	153/156 (98%)	147 (96%)	6 (4%)	0	100	100
8	QH	135/138 (98%)	128 (95%)	7 (5%)	0	100	100
8	XH	135/138 (98%)	129 (96%)	6 (4%)	0	100	100
9	QI	125/128 (98%)	111 (89%)	14 (11%)	0	100	100
9	XI	124/128 (97%)	110 (89%)	14 (11%)	0	100	100
10	QJ	97/105 (92%)	90 (93%)	7 (7%)	0	100	100
10	XJ	94/105 (90%)	83 (88%)	11 (12%)	0	100	100
11	QK	112/129 (87%)	105 (94%)	7 (6%)	0	100	100
11	XK	112/129 (87%)	104 (93%)	8 (7%)	0	100	100
12	QL	119/132 (90%)	113 (95%)	6 (5%)	0	100	100
12	XL	119/132 (90%)	112 (94%)	7 (6%)	0	100	100
13	QM	114/126 (90%)	108 (95%)	6 (5%)	0	100	100
13	XM	112/126 (89%)	102 (91%)	10 (9%)	0	100	100
14	QN	58/61 (95%)	56 (97%)	2 (3%)	0	100	100
14	XN	58/61 (95%)	57 (98%)	1 (2%)	0	100	100
15	QO	86/89 (97%)	84 (98%)	2 (2%)	0	100	100
15	XO	86/89 (97%)	80 (93%)	6 (7%)	0	100	100
16	QP	80/88 (91%)	77 (96%)	3 (4%)	0	100	100
16	XP	80/88 (91%)	76 (95%)	4 (5%)	0	100	100
17	QQ	97/105 (92%)	88 (91%)	9 (9%)	0	100	100
17	XQ	97/105 (92%)	92 (95%)	5 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
18	QR	66/88 (75%)	66 (100%)	0	0	100	100
18	XR	66/88 (75%)	65 (98%)	1 (2%)	0	100	100
19	QS	81/93 (87%)	73 (90%)	8 (10%)	0	100	100
19	XS	81/93 (87%)	78 (96%)	3 (4%)	0	100	100
20	QT	94/106 (89%)	89 (95%)	5 (5%)	0	100	100
20	XT	96/106 (91%)	91 (95%)	5 (5%)	0	100	100
21	QU	21/27 (78%)	20 (95%)	1 (5%)	0	100	100
21	XU	21/27 (78%)	21 (100%)	0	0	100	100
27	RD	273/276 (99%)	260 (95%)	13 (5%)	0	100	100
27	YD	273/276 (99%)	252 (92%)	21 (8%)	0	100	100
28	RE	202/206 (98%)	184 (91%)	17 (8%)	1 (0%)	24	55
28	YE	202/206 (98%)	181 (90%)	21 (10%)	0	100	100
29	RF	200/210 (95%)	192 (96%)	8 (4%)	0	100	100
29	YF	200/210 (95%)	188 (94%)	12 (6%)	0	100	100
30	RG	179/182 (98%)	156 (87%)	23 (13%)	0	100	100
30	YG	179/182 (98%)	151 (84%)	27 (15%)	1 (1%)	21	51
31	RH	172/180 (96%)	166 (96%)	6 (4%)	0	100	100
31	YH	171/180 (95%)	162 (95%)	8 (5%)	1 (1%)	21	51
32	RI	144/148 (97%)	115 (80%)	28 (19%)	1 (1%)	18	48
32	YI	144/148 (97%)	125 (87%)	19 (13%)	0	100	100
33	RN	138/140 (99%)	132 (96%)	6 (4%)	0	100	100
33	YN	138/140 (99%)	131 (95%)	7 (5%)	0	100	100
34	RO	120/122 (98%)	109 (91%)	11 (9%)	0	100	100
34	YO	120/122 (98%)	112 (93%)	8 (7%)	0	100	100
35	RP	147/150 (98%)	136 (92%)	10 (7%)	1 (1%)	18	48
35	YP	147/150 (98%)	135 (92%)	12 (8%)	0	100	100
36	RQ	139/141 (99%)	134 (96%)	5 (4%)	0	100	100
36	YQ	139/141 (99%)	132 (95%)	7 (5%)	0	100	100
37	RR	116/118 (98%)	114 (98%)	2 (2%)	0	100	100
37	YR	116/118 (98%)	111 (96%)	5 (4%)	0	100	100
38	RS	108/112 (96%)	103 (95%)	5 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
38	YS	108/112 (96%)	101 (94%)	7 (6%)	0	100	100
39	RT	129/146 (88%)	120 (93%)	9 (7%)	0	100	100
39	YT	129/146 (88%)	124 (96%)	5 (4%)	0	100	100
40	RU	114/118 (97%)	107 (94%)	7 (6%)	0	100	100
40	YU	114/118 (97%)	111 (97%)	3 (3%)	0	100	100
41	RV	99/101 (98%)	93 (94%)	5 (5%)	1 (1%)	12	41
41	YV	99/101 (98%)	88 (89%)	10 (10%)	1 (1%)	12	41
42	RW	110/113 (97%)	105 (96%)	5 (4%)	0	100	100
42	YW	110/113 (97%)	107 (97%)	3 (3%)	0	100	100
43	RX	93/96 (97%)	84 (90%)	9 (10%)	0	100	100
43	YX	93/96 (97%)	89 (96%)	4 (4%)	0	100	100
44	RY	105/110 (96%)	98 (93%)	7 (7%)	0	100	100
44	YY	105/110 (96%)	101 (96%)	4 (4%)	0	100	100
45	RZ	194/206 (94%)	181 (93%)	13 (7%)	0	100	100
45	YZ	181/206 (88%)	154 (85%)	27 (15%)	0	100	100
46	R0	75/85 (88%)	73 (97%)	2 (3%)	0	100	100
46	Y0	75/85 (88%)	72 (96%)	3 (4%)	0	100	100
47	R1	95/98 (97%)	91 (96%)	4 (4%)	0	100	100
47	Y1	95/98 (97%)	91 (96%)	4 (4%)	0	100	100
48	R2	68/72 (94%)	67 (98%)	1 (2%)	0	100	100
48	Y2	68/72 (94%)	66 (97%)	2 (3%)	0	100	100
49	R3	57/60 (95%)	56 (98%)	1 (2%)	0	100	100
49	Y3	57/60 (95%)	57 (100%)	0	0	100	100
50	R4	67/71 (94%)	53 (79%)	14 (21%)	0	100	100
50	Y4	67/71 (94%)	53 (79%)	14 (21%)	0	100	100
51	R5	57/60 (95%)	54 (95%)	3 (5%)	0	100	100
51	Y5	56/60 (93%)	54 (96%)	2 (4%)	0	100	100
52	R6	51/54 (94%)	50 (98%)	1 (2%)	0	100	100
52	Y6	51/54 (94%)	49 (96%)	2 (4%)	0	100	100
53	R7	46/49 (94%)	42 (91%)	4 (9%)	0	100	100
53	Y7	46/49 (94%)	44 (96%)	2 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
54	R8	62/65 (95%)	55 (89%)	7 (11%)	0	100	100
54	Y8	62/65 (95%)	59 (95%)	3 (5%)	0	100	100
55	R9	35/37 (95%)	33 (94%)	2 (6%)	0	100	100
55	Y9	35/37 (95%)	33 (94%)	2 (6%)	0	100	100
All	All	11420/12128 (94%)	10610 (93%)	801 (7%)	9 (0%)	48	78

All (9) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	QD	32	ALA
4	QD	31	CYS
30	YG	81	LYS
32	RI	132	PRO
41	RV	50	PRO
41	YV	50	PRO
28	RE	147	PRO
35	RP	44	GLY
31	YH	126	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	203/220 (92%)	201 (99%)	2 (1%)	68	72
2	XB	204/220 (93%)	203 (100%)	1 (0%)	81	78
3	QC	159/188 (85%)	158 (99%)	1 (1%)	78	77
3	XC	159/188 (85%)	158 (99%)	1 (1%)	78	77
4	QD	180/181 (99%)	176 (98%)	4 (2%)	45	61
4	XD	180/181 (99%)	174 (97%)	6 (3%)	33	54
5	QE	114/123 (93%)	112 (98%)	2 (2%)	51	64
5	XE	114/123 (93%)	112 (98%)	2 (2%)	51	64

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
6	QF	90/90 (100%)	89 (99%)	1 (1%)	65 71
6	XF	90/90 (100%)	88 (98%)	2 (2%)	45 61
7	QG	126/127 (99%)	125 (99%)	1 (1%)	73 74
7	XG	126/127 (99%)	125 (99%)	1 (1%)	73 74
8	QH	118/119 (99%)	117 (99%)	1 (1%)	73 74
8	XH	118/119 (99%)	117 (99%)	1 (1%)	73 74
9	QI	98/99 (99%)	97 (99%)	1 (1%)	68 72
9	XI	97/99 (98%)	97 (100%)	0	100 100
10	QJ	89/92 (97%)	89 (100%)	0	100 100
10	XJ	86/92 (94%)	86 (100%)	0	100 100
11	QK	86/99 (87%)	85 (99%)	1 (1%)	63 70
11	XK	86/99 (87%)	86 (100%)	0	100 100
12	QL	102/108 (94%)	102 (100%)	0	100 100
12	XL	102/108 (94%)	102 (100%)	0	100 100
13	QM	94/101 (93%)	93 (99%)	1 (1%)	65 71
13	XM	93/101 (92%)	93 (100%)	0	100 100
14	QN	49/50 (98%)	48 (98%)	1 (2%)	48 63
14	XN	49/50 (98%)	49 (100%)	0	100 100
15	QO	79/80 (99%)	78 (99%)	1 (1%)	61 69
15	XO	79/80 (99%)	78 (99%)	1 (1%)	61 69
16	QP	71/74 (96%)	71 (100%)	0	100 100
16	XP	71/74 (96%)	71 (100%)	0	100 100
17	QQ	94/97 (97%)	94 (100%)	0	100 100
17	XQ	94/97 (97%)	94 (100%)	0	100 100
18	QR	59/77 (77%)	58 (98%)	1 (2%)	53 65
18	XR	59/77 (77%)	58 (98%)	1 (2%)	53 65
19	QS	72/80 (90%)	72 (100%)	0	100 100
19	XS	72/80 (90%)	72 (100%)	0	100 100
20	QT	74/82 (90%)	74 (100%)	0	100 100
20	XT	76/82 (93%)	76 (100%)	0	100 100
21	QU	18/22 (82%)	18 (100%)	0	100 100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	XU	18/22 (82%)	18 (100%)	0	100	100
27	RD	217/218 (100%)	216 (100%)	1 (0%)	81	78
27	YD	217/218 (100%)	216 (100%)	1 (0%)	81	78
28	RE	165/166 (99%)	163 (99%)	2 (1%)	63	70
28	YE	165/166 (99%)	163 (99%)	2 (1%)	63	70
29	RF	161/166 (97%)	161 (100%)	0	100	100
29	YF	161/166 (97%)	158 (98%)	3 (2%)	50	64
30	RG	155/156 (99%)	154 (99%)	1 (1%)	78	77
30	YG	155/156 (99%)	153 (99%)	2 (1%)	61	69
31	RH	145/148 (98%)	145 (100%)	0	100	100
31	YH	144/148 (97%)	142 (99%)	2 (1%)	59	68
32	RI	122/124 (98%)	121 (99%)	1 (1%)	73	74
32	YI	122/124 (98%)	121 (99%)	1 (1%)	73	74
33	RN	119/119 (100%)	116 (98%)	3 (2%)	42	59
33	YN	119/119 (100%)	117 (98%)	2 (2%)	53	65
34	RO	100/100 (100%)	100 (100%)	0	100	100
34	YO	100/100 (100%)	99 (99%)	1 (1%)	68	72
35	RP	116/116 (100%)	113 (97%)	3 (3%)	40	58
35	YP	116/116 (100%)	115 (99%)	1 (1%)	70	73
36	RQ	111/111 (100%)	111 (100%)	0	100	100
36	YQ	111/111 (100%)	109 (98%)	2 (2%)	51	64
37	RR	101/101 (100%)	98 (97%)	3 (3%)	36	55
37	YR	101/101 (100%)	101 (100%)	0	100	100
38	RS	87/88 (99%)	86 (99%)	1 (1%)	65	71
38	YS	87/88 (99%)	87 (100%)	0	100	100
39	RT	115/127 (91%)	115 (100%)	0	100	100
39	YT	115/127 (91%)	113 (98%)	2 (2%)	53	65
40	RU	93/94 (99%)	93 (100%)	0	100	100
40	YU	93/94 (99%)	91 (98%)	2 (2%)	45	61
41	RV	82/82 (100%)	82 (100%)	0	100	100
41	YV	82/82 (100%)	80 (98%)	2 (2%)	43	60

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
42	RW	91/92 (99%)	91 (100%)	0	100	100
42	YW	91/92 (99%)	91 (100%)	0	100	100
43	RX	77/78 (99%)	77 (100%)	0	100	100
43	YX	77/78 (99%)	76 (99%)	1 (1%)	61	69
44	RY	88/91 (97%)	88 (100%)	0	100	100
44	YY	88/91 (97%)	88 (100%)	0	100	100
45	RZ	170/179 (95%)	170 (100%)	0	100	100
45	YZ	162/179 (90%)	159 (98%)	3 (2%)	50	64
46	R0	62/67 (92%)	61 (98%)	1 (2%)	55	65
46	Y0	62/67 (92%)	61 (98%)	1 (2%)	55	65
47	R1	82/83 (99%)	82 (100%)	0	100	100
47	Y1	82/83 (99%)	82 (100%)	0	100	100
48	R2	66/67 (98%)	65 (98%)	1 (2%)	57	66
48	Y2	66/67 (98%)	65 (98%)	1 (2%)	57	66
49	R3	51/52 (98%)	50 (98%)	1 (2%)	48	63
49	Y3	51/52 (98%)	50 (98%)	1 (2%)	48	63
50	R4	62/63 (98%)	61 (98%)	1 (2%)	55	65
50	Y4	62/63 (98%)	62 (100%)	0	100	100
51	R5	51/52 (98%)	50 (98%)	1 (2%)	48	63
51	Y5	50/52 (96%)	49 (98%)	1 (2%)	48	63
52	R6	51/52 (98%)	51 (100%)	0	100	100
52	Y6	51/52 (98%)	50 (98%)	1 (2%)	48	63
53	R7	41/42 (98%)	41 (100%)	0	100	100
53	Y7	41/42 (98%)	41 (100%)	0	100	100
54	R8	54/55 (98%)	53 (98%)	1 (2%)	50	64
54	Y8	54/55 (98%)	53 (98%)	1 (2%)	50	64
55	R9	34/34 (100%)	33 (97%)	1 (3%)	37	56
55	Y9	34/34 (100%)	33 (97%)	1 (3%)	37	56
All	All	9676/10064 (96%)	9586 (99%)	90 (1%)	70	73

All (90) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	QB	165	VAL
2	QB	223	ILE
3	QC	75	VAL
4	QD	8	VAL
4	QD	12	CYS
4	QD	13	ARG
4	QD	18	LYS
5	QE	69	VAL
5	QE	79	GLU
6	QF	100	ASN
7	QG	24	THR
8	QH	79	VAL
9	QI	53	VAL
11	QK	41	THR
13	QM	63	THR
14	QN	40	CYS
15	QO	70	LEU
18	QR	70	ILE
27	RD	270	ILE
28	RE	9	VAL
28	RE	33	VAL
30	RG	88	ILE
32	RI	18	VAL
33	RN	5	VAL
33	RN	106	MET
33	RN	120	LEU
35	RP	87	ASP
35	RP	95	VAL
35	RP	146	VAL
37	RR	70	LEU
37	RR	75	LEU
37	RR	79	LEU
38	RS	35	ILE
46	R0	59	LEU
48	R2	62	THR
49	R3	40	THR
50	R4	35	VAL
51	R5	44	THR
54	R8	22	VAL
55	R9	20	HIS
2	XB	121	LEU
3	XC	188	LEU
4	XD	8	VAL

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Mol	Chain	Res	Type
4	XD	12	CYS
4	XD	22	LYS
4	XD	31	CYS
4	XD	33	MET
4	XD	133	VAL
5	XE	41	VAL
5	XE	69	VAL
6	XF	72	VAL
6	XF	81	ILE
7	XG	135	VAL
8	XH	51	VAL
15	XO	34	LEU
18	XR	66	LEU
27	YD	10	THR
28	YE	9	VAL
28	YE	31	CYS
29	YF	78	ILE
29	YF	173	VAL
29	YF	183	VAL
30	YG	19	LEU
30	YG	58	GLN
31	YH	45	VAL
31	YH	47	GLU
32	YI	136	VAL
33	YN	5	VAL
33	YN	98	VAL
34	YO	43	VAL
35	YP	32	THR
36	YQ	66	ILE
36	YQ	138	ASP
39	YT	49	VAL
39	YT	75	ILE
40	YU	8	VAL
40	YU	95	LEU
41	YV	22	VAL
41	YV	25	LEU
43	YX	51	VAL
45	YZ	58	VAL
45	YZ	59	LEU
45	YZ	96	VAL
46	Y0	81	VAL
48	Y2	61	LEU

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Mol	Chain	Res	Type
49	Y3	6	VAL
51	Y5	6	VAL
52	Y6	6	ARG
54	Y8	23	VAL
55	Y9	17	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (66) such sidechains are listed below:

Mol	Chain	Res	Type
2	QB	135	GLN
2	QB	212	GLN
3	QC	37	GLN
4	QD	201	GLN
5	QE	141	GLN
6	QF	100	ASN
7	QG	56	GLN
7	QG	86	GLN
9	QI	73	GLN
12	QL	49	ASN
15	QO	28	GLN
17	QQ	94	ASN
28	RE	132	HIS
28	RE	143	ASN
35	RP	9	ASN
35	RP	68	GLN
36	RQ	57	HIS
37	RR	13	HIS
40	RU	94	ASN
43	RX	58	HIS
45	RZ	32	HIS
46	R0	70	GLN
47	R1	42	GLN
48	R2	38	GLN
50	R4	47	GLN
52	R6	20	ASN
2	XB	76	GLN
2	XB	113	HIS
2	XB	140	HIS
3	XC	63	ASN
6	XF	27	GLN
8	XH	78	GLN
8	XH	82	HIS

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Mol	Chain	Res	Type
9	XI	58	HIS
9	XI	117	HIS
10	XJ	76	ASN
10	XJ	84	GLN
13	XM	62	ASN
13	XM	77	ASN
14	XN	52	GLN
15	XO	13	GLN
16	XP	76	GLN
19	XS	56	GLN
20	XT	16	HIS
20	XT	18	GLN
20	XT	42	GLN
27	YD	164	GLN
27	YD	166	GLN
28	YE	132	HIS
28	YE	169	ASN
30	YG	58	GLN
30	YG	79	ASN
30	YG	132	ASN
32	YI	28	ASN
32	YI	133	HIS
33	YN	133	GLN
36	YQ	113	GLN
37	YR	13	HIS
37	YR	61	HIS
41	YV	80	GLN
42	YW	62	HIS
45	YZ	32	HIS
45	YZ	34	ASN
48	Y2	56	GLN
52	Y6	29	ASN
55	Y9	34	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	QA	1497/1521 (98%)	295 (19%)	14 (0%)
1	XA	1501/1521 (98%)	289 (19%)	14 (0%)
22	QV	76/77 (98%)	18 (23%)	0
22	XV	76/77 (98%)	17 (22%)	1 (1%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
23	QX	7/26 (26%)	1 (14%)	1 (14%)
23	XX	10/26 (38%)	7 (70%)	1 (10%)
24	QY	13/18 (72%)	5 (38%)	2 (15%)
24	XY	15/18 (83%)	9 (60%)	1 (6%)
25	RA	2862/2915 (98%)	600 (20%)	21 (0%)
25	YA	2862/2915 (98%)	580 (20%)	19 (0%)
26	RB	119/122 (97%)	17 (14%)	0
26	YB	119/122 (97%)	24 (20%)	0
56	ZA	1/3 (33%)	0	0
56	ZB	1/3 (33%)	1 (100%)	0
All	All	9159/9364 (97%)	1863 (20%)	74 (0%)

All (1863) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	QA	11	G
1	QA	21	G
1	QA	22	G
1	QA	32	A
1	QA	39	G
1	QA	41	G
1	QA	46	G
1	QA	47	C
1	QA	48	C
1	QA	51	A
1	QA	59	A
1	QA	61	G
1	QA	64	G
1	QA	79	G
1	QA	91	C
1	QA	93	G
1	QA	115	G
1	QA	116	A
1	QA	121	C
1	QA	129(B)	G
1	QA	131	C
1	QA	159	G
1	QA	163	C
1	QA	174	C
1	QA	182	U
1	QA	189(G)	U
1	QA	189(H)	G

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Mol	Chain	Res	Type
1	QA	195	A
1	QA	197	A
1	QA	201	C
1	QA	202	U
1	QA	204	U
1	QA	216	G
1	QA	220	G
1	QA	226	G
1	QA	240	C
1	QA	247	G
1	QA	251	G
1	QA	252	U
1	QA	262	A
1	QA	267	C
1	QA	289	G
1	QA	306	G
1	QA	309	G
1	QA	316	G
1	QA	321	A
1	QA	328	C
1	QA	330	C
1	QA	332	G
1	QA	345	C
1	QA	347	G
1	QA	351	G
1	QA	352	C
1	QA	353	A
1	QA	354	G
1	QA	360	A
1	QA	367	U
1	QA	372	C
1	QA	373	A
1	QA	397	A
1	QA	398	C
1	QA	406	G
1	QA	411	A
1	QA	412	A
1	QA	413	G
1	QA	414	A
1	QA	421	U
1	QA	422	C
1	QA	423	G

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Mol	Chain	Res	Type
1	QA	424	G
1	QA	427	U
1	QA	428	G
1	QA	429	U
1	QA	430	A
1	QA	439	A
1	QA	448	A
1	QA	452	A
1	QA	461	A
1	QA	470	C
1	QA	484	G
1	QA	485	G
1	QA	486	U
1	QA	496	A
1	QA	498	U
1	QA	502	G
1	QA	505	G
1	QA	507	C
1	QA	508	C
1	QA	509	A
1	QA	510	A
1	QA	511	C
1	QA	518	C
1	QA	527	G7M
1	QA	528	C
1	QA	531	U
1	QA	532	A
1	QA	533	A
1	QA	534	U
1	QA	537	G
1	QA	547	A
1	QA	550	G
1	QA	559	A
1	QA	563	A
1	QA	572	A
1	QA	576	G
1	QA	577	G
1	QA	596	C
1	QA	607	A
1	QA	619	U
1	QA	630	G
1	QA	631	G

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Mol	Chain	Res	Type
1	QA	632	A
1	QA	653	A
1	QA	659	U
1	QA	665	A
1	QA	687	A
1	QA	688	G
1	QA	701	C
1	QA	702	A
1	QA	731	G
1	QA	737	A
1	QA	750	G
1	QA	753	A
1	QA	754	C
1	QA	755	G
1	QA	774	G
1	QA	778	G
1	QA	793	U
1	QA	794	A
1	QA	816	A
1	QA	817	C
1	QA	818	G
1	QA	821	G
1	QA	828	A
1	QA	829	G
1	QA	840	C
1	QA	841	U
1	QA	848	C
1	QA	851	G
1	QA	858	G
1	QA	859	A
1	QA	862	C
1	QA	872	A
1	QA	873	A
1	QA	876	G
1	QA	880	C
1	QA	889	A
1	QA	902	G
1	QA	906	G
1	QA	914	A
1	QA	926	G
1	QA	927	G
1	QA	931	C

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Mol	Chain	Res	Type
1	QA	934	C
1	QA	935	A
1	QA	961	U
1	QA	965	A
1	QA	968	A
1	QA	969	A
1	QA	970	C
1	QA	971	G
1	QA	974	A
1	QA	975	A
1	QA	976	G
1	QA	977	A
1	QA	981	U
1	QA	982	U
1	QA	984	C
1	QA	992	U
1	QA	993	G
1	QA	1003	G
1	QA	1004	A
1	QA	1006	C
1	QA	1019	C
1	QA	1022	G
1	QA	1023	G
1	QA	1024	G
1	QA	1025	U
1	QA	1026	G
1	QA	1027	C
1	QA	1028	C
1	QA	1030(A)	C
1	QA	1030(B)	G
1	QA	1030(C)	C
1	QA	1030(E)	A
1	QA	1031	G
1	QA	1033	G
1	QA	1037	C
1	QA	1048	G
1	QA	1053	G
1	QA	1054	C
1	QA	1065	U
1	QA	1066	C
1	QA	1068	G
1	QA	1081	G

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Mol	Chain	Res	Type
1	QA	1084	G
1	QA	1085	U
1	QA	1091	U
1	QA	1094	G
1	QA	1095	U
1	QA	1101	A
1	QA	1104	G
1	QA	1108	G
1	QA	1123	A
1	QA	1124	G
1	QA	1125	U
1	QA	1130	A
1	QA	1135	U
1	QA	1136	U
1	QA	1137	C
1	QA	1138	G
1	QA	1139	G
1	QA	1140	C
1	QA	1152	A
1	QA	1154	G
1	QA	1158	C
1	QA	1159	U
1	QA	1161	C
1	QA	1166	G
1	QA	1177	G
1	QA	1183	A
1	QA	1184	G
1	QA	1186	G
1	QA	1196	U
1	QA	1197	G
1	QA	1198	G
1	QA	1202	G
1	QA	1213	A
1	QA	1214	C
1	QA	1224	G
1	QA	1225	A
1	QA	1226	C
1	QA	1228	C
1	QA	1236	A
1	QA	1238	A
1	QA	1241	G
1	QA	1257	U

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Mol	Chain	Res	Type
1	QA	1258	G
1	QA	1260	C
1	QA	1270	C
1	QA	1278	U
1	QA	1279	A
1	QA	1280	A
1	QA	1285	A
1	QA	1286	A
1	QA	1287	A
1	QA	1297	C
1	QA	1298	C
1	QA	1299	A
1	QA	1300	G
1	QA	1301	U
1	QA	1302	U
1	QA	1303	C
1	QA	1305	G
1	QA	1310	G
1	QA	1312	G
1	QA	1320	C
1	QA	1322	C
1	QA	1323	G
1	QA	1336	C
1	QA	1337	G
1	QA	1340	A
1	QA	1345	U
1	QA	1347	G
1	QA	1363(A)	C
1	QA	1364	U
1	QA	1370	G
1	QA	1379	G
1	QA	1383	C
1	QA	1397	C
1	QA	1398	A
1	QA	1419	G
1	QA	1442(A)	G
1	QA	1442(B)	G
1	QA	1442(C)	A
1	QA	1446	U
1	QA	1447	A
1	QA	1452	C
1	QA	1456	G

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Mol	Chain	Res	Type
1	QA	1457	G
1	QA	1492	A
1	QA	1493	A
1	QA	1494	G
1	QA	1497	G
1	QA	1499	A
1	QA	1503	A
1	QA	1504	G
1	QA	1505	G
1	QA	1506	U
1	QA	1507	A
1	QA	1519	MA6
1	QA	1520	G
1	QA	1529	G
1	QA	1530	G
1	QA	1531	A
22	QV	2	G
22	QV	4	G
22	QV	5	G
22	QV	9	G
22	QV	13	C
22	QV	16	C
22	QV	17(A)	U
22	QV	18	G
22	QV	19	G
22	QV	21	A
22	QV	47	U
22	QV	48	C
22	QV	49	G
22	QV	53	G
22	QV	65	C
22	QV	67	C
22	QV	75	C
22	QV	76	A
23	QX	19	C
24	QY	33	U
24	QY	34	C
24	QY	35	G
24	QY	37	G
24	QY	41	G
25	RA	10	G
25	RA	11	G

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Mol	Chain	Res	Type
25	RA	12	U
25	RA	34	C
25	RA	35	G
25	RA	45	C
25	RA	50	U
25	RA	51	G
25	RA	61	G
25	RA	71	A
25	RA	72	U
25	RA	73	A
25	RA	74	A
25	RA	75	G
25	RA	78	A
25	RA	84	A
25	RA	90	U
25	RA	103	A
25	RA	105	C
25	RA	110	G
25	RA	118	A
25	RA	119	A
25	RA	120	U
25	RA	121	G
25	RA	126	A
25	RA	131	G
25	RA	140	G
25	RA	157	U
25	RA	173	G
25	RA	181	A
25	RA	196	A
25	RA	199	A
25	RA	201	C
25	RA	204	A
25	RA	205	G
25	RA	214	G
25	RA	215	G
25	RA	216	A
25	RA	221	A
25	RA	222	A
25	RA	225	A
25	RA	227	A
25	RA	228	A
25	RA	229	A

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Mol	Chain	Res	Type
25	RA	230	U
25	RA	239	U
25	RA	248	G
25	RA	251	A
25	RA	272(J)	C
25	RA	272(K)	U
25	RA	272(L)	U
25	RA	272(M)	G
25	RA	272(N)	U
25	RA	272(O)	C
25	RA	272(Y)	U
25	RA	273(B)	U
25	RA	273(C)	G
25	RA	273(K)	C
25	RA	276	A
25	RA	277	C
25	RA	283	A
25	RA	294	A
25	RA	302	C
25	RA	311	A
25	RA	317	G
25	RA	324	A
25	RA	329	G
25	RA	330	A
25	RA	331	A
25	RA	352	G
25	RA	363(A)	G
25	RA	363(D)	G
25	RA	364	C
25	RA	366	C
25	RA	372	G
25	RA	383	U
25	RA	386	G
25	RA	391	G
25	RA	396	G
25	RA	406	G
25	RA	407	G
25	RA	411	G
25	RA	412	A
25	RA	425	G
25	RA	428	A
25	RA	434	U

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Mol	Chain	Res	Type
25	RA	444	C
25	RA	454	A
25	RA	455	C
25	RA	456	C
25	RA	457	A
25	RA	458	G
25	RA	464	U
25	RA	470	A
25	RA	481	G
25	RA	491	G
25	RA	504	U
25	RA	505	A
25	RA	508	G
25	RA	509	C
25	RA	519	U
25	RA	527	C
25	RA	528	A
25	RA	530	G
25	RA	531	C
25	RA	532	A
25	RA	533	G
25	RA	545	G
25	RA	547	A
25	RA	556	G
25	RA	563	G
25	RA	567	A
25	RA	568	U
25	RA	571	A
25	RA	572	A
25	RA	573	G
25	RA	575	A
25	RA	603	A
25	RA	604	G
25	RA	607	U
25	RA	610	G
25	RA	614(C)	G
25	RA	615	G
25	RA	627	A
25	RA	628	G
25	RA	634	C
25	RA	637	A
25	RA	645	C

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Mol	Chain	Res	Type
25	RA	646	A
25	RA	652(B)	A
25	RA	652(D)	G
25	RA	652(V)	G
25	RA	662	G
25	RA	663	G
25	RA	669	G
25	RA	670	A
25	RA	675	A
25	RA	677	A
25	RA	686	G
25	RA	695	G
25	RA	729	G
25	RA	730	C
25	RA	733	G
25	RA	736	C
25	RA	748	G
25	RA	764	A
25	RA	765	G
25	RA	775	G
25	RA	776	G
25	RA	782	A
25	RA	784	A
25	RA	785	G
25	RA	789	A
25	RA	792	G
25	RA	794	G
25	RA	800	A
25	RA	805	G
25	RA	811	U
25	RA	812	C
25	RA	817	C
25	RA	827	U
25	RA	828	U
25	RA	830	G
25	RA	831	G
25	RA	846	C
25	RA	847	U
25	RA	857	C
25	RA	859	G
25	RA	866	A
25	RA	886	C

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Mol	Chain	Res	Type
25	RA	887	A
25	RA	888	C
25	RA	889	C
25	RA	890	A
25	RA	893	C
25	RA	896	A
25	RA	897	C
25	RA	900	A
25	RA	907	U
25	RA	910	A
25	RA	914	C
25	RA	917	A
25	RA	931	G
25	RA	932	G
25	RA	941	A
25	RA	945	A
25	RA	946	G
25	RA	958	U
25	RA	959	A
25	RA	961	C
25	RA	962	G
25	RA	972	G
25	RA	974	G
25	RA	975(A)	C
25	RA	980	A
25	RA	983	A
25	RA	990	A
25	RA	996	A
25	RA	1012	U
25	RA	1013	C
25	RA	1022	G
25	RA	1023	U
25	RA	1025	G
25	RA	1026	U
25	RA	1027	A
25	RA	1033	U
25	RA	1042	G
25	RA	1044	G
25	RA	1046	A
25	RA	1047	G
25	RA	1052	C
25	RA	1054	A

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Mol	Chain	Res	Type
25	RA	1057	A
25	RA	1060	U
25	RA	1063	G
25	RA	1064	C
25	RA	1065	U
25	RA	1066	U
25	RA	1067	A
25	RA	1068	G
25	RA	1069	A
25	RA	1071	G
25	RA	1072	C
25	RA	1073	A
25	RA	1074	G
25	RA	1077	A
25	RA	1078	U
25	RA	1079	C
25	RA	1082	U
25	RA	1083	U
25	RA	1084	A
25	RA	1085	A
25	RA	1086	A
25	RA	1088	A
25	RA	1090	U
25	RA	1091	G
25	RA	1092	C
25	RA	1095	A
25	RA	1096	A
25	RA	1097	U
25	RA	1098	A
25	RA	1099	G
25	RA	1102	C
25	RA	1109	C
25	RA	1110	G
25	RA	1111	A
25	RA	1112	G
25	RA	1115	G
25	RA	1116	C
25	RA	1126	A
25	RA	1128	A
25	RA	1129	A
25	RA	1130	U
25	RA	1131	G

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Mol	Chain	Res	Type
25	RA	1135	C
25	RA	1136	G
25	RA	1142(B)	A
25	RA	1155	A
25	RA	1206	G
25	RA	1211	U
25	RA	1212	G
25	RA	1218	C
25	RA	1220	A
25	RA	1221(A)	C
25	RA	1236	G
25	RA	1241	A
25	RA	1248	G
25	RA	1252	G
25	RA	1253	A
25	RA	1255	U
25	RA	1256	G
25	RA	1265	A
25	RA	1271	G
25	RA	1272	A
25	RA	1300	U
25	RA	1301	A
25	RA	1302	A
25	RA	1304	C
25	RA	1306	C
25	RA	1312	U
25	RA	1314	C
25	RA	1329	U
25	RA	1330	C
25	RA	1338	G
25	RA	1341	U
25	RA	1352	U
25	RA	1355	G
25	RA	1359	A
25	RA	1360	A
25	RA	1365	A
25	RA	1368	G
25	RA	1378	A
25	RA	1379	A
25	RA	1384	A
25	RA	1385	G
25	RA	1395	A

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Mol	Chain	Res	Type
25	RA	1397	U
25	RA	1411	C
25	RA	1416	G
25	RA	1419	A
25	RA	1420	U
25	RA	1421	G
25	RA	1428	C
25	RA	1445(A)	A
25	RA	1450(A)	G
25	RA	1455	G
25	RA	1458	C
25	RA	1459	G
25	RA	1467	C
25	RA	1471	A
25	RA	1482	G
25	RA	1485	G
25	RA	1490	A
25	RA	1493	C
25	RA	1494	A
25	RA	1496	A
25	RA	1497	U
25	RA	1508	A
25	RA	1509(A)	C
25	RA	1509(B)	A
25	RA	1525	G
25	RA	1530	C
25	RA	1531	C
25	RA	1532	C
25	RA	1533	G
25	RA	1539	G
25	RA	1542	A
25	RA	1543	C
25	RA	1546	C
25	RA	1554	A
25	RA	1558	A
25	RA	1559	G
25	RA	1560	G
25	RA	1566	A
25	RA	1569	A
25	RA	1571	A
25	RA	1578	U
25	RA	1580	A

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Mol	Chain	Res	Type
25	RA	1583	A
25	RA	1584	C
25	RA	1586	A
25	RA	1588	C
25	RA	1608	A
25	RA	1609	A
25	RA	1610	A
25	RA	1616	A
25	RA	1631(A)	C
25	RA	1639	U
25	RA	1646	C
25	RA	1648	C
25	RA	1651	G
25	RA	1654	A
25	RA	1665	A
25	RA	1673	U
25	RA	1674	G
25	RA	1693	U
25	RA	1696	G
25	RA	1700	A
25	RA	1701	A
25	RA	1721	G
25	RA	1722	A
25	RA	1739	U
25	RA	1762	A
25	RA	1763	G
25	RA	1764	G
25	RA	1772	G
25	RA	1773	A
25	RA	1780	A
25	RA	1782	C
25	RA	1784	A
25	RA	1791	A
25	RA	1800	C
25	RA	1801	G
25	RA	1816	G
25	RA	1829	A
25	RA	1835	G
25	RA	1836	C
25	RA	1847	A
25	RA	1860	G
25	RA	1877	A

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Mol	Chain	Res	Type
25	RA	1878	G
25	RA	1882	C
25	RA	1900	A
25	RA	1903	G
25	RA	1906	G
25	RA	1913	A
25	RA	1914	C
25	RA	1927	A
25	RA	1929	G
25	RA	1930	G
25	RA	1934	C
25	RA	1936	A
25	RA	1938	A
25	RA	1955	U
25	RA	1963	U
25	RA	1964	G
25	RA	1967	C
25	RA	1970	A
25	RA	1971	A
25	RA	1972	A
25	RA	1975	G
25	RA	1993	U
25	RA	1997	G
25	RA	2004	G
25	RA	2023	G
25	RA	2031	A
25	RA	2032	G
25	RA	2033	A
25	RA	2043	C
25	RA	2049	G
25	RA	2052	G
25	RA	2055	C
25	RA	2056	G
25	RA	2060	A
25	RA	2061	G
25	RA	2062	A
25	RA	2069	G
25	RA	2072	G
25	RA	2093	G
25	RA	2096	U
25	RA	2100	G
25	RA	2103	C

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Mol	Chain	Res	Type
25	RA	2104	G
25	RA	2107	C
25	RA	2108	C
25	RA	2110	G
25	RA	2112	G
25	RA	2116	G
25	RA	2117	A
25	RA	2118	U
25	RA	2119	A
25	RA	2120	G
25	RA	2121	G
25	RA	2122	U
25	RA	2127	G
25	RA	2129	C
25	RA	2130	U
25	RA	2131	G
25	RA	2132	U
25	RA	2133	G
25	RA	2134	A
25	RA	2136	C
25	RA	2141	G
25	RA	2145	C
25	RA	2146	C
25	RA	2148	G
25	RA	2151	G
25	RA	2157	G
25	RA	2158	A
25	RA	2159	G
25	RA	2163	C
25	RA	2165	G
25	RA	2167	U
25	RA	2172	U
25	RA	2174	C
25	RA	2178	C
25	RA	2179	C
25	RA	2185	C
25	RA	2186	G
25	RA	2189	U
25	RA	2198	A
25	RA	2199	A
25	RA	2206	G
25	RA	2207	G

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Mol	Chain	Res	Type
25	RA	2208	A
25	RA	2218	U
25	RA	2219	G
25	RA	2221	G
25	RA	2222	G
25	RA	2225	A
25	RA	2235	G
25	RA	2238	G
25	RA	2239	G
25	RA	2249	U
25	RA	2251	OMG
25	RA	2266	A
25	RA	2268	A
25	RA	2269	A
25	RA	2275	C
25	RA	2278	A
25	RA	2279	G
25	RA	2283	C
25	RA	2287	A
25	RA	2288	A
25	RA	2305	A
25	RA	2307	G
25	RA	2309	A
25	RA	2312	U
25	RA	2319	G
25	RA	2320	A
25	RA	2321	G
25	RA	2322	A
25	RA	2325	G
25	RA	2334	G
25	RA	2335	A
25	RA	2336	A
25	RA	2343	C
25	RA	2347	C
25	RA	2350	C
25	RA	2383	G
25	RA	2385	C
25	RA	2402	C
25	RA	2403	C
25	RA	2406	U
25	RA	2410	G
25	RA	2422	A

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Mol	Chain	Res	Type
25	RA	2423	U
25	RA	2424	C
25	RA	2425	A
25	RA	2426	A
25	RA	2428	G
25	RA	2429	G
25	RA	2430	A
25	RA	2431	U
25	RA	2439	A
25	RA	2441	C
25	RA	2447	G
25	RA	2448	A
25	RA	2449	U
25	RA	2465	C
25	RA	2469	A
25	RA	2470	G
25	RA	2476	A
25	RA	2478	A
25	RA	2480	C
25	RA	2494	G
25	RA	2498	C
25	RA	2503	2MA
25	RA	2505	G
25	RA	2518	A
25	RA	2519	U
25	RA	2529	G
25	RA	2549	G
25	RA	2554	U
25	RA	2564	A
25	RA	2566	A
25	RA	2567	G
25	RA	2576	G
25	RA	2582	G
25	RA	2585	U
25	RA	2586	C
25	RA	2597	G
25	RA	2602	A
25	RA	2611	U
25	RA	2612	C
25	RA	2615	U
25	RA	2621	A
25	RA	2630	G

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Mol	Chain	Res	Type
25	RA	2632	A
25	RA	2645	G
25	RA	2646	C
25	RA	2654	A
25	RA	2656	U
25	RA	2663	G
25	RA	2679	A
25	RA	2682	U
25	RA	2689	U
25	RA	2690	C
25	RA	2691	C
25	RA	2702	U
25	RA	2703	C
25	RA	2712(B)	A
25	RA	2713	A
25	RA	2714	G
25	RA	2715	C
25	RA	2718	G
25	RA	2726	U
25	RA	2732	G
25	RA	2733	A
25	RA	2739	U
25	RA	2744	G
25	RA	2746	U
25	RA	2748	A
25	RA	2750	A
25	RA	2751	G
25	RA	2756	U
25	RA	2757	A
25	RA	2758	A
25	RA	2763	G
25	RA	2765	A
25	RA	2766	G
25	RA	2778	A
25	RA	2789	C
25	RA	2793	G
25	RA	2810	A
25	RA	2811	G
25	RA	2820	A
25	RA	2821	A
25	RA	2823	A
25	RA	2835	A

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Mol	Chain	Res	Type
25	RA	2866	U
25	RA	2872	G
25	RA	2876	G
25	RA	2879	C
25	RA	2880	C
25	RA	2883	A
25	RA	2889	C
25	RA	2892	A
25	RA	2894	G
25	RA	2897	U
26	RB	9	G
26	RB	13	A
26	RB	15	A
26	RB	25	A
26	RB	31	C
26	RB	32	C
26	RB	35	U
26	RB	41	U
26	RB	44	G
26	RB	54	G
26	RB	56	G
26	RB	73	A
26	RB	75	G
26	RB	89	G
26	RB	106	G
26	RB	108	U
26	RB	110	G
1	XA	5	U
1	XA	6	G
1	XA	7	G
1	XA	9	G
1	XA	31	G
1	XA	32	A
1	XA	39	G
1	XA	47	C
1	XA	48	C
1	XA	50	A
1	XA	51	A
1	XA	52	G
1	XA	61	G
1	XA	66	G
1	XA	78	G

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Mol	Chain	Res	Type
1	XA	80	G
1	XA	88	A
1	XA	89	C
1	XA	105	G
1	XA	121	C
1	XA	129(B)	G
1	XA	131	C
1	XA	144	G
1	XA	151	A
1	XA	163	C
1	XA	174	C
1	XA	182	U
1	XA	189(G)	U
1	XA	189(H)	G
1	XA	189(I)	G
1	XA	195	A
1	XA	197	A
1	XA	199	G
1	XA	202	U
1	XA	204	U
1	XA	216	G
1	XA	220	G
1	XA	246	A
1	XA	247	G
1	XA	251	G
1	XA	266	G
1	XA	267	C
1	XA	270	A
1	XA	280	C
1	XA	281	G
1	XA	289	G
1	XA	301	G
1	XA	316	G
1	XA	321	A
1	XA	327	A
1	XA	328	C
1	XA	330	C
1	XA	332	G
1	XA	342	C
1	XA	345	C
1	XA	347	G
1	XA	350	G

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Mol	Chain	Res	Type
1	XA	351	G
1	XA	352	C
1	XA	353	A
1	XA	354	G
1	XA	356	A
1	XA	358	U
1	XA	359	U
1	XA	360	A
1	XA	367	U
1	XA	368	U
1	XA	372	C
1	XA	373	A
1	XA	384	G
1	XA	392	G
1	XA	397	A
1	XA	398	C
1	XA	406	G
1	XA	412	A
1	XA	413	G
1	XA	423	G
1	XA	427	U
1	XA	428	G
1	XA	429	U
1	XA	439	A
1	XA	452	A
1	XA	453	A
1	XA	471	G
1	XA	482	A
1	XA	485	G
1	XA	496	A
1	XA	498	U
1	XA	505	G
1	XA	509	A
1	XA	510	A
1	XA	511	C
1	XA	512	U
1	XA	516	PSU
1	XA	517	G
1	XA	518	C
1	XA	521	G
1	XA	527	G7M
1	XA	532	A

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Mol	Chain	Res	Type
1	XA	533	A
1	XA	547	A
1	XA	559	A
1	XA	564	C
1	XA	572	A
1	XA	573	A
1	XA	576	G
1	XA	577	G
1	XA	589	C
1	XA	601	C
1	XA	602	A
1	XA	618	C
1	XA	630	G
1	XA	632	A
1	XA	653	A
1	XA	661	G
1	XA	665	A
1	XA	666	G
1	XA	683	G
1	XA	687	A
1	XA	688	G
1	XA	702	A
1	XA	721	G
1	XA	723	U
1	XA	731	G
1	XA	734	G
1	XA	749	C
1	XA	755	G
1	XA	763	G
1	XA	770	C
1	XA	774	G
1	XA	777	A
1	XA	792	A
1	XA	793	U
1	XA	794	A
1	XA	813	U
1	XA	817	C
1	XA	818	G
1	XA	819	A
1	XA	821	G
1	XA	828	A
1	XA	829	G

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Mol	Chain	Res	Type
1	XA	836	G
1	XA	840	C
1	XA	841	U
1	XA	848	C
1	XA	851	G
1	XA	855	G
1	XA	864	A
1	XA	867	G
1	XA	872	A
1	XA	873	A
1	XA	891	U
1	XA	902	G
1	XA	914	A
1	XA	920	U
1	XA	926	G
1	XA	927	G
1	XA	934	C
1	XA	935	A
1	XA	960	U
1	XA	961	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	982	U
1	XA	992	U
1	XA	993	G
1	XA	994	A
1	XA	1001(B)	G
1	XA	1003	G
1	XA	1004	A
1	XA	1005	A
1	XA	1006	C
1	XA	1020	U
1	XA	1022	G
1	XA	1024	G
1	XA	1025	U
1	XA	1026	G
1	XA	1027	C

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Mol	Chain	Res	Type
1	XA	1028	C
1	XA	1030(A)	C
1	XA	1030(C)	C
1	XA	1031	G
1	XA	1032	G
1	XA	1043	C
1	XA	1044	A
1	XA	1046	A
1	XA	1053	G
1	XA	1055	A
1	XA	1065	U
1	XA	1066	C
1	XA	1068	G
1	XA	1078	U
1	XA	1081	G
1	XA	1085	U
1	XA	1092	A
1	XA	1094	G
1	XA	1095	U
1	XA	1101	A
1	XA	1104	G
1	XA	1108	G
1	XA	1117	G
1	XA	1118	C
1	XA	1125	U
1	XA	1129	C
1	XA	1130	A
1	XA	1136	U
1	XA	1137	C
1	XA	1139	G
1	XA	1140	C
1	XA	1147	C
1	XA	1152	A
1	XA	1159	U
1	XA	1160	G
1	XA	1161	C
1	XA	1170	A
1	XA	1183	A
1	XA	1184	G
1	XA	1191	A
1	XA	1196	U
1	XA	1197	G

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Mol	Chain	Res	Type
1	XA	1201	A
1	XA	1210	C
1	XA	1211	U
1	XA	1213	A
1	XA	1215	G
1	XA	1224	G
1	XA	1227	A
1	XA	1237	C
1	XA	1238	A
1	XA	1240	U
1	XA	1241	G
1	XA	1256	A
1	XA	1257	U
1	XA	1258	G
1	XA	1260	C
1	XA	1270	C
1	XA	1275	A
1	XA	1278	U
1	XA	1279	A
1	XA	1281	U
1	XA	1282	C
1	XA	1285	A
1	XA	1286	A
1	XA	1287	A
1	XA	1300	G
1	XA	1302	U
1	XA	1303	C
1	XA	1305	G
1	XA	1312	G
1	XA	1317	C
1	XA	1320	C
1	XA	1323	G
1	XA	1340	A
1	XA	1346	A
1	XA	1347	G
1	XA	1353	G
1	XA	1363(A)	C
1	XA	1364	U
1	XA	1370	G
1	XA	1397	C
1	XA	1398	A
1	XA	1402	4OC

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Mol	Chain	Res	Type
1	XA	1419	G
1	XA	1442(A)	G
1	XA	1442(B)	G
1	XA	1447	A
1	XA	1452	C
1	XA	1456	G
1	XA	1457	G
1	XA	1487	G
1	XA	1492	A
1	XA	1494	G
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	MA6
1	XA	1520	G
1	XA	1529	G
1	XA	1530	G
1	XA	1531	A
22	XV	5	G
22	XV	8	U
22	XV	9	G
22	XV	17(A)	U
22	XV	18	G
22	XV	19	G
22	XV	21	A
22	XV	42	G
22	XV	47	U
22	XV	48	C
22	XV	49	G
22	XV	53	G
22	XV	54	U
22	XV	59	A
22	XV	67	C
22	XV	75	C
22	XV	76	A
23	XX	15	A
23	XX	18	G
23	XX	19	C

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Mol	Chain	Res	Type
23	XX	20	C
23	XX	21	C
23	XX	22	U
23	XX	23	A
24	XY	29	U
24	XY	30	C
24	XY	31	G
24	XY	32	U
24	XY	33	U
24	XY	34	C
24	XY	35	G
24	XY	36	G
24	XY	43	G
25	YA	10	G
25	YA	12	U
25	YA	15	G
25	YA	19	C
25	YA	34	C
25	YA	45	C
25	YA	51	G
25	YA	64	A
25	YA	71	A
25	YA	72	U
25	YA	74	A
25	YA	75	G
25	YA	83	G
25	YA	84	A
25	YA	92	A
25	YA	95	G
25	YA	102	G
25	YA	118	A
25	YA	120	U
25	YA	125	G
25	YA	131	G
25	YA	141	A
25	YA	157	U
25	YA	173	G
25	YA	179	G
25	YA	181	A
25	YA	196	A
25	YA	199	A
25	YA	201	C

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Mol	Chain	Res	Type
25	YA	205	G
25	YA	216	A
25	YA	221	A
25	YA	222	A
25	YA	225	A
25	YA	227	A
25	YA	228	A
25	YA	229	A
25	YA	230	U
25	YA	232	G
25	YA	233	A
25	YA	248	G
25	YA	264	C
25	YA	269	U
25	YA	272(D)	G
25	YA	272(L)	U
25	YA	272(N)	U
25	YA	273(B)	U
25	YA	273(C)	G
25	YA	273(D)	G
25	YA	276	A
25	YA	277	C
25	YA	278	A
25	YA	279	C
25	YA	311	A
25	YA	322	A
25	YA	323	G
25	YA	324	A
25	YA	329	G
25	YA	330	A
25	YA	331	A
25	YA	332	A
25	YA	342	G
25	YA	345	A
25	YA	346	A
25	YA	352	G
25	YA	362	U
25	YA	363(A)	G
25	YA	363(C)	G
25	YA	370	G
25	YA	372	G
25	YA	386	G

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Mol	Chain	Res	Type
25	YA	396	G
25	YA	407	G
25	YA	411	G
25	YA	428	A
25	YA	444	C
25	YA	455	C
25	YA	457	A
25	YA	458	G
25	YA	470	A
25	YA	473	G
25	YA	477	A
25	YA	481	G
25	YA	505	A
25	YA	509	C
25	YA	512	G
25	YA	528	A
25	YA	529	A
25	YA	530	G
25	YA	531	C
25	YA	532	A
25	YA	533	G
25	YA	546	C
25	YA	547	A
25	YA	563	G
25	YA	568	U
25	YA	571	A
25	YA	573	G
25	YA	574	C
25	YA	575	A
25	YA	579	G
25	YA	580	C
25	YA	603	A
25	YA	604	G
25	YA	607	U
25	YA	610	G
25	YA	614(B)	U
25	YA	614(C)	G
25	YA	615	G
25	YA	618	C
25	YA	627	A
25	YA	634	C
25	YA	637	A

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Mol	Chain	Res	Type
25	YA	645	C
25	YA	646	A
25	YA	652(C)	A
25	YA	652(D)	G
25	YA	669	G
25	YA	674	G
25	YA	686	G
25	YA	687	C
25	YA	695	G
25	YA	701	G
25	YA	716	A
25	YA	717	G
25	YA	728	G
25	YA	730	C
25	YA	738	G
25	YA	747	U
25	YA	749	C
25	YA	750	A
25	YA	753	C
25	YA	764	A
25	YA	773	U
25	YA	775	G
25	YA	776	G
25	YA	779	U
25	YA	782	A
25	YA	784	A
25	YA	785	G
25	YA	788	A
25	YA	793	A
25	YA	800	A
25	YA	801	G
25	YA	802	A
25	YA	805	G
25	YA	812	C
25	YA	827	U
25	YA	831	G
25	YA	843	G
25	YA	846	C
25	YA	857	C
25	YA	859	G
25	YA	860	U
25	YA	866	A

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Mol	Chain	Res	Type
25	YA	886	C
25	YA	887	A
25	YA	888	C
25	YA	889	C
25	YA	890	A
25	YA	893	C
25	YA	896	A
25	YA	897	C
25	YA	907	U
25	YA	910	A
25	YA	914	C
25	YA	917	A
25	YA	925	C
25	YA	932	G
25	YA	941	A
25	YA	945	A
25	YA	946	G
25	YA	953	A
25	YA	957	A
25	YA	959	A
25	YA	961	C
25	YA	962	G
25	YA	968	G
25	YA	973	A
25	YA	974	G
25	YA	983	A
25	YA	996	A
25	YA	1005	C
25	YA	1012	U
25	YA	1013	C
25	YA	1017	G
25	YA	1022	G
25	YA	1023	U
25	YA	1026	U
25	YA	1033	U
25	YA	1038	C
25	YA	1042	G
25	YA	1045	A
25	YA	1046	A
25	YA	1047	G
25	YA	1054	A
25	YA	1057	A

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Mol	Chain	Res	Type
25	YA	1058	G
25	YA	1060	U
25	YA	1063	G
25	YA	1064	C
25	YA	1065	U
25	YA	1066	U
25	YA	1067	A
25	YA	1068	G
25	YA	1069	A
25	YA	1071	G
25	YA	1072	C
25	YA	1073	A
25	YA	1074	G
25	YA	1077	A
25	YA	1078	U
25	YA	1079	C
25	YA	1082	U
25	YA	1083	U
25	YA	1084	A
25	YA	1087	G
25	YA	1088	A
25	YA	1090	U
25	YA	1092	C
25	YA	1093	G
25	YA	1096	A
25	YA	1097	U
25	YA	1108	U
25	YA	1109	C
25	YA	1110	G
25	YA	1126	A
25	YA	1129	A
25	YA	1130	U
25	YA	1132	A
25	YA	1135	C
25	YA	1136	G
25	YA	1142(A)	U
25	YA	1142(B)	A
25	YA	1143	A
25	YA	1150	C
25	YA	1154	G
25	YA	1155	A
25	YA	1156	A

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Mol	Chain	Res	Type
25	YA	1160	G
25	YA	1171	G
25	YA	1179	C
25	YA	1186	G
25	YA	1205	U
25	YA	1206	G
25	YA	1211	U
25	YA	1212	G
25	YA	1218	C
25	YA	1236	G
25	YA	1253	A
25	YA	1255	U
25	YA	1256	G
25	YA	1259	G
25	YA	1264	G
25	YA	1266	G
25	YA	1268	A
25	YA	1271	G
25	YA	1272	A
25	YA	1273	U
25	YA	1274	A
25	YA	1275	A
25	YA	1281	G
25	YA	1282	U
25	YA	1300	U
25	YA	1301	A
25	YA	1310	G
25	YA	1314	C
25	YA	1325	G
25	YA	1328	G
25	YA	1329	U
25	YA	1330	C
25	YA	1352	U
25	YA	1359	A
25	YA	1360	A
25	YA	1365	A
25	YA	1368	G
25	YA	1377	G
25	YA	1378	A
25	YA	1379	A
25	YA	1384	A
25	YA	1385	G

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Mol	Chain	Res	Type
25	YA	1395	A
25	YA	1398	C
25	YA	1416	G
25	YA	1417	C
25	YA	1420	U
25	YA	1421	G
25	YA	1427	A
25	YA	1428	C
25	YA	1445(A)	A
25	YA	1450(A)	G
25	YA	1453	U
25	YA	1455	G
25	YA	1459	G
25	YA	1467	C
25	YA	1470	G
25	YA	1471	A
25	YA	1482	G
25	YA	1490	A
25	YA	1493	C
25	YA	1494	A
25	YA	1497	U
25	YA	1508	A
25	YA	1509(A)	C
25	YA	1514	U
25	YA	1531	C
25	YA	1542	A
25	YA	1544	A
25	YA	1546	C
25	YA	1553	A
25	YA	1554	A
25	YA	1558	A
25	YA	1559	G
25	YA	1566	A
25	YA	1569	A
25	YA	1571	A
25	YA	1578	U
25	YA	1580	A
25	YA	1583	A
25	YA	1584	C
25	YA	1586	A
25	YA	1587	A
25	YA	1607	C

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Mol	Chain	Res	Type
25	YA	1608	A
25	YA	1609	A
25	YA	1612	C
25	YA	1616	A
25	YA	1634	A
25	YA	1639	U
25	YA	1640	C
25	YA	1645	G
25	YA	1648	C
25	YA	1664	A
25	YA	1668	A
25	YA	1672	C
25	YA	1673	U
25	YA	1674	G
25	YA	1681	G
25	YA	1696	G
25	YA	1700	A
25	YA	1701	A
25	YA	1721	G
25	YA	1722	A
25	YA	1756	G
25	YA	1762	A
25	YA	1763	G
25	YA	1764	G
25	YA	1773	A
25	YA	1780	A
25	YA	1782	C
25	YA	1791	A
25	YA	1800	C
25	YA	1801	G
25	YA	1802	A
25	YA	1808	U
25	YA	1815	A
25	YA	1816	G
25	YA	1829	A
25	YA	1839	G
25	YA	1847	A
25	YA	1848	A
25	YA	1876	A
25	YA	1877	A
25	YA	1878	G
25	YA	1889	A

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Mol	Chain	Res	Type
25	YA	1901	A
25	YA	1903	G
25	YA	1906	G
25	YA	1913	A
25	YA	1914	C
25	YA	1927	A
25	YA	1929	G
25	YA	1930	G
25	YA	1934	C
25	YA	1936	A
25	YA	1937	A
25	YA	1938	A
25	YA	1939	5MU
25	YA	1940	U
25	YA	1955	U
25	YA	1963	U
25	YA	1965	C
25	YA	1966	A
25	YA	1967	C
25	YA	1968	G
25	YA	1970	A
25	YA	1971	A
25	YA	1972	A
25	YA	1981	A
25	YA	1993	U
25	YA	1997	G
25	YA	2003	G
25	YA	2004	G
25	YA	2009	G
25	YA	2020	A
25	YA	2023	G
25	YA	2031	A
25	YA	2032	G
25	YA	2033	A
25	YA	2043	C
25	YA	2055	C
25	YA	2056	G
25	YA	2059	A
25	YA	2060	A
25	YA	2061	G
25	YA	2062	A
25	YA	2069	G

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Mol	Chain	Res	Type
25	YA	2076	U
25	YA	2077	A
25	YA	2093	G
25	YA	2096	U
25	YA	2097	C
25	YA	2102	U
25	YA	2104	G
25	YA	2107	C
25	YA	2108	C
25	YA	2116	G
25	YA	2117	A
25	YA	2118	U
25	YA	2119	A
25	YA	2127	G
25	YA	2128	C
25	YA	2129	C
25	YA	2131	G
25	YA	2132	U
25	YA	2133	G
25	YA	2134	A
25	YA	2138	C
25	YA	2141	G
25	YA	2146	C
25	YA	2147	G
25	YA	2148	G
25	YA	2151	G
25	YA	2159	G
25	YA	2172	U
25	YA	2173	A
25	YA	2185	C
25	YA	2187	G
25	YA	2189	U
25	YA	2192	G
25	YA	2198	A
25	YA	2206	G
25	YA	2207	G
25	YA	2208	A
25	YA	2218	U
25	YA	2219	G
25	YA	2225	A
25	YA	2237	G
25	YA	2238	G

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Mol	Chain	Res	Type
25	YA	2239	G
25	YA	2249	U
25	YA	2266	A
25	YA	2267	A
25	YA	2268	A
25	YA	2269	A
25	YA	2274	A
25	YA	2275	C
25	YA	2278	A
25	YA	2279	G
25	YA	2280	G
25	YA	2283	C
25	YA	2287	A
25	YA	2288	A
25	YA	2305	A
25	YA	2312	U
25	YA	2320	A
25	YA	2321	G
25	YA	2322	A
25	YA	2325	G
25	YA	2327	A
25	YA	2335	A
25	YA	2336	A
25	YA	2343	C
25	YA	2345	G
25	YA	2347	C
25	YA	2350	C
25	YA	2358	G
25	YA	2378	A
25	YA	2383	G
25	YA	2384	G
25	YA	2385	C
25	YA	2389	G
25	YA	2403	C
25	YA	2406	U
25	YA	2410	G
25	YA	2413	G
25	YA	2423	U
25	YA	2424	C
25	YA	2425	A
25	YA	2428	G
25	YA	2429	G

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Mol	Chain	Res	Type
25	YA	2430	A
25	YA	2431	U
25	YA	2435	A
25	YA	2439	A
25	YA	2440	C
25	YA	2441	C
25	YA	2447	G
25	YA	2448	A
25	YA	2473	U
25	YA	2474	C
25	YA	2476	A
25	YA	2478	A
25	YA	2484	G
25	YA	2502	G
25	YA	2503	2MA
25	YA	2505	G
25	YA	2515	C
25	YA	2516	G
25	YA	2517	C
25	YA	2518	A
25	YA	2520	C
25	YA	2529	G
25	YA	2543	G
25	YA	2554	U
25	YA	2566	A
25	YA	2567	G
25	YA	2569	G
25	YA	2573	C
25	YA	2577	A
25	YA	2578	G
25	YA	2582	G
25	YA	2585	U
25	YA	2602	A
25	YA	2609	U
25	YA	2610	C
25	YA	2612	C
25	YA	2615	U
25	YA	2621	A
25	YA	2629	A
25	YA	2630	G
25	YA	2636	U
25	YA	2654	A

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Mol	Chain	Res	Type
25	YA	2661	G
25	YA	2680	C
25	YA	2687	U
25	YA	2689	U
25	YA	2690	C
25	YA	2691	C
25	YA	2702	U
25	YA	2703	C
25	YA	2712(B)	A
25	YA	2713	A
25	YA	2714	G
25	YA	2718	G
25	YA	2726	U
25	YA	2727	G
25	YA	2733	A
25	YA	2739	U
25	YA	2744	G
25	YA	2748	A
25	YA	2750	A
25	YA	2751	G
25	YA	2755	C
25	YA	2757	A
25	YA	2759	G
25	YA	2764	A
25	YA	2765	A
25	YA	2766	G
25	YA	2770	G
25	YA	2776	A
25	YA	2778	A
25	YA	2780	G
25	YA	2802	G
25	YA	2804	C
25	YA	2808	U
25	YA	2818	G
25	YA	2820	A
25	YA	2821	A
25	YA	2833	G
25	YA	2834	G
25	YA	2835	A
25	YA	2849	U
25	YA	2872	G
25	YA	2879	C

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Mol	Chain	Res	Type
25	YA	2880	C
25	YA	2889	C
25	YA	2894	G
25	YA	2895	U
25	YA	2897	U
26	YB	2	C
26	YB	7	G
26	YB	8	U
26	YB	9	G
26	YB	13	A
26	YB	24	G
26	YB	25	A
26	YB	26	A
26	YB	31	C
26	YB	32	C
26	YB	40	U
26	YB	41	U
26	YB	42	C
26	YB	44	G
26	YB	56	G
26	YB	57	A
26	YB	67	G
26	YB	73	A
26	YB	75	G
26	YB	80	U
26	YB	84	C
26	YB	88	C
26	YB	97	G
26	YB	110	G
56	ZB	2	C

All (74) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	QA	115	G
1	QA	251	G
1	QA	266	G
1	QA	429	U
1	QA	509	A
1	QA	687	A
1	QA	913	A
1	QA	1026	G

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Mol	Chain	Res	Type
1	QA	1065	U
1	QA	1067	A
1	QA	1201	A
1	QA	1285	A
1	QA	1299	A
1	QA	1442(A)	G
23	QX	18	G
24	QY	36	G
24	QY	40	C
25	RA	9	U
25	RA	272(M)	G
25	RA	455	C
25	RA	805	G
25	RA	856	C
25	RA	961	C
25	RA	1065	U
25	RA	1073	A
25	RA	1210	A
25	RA	1240	U
25	RA	1300	U
25	RA	1420	U
25	RA	1992	G
25	RA	2031	A
25	RA	2126	A
25	RA	2171	A
25	RA	2321	G
25	RA	2406	U
25	RA	2501	C
25	RA	2585	U
25	RA	2689	U
1	XA	60	A
1	XA	65	U
1	XA	88	A
1	XA	358	U
1	XA	367	U
1	XA	509	A
1	XA	687	A
1	XA	748	C
1	XA	913	A
1	XA	991	U
1	XA	992	U
1	XA	1065	U

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Mol	Chain	Res	Type
1	XA	1067	A
1	XA	1442(A)	G
22	XV	53	G
23	XX	18	G
24	XY	34	C
25	YA	120	U
25	YA	272(M)	G
25	YA	752	A
25	YA	774	A
25	YA	856	C
25	YA	1065	U
25	YA	1073	A
25	YA	1210	A
25	YA	1420	U
25	YA	1672	C
25	YA	1900	A
25	YA	1992	G
25	YA	2003	G
25	YA	2126	A
25	YA	2172	U
25	YA	2321	G
25	YA	2439	A
25	YA	2515	C
25	YA	2689	U

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

50 non-standard protein/DNA/RNA residues are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
1	4OC	QA	1402	1	20,23,24	0.78	0	25,32,35	0.94	0
1	5MC	QA	967	1	19,22,23	1.44	3 (15%)	26,32,35	1.28	2 (7%)
1	PSU	XA	516	57,1	18,21,22	1.38	5 (27%)	21,30,33	1.95	5 (23%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
1	5MC	XA	1407	1	19,22,23	1.20	3 (15%)	26,32,35	1.41	5 (19%)
25	PSU	RA	2605	25	18,21,22	1.70	4 (22%)	21,30,33	2.27	5 (23%)
25	OMU	RA	2552	25	19,22,23	1.40	3 (15%)	25,31,34	2.05	6 (24%)
12	0TD	XL	92	12	8,9,10	4.33	3 (37%)	6,11,13	1.43	1 (16%)
1	2MG	QA	1207	1	23,26,27	1.34	4 (17%)	33,38,41	2.27	9 (27%)
1	M2G	QA	966	1	24,27,28	1.33	5 (20%)	33,40,43	1.85	6 (18%)
25	5MU	RA	1915	25	19,22,23	1.57	5 (26%)	27,32,35	2.48	8 (29%)
25	2MA	RA	2503	57,25	22,25,26	1.46	7 (31%)	32,37,40	2.42	7 (21%)
1	4OC	XA	1402	1	20,23,24	0.86	1 (5%)	25,32,35	0.93	1 (4%)
1	M2G	XA	966	1	24,27,28	1.31	4 (16%)	33,40,43	1.79	6 (18%)
1	UR3	QA	1498	1	19,22,23	0.97	2 (10%)	26,32,35	1.63	3 (11%)
12	0TD	QL	92	12	8,9,10	3.48	2 (25%)	6,11,13	2.20	3 (50%)
25	PSU	YA	1917	25	18,21,22	1.46	4 (22%)	21,30,33	2.17	5 (23%)
25	OMU	YA	2552	57,25	19,22,23	1.46	3 (15%)	25,31,34	2.12	7 (28%)
25	PSU	YA	1911	25	18,21,22	1.58	6 (33%)	21,30,33	2.02	4 (19%)
1	MA6	XA	1518	1	23,26,27	1.57	5 (21%)	33,38,41	2.34	12 (36%)
1	G7M	QA	527	1	23,26,27	2.38	5 (21%)	34,39,42	3.21	10 (29%)
25	OMC	YA	1920	25	19,22,23	0.90	1 (5%)	25,31,34	1.87	5 (20%)
1	5MC	XA	967	1	19,22,23	1.23	2 (10%)	26,32,35	1.33	3 (11%)
1	5MC	XA	1400	1	19,22,23	1.30	3 (15%)	26,32,35	1.22	2 (7%)
1	MA6	QA	1518	1	23,26,27	1.49	5 (21%)	33,38,41	2.38	14 (42%)
1	5MC	QA	1404	1	19,22,23	1.29	2 (10%)	26,32,35	1.42	4 (15%)
1	2MG	XA	1207	1	23,26,27	1.38	4 (17%)	33,38,41	2.28	7 (21%)
25	PSU	RA	1911	25	18,21,22	1.57	5 (27%)	21,30,33	2.17	4 (19%)
25	OMC	RA	1920	25	19,22,23	0.92	1 (5%)	25,31,34	1.93	7 (28%)
25	5MC	YA	1962	25	19,22,23	1.10	2 (10%)	26,32,35	2.29	8 (30%)
56	PPU	ZB	3	56,25	37,40,41	1.25	6 (16%)	47,57,60	2.21	13 (27%)
25	5MC	YA	1942	25	19,22,23	1.25	3 (15%)	26,32,35	1.54	2 (7%)
56	PPU	ZA	3	56,57,25	37,40,41	1.26	6 (16%)	47,57,60	2.32	14 (29%)
1	5MC	XA	1404	1	19,22,23	1.21	2 (10%)	26,32,35	1.35	3 (11%)
1	5MC	QA	1407	1	19,22,23	1.19	3 (15%)	26,32,35	1.10	3 (11%)
25	5MU	YA	1939	57,25	19,22,23	1.51	3 (15%)	27,32,35	2.24	6 (22%)
25	PSU	YA	2605	25	18,21,22	1.63	5 (27%)	21,30,33	2.36	5 (23%)
25	5MC	RA	1962	57,25	19,22,23	1.04	1 (5%)	26,32,35	1.62	7 (26%)
1	MA6	XA	1519	1	23,26,27	1.41	4 (17%)	33,38,41	2.52	11 (33%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
25	2MA	YA	2503	57,25	22,25,26	1.58	5 (22%)	32,37,40	2.65	9 (28%)
25	5MU	RA	1939	57,25	19,22,23	1.45	4 (21%)	27,32,35	2.33	6 (22%)
1	UR3	XA	1498	1	19,22,23	1.02	2 (10%)	26,32,35	1.61	3 (11%)
25	OMG	YA	2251	22,57,25	23,26,27	1.43	4 (17%)	32,38,41	2.22	8 (25%)
1	PSU	QA	516	1	18,21,22	1.38	4 (22%)	21,30,33	2.07	5 (23%)
1	MA6	QA	1519	1	23,26,27	1.50	5 (21%)	33,38,41	2.37	11 (33%)
25	5MC	RA	1942	25	19,22,23	1.21	2 (10%)	26,32,35	1.40	2 (7%)
1	G7M	XA	527	1	23,26,27	2.34	5 (21%)	34,39,42	3.16	11 (32%)
25	5MU	YA	1915	25	19,22,23	1.52	5 (26%)	27,32,35	2.55	9 (33%)
25	PSU	RA	1917	25	18,21,22	1.49	5 (27%)	21,30,33	2.24	4 (19%)
25	OMG	RA	2251	22,57,25	23,26,27	1.38	3 (13%)	32,38,41	2.14	6 (18%)
1	5MC	QA	1400	1	19,22,23	1.36	2 (10%)	26,32,35	1.20	1 (3%)

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
1	4OC	QA	1402	1	-	2/9/29/30	0/2/2/2
1	5MC	QA	967	1	-	0/7/25/26	0/2/2/2
1	PSU	XA	516	57,1	-	0/7/25/26	0/2/2/2
1	5MC	XA	1407	1	-	0/7/25/26	0/2/2/2
25	PSU	RA	2605	25	-	0/7/25/26	0/2/2/2
25	OMU	RA	2552	25	-	3/9/27/28	0/2/2/2
12	0TD	XL	92	12	-	4/7/12/14	-
1	2MG	QA	1207	1	-	0/9/27/28	0/3/3/3
1	M2G	QA	966	1	-	0/11/29/30	0/3/3/3
25	5MU	RA	1915	25	-	3/7/25/26	0/2/2/2
25	2MA	RA	2503	57,25	-	3/7/25/26	0/3/3/3
1	4OC	XA	1402	1	-	2/9/29/30	0/2/2/2
1	M2G	XA	966	1	-	2/11/29/30	0/3/3/3
1	UR3	QA	1498	1	-	2/7/25/26	0/2/2/2
12	0TD	QL	92	12	-	4/7/12/14	-
25	PSU	YA	1917	25	-	0/7/25/26	0/2/2/2
25	OMU	YA	2552	57,25	-	2/9/27/28	0/2/2/2
25	PSU	YA	1911	25	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	MA6	XA	1518	1	-	1/11/29/30	0/3/3/3
1	G7M	QA	527	1	-	2/7/25/26	0/3/3/3
25	OMC	YA	1920	25	-	4/9/27/28	0/2/2/2
1	5MC	XA	967	1	-	0/7/25/26	0/2/2/2
1	5MC	XA	1400	1	-	4/7/25/26	0/2/2/2
1	MA6	QA	1518	1	-	2/11/29/30	0/3/3/3
1	5MC	QA	1404	1	-	0/7/25/26	0/2/2/2
1	2MG	XA	1207	1	-	0/9/27/28	0/3/3/3
25	PSU	RA	1911	25	-	0/7/25/26	0/2/2/2
25	OMC	RA	1920	25	-	4/9/27/28	0/2/2/2
25	5MC	YA	1962	25	-	4/7/25/26	0/2/2/2
56	PPU	ZB	3	56,25	-	5/25/43/44	0/4/4/4
25	5MC	YA	1942	25	-	0/7/25/26	0/2/2/2
56	PPU	ZA	3	56,57,25	-	5/25/43/44	0/4/4/4
1	5MC	XA	1404	1	-	0/7/25/26	0/2/2/2
1	5MC	QA	1407	1	-	0/7/25/26	0/2/2/2
25	5MU	YA	1939	57,25	-	0/7/25/26	0/2/2/2
25	PSU	YA	2605	25	-	0/7/25/26	0/2/2/2
25	5MC	RA	1962	57,25	-	0/7/25/26	0/2/2/2
1	MA6	XA	1519	1	-	6/11/29/30	0/3/3/3
25	2MA	YA	2503	57,25	-	4/7/25/26	0/3/3/3
25	5MU	RA	1939	57,25	-	0/7/25/26	0/2/2/2
1	UR3	XA	1498	1	-	0/7/25/26	0/2/2/2
25	OMG	YA	2251	22,57,25	-	0/9/27/28	0/3/3/3
1	PSU	QA	516	1	-	0/7/25/26	0/2/2/2
1	MA6	QA	1519	1	-	5/11/29/30	0/3/3/3
25	5MC	RA	1942	25	-	0/7/25/26	0/2/2/2
1	G7M	XA	527	1	-	2/7/25/26	0/3/3/3
25	5MU	YA	1915	25	-	4/7/25/26	0/2/2/2
25	PSU	RA	1917	25	-	0/7/25/26	0/2/2/2
25	OMG	RA	2251	22,57,25	-	0/9/27/28	0/3/3/3
1	5MC	QA	1400	1	-	5/7/25/26	0/2/2/2

All (178) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	XL	92	0TD	CB-CA	-11.66	1.51	1.54
12	QL	92	0TD	CB-CA	-9.10	1.51	1.54
1	QA	527	G7M	C8-N7	7.07	1.45	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	XA	527	G7M	C8-N7	6.65	1.44	1.33
1	QA	527	G7M	C5-N7	-5.68	1.32	1.39
1	XA	527	G7M	C5-N7	-5.64	1.32	1.39
1	QA	967	5MC	C5-C4	4.86	1.47	1.44
1	QA	1400	5MC	C5-C4	4.48	1.47	1.44
1	QA	1519	MA6	C5-C4	4.47	1.47	1.39
1	QA	1404	5MC	C5-C4	4.08	1.47	1.44
1	XA	1518	MA6	C5-C4	4.07	1.46	1.39
1	QA	1518	MA6	C5-C4	4.06	1.46	1.39
25	YA	2552	OMU	C4-N3	-4.05	1.31	1.38
25	RA	1915	5MU	C4-N3	-3.94	1.31	1.38
1	XA	1400	5MC	C5-C4	3.90	1.47	1.44
25	RA	2503	2MA	C5-C4	3.86	1.46	1.39
1	QA	527	G7M	C8-N9	3.86	1.46	1.35
1	XA	527	G7M	C8-N9	3.83	1.46	1.35
25	YA	2503	2MA	C5-C4	3.81	1.45	1.39
56	ZB	3	PPU	C5-C4	3.71	1.45	1.39
56	ZA	3	PPU	C5-C4	3.70	1.45	1.39
1	QA	1407	5MC	C5-C4	3.69	1.46	1.44
25	RA	1939	5MU	C4-N3	-3.65	1.32	1.38
25	YA	1915	5MU	C4-N3	-3.64	1.32	1.38
1	XA	967	5MC	C5-C4	3.61	1.46	1.44
1	XA	1519	MA6	C5-C4	3.61	1.45	1.39
25	RA	2605	PSU	C4-N3	-3.56	1.32	1.38
25	RA	2552	OMU	C4-N3	-3.54	1.32	1.38
25	RA	1942	5MC	C6-N1	-3.54	1.32	1.38
25	YA	1942	5MC	C6-N1	-3.50	1.32	1.38
1	XA	1519	MA6	C5-N7	-3.50	1.32	1.39
25	YA	1962	5MC	C6-N1	-3.50	1.32	1.38
25	YA	1939	5MU	C4-N3	-3.47	1.32	1.38
25	YA	2605	PSU	C2-N1	-3.42	1.32	1.36
25	RA	2251	OMG	C6-N1	-3.40	1.32	1.38
25	YA	2251	OMG	C6-N1	-3.39	1.32	1.38
1	XA	1407	5MC	C5-C4	3.38	1.46	1.44
1	QA	527	G7M	C6-N1	-3.35	1.32	1.38
25	YA	1939	5MU	C6-N1	-3.32	1.32	1.38
1	XA	527	G7M	C5-C4	3.32	1.46	1.38
1	XA	1207	2MG	C6-N1	-3.31	1.32	1.38
25	YA	2251	OMG	C5-N7	-3.30	1.32	1.39
25	YA	2503	2MA	C5-N7	-3.27	1.33	1.39
1	QA	527	G7M	C5-C4	3.26	1.46	1.38
25	RA	1962	5MC	C6-N1	-3.25	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	XA	527	G7M	C6-N1	-3.25	1.32	1.38
12	QL	92	0TD	CB-SB	3.20	1.85	1.82
1	XA	1404	5MC	C5-C4	3.17	1.46	1.44
25	YA	1911	PSU	C4-N3	-3.17	1.32	1.38
25	RA	2251	OMG	C5-N7	-3.16	1.32	1.39
25	RA	1939	5MU	C6-N1	-3.16	1.32	1.38
1	XA	1400	5MC	C6-N1	-3.16	1.32	1.38
1	XA	1404	5MC	C6-N1	-3.13	1.32	1.38
25	YA	2605	PSU	C4-N3	-3.09	1.33	1.38
56	ZA	3	PPU	C5-N7	-3.07	1.33	1.39
25	RA	2605	PSU	C2-N3	-3.07	1.32	1.37
1	XA	967	5MC	C6-N1	-3.04	1.32	1.38
25	RA	1917	PSU	C4-N3	-3.03	1.33	1.38
25	RA	1911	PSU	C6-C5	3.02	1.38	1.35
25	YA	1917	PSU	C4-N3	-2.97	1.33	1.38
1	XA	1518	MA6	C5-N7	-2.96	1.33	1.39
1	QA	1207	2MG	C6-N1	-2.93	1.33	1.38
25	YA	2552	OMU	C2-N3	-2.93	1.32	1.38
1	QA	1404	5MC	C6-N1	-2.93	1.33	1.38
1	QA	966	M2G	C6-N1	-2.92	1.33	1.38
25	RA	1911	PSU	C4-N3	-2.90	1.33	1.38
1	XA	966	M2G	C6-N1	-2.87	1.33	1.38
56	ZB	3	PPU	C5-N7	-2.87	1.33	1.39
1	XA	1407	5MC	C6-N1	-2.86	1.33	1.38
1	QA	1207	2MG	C5-N7	-2.86	1.33	1.39
25	RA	2552	OMU	C2-N3	-2.86	1.33	1.38
25	YA	1915	5MU	C6-N1	-2.83	1.33	1.38
1	QA	967	5MC	C6-N1	-2.83	1.33	1.38
25	RA	2503	2MA	C5-N7	-2.83	1.33	1.39
1	QA	1207	2MG	C5-C4	2.83	1.46	1.38
25	YA	1911	PSU	C2-N1	-2.82	1.33	1.36
1	XA	1519	MA6	C4-N9	-2.82	1.31	1.37
25	YA	1915	5MU	C2-N3	-2.81	1.33	1.38
25	RA	1942	5MC	C5-C4	2.81	1.46	1.44
1	XA	516	PSU	C4-N3	-2.79	1.33	1.38
1	QA	1400	5MC	C6-N1	-2.78	1.33	1.38
25	RA	2251	OMG	C5-C4	2.77	1.46	1.38
25	RA	2605	PSU	C2-N1	-2.77	1.33	1.36
25	RA	1917	PSU	C2-N1	-2.77	1.33	1.36
1	XA	1518	MA6	C4-N9	-2.76	1.32	1.37
1	QA	1519	MA6	C5-N7	-2.76	1.34	1.39
1	QA	966	M2G	C5-C4	2.75	1.46	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	QA	516	PSU	C4-N3	-2.75	1.33	1.38
25	RA	1915	5MU	C2-N3	-2.74	1.33	1.38
25	YA	1939	5MU	C2-N3	-2.72	1.33	1.38
25	YA	1915	5MU	C2-N1	2.72	1.42	1.38
1	XA	1207	2MG	C5-N7	-2.71	1.33	1.39
1	XA	1498	UR3	C5-C4	-2.70	1.37	1.43
1	QA	1518	MA6	C5-N7	-2.69	1.34	1.39
25	RA	1920	OMC	C5-C4	-2.67	1.36	1.42
25	RA	1911	PSU	C2-N1	-2.66	1.33	1.36
25	RA	1939	5MU	C2-N3	-2.65	1.33	1.38
1	XA	1207	2MG	C5-C4	2.65	1.46	1.38
1	XA	966	M2G	C5-C4	2.64	1.46	1.38
25	YA	1917	PSU	C2-N3	-2.64	1.33	1.37
25	YA	2605	PSU	C6-C5	2.64	1.38	1.35
25	RA	1915	5MU	C2-N1	2.64	1.42	1.38
1	XA	966	M2G	C4-N9	-2.64	1.31	1.38
25	YA	2251	OMG	C5-C4	2.63	1.45	1.38
25	YA	2605	PSU	C2-N3	-2.61	1.33	1.37
1	QA	1518	MA6	C4-N9	-2.60	1.32	1.37
25	YA	1911	PSU	C2-N3	-2.60	1.33	1.37
25	YA	1920	OMC	C5-C4	-2.59	1.36	1.42
1	XA	1518	MA6	C5-C6	2.58	1.48	1.41
25	YA	1917	PSU	C2-N1	-2.57	1.33	1.36
1	XA	966	M2G	C5-N7	-2.51	1.34	1.39
25	YA	2503	2MA	C8-N9	-2.50	1.33	1.37
1	XA	516	PSU	C6-C5	2.50	1.38	1.35
25	RA	1915	5MU	C6-C5	2.49	1.38	1.34
25	YA	1942	5MC	C5-C4	2.49	1.46	1.44
1	XA	1498	UR3	C6-N1	-2.47	1.32	1.38
1	XA	516	PSU	C2-N3	-2.47	1.33	1.37
25	RA	1915	5MU	C6-N1	-2.45	1.33	1.38
25	YA	1962	5MC	C5-C4	2.44	1.46	1.44
25	RA	2605	PSU	C1'-C5	-2.44	1.44	1.50
25	YA	2552	OMU	C6-N1	-2.44	1.32	1.38
1	QA	1498	UR3	C5-C4	-2.43	1.37	1.43
1	QA	966	M2G	C5-N7	-2.42	1.34	1.39
1	XA	1518	MA6	C8-N9	-2.42	1.33	1.37
25	RA	1917	PSU	C2-N3	-2.42	1.33	1.37
25	RA	1939	5MU	C6-C5	2.42	1.38	1.34
1	QA	1519	MA6	C8-N9	-2.40	1.33	1.37
1	QA	966	M2G	C4-N9	-2.39	1.32	1.38
25	RA	1911	PSU	C2-N3	-2.38	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	QA	1519	MA6	C4-N9	-2.37	1.32	1.37
1	QA	1519	MA6	C5-C6	2.35	1.47	1.41
56	ZB	3	PPU	C8-N9	-2.34	1.33	1.37
1	XA	1402	4OC	C6-N1	-2.34	1.32	1.38
25	RA	2552	OMU	C6-N1	-2.33	1.32	1.38
1	QA	516	PSU	C2-N3	-2.32	1.33	1.37
1	XA	1207	2MG	C4-N9	-2.29	1.32	1.38
1	QA	1498	UR3	C6-N1	-2.29	1.32	1.38
1	QA	516	PSU	C6-C5	2.28	1.37	1.35
1	QA	1407	5MC	C6-C5	2.28	1.38	1.34
1	QA	1518	MA6	C5-C6	2.28	1.47	1.41
1	QA	1407	5MC	C6-N1	-2.27	1.34	1.38
1	QA	967	5MC	C6-C5	2.26	1.38	1.34
1	QA	1518	MA6	C8-N9	-2.26	1.33	1.37
25	RA	2503	2MA	C4-N9	-2.24	1.33	1.37
56	ZA	3	PPU	C8-N9	-2.24	1.33	1.37
25	YA	1911	PSU	O4'-C1'	-2.23	1.40	1.43
1	XA	516	PSU	C2-N1	-2.23	1.33	1.36
25	RA	1917	PSU	C6-C5	2.23	1.37	1.35
25	YA	1911	PSU	C1'-C5	-2.23	1.45	1.50
1	XA	1407	5MC	C6-C5	2.23	1.38	1.34
56	ZB	3	PPU	C5-C6	2.22	1.47	1.41
12	XL	92	0TD	OD2-CG	-2.21	1.23	1.30
25	YA	2503	2MA	C4-N9	-2.21	1.33	1.37
25	RA	2503	2MA	C5-C6	2.21	1.47	1.41
25	YA	2251	OMG	C8-N9	-2.20	1.32	1.37
1	QA	966	M2G	C2-N2	2.20	1.39	1.35
25	YA	2503	2MA	C6-N1	-2.18	1.32	1.35
56	ZB	3	PPU	C8-N7	2.18	1.35	1.31
56	ZB	3	PPU	C4-N9	-2.18	1.33	1.37
56	ZA	3	PPU	C4-N9	-2.12	1.33	1.37
25	YA	1917	PSU	C6-C5	2.11	1.37	1.35
12	XL	92	0TD	CB-SB	2.11	1.84	1.82
1	QA	1207	2MG	C4-N9	-2.09	1.32	1.38
1	XA	1400	5MC	C6-C5	2.09	1.38	1.34
56	ZA	3	PPU	C5-C6	2.08	1.46	1.41
25	RA	1911	PSU	O4'-C1'	-2.07	1.41	1.43
25	YA	1911	PSU	C6-C5	2.06	1.37	1.35
1	XA	1519	MA6	C8-N9	-2.06	1.34	1.37
25	RA	2503	2MA	C6-N1	-2.04	1.32	1.35
25	YA	1942	5MC	C6-C5	2.03	1.37	1.34
25	RA	1917	PSU	C6-N1	-2.03	1.33	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	ZA	3	PPU	C8-N7	2.02	1.35	1.31
25	RA	2503	2MA	C8-N9	-2.02	1.34	1.37
1	QA	516	PSU	C2-N1	-2.02	1.34	1.36
25	RA	2503	2MA	C8-N7	2.01	1.35	1.31
25	YA	2605	PSU	C6-N1	-2.01	1.33	1.36
25	YA	1915	5MU	C6-C5	2.01	1.37	1.34
1	XA	516	PSU	O4'-C1'	-2.01	1.41	1.43

All (298) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	YA	2503	2MA	C5-C4-N3	-9.78	116.88	127.18
25	RA	2503	2MA	C5-C4-N3	-9.19	117.50	127.18
1	XA	527	G7M	CN7-N7-C8	-9.10	111.01	124.79
1	QA	527	G7M	CN7-N7-C8	-8.93	111.26	124.79
25	YA	2503	2MA	N3-C4-N9	8.10	137.26	126.99
25	YA	2251	OMG	C5-C4-N3	-7.34	116.70	128.39
1	QA	527	G7M	C8-N7-C5	7.30	116.91	107.78
25	RA	2251	OMG	C5-C4-N3	-7.21	116.92	128.39
1	QA	1207	2MG	C2-N3-C4	7.19	121.00	112.00
25	RA	2503	2MA	N3-C4-N9	7.18	136.10	126.99
1	XA	1207	2MG	C2-N3-C4	7.18	120.98	112.00
56	ZA	3	PPU	C5-C4-N3	-7.05	117.01	126.72
1	QA	527	G7M	N9-C8-N7	-6.91	95.70	112.48
56	ZB	3	PPU	C5-C4-N3	-6.87	117.26	126.72
1	XA	527	G7M	N9-C4-N3	6.74	139.43	125.95
1	XA	527	G7M	N9-C8-N7	-6.69	96.24	112.48
1	QA	1207	2MG	C5-C4-N3	-6.68	117.75	128.39
1	XA	527	G7M	C8-N7-C5	6.65	116.10	107.78
25	RA	1917	PSU	N1-C2-N3	6.64	122.18	115.17
25	RA	2605	PSU	N1-C2-N3	6.56	122.09	115.17
1	XA	1207	2MG	C5-C4-N3	-6.56	117.95	128.39
25	RA	1911	PSU	N1-C2-N3	6.55	122.08	115.17
1	QA	527	G7M	N9-C4-N3	6.54	139.04	125.95
25	YA	1917	PSU	N1-C2-N3	6.53	122.06	115.17
25	YA	2605	PSU	N1-C2-N3	6.37	121.88	115.17
1	QA	1498	UR3	C4-N3-C2	-6.34	119.47	124.58
25	RA	1915	5MU	N3-C2-N1	6.34	123.14	114.89
25	YA	1911	PSU	N1-C2-N3	6.13	121.63	115.17
1	XA	1519	MA6	C5-C4-N3	-6.11	118.30	126.72
1	QA	527	G7M	C5-C4-N3	-6.07	116.68	128.15
25	YA	2552	OMU	N3-C2-N1	6.01	122.71	114.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	XA	1518	MA6	C5-C4-N3	-6.01	118.44	126.72
1	XA	527	G7M	C5-C4-N3	-5.96	116.88	128.15
25	RA	1939	5MU	N3-C2-N1	5.82	122.47	114.89
1	QA	966	M2G	C5-C4-N3	-5.80	119.16	128.39
25	YA	2251	OMG	N9-C4-N3	5.78	137.51	125.95
1	QA	1519	MA6	C5-C4-N3	-5.74	118.82	126.72
25	RA	2251	OMG	N9-C4-N3	5.73	137.41	125.95
1	QA	516	PSU	N1-C2-N3	5.66	121.14	115.17
25	RA	1939	5MU	C4-N3-C2	-5.64	119.95	127.34
1	XA	1498	UR3	C4-N3-C2	-5.57	120.09	124.58
1	XA	966	M2G	C5-C4-N3	-5.56	119.54	128.39
25	YA	1962	5MC	C1'-N1-C6	-5.55	112.02	121.15
25	YA	1915	5MU	N3-C2-N1	5.39	121.91	114.89
25	YA	1942	5MC	C5-C6-N1	-5.36	117.49	123.31
25	YA	1939	5MU	C4-N3-C2	-5.35	120.32	127.34
1	XA	1519	MA6	C9-N6-C6	-5.34	106.94	120.52
25	YA	2605	PSU	O2-C2-N1	-5.23	117.40	122.79
56	ZA	3	PPU	N3-C4-N9	5.19	135.99	127.17
25	YA	1939	5MU	N3-C2-N1	5.19	121.65	114.89
25	RA	2552	OMU	N3-C2-N1	5.12	121.55	114.89
1	QA	1518	MA6	C5-C4-N3	-5.08	119.72	126.72
25	YA	1915	5MU	C1'-N1-C2	5.08	126.71	117.59
25	YA	1939	5MU	O4-C4-C5	-5.05	119.14	124.92
56	ZB	3	PPU	N3-C4-N9	5.00	135.67	127.17
1	XA	1518	MA6	C4-C5-N7	-4.98	104.89	110.58
25	YA	2251	OMG	C2-N3-C4	4.96	120.84	112.30
25	YA	2552	OMU	C4-N3-C2	-4.95	120.46	126.61
25	RA	2251	OMG	C2-N3-C4	4.95	120.83	112.30
25	RA	2605	PSU	C4-N3-C2	-4.95	119.55	126.37
25	YA	1915	5MU	C4-N3-C2	-4.90	120.91	127.34
1	XA	527	G7M	CN7-N7-C5	4.89	132.89	126.80
25	RA	1915	5MU	C1'-N1-C2	4.84	126.28	117.59
25	RA	1917	PSU	O2-C2-N1	-4.84	117.80	122.79
1	XA	1207	2MG	N9-C4-N3	4.80	135.54	125.95
1	XA	516	PSU	N1-C2-N3	4.76	120.19	115.17
25	YA	1962	5MC	C5-C4-N4	-4.76	114.69	121.39
25	RA	1915	5MU	O2-C2-N3	-4.74	112.74	121.49
1	QA	966	M2G	N9-C4-N3	4.74	135.42	125.95
25	YA	1920	OMC	C1'-N1-C2	4.71	128.84	118.44
25	RA	1920	OMC	O2-C2-N3	-4.66	114.98	122.33
1	QA	1207	2MG	N9-C4-N3	4.62	135.20	125.95
25	RA	2552	OMU	CM2-O2'-C2'	-4.58	102.71	114.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	RA	1920	OMC	C1'-N1-C2	4.57	128.53	118.44
25	YA	1920	OMC	O2-C2-N3	-4.53	115.18	122.33
25	RA	1942	5MC	C5-C6-N1	-4.51	118.42	123.31
25	RA	1939	5MU	O4-C4-C5	-4.51	119.76	124.92
25	RA	1915	5MU	C4-N3-C2	-4.50	121.44	127.34
25	RA	1911	PSU	O2-C2-N1	-4.49	118.16	122.79
1	QA	527	G7M	C2-N3-C4	4.48	120.01	112.30
1	XA	1519	MA6	N3-C4-N9	4.48	134.78	127.17
1	XA	1519	MA6	N1-C6-N6	4.47	122.31	116.86
1	QA	516	PSU	C4-N3-C2	-4.46	120.22	126.37
56	ZA	3	PPU	C9-N6-C6	-4.45	109.21	120.52
25	RA	2552	OMU	C4-N3-C2	-4.44	121.10	126.61
1	XA	527	G7M	C2-N3-C4	4.44	119.94	112.30
25	RA	1939	5MU	C5-C6-N1	-4.42	118.51	123.31
1	QA	967	5MC	C5-C6-N1	-4.42	118.51	123.31
25	YA	1915	5MU	O2-C2-N3	-4.42	113.34	121.49
1	QA	1518	MA6	C2-N1-C6	4.41	122.61	111.83
25	YA	1915	5MU	C5-C4-N3	4.36	119.12	115.32
1	XA	1519	MA6	C10-N6-C6	-4.35	109.45	120.52
25	YA	1939	5MU	C5-C4-N3	4.33	119.09	115.32
1	XA	1518	MA6	C2-N1-C6	4.33	122.41	111.83
1	XA	1400	5MC	C5-C6-N1	-4.28	118.66	123.31
25	YA	1962	5MC	C5-C6-N1	-4.28	118.66	123.31
56	ZA	3	PPU	CG-CB-CA	-4.27	105.40	114.13
1	XA	967	5MC	C5-C6-N1	-4.26	118.68	123.31
25	RA	1915	5MU	C6-N1-C2	-4.26	117.06	121.30
1	QA	1519	MA6	N3-C4-N9	4.24	134.38	127.17
1	QA	1518	MA6	N1-C6-N6	4.23	122.01	116.86
25	YA	1915	5MU	O4-C4-C5	-4.23	120.08	124.92
25	YA	1917	PSU	C4-N3-C2	-4.22	120.56	126.37
1	QA	1519	MA6	C10-N6-C6	-4.21	109.82	120.52
25	RA	1939	5MU	C5-C4-N3	4.20	118.97	115.32
56	ZB	3	PPU	C2-N3-C4	4.19	122.06	111.83
1	XA	1404	5MC	C5-C6-N1	-4.19	118.76	123.31
25	RA	1917	PSU	C4-N3-C2	-4.17	120.63	126.37
1	QA	1519	MA6	C9-N6-C6	-4.14	110.00	120.52
1	XA	516	PSU	C6-C5-C4	-4.13	115.38	118.17
56	ZA	3	PPU	C10-N6-C6	-4.11	110.05	120.52
25	YA	2605	PSU	C4-N3-C2	-4.11	120.71	126.37
1	XA	527	G7M	C8-N9-C4	4.11	117.27	107.09
56	ZB	3	PPU	C10-N6-C6	-4.10	110.09	120.52
25	RA	1911	PSU	C4-N3-C2	-4.09	120.74	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	YA	1962	5MC	C1'-N1-C2	4.08	127.46	118.44
1	QA	1519	MA6	N1-C6-N6	4.08	121.83	116.86
1	QA	1519	MA6	C2-N1-C6	4.08	121.80	111.83
1	XA	966	M2G	C2-N3-C4	4.07	120.04	112.51
25	YA	1915	5MU	C1'-N1-C6	-4.06	114.47	121.15
1	QA	966	M2G	C2-N3-C4	4.06	120.01	112.51
1	QA	527	G7M	C8-N9-C4	4.05	117.13	107.09
1	QA	1400	5MC	C5-C6-N1	-4.05	118.92	123.31
1	QA	527	G7M	CN7-N7-C5	4.03	131.83	126.80
56	ZA	3	PPU	C2-N3-C4	4.02	121.64	111.83
25	YA	2552	OMU	O2-C2-N1	-3.95	117.66	122.80
1	QA	516	PSU	O2-C2-N1	-3.93	118.74	122.79
1	QA	1518	MA6	C4-C5-N7	-3.92	106.10	110.58
56	ZB	3	PPU	C9-N6-C6	-3.92	110.56	120.52
25	YA	1917	PSU	O2-C2-N1	-3.91	118.75	122.79
56	ZA	3	PPU	N1-C6-N6	3.87	121.58	116.86
1	QA	1518	MA6	N3-C4-N9	3.85	133.71	127.17
25	YA	1911	PSU	C4-N3-C2	-3.84	121.08	126.37
25	YA	1962	5MC	C4-N3-C2	-3.82	115.50	120.81
1	XA	1519	MA6	C2-N1-C6	3.81	121.15	111.83
1	QA	527	G7M	C1'-N9-C8	-3.81	113.87	126.74
1	QA	1518	MA6	C9-N6-C6	-3.79	110.87	120.52
25	YA	1911	PSU	O2-C2-N1	-3.79	118.89	122.79
56	ZB	3	PPU	CG-CB-CA	-3.79	106.38	114.13
1	XA	966	M2G	N9-C4-N3	3.77	133.49	125.95
1	QA	1404	5MC	O2-C2-N3	-3.72	116.46	122.33
56	ZB	3	PPU	C2-N1-C6	3.71	120.88	111.83
1	XA	516	PSU	C4-N3-C2	-3.69	121.28	126.37
1	XA	1518	MA6	C2-N3-C4	3.69	120.85	111.83
25	YA	1939	5MU	C5-C6-N1	-3.67	119.33	123.31
1	XA	1519	MA6	C2-N3-C4	3.66	120.78	111.83
1	XA	1519	MA6	C5-C6-N6	-3.66	119.54	125.33
1	XA	1518	MA6	C9-N6-C6	-3.63	111.28	120.52
25	RA	2605	PSU	O2-C2-N1	-3.62	119.05	122.79
1	XA	1518	MA6	N3-C4-N9	3.60	133.28	127.17
25	RA	1939	5MU	O2-C2-N1	-3.59	118.13	122.80
1	QA	1519	MA6	C4-C5-N7	-3.55	106.52	110.58
56	ZB	3	PPU	C4-C5-N7	-3.55	106.53	110.58
1	QA	1519	MA6	C2-N3-C4	3.54	120.49	111.83
56	ZB	3	PPU	N1-C6-N6	3.50	121.12	116.86
1	QA	1404	5MC	C5-C4-N3	-3.49	118.18	121.75
25	RA	1962	5MC	C1'-N1-C6	-3.48	115.42	121.15

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	ZA	3	PPU	C5-C6-N6	-3.46	119.86	125.33
25	RA	1962	5MC	C5-C6-N1	-3.46	119.56	123.31
1	XA	966	M2G	C6-C5-N7	3.39	136.45	130.29
1	QA	1518	MA6	C2-N3-C4	3.39	120.10	111.83
56	ZA	3	PPU	C2-N1-C6	3.36	120.03	111.83
56	ZA	3	PPU	C4-C5-N7	-3.34	106.77	110.58
25	YA	2503	2MA	C1'-N9-C8	-3.33	119.71	127.09
25	YA	1920	OMC	C1'-N1-C6	-3.29	113.76	120.78
25	YA	1920	OMC	O2-C2-N1	3.28	125.33	118.90
1	QA	1498	UR3	C5-C4-N3	3.27	119.34	115.04
1	QA	1518	MA6	N1-C2-N3	-3.24	123.67	128.58
25	RA	2503	2MA	C4-C5-N7	-3.24	106.88	110.58
1	XA	1407	5MC	C5-C6-N1	-3.22	119.81	123.31
25	RA	1920	OMC	O2-C2-N1	3.22	125.21	118.90
1	XA	1407	5MC	C1'-N1-C6	3.21	126.43	121.15
56	ZB	3	PPU	N3-C2-N1	-3.21	123.73	128.58
25	RA	1962	5MC	O2-C2-N3	-3.17	117.33	122.33
25	RA	1915	5MU	C5-C4-N3	3.17	118.08	115.32
12	QL	92	0TD	OD1-CG-CB	-3.15	115.83	122.44
1	XA	1519	MA6	N1-C2-N3	-3.15	123.82	128.58
1	XA	1407	5MC	C5-C4-N3	-3.14	118.53	121.75
25	RA	1942	5MC	C5-C4-N3	-3.14	118.53	121.75
1	XA	1518	MA6	C10-N6-C9	-3.14	106.10	116.18
1	XA	1498	UR3	C5-C4-N3	3.14	119.17	115.04
25	YA	2605	PSU	C6-C5-C4	-3.11	116.08	118.17
1	QA	1519	MA6	N1-C2-N3	-3.10	123.89	128.58
1	QA	1518	MA6	C10-N6-C6	-3.10	112.64	120.52
1	XA	1518	MA6	N1-C2-N3	-3.07	123.94	128.58
12	QL	92	0TD	OD2-CG-CB	3.06	119.77	113.15
1	QA	1518	MA6	C4-N9-C8	3.06	108.95	105.74
25	RA	2552	OMU	O4-C4-C5	-3.03	119.94	125.16
56	ZB	3	PPU	C5-C6-N6	-3.02	120.55	125.33
1	XA	1207	2MG	C6-C5-N7	2.98	135.71	130.29
25	YA	1920	OMC	CM2-O2'-C2'	-2.98	106.83	114.47
1	XA	1519	MA6	C4-C5-N7	-2.98	107.18	110.58
1	QA	1207	2MG	C2-N1-C6	-2.95	120.98	124.55
25	YA	1962	5MC	N4-C4-N3	2.95	123.84	118.51
1	XA	1518	MA6	C5-N7-C8	2.94	108.07	103.45
1	QA	1519	MA6	C5-C6-N6	-2.93	120.69	125.33
1	QA	1404	5MC	C5-C6-N1	-2.93	120.14	123.31
25	YA	1917	PSU	C6-C5-C4	-2.93	116.20	118.17
1	XA	1498	UR3	C1'-N1-C2	2.89	121.77	117.04

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	RA	2552	OMU	C5-C4-N3	2.87	118.82	114.80
1	XA	1519	MA6	C10-N6-C9	-2.86	106.98	116.18
1	XA	516	PSU	O2-C2-N1	-2.84	119.86	122.79
1	QA	1207	2MG	C6-C5-N7	2.84	135.46	130.29
25	YA	1962	5MC	N1-C2-N3	2.84	123.73	118.80
25	RA	1917	PSU	C6-C5-C4	-2.84	116.26	118.17
12	XL	92	0TD	O-C-CA	-2.84	117.47	124.77
25	YA	2503	2MA	C4-C5-N7	-2.82	107.35	110.58
1	QA	966	M2G	C6-C5-N7	2.82	135.43	130.29
1	XA	1207	2MG	CM2-N2-C2	-2.79	117.66	123.65
25	YA	2552	OMU	C5-C4-N3	2.78	118.69	114.80
1	QA	1518	MA6	C5-N7-C8	2.76	107.78	103.45
25	RA	1962	5MC	C5-C4-N3	-2.75	118.93	121.75
12	QL	92	0TD	O-C-CA	-2.75	117.69	124.77
25	RA	1915	5MU	C1'-N1-C6	-2.74	116.63	121.15
25	RA	1920	OMC	C6-N1-C2	-2.72	115.87	120.46
56	ZA	3	PPU	N3-C2-N1	-2.72	124.47	128.58
25	YA	2503	2MA	N6-C6-N1	2.70	120.68	117.03
1	QA	1407	5MC	C5-C6-N1	-2.70	120.38	123.31
25	RA	1920	OMC	N4-C4-N3	2.69	122.72	117.91
1	XA	966	M2G	C4-C5-N7	-2.68	106.43	110.67
25	RA	2552	OMU	O2-C2-N1	-2.66	119.34	122.80
1	XA	527	G7M	C1'-N9-C8	-2.62	117.89	126.74
25	YA	1942	5MC	C5-C4-N3	-2.62	119.07	121.75
1	QA	1207	2MG	C4-C5-N7	-2.62	106.53	110.67
25	RA	1915	5MU	O4-C4-C5	-2.61	121.94	124.92
25	YA	2552	OMU	O4-C4-C5	-2.60	120.67	125.16
1	QA	1519	MA6	C10-N6-C9	-2.60	107.82	116.18
1	XA	1207	2MG	C4-C5-N7	-2.60	106.56	110.67
1	QA	1407	5MC	C5-C4-N3	-2.56	119.13	121.75
56	ZA	3	PPU	O4'-C1'-C2'	-2.56	101.15	106.62
1	QA	516	PSU	O4'-C1'-C2'	2.55	108.68	105.15
25	YA	1915	5MU	C5-C6-N1	-2.53	120.56	123.31
25	RA	2503	2MA	C4-N9-C8	2.52	108.38	105.74
1	QA	1518	MA6	C5-C6-N6	-2.50	121.37	125.33
25	RA	1920	OMC	C1'-N1-C6	-2.50	115.43	120.78
1	XA	1207	2MG	C2-N1-C6	-2.50	121.53	124.55
25	YA	1915	5MU	C6-N1-C2	-2.49	118.82	121.30
1	XA	1404	5MC	C5-C4-N3	-2.47	119.22	121.75
1	XA	516	PSU	O4'-C1'-C2'	2.44	108.53	105.15
25	RA	1962	5MC	N4-C4-N3	2.44	122.93	118.51
25	RA	1962	5MC	C1'-N1-C2	2.42	123.77	118.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	XA	1518	MA6	C10-N6-C6	-2.41	114.38	120.52
25	RA	2503	2MA	C5-N7-C8	2.39	107.20	103.45
1	QA	967	5MC	C5-C4-N3	-2.38	119.31	121.75
1	XA	967	5MC	C5-C4-N3	-2.37	119.32	121.75
1	XA	1518	MA6	C6-C5-N7	2.37	137.21	133.43
1	QA	1518	MA6	N9-C8-N7	-2.36	110.58	113.94
1	QA	1518	MA6	C10-N6-C9	-2.35	108.62	116.18
25	YA	1962	5MC	O2-C2-N3	-2.34	118.64	122.33
25	YA	2251	OMG	C1'-N9-C8	-2.34	120.08	126.73
25	YA	2503	2MA	C4-N9-C1'	2.34	132.11	126.63
25	YA	1911	PSU	O4'-C1'-C2'	2.33	108.38	105.15
25	YA	2503	2MA	C4-N9-C8	2.33	108.18	105.74
25	YA	2251	OMG	CM2-O2'-C2'	-2.32	108.52	114.47
25	RA	1962	5MC	C5-C4-N4	-2.31	118.14	121.39
1	QA	1207	2MG	N2-C2-N3	-2.30	117.58	120.51
1	XA	527	G7M	O6-C6-C5	-2.30	122.88	128.01
56	ZA	3	PPU	C4-C5-C6	2.29	118.28	115.91
25	YA	2552	OMU	CM2-O2'-C2'	-2.29	108.59	114.47
1	XA	1407	5MC	O2-C2-N3	-2.29	118.72	122.33
56	ZB	3	PPU	C5-N7-C8	2.29	107.05	103.45
1	XA	1404	5MC	O2-C2-N3	-2.29	118.72	122.33
1	XA	1407	5MC	C1'-N1-C2	-2.28	113.39	118.44
25	RA	2251	OMG	O6-C6-C5	-2.28	120.52	126.53
25	RA	1920	OMC	CM2-O2'-C2'	-2.28	108.63	114.47
25	YA	2552	OMU	C1'-N1-C6	2.26	125.61	120.78
1	QA	516	PSU	C5-C6-N1	-2.26	119.01	122.14
56	ZB	3	PPU	C3'-N3'-C	-2.25	119.78	123.20
1	XA	1518	MA6	C5-C4-N9	2.25	108.26	105.81
25	YA	2251	OMG	C4-C5-N7	-2.23	107.14	110.67
1	XA	1400	5MC	C5-C4-N3	-2.23	119.47	121.75
25	RA	2605	PSU	C5-C6-N1	-2.22	119.06	122.14
1	QA	1498	UR3	C3U-N3-C4	2.21	120.94	117.87
25	RA	2503	2MA	N6-C6-N1	2.21	120.01	117.03
56	ZA	3	PPU	C5-N7-C8	2.21	106.92	103.45
1	QA	966	M2G	C4-C5-N7	-2.16	107.24	110.67
1	QA	1404	5MC	CM5-C5-C6	-2.14	119.95	122.85
1	QA	966	M2G	O6-C6-C5	-2.13	120.92	126.53
25	YA	2251	OMG	O6-C6-C5	-2.12	120.92	126.53
25	RA	2251	OMG	CM2-O2'-C2'	-2.11	109.05	114.47
25	YA	2503	2MA	C5-N7-C8	2.11	106.77	103.45
1	XA	966	M2G	O6-C6-C5	-2.11	120.97	126.53
25	RA	2605	PSU	O2'-C2'-C1'	-2.10	106.22	111.21

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	QA	1407	5MC	O2-C2-N3	-2.10	119.02	122.33
25	YA	2251	OMG	C2-N1-C6	-2.10	121.30	125.11
1	QA	1207	2MG	CM2-N2-C2	-2.10	119.14	123.65
25	YA	1939	5MU	O2-C2-N1	-2.10	120.06	122.80
1	QA	1207	2MG	O6-C6-C5	-2.10	121.00	126.53
25	RA	2503	2MA	C2-N1-C6	2.09	121.31	118.10
25	RA	1911	PSU	C6-C5-C4	-2.09	116.77	118.17
1	QA	527	G7M	C5-C6-N1	2.04	116.06	111.84
25	YA	1917	PSU	O4'-C1'-C2'	2.03	107.96	105.15
1	XA	967	5MC	O2-C2-N3	-2.03	119.13	122.33
25	RA	2251	OMG	C4-C5-N7	-2.02	107.47	110.67
25	YA	2503	2MA	C2-N1-C6	2.01	121.19	118.10
25	YA	2605	PSU	C3'-C2'-C1'	-2.01	99.32	101.69
1	XA	1402	4OC	C6-C5-C4	2.00	119.41	117.00
1	XA	527	G7M	C5-C6-N1	2.00	115.98	111.84

There are no chirality outliers.

All (84) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
12	QL	92	0TD	O-C-CA-CB
12	QL	92	0TD	CA-CB-SB-CSB
12	QL	92	0TD	CG-CB-SB-CSB
1	QA	527	G7M	O4'-C4'-C5'-O5'
1	QA	527	G7M	C3'-C4'-C5'-O5'
1	QA	1519	MA6	O4'-C4'-C5'-O5'
1	QA	1519	MA6	C5-C6-N6-C10
1	XA	1519	MA6	O4'-C4'-C5'-O5'
1	XA	1519	MA6	C5-C6-N6-C9
1	XA	1519	MA6	N1-C6-N6-C9
25	RA	1915	5MU	O4'-C1'-N1-C2
25	RA	1915	5MU	O4'-C1'-N1-C6
25	YA	1915	5MU	O4'-C1'-N1-C2
25	YA	1915	5MU	O4'-C1'-N1-C6
56	ZB	3	PPU	CE1-CZ-OC-CM
56	ZB	3	PPU	CE2-CZ-OC-CM
56	ZA	3	PPU	C3'-C4'-C5'-O5'
1	XA	527	G7M	C3'-C4'-C5'-O5'
1	QA	1402	4OC	O4'-C4'-C5'-O5'
1	XA	1402	4OC	O4'-C4'-C5'-O5'
1	QA	1498	UR3	O4'-C4'-C5'-O5'
1	QA	1498	UR3	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
1	QA	1519	MA6	C3'-C4'-C5'-O5'
1	XA	1519	MA6	C3'-C4'-C5'-O5'
56	ZA	3	PPU	O4'-C4'-C5'-O5'
25	YA	1915	5MU	O4'-C4'-C5'-O5'
25	YA	2503	2MA	O4'-C4'-C5'-O5'
1	QA	1400	5MC	C2'-C1'-N1-C6
1	XA	1402	4OC	C3'-C4'-C5'-O5'
25	RA	2503	2MA	O4'-C4'-C5'-O5'
1	XA	527	G7M	O4'-C4'-C5'-O5'
1	QA	1402	4OC	C3'-C4'-C5'-O5'
56	ZA	3	PPU	C5-C6-N6-C9
56	ZB	3	PPU	C5-C6-N6-C9
25	YA	1962	5MC	C2'-C1'-N1-C6
56	ZB	3	PPU	N-CA-CB-CG
1	QA	1519	MA6	C4'-C5'-O5'-P
56	ZA	3	PPU	CE2-CZ-OC-CM
25	YA	2503	2MA	O4'-C1'-N9-C4
25	YA	2503	2MA	C3'-C4'-C5'-O5'
56	ZA	3	PPU	CE1-CZ-OC-CM
25	YA	1915	5MU	C3'-C4'-C5'-O5'
25	YA	2503	2MA	O4'-C1'-N9-C8
1	QA	1518	MA6	C5-C6-N6-C10
1	XA	1519	MA6	C5-C6-N6-C10
1	XA	966	M2G	C3'-C4'-C5'-O5'
25	YA	1920	OMC	C3'-C4'-C5'-O5'
12	XL	92	0TD	CA-CB-CG-OD2
12	XL	92	0TD	CG-CB-SB-CSB
1	QA	1400	5MC	C2'-C1'-N1-C2
1	QA	1400	5MC	O4'-C1'-N1-C6
25	RA	1920	OMC	C3'-C4'-C5'-O5'
1	QA	1519	MA6	N1-C6-N6-C10
1	XA	1400	5MC	O4'-C4'-C5'-O5'
25	RA	1915	5MU	O4'-C4'-C5'-O5'
12	XL	92	0TD	SB-CB-CG-OD1
25	YA	1962	5MC	C2'-C1'-N1-C2
1	QA	1400	5MC	O4'-C1'-N1-C2
25	RA	2503	2MA	O4'-C1'-N9-C4
25	YA	1962	5MC	O4'-C1'-N1-C6
1	XA	1519	MA6	C4'-C5'-O5'-P
25	YA	1920	OMC	C2'-C1'-N1-C6
1	XA	966	M2G	O4'-C4'-C5'-O5'
1	XA	1518	MA6	C5-C6-N6-C10

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Mol	Chain	Res	Type	Atoms
56	ZB	3	PPU	C5-C6-N6-C10
1	QA	1518	MA6	N1-C6-N6-C10
25	YA	2552	OMU	C3'-C2'-O2'-CM2
25	RA	1920	OMC	O4'-C4'-C5'-O5'
25	YA	1920	OMC	O4'-C4'-C5'-O5'
25	RA	1920	OMC	C2'-C1'-N1-C6
25	RA	2503	2MA	O4'-C1'-N9-C8
12	QL	92	0TD	SB-CB-CG-OD2
12	XL	92	0TD	SB-CB-CG-OD2
25	YA	1920	OMC	C2'-C1'-N1-C2
25	RA	2552	OMU	O4'-C4'-C5'-O5'
25	YA	2552	OMU	C3'-C4'-C5'-O5'
25	RA	2552	OMU	C3'-C2'-O2'-CM2
25	YA	1962	5MC	O4'-C1'-N1-C2
1	QA	1400	5MC	O4'-C4'-C5'-O5'
1	XA	1400	5MC	C2'-C1'-N1-C6
1	XA	1400	5MC	O4'-C1'-N1-C6
1	XA	1400	5MC	C3'-C4'-C5'-O5'
25	RA	2552	OMU	C4'-C5'-O5'-P
25	RA	1920	OMC	C2'-C1'-N1-C2

There are no ring outliers.

26 monomers are involved in 47 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	QA	1402	4OC	1	0
1	XA	1407	5MC	1	0
25	RA	2552	OMU	3	0
12	XL	92	0TD	1	0
1	QA	966	M2G	1	0
25	RA	2503	2MA	2	0
1	XA	1402	4OC	1	0
12	QL	92	0TD	2	0
25	YA	1917	PSU	1	0
25	YA	2552	OMU	2	0
1	XA	1518	MA6	1	0
25	YA	1920	OMC	2	0
1	XA	967	5MC	1	0
1	XA	1207	2MG	2	0
25	RA	1920	OMC	1	0
25	YA	1962	5MC	1	0
56	ZB	3	PPU	4	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
56	ZA	3	PPU	10	0
1	XA	1404	5MC	2	0
25	YA	1939	5MU	1	0
25	YA	2503	2MA	1	0
25	YA	2251	OMG	1	0
1	QA	1519	MA6	1	0
25	RA	1942	5MC	1	0
25	RA	2251	OMG	2	0
1	QA	1400	5MC	1	0

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 1328 ligands modelled in this entry, 1326 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
58	SF4	QD	303	4	0,12,12	-	-	-		
58	SF4	XD	302	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	SF4	QD	303	4	-	-	0/6/5/5
58	SF4	XD	302	4	-	-	0/6/5/5

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 10 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
58	QD	303	SF4	6	0
58	XD	302	SF4	4	0

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	QA	1488/1521 (97%)	-0.10	16 (1%)	78	53	109, 169, 287, 424	0
1	XA	1492/1521 (98%)	-0.20	9 (0%)	85	65	91, 149, 251, 393	0
2	QB	235/256 (91%)	0.07	11 (4%)	36	22	147, 231, 284, 346	0
2	XB	236/256 (92%)	-0.04	9 (3%)	44	26	124, 194, 257, 317	0
3	QC	205/239 (85%)	0.09	3 (1%)	72	45	147, 229, 305, 353	0
3	XC	205/239 (85%)	-0.09	5 (2%)	59	35	117, 172, 217, 259	0
4	QD	208/209 (99%)	0.18	6 (2%)	53	31	108, 165, 220, 245	0
4	XD	208/209 (99%)	0.12	8 (3%)	44	26	98, 159, 205, 232	0
5	QE	148/162 (91%)	0.15	5 (3%)	48	28	129, 179, 220, 236	0
5	XE	148/162 (91%)	-0.00	3 (2%)	65	39	97, 160, 207, 246	0
6	QF	100/101 (99%)	-0.21	1 (1%)	79	54	122, 174, 219, 246	0
6	XF	100/101 (99%)	-0.13	3 (3%)	52	31	104, 162, 210, 242	0
7	QG	155/156 (99%)	0.02	3 (1%)	66	40	151, 206, 296, 361	0
7	XG	155/156 (99%)	-0.18	1 (0%)	85	65	111, 172, 227, 280	0
8	QH	137/138 (99%)	0.08	3 (2%)	62	37	137, 182, 216, 269	0
8	XH	137/138 (99%)	0.09	4 (2%)	53	31	117, 169, 213, 272	0
9	QI	127/128 (99%)	0.56	14 (11%)	10	10	153, 234, 286, 339	0
9	XI	126/128 (98%)	0.35	9 (7%)	22	15	119, 179, 237, 329	0
10	QJ	99/105 (94%)	0.59	11 (11%)	10	9	189, 230, 306, 324	0
10	XJ	96/105 (91%)	0.20	6 (6%)	26	17	127, 180, 236, 270	0
11	QK	114/129 (88%)	-0.10	2 (1%)	67	41	128, 173, 243, 273	0
11	XK	114/129 (88%)	-0.01	3 (2%)	57	34	112, 163, 223, 296	0
12	QL	121/132 (91%)	0.43	7 (5%)	29	18	117, 159, 205, 221	0
12	XL	121/132 (91%)	0.29	5 (4%)	41	24	94, 135, 170, 204	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	QM	116/126 (92%)	0.34	8 (6%) 23 15	149, 203, 261, 333	0
13	XM	114/126 (90%)	0.11	3 (2%) 57 34	110, 157, 203, 235	0
14	QN	60/61 (98%)	0.93	9 (15%) 5 6	186, 216, 284, 315	0
14	XN	60/61 (98%)	0.46	4 (6%) 24 16	123, 166, 215, 238	0
15	QO	88/89 (98%)	0.17	5 (5%) 29 18	115, 161, 207, 215	0
15	XO	88/89 (98%)	-0.04	2 (2%) 61 37	111, 154, 200, 223	0
16	QP	82/88 (93%)	0.38	4 (4%) 35 21	102, 149, 180, 219	0
16	XP	82/88 (93%)	0.74	8 (9%) 13 11	132, 183, 216, 244	0
17	QQ	99/105 (94%)	-0.03	0 100 100	113, 163, 205, 215	0
17	XQ	99/105 (94%)	0.19	2 (2%) 65 39	105, 152, 201, 249	0
18	QR	68/88 (77%)	0.02	1 (1%) 72 45	152, 191, 237, 243	0
18	XR	68/88 (77%)	-0.24	0 100 100	114, 149, 197, 207	0
19	QS	83/93 (89%)	0.61	12 (14%) 6 6	180, 239, 284, 336	0
19	XS	83/93 (89%)	0.14	4 (4%) 35 22	120, 167, 228, 276	0
20	QT	96/106 (90%)	0.70	15 (15%) 5 5	95, 146, 191, 239	0
20	XT	98/106 (92%)	0.83	14 (14%) 6 6	150, 188, 236, 285	0
21	QU	23/27 (85%)	1.08	2 (8%) 16 12	184, 214, 262, 287	0
21	XU	23/27 (85%)	0.97	3 (13%) 7 7	133, 151, 184, 194	0
22	QV	77/77 (100%)	-0.15	1 (1%) 75 49	105, 176, 213, 291	0
22	XV	77/77 (100%)	-0.49	0 100 100	100, 136, 202, 247	0
23	QX	8/26 (30%)	0.45	0 100 100	159, 174, 192, 215	0
23	XX	11/26 (42%)	0.86	1 (9%) 15 11	127, 152, 261, 262	0
24	QY	14/18 (77%)	0.20	0 100 100	178, 226, 271, 289	0
24	XY	16/18 (88%)	-0.03	1 (6%) 26 17	196, 234, 278, 300	0
25	RA	2859/2915 (98%)	-0.24	25 (0%) 81 57	73, 124, 264, 398	0
25	YA	2859/2915 (98%)	-0.29	11 (0%) 88 71	64, 107, 253, 410	0
26	RB	120/122 (98%)	0.02	0 100 100	134, 206, 259, 316	0
26	YB	120/122 (98%)	-0.23	1 (0%) 82 60	109, 145, 180, 228	0
27	RD	275/276 (99%)	0.26	10 (3%) 46 27	78, 116, 157, 200	0
27	YD	275/276 (99%)	0.24	10 (3%) 46 27	69, 104, 150, 199	0
28	RE	204/206 (99%)	0.18	9 (4%) 39 23	83, 129, 169, 227	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	YE	204/206 (99%)	0.04	5 (2%) 58 35	79, 116, 169, 224	0
29	RF	202/210 (96%)	0.18	8 (3%) 42 25	90, 131, 192, 214	0
29	YF	202/210 (96%)	0.24	4 (1%) 65 39	73, 122, 188, 231	0
30	RG	181/182 (99%)	0.32	11 (6%) 27 17	140, 209, 252, 313	0
30	YG	181/182 (99%)	-0.23	1 (0%) 85 65	82, 142, 202, 249	0
31	RH	174/180 (96%)	0.00	4 (2%) 61 37	141, 215, 271, 348	0
31	YH	173/180 (96%)	-0.01	4 (2%) 61 37	76, 124, 173, 210	0
32	RI	146/148 (98%)	-0.16	1 (0%) 84 62	102, 171, 219, 267	0
32	YI	146/148 (98%)	-0.15	1 (0%) 84 62	94, 159, 224, 262	0
33	RN	140/140 (100%)	0.06	3 (2%) 63 38	87, 141, 191, 225	0
33	YN	140/140 (100%)	0.10	5 (3%) 46 27	62, 117, 179, 216	0
34	RO	122/122 (100%)	0.27	5 (4%) 41 24	86, 125, 169, 203	0
34	YO	122/122 (100%)	0.08	5 (4%) 41 24	66, 115, 150, 243	0
35	RP	149/150 (99%)	0.42	18 (12%) 8 8	79, 145, 196, 235	0
35	YP	149/150 (99%)	0.53	14 (9%) 14 11	83, 121, 174, 229	0
36	RQ	141/141 (100%)	0.33	6 (4%) 40 23	114, 150, 194, 254	0
36	YQ	141/141 (100%)	0.31	4 (2%) 55 32	67, 116, 154, 174	0
37	RR	118/118 (100%)	0.28	2 (1%) 69 42	76, 116, 163, 219	0
37	YR	118/118 (100%)	0.31	4 (3%) 48 28	76, 113, 161, 193	0
38	RS	110/112 (98%)	0.67	8 (7%) 21 15	113, 182, 229, 253	0
38	YS	110/112 (98%)	0.16	1 (0%) 81 57	94, 139, 174, 199	0
39	RT	131/146 (89%)	-0.02	2 (1%) 72 45	78, 131, 202, 244	0
39	YT	131/146 (89%)	-0.03	2 (1%) 72 45	79, 121, 167, 194	0
40	RU	116/118 (98%)	0.46	8 (6%) 23 15	87, 149, 210, 239	0
40	YU	116/118 (98%)	0.26	0 100 100	74, 114, 176, 210	0
41	RV	101/101 (100%)	-0.22	0 100 100	99, 157, 199, 234	0
41	YV	101/101 (100%)	0.08	3 (2%) 52 31	71, 139, 190, 232	0
42	RW	112/113 (99%)	0.20	3 (2%) 56 33	72, 116, 163, 245	0
42	YW	112/113 (99%)	0.07	3 (2%) 56 33	69, 101, 164, 229	0
43	RX	95/96 (98%)	0.35	9 (9%) 14 11	78, 128, 173, 227	0
43	YX	95/96 (98%)	0.21	1 (1%) 78 53	75, 109, 163, 224	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	RY	107/110 (97%)	0.45	10 (9%) 14 11	93, 159, 200, 236	0
44	YY	107/110 (97%)	0.22	3 (2%) 55 32	92, 136, 194, 270	0
45	RZ	196/206 (95%)	-0.09	2 (1%) 79 54	136, 190, 246, 271	0
45	YZ	183/206 (88%)	0.01	4 (2%) 62 37	94, 144, 211, 256	0
46	R0	77/85 (90%)	0.27	3 (3%) 43 26	102, 151, 176, 187	0
46	Y0	77/85 (90%)	0.23	3 (3%) 43 26	89, 122, 146, 180	0
47	R1	97/98 (98%)	0.59	9 (9%) 14 11	83, 134, 192, 221	0
47	Y1	97/98 (98%)	0.30	3 (3%) 51 30	74, 124, 179, 211	0
48	R2	70/72 (97%)	0.22	3 (4%) 40 23	68, 152, 193, 217	0
48	Y2	70/72 (97%)	0.17	2 (2%) 53 31	77, 121, 166, 206	0
49	R3	59/60 (98%)	-0.07	1 (1%) 69 42	102, 154, 208, 222	0
49	Y3	59/60 (98%)	0.17	1 (1%) 69 42	92, 119, 178, 208	0
50	R4	69/71 (97%)	-0.02	2 (2%) 53 31	170, 232, 315, 373	0
50	Y4	69/71 (97%)	-0.30	0 100 100	139, 188, 262, 312	0
51	R5	59/60 (98%)	0.09	2 (3%) 48 28	81, 129, 205, 229	0
51	Y5	58/60 (96%)	0.08	0 100 100	66, 120, 223, 251	0
52	R6	53/54 (98%)	0.40	3 (5%) 29 18	207, 303, 328, 345	0
52	Y6	53/54 (98%)	0.70	4 (7%) 20 14	218, 320, 351, 372	0
53	R7	48/49 (97%)	0.73	3 (6%) 26 17	75, 115, 148, 200	0
53	Y7	48/49 (97%)	0.74	7 (14%) 6 6	73, 103, 170, 201	0
54	R8	64/65 (98%)	0.32	3 (4%) 36 22	92, 122, 179, 215	0
54	Y8	64/65 (98%)	0.73	3 (4%) 36 22	82, 114, 154, 221	0
55	R9	37/37 (100%)	1.54	12 (32%) 1 1	186, 253, 325, 353	0
55	Y9	37/37 (100%)	1.90	17 (45%) 0 1	204, 229, 284, 316	0
56	ZA	2/3 (66%)	0.78	0 100 100	116, 116, 116, 152	0
56	ZB	2/3 (66%)	0.51	0 100 100	86, 86, 86, 97	0
All	All	20761/21492 (96%)	0.01	557 (2%) 56 33	62, 144, 253, 424	0

All (557) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
44	RY	29	GLU	9.4
20	QT	9	ASN	7.3

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Mol	Chain	Res	Type	RSRZ
47	R1	2	SER	7.0
2	QB	163	PHE	6.8
35	RP	74	GLU	6.8
21	XU	14	TRP	6.7
10	QJ	58	ASP	6.1
20	XT	74	LYS	5.9
14	QN	29	ARG	5.8
55	R9	14	CYS	5.7
20	XT	73	HIS	5.7
4	XD	5	ILE	5.2
9	XI	110	GLU	5.1
53	Y7	46	VAL	5.1
21	QU	6	ARG	5.0
20	XT	23	ARG	5.0
19	QS	76	PRO	4.9
8	XH	95	VAL	4.9
34	RO	41	ALA	4.8
12	QL	19	ARG	4.7
27	RD	251	GLY	4.7
55	Y9	23	VAL	4.7
12	QL	17	LYS	4.6
21	XU	4	GLY	4.6
4	XD	154	ASN	4.6
9	XI	109	VAL	4.6
9	XI	108	VAL	4.6
53	Y7	48	LYS	4.5
2	QB	70	PHE	4.5
47	Y1	2	SER	4.4
3	XC	35	GLU	4.2
29	RF	81	PRO	4.1
37	YR	71	GLN	4.1
10	QJ	57	LYS	4.1
40	RU	19	LYS	4.1
2	XB	196	LEU	4.1
12	XL	25	PRO	4.1
30	RG	178	PHE	4.1
16	XP	29	ASP	4.0
44	YY	63	LYS	4.0
52	Y6	38	LYS	4.0
27	YD	251	GLY	4.0
20	XT	67	ALA	4.0
29	YF	94	PRO	4.0

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Mol	Chain	Res	Type	RSRZ
20	XT	17	ARG	3.9
25	YA	2062	A	3.9
25	RA	867	C	3.9
9	XI	118	LYS	3.8
35	RP	34	GLY	3.8
11	XK	126	ARG	3.8
21	XU	15	ARG	3.8
52	Y6	21	TYR	3.8
54	Y8	2	PRO	3.8
27	RD	217	ARG	3.8
20	QT	58	LYS	3.8
48	Y2	20	GLU	3.8
14	QN	20	ALA	3.7
2	XB	194	PRO	3.7
29	YF	56	GLU	3.7
43	RX	63	LYS	3.7
53	Y7	1	MET	3.7
55	Y9	1	MET	3.7
35	RP	109	GLY	3.7
35	YP	71	VAL	3.7
44	RY	1	MET	3.6
10	QJ	65	LEU	3.6
7	QG	37	ASN	3.6
41	YV	73	SER	3.6
29	YF	82	ILE	3.6
4	XD	4	TYR	3.6
15	XO	50	HIS	3.6
20	QT	36	LEU	3.6
1	QA	728	A	3.6
52	Y6	36	LEU	3.6
15	QO	54	ARG	3.5
42	RW	90	ARG	3.5
35	YP	70	GLN	3.5
25	RA	2319	G	3.5
13	XM	100	GLY	3.5
2	XB	101	MET	3.5
55	Y9	34	GLN	3.5
10	QJ	49	VAL	3.5
55	Y9	26	ILE	3.4
55	R9	31	LYS	3.4
35	YP	26	GLY	3.4
9	XI	112	LYS	3.4

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Mol	Chain	Res	Type	RSRZ
35	RP	71	VAL	3.4
27	RD	38	LYS	3.4
43	RX	33	LYS	3.4
13	QM	90	LEU	3.4
55	Y9	7	VAL	3.4
12	XL	22	SER	3.4
9	QI	74	ILE	3.4
12	XL	64	TYR	3.4
47	Y1	23	LYS	3.4
55	Y9	31	LYS	3.4
11	QK	42	TRP	3.4
35	RP	72	PRO	3.4
44	YY	45	VAL	3.4
20	QT	80	ARG	3.4
2	QB	214	ILE	3.3
43	RX	64	LYS	3.3
38	RS	98	VAL	3.3
30	RG	34	LEU	3.3
34	YO	22	ILE	3.3
46	R0	54	GLY	3.3
55	R9	30	PRO	3.3
55	R9	16	VAL	3.3
14	QN	37	PHE	3.3
25	RA	1067	A	3.3
27	RD	215	LEU	3.3
34	YO	80	ASP	3.2
35	YP	87	ASP	3.2
55	R9	24	TYR	3.2
13	QM	97	PRO	3.2
45	YZ	60	GLU	3.2
20	XT	68	LYS	3.2
35	YP	118	GLY	3.2
12	XL	30	ALA	3.2
40	RU	59	ARG	3.2
43	RX	16	LYS	3.2
27	RD	52	ARG	3.1
35	YP	54	GLY	3.1
4	QD	160	GLN	3.1
53	R7	48	LYS	3.1
15	QO	57	LEU	3.1
12	XL	29	GLY	3.1
28	RE	187	ALA	3.1

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Mol	Chain	Res	Type	RSRZ
36	RQ	81	VAL	3.1
1	XA	311	C	3.1
20	XT	21	LYS	3.1
25	RA	1093	G	3.1
29	RF	141	ALA	3.1
10	QJ	47	PHE	3.1
5	QE	20	GLN	3.1
25	RA	2275	C	3.1
48	R2	52	ASP	3.1
20	QT	26	ASN	3.1
10	QJ	83	GLU	3.1
8	QH	73	ASP	3.1
25	YA	1302	A	3.1
20	QT	13	LEU	3.1
16	XP	31	LYS	3.0
1	QA	1190	G	3.0
19	XS	76	PRO	3.0
37	YR	39	PRO	3.0
20	XT	20	LEU	3.0
36	RQ	83	MET	3.0
41	YV	40	LEU	3.0
2	QB	81	VAL	3.0
25	YA	1075	C	3.0
27	YD	52	ARG	3.0
55	Y9	4	ARG	3.0
39	YT	104	ASN	3.0
9	XI	115	GLY	3.0
32	RI	37	VAL	3.0
9	XI	111	ARG	3.0
43	RX	76	ARG	3.0
46	Y0	56	ASP	3.0
19	QS	80	TYR	3.0
2	QB	201	ILE	3.0
55	R9	26	ILE	3.0
6	QF	88	VAL	3.0
20	XT	25	ARG	3.0
35	YP	31	ALA	3.0
2	XB	193	ASP	3.0
35	RP	44	GLY	2.9
53	Y7	47	ARG	2.9
28	RE	152	LYS	2.9
9	QI	123	PRO	2.9

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Mol	Chain	Res	Type	RSRZ
27	RD	237	GLU	2.9
2	QB	102	LEU	2.9
13	XM	90	LEU	2.9
2	XB	69	LEU	2.9
29	RF	59	TYR	2.9
34	RO	91	LEU	2.9
54	R8	56	GLU	2.9
35	RP	79	ARG	2.9
25	RA	275	G	2.9
1	QA	328	C	2.9
28	RE	20	ALA	2.9
15	XO	48	LYS	2.9
20	XT	72	LEU	2.9
40	RU	97	ASP	2.9
10	XJ	52	GLY	2.9
36	RQ	85	LYS	2.9
43	RX	75	ASP	2.9
51	R5	19	ARG	2.9
10	QJ	59	SER	2.9
13	QM	100	GLY	2.9
55	Y9	8	LYS	2.9
55	Y9	17	ILE	2.9
31	YH	173	PRO	2.9
36	RQ	82	ARG	2.9
2	XB	162	ILE	2.8
34	YO	91	LEU	2.8
27	YD	35	LYS	2.8
55	Y9	33	LYS	2.8
3	QC	2	GLY	2.8
44	RY	59	GLY	2.8
10	XJ	64	GLU	2.8
47	R1	37	ILE	2.8
25	RA	2606	C	2.8
48	Y2	63	VAL	2.8
14	QN	46	GLU	2.8
25	RA	1095	A	2.8
52	R6	2	ALA	2.8
6	XF	87	ARG	2.8
16	XP	26	ARG	2.8
42	RW	92	ARG	2.8
1	QA	796	C	2.8
25	YA	2896	C	2.8

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Mol	Chain	Res	Type	RSRZ
29	RF	133	ASN	2.8
31	RH	174	GLY	2.8
44	RY	65	ALA	2.8
54	Y8	11	LYS	2.8
55	R9	32	HIS	2.8
10	XJ	45	ARG	2.8
25	YA	1068	G	2.8
35	RP	45	LEU	2.8
2	QB	101	MET	2.8
36	YQ	104	PHE	2.8
45	RZ	98	MET	2.8
52	Y6	23	THR	2.8
55	Y9	2	LYS	2.8
1	QA	1192	C	2.7
5	QE	21	ALA	2.7
28	RE	163	GLU	2.7
19	QS	2	PRO	2.7
36	YQ	82	ARG	2.7
13	QM	27	LYS	2.7
40	RU	56	ASP	2.7
20	XT	18	GLN	2.7
25	RA	1980	G	2.7
25	RA	2062	A	2.7
53	Y7	36	GLN	2.7
29	RF	137	LYS	2.7
53	R7	22	MET	2.7
16	QP	26	ARG	2.7
38	RS	35	ILE	2.7
31	YH	58	GLU	2.7
44	YY	62	GLU	2.7
28	RE	15	PHE	2.7
35	RP	40	SER	2.7
25	RA	1026	U	2.7
16	QP	56	ALA	2.7
4	XD	179	GLU	2.7
55	R9	27	CYS	2.7
53	R7	1	MET	2.7
3	QC	10	PHE	2.7
38	RS	87	PHE	2.7
36	RQ	115	MET	2.6
27	RD	231	HIS	2.6
16	QP	30	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
20	QT	12	ALA	2.6
55	R9	33	LYS	2.6
22	QV	1	C	2.6
8	QH	133	LEU	2.6
43	YX	66	LEU	2.6
20	XT	75	ASN	2.6
31	RH	169	VAL	2.6
35	RP	39	LYS	2.6
5	QE	26	PHE	2.6
1	XA	508	C	2.6
35	YP	110	TYR	2.6
5	XE	81	GLU	2.6
1	QA	1364	U	2.6
14	QN	56	VAL	2.6
19	QS	67	VAL	2.6
48	R2	57	ILE	2.6
46	R0	55	ARG	2.6
14	XN	2	ALA	2.6
44	RY	66	PRO	2.6
38	YS	7	TYR	2.6
4	XD	83	SER	2.6
5	QE	13	ILE	2.6
37	YR	69	ASP	2.6
30	RG	106	LEU	2.6
20	QT	28	ALA	2.6
27	YD	209	ALA	2.6
2	QB	68	ILE	2.5
44	RY	46	LYS	2.5
25	RA	2318	G	2.5
26	YB	31	C	2.5
35	YP	52	GLU	2.5
36	RQ	96	VAL	2.5
23	XX	23	A	2.5
16	XP	1	MET	2.5
16	XP	9	PHE	2.5
54	R8	2	PRO	2.5
55	Y9	32	HIS	2.5
17	XQ	24	GLU	2.5
20	QT	62	LEU	2.5
25	RA	2061	G	2.5
25	RA	2100	G	2.5
45	YZ	118	GLN	2.5

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Mol	Chain	Res	Type	RSRZ
9	QI	115	GLY	2.5
31	RH	108	GLY	2.5
4	QD	59	ARG	2.5
7	QG	4	ARG	2.5
20	QT	24	LEU	2.5
38	RS	7	TYR	2.5
6	XF	88	VAL	2.5
55	R9	29	ASN	2.5
2	XB	42	ILE	2.5
19	QS	68	GLY	2.5
47	R1	20	ARG	2.5
53	Y7	3	ARG	2.5
1	XA	980	C	2.5
1	XA	1224	G	2.5
6	XF	95	GLU	2.5
25	YA	2319	G	2.5
9	QI	63	ILE	2.5
38	RS	37	ALA	2.5
20	QT	70	SER	2.5
2	XB	71	VAL	2.5
12	QL	18	VAL	2.5
44	RY	45	VAL	2.5
38	RS	8	GLU	2.4
29	RF	78	ILE	2.4
9	QI	79	LEU	2.4
37	RR	8	ARG	2.4
46	Y0	22	GLY	2.4
27	YD	66	ASP	2.4
10	QJ	55	LYS	2.4
15	QO	47	LYS	2.4
4	QD	67	ILE	2.4
13	QM	22	ILE	2.4
39	RT	131	ALA	2.4
35	RP	20	GLY	2.4
34	RO	57	VAL	2.4
5	QE	83	GLU	2.4
1	XA	1437	C	2.4
25	RA	1536	C	2.4
27	YD	252	TRP	2.4
38	RS	66	ALA	2.4
12	QL	94	PRO	2.4
14	QN	14	PRO	2.4

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Mol	Chain	Res	Type	RSRZ
25	RA	1171	G	2.4
9	QI	127	LYS	2.4
19	QS	16	LEU	2.4
30	YG	35	GLU	2.4
11	XK	117	ASN	2.4
17	XQ	8	GLY	2.4
28	YE	145	LYS	2.4
39	YT	70	VAL	2.4
14	QN	34	TYR	2.4
40	RU	89	GLU	2.4
2	QB	161	ALA	2.4
15	QO	58	MET	2.4
1	QA	1202	G	2.4
30	RG	88	ILE	2.4
40	RU	63	VAL	2.4
9	QI	128	ARG	2.4
30	RG	131	TYR	2.4
52	R6	22	ALA	2.4
24	XY	32	U	2.3
25	YA	1536	C	2.3
36	YQ	47	ILE	2.3
13	XM	102	ARG	2.3
16	XP	28	ARG	2.3
32	YI	1	MET	2.3
33	YN	78	TYR	2.3
44	RY	55	TYR	2.3
4	XD	37	PRO	2.3
7	QG	120	ILE	2.3
10	QJ	62	HIS	2.3
28	YE	193	GLY	2.3
28	YE	194	GLY	2.3
30	RG	135	LEU	2.3
43	RX	74	PRO	2.3
10	XJ	34	VAL	2.3
16	XP	22	THR	2.3
47	Y1	21	ARG	2.3
12	QL	119	LYS	2.3
25	RA	2610	C	2.3
34	YO	5	GLN	2.3
38	RS	13	ARG	2.3
25	YA	389	G	2.3
4	XD	157	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
55	Y9	5	ALA	2.3
4	QD	5	ILE	2.3
25	RA	1094	U	2.3
31	YH	174	GLY	2.3
7	XG	141	VAL	2.3
14	QN	31	ARG	2.3
27	RD	273	ARG	2.3
47	R1	10	LYS	2.3
50	R4	58	ARG	2.3
55	R9	1	MET	2.3
9	QI	106	ALA	2.3
29	YF	64	ILE	2.3
29	RF	88	VAL	2.3
35	RP	73	GLY	2.3
41	YV	51	VAL	2.3
15	QO	50	HIS	2.3
19	QS	66	MET	2.3
44	RY	47	LYS	2.3
21	QU	17	THR	2.3
47	R1	41	ARG	2.3
1	QA	1224	G	2.3
3	XC	43	LEU	2.3
10	QJ	85	LEU	2.3
47	R1	54	ALA	2.3
20	QT	11	SER	2.3
25	YA	1272	A	2.3
14	QN	38	GLY	2.3
20	QT	69	GLY	2.3
25	YA	976	C	2.3
46	Y0	15	ASP	2.3
9	QI	33	PHE	2.2
18	QR	43	PHE	2.2
3	XC	169	ALA	2.2
43	RX	62	LYS	2.2
42	YW	78	GLU	2.2
9	QI	109	VAL	2.2
19	QS	9	VAL	2.2
34	RO	110	GLY	2.2
35	YP	1	MET	2.2
1	QA	818	G	2.2
54	Y8	13	ARG	2.2
4	QD	94	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
19	XS	15	LEU	2.2
20	XT	16	HIS	2.2
3	XC	182	ILE	2.2
4	XD	110	PHE	2.2
19	QS	75	ALA	2.2
45	YZ	113	ALA	2.2
35	RP	70	GLN	2.2
55	R9	15	LYS	2.2
47	R1	72	GLU	2.2
28	YE	183	LEU	2.2
40	RU	18	LEU	2.2
45	YZ	120	ILE	2.2
10	XJ	56	HIS	2.2
1	QA	982	U	2.2
28	RE	114	ALA	2.2
16	QP	32	TYR	2.2
33	YN	75	TYR	2.2
5	XE	18	ARG	2.2
20	XT	83	ARG	2.2
55	Y9	16	VAL	2.2
4	QD	69	GLY	2.2
8	QH	5	PRO	2.2
42	YW	46	PHE	2.2
1	XA	63	C	2.2
9	QI	105	ASP	2.2
19	QS	69	HIS	2.2
30	RG	169	ALA	2.2
54	R8	25	MET	2.2
12	QL	116	SER	2.2
46	R0	41	ARG	2.2
14	XN	18	VAL	2.2
19	QS	79	THR	2.2
14	XN	5	ALA	2.2
27	RD	230	ASP	2.2
30	RG	56	ALA	2.2
30	RG	155	MET	2.2
55	Y9	20	HIS	2.2
25	RA	2110	G	2.2
25	RA	2712(B)	A	2.2
25	YA	1046	A	2.2
35	YP	15	ARG	2.2
13	QM	4	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
31	YH	116	GLU	2.2
3	QC	4	LYS	2.2
36	YQ	75	THR	2.1
1	QA	1047	G	2.1
35	RP	31	ALA	2.1
37	YR	8	ARG	2.1
42	RW	13	SER	2.1
2	QB	164	VAL	2.1
13	QM	60	VAL	2.1
45	RZ	71	VAL	2.1
55	Y9	3	VAL	2.1
40	RU	7	GLY	2.1
51	R5	11	THR	2.1
35	YP	3	LEU	2.1
47	R1	11	ARG	2.1
9	QI	41	VAL	2.1
33	RN	89	LYS	2.1
28	RE	142	GLY	2.1
29	RF	85	GLY	2.1
33	RN	105	GLY	2.1
11	XK	113	PRO	2.1
14	XN	14	PRO	2.1
31	RH	36	PRO	2.1
3	XC	175	LEU	2.1
48	R2	11	GLU	2.1
1	QA	727	G	2.1
1	XA	310	G	2.1
9	QI	64	THR	2.1
55	Y9	22	ARG	2.1
28	RE	145	LYS	2.1
33	RN	104	LYS	2.1
35	RP	38	GLN	2.1
30	RG	159	VAL	2.1
27	YD	238	GLY	2.1
42	YW	38	TYR	2.1
34	RO	1	MET	2.1
25	RA	1046	A	2.1
49	R3	13	ILE	2.1
27	YD	184	LYS	2.1
34	YO	44	LYS	2.1
1	QA	47	C	2.1
19	QS	82	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
25	RA	411	G	2.1
53	Y7	26	GLY	2.1
8	XH	5	PRO	2.1
13	QM	103	THR	2.1
33	YN	71	ILE	2.1
33	YN	92	ALA	2.1
39	RT	130	ALA	2.1
10	QJ	54	PHE	2.1
27	YD	46	GLN	2.1
44	RY	60	PHE	2.1
50	R4	59	PHE	2.1
11	QK	117	ASN	2.1
19	XS	44	MET	2.1
1	XA	733	A	2.0
35	YP	28	GLY	2.0
49	Y3	14	GLY	2.0
30	RG	32	PRO	2.0
9	XI	121	ARG	2.0
35	RP	87	ASP	2.0
52	R6	23	THR	2.0
9	XI	116	LYS	2.0
27	RD	64	ILE	2.0
43	RX	72	LYS	2.0
2	QB	218	ALA	2.0
1	XA	1533	C	2.0
8	XH	93	VAL	2.0
25	RA	912	C	2.0
1	QA	1062	U	2.0
35	RP	28	GLY	2.0
27	YD	9	TYR	2.0
5	XE	24	ARG	2.0
20	QT	27	LYS	2.0
20	QT	38	LYS	2.0
28	RE	19	ARG	2.0
35	RP	18	ARG	2.0
8	XH	79	VAL	2.0
37	RR	42	LYS	2.0
47	R1	55	GLY	2.0
9	QI	114	TYR	2.0
1	QA	569	C	2.0
1	QA	1249	C	2.0
2	XB	102	LEU	2.0

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Mol	Chain	Res	Type	RSRZ
12	QL	16	GLU	2.0
25	RA	34	C	2.0
25	RA	1837	C	2.0
10	XJ	59	SER	2.0
19	XS	13	ASP	2.0
28	YE	195	LEU	2.0
35	YP	62	LEU	2.0
33	YN	76	SER	2.0
16	XP	2	VAL	2.0

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

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
1	M2G	QA	966	25/26	0.84	0.16	174,183,189,190	0
1	PSU	QA	516	20/21	0.85	0.07	180,194,201,203	0
1	2MG	QA	1207	24/25	0.86	0.11	205,208,210,211	0
1	PSU	XA	516	20/21	0.87	0.07	127,131,141,143	0
25	5MU	RA	1915	21/22	0.87	0.07	143,150,164,165	0
1	5MC	QA	1407	21/22	0.89	0.11	155,163,168,170	0
1	4OC	QA	1402	22/23	0.90	0.11	176,191,194,194	0
1	5MC	QA	967	21/22	0.90	0.11	148,156,167,184	0
1	2MG	XA	1207	24/25	0.90	0.08	111,119,125,126	0
25	5MU	YA	1915	21/22	0.90	0.06	128,133,136,138	0
25	OMC	RA	1920	21/22	0.90	0.10	135,144,149,152	0
25	OMU	RA	2552	21/22	0.90	0.12	88,98,119,122	0
25	PSU	YA	1911	20/21	0.91	0.09	103,114,117,119	0
1	5MC	QA	1404	21/22	0.92	0.08	128,135,138,139	0
1	G7M	XA	527	24/25	0.92	0.13	115,119,125,128	0
1	UR3	QA	1498	21/22	0.92	0.11	119,128,137,144	0
25	PSU	RA	1917	20/21	0.92	0.06	116,122,126,129	0
1	UR3	XA	1498	21/22	0.92	0.10	105,112,124,129	0
25	PSU	RA	1911	20/21	0.92	0.07	101,115,132,143	0
25	OMC	YA	1920	21/22	0.93	0.07	87,99,104,105	0
25	2MA	RA	2503	23/24	0.93	0.13	104,116,121,123	0
1	MA6	QA	1518	24/25	0.93	0.16	145,152,155,162	0
1	4OC	XA	1402	22/23	0.94	0.10	105,111,116,118	0
25	5MC	RA	1942	21/22	0.94	0.07	95,102,111,116	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
25	5MC	YA	1942	21/22	0.94	0.07	81,90,107,118	0
25	OMG	RA	2251	24/25	0.94	0.12	79,94,101,115	0
1	5MC	XA	967	21/22	0.94	0.09	124,129,137,147	0
1	G7M	QA	527	24/25	0.94	0.10	154,155,159,160	0
25	OMU	YA	2552	21/22	0.94	0.09	68,80,91,105	0
25	PSU	RA	2605	20/21	0.94	0.13	91,99,103,107	0
56	PPU	ZB	3	37/38	0.94	0.16	69,89,143,149	0
1	5MC	XA	1400	21/22	0.95	0.07	116,122,130,134	0
1	5MC	XA	1407	21/22	0.95	0.07	94,99,108,113	0
25	5MC	RA	1962	21/22	0.95	0.07	117,122,129,136	0
12	0TD	QL	92	10/11	0.95	0.16	168,188,192,195	0
25	OMG	YA	2251	24/25	0.95	0.15	68,77,89,100	0
1	M2G	XA	966	25/26	0.95	0.09	120,129,137,138	0
25	2MA	YA	2503	23/24	0.95	0.09	66,80,90,97	0
1	5MC	QA	1400	21/22	0.95	0.08	160,166,172,174	0
1	MA6	XA	1518	24/25	0.95	0.10	97,106,122,125	0
1	MA6	QA	1519	24/25	0.95	0.14	144,152,161,162	0
25	PSU	YA	2605	20/21	0.95	0.09	71,80,89,89	0
25	5MU	YA	1939	21/22	0.95	0.09	78,85,94,95	0
1	MA6	XA	1519	24/25	0.96	0.11	81,94,109,113	0
1	5MC	XA	1404	21/22	0.96	0.07	92,106,113,114	0
25	5MC	YA	1962	21/22	0.96	0.08	86,98,104,109	0
25	5MU	RA	1939	21/22	0.96	0.11	89,108,119,121	0
12	0TD	XL	92	10/11	0.96	0.14	143,157,176,178	0
56	PPU	ZA	3	37/38	0.96	0.13	65,80,98,115	0
25	PSU	YA	1917	20/21	0.96	0.06	105,118,129,129	0

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 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	RA	3333	1/1	0.06	0.23	94,94,94,94	0
57	MG	RA	3341	1/1	0.22	0.16	86,86,86,86	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	XA	1648	1/1	0.39	0.24	118,118,118,118	0
57	MG	RA	3356	1/1	0.40	0.12	180,180,180,180	0
59	ZN	R9	102	1/1	0.44	0.37	209,209,209,209	0
57	MG	XA	1665	1/1	0.47	0.14	98,98,98,98	0
57	MG	RA	3390	1/1	0.47	0.12	129,129,129,129	0
57	MG	RA	3342	1/1	0.49	0.16	95,95,95,95	0
57	MG	QD	301	1/1	0.51	0.13	117,117,117,117	0
57	MG	YD	301	1/1	0.53	0.26	65,65,65,65	0
57	MG	QA	1650	1/1	0.53	0.17	107,107,107,107	0
57	MG	YA	3388	1/1	0.54	0.18	78,78,78,78	0
57	MG	RA	3365	1/1	0.54	0.14	96,96,96,96	0
57	MG	RA	3361	1/1	0.54	0.10	92,92,92,92	0
57	MG	YA	3109	1/1	0.56	0.17	199,199,199,199	0
57	MG	YA	3147	1/1	0.57	0.14	82,82,82,82	0
57	MG	QA	1681	1/1	0.57	0.14	97,97,97,97	0
57	MG	QA	1688	1/1	0.57	0.11	100,100,100,100	0
57	MG	XA	1615	1/1	0.57	0.31	78,78,78,78	0
57	MG	YA	3011	1/1	0.58	0.19	110,110,110,110	0
57	MG	YA	3026	1/1	0.58	0.32	83,83,83,83	0
57	MG	YA	3305	1/1	0.58	0.12	74,74,74,74	0
57	MG	RA	3196	1/1	0.59	0.22	96,96,96,96	0
57	MG	RA	3199	1/1	0.60	0.20	78,78,78,78	0
57	MG	RA	3369	1/1	0.60	0.11	51,51,51,51	0
57	MG	YA	3080	1/1	0.60	0.10	82,82,82,82	0
57	MG	RA	3252	1/1	0.61	0.26	76,76,76,76	0
57	MG	RA	3394	1/1	0.61	0.14	70,70,70,70	0
57	MG	RA	3258	1/1	0.62	0.21	93,93,93,93	0
57	MG	XA	1690	1/1	0.62	0.16	82,82,82,82	0
57	MG	XX	101	1/1	0.62	0.16	105,105,105,105	0
57	MG	RB	201	1/1	0.62	0.20	90,90,90,90	0
57	MG	QA	1637	1/1	0.62	0.09	83,83,83,83	0
57	MG	QA	1666	1/1	0.62	0.21	87,87,87,87	0
57	MG	YA	3363	1/1	0.63	0.11	94,94,94,94	0
57	MG	YA	3492	1/1	0.63	0.13	72,72,72,72	0
57	MG	YA	3453	1/1	0.64	0.21	72,72,72,72	0
57	MG	R0	101	1/1	0.64	0.11	58,58,58,58	0
57	MG	RA	3098	1/1	0.64	0.56	86,86,86,86	0
57	MG	YA	3060	1/1	0.64	0.12	88,88,88,88	0
57	MG	XA	1660	1/1	0.65	0.17	96,96,96,96	0
57	MG	YA	3475	1/1	0.65	0.18	95,95,95,95	0
57	MG	YA	3073	1/1	0.65	0.22	71,71,71,71	0
57	MG	RZ	301	1/1	0.65	0.07	101,101,101,101	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	QA	1620	1/1	0.65	0.08	74,74,74,74	0
57	MG	QA	1715	1/1	0.66	0.08	96,96,96,96	0
57	MG	XA	1671	1/1	0.66	0.10	110,110,110,110	0
57	MG	YA	3356	1/1	0.66	0.13	59,59,59,59	0
57	MG	YA	3039	1/1	0.66	0.17	76,76,76,76	0
57	MG	YA	3058	1/1	0.66	0.21	88,88,88,88	0
57	MG	RA	3092	1/1	0.67	0.08	93,93,93,93	0
57	MG	YA	3458	1/1	0.67	0.14	111,111,111,111	0
57	MG	RB	208	1/1	0.67	0.13	97,97,97,97	0
57	MG	YA	3128	1/1	0.67	0.20	87,87,87,87	0
57	MG	RF	302	1/1	0.67	0.15	74,74,74,74	0
57	MG	YA	3428	1/1	0.67	0.37	78,78,78,78	0
57	MG	YA	3341	1/1	0.68	0.07	83,83,83,83	0
57	MG	RA	3331	1/1	0.68	0.28	119,119,119,119	0
57	MG	XA	1712	1/1	0.68	0.21	101,101,101,101	0
57	MG	QA	1711	1/1	0.68	0.19	100,100,100,100	0
57	MG	YA	3001	1/1	0.68	0.13	191,191,191,191	0
57	MG	RA	3216	1/1	0.68	0.16	96,96,96,96	0
57	MG	YA	3013	1/1	0.68	0.32	90,90,90,90	0
57	MG	RA	3261	1/1	0.68	0.16	96,96,96,96	0
57	MG	YA	3181	1/1	0.68	0.38	87,87,87,87	0
57	MG	YA	3190	1/1	0.68	0.09	67,67,67,67	0
57	MG	XA	1689	1/1	0.68	0.24	79,79,79,79	0
57	MG	YA	3327	1/1	0.69	0.19	106,106,106,106	0
57	MG	QA	1669	1/1	0.69	0.12	79,79,79,79	0
57	MG	XK	201	1/1	0.69	0.12	116,116,116,116	0
57	MG	RA	3317	1/1	0.69	0.28	89,89,89,89	0
59	ZN	Y4	101	1/1	0.69	0.15	305,305,305,305	0
57	MG	QA	1706	1/1	0.70	0.13	84,84,84,84	0
57	MG	RA	3151	1/1	0.70	0.15	80,80,80,80	0
57	MG	YA	3087	1/1	0.70	0.06	93,93,93,93	0
57	MG	RP	202	1/1	0.70	0.61	52,52,52,52	0
57	MG	RA	3266	1/1	0.70	0.13	97,97,97,97	0
57	MG	YA	3137	1/1	0.70	0.32	96,96,96,96	0
57	MG	RA	3409	1/1	0.70	0.17	80,80,80,80	0
57	MG	RA	3277	1/1	0.70	0.12	96,96,96,96	0
57	MG	YA	3049	1/1	0.70	0.18	99,99,99,99	0
57	MG	XA	1635	1/1	0.70	0.10	82,82,82,82	0
57	MG	YA	3323	1/1	0.70	0.24	51,51,51,51	0
57	MG	XA	1646	1/1	0.70	0.18	90,90,90,90	0
57	MG	YA	3431	1/1	0.71	0.17	74,74,74,74	0
57	MG	YA	3447	1/1	0.71	0.11	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	RA	3206	1/1	0.71	0.27	118,118,118,118	0
57	MG	RR	201	1/1	0.71	0.16	85,85,85,85	0
57	MG	RW	201	1/1	0.71	0.10	82,82,82,82	0
57	MG	RA	3110	1/1	0.71	0.16	73,73,73,73	0
57	MG	QA	1654	1/1	0.71	0.19	89,89,89,89	0
57	MG	RD	304	1/1	0.71	0.25	58,58,58,58	0
57	MG	RA	3398	1/1	0.71	0.20	67,67,67,67	0
57	MG	YA	3008	1/1	0.72	0.24	92,92,92,92	0
57	MG	YA	3194	1/1	0.72	0.12	36,36,36,36	0
57	MG	RA	3267	1/1	0.72	0.15	101,101,101,101	0
57	MG	YA	3312	1/1	0.72	0.07	56,56,56,56	0
57	MG	RA	3207	1/1	0.72	0.22	134,134,134,134	0
57	MG	QA	1662	1/1	0.72	0.20	98,98,98,98	0
57	MG	RA	3329	1/1	0.72	0.21	84,84,84,84	0
57	MG	YA	3516	1/1	0.72	0.49	54,54,54,54	0
57	MG	YA	3519	1/1	0.72	0.20	66,66,66,66	0
57	MG	XA	1659	1/1	0.72	0.16	77,77,77,77	0
57	MG	QA	1682	1/1	0.72	0.11	119,119,119,119	0
57	MG	XA	1608	1/1	0.72	0.17	68,68,68,68	0
57	MG	RA	3230	1/1	0.73	0.14	64,64,64,64	0
57	MG	QA	1636	1/1	0.73	0.14	111,111,111,111	0
57	MG	XA	1708	1/1	0.73	0.24	98,98,98,98	0
57	MG	RA	3254	1/1	0.73	0.16	98,98,98,98	0
57	MG	YA	3340	1/1	0.73	0.09	42,42,42,42	0
57	MG	QA	1724	1/1	0.73	0.18	70,70,70,70	0
57	MG	YA	3304	1/1	0.73	0.22	79,79,79,79	0
57	MG	RA	3239	1/1	0.74	0.23	62,62,62,62	0
57	MG	QM	202	1/1	0.74	0.15	72,72,72,72	0
57	MG	RA	3343	1/1	0.74	0.15	91,91,91,91	0
57	MG	RA	3393	1/1	0.74	0.24	112,112,112,112	0
57	MG	YA	3065	1/1	0.74	0.09	102,102,102,102	0
57	MG	RA	3221	1/1	0.74	0.14	80,80,80,80	0
57	MG	RN	201	1/1	0.74	0.12	83,83,83,83	0
57	MG	YA	3538	1/1	0.74	0.17	72,72,72,72	0
57	MG	YA	3398	1/1	0.74	0.12	81,81,81,81	0
57	MG	RN	202	1/1	0.74	0.46	101,101,101,101	0
57	MG	RA	3086	1/1	0.74	0.23	56,56,56,56	0
57	MG	YA	3314	1/1	0.75	0.16	91,91,91,91	0
57	MG	RA	3101	1/1	0.75	0.11	84,84,84,84	0
57	MG	QA	1667	1/1	0.75	0.10	62,62,62,62	0
57	MG	YA	3002	1/1	0.75	0.26	54,54,54,54	0
57	MG	RA	3120	1/1	0.75	0.15	90,90,90,90	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	QA	1624	1/1	0.75	0.08	85,85,85,85	0
57	MG	YA	3502	1/1	0.75	0.11	112,112,112,112	0
57	MG	YA	3512	1/1	0.75	0.12	67,67,67,67	0
57	MG	QA	1691	1/1	0.75	0.23	82,82,82,82	0
57	MG	YA	3081	1/1	0.75	0.09	58,58,58,58	0
57	MG	YA	3394	1/1	0.75	0.35	67,67,67,67	0
57	MG	QA	1630	1/1	0.75	0.16	111,111,111,111	0
57	MG	YA	3418	1/1	0.75	0.15	64,64,64,64	0
57	MG	RA	3270	1/1	0.75	0.15	82,82,82,82	0
57	MG	YA	3462	1/1	0.76	0.23	69,69,69,69	0
57	MG	YA	3247	1/1	0.76	0.24	69,69,69,69	0
57	MG	QA	1615	1/1	0.76	0.10	93,93,93,93	0
57	MG	RA	3351	1/1	0.76	0.09	87,87,87,87	0
57	MG	RA	3244	1/1	0.76	0.08	85,85,85,85	0
57	MG	RA	3227	1/1	0.76	0.08	74,74,74,74	0
57	MG	YA	3153	1/1	0.76	0.15	83,83,83,83	0
57	MG	QA	1694	1/1	0.76	0.09	67,67,67,67	0
57	MG	RA	3404	1/1	0.76	0.23	79,79,79,79	0
57	MG	YA	3191	1/1	0.76	0.23	82,82,82,82	0
57	MG	YA	3102	1/1	0.76	0.09	96,96,96,96	0
57	MG	RA	3211	1/1	0.77	0.12	58,58,58,58	0
57	MG	RA	3133	1/1	0.77	0.16	86,86,86,86	0
57	MG	YA	3066	1/1	0.77	0.15	70,70,70,70	0
57	MG	YA	3040	1/1	0.77	0.07	93,93,93,93	0
57	MG	Y8	101	1/1	0.77	0.19	74,74,74,74	0
57	MG	RA	3251	1/1	0.77	0.07	94,94,94,94	0
57	MG	RA	3219	1/1	0.77	0.15	64,64,64,64	0
57	MG	YA	3286	1/1	0.78	0.37	76,76,76,76	0
57	MG	RA	3379	1/1	0.78	0.28	115,115,115,115	0
57	MG	XA	1723	1/1	0.78	0.09	74,74,74,74	0
57	MG	RA	3289	1/1	0.78	0.15	99,99,99,99	0
57	MG	YA	3456	1/1	0.78	0.10	64,64,64,64	0
57	MG	RA	3339	1/1	0.78	0.07	88,88,88,88	0
57	MG	YA	3317	1/1	0.78	0.22	94,94,94,94	0
57	MG	YA	3041	1/1	0.78	0.10	50,50,50,50	0
57	MG	YA	3285	1/1	0.78	0.26	90,90,90,90	0
57	MG	YA	3068	1/1	0.79	0.12	49,49,49,49	0
57	MG	QN	103	1/1	0.79	0.20	88,88,88,88	0
57	MG	RA	3357	1/1	0.79	0.10	81,81,81,81	0
57	MG	XA	1716	1/1	0.79	0.15	74,74,74,74	0
57	MG	YA	3459	1/1	0.79	0.10	83,83,83,83	0
57	MG	YA	3239	1/1	0.79	0.07	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3349	1/1	0.79	0.16	62,62,62,62	0
57	MG	RA	3168	1/1	0.79	0.14	119,119,119,119	0
57	MG	YA	3493	1/1	0.79	0.12	50,50,50,50	0
57	MG	RA	3249	1/1	0.79	0.11	106,106,106,106	0
57	MG	YA	3365	1/1	0.79	0.14	39,39,39,39	0
57	MG	RA	3274	1/1	0.79	0.21	79,79,79,79	0
57	MG	YA	3290	1/1	0.79	0.23	79,79,79,79	0
57	MG	XA	1687	1/1	0.79	0.10	67,67,67,67	0
57	MG	YA	3543	1/1	0.79	0.19	78,78,78,78	0
57	MG	RA	3372	1/1	0.79	0.11	125,125,125,125	0
57	MG	RA	3149	1/1	0.79	0.05	82,82,82,82	0
57	MG	XA	1704	1/1	0.79	0.25	74,74,74,74	0
57	MG	YA	3437	1/1	0.79	0.25	96,96,96,96	0
57	MG	XA	1678	1/1	0.80	0.06	97,97,97,97	0
57	MG	RA	3301	1/1	0.80	0.08	58,58,58,58	0
57	MG	YA	3296	1/1	0.80	0.08	49,49,49,49	0
57	MG	XA	1606	1/1	0.80	0.07	71,71,71,71	0
57	MG	RA	3304	1/1	0.80	0.08	78,78,78,78	0
57	MG	RA	3376	1/1	0.80	0.10	68,68,68,68	0
57	MG	RA	3309	1/1	0.80	0.10	78,78,78,78	0
57	MG	YA	3133	1/1	0.80	0.11	99,99,99,99	0
57	MG	YA	3136	1/1	0.80	0.23	65,65,65,65	0
57	MG	YA	3472	1/1	0.80	0.13	78,78,78,78	0
57	MG	XA	1645	1/1	0.80	0.09	65,65,65,65	0
57	MG	YA	3487	1/1	0.80	0.12	41,41,41,41	0
57	MG	YA	3138	1/1	0.80	0.07	73,73,73,73	0
57	MG	RA	3348	1/1	0.80	0.09	71,71,71,71	0
57	MG	YA	3343	1/1	0.80	0.13	92,92,92,92	0
57	MG	YA	3055	1/1	0.80	0.11	67,67,67,67	0
57	MG	QA	1604	1/1	0.80	0.18	79,79,79,79	0
57	MG	XA	1726	1/1	0.80	0.27	83,83,83,83	0
57	MG	YA	3536	1/1	0.80	0.41	85,85,85,85	0
57	MG	YA	3061	1/1	0.80	0.11	74,74,74,74	0
57	MG	RA	3242	1/1	0.80	0.12	53,53,53,53	0
57	MG	QE	201	1/1	0.80	0.26	76,76,76,76	0
57	MG	QA	1603	1/1	0.80	0.10	110,110,110,110	0
57	MG	YA	3410	1/1	0.80	0.16	59,59,59,59	0
57	MG	RA	3234	1/1	0.80	0.51	94,94,94,94	0
57	MG	QA	1677	1/1	0.81	0.08	58,58,58,58	0
57	MG	YA	3230	1/1	0.81	0.15	106,106,106,106	0
57	MG	RA	3018	1/1	0.81	0.25	35,35,35,35	0
57	MG	YA	3071	1/1	0.81	0.18	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3281	1/1	0.81	0.13	61,61,61,61	0
57	MG	RA	3330	1/1	0.81	0.26	84,84,84,84	0
57	MG	YA	3452	1/1	0.81	0.13	51,51,51,51	0
57	MG	RF	305	1/1	0.81	0.10	82,82,82,82	0
57	MG	RA	3056	1/1	0.81	0.36	69,69,69,69	0
57	MG	RA	3139	1/1	0.81	0.12	51,51,51,51	0
57	MG	RA	3273	1/1	0.81	0.22	75,75,75,75	0
57	MG	YA	3108	1/1	0.81	0.17	74,74,74,74	0
57	MG	QA	1629	1/1	0.81	0.25	77,77,77,77	0
57	MG	YA	3110	1/1	0.81	0.09	55,55,55,55	0
57	MG	YA	3117	1/1	0.81	0.14	56,56,56,56	0
57	MG	YA	3031	1/1	0.81	0.07	60,60,60,60	0
57	MG	QA	1608	1/1	0.81	0.27	97,97,97,97	0
57	MG	QA	1683	1/1	0.81	0.12	91,91,91,91	0
57	MG	RA	3195	1/1	0.81	0.09	85,85,85,85	0
57	MG	RA	3256	1/1	0.81	0.23	88,88,88,88	0
57	MG	QA	1684	1/1	0.81	0.16	84,84,84,84	0
57	MG	XA	1611	1/1	0.81	0.07	82,82,82,82	0
57	MG	YA	3154	1/1	0.81	0.06	92,92,92,92	0
57	MG	RA	3311	1/1	0.81	0.11	100,100,100,100	0
57	MG	YA	3369	1/1	0.81	0.09	61,61,61,61	0
57	MG	Y1	103	1/1	0.81	0.07	92,92,92,92	0
57	MG	Y3	101	1/1	0.81	0.22	70,70,70,70	0
57	MG	YA	3189	1/1	0.81	0.28	94,94,94,94	0
57	MG	RB	205	1/1	0.81	0.08	151,151,151,151	0
57	MG	XA	1644	1/1	0.81	0.14	86,86,86,86	0
57	MG	YA	3228	1/1	0.82	0.08	33,33,33,33	0
57	MG	YA	3417	1/1	0.82	0.07	55,55,55,55	0
57	MG	QA	1644	1/1	0.82	0.18	71,71,71,71	0
57	MG	QA	1647	1/1	0.82	0.10	67,67,67,67	0
57	MG	RA	3161	1/1	0.82	0.17	107,107,107,107	0
57	MG	YA	3252	1/1	0.82	0.12	55,55,55,55	0
57	MG	YA	3082	1/1	0.82	0.25	48,48,48,48	0
57	MG	RD	301	1/1	0.82	0.26	101,101,101,101	0
57	MG	QA	1692	1/1	0.82	0.13	75,75,75,75	0
57	MG	RA	3192	1/1	0.82	0.12	66,66,66,66	0
57	MG	RA	3223	1/1	0.82	0.26	76,76,76,76	0
57	MG	YA	3018	1/1	0.82	0.17	61,61,61,61	0
57	MG	QA	1676	1/1	0.82	0.14	68,68,68,68	0
57	MG	YA	3126	1/1	0.82	0.09	94,94,94,94	0
57	MG	RA	3375	1/1	0.82	0.10	55,55,55,55	0
57	MG	RA	3127	1/1	0.82	0.09	27,27,27,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	QD	302	1/1	0.82	0.14	104,104,104,104	0
57	MG	YA	3326	1/1	0.82	0.15	71,71,71,71	0
57	MG	RA	3269	1/1	0.82	0.11	64,64,64,64	0
57	MG	RA	3201	1/1	0.82	0.17	48,48,48,48	0
57	MG	XA	1702	1/1	0.82	0.14	89,89,89,89	0
57	MG	RA	3205	1/1	0.82	0.11	101,101,101,101	0
57	MG	QA	1633	1/1	0.82	0.14	68,68,68,68	0
57	MG	YA	3158	1/1	0.82	0.11	68,68,68,68	0
57	MG	YA	3160	1/1	0.82	0.29	65,65,65,65	0
57	MG	RA	3401	1/1	0.82	0.09	66,66,66,66	0
57	MG	YT	201	1/1	0.82	0.11	93,93,93,93	0
57	MG	YA	3368	1/1	0.82	0.15	61,61,61,61	0
57	MG	RA	3246	1/1	0.82	0.14	64,64,64,64	0
57	MG	RA	3286	1/1	0.82	0.11	60,60,60,60	0
59	ZN	R4	101	1/1	0.82	0.25	199,199,199,199	0
57	MG	XA	1627	1/1	0.82	0.07	72,72,72,72	0
57	MG	XJ	401	1/1	0.82	0.08	111,111,111,111	0
57	MG	QA	1704	1/1	0.83	0.11	108,108,108,108	0
57	MG	RA	3340	1/1	0.83	0.11	100,100,100,100	0
57	MG	RA	3175	1/1	0.83	0.19	61,61,61,61	0
57	MG	YA	3449	1/1	0.83	0.16	46,46,46,46	0
57	MG	R5	3600	1/1	0.83	0.16	96,96,96,96	0
57	MG	RA	3288	1/1	0.83	0.20	127,127,127,127	0
57	MG	RA	3255	1/1	0.83	0.19	79,79,79,79	0
57	MG	YA	3146	1/1	0.83	0.06	76,76,76,76	0
57	MG	RA	3290	1/1	0.83	0.21	75,75,75,75	0
57	MG	RA	3300	1/1	0.83	0.11	68,68,68,68	0
57	MG	QA	1660	1/1	0.83	0.08	63,63,63,63	0
57	MG	QA	1634	1/1	0.83	0.16	99,99,99,99	0
57	MG	YA	3331	1/1	0.83	0.10	69,69,69,69	0
57	MG	XA	1728	1/1	0.83	0.19	83,83,83,83	0
57	MG	XA	1636	1/1	0.83	0.12	81,81,81,81	0
57	MG	RA	3215	1/1	0.83	0.12	78,78,78,78	0
57	MG	RD	302	1/1	0.83	0.12	82,82,82,82	0
57	MG	RA	3152	1/1	0.83	0.06	51,51,51,51	0
57	MG	YA	3361	1/1	0.83	0.30	69,69,69,69	0
57	MG	RA	3313	1/1	0.83	0.08	105,105,105,105	0
57	MG	RA	3243	1/1	0.83	0.06	74,74,74,74	0
57	MG	YA	3539	1/1	0.83	0.12	94,94,94,94	0
57	MG	RA	3218	1/1	0.83	0.07	52,52,52,52	0
57	MG	YA	3235	1/1	0.83	0.36	85,85,85,85	0
57	MG	YA	3107	1/1	0.83	0.19	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	Y1	102	1/1	0.83	0.12	74,74,74,74	0
57	MG	YA	3240	1/1	0.83	0.05	49,49,49,49	0
57	MG	RA	3154	1/1	0.83	0.17	77,77,77,77	0
57	MG	YA	3248	1/1	0.83	0.14	72,72,72,72	0
57	MG	XA	1667	1/1	0.83	0.14	75,75,75,75	0
57	MG	QA	1648	1/1	0.83	0.09	79,79,79,79	0
57	MG	RA	3222	1/1	0.83	0.12	102,102,102,102	0
57	MG	XA	1710	1/1	0.84	0.17	73,73,73,73	0
57	MG	QA	1651	1/1	0.84	0.22	60,60,60,60	0
57	MG	RA	3405	1/1	0.84	0.08	93,93,93,93	0
57	MG	XA	1720	1/1	0.84	0.09	67,67,67,67	0
57	MG	XA	1658	1/1	0.84	0.07	62,62,62,62	0
57	MG	YA	3241	1/1	0.84	0.23	30,30,30,30	0
57	MG	YA	3490	1/1	0.84	0.07	64,64,64,64	0
57	MG	RA	3126	1/1	0.84	0.07	73,73,73,73	0
57	MG	QA	1717	1/1	0.84	0.14	69,69,69,69	0
57	MG	RA	3235	1/1	0.84	0.21	46,46,46,46	0
57	MG	YA	3273	1/1	0.84	0.21	86,86,86,86	0
57	MG	YA	3387	1/1	0.84	0.10	59,59,59,59	0
57	MG	RA	3336	1/1	0.84	0.07	66,66,66,66	0
57	MG	RA	3253	1/1	0.84	0.13	73,73,73,73	0
57	MG	XA	1675	1/1	0.84	0.17	65,65,65,65	0
57	MG	QA	1618	1/1	0.84	0.19	71,71,71,71	0
57	MG	RA	3305	1/1	0.84	0.12	111,111,111,111	0
57	MG	QA	1649	1/1	0.84	0.24	68,68,68,68	0
57	MG	QA	1626	1/1	0.84	0.11	61,61,61,61	0
57	MG	YW	201	1/1	0.84	0.09	104,104,104,104	0
57	MG	RA	3284	1/1	0.84	0.12	86,86,86,86	0
57	MG	YA	3169	1/1	0.84	0.07	32,32,32,32	0
57	MG	RA	3117	1/1	0.84	0.16	56,56,56,56	0
57	MG	Y5	101	1/1	0.84	0.11	82,82,82,82	0
57	MG	Y6	101	1/1	0.84	0.13	68,68,68,68	0
57	MG	YA	3089	1/1	0.84	0.05	79,79,79,79	0
57	MG	YA	3093	1/1	0.84	0.17	74,74,74,74	0
57	MG	RA	3327	1/1	0.84	0.11	64,64,64,64	0
57	MG	YA	3035	1/1	0.84	0.12	68,68,68,68	0
57	MG	RA	3399	1/1	0.85	0.15	77,77,77,77	0
57	MG	YA	3322	1/1	0.85	0.16	35,35,35,35	0
57	MG	RA	3292	1/1	0.85	0.13	65,65,65,65	0
57	MG	YA	3513	1/1	0.85	0.24	73,73,73,73	0
57	MG	RA	3203	1/1	0.85	0.12	52,52,52,52	0
57	MG	RA	3143	1/1	0.85	0.07	93,93,93,93	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3525	1/1	0.85	0.10	65,65,65,65	0
57	MG	YA	3532	1/1	0.85	0.09	64,64,64,64	0
57	MG	YA	3534	1/1	0.85	0.11	42,42,42,42	0
57	MG	XA	1679	1/1	0.85	0.17	104,104,104,104	0
57	MG	XD	301	1/1	0.85	0.21	77,77,77,77	0
57	MG	YA	3047	1/1	0.85	0.14	82,82,82,82	0
57	MG	YA	3268	1/1	0.85	0.07	86,86,86,86	0
57	MG	RF	304	1/1	0.85	0.15	106,106,106,106	0
57	MG	YE	306	1/1	0.85	0.17	48,48,48,48	0
57	MG	YA	3353	1/1	0.85	0.14	40,40,40,40	0
57	MG	R6	101	1/1	0.85	0.07	93,93,93,93	0
57	MG	RA	3077	1/1	0.85	0.17	54,54,54,54	0
57	MG	XA	1700	1/1	0.85	0.20	70,70,70,70	0
57	MG	QA	1686	1/1	0.85	0.11	72,72,72,72	0
57	MG	YA	3466	1/1	0.85	0.13	82,82,82,82	0
57	MG	XA	1610	1/1	0.85	0.05	72,72,72,72	0
57	MG	QA	1625	1/1	0.85	0.08	77,77,77,77	0
57	MG	XA	1663	1/1	0.85	0.09	86,86,86,86	0
57	MG	YA	3131	1/1	0.85	0.17	69,69,69,69	0
57	MG	RA	3189	1/1	0.85	0.19	100,100,100,100	0
57	MG	YA	3265	1/1	0.86	0.10	52,52,52,52	0
57	MG	YA	3267	1/1	0.86	0.05	69,69,69,69	0
57	MG	RE	305	1/1	0.86	0.07	85,85,85,85	0
57	MG	YA	3440	1/1	0.86	0.14	37,37,37,37	0
57	MG	YA	3272	1/1	0.86	0.09	80,80,80,80	0
57	MG	RA	3006	1/1	0.86	0.06	68,68,68,68	0
57	MG	QA	1628	1/1	0.86	0.15	106,106,106,106	0
57	MG	RA	3214	1/1	0.86	0.24	68,68,68,68	0
57	MG	XA	1666	1/1	0.86	0.08	73,73,73,73	0
57	MG	RA	3040	1/1	0.86	0.18	46,46,46,46	0
57	MG	XA	1669	1/1	0.86	0.12	54,54,54,54	0
57	MG	RA	3177	1/1	0.86	0.24	39,39,39,39	0
57	MG	RA	3377	1/1	0.86	0.27	82,82,82,82	0
57	MG	YA	3038	1/1	0.86	0.27	71,71,71,71	0
57	MG	RA	3378	1/1	0.86	0.07	93,93,93,93	0
57	MG	YA	3315	1/1	0.86	0.08	89,89,89,89	0
57	MG	RA	3280	1/1	0.86	0.14	80,80,80,80	0
57	MG	YA	3318	1/1	0.86	0.22	68,68,68,68	0
57	MG	RA	3184	1/1	0.86	0.21	90,90,90,90	0
57	MG	QA	1721	1/1	0.86	0.06	91,91,91,91	0
57	MG	QA	1638	1/1	0.86	0.13	67,67,67,67	0
57	MG	YA	3053	1/1	0.86	0.07	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3330	1/1	0.86	0.15	59,59,59,59	0
57	MG	RA	3135	1/1	0.86	0.06	62,62,62,62	0
57	MG	YA	3523	1/1	0.86	0.14	62,62,62,62	0
57	MG	QA	1655	1/1	0.86	0.08	61,61,61,61	0
57	MG	RA	3291	1/1	0.86	0.11	74,74,74,74	0
57	MG	QA	1670	1/1	0.86	0.05	81,81,81,81	0
57	MG	YA	3187	1/1	0.86	0.06	82,82,82,82	0
57	MG	RA	3299	1/1	0.86	0.16	99,99,99,99	0
57	MG	QA	1685	1/1	0.86	0.22	100,100,100,100	0
57	MG	YA	3067	1/1	0.86	0.12	76,76,76,76	0
57	MG	YB	207	1/1	0.86	0.06	73,73,73,73	0
57	MG	RA	3410	1/1	0.86	0.20	100,100,100,100	0
57	MG	YD	303	1/1	0.86	0.12	87,87,87,87	0
57	MG	YE	303	1/1	0.86	0.10	41,41,41,41	0
57	MG	RA	3411	1/1	0.86	0.20	86,86,86,86	0
57	MG	YQ	202	1/1	0.86	0.07	57,57,57,57	0
57	MG	RA	3099	1/1	0.86	0.10	70,70,70,70	0
57	MG	RA	3303	1/1	0.86	0.15	81,81,81,81	0
57	MG	YA	3371	1/1	0.86	0.09	66,66,66,66	0
57	MG	RA	3355	1/1	0.86	0.07	45,45,45,45	0
57	MG	QA	1643	1/1	0.86	0.07	79,79,79,79	0
57	MG	YA	3392	1/1	0.86	0.12	74,74,74,74	0
57	MG	QA	1623	1/1	0.86	0.04	95,95,95,95	0
57	MG	XA	1651	1/1	0.86	0.19	69,69,69,69	0
57	MG	XN	101	1/1	0.86	0.27	72,72,72,72	0
57	MG	RA	3307	1/1	0.86	0.14	73,73,73,73	0
57	MG	YA	3262	1/1	0.86	0.08	61,61,61,61	0
57	MG	RA	3121	1/1	0.87	0.13	51,51,51,51	0
57	MG	QA	1722	1/1	0.87	0.10	84,84,84,84	0
57	MG	XA	1724	1/1	0.87	0.08	86,86,86,86	0
57	MG	YA	3379	1/1	0.87	0.16	73,73,73,73	0
57	MG	YA	3383	1/1	0.87	0.10	70,70,70,70	0
57	MG	YA	3386	1/1	0.87	0.25	76,76,76,76	0
57	MG	YA	3295	1/1	0.87	0.12	73,73,73,73	0
57	MG	RA	3210	1/1	0.87	0.10	92,92,92,92	0
57	MG	YA	3104	1/1	0.87	0.07	36,36,36,36	0
57	MG	RA	3028	1/1	0.87	0.23	33,33,33,33	0
57	MG	YA	3528	1/1	0.87	0.08	64,64,64,64	0
57	MG	XA	1631	1/1	0.87	0.04	78,78,78,78	0
57	MG	YA	3408	1/1	0.87	0.14	64,64,64,64	0
57	MG	YA	3052	1/1	0.87	0.09	57,57,57,57	0
57	MG	QA	1673	1/1	0.87	0.14	76,76,76,76	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	RA	3197	1/1	0.87	0.20	72,72,72,72	0
57	MG	YA	3232	1/1	0.87	0.10	79,79,79,79	0
57	MG	XA	1684	1/1	0.87	0.17	51,51,51,51	0
57	MG	QA	1718	1/1	0.87	0.07	111,111,111,111	0
57	MG	RA	3217	1/1	0.87	0.05	74,74,74,74	0
57	MG	QV	101	1/1	0.87	0.09	69,69,69,69	0
57	MG	RA	3265	1/1	0.87	0.07	66,66,66,66	0
57	MG	RA	3083	1/1	0.87	0.08	50,50,50,50	0
57	MG	YA	3012	1/1	0.87	0.05	60,60,60,60	0
57	MG	YV	201	1/1	0.87	0.08	106,106,106,106	0
57	MG	YA	3455	1/1	0.87	0.15	51,51,51,51	0
57	MG	RA	3344	1/1	0.87	0.12	61,61,61,61	0
57	MG	QA	1709	1/1	0.87	0.14	81,81,81,81	0
57	MG	YA	3149	1/1	0.87	0.13	63,63,63,63	0
57	MG	YA	3152	1/1	0.87	0.09	104,104,104,104	0
57	MG	YA	3464	1/1	0.87	0.13	73,73,73,73	0
57	MG	R7	101	1/1	0.87	0.10	86,86,86,86	0
57	MG	RA	3391	1/1	0.87	0.05	43,43,43,43	0
57	MG	YA	3278	1/1	0.87	0.17	96,96,96,96	0
57	MG	RA	3325	1/1	0.87	0.17	89,89,89,89	0
57	MG	RA	3193	1/1	0.88	0.12	37,37,37,37	0
57	MG	YA	3483	1/1	0.88	0.09	103,103,103,103	0
57	MG	R1	101	1/1	0.88	0.08	86,86,86,86	0
57	MG	XA	1664	1/1	0.88	0.11	79,79,79,79	0
57	MG	YA	3142	1/1	0.88	0.06	65,65,65,65	0
57	MG	RA	3366	1/1	0.88	0.09	48,48,48,48	0
57	MG	YA	3063	1/1	0.88	0.10	66,66,66,66	0
57	MG	YA	3509	1/1	0.88	0.05	77,77,77,77	0
57	MG	YA	3511	1/1	0.88	0.09	24,24,24,24	0
57	MG	QA	1656	1/1	0.88	0.06	74,74,74,74	0
57	MG	YA	3150	1/1	0.88	0.11	58,58,58,58	0
57	MG	RA	3371	1/1	0.88	0.12	52,52,52,52	0
57	MG	R9	101	1/1	0.88	0.12	81,81,81,81	0
57	MG	YA	3521	1/1	0.88	0.17	69,69,69,69	0
57	MG	RA	3334	1/1	0.88	0.10	121,121,121,121	0
57	MG	RA	3114	1/1	0.88	0.13	45,45,45,45	0
57	MG	YA	3393	1/1	0.88	0.08	48,48,48,48	0
57	MG	RA	3115	1/1	0.88	0.14	75,75,75,75	0
57	MG	YA	3004	1/1	0.88	0.06	67,67,67,67	0
57	MG	RA	3198	1/1	0.88	0.09	52,52,52,52	0
57	MG	RA	3162	1/1	0.88	0.12	66,66,66,66	0
57	MG	XA	1622	1/1	0.88	0.05	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	RD	305	1/1	0.88	0.09	93,93,93,93	0
57	MG	YA	3422	1/1	0.88	0.07	56,56,56,56	0
57	MG	YA	3316	1/1	0.88	0.07	76,76,76,76	0
57	MG	QA	1710	1/1	0.88	0.10	70,70,70,70	0
57	MG	RA	3057	1/1	0.88	0.19	34,34,34,34	0
57	MG	YA	3223	1/1	0.88	0.08	38,38,38,38	0
57	MG	YA	3446	1/1	0.88	0.19	59,59,59,59	0
57	MG	RA	3144	1/1	0.88	0.31	97,97,97,97	0
57	MG	RA	3179	1/1	0.88	0.13	95,95,95,95	0
57	MG	YA	3231	1/1	0.88	0.21	57,57,57,57	0
57	MG	RA	3183	1/1	0.88	0.15	36,36,36,36	0
57	MG	RA	3354	1/1	0.88	0.12	58,58,58,58	0
57	MG	XA	1711	1/1	0.88	0.05	59,59,59,59	0
57	MG	RA	3145	1/1	0.88	0.08	75,75,75,75	0
57	MG	YA	3342	1/1	0.88	0.34	60,60,60,60	0
57	MG	XA	1715	1/1	0.88	0.09	64,64,64,64	0
57	MG	QA	1680	1/1	0.88	0.11	82,82,82,82	0
57	MG	RA	3035	1/1	0.88	0.08	42,42,42,42	0
57	MG	RA	3295	1/1	0.88	0.05	115,115,115,115	0
57	MG	YA	3024	1/1	0.89	0.26	82,82,82,82	0
57	MG	YA	3025	1/1	0.89	0.21	67,67,67,67	0
57	MG	RA	3247	1/1	0.89	0.05	92,92,92,92	0
57	MG	QO	101	1/1	0.89	0.30	92,92,92,92	0
57	MG	RA	3185	1/1	0.89	0.20	83,83,83,83	0
57	MG	XA	1682	1/1	0.89	0.04	62,62,62,62	0
57	MG	YA	3143	1/1	0.89	0.30	75,75,75,75	0
57	MG	YA	3307	1/1	0.89	0.09	73,73,73,73	0
57	MG	RA	3045	1/1	0.89	0.10	70,70,70,70	0
57	MG	RA	3051	1/1	0.89	0.20	36,36,36,36	0
57	MG	QA	1616	1/1	0.89	0.05	64,64,64,64	0
57	MG	RA	3297	1/1	0.89	0.12	102,102,102,102	0
57	MG	RA	3003	1/1	0.89	0.15	47,47,47,47	0
57	MG	YA	3050	1/1	0.89	0.20	65,65,65,65	0
57	MG	YA	3320	1/1	0.89	0.20	54,54,54,54	0
57	MG	YA	3051	1/1	0.89	0.07	52,52,52,52	0
57	MG	RA	3119	1/1	0.89	0.09	92,92,92,92	0
57	MG	YA	3491	1/1	0.89	0.12	60,60,60,60	0
57	MG	RA	3061	1/1	0.89	0.09	55,55,55,55	0
57	MG	XA	1620	1/1	0.89	0.10	58,58,58,58	0
57	MG	YA	3176	1/1	0.89	0.26	59,59,59,59	0
57	MG	YA	3179	1/1	0.89	0.16	57,57,57,57	0
57	MG	QA	1663	1/1	0.89	0.12	86,86,86,86	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3184	1/1	0.89	0.07	50,50,50,50	0
57	MG	RB	203	1/1	0.89	0.06	90,90,90,90	0
57	MG	RA	3263	1/1	0.89	0.10	62,62,62,62	0
57	MG	XA	1632	1/1	0.89	0.11	75,75,75,75	0
57	MG	YA	3520	1/1	0.89	0.11	77,77,77,77	0
57	MG	RA	3225	1/1	0.89	0.18	58,58,58,58	0
57	MG	RA	3124	1/1	0.89	0.16	63,63,63,63	0
57	MG	YA	3206	1/1	0.89	0.14	77,77,77,77	0
57	MG	RA	3308	1/1	0.89	0.08	60,60,60,60	0
57	MG	RA	3363	1/1	0.89	0.06	72,72,72,72	0
57	MG	RA	3007	1/1	0.89	0.21	54,54,54,54	0
57	MG	XA	1727	1/1	0.89	0.07	52,52,52,52	0
57	MG	RE	304	1/1	0.89	0.19	91,91,91,91	0
57	MG	YA	3374	1/1	0.89	0.12	69,69,69,69	0
57	MG	RA	3172	1/1	0.89	0.17	60,60,60,60	0
57	MG	XA	1656	1/1	0.89	0.07	73,73,73,73	0
57	MG	RA	3173	1/1	0.89	0.16	59,59,59,59	0
57	MG	RA	3236	1/1	0.89	0.12	95,95,95,95	0
57	MG	YA	3245	1/1	0.89	0.15	82,82,82,82	0
57	MG	YA	3391	1/1	0.89	0.07	64,64,64,64	0
57	MG	RA	3323	1/1	0.89	0.14	64,64,64,64	0
57	MG	XA	1662	1/1	0.89	0.06	58,58,58,58	0
57	MG	QA	1696	1/1	0.89	0.12	84,84,84,84	0
57	MG	YA	3261	1/1	0.89	0.12	21,21,21,21	0
57	MG	RA	3275	1/1	0.89	0.10	76,76,76,76	0
57	MG	YA	3264	1/1	0.89	0.11	22,22,22,22	0
57	MG	RA	3328	1/1	0.89	0.08	95,95,95,95	0
57	MG	QA	1703	1/1	0.89	0.08	81,81,81,81	0
57	MG	RA	3031	1/1	0.89	0.09	48,48,48,48	0
57	MG	QA	1610	1/1	0.89	0.06	90,90,90,90	0
57	MG	YA	3118	1/1	0.89	0.17	72,72,72,72	0
57	MG	YA	3017	1/1	0.89	0.18	78,78,78,78	0
57	MG	RA	3212	1/1	0.89	0.06	50,50,50,50	0
57	MG	YA	3141	1/1	0.90	0.09	62,62,62,62	0
57	MG	YA	3282	1/1	0.90	0.16	62,62,62,62	0
57	MG	YA	3284	1/1	0.90	0.23	52,52,52,52	0
57	MG	YA	3432	1/1	0.90	0.08	57,57,57,57	0
57	MG	XA	1693	1/1	0.90	0.11	85,85,85,85	0
57	MG	RD	303	1/1	0.90	0.61	59,59,59,59	0
57	MG	XA	1623	1/1	0.90	0.05	87,87,87,87	0
57	MG	YA	3291	1/1	0.90	0.22	66,66,66,66	0
57	MG	RA	3373	1/1	0.90	0.07	86,86,86,86	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3148	1/1	0.90	0.09	91,91,91,91	0
57	MG	YA	3302	1/1	0.90	0.15	55,55,55,55	0
57	MG	XA	1629	1/1	0.90	0.09	67,67,67,67	0
57	MG	QA	1627	1/1	0.90	0.11	82,82,82,82	0
57	MG	RE	303	1/1	0.90	0.12	52,52,52,52	0
57	MG	RA	3084	1/1	0.90	0.14	49,49,49,49	0
57	MG	QA	1678	1/1	0.90	0.06	77,77,77,77	0
57	MG	XA	1639	1/1	0.90	0.09	55,55,55,55	0
57	MG	RA	3146	1/1	0.90	0.08	70,70,70,70	0
57	MG	RF	303	1/1	0.90	0.16	60,60,60,60	0
57	MG	YA	3064	1/1	0.90	0.14	91,91,91,91	0
57	MG	RA	3245	1/1	0.90	0.15	90,90,90,90	0
57	MG	YA	3321	1/1	0.90	0.13	42,42,42,42	0
57	MG	QA	1601	1/1	0.90	0.18	54,54,54,54	0
57	MG	QA	1645	1/1	0.90	0.23	80,80,80,80	0
57	MG	YA	3325	1/1	0.90	0.07	63,63,63,63	0
57	MG	QA	1612	1/1	0.90	0.07	101,101,101,101	0
57	MG	RA	3027	1/1	0.90	0.09	56,56,56,56	0
57	MG	YA	3506	1/1	0.90	0.08	58,58,58,58	0
57	MG	YA	3508	1/1	0.90	0.16	51,51,51,51	0
57	MG	RA	3276	1/1	0.90	0.20	71,71,71,71	0
57	MG	RA	3350	1/1	0.90	0.10	68,68,68,68	0
57	MG	RA	3187	1/1	0.90	0.12	89,89,89,89	0
57	MG	YA	3203	1/1	0.90	0.20	32,32,32,32	0
57	MG	RA	3157	1/1	0.90	0.07	50,50,50,50	0
57	MG	YA	3218	1/1	0.90	0.09	71,71,71,71	0
57	MG	RA	3314	1/1	0.90	0.06	119,119,119,119	0
57	MG	YA	3352	1/1	0.90	0.12	64,64,64,64	0
57	MG	R3	101	1/1	0.90	0.20	69,69,69,69	0
57	MG	QA	1708	1/1	0.90	0.04	60,60,60,60	0
57	MG	YA	3101	1/1	0.90	0.10	59,59,59,59	0
57	MG	YA	3006	1/1	0.90	0.12	38,38,38,38	0
57	MG	RA	3318	1/1	0.90	0.10	71,71,71,71	0
57	MG	YA	3535	1/1	0.90	0.25	83,83,83,83	0
57	MG	YA	3367	1/1	0.90	0.10	90,90,90,90	0
57	MG	YA	3537	1/1	0.90	0.24	54,54,54,54	0
57	MG	YA	3238	1/1	0.90	0.29	98,98,98,98	0
57	MG	RA	3071	1/1	0.90	0.24	45,45,45,45	0
57	MG	RA	3412	1/1	0.90	0.18	58,58,58,58	0
57	MG	YB	205	1/1	0.90	0.05	73,73,73,73	0
57	MG	XA	1674	1/1	0.90	0.07	65,65,65,65	0
57	MG	RA	3213	1/1	0.90	0.16	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	RA	3257	1/1	0.90	0.34	96,96,96,96	0
57	MG	YE	301	1/1	0.90	0.12	24,24,24,24	0
57	MG	YA	3384	1/1	0.90	0.15	80,80,80,80	0
57	MG	YE	305	1/1	0.90	0.07	68,68,68,68	0
57	MG	QA	1639	1/1	0.90	0.08	60,60,60,60	0
57	MG	YA	3120	1/1	0.90	0.09	73,73,73,73	0
57	MG	YA	3260	1/1	0.90	0.17	58,58,58,58	0
57	MG	YA	3390	1/1	0.90	0.09	71,71,71,71	0
57	MG	YA	3121	1/1	0.90	0.06	82,82,82,82	0
57	MG	YA	3125	1/1	0.90	0.10	76,76,76,76	0
57	MG	XA	1680	1/1	0.90	0.06	86,86,86,86	0
57	MG	RA	3260	1/1	0.90	0.10	45,45,45,45	0
57	MG	RA	3238	1/1	0.90	0.09	106,106,106,106	0
57	MG	YA	3404	1/1	0.90	0.22	38,38,38,38	0
57	MG	XA	1686	1/1	0.90	0.23	41,41,41,41	0
57	MG	XA	1616	1/1	0.90	0.08	68,68,68,68	0
57	MG	XA	1618	1/1	0.90	0.06	51,51,51,51	0
57	MG	RA	3262	1/1	0.90	0.13	67,67,67,67	0
57	MG	RA	3176	1/1	0.91	0.14	71,71,71,71	0
57	MG	YA	3471	1/1	0.91	0.12	32,32,32,32	0
57	MG	RA	3414	1/1	0.91	0.08	68,68,68,68	0
57	MG	XA	1681	1/1	0.91	0.07	77,77,77,77	0
57	MG	YA	3478	1/1	0.91	0.11	67,67,67,67	0
57	MG	YA	3479	1/1	0.91	0.11	58,58,58,58	0
57	MG	YA	3480	1/1	0.91	0.14	47,47,47,47	0
57	MG	YA	3249	1/1	0.91	0.22	42,42,42,42	0
57	MG	QA	1679	1/1	0.91	0.09	82,82,82,82	0
57	MG	QA	1661	1/1	0.91	0.14	82,82,82,82	0
57	MG	YA	3069	1/1	0.91	0.10	41,41,41,41	0
57	MG	RA	3226	1/1	0.91	0.11	64,64,64,64	0
57	MG	YA	3151	1/1	0.91	0.28	60,60,60,60	0
57	MG	YA	3494	1/1	0.91	0.15	75,75,75,75	0
57	MG	RB	206	1/1	0.91	0.12	69,69,69,69	0
57	MG	YA	3505	1/1	0.91	0.13	52,52,52,52	0
57	MG	YA	3075	1/1	0.91	0.17	43,43,43,43	0
57	MG	RA	3049	1/1	0.91	0.09	66,66,66,66	0
57	MG	RA	3022	1/1	0.91	0.22	31,31,31,31	0
57	MG	RA	3319	1/1	0.91	0.09	55,55,55,55	0
57	MG	YA	3162	1/1	0.91	0.19	89,89,89,89	0
57	MG	YA	3382	1/1	0.91	0.11	85,85,85,85	0
57	MG	XA	1652	1/1	0.91	0.13	54,54,54,54	0
57	MG	YA	3019	1/1	0.91	0.11	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3283	1/1	0.91	0.23	57,57,57,57	0
57	MG	YA	3023	1/1	0.91	0.05	57,57,57,57	0
57	MG	XA	1653	1/1	0.91	0.07	48,48,48,48	0
57	MG	XA	1703	1/1	0.91	0.09	57,57,57,57	0
57	MG	YA	3289	1/1	0.91	0.14	72,72,72,72	0
57	MG	RA	3381	1/1	0.91	0.08	36,36,36,36	0
57	MG	RA	3250	1/1	0.91	0.09	47,47,47,47	0
57	MG	XA	1607	1/1	0.91	0.05	71,71,71,71	0
57	MG	RA	3352	1/1	0.91	0.09	69,69,69,69	0
57	MG	RE	302	1/1	0.91	0.09	90,90,90,90	0
57	MG	YA	3198	1/1	0.91	0.07	42,42,42,42	0
57	MG	YA	3199	1/1	0.91	0.06	62,62,62,62	0
57	MG	YA	3541	1/1	0.91	0.15	72,72,72,72	0
57	MG	YA	3415	1/1	0.91	0.29	52,52,52,52	0
57	MG	YB	202	1/1	0.91	0.07	63,63,63,63	0
57	MG	RA	3233	1/1	0.91	0.10	60,60,60,60	0
57	MG	YB	206	1/1	0.91	0.07	69,69,69,69	0
57	MG	RA	3200	1/1	0.91	0.08	61,61,61,61	0
57	MG	YA	3421	1/1	0.91	0.15	53,53,53,53	0
57	MG	RA	3271	1/1	0.91	0.09	56,56,56,56	0
57	MG	YA	3423	1/1	0.91	0.21	17,17,17,17	0
57	MG	YA	3220	1/1	0.91	0.21	25,25,25,25	0
57	MG	XA	1721	1/1	0.91	0.07	71,71,71,71	0
57	MG	RA	3055	1/1	0.91	0.05	74,74,74,74	0
57	MG	QA	1672	1/1	0.91	0.06	69,69,69,69	0
57	MG	XA	1668	1/1	0.91	0.06	64,64,64,64	0
57	MG	YU	201	1/1	0.91	0.09	65,65,65,65	0
57	MG	RA	3237	1/1	0.91	0.17	72,72,72,72	0
57	MG	QA	1705	1/1	0.91	0.05	61,61,61,61	0
57	MG	YA	3236	1/1	0.91	0.11	71,71,71,71	0
57	MG	YA	3237	1/1	0.91	0.11	66,66,66,66	0
57	MG	QA	1693	1/1	0.91	0.07	69,69,69,69	0
57	MG	RA	3278	1/1	0.91	0.05	90,90,90,90	0
57	MG	XA	1677	1/1	0.91	0.08	78,78,78,78	0
57	MG	QA	1607	1/1	0.91	0.12	133,133,133,133	0
59	ZN	QN	102	1/1	0.91	0.09	145,145,145,145	0
57	MG	YA	3336	1/1	0.91	0.18	42,42,42,42	0
57	MG	YA	3243	1/1	0.91	0.15	63,63,63,63	0
57	MG	YA	3244	1/1	0.91	0.07	51,51,51,51	0
57	MG	RV	201	1/1	0.92	0.24	86,86,86,86	0
57	MG	YA	3186	1/1	0.92	0.04	42,42,42,42	0
57	MG	YA	3313	1/1	0.92	0.30	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	RA	3171	1/1	0.92	0.06	43,43,43,43	0
57	MG	RA	3316	1/1	0.92	0.07	79,79,79,79	0
57	MG	QA	1701	1/1	0.92	0.12	83,83,83,83	0
57	MG	XA	1661	1/1	0.92	0.07	78,78,78,78	0
57	MG	YA	3460	1/1	0.92	0.17	48,48,48,48	0
57	MG	YA	3192	1/1	0.92	0.07	60,60,60,60	0
57	MG	YA	3079	1/1	0.92	0.06	90,90,90,90	0
57	MG	RA	3402	1/1	0.92	0.10	55,55,55,55	0
57	MG	YA	3467	1/1	0.92	0.22	82,82,82,82	0
57	MG	RA	3009	1/1	0.92	0.19	29,29,29,29	0
57	MG	QA	1617	1/1	0.92	0.07	118,118,118,118	0
57	MG	YA	3084	1/1	0.92	0.14	58,58,58,58	0
57	MG	YA	3212	1/1	0.92	0.09	65,65,65,65	0
57	MG	RA	3232	1/1	0.92	0.18	81,81,81,81	0
57	MG	RA	3358	1/1	0.92	0.06	67,67,67,67	0
57	MG	RA	3141	1/1	0.92	0.19	78,78,78,78	0
57	MG	YA	3333	1/1	0.92	0.17	57,57,57,57	0
57	MG	XA	1601	1/1	0.92	0.15	67,67,67,67	0
57	MG	YA	3005	1/1	0.92	0.08	61,61,61,61	0
57	MG	RA	3142	1/1	0.92	0.15	67,67,67,67	0
57	MG	RA	3364	1/1	0.92	0.17	73,73,73,73	0
57	MG	RA	3209	1/1	0.92	0.12	45,45,45,45	0
57	MG	YA	3347	1/1	0.92	0.17	60,60,60,60	0
57	MG	RA	3104	1/1	0.92	0.12	48,48,48,48	0
57	MG	RA	3368	1/1	0.92	0.15	59,59,59,59	0
57	MG	YA	3116	1/1	0.92	0.06	87,87,87,87	0
57	MG	YA	3354	1/1	0.92	0.11	86,86,86,86	0
57	MG	YA	3016	1/1	0.92	0.13	62,62,62,62	0
57	MG	YA	3359	1/1	0.92	0.15	63,63,63,63	0
57	MG	XA	1612	1/1	0.92	0.06	92,92,92,92	0
57	MG	XA	1614	1/1	0.92	0.21	68,68,68,68	0
57	MG	YA	3517	1/1	0.92	0.08	59,59,59,59	0
57	MG	RA	3105	1/1	0.92	0.09	59,59,59,59	0
57	MG	RA	3370	1/1	0.92	0.18	52,52,52,52	0
57	MG	QA	1611	1/1	0.92	0.11	63,63,63,63	0
57	MG	RA	3026	1/1	0.92	0.10	38,38,38,38	0
57	MG	YA	3370	1/1	0.92	0.09	73,73,73,73	0
57	MG	YA	3526	1/1	0.92	0.05	53,53,53,53	0
57	MG	XA	1685	1/1	0.92	0.09	75,75,75,75	0
57	MG	YA	3531	1/1	0.92	0.07	63,63,63,63	0
57	MG	YA	3372	1/1	0.92	0.05	68,68,68,68	0
57	MG	YA	3132	1/1	0.92	0.17	127,127,127,127	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3378	1/1	0.92	0.10	59,59,59,59	0
57	MG	RA	3241	1/1	0.92	0.06	26,26,26,26	0
57	MG	YA	3254	1/1	0.92	0.06	33,33,33,33	0
57	MG	QA	1652	1/1	0.92	0.08	62,62,62,62	0
57	MG	YA	3037	1/1	0.92	0.11	40,40,40,40	0
57	MG	YA	3385	1/1	0.92	0.11	60,60,60,60	0
57	MG	YA	3542	1/1	0.92	0.15	64,64,64,64	0
57	MG	RA	3337	1/1	0.92	0.06	63,63,63,63	0
57	MG	QA	1640	1/1	0.92	0.08	45,45,45,45	0
57	MG	RA	3029	1/1	0.92	0.19	41,41,41,41	0
57	MG	XA	1698	1/1	0.92	0.07	67,67,67,67	0
57	MG	YA	3144	1/1	0.92	0.12	53,53,53,53	0
57	MG	RA	3082	1/1	0.92	0.07	33,33,33,33	0
57	MG	YD	302	1/1	0.92	0.11	91,91,91,91	0
57	MG	QA	1641	1/1	0.92	0.09	39,39,39,39	0
57	MG	YD	308	1/1	0.92	0.12	42,42,42,42	0
57	MG	RA	3383	1/1	0.92	0.16	68,68,68,68	0
57	MG	RA	3384	1/1	0.92	0.26	25,25,25,25	0
57	MG	XA	1707	1/1	0.92	0.12	56,56,56,56	0
57	MG	XA	1641	1/1	0.92	0.07	87,87,87,87	0
57	MG	YQ	201	1/1	0.92	0.08	57,57,57,57	0
57	MG	RA	3160	1/1	0.92	0.17	65,65,65,65	0
57	MG	RA	3002	1/1	0.92	0.15	48,48,48,48	0
57	MG	RA	3392	1/1	0.92	0.20	87,87,87,87	0
57	MG	XA	1713	1/1	0.92	0.18	84,84,84,84	0
57	MG	YA	3420	1/1	0.92	0.15	51,51,51,51	0
57	MG	YA	3062	1/1	0.92	0.09	96,96,96,96	0
57	MG	QA	1609	1/1	0.92	0.20	52,52,52,52	0
57	MG	XA	1649	1/1	0.92	0.09	59,59,59,59	0
57	MG	RO	201	1/1	0.92	0.09	88,88,88,88	0
57	MG	YA	3297	1/1	0.92	0.11	39,39,39,39	0
57	MG	YA	3299	1/1	0.92	0.09	55,55,55,55	0
57	MG	QA	1668	1/1	0.92	0.11	79,79,79,79	0
57	MG	YA	3180	1/1	0.92	0.13	50,50,50,50	0
57	MG	RA	3395	1/1	0.92	0.09	25,25,25,25	0
57	MG	YA	3306	1/1	0.92	0.05	58,58,58,58	0
57	MG	YA	3338	1/1	0.93	0.08	57,57,57,57	0
57	MG	YA	3043	1/1	0.93	0.08	67,67,67,67	0
57	MG	YA	3046	1/1	0.93	0.24	71,71,71,71	0
57	MG	RA	3208	1/1	0.93	0.08	77,77,77,77	0
57	MG	YA	3048	1/1	0.93	0.12	73,73,73,73	0
57	MG	QA	1646	1/1	0.93	0.08	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3474	1/1	0.93	0.12	33,33,33,33	0
57	MG	YA	3246	1/1	0.93	0.08	67,67,67,67	0
57	MG	YA	3350	1/1	0.93	0.06	55,55,55,55	0
57	MG	QE	202	1/1	0.93	0.07	108,108,108,108	0
57	MG	RA	3310	1/1	0.93	0.09	107,107,107,107	0
57	MG	RA	3240	1/1	0.93	0.11	80,80,80,80	0
57	MG	RA	3180	1/1	0.93	0.05	48,48,48,48	0
57	MG	YA	3358	1/1	0.93	0.06	45,45,45,45	0
57	MG	XA	1719	1/1	0.93	0.25	74,74,74,74	0
57	MG	YA	3255	1/1	0.93	0.11	24,24,24,24	0
57	MG	YA	3362	1/1	0.93	0.18	40,40,40,40	0
57	MG	RA	3272	1/1	0.93	0.12	68,68,68,68	0
57	MG	RA	3315	1/1	0.93	0.05	82,82,82,82	0
57	MG	YA	3366	1/1	0.93	0.15	43,43,43,43	0
57	MG	RA	3066	1/1	0.93	0.04	60,60,60,60	0
57	MG	YA	3507	1/1	0.93	0.07	45,45,45,45	0
57	MG	RA	3005	1/1	0.93	0.16	48,48,48,48	0
57	MG	QA	1674	1/1	0.93	0.07	68,68,68,68	0
57	MG	YA	3510	1/1	0.93	0.07	27,27,27,27	0
57	MG	XA	1609	1/1	0.93	0.05	79,79,79,79	0
57	MG	RA	3081	1/1	0.93	0.09	39,39,39,39	0
57	MG	QN	101	1/1	0.93	0.07	66,66,66,66	0
57	MG	YA	3514	1/1	0.93	0.05	57,57,57,57	0
57	MG	RA	3191	1/1	0.93	0.10	64,64,64,64	0
57	MG	YA	3375	1/1	0.93	0.09	27,27,27,27	0
57	MG	YA	3275	1/1	0.93	0.18	40,40,40,40	0
57	MG	YA	3159	1/1	0.93	0.06	80,80,80,80	0
57	MG	YA	3280	1/1	0.93	0.18	63,63,63,63	0
57	MG	XA	1670	1/1	0.93	0.19	91,91,91,91	0
57	MG	RA	3279	1/1	0.93	0.14	64,64,64,64	0
57	MG	YA	3165	1/1	0.93	0.24	54,54,54,54	0
57	MG	XA	1672	1/1	0.93	0.07	52,52,52,52	0
57	MG	YA	3529	1/1	0.93	0.10	40,40,40,40	0
57	MG	YA	3172	1/1	0.93	0.06	50,50,50,50	0
57	MG	YA	3072	1/1	0.93	0.14	65,65,65,65	0
57	MG	YA	3533	1/1	0.93	0.11	57,57,57,57	0
57	MG	YA	3288	1/1	0.93	0.08	34,34,34,34	0
57	MG	YA	3178	1/1	0.93	0.22	35,35,35,35	0
57	MG	RA	3156	1/1	0.93	0.08	88,88,88,88	0
57	MG	QA	1716	1/1	0.93	0.11	74,74,74,74	0
57	MG	RA	3220	1/1	0.93	0.16	33,33,33,33	0
57	MG	YA	3395	1/1	0.93	0.07	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3396	1/1	0.93	0.13	53,53,53,53	0
57	MG	RA	3016	1/1	0.93	0.07	27,27,27,27	0
57	MG	RA	3047	1/1	0.93	0.15	35,35,35,35	0
57	MG	YB	201	1/1	0.93	0.04	67,67,67,67	0
57	MG	RA	3087	1/1	0.93	0.16	31,31,31,31	0
57	MG	YA	3409	1/1	0.93	0.12	53,53,53,53	0
57	MG	RA	3164	1/1	0.93	0.06	56,56,56,56	0
57	MG	XA	1628	1/1	0.93	0.05	85,85,85,85	0
57	MG	RF	301	1/1	0.93	0.05	66,66,66,66	0
57	MG	RA	3165	1/1	0.93	0.10	79,79,79,79	0
57	MG	YA	3097	1/1	0.93	0.04	68,68,68,68	0
57	MG	RA	3294	1/1	0.93	0.06	55,55,55,55	0
57	MG	RA	3090	1/1	0.93	0.09	66,66,66,66	0
57	MG	RA	3296	1/1	0.93	0.07	42,42,42,42	0
57	MG	YA	3426	1/1	0.93	0.15	40,40,40,40	0
57	MG	YA	3021	1/1	0.93	0.10	31,31,31,31	0
57	MG	YE	307	1/1	0.93	0.28	95,95,95,95	0
57	MG	YP	203	1/1	0.93	0.07	34,34,34,34	0
57	MG	YA	3211	1/1	0.93	0.08	54,54,54,54	0
57	MG	YA	3022	1/1	0.93	0.05	46,46,46,46	0
57	MG	QA	1675	1/1	0.93	0.14	80,80,80,80	0
57	MG	RA	3259	1/1	0.93	0.12	50,50,50,50	0
57	MG	YA	3445	1/1	0.93	0.08	34,34,34,34	0
57	MG	XA	1642	1/1	0.93	0.09	82,82,82,82	0
57	MG	RA	3020	1/1	0.93	0.14	33,33,33,33	0
57	MG	XA	1701	1/1	0.93	0.05	79,79,79,79	0
57	MG	RA	3204	1/1	0.93	0.18	41,41,41,41	0
57	MG	RA	3053	1/1	0.93	0.07	51,51,51,51	0
57	MG	YA	3454	1/1	0.93	0.15	66,66,66,66	0
57	MG	Y7	101	1/1	0.93	0.14	64,64,64,64	0
57	MG	YA	3124	1/1	0.93	0.06	53,53,53,53	0
57	MG	Y9	101	1/1	0.93	0.07	133,133,133,133	0
57	MG	QA	1605	1/1	0.93	0.05	68,68,68,68	0
57	MG	XA	1705	1/1	0.93	0.12	36,36,36,36	0
57	MG	RA	3400	1/1	0.93	0.06	82,82,82,82	0
57	MG	QV	103	1/1	0.93	0.41	92,92,92,92	0
57	MG	YA	3461	1/1	0.94	0.07	60,60,60,60	0
57	MG	YA	3029	1/1	0.94	0.06	66,66,66,66	0
57	MG	YA	3463	1/1	0.94	0.21	51,51,51,51	0
57	MG	RA	3046	1/1	0.94	0.07	63,63,63,63	0
57	MG	YA	3465	1/1	0.94	0.09	59,59,59,59	0
57	MG	YA	3034	1/1	0.94	0.18	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	XA	1643	1/1	0.94	0.27	60,60,60,60	0
57	MG	YA	3470	1/1	0.94	0.08	55,55,55,55	0
57	MG	RA	3166	1/1	0.94	0.09	80,80,80,80	0
57	MG	YA	3348	1/1	0.94	0.10	59,59,59,59	0
57	MG	QL	202	1/1	0.94	0.10	70,70,70,70	0
57	MG	RA	3353	1/1	0.94	0.13	54,54,54,54	0
57	MG	YA	3476	1/1	0.94	0.10	61,61,61,61	0
57	MG	RA	3169	1/1	0.94	0.04	79,79,79,79	0
57	MG	RA	3023	1/1	0.94	0.06	35,35,35,35	0
57	MG	RA	3130	1/1	0.94	0.13	63,63,63,63	0
57	MG	YA	3482	1/1	0.94	0.07	39,39,39,39	0
57	MG	YA	3355	1/1	0.94	0.13	78,78,78,78	0
57	MG	YA	3044	1/1	0.94	0.06	67,67,67,67	0
57	MG	YA	3488	1/1	0.94	0.17	42,42,42,42	0
57	MG	RA	3025	1/1	0.94	0.14	28,28,28,28	0
57	MG	QA	1712	1/1	0.94	0.15	88,88,88,88	0
57	MG	YA	3253	1/1	0.94	0.06	35,35,35,35	0
57	MG	XA	1655	1/1	0.94	0.07	84,84,84,84	0
57	MG	XA	1714	1/1	0.94	0.05	77,77,77,77	0
57	MG	YA	3498	1/1	0.94	0.13	25,25,25,25	0
57	MG	YA	3364	1/1	0.94	0.14	78,78,78,78	0
57	MG	YA	3503	1/1	0.94	0.03	45,45,45,45	0
57	MG	RA	3407	1/1	0.94	0.06	48,48,48,48	0
57	MG	XA	1657	1/1	0.94	0.05	51,51,51,51	0
57	MG	XA	1718	1/1	0.94	0.06	66,66,66,66	0
57	MG	RA	3360	1/1	0.94	0.04	53,53,53,53	0
57	MG	QA	1714	1/1	0.94	0.05	52,52,52,52	0
57	MG	YA	3057	1/1	0.94	0.16	66,66,66,66	0
57	MG	QA	1631	1/1	0.94	0.09	113,113,113,113	0
57	MG	XA	1722	1/1	0.94	0.17	49,49,49,49	0
57	MG	QA	1659	1/1	0.94	0.11	65,65,65,65	0
57	MG	XA	1602	1/1	0.94	0.10	55,55,55,55	0
57	MG	YA	3376	1/1	0.94	0.12	38,38,38,38	0
57	MG	YA	3276	1/1	0.94	0.07	32,32,32,32	0
57	MG	YA	3155	1/1	0.94	0.11	61,61,61,61	0
57	MG	YA	3279	1/1	0.94	0.31	70,70,70,70	0
57	MG	XA	1605	1/1	0.94	0.05	80,80,80,80	0
57	MG	YA	3522	1/1	0.94	0.17	56,56,56,56	0
57	MG	QA	1700	1/1	0.94	0.07	59,59,59,59	0
57	MG	YA	3524	1/1	0.94	0.10	82,82,82,82	0
57	MG	RA	3182	1/1	0.94	0.05	57,57,57,57	0
57	MG	RA	3367	1/1	0.94	0.03	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3527	1/1	0.94	0.08	85,85,85,85	0
57	MG	RB	204	1/1	0.94	0.04	63,63,63,63	0
57	MG	YA	3166	1/1	0.94	0.15	34,34,34,34	0
57	MG	RA	3281	1/1	0.94	0.07	70,70,70,70	0
57	MG	RA	3282	1/1	0.94	0.05	74,74,74,74	0
57	MG	XV	101	1/1	0.94	0.06	60,60,60,60	0
57	MG	RA	3063	1/1	0.94	0.06	68,68,68,68	0
57	MG	RA	3103	1/1	0.94	0.06	58,58,58,58	0
57	MG	RA	3017	1/1	0.94	0.08	48,48,48,48	0
57	MG	YA	3076	1/1	0.94	0.18	64,64,64,64	0
57	MG	YA	3397	1/1	0.94	0.12	79,79,79,79	0
57	MG	RA	3186	1/1	0.94	0.08	56,56,56,56	0
57	MG	YA	3399	1/1	0.94	0.04	53,53,53,53	0
57	MG	RA	3068	1/1	0.94	0.14	27,27,27,27	0
57	MG	YA	3407	1/1	0.94	0.18	51,51,51,51	0
57	MG	YA	3301	1/1	0.94	0.05	54,54,54,54	0
57	MG	RA	3109	1/1	0.94	0.07	70,70,70,70	0
57	MG	YB	203	1/1	0.94	0.09	34,34,34,34	0
57	MG	YB	204	1/1	0.94	0.04	81,81,81,81	0
57	MG	RA	3069	1/1	0.94	0.07	44,44,44,44	0
57	MG	YA	3413	1/1	0.94	0.07	48,48,48,48	0
57	MG	YA	3414	1/1	0.94	0.16	37,37,37,37	0
57	MG	QA	1635	1/1	0.94	0.08	59,59,59,59	0
57	MG	YA	3086	1/1	0.94	0.08	42,42,42,42	0
57	MG	XA	1625	1/1	0.94	0.05	53,53,53,53	0
57	MG	RA	3155	1/1	0.94	0.10	46,46,46,46	0
57	MG	RA	3072	1/1	0.94	0.10	47,47,47,47	0
57	MG	YA	3095	1/1	0.94	0.08	93,93,93,93	0
57	MG	YE	304	1/1	0.94	0.19	43,43,43,43	0
57	MG	RA	3042	1/1	0.94	0.08	26,26,26,26	0
57	MG	YA	3204	1/1	0.94	0.11	32,32,32,32	0
57	MG	YA	3427	1/1	0.94	0.08	20,20,20,20	0
57	MG	YA	3100	1/1	0.94	0.18	69,69,69,69	0
57	MG	YA	3430	1/1	0.94	0.20	40,40,40,40	0
57	MG	XA	1630	1/1	0.94	0.08	77,77,77,77	0
57	MG	RA	3118	1/1	0.94	0.09	44,44,44,44	0
57	MG	YA	3215	1/1	0.94	0.05	82,82,82,82	0
57	MG	YA	3020	1/1	0.94	0.23	76,76,76,76	0
57	MG	YA	3441	1/1	0.94	0.04	31,31,31,31	0
57	MG	RA	3387	1/1	0.94	0.07	18,18,18,18	0
57	MG	YA	3324	1/1	0.94	0.07	39,39,39,39	0
57	MG	XA	1633	1/1	0.94	0.05	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3225	1/1	0.94	0.13	25,25,25,25	0
57	MG	RA	3079	1/1	0.94	0.16	31,31,31,31	0
57	MG	YA	3328	1/1	0.94	0.25	81,81,81,81	0
57	MG	RA	3080	1/1	0.94	0.11	37,37,37,37	0
57	MG	YA	3113	1/1	0.94	0.21	66,66,66,66	0
57	MG	RA	3163	1/1	0.94	0.07	78,78,78,78	0
57	MG	QA	1719	1/1	0.94	0.15	83,83,83,83	0
57	MG	YA	3027	1/1	0.94	0.05	68,68,68,68	0
57	MG	YA	3339	1/1	0.94	0.08	36,36,36,36	0
57	MG	YA	3373	1/1	0.95	0.20	82,82,82,82	0
57	MG	YA	3183	1/1	0.95	0.13	72,72,72,72	0
57	MG	RA	3075	1/1	0.95	0.12	72,72,72,72	0
57	MG	RA	3158	1/1	0.95	0.19	65,65,65,65	0
57	MG	YA	3106	1/1	0.95	0.05	60,60,60,60	0
57	MG	RA	3076	1/1	0.95	0.10	35,35,35,35	0
57	MG	YA	3495	1/1	0.95	0.04	33,33,33,33	0
57	MG	YA	3381	1/1	0.95	0.07	64,64,64,64	0
57	MG	YA	3500	1/1	0.95	0.07	23,23,23,23	0
57	MG	YA	3501	1/1	0.95	0.15	44,44,44,44	0
57	MG	RA	3396	1/1	0.95	0.18	54,54,54,54	0
57	MG	RA	3326	1/1	0.95	0.07	60,60,60,60	0
57	MG	XA	1725	1/1	0.95	0.10	71,71,71,71	0
57	MG	RA	3136	1/1	0.95	0.04	44,44,44,44	0
57	MG	YA	3195	1/1	0.95	0.09	40,40,40,40	0
57	MG	YA	3292	1/1	0.95	0.06	47,47,47,47	0
57	MG	YA	3293	1/1	0.95	0.08	59,59,59,59	0
57	MG	RA	3033	1/1	0.95	0.10	52,52,52,52	0
57	MG	RA	3140	1/1	0.95	0.15	53,53,53,53	0
57	MG	YA	3200	1/1	0.95	0.11	31,31,31,31	0
57	MG	YA	3202	1/1	0.95	0.22	33,33,33,33	0
57	MG	QA	1720	1/1	0.95	0.04	64,64,64,64	0
57	MG	RA	3403	1/1	0.95	0.07	51,51,51,51	0
57	MG	RA	3097	1/1	0.95	0.06	55,55,55,55	0
57	MG	YA	3518	1/1	0.95	0.07	72,72,72,72	0
57	MG	YA	3207	1/1	0.95	0.15	19,19,19,19	0
57	MG	YA	3209	1/1	0.95	0.10	27,27,27,27	0
57	MG	YA	3123	1/1	0.95	0.08	43,43,43,43	0
57	MG	YA	3309	1/1	0.95	0.16	59,59,59,59	0
57	MG	YA	3311	1/1	0.95	0.11	60,60,60,60	0
57	MG	RA	3302	1/1	0.95	0.06	74,74,74,74	0
57	MG	YA	3214	1/1	0.95	0.16	23,23,23,23	0
57	MG	RA	3037	1/1	0.95	0.11	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3054	1/1	0.95	0.06	79,79,79,79	0
57	MG	RA	3335	1/1	0.95	0.03	49,49,49,49	0
57	MG	YA	3222	1/1	0.95	0.10	66,66,66,66	0
57	MG	R0	102	1/1	0.95	0.04	58,58,58,58	0
57	MG	YA	3224	1/1	0.95	0.10	44,44,44,44	0
57	MG	QM	201	1/1	0.95	0.08	89,89,89,89	0
57	MG	YA	3226	1/1	0.95	0.10	75,75,75,75	0
57	MG	RA	3014	1/1	0.95	0.09	28,28,28,28	0
57	MG	YA	3135	1/1	0.95	0.09	51,51,51,51	0
57	MG	XA	1688	1/1	0.95	0.04	60,60,60,60	0
57	MG	RA	3306	1/1	0.95	0.05	54,54,54,54	0
57	MG	YA	3233	1/1	0.95	0.19	38,38,38,38	0
57	MG	QA	1613	1/1	0.95	0.04	73,73,73,73	0
57	MG	YA	3329	1/1	0.95	0.20	33,33,33,33	0
57	MG	RA	3374	1/1	0.95	0.07	83,83,83,83	0
57	MG	R8	101	1/1	0.95	0.20	65,65,65,65	0
57	MG	RB	202	1/1	0.95	0.06	87,87,87,87	0
57	MG	YA	3335	1/1	0.95	0.10	68,68,68,68	0
57	MG	YA	3443	1/1	0.95	0.07	70,70,70,70	0
57	MG	YA	3015	1/1	0.95	0.22	67,67,67,67	0
57	MG	YA	3145	1/1	0.95	0.08	69,69,69,69	0
57	MG	QL	201	1/1	0.95	0.13	65,65,65,65	0
57	MG	YB	208	1/1	0.95	0.04	56,56,56,56	0
57	MG	YA	3242	1/1	0.95	0.05	57,57,57,57	0
57	MG	RA	3085	1/1	0.95	0.12	40,40,40,40	0
57	MG	XA	1654	1/1	0.95	0.05	47,47,47,47	0
57	MG	RA	3283	1/1	0.95	0.06	83,83,83,83	0
57	MG	YA	3346	1/1	0.95	0.04	60,60,60,60	0
57	MG	RA	3106	1/1	0.95	0.06	65,65,65,65	0
57	MG	XA	1706	1/1	0.95	0.08	67,67,67,67	0
57	MG	RA	3347	1/1	0.95	0.07	64,64,64,64	0
57	MG	RA	3312	1/1	0.95	0.08	46,46,46,46	0
57	MG	RA	3153	1/1	0.95	0.06	58,58,58,58	0
57	MG	YF	301	1/1	0.95	0.14	61,61,61,61	0
57	MG	YP	201	1/1	0.95	0.05	46,46,46,46	0
57	MG	RA	3287	1/1	0.95	0.04	59,59,59,59	0
57	MG	RA	3386	1/1	0.95	0.07	24,24,24,24	0
57	MG	RA	3128	1/1	0.95	0.09	58,58,58,58	0
57	MG	YA	3028	1/1	0.95	0.08	57,57,57,57	0
57	MG	RE	301	1/1	0.95	0.05	55,55,55,55	0
57	MG	YA	3030	1/1	0.95	0.19	71,71,71,71	0
57	MG	YA	3469	1/1	0.95	0.06	17,17,17,17	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YX	101	1/1	0.95	0.06	63,63,63,63	0
57	MG	Y1	101	1/1	0.95	0.08	42,42,42,42	0
57	MG	YA	3090	1/1	0.95	0.06	58,58,58,58	0
57	MG	YA	3091	1/1	0.95	0.07	81,81,81,81	0
57	MG	YA	3171	1/1	0.95	0.05	46,46,46,46	0
57	MG	YA	3092	1/1	0.95	0.08	67,67,67,67	0
57	MG	YA	3269	1/1	0.95	0.24	24,24,24,24	0
57	MG	YA	3175	1/1	0.95	0.04	39,39,39,39	0
57	MG	RA	3388	1/1	0.95	0.09	50,50,50,50	0
57	MG	RA	3108	1/1	0.95	0.08	82,82,82,82	0
57	MG	RA	3131	1/1	0.95	0.05	56,56,56,56	0
57	MG	YA	3036	1/1	0.95	0.12	67,67,67,67	0
57	MG	RA	3268	1/1	0.95	0.11	38,38,38,38	0
59	ZN	XN	102	1/1	0.95	0.11	119,119,119,119	0
57	MG	YA	3182	1/1	0.95	0.07	90,90,90,90	0
57	MG	YA	3481	1/1	0.96	0.04	33,33,33,33	0
57	MG	YA	3257	1/1	0.96	0.05	42,42,42,42	0
57	MG	QA	1698	1/1	0.96	0.10	85,85,85,85	0
57	MG	RA	3038	1/1	0.96	0.07	30,30,30,30	0
57	MG	RA	3159	1/1	0.96	0.09	71,71,71,71	0
57	MG	RA	3293	1/1	0.96	0.04	77,77,77,77	0
57	MG	RA	3011	1/1	0.96	0.07	20,20,20,20	0
57	MG	RA	3078	1/1	0.96	0.05	56,56,56,56	0
57	MG	YA	3167	1/1	0.96	0.06	46,46,46,46	0
57	MG	QA	1713	1/1	0.96	0.04	78,78,78,78	0
57	MG	YA	3170	1/1	0.96	0.28	37,37,37,37	0
57	MG	YA	3496	1/1	0.96	0.13	32,32,32,32	0
57	MG	XA	1603	1/1	0.96	0.21	63,63,63,63	0
57	MG	XA	1604	1/1	0.96	0.04	66,66,66,66	0
57	MG	YA	3173	1/1	0.96	0.17	31,31,31,31	0
57	MG	YA	3277	1/1	0.96	0.08	49,49,49,49	0
57	MG	RA	3122	1/1	0.96	0.12	30,30,30,30	0
57	MG	YA	3083	1/1	0.96	0.04	48,48,48,48	0
57	MG	RA	3298	1/1	0.96	0.04	58,58,58,58	0
57	MG	RA	3406	1/1	0.96	0.07	39,39,39,39	0
57	MG	RA	3043	1/1	0.96	0.05	35,35,35,35	0
57	MG	RA	3408	1/1	0.96	0.05	68,68,68,68	0
57	MG	RA	3044	1/1	0.96	0.05	35,35,35,35	0
57	MG	QA	1699	1/1	0.96	0.09	79,79,79,79	0
57	MG	RA	3167	1/1	0.96	0.07	64,64,64,64	0
57	MG	YA	3287	1/1	0.96	0.08	57,57,57,57	0
57	MG	YA	3185	1/1	0.96	0.06	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	QA	1687	1/1	0.96	0.05	69,69,69,69	0
57	MG	RA	3129	1/1	0.96	0.07	76,76,76,76	0
57	MG	XA	1683	1/1	0.96	0.17	53,53,53,53	0
57	MG	RA	3359	1/1	0.96	0.06	67,67,67,67	0
57	MG	RA	3170	1/1	0.96	0.11	55,55,55,55	0
57	MG	YA	3294	1/1	0.96	0.07	29,29,29,29	0
57	MG	QA	1664	1/1	0.96	0.04	62,62,62,62	0
57	MG	RA	3048	1/1	0.96	0.06	32,32,32,32	0
57	MG	YA	3105	1/1	0.96	0.07	53,53,53,53	0
57	MG	QA	1702	1/1	0.96	0.05	85,85,85,85	0
57	MG	YA	3403	1/1	0.96	0.15	32,32,32,32	0
57	MG	YA	3300	1/1	0.96	0.14	38,38,38,38	0
57	MG	YA	3405	1/1	0.96	0.05	36,36,36,36	0
57	MG	XA	1624	1/1	0.96	0.08	53,53,53,53	0
57	MG	RA	3134	1/1	0.96	0.09	44,44,44,44	0
57	MG	XA	1626	1/1	0.96	0.13	52,52,52,52	0
57	MG	XA	1697	1/1	0.96	0.13	76,76,76,76	0
57	MG	RB	207	1/1	0.96	0.06	68,68,68,68	0
57	MG	YA	3115	1/1	0.96	0.07	46,46,46,46	0
57	MG	YA	3308	1/1	0.96	0.13	43,43,43,43	0
57	MG	YA	3416	1/1	0.96	0.05	70,70,70,70	0
57	MG	QA	1689	1/1	0.96	0.13	63,63,63,63	0
57	MG	YA	3208	1/1	0.96	0.13	43,43,43,43	0
57	MG	RA	3088	1/1	0.96	0.15	41,41,41,41	0
57	MG	RA	3178	1/1	0.96	0.08	65,65,65,65	0
57	MG	RA	3138	1/1	0.96	0.07	72,72,72,72	0
57	MG	YA	3213	1/1	0.96	0.06	47,47,47,47	0
57	MG	YA	3425	1/1	0.96	0.08	51,51,51,51	0
57	MG	QA	1690	1/1	0.96	0.04	64,64,64,64	0
57	MG	YA	3122	1/1	0.96	0.03	82,82,82,82	0
57	MG	RA	3054	1/1	0.96	0.16	61,61,61,61	0
57	MG	YA	3219	1/1	0.96	0.07	37,37,37,37	0
57	MG	RA	3024	1/1	0.96	0.10	34,34,34,34	0
57	MG	QA	1665	1/1	0.96	0.13	51,51,51,51	0
57	MG	YA	3433	1/1	0.96	0.03	55,55,55,55	0
57	MG	XA	1638	1/1	0.96	0.07	56,56,56,56	0
57	MG	YA	3127	1/1	0.96	0.06	41,41,41,41	0
57	MG	YD	305	1/1	0.96	0.27	75,75,75,75	0
57	MG	XA	1709	1/1	0.96	0.04	61,61,61,61	0
57	MG	YA	3130	1/1	0.96	0.06	60,60,60,60	0
57	MG	YA	3227	1/1	0.96	0.12	25,25,25,25	0
57	MG	RA	3229	1/1	0.96	0.07	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	QA	1671	1/1	0.96	0.05	60,60,60,60	0
57	MG	RA	3231	1/1	0.96	0.16	66,66,66,66	0
57	MG	YA	3134	1/1	0.96	0.12	32,32,32,32	0
57	MG	RA	3058	1/1	0.96	0.08	40,40,40,40	0
57	MG	YA	3334	1/1	0.96	0.15	30,30,30,30	0
57	MG	QA	1658	1/1	0.96	0.05	61,61,61,61	0
57	MG	RA	3188	1/1	0.96	0.04	56,56,56,56	0
57	MG	QA	1723	1/1	0.96	0.04	104,104,104,104	0
57	MG	XA	1717	1/1	0.96	0.19	54,54,54,54	0
57	MG	RA	3190	1/1	0.96	0.04	47,47,47,47	0
57	MG	RA	3148	1/1	0.96	0.07	37,37,37,37	0
57	MG	YA	3056	1/1	0.96	0.12	77,77,77,77	0
57	MG	RA	3385	1/1	0.96	0.20	40,40,40,40	0
57	MG	RA	3065	1/1	0.96	0.11	49,49,49,49	0
57	MG	RA	3332	1/1	0.96	0.09	91,91,91,91	0
57	MG	QA	1622	1/1	0.96	0.03	79,79,79,79	0
57	MG	RA	3389	1/1	0.96	0.05	73,73,73,73	0
57	MG	RA	3067	1/1	0.96	0.13	41,41,41,41	0
57	MG	YA	3351	1/1	0.96	0.12	78,78,78,78	0
57	MG	RA	3285	1/1	0.96	0.24	64,64,64,64	0
57	MG	QC	301	1/1	0.96	0.14	133,133,133,133	0
57	MG	YA	3250	1/1	0.96	0.12	36,36,36,36	0
57	MG	YA	3251	1/1	0.96	0.12	49,49,49,49	0
57	MG	RA	3032	1/1	0.96	0.11	51,51,51,51	0
57	MG	QA	1695	1/1	0.96	0.03	96,96,96,96	0
57	MG	QA	1657	1/1	0.96	0.06	75,75,75,75	0
57	MG	YA	3156	1/1	0.96	0.07	87,87,87,87	0
57	MG	QA	1606	1/1	0.97	0.11	93,93,93,93	0
57	MG	YA	3497	1/1	0.97	0.06	55,55,55,55	0
57	MG	RA	3050	1/1	0.97	0.08	55,55,55,55	0
57	MG	YA	3499	1/1	0.97	0.03	38,38,38,38	0
57	MG	YA	3077	1/1	0.97	0.12	49,49,49,49	0
57	MG	YA	3229	1/1	0.97	0.06	32,32,32,32	0
57	MG	XA	1694	1/1	0.97	0.11	61,61,61,61	0
57	MG	RA	3100	1/1	0.97	0.17	51,51,51,51	0
57	MG	RA	3074	1/1	0.97	0.03	34,34,34,34	0
57	MG	RA	3228	1/1	0.97	0.13	67,67,67,67	0
57	MG	RA	3102	1/1	0.97	0.08	49,49,49,49	0
57	MG	XA	1647	1/1	0.97	0.14	44,44,44,44	0
57	MG	YA	3085	1/1	0.97	0.10	48,48,48,48	0
57	MG	YA	3319	1/1	0.97	0.11	51,51,51,51	0
57	MG	YA	3157	1/1	0.97	0.08	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	RA	3132	1/1	0.97	0.05	106,106,106,106	0
57	MG	RA	3034	1/1	0.97	0.06	34,34,34,34	0
57	MG	YA	3412	1/1	0.97	0.04	60,60,60,60	0
57	MG	YA	3515	1/1	0.97	0.10	40,40,40,40	0
57	MG	YA	3088	1/1	0.97	0.17	30,30,30,30	0
57	MG	RA	3413	1/1	0.97	0.06	46,46,46,46	0
57	MG	YA	3163	1/1	0.97	0.05	72,72,72,72	0
57	MG	YA	3164	1/1	0.97	0.08	30,30,30,30	0
57	MG	QA	1621	1/1	0.97	0.06	60,60,60,60	0
57	MG	RA	3036	1/1	0.97	0.07	36,36,36,36	0
57	MG	YA	3419	1/1	0.97	0.11	60,60,60,60	0
57	MG	QA	1614	1/1	0.97	0.04	81,81,81,81	0
57	MG	QA	1619	1/1	0.97	0.05	57,57,57,57	0
57	MG	RA	3338	1/1	0.97	0.04	59,59,59,59	0
57	MG	RA	3039	1/1	0.97	0.10	41,41,41,41	0
57	MG	YA	3424	1/1	0.97	0.05	38,38,38,38	0
57	MG	YA	3032	1/1	0.97	0.07	75,75,75,75	0
57	MG	RA	3010	1/1	0.97	0.17	46,46,46,46	0
57	MG	YA	3530	1/1	0.97	0.08	39,39,39,39	0
57	MG	RA	3111	1/1	0.97	0.07	47,47,47,47	0
57	MG	YA	3103	1/1	0.97	0.05	43,43,43,43	0
57	MG	YA	3177	1/1	0.97	0.07	32,32,32,32	0
57	MG	RA	3112	1/1	0.97	0.08	65,65,65,65	0
57	MG	YA	3259	1/1	0.97	0.05	41,41,41,41	0
57	MG	RA	3382	1/1	0.97	0.09	33,33,33,33	0
57	MG	YA	3434	1/1	0.97	0.07	36,36,36,36	0
57	MG	RA	3113	1/1	0.97	0.03	56,56,56,56	0
57	MG	YA	3439	1/1	0.97	0.17	39,39,39,39	0
57	MG	YA	3344	1/1	0.97	0.09	8,8,8,8	0
57	MG	RA	3174	1/1	0.97	0.04	49,49,49,49	0
57	MG	XA	1613	1/1	0.97	0.08	59,59,59,59	0
57	MG	YA	3544	1/1	0.97	0.13	45,45,45,45	0
57	MG	RA	3345	1/1	0.97	0.10	90,90,90,90	0
57	MG	YA	3042	1/1	0.97	0.05	52,52,52,52	0
57	MG	YA	3111	1/1	0.97	0.03	74,74,74,74	0
57	MG	RA	3346	1/1	0.97	0.05	58,58,58,58	0
57	MG	YA	3271	1/1	0.97	0.05	41,41,41,41	0
57	MG	RA	3060	1/1	0.97	0.10	43,43,43,43	0
57	MG	YA	3188	1/1	0.97	0.04	29,29,29,29	0
57	MG	YA	3274	1/1	0.97	0.14	25,25,25,25	0
57	MG	QV	102	1/1	0.97	0.05	38,38,38,38	0
57	MG	YA	3457	1/1	0.97	0.13	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	RA	3349	1/1	0.97	0.11	57,57,57,57	0
57	MG	RA	3116	1/1	0.97	0.09	37,37,37,37	0
57	MG	YD	307	1/1	0.97	0.11	109,109,109,109	0
57	MG	RA	3147	1/1	0.97	0.03	69,69,69,69	0
57	MG	RA	3062	1/1	0.97	0.15	52,52,52,52	0
57	MG	XA	1673	1/1	0.97	0.04	58,58,58,58	0
57	MG	YA	3197	1/1	0.97	0.17	33,33,33,33	0
57	MG	RA	3012	1/1	0.97	0.05	36,36,36,36	0
57	MG	RA	3150	1/1	0.97	0.07	67,67,67,67	0
57	MG	XA	1676	1/1	0.97	0.05	49,49,49,49	0
57	MG	RA	3064	1/1	0.97	0.05	46,46,46,46	0
57	MG	YA	3468	1/1	0.97	0.10	65,65,65,65	0
57	MG	XK	202	1/1	0.97	0.09	41,41,41,41	0
57	MG	QA	1653	1/1	0.97	0.04	70,70,70,70	0
57	MG	RA	3397	1/1	0.97	0.05	11,11,11,11	0
57	MG	QA	1632	1/1	0.97	0.05	63,63,63,63	0
57	MG	YA	3473	1/1	0.97	0.06	53,53,53,53	0
57	MG	RA	3030	1/1	0.97	0.14	49,49,49,49	0
57	MG	RA	3123	1/1	0.97	0.04	53,53,53,53	0
57	MG	YA	3210	1/1	0.97	0.09	28,28,28,28	0
57	MG	Y0	101	1/1	0.97	0.09	27,27,27,27	0
57	MG	RQ	201	1/1	0.97	0.07	84,84,84,84	0
57	MG	XA	1634	1/1	0.97	0.05	60,60,60,60	0
57	MG	RA	3321	1/1	0.97	0.09	50,50,50,50	0
57	MG	YA	3380	1/1	0.97	0.05	70,70,70,70	0
57	MG	QA	1697	1/1	0.97	0.06	72,72,72,72	0
57	MG	YA	3009	1/1	0.97	0.08	67,67,67,67	0
57	MG	YA	3298	1/1	0.97	0.04	43,43,43,43	0
57	MG	YA	3140	1/1	0.97	0.06	60,60,60,60	0
57	MG	YA	3010	1/1	0.97	0.09	61,61,61,61	0
57	MG	RA	3362	1/1	0.97	0.08	111,111,111,111	0
57	MG	RA	3004	1/1	0.97	0.04	49,49,49,49	0
57	MG	XA	1640	1/1	0.97	0.16	37,37,37,37	0
57	MG	YA	3014	1/1	0.97	0.10	51,51,51,51	0
57	MG	YA	3074	1/1	0.97	0.13	45,45,45,45	0
57	MG	QA	1642	1/1	0.98	0.04	70,70,70,70	0
57	MG	RA	3001	1/1	0.98	0.11	83,83,83,83	0
57	MG	YA	3234	1/1	0.98	0.24	34,34,34,34	0
57	MG	RA	3194	1/1	0.98	0.13	23,23,23,23	0
57	MG	QA	1707	1/1	0.98	0.03	54,54,54,54	0
57	MG	QA	1602	1/1	0.98	0.03	71,71,71,71	0
57	MG	RA	3041	1/1	0.98	0.11	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3345	1/1	0.98	0.03	50,50,50,50	0
57	MG	YA	3406	1/1	0.98	0.10	30,30,30,30	0
57	MG	YA	3112	1/1	0.98	0.08	43,43,43,43	0
57	MG	RA	3089	1/1	0.98	0.07	55,55,55,55	0
57	MG	YA	3114	1/1	0.98	0.03	68,68,68,68	0
57	MG	RP	201	1/1	0.98	0.06	40,40,40,40	0
57	MG	YA	3411	1/1	0.98	0.08	31,31,31,31	0
57	MG	YA	3477	1/1	0.98	0.04	37,37,37,37	0
57	MG	YA	3196	1/1	0.98	0.09	20,20,20,20	0
57	MG	YA	3078	1/1	0.98	0.11	40,40,40,40	0
57	MG	YA	3045	1/1	0.98	0.05	61,61,61,61	0
57	MG	RA	3181	1/1	0.98	0.03	50,50,50,50	0
57	MG	YA	3119	1/1	0.98	0.07	64,64,64,64	0
57	MG	YA	3201	1/1	0.98	0.08	27,27,27,27	0
57	MG	RA	3073	1/1	0.98	0.05	60,60,60,60	0
57	MG	RA	3091	1/1	0.98	0.04	34,34,34,34	0
57	MG	YA	3489	1/1	0.98	0.04	59,59,59,59	0
57	MG	YA	3303	1/1	0.98	0.06	43,43,43,43	0
57	MG	YA	3360	1/1	0.98	0.06	26,26,26,26	0
57	MG	YA	3161	1/1	0.98	0.07	26,26,26,26	0
57	MG	YD	304	1/1	0.98	0.09	85,85,85,85	0
57	MG	YA	3205	1/1	0.98	0.09	27,27,27,27	0
57	MG	YD	306	1/1	0.98	0.07	60,60,60,60	0
57	MG	XA	1637	1/1	0.98	0.09	108,108,108,108	0
57	MG	XA	1691	1/1	0.98	0.03	53,53,53,53	0
57	MG	RA	3052	1/1	0.98	0.03	60,60,60,60	0
57	MG	YE	302	1/1	0.98	0.04	42,42,42,42	0
57	MG	RA	3107	1/1	0.98	0.11	96,96,96,96	0
57	MG	YA	3310	1/1	0.98	0.10	49,49,49,49	0
57	MG	YA	3429	1/1	0.98	0.09	35,35,35,35	0
57	MG	YA	3258	1/1	0.98	0.05	37,37,37,37	0
57	MG	XA	1695	1/1	0.98	0.07	29,29,29,29	0
57	MG	RX	101	1/1	0.98	0.07	107,107,107,107	0
57	MG	YA	3168	1/1	0.98	0.04	41,41,41,41	0
57	MG	YP	202	1/1	0.98	0.06	36,36,36,36	0
57	MG	RA	3137	1/1	0.98	0.03	59,59,59,59	0
57	MG	YA	3435	1/1	0.98	0.06	34,34,34,34	0
57	MG	YA	3436	1/1	0.98	0.05	49,49,49,49	0
57	MG	YA	3263	1/1	0.98	0.06	5,5,5,5	0
57	MG	XA	1699	1/1	0.98	0.04	47,47,47,47	0
57	MG	RA	3093	1/1	0.98	0.03	35,35,35,35	0
57	MG	YA	3216	1/1	0.98	0.03	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3217	1/1	0.98	0.07	31,31,31,31	0
57	MG	RA	3320	1/1	0.98	0.03	61,61,61,61	0
57	MG	YA	3270	1/1	0.98	0.10	44,44,44,44	0
57	MG	XA	1617	1/1	0.98	0.07	78,78,78,78	0
57	MG	YA	3174	1/1	0.98	0.07	50,50,50,50	0
57	MG	YA	3221	1/1	0.98	0.09	34,34,34,34	0
57	MG	RA	3094	1/1	0.98	0.04	42,42,42,42	0
57	MG	XA	1619	1/1	0.98	0.03	37,37,37,37	0
57	MG	YA	3098	1/1	0.98	0.10	90,90,90,90	0
57	MG	YA	3099	1/1	0.98	0.05	57,57,57,57	0
57	MG	RA	3264	1/1	0.98	0.07	35,35,35,35	0
57	MG	RA	3324	1/1	0.98	0.04	39,39,39,39	0
57	MG	RA	3096	1/1	0.98	0.10	48,48,48,48	0
57	MG	RA	3125	1/1	0.98	0.06	40,40,40,40	0
57	MG	YA	3003	1/1	0.98	0.05	43,43,43,43	0
57	MG	RA	3059	1/1	0.98	0.08	50,50,50,50	0
57	MG	YA	3504	1/1	0.99	0.09	14,14,14,14	0
57	MG	YA	3357	1/1	0.99	0.02	24,24,24,24	0
57	MG	XA	1692	1/1	0.99	0.05	53,53,53,53	0
57	MG	YA	3389	1/1	0.99	0.02	32,32,32,32	0
57	MG	RA	3095	1/1	0.99	0.04	45,45,45,45	0
57	MG	RA	3070	1/1	0.99	0.03	51,51,51,51	0
57	MG	YA	3332	1/1	0.99	0.04	21,21,21,21	0
57	MG	RA	3008	1/1	0.99	0.04	46,46,46,46	0
57	MG	YA	3094	1/1	0.99	0.03	44,44,44,44	0
57	MG	YA	3256	1/1	0.99	0.04	55,55,55,55	0
57	MG	XA	1696	1/1	0.99	0.03	36,36,36,36	0
57	MG	YA	3337	1/1	0.99	0.09	27,27,27,27	0
57	MG	YA	3139	1/1	0.99	0.04	94,94,94,94	0
57	MG	YA	3096	1/1	0.99	0.03	55,55,55,55	0
57	MG	YA	3400	1/1	0.99	0.03	20,20,20,20	0
57	MG	YA	3401	1/1	0.99	0.02	39,39,39,39	0
57	MG	YA	3402	1/1	0.99	0.07	46,46,46,46	0
57	MG	YA	3007	1/1	0.99	0.04	56,56,56,56	0
57	MG	YA	3438	1/1	0.99	0.09	39,39,39,39	0
57	MG	RA	3019	1/1	0.99	0.04	39,39,39,39	0
57	MG	YG	201	1/1	0.99	0.04	58,58,58,58	0
57	MG	YA	3059	1/1	0.99	0.10	32,32,32,32	0
57	MG	RA	3015	1/1	0.99	0.03	29,29,29,29	0
57	MG	YA	3442	1/1	0.99	0.03	50,50,50,50	0
57	MG	XA	1621	1/1	0.99	0.05	70,70,70,70	0
57	MG	YA	3484	1/1	0.99	0.03	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YR	201	1/1	0.99	0.03	51,51,51,51	0
57	MG	YA	3485	1/1	0.99	0.06	31,31,31,31	0
57	MG	YA	3486	1/1	0.99	0.03	50,50,50,50	0
57	MG	YA	3444	1/1	0.99	0.04	58,58,58,58	0
57	MG	RA	3202	1/1	0.99	0.08	50,50,50,50	0
57	MG	YA	3266	1/1	0.99	0.04	34,34,34,34	0
57	MG	YA	3193	1/1	0.99	0.04	53,53,53,53	0
57	MG	YA	3448	1/1	0.99	0.05	26,26,26,26	0
57	MG	YA	3377	1/1	0.99	0.03	32,32,32,32	0
57	MG	YA	3450	1/1	0.99	0.05	47,47,47,47	0
57	MG	YA	3451	1/1	0.99	0.07	32,32,32,32	0
57	MG	RA	3380	1/1	0.99	0.03	21,21,21,21	0
57	MG	YA	3540	1/1	0.99	0.07	51,51,51,51	0
57	MG	RA	3248	1/1	0.99	0.02	43,43,43,43	0
57	MG	RA	3224	1/1	0.99	0.05	41,41,41,41	0
57	MG	XA	1650	1/1	0.99	0.05	50,50,50,50	0
58	SF4	QD	303	8/8	0.99	0.04	98,145,211,224	0
58	SF4	XD	302	8/8	0.99	0.03	105,135,155,248	0
57	MG	RA	3322	1/1	0.99	0.04	46,46,46,46	0
57	MG	YA	3129	1/1	0.99	0.06	60,60,60,60	0
57	MG	YA	3033	1/1	0.99	0.02	50,50,50,50	0
57	MG	RA	3021	1/1	0.99	0.06	67,67,67,67	0
57	MG	YA	3070	1/1	0.99	0.03	40,40,40,40	0
57	MG	RA	3013	1/1	1.00	0.02	51,51,51,51	0

6.5 Other polymers (i)

There are no such residues in this entry.