Full wwPDB X-ray Structure Validation Report (i)

Mar 27, 2026 – 01:13 AM UTC

PDB ID	:	6NWY / pdb_00006nwy
Title	:	Modified tRNA(Pro) bound to Thermus thermophilus 70S (near-cognate)
Authors	:	Hoffer, E.D.; Subaramanian, S.; Hong, S.; Maehigashi, T.; Dunham, C.M.
Deposited on	:	2019-02-07
Resolution	:	3.50 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:

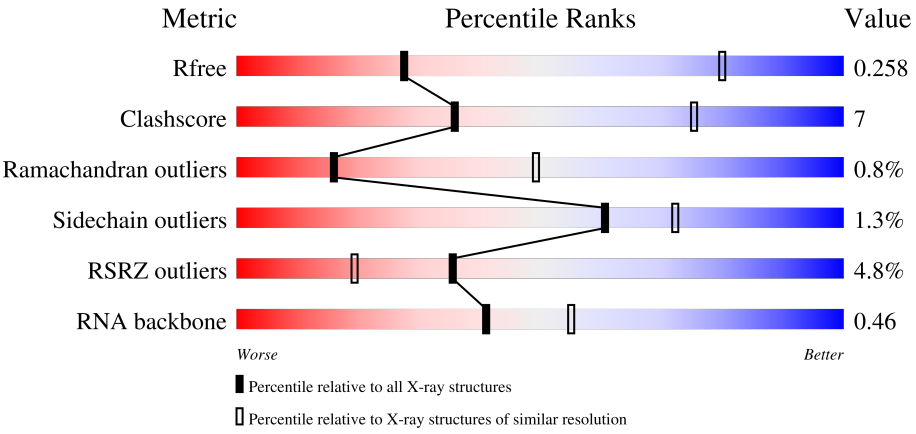
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (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 3.50 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	1085 (3.54-3.46)
Clashscore	190562	1140 (3.54-3.46)
Ramachandran outliers	187476	1113 (3.54-3.46)
Sidechain outliers	187428	1114 (3.54-3.46)
RSRZ outliers	180081	1084 (3.54-3.46)
RNA backbone	3983	1010 (3.98-3.02)

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	7% 55% 38% 7%
1	XA	1521	3% 55% 38% 7%
2	QB	256	3% 63% 28% 8%
2	XB	256	% 67% 24% 8%

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Mol	Chain	Length	Quality of chain
3	QC	239	2% 64% 19% 14%
3	XC	239	3% 70% 15% 14%
4	QD	209	6% 73% 24%
4	XD	209	7% 67% 30%
5	QE	162	2% 69% 24% 7%
5	XE	162	% 70% 23% 7%
6	QF	101	2% 77% 22%
6	XF	101	79% 21%
7	QG	156	8% 78% 21%
7	XG	156	4% 76% 22%
8	QH	138	7% 77% 22%
8	XH	138	6% 75% 23%
9	QI	128	23% 67% 30%
9	XI	128	14% 76% 22%
10	QJ	105	21% 62% 30% 6%
10	XJ	105	10% 73% 18% 9%
11	QK	129	5% 83% 9% 8%
11	XK	129	2% 74% 16% 10%
12	QL	132	10% 70% 23% 5%
12	XL	132	8% 72% 20% 8%
13	QM	126	6% 63% 32% 5%
13	XM	126	6% 67% 21% 10%
14	QN	61	18% 62% 33%
14	XN	61	11% 62% 31%
15	QO	89	% 88% 11%

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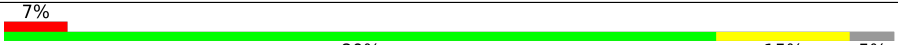
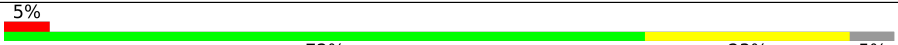
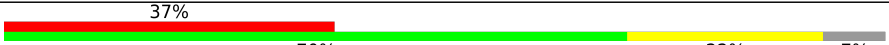
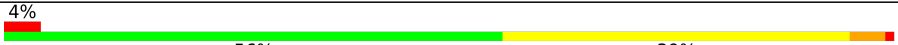
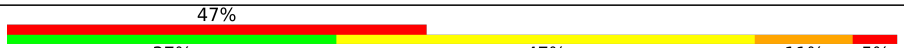
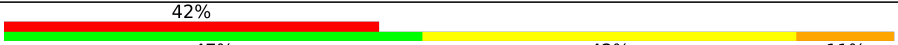
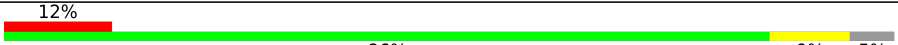
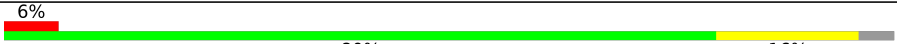
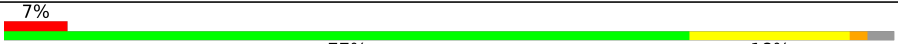
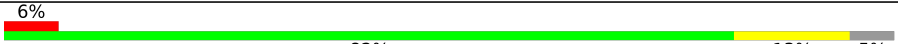
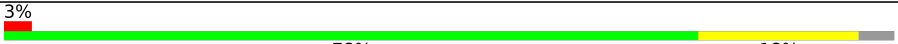
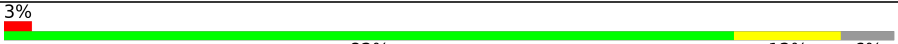
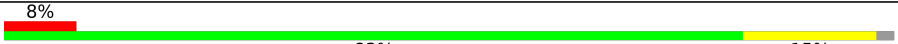
Mol	Chain	Length	Quality of chain
15	XO	89	
16	QP	88	
16	XP	88	
17	QQ	105	
17	XQ	105	
18	QR	88	
18	XR	88	
19	QS	93	
19	XS	93	
20	QT	106	
20	XT	106	
21	QU	27	
21	XU	27	
22	QV	77	
22	XV	77	
23	QX	19	
23	XX	19	
24	R0	85	
24	Y0	85	
25	R1	98	
25	Y1	98	
26	R2	72	
26	Y2	72	
27	R3	60	
27	Y3	60	

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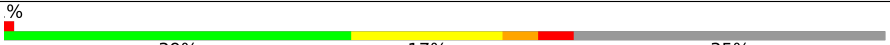
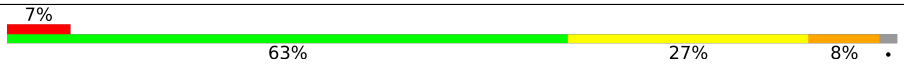
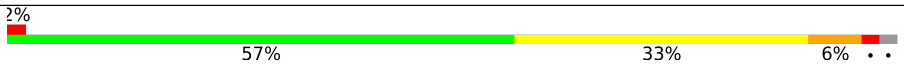
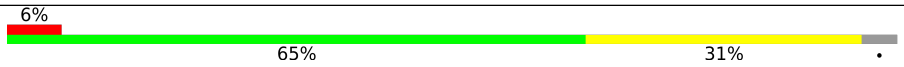
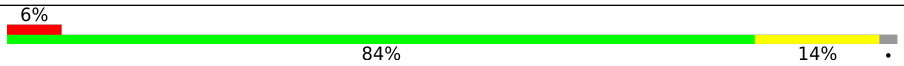
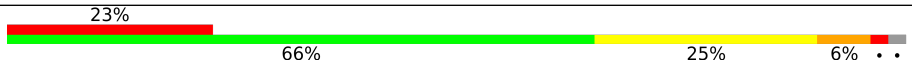
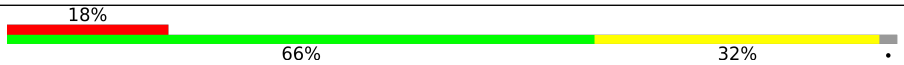
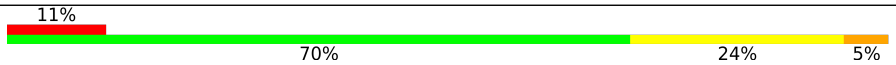
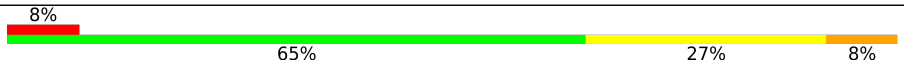
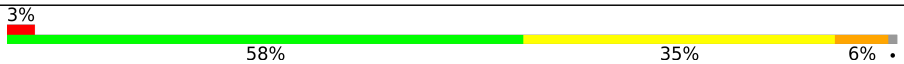
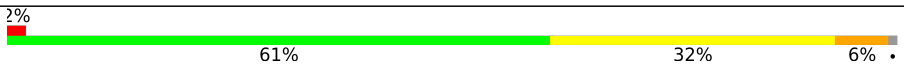
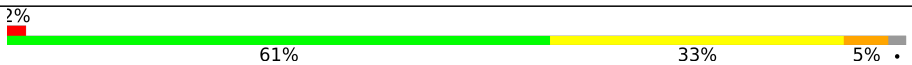
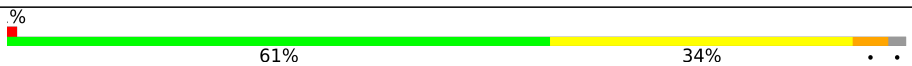
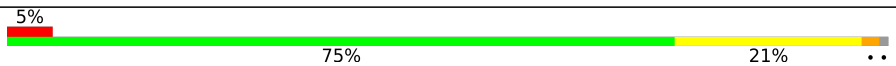
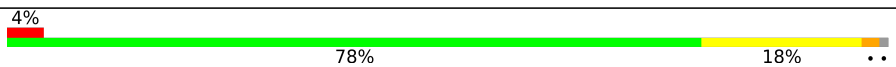
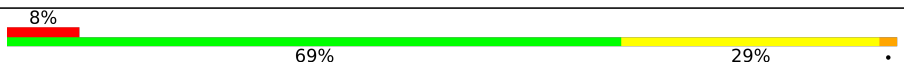
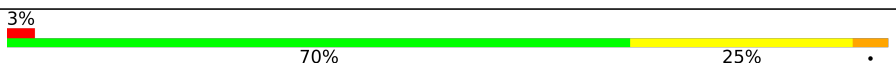
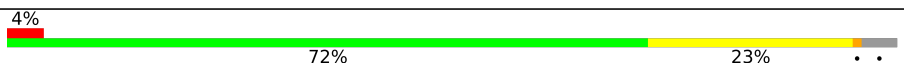
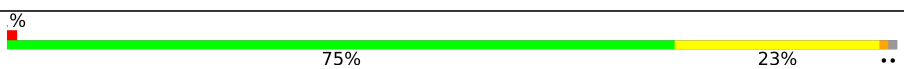
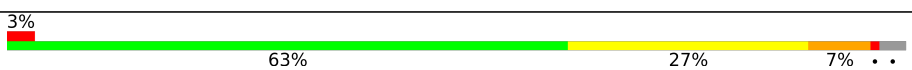
Mol	Chain	Length	Quality of chain
28	R4	71	
28	Y4	71	
29	R5	60	
29	Y5	60	
30	R6	54	
30	Y6	54	
31	R7	49	
31	Y7	49	
32	R8	65	
32	Y8	65	
33	R9	37	
33	Y9	37	
34	RA	2915	
34	YA	2915	
35	RB	122	
35	YB	122	
36	RD	276	
36	YD	276	
37	RE	206	
37	YE	206	
38	RF	210	
38	YF	210	
39	RG	182	
39	YG	182	
40	RH	180	

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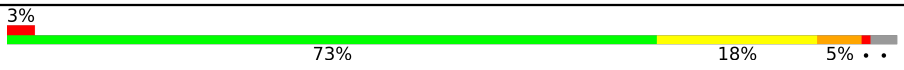
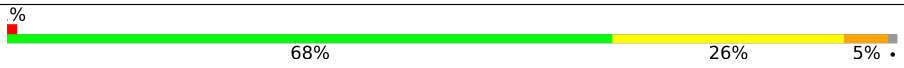
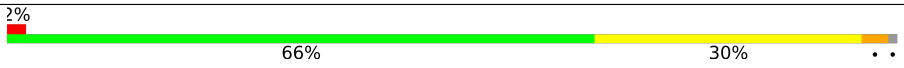
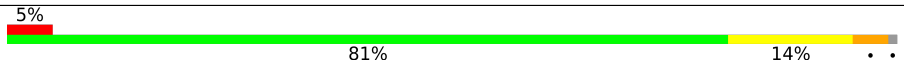
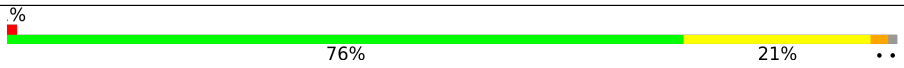
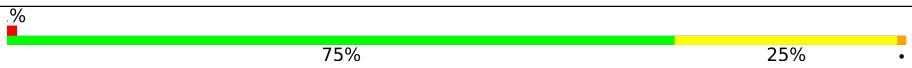
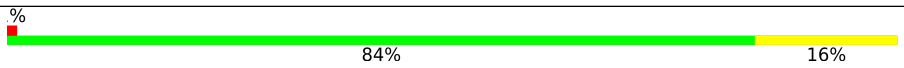
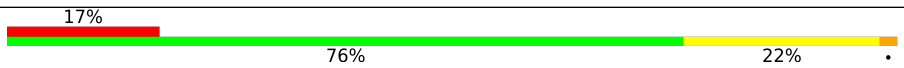
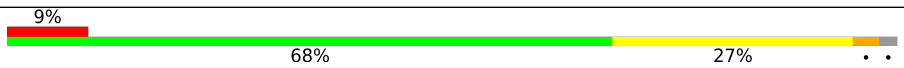
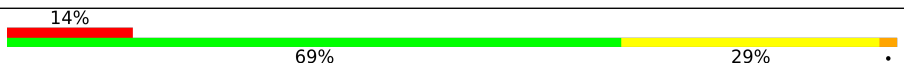
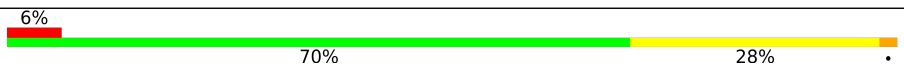
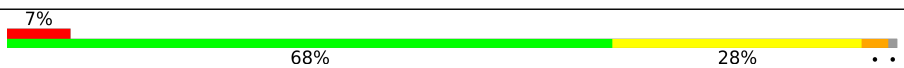
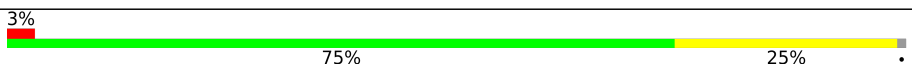
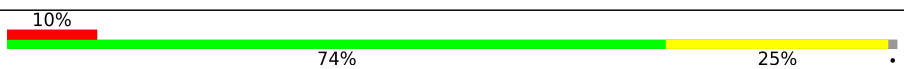
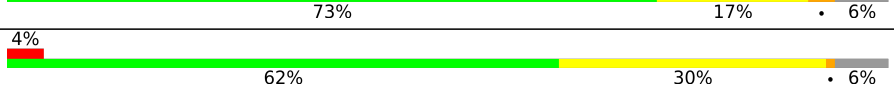
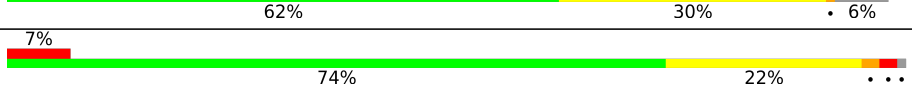
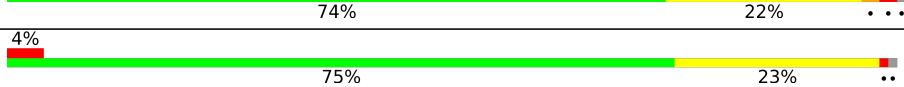
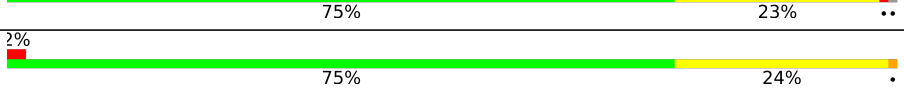
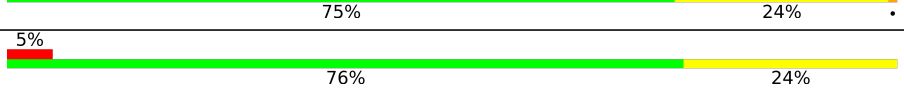
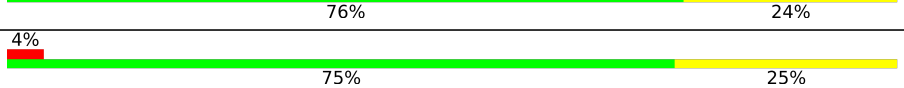
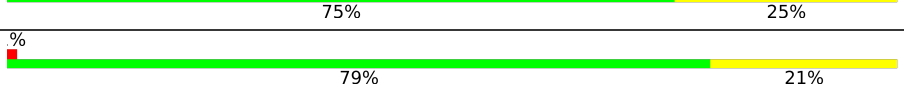
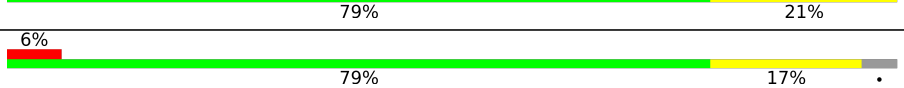
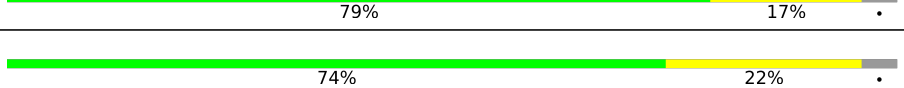
Mol	Chain	Length	Quality of chain
40	YH	180	
41	RI	148	
41	YI	148	
42	RN	140	
42	YN	140	
43	RO	122	
43	YO	122	
44	RP	150	
44	YP	150	
45	RQ	141	
45	YQ	141	
46	RR	118	
46	YR	118	
47	RS	112	
47	YS	112	
48	RT	146	
48	YT	146	
49	RU	118	
49	YU	118	
50	RV	101	
50	YV	101	
51	RW	113	
51	YW	113	
52	RX	96	
52	YX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

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Mol	Chain	Length	Quality of chain
53	RY	110	5% 72% 23%
53	YY	110	2% 72% 24%
54	RZ	206	4% 62% 24% 11%
54	YZ	206	3% 67% 22% 5% 6%

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
55	MG	YA	3245	-	-	-	X
56	SF4	QD	301	-	-	X	-

2 Entry composition

There are 57 unique types of molecules in this entry. The entry contains 292039 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	1511	Total	C	N	O	P	0	0	0
			32469	14453	6011	10495	1510			
1	XA	1515	Total	C	N	O	P	0	0	0
			32551	14490	6022	10525	1514			

- 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	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			
5	XE	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	QH	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 777	C 487	N 153	O 136	S 1	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	QK	119	Total 885	C 549	N 168	O 165	S 3	0	0	0
11	XK	116	Total 864	C 537	N 164	O 160	S 3	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	QL	125	Total 975	C 614	N 196	O 164	S 1	0	0	0
12	XL	122	Total 956	C 603	N 193	O 159	S 1	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	QM	120	Total 955	C 591	N 197	O 165	S 2	0	0	0
13	XM	114	Total 914	C 565	N 189	O 158	S 2	0	0	0

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	QO	88	Total 734	C 459	N 147	O 126	S 2	0	0	0
15	XO	87	Total 729	C 457	N 146	O 124	S 2	0	0	0

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	QS	83	Total	C	N	O	S	0	0	0
			665	424	124	115	2			
19	XS	84	Total	C	N	O	S	0	0	0
			674	430	126	116	2			

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

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

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

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

- Molecule 22 is a RNA chain called E-site tRNA-Pro.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	QV	77	Total 1647	C 734	N 295	O 541	P 77	0	0	0
22	XV	77	Total 1647	C 734	N 295	O 541	P 77	0	0	0

- Molecule 23 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	QX	19	Total 409	C 184	N 81	O 126	P 18	0	0	0
23	XX	19	Total 409	C 184	N 81	O 126	P 18	0	0	0

- Molecule 24 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	R0	81	Total 643	C 398	N 137	O 107	S 1	0	0	0
24	Y0	82	Total 648	C 401	N 138	O 108	S 1	0	0	0

- Molecule 25 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	R1	95	Total 746	C 469	N 148	O 128	S 1	0	0	0
25	Y1	93	Total 729	C 457	N 145	O 126	S 1	0	0	0

- Molecule 26 is a protein called 50S ribosomal protein L29.

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

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	Y2	68	Total	C	N	O	S	0	0	0
			575	355	117	102	1			

- Molecule 27 is a protein called 50S ribosomal protein L30.

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

- Molecule 28 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	R4	45	Total	C	N	O	S	0	0	0
			348	224	57	62	5			
28	Y4	46	Total	C	N	O	S	0	0	0
			357	229	59	64	5			

- Molecule 29 is a protein called 50S ribosomal protein L32.

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

- Molecule 30 is a protein called 50S ribosomal protein L33.

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

- Molecule 31 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	R7	47	Total	C	N	O	S	0	0	0
			409	251	102	54	2			
31	Y7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

- Molecule 32 is a protein called 50S ribosomal protein L35.

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

- Molecule 33 is a protein called 50S ribosomal protein L36.

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

- Molecule 34 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	RA	2882	Total	C	N	O	P	0	0	0
			62070	27627	11611	19951	2881			
34	YA	2883	Total	C	N	O	P	0	0	0
			62091	27636	11613	19960	2882			

- Molecule 35 is a RNA chain called 5S rRNA.

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

- Molecule 36 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	RD	272	Total	C	N	O	S	0	0	0
			2115	1335	420	357	3			
36	YD	272	Total	C	N	O	S	0	0	0
			2115	1335	420	357	3			

- Molecule 37 is a protein called 50S ribosomal protein L3.

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

- Molecule 38 is a protein called 50S ribosomal protein L4.

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

- Molecule 39 is a protein called 50S ribosomal protein L5.

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

- Molecule 40 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	RH	174	Total	C	N	O	S	0	0	0
			1336	848	251	236	1			
40	YH	174	Total	C	N	O	S	0	0	0
			1336	848	251	236	1			

- Molecule 41 is a protein called 50S ribosomal protein L9.

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

- Molecule 42 is a protein called 50S ribosomal protein L13.

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

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

- Molecule 43 is a protein called 50S ribosomal protein L14.

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

- Molecule 44 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	RP	150	Total	C	N	O	S	0	0	0
			1145	712	232	198	3			
44	YP	147	Total	C	N	O	S	0	0	0
			1122	698	229	192	3			

- Molecule 45 is a protein called 50S ribosomal protein L16.

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

- Molecule 46 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
46	RR	117	Total	C	N	O	0	0	0
			960	599	202	159			
46	YR	117	Total	C	N	O	0	0	0
			960	599	202	159			

- Molecule 47 is a protein called 50S ribosomal protein L18.

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

- Molecule 48 is a protein called 50S ribosomal protein L19.

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

- Molecule 49 is a protein called 50S ribosomal protein L20.

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

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

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

- Molecule 51 is a protein called 50S ribosomal protein L22.

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

- Molecule 52 is a protein called 50S ribosomal protein L23.

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

- Molecule 53 is a protein called 50S ribosomal protein L24.

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

- Molecule 54 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	RZ	183	Total 1461	C 933	N 260	O 265	S 3	0	0	0
54	YZ	193	Total 1529	C 973	N 270	O 283	S 3	0	0	0

- Molecule 55 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	QA	87	Total 87	Mg 87	0	0
55	QF	1	Total 1	Mg 1	0	0
55	QH	2	Total 2	Mg 2	0	0
55	QL	1	Total 1	Mg 1	0	0
55	R0	2	Total 2	Mg 2	0	0
55	R1	1	Total 1	Mg 1	0	0
55	R3	1	Total 1	Mg 1	0	0
55	R8	1	Total 1	Mg 1	0	0
55	RA	429	Total 429	Mg 429	0	0
55	RB	11	Total 11	Mg 11	0	0
55	RD	1	Total 1	Mg 1	0	0
55	RE	4	Total 4	Mg 4	0	0
55	RF	2	Total 2	Mg 2	0	0
55	RN	1	Total 1	Mg 1	0	0

Continued on next page...

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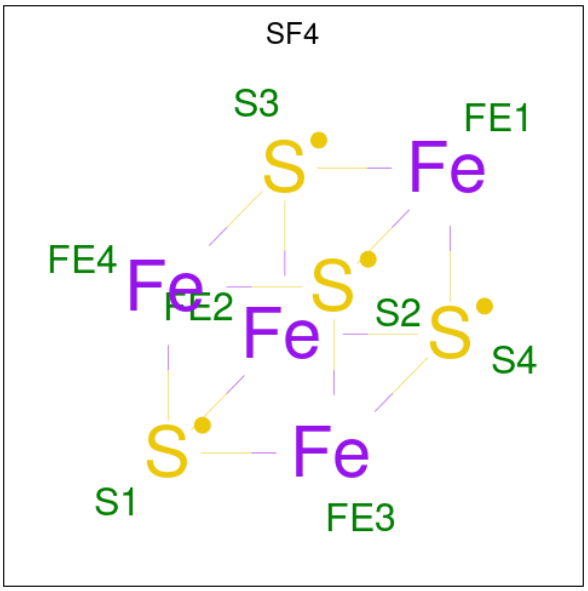
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
55	RO	1	Total Mg 1 1	0	0
55	RP	1	Total Mg 1 1	0	0
55	RQ	1	Total Mg 1 1	0	0
55	XA	89	Total Mg 89 89	0	0
55	XE	1	Total Mg 1 1	0	0
55	Y1	1	Total Mg 1 1	0	0
55	Y2	1	Total Mg 1 1	0	0
55	Y5	1	Total Mg 1 1	0	0
55	Y7	1	Total Mg 1 1	0	0
55	Y8	1	Total Mg 1 1	0	0
55	YA	439	Total Mg 439 439	0	0
55	YB	8	Total Mg 8 8	0	0
55	YD	1	Total Mg 1 1	0	0
55	YE	2	Total Mg 2 2	0	0
55	YF	1	Total Mg 1 1	0	0
55	YQ	1	Total Mg 1 1	0	0
55	YR	2	Total Mg 2 2	0	0
55	YU	1	Total Mg 1 1	0	0
55	YX	1	Total Mg 1 1	0	0

- Molecule 56 is IRON/SULFUR CLUSTER (CCD ID: SF4) (formula: Fe_4S_4).



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

- Molecule 57 is ZINC ION (CCD ID: ZN) (formula: Zn).

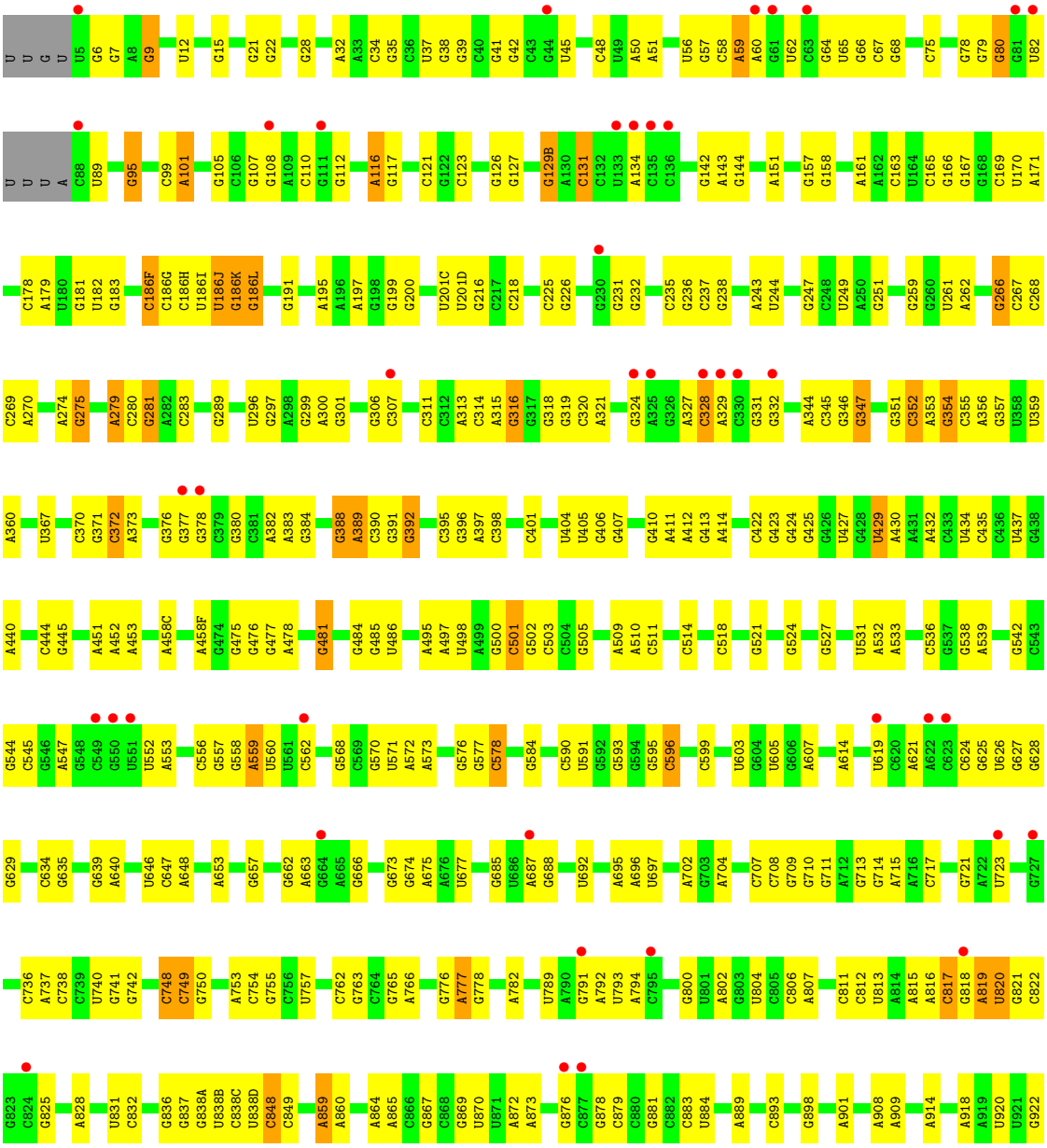
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	QN	1	Total Zn 1 1	0	0
57	R5	1	Total Zn 1 1	0	0
57	R6	1	Total Zn 1 1	0	0
57	R9	1	Total Zn 1 1	0	0
57	RY	1	Total Zn 1 1	0	0
57	XN	1	Total Zn 1 1	0	0
57	Y5	1	Total Zn 1 1	0	0
57	Y6	1	Total Zn 1 1	0	0
57	Y9	1	Total Zn 1 1	0	0
57	YY	1	Total Zn 1 1	0	0

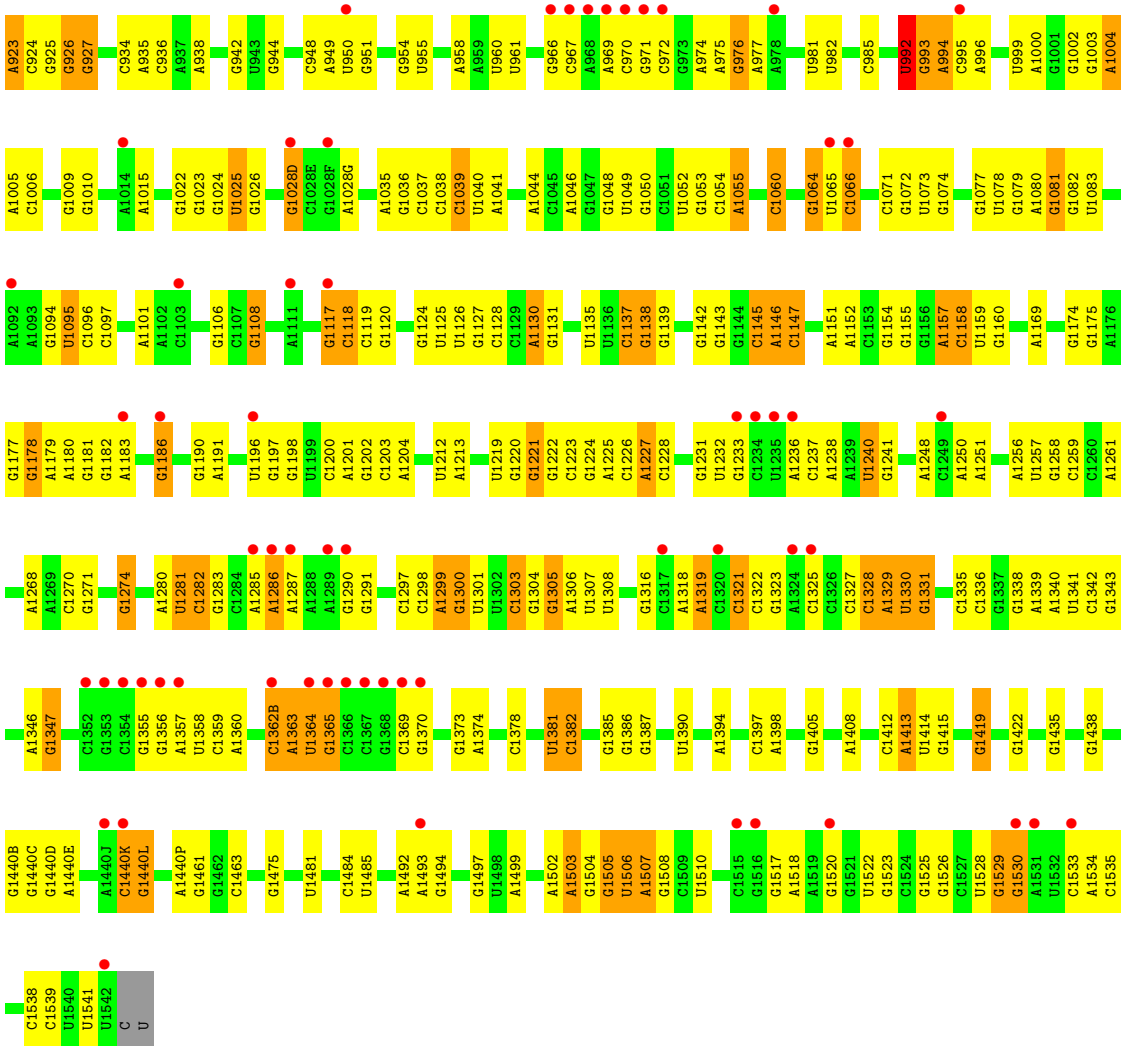
3 Residue-property plots (i)

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

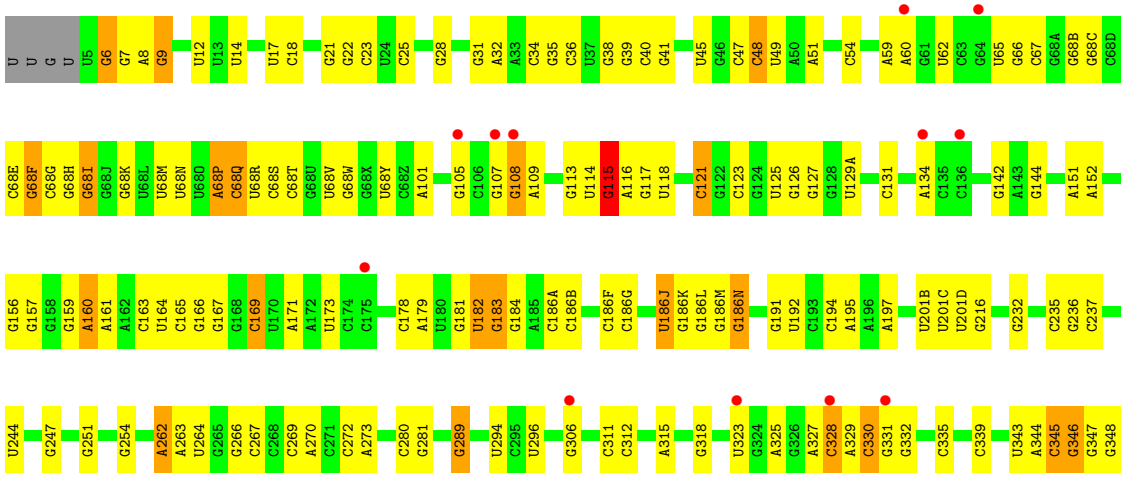
Chain QA:

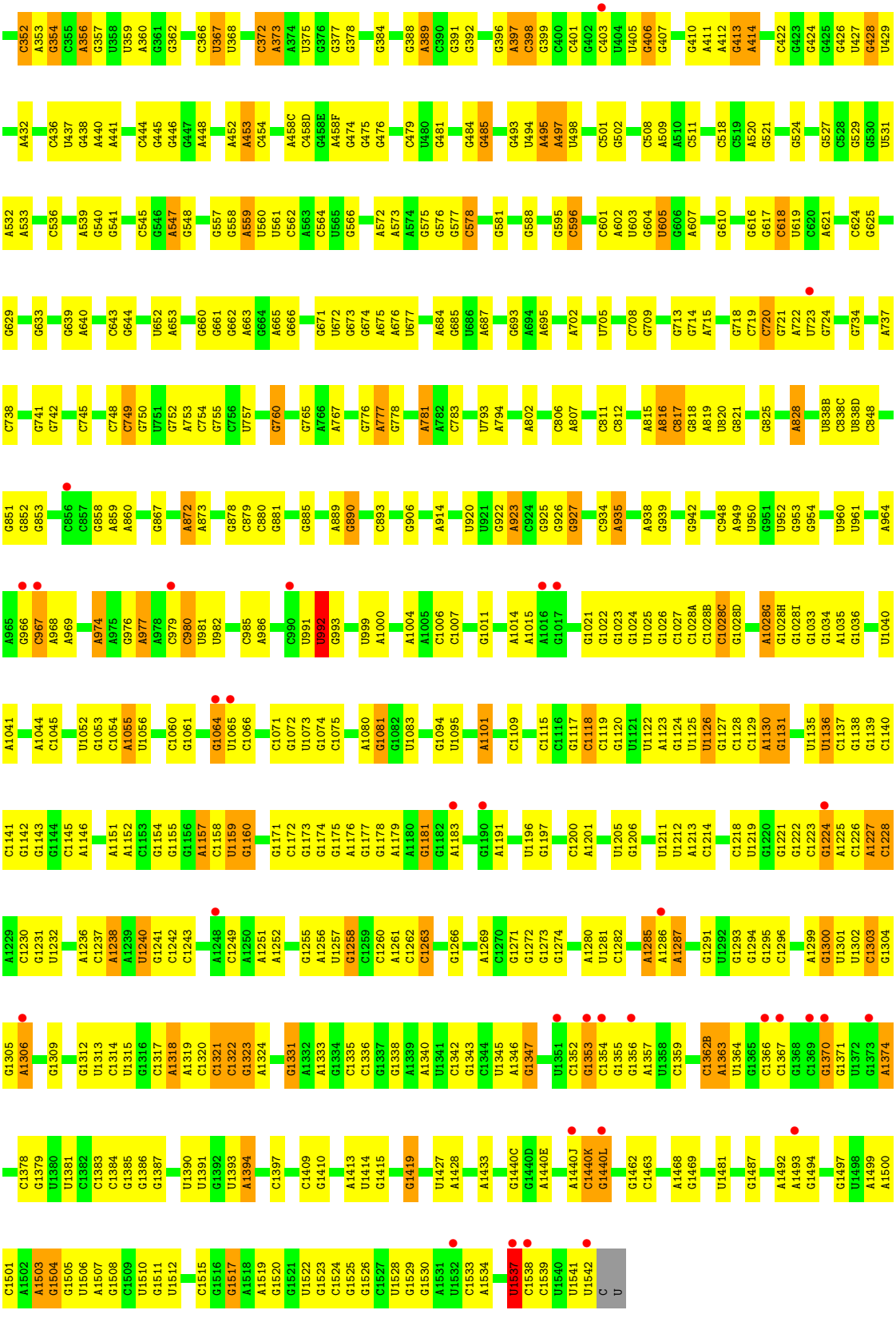




• Molecule 1: 16S rRNA

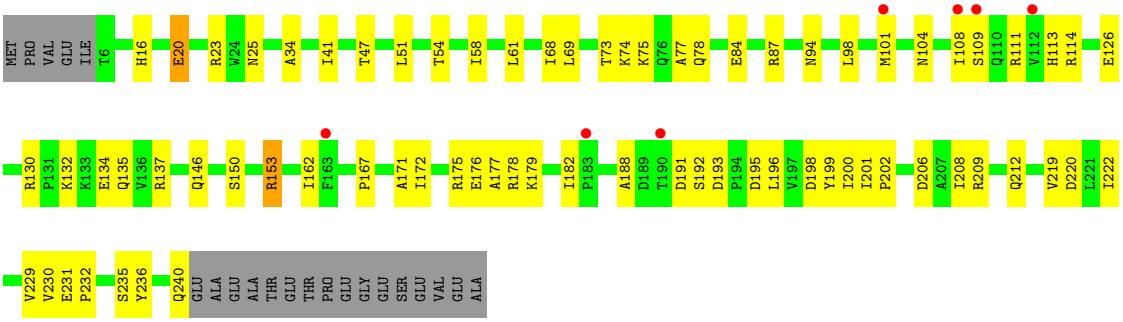
Chain XA:





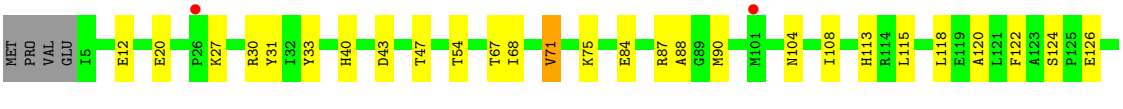
• Molecule 2: 30S ribosomal protein S2

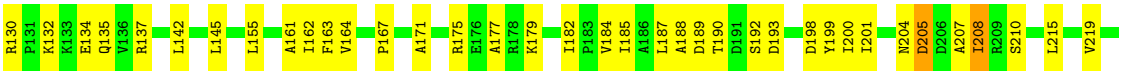
Chain QB:

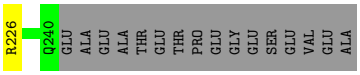


• Molecule 2: 30S ribosomal protein S2

Chain XB:

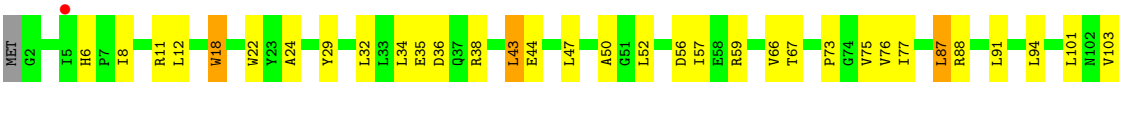


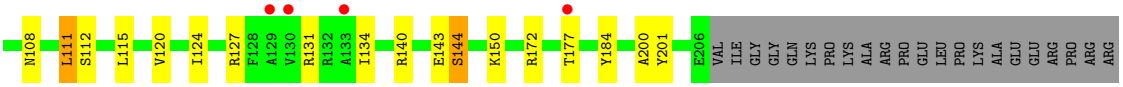




• Molecule 3: 30S ribosomal protein S3

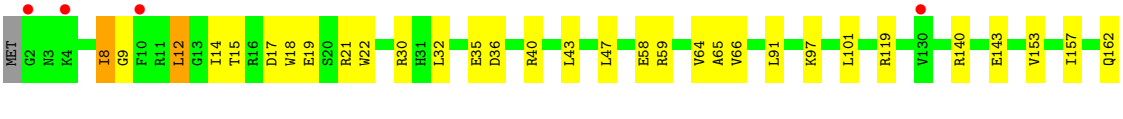
Chain QC:

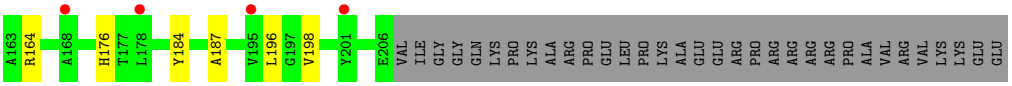




• Molecule 3: 30S ribosomal protein S3

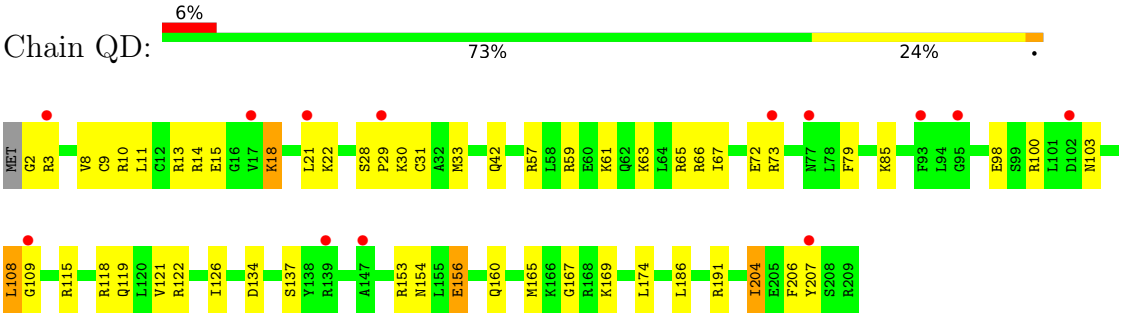
Chain XC:





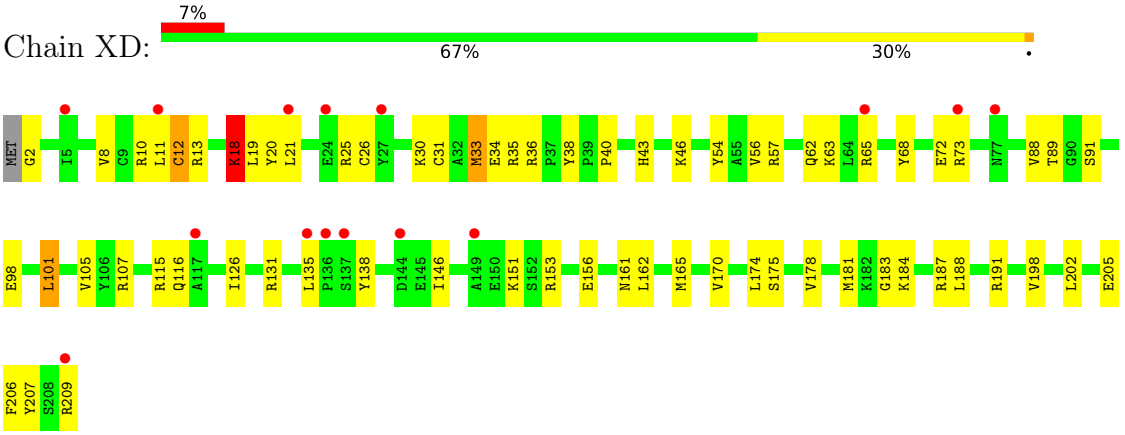
• Molecule 4: 30S ribosomal protein S4

Chain QD:



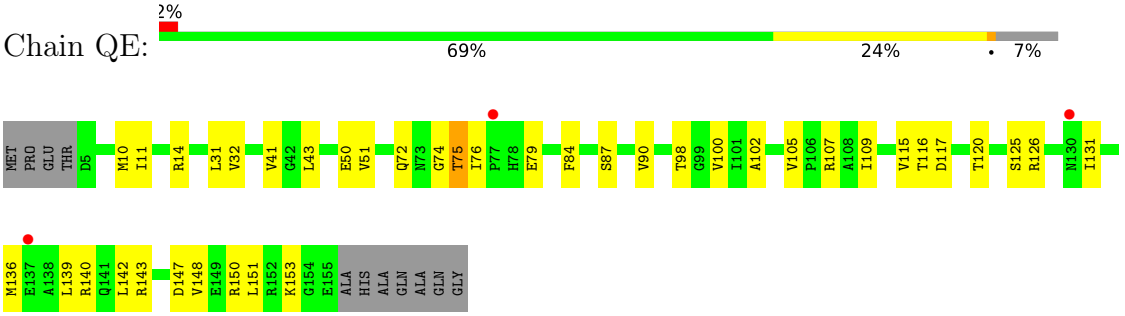
• Molecule 4: 30S ribosomal protein S4

Chain XD:



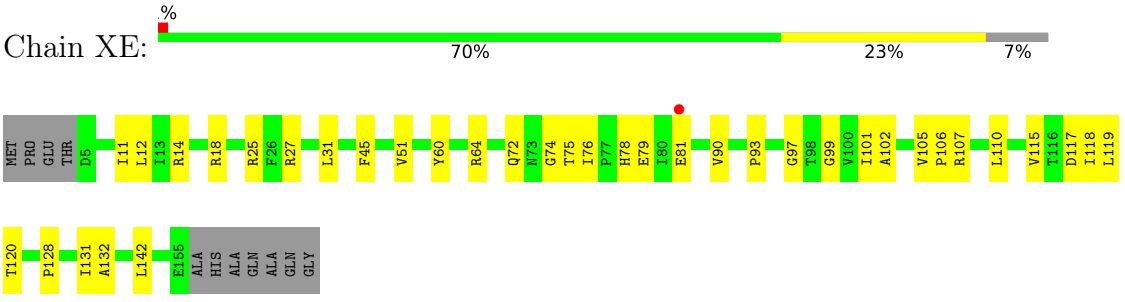
• Molecule 5: 30S ribosomal protein S5

Chain QE:



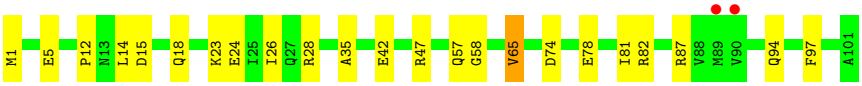
• Molecule 5: 30S ribosomal protein S5

Chain XE:

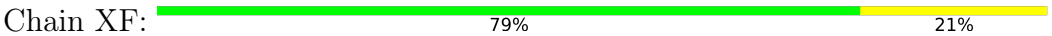


• Molecule 6: 30S ribosomal protein S6

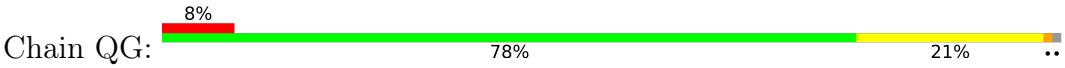
Chain QF:

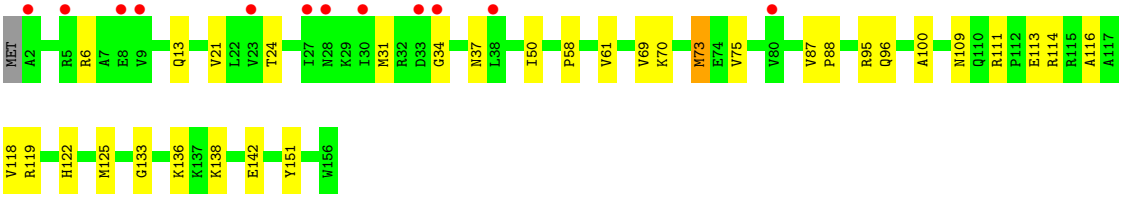


• Molecule 6: 30S ribosomal protein S6

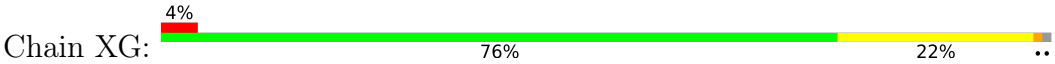


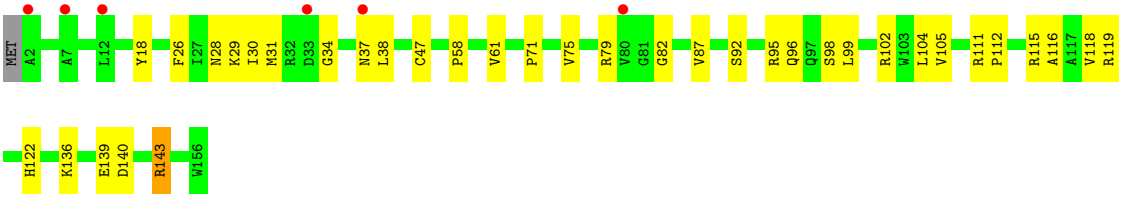
• Molecule 7: 30S ribosomal protein S7



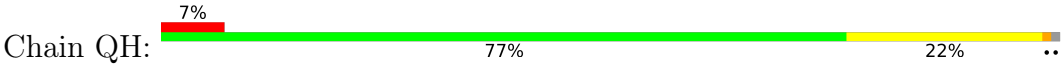


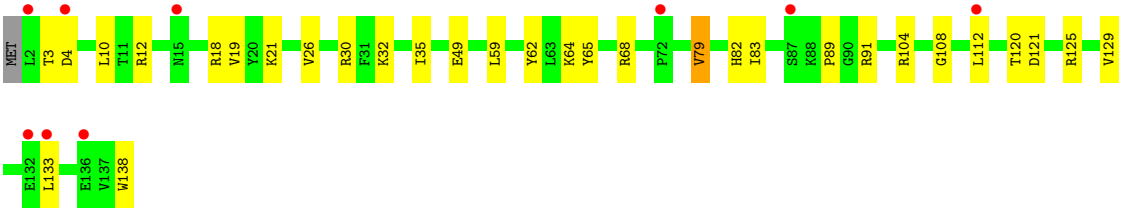
• Molecule 7: 30S ribosomal protein S7



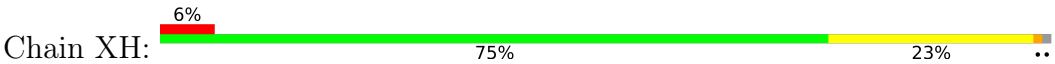


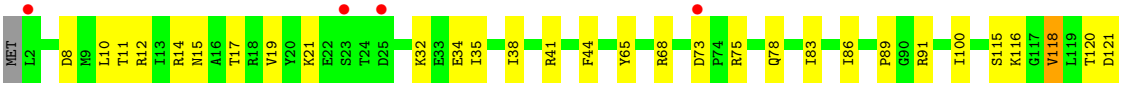
• Molecule 8: 30S ribosomal protein S8

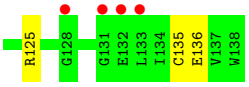




• Molecule 8: 30S ribosomal protein S8

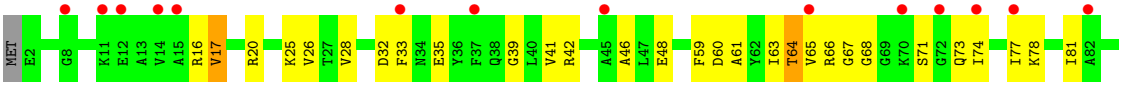


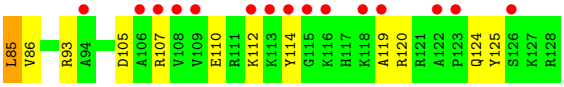




• Molecule 9: 30S ribosomal protein S9

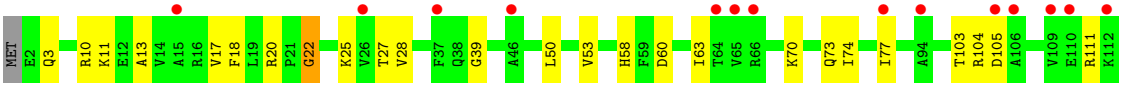
Chain QI:

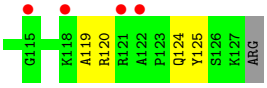




• Molecule 9: 30S ribosomal protein S9

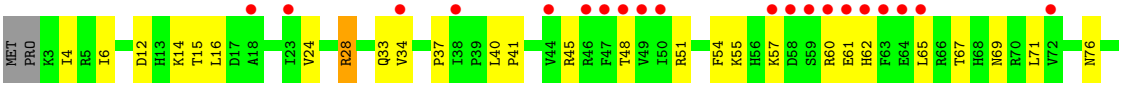
Chain XI:

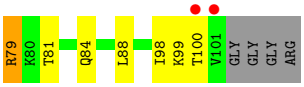




• Molecule 10: 30S ribosomal protein S10

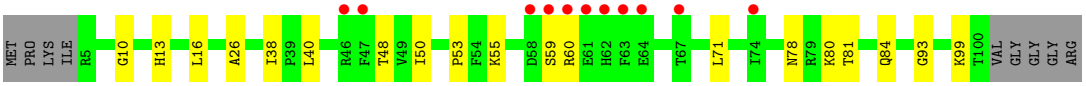
Chain QJ:





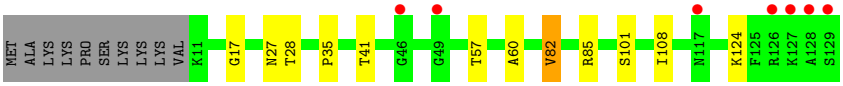
• Molecule 10: 30S ribosomal protein S10

Chain XJ:



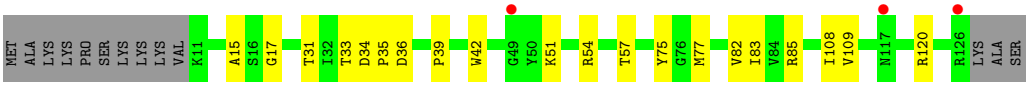
• Molecule 11: 30S ribosomal protein S11

Chain QK:



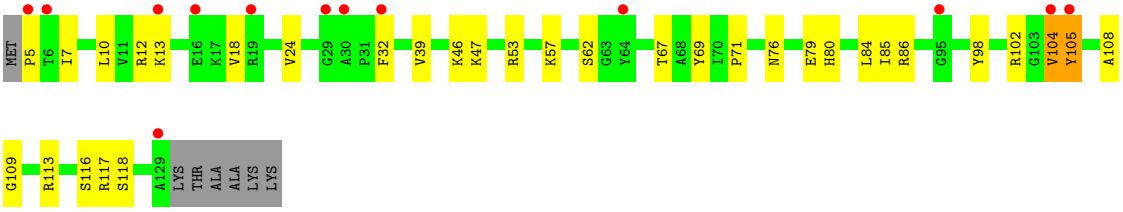
• Molecule 11: 30S ribosomal protein S11

Chain XK:



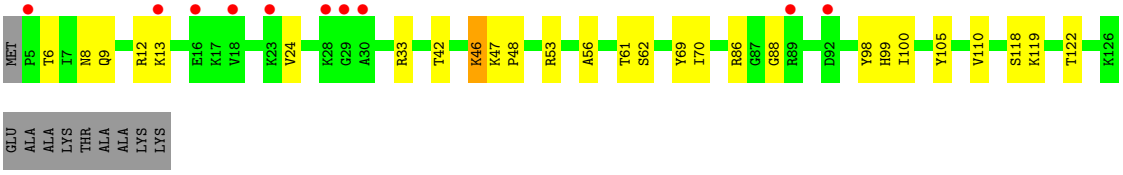
• Molecule 12: 30S ribosomal protein S12

Chain QL:



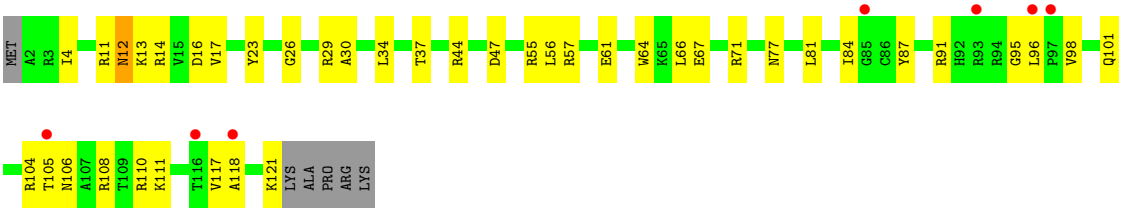
• Molecule 12: 30S ribosomal protein S12

Chain XL:



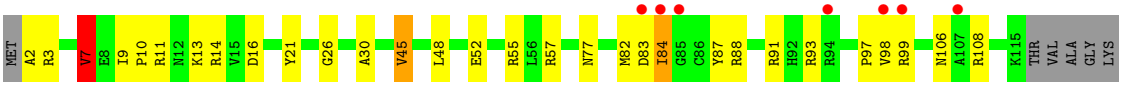
• Molecule 13: 30S ribosomal protein S13

Chain QM:



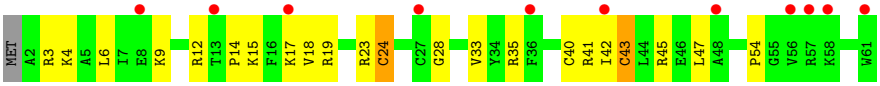
• Molecule 13: 30S ribosomal protein S13

Chain XM:



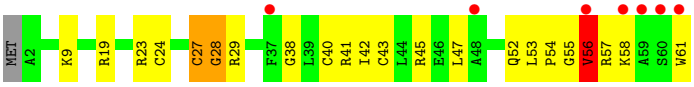
• Molecule 14: 30S ribosomal protein S14 type Z

Chain QN:



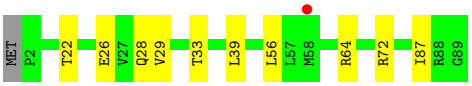
• Molecule 14: 30S ribosomal protein S14 type Z

Chain XN:



• Molecule 15: 30S ribosomal protein S15

Chain QO:

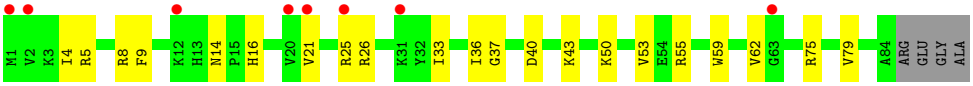


• Molecule 15: 30S ribosomal protein S15

Chain XO:

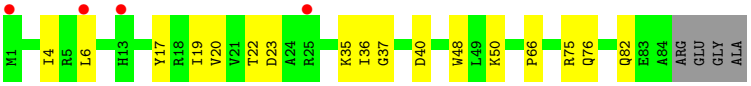
• Molecule 16: 30S ribosomal protein S16

Chain QP:



• Molecule 16: 30S ribosomal protein S16

Chain XP:

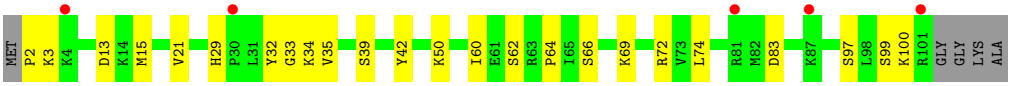


• Molecule 17: 30S ribosomal protein S17

Chain QQ:

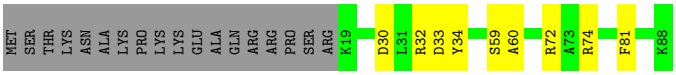
• Molecule 17: 30S ribosomal protein S17

Chain XQ:



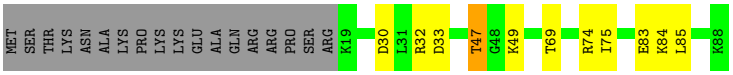
• Molecule 18: 30S ribosomal protein S18

Chain QR:



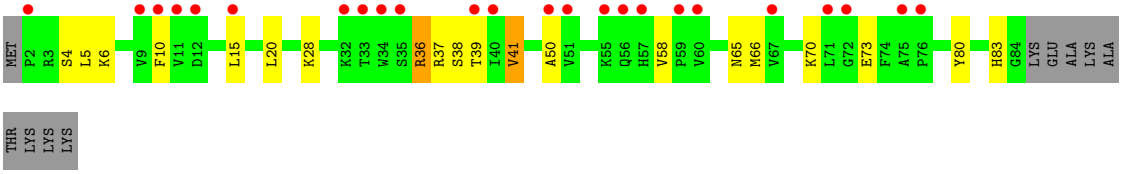
• Molecule 18: 30S ribosomal protein S18

Chain XR:



• Molecule 19: 30S ribosomal protein S19

Chain QS:

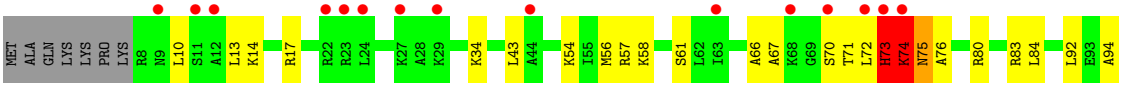


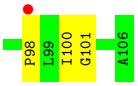
• Molecule 19: 30S ribosomal protein S19

Chain XS:

• Molecule 20: 30S ribosomal protein S20

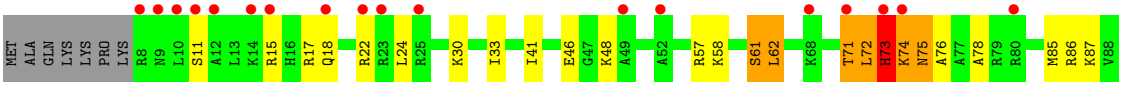
Chain QT:

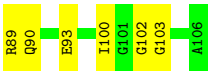




• Molecule 20: 30S ribosomal protein S20

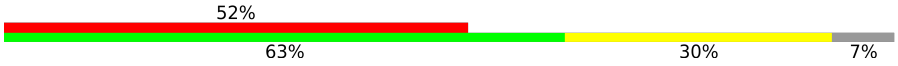
Chain XT:





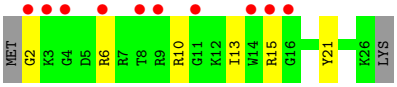
• Molecule 21: 30S ribosomal protein Thx

Chain QU:



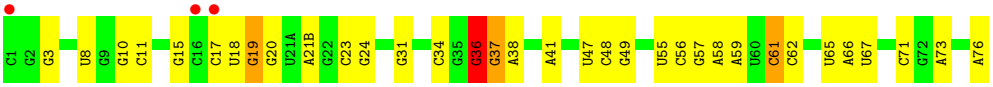
• Molecule 21: 30S ribosomal protein Thx

Chain XU:



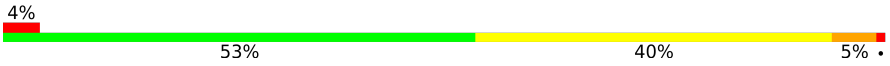
• Molecule 22: E-site tRNA-Pro

Chain QV:



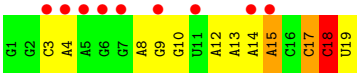
• Molecule 22: E-site tRNA-Pro

Chain XV:



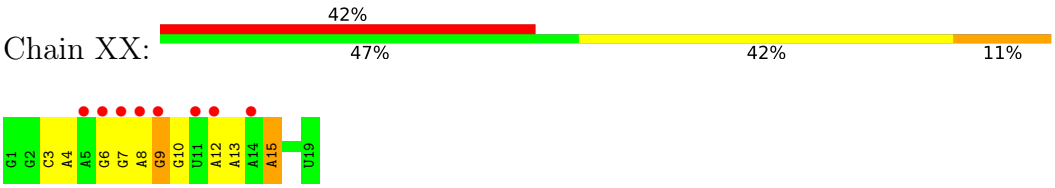
• Molecule 23: mRNA

Chain QX:



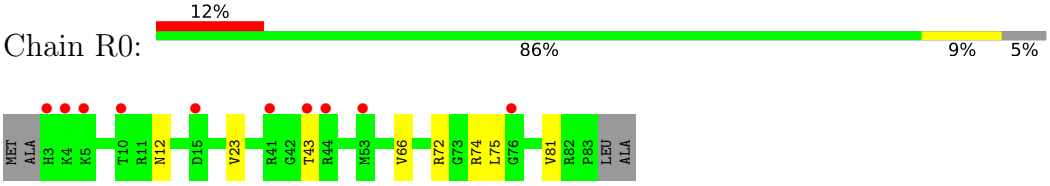
• Molecule 23: mRNA

Chain XX:



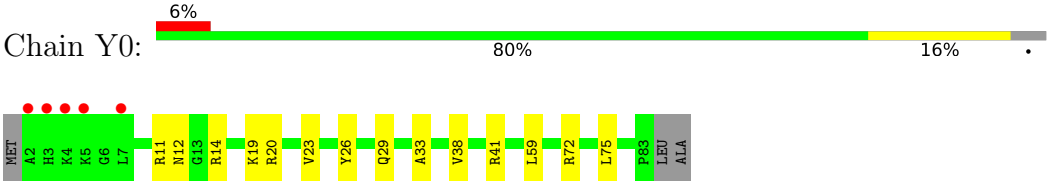
• Molecule 24: 50S ribosomal protein L27

Chain R0:



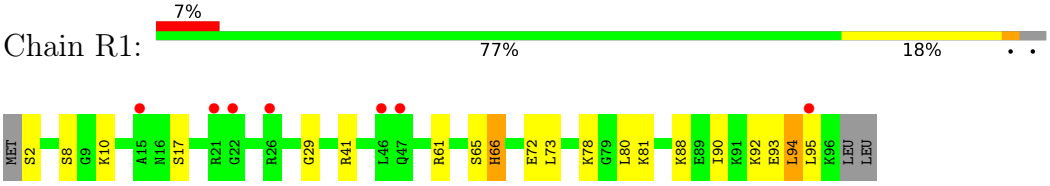
• Molecule 24: 50S ribosomal protein L27

Chain Y0:



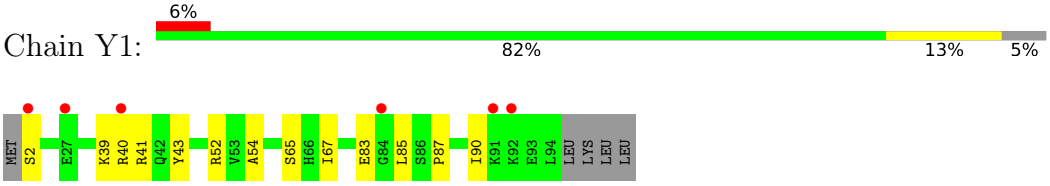
• Molecule 25: 50S ribosomal protein L28

Chain R1:



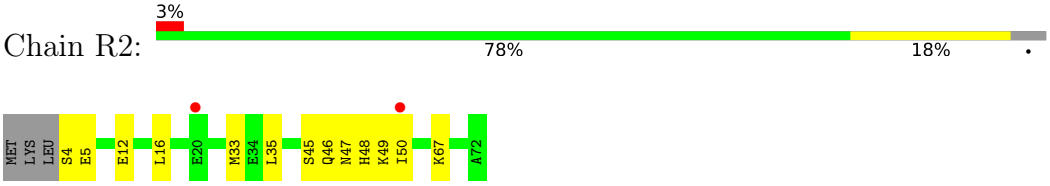
• Molecule 25: 50S ribosomal protein L28

Chain Y1:



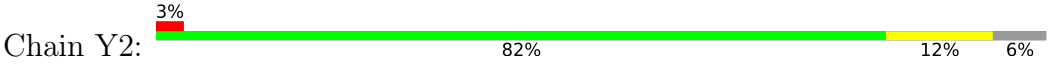
• Molecule 26: 50S ribosomal protein L29

Chain R2:



• Molecule 26: 50S ribosomal protein L29

Chain Y2:

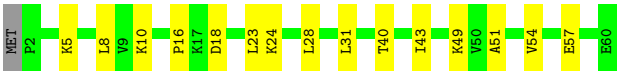


• Molecule 27: 50S ribosomal protein L30

Chain R3:

• Molecule 27: 50S ribosomal protein L30

Chain Y3:

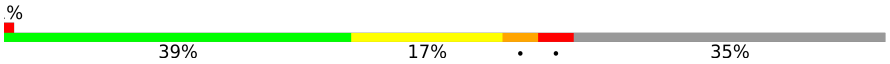


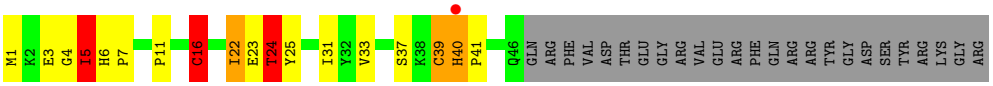
• Molecule 28: 50S ribosomal protein L31

Chain R4:

• Molecule 28: 50S ribosomal protein L31

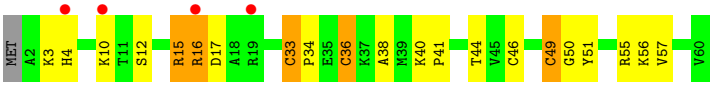
Chain Y4:





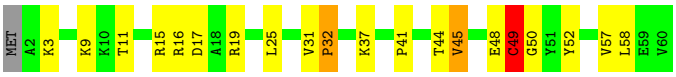
• Molecule 29: 50S ribosomal protein L32

Chain R5:



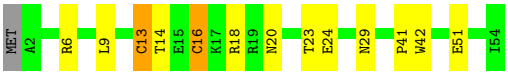
• Molecule 29: 50S ribosomal protein L32

Chain Y5:



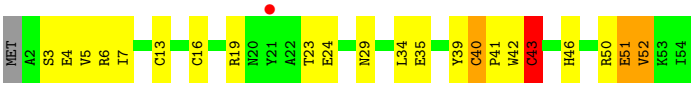
• Molecule 30: 50S ribosomal protein L33

Chain R6:



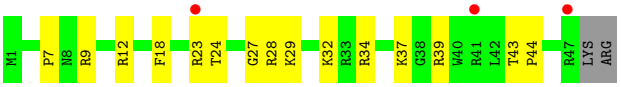
• Molecule 30: 50S ribosomal protein L33

Chain Y6:



• Molecule 31: 50S ribosomal protein L34

Chain R7:

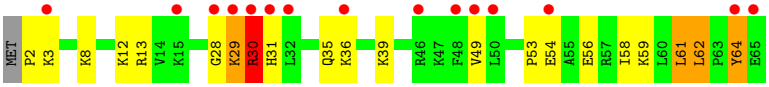


• Molecule 31: 50S ribosomal protein L34

Chain Y7:

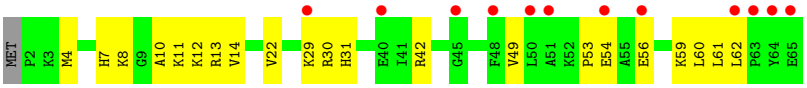
• Molecule 32: 50S ribosomal protein L35

Chain R8:



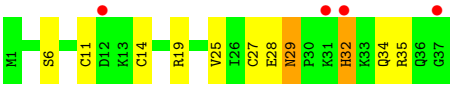
• Molecule 32: 50S ribosomal protein L35

Chain Y8:



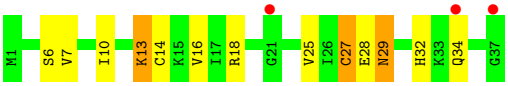
• Molecule 33: 50S ribosomal protein L36

Chain R9:



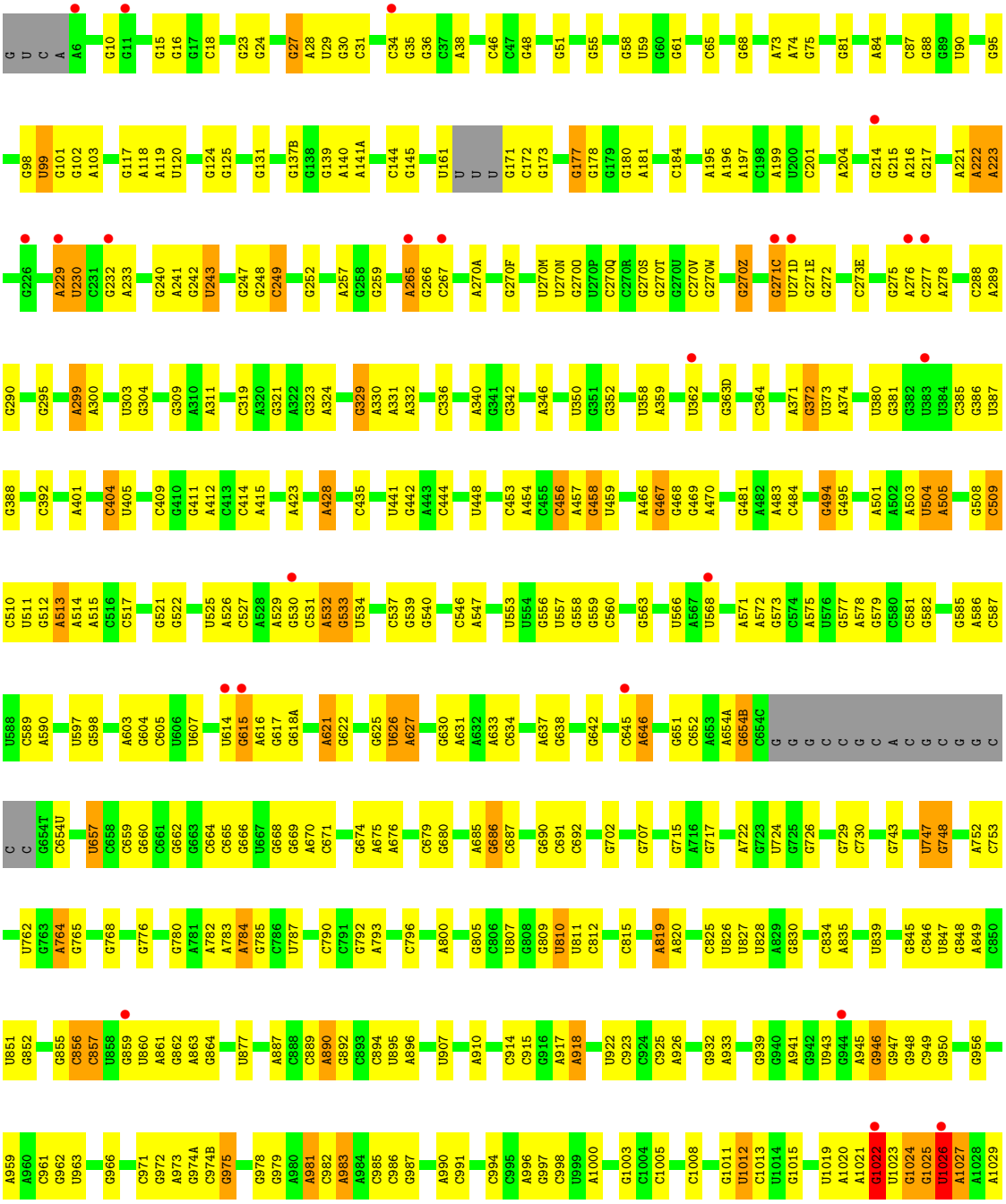
• Molecule 33: 50S ribosomal protein L36

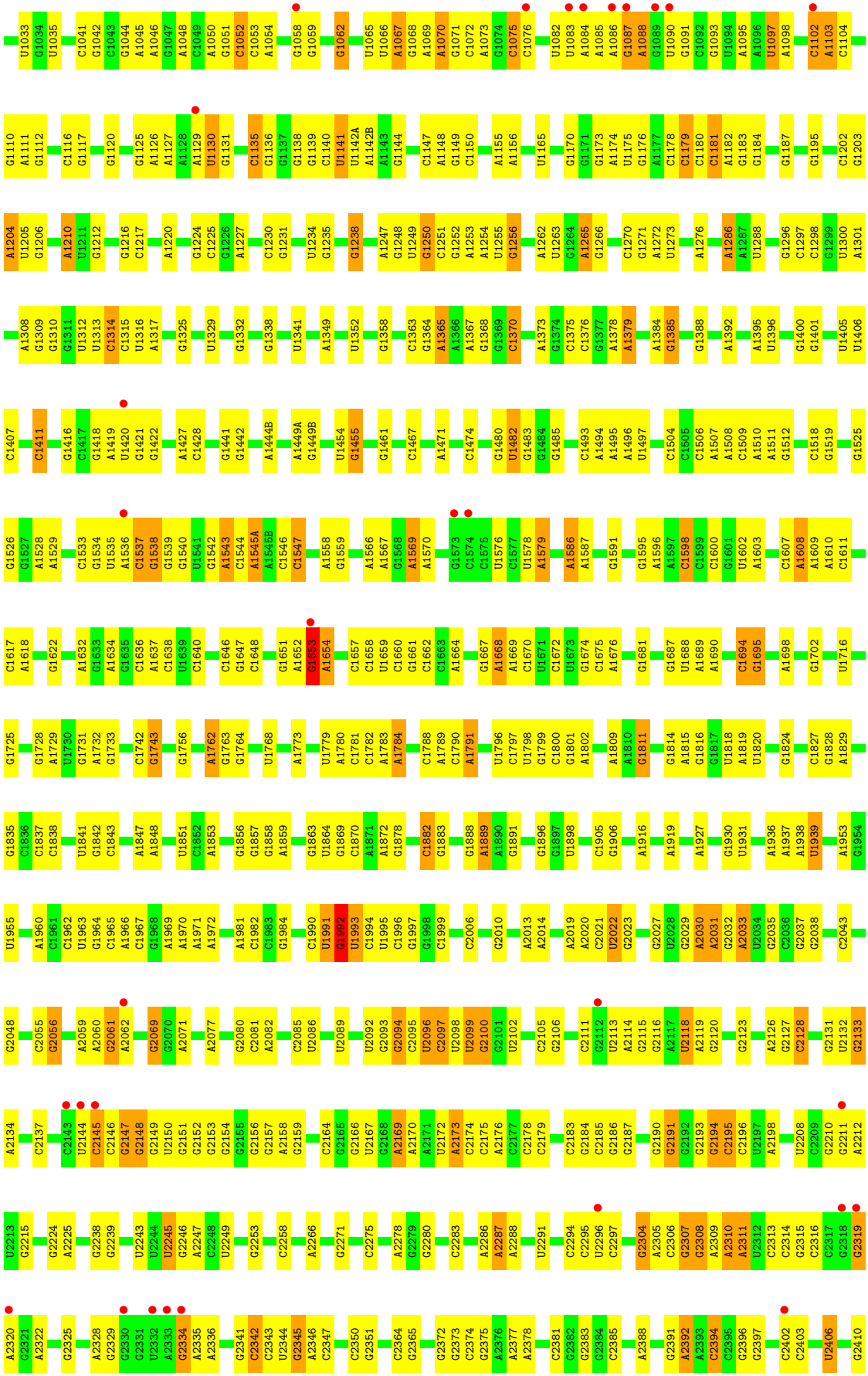
Chain Y9:



• Molecule 34: 23S rRNA

Chain RA:

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G1110 A1111 C1112 C1116 C1117 G1120 G1125 A1126 A1127 A1128 A1129 U1130 G1131 C1135 G1136 G1137 G1138 G1139 C1140 U1141 A1142A A1142B A1143 G1144 C1147 A1148 G1149 C1150 A1155 A1156 U1165 G1170 G1171 G1173 A1174 U1175 G1176 A1177 C1178 C1179 C1180 C1181 A1182 G1183 G1184 G1187 G1195 C1202 G1203
A1204 U1205 G1206 A1210 U1211 G1212 G1216 C1217 A1220 G1224 C1225 G1226 A1227 C1230 G1231 U1234 G1235 G1238 A1247 G1248 U1249 G1250 C1251 G1252 A1253 A1254 U1255 G1256 A1262 U1263 G1264 A1265 G1266 C1270 G1271 A1272 U1273 A1276 A1286 A1287 U1288 G1296 C1297 C1298 G1299 U1300 A1301
A1308 G1309 G1310 G1311 U1312 U1313 C1314 C1315 U1316 A1317 G1325 U1329 G1332 G1338 U1341 A1349 U1352 G1358 C1363 G1364 A1365 A1366 A1367 G1368 G1369 C1370 A1373 G1374 C1375 C1376 G1377 A1378 A1379 A1384 G1385 G1388 A1392 A1395 U1396 G1400 G1401 U1405 U1406
C1407 C1411 G1416 C1417 G1418 A1419 U1420 G1421 G1422 A1427 C1428 G1441 G1442 A1444B A1449A G1449B U1454 G1465 G1461 C1467 A1471 C1474 G1480 U1482 G1483 G1484 G1485 C1493 A1494 A1495 A1496 U1497 C1504 C1505 C1506 A1507 A1508 C1509 A1510 A1511 G1512 C1518 G1519 G1525
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C1617 A1618 G1622 A1632 G1633 A1634 G1635 C1636 A1637 C1638 U1639 C1640 C1646 G1647 C1648 G1651 A1652 G1653 A1654 C1657 C1658 U1659 C1660 G1661 C1662 C1663 A1664 G1667 A1668 A1669 C1670 U1671 C1672 U1673 G1674 C1675 A1676 G1681 G1687 U1688 A1689 A1690 C1694 G1695 A1698 G1702 U1716
G1725 G1728 A1729 U1730 G1731 A1732 G1733 C1742 G1743 G1756 A1762 G1763 G1764 U1768 A1773 U1779 A1780 C1781 C1782 A1783 A1784 C1788 A1789 C1790 A1791 U1796 C1797 U1798 G1799 C1800 G1801 A1802 A1809 A1810 G1811 G1814 A1815 G1816 G1817 U1818 A1819 U1820 G1824 C1827 G1828 A1829
G1835 C1836 C1837 C1838 U1841 G1842 C1843 A1847 A1848 U1851 C1852 A1853 G1856 G1857 G1858 A1859 G1863 U1864 G1869 C1870 A1871 A1872 G1878 C1882 G1883 G1888 A1889 A1890 G1891 G1896 G1897 U1898 C1905 G1906 A1916 G1919 A1927 G1930 U1931 A1936 A1937 A1938 U1939 A1953 G1954
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G2048 C2055 G2056 A2059 A2060 G2061 A2062 G2069 G2070 A2071 A2077 G2080 C2081 A2082 C2085 U2086 U2089 U2092 G2093 G2094 C2095 U2096 C2097 U2098 U2099 G2100 G2101 U2102 C2105 G2106 C2111 G2112 U2113 A2114 G2115 G2116 A2117 U2118 A2119 G2120 G2123 A2126 G2127 C2128 G2131 U2132 G2133
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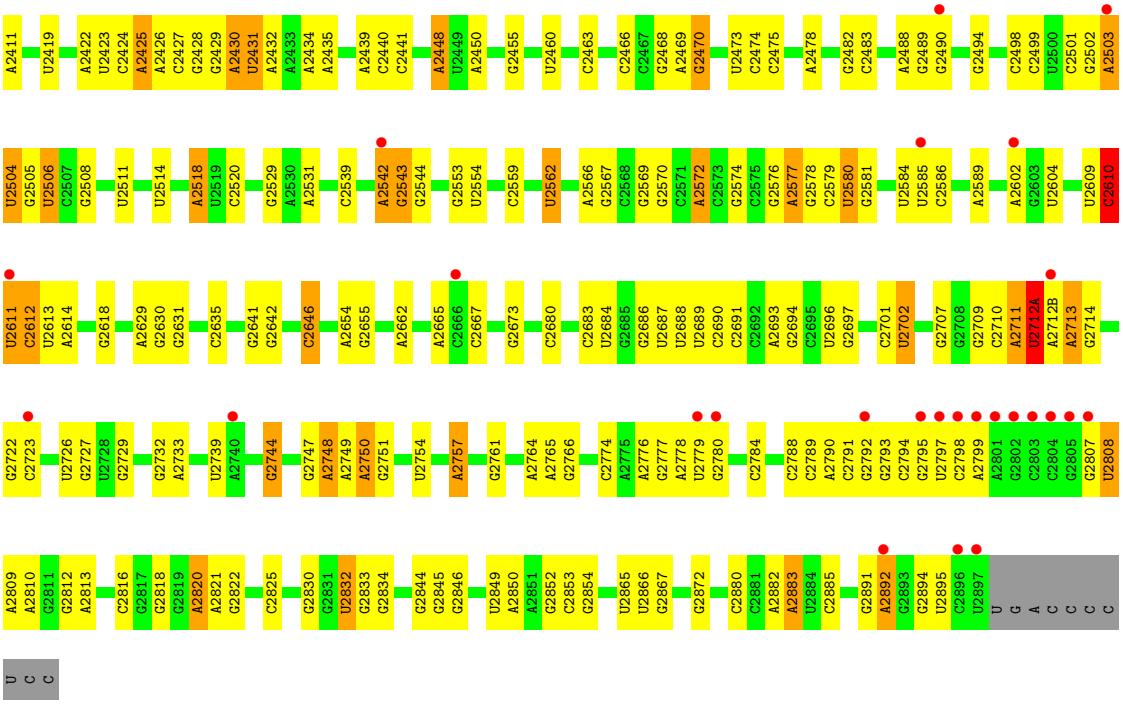
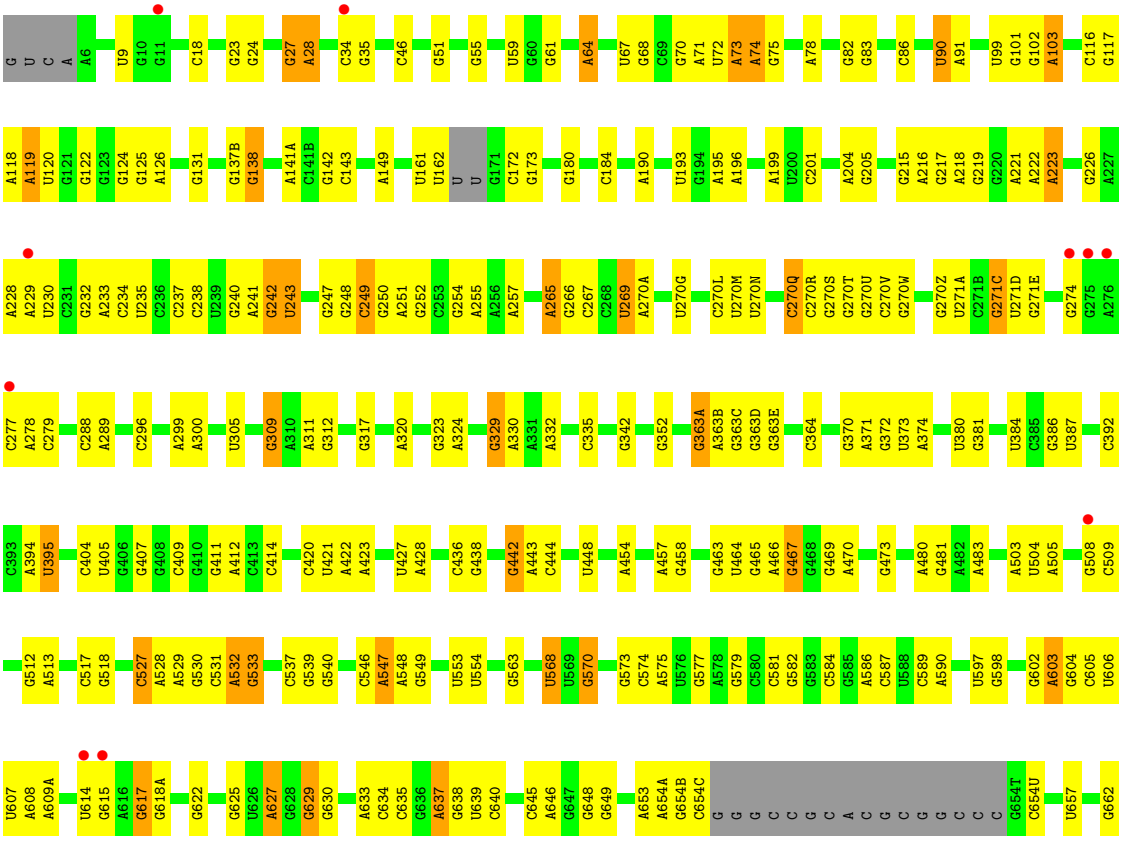
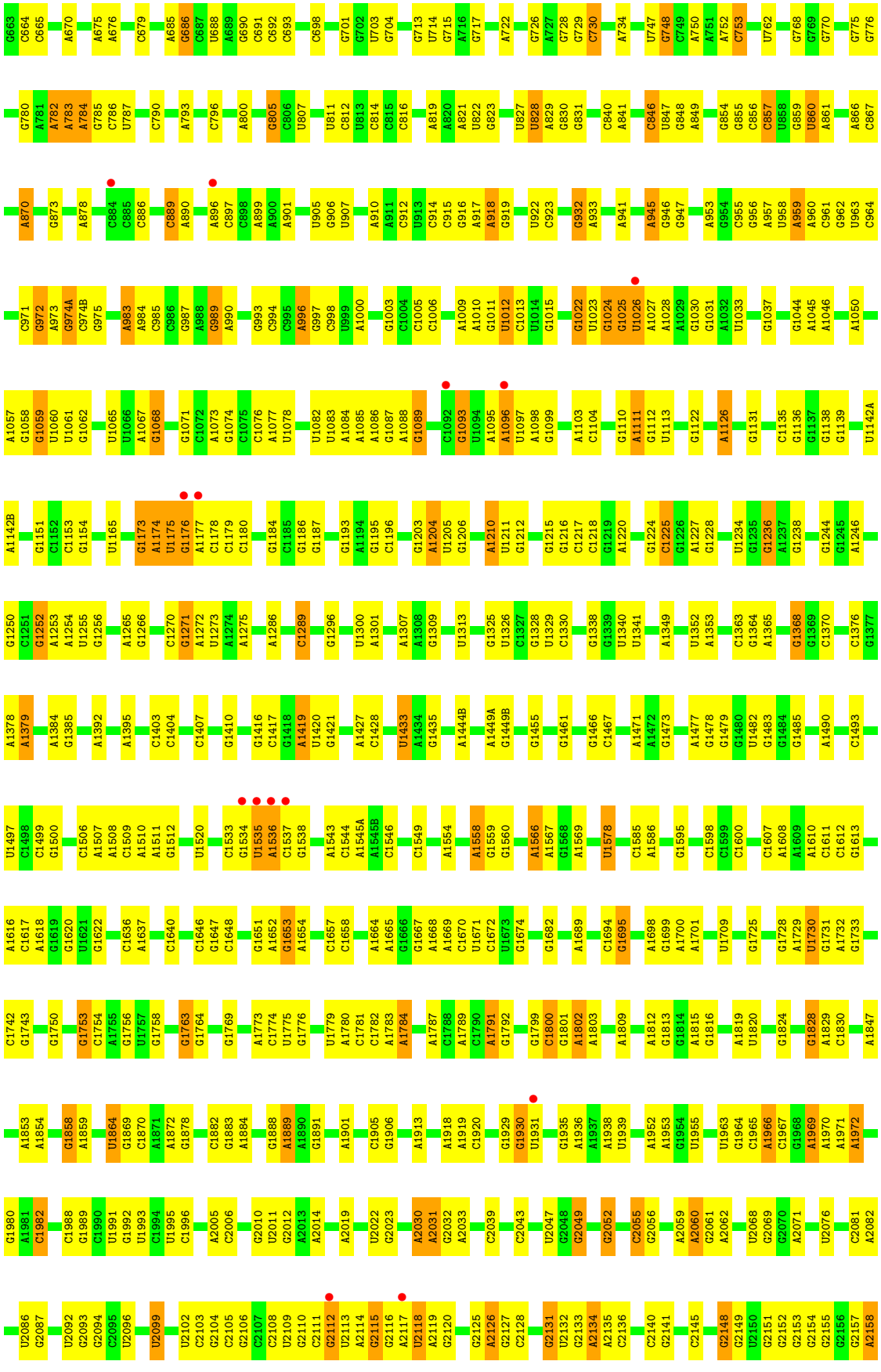
U2213 G2215 G2224 A2225 G2238 G2239 U2243 U2244 U2245 G2246 A2247 C2248 U2249 G2253 C2258 A2266 G2271 C2275 A2278 G2279 G2280 C2283 A2286 A2287 A2288 U2291 C2294 C2295 U2296 C2297 G2304 A2305 C2306 G2307 G2308 A2309 A2310 A2311 U2312 C2313 C2314 G2315 C2316 C2317 G2318 G2319
A2320 G2321 A2322 G2325 A2328 G2329 G2330 G2331 U2332 A2333 G2334 A2335 A2336 G2341 C2342 C2343 U2344 G2345 A2346 C2347 C2350 G2351 C2364 G2365 G2372 G2373 C2374 G2375 A2376 A2377 A2378 C2381 G2382 G2383 G2384 C2385 A2388 G2391 A2392 A2393 C2394 C2395 G2396 G2397 C2402 C2403 U2406 G2410



• Molecule 34: 23S rRNA

Chain YA:

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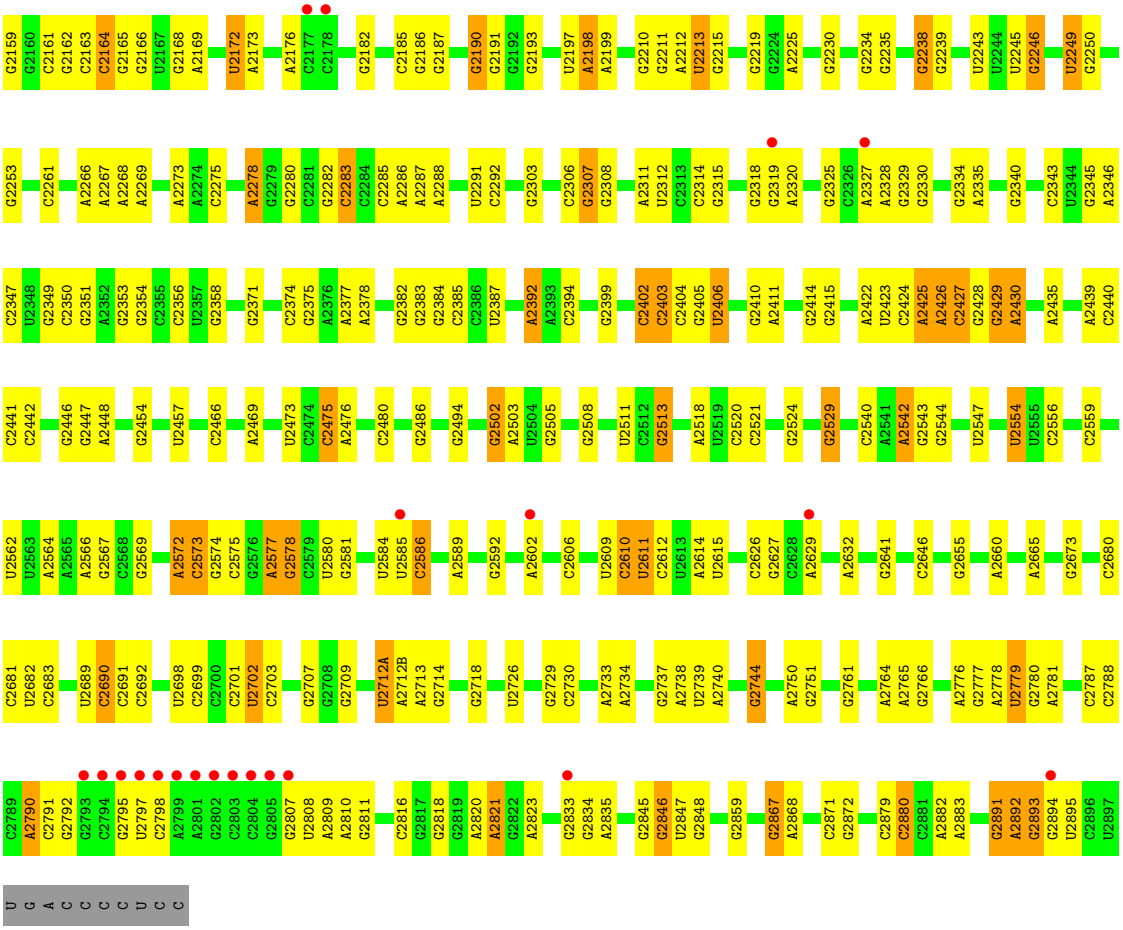
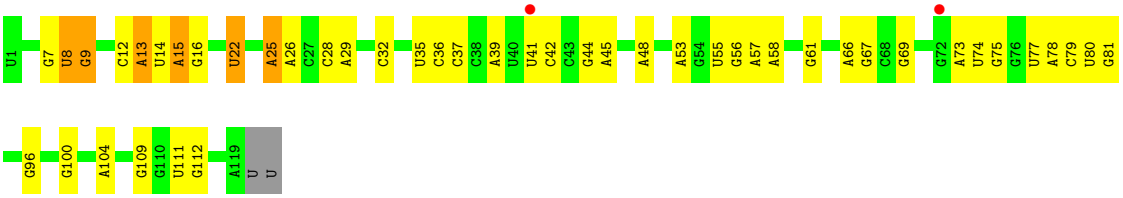


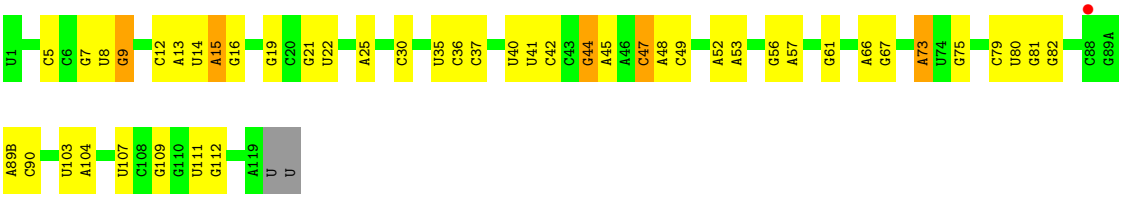
• Molecule 35: 5S rRNA

Chain RB:



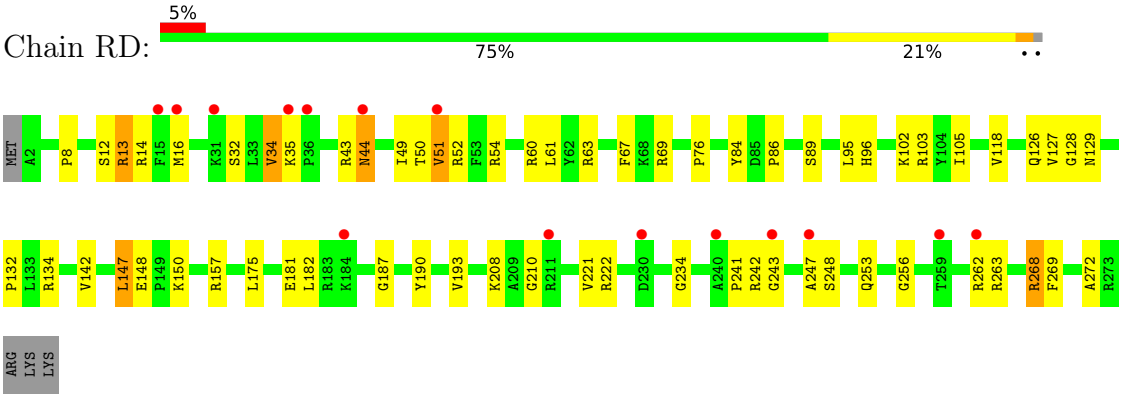
• Molecule 35: 5S rRNA

Chain YB:



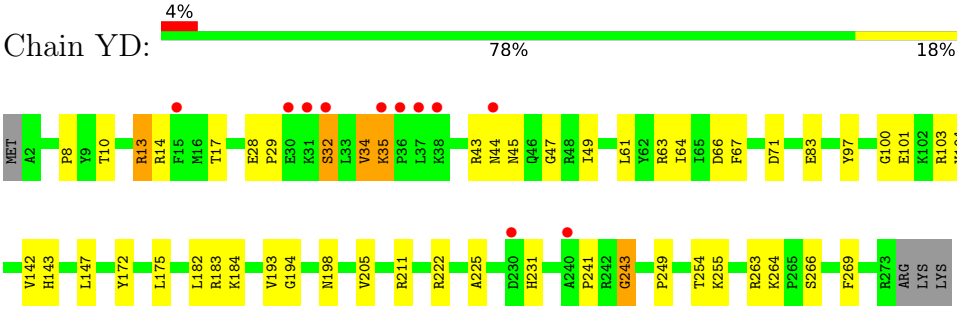
• Molecule 36: 50S ribosomal protein L2

Chain RD:



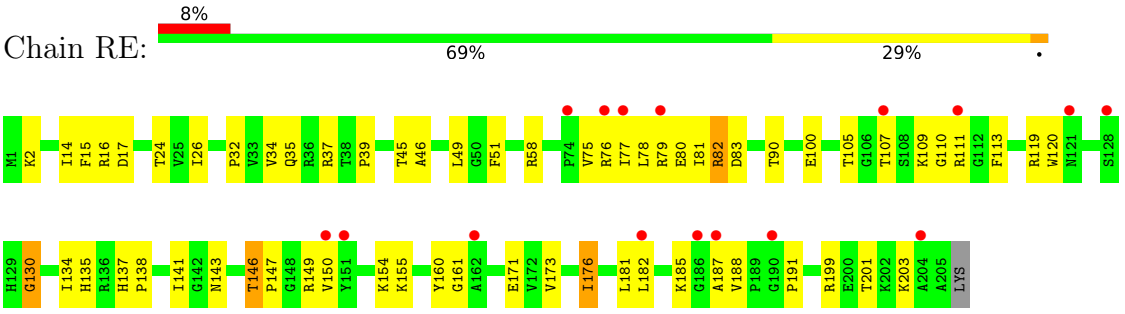
• Molecule 36: 50S ribosomal protein L2

Chain YD:



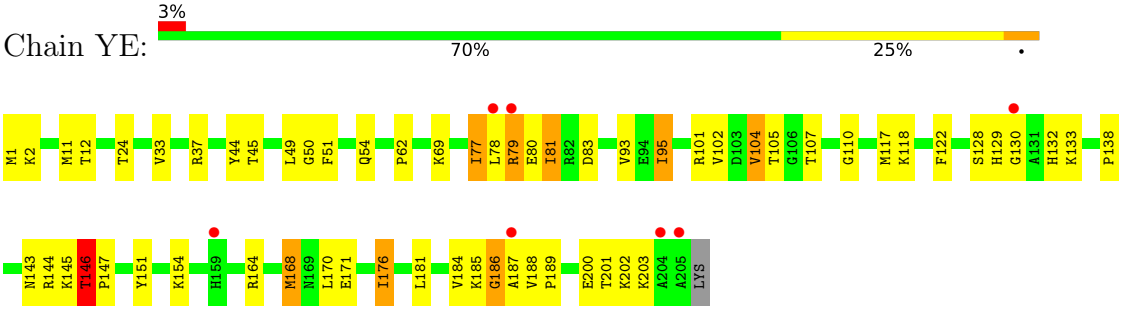
• Molecule 37: 50S ribosomal protein L3

Chain RE:



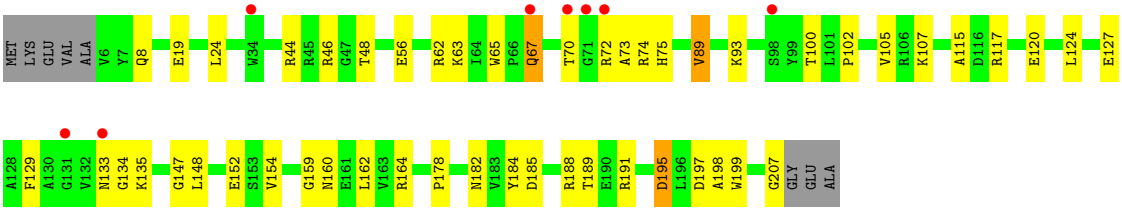
• Molecule 37: 50S ribosomal protein L3

Chain YE:



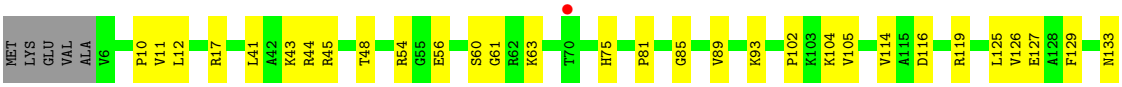
• Molecule 38: 50S ribosomal protein L4

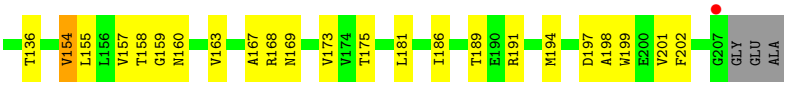
Chain RF:



• Molecule 38: 50S ribosomal protein L4

Chain YF:



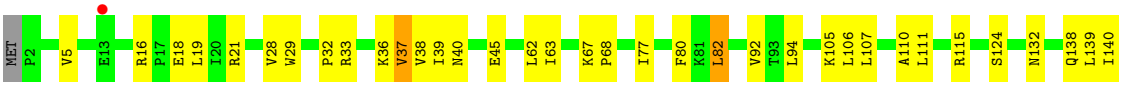


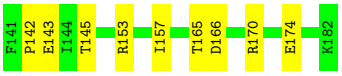
• Molecule 39: 50S ribosomal protein L5

Chain RG:

• Molecule 39: 50S ribosomal protein L5

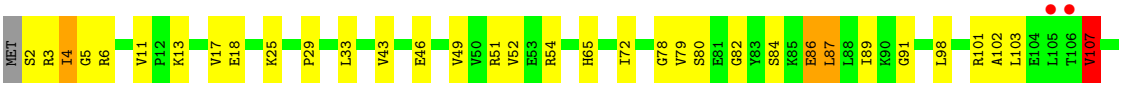
Chain YG:

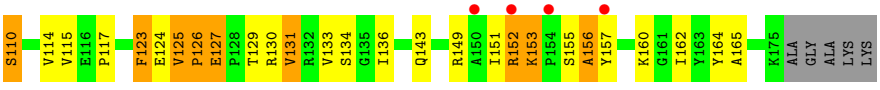




• Molecule 40: 50S ribosomal protein L6

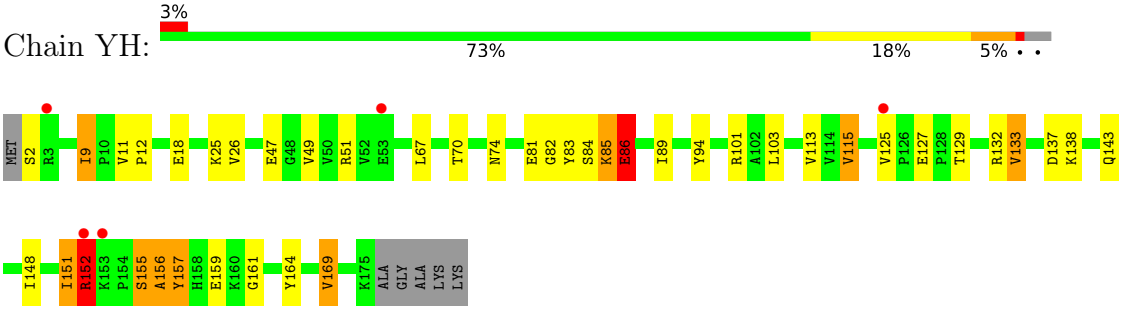
Chain RH:





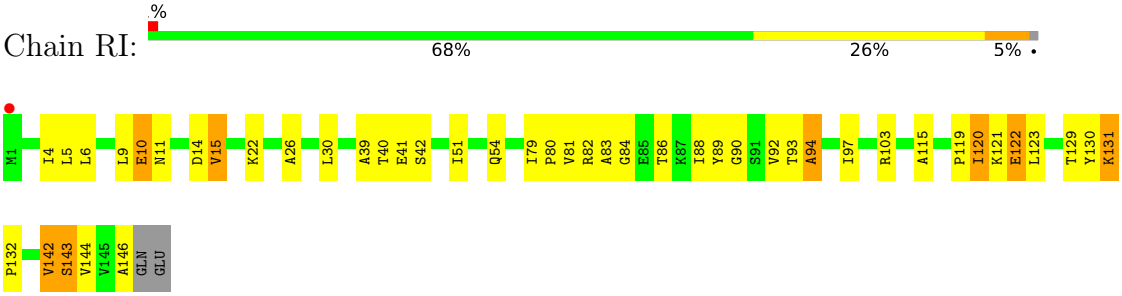
• Molecule 40: 50S ribosomal protein L6

Chain YH:



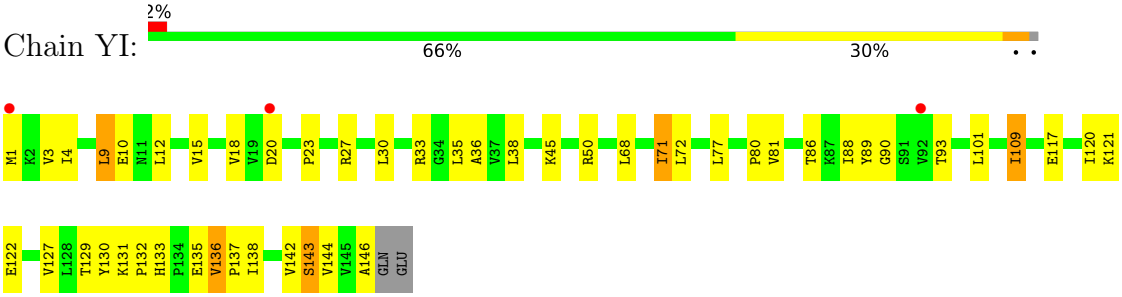
• Molecule 41: 50S ribosomal protein L9

Chain RI:



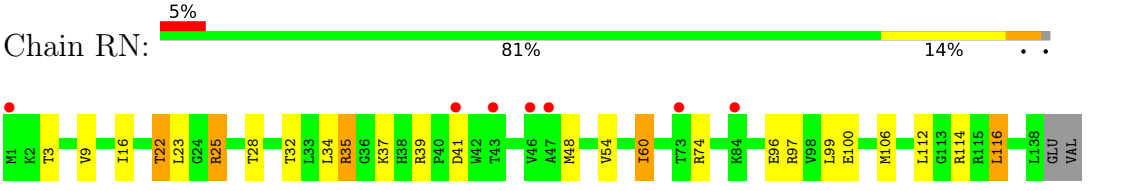
• Molecule 41: 50S ribosomal protein L9

Chain YI:



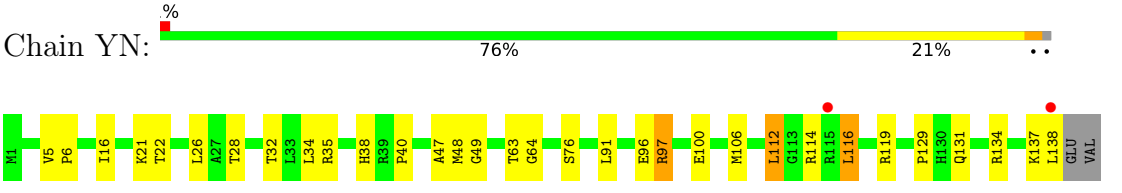
• Molecule 42: 50S ribosomal protein L13

Chain RN:



• Molecule 42: 50S ribosomal protein L13

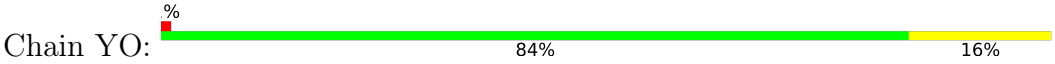
Chain YN:

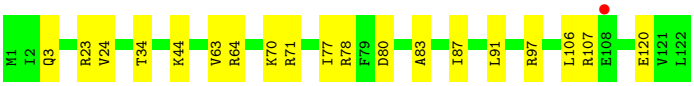


• Molecule 43: 50S ribosomal protein L14

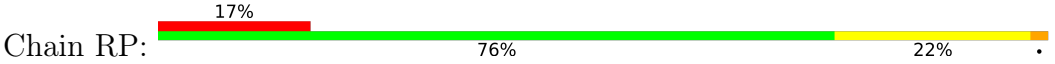
Chain RO:

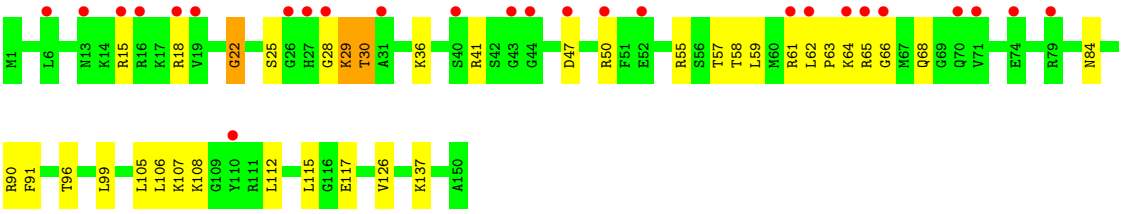
• Molecule 43: 50S ribosomal protein L14



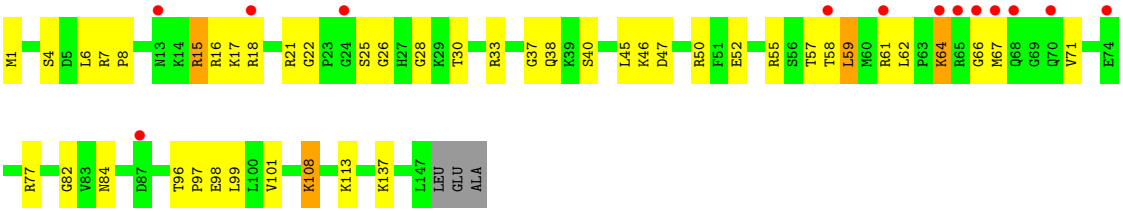


• Molecule 44: 50S ribosomal protein L15

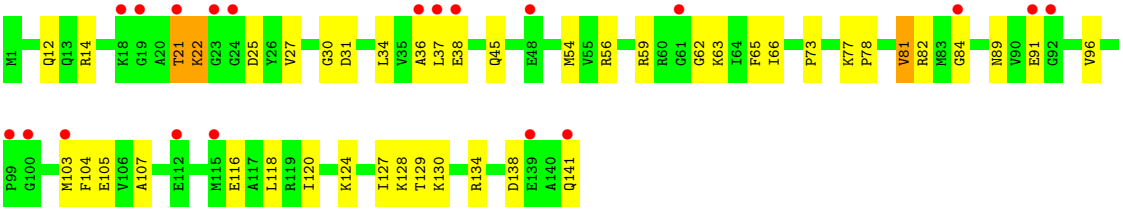




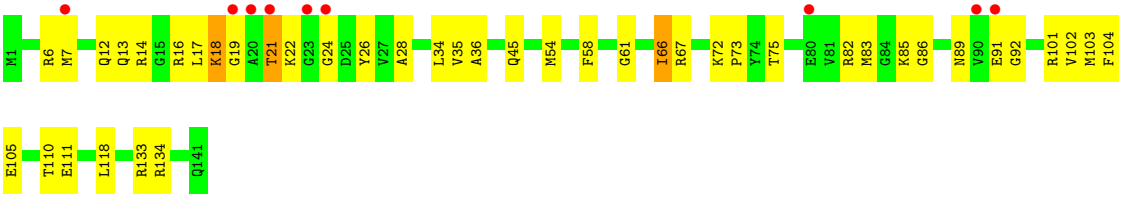
• Molecule 44: 50S ribosomal protein L15



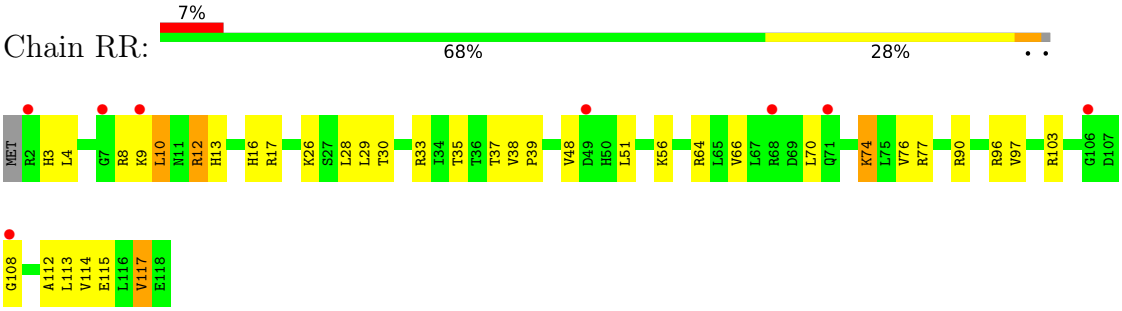
• Molecule 45: 50S ribosomal protein L16



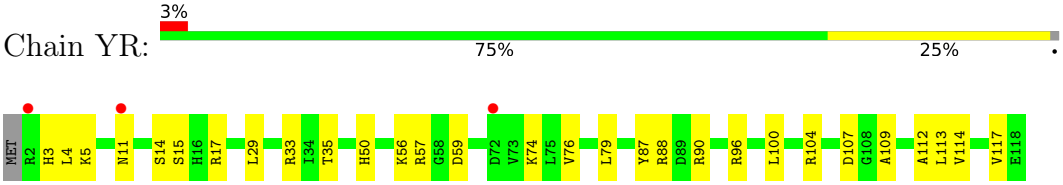
• Molecule 45: 50S ribosomal protein L16



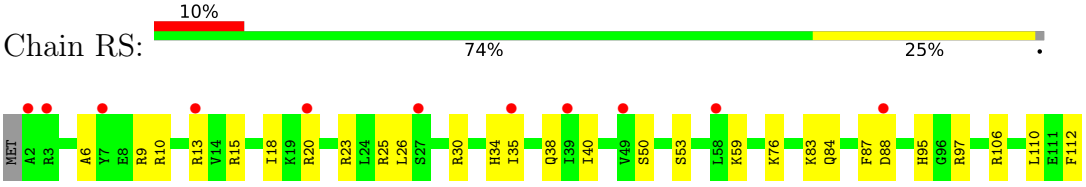
• Molecule 46: 50S ribosomal protein L17



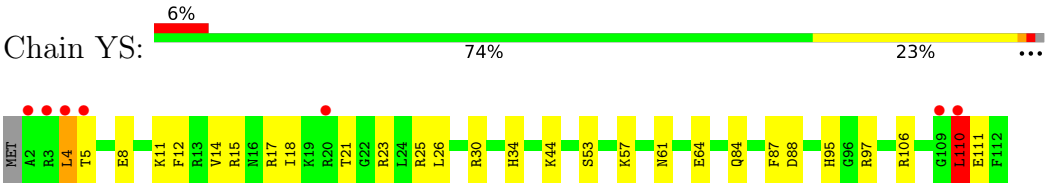
• Molecule 46: 50S ribosomal protein L17



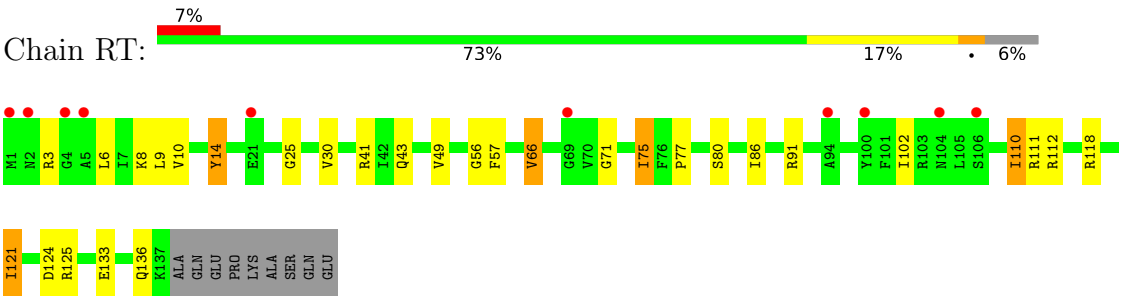
• Molecule 47: 50S ribosomal protein L18



• Molecule 47: 50S ribosomal protein L18

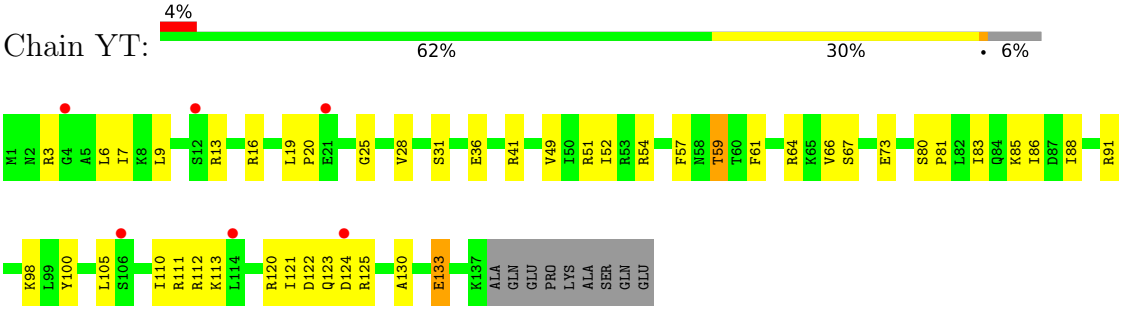


• Molecule 48: 50S ribosomal protein L19



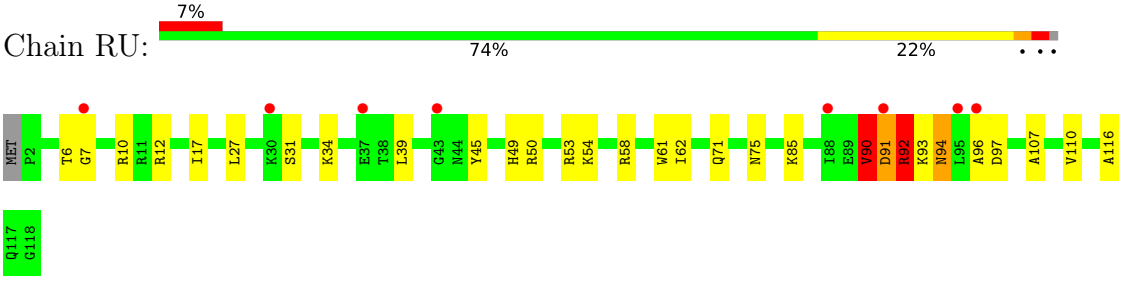
• Molecule 48: 50S ribosomal protein L19

Chain YT:



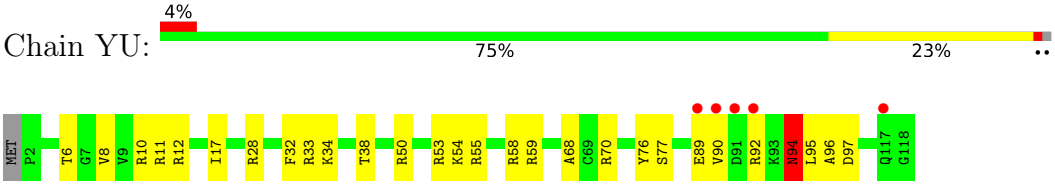
• Molecule 49: 50S ribosomal protein L20

Chain RU:



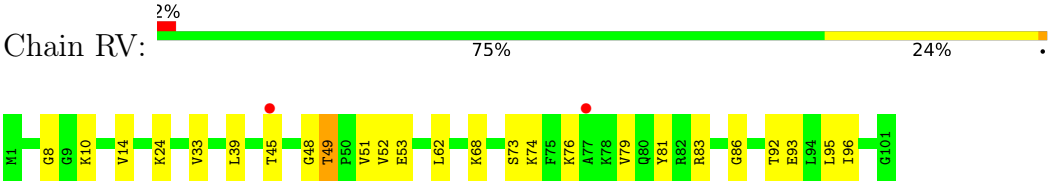
• Molecule 49: 50S ribosomal protein L20

Chain YU:



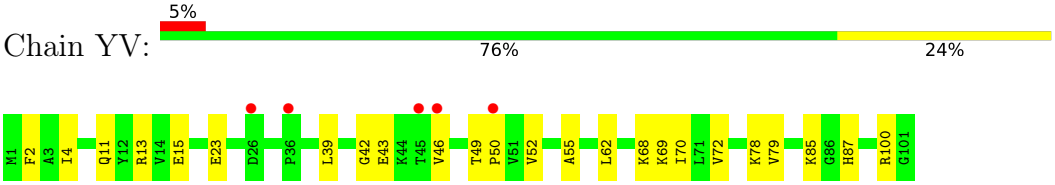
• Molecule 50: 50S ribosomal protein L21

Chain RV:



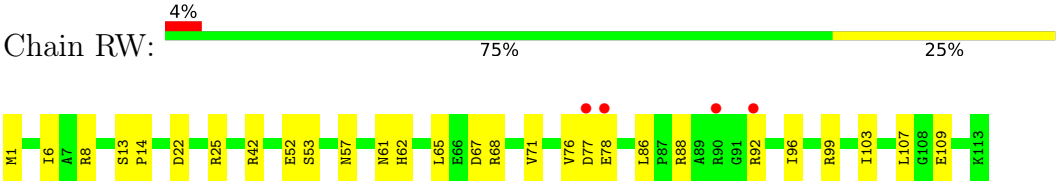
• Molecule 50: 50S ribosomal protein L21

Chain YV:



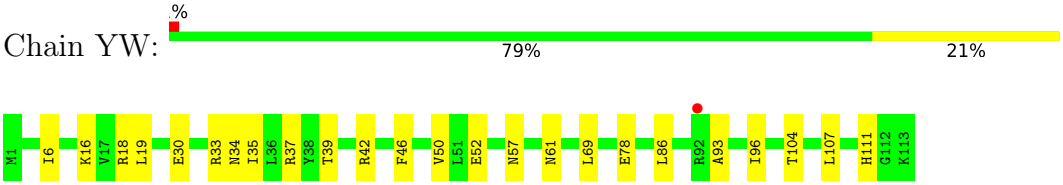
• Molecule 51: 50S ribosomal protein L22

Chain RW:



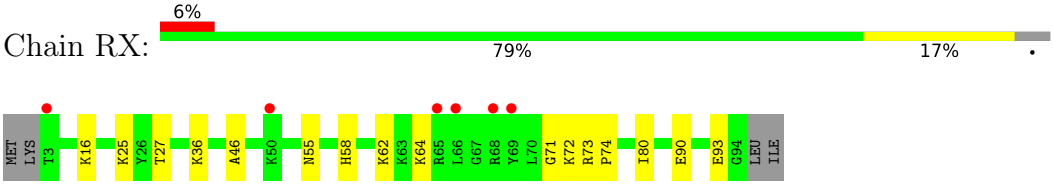
• Molecule 51: 50S ribosomal protein L22

Chain YW:



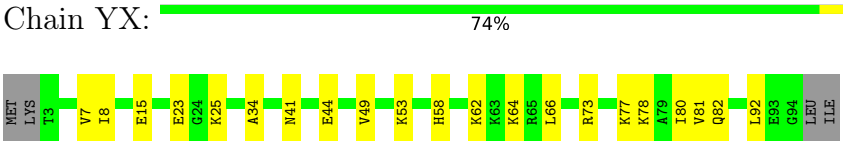
• Molecule 52: 50S ribosomal protein L23

Chain RX:



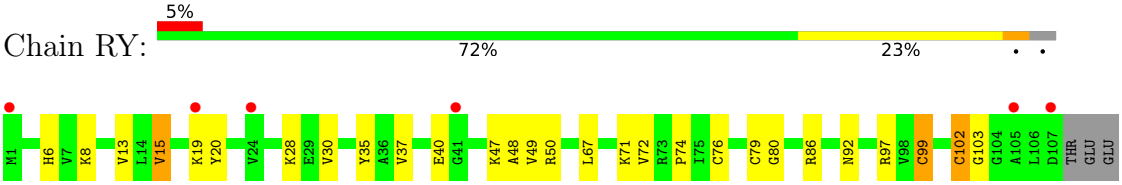
• Molecule 52: 50S ribosomal protein L23

Chain YX:



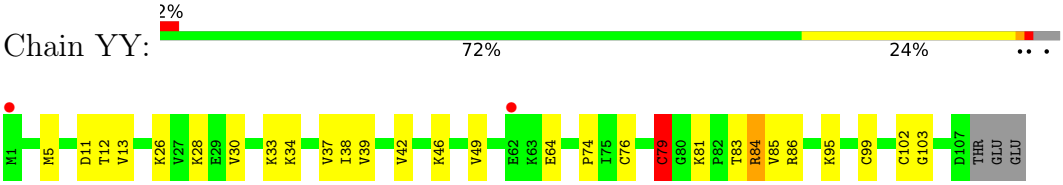
• Molecule 53: 50S ribosomal protein L24

Chain RY:



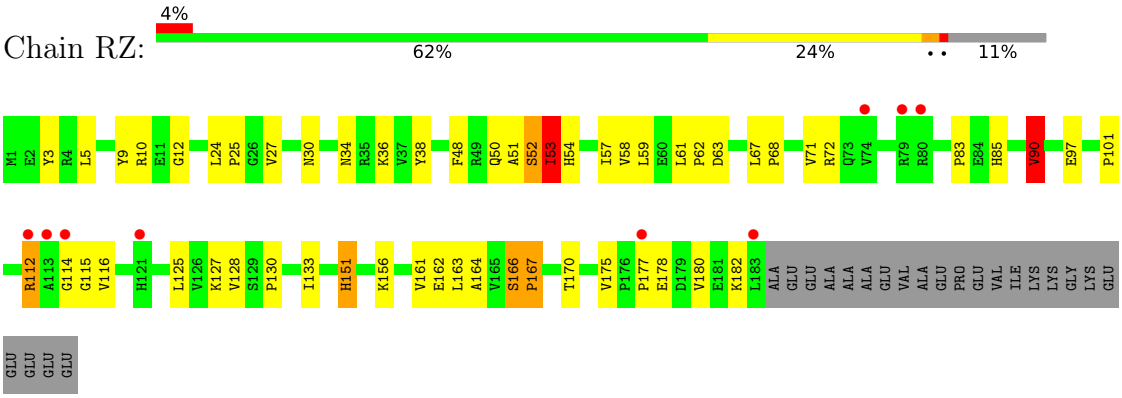
• Molecule 53: 50S ribosomal protein L24

Chain YY:



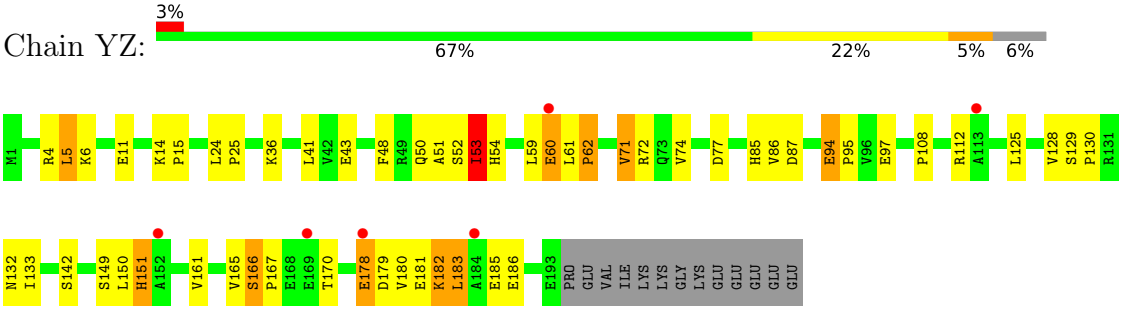
• Molecule 54: 50S ribosomal protein L25

Chain RZ:



• Molecule 54: 50S ribosomal protein L25

Chain YZ:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	210.74Å 450.26Å 626.11Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.94 – 3.50 49.94 – 3.50	Depositor EDS
% Data completeness (in resolution range)	97.6 (49.94-3.50) 97.5 (49.94-3.50)	Depositor EDS
R_{merge}	0.17	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.17 (at 3.19Å)	Xtriage
Refinement program	PHENIX 1.14_3260	Depositor
R, R_{free}	0.240 , 0.258 0.240 , 0.258	Depositor DCC
R_{free} test set	40067 reflections (4.54%)	wwPDB-VP
Wilson B-factor (Å^2)	75.0	Xtriage
Anisotropy	0.423	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.25 , 74.1	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	0.90	EDS
Total number of atoms	292039	wwPDB-VP
Average B, all atoms (Å^2)	113.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.68% 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: SF4, MG, 1MG, ZN

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	QA	0.36	0/36343	0.44	2/56720 (0.0%)
1	XA	0.39	0/36435	0.45	5/56865 (0.0%)
2	QB	0.33	0/1942	0.98	12/2619 (0.5%)
2	XB	0.33	0/1950	0.93	7/2630 (0.3%)
3	QC	0.32	0/1629	0.94	7/2195 (0.3%)
3	XC	0.31	0/1629	0.86	3/2195 (0.1%)
4	QD	0.39	0/1733	0.98	6/2318 (0.3%)
4	XD	0.43	1/1733 (0.1%)	0.96	6/2318 (0.3%)
5	QE	0.35	0/1171	0.96	11/1576 (0.7%)
5	XE	0.43	1/1171 (0.1%)	0.84	4/1576 (0.3%)
6	QF	0.34	0/856	0.94	6/1154 (0.5%)
6	XF	0.35	0/856	0.81	2/1154 (0.2%)
7	QG	0.32	0/1276	0.93	2/1709 (0.1%)
7	XG	0.31	0/1276	0.83	3/1709 (0.2%)
8	QH	0.37	0/1128	0.90	2/1517 (0.1%)
8	XH	0.40	0/1128	0.93	2/1517 (0.1%)
9	QI	0.43	1/1029 (0.1%)	1.10	10/1379 (0.7%)
9	XI	0.33	0/1017	0.99	5/1365 (0.4%)
10	QJ	0.34	0/814	1.01	4/1095 (0.4%)
10	XJ	0.32	0/790	0.86	1/1063 (0.1%)
11	QK	0.33	0/900	0.81	0/1213
11	XK	0.36	0/879	0.84	4/1187 (0.3%)
12	QL	0.38	0/991	1.00	5/1327 (0.4%)
12	XL	0.43	0/972	1.08	6/1301 (0.5%)
13	QM	0.33	0/965	1.12	10/1292 (0.8%)
13	XM	0.32	0/924	0.98	3/1238 (0.2%)
14	QN	0.55	1/501 (0.2%)	1.14	7/664 (1.1%)
14	XN	0.57	1/501 (0.2%)	1.20	5/664 (0.8%)
15	QO	0.35	0/745	0.77	0/992
15	XO	0.36	0/740	0.75	0/987
16	QP	0.38	0/721	0.92	4/970 (0.4%)
16	XP	0.34	0/721	0.92	1/970 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	QQ	0.33	0/847	0.87	3/1131 (0.3%)
17	XQ	0.46	0/847	0.93	3/1131 (0.3%)
18	QR	0.35	0/579	0.81	0/768
18	XR	0.36	0/579	0.77	1/768 (0.1%)
19	QS	0.32	0/680	1.05	6/915 (0.7%)
19	XS	0.33	0/689	1.00	3/926 (0.3%)
20	QT	1.05	3/765 (0.4%)	1.53	12/1007 (1.2%)
20	XT	0.37	0/765	1.14	10/1007 (1.0%)
21	QU	0.29	0/221	0.75	0/288
21	XU	0.30	0/221	0.77	1/288 (0.3%)
22	QV	0.39	0/1813	0.54	2/2825 (0.1%)
22	XV	0.35	0/1813	0.46	0/2825
23	QX	0.52	0/459	0.93	2/715 (0.3%)
23	XX	0.30	0/459	0.48	0/715
24	R0	0.38	0/652	0.83	0/867
24	Y0	0.58	0/657	0.86	0/874
25	R1	0.58	0/753	0.99	6/1000 (0.6%)
25	Y1	0.60	1/736 (0.1%)	1.03	1/978 (0.1%)
26	R2	0.35	0/583	0.94	2/771 (0.3%)
26	Y2	0.47	0/577	0.89	1/764 (0.1%)
27	R3	0.38	0/474	0.93	0/635
27	Y3	0.65	1/474 (0.2%)	0.85	1/635 (0.2%)
28	R4	0.25	0/357	0.85	0/483
28	Y4	2.19	2/366 (0.5%)	2.02	17/495 (3.4%)
29	R5	0.88	2/473 (0.4%)	1.26	7/639 (1.1%)
29	Y5	1.10	1/473 (0.2%)	1.33	4/639 (0.6%)
30	R6	0.69	2/460 (0.4%)	0.94	2/613 (0.3%)
30	Y6	1.20	7/460 (1.5%)	1.55	9/613 (1.5%)
31	R7	0.55	0/417	0.89	1/550 (0.2%)
31	Y7	0.64	0/426	0.83	0/561
32	R8	0.47	0/525	1.19	8/691 (1.2%)
32	Y8	0.61	0/525	1.19	5/691 (0.7%)
33	R9	0.86	1/310 (0.3%)	1.33	3/407 (0.7%)
33	Y9	0.63	0/310	1.01	2/407 (0.5%)
34	RA	0.47	0/69520	0.51	16/108527 (0.0%)
34	YA	0.65	0/69543	0.55	7/108563 (0.0%)
35	RB	0.36	0/2878	0.43	0/4490
35	YB	0.55	0/2878	0.52	0/4490
36	RD	0.52	0/2165	0.99	9/2919 (0.3%)
36	YD	0.63	0/2165	1.03	12/2919 (0.4%)
37	RE	0.50	0/1601	1.44	13/2160 (0.6%)
37	YE	0.63	0/1601	1.50	16/2160 (0.7%)
38	RF	0.45	0/1620	1.00	10/2194 (0.5%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	YF	0.61	0/1620	0.96	8/2194 (0.4%)
39	RG	0.36	0/1499	1.01	9/2016 (0.4%)
39	YG	0.42	0/1499	0.97	7/2016 (0.3%)
40	RH	0.41	0/1362	1.19	15/1841 (0.8%)
40	YH	0.59	0/1362	1.22	19/1841 (1.0%)
41	RI	0.60	2/1151 (0.2%)	1.25	19/1558 (1.2%)
41	YI	0.48	1/1151 (0.1%)	1.10	10/1558 (0.6%)
42	RN	0.44	0/1131	0.99	5/1525 (0.3%)
42	YN	0.62	0/1131	1.05	7/1525 (0.5%)
43	RO	0.46	0/943	0.87	1/1269 (0.1%)
43	YO	0.59	0/943	0.86	0/1269
44	RP	0.47	0/1162	1.05	6/1544 (0.4%)
44	YP	0.58	0/1139	1.19	10/1514 (0.7%)
45	RQ	0.42	0/1143	1.00	9/1527 (0.6%)
45	YQ	0.56	0/1143	1.09	8/1527 (0.5%)
46	RR	0.50	0/974	1.00	6/1302 (0.5%)
46	YR	0.58	0/974	1.01	2/1302 (0.2%)
47	RS	0.37	0/892	0.94	1/1187 (0.1%)
47	YS	0.50	0/892	0.98	4/1187 (0.3%)
48	RT	0.41	0/1155	1.09	8/1542 (0.5%)
48	YT	0.51	0/1155	1.06	9/1542 (0.6%)
49	RU	0.45	0/982	0.99	6/1306 (0.5%)
49	YU	0.65	0/982	0.95	6/1306 (0.5%)
50	RV	0.44	0/790	1.08	8/1057 (0.8%)
50	YV	0.61	0/790	1.01	4/1057 (0.4%)
51	RW	0.50	0/911	0.88	1/1220 (0.1%)
51	YW	0.64	0/911	0.87	2/1220 (0.2%)
52	RX	0.48	0/739	0.84	1/993 (0.1%)
52	YX	0.61	0/739	0.95	2/993 (0.2%)
53	RY	0.51	1/831 (0.1%)	0.93	1/1108 (0.1%)
53	YY	0.61	1/831 (0.1%)	0.99	6/1108 (0.5%)
54	RZ	0.42	0/1493	1.55	18/2026 (0.9%)
54	YZ	0.50	0/1561	1.46	14/2119 (0.7%)
All	All	0.50	30/316163 (0.0%)	0.69	572/472822 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
28	Y4	1	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
37	RE	0	1
37	YE	0	1
50	RV	0	2
54	RZ	0	1
54	YZ	0	1
All	All	1	7

All (30) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
28	Y4	5	ILE	CA-CB	-36.42	1.04	1.54
20	QT	73	HIS	N-CA	-19.14	1.21	1.46
28	Y4	4	GLY	N-CA	-18.88	1.18	1.45
20	QT	74	LYS	CA-CB	-17.57	1.23	1.53
29	Y5	32	PRO	N-CA	17.50	1.69	1.47
30	Y6	40	CYS	C-N	14.23	1.50	1.33
33	R9	29	ASN	C-N	12.75	1.50	1.33
41	RI	94	ALA	C-N	11.87	1.50	1.34
41	RI	82	ARG	C-N	-10.95	1.18	1.33
29	R5	34	PRO	N-CD	10.64	1.62	1.47
41	YI	109	ILE	C-N	8.67	1.46	1.33
20	QT	74	LYS	CA-C	8.28	1.63	1.52
30	R6	16	CYS	CB-SG	7.64	2.06	1.81
30	R6	41	PRO	N-CD	7.57	1.58	1.47
29	R5	33	CYS	C-N	7.44	1.51	1.33
30	Y6	41	PRO	N-CD	7.12	1.57	1.47
30	Y6	16	CYS	CB-SG	-6.95	1.58	1.81
30	Y6	13	CYS	CB-SG	-6.44	1.60	1.81
14	QN	43	CYS	CB-SG	6.04	2.01	1.81
4	XD	12	CYS	CB-SG	5.95	2.00	1.81
14	XN	43	CYS	CB-SG	5.94	2.00	1.81
30	Y6	43	CYS	CA-CB	5.80	1.63	1.53
30	Y6	42	TRP	C-N	-5.71	1.25	1.33
25	Y1	67	ILE	C-N	5.32	1.39	1.34
53	RY	102	CYS	CB-SG	-5.27	1.63	1.81
30	Y6	43	CYS	CA-C	5.25	1.59	1.52
5	XE	51	VAL	C-N	5.23	1.40	1.34
27	Y3	10	LYS	C-N	-5.15	1.25	1.33
9	QI	48	GLU	C-N	5.14	1.40	1.34
53	YY	79	CYS	CB-SG	-5.04	1.64	1.81

All (572) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
37	YE	146	THR	CA-C-N	33.70	161.97	119.84
37	YE	146	THR	C-N-CA	33.70	161.97	119.84
54	RZ	166	SER	CA-C-N	32.44	160.39	119.84
54	RZ	166	SER	C-N-CA	32.44	160.39	119.84
54	YZ	166	SER	CA-C-N	30.31	157.72	119.84
54	YZ	166	SER	C-N-CA	30.31	157.72	119.84
37	RE	146	THR	CA-C-N	30.05	157.41	119.84
37	RE	146	THR	C-N-CA	30.05	157.41	119.84
20	QT	74	LYS	N-CA-CB	22.73	148.91	110.49
28	Y4	5	ILE	CB-CA-C	19.87	143.88	111.29
20	QT	73	HIS	N-CA-C	16.79	135.49	110.30
29	Y5	31	VAL	CA-C-N	15.56	139.29	119.84
29	Y5	31	VAL	C-N-CA	15.56	139.29	119.84
40	RH	86	GLU	CB-CA-C	-15.32	84.72	110.16
40	YH	151	ILE	N-CA-C	-14.69	89.45	108.84
30	Y6	40	CYS	CA-C-N	14.08	133.92	119.56
30	Y6	40	CYS	C-N-CA	14.08	133.92	119.56
36	YD	34	VAL	N-CA-C	-13.13	89.02	108.45
33	R9	29	ASN	CA-C-N	13.10	133.69	119.28
33	R9	29	ASN	C-N-CA	13.10	133.69	119.28
29	R5	33	CYS	CA-C-N	11.94	134.77	119.84
29	R5	33	CYS	C-N-CA	11.94	134.77	119.84
28	Y4	39	CYS	N-CA-C	-11.60	96.03	110.88
36	RD	34	VAL	N-CA-C	-11.51	91.04	108.99
20	QT	74	LYS	N-CA-C	-11.43	86.46	110.80
41	RI	82	ARG	CA-C-N	-11.41	102.48	122.79
41	RI	82	ARG	C-N-CA	-11.41	102.48	122.79
23	QX	15	A	P-O3'-C3'	-11.22	103.37	120.20
42	YN	114	ARG	N-CA-C	-11.03	92.78	110.32
30	Y6	5	VAL	N-CA-C	-10.89	102.86	113.53
48	RT	125	ARG	N-CA-C	-10.82	99.79	113.43
40	RH	155	SER	N-CA-C	10.81	124.66	109.31
30	Y6	43	CYS	N-CA-CB	-10.75	92.89	110.40
28	Y4	5	ILE	N-CA-C	-10.73	87.02	109.34
40	YH	26	VAL	N-CA-C	10.58	120.66	111.56
28	Y4	5	ILE	N-CA-CB	10.54	128.62	111.23
25	R1	88	LYS	N-CA-C	-10.44	101.30	114.56
46	RR	76	VAL	N-CA-C	-10.25	100.72	111.58
38	RF	197	ASP	N-CA-C	-10.11	94.22	110.20
38	RF	134	GLY	N-CA-C	9.97	123.03	111.36
37	YE	186	GLY	N-CA-C	9.95	127.18	114.25
54	YZ	151	HIS	N-CA-C	9.78	125.22	112.12
20	QT	73	HIS	CB-CA-C	-9.72	96.55	110.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
42	RN	114	ARG	N-CA-C	-9.68	93.69	109.96
44	YP	59	LEU	N-CA-C	-9.62	101.08	112.92
34	RA	1022	G	C2'-C3'-O3'	9.59	123.88	109.50
40	YH	127	GLU	N-CA-C	-9.56	97.56	110.36
20	QT	74	LYS	CA-C-O	9.50	134.10	120.51
38	RF	199	TRP	N-CA-C	-9.40	101.37	113.12
20	QT	73	HIS	CA-CB-CG	9.35	123.15	113.80
37	RE	146	THR	C-N-CD	-9.28	86.97	125.00
13	QM	117	VAL	N-CA-C	9.27	121.47	108.12
4	XD	54	TYR	N-CA-C	-9.24	101.79	113.43
19	QS	41	VAL	N-CA-C	9.23	128.82	108.88
48	RT	110	ILE	N-CA-C	-9.17	101.01	111.00
20	QT	73	HIS	N-CA-CB	9.09	124.18	109.28
28	Y4	39	CYS	CA-C-N	9.08	143.96	121.80
28	Y4	39	CYS	C-N-CA	9.08	143.96	121.80
46	YR	76	VAL	N-CA-C	-9.03	101.16	111.00
48	YT	125	ARG	N-CA-C	-9.02	102.06	113.43
41	YI	9	LEU	N-CA-C	8.97	121.20	110.44
41	RI	131	LYS	N-CA-C	8.93	129.54	109.81
2	QB	230	VAL	CA-C-N	8.86	133.50	120.83
2	QB	230	VAL	C-N-CA	8.86	133.50	120.83
40	YH	161	GLY	N-CA-C	8.77	123.34	110.63
26	R2	47	ASN	N-CA-C	8.74	121.96	111.82
19	XS	25	LYS	N-CA-C	-8.66	99.59	111.28
54	RZ	166	SER	C-N-CD	-8.65	89.52	125.00
37	YE	146	THR	C-N-CD	-8.65	89.53	125.00
5	QE	153	LYS	N-CA-C	-8.61	101.84	111.14
37	RE	58	ARG	N-CA-C	-8.61	101.77	113.30
54	RZ	62	PRO	CA-C-N	8.55	137.86	121.54
54	RZ	62	PRO	C-N-CA	8.55	137.86	121.54
48	YT	13	ARG	N-CA-C	-8.54	102.17	112.59
42	YN	116	LEU	N-CA-C	-8.52	103.06	113.97
45	YQ	92	GLY	N-CA-C	8.39	119.94	111.21
29	Y5	32	PRO	CA-N-CD	-8.38	100.26	112.00
41	RI	82	ARG	O-C-N	8.37	133.89	123.01
10	QJ	79	ARG	N-CA-C	8.36	121.45	111.33
48	RT	136	GLN	N-CA-C	-8.33	103.13	113.38
12	QL	104	VAL	CA-C-N	8.32	137.43	121.54
12	QL	104	VAL	C-N-CA	8.32	137.43	121.54
30	Y6	43	CYS	CB-CA-C	8.27	127.27	109.99
10	QJ	81	THR	N-CA-C	-8.24	102.24	111.14
39	YG	82	LEU	N-CA-C	8.22	121.29	111.02

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
40	RH	152	ARG	CA-C-N	8.15	141.68	121.80
40	RH	152	ARG	C-N-CA	8.15	141.68	121.80
41	RI	10	GLU	CA-C-N	8.10	137.02	121.54
41	RI	10	GLU	C-N-CA	8.10	137.02	121.54
41	RI	143	SER	N-CA-C	8.05	119.18	108.07
40	RH	72	ILE	N-CA-C	-8.03	104.93	112.96
4	XD	33	MET	N-CA-C	-8.01	103.71	113.97
49	YU	96	ALA	N-CA-C	-7.99	103.61	112.72
49	YU	97	ASP	N-CA-C	-7.96	101.90	111.69
49	YU	89	GLU	N-CA-C	-7.95	101.17	113.02
34	RA	2712(A)	U	C2'-C3'-O3'	7.95	125.63	113.70
41	YI	143	SER	N-CA-C	7.91	118.39	108.19
11	XK	34	ASP	N-CA-C	-7.87	99.43	110.29
28	Y4	3	GLU	CA-C-N	-7.85	106.03	121.41
28	Y4	3	GLU	C-N-CA	-7.85	106.03	121.41
12	XL	62	SER	N-CA-C	-7.84	103.78	112.72
54	YZ	166	SER	C-N-CD	-7.83	92.88	125.00
14	XN	58	LYS	N-CA-C	-7.82	96.52	108.96
42	YN	97	ARG	N-CA-C	-7.79	103.77	113.28
2	QB	16	HIS	N-CA-C	7.79	121.60	112.72
41	YI	117	GLU	N-CA-C	-7.79	98.99	110.52
41	RI	142	VAL	N-CA-C	-7.70	98.73	109.21
40	RH	87	LEU	N-CA-CB	-7.69	98.33	110.87
13	QM	106	ASN	N-CA-C	7.63	119.90	107.32
34	RA	1026	U	C4'-C3'-O3'	7.63	120.84	109.40
31	R7	37	LYS	N-CA-C	-7.62	104.00	113.38
12	XL	47	LYS	N-CA-C	7.62	126.66	109.81
4	QD	153	ARG	N-CA-C	-7.59	103.48	112.89
40	YH	101	ARG	N-CA-C	-7.59	104.52	114.31
42	RN	35	ARG	N-CA-C	-7.53	98.29	109.81
36	YD	35	LYS	CA-CB-CG	7.51	129.12	114.10
12	XL	119	LYS	N-CA-C	-7.50	98.36	110.20
51	RW	53	SER	N-CA-C	-7.46	104.31	113.41
36	YD	241	PRO	CA-C-N	7.45	135.76	121.54
36	YD	241	PRO	C-N-CA	7.45	135.76	121.54
40	RH	4	ILE	N-CA-CB	7.33	119.33	110.31
54	YZ	62	PRO	CA-C-N	7.32	135.52	121.54
54	YZ	62	PRO	C-N-CA	7.32	135.52	121.54
40	RH	153	LYS	N-CA-C	7.29	125.92	109.81
52	YX	7	VAL	N-CA-C	-7.28	103.76	110.82
9	QI	86	VAL	N-CA-C	-7.27	102.32	113.16
44	YP	25	SER	N-CA-C	-7.26	104.44	113.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	QG	73	MET	N-CA-CB	-7.24	99.47	111.20
34	RA	2610	C	C2'-C3'-O3'	7.21	120.32	109.50
16	QP	36	ILE	N-CA-C	-7.21	106.06	111.90
37	RE	51	PHE	N-CA-C	7.21	121.78	112.12
25	R1	72	GLU	N-CA-C	-7.18	104.66	113.50
20	QT	13	LEU	N-CA-C	-7.18	104.52	113.28
50	RV	48	GLY	N-CA-C	7.18	119.76	111.36
48	YT	113	LYS	N-CA-C	-7.17	103.64	113.18
45	YQ	66	ILE	N-CA-C	7.14	118.76	110.62
26	Y2	47	ASN	N-CA-C	7.13	122.27	113.50
37	YE	93	VAL	N-CA-C	-7.13	105.78	112.83
19	QS	6	LYS	N-CA-C	-7.09	104.10	112.89
37	YE	51	PHE	N-CA-C	7.07	121.59	112.12
4	XD	34	GLU	N-CA-C	-7.06	104.14	112.89
51	YW	111	HIS	N-CA-C	7.03	118.63	110.97
17	QQ	13	ASP	N-CA-C	-7.02	102.99	112.26
48	YT	122	ASP	N-CA-C	-7.02	103.68	111.82
4	QD	67	ILE	N-CA-C	-7.00	103.95	110.53
39	RG	79	ASN	N-CA-C	-6.99	103.42	112.23
11	XK	33	THR	N-CA-C	6.99	120.03	109.41
54	YZ	77	ASP	N-CA-C	-6.99	98.65	109.76
44	RP	59	LEU	N-CA-C	-6.98	104.68	112.57
34	YA	2712(A)	U	P-O3'-C3'	6.97	128.06	119.70
20	XT	24	LEU	N-CA-C	-6.96	103.78	111.36
28	Y4	5	ILE	CA-CB-CG1	6.96	122.22	110.40
30	R6	16	CYS	CA-CB-SG	6.95	130.39	114.40
2	QB	200	ILE	N-CA-C	6.95	118.60	108.53
54	RZ	178	GLU	CA-C-N	6.95	134.81	121.54
54	RZ	178	GLU	C-N-CA	6.95	134.81	121.54
36	YD	13	ARG	N-CA-C	-6.94	102.92	113.89
48	RT	57	PHE	N-CA-C	-6.93	100.20	110.46
40	YH	155	SER	N-CA-C	6.92	125.55	110.80
42	YN	119	ARG	N-CA-C	-6.90	104.43	112.92
14	XN	28	GLY	N-CA-C	6.87	129.46	113.18
9	XI	53	VAL	N-CA-C	-6.86	106.04	112.83
38	RF	133	ASN	N-CA-C	-6.85	102.50	111.74
49	RU	94	ASN	N-CA-C	-6.85	104.40	112.89
28	Y4	5	ILE	CA-C-O	-6.84	112.22	120.78
34	RA	1992	G	C2'-C3'-O3'	6.84	119.76	109.50
18	XR	47	THR	N-CA-C	-6.84	104.75	113.23
34	YA	271(C)	G	P-O3'-C3'	6.84	127.91	119.70
45	RQ	89	ASN	N-CA-C	-6.84	102.03	110.65

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	YT	121	ILE	N-CA-C	-6.83	102.71	112.35
37	YE	81	ILE	N-CA-C	6.82	119.62	111.09
40	YH	152	ARG	CA-C-N	6.81	138.41	121.80
40	YH	152	ARG	C-N-CA	6.81	138.41	121.80
36	RD	241	PRO	CA-C-N	6.80	134.53	121.54
36	RD	241	PRO	C-N-CA	6.80	134.53	121.54
48	RT	121	ILE	N-CA-C	-6.79	103.59	111.00
48	RT	111	ARG	N-CA-C	-6.79	101.78	110.53
2	QB	235	SER	N-CA-C	6.77	121.53	111.04
38	YF	199	TRP	N-CA-C	-6.76	103.72	112.23
46	RR	74	LYS	N-CA-C	-6.74	100.50	110.48
49	YU	94	ASN	N-CA-C	-6.74	105.68	114.04
48	RT	133	GLU	N-CA-C	-6.72	103.77	112.23
30	Y6	7	ILE	N-CA-C	6.72	118.73	109.46
37	RE	146	THR	N-CA-C	6.71	124.64	109.81
34	RA	404	C	C4'-C3'-O3'	6.70	119.44	109.40
26	R2	12	GLU	N-CA-C	-6.67	104.95	113.23
1	XA	1504	G	C4'-C3'-O3'	6.66	119.38	109.40
6	QF	65	VAL	N-CA-C	6.65	117.12	108.35
50	RV	79	VAL	N-CA-C	-6.64	107.40	113.71
25	Y1	65	SER	N-CA-C	-6.64	103.30	111.40
32	R8	62	LEU	N-CA-C	6.64	124.48	109.81
40	YH	82	GLY	N-CA-C	6.62	128.87	113.18
27	Y3	16	PRO	N-CA-C	6.62	120.79	111.33
48	YT	133	GLU	N-CA-C	-6.62	105.03	113.23
40	YH	9	ILE	N-CA-C	6.61	115.09	107.89
28	Y4	5	ILE	CA-CB-CG2	-6.61	99.27	110.50
40	YH	155	SER	CA-C-N	6.60	134.15	121.54
40	YH	155	SER	C-N-CA	6.60	134.15	121.54
45	YQ	17	LEU	CB-CA-C	-6.59	100.11	111.45
45	RQ	103	MET	CA-C-N	6.58	134.10	121.54
45	RQ	103	MET	C-N-CA	6.58	134.10	121.54
34	RA	1653	G	C2'-C3'-O3'	6.58	119.36	109.50
29	R5	15	ARG	N-CA-C	-6.57	103.95	112.23
40	RH	151	ILE	N-CA-C	-6.56	101.11	109.58
50	RV	49	THR	N-CA-C	6.55	124.29	109.81
50	RV	49	THR	CA-C-N	6.54	128.01	119.84
50	RV	49	THR	C-N-CA	6.54	128.01	119.84
32	R8	54	GLU	N-CA-C	-6.53	104.80	112.89
45	YQ	21	THR	N-CA-C	6.50	121.04	112.13
4	QD	108	LEU	N-CA-C	-6.50	105.17	113.23
39	RG	48	GLU	N-CA-C	-6.50	105.27	113.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
44	RP	25	SER	N-CA-C	-6.49	105.28	113.72
49	YU	6	THR	N-CA-C	-6.49	100.97	111.04
39	YG	115	ARG	CA-C-N	6.49	133.94	121.54
39	YG	115	ARG	C-N-CA	6.49	133.94	121.54
53	YY	34	LYS	N-CA-C	-6.48	105.11	114.12
2	QB	126	GLU	N-CA-C	-6.47	104.00	112.41
29	R5	16	ARG	N-CA-C	6.47	118.41	111.36
14	QN	43	CYS	CB-CA-C	6.47	121.85	110.85
34	RA	1653	G	C4'-C3'-O3'	6.45	119.07	109.40
45	YQ	83	MET	N-CA-C	6.41	118.88	108.63
3	QC	94	LEU	N-CA-C	-6.40	103.59	111.40
40	YH	164	TYR	N-CA-C	-6.39	101.06	110.52
38	YF	133	ASN	N-CA-C	-6.38	97.22	110.80
54	YZ	178	GLU	CA-C-N	6.34	133.66	121.54
54	YZ	178	GLU	C-N-CA	6.34	133.66	121.54
54	RZ	9	TYR	N-CA-C	6.34	118.51	110.33
54	RZ	53	ILE	N-CA-C	6.34	122.52	109.34
53	YY	85	VAL	N-CA-C	6.32	118.12	108.71
2	QB	23	ARG	N-CA-C	-6.30	102.81	110.88
40	RH	107	VAL	N-CA-C	-6.29	106.20	112.17
32	Y8	54	GLU	N-CA-C	-6.28	104.51	111.36
14	XN	38	GLY	N-CA-C	-6.27	104.10	114.76
34	RA	271(C)	G	P-O3'-C3'	6.27	127.22	119.70
41	YI	142	VAL	N-CA-C	-6.26	99.23	109.12
47	YS	44	LYS	N-CA-C	-6.25	106.29	114.04
54	YZ	178	GLU	N-CA-C	6.25	118.18	109.31
44	YP	71	VAL	N-CA-C	6.24	121.65	112.61
28	Y4	40	HIS	N-CA-C	6.22	123.57	109.81
28	Y4	16	CYS	N-CA-C	6.22	116.21	108.19
33	R9	32	HIS	CB-CA-C	6.21	121.06	110.56
52	YX	23	GLU	N-CA-C	-6.21	101.59	110.59
38	RF	135	LYS	N-CA-C	-6.20	100.33	109.81
37	YE	69	LYS	N-CA-C	-6.17	104.46	112.23
45	YQ	89	ASN	N-CA-C	-6.15	103.25	112.54
53	YY	84	ARG	N-CA-C	-6.14	101.12	110.14
14	XN	56	VAL	CA-C-N	6.13	133.25	121.54
14	XN	56	VAL	C-N-CA	6.13	133.25	121.54
32	R8	58	ILE	N-CA-C	-6.12	104.33	111.00
42	RN	116	LEU	N-CA-C	-6.11	105.95	113.41
41	RI	130	TYR	CA-C-N	6.11	136.70	121.80
41	RI	130	TYR	C-N-CA	6.11	136.70	121.80
3	XC	30	ARG	N-CA-C	6.11	117.60	111.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	XE	72	GLN	CA-C-N	6.08	133.15	121.54
5	XE	72	GLN	C-N-CA	6.08	133.15	121.54
13	QM	4	ILE	N-CA-C	6.03	116.23	110.74
34	RA	1992	G	C4'-C3'-O3'	6.03	118.45	109.40
39	RG	157	ILE	N-CA-C	-6.03	103.48	110.05
54	RZ	151	HIS	N-CA-C	6.03	123.63	110.80
45	YQ	19	GLY	N-CA-C	-6.01	98.93	113.18
50	RV	51	VAL	N-CA-C	-6.01	103.50	110.05
36	YD	32	SER	CA-C-N	6.01	133.01	121.54
36	YD	32	SER	C-N-CA	6.01	133.01	121.54
14	QN	19	ARG	N-CA-C	-6.00	105.72	113.16
49	RU	97	ASP	N-CA-C	-5.98	104.83	111.71
19	QS	38	SER	N-CA-C	5.97	116.16	108.34
20	XT	61	SER	N-CA-C	-5.96	104.41	111.03
2	XB	12	GLU	N-CA-C	-5.96	106.17	113.50
22	QV	36	G	C5'-C4'-O4'	5.96	118.74	109.80
19	QS	36	ARG	N-CA-C	-5.95	105.84	112.57
5	QE	50	GLU	CA-C-N	5.95	126.14	120.43
5	QE	50	GLU	C-N-CA	5.95	126.14	120.43
54	YZ	53	ILE	N-CA-C	5.95	121.71	109.34
20	QT	92	LEU	N-CA-C	-5.94	105.95	112.72
54	YZ	50	GLN	N-CA-C	-5.94	106.20	113.50
44	YP	28	GLY	CA-C-N	5.93	132.87	121.54
44	YP	28	GLY	C-N-CA	5.93	132.87	121.54
42	YN	35	ARG	N-CA-C	-5.93	99.62	109.46
30	Y6	39	TYR	N-CA-C	5.91	118.28	109.59
54	YZ	112	ARG	N-CA-C	-5.91	98.22	110.80
2	QB	20	GLU	N-CA-C	5.91	117.67	110.41
29	R5	34	PRO	CA-N-CD	-5.90	103.73	112.00
4	XD	18	LYS	CD-CE-NZ	5.90	130.79	111.90
3	QC	127	ARG	N-CA-C	5.90	117.82	110.91
37	RE	49	LEU	N-CA-C	5.90	120.02	112.12
29	R5	34	PRO	N-CA-CB	5.89	109.44	103.25
14	QN	47	LEU	N-CA-C	5.88	117.36	111.07
14	QN	4	LYS	N-CA-C	-5.87	105.78	113.12
20	XT	73	HIS	CA-C-N	5.87	132.76	121.54
20	XT	73	HIS	C-N-CA	5.87	132.76	121.54
9	QI	85	LEU	N-CA-C	-5.87	106.12	113.28
36	RD	234	GLY	N-CA-C	5.87	118.22	111.36
39	RG	115	ARG	CA-C-N	5.86	132.74	121.54
39	RG	115	ARG	C-N-CA	5.86	132.74	121.54
37	YE	77	ILE	N-CA-C	-5.86	107.03	112.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	YF	85	GLY	N-CA-C	-5.85	106.94	113.79
2	XB	113	HIS	N-CA-C	-5.85	104.49	111.69
5	XE	78	HIS	N-CA-C	5.85	117.86	109.14
9	XI	22	GLY	N-CA-C	5.84	118.47	110.58
36	RD	67	PHE	N-CA-C	-5.84	106.00	114.12
3	QC	87	LEU	N-CA-C	5.84	117.32	111.07
9	QI	32	ASP	N-CA-C	5.83	119.46	110.42
32	Y8	62	LEU	N-CA-C	5.82	122.68	109.81
37	YE	203	LYS	N-CA-C	-5.82	104.53	111.69
28	Y4	22	ILE	CA-C-N	5.82	132.66	121.54
28	Y4	22	ILE	C-N-CA	5.82	132.66	121.54
36	YD	198	ASN	N-CA-C	-5.82	103.38	111.52
14	QN	15	LYS	N-CA-C	-5.80	104.12	110.91
9	QI	93	ARG	N-CA-C	-5.79	105.48	113.18
14	QN	24	CYS	CA-CB-SG	5.79	127.70	114.40
39	YG	80	PHE	N-CA-C	-5.79	101.36	109.69
16	XP	76	GLN	N-CA-C	-5.76	104.97	112.23
39	RG	136	ARG	N-CA-C	5.76	117.36	111.14
49	RU	92	ARG	CA-C-N	5.76	132.54	121.54
49	RU	92	ARG	C-N-CA	5.76	132.54	121.54
2	QB	153	ARG	N-CA-C	-5.75	105.92	113.17
10	XJ	80	LYS	N-CA-C	-5.75	105.37	112.90
32	R8	30	ARG	N-CA-C	5.75	123.04	110.80
38	RF	133	ASN	CA-C-N	5.75	125.44	119.92
38	RF	133	ASN	C-N-CA	5.75	125.44	119.92
9	XI	50	LEU	N-CA-C	-5.74	105.00	112.23
8	QH	19	VAL	N-CA-C	-5.74	107.15	112.83
17	XQ	15	MET	N-CA-C	5.73	119.15	109.76
3	XC	143	GLU	N-CA-C	-5.71	105.04	112.23
19	QS	28	LYS	N-CA-C	5.70	119.20	111.17
3	QC	144	SER	N-CA-C	-5.68	105.84	112.89
41	RI	6	LEU	N-CA-C	-5.68	106.15	114.39
37	RE	16	ARG	N-CA-C	-5.67	100.45	109.59
51	YW	93	ALA	N-CA-C	5.67	118.10	111.02
34	RA	271(C)	G	OP2-P-O3'	5.66	117.66	105.20
44	RP	30	THR	N-CA-C	-5.66	106.04	114.64
12	XL	118	SER	N-CA-C	-5.66	105.03	111.14
17	XQ	13	ASP	N-CA-C	-5.66	104.13	111.71
17	XQ	62	SER	N-CA-C	5.65	115.74	108.34
38	YF	197	ASP	N-CA-C	-5.64	102.93	110.55
32	R8	61	LEU	CA-C-N	5.64	135.56	121.80
32	R8	61	LEU	C-N-CA	5.64	135.56	121.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
47	RS	20	ARG	N-CA-C	-5.64	105.70	112.58
39	YG	145	THR	N-CA-C	5.63	119.73	112.41
13	QM	105	THR	N-CA-C	5.63	120.67	113.18
38	YF	154	VAL	N-CA-C	5.62	115.98	108.11
9	XI	53	VAL	CA-C-N	5.62	132.27	121.54
9	XI	53	VAL	C-N-CA	5.62	132.27	121.54
17	QQ	91	ARG	N-CA-C	-5.61	105.31	111.82
2	QB	236	TYR	N-CA-C	5.61	117.60	108.63
44	RP	99	LEU	N-CA-C	-5.60	105.73	113.18
41	YI	120	ILE	CA-C-N	5.60	132.23	121.54
41	YI	120	ILE	C-N-CA	5.60	132.23	121.54
38	YF	127	GLU	CA-C-N	5.60	132.23	121.54
38	YF	127	GLU	C-N-CA	5.60	132.23	121.54
40	RH	155	SER	CA-C-N	5.59	132.22	121.54
40	RH	155	SER	C-N-CA	5.59	132.22	121.54
40	YH	157	TYR	N-CA-C	5.59	122.72	110.80
12	QL	62	SER	N-CA-C	-5.59	105.67	112.88
12	XL	46	LYS	CA-C-N	-5.58	108.18	121.80
12	XL	46	LYS	C-N-CA	-5.58	108.18	121.80
37	RE	81	ILE	N-CA-C	5.58	116.36	110.72
37	RE	79	ARG	N-CA-C	5.58	117.43	110.91
29	R5	17	ASP	N-CA-C	5.57	119.80	112.89
42	YN	112	LEU	N-CA-C	-5.57	107.03	113.88
6	QF	94	GLN	N-CA-C	5.57	117.31	108.79
53	RY	99	CYS	CB-CA-C	-5.57	100.13	109.65
19	XS	21	GLU	N-CA-C	-5.57	105.22	112.23
13	QM	117	VAL	CA-C-N	5.56	132.16	121.54
13	QM	117	VAL	C-N-CA	5.56	132.16	121.54
40	YH	86	GLU	N-CA-C	5.56	122.64	110.80
13	XM	84	ILE	N-CA-C	-5.56	104.88	113.16
3	QC	43	LEU	N-CA-C	-5.56	105.23	112.23
46	RR	117	VAL	N-CA-C	5.55	117.45	109.51
45	YQ	18	LYS	N-CA-C	5.55	119.23	112.23
12	QL	118	SER	N-CA-C	-5.55	105.31	111.36
41	YI	71	ILE	N-CA-C	-5.55	105.47	113.07
9	QI	17	VAL	N-CA-C	5.55	115.94	108.17
45	RQ	21	THR	N-CA-C	5.55	121.32	110.56
32	Y8	29	LYS	CA-C-N	5.55	132.13	121.54
32	Y8	29	LYS	C-N-CA	5.55	132.13	121.54
53	YY	79	CYS	N-CA-CB	5.55	119.94	110.51
5	QE	115	VAL	N-CA-C	-5.54	104.01	110.05
40	RH	156	ALA	CA-C-N	5.54	132.13	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
40	RH	156	ALA	C-N-CA	5.54	132.13	121.54
4	QD	186	LEU	N-CA-C	5.54	117.12	111.14
36	RD	147	LEU	N-CA-C	-5.53	106.66	113.41
50	RV	48	GLY	CA-C-N	5.53	135.30	121.80
50	RV	48	GLY	C-N-CA	5.53	135.30	121.80
1	XA	115	G	P-O3'-C3'	5.53	128.50	120.20
46	YR	74	LYS	N-CA-C	-5.53	102.30	110.48
34	RA	222	A	C2'-C3'-O3'	5.52	117.78	109.50
7	XG	98	SER	N-CA-C	5.52	117.30	111.28
28	Y4	24	THR	N-CA-C	5.52	122.56	110.80
2	XB	20	GLU	N-CA-C	5.51	118.67	110.52
42	YN	38	HIS	N-CA-C	-5.50	105.78	112.88
3	XC	8	ILE	N-CA-C	-5.50	105.48	110.82
53	YY	86	ARG	N-CA-C	-5.50	102.06	110.14
2	XB	122	PHE	N-CA-C	-5.49	105.45	111.82
20	XT	72	LEU	N-CA-C	-5.49	99.34	108.34
36	RD	127	VAL	N-CA-C	5.49	120.76	109.34
11	XK	36	ASP	N-CA-C	-5.49	106.63	113.38
10	QJ	81	THR	N-CA-CB	5.48	118.02	110.07
4	QD	204	ILE	N-CA-C	-5.48	105.50	110.82
25	R1	66	HIS	CA-C-N	5.47	123.69	120.24
25	R1	66	HIS	C-N-CA	5.47	123.69	120.24
41	YI	12	LEU	N-CA-C	-5.47	101.11	109.65
37	YE	168	MET	N-CA-C	5.47	118.61	110.14
9	QI	120	ARG	N-CA-C	-5.46	108.39	114.62
37	YE	79	ARG	N-CA-C	5.46	117.30	110.91
54	YZ	5	LEU	N-CA-C	5.46	115.23	108.19
21	XU	21	TYR	N-CA-C	-5.46	106.58	113.18
49	YU	94	ASN	CA-CB-CG	5.46	118.06	112.60
2	QB	25	ASN	N-CA-C	-5.45	102.78	109.65
20	XT	46	GLU	N-CA-C	-5.45	105.25	111.14
41	RI	42	SER	N-CA-C	-5.44	105.76	112.72
46	RR	37	THR	N-CA-C	-5.44	102.71	110.59
39	RG	37	VAL	N-CA-C	-5.43	100.66	108.53
34	RA	195	A	C2'-C3'-O3'	-5.43	105.56	113.70
29	Y5	19	ARG	N-CA-C	-5.43	105.53	111.82
7	QG	73	MET	N-CA-C	5.42	118.42	109.85
48	RT	14	TYR	N-CA-C	-5.42	105.11	112.26
41	RI	129	THR	N-CA-C	5.42	118.35	110.17
39	YG	139	LEU	CA-C-N	5.42	127.88	120.46
39	YG	139	LEU	C-N-CA	5.42	127.88	120.46
36	YD	243	GLY	N-CA-C	5.41	126.01	113.18

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
43	RO	40	VAL	N-CA-C	-5.41	100.59	108.97
36	YD	193	VAL	N-CA-C	5.40	116.66	109.37
19	XS	28	LYS	N-CA-C	5.40	117.77	111.02
36	RD	89	SER	N-CA-C	-5.40	105.43	112.23
3	QC	77	ILE	N-CA-C	-5.39	106.43	111.45
16	QP	9	PHE	CA-C-N	-5.39	117.08	122.63
16	QP	9	PHE	C-N-CA	-5.39	117.08	122.63
54	RZ	12	GLY	N-CA-C	-5.39	100.41	113.18
54	RZ	90	VAL	N-CA-C	-5.39	102.12	109.55
32	R8	28	GLY	N-CA-C	5.38	125.92	113.18
7	XG	143	ARG	N-CA-C	-5.37	106.23	112.89
44	YP	64	LYS	N-CA-C	-5.37	106.23	112.89
23	QX	18	C	O5'-P-OP1	-5.36	91.92	108.00
4	XD	101	LEU	N-CA-C	5.36	117.12	111.28
54	RZ	58	VAL	CA-C-N	5.35	131.76	121.54
54	RZ	58	VAL	C-N-CA	5.35	131.76	121.54
40	YH	83	TYR	N-CA-C	5.34	122.17	110.80
11	XK	75	TYR	N-CA-C	-5.33	105.51	112.23
40	YH	81	GLU	N-CA-C	-5.33	104.67	110.91
25	R1	94	LEU	N-CA-C	5.33	122.15	110.80
41	YI	10	GLU	CA-C-N	5.33	131.72	121.54
41	YI	10	GLU	C-N-CA	5.33	131.72	121.54
44	YP	15	ARG	N-CA-C	-5.33	106.46	113.17
48	YT	110	ILE	N-CA-C	-5.32	104.44	111.09
44	YP	26	GLY	N-CA-C	-5.32	102.68	112.62
13	QM	12	ASN	N-CA-C	5.31	122.12	110.80
13	QM	17	VAL	N-CA-C	-5.31	105.25	113.16
6	QF	26	ILE	N-CA-C	-5.30	105.36	110.72
34	RA	2832	U	P-O3'-C3'	5.30	128.16	120.20
14	QN	24	CYS	N-CA-C	-5.29	103.41	110.55
39	RG	128	ARG	N-CA-C	-5.28	105.54	113.89
38	RF	162	LEU	N-CA-C	5.28	116.73	110.97
40	RH	110	SER	N-CA-C	-5.28	106.61	113.16
1	QA	748	C	P-O3'-C3'	5.28	128.12	120.20
8	XH	120	THR	N-CA-C	-5.28	101.93	110.32
32	Y8	31	HIS	N-CA-C	5.28	120.20	113.18
4	XD	151	LYS	N-CA-C	-5.27	105.70	111.82
54	RZ	112	ARG	N-CA-C	-5.27	101.78	109.63
45	RQ	129	THR	N-CA-C	5.26	117.68	109.52
45	RQ	22	LYS	N-CA-C	5.26	117.61	110.35
5	QE	51	VAL	CB-CA-C	-5.26	108.70	113.70
9	QI	33	PHE	N-CA-C	5.25	117.43	111.02

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	XH	44	PHE	N-CA-C	-5.25	106.92	113.38
9	QI	35	GLU	N-CA-C	-5.25	107.42	113.88
7	XG	136	LYS	N-CA-C	-5.25	105.64	111.36
5	QE	75	THR	N-CA-C	5.24	115.16	108.24
17	QQ	61	GLU	N-CA-C	-5.24	102.72	110.48
39	RG	15	VAL	N-CA-C	5.23	115.50	110.74
41	RI	9	LEU	N-CA-C	5.23	120.30	113.30
44	YP	30	THR	N-CA-C	-5.22	108.17	114.75
8	QH	79	VAL	N-CA-C	-5.22	105.39	113.16
38	YF	186	ILE	N-CA-C	-5.22	105.76	110.82
20	XT	48	LYS	CA-C-N	5.21	131.50	121.54
20	XT	48	LYS	C-N-CA	5.21	131.50	121.54
37	YE	130	GLY	CA-C-N	5.21	131.49	121.54
37	YE	130	GLY	C-N-CA	5.21	131.49	121.54
38	RF	127	GLU	CA-C-N	5.20	131.48	121.54
38	RF	127	GLU	C-N-CA	5.20	131.48	121.54
36	YD	10	THR	N-CA-C	-5.20	100.44	108.55
20	XT	62	LEU	N-CA-C	5.20	117.62	111.33
54	RZ	50	GLN	N-CA-C	-5.20	107.32	113.97
1	XA	992	U	P-O3'-C3'	5.20	127.99	120.20
41	RI	120	ILE	CA-C-N	5.19	131.45	121.54
41	RI	120	ILE	C-N-CA	5.19	131.45	121.54
47	YS	21	THR	N-CA-C	-5.18	106.88	114.39
30	R6	13	CYS	CA-CB-SG	-5.18	102.49	114.40
19	QS	20	LEU	N-CA-C	-5.18	106.47	112.89
34	YA	1022	G	P-O3'-C3'	5.18	127.97	120.20
42	RN	99	LEU	N-CA-C	-5.17	106.48	112.89
34	YA	1026	U	P-O3'-C3'	5.17	127.95	120.20
13	QM	56	LEU	N-CA-C	-5.17	105.73	111.36
48	YT	57	PHE	N-CA-C	-5.16	103.58	110.55
4	QD	154	ASN	N-CA-C	-5.16	101.98	109.31
6	QF	82	ARG	N-CA-C	5.16	116.95	110.24
44	RP	107	LYS	CA-C-N	5.16	131.39	121.54
44	RP	107	LYS	C-N-CA	5.16	131.39	121.54
5	QE	51	VAL	N-CA-C	5.15	119.10	112.67
1	XA	1537	U	P-O3'-C3'	5.15	127.92	120.20
20	QT	75	ASN	N-CA-C	5.14	121.76	110.80
37	RE	82	ARG	CA-C-N	5.14	131.36	121.54
37	RE	82	ARG	C-N-CA	5.14	131.36	121.54
32	R8	64	TYR	N-CA-C	5.14	118.33	111.24
36	RD	13	ARG	N-CA-C	-5.14	107.68	114.31
34	RA	1694	C	P-O3'-C3'	5.14	127.91	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
50	YV	49	THR	CA-C-N	5.13	126.26	119.84
50	YV	49	THR	C-N-CA	5.13	126.26	119.84
37	YE	118	LYS	N-CA-C	-5.13	106.36	113.18
47	YS	57	LYS	N-CA-C	5.13	116.91	110.91
45	RQ	81	VAL	N-CA-C	5.12	120.00	109.34
37	RE	15	PHE	N-CA-C	5.12	117.97	107.37
34	YA	1558	A	P-O3'-C3'	5.12	127.89	120.20
34	YA	846	C	P-O3'-C3'	5.12	127.88	120.20
20	QT	94	ALA	N-CA-C	-5.11	103.65	110.55
1	XA	1064	G	P-O3'-C3'	5.11	127.86	120.20
47	YS	53	SER	N-CA-C	-5.11	105.35	112.45
30	Y6	52	VAL	N-CA-C	-5.10	98.73	109.34
50	YV	43	GLU	CA-C-N	5.10	131.29	121.54
50	YV	43	GLU	C-N-CA	5.10	131.29	121.54
13	XM	7	VAL	N-CA-C	5.10	119.94	109.34
2	XB	71	VAL	N-CA-C	5.09	115.45	108.12
22	QV	36	G	O5'-C5'-C4'	5.09	119.13	111.50
45	RQ	66	ILE	N-CA-C	5.09	116.42	110.62
3	QC	18	TRP	N-CA-C	5.08	117.98	110.46
41	RI	121	LYS	CA-C-N	5.08	131.25	121.54
41	RI	121	LYS	C-N-CA	5.08	131.25	121.54
52	RX	16	LYS	N-CA-C	-5.08	105.83	112.23
1	QA	992	U	P-O3'-C3'	5.08	127.82	120.20
5	QE	72	GLN	CA-C-N	5.08	131.24	121.54
5	QE	72	GLN	C-N-CA	5.08	131.24	121.54
30	Y6	51	GLU	N-CA-C	5.08	118.23	110.36
6	XF	65	VAL	N-CA-C	5.08	116.17	108.96
33	Y9	18	ARG	N-CA-C	-5.08	101.88	109.95
37	YE	95	ILE	N-CA-C	-5.08	105.76	110.53
16	QP	26	ARG	N-CA-C	-5.07	103.71	110.55
44	YP	108	LYS	N-CA-C	5.07	121.59	110.80
6	QF	15	ASP	CA-C-N	5.06	127.31	120.38
6	QF	15	ASP	C-N-CA	5.06	127.31	120.38
2	XB	208	ILE	N-CA-C	5.06	119.87	109.34
49	RU	96	ALA	N-CA-C	-5.06	107.06	113.18
45	RQ	25	ASP	CA-CB-CG	5.05	117.66	112.60
54	RZ	164	ALA	N-CA-C	5.05	118.48	111.71
28	Y4	4	GLY	N-CA-C	5.05	125.16	113.18
46	RR	74	LYS	CA-C-N	5.05	131.19	121.54
46	RR	74	LYS	C-N-CA	5.05	131.19	121.54
54	RZ	180	VAL	N-CA-C	-5.05	98.83	109.34
49	RU	71	GLN	N-CA-C	-5.05	105.97	111.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	XE	51	VAL	N-CA-C	5.05	119.78	108.88
20	QT	43	LEU	N-CA-C	-5.04	107.13	113.28
13	QM	104	ARG	N-CA-C	-5.04	105.97	111.82
10	QJ	28	ARG	N-CA-C	-5.04	106.64	112.89
9	QI	41	VAL	N-CA-C	5.04	118.92	113.43
25	R1	93	GLU	N-CA-C	5.04	119.63	111.37
5	QE	148	VAL	N-CA-C	-5.03	105.66	113.16
42	RN	25	ARG	N-CA-C	-5.03	106.66	112.89
5	QE	105	VAL	N-CA-C	5.02	119.73	108.88
20	XT	93	GLU	N-CA-C	-5.01	106.42	112.54
34	YA	637	A	P-O3'-C3'	5.01	127.72	120.20
6	XF	44	GLY	N-CA-C	5.01	121.34	112.02
13	XM	45	VAL	N-CA-C	-5.01	107.45	111.91
2	XB	205	ASP	N-CA-C	-5.01	107.24	113.55
40	YH	85	LYS	CA-C-N	5.01	131.11	121.54
40	YH	85	LYS	C-N-CA	5.01	131.11	121.54
2	QB	206	ASP	N-CA-C	-5.01	102.17	109.63
9	QI	59	PHE	N-CA-C	5.01	116.74	108.13
34	RA	856	C	C2'-C3'-O3'	5.01	121.21	113.70
12	QL	104	VAL	N-CA-C	5.00	115.52	106.61
41	RI	103	ARG	N-CA-C	-5.00	107.86	114.31
53	YY	79	CYS	CB-CA-C	-5.00	101.24	109.65
33	Y9	29	ASN	N-CA-C	-5.00	102.02	109.42
36	YD	147	LEU	N-CA-C	-5.00	107.73	113.88
48	YT	59	THR	N-CA-C	-5.00	102.88	110.28

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
28	Y4	5	ILE	CA

All (7) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
37	RE	146	THR	Peptide
50	RV	49	THR	Peptide,Mainchain
54	RZ	166	SER	Peptide
28	Y4	5	ILE	Mainchain
37	YE	146	THR	Peptide
54	YZ	166	SER	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	32469	0	16393	392	0
1	XA	32551	0	16433	387	1
2	QB	1907	0	1958	39	0
2	XB	1915	0	1969	39	0
3	QC	1605	0	1668	31	0
3	XC	1605	0	1668	21	0
4	QD	1703	0	1763	56	0
4	XD	1703	0	1763	48	0
5	QE	1155	0	1213	22	0
5	XE	1155	0	1213	22	0
6	QF	843	0	857	11	0
6	XF	843	0	857	12	0
7	QG	1257	0	1296	26	0
7	XG	1257	0	1296	24	0
8	QH	1108	0	1165	23	0
8	XH	1108	0	1165	24	0
9	QI	1010	0	1037	22	0
9	XI	998	0	1024	21	0
10	QJ	801	0	849	22	0
10	XJ	777	0	816	14	0
11	QK	885	0	904	7	0
11	XK	864	0	881	12	0
12	QL	975	0	1062	23	0
12	XL	956	0	1046	14	0
13	QM	955	0	1021	27	0
13	XM	914	0	971	23	0
14	QN	492	0	532	18	0
14	XN	492	0	531	16	0
15	QO	734	0	771	6	0
15	XO	729	0	768	10	0
16	QP	705	0	725	12	0
16	XP	705	0	725	11	0
17	QQ	834	0	904	12	0
17	XQ	834	0	904	13	0
18	QR	574	0	644	6	0
18	XR	574	0	644	11	0
19	QS	665	0	686	16	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	XS	674	0	699	17	0
20	QT	763	0	861	16	0
20	XT	763	0	861	19	0
21	QU	217	0	234	8	0
21	XU	217	0	234	4	0
22	QV	1647	0	834	21	0
22	XV	1647	0	834	18	0
23	QX	409	0	209	11	0
23	XX	409	0	209	6	0
24	R0	643	0	667	6	0
24	Y0	648	0	672	14	0
25	R1	746	0	826	21	0
25	Y1	729	0	802	7	0
26	R2	581	0	629	7	0
26	Y2	575	0	624	5	0
27	R3	469	0	518	6	0
27	Y3	469	0	518	10	0
28	R4	348	0	354	6	0
28	Y4	357	0	362	13	0
29	R5	459	0	477	24	0
29	Y5	459	0	476	17	0
30	R6	453	0	474	7	0
30	Y6	453	0	473	13	0
31	R7	409	0	454	9	0
31	Y7	418	0	467	8	0
32	R8	517	0	582	19	0
32	Y8	517	0	582	16	0
33	R9	307	0	335	9	0
33	Y9	307	0	336	17	0
34	RA	62070	0	31284	625	0
34	YA	62091	0	31294	499	0
35	RB	2573	0	1306	27	0
35	YB	2573	0	1306	24	0
36	RD	2115	0	2195	51	0
36	YD	2115	0	2195	41	0
37	RE	1568	0	1634	36	0
37	YE	1568	0	1633	37	0
38	RF	1585	0	1632	32	0
38	YF	1585	0	1632	31	0
39	RG	1474	0	1535	32	0
39	YG	1474	0	1535	24	0
40	RH	1336	0	1418	58	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
40	YH	1336	0	1418	21	0
41	RI	1136	0	1223	32	1
41	YI	1136	0	1223	25	0
42	RN	1104	0	1180	14	0
42	YN	1104	0	1180	18	0
43	RO	933	0	996	21	0
43	YO	933	0	996	15	0
44	RP	1145	0	1228	27	0
44	YP	1122	0	1206	31	0
45	RQ	1122	0	1179	25	0
45	YQ	1122	0	1179	27	0
46	RR	960	0	1021	32	0
46	YR	960	0	1021	19	0
47	RS	882	0	943	21	0
47	YS	882	0	943	20	0
48	RT	1141	0	1202	17	0
48	YT	1141	0	1202	27	0
49	RU	964	0	1022	27	0
49	YU	964	0	1022	22	0
50	RV	779	0	852	14	0
50	YV	779	0	852	12	0
51	RW	900	0	964	20	0
51	YW	900	0	964	16	0
52	RX	725	0	778	11	0
52	YX	725	0	778	14	0
53	RY	818	0	911	25	0
53	YY	818	0	910	21	0
54	RZ	1461	0	1493	32	0
54	YZ	1529	0	1551	29	0
55	QA	87	0	0	0	0
55	QF	1	0	0	0	0
55	QH	2	0	0	0	0
55	QL	1	0	0	0	0
55	R0	2	0	0	0	0
55	R1	1	0	0	0	0
55	R3	1	0	0	0	0
55	R8	1	0	0	0	0
55	RA	429	0	0	0	0
55	RB	11	0	0	0	0
55	RD	1	0	0	0	0
55	RE	4	0	0	0	0
55	RF	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
55	RN	1	0	0	0	0
55	RO	1	0	0	0	0
55	RP	1	0	0	0	0
55	RQ	1	0	0	0	0
55	XA	89	0	0	0	0
55	XE	1	0	0	0	0
55	Y1	1	0	0	0	0
55	Y2	1	0	0	0	0
55	Y5	1	0	0	0	0
55	Y7	1	0	0	0	0
55	Y8	1	0	0	0	0
55	YA	439	0	0	0	0
55	YB	8	0	0	0	0
55	YD	1	0	0	0	0
55	YE	2	0	0	0	0
55	YF	1	0	0	0	0
55	YQ	1	0	0	0	0
55	YR	2	0	0	0	0
55	YU	1	0	0	0	0
55	YX	1	0	0	0	0
56	QD	8	0	0	2	0
56	XD	8	0	0	0	0
57	QN	1	0	0	0	0
57	R5	1	0	0	0	0
57	R6	1	0	0	0	0
57	R9	1	0	0	0	0
57	RY	1	0	0	0	0
57	XN	1	0	0	0	0
57	Y5	1	0	0	0	0
57	Y6	1	0	0	0	0
57	Y9	1	0	0	0	0
57	YY	1	0	0	1	0
All	All	292039	0	197761	3384	1

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 7.

All (3384) 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)
14:QN:24:CYS:SG	14:QN:40:CYS:HB2	1.24	1.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RH:98:LEU:CD2	40:RH:125:VAL:HG11	1.44	1.45
29:Y5:32:PRO:N	29:Y5:32:PRO:CA	1.69	1.44
30:R6:16:CYS:SG	30:R6:16:CYS:CB	2.06	1.44
14:QN:24:CYS:SG	14:QN:40:CYS:CB	2.14	1.35
34:RA:1789:A:OP1	36:RD:222:ARG:HG3	1.26	1.29
46:RR:12:ARG:CG	46:RR:16:HIS:CD2	2.17	1.27
12:QL:104:VAL:O	12:QL:105:TYR:CD2	1.90	1.24
40:RH:98:LEU:HD21	40:RH:125:VAL:CG1	1.66	1.23
40:RH:103:LEU:HD11	40:RH:123:PHE:CZ	1.72	1.22
46:RR:12:ARG:HD3	46:RR:16:HIS:NE2	1.53	1.21
46:RR:12:ARG:CG	46:RR:16:HIS:HD2	1.50	1.19
46:RR:12:ARG:HG2	46:RR:16:HIS:CD2	1.76	1.19
46:RR:12:ARG:HD3	46:RR:16:HIS:CD2	1.82	1.14
46:RR:12:ARG:CD	46:RR:16:HIS:CD2	2.31	1.14
1:XA:372:C:N4	1:XA:389:A:H62	1.48	1.11
34:YA:2611:U:H6	34:YA:2611:U:H5'	1.15	1.11
25:R1:90:ILE:HG22	25:R1:94:LEU:HD11	1.19	1.09
1:XA:372:C:H42	1:XA:389:A:N6	1.51	1.06
4:XD:18:LYS:NZ	4:XD:31:CYS:SG	2.26	1.06
14:XN:27:CYS:SG	14:XN:28:GLY:N	2.28	1.06
40:RH:87:LEU:O	40:RH:131:VAL:HG23	1.54	1.05
34:RA:1093:G:N2	34:RA:1098:A:H62	1.58	1.01
26:R2:48:HIS:NE2	26:R2:49:LYS:HE2	1.74	1.00
46:RR:12:ARG:HG2	46:RR:16:HIS:HD2	1.12	0.99
34:RA:1542:G:O6	34:RA:1543:A:N6	1.97	0.98
25:R1:95:LEU:O	25:R1:95:LEU:HD23	1.64	0.97
34:RA:1247:A:N1	34:RA:1249:U:O2	1.99	0.96
30:R6:13:CYS:SG	30:R6:14:THR:N	2.39	0.96
1:QA:372:C:N4	1:QA:389:A:H62	1.64	0.95
35:RB:22:U:H3	35:RB:61:G:H1	1.08	0.95
34:RA:2808:U:H3	34:RA:2892:A:H62	0.97	0.95
34:YA:2611:U:H5'	34:YA:2611:U:C6	2.02	0.95
29:R5:16:ARG:CD	34:RA:1263:U:H5"	1.97	0.94
1:QA:62:U:H3	1:QA:105:G:H1	0.95	0.94
34:RA:1093:G:H21	34:RA:1098:A:N6	1.66	0.94
34:YA:1652:A:N6	34:YA:1653:G:N1	2.17	0.93
22:XV:8:U:H3	22:XV:14:A:N6	1.66	0.93
34:RA:1035:U:H3	34:RA:1120:G:H1	1.14	0.93
1:XA:1238:A:N6	1:XA:1301:U:H3	1.66	0.93
34:RA:2094:G:OP1	41:RI:22:LYS:HE3	1.70	0.91
34:YA:2099:U:H3	34:YA:2190:G:H1	1.00	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:372:C:H42	1:QA:389:A:N6	1.69	0.91
1:XA:45:U:H3	1:XA:396:G:H1	1.19	0.90
1:XA:927:G:H1	1:XA:1390:U:H3	1.10	0.90
25:R1:90:ILE:HA	25:R1:94:LEU:CD1	2.00	0.90
34:YA:1165:U:H3	34:YA:1184:G:H1	1.15	0.90
34:YA:2068:U:H3	34:YA:2430:A:H2	1.15	0.90
22:XV:8:U:H3	22:XV:14:A:H62	1.20	0.89
1:XA:1304:G:H21	1:XA:1333:A:H62	1.15	0.89
25:R1:90:ILE:CG2	25:R1:94:LEU:HD11	2.03	0.89
29:Y5:48:GLU:OE2	51:YW:37:ARG:NH1	2.05	0.88
1:XA:741:G:P	15:XO:35:ARG:HH21	1.96	0.88
34:RA:855:G:H1	34:RA:922:U:H3	1.20	0.88
34:RA:2508:G:H1	34:RA:2580:U:H3	1.21	0.88
1:XA:152:A:N6	1:XA:169:C:C4	2.43	0.87
1:QA:1066:C:H42	1:QA:1191:A:N6	1.72	0.87
34:RA:2680:C:OP2	37:RE:111:ARG:NH2	2.08	0.87
34:RA:585:G:N2	34:RA:1256:G:C6	2.42	0.86
34:RA:2808:U:H3	34:RA:2892:A:N6	1.73	0.86
33:Y9:13:LYS:HD2	33:Y9:13:LYS:O	1.76	0.86
1:QA:249:U:H3	1:QA:275:G:H1	1.19	0.86
1:XA:12:U:H3	1:XA:22:G:H1	1.24	0.86
40:RH:103:LEU:HD11	40:RH:123:PHE:CE1	2.09	0.85
1:XA:157:G:H1	1:XA:164:U:H3	1.21	0.85
34:YA:270(A):A:N6	34:YA:271(A):U:O2	2.09	0.85
1:XA:437:U:H3	1:XA:495:A:H62	1.21	0.85
34:YA:1419:A:H62	34:YA:1578:U:H3	1.23	0.85
34:RA:1482:U:H3	34:RA:1512:G:H1	1.25	0.85
34:RA:2475:C:H42	34:RA:2529:G:H22	1.22	0.84
4:QD:61:LYS:HE2	4:QD:206:PHE:CE2	2.11	0.84
16:QP:37:GLY:HA3	16:QP:50:LYS:O	1.77	0.84
34:RA:139:G:N2	34:RA:141(A):A:C6	2.45	0.84
34:RA:2542:A:O2'	34:RA:2543:G:H8	1.60	0.84
40:YH:9:ILE:HG21	40:YH:49:VAL:HB	1.56	0.84
1:QA:372:C:H42	1:QA:389:A:H62	0.88	0.84
34:RA:1093:G:H21	34:RA:1098:A:H62	0.86	0.84
35:RB:8:U:H3	35:RB:112:G:H1	1.21	0.84
34:YA:2542:A:H2	34:YA:2544:G:O6	1.61	0.84
40:RH:103:LEU:CD1	40:RH:123:PHE:CZ	2.61	0.84
1:XA:244:U:H3	1:XA:893:C:H42	1.22	0.84
35:YB:73:A:H62	35:YB:103:U:H3	1.26	0.83
34:RA:1247:A:C6	34:RA:1249:U:O2	2.31	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:R5:16:ARG:HD2	34:RA:1263:U:H5"	1.57	0.83
34:RA:2475:C:H42	34:RA:2529:G:N2	1.75	0.83
34:RA:2123:G:H1	34:RA:2175:C:H42	1.26	0.83
1:QA:401:C:C5	4:QD:73:ARG:NH2	2.48	0.82
1:QA:782:A:H62	1:QA:800:G:H21	1.27	0.82
34:RA:2751:G:C4	40:RH:3:ARG:HB3	2.14	0.82
1:XA:560:U:H5'	1:XA:566:G:N2	1.95	0.82
19:QS:65:ASN:O	19:QS:66:MET:HE2	1.80	0.81
34:RA:586:A:H5'	38:RF:89:VAL:HG21	1.63	0.81
4:QD:61:LYS:HE2	4:QD:206:PHE:HE2	1.45	0.81
1:QA:15:G:H1	1:QA:920:U:H3	1.25	0.81
29:Y5:45:VAL:HG21	29:Y5:58:LEU:HD21	1.63	0.81
34:YA:1652:A:N6	34:YA:1653:G:C6	2.49	0.81
40:YH:9:ILE:CG2	40:YH:49:VAL:HB	2.11	0.80
40:RH:98:LEU:HD21	40:RH:125:VAL:HG11	0.81	0.80
1:XA:289:G:N2	1:XA:312:C:O2	2.14	0.80
25:R1:90:ILE:HG22	25:R1:94:LEU:CD1	2.06	0.80
46:RR:12:ARG:HG3	46:RR:16:HIS:HD2	1.47	0.80
34:RA:1632:A:N6	34:RA:1762:A:C2	2.49	0.80
34:RA:2852:G:H1	34:RA:2865:U:H3	1.26	0.80
40:RH:89:ILE:CD1	40:RH:131:VAL:HG22	2.12	0.80
41:RI:84:GLY:HA3	41:RI:89:TYR:OH	1.82	0.80
29:R5:16:ARG:HD3	34:RA:1263:U:H5"	1.63	0.79
35:RB:35:U:OP2	35:RB:36:C:OP2	1.98	0.79
34:RA:978:G:N2	34:RA:986:C:C2	2.50	0.79
1:QA:766:A:H62	1:QA:813:U:H3	1.27	0.79
4:QD:18:LYS:NZ	56:QD:301:SF4:S4	2.55	0.79
40:RH:98:LEU:CG	40:RH:125:VAL:HG11	2.13	0.78
1:QA:80:G:H1	1:QA:89:U:H3	1.30	0.78
1:QA:401:C:H5	4:QD:73:ARG:NH2	1.82	0.78
34:YA:59:U:H3	34:YA:68:G:H1	1.32	0.78
34:RA:2094:G:OP1	41:RI:22:LYS:CE	2.32	0.77
34:RA:676:A:H8	34:RA:2069:G:H21	1.33	0.77
34:RA:990:A:OP2	34:RA:991:C:OP2	2.03	0.77
34:RA:2291:U:H3	34:RA:2341:G:H1	1.28	0.77
40:RH:98:LEU:CD2	40:RH:125:VAL:CG1	2.41	0.77
34:RA:585:G:C2	34:RA:1256:G:C6	2.73	0.77
40:RH:87:LEU:O	40:RH:131:VAL:CG2	2.32	0.77
34:RA:1276:A:O2'	46:RR:12:ARG:NH1	2.18	0.77
1:XA:575:G:N2	1:XA:880:C:O2	2.17	0.77
34:YA:2508:G:H1	34:YA:2580:U:H3	1.31	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:RV:45:THR:O	50:RV:45:THR:HG22	1.83	0.77
25:R1:90:ILE:HA	25:R1:94:LEU:HD12	1.67	0.76
1:QA:819:A:N7	1:QA:1529:G:N1	2.34	0.76
41:RI:92:VAL:O	41:RI:120:ILE:HB	1.85	0.76
54:YZ:183:LEU:HD23	54:YZ:183:LEU:O	1.85	0.76
34:RA:2475:C:N4	34:RA:2529:G:H22	1.83	0.75
34:RA:526:A:OP1	34:RA:527:C:OP1	2.03	0.75
34:RA:2747:G:H21	34:RA:2757:A:H62	1.32	0.75
41:RI:92:VAL:HB	41:RI:120:ILE:CG2	2.16	0.75
10:QJ:79:ARG:NH1	10:QJ:79:ARG:O	2.20	0.75
33:Y9:27:CYS:SG	33:Y9:29:ASN:N	2.58	0.75
33:Y9:29:ASN:ND2	33:Y9:32:HIS:NE2	2.35	0.75
34:RA:1789:A:OP1	36:RD:222:ARG:CG	2.21	0.74
34:RA:2641:G:N2	34:RA:2774:C:C2	2.55	0.74
34:YA:2245:U:H6	34:YA:2245:U:H5"	1.52	0.74
34:YA:855:G:H1	34:YA:922:U:H3	1.34	0.74
32:R8:35:GLN:NE2	32:R8:36:LYS:HE2	2.02	0.74
34:RA:1165:U:H3	34:RA:1184:G:H1	1.35	0.74
34:RA:1234:U:C2'	34:RA:1235:G:H5'	2.17	0.74
1:XA:244:U:H3	1:XA:893:C:N4	1.85	0.74
1:XA:1304:G:N2	1:XA:1333:A:H62	1.85	0.74
1:QA:1066:C:H42	1:QA:1191:A:H62	1.32	0.74
1:QA:663:A:H61	1:QA:742:G:H1	1.36	0.73
1:QA:1066:C:N4	1:QA:1191:A:H62	1.84	0.73
1:XA:152:A:N6	1:XA:169:C:N4	2.36	0.73
34:RA:139:G:N2	34:RA:141(A):A:N6	2.36	0.73
34:YA:1215:G:H1	34:YA:1234:U:H3	1.36	0.73
34:RA:2542:A:O2'	34:RA:2543:G:C8	2.37	0.73
34:RA:2061:G:H5"	34:RA:2503:A:C2	2.24	0.72
34:RA:1632:A:N6	34:RA:1762:A:H2	1.87	0.72
2:QB:172:ILE:O	2:QB:176:GLU:HB2	1.88	0.72
34:YA:2611:U:H6	34:YA:2611:U:C5'	1.99	0.72
34:RA:141(A):A:H8	34:RA:1595:G:H21	1.37	0.72
1:XA:1393:U:HO2'	1:XA:1501:C:HO2'	1.37	0.72
1:QA:60:A:H62	1:QA:110:C:N4	1.88	0.72
36:RD:96:HIS:CE1	36:RD:102:LYS:HE2	2.24	0.71
1:XA:765:G:H1	1:XA:812:C:HO2'	1.37	0.71
1:QA:778:G:H1	1:QA:804:U:H3	1.38	0.71
33:Y9:13:LYS:HD2	33:Y9:13:LYS:C	2.14	0.71
34:YA:1612:C:C2	34:YA:1620:G:N2	2.59	0.71
9:QI:16:ARG:HB3	9:QI:64:THR:HG23	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RQ:65:PHE:HB2	45:RQ:105:GLU:HB2	1.72	0.71
34:YA:1433:U:H3	34:YA:1560:G:H1	1.37	0.71
34:YA:574:C:N3	37:YE:145:LYS:NZ	2.35	0.71
1:XA:323:U:H3	1:XA:327:A:H62	1.39	0.71
34:RA:978:G:C2	34:RA:986:C:C2	2.79	0.70
2:XB:120:ALA:O	2:XB:124:SER:HB2	1.92	0.70
34:RA:1768:U:H3	34:RA:1984:G:H1	1.40	0.70
34:YA:2403:C:N4	34:YA:2415:G:C6	2.60	0.70
1:XA:152:A:H62	1:XA:169:C:N4	1.90	0.70
12:QL:104:VAL:O	12:QL:105:TYR:HD2	1.68	0.70
29:Y5:48:GLU:CD	51:YW:37:ARG:HH12	1.99	0.69
2:QB:54:THR:HG22	2:QB:199:TYR:HB3	1.74	0.69
4:XD:57:ARG:HB3	4:XD:206:PHE:HB2	1.72	0.69
34:RA:1632:A:H61	34:RA:1762:A:H2	1.39	0.69
4:XD:12:CYS:SG	4:XD:19:LEU:HB2	2.33	0.69
4:QD:61:LYS:CE	4:QD:206:PHE:CE2	2.75	0.69
14:QN:24:CYS:SG	14:QN:40:CYS:CA	2.81	0.69
40:RH:103:LEU:CD1	40:RH:123:PHE:CE1	2.75	0.69
1:QA:819:A:N7	1:QA:1529:G:C2	2.61	0.69
34:RA:1234:U:O2'	34:RA:1235:G:H5'	1.93	0.69
29:R5:15:ARG:NH2	34:RA:2022:U:OP2	2.26	0.69
36:YD:35:LYS:HB2	36:YD:63:ARG:HA	1.75	0.69
1:QA:927:G:H1	1:QA:1390:U:H3	1.40	0.68
36:RD:8:PRO:HB3	36:RD:14:ARG:HB3	1.75	0.68
30:Y6:6:ARG:NH1	34:YA:2285:C:OP2	2.25	0.68
1:XA:289:G:N1	1:XA:312:C:N3	2.41	0.68
34:RA:1791:A:N6	34:RA:1828:G:O2'	2.25	0.68
42:RN:16:ILE:HB	42:RN:54:VAL:HG12	1.75	0.68
53:RY:99:CYS:HB2	53:RY:103:GLY:H	1.58	0.68
1:XA:68(F):G:H1	1:XA:68(V):U:H3	1.39	0.68
34:YA:2392:A:H2	34:YA:2424:C:H42	1.41	0.68
1:QA:60:A:N6	1:QA:110:C:N4	2.41	0.68
3:XC:43:LEU:O	3:XC:47:LEU:HB2	1.93	0.68
22:XV:8:U:N3	22:XV:14:A:N6	2.34	0.68
34:YA:2185:C:H2'	34:YA:2186:G:H8	1.58	0.68
41:RI:81:VAL:HG21	41:RI:88:ILE:HD12	1.75	0.68
45:RQ:38:GLU:HG2	45:RQ:127:ILE:HG23	1.74	0.68
34:YA:2245:U:H5"	34:YA:2245:U:C6	2.29	0.67
34:YA:2542:A:C2	34:YA:2544:G:O6	2.46	0.67
4:QD:3:ARG:HH22	4:QD:100:ARG:HH22	1.42	0.67
34:RA:2576:G:H3'	34:RA:2576:G:N3	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:1154:G:OP2	49:YU:58:ARG:NH2	2.27	0.67
38:RF:154:VAL:HG12	38:RF:191:ARG:HB2	1.77	0.67
1:XA:1238:A:H62	1:XA:1301:U:H3	0.80	0.67
1:QA:437:U:H3	1:QA:495:A:H62	1.42	0.67
42:YN:131:GLN:OE1	42:YN:134:ARG:NH2	2.27	0.67
1:XA:107:G:N7	20:XT:15:ARG:NH2	2.43	0.67
45:YQ:16:ARG:HH21	45:YQ:18:LYS:HD3	1.59	0.67
5:QE:139:LEU:HA	5:QE:142:LEU:HD12	1.77	0.67
34:RA:784:A:OP2	34:RA:2589:A:OP1	2.13	0.67
41:RI:92:VAL:HB	41:RI:120:ILE:HG21	1.74	0.67
40:RH:101:ARG:HH12	40:RH:123:PHE:H	1.43	0.67
54:RZ:52:SER:O	54:RZ:54:HIS:N	2.28	0.67
4:QD:31:CYS:SG	4:QD:33:MET:HB2	2.35	0.66
54:RZ:112:ARG:HG3	54:RZ:114:GLY:H	1.59	0.66
1:XA:1119:C:H2'	1:XA:1120:G:H8	1.60	0.66
1:XA:1238:A:N7	1:XA:1301:U:O4	2.27	0.66
22:XV:65:U:H2'	22:XV:66:A:H8	1.59	0.66
32:Y8:8:LYS:NZ	34:YA:243:U:OP1	2.28	0.66
53:YY:79:CYS:SG	57:YY:201:ZN:ZN	1.84	0.66
1:XA:1512:U:H3	1:XA:1523:G:H1	1.43	0.66
32:R8:8:LYS:NZ	34:RA:243:U:OP1	2.29	0.66
34:RA:139:G:N3	34:RA:141(A):A:N1	2.43	0.66
2:XB:185:ILE:HG22	2:XB:199:TYR:HB2	1.78	0.66
1:QA:765:G:H1	1:QA:812:C:HO2'	1.42	0.66
34:RA:981:A:H2	34:RA:2027:G:N3	1.93	0.66
1:XA:1300:G:O2'	1:XA:1303:C:N4	2.29	0.66
34:YA:1187:G:H8	34:YA:1187:G:O5'	1.79	0.66
34:RA:2751:G:N3	40:RH:3:ARG:HG2	2.10	0.66
1:XA:186(G):C:H42	1:XA:186(M):G:H1	1.43	0.66
1:QA:815:A:O4'	1:QA:817:C:N4	2.29	0.66
34:RA:27:G:N2	34:RA:513:A:OP2	2.29	0.66
40:RH:18:GLU:HB2	40:RH:25:LYS:HB2	1.78	0.66
1:XA:560:U:H5'	1:XA:566:G:H21	1.60	0.66
1:XA:1320:C:H42	19:XS:36:ARG:HG3	1.59	0.66
40:YH:84:SER:HB2	40:YH:132:ARG:HD2	1.78	0.66
9:XI:18:PHE:HB3	9:XI:20:ARG:HH12	1.60	0.66
34:RA:1052:C:O5'	34:RA:1052:C:H6	1.79	0.65
29:Y5:16:ARG:NH2	34:YA:517:C:OP1	2.28	0.65
2:QB:167:PRO:O	2:QB:171:ALA:HB2	1.96	0.65
34:RA:2508:G:O6	34:RA:2580:U:O4	2.15	0.65
34:RA:2641:G:C2	34:RA:2774:C:N3	2.65	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:2641:G:N1	34:RA:2774:C:N3	2.43	0.65
1:QA:1127:G:N3	1:QA:1147:C:N4	2.44	0.65
1:QA:266:G:H5'	1:QA:268:C:H41	1.60	0.65
1:QA:766:A:N6	1:QA:813:U:H3	1.94	0.65
34:RA:811:U:HO2'	34:RA:1250:G:HO2'	1.35	0.65
34:RA:962:G:OP1	34:RA:963:U:OP2	2.13	0.65
34:RA:1824:G:HO2'	36:RD:248:SER:HG	1.40	0.65
51:RW:88:ARG:HB2	51:RW:92:ARG:HB3	1.77	0.65
1:XA:674:G:H2'	1:XA:675:A:H8	1.61	0.65
20:XT:86:ARG:O	20:XT:90:GLN:NE2	2.30	0.65
34:YA:530:G:O2'	34:YA:532:A:N7	2.29	0.65
50:RV:62:LEU:HD11	50:RV:95:LEU:HB2	1.77	0.65
1:QA:401:C:OP2	4:QD:73:ARG:NE	2.29	0.65
38:RF:147:GLY:O	38:RF:191:ARG:NH1	2.29	0.65
40:RH:89:ILE:HD11	40:RH:131:VAL:HG22	1.76	0.65
1:XA:375:U:H4'	16:XP:6:LEU:HD11	1.78	0.65
1:XA:438:G:H21	1:XA:497:A:H62	1.45	0.65
1:XA:1386:G:H2'	1:XA:1387:G:H8	1.61	0.65
34:YA:2680:C:H5'	37:YE:189:PRO:HA	1.79	0.65
13:QM:14:ARG:HG2	13:QM:44:ARG:HD3	1.78	0.65
34:RA:675:A:O2'	38:RF:67:GLN:NE2	2.29	0.65
34:RA:2641:G:N1	34:RA:2774:C:C4	2.65	0.65
1:QA:982:U:H3	1:QA:1223:C:H42	1.44	0.65
4:QD:121:VAL:HG22	4:QD:126:ILE:HG13	1.79	0.65
34:RA:229:A:H4'	34:RA:230:U:H5'	1.78	0.65
34:YA:703:U:H3	34:YA:728:G:H1	1.44	0.65
1:QA:942:G:H1	1:QA:1341:U:H3	1.45	0.65
1:XA:1261:A:H62	1:XA:1274:G:H21	1.45	0.65
54:RZ:10:ARG:HD2	54:RZ:38:TYR:HB3	1.79	0.65
4:XD:20:TYR:HA	4:XD:26:CYS:SG	2.37	0.65
22:XV:8:U:O4	22:XV:14:A:N7	2.30	0.65
47:YS:106:ARG:HB2	47:YS:110:LEU:HD23	1.78	0.65
37:RE:75:VAL:HG23	37:RE:76:ARG:HG2	1.79	0.64
1:QA:860:A:N3	8:QH:18:ARG:NH1	2.44	0.64
2:QB:177:ALA:HB1	2:QB:182:ILE:HB	1.78	0.64
34:RA:331:A:N6	34:RA:1210:A:OP2	2.30	0.64
8:XH:14:ARG:HB3	8:XH:83:ILE:HD11	1.79	0.64
35:YB:90:C:H5'	45:YQ:18:LYS:HA	1.80	0.64
41:RI:92:VAL:HB	41:RI:120:ILE:HB	1.80	0.64
29:Y5:16:ARG:NH1	29:Y5:17:ASP:OD1	2.30	0.64
34:YA:1252:G:N3	49:YU:33:ARG:NH1	2.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:1392:A:N6	52:YX:15:GLU:OE2	2.30	0.64
34:YA:2402:C:H6	34:YA:2402:C:O5'	1.80	0.64
4:QD:18:LYS:HG3	4:QD:33:MET:HG3	1.78	0.64
25:Y1:87:PRO:HA	25:Y1:90:ILE:HG22	1.80	0.64
1:QA:1291:G:H4'	9:QI:39:GLY:HA3	1.80	0.64
4:QD:9:CYS:SG	4:QD:22:LYS:NZ	2.71	0.64
34:RA:2542:A:C2	34:RA:2544:G:O6	2.50	0.64
1:QA:624:C:H2'	1:QA:625:G:H8	1.62	0.64
1:QA:1074:G:H1	1:QA:1083:U:H3	1.45	0.64
9:XI:17:VAL:HG12	9:XI:63:ILE:HD12	1.79	0.64
1:XA:1323:G:H5"	13:XM:99:ARG:HH21	1.61	0.64
34:YA:138:G:N2	52:YX:44:GLU:OE2	2.29	0.64
34:YA:414:C:O2	34:YA:1864:U:O2'	2.16	0.64
34:YA:2086:U:OP2	36:YD:263:ARG:NH1	2.29	0.64
1:QA:12:U:H3	1:QA:22:G:H1	1.46	0.64
34:RA:811:U:H3'	44:RP:22:GLY:HA2	1.80	0.64
34:RA:1654:A:H8	34:RA:1654:A:H5"	1.61	0.64
34:YA:1270:C:H5"	34:YA:1271:G:H5'	1.79	0.64
34:YA:1307:A:C6	34:YA:1622:G:O6	2.51	0.64
2:QB:132:LYS:HA	2:QB:135:GLN:HB2	1.78	0.64
34:RA:1026:U:H1'	34:RA:1027:A:H5"	1.80	0.64
34:YA:2425:A:H4'	34:YA:2426:A:H5"	1.79	0.64
1:QA:1415:G:H1	1:QA:1485:U:H3	1.44	0.64
34:RA:1818:U:OP2	36:RD:157:ARG:NH1	2.31	0.64
40:RH:6:ARG:HH22	40:RH:54:ARG:HD3	1.62	0.64
10:XJ:50:ILE:HA	10:XJ:60:ARG:HB2	1.79	0.64
36:RD:60:ARG:HD3	36:RD:86:PRO:HB2	1.80	0.63
45:RQ:81:VAL:HG12	45:RQ:82:ARG:HG2	1.80	0.63
1:XA:160:A:N1	1:XA:343:U:O2'	2.30	0.63
1:QA:1221:G:OP1	1:QA:1321:C:N4	2.31	0.63
54:RZ:52:SER:O	54:RZ:54:HIS:ND1	2.32	0.63
2:XB:54:THR:HG22	2:XB:199:TYR:HB3	1.81	0.63
32:Y8:22:VAL:HB	32:Y8:53:PRO:HB3	1.80	0.63
5:QE:140:ARG:O	5:QE:143:ARG:NH1	2.32	0.63
34:RA:1012:U:OP1	49:RU:75:ASN:ND2	2.31	0.63
40:RH:78:GLY:HA2	40:RH:82:GLY:HA3	1.79	0.63
41:RI:84:GLY:HA3	41:RI:89:TYR:CZ	2.33	0.63
34:YA:1695:G:N7	36:YD:14:ARG:NH2	2.47	0.63
34:YA:2701:C:H3'	34:YA:2702:U:H5"	1.80	0.63
44:YP:4:SER:O	44:YP:7:ARG:NH2	2.32	0.63
1:QA:346:G:OP1	48:RT:41:ARG:NH2	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:79:GLU:O	8:QH:104:ARG:NH1	2.32	0.63
17:XQ:29:HIS:HB3	17:XQ:33:GLY:H	1.64	0.63
28:Y4:22:ILE:HG22	28:Y4:23:GLU:HG3	1.80	0.63
34:RA:1022:G:N7	34:RA:1140:C:N4	2.46	0.63
47:RS:34:HIS:HD1	47:RS:53:SER:HG	1.46	0.63
24:Y0:72:ARG:HE	24:Y0:75:LEU:HD12	1.64	0.63
37:RE:109:LYS:HE3	37:RE:191:PRO:HA	1.79	0.63
1:XA:166:G:H2'	1:XA:167:G:H8	1.64	0.63
34:YA:2006:C:O2'	34:YA:2823:A:N3	2.31	0.63
1:QA:619:U:N3	4:QD:134:ASP:OD1	2.30	0.63
34:RA:1247:A:OP2	44:RP:15:ARG:NH2	2.32	0.63
4:XD:8:VAL:HA	4:XD:11:LEU:HD13	1.81	0.63
32:R8:35:GLN:HE22	32:R8:36:LYS:HE2	1.62	0.62
34:YA:1186:G:H8	34:YA:1186:G:O5'	1.82	0.62
34:YA:1607:C:N4	34:YA:1622:G:OP2	2.32	0.62
34:YA:1995:U:O2	43:YO:3:GLN:NE2	2.32	0.62
1:QA:674:G:H2'	1:QA:675:A:H8	1.64	0.62
21:QU:12:LYS:HB3	21:QU:22:ARG:HD2	1.80	0.62
34:RA:998:C:OP2	49:RU:58:ARG:NH1	2.32	0.62
37:RE:119:ARG:HG3	37:RE:160:TYR:CD1	2.34	0.62
34:RA:2102:U:H3	34:RA:2187:G:H1	1.46	0.62
34:RA:2343:C:HO2'	34:RA:2373:G:HO2'	1.46	0.62
34:YA:627:A:N7	44:YP:84:ASN:ND2	2.46	0.62
54:YZ:52:SER:O	54:YZ:54:HIS:N	2.32	0.62
34:RA:139:G:C2	34:RA:141(A):A:N6	2.67	0.62
34:RA:2641:G:C2	34:RA:2774:C:C2	2.88	0.62
47:RS:83:LYS:HG3	47:RS:84:GLN:HG3	1.81	0.62
1:XA:345:C:O2'	1:XA:346:G:N2	2.33	0.62
1:QA:1198:G:H21	10:QJ:54:PHE:HE1	1.48	0.62
7:QG:118:VAL:O	7:QG:122:HIS:ND1	2.32	0.62
29:R5:51:TYR:CE1	29:R5:56:LYS:HB3	2.35	0.62
45:RQ:37:LEU:HD11	45:RQ:130:LYS:HG2	1.81	0.62
53:RY:99:CYS:CB	53:RY:103:GLY:H	2.12	0.62
1:QA:1066:C:N4	1:QA:1191:A:N6	2.43	0.62
27:R3:49:LYS:NZ	34:RA:851:U:OP1	2.31	0.62
34:YA:270(A):A:OP2	34:YA:270(Z):G:N2	2.28	0.62
34:YA:2547:U:O2	43:YO:23:ARG:NH2	2.33	0.62
41:YI:80:PRO:HB2	41:YI:146:ALA:HB2	1.81	0.62
34:RA:1314:C:OP1	34:RA:1332:G:OP1	2.17	0.62
1:XA:954:G:H21	1:XA:1227:A:H62	1.48	0.62
1:XA:1179:A:H4'	9:XI:103:THR:HA	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1510:U:H3	1:XA:1525:G:H1	1.48	0.62
34:YA:780:G:H21	34:YA:783:A:H62	1.48	0.62
34:YA:1612:C:C2	34:YA:1620:G:C2	2.88	0.62
36:YD:264:LYS:HG2	36:YD:266:SER:H	1.64	0.62
1:QA:262:A:H5"	20:QT:76:ALA:HB2	1.82	0.62
1:QA:553:A:H5"	12:QL:24:VAL:HG11	1.82	0.62
1:QA:570:G:H2'	1:QA:571:U:H6	1.64	0.62
1:QA:1077:G:N2	1:QA:1080:A:OP2	2.33	0.62
47:YS:23:ARG:NH2	47:YS:84:GLN:OE1	2.33	0.62
1:QA:1073:U:O2	2:QB:104:ASN:ND2	2.32	0.62
29:R5:3:LYS:O	34:RA:2056:G:N2	2.30	0.62
1:XA:289:G:N2	1:XA:312:C:C2	2.68	0.62
1:XA:1007:C:N3	1:XA:1023:G:N2	2.48	0.62
38:YF:160:ASN:HB3	38:YF:163:VAL:HG12	1.81	0.62
22:QV:19:G:H1'	22:QV:56:C:H42	1.65	0.61
25:R1:95:LEU:O	25:R1:95:LEU:CD2	2.45	0.61
54:RZ:72:ARG:NH2	54:RZ:97:GLU:O	2.33	0.61
34:YA:269:U:C5	34:YA:271(A):U:C4	2.88	0.61
34:YA:768:G:O2'	34:YA:1379:A:N6	2.32	0.61
37:RE:141:ILE:O	37:RE:154:LYS:NZ	2.33	0.61
8:XH:17:THR:O	8:XH:78:GLN:NE2	2.32	0.61
32:Y8:11:LYS:HB3	32:Y8:60:LEU:HD11	1.82	0.61
34:YA:2126:A:N6	34:YA:2163:C:O2'	2.34	0.61
50:YV:72:VAL:HB	50:YV:85:LYS:HB3	1.82	0.61
27:R3:12:PRO:HB2	27:R3:20:LYS:HD3	1.82	0.61
34:RA:259:G:H21	34:RA:621:A:H8	1.48	0.61
34:RA:1664:A:H61	34:RA:1996:C:N4	1.99	0.61
34:RA:1859:A:N6	34:RA:1883:G:O2'	2.33	0.61
1:XA:339:C:OP2	43:YO:97:ARG:NH1	2.33	0.61
1:XA:749:C:H2'	1:XA:750:G:H8	1.64	0.61
1:XA:1157:A:H2'	1:XA:1181:G:H22	1.65	0.61
15:XO:88:ARG:NH1	34:YA:713:G:OP2	2.33	0.61
34:YA:814:C:O2'	34:YA:1225:C:N3	2.33	0.61
44:RP:47:ASP:OD2	44:RP:50:ARG:NH2	2.33	0.61
16:XP:6:LEU:HB2	16:XP:17:TYR:HB3	1.82	0.61
42:YN:112:LEU:O	42:YN:116:LEU:HB2	1.99	0.61
28:R4:16:CYS:SG	28:R4:17:GLY:N	2.73	0.61
1:XA:437:U:H3	1:XA:495:A:N6	1.96	0.61
36:RD:96:HIS:HE1	36:RD:102:LYS:HE2	1.64	0.61
34:YA:955:C:OP1	45:YQ:85:LYS:NZ	2.33	0.61
41:YI:30:LEU:HB3	41:YI:36:ALA:HB3	1.80	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:992:U:H3	1:QA:1044:A:H62	1.47	0.61
1:QA:1316:G:H4'	14:QN:18:VAL:HG11	1.83	0.61
45:RQ:63:LYS:HD2	54:RZ:175:VAL:HG21	1.82	0.61
1:XA:881:G:OP2	12:XL:9:GLN:NE2	2.33	0.61
32:Y8:12:LYS:NZ	34:YA:249:C:O2	2.32	0.61
16:QP:53:VAL:HG12	16:QP:79:VAL:HG12	1.82	0.61
34:RA:300:A:OP1	53:RY:86:ARG:NH2	2.34	0.61
46:RR:74:LYS:HD3	46:RR:77:ARG:HH21	1.66	0.61
1:XA:1324:A:OP2	13:XM:99:ARG:NH2	2.33	0.61
54:YZ:181:GLU:O	54:YZ:182:LYS:O	2.19	0.61
1:QA:766:A:N7	1:QA:813:U:O4	2.34	0.61
1:QA:1306:A:N6	1:QA:1331:G:O2'	2.33	0.61
34:RA:1638:C:O3'	34:RA:2709:G:N2	2.34	0.61
53:RY:76:CYS:SG	53:RY:80:GLY:N	2.74	0.61
34:YA:265:A:N6	34:YA:427:U:O2'	2.34	0.61
35:YB:37:C:O2	47:YS:95:HIS:NE2	2.27	0.61
7:QG:133:GLY:HA2	7:QG:136:LYS:HE2	1.83	0.60
7:QG:138:LYS:HE2	7:QG:142:GLU:HG3	1.83	0.60
13:QM:57:ARG:O	13:QM:61:GLU:HB2	2.01	0.60
54:RZ:3:TYR:HB2	54:RZ:57:ILE:HG22	1.81	0.60
34:YA:2010:G:H5"	51:YW:42:ARG:HB2	1.81	0.60
34:RA:2641:G:H2'	34:RA:2642:G:H8	1.66	0.60
48:RT:77:PRO:HG2	48:RT:80:SER:HB3	1.82	0.60
1:XA:68(I):G:H21	1:XA:68(T):C:H41	1.47	0.60
34:YA:960:A:H61	45:YQ:82:ARG:HH12	1.48	0.60
34:RA:626:U:H3	44:RP:105:LEU:HA	1.66	0.60
34:RA:994:C:OP1	49:RU:53:ARG:NH2	2.35	0.60
4:XD:25:ARG:NE	4:XD:30:LYS:O	2.33	0.60
34:YA:688:U:H6	34:YA:688:U:O5'	1.85	0.60
34:YA:750:A:C2	34:YA:753:C:C6	2.89	0.60
34:YA:2402:C:H6	34:YA:2402:C:C5'	2.14	0.60
34:RA:2483:C:N3	45:RQ:124:LYS:NZ	2.49	0.60
39:RG:72:ARG:HA	39:RG:87:PRO:HA	1.82	0.60
34:YA:1093:G:H21	34:YA:1098:A:H62	1.48	0.60
34:YA:2572:A:OP1	34:YA:2574:G:O2'	2.20	0.60
35:YB:48:A:OP2	47:YS:30:ARG:NH2	2.34	0.60
37:YE:1:MET:HG3	37:YE:200:GLU:HG2	1.82	0.60
2:XB:163:PHE:HA	2:XB:185:ILE:O	2.01	0.60
34:YA:1669:A:H2'	34:YA:1669:A:N3	2.17	0.60
34:RA:2808:U:C2	34:RA:2892:A:N6	2.70	0.60
28:Y4:1:MET:N	35:YB:44:G:OP1	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:184:C:O2'	34:YA:217:G:N3	2.35	0.60
34:YA:1224:G:N2	34:YA:1227:A:OP2	2.31	0.60
41:RI:92:VAL:HB	41:RI:120:ILE:CB	2.30	0.60
1:XA:1118:C:OP1	9:XI:104:ARG:NH1	2.34	0.60
39:YG:16:ARG:NH2	39:YG:28:VAL:O	2.35	0.60
44:YP:58:THR:O	44:YP:61:ARG:NH2	2.34	0.60
51:YW:6:ILE:HG12	51:YW:104:THR:HG23	1.84	0.60
51:YW:30:GLU:O	51:YW:34:ASN:ND2	2.34	0.60
34:RA:585:G:C2	34:RA:1256:G:O6	2.55	0.60
34:RA:1234:U:H2'	34:RA:1235:G:H5'	1.83	0.60
46:RR:97:VAL:HG22	46:RR:114:VAL:HG12	1.84	0.60
4:XD:13:ARG:HG3	4:XD:40:PRO:HD3	1.84	0.60
34:YA:987:G:O2'	34:YA:1000:A:N3	2.30	0.60
1:QA:1261:A:H62	1:QA:1274:G:H21	1.50	0.60
32:R8:12:LYS:NZ	34:RA:249:C:O2	2.35	0.60
2:XB:67:THR:HG21	2:XB:155:LEU:HG	1.84	0.60
2:XB:126:GLU:OE2	2:XB:130:ARG:NH1	2.34	0.60
13:XM:3:ARG:O	13:XM:57:ARG:NH2	2.35	0.60
40:YH:89:ILE:O	40:YH:129:THR:OG1	2.19	0.60
34:RA:1827:C:OP2	36:RD:222:ARG:NH1	2.35	0.60
1:XA:545:C:OP2	4:XD:65:ARG:NH2	2.35	0.60
29:Y5:9:LYS:NZ	34:YA:2019:A:OP2	2.34	0.60
34:YA:811:U:O4	44:YP:21:ARG:NH2	2.34	0.60
34:YA:1340:U:OP2	52:YX:78:LYS:NZ	2.32	0.60
38:YF:11:VAL:HG22	38:YF:125:LEU:HB2	1.84	0.60
10:QJ:6:ILE:HG22	10:QJ:98:ILE:HG22	1.84	0.59
32:R8:56:GLU:HA	32:R8:59:LYS:HE2	1.83	0.59
1:XA:760:G:N2	17:XQ:97:SER:OG	2.35	0.59
5:XE:79:GLU:HG3	5:XE:93:PRO:HD2	1.84	0.59
34:YA:467:G:HO2'	34:YA:796:C:HO2'	1.45	0.59
34:YA:782:A:O2'	36:YD:225:ALA:O	2.19	0.59
34:YA:2108:C:N3	34:YA:2182:G:N2	2.50	0.59
47:YS:4:LEU:HD11	47:YS:12:PHE:HE2	1.67	0.59
1:QA:544:G:OP1	4:QD:59:ARG:NH2	2.35	0.59
11:XK:17:GLY:HA2	11:XK:35:PRO:HD3	1.83	0.59
30:Y6:6:ARG:HH21	30:Y6:24:GLU:HG3	1.65	0.59
31:Y7:3:ARG:NE	34:YA:1613:G:O2'	2.36	0.59
1:QA:178:C:H2'	1:QA:179:A:H8	1.66	0.59
1:QA:545:C:OP2	4:QD:65:ARG:NH2	2.36	0.59
34:RA:825:C:O2	44:RP:55:ARG:NH2	2.36	0.59
34:RA:2701:C:H3'	34:RA:2702:U:H5"	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:RE:201:THR:HG22	37:RE:203:LYS:H	1.66	0.59
41:RI:88:ILE:HG22	41:RI:90:GLY:H	1.66	0.59
1:XA:520:A:H62	1:XA:529:G:H21	1.50	0.59
34:YA:994:C:OP1	49:YU:53:ARG:NH2	2.36	0.59
34:YA:1988:C:N4	34:YA:1989:G:O6	2.35	0.59
51:YW:33:ARG:NH2	51:YW:52:GLU:OE1	2.35	0.59
34:RA:2820:A:N3	34:RA:2820:A:H2'	2.17	0.59
46:RR:12:ARG:HG3	46:RR:16:HIS:CD2	2.25	0.59
28:Y4:5:ILE:HD13	28:Y4:5:ILE:N	2.17	0.59
34:YA:2055:C:O2	34:YA:2572:A:N6	2.35	0.59
34:RA:530:G:O2'	34:RA:532:A:N7	2.34	0.59
40:RH:89:ILE:HD11	40:RH:131:VAL:CG2	2.32	0.59
1:XA:410:G:H21	1:XA:432:A:H62	1.50	0.59
8:XH:100:ILE:HD11	8:XH:125:ARG:HB3	1.84	0.59
34:YA:1216:G:OP1	49:YU:11:ARG:NH2	2.32	0.59
34:YA:1433:U:O4	34:YA:1560:G:O6	2.21	0.59
37:YE:143:ASN:OD1	37:YE:143:ASN:N	2.35	0.59
53:YY:79:CYS:HB2	53:YY:81:LYS:HG2	1.83	0.59
1:QA:614:A:OP2	4:QD:85:LYS:NZ	2.34	0.59
31:R7:9:ARG:NE	34:RA:1310:G:OP2	2.34	0.59
34:RA:572:A:H61	34:RA:2029:G:H21	1.50	0.59
34:RA:659:C:H2'	34:RA:660:G:H8	1.66	0.59
22:XV:30:C:H2'	22:XV:31:G:H8	1.66	0.59
36:YD:61:LEU:O	36:YD:63:ARG:NH1	2.36	0.59
41:YI:9:LEU:HD21	41:YI:35:LEU:HD12	1.84	0.59
34:RA:2085:C:H4'	36:RD:262:ARG:HH21	1.66	0.59
34:RA:2542:A:H2	34:RA:2544:G:O6	1.86	0.59
35:RB:37:C:O2	47:RS:95:HIS:NE2	2.35	0.59
41:RI:93:THR:O	41:RI:97:ILE:HG13	2.03	0.59
46:RR:51:LEU:HG	46:RR:66:VAL:HG23	1.85	0.59
8:XH:91:ARG:NH1	17:XQ:32:TYR:O	2.35	0.59
25:Y1:39:LYS:NZ	34:YA:205:G:O6	2.35	0.59
34:YA:83:G:N2	34:YA:103:A:OP2	2.34	0.59
1:QA:266:G:O2'	1:QA:268:C:OP2	2.21	0.59
1:QA:782:A:H62	1:QA:800:G:N2	1.98	0.59
4:QD:98:GLU:OE1	4:QD:103:ASN:ND2	2.36	0.59
34:RA:1066:U:N3	34:RA:1069:A:OP2	2.34	0.59
40:RH:107:VAL:O	40:RH:152:ARG:NH2	2.35	0.59
43:RO:88:ASN:ND2	43:RO:90:GLN:OE1	2.36	0.59
23:QX:8:A:H2'	23:QX:9:G:H8	1.68	0.59
10:XJ:10:GLY:HA3	10:XJ:16:LEU:HD21	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:1709:U:O2'	34:YA:2859:G:N3	2.35	0.59
34:YA:2475:C:H42	34:YA:2529:G:H22	1.50	0.59
34:YA:2502:G:H5"	34:YA:2503:A:H5"	1.85	0.59
38:YF:168:ARG:HG2	38:YF:175:THR:HG21	1.84	0.59
34:RA:2576:G:O2'	34:RA:2579:C:OP2	2.16	0.59
13:XM:3:ARG:HH12	13:XM:11:ARG:HH21	1.51	0.59
19:XS:63:THR:OG1	19:XS:65:ASN:OD1	2.21	0.59
34:YA:1800:C:OP2	36:YD:183:ARG:NH1	2.34	0.59
54:YZ:151:HIS:HB3	54:YZ:170:THR:HA	1.85	0.59
1:QA:352:C:O2'	1:QA:354:G:OP1	2.21	0.58
1:QA:1071:C:H2'	1:QA:1072:G:H8	1.67	0.58
29:R5:33:CYS:CB	29:R5:46:CYS:SG	2.90	0.58
34:RA:2134:A:O2'	34:RA:2159:G:N3	2.36	0.58
34:RA:2448:A:OP2	34:RA:2499:C:OP2	2.21	0.58
40:RH:152:ARG:HG2	40:RH:153:LYS:HG2	1.84	0.58
33:Y9:6:SER:HB3	34:YA:2466:C:H5"	1.85	0.58
3:QC:108:ASN:ND2	3:QC:144:SER:OG	2.36	0.58
5:QE:75:THR:OG1	5:QE:76:ILE:N	2.35	0.58
38:RF:148:LEU:HD13	38:RF:191:ARG:HH11	1.68	0.58
34:RA:1019:U:OP1	34:RA:1035:U:O2'	2.21	0.58
1:XA:406:G:H1	1:XA:436:C:H42	1.51	0.58
1:XA:578:C:H5"	1:XA:578:C:H6	1.68	0.58
34:YA:116:C:O2'	34:YA:126:A:N3	2.33	0.58
34:YA:1930:G:N2	34:YA:1969:A:OP2	2.35	0.58
34:RA:309:G:N3	34:RA:329:G:O2'	2.36	0.58
1:XA:1463:C:H4'	48:YT:112:ARG:HH21	1.68	0.58
34:YA:1789:A:OP2	36:YD:222:ARG:NH1	2.36	0.58
1:QA:976:G:O4'	1:QA:1363:A:N6	2.36	0.58
2:QB:78:GLN:O	2:QB:94:ASN:ND2	2.37	0.58
34:RA:946:G:O6	34:RA:972:G:N2	2.36	0.58
34:RA:1637:A:H4'	34:RA:2711:A:O2'	2.03	0.58
1:XA:49:U:H3	1:XA:362:G:H1'	1.69	0.58
1:XA:1130:A:O2'	9:XI:3:GLN:OE1	2.22	0.58
1:XA:1319:A:O2'	1:XA:1323:G:N7	2.36	0.58
34:YA:27:G:N2	34:YA:513:A:OP2	2.36	0.58
34:YA:776:G:N7	34:YA:793:A:O2'	2.36	0.58
34:YA:1667:G:O2'	34:YA:1991:U:O4	2.21	0.58
36:YD:35:LYS:H	36:YD:64:ILE:HG12	1.68	0.58
6:QF:23:LYS:NZ	6:QF:42:GLU:OE1	2.36	0.58
34:RA:2086:U:OP2	36:RD:263:ARG:NH1	2.36	0.58
34:RA:2729:G:H1'	37:RE:187:ALA:HB2	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:18:ARG:NH1	5:XE:25:ARG:O	2.36	0.58
22:XV:49:G:H1	22:XV:65:U:H3	1.52	0.58
24:Y0:33:ALA:O	34:YA:2353:G:O2'	2.22	0.58
32:Y8:42:ARG:NH1	34:YA:2349:G:OP2	2.36	0.58
34:YA:269:U:C6	34:YA:271(A):U:C4	2.91	0.58
37:YE:50:GLY:HA2	37:YE:77:ILE:HA	1.85	0.58
37:YE:128:SER:OG	37:YE:129:HIS:N	2.35	0.58
43:YO:80:ASP:OD2	48:YT:64:ARG:NH2	2.34	0.58
30:R6:16:CYS:SG	30:R6:42:TRP:HB2	2.44	0.58
1:XA:578:C:H5"	1:XA:578:C:C6	2.38	0.58
1:XA:643:C:H2'	1:XA:644:G:H8	1.67	0.58
3:XC:9:GLY:HA2	3:XC:12:LEU:HD13	1.83	0.58
34:YA:180:G:N2	34:YA:215:G:O6	2.36	0.58
4:QD:59:ARG:HH12	4:QD:66:ARG:HH22	1.51	0.58
34:RA:654(B):G:N2	34:RA:654(U):C:O2	2.36	0.58
34:RA:863:A:O3'	35:RB:100:G:N2	2.37	0.58
50:RV:24:LYS:HA	50:RV:92:THR:HG23	1.85	0.58
52:RX:25:LYS:HD3	52:RX:80:ILE:HD11	1.86	0.58
53:RY:99:CYS:HB2	53:RY:103:GLY:N	2.18	0.58
32:Y8:56:GLU:OE1	32:Y8:59:LYS:NZ	2.36	0.58
34:YA:141(A):A:H8	34:YA:1595:G:H21	1.50	0.58
1:QA:736:C:OP1	18:QR:72:ARG:NH2	2.37	0.58
1:QA:1268:A:N3	21:QU:20:LYS:NZ	2.51	0.58
43:RO:1:MET:HB2	43:RO:32:TYR:HB3	1.84	0.58
54:RZ:30:ASN:HB3	54:RZ:90:VAL:HG22	1.86	0.58
13:XM:11:ARG:O	13:XM:13:LYS:NZ	2.35	0.58
20:XT:71:THR:OG1	20:XT:72:LEU:N	2.36	0.58
34:YA:238:C:O2'	34:YA:608:A:N3	2.34	0.58
1:QA:1233:G:OP2	9:QI:124:GLN:NE2	2.36	0.58
1:QA:1522:U:H2'	1:QA:1523:G:H8	1.69	0.58
10:QJ:40:LEU:HD11	10:QJ:71:LEU:HB2	1.86	0.58
22:QV:37:1MG:H3'	22:QV:38:A:H8	1.69	0.58
34:RA:197:A:N6	34:RA:2430:A:C8	2.72	0.58
34:RA:2431:U:N3	34:RA:2434:A:OP2	2.31	0.58
34:RA:2808:U:O4	34:RA:2892:A:N7	2.36	0.58
1:XA:825:G:O2'	8:XH:12:ARG:NH2	2.37	0.58
27:Y3:24:LYS:NZ	34:YA:933:A:OP1	2.36	0.58
34:YA:392:C:H5"	34:YA:409:C:H5"	1.85	0.58
34:YA:442:G:H1'	38:YF:48:THR:HG21	1.86	0.58
34:YA:2683:C:O2	43:YO:70:LYS:NZ	2.28	0.58
41:YI:3:VAL:HG12	41:YI:38:LEU:HA	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:91:LEU:HD12	3:QC:101:LEU:HD11	1.85	0.57
27:R3:30:ARG:NH1	34:RA:1184:G:OP1	2.37	0.57
34:RA:1653:G:N7	46:RR:9:LYS:HB2	2.18	0.57
34:RA:2314:C:H2'	34:RA:2315:G:H8	1.69	0.57
39:RG:15:VAL:HG22	39:RG:175:LEU:HD22	1.86	0.57
5:XE:11:ILE:HG21	5:XE:105:VAL:HG22	1.86	0.57
34:YA:662:G:OP1	44:YP:15:ARG:NH1	2.36	0.57
34:YA:1068:G:O2'	34:YA:1096:A:N3	2.37	0.57
34:YA:2118:U:H3	34:YA:2148:G:H4'	1.67	0.57
34:YA:2788:C:O2'	34:YA:2809:A:N3	2.32	0.57
34:RA:265:A:N6	34:RA:428:A:N7	2.52	0.57
34:RA:2712(A):U:O2	34:RA:2712(A):U:H5"	2.05	0.57
41:RI:115:ALA:HB2	41:RI:131:LYS:HE3	1.85	0.57
1:XA:1304:G:H21	1:XA:1333:A:N6	1.93	0.57
34:YA:2131:G:H1'	34:YA:2158:A:H61	1.69	0.57
34:YA:2508:G:O6	34:YA:2580:U:O4	2.22	0.57
46:YR:56:LYS:O	46:YR:88:ARG:NH2	2.36	0.57
48:YT:36:GLU:OE1	48:YT:41:ARG:NH1	2.37	0.57
1:QA:881:G:OP1	12:QL:13:LYS:NZ	2.37	0.57
4:QD:167:GLY:O	4:QD:169:LYS:NZ	2.36	0.57
12:QL:113:ARG:HH21	12:QL:116:SER:HB2	1.68	0.57
34:RA:585:G:N2	34:RA:1256:G:C5	2.71	0.57
34:RA:1789:A:P	36:RD:222:ARG:HG3	2.40	0.57
35:RB:9:G:OP1	47:RS:15:ARG:NH1	2.37	0.57
37:RE:26:ILE:HG23	37:RE:182:LEU:HB3	1.86	0.57
49:RU:6:THR:OG1	49:RU:7:GLY:N	2.37	0.57
1:XA:708:C:OP1	11:XK:85:ARG:NH2	2.35	0.57
1:XA:1028(B):C:O2	1:XA:1028(I):G:N2	2.37	0.57
2:XB:115:LEU:HD12	2:XB:145:LEU:HB3	1.86	0.57
20:XT:30:LYS:HA	20:XT:33:ILE:HD12	1.87	0.57
34:YA:2134:A:H8	34:YA:2157:G:H21	1.53	0.57
34:YA:2880:C:O2'	46:YR:90:ARG:NH1	2.37	0.57
39:YG:29:TRP:O	39:YG:33:ARG:NH1	2.37	0.57
40:YH:9:ILE:HD12	40:YH:51:ARG:HG2	1.85	0.57
1:QA:1408:A:O2'	34:RA:1916:A:N6	2.34	0.57
34:RA:1856:G:O6	34:RA:1857:G:N2	2.37	0.57
40:RH:149:ARG:HA	40:RH:162:ILE:HD11	1.85	0.57
1:XA:1440(K):C:O2'	1:XA:1440(L):G:N2	2.37	0.57
1:XA:1507:A:H2'	1:XA:1508:G:H8	1.70	0.57
8:XH:11:THR:O	8:XH:15:ASN:ND2	2.37	0.57
34:YA:2312:U:O2	39:YG:40:ASN:ND2	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:995:C:H2'	1:QA:996:A:H8	1.70	0.57
10:QJ:45:ARG:HB3	10:QJ:65:LEU:HB3	1.85	0.57
34:RA:1454:U:O2'	34:RA:1455:G:N7	2.36	0.57
8:XH:8:ASP:OD2	8:XH:12:ARG:NH2	2.37	0.57
34:YA:2219:G:OP1	36:YD:172:TYR:OH	2.22	0.57
34:YA:2871:C:OP1	46:YR:50:HIS:NE2	2.37	0.57
1:QA:677:U:O2	1:QA:777:A:O2'	2.22	0.57
1:QA:1060:C:H4'	10:QJ:51:ARG:HB3	1.86	0.57
1:QA:1240:U:O4	7:QG:109:ASN:ND2	2.37	0.57
2:QB:74:LYS:HG3	2:QB:77:ALA:HB3	1.87	0.57
7:QG:50:ILE:HG12	7:QG:61:VAL:HG11	1.86	0.57
9:QI:67:GLY:O	9:QI:73:GLN:NE2	2.38	0.57
34:RA:514:A:N3	34:RA:581:C:O2'	2.35	0.57
45:RQ:12:GLN:HB2	45:RQ:73:PRO:HD2	1.87	0.57
1:XA:1158:C:H2'	1:XA:1159:U:H4'	1.87	0.57
1:XA:1414:U:H2'	1:XA:1415:G:H8	1.70	0.57
3:XC:17:ASP:OD1	3:XC:21:ARG:NH2	2.37	0.57
34:YA:1113:U:H5'	40:YH:2:SER:HB3	1.85	0.57
34:YA:1307:A:C6	34:YA:1622:G:C6	2.93	0.57
36:YD:28:GLU:HG2	36:YD:29:PRO:HD3	1.86	0.57
1:QA:237:C:H2'	1:QA:238:G:H8	1.69	0.57
1:QA:1505:G:H4'	1:QA:1506:U:H5"	1.85	0.57
2:QB:219:VAL:HA	2:QB:222:ILE:HD12	1.85	0.57
10:QJ:24:VAL:HG21	10:QJ:37:PRO:HG3	1.87	0.57
32:R8:13:ARG:HG2	44:RP:63:PRO:HB3	1.85	0.57
34:RA:1528:A:OP2	34:RA:1542:G:O6	2.23	0.57
34:RA:2744:G:N2	40:RH:143:GLN:OE1	2.37	0.57
43:RO:71:ARG:NE	43:RO:105:GLU:OE2	2.36	0.57
1:XA:1252:A:H61	1:XA:1285:A:H61	1.53	0.57
34:YA:2882:A:OP1	46:YR:96:ARG:NH1	2.37	0.57
46:YR:57:ARG:NH1	46:YR:59:ASP:OD2	2.38	0.57
1:QA:944:G:H21	1:QA:1339:A:H62	1.52	0.57
34:RA:2683:C:N3	34:RA:2727:G:O2'	2.36	0.57
3:XC:36:ASP:OD1	3:XC:59:ARG:NH2	2.34	0.57
34:YA:1566:A:OP1	36:YD:211:ARG:NH1	2.37	0.57
36:YD:184:LYS:HB3	36:YD:269:PHE:HB3	1.86	0.57
53:YY:30:VAL:HG22	53:YY:37:VAL:HG12	1.87	0.57
1:QA:1440(K):C:O2'	1:QA:1440(L):G:N2	2.36	0.57
9:XI:10:ARG:HG3	9:XI:11:LYS:HG2	1.86	0.57
34:YA:974(A):G:C4	34:YA:989:G:N2	2.72	0.57
34:YA:2632:A:O2'	34:YA:2811:G:O2'	2.23	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:9:G:N7	1:QA:558:G:O2'	2.38	0.57
1:QA:570:G:O4'	1:QA:820:U:C6	2.58	0.57
13:QM:91:ARG:HD2	13:QM:96:LEU:HD22	1.87	0.57
34:RA:2406:U:OP2	34:RA:2411:A:N6	2.38	0.57
1:XA:1131:G:H1	1:XA:1143:G:H21	1.53	0.57
34:YA:886:C:O2'	34:YA:889:C:N4	2.35	0.57
40:YH:155:SER:OG	40:YH:156:ALA:N	2.36	0.57
1:QA:401:C:C6	4:QD:73:ARG:NH2	2.73	0.56
17:XQ:3:LYS:HB2	17:XQ:60:ILE:HD11	1.86	0.56
30:Y6:19:ARG:HH21	30:Y6:52:VAL:HG21	1.68	0.56
1:QA:60:A:N6	1:QA:110:C:C4	2.73	0.56
1:QA:1316:G:N1	1:QA:1319:A:OP2	2.37	0.56
2:QB:130:ARG:O	2:QB:135:GLN:NE2	2.37	0.56
9:QI:64:THR:OG1	9:QI:66:ARG:NH1	2.37	0.56
28:R4:1:MET:N	35:RB:39:A:N1	2.53	0.56
34:RA:495:G:N3	51:RW:61:ASN:ND2	2.53	0.56
34:RA:1251:C:OP2	49:RU:10:ARG:NH1	2.38	0.56
34:RA:2816:C:O2	34:RA:2883:A:O2'	2.21	0.56
39:RG:144:ILE:HG22	39:RG:146:TYR:H	1.69	0.56
1:XA:427:U:OP2	4:XD:36:ARG:NH1	2.38	0.56
1:XA:1317:C:O2	19:XS:37:ARG:NH2	2.38	0.56
11:XK:15:ALA:HA	11:XK:77:MET:HA	1.86	0.56
15:XO:88:ARG:NH2	34:YA:714:U:OP2	2.38	0.56
34:YA:1812:A:H2'	34:YA:1813:G:H8	1.69	0.56
1:QA:708:C:H2'	1:QA:709:G:H8	1.70	0.56
2:QB:87:ARG:NH1	2:QB:220:ASP:OD2	2.38	0.56
34:RA:978:G:C2	34:RA:986:C:N3	2.73	0.56
34:RA:1066:U:H2'	34:RA:1067:A:H3'	1.87	0.56
34:RA:2635:C:H5"	37:RE:78:LEU:HA	1.86	0.56
35:RB:35:U:OP2	35:RB:36:C:P	2.62	0.56
40:RH:29:PRO:HD2	40:RH:79:VAL:HB	1.86	0.56
44:RP:58:THR:O	44:RP:61:ARG:NH2	2.38	0.56
54:RZ:127:LYS:HB3	54:RZ:162:GLU:HB2	1.86	0.56
1:XA:405:U:O4	4:XD:2:GLY:N	2.37	0.56
1:XA:413:G:H1'	1:XA:428:G:H21	1.70	0.56
8:XH:73:ASP:OD1	8:XH:75:ARG:NH1	2.38	0.56
10:XJ:40:LEU:HD11	10:XJ:71:LEU:HB2	1.87	0.56
30:Y6:3:SER:OG	30:Y6:4:GLU:N	2.37	0.56
37:YE:49:LEU:HD22	37:YE:81:ILE:HD11	1.85	0.56
45:YQ:24:GLY:H	45:YQ:101:ARG:HD2	1.70	0.56
46:YR:14:SER:OG	46:YR:15:SER:N	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:YY:76:CYS:HB3	53:YY:79:CYS:SG	2.45	0.56
33:R9:6:SER:HB2	34:RA:2466:C:H5"	1.88	0.56
1:XA:118:U:O5'	1:XA:118:U:H6	1.88	0.56
1:XA:754:C:OP1	15:XO:72:ARG:NH2	2.38	0.56
8:XH:32:LYS:HA	8:XH:35:ILE:HD12	1.86	0.56
9:XI:111:ARG:NH1	14:XN:61:TRP:O	2.33	0.56
34:YA:2068:U:N3	34:YA:2430:A:H2	1.95	0.56
1:QA:825:G:O2'	8:QH:12:ARG:NH2	2.37	0.56
8:QH:12:ARG:HD2	8:QH:26:VAL:HG12	1.88	0.56
31:R7:29:LYS:HA	31:R7:32:LYS:HG3	1.88	0.56
34:RA:768:G:O2'	34:RA:1379:A:N6	2.39	0.56
37:RE:34:VAL:HG21	37:RE:77:ILE:HD11	1.88	0.56
45:RQ:138:ASP:O	45:RQ:141:GLN:NE2	2.39	0.56
49:RU:50:ARG:O	49:RU:54:LYS:NZ	2.39	0.56
53:RY:30:VAL:HG12	53:RY:37:VAL:HG23	1.87	0.56
1:XA:272:C:H2'	1:XA:273:A:H8	1.70	0.56
34:YA:748:G:C8	34:YA:750:A:C8	2.94	0.56
34:RA:1035:U:O2	34:RA:1120:G:N2	2.31	0.56
35:RB:104:A:OP1	54:RZ:72:ARG:NH1	2.38	0.56
37:RE:39:PRO:HD3	37:RE:45:THR:HG22	1.87	0.56
1:XA:407:G:OP1	4:XD:115:ARG:NH1	2.38	0.56
34:YA:2847:U:OP1	48:YT:98:LYS:NZ	2.37	0.56
39:YG:37:VAL:HG13	39:YG:94:LEU:HB2	1.85	0.56
54:YZ:52:SER:O	54:YZ:54:HIS:ND1	2.38	0.56
34:RA:793:A:OP2	34:RA:2071:A:O2'	2.23	0.56
34:RA:1297:C:H2'	34:RA:1298:C:H6	1.71	0.56
34:RA:2061:G:H5"	34:RA:2503:A:N1	2.20	0.56
38:RF:195:ASP:N	38:RF:195:ASP:OD1	2.38	0.56
41:RI:26:ALA:HA	41:RI:30:LEU:HB2	1.88	0.56
43:YO:107:ARG:NH2	48:YT:36:GLU:O	2.39	0.56
1:QA:200:G:N2	1:QA:218:C:O2	2.38	0.56
12:QL:71:PRO:O	12:QL:102:ARG:NH1	2.39	0.56
13:QM:11:ARG:HG3	13:QM:12:ASN:H	1.71	0.56
38:RF:117:ARG:NH1	38:RF:120:GLU:OE2	2.38	0.56
1:XA:152:A:N6	1:XA:169:C:N3	2.54	0.56
1:XA:684:A:O2'	11:XK:39:PRO:O	2.21	0.56
24:Y0:23:VAL:HG21	34:YA:857:C:H4'	1.88	0.56
34:YA:1918:A:O2'	34:YA:1920:C:N4	2.38	0.56
42:YN:63:THR:OG1	42:YN:64:GLY:N	2.39	0.56
1:QA:186(J):U:O2'	17:QQ:63:ARG:NH2	2.38	0.56
5:QE:41:VAL:HG13	5:QE:136:MET:HE1	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:1022:G:N2	34:RA:1141:U:N3	2.54	0.56
42:RN:22:THR:OG1	42:RN:23:LEU:N	2.39	0.56
1:XA:8:A:N1	4:XD:209:ARG:NH1	2.53	0.56
1:XA:605:U:H6	1:XA:605:U:O5'	1.88	0.56
4:XD:205:GLU:OE1	5:XE:107:ARG:NH1	2.39	0.56
34:YA:2291:U:O2'	34:YA:2374:C:O2	2.24	0.56
1:QA:259:G:OP2	20:QT:83:ARG:NH1	2.38	0.56
1:XA:38:G:N2	1:XA:397:A:OP1	2.39	0.56
1:XA:776:G:N2	1:XA:802:A:OP2	2.38	0.56
3:XC:14:ILE:HG22	3:XC:15:THR:HG23	1.88	0.56
34:YA:664:C:OP1	44:YP:18:ARG:NH1	2.39	0.56
41:YI:130:TYR:HB3	41:YI:136:VAL:HG13	1.86	0.56
1:QA:1236:A:OP1	21:QU:10:ARG:NH1	2.39	0.55
34:RA:180:G:N2	34:RA:215:G:O6	2.39	0.55
34:RA:566:U:H5"	44:RP:29:LYS:HE3	1.88	0.55
34:RA:1658:C:OP1	37:RE:135:HIS:NE2	2.39	0.55
39:RG:126:ASP:OD2	39:RG:130:ASN:ND2	2.36	0.55
41:RI:86:THR:O	41:RI:122:GLU:HG2	2.05	0.55
34:YA:2011:U:OP2	51:YW:16:LYS:NZ	2.35	0.55
34:YA:2375:G:N2	34:YA:2378:A:OP2	2.34	0.55
39:YG:77:ILE:HG22	39:YG:82:LEU:HB2	1.89	0.55
1:QA:791:G:O6	1:QA:792:A:N6	2.39	0.55
1:QA:993:G:O2'	1:QA:994:A:N7	2.37	0.55
2:QB:195:ASP:O	8:QH:68:ARG:NH2	2.39	0.55
25:R1:90:ILE:CA	25:R1:94:LEU:HD12	2.35	0.55
34:RA:494:G:OP1	51:RW:8:ARG:NH1	2.39	0.55
35:RB:48:A:OP2	47:RS:30:ARG:NH2	2.39	0.55
53:RY:47:LYS:NZ	53:RY:48:ALA:O	2.37	0.55
34:YA:1728:G:N1	34:YA:1730:U:OP2	2.39	0.55
35:YB:90:C:OP2	45:YQ:16:ARG:NH1	2.38	0.55
34:RA:815:C:OP2	50:RV:83:ARG:NH1	2.38	0.55
34:RA:1025:G:N7	34:RA:1135:C:H1'	2.21	0.55
43:RO:106:LEU:HB3	43:RO:111:PHE:HB2	1.87	0.55
44:RP:90:ARG:HG3	44:RP:91:PHE:HD1	1.71	0.55
14:XN:23:ARG:NH1	14:XN:24:CYS:O	2.40	0.55
28:Y4:24:THR:O	39:YG:105:LYS:NZ	2.38	0.55
34:YA:527:C:N4	34:YA:2779:U:OP2	2.39	0.55
34:YA:956:G:OP2	45:YQ:14:ARG:NH2	2.39	0.55
42:YN:129:PRO:O	42:YN:134:ARG:NH1	2.33	0.55
1:QA:806:C:H2'	1:QA:807:A:H8	1.70	0.55
24:R0:74:ARG:NH2	34:RA:2334:G:O6	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:R2:48:HIS:ND1	34:RA:95:G:O2'	2.38	0.55
43:RO:19:ILE:HG22	43:RO:43:VAL:HG12	1.88	0.55
23:XX:6:G:H2'	23:XX:7:G:C8	2.42	0.55
34:YA:335:C:OP2	53:YY:84:ARG:NH2	2.40	0.55
34:YA:1246:A:OP1	44:YP:15:ARG:NH2	2.38	0.55
34:YA:2690:C:OP1	46:YR:17:ARG:NH2	2.40	0.55
48:YT:51:ARG:HD2	48:YT:100:TYR:HE1	1.72	0.55
1:QA:116:A:H61	1:QA:313:A:H1'	1.71	0.55
1:QA:677:U:H3	1:QA:713:G:H22	1.53	0.55
1:QA:1438:G:OP1	20:QT:34:LYS:NZ	2.40	0.55
40:RH:33:LEU:HD11	40:RH:136:ILE:HG13	1.87	0.55
43:RO:14:THR:HG21	43:RO:86:ILE:HD12	1.88	0.55
1:XA:323:U:O4	1:XA:327:A:N7	2.40	0.55
1:XA:890:G:O2'	1:XA:906:G:O6	2.24	0.55
1:XA:1291:G:OP1	7:XG:37:ASN:ND2	2.39	0.55
4:XD:153:ARG:HA	4:XD:181:MET:HE1	1.89	0.55
32:Y8:12:LYS:NZ	34:YA:247:G:O6	2.36	0.55
34:YA:2406:U:OP2	34:YA:2411:A:N6	2.39	0.55
43:YO:87:ILE:HD12	43:YO:91:LEU:HA	1.89	0.55
48:YT:3:ARG:HG3	48:YT:6:LEU:HB2	1.89	0.55
49:YU:92:ARG:HH11	50:YV:11:GLN:HB2	1.71	0.55
1:QA:673:G:H2'	1:QA:674:G:C8	2.42	0.55
9:QI:46:ALA:HA	9:QI:78:LYS:HB3	1.88	0.55
34:RA:288:C:H2'	34:RA:289:A:H8	1.71	0.55
34:RA:1075:C:OP1	45:RQ:59:ARG:NH1	2.36	0.55
34:RA:2581:G:C6	34:RA:2610:C:N3	2.75	0.55
38:RF:117:ARG:NH2	38:RF:189:THR:O	2.40	0.55
47:RS:106:ARG:HA	47:RS:110:LEU:HD21	1.88	0.55
4:QD:11:LEU:HD13	4:QD:66:ARG:HD2	1.88	0.55
29:R5:16:ARG:NH2	34:RA:517:C:OP1	2.40	0.55
34:RA:729:G:C6	36:RD:208:LYS:HB2	2.42	0.55
34:RA:1660:C:H2'	34:RA:1661:G:H8	1.71	0.55
34:RA:1675:C:H6	34:RA:1675:C:O5'	1.89	0.55
1:XA:927:G:N2	1:XA:1390:U:O2	2.32	0.55
2:XB:43:ASP:O	2:XB:47:THR:OG1	2.23	0.55
17:XQ:99:SER:OG	17:XQ:100:LYS:N	2.37	0.55
33:Y9:14:CYS:HA	33:Y9:27:CYS:HB2	1.88	0.55
34:YA:998:C:OP2	49:YU:58:ARG:NH1	2.40	0.55
34:YA:1203:G:O6	34:YA:1204:A:N6	2.40	0.55
38:YF:56:GLU:OE2	38:YF:93:LYS:NZ	2.36	0.55
1:QA:626:U:H2'	1:QA:627:G:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1507:A:C2	1:QA:1530:G:C4	2.95	0.55
3:QC:108:ASN:HB3	3:QC:111:LEU:HB2	1.89	0.55
34:RA:1202:C:HO2'	38:RF:184:TYR:HH	1.55	0.55
34:RA:2463:C:C2	34:RA:2488:A:C2	2.95	0.55
40:RH:86:GLU:HG3	40:RH:165:ALA:HB3	1.89	0.55
43:RO:112:MET:HA	43:RO:115:VAL:HG22	1.88	0.55
1:XA:59:A:H2	1:XA:330:C:H42	1.54	0.55
41:YI:131:LYS:HG2	41:YI:135:GLU:HG3	1.87	0.55
26:R2:35:LEU:HD23	26:R2:50:ILE:HG12	1.88	0.55
47:RS:25:ARG:HH21	47:RS:40:ILE:HG13	1.70	0.55
24:Y0:19:LYS:NZ	34:YA:2261:C:OP1	2.34	0.55
34:YA:483:A:O2'	53:YY:49:VAL:O	2.25	0.55
34:YA:2403:C:C4	34:YA:2415:G:N1	2.75	0.55
1:QA:107:G:H3'	1:QA:108:G:H21	1.71	0.55
1:QA:542:G:OP1	4:QD:10:ARG:NH1	2.34	0.55
26:R2:4:SER:OG	26:R2:5:GLU:N	2.37	0.55
31:R7:23:ARG:O	31:R7:28:ARG:NH1	2.40	0.55
33:Y9:16:VAL:HG12	33:Y9:25:VAL:HG12	1.88	0.55
1:QA:578:C:H6	1:QA:578:C:H5"	1.71	0.54
1:QA:954:G:H4'	13:QM:121:LYS:HB3	1.89	0.54
25:R1:29:GLY:O	34:RA:2396:G:O2'	2.23	0.54
34:RA:458:G:O2'	34:RA:469:G:O6	2.25	0.54
34:RA:834:C:H2'	34:RA:835:A:H8	1.72	0.54
43:RO:104:ARG:NH2	43:RO:121:VAL:O	2.40	0.54
1:XA:45:U:O4	1:XA:396:G:O6	2.25	0.54
1:XA:564:C:O2'	8:XH:91:ARG:NH2	2.39	0.54
1:XA:1261:A:H62	1:XA:1274:G:N2	2.04	0.54
1:XA:1312:G:H5'	19:XS:5:LEU:HD11	1.88	0.54
34:YA:219:G:N3	34:YA:234:C:O2'	2.35	0.54
34:YA:2473:U:OP1	34:YA:2529:G:N2	2.39	0.54
41:YI:129:THR:HA	41:YI:137:PRO:HA	1.89	0.54
53:YY:83:THR:HG21	53:YY:99:CYS:SG	2.48	0.54
8:QH:64:LYS:HG2	8:QH:79:VAL:HG11	1.90	0.54
13:QM:67:GLU:OE1	13:QM:71:ARG:NH1	2.40	0.54
14:QN:24:CYS:SG	14:QN:40:CYS:N	2.80	0.54
31:R7:7:PRO:HB2	34:RA:1309:G:H4'	1.89	0.54
34:RA:2511:U:O2'	37:RE:138:PRO:O	2.25	0.54
45:RQ:45:GLN:NE2	45:RQ:91:GLU:O	2.40	0.54
1:XA:398:C:H2'	1:XA:399:G:H8	1.72	0.54
54:YZ:149:SER:OG	54:YZ:150:LEU:N	2.40	0.54
1:QA:634:C:H2'	1:QA:635:G:H8	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:783:A:H8	34:RA:784:A:H4'	1.72	0.54
34:RA:982:C:O5'	34:RA:982:C:H6	1.90	0.54
34:RA:1363:C:O2'	34:RA:1809:A:N3	2.39	0.54
34:RA:2845:G:H2'	34:RA:2846:G:H8	1.72	0.54
43:RO:22:ILE:HB	43:RO:40:VAL:HG13	1.89	0.54
51:RW:67:ASP:N	51:RW:67:ASP:OD1	2.39	0.54
54:RZ:128:VAL:HG23	54:RZ:161:VAL:HG12	1.89	0.54
2:XB:187:LEU:HA	2:XB:201:ILE:HB	1.90	0.54
6:XF:87:ARG:NH1	18:XR:75:ILE:O	2.40	0.54
7:XG:29:LYS:HE2	7:XG:102:ARG:HB3	1.89	0.54
25:Y1:52:ARG:NH2	34:YA:2213:U:O2	2.41	0.54
30:Y6:40:CYS:HB3	30:Y6:43:CYS:HB3	1.88	0.54
34:YA:1328:G:O5'	34:YA:1328:G:H8	1.89	0.54
1:QA:1360:A:OP2	14:QN:35:ARG:NH1	2.40	0.54
5:QE:151:LEU:HD12	8:QH:79:VAL:HG12	1.89	0.54
12:QL:53:ARG:HB3	12:QL:69:TYR:HE1	1.73	0.54
14:QN:6:LEU:HB3	14:QN:23:ARG:HH12	1.72	0.54
34:RA:270(V):C:H2'	34:RA:270(W):G:H8	1.73	0.54
34:RA:819:A:OP2	34:RA:1187:G:N2	2.40	0.54
34:RA:1296:G:OP1	34:RA:2709:G:O2'	2.24	0.54
34:RA:2490:G:H2'	34:RA:2490:G:N3	2.22	0.54
35:RB:22:U:O4	35:RB:61:G:O6	2.26	0.54
1:XA:1394:A:N6	1:XA:1500:A:O2'	2.30	0.54
22:XV:31:G:H22	22:XV:39:C:H42	1.54	0.54
34:YA:24:G:O2'	51:YW:78:GLU:O	2.25	0.54
34:YA:867:C:N3	34:YA:912:C:O2'	2.40	0.54
34:YA:958:U:OP2	45:YQ:14:ARG:NH1	2.40	0.54
34:YA:2848:G:O2'	34:YA:2867:G:N2	2.38	0.54
1:QA:231:G:H2'	1:QA:232:G:H8	1.73	0.54
1:QA:458(F):A:OP1	16:QP:75:ARG:NH1	2.39	0.54
34:RA:392:C:H5"	34:RA:409:C:H5"	1.89	0.54
37:RE:2:LYS:NZ	37:RE:100:GLU:OE2	2.40	0.54
34:YA:1138:G:H21	42:YN:106:MET:HE3	1.71	0.54
34:YA:1657:C:H4'	37:YE:133:LYS:HB3	1.89	0.54
54:YZ:97:GLU:HB3	54:YZ:125:LEU:HD11	1.90	0.54
3:QC:88:ARG:HG2	3:QC:101:LEU:HD13	1.90	0.54
33:R9:14:CYS:HA	33:R9:27:CYS:HB2	1.88	0.54
34:RA:484:C:P	53:RY:50:ARG:HG2	2.48	0.54
34:RA:687:C:H42	34:RA:787:U:H4'	1.73	0.54
34:RA:2635:C:O2'	37:RE:80:GLU:OE1	2.26	0.54
42:RN:28:THR:O	42:RN:32:THR:OG1	2.24	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:RV:62:LEU:HB2	50:RV:93:GLU:HG3	1.88	0.54
1:XA:107:G:H3'	1:XA:108:G:H21	1.72	0.54
1:XA:356:A:O2'	1:XA:367:U:O2'	2.21	0.54
1:XA:1240:U:OP1	7:XG:119:ARG:NH2	2.41	0.54
34:YA:581:C:H2'	34:YA:582:G:H8	1.72	0.54
34:YA:784:A:OP2	34:YA:2589:A:OP1	2.25	0.54
34:YA:964:C:O2'	34:YA:2273:A:N3	2.37	0.54
46:YR:104:ARG:NH1	46:YR:107:ASP:OD1	2.40	0.54
34:RA:1546:C:H5'	34:RA:1547:C:H5'	1.90	0.54
34:RA:2808:U:N3	34:RA:2892:A:N6	2.39	0.54
38:RF:63:LYS:NZ	38:RF:75:HIS:O	2.33	0.54
53:RY:6:HIS:O	53:RY:97:ARG:NH2	2.39	0.54
1:XA:1221:G:H4'	19:XS:77:THR:HG21	1.88	0.54
26:Y2:36:ARG:NH2	52:YX:8:ILE:O	2.41	0.54
34:YA:579:G:O2'	34:YA:2019:A:OP1	2.25	0.54
34:YA:2577:A:H5"	34:YA:2578:G:H5'	1.88	0.54
51:YW:69:LEU:HD13	51:YW:107:LEU:HD23	1.89	0.54
1:QA:191:G:O2'	20:QT:101:GLY:O	2.22	0.54
3:QC:11:ARG:NH2	3:QC:177:THR:O	2.40	0.54
22:QV:19:G:OP2	22:QV:20:G:N2	2.41	0.54
1:XA:453:A:H5'	16:XP:75:ARG:HH22	1.73	0.54
45:YQ:45:GLN:NE2	45:YQ:91:GLU:O	2.40	0.54
1:QA:296:U:O2'	1:QA:556:C:O2	2.24	0.54
1:QA:1106:G:H4'	3:QC:172:ARG:HG3	1.89	0.54
34:RA:240:G:O2'	34:RA:257:A:N6	2.41	0.54
34:RA:1676:A:C2	34:RA:1993:U:H5'	2.43	0.54
1:XA:9:G:N7	1:XA:558:G:O2'	2.41	0.54
7:XG:71:PRO:O	7:XG:96:GLN:NE2	2.41	0.54
27:Y3:8:LEU:HD13	27:Y3:23:LEU:HD11	1.90	0.54
32:Y8:7:HIS:NE2	34:YA:251:A:OP1	2.38	0.54
34:YA:602:G:HO2'	34:YA:604:G:HO2'	1.50	0.54
34:YA:861:A:N3	35:YB:79:C:O2'	2.40	0.54
34:YA:971:C:O2'	34:YA:983:A:N3	2.32	0.54
54:YZ:53:ILE:HG22	54:YZ:71:VAL:HG13	1.90	0.54
1:QA:938:A:O3'	7:QG:95:ARG:NH2	2.41	0.54
10:QJ:40:LEU:HD13	10:QJ:69:ASN:HB3	1.90	0.54
29:R5:33:CYS:N	29:R5:38:ALA:O	2.28	0.54
34:RA:59:U:H3	34:RA:68:G:H1	1.55	0.54
34:RA:987:G:O2'	34:RA:1000:A:N3	2.35	0.54
34:RA:1681:G:O2'	34:RA:1762:A:O2'	2.26	0.54
34:RA:2468:G:OP2	34:RA:2468:G:N2	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:RR:33:ARG:NH2	46:RR:115:GLU:OE1	2.41	0.54
47:RS:34:HIS:ND1	47:RS:53:SER:OG	2.40	0.54
34:YA:1664:A:H61	34:YA:1996:C:H42	1.56	0.54
39:YG:19:LEU:HD23	39:YG:32:PRO:HD2	1.89	0.54
54:YZ:108:PRO:HA	54:YZ:142:SER:HA	1.88	0.54
3:QC:108:ASN:HD22	3:QC:111:LEU:HD23	1.72	0.53
19:QS:4:SER:OG	19:QS:5:LEU:N	2.41	0.53
33:R9:25:VAL:HB	33:R9:34:GLN:HB2	1.90	0.53
34:RA:1068:G:N2	34:RA:1095:A:O2'	2.41	0.53
51:RW:1:MET:HE3	51:RW:62:HIS:HB3	1.90	0.53
2:XB:192:SER:OG	2:XB:193:ASP:N	2.40	0.53
34:YA:270(G):U:H3	34:YA:270(U):G:H1	1.56	0.53
34:YA:1296:G:OP1	34:YA:2709:G:O2'	2.19	0.53
34:YA:2540:C:O2'	34:YA:2740:A:N3	2.34	0.53
29:R5:36:CYS:SG	29:R5:49:CYS:HB3	2.49	0.53
34:RA:662:G:OP1	44:RP:15:ARG:NH1	2.41	0.53
16:XP:37:GLY:HA3	16:XP:50:LYS:O	2.09	0.53
35:YB:73:A:N7	35:YB:103:U:O4	2.40	0.53
41:YI:68:LEU:HA	41:YI:71:ILE:HG22	1.90	0.53
1:QA:112:G:H1	1:QA:315:A:H61	1.57	0.53
34:RA:605:C:O2	34:RA:657:U:O2'	2.26	0.53
34:RA:1247:A:C6	34:RA:1249:U:C2	2.96	0.53
35:RB:57:A:OP2	35:RB:58:A:OP2	2.27	0.53
36:RD:44:ASN:N	36:RD:44:ASN:OD1	2.41	0.53
1:XA:1354:C:H2'	1:XA:1355:G:H8	1.73	0.53
8:XH:86:ILE:HD11	8:XH:136:GLU:HG2	1.89	0.53
25:Y1:2:SER:N	34:YA:1364:G:N7	2.56	0.53
29:Y5:3:LYS:HG3	34:YA:2611:U:C4	2.42	0.53
33:Y9:29:ASN:ND2	33:Y9:32:HIS:CD2	2.77	0.53
34:YA:2125:G:N1	34:YA:2172:U:OP1	2.42	0.53
45:YQ:28:ALA:N	45:YQ:105:GLU:OE2	2.41	0.53
54:YZ:11:GLU:O	54:YZ:36:LYS:NZ	2.36	0.53
1:QA:754:C:OP1	15:QO:72:ARG:NH2	2.40	0.53
34:RA:918:A:N3	35:RB:80:U:O2'	2.39	0.53
34:RA:2291:U:O2'	34:RA:2374:C:O2	2.27	0.53
1:XA:1306:A:N6	1:XA:1331:G:O2'	2.41	0.53
17:XQ:83:ASP:N	17:XQ:83:ASP:OD1	2.40	0.53
30:Y6:35:GLU:OE2	30:Y6:50:ARG:NH1	2.42	0.53
31:Y7:8:ASN:ND2	34:YA:770:G:OP1	2.40	0.53
34:YA:2403:C:N4	34:YA:2415:G:N1	2.57	0.53
54:YZ:129:SER:OG	54:YZ:132:ASN:OD1	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:RR:56:LYS:NZ	46:RR:90:ARG:O	2.41	0.53
1:XA:1028(D):G:O2'	1:XA:1028(G):A:N6	2.40	0.53
18:XR:47:THR:HG22	18:XR:85:LEU:HD13	1.90	0.53
24:Y0:20:ARG:HD3	34:YA:2356:C:H4'	1.91	0.53
34:YA:906:G:HO2'	45:YQ:67:ARG:HH21	1.56	0.53
1:QA:357:G:O2'	41:YI:89:TYR:O	2.25	0.53
6:QF:97:PHE:HB2	18:QR:32:ARG:HE	1.73	0.53
27:R3:12:PRO:HA	27:R3:15:TYR:HD2	1.73	0.53
29:R5:16:ARG:HD3	34:RA:1263:U:C5'	2.37	0.53
34:RA:2306:C:N4	39:RG:42:GLY:O	2.42	0.53
38:RF:185:ASP:OD1	38:RF:188:ARG:NH1	2.42	0.53
46:RR:103:ARG:NH1	46:RR:108:GLY:O	2.40	0.53
51:RW:14:PRO:HG2	51:RW:78:GLU:HG3	1.90	0.53
1:XA:860:A:H61	1:XA:872:A:H62	1.57	0.53
47:YS:4:LEU:HD22	47:YS:8:GLU:CD	2.34	0.53
1:QA:430:A:OP1	4:QD:9:CYS:HB2	2.08	0.53
4:QD:98:GLU:HA	4:QD:103:ASN:HD22	1.73	0.53
25:R1:41:ARG:NH2	34:RA:1365:A:O4'	2.42	0.53
34:RA:23:G:N2	51:RW:77:ASP:OD1	2.36	0.53
38:RF:107:LYS:HE3	38:RF:207:GLY:H	1.73	0.53
1:XA:624:C:H2'	1:XA:625:G:H8	1.73	0.53
1:XA:719:C:N3	18:XR:74:ARG:NH2	2.51	0.53
28:Y4:7:PRO:HG3	39:YG:62:LEU:HA	1.91	0.53
28:Y4:11:PRO:HA	28:Y4:25:TYR:HA	1.90	0.53
34:YA:703:U:O4	34:YA:728:G:O6	2.27	0.53
1:QA:591:U:OP1	8:QH:30:ARG:NH1	2.42	0.53
1:QA:938:A:H4'	7:QG:95:ARG:HH12	1.74	0.53
31:R7:39:ARG:NH1	34:RA:459:U:OP2	2.42	0.53
34:RA:2784:C:O2'	37:RE:37:ARG:NH1	2.42	0.53
47:RS:18:ILE:HD13	47:RS:88:ASP:HA	1.90	0.53
1:XA:1232:U:OP1	9:XI:124:GLN:NE2	2.42	0.53
2:XB:132:LYS:HA	2:XB:135:GLN:HB2	1.89	0.53
7:XG:18:TYR:OH	7:XG:47:CYS:SG	2.64	0.53
29:Y5:57:VAL:O	46:YR:33:ARG:NH2	2.34	0.53
34:YA:1215:G:O6	34:YA:1234:U:O4	2.27	0.53
47:YS:26:LEU:HB3	47:YS:87:PHE:HA	1.90	0.53
9:QI:71:SER:HA	9:QI:74:ILE:HG12	1.90	0.53
19:QS:65:ASN:C	19:QS:66:MET:HE2	2.33	0.53
34:RA:139:G:H22	34:RA:1596:A:H4'	1.73	0.53
34:RA:2328:A:H2'	34:RA:2329:G:C8	2.44	0.53
37:RE:171:GLU:HB3	37:RE:185:LYS:HE2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RN:39:ARG:NH1	42:RN:48:MET:SD	2.82	0.53
40:YH:103:LEU:HB3	40:YH:115:VAL:HG22	1.91	0.53
1:QA:570:G:H2'	1:QA:571:U:C6	2.44	0.53
7:QG:111:ARG:HH11	7:QG:119:ARG:HA	1.73	0.53
34:RA:380:U:H2'	34:RA:381:G:H8	1.74	0.53
34:RA:468:G:O2'	38:RF:62:ARG:NH2	2.42	0.53
34:RA:2100:G:H8	34:RA:2100:G:O5'	1.92	0.53
1:XA:127:G:O2'	17:XQ:2:PRO:O	2.27	0.53
1:XA:548:G:H5'	4:XD:73:ARG:HH22	1.74	0.53
1:XA:977:A:N6	1:XA:1224:G:OP1	2.41	0.53
34:YA:86:C:OP1	53:YY:33:LYS:NZ	2.42	0.53
34:YA:2307:G:N1	39:YG:45:GLU:OE2	2.36	0.53
36:YD:17:THR:HB	36:YD:205:VAL:H	1.74	0.53
1:QA:373:A:O2'	1:QA:451:A:N6	2.42	0.52
2:QB:109:SER:O	2:QB:113:HIS:ND1	2.41	0.52
22:QV:55:U:N3	22:QV:58:A:OP2	2.39	0.52
22:QV:65:U:H2'	22:QV:66:A:H8	1.74	0.52
32:R8:2:PRO:O	34:RA:666:G:N2	2.42	0.52
34:RA:184:C:O2'	34:RA:217:G:N3	2.39	0.52
34:RA:1025:G:C8	34:RA:1135:C:H1'	2.43	0.52
34:RA:1782:C:H42	34:RA:2586:C:H42	1.57	0.52
34:RA:2319:G:N1	34:RA:2334:G:OP2	2.39	0.52
50:RV:76:LYS:HB2	50:RV:81:TYR:HB3	1.90	0.52
53:RY:19:LYS:HZ1	53:RY:20:TYR:HE2	1.47	0.52
1:XA:68(P):A:C5	1:XA:68(Q):C:H1'	2.44	0.52
1:XA:186(B):C:O2'	20:XT:89:ARG:NH2	2.42	0.52
11:XK:83:ILE:HD13	11:XK:109:VAL:HB	1.90	0.52
34:YA:1473:G:H1	34:YA:1520:U:H3	1.57	0.52
1:QA:955:U:O2	19:QS:83:HIS:NE2	2.39	0.52
7:QG:114:ARG:O	7:QG:119:ARG:NH2	2.42	0.52
10:QJ:33:GLN:O	10:QJ:76:ASN:ND2	2.43	0.52
24:R0:23:VAL:HG21	34:RA:857:C:H4'	1.90	0.52
30:R6:9:LEU:HD13	30:R6:51:GLU:HB2	1.90	0.52
34:RA:48:G:N2	34:RA:177:G:OP2	2.37	0.52
34:RA:303:U:H2'	34:RA:304:G:H8	1.74	0.52
34:RA:664:C:OP1	44:RP:18:ARG:NH2	2.39	0.52
34:RA:1788:C:OP1	36:RD:222:ARG:NH2	2.43	0.52
39:RG:166:ASP:OD2	39:RG:166:ASP:N	2.42	0.52
46:RR:26:LYS:O	46:RR:30:THR:OG1	2.24	0.52
34:YA:729:G:OP2	36:YD:13:ARG:NH1	2.42	0.52
49:YU:28:ARG:NH1	49:YU:38:THR:OG1	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:209:ARG:NH1	2:QB:240:GLN:OE1	2.42	0.52
23:QX:17:C:C4	23:QX:18:C:C5	2.97	0.52
29:R5:49:CYS:SG	29:R5:50:GLY:N	2.82	0.52
34:RA:1116:C:H2'	34:RA:1117:G:H8	1.74	0.52
34:RA:2646:C:OP2	34:RA:2732:G:O2'	2.25	0.52
44:RP:29:LYS:HD3	44:RP:30:THR:HG23	1.92	0.52
1:XA:1295:G:O3'	13:XM:14:ARG:NH1	2.42	0.52
3:XC:32:LEU:O	3:XC:59:ARG:NH2	2.42	0.52
34:YA:242:G:O2'	34:YA:254:G:O6	2.26	0.52
47:YS:61:ASN:ND2	47:YS:64:GLU:OE1	2.42	0.52
13:QM:84:ILE:HG12	19:QS:66:MET:HE3	1.90	0.52
23:QX:14:A:H8	23:QX:14:A:O5'	1.92	0.52
34:RA:1482:U:O4	34:RA:1512:G:O6	2.26	0.52
40:RH:125:VAL:HG22	40:RH:125:VAL:O	2.08	0.52
1:XA:1073:U:O2	2:XB:104:ASN:ND2	2.40	0.52
36:YD:67:PHE:HE1	36:YD:106:ILE:HD11	1.75	0.52
37:YE:176:ILE:HG13	37:YE:181:LEU:HB2	1.92	0.52
39:YG:170:ARG:NH1	39:YG:174:GLU:OE1	2.43	0.52
7:QG:13:GLN:OE1	9:QI:42:ARG:NH2	2.42	0.52
29:R5:46:CYS:HB3	29:R5:49:CYS:SG	2.50	0.52
34:RA:979:G:N2	34:RA:985:C:N4	2.56	0.52
34:RA:1026:U:C4	34:RA:1125:G:O6	2.62	0.52
34:RA:1815:A:OP2	36:RD:54:ARG:NH2	2.42	0.52
34:RA:2224:G:OP1	36:RD:268:ARG:HD3	2.10	0.52
34:RA:2448:A:OP2	34:RA:2498:C:OP2	2.27	0.52
39:RG:41:GLN:HB2	39:RG:90:LEU:HB2	1.92	0.52
48:RT:6:LEU:HA	48:RT:9:LEU:HB2	1.91	0.52
34:YA:605:C:O2	34:YA:657:U:O2'	2.26	0.52
34:YA:1478:G:H2'	34:YA:1479:G:H8	1.74	0.52
34:YA:1701:A:OP1	34:YA:1763:G:N1	2.37	0.52
34:YA:2099:U:O4	34:YA:2190:G:O6	2.27	0.52
34:YA:2573:C:OP1	34:YA:2575:C:OP2	2.26	0.52
1:QA:864:A:H2'	1:QA:865:A:C8	2.45	0.52
1:QA:1005:A:O2'	1:QA:1036:G:N2	2.43	0.52
1:QA:1358:U:H5"	14:QN:35:ARG:H	1.74	0.52
38:RF:65:TRP:NE1	38:RF:73:ALA:O	2.42	0.52
43:RO:24:VAL:HG13	43:RO:33:ALA:HB2	1.91	0.52
54:RZ:24:LEU:HD11	54:RZ:83:PRO:HB2	1.90	0.52
54:RZ:27:VAL:HG22	54:RZ:85:HIS:HE1	1.74	0.52
1:XA:708:C:H2'	1:XA:709:G:H8	1.75	0.52
5:XE:110:LEU:HD13	5:XE:118:ILE:HG21	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:958:U:O2	35:YB:89(B):A:O2'	2.25	0.52
34:YA:1891:G:HO2'	34:YA:2235:G:HO2'	1.56	0.52
45:YQ:21:THR:OG1	45:YQ:22:LYS:N	2.42	0.52
1:QA:789:U:H6	1:QA:789:U:O5'	1.93	0.52
1:QA:859:A:OP2	1:QA:869:G:N1	2.39	0.52
1:QA:951:G:N3	1:QA:970:C:O2'	2.40	0.52
9:QI:112:LYS:HA	9:QI:119:ALA:HB2	1.92	0.52
24:R0:66:VAL:O	24:R0:81:VAL:HA	2.10	0.52
25:R1:10:LYS:NZ	25:R1:65:SER:OG	2.41	0.52
34:RA:615:G:N2	38:RF:44:ARG:O	2.43	0.52
34:RA:1247:A:N6	34:RA:1249:U:O2	2.43	0.52
34:RA:2208:U:O2'	36:RD:150:LYS:O	2.28	0.52
34:RA:2506:U:O2	34:RA:2506:U:H2'	2.10	0.52
34:RA:2641:G:H2'	34:RA:2642:G:C8	2.44	0.52
1:XA:719:C:H1'	18:XR:49:LYS:HB2	1.90	0.52
31:Y7:28:ARG:NH2	34:YA:1368:G:OP1	2.42	0.52
32:Y8:49:VAL:HG23	32:Y8:53:PRO:HD3	1.91	0.52
34:YA:617:G:OP2	38:YF:43:LYS:NZ	2.32	0.52
12:QL:85:ILE:HD11	12:QL:98:TYR:HB3	1.92	0.52
34:RA:2010:G:H5"	51:RW:42:ARG:HB2	1.92	0.52
34:RA:2258:C:O2'	34:RA:2427:C:OP2	2.28	0.52
34:RA:2375:G:N2	34:RA:2378:A:OP2	2.41	0.52
48:RT:30:VAL:HG12	48:RT:86:ILE:HG23	1.92	0.52
1:XA:8:A:N6	4:XD:205:GLU:O	2.43	0.52
1:XA:1345:U:H5"	9:XI:120:ARG:HH11	1.75	0.52
8:XH:121:ASP:OD1	8:XH:121:ASP:N	2.42	0.52
9:XI:25:LYS:HE3	9:XI:60:ASP:HB3	1.92	0.52
34:YA:780:G:N2	34:YA:783:A:H62	2.08	0.52
34:YA:831:G:O2'	44:YP:38:GLN:OE1	2.28	0.52
34:YA:2292:C:OP2	47:YS:17:ARG:NH1	2.42	0.52
2:QB:61:LEU:HD21	2:QB:68:ILE:HD11	1.91	0.52
5:QE:147:ASP:HA	5:QE:150:ARG:HD2	1.92	0.52
18:QR:30:ASP:HB3	18:QR:33:ASP:HB2	1.92	0.52
33:R9:27:CYS:SG	33:R9:28:GLU:N	2.83	0.52
34:RA:579:G:O2'	34:RA:2019:A:OP1	2.27	0.52
45:RQ:81:VAL:O	45:RQ:82:ARG:NE	2.34	0.52
1:XA:1080:A:H5'	5:XE:14:ARG:HH21	1.74	0.52
1:XA:1172:C:H2'	1:XA:1173:G:H8	1.74	0.52
1:XA:1255:G:O2'	1:XA:1258:G:N3	2.36	0.52
7:XG:92:SER:O	7:XG:96:GLN:HB2	2.10	0.52
34:YA:873:G:N2	34:YA:905:U:O2	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2019:A:O2'	49:YU:34:LYS:NZ	2.43	0.52
1:QA:1040:U:H2'	1:QA:1041:A:H8	1.75	0.52
4:QD:122:ARG:NH1	4:QD:122:ARG:O	2.43	0.52
34:RA:372:G:N2	34:RA:401:A:OP2	2.37	0.52
34:RA:2144:U:O2'	34:RA:2147:G:O6	2.28	0.52
42:RN:35:ARG:HG3	42:RN:37:LYS:HG2	1.91	0.52
44:RP:84:ASN:ND2	44:RP:117:GLU:OE2	2.43	0.52
2:XB:175:ARG:HH22	2:XB:179:LYS:HZ1	1.58	0.52
5:XE:76:ILE:HB	5:XE:142:LEU:HD21	1.92	0.52
1:QA:395:C:N4	1:QA:396:G:O6	2.43	0.51
1:QA:1022:G:H2'	1:QA:1023:G:H8	1.75	0.51
1:QA:1286:A:N6	1:QA:1355:G:OP1	2.44	0.51
4:QD:15:GLU:OE2	4:QD:66:ARG:NH2	2.42	0.51
14:QN:24:CYS:HB2	14:QN:28:GLY:H	1.73	0.51
34:RA:385:C:O2'	34:RA:388:G:N2	2.42	0.51
43:RO:23:ARG:NH2	43:RO:28:SER:O	2.43	0.51
47:RS:26:LEU:O	47:RS:88:ASP:HB3	2.10	0.51
53:RY:76:CYS:HB2	53:RY:99:CYS:SG	2.51	0.51
1:XA:1266:G:N2	1:XA:1269:A:OP2	2.35	0.51
3:XC:22:TRP:HA	10:XJ:93:GLY:HA2	1.92	0.51
34:YA:2846:G:N1	34:YA:2871:C:O2	2.43	0.51
35:YB:44:G:O2'	35:YB:47:C:N4	2.43	0.51
36:YD:8:PRO:HB3	36:YD:14:ARG:HG2	1.92	0.51
38:YF:198:ALA:HA	38:YF:201:VAL:HG12	1.91	0.51
40:YH:2:SER:O	40:YH:2:SER:OG	2.24	0.51
1:QA:313:A:H2'	1:QA:314:C:C6	2.46	0.51
5:QE:116:THR:OG1	5:QE:117:ASP:OD2	2.29	0.51
34:RA:981:A:C2	34:RA:2027:G:N3	2.75	0.51
53:RY:67:LEU:HD22	53:RY:71:LYS:HD2	1.91	0.51
1:XA:925:G:H1	1:XA:1391:U:H3	1.58	0.51
13:XM:82:MET:O	13:XM:93:ARG:NH2	2.43	0.51
16:XP:4:ILE:HB	16:XP:66:PRO:HB3	1.92	0.51
37:YE:78:LEU:HG	37:YE:79:ARG:HD2	1.91	0.51
48:YT:19:LEU:HD22	48:YT:86:ILE:HD12	1.92	0.51
1:QA:377:G:H2'	1:QA:378:G:H8	1.75	0.51
1:QA:392:G:OP2	16:QP:8:ARG:NH2	2.37	0.51
2:QB:84:GLU:OE2	2:QB:87:ARG:NH2	2.43	0.51
28:R4:26:SER:OG	28:R4:27:THR:N	2.43	0.51
34:RA:1216:G:OP2	49:RU:12:ARG:NH2	2.40	0.51
34:RA:1651:G:H4'	46:RR:39:PRO:HG2	1.92	0.51
40:RH:103:LEU:HG	40:RH:123:PHE:CE1	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RI:83:ALA:C	41:RI:89:TYR:CE2	2.88	0.51
45:RQ:21:THR:OG1	45:RQ:22:LYS:N	2.43	0.51
50:RV:8:GLY:O	50:RV:10:LYS:NZ	2.42	0.51
1:XA:639:G:H2'	1:XA:640:A:H8	1.74	0.51
4:XD:187:ARG:NH1	4:XD:188:LEU:O	2.43	0.51
30:Y6:34:LEU:N	30:Y6:51:GLU:OE1	2.44	0.51
45:YQ:67:ARG:O	45:YQ:101:ARG:NH2	2.44	0.51
30:R6:6:ARG:NH1	30:R6:24:GLU:OE2	2.43	0.51
34:RA:566:U:H5"	44:RP:29:LYS:CE	2.40	0.51
34:RA:1824:G:OP1	36:RD:52:ARG:NH2	2.38	0.51
40:RH:103:LEU:CG	40:RH:123:PHE:CE1	2.94	0.51
41:RI:86:THR:HA	41:RI:123:LEU:CB	2.40	0.51
47:RS:6:ALA:HA	47:RS:9:ARG:HG2	1.92	0.51
1:XA:235:C:H2'	1:XA:236:G:H8	1.75	0.51
1:XA:1074:G:H1	1:XA:1083:U:H3	1.58	0.51
34:YA:584:C:OP2	49:YU:10:ARG:NH2	2.43	0.51
34:YA:807:U:O2'	34:YA:2060:A:N1	2.40	0.51
34:YA:1286:A:N6	34:YA:1289:C:C2	2.78	0.51
34:YA:1792:G:H5'	36:YD:205:VAL:HG13	1.93	0.51
1:QA:123:C:OP1	1:QA:311:C:O2'	2.27	0.51
1:QA:427:U:OP1	4:QD:13:ARG:NH2	2.40	0.51
1:QA:1151:A:H5'	10:QJ:41:PRO:HA	1.92	0.51
1:QA:1238:A:H62	1:QA:1301:U:H3	1.59	0.51
1:QA:1259:C:O2'	1:QA:1283:G:N2	2.38	0.51
7:QG:69:VAL:HG13	7:QG:100:ALA:HB1	1.93	0.51
34:RA:971:C:O2'	34:RA:983:A:N3	2.38	0.51
1:XA:1367:C:H4'	10:XJ:48:THR:HG21	1.90	0.51
22:XV:55:U:N3	22:XV:58:A:OP2	2.38	0.51
28:Y4:6:HIS:CE1	39:YG:67:LYS:H	2.28	0.51
32:Y8:30:ARG:HE	44:YP:62:LEU:HD12	1.76	0.51
34:YA:2152:G:H2'	34:YA:2153:G:H8	1.75	0.51
53:YY:76:CYS:SG	53:YY:79:CYS:SG	3.08	0.51
34:RA:748:G:OP1	34:RA:2612:C:N4	2.44	0.51
34:RA:1567:A:OP2	36:RD:84:TYR:OH	2.28	0.51
34:RA:2795:G:N2	34:RA:2799:A:OP2	2.44	0.51
41:RI:86:THR:HA	41:RI:123:LEU:HB2	1.92	0.51
41:RI:94:ALA:HA	41:RI:97:ILE:HD12	1.93	0.51
42:RN:3:THR:HG21	49:RU:61:TRP:HE1	1.75	0.51
1:XA:59:A:H3'	1:XA:331:G:H22	1.74	0.51
1:XA:935:A:O2'	1:XA:1383:C:N3	2.43	0.51
1:XA:992:U:H3	1:XA:1044:A:H62	1.57	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:26:ALA:O	10:XJ:84:GLN:NE2	2.43	0.51
36:YD:108:PRO:HB3	36:YD:143:HIS:CE1	2.46	0.51
52:YX:25:LYS:HA	52:YX:81:VAL:O	2.11	0.51
1:QA:15:G:O6	1:QA:920:U:O4	2.29	0.51
1:QA:320:C:O2'	1:QA:1435:G:O2'	2.26	0.51
1:QA:778:G:O6	1:QA:804:U:O4	2.28	0.51
34:RA:1990:C:H2'	34:RA:1991:U:C6	2.45	0.51
34:RA:2169:A:N6	34:RA:2170:A:N1	2.59	0.51
37:RE:110:GLY:HA2	37:RE:161:GLY:HA3	1.92	0.51
39:RG:52:ILE:HG22	39:RG:55:LYS:HD2	1.92	0.51
1:XA:21:G:H2'	1:XA:22:G:C8	2.46	0.51
2:XB:198:ASP:OD1	8:XH:68:ARG:NH2	2.44	0.51
27:Y3:31:LEU:HG	34:YA:989:G:OP1	2.10	0.51
34:YA:693:C:O2'	34:YA:1353:A:N3	2.37	0.51
34:YA:730:C:OP1	34:YA:1775:U:O2'	2.25	0.51
34:YA:1012:U:OP2	49:YU:70:ARG:NH2	2.39	0.51
34:YA:1435:G:N2	34:YA:1477:A:O2'	2.42	0.51
34:YA:1824:G:N3	36:YD:254:THR:OG1	2.44	0.51
42:YN:97:ARG:HA	42:YN:100:GLU:HB2	1.92	0.51
1:QA:249:U:O4	1:QA:275:G:O6	2.28	0.51
1:QA:1081:G:H2'	1:QA:1082:G:H8	1.75	0.51
8:QH:32:LYS:HA	8:QH:35:ILE:HD12	1.92	0.51
5:XE:102:ALA:HB1	5:XE:106:PRO:HG2	1.93	0.51
34:YA:1670:C:H6	34:YA:1670:C:O5'	1.94	0.51
1:QA:878:G:H5'	8:QH:89:PRO:HG2	1.92	0.51
1:QA:958:A:N3	1:QA:985:C:O2'	2.42	0.51
1:QA:1233:G:O2'	1:QA:1365:G:OP1	2.28	0.51
32:R8:30:ARG:O	32:R8:30:ARG:HG2	2.11	0.51
34:RA:1041:C:H2'	34:RA:1042:G:H8	1.76	0.51
34:RA:2014:A:O3'	51:RW:92:ARG:NH2	2.44	0.51
36:RD:147:LEU:HD12	36:RD:148:GLU:HG3	1.93	0.51
39:RG:121:ASN:O	39:RG:131:TYR:OH	2.26	0.51
6:XF:9:VAL:HB	6:XF:87:ARG:HB2	1.92	0.51
34:YA:960:A:C8	34:YA:962:G:C8	2.99	0.51
38:YF:63:LYS:NZ	38:YF:75:HIS:O	2.33	0.51
38:YF:154:VAL:HG22	38:YF:191:ARG:HB2	1.93	0.51
1:QA:556:C:H2'	1:QA:557:G:H8	1.76	0.51
5:QE:10:MET:HA	5:QE:32:VAL:HG12	1.93	0.51
12:QL:39:VAL:HG12	12:QL:57:LYS:HG2	1.93	0.51
12:QL:104:VAL:O	12:QL:105:TYR:CG	2.57	0.51
22:QV:36:G:C2	23:QX:17:C:O2	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:1288:U:O3'	34:RA:1647:G:N2	2.44	0.51
44:RP:57:THR:OG1	44:RP:58:THR:N	2.44	0.51
48:RT:3:ARG:HG3	48:RT:6:LEU:HB2	1.92	0.51
1:XA:352:C:O2'	1:XA:354:G:OP1	2.24	0.51
1:XA:1537:U:H3	23:XX:9:G:H1	1.59	0.51
2:XB:167:PRO:O	2:XB:171:ALA:HB2	2.11	0.51
3:XC:58:GLU:HB2	3:XC:65:ALA:HB3	1.91	0.51
34:YA:547:A:H2'	34:YA:548:A:C8	2.46	0.51
1:QA:235:C:H2'	1:QA:236:G:H8	1.75	0.50
1:QA:1157:A:O2'	1:QA:1158:C:O2	2.28	0.50
3:QC:150:LYS:HB3	3:QC:201:TYR:HB2	1.93	0.50
32:R8:8:LYS:HB3	32:R8:12:LYS:HE3	1.94	0.50
34:RA:2397:G:O6	34:RA:2419:U:O2	2.29	0.50
36:RD:175:LEU:O	36:RD:182:LEU:HA	2.12	0.50
42:RN:39:ARG:NH2	42:RN:41:ASP:OD1	2.44	0.50
47:RS:35:ILE:HD11	47:RS:97:ARG:HD2	1.92	0.50
1:XA:428:G:OP2	4:XD:10:ARG:NH1	2.39	0.50
1:XA:672:U:H2'	1:XA:673:G:H8	1.76	0.50
1:XA:828:A:H62	1:XA:858:G:H21	1.59	0.50
1:XA:1338:G:N3	22:XV:41:A:O2'	2.44	0.50
4:XD:19:LEU:HB3	4:XD:21:LEU:HD23	1.92	0.50
7:XG:111:ARG:HD3	7:XG:112:PRO:HD2	1.93	0.50
34:YA:2508:G:O2'	34:YA:2554:U:O2'	2.29	0.50
41:YI:1:MET:HG2	41:YI:23:PRO:HB3	1.92	0.50
12:QL:46:LYS:HD2	12:QL:47:LYS:HB2	1.93	0.50
22:QV:49:G:H1	22:QV:65:U:H3	1.59	0.50
53:RY:19:LYS:NZ	53:RY:20:TYR:CE2	2.71	0.50
1:XA:373:A:H61	1:XA:391:G:H1'	1.75	0.50
1:XA:1034:G:H2'	1:XA:1035:A:C8	2.47	0.50
3:XC:157:ILE:HD12	3:XC:164:ARG:HG3	1.94	0.50
8:XH:21:LYS:O	8:XH:65:TYR:OH	2.28	0.50
34:YA:1286:A:C6	34:YA:1289:C:C2	2.99	0.50
1:QA:864:A:O2'	1:QA:1078:U:O4	2.26	0.50
2:QB:111:ARG:HH11	2:QB:114:ARG:HH12	1.60	0.50
2:QB:208:ILE:O	2:QB:212:GLN:HB2	2.12	0.50
3:QC:57:ILE:HG22	3:QC:66:VAL:HG22	1.93	0.50
34:RA:58:G:H5'	52:RX:74:PRO:HB3	1.92	0.50
1:XA:816:A:OP2	1:XA:1526:G:O2'	2.26	0.50
1:XA:1500:A:H5"	1:XA:1508:G:H5"	1.93	0.50
40:YH:85:LYS:HB3	40:YH:133:VAL:HG13	1.93	0.50
34:RA:321:G:O2'	34:RA:340:A:N3	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:1953:A:O2'	34:RA:2559:C:O2	2.29	0.50
34:RA:2185:C:H2'	34:RA:2186:G:H8	1.77	0.50
38:RF:100:THR:O	38:RF:100:THR:OG1	2.30	0.50
1:XA:410:G:N2	1:XA:432:A:H62	2.10	0.50
8:XH:38:ILE:HD12	8:XH:41:ARG:HH21	1.76	0.50
34:YA:530:G:C6	34:YA:2022:U:OP1	2.65	0.50
34:YA:662:G:H5"	44:YP:17:LYS:HG2	1.92	0.50
1:QA:603:U:H3	1:QA:635:G:H1	1.60	0.50
34:RA:1297:C:H2'	34:RA:1298:C:C6	2.46	0.50
34:RA:2178:C:H2'	34:RA:2179:C:H6	1.76	0.50
1:XA:318:G:O2'	1:XA:1468:A:O2'	2.27	0.50
1:XA:1386:G:H2'	1:XA:1387:G:C8	2.43	0.50
3:XC:19:GLU:O	3:XC:40:ARG:NH2	2.44	0.50
20:XT:75:ASN:N	20:XT:75:ASN:OD1	2.44	0.50
24:Y0:41:ARG:NH2	34:YA:2387:U:O2'	2.45	0.50
34:YA:581:C:H2'	34:YA:582:G:C8	2.47	0.50
34:YA:2148:G:H2'	34:YA:2149:G:H8	1.76	0.50
40:YH:113:VAL:HG11	40:YH:151:ILE:HD12	1.94	0.50
52:YX:53:LYS:HG2	52:YX:82:GLN:HB3	1.93	0.50
1:QA:692:U:OP1	11:QK:124:LYS:NZ	2.37	0.50
1:QA:1261:A:H62	1:QA:1274:G:N2	2.09	0.50
1:QA:1342:C:H2'	1:QA:1343:G:C8	2.47	0.50
1:QA:1484:C:HO2'	34:RA:1960:A:HO2'	1.53	0.50
13:QM:84:ILE:HG12	19:QS:66:MET:CE	2.41	0.50
31:R7:34:ARG:NH1	34:RA:466:A:OP1	2.45	0.50
34:RA:505:A:OP2	34:RA:1235:G:OP1	2.29	0.50
34:RA:2490:G:N2	34:RA:2490:G:OP2	2.45	0.50
1:XA:159:G:H21	1:XA:161:A:H8	1.60	0.50
1:XA:181:G:N2	1:XA:182:U:O4	2.36	0.50
1:XA:745:C:OP1	1:XA:851:G:O2'	2.30	0.50
2:XB:118:LEU:HD23	2:XB:142:LEU:HB2	1.94	0.50
18:XR:32:ARG:HA	18:XR:69:THR:HG21	1.92	0.50
28:Y4:16:CYS:HB3	28:Y4:33:VAL:HB	1.93	0.50
34:YA:458:G:O2'	34:YA:469:G:O6	2.29	0.50
34:YA:630:G:N2	34:YA:633:A:OP2	2.42	0.50
34:YA:2076:U:OP2	34:YA:2238:G:N2	2.37	0.50
34:YA:2808:U:C2	34:YA:2892:A:N6	2.79	0.50
1:QA:1338:G:N3	22:QV:41:A:O2'	2.44	0.50
29:R5:40:LYS:NZ	29:R5:44:THR:O	2.39	0.50
34:RA:1422:G:H1	34:RA:1576:U:H3	1.60	0.50
34:RA:2751:G:C4	40:RH:3:ARG:CB	2.90	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RD:69:ARG:NH1	36:RD:128:GLY:O	2.42	0.50
42:RN:9:VAL:HG11	42:RN:39:ARG:HH12	1.77	0.50
42:RN:112:LEU:O	42:RN:116:LEU:HB2	2.10	0.50
4:XD:107:ARG:HB3	4:XD:174:LEU:HD11	1.93	0.50
34:YA:255:A:O2'	34:YA:384:U:OP1	2.27	0.50
34:YA:305:U:O4	34:YA:312:G:O6	2.30	0.50
34:YA:919:G:N2	34:YA:2269:A:OP2	2.44	0.50
37:YE:101:ARG:NE	37:YE:171:GLU:OE2	2.41	0.50
38:YF:10:PRO:HB3	38:YF:17:ARG:HH21	1.76	0.50
5:QE:90:VAL:O	5:QE:120:THR:OG1	2.27	0.50
19:QS:10:PHE:HZ	19:QS:15:LEU:HD11	1.76	0.50
34:RA:947:G:H2'	34:RA:948:G:H8	1.75	0.50
34:RA:1405:U:H2'	34:RA:1406:U:H6	1.76	0.50
34:RA:1654:A:N1	34:RA:2048:G:O2'	2.44	0.50
34:RA:2343:C:O2'	34:RA:2373:G:O2'	2.21	0.50
34:RA:2572:A:OP1	34:RA:2574:G:O2'	2.25	0.50
1:XA:1074:G:O2'	1:XA:1101:A:N1	2.41	0.50
5:XE:81:GLU:HG2	5:XE:90:VAL:HG23	1.94	0.50
9:XI:22:GLY:N	9:XI:58:HIS:O	2.37	0.50
10:XJ:53:PRO:HB3	14:XN:42:ILE:HG12	1.94	0.50
33:Y9:27:CYS:HB3	33:Y9:32:HIS:HB2	1.94	0.50
34:YA:28:A:HO2'	34:YA:582:G:HO2'	1.56	0.50
34:YA:117:G:OP2	34:YA:119:A:O2'	2.27	0.50
34:YA:2692:C:O2	34:YA:2847:U:O2'	2.27	0.50
51:YW:86:LEU:HD22	51:YW:96:ILE:HD11	1.93	0.50
53:YY:28:LYS:NZ	53:YY:64:GLU:OE2	2.35	0.50
1:QA:279:A:OP2	17:QQ:95:TYR:OH	2.27	0.50
34:RA:764:A:H5'	36:RD:210:GLY:HA2	1.93	0.50
36:RD:126:GLN:O	36:RD:129:ASN:ND2	2.41	0.50
1:XA:126:G:OP1	1:XA:633:G:N2	2.42	0.50
1:XA:444:C:H2'	1:XA:445:G:C8	2.46	0.50
20:XT:74:LYS:O	20:XT:76:ALA:N	2.44	0.50
26:Y2:58:ALA:O	26:Y2:62:THR:OG1	2.30	0.50
34:YA:962:G:H2'	34:YA:963:U:C6	2.47	0.50
34:YA:1682:G:OP1	34:YA:1699:G:N1	2.44	0.50
1:QA:243:A:N6	1:QA:281:G:O2'	2.43	0.49
1:QA:1305:G:OP2	21:QU:2:GLY:N	2.45	0.49
1:QA:1510:U:H3	1:QA:1525:G:H1	1.59	0.49
2:QB:146:GLN:HG3	2:QB:153:ARG:HH22	1.77	0.49
2:QB:178:ARG:NH2	2:QB:198:ASP:OD1	2.39	0.49
13:QM:16:ASP:OD1	13:QM:16:ASP:N	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:1882:C:H3'	34:RA:1883:G:H8	1.75	0.49
8:XH:19:VAL:HG23	8:XH:21:LYS:HG3	1.94	0.49
29:Y5:25:LEU:HG	51:YW:19:LEU:HD12	1.94	0.49
35:YB:36:C:H42	35:YB:49:C:H1'	1.77	0.49
1:XA:1122:U:O4	1:XA:1123:A:N6	2.45	0.49
34:YA:1791:A:N6	34:YA:1828:G:O2'	2.44	0.49
34:YA:2729:G:H1'	37:YE:187:ALA:HB2	1.94	0.49
37:YE:44:TYR:OH	37:YE:80:GLU:OE2	2.27	0.49
43:YO:63:VAL:HG12	43:YO:106:LEU:HD21	1.93	0.49
1:QA:1117:G:H21	1:QA:1180:A:H1'	1.76	0.49
1:QA:1203:C:H2'	1:QA:1204:A:H8	1.78	0.49
1:QA:1304:G:OP1	21:QU:10:ARG:NH2	2.45	0.49
4:QD:61:LYS:HD3	4:QD:206:PHE:CD2	2.46	0.49
20:QT:56:MET:HG3	20:QT:84:LEU:HD21	1.94	0.49
20:QT:66:ALA:O	20:QT:71:THR:OG1	2.28	0.49
24:R0:12:ASN:ND2	34:RA:2278:A:OP2	2.45	0.49
28:R4:5:ILE:HB	39:RG:67:LYS:HD2	1.94	0.49
1:XA:757:U:O2'	1:XA:879:C:O2	2.30	0.49
1:XA:1071:C:H2'	1:XA:1072:G:H8	1.76	0.49
1:XA:1124:G:H1'	10:XJ:38:ILE:HD12	1.95	0.49
4:XD:88:VAL:HG13	5:XE:97:GLY:HA3	1.94	0.49
5:XE:101:ILE:O	5:XE:120:THR:OG1	2.30	0.49
7:XG:58:PRO:HA	7:XG:61:VAL:HG12	1.92	0.49
33:Y9:27:CYS:SG	33:Y9:28:GLU:N	2.84	0.49
34:YA:124:G:N2	34:YA:126:A:O2'	2.46	0.49
34:YA:1653:G:O6	46:YR:11:ASN:N	2.43	0.49
34:YA:1901:A:OP2	36:YD:255:LYS:NZ	2.34	0.49
34:YA:2198:A:OP1	41:YI:33:ARG:NH2	2.46	0.49
1:QA:558:G:OP2	1:QA:559:A:O2'	2.26	0.49
1:QA:776:G:N2	1:QA:802:A:OP2	2.45	0.49
23:QX:3:C:H2'	23:QX:4:A:C8	2.47	0.49
24:R0:72:ARG:HE	24:R0:75:LEU:HD12	1.76	0.49
25:R1:90:ILE:HA	25:R1:94:LEU:CG	2.42	0.49
34:RA:1147:C:H2'	34:RA:1148:A:H8	1.77	0.49
1:XA:269:C:H2'	1:XA:270:A:H8	1.77	0.49
23:XX:6:G:H2'	23:XX:7:G:H8	1.75	0.49
34:YA:1668:A:H62	34:YA:1991:U:H3	1.60	0.49
37:YE:1:MET:N	37:YE:83:ASP:O	2.36	0.49
54:YZ:6:LYS:NZ	54:YZ:43:GLU:OE1	2.39	0.49
1:QA:1128:C:O2'	1:QA:1130:A:N7	2.45	0.49
30:R6:18:ARG:O	30:R6:20:ASN:ND2	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:270(S):G:H2'	34:RA:270(T):G:H8	1.78	0.49
34:RA:290:G:H1	34:RA:350:U:H3	1.60	0.49
34:RA:586:A:C5'	38:RF:89:VAL:HG21	2.37	0.49
34:RA:2148:G:H2'	34:RA:2149:G:C8	2.48	0.49
34:RA:2306:C:H2'	34:RA:2307:G:H21	1.76	0.49
40:RH:89:ILE:HD12	40:RH:131:VAL:HG22	1.94	0.49
2:XB:67:THR:HA	2:XB:90:MET:HE1	1.93	0.49
7:XG:140:ASP:OD2	7:XG:143:ARG:NH1	2.45	0.49
36:YD:97:TYR:HB2	36:YD:101:GLU:O	2.13	0.49
1:QA:766:A:N6	1:QA:813:U:N3	2.48	0.49
1:QA:1268:A:H5'	21:QU:20:LYS:HG2	1.95	0.49
13:QM:84:ILE:HG12	19:QS:66:MET:SD	2.53	0.49
33:R9:11:CYS:SG	33:R9:14:CYS:N	2.85	0.49
34:RA:1668:A:N3	34:RA:1670:C:N4	2.60	0.49
39:RG:135:LEU:O	39:RG:154:GLY:HA3	2.13	0.49
50:RV:45:THR:O	50:RV:45:THR:CG2	2.55	0.49
1:XA:186(A):C:H5'	20:XT:78:ALA:HB1	1.95	0.49
1:XA:652:U:O4	1:XA:752:G:O2'	2.28	0.49
7:XG:115:ARG:HB2	7:XG:118:VAL:HG12	1.94	0.49
7:XG:118:VAL:HG22	7:XG:122:HIS:CE1	2.48	0.49
20:XT:41:ILE:HD13	20:XT:87:LYS:HG2	1.95	0.49
26:Y2:16:LEU:O	26:Y2:67:LYS:NZ	2.45	0.49
28:Y4:31:ILE:HG21	39:YG:142:PRO:HB2	1.93	0.49
29:Y5:32:PRO:N	29:Y5:32:PRO:C	2.61	0.49
32:Y8:10:ALA:O	32:Y8:14:VAL:HB	2.13	0.49
34:YA:793:A:OP2	34:YA:2071:A:O2'	2.30	0.49
34:YA:959:A:N3	34:YA:2457:U:O2'	2.36	0.49
34:YA:2245:U:H5'	34:YA:2246:G:H5'	1.93	0.49
44:YP:52:GLU:OE1	44:YP:55:ARG:NH1	2.46	0.49
1:QA:475:G:H2'	1:QA:476:G:H8	1.78	0.49
1:QA:762:C:H2'	1:QA:763:G:H8	1.76	0.49
3:QC:35:GLU:HA	3:QC:38:ARG:HH21	1.77	0.49
6:QF:35:ALA:HB1	6:QF:65:VAL:HG21	1.95	0.49
34:RA:690:G:H21	36:RD:43:ARG:HH21	1.61	0.49
34:RA:1652:A:C2	34:RA:2006:C:N3	2.80	0.49
1:XA:557:G:H2'	1:XA:558:G:C8	2.48	0.49
1:XA:925:G:O2'	1:XA:927:G:OP1	2.24	0.49
6:XF:61:LEU:HD23	6:XF:63:TYR:HE2	1.77	0.49
19:XS:12:ASP:HB2	19:XS:37:ARG:HE	1.77	0.49
19:XS:40:ILE:HD13	19:XS:71:LEU:HD21	1.95	0.49
34:YA:71:A:N3	34:YA:73:A:N6	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:288:C:H2'	34:YA:289:A:H8	1.77	0.49
34:YA:577:G:O2'	34:YA:1254:A:OP1	2.31	0.49
34:YA:1153:C:H5'	49:YU:76:TYR:HE2	1.77	0.49
34:YA:1212:G:O2'	34:YA:1236:G:N2	2.39	0.49
34:YA:2092:U:OP2	41:YI:27:ARG:NH2	2.42	0.49
34:YA:2131:G:N3	34:YA:2158:A:N6	2.61	0.49
1:QA:1049:U:H4'	1:QA:1050:G:H5"	1.94	0.49
34:RA:577:G:O2'	34:RA:1254:A:OP1	2.30	0.49
34:RA:1224:G:N2	34:RA:1227:A:OP2	2.36	0.49
34:RA:1265:A:H61	34:RA:2013:A:H5"	1.77	0.49
34:RA:1837:C:O2'	34:RA:1927:A:N3	2.36	0.49
43:RO:88:ASN:HD21	43:RO:90:GLN:HB2	1.78	0.49
51:RW:22:ASP:OD1	51:RW:25:ARG:NH1	2.45	0.49
1:XA:411:A:OP1	4:XD:30:LYS:NZ	2.45	0.49
1:XA:474:G:H2'	1:XA:475:G:H8	1.77	0.49
4:XD:56:VAL:HG13	4:XD:57:ARG:HD2	1.94	0.49
4:XD:72:GLU:OE2	4:XD:207:TYR:OH	2.19	0.49
34:YA:676:A:HO2'	34:YA:2442:C:HO2'	1.47	0.49
34:YA:2744:G:H21	40:YH:143:GLN:HE22	1.61	0.49
45:YQ:66:ILE:HA	45:YQ:104:PHE:HA	1.95	0.49
1:QA:126:G:OP1	1:QA:605:U:O2'	2.25	0.49
1:QA:1096:C:H2'	1:QA:1097:C:H6	1.78	0.49
3:QC:47:LEU:HD11	3:QC:87:LEU:HD21	1.95	0.49
4:QD:79:PHE:HE1	4:QD:204:ILE:HD13	1.77	0.49
34:RA:1116:C:H2'	34:RA:1117:G:C8	2.48	0.49
34:RA:1181:C:H2'	34:RA:1182:A:H8	1.78	0.49
34:RA:2581:G:N2	34:RA:2581:G:OP2	2.44	0.49
45:RQ:36:ALA:HB1	45:RQ:127:ILE:HG21	1.94	0.49
1:XA:14:U:N3	1:XA:17:U:OP2	2.42	0.49
1:XA:107:G:OP1	1:XA:325:A:N6	2.46	0.49
45:YQ:54:MET:HE1	45:YQ:104:PHE:HB3	1.94	0.49
1:QA:59:A:H5"	1:QA:60:A:H5"	1.95	0.49
1:QA:1281:U:H5"	1:QA:1282:C:H5	1.78	0.49
5:QE:87:SER:OG	5:QE:125:SER:OG	2.27	0.49
25:R1:78:LYS:HZ3	34:RA:270(T):G:H1'	1.78	0.49
34:RA:137(B):G:O6	34:RA:139:G:O2'	2.29	0.49
34:RA:180:G:N1	34:RA:214:G:O6	2.46	0.49
34:RA:441:U:O2	38:RF:46:ARG:NH2	2.45	0.49
34:RA:848:G:H2'	34:RA:849:A:C8	2.48	0.49
34:RA:975:G:N2	34:RA:1156:A:O2'	2.46	0.49
52:RX:72:LYS:NZ	52:RX:73:ARG:O	2.38	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:RY:76:CYS:SG	53:RY:79:CYS:CA	2.94	0.49
1:XA:191:G:N2	20:XT:103:GLY:O	2.34	0.49
1:XA:1384:C:H2'	1:XA:1385:G:H8	1.77	0.49
15:XO:10:LYS:HA	15:XO:13:GLN:HG2	1.95	0.49
48:YT:28:VAL:HG12	48:YT:88:ILE:HA	1.95	0.49
1:QA:1270:C:H2'	1:QA:1271:G:C8	2.48	0.48
2:QB:69:LEU:HB3	2:QB:162:ILE:HG22	1.94	0.48
34:RA:566:U:H5"	44:RP:29:LYS:NZ	2.28	0.48
34:RA:820:A:N3	34:RA:943:U:O2'	2.39	0.48
34:RA:1086:A:O2'	34:RA:1087:G:N7	2.43	0.48
34:RA:1454:U:O2	46:RR:64:ARG:NE	2.41	0.48
34:RA:2751:G:N7	40:RH:2:SER:OG	2.46	0.48
54:RZ:163:LEU:HD22	54:RZ:167:PRO:HG3	1.95	0.48
1:XA:62:U:H3	1:XA:105:G:H1	1.61	0.48
1:XA:458(F):A:HO2'	16:XP:82:GLN:H	1.60	0.48
1:XA:714:G:H2'	1:XA:715:A:C8	2.48	0.48
1:XA:1500:A:OP1	1:XA:1508:G:OP1	2.31	0.48
13:XM:88:ARG:HD2	13:XM:98:VAL:HB	1.95	0.48
13:XM:91:ARG:NE	13:XM:97:PRO:O	2.46	0.48
34:YA:587:C:O2	44:YP:33:ARG:NH2	2.36	0.48
34:YA:1165:U:O4	34:YA:1184:G:O6	2.30	0.48
1:QA:570:G:H1'	1:QA:820:U:H5	1.77	0.48
4:QD:72:GLU:OE2	4:QD:207:TYR:OH	2.29	0.48
5:QE:84:PHE:N	5:QE:87:SER:O	2.45	0.48
17:QQ:66:SER:O	17:QQ:70:ARG:NH1	2.46	0.48
18:QR:59:SER:OG	18:QR:60:ALA:N	2.46	0.48
34:RA:560:C:O2	49:RU:49:HIS:NE2	2.46	0.48
34:RA:1315:C:O2'	34:RA:1392:A:N3	2.40	0.48
34:RA:2291:U:O4	34:RA:2341:G:O6	2.31	0.48
40:RH:3:ARG:HH12	40:RH:5:GLY:HA2	1.77	0.48
1:XA:1115:C:H1'	9:XI:111:ARG:HH21	1.78	0.48
1:XA:1175:G:H2'	1:XA:1176:A:H8	1.78	0.48
4:XD:20:TYR:HD1	4:XD:26:CYS:HB3	1.78	0.48
31:Y7:7:PRO:HA	34:YA:686:G:C8	2.47	0.48
33:Y9:14:CYS:HB3	33:Y9:27:CYS:HB2	1.95	0.48
34:YA:860:U:H1'	34:YA:2268:A:H5'	1.94	0.48
34:YA:2403:C:C4	34:YA:2415:G:C2	3.01	0.48
41:YI:129:THR:HG22	41:YI:137:PRO:HB3	1.95	0.48
54:YZ:24:LEU:HD23	54:YZ:41:LEU:HG	1.94	0.48
1:QA:129(B):G:O2'	1:QA:186(J):U:OP1	2.27	0.48
1:QA:1507:A:C2	1:QA:1530:G:N9	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:QT:71:THR:OG1	20:QT:72:LEU:N	2.43	0.48
34:RA:1024:G:HO2'	34:RA:1144:G:HO2'	1.59	0.48
40:RH:3:ARG:HG3	40:RH:3:ARG:O	2.13	0.48
43:RO:15:GLY:O	43:RO:47:ILE:N	2.45	0.48
53:RY:15:VAL:HA	53:RY:72:VAL:HA	1.94	0.48
1:XA:922:G:H2'	1:XA:923:A:C8	2.48	0.48
48:YT:31:SER:OG	48:YT:85:LYS:NZ	2.44	0.48
1:QA:1137:C:O2'	1:QA:1138:G:N2	2.46	0.48
1:QA:1291:G:H5'	7:QG:37:ASN:HD21	1.77	0.48
1:QA:1357:A:H5'	10:QJ:45:ARG:HH12	1.78	0.48
7:QG:122:HIS:HA	7:QG:125:MET:HE3	1.95	0.48
34:RA:358:U:H2'	34:RA:359:A:H8	1.79	0.48
34:RA:483:A:O2'	53:RY:49:VAL:O	2.30	0.48
34:RA:1608:A:C5	34:RA:1611:C:C4	3.01	0.48
34:RA:2195:C:H2'	34:RA:2196:C:C6	2.49	0.48
34:RA:2295:C:OP1	47:RS:10:ARG:NH1	2.46	0.48
44:RP:106:LEU:HD13	44:RP:112:LEU:HD13	1.95	0.48
1:XA:781:A:O2'	1:XA:1522:U:O2	2.30	0.48
1:XA:1230:C:H2'	1:XA:1231:G:H8	1.77	0.48
6:XF:82:ARG:HB3	6:XF:85:VAL:HG12	1.95	0.48
20:XT:73:HIS:HB3	20:XT:74:LYS:H	1.47	0.48
34:YA:675:A:OP1	38:YF:63:LYS:NZ	2.39	0.48
34:YA:2099:U:O2	34:YA:2190:G:N2	2.37	0.48
36:YD:108:PRO:HB3	36:YD:143:HIS:HE1	1.77	0.48
41:YI:77:LEU:HD13	41:YI:101:LEU:HB3	1.96	0.48
54:YZ:130:PRO:HA	54:YZ:133:ILE:HD11	1.96	0.48
1:QA:117:G:H8	1:QA:117:G:O5'	1.96	0.48
7:QG:111:ARG:NH1	7:QG:113:GLU:OE1	2.43	0.48
10:QJ:4:ILE:HG12	10:QJ:100:THR:HG22	1.96	0.48
11:QK:82:VAL:HG13	11:QK:108:ILE:HA	1.95	0.48
20:QT:54:LYS:HE3	20:QT:100:ILE:HG21	1.95	0.48
20:QT:67:ALA:O	20:QT:73:HIS:ND1	2.39	0.48
34:RA:1525:G:H2'	34:RA:1526:G:H8	1.77	0.48
34:RA:2489:G:O2'	34:RA:2518:A:N6	2.47	0.48
35:RB:75:G:H4'	54:RZ:36:LYS:HE2	1.96	0.48
54:RZ:61:LEU:HD23	54:RZ:67:LEU:HD23	1.94	0.48
6:XF:5:GLU:HA	6:XF:63:TYR:O	2.14	0.48
16:XP:40:ASP:HB3	16:XP:48:TRP:HB2	1.94	0.48
19:XS:36:ARG:HB2	19:XS:72:GLY:HA3	1.94	0.48
32:Y8:13:ARG:HD2	44:YP:61:ARG:HG3	1.95	0.48
34:YA:363(B):A:H2'	34:YA:363(C):G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:1193:G:OP2	44:YP:16:ARG:NH2	2.42	0.48
34:YA:1307:A:N1	34:YA:1622:G:C6	2.81	0.48
34:YA:1802:A:H2'	34:YA:1803:A:C8	2.48	0.48
34:YA:2816:C:O2	34:YA:2883:A:O2'	2.27	0.48
48:YT:52:ILE:HG13	48:YT:61:PHE:HB3	1.96	0.48
1:QA:261:U:OP2	20:QT:80:ARG:NH2	2.47	0.48
1:QA:819:A:C8	1:QA:1529:G:N1	2.81	0.48
34:RA:521:G:H2'	34:RA:522:G:H8	1.77	0.48
34:RA:571:A:O5'	34:RA:2030:A:N6	2.43	0.48
34:RA:2314:C:H5'	39:RG:38:VAL:HG11	1.96	0.48
4:XD:63:LYS:HD2	4:XD:198:VAL:HG12	1.95	0.48
13:XM:3:ARG:HD2	13:XM:7:VAL:HG12	1.96	0.48
29:Y5:48:GLU:CD	51:YW:37:ARG:NH1	2.67	0.48
31:Y7:5:TRP:O	34:YA:1612:C:O2'	2.30	0.48
34:YA:1174:A:H2'	34:YA:1175:U:H4'	1.94	0.48
34:YA:2250:G:C4	45:YQ:82:ARG:HG3	2.48	0.48
1:QA:1342:C:H4'	9:QI:125:TYR:HB3	1.95	0.48
6:QF:14:LEU:HD12	6:QF:18:GLN:CD	2.38	0.48
29:R5:4:HIS:O	34:RA:2056:G:N2	2.47	0.48
34:RA:1586:A:H3'	34:RA:1587:A:H8	1.79	0.48
34:RA:2450:A:H62	34:RA:2501:C:H42	1.61	0.48
40:RH:43:VAL:HG23	40:RH:52:VAL:HG12	1.95	0.48
40:RH:46:GLU:HB2	40:RH:49:VAL:HG23	1.95	0.48
49:RU:90:VAL:O	49:RU:92:ARG:N	2.35	0.48
53:RY:13:VAL:HA	53:RY:74:PRO:HA	1.96	0.48
1:XA:28:G:O2'	1:XA:296:U:OP1	2.30	0.48
1:XA:372:C:H42	1:XA:389:A:H62	0.68	0.48
1:XA:520:A:H62	1:XA:529:G:N2	2.11	0.48
1:XA:693:G:H22	22:XV:37:1MG:HN21	1.60	0.48
4:XD:89:THR:OG1	5:XE:97:GLY:O	2.27	0.48
4:XD:91:SER:HB2	4:XD:191:ARG:HD2	1.95	0.48
7:XG:31:MET:HE3	7:XG:34:GLY:HA2	1.96	0.48
32:Y8:13:ARG:NH2	34:YA:250:G:OP2	2.47	0.48
34:YA:993:G:N2	50:YV:23:GLU:OE2	2.46	0.48
34:YA:1087:G:O6	34:YA:1089:G:N2	2.44	0.48
34:YA:1419:A:N7	34:YA:1578:U:O4	2.47	0.48
34:YA:1980:G:O2'	34:YA:1982:C:OP2	2.25	0.48
39:YG:68:PRO:HB3	39:YG:92:VAL:HB	1.95	0.48
46:YR:3:HIS:O	46:YR:5:LYS:N	2.47	0.48
34:RA:514:A:H2'	34:RA:515:A:H8	1.79	0.48
34:RA:685:A:OP1	34:RA:686:G:N2	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:114:U:H2'	1:XA:115:G:C8	2.48	0.48
1:XA:346:G:OP1	48:YT:41:ARG:NH2	2.39	0.48
1:XA:410:G:OP1	4:XD:30:LYS:NZ	2.47	0.48
1:XA:737:A:H2'	1:XA:738:C:H6	1.79	0.48
1:XA:938:A:O3'	7:XG:95:ARG:NH2	2.47	0.48
1:XA:1223:C:H5"	1:XA:1224:G:H5"	1.95	0.48
5:XE:60:TYR:OH	5:XE:64:ARG:NH2	2.47	0.48
24:Y0:11:ARG:O	24:Y0:14:ARG:NH2	2.43	0.48
25:Y1:83:GLU:HG3	25:Y1:85:LEU:H	1.78	0.48
34:YA:2787:C:H1'	37:YE:62:PRO:HG3	1.96	0.48
37:YE:117:MET:HA	37:YE:122:PHE:H	1.79	0.48
38:YF:116:ASP:OD2	44:YP:1:MET:N	2.43	0.48
39:YG:107:LEU:HA	39:YG:111:LEU:HD12	1.95	0.48
1:QA:1299:A:H2'	1:QA:1301:U:H1'	1.96	0.48
1:QA:1318:A:H1'	19:QS:37:ARG:HE	1.79	0.48
2:QB:98:LEU:H	2:QB:101:MET:HE3	1.79	0.48
25:R1:2:SER:N	34:RA:1364:G:OP2	2.46	0.48
34:RA:23:G:OP1	34:RA:504:U:N3	2.38	0.48
34:RA:597:U:H2'	34:RA:598:G:C8	2.49	0.48
34:RA:2245:U:H5"	34:RA:2246:G:H5'	1.96	0.48
34:RA:2473:U:OP1	34:RA:2529:G:N2	2.46	0.48
38:RF:159:GLY:O	38:RF:164:ARG:NH2	2.41	0.48
42:RN:60:ILE:HD12	42:RN:60:ILE:HA	1.81	0.48
1:XA:618:C:H5'	1:XA:619:U:H5"	1.96	0.48
2:XB:30:ARG:NH1	2:XB:31:TYR:OH	2.46	0.48
3:XC:153:VAL:HB	3:XC:196:LEU:HD21	1.95	0.48
15:XO:39:LEU:HG	15:XO:56:LEU:HD12	1.96	0.48
34:YA:480:A:O2'	53:YY:46:LYS:O	2.32	0.48
34:YA:1338:G:N7	52:YX:62:LYS:NZ	2.59	0.48
34:YA:2115:G:N2	34:YA:2164:C:OP2	2.47	0.48
40:YH:70:THR:O	40:YH:74:ASN:ND2	2.47	0.48
45:YQ:35:VAL:HG12	45:YQ:102:VAL:HG22	1.94	0.48
1:QA:501:C:OP1	12:QL:117:ARG:NH2	2.47	0.48
1:QA:1250:A:H4'	9:QI:67:GLY:HA2	1.96	0.48
5:QE:102:ALA:O	5:QE:107:ARG:NH2	2.45	0.48
34:RA:862:G:O2'	35:RB:78:A:N3	2.47	0.48
34:RA:1052:C:H2'	34:RA:1053:C:C5	2.49	0.48
34:RA:2085:C:H4'	36:RD:262:ARG:NH2	2.29	0.48
34:RA:2156:G:O6	34:RA:2157:G:N2	2.47	0.48
39:RG:126:ASP:OD1	39:RG:130:ASN:N	2.43	0.48
45:RQ:54:MET:HE1	45:RQ:104:PHE:HB3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:192:U:H4'	20:XT:57:ARG:HD3	1.96	0.48
1:XA:605:U:H5	1:XA:605:U:OP2	1.97	0.48
1:XA:767:A:O2'	1:XA:1524:C:O2	2.27	0.48
1:XA:949:A:O2'	1:XA:1363:A:OP2	2.31	0.48
9:XI:73:GLN:O	9:XI:77:ILE:HG12	2.14	0.48
22:XV:8:U:C2	22:XV:14:A:N6	2.82	0.48
30:Y6:19:ARG:NH1	34:YA:2399:G:O2'	2.47	0.48
37:YE:37:ARG:O	37:YE:45:THR:HA	2.13	0.48
39:YG:63:ILE:HG22	39:YG:143:GLU:HB2	1.95	0.48
1:QA:407:G:H5"	4:QD:115:ARG:HE	1.78	0.47
1:QA:815:A:H4'	1:QA:817:C:C5	2.48	0.47
2:QB:47:THR:HG23	2:QB:202:PRO:HG2	1.96	0.47
3:QC:50:ALA:HB2	3:QC:75:VAL:HB	1.96	0.47
34:RA:1411:C:H42	34:RA:1591:G:H22	1.62	0.47
35:RB:13:A:N1	35:RB:69:G:O2'	2.42	0.47
48:RT:91:ARG:NH2	48:RT:124:ASP:OD2	2.47	0.47
1:XA:1370:G:H2'	1:XA:1371:G:H8	1.79	0.47
17:XQ:66:SER:H	17:XQ:69:LYS:HB3	1.78	0.47
20:XT:61:SER:OG	20:XT:62:LEU:N	2.47	0.47
34:YA:363(D):G:H2'	34:YA:363(E):G:H8	1.78	0.47
34:YA:1466:G:HO2'	34:YA:1546:C:HO2'	1.52	0.47
34:YA:2105:C:H2'	34:YA:2106:G:C8	2.49	0.47
34:YA:2427:C:H5'	34:YA:2429:G:H5'	1.96	0.47
35:YB:12:C:O4'	35:YB:15:A:N6	2.47	0.47
37:YE:102:VAL:O	37:YE:170:LEU:N	2.45	0.47
1:QA:161:A:H2	1:QA:347:G:H21	1.62	0.47
3:QC:34:LEU:O	3:QC:38:ARG:NE	2.43	0.47
4:QD:108:LEU:HD22	4:QD:174:LEU:HD13	1.96	0.47
13:QM:26:GLY:O	13:QM:30:ALA:CB	2.62	0.47
34:RA:839:U:H3	34:RA:939:G:H1	1.62	0.47
34:RA:1058:G:H2'	34:RA:1059:G:C8	2.49	0.47
34:RA:2693:A:H2'	34:RA:2694:G:H8	1.78	0.47
47:RS:26:LEU:HB3	47:RS:87:PHE:HA	1.96	0.47
49:RU:17:ILE:HG13	49:RU:39:LEU:HD12	1.95	0.47
1:XA:964:A:N3	10:XJ:55:LYS:NZ	2.62	0.47
16:XP:6:LEU:HD13	16:XP:17:TYR:CG	2.49	0.47
19:XS:4:SER:HB2	19:XS:7:LYS:HG2	1.95	0.47
34:YA:2154:G:H2'	34:YA:2155:G:H8	1.79	0.47
35:YB:9:G:OP1	47:YS:25:ARG:NH1	2.40	0.47
50:YV:13:ARG:NH1	50:YV:15:GLU:OE2	2.45	0.47
50:YV:52:VAL:HG21	50:YV:55:ALA:HB3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:YY:11:ASP:OD1	53:YY:11:ASP:N	2.43	0.47
1:QA:1318:A:H1'	19:QS:37:ARG:HH21	1.80	0.47
29:R5:12:SER:O	29:R5:16:ARG:HB2	2.14	0.47
38:RF:102:PRO:HB2	38:RF:105:VAL:HG23	1.95	0.47
1:XA:426:G:OP1	4:XD:38:TYR:OH	2.28	0.47
2:XB:71:VAL:HB	2:XB:164:VAL:HG12	1.96	0.47
4:XD:175:SER:O	4:XD:183:GLY:HA2	2.15	0.47
4:XD:175:SER:HB3	4:XD:184:LYS:HB3	1.96	0.47
47:YS:25:ARG:HG3	47:YS:88:ASP:HB2	1.96	0.47
1:QA:21:G:H2'	1:QA:22:G:C8	2.49	0.47
1:QA:269:C:H2'	1:QA:270:A:H8	1.79	0.47
1:QA:1186:G:O2'	9:QI:110:GLU:OE2	2.27	0.47
9:QI:20:ARG:HG3	9:QI:60:ASP:HB2	1.96	0.47
12:QL:7:ILE:HD11	17:QQ:32:TYR:HB3	1.94	0.47
25:R1:17:SER:O	25:R1:17:SER:OG	2.29	0.47
34:RA:442:G:N2	38:RF:48:THR:OG1	2.47	0.47
34:RA:1203:G:O6	34:RA:1204:A:N6	2.48	0.47
34:RA:2845:G:OP1	48:RT:56:GLY:N	2.48	0.47
37:RE:105:THR:OG1	37:RE:199:ARG:NH1	2.48	0.47
1:XA:974:A:OP2	14:XN:29:ARG:NH2	2.48	0.47
29:Y5:52:TYR:OH	34:YA:2883:A:OP1	2.20	0.47
34:YA:1286:A:C6	34:YA:1289:C:N3	2.83	0.47
45:YQ:75:THR:HB	45:YQ:86:GLY:HA3	1.96	0.47
1:QA:1052:U:O2'	1:QA:1055:A:OP2	2.28	0.47
7:QG:73:MET:HE3	7:QG:88:PRO:HB2	1.96	0.47
31:R7:24:THR:HG23	31:R7:27:GLY:H	1.79	0.47
34:RA:513:A:O2'	34:RA:1217:C:OP1	2.30	0.47
34:RA:1068:G:O6	34:RA:1069:A:N6	2.48	0.47
34:RA:1270:C:H5"	34:RA:1271:G:H5'	1.97	0.47
34:RA:1542:G:O6	34:RA:1543:A:C6	2.67	0.47
34:RA:2328:A:H2'	34:RA:2329:G:H8	1.79	0.47
41:RI:51:ILE:HA	41:RI:54:GLN:HG2	1.95	0.47
2:XB:204:ASN:OD1	2:XB:205:ASP:N	2.48	0.47
27:Y3:18:ASP:OD1	27:Y3:18:ASP:N	2.46	0.47
34:YA:28:A:N6	34:YA:512:G:O2'	2.47	0.47
34:YA:974(A):G:C4	34:YA:1186:G:C2	3.03	0.47
34:YA:1535:U:H2'	34:YA:1536:A:C8	2.49	0.47
34:YA:2511:U:O2'	37:YE:138:PRO:O	2.29	0.47
52:YX:64:LYS:HZ2	52:YX:73:ARG:HE	1.60	0.47
1:QA:1221:G:H5'	19:QS:36:ARG:HH22	1.78	0.47
11:QK:17:GLY:HA2	11:QK:35:PRO:HD3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:5:PRO:HG2	12:QL:10:LEU:HD21	1.96	0.47
34:RA:99:U:O4	53:RY:8:LYS:NZ	2.46	0.47
34:RA:534:U:H3	34:RA:559:G:H1	1.63	0.47
34:RA:1148:A:H2'	34:RA:1149:G:H8	1.80	0.47
1:XA:734:G:H21	18:XR:75:ILE:HD13	1.80	0.47
2:XB:84:GLU:HG3	2:XB:215:LEU:HB3	1.96	0.47
7:XG:99:LEU:HD12	7:XG:102:ARG:HD2	1.96	0.47
13:XM:83:ASP:OD2	13:XM:84:ILE:N	2.46	0.47
27:Y3:51:ALA:HA	27:Y3:54:VAL:HG12	1.96	0.47
34:YA:137(B):G:N3	52:YX:41:ASN:ND2	2.61	0.47
37:YE:105:THR:HG21	37:YE:164:ARG:HH21	1.78	0.47
41:YI:88:ILE:HG22	41:YI:90:GLY:H	1.80	0.47
1:QA:1251:A:N3	1:QA:1369:C:O2'	2.46	0.47
1:QA:1328:C:H4'	13:QM:29:ARG:HD3	1.96	0.47
11:QK:27:ASN:OD1	11:QK:28:THR:N	2.47	0.47
17:QQ:83:ASP:N	17:QQ:83:ASP:OD1	2.47	0.47
33:R9:11:CYS:N	33:R9:14:CYS:SG	2.83	0.47
34:RA:581:C:H2'	34:RA:582:G:H8	1.79	0.47
34:RA:978:G:N1	34:RA:986:C:N3	2.62	0.47
34:RA:1843:C:O2'	36:RD:256:GLY:O	2.28	0.47
34:RA:2031:A:N3	34:RA:2455:G:O2'	2.48	0.47
34:RA:2096:U:H3	34:RA:2193:G:H1	1.61	0.47
34:RA:2118:U:H3	34:RA:2148:G:H4'	1.80	0.47
34:RA:2749:A:H3'	34:RA:2750:A:H2'	1.96	0.47
49:RU:6:THR:HG21	49:RU:10:ARG:HH12	1.79	0.47
49:RU:90:VAL:HG13	50:RV:39:LEU:HD22	1.97	0.47
52:RX:64:LYS:HD2	52:RX:73:ARG:HH12	1.77	0.47
1:XA:186(A):C:O2'	20:XT:85:MET:SD	2.63	0.47
1:XA:403:C:H42	1:XA:547:A:H5'	1.80	0.47
1:XA:616:G:H2'	1:XA:617:G:H8	1.78	0.47
1:XA:1503:A:O2'	23:XX:15:A:N6	2.44	0.47
2:XB:207:ALA:O	2:XB:210:SER:OG	2.28	0.47
22:XV:19:G:OP1	22:XV:20:G:N2	2.48	0.47
34:YA:586:A:H5'	38:YF:89:VAL:HG21	1.96	0.47
34:YA:821:A:N6	34:YA:972:G:O2'	2.47	0.47
34:YA:1500:G:O2'	36:YD:100:GLY:O	2.27	0.47
34:YA:1689:A:H62	34:YA:1698:A:H2	1.63	0.47
34:YA:2589:A:N1	34:YA:2606:C:N4	2.63	0.47
36:YD:35:LYS:HG3	36:YD:63:ARG:HG3	1.96	0.47
43:YO:120:GLU:OE1	48:YT:67:SER:OG	2.33	0.47
47:YS:11:LYS:HG3	47:YS:15:ARG:HE	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:749:C:H2'	1:QA:750:G:H8	1.80	0.47
1:QA:1035:A:H2'	1:QA:1036:G:H8	1.80	0.47
1:QA:1237:C:H5"	1:QA:1238:A:C8	2.50	0.47
1:QA:1329:A:H62	21:QU:7:ARG:HH12	1.62	0.47
8:QH:120:THR:OG1	8:QH:121:ASP:N	2.47	0.47
16:QP:21:VAL:HG23	16:QP:33:ILE:HB	1.96	0.47
17:QQ:62:SER:OG	17:QQ:72:ARG:NE	2.47	0.47
34:RA:2150:U:H2'	34:RA:2151:G:H8	1.79	0.47
34:RA:2852:G:O6	34:RA:2865:U:O4	2.32	0.47
1:XA:413:G:H21	1:XA:428:G:H1'	1.79	0.47
1:XA:427:U:O2'	1:XA:541:G:OP1	2.29	0.47
1:XA:1028(H):G:H2'	1:XA:1028(I):G:C8	2.50	0.47
2:XB:184:VAL:HG23	2:XB:198:ASP:H	1.79	0.47
34:YA:422:A:H8	34:YA:422:A:O5'	1.97	0.47
34:YA:1058:G:H2'	34:YA:1059:G:H8	1.80	0.47
34:YA:1728:G:H8	34:YA:1732:A:H62	1.62	0.47
34:YA:2584:U:H2'	34:YA:2585:U:H2'	1.96	0.47
34:YA:2611:U:C6	34:YA:2611:U:C5'	2.86	0.47
40:YH:18:GLU:HB3	40:YH:25:LYS:HG2	1.96	0.47
41:YI:20:ASP:OD2	41:YI:20:ASP:N	2.43	0.47
45:YQ:36:ALA:HB2	45:YQ:103:MET:HE2	1.95	0.47
1:QA:316:G:OP2	1:QA:351:G:O2'	2.31	0.47
1:QA:542:G:O3'	4:QD:14:ARG:NH2	2.48	0.47
1:QA:982:U:H5"	14:QN:6:LEU:HD11	1.96	0.47
10:QJ:67:THR:O	10:QJ:67:THR:OG1	2.32	0.47
15:QO:26:GLU:HA	15:QO:29:VAL:HG12	1.97	0.47
34:RA:2345:G:O2'	34:RA:2381:C:O2	2.32	0.47
34:RA:2377:A:H4'	47:RS:112:PHE:HA	1.97	0.47
40:RH:6:ARG:HE	40:RH:65:HIS:HB3	1.80	0.47
46:RR:35:THR:O	46:RR:35:THR:OG1	2.33	0.47
1:XA:942:G:N2	9:XI:124:GLN:OE1	2.44	0.47
1:XA:1517:G:N3	34:YA:1919:A:O2'	2.47	0.47
1:XA:1522:U:H2'	1:XA:1523:G:H8	1.79	0.47
13:XM:14:ARG:HG2	13:XM:16:ASP:H	1.79	0.47
14:XN:23:ARG:NH1	14:XN:28:GLY:HA2	2.29	0.47
28:Y4:23:GLU:O	28:Y4:25:TYR:N	2.46	0.47
34:YA:223:A:O2'	34:YA:420:C:O2	2.25	0.47
34:YA:380:U:H2'	34:YA:381:G:H8	1.80	0.47
34:YA:1779:U:OP2	34:YA:1784:A:N6	2.43	0.47
34:YA:2005:A:O2'	34:YA:2049:G:OP1	2.30	0.47
38:YF:157:VAL:HG13	38:YF:194:MET:HB3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:QF:24:GLU:OE1	6:QF:28:ARG:NH1	2.48	0.47
8:QH:108:GLY:HA3	8:QH:138:TRP:HB3	1.97	0.47
25:R1:2:SER:O	25:R1:61:ARG:NH1	2.47	0.47
34:RA:414:C:O2	34:RA:1864:U:O2'	2.30	0.47
34:RA:2249:U:N3	34:RA:2253:G:OP2	2.48	0.47
1:XA:396:G:O2'	1:XA:398:C:OP1	2.28	0.47
1:XA:925:G:O6	1:XA:1391:U:O4	2.33	0.47
1:XA:967:C:O3'	9:XI:125:TYR:OH	2.27	0.47
1:XA:1525:G:OP1	11:XK:120:ARG:NH1	2.41	0.47
12:XL:12:ARG:HH21	12:XL:13:LYS:HE3	1.79	0.47
17:XQ:21:VAL:N	17:XQ:42:TYR:O	2.40	0.47
22:XV:76:A:N6	34:YA:2422:A:O4'	2.47	0.47
34:YA:363(A):G:H2'	34:YA:363(B):A:H8	1.79	0.47
38:YF:12:LEU:HB3	38:YF:126:VAL:HG12	1.95	0.47
1:QA:825:G:HO2'	8:QH:12:ARG:HH21	1.62	0.46
1:QA:1048:G:O2'	1:QA:1050:G:OP1	2.34	0.46
1:QA:1298:C:N4	7:QG:113:GLU:O	2.48	0.46
2:QB:134:GLU:HA	2:QB:137:ARG:HG2	1.96	0.46
4:QD:156:GLU:O	4:QD:160:GLN:N	2.48	0.46
8:QH:91:ARG:NE	17:QQ:32:TYR:O	2.40	0.46
22:QV:37:1MG:C8	22:QV:38:A:C8	3.04	0.46
34:RA:659:C:H2'	34:RA:660:G:C8	2.49	0.46
34:RA:956:G:OP2	45:RQ:14:ARG:NH2	2.36	0.46
34:RA:1102:C:H2'	34:RA:1103:A:H8	1.79	0.46
34:RA:1783:A:OP1	34:RA:1784:A:OP2	2.33	0.46
35:RB:15:A:H5'	35:RB:16:G:C8	2.49	0.46
37:RE:24:THR:HG21	37:RE:188:VAL:HG22	1.97	0.46
40:RH:11:VAL:HG12	40:RH:13:LYS:HG2	1.97	0.46
51:RW:68:ARG:NH2	51:RW:109:GLU:OE2	2.48	0.46
1:XA:1127:G:N2	1:XA:1145:C:O2	2.47	0.46
4:XD:62:GLN:HE22	4:XD:65:ARG:HH21	1.62	0.46
12:XL:8:ASN:O	12:XL:12:ARG:HB2	2.15	0.46
22:XV:19:G:H2'	34:YA:2112:G:C6	2.50	0.46
33:Y9:14:CYS:CA	33:Y9:27:CYS:HB2	2.44	0.46
34:YA:28:A:O2'	34:YA:582:G:O2'	2.30	0.46
34:YA:963:U:H1'	34:YA:2250:G:O6	2.15	0.46
42:YN:16:ILE:HG21	42:YN:26:LEU:HD11	1.97	0.46
1:QA:407:G:H5'	4:QD:115:ARG:HH21	1.80	0.46
1:QA:1004:A:N6	1:QA:1025:U:O3'	2.47	0.46
7:QG:70:LYS:HB2	7:QG:96:GLN:HB3	1.97	0.46
16:QP:40:ASP:OD1	16:QP:43:LYS:N	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:144:C:H2'	34:RA:145:G:H8	1.80	0.46
34:RA:2151:G:H2'	34:RA:2152:G:H8	1.81	0.46
34:RA:2153:G:H2'	34:RA:2154:G:H8	1.80	0.46
34:RA:2185:C:H2'	34:RA:2186:G:C8	2.51	0.46
40:RH:126:PRO:HG2	40:RH:130:ARG:HG3	1.96	0.46
1:XA:413:G:H4'	1:XA:414:A:H5"	1.97	0.46
1:XA:673:G:H2'	1:XA:674:G:C8	2.51	0.46
1:XA:1419:G:H1	1:XA:1481:U:H3	1.62	0.46
2:XB:188:ALA:HB3	2:XB:200:ILE:HD11	1.97	0.46
16:XP:20:VAL:HG12	16:XP:35:LYS:HA	1.97	0.46
31:Y7:33:ARG:NH1	34:YA:467:G:OP1	2.47	0.46
34:YA:296:C:O3'	53:YY:95:LYS:NZ	2.48	0.46
34:YA:373:U:H1'	34:YA:423:A:N3	2.30	0.46
34:YA:805:G:N2	34:YA:829:A:OP1	2.47	0.46
41:YI:72:LEU:HD12	41:YI:138:ILE:HD12	1.97	0.46
49:YU:94:ASN:C	49:YU:94:ASN:HD22	2.23	0.46
1:QA:75:C:H42	1:QA:95:G:H1	1.62	0.46
1:QA:976:G:N1	1:QA:1362(B):C:OP2	2.37	0.46
1:QA:1097:C:O2'	1:QA:1169:A:N3	2.37	0.46
34:RA:630:G:N2	34:RA:633:A:OP2	2.35	0.46
34:RA:979:G:N2	34:RA:985:C:C4	2.84	0.46
34:RA:1070:A:O2'	34:RA:1097:U:O3'	2.32	0.46
38:RF:24:LEU:HD12	38:RF:115:ALA:HB2	1.96	0.46
40:RH:123:PHE:HE2	40:RH:133:VAL:HG22	1.80	0.46
46:RR:28:LEU:HD23	46:RR:48:VAL:HG21	1.98	0.46
54:RZ:182:LYS:HA	54:RZ:182:LYS:HD2	1.75	0.46
1:XA:186(F):C:N3	1:XA:186(N):G:N2	2.63	0.46
7:XG:75:VAL:HA	7:XG:87:VAL:O	2.16	0.46
34:YA:840:C:H2'	34:YA:841:A:H8	1.79	0.46
34:YA:2152:G:H2'	34:YA:2153:G:C8	2.49	0.46
38:YF:60:SER:OG	38:YF:61:GLY:N	2.49	0.46
1:QA:1000:A:N1	1:QA:1041:A:N6	2.64	0.46
1:QA:1227:A:OP1	19:QS:80:TYR:OH	2.30	0.46
1:QA:1373:G:H4'	7:QG:31:MET:HE1	1.97	0.46
9:QI:28:VAL:HA	9:QI:63:ILE:HB	1.97	0.46
22:QV:61:C:H2'	22:QV:62:C:H6	1.80	0.46
25:R1:90:ILE:HA	25:R1:94:LEU:HD11	1.93	0.46
29:R5:12:SER:HB3	34:RA:2020:A:H5'	1.97	0.46
32:R8:30:ARG:HH21	44:RP:62:LEU:HD12	1.81	0.46
34:RA:1657:C:H2'	34:RA:1658:C:H6	1.80	0.46
1:XA:6:G:H2'	5:XE:119:LEU:HD21	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:165:C:H2'	1:XA:166:G:C8	2.51	0.46
1:XA:640:A:O2'	8:XH:116:LYS:NZ	2.49	0.46
1:XA:948:C:H2'	1:XA:949:A:H8	1.80	0.46
1:XA:979:C:O2	14:XN:19:ARG:NH2	2.40	0.46
8:XH:86:ILE:HD12	8:XH:135:CYS:HA	1.97	0.46
34:YA:309:G:N3	34:YA:329:G:O2'	2.47	0.46
34:YA:363(C):G:H2'	34:YA:363(D):G:H8	1.80	0.46
34:YA:974(A):G:C6	34:YA:1186:G:N1	2.84	0.46
34:YA:984:A:H5"	34:YA:985:C:H5	1.81	0.46
34:YA:1753:G:N2	34:YA:1758:G:N7	2.62	0.46
34:YA:2403:C:N3	34:YA:2415:G:C2	2.83	0.46
34:YA:2414:G:H21	44:YP:67:MET:HE2	1.80	0.46
44:YP:98:GLU:HA	44:YP:101:VAL:HG12	1.96	0.46
54:YZ:185:GLU:O	54:YZ:186:GLU:C	2.58	0.46
1:QA:186(H):C:O2	1:QA:186(L):G:N1	2.49	0.46
1:QA:324:G:N2	1:QA:327:A:OP2	2.48	0.46
1:QA:707:C:H2'	1:QA:708:C:H6	1.81	0.46
1:QA:898:G:N2	1:QA:901:A:OP2	2.45	0.46
3:QC:66:VAL:HB	3:QC:101:LEU:HG	1.98	0.46
4:QD:57:ARG:HB3	4:QD:206:PHE:HB2	1.97	0.46
9:QI:105:ASP:HB3	9:QI:107:ARG:HE	1.80	0.46
29:R5:57:VAL:O	46:RR:33:ARG:NH1	2.39	0.46
34:RA:2195:C:H2'	34:RA:2196:C:H6	1.80	0.46
1:XA:186(F):C:H42	1:XA:186(N):G:H1	1.61	0.46
10:XJ:78:ASN:HB2	10:XJ:81:THR:HG23	1.97	0.46
17:XQ:34:LYS:NZ	17:XQ:35:VAL:O	2.46	0.46
34:YA:589:C:H2'	34:YA:590:A:C8	2.50	0.46
34:YA:1669:A:N3	34:YA:1669:A:C2'	2.78	0.46
35:YB:5:C:OP1	35:YB:61:G:O2'	2.28	0.46
38:YF:41:LEU:HA	38:YF:44:ARG:HG2	1.98	0.46
1:QA:359:U:H2'	1:QA:360:A:H8	1.79	0.46
1:QA:410:G:H21	1:QA:432:A:H62	1.62	0.46
1:QA:628:G:H2'	1:QA:629:G:H8	1.80	0.46
1:QA:663:A:N6	1:QA:742:G:H1	2.10	0.46
1:QA:972:C:H4'	10:QJ:57:LYS:HB2	1.98	0.46
8:QH:121:ASP:OD2	8:QH:125:ARG:NH1	2.48	0.46
13:QM:91:ARG:HD2	13:QM:96:LEU:HB3	1.98	0.46
34:RA:1181:C:H2'	34:RA:1182:A:C8	2.49	0.46
34:RA:1316:U:H2'	34:RA:1317:A:H8	1.80	0.46
34:RA:2845:G:H2'	34:RA:2846:G:C8	2.51	0.46
34:RA:2882:A:OP1	46:RR:96:ARG:NH1	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RI:88:ILE:HG22	41:RI:90:GLY:N	2.31	0.46
1:XA:36:C:O2'	1:XA:501:C:OP1	2.33	0.46
1:XA:737:A:H2'	1:XA:738:C:C6	2.50	0.46
1:XA:1071:C:OP1	5:XE:27:ARG:NH2	2.49	0.46
34:YA:517:C:O2'	51:YW:18:ARG:NH2	2.48	0.46
34:YA:1363:C:O2'	34:YA:1809:A:N3	2.38	0.46
34:YA:2404:C:O3'	44:YP:77:ARG:NH2	2.49	0.46
34:YA:2521:C:O2'	34:YA:2564:A:N3	2.38	0.46
40:YH:89:ILE:HD11	40:YH:94:TYR:HB3	1.98	0.46
2:QB:101:MET:HA	2:QB:108:ILE:HG13	1.97	0.46
13:QM:47:ASP:OD1	13:QM:47:ASP:N	2.48	0.46
34:RA:65:C:H1'	34:RA:456:C:H42	1.81	0.46
34:RA:1543:A:H1'	34:RA:1545(A):A:H5"	1.97	0.46
37:RE:14:ILE:HD11	37:RE:173:VAL:HG11	1.97	0.46
38:RF:56:GLU:OE2	38:RF:93:LYS:NZ	2.49	0.46
49:RU:27:LEU:HD22	49:RU:31:SER:HB2	1.97	0.46
1:XA:444:C:H2'	1:XA:445:G:H8	1.81	0.46
1:XA:1014:A:H2'	1:XA:1015:A:C8	2.50	0.46
20:XT:58:LYS:O	20:XT:61:SER:OG	2.29	0.46
22:XV:1:C:H2'	22:XV:2:G:H8	1.81	0.46
34:YA:1255:U:N3	34:YA:2060:A:OP2	2.44	0.46
34:YA:1652:A:N6	34:YA:1653:G:H1	2.10	0.46
35:YB:73:A:N6	35:YB:103:U:H3	2.04	0.46
42:YN:47:ALA:HB2	42:YN:112:LEU:HD11	1.98	0.46
43:YO:78:ARG:NE	48:YT:73:GLU:OE1	2.45	0.46
1:QA:359:U:H2'	1:QA:360:A:C8	2.51	0.46
9:QI:26:VAL:HG12	9:QI:61:ALA:HB3	1.98	0.46
10:QJ:48:THR:HG22	10:QJ:62:HIS:HB3	1.98	0.46
20:QT:54:LYS:HZ3	20:QT:57:ARG:HE	1.64	0.46
32:R8:29:LYS:O	32:R8:31:HIS:N	2.45	0.46
34:RA:16:G:C6	34:RA:525:U:N3	2.84	0.46
34:RA:2812:G:H2'	34:RA:2813:A:H8	1.81	0.46
37:RE:14:ILE:HB	48:RT:14:TYR:HE2	1.81	0.46
38:RF:182:ASN:OD1	38:RF:182:ASN:N	2.46	0.46
40:RH:84:SER:HA	40:RH:134:SER:HA	1.97	0.46
2:XB:118:LEU:HB3	2:XB:142:LEU:HD13	1.98	0.46
6:XF:36:ARG:NH2	6:XF:38:GLU:OE2	2.49	0.46
13:XM:45:VAL:HG23	13:XM:48:LEU:HD12	1.98	0.46
26:Y2:28:LYS:HD3	26:Y2:28:LYS:HA	1.77	0.46
34:YA:1792:G:O2'	34:YA:1830:C:OP1	2.32	0.46
34:YA:1953:A:O2'	34:YA:2559:C:O2	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YH:137:ASP:OD2	40:YH:138:LYS:N	2.48	0.46
43:YO:64:ARG:HB2	43:YO:83:ALA:HB3	1.98	0.46
54:YZ:74:VAL:HG22	54:YZ:86:VAL:HG23	1.97	0.46
1:QA:373:A:H61	1:QA:391:G:H1'	1.80	0.46
1:QA:593:G:H1	1:QA:646:U:H3	1.64	0.46
1:QA:710:G:H2'	1:QA:711:G:H8	1.80	0.46
1:QA:883:C:N4	1:QA:884:U:O4	2.49	0.46
1:QA:1463:C:H5"	48:RT:112:ARG:HE	1.79	0.46
3:QC:184:TYR:HA	3:QC:200:ALA:O	2.15	0.46
16:QP:59:TRP:HA	16:QP:62:VAL:HG22	1.97	0.46
26:R2:33:MET:HE1	52:RX:46:ALA:HB1	1.98	0.46
34:RA:81:G:HO2'	34:RA:295:G:HO2'	1.51	0.46
34:RA:1247:A:N1	34:RA:1249:U:C2	2.81	0.46
43:RO:104:ARG:NH2	48:RT:43:GLN:OE1	2.49	0.46
52:RX:90:GLU:HA	52:RX:93:GLU:HG2	1.97	0.46
54:RZ:67:LEU:HD13	54:RZ:68:PRO:HD2	1.96	0.46
1:XA:581:G:OP1	15:XO:65:ARG:NH1	2.33	0.46
12:XL:53:ARG:HB3	12:XL:69:TYR:HE1	1.79	0.46
31:Y7:7:PRO:HA	34:YA:686:G:H8	1.80	0.46
34:YA:190:A:N3	34:YA:679:C:O2'	2.44	0.46
34:YA:2314:C:H2'	34:YA:2315:G:C8	2.51	0.46
1:QA:157:G:H2'	1:QA:158:G:H8	1.81	0.46
1:QA:1385:G:H2'	1:QA:1386:G:H8	1.81	0.46
5:QE:98:THR:N	5:QE:117:ASP:OD1	2.40	0.46
7:QG:21:VAL:O	7:QG:24:THR:OG1	2.32	0.46
13:QM:26:GLY:O	13:QM:30:ALA:HB2	2.15	0.46
25:R1:90:ILE:CA	25:R1:94:LEU:CD1	2.84	0.46
34:RA:1048:A:N6	34:RA:1111:A:N3	2.64	0.46
34:RA:2310:A:N6	39:RG:79:ASN:HD22	2.14	0.46
34:RA:2514:U:H3	34:RA:2570:G:H1	1.63	0.46
37:RE:46:ALA:HB1	37:RE:80:GLU:HG2	1.98	0.46
46:RR:38:VAL:HG12	46:RR:112:ALA:HB2	1.96	0.46
1:XA:327:A:O2'	1:XA:328:C:O4'	2.29	0.46
1:XA:448:A:OP2	1:XA:485:G:N1	2.39	0.46
1:XA:603:U:H2'	1:XA:604:G:H8	1.80	0.46
1:XA:806:C:H2'	1:XA:807:A:H8	1.80	0.46
11:XK:31:THR:HA	11:XK:42:TRP:HA	1.97	0.46
21:XU:6:ARG:HH21	21:XU:15:ARG:HH22	1.64	0.46
41:YI:4:ILE:HG22	41:YI:18:VAL:HB	1.98	0.46
48:YT:91:ARG:NH2	48:YT:124:ASP:OD2	2.48	0.46
1:QA:657:G:H4'	15:QO:28:GLN:HG2	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:666:G:H1	1:QA:740:U:H3	1.62	0.45
2:QB:73:THR:O	2:QB:75:LYS:NZ	2.50	0.45
5:QE:87:SER:OG	5:QE:125:SER:O	2.32	0.45
11:QK:57:THR:HG23	11:QK:60:ALA:H	1.81	0.45
18:QR:74:ARG:HD3	18:QR:81:PHE:HA	1.98	0.45
34:RA:271(E):G:H2'	34:RA:272:G:H8	1.80	0.45
34:RA:414:C:H2'	34:RA:415:A:H8	1.81	0.45
34:RA:1654:A:O2'	37:RE:113:PHE:O	2.19	0.45
34:RA:2037:G:H2'	34:RA:2038:G:C8	2.51	0.45
34:RA:2618:G:H21	37:RE:150:VAL:HG21	1.80	0.45
35:RB:74:U:H1'	54:RZ:34:ASN:HD21	1.81	0.45
51:RW:86:LEU:HD22	51:RW:96:ILE:HD11	1.98	0.45
1:XA:264:U:O2'	17:XQ:64:PRO:O	2.31	0.45
1:XA:407:G:O2'	4:XD:116:GLN:OE1	2.33	0.45
34:YA:597:U:H2'	34:YA:598:G:H8	1.81	0.45
45:YQ:133:ARG:HG3	45:YQ:134:ARG:H	1.80	0.45
48:YT:16:ARG:HH21	48:YT:81:PRO:HA	1.80	0.45
1:QA:922:G:H2'	1:QA:923:A:C8	2.52	0.45
9:QI:114:TYR:HB2	10:QJ:60:ARG:HB2	1.98	0.45
10:QJ:12:ASP:O	10:QJ:16:LEU:HB3	2.16	0.45
24:R0:43:THR:HG21	34:RA:2336:A:H61	1.81	0.45
34:RA:1127:A:N7	34:RA:2488:A:O2'	2.45	0.45
34:RA:1147:C:H2'	34:RA:1148:A:C8	2.51	0.45
39:RG:68:PRO:HB3	39:RG:92:VAL:HB	1.98	0.45
2:XB:68:ILE:HG22	2:XB:161:ALA:HB3	1.98	0.45
34:YA:1174:A:H2	34:YA:1176:G:H4'	1.81	0.45
34:YA:1612:C:N3	34:YA:1620:G:N1	2.65	0.45
34:YA:2315:G:OP1	39:YG:36:LYS:NZ	2.40	0.45
34:YA:2730:C:O2'	37:YE:168:MET:O	2.32	0.45
44:YP:96:THR:HG22	44:YP:99:LEU:HD22	1.98	0.45
49:YU:90:VAL:HG22	50:YV:39:LEU:HB3	1.98	0.45
1:QA:1177:G:H2'	1:QA:1178:G:C4	2.51	0.45
4:QD:22:LYS:HG3	56:QD:301:SF4:S1	2.56	0.45
11:QK:101:SER:O	11:QK:101:SER:OG	2.30	0.45
15:QO:39:LEU:HD22	15:QO:56:LEU:HD13	1.97	0.45
34:RA:589:C:H2'	34:RA:590:A:C8	2.52	0.45
34:RA:2463:C:C2	34:RA:2488:A:H2	2.35	0.45
34:RA:2722:G:H5"	34:RA:2820:A:N7	2.31	0.45
1:XA:123:C:OP1	1:XA:311:C:O2'	2.34	0.45
1:XA:881:G:P	12:XL:12:ARG:HH22	2.40	0.45
9:XI:28:VAL:HG12	9:XI:63:ILE:HB	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2151:G:H2'	34:YA:2152:G:H8	1.80	0.45
34:YA:2641:G:H5"	42:YN:76:SER:HB3	1.97	0.45
36:YD:133:LEU:HD23	36:YD:136:ILE:HD12	1.98	0.45
46:YR:33:ARG:HA	46:YR:114:VAL:O	2.17	0.45
1:QA:28:G:O2'	1:QA:296:U:OP1	2.31	0.45
1:QA:370:C:H2'	1:QA:371:G:C8	2.51	0.45
7:QG:116:ALA:HA	7:QG:119:ARG:HE	1.82	0.45
13:QM:108:ARG:HA	13:QM:111:LYS:HB2	1.97	0.45
34:RA:665:C:H2'	34:RA:666:G:H8	1.81	0.45
34:RA:2308:G:H22	34:RA:2311:A:H2	1.64	0.45
36:RD:247:ALA:HA	36:RD:253:GLN:HA	1.98	0.45
43:RO:63:VAL:HB	43:RO:102:VAL:HG13	1.98	0.45
49:RU:45:TYR:O	49:RU:49:HIS:ND1	2.49	0.45
1:XA:603:U:H2'	1:XA:604:G:C8	2.51	0.45
1:XA:1304:G:OP1	21:XU:2:GLY:N	2.50	0.45
1:XA:1356:G:H2'	1:XA:1357:A:H8	1.82	0.45
2:XB:27:LYS:HD2	2:XB:193:ASP:HB2	1.97	0.45
4:XD:162:LEU:HD12	4:XD:178:VAL:HG13	1.98	0.45
11:XK:54:ARG:O	11:XK:57:THR:OG1	2.31	0.45
12:XL:46:LYS:HG3	12:XL:48:PRO:HD2	1.98	0.45
15:XO:64:ARG:HH12	15:XO:68:ARG:HH22	1.63	0.45
1:QA:99:C:H2'	1:QA:101:A:C8	2.51	0.45
1:QA:165:C:H2'	1:QA:166:G:H8	1.81	0.45
1:QA:1347:G:O2'	1:QA:1373:G:O6	2.33	0.45
34:RA:38:A:N3	38:RF:48:THR:OG1	2.48	0.45
34:RA:809:G:H2'	34:RA:810:U:C6	2.51	0.45
34:RA:890:A:H2'	34:RA:892:G:H8	1.82	0.45
34:RA:1230:C:H2'	34:RA:1231:G:H8	1.82	0.45
35:RB:7:G:H21	47:RS:38:GLN:HE22	1.64	0.45
36:RD:13:ARG:NH1	36:RD:16:MET:SD	2.90	0.45
53:RY:28:LYS:HG3	53:RY:40:GLU:HG2	1.99	0.45
1:XA:34:C:H2'	1:XA:35:G:H8	1.81	0.45
1:XA:595:G:H1'	1:XA:596:C:H5	1.81	0.45
4:XD:30:LYS:HB3	4:XD:35:ARG:HH22	1.81	0.45
36:YD:71:ASP:HB2	36:YD:103:ARG:HH12	1.82	0.45
38:YF:155:LEU:HB2	38:YF:189:THR:HG21	1.99	0.45
1:QA:244:U:H3	1:QA:893:C:H42	1.64	0.45
34:RA:172:C:H2'	34:RA:173:G:C8	2.52	0.45
34:RA:581:C:H2'	34:RA:582:G:C8	2.51	0.45
34:RA:626:U:H5'	34:RA:627:A:H5"	1.97	0.45
34:RA:1029:A:OP1	45:RQ:128:LYS:NZ	2.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:2641:G:P	42:RN:74:ARG:HE	2.39	0.45
36:RD:132:PRO:HA	36:RD:190:TYR:HA	1.99	0.45
41:RI:123:LEU:HD12	41:RI:142:VAL:HG13	1.98	0.45
44:RP:28:GLY:C	44:RP:30:THR:H	2.24	0.45
50:RV:14:VAL:HB	50:RV:96:ILE:HG12	1.98	0.45
51:RW:76:VAL:HG22	51:RW:103:ILE:HG23	1.98	0.45
1:XA:269:C:H2'	1:XA:270:A:C8	2.52	0.45
1:XA:1128:C:O2'	1:XA:1130:A:N7	2.50	0.45
1:XA:1151:A:H2'	1:XA:1152:A:H8	1.82	0.45
4:XD:21:LEU:N	4:XD:26:CYS:SG	2.89	0.45
33:Y9:25:VAL:HG22	33:Y9:34:GLN:HB3	1.98	0.45
34:YA:122:G:OP1	34:YA:149:A:O2'	2.31	0.45
34:YA:1636:C:H2'	34:YA:1637:A:C8	2.51	0.45
34:YA:1657:C:H2'	34:YA:1658:C:C6	2.51	0.45
35:YB:104:A:OP1	54:YZ:72:ARG:NH1	2.49	0.45
38:YF:54:ARG:HD2	38:YF:81:PRO:HD3	1.98	0.45
45:YQ:13:GLN:O	45:YQ:72:LYS:NZ	2.38	0.45
49:YU:8:VAL:HG22	49:YU:12:ARG:HE	1.82	0.45
51:YW:46:PHE:O	51:YW:50:VAL:HG23	2.16	0.45
1:QA:950:U:H3	1:QA:1231:G:H1	1.65	0.45
1:QA:1174:G:H2'	1:QA:1175:G:H8	1.81	0.45
1:QA:1412:C:H2'	1:QA:1413:A:C8	2.51	0.45
4:QD:85:LYS:HA	4:QD:85:LYS:HD2	1.73	0.45
32:R8:13:ARG:HD2	44:RP:61:ARG:HE	1.81	0.45
34:RA:249:C:O5'	34:RA:2394:C:O2'	2.35	0.45
34:RA:1062:G:N7	34:RA:1088:A:O2'	2.47	0.45
34:RA:1400:G:H2'	34:RA:1401:G:H8	1.81	0.45
34:RA:1789:A:H5"	36:RD:221:VAL:HA	1.99	0.45
36:RD:208:LYS:HG3	36:RD:210:GLY:H	1.82	0.45
48:RT:102:ILE:HD12	48:RT:110:ILE:HD12	1.99	0.45
1:XA:125:U:H2'	1:XA:126:G:C8	2.52	0.45
1:XA:619:U:H5'	4:XD:131:ARG:HH21	1.82	0.45
4:XD:43:HIS:HB3	4:XD:46:LYS:HD2	1.98	0.45
7:XG:26:PHE:O	7:XG:30:ILE:HG12	2.17	0.45
7:XG:139:GLU:OE1	7:XG:143:ARG:NH2	2.49	0.45
8:XH:121:ASP:HB2	8:XH:125:ARG:HH21	1.82	0.45
12:XL:110:VAL:H	12:XL:122:THR:HG22	1.82	0.45
25:Y1:40:ARG:HG2	25:Y1:41:ARG:H	1.81	0.45
28:Y4:5:ILE:N	28:Y4:5:ILE:CD1	2.79	0.45
34:YA:172:C:H2'	34:YA:173:G:C8	2.52	0.45
34:YA:748:G:C8	34:YA:750:A:N7	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:906:G:OP1	45:YQ:26:TYR:OH	2.34	0.45
34:YA:1682:G:OP2	34:YA:1699:G:N2	2.44	0.45
34:YA:2162:G:H2'	34:YA:2163:C:C2	2.52	0.45
42:YN:91:LEU:HD23	42:YN:91:LEU:HA	1.81	0.45
42:YN:137:LYS:HD3	42:YN:138:LEU:HG	1.99	0.45
48:YT:54:ARG:HA	48:YT:59:THR:HG23	1.99	0.45
49:YU:17:ILE:HG13	49:YU:32:PHE:HE1	1.82	0.45
1:QA:1338:G:H21	22:QV:41:A:H1'	1.80	0.45
34:RA:65:C:H5'	52:RX:71:GLY:HA3	1.98	0.45
34:RA:1608:A:C8	34:RA:1611:C:N4	2.84	0.45
34:RA:1689:A:H2'	34:RA:1690:A:H8	1.82	0.45
34:RA:2448:A:OP1	34:RA:2499:C:OP1	2.34	0.45
36:RD:32:SER:C	36:RD:34:VAL:H	2.23	0.45
37:RE:111:ARG:HD3	37:RE:160:TYR:CE2	2.52	0.45
39:RG:81:LYS:HD2	39:RG:81:LYS:HA	1.74	0.45
40:RH:98:LEU:CG	40:RH:125:VAL:CG1	2.91	0.45
40:RH:124:GLU:HG3	40:RH:124:GLU:O	2.17	0.45
50:RV:68:LYS:HD2	50:RV:68:LYS:HA	1.70	0.45
54:RZ:54:HIS:HB3	54:RZ:101:PRO:HD3	1.99	0.45
1:XA:985:C:H2'	1:XA:986:A:C8	2.51	0.45
24:Y0:41:ARG:O	34:YA:2330:G:N2	2.47	0.45
34:YA:2031:A:O2'	34:YA:2454:G:N2	2.49	0.45
35:YB:14:U:O3'	35:YB:107:U:O2'	2.29	0.45
37:YE:171:GLU:HB2	37:YE:185:LYS:HG3	1.98	0.45
1:QA:62:U:O4	1:QA:105:G:O6	2.35	0.45
1:QA:765:G:N1	1:QA:812:C:O2'	2.44	0.45
16:QP:4:ILE:HD13	16:QP:21:VAL:HG12	1.97	0.45
17:QQ:59:ILE:HG22	17:QQ:73:VAL:HA	1.98	0.45
31:R7:18:PHE:HB2	31:R7:43:THR:HG21	1.99	0.45
34:RA:1518:C:H2'	34:RA:1519:G:H8	1.82	0.45
34:RA:1687:G:N2	34:RA:1702:G:O6	2.50	0.45
34:RA:1838:C:O2	34:RA:1898:U:C4	2.70	0.45
34:RA:1939:U:OP1	34:RA:2604:U:O2'	2.35	0.45
34:RA:2099:U:H2'	34:RA:2100:G:C8	2.51	0.45
39:RG:161:THR:HG22	39:RG:163:ALA:H	1.82	0.45
41:RI:80:PRO:HB2	41:RI:146:ALA:HB2	1.97	0.45
43:RO:106:LEU:HA	43:RO:109:LYS:HB2	1.99	0.45
48:RT:118:ARG:HH11	48:RT:121:ILE:HG21	1.81	0.45
53:RY:28:LYS:NZ	53:RY:40:GLU:OE2	2.38	0.45
1:XA:778:G:H21	11:XK:120:ARG:HB3	1.81	0.45
1:XA:977:A:O2'	1:XA:979:C:OP2	2.28	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1228:C:P	13:XM:108:ARG:HH12	2.40	0.45
27:Y3:23:LEU:HD12	27:Y3:28:LEU:HB2	1.98	0.45
30:Y6:46:HIS:ND1	34:YA:2371:G:O2'	2.42	0.45
34:YA:2032:G:N2	37:YE:146:THR:OG1	2.48	0.45
36:YD:44:ASN:HB3	36:YD:49:ILE:HG22	1.98	0.45
1:QA:382:A:H2'	1:QA:383:A:H8	1.81	0.45
1:QA:1095:U:P	1:QA:1108:G:H1	2.40	0.45
2:QB:193:ASP:OD2	2:QB:193:ASP:N	2.50	0.45
3:QC:6:HIS:HE1	3:QC:8:ILE:HD12	1.82	0.45
3:QC:24:ALA:HB1	3:QC:32:LEU:HD21	1.99	0.45
6:QF:12:PRO:HD3	6:QF:58:GLY:HA2	1.99	0.45
33:R9:35:ARG:NH2	34:RA:2539:C:O2'	2.49	0.45
38:RF:48:THR:OG1	38:RF:48:THR:O	2.32	0.45
39:RG:81:LYS:HB3	39:RG:82:LEU:H	1.59	0.45
40:RH:126:PRO:HG2	40:RH:130:ARG:CG	2.46	0.45
41:RI:79:ILE:HG23	41:RI:142:VAL:HA	1.99	0.45
1:XA:68(C):G:H1	1:XA:68(Y):U:H3	1.64	0.45
1:XA:186(M):G:H2'	1:XA:186(N):G:C8	2.52	0.45
1:XA:741:G:H5'	1:XA:742:G:OP2	2.17	0.45
1:XA:985:C:H2'	1:XA:986:A:H8	1.82	0.45
1:XA:1342:C:H2'	1:XA:1343:G:C8	2.52	0.45
19:XS:53:ASN:ND2	19:XS:76:PRO:O	2.48	0.45
19:XS:66:MET:HE2	19:XS:66:MET:HB3	1.78	0.45
27:Y3:40:THR:HB	27:Y3:43:ILE:HG12	1.98	0.45
1:QA:237:C:H2'	1:QA:238:G:C8	2.51	0.44
1:QA:685:G:N1	1:QA:704:A:OP2	2.41	0.44
6:QF:5:GLU:OE1	18:QR:34:TYR:OH	2.31	0.44
8:QH:112:LEU:HD11	8:QH:133:LEU:HD12	1.99	0.44
33:R9:19:ARG:NH2	34:RA:2754:U:O3'	2.50	0.44
34:RA:18:C:O2'	34:RA:553:U:OP1	2.33	0.44
34:RA:139:G:C2	34:RA:141(A):A:C6	3.04	0.44
34:RA:1286:A:O2'	34:RA:1288:U:OP2	2.35	0.44
34:RA:2687:U:H3	34:RA:2722:G:H1	1.66	0.44
36:RD:95:LEU:HB2	36:RD:103:ARG:O	2.17	0.44
37:RE:32:PRO:HA	37:RE:90:THR:HA	1.99	0.44
49:RU:92:ARG:C	49:RU:94:ASN:H	2.24	0.44
1:XA:1224:G:O2'	1:XA:1322:C:OP2	2.36	0.44
1:XA:1414:U:H2'	1:XA:1415:G:C8	2.50	0.44
2:XB:33:TYR:HB2	2:XB:43:ASP:HB2	1.99	0.44
12:XL:24:VAL:HG13	12:XL:98:TYR:HE1	1.82	0.44
32:Y8:42:ARG:NH2	34:YA:2382:G:H21	2.14	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Y9:27:CYS:SG	33:Y9:29:ASN:HB3	2.57	0.44
34:YA:775:G:H4'	34:YA:776:G:H5'	1.98	0.44
34:YA:783:A:H8	34:YA:784:A:H4'	1.82	0.44
34:YA:1266:G:O2'	34:YA:2012:G:O6	2.22	0.44
34:YA:1499:C:H2'	34:YA:1500:G:H8	1.82	0.44
34:YA:2402:C:C5'	34:YA:2402:C:C6	2.97	0.44
34:YA:2809:A:H2'	34:YA:2810:A:C8	2.52	0.44
43:YO:44:LYS:HA	43:YO:44:LYS:HD3	1.72	0.44
54:YZ:5:LEU:HB2	54:YZ:59:LEU:HD12	1.98	0.44
1:QA:166:G:H2'	1:QA:167:G:H8	1.82	0.44
1:QA:647:C:H2'	1:QA:648:A:H8	1.81	0.44
1:QA:948:C:H2'	1:QA:949:A:H8	1.82	0.44
22:QV:76:A:N6	34:RA:2422:A:O4'	2.50	0.44
34:RA:780:G:H21	34:RA:783:A:H62	1.65	0.44
34:RA:966:G:H4'	34:RA:2271:G:H22	1.83	0.44
34:RA:1509:C:N3	34:RA:1511:A:N6	2.65	0.44
34:RA:2033:A:O2'	34:RA:2035:G:OP2	2.31	0.44
34:RA:2531:A:H61	34:RA:2662:A:H61	1.64	0.44
34:RA:2630:G:H2'	34:RA:2631:G:C8	2.52	0.44
54:RZ:97:GLU:HB3	54:RZ:125:LEU:HD11	2.00	0.44
1:XA:1499:A:H8	1:XA:1499:A:O5'	2.00	0.44
7:XG:79:ARG:HH21	7:XG:82:GLY:HA2	1.82	0.44
34:YA:532:A:H4'	34:YA:533:G:C8	2.52	0.44
1:QA:67:C:H2'	1:QA:68:G:C8	2.53	0.44
1:QA:626:U:H2'	1:QA:627:G:C8	2.51	0.44
2:QB:178:ARG:NH1	2:QB:196:LEU:O	2.49	0.44
6:QF:47:ARG:HD2	6:QF:57:GLN:HB3	2.00	0.44
15:QO:29:VAL:O	15:QO:33:THR:OG1	2.26	0.44
29:R5:41:PRO:O	29:R5:44:THR:OG1	2.27	0.44
34:RA:29:U:H2'	34:RA:30:G:C8	2.53	0.44
34:RA:84:A:N1	34:RA:98:G:O2'	2.38	0.44
34:RA:494:G:H21	51:RW:57:ASN:HD21	1.63	0.44
34:RA:2498:C:OP2	34:RA:2499:C:OP2	2.36	0.44
34:RA:2684:U:O2'	43:RO:68:GLU:OE2	2.32	0.44
40:RH:86:GLU:O	40:RH:164:TYR:HB2	2.17	0.44
43:RO:76:ALA:HB3	48:RT:75:ILE:HG12	1.99	0.44
1:XA:920:U:O2'	1:XA:1081:G:O2'	2.33	0.44
1:XA:1061:G:OP1	10:XJ:59:SER:OG	2.27	0.44
1:XA:1462:G:H5"	48:YT:111:ARG:HH22	1.81	0.44
1:XA:1499:A:O5'	1:XA:1499:A:C8	2.70	0.44
12:XL:88:GLY:H	12:XL:98:TYR:HA	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Y0:38:VAL:HG22	24:Y0:59:LEU:HB2	1.98	0.44
34:YA:568:U:H5"	34:YA:568:U:H6	1.82	0.44
34:YA:747:U:O2	34:YA:2014:A:O2'	2.32	0.44
42:YN:21:LYS:HD2	42:YN:26:LEU:HD13	1.98	0.44
48:YT:25:GLY:N	48:YT:49:VAL:O	2.42	0.44
50:YV:2:PHE:H	50:YV:42:GLY:HA3	1.82	0.44
1:QA:269:C:H2'	1:QA:270:A:C8	2.52	0.44
1:QA:318:G:H2'	1:QA:319:G:H8	1.83	0.44
1:QA:1080:A:OP1	5:QE:14:ARG:NH2	2.47	0.44
34:RA:28:A:HO2'	34:RA:582:G:HO2'	1.58	0.44
34:RA:861:A:N3	35:RB:79:C:O2'	2.51	0.44
34:RA:2319:G:N2	34:RA:2334:G:OP1	2.51	0.44
34:RA:2809:A:OP2	34:RA:2891:G:N1	2.45	0.44
35:RB:25:A:H2'	35:RB:26:A:H8	1.83	0.44
41:RI:4:ILE:HG23	41:RI:39:ALA:HB2	2.00	0.44
48:RT:25:GLY:H	48:RT:49:VAL:HG13	1.82	0.44
54:RZ:115:GLY:H	54:RZ:177:PRO:HG3	1.83	0.44
1:XA:673:G:O3'	6:XF:87:ARG:NH2	2.50	0.44
1:XA:1354:C:H2'	1:XA:1355:G:C8	2.53	0.44
1:XA:1356:G:H2'	1:XA:1357:A:C8	2.52	0.44
2:XB:175:ARG:NH2	2:XB:179:LYS:HZ1	2.15	0.44
3:XC:18:TRP:CE2	14:XN:55:GLY:HA2	2.53	0.44
13:XM:2:ALA:HB3	13:XM:9:ILE:HG21	2.00	0.44
34:YA:1549:C:O2'	34:YA:1733:G:N2	2.42	0.44
34:YA:1969:A:O2'	34:YA:1972:A:N3	2.45	0.44
34:YA:2102:U:H3	34:YA:2187:G:H1	1.64	0.44
34:YA:2303:G:N3	39:YG:132:ASN:ND2	2.64	0.44
46:YR:100:LEU:HD11	46:YR:113:LEU:HG	2.00	0.44
1:QA:502:G:H2'	1:QA:503:C:O4'	2.18	0.44
1:QA:707:C:OP1	11:QK:85:ARG:NH1	2.51	0.44
4:QD:61:LYS:HD2	4:QD:207:TYR:CZ	2.53	0.44
34:RA:679:C:H2'	34:RA:680:G:H8	1.82	0.44
34:RA:1309:G:O2'	34:RA:1611:C:O2'	2.32	0.44
34:RA:1796:U:H2'	34:RA:1797:C:H6	1.82	0.44
34:RA:1851:U:H3	34:RA:1891:G:H1	1.65	0.44
34:RA:1992:G:C5	34:RA:1997:G:C6	3.05	0.44
36:RD:61:LEU:HD23	36:RD:61:LEU:HA	1.83	0.44
39:RG:135:LEU:HD11	39:RG:140:ILE:HD11	2.00	0.44
51:RW:65:LEU:HD12	51:RW:68:ARG:HH21	1.83	0.44
53:RY:76:CYS:SG	53:RY:79:CYS:C	3.00	0.44
1:XA:1302:U:OP2	13:XM:21:TYR:OH	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1427:U:H2'	1:XA:1428:A:C8	2.52	0.44
16:XP:22:THR:OG1	16:XP:23:ASP:N	2.50	0.44
18:XR:85:LEU:HD12	18:XR:85:LEU:HA	1.83	0.44
34:YA:840:C:H2'	34:YA:841:A:C8	2.53	0.44
34:YA:1859:A:N6	34:YA:1883:G:O2'	2.51	0.44
38:YF:167:ALA:HB1	38:YF:173:VAL:HG11	1.99	0.44
45:YQ:12:GLN:HB2	45:YQ:73:PRO:HD2	2.00	0.44
1:QA:476:G:H2'	1:QA:477:G:H8	1.82	0.44
2:QB:51:LEU:HD23	2:QB:201:ILE:HD12	1.99	0.44
8:QH:21:LYS:O	8:QH:65:TYR:OH	2.25	0.44
27:R3:18:ASP:OD1	27:R3:18:ASP:N	2.48	0.44
34:RA:373:U:H2'	34:RA:374:A:H8	1.83	0.44
34:RA:1441:G:H2'	34:RA:1442:G:H8	1.82	0.44
34:RA:2094:G:OP1	41:RI:22:LYS:HE2	2.13	0.44
34:RA:2580:U:H5'	37:RE:130:GLY:O	2.18	0.44
36:RD:12:SER:HB2	36:RD:208:LYS:HB3	1.99	0.44
41:RI:84:GLY:CA	41:RI:89:TYR:OH	2.61	0.44
1:XA:1174:G:H2'	1:XA:1175:G:C8	2.53	0.44
1:XA:1271:G:H5'	1:XA:1314:C:H5"	1.99	0.44
2:XB:189:ASP:OD1	2:XB:189:ASP:N	2.49	0.44
4:XD:57:ARG:NH2	4:XD:205:GLU:OE1	2.51	0.44
30:Y6:29:ASN:ND2	34:YA:2286:A:OP1	2.50	0.44
34:YA:270(R):C:H5"	41:YI:45:LYS:HD3	1.99	0.44
34:YA:828:U:O2	34:YA:828:U:H3'	2.17	0.44
34:YA:1006:C:H5'	42:YN:28:THR:HG23	1.99	0.44
34:YA:2109:U:H2'	34:YA:2110:G:C8	2.52	0.44
45:YQ:58:PHE:HD2	45:YQ:61:GLY:HA3	1.82	0.44
53:YY:13:VAL:HG12	53:YY:74:PRO:HA	1.99	0.44
1:QA:59:A:H3'	1:QA:331:G:H22	1.82	0.44
1:QA:297:G:N2	1:QA:300:A:OP2	2.51	0.44
1:QA:949:A:H2'	1:QA:950:U:H6	1.83	0.44
1:QA:1220:G:H2'	1:QA:1221:G:H8	1.82	0.44
1:QA:1440(B):G:H21	1:QA:1440(P):A:H62	1.65	0.44
10:QJ:28:ARG:HE	10:QJ:34:VAL:HG12	1.83	0.44
13:QM:95:GLY:HA2	13:QM:110:ARG:HH21	1.83	0.44
22:QV:71:C:O2	34:RA:1851:U:O2'	2.36	0.44
34:RA:1138:G:H21	42:RN:106:MET:HG2	1.83	0.44
34:RA:2294:C:H2'	34:RA:2295:C:H6	1.82	0.44
40:RH:4:ILE:HD12	40:RH:6:ARG:HB2	1.99	0.44
1:XA:59:A:H5'	1:XA:60:A:H5"	1.99	0.44
1:XA:294:U:OP1	1:XA:610:G:O2'	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:68:TYR:OH	4:XD:98:GLU:OE2	2.33	0.44
34:YA:1151:G:O2'	49:YU:77:SER:O	2.33	0.44
34:YA:1966:A:N3	34:YA:2592:G:O2'	2.45	0.44
34:YA:2153:G:H2'	34:YA:2154:G:H8	1.82	0.44
46:YR:29:LEU:HD13	46:YR:79:LEU:HD22	1.99	0.44
1:QA:444:C:H2'	1:QA:445:G:C8	2.53	0.44
1:QA:927:G:N2	1:QA:1390:U:O2	2.33	0.44
1:QA:1022:G:H2'	1:QA:1023:G:C8	2.52	0.44
3:QC:112:SER:HB3	3:QC:115:LEU:HD12	2.00	0.44
34:RA:1053:C:O5'	34:RA:1053:C:H6	2.00	0.44
34:RA:1276:A:H1'	46:RR:16:HIS:HE1	1.83	0.44
34:RA:1338:G:O6	52:RX:62:LYS:NZ	2.47	0.44
34:RA:1695:G:H1'	36:RD:8:PRO:O	2.17	0.44
34:RA:2081:C:H2'	34:RA:2082:A:H8	1.83	0.44
34:RA:2097:C:C6	34:RA:2097:C:OP2	2.71	0.44
34:RA:2097:C:OP2	34:RA:2097:C:H6	2.00	0.44
34:RA:2287:A:N6	34:RA:2344:U:H3	2.16	0.44
34:RA:2342:C:O2'	34:RA:2374:C:OP1	2.33	0.44
34:RA:2850:A:OP2	34:RA:2866:U:N3	2.51	0.44
36:RD:181:GLU:HA	36:RD:272:ALA:HB3	1.99	0.44
1:XA:40:C:H2'	1:XA:41:G:H8	1.82	0.44
1:XA:1230:C:H2'	1:XA:1231:G:C8	2.53	0.44
39:YG:124:SER:O	39:YG:124:SER:OG	2.35	0.44
39:YG:138:GLN:OE1	39:YG:153:ARG:N	2.43	0.44
1:QA:37:U:HO2'	1:QA:500:G:HO2'	1.64	0.44
1:QA:401:C:O2'	1:QA:621:A:N3	2.47	0.44
1:QA:538:G:H2'	1:QA:539:A:H8	1.83	0.44
1:QA:595:G:H1'	1:QA:596:C:H5	1.83	0.44
1:QA:662:G:H2'	1:QA:663:A:C8	2.53	0.44
1:QA:1203:C:H2'	1:QA:1204:A:C8	2.53	0.44
5:QE:43:LEU:HD13	5:QE:109:ILE:HD11	1.99	0.44
19:QS:50:ALA:HA	19:QS:58:VAL:O	2.17	0.44
22:QV:37:1MG:C5	22:QV:38:A:C4	3.06	0.44
34:RA:31:C:O2'	34:RA:1238:G:OP1	2.35	0.44
34:RA:997:G:OP1	49:RU:93:LYS:HD3	2.18	0.44
34:RA:1068:G:N2	34:RA:1095:A:O3'	2.51	0.44
34:RA:1790:C:OP2	34:RA:1828:G:N1	2.48	0.44
34:RA:1962:C:O2'	34:RA:1964:G:OP2	2.28	0.44
34:RA:2098:U:O2	34:RA:2098:U:H2'	2.17	0.44
36:RD:50:THR:OG1	36:RD:51:VAL:N	2.50	0.44
1:XA:575:G:N1	1:XA:880:C:N3	2.55	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1251:A:H2'	1:XA:1252:A:C8	2.53	0.44
1:XA:1342:C:H2'	1:XA:1343:G:H8	1.83	0.44
1:XA:1427:U:H2'	1:XA:1428:A:H8	1.83	0.44
3:XC:66:VAL:HB	3:XC:101:LEU:HD13	2.00	0.44
16:XP:19:ILE:HG13	16:XP:36:ILE:HD11	2.00	0.44
18:XR:47:THR:O	18:XR:83:GLU:N	2.51	0.44
20:XT:100:ILE:HG23	20:XT:102:GLY:H	1.81	0.44
34:YA:1853:A:H2'	34:YA:1854:A:C8	2.53	0.44
38:YF:102:PRO:HB2	38:YF:105:VAL:HG23	1.99	0.44
51:YW:35:ILE:O	51:YW:39:THR:OG1	2.27	0.44
53:YY:28:LYS:N	53:YY:38:ILE:O	2.45	0.44
1:QA:1204:A:OP1	14:QN:3:ARG:NH2	2.51	0.43
25:R1:90:ILE:HA	25:R1:94:LEU:HG	1.99	0.43
34:RA:117:G:OP1	34:RA:124:G:N1	2.44	0.43
34:RA:265:A:N7	34:RA:428:A:N6	2.65	0.43
34:RA:707:G:H1	34:RA:724:U:H3	1.66	0.43
45:RQ:34:LEU:HB2	45:RQ:118:LEU:HD12	1.99	0.43
51:RW:71:VAL:HA	51:RW:107:LEU:HD23	2.00	0.43
52:RX:55:ASN:HB2	52:RX:80:ILE:HG23	2.00	0.43
1:XA:48:C:OP2	1:XA:115:G:OP1	2.35	0.43
1:XA:1291:G:H4'	9:XI:39:GLY:HA3	1.99	0.43
5:XE:31:LEU:HD13	5:XE:45:PHE:HD1	1.83	0.43
15:XO:53:HIS:NE2	34:YA:715:G:O6	2.49	0.43
36:YD:142:VAL:HA	36:YD:194:GLY:H	1.83	0.43
37:YE:102:VAL:N	37:YE:170:LEU:O	2.46	0.43
1:QA:1503:A:N3	23:QX:15:A:N6	2.65	0.43
5:QE:100:VAL:O	5:QE:107:ARG:NH1	2.48	0.43
16:QP:55:ARG:HD2	16:QP:55:ARG:HA	1.79	0.43
23:QX:14:A:C8	23:QX:14:A:OP2	2.70	0.43
28:R4:12:ALA:H	28:R4:25:TYR:HA	1.83	0.43
34:RA:1084:A:H2'	34:RA:1085:A:C4	2.53	0.43
34:RA:2246:G:H2'	34:RA:2247:A:H8	1.82	0.43
34:RA:2392:A:H2	34:RA:2424:C:H42	1.66	0.43
34:RA:2576:G:N3	34:RA:2576:G:C3'	2.80	0.43
41:RI:79:ILE:HD12	41:RI:80:PRO:HD2	2.00	0.43
3:XC:187:ALA:HB3	3:XC:198:VAL:HG13	2.00	0.43
5:XE:105:VAL:HG11	5:XE:132:ALA:HB2	1.99	0.43
12:XL:33:ARG:NH2	12:XL:61:THR:OG1	2.51	0.43
28:Y4:37:SER:HA	28:Y4:41:PRO:HD2	1.98	0.43
34:YA:748:G:N9	34:YA:750:A:N7	2.66	0.43
34:YA:2821:A:OP1	37:YE:110:GLY:N	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YE:37:ARG:NH1	37:YE:44:TYR:OH	2.48	0.43
39:YG:106:LEU:HD12	39:YG:110:ALA:HB3	1.99	0.43
44:YP:21:ARG:HB3	44:YP:22:GLY:H	1.67	0.43
1:QA:355:C:O2'	1:QA:388:G:N3	2.36	0.43
1:QA:406:G:H21	4:QD:119:GLN:HE22	1.66	0.43
1:QA:559:A:H4'	1:QA:560:U:H5"	2.00	0.43
1:QA:673:G:O3'	6:QF:87:ARG:NH2	2.50	0.43
1:QA:881:G:P	12:QL:12:ARG:HH22	2.41	0.43
34:RA:691:C:H2'	34:RA:692:C:H6	1.82	0.43
34:RA:1165:U:O4	34:RA:1184:G:O6	2.36	0.43
34:RA:1182:A:H2'	34:RA:1183:G:H8	1.83	0.43
34:RA:1385:G:O2'	34:RA:1396:U:O2	2.32	0.43
34:RA:2313:C:H5"	39:RG:91:ARG:HH21	1.83	0.43
37:RE:176:ILE:HG13	37:RE:181:LEU:HB2	2.00	0.43
1:XA:1409:C:H2'	1:XA:1410:G:H8	1.82	0.43
24:Y0:12:ASN:ND2	34:YA:2278:A:OP2	2.51	0.43
30:Y6:3:SER:HB3	30:Y6:6:ARG:HB3	2.00	0.43
34:YA:124:G:OP1	34:YA:1376:C:O2'	2.34	0.43
35:YB:75:G:H21	54:YZ:85:HIS:CD2	2.36	0.43
47:YS:4:LEU:HD11	47:YS:12:PHE:CE2	2.51	0.43
1:QA:57:G:H2'	1:QA:58:C:H6	1.84	0.43
2:QB:54:THR:O	2:QB:58:ILE:HG12	2.18	0.43
7:QG:31:MET:HE2	7:QG:34:GLY:HA2	1.99	0.43
29:R5:12:SER:O	29:R5:16:ARG:CB	2.67	0.43
34:RA:29:U:H2'	34:RA:30:G:H8	1.83	0.43
34:RA:273(E):C:N4	34:RA:363(D):G:O6	2.51	0.43
34:RA:922:U:H2'	34:RA:923:C:C6	2.54	0.43
34:RA:1525:G:H2'	34:RA:1526:G:C8	2.53	0.43
34:RA:2294:C:OP2	47:RS:13:ARG:NH2	2.52	0.43
34:RA:2311:A:C8	39:RG:82:LEU:HD21	2.53	0.43
37:RE:171:GLU:H	37:RE:185:LYS:HB2	1.84	0.43
40:RH:80:SER:O	40:RH:80:SER:OG	2.31	0.43
46:RR:29:LEU:HD12	46:RR:70:LEU:HD21	1.99	0.43
46:RR:35:THR:HG22	46:RR:113:LEU:HD13	2.01	0.43
1:XA:25:C:C4	1:XA:558:G:N2	2.86	0.43
1:XA:67:C:O2'	1:XA:171:A:N3	2.40	0.43
1:XA:280:C:N3	17:XQ:39:SER:OG	2.49	0.43
1:XA:605:U:OP2	1:XA:605:U:C5	2.70	0.43
1:XA:1135:U:H4'	1:XA:1136:U:H5	1.83	0.43
27:Y3:18:ASP:HB2	27:Y3:49:LYS:HE2	1.99	0.43
31:Y7:34:ARG:NH1	34:YA:466:A:OP1	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:530:G:N1	34:YA:2022:U:OP1	2.52	0.43
34:YA:629:G:N3	34:YA:639:U:O2'	2.51	0.43
34:YA:2047:U:O2'	34:YA:2823:A:N1	2.47	0.43
41:YI:81:VAL:HG11	41:YI:88:ILE:HD13	1.99	0.43
44:YP:97:PRO:O	44:YP:98:GLU:HG3	2.18	0.43
49:YU:55:ARG:O	49:YU:59:ARG:HG2	2.18	0.43
1:QA:501:C:H2'	1:QA:502:G:C8	2.54	0.43
1:QA:674:G:H2'	1:QA:675:A:C8	2.48	0.43
1:QA:1414:U:H2'	1:QA:1415:G:H8	1.83	0.43
3:QC:131:ARG:HH11	3:QC:134:ILE:HG21	1.83	0.43
8:QH:82:HIS:N	8:QH:138:TRP:OXT	2.41	0.43
9:QI:65:VAL:HG11	9:QI:73:GLN:HG3	2.01	0.43
26:R2:16:LEU:H	26:R2:67:LYS:NZ	2.16	0.43
34:RA:947:G:H2'	34:RA:948:G:C8	2.53	0.43
34:RA:1814:G:H5'	36:RD:51:VAL:HG11	2.01	0.43
34:RA:2315:G:H2'	34:RA:2316:C:C6	2.54	0.43
34:RA:2425:A:H4'	34:RA:2426:A:H5"	2.00	0.43
34:RA:2504:U:H6	34:RA:2504:U:O5'	2.02	0.43
34:RA:2584:U:H2'	34:RA:2585:U:H2'	2.00	0.43
39:RG:43:LEU:HD21	39:RG:153:ARG:HB2	1.99	0.43
43:RO:15:GLY:HA3	43:RO:50:GLY:HA3	1.99	0.43
48:RT:6:LEU:O	48:RT:10:VAL:HG23	2.19	0.43
1:XA:186(J):U:O2	17:XQ:72:ARG:NH2	2.52	0.43
1:XA:713:G:H2'	1:XA:714:G:C8	2.53	0.43
1:XA:765:G:N1	1:XA:812:C:O2'	2.40	0.43
9:XI:70:LYS:O	9:XI:74:ILE:HG13	2.19	0.43
18:XR:49:LYS:HB3	18:XR:49:LYS:HE2	1.85	0.43
34:YA:90:U:H1'	34:YA:91:A:C8	2.54	0.43
34:YA:320:A:N3	38:YF:169:ASN:ND2	2.67	0.43
34:YA:463:G:O2'	34:YA:465:G:O6	2.36	0.43
35:YB:9:G:P	47:YS:25:ARG:HH12	2.42	0.43
37:YE:11:MET:HE3	37:YE:11:MET:HB2	1.93	0.43
39:YG:165:THR:OG1	39:YG:166:ASP:N	2.52	0.43
41:YI:101:LEU:HD11	41:YI:109:ILE:HD13	2.00	0.43
1:QA:865:A:N3	1:QA:918:A:O2'	2.42	0.43
1:QA:1038:C:N3	1:QA:1039:C:N4	2.67	0.43
3:QC:12:LEU:HG	3:QC:18:TRP:HE1	1.83	0.43
4:QD:191:ARG:HA	4:QD:191:ARG:HD2	1.72	0.43
20:QT:58:LYS:O	20:QT:61:SER:OG	2.26	0.43
44:RP:96:THR:HA	44:RP:126:VAL:HB	2.01	0.43
54:RZ:48:PHE:HA	54:RZ:51:ALA:HB3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:RZ:53:ILE:HG22	54:RZ:71:VAL:HG13	1.99	0.43
54:RZ:156:LYS:HE3	54:RZ:156:LYS:HB3	1.74	0.43
1:XA:7:G:O2'	5:XE:120:THR:O	2.36	0.43
1:XA:377:G:H2'	1:XA:378:G:H8	1.83	0.43
1:XA:601:C:H2'	1:XA:602:A:H8	1.83	0.43
1:XA:1374:A:O2'	7:XG:28:ASN:O	2.37	0.43
12:XL:86:ARG:HH21	12:XL:99:HIS:CD2	2.37	0.43
14:XN:40:CYS:SG	14:XN:41:ARG:N	2.91	0.43
34:YA:240:G:O2'	34:YA:257:A:N6	2.51	0.43
34:YA:635:C:O2'	34:YA:639:U:OP1	2.29	0.43
34:YA:2081:C:H2'	34:YA:2082:A:H8	1.83	0.43
34:YA:2581:G:N1	34:YA:2610:C:O2'	2.47	0.43
44:YP:64:LYS:O	44:YP:66:GLY:N	2.51	0.43
48:YT:19:LEU:HD21	48:YT:83:ILE:HD11	2.00	0.43
1:QA:131:C:OP2	1:QA:186(K):G:O2'	2.35	0.43
1:QA:382:A:H2'	1:QA:383:A:C8	2.54	0.43
1:QA:736:C:H2'	1:QA:737:A:C8	2.53	0.43
1:QA:1119:C:H2'	1:QA:1120:G:H8	1.83	0.43
2:QB:188:ALA:HB1	2:QB:192:SER:HB2	2.01	0.43
23:QX:14:A:O5'	23:QX:14:A:C8	2.70	0.43
34:RA:1148:A:H2'	34:RA:1149:G:C8	2.54	0.43
34:RA:1528:A:H2'	34:RA:1529:A:H8	1.84	0.43
38:RF:152:GLU:OE1	38:RF:191:ARG:NE	2.52	0.43
49:RU:91:ASP:O	49:RU:93:LYS:N	2.50	0.43
1:XA:129(A):U:H3	1:XA:232:G:H1	1.67	0.43
1:XA:262:A:H2'	1:XA:263:A:C8	2.54	0.43
1:XA:1205:U:H2'	1:XA:1206:G:H8	1.83	0.43
11:XK:82:VAL:HB	11:XK:108:ILE:HA	2.01	0.43
24:Y0:72:ARG:CB	24:Y0:75:LEU:HB2	2.49	0.43
33:Y9:10:ILE:N	33:Y9:14:CYS:SG	2.84	0.43
34:YA:947:G:N3	34:YA:984:A:C2	2.87	0.43
34:YA:974(A):G:C5	34:YA:1186:G:C2	3.07	0.43
36:YD:143:HIS:ND1	36:YD:194:GLY:O	2.40	0.43
36:YD:254:THR:OG1	36:YD:254:THR:O	2.36	0.43
39:YG:18:GLU:OE1	39:YG:21:ARG:NH2	2.50	0.43
48:YT:120:ARG:HA	48:YT:123:GLN:HB2	2.01	0.43
53:YY:76:CYS:CB	53:YY:79:CYS:SG	3.07	0.43
1:QA:451:A:N7	1:QA:481:G:N1	2.67	0.43
1:QA:819:A:N7	1:QA:1529:G:C6	2.87	0.43
1:QA:1003:G:H2'	1:QA:1004:A:H4'	2.00	0.43
7:QG:75:VAL:HA	7:QG:88:PRO:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:76:ASN:HD21	12:QL:108:ALA:HB3	1.84	0.43
13:QM:29:ARG:HH21	13:QM:64:TRP:HE1	1.67	0.43
13:QM:87:TYR:OH	13:QM:91:ARG:NH2	2.47	0.43
14:QN:6:LEU:HD23	14:QN:9:LYS:HD3	2.00	0.43
34:RA:578:A:OP1	34:RA:1255:U:O2'	2.36	0.43
34:RA:1140:C:O3'	42:RN:25:ARG:NH2	2.44	0.43
34:RA:1732:A:H3'	34:RA:1733:G:H8	1.82	0.43
34:RA:2133:G:N2	34:RA:2157:G:H2'	2.33	0.43
43:RO:15:GLY:HA2	43:RO:47:ILE:HG22	2.00	0.43
3:XC:64:VAL:HG13	3:XC:97:LYS:HD2	2.01	0.43
32:Y8:60:LEU:HD12	32:Y8:60:LEU:HA	1.81	0.43
34:YA:363(B):A:H2'	34:YA:363(C):G:C8	2.52	0.43
34:YA:2148:G:H2'	34:YA:2149:G:C8	2.54	0.43
47:YS:14:VAL:O	47:YS:18:ILE:HG12	2.18	0.43
48:YT:16:ARG:NH2	48:YT:83:ILE:O	2.51	0.43
1:QA:67:C:O2'	1:QA:171:A:N3	2.46	0.43
1:QA:181:G:O2'	1:QA:183:G:O6	2.35	0.43
1:QA:380:G:N2	1:QA:383:A:OP2	2.42	0.43
1:QA:401:C:H5	4:QD:73:ARG:HH22	1.60	0.43
1:QA:411:A:OP1	4:QD:30:LYS:NZ	2.49	0.43
1:QA:708:C:H2'	1:QA:709:G:C8	2.53	0.43
3:QC:43:LEU:HG	3:QC:47:LEU:HD22	2.00	0.43
13:QM:34:LEU:HA	13:QM:37:THR:HG22	2.01	0.43
19:QS:70:LYS:N	19:QS:73:GLU:OE1	2.52	0.43
22:QV:23:C:H2'	22:QV:24:G:C8	2.54	0.43
34:RA:1370:C:O2'	34:RA:1811:G:O2'	2.34	0.43
34:RA:1995:U:H3'	34:RA:1996:C:H2'	2.01	0.43
34:RA:2630:G:H2'	34:RA:2631:G:H8	1.84	0.43
35:RB:8:U:O2	35:RB:112:G:N2	2.43	0.43
1:XA:851:G:H2'	1:XA:852:G:H8	1.84	0.43
6:XF:67:MET:HE1	6:XF:75:LEU:HD22	2.01	0.43
24:Y0:26:TYR:N	24:Y0:29:GLN:OE1	2.52	0.43
34:YA:688:U:H1'	34:YA:786:C:O2'	2.19	0.43
34:YA:2140:C:H2'	34:YA:2141:G:H8	1.83	0.43
34:YA:2790:A:O2'	34:YA:2893:G:N3	2.51	0.43
38:YF:158:THR:OG1	38:YF:159:GLY:N	2.51	0.43
40:YH:152:ARG:HA	40:YH:152:ARG:HD3	1.80	0.43
1:QA:1064:G:OP1	1:QA:1386:G:O2'	2.33	0.43
34:RA:1179:C:H2'	34:RA:1180:C:H6	1.84	0.43
34:RA:1539:G:H2'	34:RA:1540:G:H8	1.83	0.43
34:RA:2470:G:OP1	45:RQ:56:ARG:NH2	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:RE:35:GLN:HB2	37:RE:37:ARG:HH21	1.84	0.43
40:RH:46:GLU:OE1	40:RH:51:ARG:NH1	2.52	0.43
54:RZ:130:PRO:HA	54:RZ:133:ILE:HD11	2.01	0.43
1:XA:445:G:H2'	1:XA:446:G:H8	1.84	0.43
1:XA:1124:G:O2'	1:XA:1126:U:O4	2.28	0.43
7:XG:102:ARG:HA	7:XG:105:VAL:HG22	2.01	0.43
11:XK:109:VAL:HG11	18:XR:84:LYS:HD2	2.01	0.43
27:Y3:5:LYS:HE3	27:Y3:57:GLU:HB3	1.99	0.43
34:YA:18:C:O2'	34:YA:553:U:OP1	2.31	0.43
34:YA:1600:C:OP1	52:YX:58:HIS:NE2	2.42	0.43
34:YA:2249:U:N3	34:YA:2253:G:OP2	2.46	0.43
38:YF:48:THR:O	38:YF:48:THR:OG1	2.36	0.43
54:YZ:85:HIS:NE2	54:YZ:87:ASP:OD1	2.52	0.43
1:QA:908:A:H2'	1:QA:909:A:H8	1.84	0.42
1:QA:1145:C:O2'	1:QA:1146:A:N7	2.47	0.42
2:QB:150:SER:HA	2:QB:153:ARG:HH21	1.83	0.42
3:QC:140:ARG:HA	3:QC:143:GLU:HG2	2.01	0.42
6:QF:78:GLU:HA	6:QF:81:ILE:HG12	2.01	0.42
10:QJ:61:GLU:HG3	14:QN:45:ARG:HH12	1.84	0.42
15:QO:64:ARG:NH1	34:RA:715:G:OP1	2.52	0.42
34:RA:532:A:H4'	34:RA:533:G:C8	2.53	0.42
34:RA:807:U:OP1	44:RP:36:LYS:HD3	2.19	0.42
34:RA:1662:C:O2'	34:RA:2687:U:OP1	2.34	0.42
37:RE:134:ILE:HD12	37:RE:134:ILE:HA	1.85	0.42
45:RQ:77:LYS:NZ	45:RQ:84:GLY:O	2.40	0.42
53:RY:79:CYS:N	53:RY:102:CYS:SG	2.92	0.42
1:XA:17:U:H2'	1:XA:18:C:H6	1.83	0.42
1:XA:815:A:O4'	1:XA:817:C:N4	2.52	0.42
10:XJ:99:LYS:HA	10:XJ:99:LYS:HD2	1.73	0.42
34:YA:603:A:N1	34:YA:625:G:O2'	2.49	0.42
34:YA:2377:A:O2'	47:YS:111:GLU:O	2.32	0.42
34:YA:2808:U:N3	34:YA:2892:A:N6	2.67	0.42
54:YZ:48:PHE:HA	54:YZ:51:ALA:HB3	2.00	0.42
1:QA:757:U:O2'	1:QA:879:C:O2	2.35	0.42
1:QA:820:U:O2	1:QA:820:U:O2'	2.28	0.42
3:QC:29:TYR:OH	14:QN:54:PRO:O	2.37	0.42
4:QD:100:ARG:HG3	4:QD:137:SER:HA	2.00	0.42
8:QH:10:LEU:HG	8:QH:83:ILE:HD11	1.99	0.42
12:QL:57:LYS:HA	12:QL:67:THR:HA	2.00	0.42
34:RA:30:G:H2'	34:RA:31:C:C6	2.53	0.42
36:RD:13:ARG:HD2	36:RD:13:ARG:HA	1.80	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:RE:109:LYS:HG2	37:RE:191:PRO:HB3	2.00	0.42
37:RE:120:TRP:CD2	37:RE:155:LYS:HB3	2.54	0.42
44:RP:65:ARG:O	44:RP:68:GLN:NE2	2.52	0.42
1:XA:948:C:OP2	13:XM:106:ASN:ND2	2.48	0.42
1:XA:1314:C:H2'	1:XA:1315:U:H6	1.84	0.42
1:XA:1384:C:H2'	1:XA:1385:G:C8	2.54	0.42
7:XG:116:ALA:HA	7:XG:119:ARG:HE	1.83	0.42
34:YA:691:C:H2'	34:YA:692:C:H6	1.85	0.42
34:YA:1935:G:H1'	34:YA:1964:G:N2	2.34	0.42
34:YA:1952:A:OP1	43:YO:44:LYS:NZ	2.50	0.42
34:YA:2446:G:H2'	34:YA:2447:G:H5"	2.01	0.42
37:YE:144:ARG:HG3	37:YE:145:LYS:H	1.84	0.42
1:QA:1071:C:H2'	1:QA:1072:G:C8	2.52	0.42
3:QC:22:TRP:HH2	3:QC:32:LEU:HD13	1.85	0.42
5:QE:102:ALA:H	5:QE:107:ARG:NH2	2.18	0.42
22:QV:19:G:H4'	22:QV:57:G:H1	1.85	0.42
23:QX:14:A:C8	23:QX:14:A:P	3.12	0.42
34:RA:1021:A:H62	34:RA:1022:G:H21	1.67	0.42
1:XA:662:G:H2'	1:XA:663:A:C8	2.54	0.42
1:XA:1052:U:O2'	1:XA:1055:A:OP2	2.29	0.42
1:XA:1314:C:H2'	1:XA:1315:U:C6	2.55	0.42
2:XB:87:ARG:HH21	2:XB:219:VAL:HG13	1.84	0.42
13:XM:9:ILE:HA	13:XM:10:PRO:HD3	1.90	0.42
13:XM:52:GLU:HA	13:XM:55:ARG:HG2	2.00	0.42
19:XS:36:ARG:NH2	19:XS:72:GLY:O	2.52	0.42
20:XT:17:ARG:HE	20:XT:17:ARG:HB3	1.73	0.42
34:YA:816:C:O2'	34:YA:932:G:O6	2.36	0.42
34:YA:1782:C:H42	34:YA:2586:C:N4	2.16	0.42
34:YA:2151:G:H2'	34:YA:2152:G:C8	2.54	0.42
35:YB:111:U:H2'	35:YB:112:G:H8	1.85	0.42
40:YH:159:GLU:HG2	40:YH:169:VAL:HG21	2.01	0.42
42:YN:48:MET:HB2	42:YN:48:MET:HE2	1.68	0.42
51:YW:57:ASN:O	51:YW:61:ASN:HB2	2.19	0.42
1:QA:477:G:H2'	1:QA:478:A:H8	1.83	0.42
1:QA:1028(D):G:N2	1:QA:1028(G):A:OP2	2.53	0.42
1:QA:1219:U:H2'	1:QA:1220:G:C8	2.54	0.42
4:QD:15:GLU:HG2	4:QD:63:LYS:HB3	2.02	0.42
5:QE:126:ARG:HA	5:QE:131:ILE:HD11	2.01	0.42
7:QG:75:VAL:HG12	7:QG:88:PRO:HB3	2.01	0.42
12:QL:79:GLU:OE2	12:QL:80:HIS:NE2	2.53	0.42
17:QQ:45:HIS:H	17:QQ:72:ARG:HA	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:39:THR:HG22	19:QS:41:VAL:HG22	2.01	0.42
22:QV:61:C:H2'	22:QV:62:C:C6	2.53	0.42
23:QX:15:A:O2'	23:QX:17:C:OP2	2.37	0.42
34:RA:494:G:HO2'	51:RW:6:ILE:H	1.66	0.42
34:RA:894:C:H2'	34:RA:895:U:C6	2.55	0.42
34:RA:2378:A:O3'	47:RS:23:ARG:NH1	2.52	0.42
46:RR:8:ARG:HD2	46:RR:10:LEU:HD21	2.01	0.42
1:XA:1218:C:H2'	1:XA:1219:U:C6	2.54	0.42
3:XC:8:ILE:HG12	3:XC:184:TYR:HB3	2.02	0.42
14:XN:23:ARG:NH1	14:XN:24:CYS:HB3	2.34	0.42
33:Y9:32:HIS:CD2	33:Y9:32:HIS:N	2.87	0.42
34:YA:690:G:O2'	36:YD:43:ARG:NH1	2.53	0.42
34:YA:1028:A:N3	34:YA:2486:G:O2'	2.50	0.42
34:YA:2245:U:H6	34:YA:2245:U:C5'	2.29	0.42
53:YY:79:CYS:SG	53:YY:81:LYS:HE2	2.60	0.42
13:QM:66:LEU:HB3	13:QM:67:GLU:H	1.71	0.42
34:RA:504:U:H5"	34:RA:505:A:H5'	2.02	0.42
34:RA:511:U:H4'	34:RA:1235:G:H4'	2.00	0.42
34:RA:1266:G:O6	51:RW:13:SER:OG	2.32	0.42
34:RA:1728:G:H8	34:RA:1732:A:H62	1.67	0.42
34:RA:1796:U:HO2'	36:RD:256:GLY:H	1.67	0.42
34:RA:2748:A:H62	34:RA:2754:U:H3	1.67	0.42
34:RA:2853:C:H2'	34:RA:2854:G:H8	1.84	0.42
35:RB:28:C:H2'	35:RB:29:A:H8	1.85	0.42
35:RB:28:C:H2'	35:RB:29:A:C8	2.54	0.42
36:RD:49:ILE:HD11	36:RD:52:ARG:HA	2.00	0.42
51:RW:13:SER:HA	51:RW:99:ARG:HB2	2.01	0.42
1:XA:401:C:O2'	1:XA:621:A:N3	2.43	0.42
1:XA:501:C:H2'	1:XA:502:G:C8	2.54	0.42
1:XA:674:G:H2'	1:XA:675:A:C8	2.49	0.42
1:XA:878:G:H5'	8:XH:89:PRO:HG2	2.00	0.42
1:XA:1060:C:H2'	1:XA:1061:G:H8	1.85	0.42
7:XG:99:LEU:HD12	7:XG:99:LEU:HA	1.93	0.42
19:XS:19:VAL:HA	19:XS:22:LEU:HB2	2.01	0.42
28:Y4:39:CYS:C	28:Y4:41:PRO:HD3	2.44	0.42
30:Y6:23:THR:OG1	30:Y6:24:GLU:N	2.42	0.42
32:Y8:4:MET:HG3	32:Y8:61:LEU:HD11	2.01	0.42
34:YA:639:U:H3	34:YA:649:G:H1	1.67	0.42
34:YA:750:A:C2	34:YA:753:C:N1	2.88	0.42
40:YH:9:ILE:HG22	40:YH:49:VAL:HB	1.96	0.42
42:YN:40:PRO:HB3	49:YU:68:ALA:HB2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YP:57:THR:C	44:YP:59:LEU:H	2.27	0.42
44:YP:82:GLY:HA2	44:YP:113:LYS:O	2.18	0.42
46:YR:35:THR:HA	46:YR:112:ALA:O	2.19	0.42
1:QA:1118:C:H1'	1:QA:1179:A:C5	2.54	0.42
1:QA:1220:G:O3'	19:QS:36:ARG:NH2	2.53	0.42
2:QB:175:ARG:O	2:QB:179:LYS:HG3	2.20	0.42
14:QN:41:ARG:HG3	14:QN:42:ILE:HG13	2.01	0.42
20:QT:14:LYS:HA	20:QT:17:ARG:HG2	2.02	0.42
34:RA:24:G:O2'	51:RW:78:GLU:O	2.24	0.42
34:RA:863:A:H2'	34:RA:864:G:C8	2.55	0.42
34:RA:1051:G:C5	34:RA:1052:C:C4	3.08	0.42
34:RA:2014:A:H2	34:RA:2613:U:N3	2.17	0.42
34:RA:2105:C:H2'	34:RA:2106:G:C8	2.55	0.42
34:RA:2710:C:H2'	34:RA:2711:A:C8	2.55	0.42
49:RU:85:LYS:HE2	49:RU:116:ALA:HA	2.01	0.42
54:RZ:67:LEU:HD12	54:RZ:90:VAL:HB	2.02	0.42
1:XA:17:U:H2'	1:XA:18:C:C6	2.54	0.42
1:XA:186(A):C:H2'	1:XA:186(B):C:C6	2.54	0.42
6:XF:27:GLN:HA	6:XF:30:LEU:HD12	2.02	0.42
34:YA:664:C:H2'	34:YA:665:C:H6	1.85	0.42
34:YA:750:A:H2	34:YA:753:C:C6	2.34	0.42
47:YS:34:HIS:O	47:YS:97:ARG:NH2	2.52	0.42
1:QA:56:U:H2'	1:QA:57:G:C8	2.55	0.42
1:QA:502:G:OP1	12:QL:117:ARG:N	2.53	0.42
1:QA:552:U:O2'	12:QL:86:ARG:O	2.31	0.42
1:QA:926:G:O6	23:QX:19:U:H3'	2.19	0.42
1:QA:1158:C:H1'	2:QB:132:LYS:HD3	2.02	0.42
1:QA:1381:U:H1'	1:QA:1382:C:H5'	2.01	0.42
4:QD:59:ARG:HH12	4:QD:66:ARG:NH2	2.16	0.42
31:R7:12:ARG:HH21	31:R7:44:PRO:HB3	1.84	0.42
34:RA:589:C:H2'	34:RA:590:A:H8	1.84	0.42
34:RA:1518:C:H2'	34:RA:1519:G:C8	2.54	0.42
34:RA:2296:U:OP2	47:RS:9:ARG:NH1	2.52	0.42
36:RD:142:VAL:HG23	36:RD:193:VAL:HA	2.02	0.42
1:XA:693:G:N2	22:XV:37:1MG:HN21	2.17	0.42
2:XB:177:ALA:HB1	2:XB:182:ILE:HB	2.01	0.42
3:XC:119:ARG:HG2	3:XC:140:ARG:HH22	1.85	0.42
5:XE:99:GLY:N	5:XE:117:ASP:OD1	2.47	0.42
14:XN:53:LEU:HD12	14:XN:54:PRO:HD2	2.01	0.42
26:Y2:4:SER:OG	26:Y2:5:GLU:N	2.39	0.42
34:YA:848:G:H2'	34:YA:849:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:1858:G:O2'	34:YA:1884:A:N6	2.53	0.42
38:YF:114:VAL:HG11	38:YF:202:PHE:CZ	2.55	0.42
48:YT:6:LEU:HA	48:YT:9:LEU:HB2	2.02	0.42
1:QA:737:A:H2'	1:QA:738:C:C6	2.55	0.42
1:QA:1060:C:OP1	14:QN:45:ARG:NH2	2.41	0.42
7:QG:58:PRO:HA	7:QG:61:VAL:HG12	2.01	0.42
8:QH:21:LYS:HE2	8:QH:21:LYS:HB2	1.91	0.42
22:QV:56:C:N4	22:QV:57:G:O6	2.53	0.42
32:R8:39:LYS:NZ	34:RA:2351:G:O6	2.49	0.42
32:R8:61:LEU:HD12	32:R8:62:LEU:HG	2.02	0.42
34:RA:514:A:H2'	34:RA:515:A:C8	2.54	0.42
34:RA:2308:G:H1	34:RA:2311:A:H2	1.68	0.42
34:RA:2712(A):U:O2	34:RA:2712(A):U:H3'	2.19	0.42
53:RY:92:ASN:OD1	53:RY:92:ASN:N	2.53	0.42
1:XA:178:C:H2'	1:XA:179:A:H8	1.84	0.42
1:XA:183:G:H2'	1:XA:184:G:H8	1.84	0.42
1:XA:454:C:H41	1:XA:479:C:H42	1.65	0.42
1:XA:1060:C:OP1	14:XN:45:ARG:NH2	2.53	0.42
9:XI:13:ALA:HB1	9:XI:73:GLN:HG3	2.01	0.42
12:XL:42:THR:HA	12:XL:53:ARG:O	2.19	0.42
21:XU:6:ARG:NH2	21:XU:15:ARG:HH22	2.16	0.42
30:Y6:40:CYS:HB3	30:Y6:43:CYS:CB	2.50	0.42
34:YA:2291:U:H2'	34:YA:2292:C:C6	2.55	0.42
36:YD:83:GLU:OE1	36:YD:104:TYR:OH	2.31	0.42
37:YE:102:VAL:HG23	37:YE:200:GLU:HA	2.02	0.42
44:YP:46:LYS:HB3	44:YP:46:LYS:HE3	1.78	0.42
45:YQ:110:THR:OG1	45:YQ:111:GLU:N	2.53	0.42
52:YX:25:LYS:HB3	52:YX:80:ILE:HD11	2.00	0.42
1:QA:324:G:OP1	20:QT:70:SER:OG	2.35	0.42
1:QA:570:G:O4'	1:QA:820:U:H6	2.02	0.42
1:QA:762:C:H2'	1:QA:763:G:C8	2.54	0.42
1:QA:1307:U:OP1	13:QM:101:GLN:NE2	2.53	0.42
1:QA:1386:G:H2'	1:QA:1387:G:H8	1.85	0.42
2:QB:34:ALA:H	2:QB:41:ILE:HB	1.84	0.42
20:QT:10:LEU:HD23	20:QT:10:LEU:HA	1.86	0.42
33:R9:29:ASN:HB3	33:R9:32:HIS:CD2	2.55	0.42
34:RA:30:G:H2'	34:RA:31:C:H6	1.85	0.42
34:RA:303:U:H2'	34:RA:304:G:C8	2.55	0.42
34:RA:587:C:C2	34:RA:671:C:O4'	2.73	0.42
34:RA:1779:U:OP2	34:RA:1784:A:N6	2.35	0.42
34:RA:2431:U:P	34:RA:2432:A:OP2	2.77	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:2474:C:H5"	34:RA:2475:C:H5	1.84	0.42
38:RF:8:GLN:NE2	38:RF:19:GLU:OE1	2.51	0.42
38:RF:70:THR:HG23	38:RF:72:ARG:H	1.85	0.42
40:RH:126:PRO:HB2	40:RH:127:GLU:H	1.68	0.42
1:XA:156:G:H2'	1:XA:157:G:H8	1.85	0.42
1:XA:624:C:H2'	1:XA:625:G:C8	2.55	0.42
1:XA:1313:U:OP1	19:XS:6:LYS:NZ	2.50	0.42
1:XA:1347:G:N2	1:XA:1374:A:OP2	2.34	0.42
7:XG:104:LEU:HD23	7:XG:104:LEU:HA	1.90	0.42
19:XS:30:LEU:HD13	19:XS:48:THR:HG23	2.01	0.42
21:XU:10:ARG:HA	21:XU:13:ILE:HG22	2.01	0.42
22:XV:9:G:O2'	22:XV:10:G:N7	2.53	0.42
34:YA:320:A:H2'	38:YF:136:THR:HG21	2.02	0.42
34:YA:513:A:O2'	34:YA:1217:C:OP1	2.38	0.42
34:YA:648:G:O2'	34:YA:2351:G:OP1	2.26	0.42
34:YA:654(C):C:H42	34:YA:654(U):C:N4	2.18	0.42
34:YA:2096:U:H3	34:YA:2193:G:H1	1.68	0.42
42:YN:28:THR:O	42:YN:32:THR:OG1	2.32	0.42
44:YP:15:ARG:HD3	44:YP:15:ARG:HA	1.85	0.42
45:YQ:34:LEU:HB2	45:YQ:118:LEU:HD22	2.01	0.42
1:QA:41:G:H2'	1:QA:42:G:H8	1.84	0.42
1:QA:56:U:H2'	1:QA:57:G:H8	1.85	0.42
1:QA:142:G:H2'	1:QA:143:A:C8	2.54	0.42
1:QA:404:U:O4	4:QD:2:GLY:N	2.53	0.42
1:QA:406:G:H21	4:QD:119:GLN:NE2	2.18	0.42
1:QA:714:G:H2'	1:QA:715:A:C8	2.55	0.42
1:QA:1232:U:H5"	9:QI:124:GLN:HG3	2.02	0.42
1:QA:1440(B):G:N2	1:QA:1461:G:O6	2.52	0.42
2:QB:231:GLU:HA	2:QB:232:PRO:HD3	1.87	0.42
12:QL:102:ARG:HB3	12:QL:109:GLY:HA2	2.01	0.42
13:QM:29:ARG:HD2	13:QM:29:ARG:HA	1.79	0.42
32:R8:49:VAL:HG23	32:R8:53:PRO:HD3	2.02	0.42
32:R8:64:TYR:HB3	34:RA:625:G:P	2.60	0.42
36:RD:76:PRO:HB3	36:RD:118:VAL:HG22	2.02	0.42
39:RG:34:LEU:HD21	39:RG:172:LEU:HD21	2.02	0.42
1:XA:335:C:O2'	1:XA:1433:A:N3	2.46	0.42
1:XA:950:U:H3	1:XA:1231:G:H1	1.67	0.42
20:XT:11:SER:O	20:XT:11:SER:OG	2.28	0.42
34:YA:442:G:N2	38:YF:48:THR:OG1	2.53	0.42
34:YA:822:U:H2'	34:YA:823:G:H8	1.85	0.42
34:YA:1024:G:OP2	34:YA:1025:G:C2'	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2105:C:H2'	34:YA:2106:G:H8	1.85	0.42
34:YA:2282:G:H5"	34:YA:2283:C:O4'	2.20	0.42
34:YA:2314:C:H5'	39:YG:38:VAL:HG21	2.01	0.42
37:YE:2:LYS:HD2	37:YE:95:ILE:HG22	2.02	0.42
37:YE:24:THR:HG22	37:YE:186:GLY:H	1.83	0.42
47:YS:18:ILE:HG21	47:YS:88:ASP:HA	2.02	0.42
1:QA:376:G:H5"	16:QP:5:ARG:HB2	2.01	0.41
1:QA:815:A:O4'	1:QA:817:C:C4	2.72	0.41
1:QA:1405:G:O2'	1:QA:1518:A:O2'	2.32	0.41
3:QC:120:VAL:O	3:QC:124:ILE:HG12	2.20	0.41
7:QG:87:VAL:HG23	7:QG:151:TYR:HB3	2.02	0.41
34:RA:414:C:H2'	34:RA:415:A:C8	2.54	0.41
34:RA:1225:C:HO2'	50:RV:86:GLY:H	1.64	0.41
34:RA:2562:U:H4'	43:RO:25:LEU:HD21	2.02	0.41
34:RA:2576:G:P	34:RA:2576:G:N2	2.93	0.41
34:RA:2577:A:H5"	34:RA:2578:G:H5'	2.01	0.41
34:RA:2667:C:N3	40:RH:110:SER:OG	2.45	0.41
38:RF:178:PRO:HB3	38:RF:198:ALA:HB2	2.02	0.41
41:RI:84:GLY:N	41:RI:89:TYR:CE2	2.89	0.41
45:RQ:62:GLY:HA2	54:RZ:116:VAL:HG21	2.01	0.41
1:XA:22:G:H2'	1:XA:23:C:C6	2.55	0.41
1:XA:121:C:N4	1:XA:237:C:H41	2.18	0.41
1:XA:272:C:H2'	1:XA:273:A:C8	2.54	0.41
1:XA:475:G:H2'	1:XA:476:G:H8	1.84	0.41
1:XA:741:G:H3'	1:XA:742:G:H8	1.84	0.41
1:XA:980:C:O3'	14:XN:9:LYS:NZ	2.43	0.41
1:XA:1040:U:H2'	1:XA:1041:A:C8	2.55	0.41
2:XB:75:LYS:HA	2:XB:75:LYS:HD3	1.85	0.41
4:XD:105:VAL:HG21	4:XD:126:ILE:HD13	2.02	0.41
5:XE:128:PRO:HA	5:XE:131:ILE:HG12	2.02	0.41
6:XF:22:GLU:OE2	6:XF:84:ASN:ND2	2.40	0.41
34:YA:2086:U:H2'	34:YA:2087:G:C8	2.55	0.41
34:YA:2306:C:H3'	34:YA:2307:G:H5"	2.01	0.41
34:YA:2845:G:H2'	34:YA:2846:G:C8	2.54	0.41
36:YD:45:ASN:O	36:YD:47:GLY:N	2.52	0.41
42:YN:5:VAL:HA	42:YN:6:PRO:HD3	1.93	0.41
44:YP:47:ASP:OD2	44:YP:50:ARG:NH1	2.53	0.41
46:YR:104:ARG:HD2	46:YR:109:ALA:HB3	2.01	0.41
1:QA:60:A:N6	1:QA:110:C:H42	2.14	0.41
1:QA:1154:G:H2'	1:QA:1155:G:H8	1.85	0.41
1:QA:1355:G:H2'	1:QA:1356:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:73:PRO:HA	3:QC:76:VAL:HG22	2.01	0.41
7:QG:6:ARG:HA	7:QG:6:ARG:HD3	1.75	0.41
34:RA:87:C:H5"	34:RA:88:G:H5'	2.01	0.41
34:RA:997:G:H3'	49:RU:58:ARG:HH12	1.85	0.41
34:RA:1225:C:O2'	50:RV:86:GLY:N	2.36	0.41
34:RA:1600:C:OP1	52:RX:58:HIS:NE2	2.51	0.41
39:RG:39:ILE:HB	39:RG:92:VAL:HG13	2.02	0.41
44:RP:84:ASN:HA	44:RP:115:LEU:O	2.20	0.41
46:RR:13:HIS:O	46:RR:17:ARG:HB2	2.20	0.41
47:RS:50:SER:O	47:RS:76:LYS:NZ	2.41	0.41
1:XA:1028(C):C:H42	1:XA:1028(I):G:H1	1.68	0.41
1:XA:1318:A:H4'	19:XS:11:VAL:HG11	2.02	0.41
1:XA:1510:U:H2'	1:XA:1511:G:C8	2.55	0.41
5:XE:75:THR:HG22	5:XE:117:ASP:O	2.21	0.41
34:YA:639:U:H2'	34:YA:640:C:C6	2.54	0.41
34:YA:1028:A:OP2	34:YA:1126:A:N6	2.51	0.41
34:YA:1044:G:O2'	34:YA:1111:A:N1	2.51	0.41
34:YA:1309:G:O2'	34:YA:1611:C:O2'	2.35	0.41
34:YA:2475:C:H42	34:YA:2529:G:N2	2.17	0.41
34:YA:2698:U:H2'	34:YA:2699:C:C6	2.54	0.41
36:YD:66:ASP:OD1	36:YD:103:ARG:NH1	2.53	0.41
37:YE:201:THR:OG1	37:YE:202:LYS:N	2.53	0.41
39:YG:39:ILE:HG12	39:YG:157:ILE:HD12	2.02	0.41
41:YI:50:ARG:HA	41:YI:50:ARG:HD3	1.80	0.41
43:YO:70:LYS:HE2	43:YO:70:LYS:HB3	1.81	0.41
53:YY:5:MET:HE2	53:YY:5:MET:HB3	1.81	0.41
1:QA:7:G:O2'	5:QE:120:THR:O	2.34	0.41
1:QA:37:U:O2'	1:QA:500:G:O2'	2.30	0.41
1:QA:370:C:H2'	1:QA:371:G:H8	1.84	0.41
1:QA:584:G:H1	1:QA:757:U:H3	1.69	0.41
1:QA:924:C:H2'	1:QA:925:G:C8	2.55	0.41
1:QA:1151:A:H2'	1:QA:1152:A:C8	2.56	0.41
1:QA:1308:U:OP1	13:QM:98:VAL:N	2.54	0.41
4:QD:109:GLY:HA3	4:QD:165:MET:HG2	2.02	0.41
28:R4:25:TYR:HE2	39:RG:3:LEU:HG	1.85	0.41
34:RA:674:G:H1'	38:RF:74:ARG:HD2	2.02	0.41
34:RA:1999:C:OP1	34:RA:2723:C:O2'	2.37	0.41
34:RA:2145:C:H2'	34:RA:2147:G:C2	2.55	0.41
34:RA:2309:A:H2'	34:RA:2310:A:C4	2.56	0.41
45:RQ:116:GLU:O	45:RQ:120:ILE:HG12	2.20	0.41
49:RU:107:ALA:HA	49:RU:110:VAL:HG12	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:493:G:N2	1:XA:494:U:O4	2.53	0.41
1:XA:676:A:H2'	1:XA:677:U:H6	1.84	0.41
1:XA:1141:C:H2'	1:XA:1142:G:H8	1.85	0.41
1:XA:1242:C:H2'	1:XA:1243:C:H6	1.85	0.41
1:XA:1287:A:H2	1:XA:1353:G:H1'	1.85	0.41
4:XD:101:LEU:HD22	4:XD:138:TYR:HB3	2.01	0.41
4:XD:161:ASN:O	4:XD:165:MET:HB2	2.21	0.41
6:XF:39:LYS:HB2	6:XF:64:GLN:HB3	2.01	0.41
33:Y9:7:VAL:O	34:YA:1031:G:O2'	2.25	0.41
34:YA:142:G:H2'	34:YA:143:C:C6	2.56	0.41
34:YA:1210:A:H5"	34:YA:1211:U:H3'	2.02	0.41
34:YA:1791:A:H3'	34:YA:1792:G:H8	1.85	0.41
44:YP:7:ARG:HA	44:YP:8:PRO:HD2	1.97	0.41
53:YY:102:CYS:SG	53:YY:103:GLY:N	2.94	0.41
1:QA:707:C:H2'	1:QA:708:C:C6	2.55	0.41
8:QH:49:GLU:OE2	8:QH:62:TYR:OH	2.31	0.41
9:QI:77:ILE:O	9:QI:81:ILE:HG12	2.20	0.41
12:QL:104:VAL:O	12:QL:105:TYR:CE2	2.63	0.41
14:QN:6:LEU:HD23	14:QN:6:LEU:HA	1.84	0.41
21:QU:3:LYS:HD3	21:QU:14:TRP:CG	2.55	0.41
29:R5:3:LYS:HG2	34:RA:2611:U:C5	2.56	0.41
34:RA:1636:C:H2'	34:RA:1637:A:C8	2.55	0.41
34:RA:2174:C:H2'	34:RA:2175:C:C6	2.55	0.41
34:RA:2641:G:C6	34:RA:2774:C:N4	2.89	0.41
39:RG:63:ILE:HD13	39:RG:141:PHE:HB3	2.02	0.41
1:XA:605:U:O5'	1:XA:605:U:C6	2.70	0.41
1:XA:999:U:H2'	1:XA:1000:A:C8	2.55	0.41
1:XA:1222:G:OP1	19:XS:78:ARG:NH1	2.53	0.41
2:XB:115:LEU:HB2	2:XB:145:LEU:HD23	2.02	0.41
3:XC:8:ILE:HD11	3:XC:184:TYR:H	1.84	0.41
4:XD:18:LYS:HZ3	4:XD:33:MET:HG3	1.86	0.41
14:XN:24:CYS:SG	14:XN:40:CYS:N	2.93	0.41
14:XN:47:LEU:HD23	14:XN:47:LEU:HA	1.86	0.41
24:Y0:72:ARG:HB3	24:Y0:75:LEU:HB2	2.02	0.41
34:YA:223:A:N6	34:YA:374:A:O2'	2.43	0.41
34:YA:685:A:C2	34:YA:787:U:H1'	2.55	0.41
34:YA:996:A:O3'	49:YU:92:ARG:NH2	2.53	0.41
34:YA:1252:G:H21	49:YU:33:ARG:HH11	1.68	0.41
37:YE:132:HIS:CD2	37:YE:132:HIS:O	2.73	0.41
1:QA:34:C:H2'	1:QA:35:G:H8	1.85	0.41
1:QA:186(J):U:H3	17:QQ:63:ARG:HG2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:696:A:H2'	1:QA:697:U:H6	1.86	0.41
1:QA:831:U:H2'	1:QA:832:C:H6	1.86	0.41
13:QM:37:THR:O	13:QM:55:ARG:NH2	2.53	0.41
27:R3:4:LEU:HD21	27:R3:56:VAL:HB	2.02	0.41
32:R8:12:LYS:NZ	34:RA:247:G:O6	2.38	0.41
34:RA:1234:U:H2'	34:RA:1235:G:C5'	2.48	0.41
34:RA:1716:U:O2	34:RA:1743:G:O6	2.38	0.41
34:RA:1841:U:H2'	34:RA:1842:G:H8	1.85	0.41
34:RA:2191:G:H2'	34:RA:2191:G:N3	2.35	0.41
41:RI:143:SER:HB2	41:RI:144:VAL:H	1.64	0.41
44:RP:41:ARG:HD3	44:RP:41:ARG:HA	1.82	0.41
44:RP:137:LYS:HA	44:RP:137:LYS:HD3	1.86	0.41
49:RU:27:LEU:O	49:RU:31:SER:HB3	2.20	0.41
53:RY:99:CYS:HB3	53:RY:102:CYS:H	1.85	0.41
54:RZ:24:LEU:HA	54:RZ:25:PRO:HD3	1.92	0.41
1:XA:718:G:OP2	1:XA:720:C:N4	2.52	0.41
1:XA:1236:A:H4'	1:XA:1304:G:H4'	2.02	0.41
1:XA:1237:C:H5"	1:XA:1238:A:C8	2.56	0.41
1:XA:1440(K):C:OP1	1:XA:1440(L):G:N1	2.54	0.41
11:XK:51:LYS:HE2	11:XK:51:LYS:HB2	1.93	0.41
14:XN:47:LEU:HD22	14:XN:52:GLN:HB2	2.02	0.41
23:XX:8:A:H2'	23:XX:9:G:C8	2.55	0.41
34:YA:1173:G:H4'	34:YA:1174:A:C8	2.55	0.41
34:YA:2627:G:O2'	34:YA:2781:A:N1	2.52	0.41
40:YH:86:GLU:H	40:YH:86:GLU:HG2	1.51	0.41
44:YP:37:GLY:O	44:YP:40:SER:OG	2.36	0.41
54:YZ:6:LYS:O	54:YZ:62:PRO:HD3	2.20	0.41
1:QA:225:C:H2'	1:QA:226:G:H8	1.84	0.41
1:QA:377:G:H2'	1:QA:378:G:C8	2.55	0.41
1:QA:475:G:H2'	1:QA:476:G:C8	2.56	0.41
1:QA:1009:G:H2'	1:QA:1010:G:H8	1.86	0.41
3:QC:76:VAL:HG21	3:QC:103:VAL:HG11	2.03	0.41
8:QH:3:THR:OG1	8:QH:4:ASP:N	2.54	0.41
22:QV:3:G:O2'	34:RA:1851:U:OP1	2.38	0.41
29:R5:33:CYS:SG	29:R5:46:CYS:HB2	2.60	0.41
34:RA:299:A:N3	34:RA:319:C:O2'	2.38	0.41
34:RA:1149:G:H2'	34:RA:1150:C:H6	1.86	0.41
34:RA:1664:A:H61	34:RA:1996:C:H42	1.65	0.41
34:RA:2183:C:H2'	34:RA:2184:G:H8	1.85	0.41
36:RD:268:ARG:HG3	36:RD:269:PHE:CD2	2.55	0.41
40:RH:91:GLY:HA2	40:RH:160:LYS:HG2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:RU:91:ASP:C	49:RU:93:LYS:H	2.28	0.41
1:XA:501:C:H2'	1:XA:502:G:H8	1.86	0.41
1:XA:1160:G:O6	1:XA:1177:G:N2	2.53	0.41
13:XM:9:ILE:HA	13:XM:9:ILE:HD13	1.93	0.41
27:Y3:31:LEU:HD23	27:Y3:31:LEU:HA	1.87	0.41
34:YA:67:U:H3	34:YA:74:A:H2	1.69	0.41
34:YA:305:U:C4	34:YA:312:G:O6	2.73	0.41
35:YB:30:C:H1'	35:YB:57:A:H61	1.85	0.41
49:YU:50:ARG:O	49:YU:54:LYS:NZ	2.38	0.41
1:QA:405:U:P	4:QD:118:ARG:HH12	2.43	0.41
1:QA:599:C:O2'	8:QH:129:VAL:O	2.27	0.41
1:QA:628:G:H2'	1:QA:629:G:C8	2.56	0.41
1:QA:1300:G:O2'	1:QA:1303:C:N4	2.47	0.41
2:QB:75:LYS:HA	2:QB:75:LYS:HD3	1.83	0.41
13:QM:77:ASN:O	13:QM:81:LEU:HG	2.21	0.41
34:RA:271(E):G:H2'	34:RA:272:G:C8	2.55	0.41
34:RA:642:G:H21	34:RA:646:A:H2	1.67	0.41
34:RA:1537:C:H2'	34:RA:1538:G:C8	2.56	0.41
34:RA:2751:G:N3	40:RH:3:ARG:CB	2.84	0.41
37:RE:134:ILE:HD12	37:RE:137:HIS:HB2	2.02	0.41
39:RG:141:PHE:HB2	39:RG:144:ILE:HD13	2.03	0.41
48:RT:66:VAL:HA	48:RT:71:GLY:HA2	2.02	0.41
49:RU:39:LEU:HD23	49:RU:39:LEU:HA	1.93	0.41
49:RU:58:ARG:HH11	49:RU:93:LYS:NZ	2.18	0.41
1:XA:359:U:H2'	1:XA:360:A:H8	1.84	0.41
1:XA:605:U:H6	1:XA:605:U:C5'	2.33	0.41
1:XA:1028(C):C:N4	1:XA:1028(I):G:H1	2.18	0.41
29:Y5:11:THR:HG23	29:Y5:15:ARG:HD2	2.02	0.41
29:Y5:58:LEU:HD23	46:YR:113:LEU:HD11	2.03	0.41
34:YA:698:C:O2'	34:YA:734:A:N6	2.53	0.41
34:YA:945:A:H2'	34:YA:945:A:N3	2.36	0.41
34:YA:2867:G:O2'	34:YA:2868:A:H8	2.04	0.41
36:YD:44:ASN:OD1	36:YD:44:ASN:N	2.53	0.41
37:YE:104:VAL:HG11	37:YE:188:VAL:HG12	2.03	0.41
48:YT:3:ARG:O	48:YT:7:ILE:HG12	2.21	0.41
54:YZ:178:GLU:HB3	54:YZ:179:ASP:H	1.60	0.41
1:QA:434:U:H2'	1:QA:435:C:C6	2.56	0.41
1:QA:1347:G:N2	1:QA:1374:A:OP2	2.39	0.41
2:QB:20:GLU:HG3	2:QB:191:ASP:HB2	2.02	0.41
2:QB:167:PRO:O	2:QB:171:ALA:CB	2.67	0.41
4:QD:122:ARG:HA	4:QD:122:ARG:HD2	1.90	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:171:G:H2'	34:RA:172:C:C6	2.56	0.41
34:RA:336:C:HO2'	53:RY:35:TYR:HH	1.68	0.41
34:RA:505:A:O2'	34:RA:509:C:O2'	2.35	0.41
34:RA:690:G:H21	36:RD:43:ARG:NH2	2.18	0.41
34:RA:946:G:H2'	34:RA:947:G:H8	1.85	0.41
34:RA:1569:A:H2'	34:RA:1570:A:C8	2.56	0.41
42:RN:97:ARG:HA	42:RN:100:GLU:HB2	2.02	0.41
45:RQ:31:ASP:OD2	45:RQ:134:ARG:NH2	2.54	0.41
45:RQ:34:LEU:HD13	45:RQ:118:LEU:HD12	2.03	0.41
46:RR:96:ARG:HB2	46:RR:117:VAL:HG12	2.02	0.41
48:RT:8:LYS:HB2	48:RT:8:LYS:HE2	1.86	0.41
54:RZ:5:LEU:H	54:RZ:59:LEU:HA	1.85	0.41
1:XA:539:A:H2'	1:XA:540:G:H8	1.85	0.41
1:XA:640:A:N3	8:XH:115:SER:OG	2.44	0.41
2:XB:40:HIS:HB2	2:XB:190:THR:HG21	2.01	0.41
5:XE:110:LEU:HB3	5:XE:115:VAL:HB	2.03	0.41
13:XM:87:TYR:OH	13:XM:91:ARG:NH1	2.53	0.41
15:XO:26:GLU:HG3	15:XO:81:LEU:HD22	2.03	0.41
29:Y5:41:PRO:O	29:Y5:44:THR:OG1	2.35	0.41
34:YA:270(V):C:H2'	34:YA:270(W):G:H8	1.86	0.41
34:YA:922:U:H2'	34:YA:923:C:C6	2.56	0.41
34:YA:993:G:H4'	50:YV:70:ILE:HD11	2.02	0.41
34:YA:2475:C:N4	34:YA:2529:G:H22	2.17	0.41
34:YA:2810:A:H61	34:YA:2891:G:H2'	1.86	0.41
36:YD:231:HIS:CD2	36:YD:249:PRO:HG3	2.56	0.41
1:QA:110:C:O2'	16:QP:25:ARG:O	2.29	0.41
1:QA:186(F):C:H2'	1:QA:186(G):C:C6	2.56	0.41
1:QA:639:G:H2'	1:QA:640:A:C8	2.56	0.41
1:QA:757:U:OP1	1:QA:822:C:O2'	2.38	0.41
1:QA:936:C:H1'	1:QA:1382:C:H42	1.86	0.41
1:QA:1330:U:H4'	13:QM:23:TYR:CD2	2.56	0.41
3:QC:12:LEU:HG	3:QC:18:TRP:NE1	2.36	0.41
3:QC:36:ASP:OD1	3:QC:59:ARG:NH2	2.53	0.41
4:QD:8:VAL:HG13	4:QD:21:LEU:HD12	2.02	0.41
9:QI:25:LYS:O	9:QI:60:ASP:HA	2.21	0.41
22:QV:23:C:H2'	22:QV:24:G:H8	1.85	0.41
25:R1:8:SER:HB3	25:R1:66:HIS:CD2	2.55	0.41
25:R1:80:LEU:HD12	25:R1:81:LYS:HB2	2.03	0.41
26:R2:45:SER:OG	26:R2:46:GLN:N	2.53	0.41
29:R5:51:TYR:HD1	29:R5:55:ARG:O	2.03	0.41
34:RA:177:G:H5'	34:RA:178:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:270(F):G:H1	34:RA:270(V):C:H42	1.69	0.41
34:RA:747:U:O2	34:RA:2014:A:H1'	2.21	0.41
34:RA:851:U:H2'	34:RA:852:G:H8	1.86	0.41
34:RA:1400:G:H2'	34:RA:1401:G:C8	2.55	0.41
34:RA:1863:G:O2'	34:RA:2411:A:O2'	2.33	0.41
34:RA:2128:C:O2'	34:RA:2173:A:N3	2.43	0.41
34:RA:2581:G:C5	34:RA:2610:C:C4	3.09	0.41
34:RA:2788:C:O2'	34:RA:2809:A:N3	2.53	0.41
35:RB:75:G:H21	54:RZ:85:HIS:HD1	1.68	0.41
36:RD:35:LYS:HB3	36:RD:63:ARG:HA	2.03	0.41
40:RH:123:PHE:HD2	40:RH:123:PHE:HA	1.77	0.41
41:RI:14:ASP:HB3	41:RI:15:VAL:H	1.65	0.41
49:RU:34:LYS:HD3	49:RU:34:LYS:HA	1.72	0.41
54:RZ:151:HIS:HB2	54:RZ:170:THR:HA	2.02	0.41
1:XA:445:G:H2'	1:XA:446:G:C8	2.55	0.41
1:XA:548:G:H5'	4:XD:73:ARG:NH2	2.36	0.41
1:XA:559:A:H4'	1:XA:560:U:H3'	2.03	0.41
1:XA:1109:C:OP2	3:XC:176:HIS:ND1	2.54	0.41
1:XA:1324:A:H5"	1:XA:1362(B):C:H5'	2.02	0.41
1:XA:1366:C:O3'	10:XJ:60:ARG:NH2	2.53	0.41
3:XC:35:GLU:HB3	3:XC:59:ARG:HH22	1.85	0.41
6:XF:12:PRO:HD3	6:XF:58:GLY:HA2	2.02	0.41
9:XI:10:ARG:CZ	9:XI:105:ASP:HB2	2.51	0.41
13:XM:26:GLY:O	13:XM:30:ALA:HB2	2.20	0.41
20:XT:18:GLN:HE21	20:XT:22:ARG:NH2	2.19	0.41
24:Y0:23:VAL:HA	24:Y0:38:VAL:HG12	2.02	0.41
25:Y1:43:TYR:HD2	34:YA:2230:G:H5"	1.85	0.41
29:Y5:49:CYS:SG	29:Y5:50:GLY:N	2.93	0.41
34:YA:218:A:N1	34:YA:235:U:H4'	2.36	0.41
34:YA:270(Q):C:H1'	41:YI:50:ARG:HH22	1.86	0.41
34:YA:363(C):G:H2'	34:YA:363(D):G:C8	2.55	0.41
34:YA:589:C:H2'	34:YA:590:A:H8	1.85	0.41
34:YA:860:U:OP2	34:YA:916:G:N1	2.53	0.41
34:YA:870:A:OP1	45:YQ:6:ARG:NH2	2.37	0.41
34:YA:1196:C:O2'	34:YA:1228:G:O2'	2.24	0.41
34:YA:1853:A:N6	34:YA:1889:A:N7	2.68	0.41
34:YA:2103:C:H2'	34:YA:2104:G:H8	1.86	0.41
35:YB:48:A:H2'	35:YB:49:C:C6	2.56	0.41
36:YD:32:SER:C	36:YD:34:VAL:H	2.29	0.41
38:YF:157:VAL:HG21	38:YF:181:LEU:HD13	2.03	0.41
41:YI:143:SER:HB2	41:YI:144:VAL:H	1.60	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:YT:19:LEU:HA	48:YT:20:PRO:HD3	1.91	0.41
52:YX:34:ALA:O	52:YX:77:LYS:NZ	2.54	0.41
1:QA:57:G:H2'	1:QA:58:C:C6	2.56	0.41
1:QA:318:G:H2'	1:QA:319:G:C8	2.56	0.41
1:QA:737:A:H2'	1:QA:738:C:H6	1.86	0.41
1:QA:838(A):G:H1	1:QA:848:C:H42	1.68	0.41
1:QA:999:U:O4	1:QA:1000:A:N6	2.54	0.41
4:QD:28:SER:HA	4:QD:29:PRO:HD3	1.96	0.41
32:R8:35:GLN:NE2	32:R8:36:LYS:CE	2.80	0.41
34:RA:557:U:H2'	34:RA:558:G:H8	1.86	0.41
34:RA:1130:U:O2	37:RE:149:ARG:NH2	2.38	0.41
34:RA:1405:U:H2'	34:RA:1406:U:C6	2.56	0.41
34:RA:1669:A:N3	34:RA:1669:A:H2'	2.34	0.41
34:RA:1853:A:N6	34:RA:1889:A:N7	2.69	0.41
34:RA:2194:G:C2'	34:RA:2195:C:H5'	2.50	0.41
34:RA:2696:U:H2'	34:RA:2697:G:C8	2.56	0.41
39:RG:33:ARG:H	39:RG:162:THR:HG22	1.85	0.41
1:XA:23:C:OP2	1:XA:561:U:N3	2.40	0.41
1:XA:40:C:H2'	1:XA:41:G:C8	2.55	0.41
3:XC:91:LEU:HD22	3:XC:101:LEU:HD21	2.03	0.41
4:XD:170:VAL:HB	4:XD:174:LEU:HD12	2.02	0.41
12:XL:56:ALA:HB2	12:XL:70:ILE:HD11	2.03	0.41
34:YA:64:A:OP1	52:YX:73:ARG:NH1	2.54	0.41
34:YA:82:G:H5"	34:YA:296:C:H5'	2.03	0.41
34:YA:2513:G:O2'	37:YE:151:TYR:OH	2.20	0.41
38:YF:116:ASP:OD1	38:YF:119:ARG:NH2	2.52	0.41
44:YP:137:LYS:HA	44:YP:137:LYS:HD3	1.86	0.41
46:YR:56:LYS:NZ	46:YR:90:ARG:O	2.53	0.41
52:YX:92:LEU:HD23	52:YX:92:LEU:HA	1.86	0.41
53:YY:39:VAL:HG23	53:YY:42:VAL:HB	2.01	0.41
54:YZ:4:ARG:NH1	54:YZ:60:GLU:OE2	2.54	0.41
1:QA:127:G:HO2'	17:QQ:2:PRO:N	2.19	0.40
1:QA:836:G:H2'	1:QA:837:G:C8	2.56	0.40
1:QA:1525:G:H2'	1:QA:1526:G:H8	1.85	0.40
12:QL:32:PHE:HB3	12:QL:84:LEU:HD21	2.03	0.40
14:QN:12:ARG:HE	14:QN:14:PRO:HD2	1.86	0.40
17:QQ:75:ARG:HA	17:QQ:75:ARG:HD2	1.88	0.40
34:RA:270(A):A:OP2	34:RA:270(Z):G:N2	2.54	0.40
34:RA:1598:C:H5'	52:RX:36:LYS:HB2	2.02	0.40
34:RA:2688:U:OP1	34:RA:2713:A:N6	2.54	0.40
34:RA:2810:A:H61	34:RA:2891:G:H2'	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RB:55:U:O2'	39:RG:27:ASN:ND2	2.51	0.40
39:RG:132:ASN:HD22	39:RG:158:ALA:HA	1.86	0.40
40:RH:103:LEU:HD11	40:RH:123:PHE:CE2	2.45	0.40
40:RH:126:PRO:HD2	40:RH:131:VAL:HA	2.03	0.40
47:RS:59:LYS:HA	47:RS:59:LYS:HD2	1.94	0.40
1:XA:939:G:H4'	7:XG:102:ARG:NH2	2.36	0.40
1:XA:1249:C:O2'	9:XI:73:GLN:NE2	2.51	0.40
1:XA:1309:G:O3'	13:XM:77:ASN:ND2	2.48	0.40
8:XH:10:LEU:HD12	8:XH:83:ILE:HD12	2.03	0.40
34:YA:394:A:H2'	34:YA:395:U:O4'	2.21	0.40
34:YA:423:A:H8	34:YA:423:A:O5'	2.03	0.40
34:YA:443:A:N7	38:YF:45:ARG:HD3	2.36	0.40
34:YA:974(A):G:C5	34:YA:1186:G:N2	2.89	0.40
34:YA:1307:A:N6	34:YA:1622:G:O6	2.54	0.40
34:YA:2578:G:OP1	34:YA:2614:A:N6	2.51	0.40
43:YO:71:ARG:HH21	43:YO:77:ILE:HG21	1.86	0.40
48:YT:130:ALA:HA	48:YT:133:GLU:HG2	2.04	0.40
54:YZ:24:LEU:HA	54:YZ:25:PRO:HD3	1.87	0.40
1:QA:327:A:O2'	1:QA:328:C:O4'	2.32	0.40
1:QA:819:A:C5	1:QA:1529:G:C6	3.10	0.40
1:QA:838(A):G:N2	1:QA:849:C:O2	2.54	0.40
1:QA:1096:C:H2'	1:QA:1097:C:C6	2.56	0.40
10:QJ:99:LYS:HA	10:QJ:99:LYS:HD3	1.79	0.40
22:QV:37:1MG:C2	22:QV:38:A:H1'	2.56	0.40
34:RA:863:A:OP1	45:RQ:21:THR:OG1	2.31	0.40
34:RA:925:C:H2'	34:RA:926:A:H8	1.86	0.40
34:RA:1798:U:O2'	34:RA:1802:A:N3	2.48	0.40
34:RA:2844:G:H3'	34:RA:2845:G:H8	1.87	0.40
34:RA:2853:C:H2'	34:RA:2854:G:C8	2.56	0.40
36:RD:105:ILE:HD12	36:RD:105:ILE:HA	1.91	0.40
36:RD:134:ARG:N	36:RD:187:GLY:O	2.54	0.40
40:RH:103:LEU:O	40:RH:114:VAL:HA	2.22	0.40
50:RV:73:SER:OG	50:RV:74:LYS:N	2.53	0.40
1:XA:68(B):G:H2'	1:XA:68(C):G:H8	1.87	0.40
1:XA:1320:C:H2'	1:XA:1321:C:C6	2.57	0.40
8:XH:34:GLU:O	8:XH:38:ILE:HG12	2.22	0.40
34:YA:223:A:H61	34:YA:374:A:HO2'	1.65	0.40
34:YA:237:C:O2	34:YA:609(A):A:O2'	2.35	0.40
34:YA:270(S):G:H2'	34:YA:270(T):G:H8	1.86	0.40
34:YA:436:C:H2'	34:YA:438:G:C8	2.56	0.40
34:YA:918:A:N3	35:YB:80:U:O2'	2.53	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:1009:A:OP2	34:YA:1010:A:OP2	2.40	0.40
34:YA:2052:G:O2'	37:YE:144:ARG:O	2.38	0.40
36:YD:172:TYR:HB3	36:YD:184:LYS:HG2	2.04	0.40
37:YE:154:LYS:HD2	37:YE:154:LYS:HA	1.87	0.40
40:YH:115:VAL:HG21	40:YH:148:ILE:HD11	2.02	0.40
41:YI:121:LYS:HD3	41:YI:121:LYS:HA	1.67	0.40
44:YP:6:LEU:HD23	44:YP:6:LEU:HA	1.90	0.40
53:YY:12:THR:HA	53:YY:26:LYS:HA	2.03	0.40
54:YZ:94:GLU:HA	54:YZ:95:PRO:HD2	1.75	0.40
1:QA:157:G:H2'	1:QA:158:G:C8	2.56	0.40
1:QA:1077:G:N2	1:QA:1079:G:H3'	2.36	0.40
1:QA:1142:G:H3'	1:QA:1143:G:H8	1.86	0.40
1:QA:1419:G:H1	1:QA:1481:U:H3	1.69	0.40
5:QE:11:ILE:HG21	5:QE:31:LEU:HD23	2.02	0.40
10:QJ:14:LYS:HD3	10:QJ:15:THR:HG23	2.02	0.40
16:QP:14:ASN:OD1	16:QP:16:HIS:NE2	2.54	0.40
32:R8:3:LYS:H	32:R8:3:LYS:HG2	1.71	0.40
34:RA:172:C:H2'	34:RA:173:G:H8	1.85	0.40
34:RA:223:A:H61	34:RA:374:A:HO2'	1.70	0.40
34:RA:949:C:H2'	34:RA:950:G:C8	2.56	0.40
34:RA:1053:C:H2'	34:RA:1054:A:C8	2.56	0.40
34:RA:1418:G:N1	34:RA:1579:A:OP2	2.42	0.40
34:RA:2304:G:O2'	39:RG:134:GLY:N	2.53	0.40
40:RH:102:ALA:HA	40:RH:117:PRO:HD3	2.03	0.40
45:RQ:30:GLY:HA2	45:RQ:107:ALA:HB2	2.03	0.40
49:RU:58:ARG:O	49:RU:62:ILE:HG12	2.20	0.40
1:XA:68(G):C:H2'	1:XA:68(H):G:C8	2.56	0.40
1:XA:165:C:H2'	1:XA:166:G:H8	1.86	0.40
1:XA:783:C:OP1	1:XA:1515:C:O2'	2.37	0.40
1:XA:1028(I):G:H2'	1:XA:1033:G:C8	2.56	0.40
1:XA:1321:C:H5"	1:XA:1322:C:H5"	2.02	0.40
2:XB:104:ASN:O	2:XB:108:ILE:HG12	2.21	0.40
2:XB:134:GLU:HG3	2:XB:137:ARG:NE	2.37	0.40
34:YA:2626:C:H2'	34:YA:2627:G:C8	2.57	0.40
34:YA:2737:G:H2'	34:YA:2738:A:C8	2.56	0.40
35:YB:48:A:H4'	47:YS:95:HIS:HD2	1.85	0.40
46:YR:87:TYR:OH	46:YR:117:VAL:O	2.31	0.40
47:YS:4:LEU:HA	47:YS:8:GLU:CD	2.46	0.40
50:YV:68:LYS:HD3	50:YV:68:LYS:HA	1.75	0.40
1:QA:45:U:H5"	1:QA:307:C:H1'	2.03	0.40
1:QA:425:G:H21	4:QD:42:GLN:CD	2.28	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:429:U:H3'	4:QD:9:CYS:SG	2.62	0.40
1:QA:736:C:H2'	1:QA:737:A:H8	1.85	0.40
1:QA:1363:A:H4'	1:QA:1364:U:H5"	2.03	0.40
3:QC:56:ASP:HB3	3:QC:67:THR:HG23	2.02	0.40
9:QI:68:GLY:C	9:QI:73:GLN:HE22	2.29	0.40
10:QJ:84:GLN:O	10:QJ:88:LEU:HB2	2.22	0.40
29:R5:10:LYS:NZ	34:RA:1262:A:N3	2.61	0.40
34:RA:467:G:O2'	34:RA:796:C:O2'	2.30	0.40
34:RA:743:G:O2'	34:RA:1659:U:OP1	2.33	0.40
34:RA:1364:G:N2	34:RA:1367:A:OP2	2.37	0.40
34:RA:1375:C:H2'	34:RA:1376:C:H6	1.87	0.40
34:RA:1388:G:O2'	34:RA:1525:G:O2'	2.27	0.40
34:RA:2364:C:H2'	34:RA:2365:G:O4'	2.21	0.40
46:RR:3:HIS:HB3	46:RR:4:LEU:H	1.64	0.40
1:XA:113:G:H2'	1:XA:114:U:C6	2.56	0.40
1:XA:677:U:O2	1:XA:777:A:O2'	2.37	0.40
1:XA:952:U:H2'	1:XA:953:G:H8	1.85	0.40
1:XA:1152:A:H5"	10:XJ:13:HIS:CD2	2.57	0.40
1:XA:1154:G:H2'	1:XA:1155:G:H8	1.87	0.40
1:XA:1262:C:H2'	1:XA:1263:C:C6	2.56	0.40
1:XA:1293:G:H2'	1:XA:1294:G:H8	1.87	0.40
2:XB:88:ALA:O	2:XB:226:ARG:NH1	2.46	0.40
2:XB:188:ALA:HB1	2:XB:192:SER:HB3	2.03	0.40
4:XD:202:LEU:HA	4:XD:205:GLU:HB2	2.03	0.40
8:XH:34:GLU:HB3	8:XH:118:VAL:HG11	2.03	0.40
12:XL:70:ILE:HG13	12:XL:100:ILE:HG13	2.03	0.40
34:YA:828:U:O2	34:YA:828:U:C2'	2.70	0.40
34:YA:2197:U:H1'	34:YA:2198:A:C8	2.56	0.40
36:YD:61:LEU:HD23	36:YD:61:LEU:HA	1.94	0.40
50:YV:69:LYS:HA	50:YV:87:HIS:O	2.21	0.40
54:YZ:14:LYS:HA	54:YZ:15:PRO:HD3	1.93	0.40
1:QA:299:G:H2'	1:QA:300:A:C8	2.57	0.40
1:QA:1385:G:H2'	1:QA:1386:G:C8	2.56	0.40
3:QC:44:GLU:HA	3:QC:52:LEU:HD21	2.03	0.40
4:QD:3:ARG:HE	4:QD:118:ARG:HD2	1.85	0.40
6:QF:1:MET:HE2	6:QF:1:MET:HB2	1.95	0.40
20:QT:74:LYS:O	20:QT:76:ALA:N	2.55	0.40
30:R6:29:ASN:HD22	34:RA:2286:A:P	2.44	0.40
34:RA:848:G:C2	34:RA:933:A:H1'	2.57	0.40
34:RA:1358:G:H21	34:RA:1373:A:H62	1.69	0.40
34:RA:2150:U:H2'	34:RA:2151:G:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:2310:A:H61	39:RG:79:ASN:HD22	1.67	0.40
35:RB:111:U:H2'	35:RB:112:G:H8	1.85	0.40
38:RF:160:ASN:OD1	38:RF:160:ASN:N	2.54	0.40
41:RI:40:THR:OG1	41:RI:41:GLU:N	2.54	0.40
44:RP:64:LYS:O	44:RP:66:GLY:N	2.55	0.40
1:XA:21:G:H2'	1:XA:22:G:H8	1.87	0.40
1:XA:685:G:N2	1:XA:705:U:O4	2.55	0.40
1:XA:1021:G:H2'	1:XA:1022:G:C8	2.57	0.40
18:XR:30:ASP:OD2	18:XR:33:ASP:N	2.54	0.40
23:XX:3:C:H2'	23:XX:4:A:C8	2.56	0.40
34:YA:172:C:H2'	34:YA:173:G:H8	1.86	0.40
34:YA:570:G:H2'	34:YA:2030:A:C5	2.57	0.40
34:YA:606:U:OP2	38:YF:104:LYS:NZ	2.43	0.40
34:YA:1889:A:N3	34:YA:2086:U:O2'	2.52	0.40
36:YD:175:LEU:O	36:YD:182:LEU:HA	2.22	0.40
42:YN:34:LEU:O	42:YN:49:GLY:HA3	2.21	0.40
48:YT:80:SER:HA	48:YT:81:PRO:HD3	1.96	0.40
49:YU:95:LEU:HG	50:YV:4:ILE:HD13	2.02	0.40
50:YV:100:ARG:HE	50:YV:100:ARG:HB2	1.70	0.40
54:YZ:5:LEU:HB3	54:YZ:6:LYS:H	1.72	0.40
54:YZ:128:VAL:HG22	54:YZ:161:VAL:HG22	2.04	0.40

All (1) 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)
41:RI:89:TYR:O	1:XA:357:G:O2'[4_555]	1.70	0.50

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%)	206 (88%)	27 (12%)	0	100	100
2	XB	234/256 (91%)	202 (86%)	31 (13%)	1 (0%)	30	62
3	QC	203/239 (85%)	180 (89%)	23 (11%)	0	100	100
3	XC	203/239 (85%)	182 (90%)	21 (10%)	0	100	100
4	QD	206/209 (99%)	195 (95%)	10 (5%)	1 (0%)	24	57
4	XD	206/209 (99%)	194 (94%)	11 (5%)	1 (0%)	24	57
5	QE	149/162 (92%)	134 (90%)	14 (9%)	1 (1%)	18	51
5	XE	149/162 (92%)	140 (94%)	8 (5%)	1 (1%)	18	51
6	QF	99/101 (98%)	96 (97%)	3 (3%)	0	100	100
6	XF	99/101 (98%)	98 (99%)	1 (1%)	0	100	100
7	QG	153/156 (98%)	145 (95%)	8 (5%)	0	100	100
7	XG	153/156 (98%)	143 (94%)	10 (6%)	0	100	100
8	QH	135/138 (98%)	127 (94%)	8 (6%)	0	100	100
8	XH	135/138 (98%)	126 (93%)	9 (7%)	0	100	100
9	QI	125/128 (98%)	109 (87%)	16 (13%)	0	100	100
9	XI	124/128 (97%)	110 (89%)	13 (10%)	1 (1%)	16	49
10	QJ	97/105 (92%)	88 (91%)	8 (8%)	1 (1%)	12	44
10	XJ	94/105 (90%)	86 (92%)	8 (8%)	0	100	100
11	QK	117/129 (91%)	108 (92%)	9 (8%)	0	100	100
11	XK	114/129 (88%)	104 (91%)	10 (9%)	0	100	100
12	QL	123/132 (93%)	98 (80%)	24 (20%)	1 (1%)	16	49
12	XL	120/132 (91%)	99 (82%)	21 (18%)	0	100	100
13	QM	118/126 (94%)	99 (84%)	17 (14%)	2 (2%)	7	35
13	XM	112/126 (89%)	101 (90%)	10 (9%)	1 (1%)	14	47
14	QN	58/61 (95%)	50 (86%)	7 (12%)	1 (2%)	7	35
14	XN	58/61 (95%)	48 (83%)	8 (14%)	2 (3%)	3	23
15	QO	86/89 (97%)	80 (93%)	6 (7%)	0	100	100
15	XO	85/89 (96%)	81 (95%)	4 (5%)	0	100	100
16	QP	82/88 (93%)	76 (93%)	6 (7%)	0	100	100
16	XP	82/88 (93%)	78 (95%)	4 (5%)	0	100	100
17	QQ	98/105 (93%)	92 (94%)	6 (6%)	0	100	100
17	XQ	98/105 (93%)	94 (96%)	4 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
18	QR	68/88 (77%)	66 (97%)	2 (3%)	0	100	100
18	XR	68/88 (77%)	66 (97%)	2 (3%)	0	100	100
19	QS	81/93 (87%)	66 (82%)	15 (18%)	0	100	100
19	XS	82/93 (88%)	65 (79%)	17 (21%)	0	100	100
20	QT	97/106 (92%)	86 (89%)	8 (8%)	3 (3%)	3	25
20	XT	97/106 (92%)	84 (87%)	10 (10%)	3 (3%)	3	25
21	QU	23/27 (85%)	21 (91%)	2 (9%)	0	100	100
21	XU	23/27 (85%)	19 (83%)	4 (17%)	0	100	100
24	R0	79/85 (93%)	71 (90%)	8 (10%)	0	100	100
24	Y0	80/85 (94%)	75 (94%)	5 (6%)	0	100	100
25	R1	93/98 (95%)	76 (82%)	17 (18%)	0	100	100
25	Y1	91/98 (93%)	78 (86%)	12 (13%)	1 (1%)	11	43
26	R2	67/72 (93%)	63 (94%)	4 (6%)	0	100	100
26	Y2	66/72 (92%)	64 (97%)	2 (3%)	0	100	100
27	R3	57/60 (95%)	56 (98%)	1 (2%)	0	100	100
27	Y3	57/60 (95%)	55 (96%)	2 (4%)	0	100	100
28	R4	43/71 (61%)	41 (95%)	2 (5%)	0	100	100
28	Y4	44/71 (62%)	28 (64%)	13 (30%)	3 (7%)	1	10
29	R5	57/60 (95%)	49 (86%)	7 (12%)	1 (2%)	6	34
29	Y5	57/60 (95%)	49 (86%)	7 (12%)	1 (2%)	6	34
30	R6	51/54 (94%)	46 (90%)	5 (10%)	0	100	100
30	Y6	51/54 (94%)	49 (96%)	2 (4%)	0	100	100
31	R7	45/49 (92%)	43 (96%)	2 (4%)	0	100	100
31	Y7	46/49 (94%)	45 (98%)	1 (2%)	0	100	100
32	R8	62/65 (95%)	51 (82%)	9 (14%)	2 (3%)	3	24
32	Y8	62/65 (95%)	48 (77%)	14 (23%)	0	100	100
33	R9	35/37 (95%)	33 (94%)	2 (6%)	0	100	100
33	Y9	35/37 (95%)	33 (94%)	2 (6%)	0	100	100
36	RD	270/276 (98%)	244 (90%)	24 (9%)	2 (1%)	18	51
36	YD	270/276 (98%)	241 (89%)	28 (10%)	1 (0%)	30	62
37	RE	203/206 (98%)	159 (78%)	39 (19%)	5 (2%)	4	28

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
37	YE	203/206 (98%)	163 (80%)	38 (19%)	2 (1%)	12 44
38	RF	200/210 (95%)	183 (92%)	15 (8%)	2 (1%)	12 44
38	YF	200/210 (95%)	183 (92%)	16 (8%)	1 (0%)	24 57
39	RG	179/182 (98%)	150 (84%)	28 (16%)	1 (1%)	21 54
39	YG	179/182 (98%)	152 (85%)	27 (15%)	0	100 100
40	RH	172/180 (96%)	145 (84%)	24 (14%)	3 (2%)	7 35
40	YH	172/180 (96%)	147 (86%)	20 (12%)	5 (3%)	3 26
41	RI	144/148 (97%)	115 (80%)	23 (16%)	6 (4%)	2 19
41	YI	144/148 (97%)	118 (82%)	22 (15%)	4 (3%)	4 26
42	RN	136/140 (97%)	122 (90%)	13 (10%)	1 (1%)	18 51
42	YN	136/140 (97%)	123 (90%)	12 (9%)	1 (1%)	18 51
43	RO	120/122 (98%)	109 (91%)	11 (9%)	0	100 100
43	YO	120/122 (98%)	111 (92%)	9 (8%)	0	100 100
44	RP	148/150 (99%)	114 (77%)	31 (21%)	3 (2%)	6 32
44	YP	145/150 (97%)	116 (80%)	28 (19%)	1 (1%)	18 51
45	RQ	139/141 (99%)	120 (86%)	18 (13%)	1 (1%)	18 51
45	YQ	139/141 (99%)	111 (80%)	27 (19%)	1 (1%)	18 51
46	RR	115/118 (98%)	103 (90%)	12 (10%)	0	100 100
46	YR	115/118 (98%)	104 (90%)	10 (9%)	1 (1%)	14 47
47	RS	109/112 (97%)	94 (86%)	15 (14%)	0	100 100
47	YS	109/112 (97%)	95 (87%)	13 (12%)	1 (1%)	14 47
48	RT	135/146 (92%)	116 (86%)	19 (14%)	0	100 100
48	YT	135/146 (92%)	121 (90%)	14 (10%)	0	100 100
49	RU	115/118 (98%)	106 (92%)	6 (5%)	3 (3%)	4 27
49	YU	115/118 (98%)	109 (95%)	6 (5%)	0	100 100
50	RV	99/101 (98%)	87 (88%)	11 (11%)	1 (1%)	12 44
50	YV	99/101 (98%)	90 (91%)	8 (8%)	1 (1%)	12 44
51	RW	111/113 (98%)	104 (94%)	7 (6%)	0	100 100
51	YW	111/113 (98%)	107 (96%)	4 (4%)	0	100 100
52	RX	90/96 (94%)	85 (94%)	5 (6%)	0	100 100
52	YX	90/96 (94%)	84 (93%)	6 (7%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
53	RY	105/110 (96%)	102 (97%)	3 (3%)	0	100 100
53	YY	105/110 (96%)	99 (94%)	6 (6%)	0	100 100
54	RZ	181/206 (88%)	139 (77%)	38 (21%)	4 (2%)	5 30
54	YZ	191/206 (93%)	145 (76%)	39 (20%)	7 (4%)	2 21
All	All	11414/12128 (94%)	10111 (89%)	1217 (11%)	86 (1%)	16 49

All (86) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
12	QL	105	TYR
20	QT	75	ASN
32	R8	30	ARG
37	RE	147	PRO
40	RH	157	TYR
41	RI	11	ASN
44	RP	108	LYS
49	RU	91	ASP
49	RU	92	ARG
54	RZ	53	ILE
4	XD	156	GLU
20	XT	74	LYS
20	XT	75	ASN
28	Y4	5	ILE
28	Y4	24	THR
37	YE	147	PRO
40	YH	157	TYR
44	YP	108	LYS
50	YV	50	PRO
54	YZ	53	ILE
54	YZ	182	LYS
14	QN	17	LYS
32	R8	29	LYS
36	RD	243	GLY
39	RG	81	LYS
40	RH	126	PRO
41	RI	132	PRO
42	RN	22	THR
44	RP	22	GLY
49	RU	90	VAL
54	RZ	167	PRO
14	XN	57	ARG

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Mol	Chain	Res	Type
36	YD	243	GLY
40	YH	47	GLU
41	YI	122	GLU
41	YI	132	PRO
47	YS	110	LEU
54	YZ	60	GLU
54	YZ	167	PRO
13	QM	118	ALA
20	QT	74	LYS
36	RD	242	ARG
37	RE	130	GLY
38	RF	67	GLN
38	RF	129	PHE
38	YF	129	PHE
46	YR	4	LEU
10	QJ	55	LYS
29	R5	49	CYS
37	RE	17	ASP
37	RE	83	ASP
41	RI	10	GLU
41	RI	122	GLU
44	RP	29	LYS
54	RZ	52	SER
54	RZ	63	ASP
13	XM	7	VAL
20	XT	73	HIS
28	Y4	40	HIS
29	Y5	49	CYS
40	YH	152	ARG
41	YI	15	VAL
54	YZ	183	LEU
20	QT	98	PRO
37	RE	82	ARG
40	RH	156	ALA
50	RV	53	GLU
5	XE	74	GLY
14	XN	56	VAL
40	YH	156	ALA
42	YN	22	THR
54	YZ	61	LEU
4	QD	156	GLU
13	QM	13	LYS

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Mol	Chain	Res	Type
41	RI	15	VAL
9	XI	119	ALA
25	Y1	54	ALA
37	YE	54	GLN
45	YQ	7	MET
54	YZ	94	GLU
5	QE	74	GLY
2	XB	208	ILE
45	RQ	78	PRO
41	YI	133	HIS
41	RI	119	PRO
40	YH	12	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%)	202 (100%)	1 (0%)	81	80
2	XB	204/220 (93%)	203 (100%)	1 (0%)	81	80
3	QC	159/188 (85%)	158 (99%)	1 (1%)	78	79
3	XC	159/188 (85%)	157 (99%)	2 (1%)	61	72
4	QD	180/181 (99%)	179 (99%)	1 (1%)	78	79
4	XD	180/181 (99%)	177 (98%)	3 (2%)	53	70
5	QE	116/123 (94%)	116 (100%)	0	100	100
5	XE	116/123 (94%)	115 (99%)	1 (1%)	70	76
6	QF	90/90 (100%)	89 (99%)	1 (1%)	65	74
6	XF	90/90 (100%)	90 (100%)	0	100	100
7	QG	126/127 (99%)	126 (100%)	0	100	100
7	XG	126/127 (99%)	125 (99%)	1 (1%)	73	77
8	QH	118/119 (99%)	117 (99%)	1 (1%)	73	77
8	XH	118/119 (99%)	117 (99%)	1 (1%)	73	77

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
9	QI	98/99 (99%)	95 (97%)	3 (3%)	35 59
9	XI	97/99 (98%)	96 (99%)	1 (1%)	68 75
10	QJ	89/92 (97%)	89 (100%)	0	100 100
10	XJ	86/92 (94%)	86 (100%)	0	100 100
11	QK	90/99 (91%)	88 (98%)	2 (2%)	45 65
11	XK	88/99 (89%)	88 (100%)	0	100 100
12	QL	104/109 (95%)	103 (99%)	1 (1%)	68 75
12	XL	103/109 (94%)	101 (98%)	2 (2%)	50 68
13	QM	96/101 (95%)	96 (100%)	0	100 100
13	XM	92/101 (91%)	92 (100%)	0	100 100
14	QN	49/50 (98%)	47 (96%)	2 (4%)	27 53
14	XN	49/50 (98%)	47 (96%)	2 (4%)	27 53
15	QO	79/80 (99%)	77 (98%)	2 (2%)	42 63
15	XO	79/80 (99%)	79 (100%)	0	100 100
16	QP	72/74 (97%)	72 (100%)	0	100 100
16	XP	72/74 (97%)	72 (100%)	0	100 100
17	QQ	95/97 (98%)	95 (100%)	0	100 100
17	XQ	95/97 (98%)	93 (98%)	2 (2%)	47 66
18	QR	61/77 (79%)	61 (100%)	0	100 100
18	XR	61/77 (79%)	61 (100%)	0	100 100
19	QS	72/80 (90%)	72 (100%)	0	100 100
19	XS	73/80 (91%)	72 (99%)	1 (1%)	59 71
20	QT	76/82 (93%)	75 (99%)	1 (1%)	61 72
20	XT	76/82 (93%)	75 (99%)	1 (1%)	61 72
21	QU	20/22 (91%)	20 (100%)	0	100 100
21	XU	20/22 (91%)	20 (100%)	0	100 100
24	R0	65/67 (97%)	65 (100%)	0	100 100
24	Y0	65/67 (97%)	65 (100%)	0	100 100
25	R1	80/83 (96%)	78 (98%)	2 (2%)	42 63
25	Y1	78/83 (94%)	78 (100%)	0	100 100
26	R2	64/67 (96%)	64 (100%)	0	100 100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
26	Y2	64/67 (96%)	64 (100%)	0	100	100
27	R3	51/52 (98%)	50 (98%)	1 (2%)	48	67
27	Y3	51/52 (98%)	51 (100%)	0	100	100
28	R4	40/63 (64%)	40 (100%)	0	100	100
28	Y4	41/63 (65%)	39 (95%)	2 (5%)	22	48
29	R5	51/52 (98%)	50 (98%)	1 (2%)	48	67
29	Y5	51/52 (98%)	48 (94%)	3 (6%)	18	44
30	R6	51/52 (98%)	50 (98%)	1 (2%)	48	67
30	Y6	51/52 (98%)	50 (98%)	1 (2%)	48	67
31	R7	40/42 (95%)	40 (100%)	0	100	100
31	Y7	41/42 (98%)	41 (100%)	0	100	100
32	R8	54/55 (98%)	54 (100%)	0	100	100
32	Y8	54/55 (98%)	54 (100%)	0	100	100
33	R9	34/34 (100%)	34 (100%)	0	100	100
33	Y9	34/34 (100%)	32 (94%)	2 (6%)	18	44
36	RD	214/218 (98%)	211 (99%)	3 (1%)	59	71
36	YD	214/218 (98%)	214 (100%)	0	100	100
37	RE	165/166 (99%)	162 (98%)	3 (2%)	51	69
37	YE	165/166 (99%)	159 (96%)	6 (4%)	31	57
38	RF	161/166 (97%)	158 (98%)	3 (2%)	50	68
38	YF	161/166 (97%)	161 (100%)	0	100	100
39	RG	155/156 (99%)	154 (99%)	1 (1%)	78	79
39	YG	155/156 (99%)	152 (98%)	3 (2%)	50	68
40	RH	145/148 (98%)	137 (94%)	8 (6%)	19	46
40	YH	145/148 (98%)	138 (95%)	7 (5%)	23	49
41	RI	122/124 (98%)	121 (99%)	1 (1%)	73	77
41	YI	122/124 (98%)	118 (97%)	4 (3%)	33	58
42	RN	117/119 (98%)	114 (97%)	3 (3%)	40	62
42	YN	117/119 (98%)	116 (99%)	1 (1%)	70	76
43	RO	100/100 (100%)	100 (100%)	0	100	100
43	YO	100/100 (100%)	98 (98%)	2 (2%)	48	67

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
44	RP	116/116 (100%)	116 (100%)	0	100 100
44	YP	114/116 (98%)	113 (99%)	1 (1%)	70 76
45	RQ	111/111 (100%)	109 (98%)	2 (2%)	51 69
45	YQ	111/111 (100%)	111 (100%)	0	100 100
46	RR	100/101 (99%)	98 (98%)	2 (2%)	48 67
46	YR	100/101 (99%)	100 (100%)	0	100 100
47	RS	87/88 (99%)	87 (100%)	0	100 100
47	YS	87/88 (99%)	84 (97%)	3 (3%)	32 57
48	RT	120/127 (94%)	118 (98%)	2 (2%)	53 70
48	YT	120/127 (94%)	118 (98%)	2 (2%)	53 70
49	RU	93/94 (99%)	92 (99%)	1 (1%)	65 74
49	YU	93/94 (99%)	92 (99%)	1 (1%)	65 74
50	RV	82/82 (100%)	80 (98%)	2 (2%)	43 64
50	YV	82/82 (100%)	78 (95%)	4 (5%)	22 48
51	RW	92/92 (100%)	91 (99%)	1 (1%)	65 74
51	YW	92/92 (100%)	92 (100%)	0	100 100
52	RX	74/78 (95%)	73 (99%)	1 (1%)	59 71
52	YX	74/78 (95%)	72 (97%)	2 (3%)	39 62
53	RY	88/91 (97%)	87 (99%)	1 (1%)	65 74
53	YY	88/91 (97%)	87 (99%)	1 (1%)	65 74
54	RZ	162/179 (90%)	161 (99%)	1 (1%)	78 79
54	YZ	167/179 (93%)	164 (98%)	3 (2%)	51 69
All	All	9648/10066 (96%)	9526 (99%)	122 (1%)	61 72

All (122) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	QB	229	VAL
3	QC	111	LEU
4	QD	18	LYS
6	QF	74	ASP
8	QH	59	LEU
9	QI	17	VAL
9	QI	64	THR

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Mol	Chain	Res	Type
9	QI	85	LEU
11	QK	41	THR
11	QK	82	VAL
12	QL	18	VAL
14	QN	33	VAL
14	QN	43	CYS
15	QO	22	THR
15	QO	87	ILE
20	QT	73	HIS
25	R1	73	LEU
25	R1	92	LYS
27	R3	13	ILE
29	R5	36	CYS
30	R6	23	THR
36	RD	44	ASN
36	RD	51	VAL
36	RD	268	ARG
37	RE	107	THR
37	RE	143	ASN
37	RE	176	ILE
38	RF	89	VAL
38	RF	124	LEU
38	RF	195	ASP
39	RG	92	VAL
40	RH	17	VAL
40	RH	107	VAL
40	RH	115	VAL
40	RH	123	PHE
40	RH	125	VAL
40	RH	127	GLU
40	RH	129	THR
40	RH	131	VAL
41	RI	5	LEU
42	RN	34	LEU
42	RN	60	ILE
42	RN	96	GLU
45	RQ	27	VAL
45	RQ	96	VAL
46	RR	10	LEU
46	RR	12	ARG
48	RT	66	VAL
48	RT	75	ILE

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Mol	Chain	Res	Type
49	RU	90	VAL
50	RV	33	VAL
50	RV	52	VAL
51	RW	52	GLU
52	RX	27	THR
53	RY	15	VAL
54	RZ	90	VAL
2	XB	162	ILE
3	XC	12	LEU
3	XC	162	GLN
4	XD	18	LYS
4	XD	135	LEU
4	XD	146	ILE
5	XE	12	LEU
7	XG	38	LEU
8	XH	118	VAL
9	XI	27	THR
12	XL	6	THR
12	XL	105	TYR
14	XN	27	CYS
14	XN	56	VAL
17	XQ	50	LYS
17	XQ	74	LEU
19	XS	11	VAL
20	XT	71	THR
28	Y4	5	ILE
28	Y4	16	CYS
29	Y5	37	LYS
29	Y5	45	VAL
29	Y5	49	CYS
30	Y6	43	CYS
33	Y9	13	LYS
33	Y9	27	CYS
37	YE	12	THR
37	YE	33	VAL
37	YE	104	VAL
37	YE	107	THR
37	YE	176	ILE
37	YE	184	VAL
39	YG	5	VAL
39	YG	37	VAL
39	YG	140	ILE

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Mol	Chain	Res	Type
40	YH	11	VAL
40	YH	67	LEU
40	YH	86	GLU
40	YH	115	VAL
40	YH	125	VAL
40	YH	133	VAL
40	YH	169	VAL
41	YI	86	THR
41	YI	93	THR
41	YI	127	VAL
41	YI	136	VAL
42	YN	96	GLU
43	YO	24	VAL
43	YO	34	THR
44	YP	45	LEU
47	YS	4	LEU
47	YS	5	THR
47	YS	110	LEU
48	YT	66	VAL
48	YT	105	LEU
49	YU	94	ASN
50	YV	46	VAL
50	YV	62	LEU
50	YV	78	LYS
50	YV	79	VAL
52	YX	49	VAL
52	YX	66	LEU
53	YY	79	CYS
54	YZ	71	VAL
54	YZ	165	VAL
54	YZ	180	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (65) such sidechains are listed below:

Mol	Chain	Res	Type
3	QC	6	HIS
3	QC	108	ASN
4	QD	45	GLN
4	QD	103	ASN
7	QG	28	ASN
7	QG	37	ASN
7	QG	97	GLN

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Mol	Chain	Res	Type
11	QK	13	GLN
12	QL	9	GLN
12	QL	78	GLN
15	QO	50	HIS
17	QQ	45	HIS
19	QS	57	HIS
24	R0	12	ASN
26	R2	9	GLN
26	R2	46	GLN
26	R2	47	ASN
30	R6	20	ASN
31	R7	36	GLN
32	R8	33	ASN
32	R8	35	GLN
36	RD	253	GLN
37	RE	180	ASN
39	RG	66	GLN
39	RG	79	ASN
40	RH	61	HIS
42	RN	131	GLN
43	RO	3	GLN
44	RP	68	GLN
45	RQ	113	GLN
47	RS	38	GLN
47	RS	68	GLN
48	RT	79	HIS
50	RV	11	GLN
2	XB	25	ASN
2	XB	37	ASN
3	XC	108	ASN
4	XD	119	GLN
6	XF	73	ASN
7	XG	110	GLN
7	XG	148	ASN
10	XJ	56	HIS
10	XJ	78	ASN
11	XK	38	ASN
11	XK	117	ASN
12	XL	99	HIS
13	XM	40	ASN
15	XO	50	HIS
20	XT	9	ASN

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Mol	Chain	Res	Type
20	XT	18	GLN
20	XT	26	ASN
26	Y2	38	GLN
26	Y2	47	ASN
37	YE	55	ASN
37	YE	132	HIS
38	YF	160	ASN
38	YF	204	ASN
39	YG	79	ASN
39	YG	132	ASN
40	YH	74	ASN
41	YI	105	HIS
45	YQ	46	GLN
45	YQ	113	GLN
49	YU	72	HIS
50	YV	11	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	QA	1509/1521 (99%)	309 (20%)	9 (0%)
1	XA	1514/1521 (99%)	322 (21%)	10 (0%)
22	QV	76/77 (98%)	17 (22%)	2 (2%)
22	XV	76/77 (98%)	21 (27%)	1 (1%)
23	QX	18/19 (94%)	4 (22%)	1 (5%)
23	XX	18/19 (94%)	5 (27%)	0
34	RA	2877/2915 (98%)	619 (21%)	40 (1%)
34	YA	2880/2915 (98%)	638 (22%)	44 (1%)
35	RB	119/122 (97%)	21 (17%)	1 (0%)
35	YB	119/122 (97%)	25 (21%)	1 (0%)
All	All	9206/9308 (98%)	1981 (21%)	109 (1%)

All (1981) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	QA	6	G
1	QA	9	G
1	QA	32	A
1	QA	38	G
1	QA	39	G
1	QA	48	C

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Mol	Chain	Res	Type
1	QA	50	A
1	QA	51	A
1	QA	59	A
1	QA	64	G
1	QA	65	U
1	QA	66	G
1	QA	78	G
1	QA	79	G
1	QA	80	G
1	QA	82	U
1	QA	95	G
1	QA	101	A
1	QA	116	A
1	QA	121	C
1	QA	129(B)	G
1	QA	131	C
1	QA	134	A
1	QA	144	G
1	QA	151	A
1	QA	163	C
1	QA	169	C
1	QA	170	U
1	QA	182	U
1	QA	186(F)	C
1	QA	186(I)	U
1	QA	186(J)	U
1	QA	186(K)	G
1	QA	186(L)	G
1	QA	195	A
1	QA	197	A
1	QA	199	G
1	QA	201(C)	U
1	QA	201(D)	U
1	QA	216	G
1	QA	247	G
1	QA	251	G
1	QA	267	C
1	QA	274	A
1	QA	275	G
1	QA	279	A
1	QA	280	C
1	QA	281	G

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Mol	Chain	Res	Type
1	QA	283	C
1	QA	289	G
1	QA	301	G
1	QA	306	G
1	QA	316	G
1	QA	321	A
1	QA	328	C
1	QA	329	A
1	QA	332	G
1	QA	344	A
1	QA	345	C
1	QA	347	G
1	QA	352	C
1	QA	353	A
1	QA	354	G
1	QA	356	A
1	QA	367	U
1	QA	372	C
1	QA	384	G
1	QA	388	G
1	QA	389	A
1	QA	390	C
1	QA	392	G
1	QA	397	A
1	QA	398	C
1	QA	412	A
1	QA	413	G
1	QA	414	A
1	QA	422	C
1	QA	423	G
1	QA	424	G
1	QA	429	U
1	QA	440	A
1	QA	452	A
1	QA	453	A
1	QA	458(C)	A
1	QA	481	G
1	QA	484	G
1	QA	485	G
1	QA	486	U
1	QA	497	A
1	QA	498	U

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Mol	Chain	Res	Type
1	QA	501	C
1	QA	505	G
1	QA	509	A
1	QA	510	A
1	QA	511	C
1	QA	514	C
1	QA	518	C
1	QA	521	G
1	QA	524	G
1	QA	527	G
1	QA	531	U
1	QA	532	A
1	QA	533	A
1	QA	536	C
1	QA	547	A
1	QA	559	A
1	QA	562	C
1	QA	568	G
1	QA	572	A
1	QA	573	A
1	QA	576	G
1	QA	577	G
1	QA	578	C
1	QA	590	C
1	QA	596	C
1	QA	607	A
1	QA	653	A
1	QA	687	A
1	QA	688	G
1	QA	695	A
1	QA	702	A
1	QA	717	C
1	QA	721	G
1	QA	723	U
1	QA	741	G
1	QA	749	C
1	QA	753	A
1	QA	755	G
1	QA	777	A
1	QA	793	U
1	QA	794	A
1	QA	811	C

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Mol	Chain	Res	Type
1	QA	816	A
1	QA	817	C
1	QA	818	G
1	QA	819	A
1	QA	820	U
1	QA	821	G
1	QA	828	A
1	QA	838(B)	U
1	QA	838(C)	C
1	QA	838(D)	U
1	QA	848	C
1	QA	859	A
1	QA	867	G
1	QA	870	U
1	QA	872	A
1	QA	873	A
1	QA	876	G
1	QA	889	A
1	QA	914	A
1	QA	923	A
1	QA	926	G
1	QA	927	G
1	QA	934	C
1	QA	935	A
1	QA	960	U
1	QA	961	U
1	QA	966	G
1	QA	967	C
1	QA	969	A
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	992	U
1	QA	993	G
1	QA	994	A
1	QA	1002	G
1	QA	1004	A
1	QA	1006	C
1	QA	1015	A

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Mol	Chain	Res	Type
1	QA	1024	G
1	QA	1025	U
1	QA	1026	G
1	QA	1028(D)	G
1	QA	1037	C
1	QA	1039	C
1	QA	1046	A
1	QA	1053	G
1	QA	1054	C
1	QA	1055	A
1	QA	1060	C
1	QA	1064	G
1	QA	1065	U
1	QA	1066	C
1	QA	1081	G
1	QA	1094	G
1	QA	1095	U
1	QA	1101	A
1	QA	1108	G
1	QA	1117	G
1	QA	1118	C
1	QA	1124	G
1	QA	1125	U
1	QA	1126	U
1	QA	1130	A
1	QA	1131	G
1	QA	1135	U
1	QA	1137	C
1	QA	1138	G
1	QA	1139	G
1	QA	1145	C
1	QA	1146	A
1	QA	1147	C
1	QA	1157	A
1	QA	1158	C
1	QA	1159	U
1	QA	1160	G
1	QA	1178	G
1	QA	1181	G
1	QA	1182	G
1	QA	1183	A
1	QA	1186	G

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Mol	Chain	Res	Type
1	QA	1190	G
1	QA	1196	U
1	QA	1197	G
1	QA	1200	C
1	QA	1201	A
1	QA	1202	G
1	QA	1212	U
1	QA	1213	A
1	QA	1221	G
1	QA	1222	G
1	QA	1224	G
1	QA	1225	A
1	QA	1226	C
1	QA	1227	A
1	QA	1228	C
1	QA	1240	U
1	QA	1241	G
1	QA	1248	A
1	QA	1256	A
1	QA	1257	U
1	QA	1258	G
1	QA	1274	G
1	QA	1280	A
1	QA	1281	U
1	QA	1282	C
1	QA	1285	A
1	QA	1286	A
1	QA	1287	A
1	QA	1290	G
1	QA	1297	C
1	QA	1299	A
1	QA	1300	G
1	QA	1303	C
1	QA	1305	G
1	QA	1319	A
1	QA	1321	C
1	QA	1322	C
1	QA	1323	G
1	QA	1325	C
1	QA	1327	C
1	QA	1328	C
1	QA	1329	A

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Mol	Chain	Res	Type
1	QA	1330	U
1	QA	1331	G
1	QA	1335	C
1	QA	1336	C
1	QA	1340	A
1	QA	1346	A
1	QA	1347	G
1	QA	1359	C
1	QA	1362(B)	C
1	QA	1363	A
1	QA	1364	U
1	QA	1365	G
1	QA	1370	G
1	QA	1378	C
1	QA	1381	U
1	QA	1382	C
1	QA	1394	A
1	QA	1397	C
1	QA	1398	A
1	QA	1413	A
1	QA	1419	G
1	QA	1422	G
1	QA	1440(C)	G
1	QA	1440(D)	G
1	QA	1440(E)	A
1	QA	1440(K)	C
1	QA	1440(L)	G
1	QA	1475	G
1	QA	1492	A
1	QA	1493	A
1	QA	1494	G
1	QA	1497	G
1	QA	1499	A
1	QA	1502	A
1	QA	1503	A
1	QA	1504	G
1	QA	1505	G
1	QA	1506	U
1	QA	1507	A
1	QA	1508	G
1	QA	1517	G
1	QA	1520	G

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Mol	Chain	Res	Type
1	QA	1528	U
1	QA	1529	G
1	QA	1530	G
1	QA	1533	C
1	QA	1534	A
1	QA	1535	C
1	QA	1538	C
1	QA	1539	C
1	QA	1541	U
22	QV	8	U
22	QV	10	G
22	QV	11	C
22	QV	15	G
22	QV	17	C
22	QV	18	U
22	QV	19	G
22	QV	21(B)	A
22	QV	31	G
22	QV	34	C
22	QV	36	G
22	QV	47	U
22	QV	48	C
22	QV	59	A
22	QV	61	C
22	QV	67	U
22	QV	73	A
23	QX	10	G
23	QX	12	A
23	QX	13	A
23	QX	18	C
34	RA	10	G
34	RA	15	G
34	RA	27	G
34	RA	34	C
34	RA	35	G
34	RA	36	G
34	RA	46	C
34	RA	51	G
34	RA	55	G
34	RA	61	G
34	RA	73	A
34	RA	74	A

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Mol	Chain	Res	Type
34	RA	75	G
34	RA	90	U
34	RA	101	G
34	RA	102	G
34	RA	103	A
34	RA	118	A
34	RA	119	A
34	RA	120	U
34	RA	125	G
34	RA	131	G
34	RA	140	A
34	RA	161	U
34	RA	177	G
34	RA	181	A
34	RA	196	A
34	RA	199	A
34	RA	201	C
34	RA	204	A
34	RA	216	A
34	RA	221	A
34	RA	222	A
34	RA	223	A
34	RA	229	A
34	RA	230	U
34	RA	232	G
34	RA	233	A
34	RA	241	A
34	RA	242	G
34	RA	243	U
34	RA	248	G
34	RA	249	C
34	RA	252	G
34	RA	265	A
34	RA	266	G
34	RA	267	C
34	RA	270(M)	U
34	RA	270(N)	U
34	RA	270(O)	G
34	RA	270(Q)	C
34	RA	270(Z)	G
34	RA	271(D)	U
34	RA	275	G

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Mol	Chain	Res	Type
34	RA	276	A
34	RA	277	C
34	RA	278	A
34	RA	299	A
34	RA	311	A
34	RA	323	G
34	RA	324	A
34	RA	329	G
34	RA	330	A
34	RA	332	A
34	RA	342	G
34	RA	346	A
34	RA	352	G
34	RA	362	U
34	RA	364	C
34	RA	371	A
34	RA	372	G
34	RA	386	G
34	RA	387	U
34	RA	404	C
34	RA	405	U
34	RA	411	G
34	RA	412	A
34	RA	423	A
34	RA	428	A
34	RA	435	C
34	RA	444	C
34	RA	448	U
34	RA	453	C
34	RA	454	A
34	RA	456	C
34	RA	457	A
34	RA	458	G
34	RA	467	G
34	RA	470	A
34	RA	481	G
34	RA	494	G
34	RA	501	A
34	RA	503	A
34	RA	504	U
34	RA	505	A
34	RA	508	G

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Mol	Chain	Res	Type
34	RA	509	C
34	RA	510	C
34	RA	512	G
34	RA	513	A
34	RA	529	A
34	RA	531	C
34	RA	532	A
34	RA	533	G
34	RA	537	C
34	RA	539	G
34	RA	540	G
34	RA	546	C
34	RA	547	A
34	RA	556	G
34	RA	563	G
34	RA	568	U
34	RA	573	G
34	RA	575	A
34	RA	603	A
34	RA	604	G
34	RA	607	U
34	RA	614	U
34	RA	615	G
34	RA	616	A
34	RA	617	G
34	RA	618(A)	G
34	RA	621	A
34	RA	622	G
34	RA	626	U
34	RA	627	A
34	RA	631	A
34	RA	634	C
34	RA	637	A
34	RA	638	G
34	RA	645	C
34	RA	646	A
34	RA	651	G
34	RA	652	C
34	RA	654(A)	A
34	RA	654(B)	G
34	RA	657	U
34	RA	668	G

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Mol	Chain	Res	Type
34	RA	669	G
34	RA	670	A
34	RA	686	G
34	RA	702	G
34	RA	717	G
34	RA	722	A
34	RA	726	G
34	RA	730	C
34	RA	747	U
34	RA	748	G
34	RA	753	C
34	RA	762	U
34	RA	764	A
34	RA	765	G
34	RA	776	G
34	RA	782	A
34	RA	784	A
34	RA	785	G
34	RA	790	C
34	RA	792	G
34	RA	800	A
34	RA	805	G
34	RA	810	U
34	RA	812	C
34	RA	819	A
34	RA	826	U
34	RA	827	U
34	RA	828	U
34	RA	830	G
34	RA	845	G
34	RA	847	U
34	RA	856	C
34	RA	857	C
34	RA	859	G
34	RA	860	U
34	RA	877	U
34	RA	887	A
34	RA	889	C
34	RA	890	A
34	RA	896	A
34	RA	907	U
34	RA	910	A

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Mol	Chain	Res	Type
34	RA	914	C
34	RA	915	C
34	RA	917	A
34	RA	918	A
34	RA	932	G
34	RA	941	A
34	RA	945	A
34	RA	946	G
34	RA	959	A
34	RA	961	C
34	RA	973	A
34	RA	974(A)	G
34	RA	974(B)	C
34	RA	975	G
34	RA	981	A
34	RA	983	A
34	RA	996	A
34	RA	1003	G
34	RA	1005	C
34	RA	1008	C
34	RA	1011	G
34	RA	1012	U
34	RA	1013	C
34	RA	1015	G
34	RA	1020	A
34	RA	1022	G
34	RA	1023	U
34	RA	1024	G
34	RA	1025	G
34	RA	1026	U
34	RA	1027	A
34	RA	1033	U
34	RA	1044	G
34	RA	1045	A
34	RA	1046	A
34	RA	1050	A
34	RA	1052	C
34	RA	1062	G
34	RA	1065	U
34	RA	1067	A
34	RA	1070	A
34	RA	1071	G

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Mol	Chain	Res	Type
34	RA	1072	C
34	RA	1073	A
34	RA	1075	C
34	RA	1076	C
34	RA	1082	U
34	RA	1083	U
34	RA	1087	G
34	RA	1088	A
34	RA	1090	U
34	RA	1091	G
34	RA	1097	U
34	RA	1102	C
34	RA	1103	A
34	RA	1104	C
34	RA	1110	G
34	RA	1112	G
34	RA	1126	A
34	RA	1129	A
34	RA	1130	U
34	RA	1131	G
34	RA	1135	C
34	RA	1136	G
34	RA	1139	G
34	RA	1141	U
34	RA	1142(A)	U
34	RA	1142(B)	A
34	RA	1155	A
34	RA	1170	G
34	RA	1173	G
34	RA	1174	A
34	RA	1175	U
34	RA	1176	G
34	RA	1179	C
34	RA	1181	C
34	RA	1195	G
34	RA	1204	A
34	RA	1205	U
34	RA	1206	G
34	RA	1210	A
34	RA	1212	G
34	RA	1220	A
34	RA	1238	G

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Mol	Chain	Res	Type
34	RA	1248	G
34	RA	1250	G
34	RA	1252	G
34	RA	1253	A
34	RA	1256	G
34	RA	1265	A
34	RA	1272	A
34	RA	1273	U
34	RA	1286	A
34	RA	1300	U
34	RA	1301	A
34	RA	1308	A
34	RA	1313	U
34	RA	1314	C
34	RA	1325	G
34	RA	1329	U
34	RA	1341	U
34	RA	1349	A
34	RA	1352	U
34	RA	1365	A
34	RA	1368	G
34	RA	1370	C
34	RA	1378	A
34	RA	1379	A
34	RA	1384	A
34	RA	1385	G
34	RA	1395	A
34	RA	1407	C
34	RA	1411	C
34	RA	1416	G
34	RA	1419	A
34	RA	1420	U
34	RA	1421	G
34	RA	1427	A
34	RA	1428	C
34	RA	1444(B)	A
34	RA	1449(A)	A
34	RA	1449(B)	G
34	RA	1455	G
34	RA	1461	G
34	RA	1467	C
34	RA	1471	A

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Mol	Chain	Res	Type
34	RA	1474	C
34	RA	1480	G
34	RA	1482	U
34	RA	1483	G
34	RA	1485	G
34	RA	1493	C
34	RA	1494	A
34	RA	1495	A
34	RA	1496	A
34	RA	1497	U
34	RA	1504	C
34	RA	1506	C
34	RA	1507	A
34	RA	1508	A
34	RA	1510	A
34	RA	1533	C
34	RA	1534	G
34	RA	1535	U
34	RA	1536	A
34	RA	1537	C
34	RA	1538	G
34	RA	1543	A
34	RA	1544	C
34	RA	1545(A)	A
34	RA	1547	C
34	RA	1558	A
34	RA	1559	G
34	RA	1566	A
34	RA	1569	A
34	RA	1578	U
34	RA	1579	A
34	RA	1586	A
34	RA	1598	C
34	RA	1602	U
34	RA	1603	A
34	RA	1607	C
34	RA	1608	A
34	RA	1609	A
34	RA	1610	A
34	RA	1617	C
34	RA	1618	A
34	RA	1622	G

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Mol	Chain	Res	Type
34	RA	1634	A
34	RA	1640	C
34	RA	1646	C
34	RA	1648	C
34	RA	1653	G
34	RA	1654	A
34	RA	1667	G
34	RA	1668	A
34	RA	1672	C
34	RA	1674	G
34	RA	1688	U
34	RA	1695	G
34	RA	1698	A
34	RA	1725	G
34	RA	1729	A
34	RA	1731	G
34	RA	1742	C
34	RA	1743	G
34	RA	1756	G
34	RA	1762	A
34	RA	1763	G
34	RA	1764	G
34	RA	1773	A
34	RA	1780	A
34	RA	1781	C
34	RA	1784	A
34	RA	1791	A
34	RA	1799	G
34	RA	1800	C
34	RA	1801	G
34	RA	1811	G
34	RA	1816	G
34	RA	1820	U
34	RA	1829	A
34	RA	1835	G
34	RA	1847	A
34	RA	1848	A
34	RA	1858	G
34	RA	1869	G
34	RA	1870	C
34	RA	1872	A
34	RA	1878	G

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Mol	Chain	Res	Type
34	RA	1882	C
34	RA	1888	G
34	RA	1889	A
34	RA	1896	G
34	RA	1905	C
34	RA	1906	G
34	RA	1919	A
34	RA	1930	G
34	RA	1931	U
34	RA	1936	A
34	RA	1937	A
34	RA	1938	A
34	RA	1939	U
34	RA	1955	U
34	RA	1963	U
34	RA	1965	C
34	RA	1966	A
34	RA	1967	C
34	RA	1969	A
34	RA	1970	A
34	RA	1971	A
34	RA	1972	A
34	RA	1981	A
34	RA	1982	C
34	RA	1991	U
34	RA	1992	G
34	RA	1993	U
34	RA	1994	C
34	RA	2021	C
34	RA	2022	U
34	RA	2023	G
34	RA	2030	A
34	RA	2031	A
34	RA	2032	G
34	RA	2033	A
34	RA	2043	C
34	RA	2055	C
34	RA	2056	G
34	RA	2059	A
34	RA	2060	A
34	RA	2061	G
34	RA	2062	A

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Mol	Chain	Res	Type
34	RA	2069	G
34	RA	2077	A
34	RA	2080	G
34	RA	2089	U
34	RA	2092	U
34	RA	2093	G
34	RA	2094	G
34	RA	2095	C
34	RA	2096	U
34	RA	2097	C
34	RA	2099	U
34	RA	2100	G
34	RA	2111	C
34	RA	2113	U
34	RA	2114	A
34	RA	2115	G
34	RA	2116	G
34	RA	2118	U
34	RA	2119	A
34	RA	2120	G
34	RA	2126	A
34	RA	2127	G
34	RA	2128	C
34	RA	2131	G
34	RA	2132	U
34	RA	2133	G
34	RA	2137	C
34	RA	2145	C
34	RA	2146	C
34	RA	2147	G
34	RA	2148	G
34	RA	2158	A
34	RA	2164	C
34	RA	2166	G
34	RA	2167	U
34	RA	2169	A
34	RA	2172	U
34	RA	2173	A
34	RA	2176	A
34	RA	2190	G
34	RA	2191	G
34	RA	2194	G

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Mol	Chain	Res	Type
34	RA	2195	C
34	RA	2198	A
34	RA	2210	G
34	RA	2211	G
34	RA	2212	A
34	RA	2215	G
34	RA	2225	A
34	RA	2238	G
34	RA	2239	G
34	RA	2243	U
34	RA	2245	U
34	RA	2266	A
34	RA	2275	C
34	RA	2280	G
34	RA	2283	C
34	RA	2287	A
34	RA	2288	A
34	RA	2297	C
34	RA	2304	G
34	RA	2305	A
34	RA	2307	G
34	RA	2308	G
34	RA	2310	A
34	RA	2311	A
34	RA	2319	G
34	RA	2320	A
34	RA	2322	A
34	RA	2325	G
34	RA	2334	G
34	RA	2335	A
34	RA	2342	C
34	RA	2345	G
34	RA	2346	A
34	RA	2347	C
34	RA	2350	C
34	RA	2372	G
34	RA	2383	G
34	RA	2385	C
34	RA	2388	A
34	RA	2391	G
34	RA	2392	A
34	RA	2394	C

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Mol	Chain	Res	Type
34	RA	2402	C
34	RA	2403	C
34	RA	2406	U
34	RA	2410	G
34	RA	2423	U
34	RA	2425	A
34	RA	2428	G
34	RA	2429	G
34	RA	2430	A
34	RA	2431	U
34	RA	2435	A
34	RA	2439	A
34	RA	2440	C
34	RA	2441	C
34	RA	2448	A
34	RA	2460	U
34	RA	2469	A
34	RA	2470	G
34	RA	2478	A
34	RA	2482	G
34	RA	2494	G
34	RA	2502	G
34	RA	2503	A
34	RA	2504	U
34	RA	2505	G
34	RA	2506	U
34	RA	2518	A
34	RA	2520	C
34	RA	2542	A
34	RA	2543	G
34	RA	2553	G
34	RA	2554	U
34	RA	2562	U
34	RA	2567	G
34	RA	2569	G
34	RA	2572	A
34	RA	2577	A
34	RA	2580	U
34	RA	2602	A
34	RA	2609	U
34	RA	2610	C
34	RA	2611	U

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Mol	Chain	Res	Type
34	RA	2612	C
34	RA	2614	A
34	RA	2629	A
34	RA	2646	C
34	RA	2654	A
34	RA	2655	G
34	RA	2665	A
34	RA	2673	G
34	RA	2686	G
34	RA	2689	U
34	RA	2690	C
34	RA	2691	C
34	RA	2702	U
34	RA	2707	G
34	RA	2711	A
34	RA	2712(A)	U
34	RA	2712(B)	A
34	RA	2713	A
34	RA	2714	G
34	RA	2726	U
34	RA	2733	A
34	RA	2739	U
34	RA	2744	G
34	RA	2748	A
34	RA	2750	A
34	RA	2757	A
34	RA	2761	G
34	RA	2764	A
34	RA	2765	A
34	RA	2766	G
34	RA	2777	G
34	RA	2778	A
34	RA	2779	U
34	RA	2780	G
34	RA	2789	C
34	RA	2790	A
34	RA	2791	C
34	RA	2792	G
34	RA	2793	G
34	RA	2794	C
34	RA	2797	U
34	RA	2798	C

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Mol	Chain	Res	Type
34	RA	2807	G
34	RA	2808	U
34	RA	2818	G
34	RA	2820	A
34	RA	2821	A
34	RA	2822	G
34	RA	2825	C
34	RA	2830	G
34	RA	2833	G
34	RA	2834	G
34	RA	2849	U
34	RA	2867	G
34	RA	2872	G
34	RA	2880	C
34	RA	2883	A
34	RA	2885	C
34	RA	2892	A
34	RA	2894	G
34	RA	2895	U
35	RB	8	U
35	RB	9	G
35	RB	12	C
35	RB	13	A
35	RB	14	U
35	RB	15	A
35	RB	22	U
35	RB	25	A
35	RB	32	C
35	RB	41	U
35	RB	42	C
35	RB	44	G
35	RB	45	A
35	RB	53	A
35	RB	56	G
35	RB	67	G
35	RB	73	A
35	RB	77	U
35	RB	81	G
35	RB	96	G
35	RB	109	G
1	XA	6	G
1	XA	9	G

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Mol	Chain	Res	Type
1	XA	31	G
1	XA	32	A
1	XA	39	G
1	XA	47	C
1	XA	48	C
1	XA	51	A
1	XA	54	C
1	XA	65	U
1	XA	66	G
1	XA	68(E)	C
1	XA	68(F)	G
1	XA	68(I)	G
1	XA	68(K)	G
1	XA	68(M)	U
1	XA	68(N)	U
1	XA	68(P)	A
1	XA	68(Q)	C
1	XA	68(R)	U
1	XA	68(S)	C
1	XA	68(W)	G
1	XA	101	A
1	XA	108	G
1	XA	109	A
1	XA	116	A
1	XA	117	G
1	XA	121	C
1	XA	131	C
1	XA	134	A
1	XA	142	G
1	XA	144	G
1	XA	151	A
1	XA	160	A
1	XA	163	C
1	XA	169	C
1	XA	173	U
1	XA	182	U
1	XA	183	G
1	XA	186(J)	U
1	XA	186(K)	G
1	XA	186(L)	G
1	XA	186(N)	G
1	XA	194	C

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Mol	Chain	Res	Type
1	XA	195	A
1	XA	197	A
1	XA	201(B)	U
1	XA	201(C)	U
1	XA	201(D)	U
1	XA	216	G
1	XA	247	G
1	XA	251	G
1	XA	254	G
1	XA	262	A
1	XA	266	G
1	XA	267	C
1	XA	281	G
1	XA	289	G
1	XA	306	G
1	XA	315	A
1	XA	328	C
1	XA	329	A
1	XA	330	C
1	XA	332	G
1	XA	344	A
1	XA	345	C
1	XA	346	G
1	XA	347	G
1	XA	348	G
1	XA	352	C
1	XA	353	A
1	XA	354	G
1	XA	356	A
1	XA	366	C
1	XA	368	U
1	XA	372	C
1	XA	373	A
1	XA	384	G
1	XA	388	G
1	XA	389	A
1	XA	392	G
1	XA	397	A
1	XA	398	C
1	XA	406	G
1	XA	412	A
1	XA	413	G

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Mol	Chain	Res	Type
1	XA	414	A
1	XA	422	C
1	XA	424	G
1	XA	428	G
1	XA	429	U
1	XA	440	A
1	XA	441	A
1	XA	452	A
1	XA	453	A
1	XA	458(C)	A
1	XA	458(D)	C
1	XA	481	G
1	XA	484	G
1	XA	485	G
1	XA	495	A
1	XA	497	A
1	XA	498	U
1	XA	508	C
1	XA	509	A
1	XA	511	C
1	XA	518	C
1	XA	521	G
1	XA	524	G
1	XA	527	G
1	XA	531	U
1	XA	532	A
1	XA	533	A
1	XA	536	C
1	XA	547	A
1	XA	559	A
1	XA	562	C
1	XA	572	A
1	XA	573	A
1	XA	576	G
1	XA	577	G
1	XA	578	C
1	XA	588	G
1	XA	596	C
1	XA	605	U
1	XA	607	A
1	XA	618	C
1	XA	629	G

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Mol	Chain	Res	Type
1	XA	653	A
1	XA	660	G
1	XA	661	G
1	XA	665	A
1	XA	666	G
1	XA	671	G
1	XA	687	A
1	XA	695	A
1	XA	702	A
1	XA	720	C
1	XA	721	G
1	XA	722	A
1	XA	723	U
1	XA	724	G
1	XA	749	C
1	XA	753	A
1	XA	755	G
1	XA	760	G
1	XA	777	A
1	XA	781	A
1	XA	793	U
1	XA	794	A
1	XA	811	C
1	XA	816	A
1	XA	817	C
1	XA	818	G
1	XA	819	A
1	XA	820	U
1	XA	821	G
1	XA	828	A
1	XA	838(B)	U
1	XA	838(C)	C
1	XA	838(D)	U
1	XA	848	C
1	XA	853	G
1	XA	859	A
1	XA	867	G
1	XA	872	A
1	XA	873	A
1	XA	885	G
1	XA	889	A
1	XA	890	G

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Mol	Chain	Res	Type
1	XA	914	A
1	XA	923	A
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	966	G
1	XA	967	C
1	XA	968	A
1	XA	969	A
1	XA	974	A
1	XA	976	G
1	XA	977	A
1	XA	980	C
1	XA	981	U
1	XA	982	U
1	XA	991	U
1	XA	992	U
1	XA	993	G
1	XA	1004	A
1	XA	1006	C
1	XA	1011	G
1	XA	1024	G
1	XA	1025	U
1	XA	1026	G
1	XA	1027	C
1	XA	1028(A)	C
1	XA	1028(C)	C
1	XA	1028(G)	A
1	XA	1036	G
1	XA	1045	C
1	XA	1053	G
1	XA	1054	C
1	XA	1055	A
1	XA	1056	U
1	XA	1064	G
1	XA	1065	U
1	XA	1066	C
1	XA	1075	C
1	XA	1081	G

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Mol	Chain	Res	Type
1	XA	1094	G
1	XA	1095	U
1	XA	1101	A
1	XA	1117	G
1	XA	1118	C
1	XA	1125	U
1	XA	1126	U
1	XA	1129	C
1	XA	1130	A
1	XA	1131	G
1	XA	1136	U
1	XA	1137	C
1	XA	1138	G
1	XA	1139	G
1	XA	1140	C
1	XA	1146	A
1	XA	1157	A
1	XA	1159	U
1	XA	1160	G
1	XA	1171	G
1	XA	1178	G
1	XA	1181	G
1	XA	1183	A
1	XA	1191	A
1	XA	1196	U
1	XA	1197	G
1	XA	1200	C
1	XA	1201	A
1	XA	1211	U
1	XA	1212	U
1	XA	1213	A
1	XA	1214	C
1	XA	1224	G
1	XA	1225	A
1	XA	1226	C
1	XA	1227	A
1	XA	1228	C
1	XA	1238	A
1	XA	1240	U
1	XA	1241	G
1	XA	1256	A
1	XA	1257	U

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Mol	Chain	Res	Type
1	XA	1258	G
1	XA	1260	C
1	XA	1263	C
1	XA	1272	G
1	XA	1273	G
1	XA	1280	A
1	XA	1281	U
1	XA	1282	C
1	XA	1286	A
1	XA	1287	A
1	XA	1296	C
1	XA	1299	A
1	XA	1300	G
1	XA	1303	C
1	XA	1305	G
1	XA	1306	A
1	XA	1318	A
1	XA	1321	C
1	XA	1322	C
1	XA	1323	G
1	XA	1331	G
1	XA	1335	C
1	XA	1336	C
1	XA	1340	A
1	XA	1346	A
1	XA	1347	G
1	XA	1352	C
1	XA	1353	G
1	XA	1359	C
1	XA	1362(B)	C
1	XA	1363	A
1	XA	1364	U
1	XA	1370	G
1	XA	1374	A
1	XA	1378	C
1	XA	1379	G
1	XA	1381	U
1	XA	1394	A
1	XA	1397	C
1	XA	1413	A
1	XA	1419	G
1	XA	1440(C)	G

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Mol	Chain	Res	Type
1	XA	1440(E)	A
1	XA	1440(J)	A
1	XA	1440(K)	C
1	XA	1440(L)	G
1	XA	1469	G
1	XA	1487	G
1	XA	1492	A
1	XA	1493	A
1	XA	1494	G
1	XA	1497	G
1	XA	1503	A
1	XA	1504	G
1	XA	1505	G
1	XA	1506	U
1	XA	1517	G
1	XA	1519	A
1	XA	1520	G
1	XA	1528	U
1	XA	1529	G
1	XA	1530	G
1	XA	1533	C
1	XA	1534	A
1	XA	1538	C
1	XA	1539	C
1	XA	1541	U
1	XA	1542	U
22	XV	8	U
22	XV	11	C
22	XV	17	C
22	XV	18	U
22	XV	19	G
22	XV	21(A)	U
22	XV	21(B)	A
22	XV	34	C
22	XV	37	1MG
22	XV	38	A
22	XV	40	G
22	XV	42	A
22	XV	43	G
22	XV	46	G
22	XV	47	U
22	XV	48	C

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Mol	Chain	Res	Type
22	XV	58	A
22	XV	61	C
22	XV	69	A
22	XV	72	G
22	XV	73	A
23	XX	9	G
23	XX	10	G
23	XX	12	A
23	XX	13	A
23	XX	15	A
34	YA	9	U
34	YA	23	G
34	YA	27	G
34	YA	28	A
34	YA	34	C
34	YA	35	G
34	YA	46	C
34	YA	51	G
34	YA	55	G
34	YA	61	G
34	YA	64	A
34	YA	70	G
34	YA	72	U
34	YA	73	A
34	YA	74	A
34	YA	75	G
34	YA	78	A
34	YA	90	U
34	YA	101	G
34	YA	102	G
34	YA	103	A
34	YA	118	A
34	YA	119	A
34	YA	120	U
34	YA	125	G
34	YA	131	G
34	YA	138	G
34	YA	161	U
34	YA	162	U
34	YA	193	U
34	YA	196	A
34	YA	199	A

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Mol	Chain	Res	Type
34	YA	201	C
34	YA	204	A
34	YA	216	A
34	YA	221	A
34	YA	222	A
34	YA	223	A
34	YA	226	G
34	YA	228	A
34	YA	229	A
34	YA	230	U
34	YA	232	G
34	YA	233	A
34	YA	241	A
34	YA	242	G
34	YA	243	U
34	YA	248	G
34	YA	249	C
34	YA	252	G
34	YA	265	A
34	YA	266	G
34	YA	267	C
34	YA	269	U
34	YA	270(L)	C
34	YA	270(M)	U
34	YA	270(N)	U
34	YA	270(Q)	C
34	YA	271(D)	U
34	YA	271(E)	G
34	YA	274	G
34	YA	277	C
34	YA	278	A
34	YA	279	C
34	YA	299	A
34	YA	300	A
34	YA	309	G
34	YA	311	A
34	YA	317	G
34	YA	323	G
34	YA	324	A
34	YA	329	G
34	YA	330	A
34	YA	332	A

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Mol	Chain	Res	Type
34	YA	342	G
34	YA	352	G
34	YA	363(A)	G
34	YA	364	C
34	YA	370	G
34	YA	371	A
34	YA	372	G
34	YA	386	G
34	YA	387	U
34	YA	395	U
34	YA	405	U
34	YA	407	G
34	YA	411	G
34	YA	412	A
34	YA	421	U
34	YA	428	A
34	YA	442	G
34	YA	444	C
34	YA	448	U
34	YA	454	A
34	YA	457	A
34	YA	464	U
34	YA	467	G
34	YA	470	A
34	YA	473	G
34	YA	481	G
34	YA	503	A
34	YA	504	U
34	YA	505	A
34	YA	508	G
34	YA	509	C
34	YA	518	G
34	YA	527	C
34	YA	528	A
34	YA	529	A
34	YA	531	C
34	YA	532	A
34	YA	533	G
34	YA	537	C
34	YA	539	G
34	YA	540	G
34	YA	546	C

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Mol	Chain	Res	Type
34	YA	547	A
34	YA	549	G
34	YA	554	U
34	YA	563	G
34	YA	568	U
34	YA	570	G
34	YA	573	G
34	YA	575	A
34	YA	603	A
34	YA	607	U
34	YA	614	U
34	YA	615	G
34	YA	617	G
34	YA	618(A)	G
34	YA	622	G
34	YA	627	A
34	YA	629	G
34	YA	634	C
34	YA	637	A
34	YA	638	G
34	YA	645	C
34	YA	646	A
34	YA	654(A)	A
34	YA	654(B)	G
34	YA	670	A
34	YA	686	G
34	YA	701	G
34	YA	704	G
34	YA	717	G
34	YA	722	A
34	YA	726	G
34	YA	730	C
34	YA	748	G
34	YA	752	A
34	YA	753	C
34	YA	762	U
34	YA	782	A
34	YA	783	A
34	YA	784	A
34	YA	785	G
34	YA	790	C
34	YA	800	A

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Mol	Chain	Res	Type
34	YA	805	G
34	YA	812	C
34	YA	819	A
34	YA	827	U
34	YA	828	U
34	YA	830	G
34	YA	847	U
34	YA	854	G
34	YA	856	C
34	YA	857	C
34	YA	860	U
34	YA	866	A
34	YA	870	A
34	YA	878	A
34	YA	889	C
34	YA	890	A
34	YA	896	A
34	YA	897	C
34	YA	899	A
34	YA	901	A
34	YA	907	U
34	YA	910	A
34	YA	914	C
34	YA	915	C
34	YA	917	A
34	YA	918	A
34	YA	932	G
34	YA	941	A
34	YA	945	A
34	YA	946	G
34	YA	953	A
34	YA	957	A
34	YA	959	A
34	YA	961	C
34	YA	972	G
34	YA	973	A
34	YA	974(A)	G
34	YA	974(B)	C
34	YA	975	G
34	YA	983	A
34	YA	989	G
34	YA	990	A

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Mol	Chain	Res	Type
34	YA	996	A
34	YA	997	G
34	YA	1003	G
34	YA	1005	C
34	YA	1011	G
34	YA	1012	U
34	YA	1013	C
34	YA	1015	G
34	YA	1022	G
34	YA	1023	U
34	YA	1024	G
34	YA	1025	G
34	YA	1026	U
34	YA	1027	A
34	YA	1030	G
34	YA	1033	U
34	YA	1037	G
34	YA	1045	A
34	YA	1046	A
34	YA	1050	A
34	YA	1057	A
34	YA	1059	G
34	YA	1060	U
34	YA	1061	U
34	YA	1062	G
34	YA	1065	U
34	YA	1067	A
34	YA	1068	G
34	YA	1071	G
34	YA	1073	A
34	YA	1074	G
34	YA	1076	C
34	YA	1077	A
34	YA	1078	U
34	YA	1082	U
34	YA	1083	U
34	YA	1084	A
34	YA	1085	A
34	YA	1086	A
34	YA	1088	A
34	YA	1089	G
34	YA	1093	G

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Mol	Chain	Res	Type
34	YA	1095	A
34	YA	1096	A
34	YA	1097	U
34	YA	1099	G
34	YA	1103	A
34	YA	1104	C
34	YA	1110	G
34	YA	1111	A
34	YA	1112	G
34	YA	1122	G
34	YA	1126	A
34	YA	1131	G
34	YA	1135	C
34	YA	1136	G
34	YA	1139	G
34	YA	1142(A)	U
34	YA	1142(B)	A
34	YA	1173	G
34	YA	1174	A
34	YA	1175	U
34	YA	1176	G
34	YA	1177	A
34	YA	1179	C
34	YA	1180	C
34	YA	1195	G
34	YA	1204	A
34	YA	1205	U
34	YA	1206	G
34	YA	1210	A
34	YA	1218	C
34	YA	1220	A
34	YA	1225	C
34	YA	1236	G
34	YA	1238	G
34	YA	1244	G
34	YA	1250	G
34	YA	1252	G
34	YA	1253	A
34	YA	1256	G
34	YA	1265	A
34	YA	1271	G
34	YA	1272	A

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Mol	Chain	Res	Type
34	YA	1273	U
34	YA	1275	A
34	YA	1289	C
34	YA	1300	U
34	YA	1301	A
34	YA	1313	U
34	YA	1325	G
34	YA	1326	U
34	YA	1329	U
34	YA	1330	C
34	YA	1341	U
34	YA	1349	A
34	YA	1352	U
34	YA	1365	A
34	YA	1368	G
34	YA	1370	C
34	YA	1378	A
34	YA	1379	A
34	YA	1384	A
34	YA	1385	G
34	YA	1395	A
34	YA	1403	C
34	YA	1404	C
34	YA	1407	C
34	YA	1410	G
34	YA	1416	G
34	YA	1417	C
34	YA	1419	A
34	YA	1420	U
34	YA	1421	G
34	YA	1427	A
34	YA	1428	C
34	YA	1433	U
34	YA	1444(B)	A
34	YA	1449(A)	A
34	YA	1449(B)	G
34	YA	1455	G
34	YA	1461	G
34	YA	1467	C
34	YA	1471	A
34	YA	1482	U
34	YA	1483	G

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Mol	Chain	Res	Type
34	YA	1485	G
34	YA	1490	A
34	YA	1493	C
34	YA	1497	U
34	YA	1506	C
34	YA	1507	A
34	YA	1508	A
34	YA	1509	C
34	YA	1510	A
34	YA	1511	A
34	YA	1512	G
34	YA	1533	C
34	YA	1534	G
34	YA	1535	U
34	YA	1536	A
34	YA	1537	C
34	YA	1538	G
34	YA	1543	A
34	YA	1544	C
34	YA	1545(A)	A
34	YA	1554	A
34	YA	1558	A
34	YA	1559	G
34	YA	1566	A
34	YA	1567	A
34	YA	1569	A
34	YA	1578	U
34	YA	1585	C
34	YA	1586	A
34	YA	1598	C
34	YA	1608	A
34	YA	1610	A
34	YA	1616	A
34	YA	1617	C
34	YA	1618	A
34	YA	1640	C
34	YA	1646	C
34	YA	1647	G
34	YA	1648	C
34	YA	1651	G
34	YA	1653	G
34	YA	1654	A

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Mol	Chain	Res	Type
34	YA	1665	A
34	YA	1671	U
34	YA	1672	C
34	YA	1674	G
34	YA	1695	G
34	YA	1700	A
34	YA	1725	G
34	YA	1729	A
34	YA	1730	U
34	YA	1731	G
34	YA	1742	C
34	YA	1743	G
34	YA	1750	G
34	YA	1753	G
34	YA	1754	C
34	YA	1756	G
34	YA	1763	G
34	YA	1764	G
34	YA	1769	G
34	YA	1773	A
34	YA	1774	C
34	YA	1776	G
34	YA	1780	A
34	YA	1781	C
34	YA	1783	A
34	YA	1784	A
34	YA	1787	A
34	YA	1791	A
34	YA	1799	G
34	YA	1800	C
34	YA	1801	G
34	YA	1802	A
34	YA	1815	A
34	YA	1816	G
34	YA	1820	U
34	YA	1828	G
34	YA	1829	A
34	YA	1847	A
34	YA	1858	G
34	YA	1864	U
34	YA	1869	G
34	YA	1870	C

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Mol	Chain	Res	Type
34	YA	1872	A
34	YA	1878	G
34	YA	1882	C
34	YA	1888	G
34	YA	1889	A
34	YA	1905	C
34	YA	1906	G
34	YA	1913	A
34	YA	1929	G
34	YA	1930	G
34	YA	1931	U
34	YA	1936	A
34	YA	1938	A
34	YA	1939	U
34	YA	1955	U
34	YA	1963	U
34	YA	1965	C
34	YA	1966	A
34	YA	1967	C
34	YA	1969	A
34	YA	1970	A
34	YA	1971	A
34	YA	1972	A
34	YA	1982	C
34	YA	1992	G
34	YA	1993	U
34	YA	2023	G
34	YA	2030	A
34	YA	2031	A
34	YA	2033	A
34	YA	2039	C
34	YA	2043	C
34	YA	2049	G
34	YA	2052	G
34	YA	2055	C
34	YA	2056	G
34	YA	2059	A
34	YA	2060	A
34	YA	2061	G
34	YA	2062	A
34	YA	2069	G
34	YA	2093	G

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Mol	Chain	Res	Type
34	YA	2094	G
34	YA	2099	U
34	YA	2111	C
34	YA	2112	G
34	YA	2113	U
34	YA	2114	A
34	YA	2115	G
34	YA	2116	G
34	YA	2117	A
34	YA	2118	U
34	YA	2119	A
34	YA	2120	G
34	YA	2126	A
34	YA	2127	G
34	YA	2128	C
34	YA	2131	G
34	YA	2132	U
34	YA	2133	G
34	YA	2134	A
34	YA	2135	A
34	YA	2136	C
34	YA	2145	C
34	YA	2148	G
34	YA	2158	A
34	YA	2159	G
34	YA	2161	C
34	YA	2164	C
34	YA	2165	G
34	YA	2166	G
34	YA	2168	G
34	YA	2169	A
34	YA	2172	U
34	YA	2173	A
34	YA	2176	A
34	YA	2190	G
34	YA	2191	G
34	YA	2198	A
34	YA	2199	A
34	YA	2210	G
34	YA	2211	G
34	YA	2212	A
34	YA	2213	U

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Mol	Chain	Res	Type
34	YA	2215	G
34	YA	2225	A
34	YA	2234	G
34	YA	2238	G
34	YA	2239	G
34	YA	2243	U
34	YA	2246	G
34	YA	2249	U
34	YA	2266	A
34	YA	2267	A
34	YA	2275	C
34	YA	2278	A
34	YA	2280	G
34	YA	2283	C
34	YA	2287	A
34	YA	2288	A
34	YA	2307	G
34	YA	2308	G
34	YA	2311	A
34	YA	2318	G
34	YA	2319	G
34	YA	2320	A
34	YA	2325	G
34	YA	2327	A
34	YA	2328	A
34	YA	2329	G
34	YA	2334	G
34	YA	2335	A
34	YA	2340	G
34	YA	2343	C
34	YA	2345	G
34	YA	2346	A
34	YA	2347	C
34	YA	2350	C
34	YA	2354	G
34	YA	2358	G
34	YA	2383	G
34	YA	2384	G
34	YA	2385	C
34	YA	2392	A
34	YA	2394	C
34	YA	2402	C

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Mol	Chain	Res	Type
34	YA	2403	C
34	YA	2405	G
34	YA	2406	U
34	YA	2410	G
34	YA	2423	U
34	YA	2425	A
34	YA	2426	A
34	YA	2427	C
34	YA	2428	G
34	YA	2429	G
34	YA	2430	A
34	YA	2435	A
34	YA	2439	A
34	YA	2440	C
34	YA	2441	C
34	YA	2448	A
34	YA	2469	A
34	YA	2475	C
34	YA	2476	A
34	YA	2480	C
34	YA	2494	G
34	YA	2502	G
34	YA	2505	G
34	YA	2513	G
34	YA	2518	A
34	YA	2520	C
34	YA	2524	G
34	YA	2529	G
34	YA	2542	A
34	YA	2543	G
34	YA	2554	U
34	YA	2556	C
34	YA	2562	U
34	YA	2567	G
34	YA	2569	G
34	YA	2572	A
34	YA	2573	C
34	YA	2577	A
34	YA	2578	G
34	YA	2586	C
34	YA	2602	A
34	YA	2609	U

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Mol	Chain	Res	Type
34	YA	2611	U
34	YA	2612	C
34	YA	2615	U
34	YA	2629	A
34	YA	2646	C
34	YA	2655	G
34	YA	2660	A
34	YA	2665	A
34	YA	2673	G
34	YA	2681	C
34	YA	2682	U
34	YA	2689	U
34	YA	2690	C
34	YA	2691	C
34	YA	2702	U
34	YA	2703	C
34	YA	2707	G
34	YA	2712(A)	U
34	YA	2712(B)	A
34	YA	2713	A
34	YA	2714	G
34	YA	2718	G
34	YA	2726	U
34	YA	2733	A
34	YA	2734	A
34	YA	2739	U
34	YA	2744	G
34	YA	2750	A
34	YA	2751	G
34	YA	2761	G
34	YA	2764	A
34	YA	2765	A
34	YA	2766	G
34	YA	2777	G
34	YA	2778	A
34	YA	2779	U
34	YA	2780	G
34	YA	2790	A
34	YA	2791	C
34	YA	2792	G
34	YA	2795	G
34	YA	2797	U

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Mol	Chain	Res	Type
34	YA	2798	C
34	YA	2807	G
34	YA	2818	G
34	YA	2820	A
34	YA	2821	A
34	YA	2833	G
34	YA	2834	G
34	YA	2835	A
34	YA	2846	G
34	YA	2867	G
34	YA	2872	G
34	YA	2879	C
34	YA	2880	C
34	YA	2891	G
34	YA	2892	A
34	YA	2893	G
34	YA	2894	G
34	YA	2895	U
35	YB	7	G
35	YB	8	U
35	YB	9	G
35	YB	13	A
35	YB	15	A
35	YB	16	G
35	YB	19	G
35	YB	21	G
35	YB	22	U
35	YB	25	A
35	YB	35	U
35	YB	40	U
35	YB	41	U
35	YB	42	C
35	YB	44	G
35	YB	45	A
35	YB	47	C
35	YB	52	A
35	YB	53	A
35	YB	56	G
35	YB	67	G
35	YB	73	A
35	YB	81	G
35	YB	82	G

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Mol	Chain	Res	Type
35	YB	109	G

All (109) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	QA	64	G
1	QA	266	G
1	QA	328	C
1	QA	687	A
1	QA	748	C
1	QA	819	A
1	QA	992	U
1	QA	1285	A
1	QA	1538	C
22	QV	10	G
22	QV	36	G
23	QX	17	C
34	RA	99	U
34	RA	102	G
34	RA	221	A
34	RA	222	A
34	RA	229	A
34	RA	242	G
34	RA	271(C)	G
34	RA	404	C
34	RA	503	A
34	RA	512	G
34	RA	637	A
34	RA	752	A
34	RA	790	C
34	RA	846	C
34	RA	856	C
34	RA	974(B)	C
34	RA	1022	G
34	RA	1026	U
34	RA	1045	A
34	RA	1130	U
34	RA	1178	C
34	RA	1312	U
34	RA	1427	A
34	RA	1558	A
34	RA	1653	G

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Mol	Chain	Res	Type
34	RA	1694	C
34	RA	1799	G
34	RA	1819	A
34	RA	1930	G
34	RA	1992	G
34	RA	2022	U
34	RA	2060	A
34	RA	2126	A
34	RA	2439	A
34	RA	2566	A
34	RA	2610	C
34	RA	2689	U
34	RA	2712(A)	U
34	RA	2776	A
34	RA	2832	U
35	RB	66	A
1	XA	115	G
1	XA	266	G
1	XA	328	C
1	XA	367	U
1	XA	748	C
1	XA	992	U
1	XA	1064	G
1	XA	1285	A
1	XA	1504	G
1	XA	1537	U
22	XV	10	G
34	YA	99	U
34	YA	102	G
34	YA	195	A
34	YA	221	A
34	YA	229	A
34	YA	242	G
34	YA	271(C)	G
34	YA	278	A
34	YA	404	C
34	YA	503	A
34	YA	637	A
34	YA	653	A
34	YA	752	A
34	YA	846	C
34	YA	856	C

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Mol	Chain	Res	Type
34	YA	859	G
34	YA	974(A)	G
34	YA	974(B)	C
34	YA	1012	U
34	YA	1022	G
34	YA	1026	U
34	YA	1045	A
34	YA	1085	A
34	YA	1178	C
34	YA	1427	A
34	YA	1508	A
34	YA	1558	A
34	YA	1653	G
34	YA	1694	C
34	YA	1799	G
34	YA	1819	A
34	YA	1930	G
34	YA	1992	G
34	YA	2126	A
34	YA	2319	G
34	YA	2402	C
34	YA	2439	A
34	YA	2566	A
34	YA	2610	C
34	YA	2611	U
34	YA	2681	C
34	YA	2689	U
34	YA	2712(A)	U
34	YA	2776	A
35	YB	66	A

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

2 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	$\#\|Z\|>2$
22	1MG	XV	37	22	23,26,27	1.18	3 (13%)	33,39,42	1.95	8 (24%)
22	1MG	QV	37	22	23,26,27	1.83	5 (21%)	33,39,42	2.38	8 (24%)

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
22	1MG	XV	37	22	-	2/7/25/26	0/3/3/3
22	1MG	QV	37	22	-	2/7/25/26	0/3/3/3

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	QV	37	1MG	C5-C4	4.60	1.51	1.38
22	QV	37	1MG	C2-N1	3.89	1.44	1.37
22	QV	37	1MG	C2-N3	3.16	1.38	1.33
22	XV	37	1MG	C5-C4	3.10	1.47	1.38
22	QV	37	1MG	C5-C6	2.65	1.52	1.45
22	XV	37	1MG	C2-N1	2.40	1.41	1.37
22	XV	37	1MG	C5-N7	-2.21	1.34	1.39
22	QV	37	1MG	O6-C6	2.00	1.27	1.23

All (16) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	QV	37	1MG	C5-C4-N3	-8.11	115.49	128.39
22	QV	37	1MG	C2-N3-C4	5.68	124.75	111.98
22	XV	37	1MG	C5-C4-N3	-5.44	119.73	128.39
22	QV	37	1MG	N9-C4-N3	5.43	136.81	125.95
22	XV	37	1MG	C2-N3-C4	4.78	122.73	111.98
22	XV	37	1MG	N9-C4-N3	3.71	133.38	125.95
22	QV	37	1MG	C1'-N9-C4	3.07	135.56	126.49
22	XV	37	1MG	C6-C5-N7	2.98	135.98	129.36
22	QV	37	1MG	C4-C5-N7	-2.88	106.10	110.67
22	XV	37	1MG	C4-C5-N7	-2.80	106.23	110.67
22	XV	37	1MG	CM1-N1-C6	2.73	121.87	117.64
22	XV	37	1MG	N2-C2-N1	2.59	120.87	118.79
22	QV	37	1MG	CM1-N1-C2	2.46	123.25	120.70
22	QV	37	1MG	C2-N1-C6	-2.40	118.99	120.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	QV	37	1MG	C1'-N9-C8	-2.26	120.30	126.73
22	XV	37	1MG	CM1-N1-C2	-2.20	118.43	120.70

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
22	XV	37	1MG	O4'-C4'-C5'-O5'
22	XV	37	1MG	C3'-C4'-C5'-O5'
22	QV	37	1MG	C3'-C4'-C5'-O5'
22	QV	37	1MG	O4'-C4'-C5'-O5'

There are no ring outliers.

2 monomers are involved in 6 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
22	XV	37	1MG	2	0
22	QV	37	1MG	4	0

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 1110 ligands modelled in this entry, 1108 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	$\#\|Z\| > 2$
56	SF4	XD	301	4	0,12,12	-	-	-		
56	SF4	QD	301	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
56	SF4	XD	301	4	-	-	0/6/5/5
56	SF4	QD	301	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.

1 monomer is involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
56	QD	301	SF4	2	0

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
41	RI	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	RI	82:ARG	C	83:ALA	N	1.18

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	1511/1521 (99%)	0.65	101 (6%) 24 15	96, 139, 274, 366	0
1	XA	1515/1521 (99%)	0.46	45 (2%) 52 30	72, 129, 225, 307	0
2	QB	235/256 (91%)	0.46	7 (2%) 52 30	128, 165, 188, 207	0
2	XB	236/256 (92%)	0.20	2 (0%) 82 60	106, 138, 172, 188	0
3	QC	205/239 (85%)	0.43	5 (2%) 59 35	140, 169, 191, 211	0
3	XC	205/239 (85%)	0.42	8 (3%) 43 23	127, 152, 176, 192	0
4	QD	208/209 (99%)	0.72	13 (6%) 26 15	95, 130, 151, 168	0
4	XD	208/209 (99%)	0.61	15 (7%) 21 14	91, 134, 156, 172	0
5	QE	151/162 (93%)	0.38	3 (1%) 65 39	111, 132, 161, 167	0
5	XE	151/162 (93%)	0.11	1 (0%) 84 63	89, 109, 139, 182	0
6	QF	101/101 (100%)	0.10	2 (1%) 65 39	80, 124, 146, 170	0
6	XF	101/101 (100%)	0.16	0 100 100	87, 117, 142, 159	0
7	QG	155/156 (99%)	0.34	12 (7%) 19 13	158, 186, 212, 249	0
7	XG	155/156 (99%)	0.22	6 (3%) 43 23	141, 168, 194, 274	0
8	QH	137/138 (99%)	0.72	9 (6%) 24 15	100, 125, 147, 182	0
8	XH	137/138 (99%)	0.57	8 (5%) 29 17	89, 119, 146, 157	0
9	QI	127/128 (99%)	1.17	29 (22%) 2 2	148, 190, 219, 230	0
9	XI	126/128 (98%)	0.90	18 (14%) 6 5	126, 173, 193, 218	0
10	QJ	99/105 (94%)	1.46	22 (22%) 2 2	152, 196, 212, 227	0
10	XJ	96/105 (91%)	0.95	11 (11%) 9 6	134, 169, 192, 207	0
11	QK	119/129 (92%)	0.59	7 (5%) 28 16	100, 125, 158, 177	0
11	XK	116/129 (89%)	0.32	3 (2%) 57 33	72, 115, 142, 153	0
12	QL	125/132 (94%)	0.90	13 (10%) 11 8	99, 118, 143, 181	0
12	XL	122/132 (92%)	0.76	10 (8%) 17 11	84, 102, 125, 137	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	QM	120/126 (95%)	0.65	7 (5%) 29 17	150, 184, 210, 224	0
13	XM	114/126 (90%)	0.68	7 (6%) 27 16	121, 175, 195, 213	0
14	QN	60/61 (98%)	1.34	11 (18%) 3 4	124, 163, 182, 191	0
14	XN	60/61 (98%)	1.13	7 (11%) 9 6	123, 150, 185, 200	0
15	QO	88/89 (98%)	0.39	1 (1%) 78 54	92, 112, 135, 150	0
15	XO	87/89 (97%)	0.30	0 100 100	83, 101, 132, 146	0
16	QP	84/88 (95%)	0.91	8 (9%) 14 9	89, 124, 149, 169	0
16	XP	84/88 (95%)	0.55	4 (4%) 35 19	102, 132, 153, 197	0
17	QQ	100/105 (95%)	0.77	7 (7%) 22 14	103, 119, 132, 135	0
17	XQ	100/105 (95%)	0.61	5 (5%) 34 19	84, 104, 127, 141	0
18	QR	70/88 (79%)	0.12	0 100 100	83, 121, 148, 165	0
18	XR	70/88 (79%)	0.16	0 100 100	96, 116, 144, 160	0
19	QS	83/93 (89%)	1.44	24 (28%) 1 1	171, 204, 229, 245	0
19	XS	84/93 (90%)	0.93	8 (9%) 14 9	126, 167, 200, 228	0
20	QT	99/106 (93%)	1.03	16 (16%) 4 4	86, 118, 165, 176	0
20	XT	99/106 (93%)	1.07	18 (18%) 3 4	88, 116, 160, 173	0
21	QU	25/27 (92%)	2.50	14 (56%) 0 0	153, 183, 204, 213	0
21	XU	25/27 (92%)	2.28	10 (40%) 1 1	145, 158, 182, 187	0
22	QV	76/77 (98%)	0.55	3 (3%) 43 23	119, 205, 269, 284	0
22	XV	76/77 (98%)	0.44	3 (3%) 43 23	74, 177, 222, 267	0
23	QX	19/19 (100%)	2.07	9 (47%) 0 1	143, 241, 287, 290	0
23	XX	19/19 (100%)	2.08	8 (42%) 0 1	126, 234, 286, 304	0
24	R0	81/85 (95%)	0.91	10 (12%) 8 6	84, 104, 169, 198	0
24	Y0	82/85 (96%)	0.56	5 (6%) 27 16	44, 65, 146, 190	0
25	R1	95/98 (96%)	0.79	7 (7%) 20 13	70, 91, 121, 136	0
25	Y1	93/98 (94%)	0.71	6 (6%) 25 15	46, 70, 96, 115	0
26	R2	69/72 (95%)	0.51	2 (2%) 53 31	81, 98, 134, 156	0
26	Y2	68/72 (94%)	0.59	2 (2%) 53 31	44, 73, 104, 125	0
27	R3	59/60 (98%)	0.62	5 (8%) 16 11	80, 106, 135, 187	0
27	Y3	59/60 (98%)	0.12	0 100 100	27, 53, 96, 147	0
28	R4	45/71 (63%)	0.18	0 100 100	121, 174, 203, 225	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	Y4	46/71 (64%)	0.25	1 (2%) 62 37	105, 153, 169, 188	0
29	R5	59/60 (98%)	0.42	4 (6%) 23 14	66, 91, 113, 148	0
29	Y5	59/60 (98%)	0.10	0 100 100	29, 47, 77, 134	0
30	R6	53/54 (98%)	0.23	0 100 100	90, 101, 119, 126	0
30	Y6	53/54 (98%)	0.17	1 (1%) 66 41	49, 69, 97, 104	0
31	R7	47/49 (95%)	0.70	3 (6%) 25 15	58, 72, 93, 96	0
31	Y7	48/49 (97%)	0.55	3 (6%) 26 15	32, 45, 85, 106	0
32	R8	64/65 (98%)	1.47	15 (23%) 2 2	80, 98, 125, 183	0
32	Y8	64/65 (98%)	1.04	12 (18%) 3 3	48, 58, 82, 143	0
33	R9	37/37 (100%)	1.00	4 (10%) 11 8	86, 110, 136, 145	0
33	Y9	37/37 (100%)	0.84	3 (8%) 18 12	53, 66, 84, 98	0
34	RA	2882/2915 (98%)	0.41	80 (2%) 55 32	55, 100, 221, 404	0
34	YA	2883/2915 (98%)	0.18	45 (1%) 70 45	28, 58, 166, 367	0
35	RB	120/122 (98%)	0.33	2 (1%) 69 43	111, 144, 166, 214	0
35	YB	120/122 (98%)	-0.01	1 (0%) 82 60	55, 83, 103, 128	0
36	RD	272/276 (98%)	0.65	15 (5%) 30 18	62, 86, 105, 141	0
36	YD	272/276 (98%)	0.39	11 (4%) 42 23	41, 60, 83, 116	0
37	RE	205/206 (99%)	0.62	16 (7%) 19 12	72, 101, 130, 153	0
37	YE	205/206 (99%)	0.39	7 (3%) 48 27	37, 59, 101, 127	0
38	RF	202/210 (96%)	0.49	8 (3%) 42 23	69, 101, 135, 161	0
38	YF	202/210 (96%)	0.17	2 (0%) 79 56	28, 64, 102, 125	0
39	RG	181/182 (99%)	0.66	7 (3%) 43 23	121, 153, 191, 218	0
39	YG	181/182 (99%)	0.27	1 (0%) 85 65	71, 117, 157, 187	0
40	RH	174/180 (96%)	0.64	6 (3%) 48 27	112, 154, 176, 195	0
40	YH	174/180 (96%)	0.38	5 (2%) 53 31	42, 77, 103, 147	0
41	RI	146/148 (98%)	0.30	1 (0%) 84 63	94, 126, 156, 193	0
41	YI	146/148 (98%)	0.27	3 (2%) 63 38	69, 117, 137, 144	0
42	RN	138/140 (98%)	0.54	7 (5%) 33 19	62, 103, 138, 161	0
42	YN	138/140 (98%)	0.35	2 (1%) 73 48	32, 54, 96, 115	0
43	RO	122/122 (100%)	0.42	1 (0%) 82 60	65, 100, 123, 133	0
43	YO	122/122 (100%)	0.09	1 (0%) 82 60	36, 63, 90, 101	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	RP	150/150 (100%)	1.01	26 (17%) 4 4	74, 114, 142, 182	0
44	YP	147/150 (98%)	0.79	13 (8%) 15 10	41, 76, 105, 120	0
45	RQ	141/141 (100%)	0.93	20 (14%) 6 5	87, 116, 143, 165	0
45	YQ	141/141 (100%)	0.61	9 (6%) 25 15	34, 68, 104, 144	0
46	RR	117/118 (99%)	0.67	8 (6%) 23 14	64, 87, 111, 134	0
46	YR	117/118 (99%)	0.50	3 (2%) 57 33	41, 57, 83, 141	0
47	RS	111/112 (99%)	0.80	11 (9%) 13 8	83, 132, 187, 218	0
47	YS	111/112 (99%)	0.45	7 (6%) 26 15	58, 83, 123, 190	0
48	RT	137/146 (93%)	0.57	10 (7%) 21 13	76, 114, 153, 183	0
48	YT	137/146 (93%)	0.44	6 (4%) 39 21	53, 76, 141, 171	0
49	RU	117/118 (99%)	0.75	8 (6%) 23 14	75, 109, 146, 173	0
49	YU	117/118 (99%)	0.45	5 (4%) 40 21	33, 44, 88, 121	0
50	RV	101/101 (100%)	0.32	2 (1%) 65 39	71, 114, 151, 194	0
50	YV	101/101 (100%)	0.24	5 (4%) 34 19	30, 60, 111, 172	0
51	RW	113/113 (100%)	0.51	4 (3%) 47 26	59, 74, 106, 167	0
51	YW	113/113 (100%)	0.11	1 (0%) 81 58	31, 43, 80, 148	0
52	RX	92/96 (95%)	0.53	6 (6%) 25 15	59, 80, 109, 136	0
52	YX	92/96 (95%)	0.28	0 100 100	38, 55, 81, 100	0
53	RY	107/110 (97%)	0.57	6 (5%) 30 17	68, 104, 134, 175	0
53	YY	107/110 (97%)	0.24	2 (1%) 66 41	39, 66, 91, 130	0
54	RZ	183/206 (88%)	0.45	9 (4%) 35 19	108, 142, 172, 208	0
54	YZ	193/206 (93%)	0.39	6 (3%) 51 29	57, 93, 129, 169	0
All	All	20831/21436 (97%)	0.48	991 (4%) 35 19	27, 108, 200, 404	0

All (991) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
11	QK	129	SER	11.8
21	QU	16	GLY	10.4
9	QI	123	PRO	7.6
1	XA	966	G	7.2
34	YA	2602	A	7.1
21	XU	16	GLY	7.0
24	Y0	2	ALA	6.8

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Mol	Chain	Res	Type	RSRZ
25	Y1	92	LYS	6.7
36	RD	36	PRO	6.5
21	QU	14	TRP	6.5
4	QD	77	ASN	6.3
10	QJ	62	HIS	5.9
1	QA	966	G	5.6
53	RY	1	MET	5.6
34	RA	2319	G	5.5
21	XU	2	GLY	5.5
45	YQ	91	GLU	5.2
34	YA	1536	A	5.2
12	QL	6	THR	5.2
34	RA	614	U	5.1
32	R8	31	HIS	5.0
1	QA	135	C	5.0
48	RT	1	MET	5.0
36	YD	36	PRO	5.0
11	QK	49	GLY	5.0
34	YA	2803	C	4.9
34	RA	2602	A	4.9
34	RA	2799	A	4.9
24	Y0	3	HIS	4.9
32	R8	30	ARG	4.8
34	RA	1536	A	4.8
34	YA	2319	G	4.8
37	RE	79	ARG	4.8
20	XT	73	HIS	4.8
10	QJ	58	ASP	4.8
34	RA	2797	U	4.8
48	RT	106	SER	4.7
12	XL	28	LYS	4.7
8	XH	23	SER	4.7
32	R8	54	GLU	4.7
24	R0	76	GLY	4.6
10	QJ	65	LEU	4.6
47	RS	2	ALA	4.5
32	R8	50	LEU	4.5
10	QJ	57	LYS	4.4
40	RH	150	ALA	4.4
34	RA	1087	G	4.4
24	R0	3	HIS	4.4
1	XA	967	C	4.3

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Mol	Chain	Res	Type	RSRZ
36	YD	38	LYS	4.3
7	XG	2	ALA	4.3
10	QJ	18	ALA	4.3
19	QS	11	VAL	4.3
21	QU	3	LYS	4.3
34	YA	2794	C	4.3
1	XA	1542	U	4.3
47	YS	3	ARG	4.2
10	QJ	46	ARG	4.2
36	YD	35	LYS	4.2
10	QJ	63	PHE	4.2
32	Y8	54	GLU	4.2
3	XC	201	TYR	4.2
34	RA	2801	A	4.2
8	QH	112	LEU	4.2
34	YA	2795	G	4.2
47	YS	20	ARG	4.2
24	Y0	4	LYS	4.1
14	QN	57	ARG	4.1
44	RP	65	ARG	4.1
9	QI	112	LYS	4.1
20	QT	73	HIS	4.1
37	YE	79	ARG	4.1
16	QP	1	MET	4.1
40	YH	3	ARG	4.1
4	XD	73	ARG	4.0
34	RA	2798	C	4.0
23	XX	5	A	4.0
1	QA	1286	A	4.0
36	YD	240	ALA	4.0
48	RT	69	GLY	4.0
1	QA	1362(B)	C	4.0
9	QI	74	ILE	4.0
34	RA	615	G	4.0
19	QS	35	SER	4.0
24	Y0	5	LYS	4.0
1	QA	134	A	3.9
34	RA	2320	A	3.9
53	YY	1	MET	3.9
21	XU	11	GLY	3.9
44	RP	61	ARG	3.9
23	XX	6	G	3.9

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Mol	Chain	Res	Type	RSRZ
10	QJ	101	VAL	3.9
19	QS	51	VAL	3.9
14	XN	59	ALA	3.9
21	XU	14	TRP	3.9
34	RA	2804	C	3.9
23	QX	7	G	3.9
23	XX	7	G	3.9
1	QA	136	C	3.9
36	RD	240	ALA	3.9
34	YA	2804	C	3.9
44	YP	13	ASN	3.8
10	QJ	64	GLU	3.8
3	XC	130	VAL	3.8
1	QA	967	C	3.8
1	XA	1538	C	3.8
23	QX	6	G	3.8
21	XU	15	ARG	3.8
49	RU	91	ASP	3.8
52	RX	68	ARG	3.8
33	Y9	37	GLY	3.8
1	QA	950	U	3.8
11	QK	128	ALA	3.8
47	YS	109	GLY	3.7
10	XJ	62	HIS	3.7
46	YR	2	ARG	3.7
12	XL	23	LYS	3.7
50	YV	45	THR	3.7
46	YR	11	ASN	3.7
34	YA	1177	A	3.7
10	QJ	59	SER	3.7
34	RA	2795	G	3.7
1	QA	82	U	3.6
17	QQ	35	VAL	3.6
1	QA	970	C	3.6
34	YA	2798	C	3.6
22	XV	21(A)	U	3.6
12	QL	129	ALA	3.6
19	QS	33	THR	3.6
8	QH	72	PRO	3.6
19	QS	76	PRO	3.6
10	XJ	64	GLU	3.6
8	QH	4	ASP	3.6

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Mol	Chain	Res	Type	RSRZ
49	YU	91	ASP	3.6
45	YQ	90	VAL	3.6
25	R1	95	LEU	3.6
44	RP	64	LYS	3.6
44	RP	13	ASN	3.5
32	R8	65	GLU	3.5
1	QA	1368	G	3.5
34	RA	2802	G	3.5
34	YA	615	G	3.5
1	QA	60	A	3.5
34	RA	2611	U	3.5
42	RN	41	ASP	3.5
8	QH	133	LEU	3.5
9	QI	122	ALA	3.5
44	RP	31	ALA	3.5
14	XN	56	VAL	3.5
4	XD	5	ILE	3.5
9	QI	118	LYS	3.5
34	RA	2807	G	3.5
21	QU	25	LYS	3.5
16	QP	25	ARG	3.5
20	XT	80	ARG	3.5
31	Y7	45	ALA	3.5
1	QA	972	C	3.5
22	QV	16	C	3.5
1	QA	1364	U	3.5
23	QX	5	A	3.5
34	YA	1535	U	3.5
29	R5	10	LYS	3.5
40	YH	125	VAL	3.5
10	QJ	50	ILE	3.4
4	XD	24	GLU	3.4
1	XA	723	U	3.4
1	QA	968	A	3.4
1	QA	1440(J)	A	3.4
9	QI	115	GLY	3.4
21	QU	10	ARG	3.4
36	YD	30	GLU	3.4
34	YA	34	C	3.4
51	YW	92	ARG	3.4
19	XS	76	PRO	3.4
34	YA	2799	A	3.4

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Mol	Chain	Res	Type	RSRZ
20	XT	49	ALA	3.4
7	QG	9	VAL	3.4
17	QQ	24	GLU	3.4
3	QC	130	VAL	3.4
44	RP	74	GLU	3.4
1	QA	723	U	3.4
20	XT	14	LYS	3.4
34	RA	2585	U	3.4
6	QF	90	VAL	3.4
34	RA	2333	A	3.4
20	QT	27	LYS	3.4
44	RP	50	ARG	3.4
9	XI	64	THR	3.3
49	YU	90	VAL	3.3
7	QG	8	GLU	3.3
40	RH	105	LEU	3.3
46	RR	71	GLN	3.3
1	XA	1353	G	3.3
34	YA	2112	G	3.3
21	XU	6	ARG	3.3
34	RA	34	C	3.3
49	RU	95	LEU	3.3
44	YP	66	GLY	3.3
37	YE	159	HIS	3.3
25	R1	47	GLN	3.3
20	QT	22	ARG	3.3
41	YI	20	ASP	3.3
45	RQ	91	GLU	3.3
1	QA	824	C	3.3
34	YA	2793	G	3.3
9	QI	119	ALA	3.3
53	RY	19	LYS	3.3
19	QS	12	ASP	3.2
1	QA	1066	C	3.2
1	QA	1320	C	3.2
34	RA	1653	G	3.2
44	RP	18	ARG	3.2
47	RS	20	ARG	3.2
51	RW	90	ARG	3.2
12	XL	5	PRO	3.2
16	QP	63	GLY	3.2
25	R1	46	LEU	3.2

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Mol	Chain	Res	Type	RSRZ
20	XT	18	GLN	3.2
23	XX	11	U	3.2
54	RZ	79	ARG	3.2
7	QG	23	VAL	3.2
9	XI	65	VAL	3.2
9	XI	109	VAL	3.2
41	YI	1	MET	3.2
44	YP	65	ARG	3.2
49	YU	89	GLU	3.2
37	YE	204	ALA	3.2
10	XJ	59	SER	3.2
34	RA	1083	U	3.2
36	RD	230	ASP	3.2
47	RS	3	ARG	3.2
34	RA	2402	C	3.2
9	XI	122	ALA	3.2
10	QJ	60	ARG	3.2
12	XL	18	VAL	3.2
12	QL	5	PRO	3.2
50	YV	36	PRO	3.2
10	XJ	63	PHE	3.1
34	RA	2805	G	3.1
9	QI	37	PHE	3.1
1	QA	1065	U	3.1
21	QU	4	GLY	3.1
10	QJ	48	THR	3.1
32	Y8	64	TYR	3.1
36	YD	37	LEU	3.1
34	RA	2896	C	3.1
36	YD	44	ASN	3.1
16	QP	21	VAL	3.1
32	R8	28	GLY	3.1
1	QA	1531	A	3.1
3	QC	133	ALA	3.1
14	QN	56	VAL	3.1
7	QG	27	ILE	3.1
13	QM	105	THR	3.1
1	QA	324	G	3.1
34	RA	214	G	3.1
8	QH	15	ASN	3.1
51	RW	78	GLU	3.1
31	R7	47	ARG	3.1

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Mol	Chain	Res	Type	RSRZ
36	RD	44	ASN	3.0
25	Y1	91	LYS	3.0
11	QK	126	ARG	3.0
10	XJ	58	ASP	3.0
1	QA	971	G	3.0
38	RF	67	GLN	3.0
38	RF	70	THR	3.0
47	RS	27	SER	3.0
14	XN	58	LYS	3.0
8	QH	2	LEU	3.0
26	Y2	20	GLU	3.0
1	QA	1440(K)	C	3.0
36	RD	243	GLY	3.0
45	YQ	21	THR	3.0
9	QI	108	VAL	3.0
3	XC	168	ALA	3.0
13	QM	118	ALA	3.0
16	XP	1	MET	3.0
46	RR	2	ARG	3.0
47	RS	7	TYR	3.0
1	QA	377	G	3.0
1	QA	1186	G	3.0
34	YA	1096	A	3.0
1	QA	330	C	3.0
34	RA	2803	C	3.0
54	YZ	152	ALA	3.0
38	RF	72	ARG	3.0
12	QL	95	GLY	3.0
20	XT	52	ALA	3.0
32	Y8	51	ALA	3.0
51	RW	92	ARG	3.0
1	XA	1286	A	3.0
23	XX	8	A	3.0
34	RA	232	G	3.0
34	YA	896	A	3.0
12	XL	29	GLY	3.0
45	YQ	23	GLY	3.0
27	R3	9	VAL	3.0
37	RE	128	SER	3.0
37	RE	76	ARG	3.0
13	XM	99	ARG	2.9
23	QX	4	A	2.9

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Mol	Chain	Res	Type	RSRZ
40	YH	152	ARG	2.9
23	QX	9	G	2.9
1	QA	1367	C	2.9
10	XJ	74	ILE	2.9
19	QS	15	LEU	2.9
16	QP	2	VAL	2.9
4	XD	135	LEU	2.9
9	XI	110	GLU	2.9
32	Y8	65	GLU	2.9
10	XJ	46	ARG	2.9
29	R5	19	ARG	2.9
1	XA	108	G	2.9
24	R0	4	LYS	2.9
20	QT	63	ILE	2.9
9	QI	33	PHE	2.9
8	XH	131	GLY	2.9
11	XK	49	GLY	2.9
11	QK	127	LYS	2.9
54	YZ	184	ALA	2.9
14	QN	36	PHE	2.9
1	XA	1366	C	2.9
2	QB	109	SER	2.9
20	XT	11	SER	2.9
34	RA	2143	C	2.9
34	YA	2178	C	2.9
44	YP	24	GLY	2.9
20	QT	72	LEU	2.9
45	RQ	38	GLU	2.9
1	QA	325	A	2.8
9	QI	14	VAL	2.8
23	XX	14	A	2.8
34	YA	2801	A	2.8
46	RR	49	ASP	2.8
19	QS	71	LEU	2.8
21	XU	8	THR	2.8
1	QA	1196	U	2.8
1	QA	1325	C	2.8
20	XT	25	ARG	2.8
1	QA	1117	G	2.8
34	RA	2112	G	2.8
39	RG	2	PRO	2.8
8	QH	87	SER	2.8

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Mol	Chain	Res	Type	RSRZ
20	QT	11	SER	2.8
53	RY	105	ALA	2.8
3	XC	10	PHE	2.8
34	RA	229	A	2.8
31	Y7	47	ARG	2.8
5	XE	81	GLU	2.8
44	RP	6	LEU	2.8
52	RX	66	LEU	2.8
46	RR	7	GLY	2.8
13	XM	107	ALA	2.8
48	RT	5	ALA	2.8
1	QA	795	C	2.8
1	XA	328	C	2.8
1	QA	332	G	2.8
19	QS	40	ILE	2.8
19	QS	56	GLN	2.8
44	RP	52	GLU	2.8
7	QG	2	ALA	2.8
9	QI	15	ALA	2.8
9	QI	70	LYS	2.8
4	QD	3	ARG	2.8
1	QA	1352	C	2.8
9	QI	109	VAL	2.8
10	QJ	72	VAL	2.8
12	QL	105	TYR	2.8
53	RY	24	VAL	2.8
17	QQ	7	THR	2.8
36	RD	259	THR	2.8
47	YS	2	ALA	2.8
21	XU	3	LYS	2.8
32	R8	29	LYS	2.8
33	R9	32	HIS	2.8
40	YH	153	LYS	2.8
12	QL	19	ARG	2.8
20	XT	23	ARG	2.8
12	QL	104	VAL	2.8
33	R9	37	GLY	2.8
44	RP	44	GLY	2.8
45	RQ	141	GLN	2.8
12	XL	30	ALA	2.8
20	QT	12	ALA	2.8
36	RD	184	LYS	2.8

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Mol	Chain	Res	Type	RSRZ
1	QA	1542	U	2.8
34	RA	362	U	2.8
1	QA	1354	C	2.7
10	QJ	47	PHE	2.7
25	R1	22	GLY	2.7
9	XI	106	ALA	2.7
45	YQ	20	ALA	2.7
53	YY	62	GLU	2.7
21	QU	8	THR	2.7
34	YA	11	G	2.7
48	RT	104	ASN	2.7
46	RR	68	ARG	2.7
1	XA	60	A	2.7
14	QN	58	LYS	2.7
12	QL	64	TYR	2.7
12	QL	16	GLU	2.7
20	XT	12	ALA	2.7
45	RQ	36	ALA	2.7
1	XA	1354	C	2.7
1	QA	1183	A	2.7
23	QX	14	A	2.7
4	QD	109	GLY	2.7
27	R3	15	TYR	2.7
30	Y6	21	TYR	2.7
48	YT	4	GLY	2.7
52	RX	69	TYR	2.7
9	XI	66	ARG	2.7
38	YF	70	THR	2.7
34	RA	2296	U	2.7
34	RA	2897	U	2.7
36	YD	31	LYS	2.7
38	RF	131	GLY	2.7
44	RP	16	ARG	2.7
49	RU	96	ALA	2.7
1	QA	1324	A	2.7
1	QA	664	G	2.7
38	RF	34	TRP	2.7
20	XT	15	ARG	2.7
21	QU	15	ARG	2.7
36	RD	262	ARG	2.7
4	XD	77	ASN	2.7
22	XV	16	C	2.7

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Mol	Chain	Res	Type	RSRZ
22	XV	17	C	2.7
34	YA	277	C	2.7
44	RP	40	SER	2.7
11	XK	126	ARG	2.6
1	QA	687	A	2.6
14	QN	13	THR	2.6
23	XX	12	A	2.6
1	XA	323	U	2.6
34	RA	568	U	2.6
34	YA	2805	G	2.6
4	QD	139	ARG	2.6
36	RD	247	ALA	2.6
45	RQ	19	GLY	2.6
48	RT	100	TYR	2.6
50	YV	26	ASP	2.6
1	QA	1515	C	2.6
12	QL	32	PHE	2.6
44	RP	62	LEU	2.6
19	QS	67	VAL	2.6
1	XA	1493	A	2.6
2	QB	108	ILE	2.6
4	QD	73	ARG	2.6
34	RA	2712(B)	A	2.6
32	R8	48	PHE	2.6
1	QA	108	G	2.6
23	XX	9	G	2.6
39	RG	13	GLU	2.6
42	RN	46	VAL	2.6
20	XT	74	LYS	2.6
44	RP	43	GLY	2.6
45	RQ	92	GLY	2.6
47	YS	110	LEU	2.6
37	RE	151	TYR	2.6
1	QA	1357	A	2.6
48	YT	124	ASP	2.6
20	XT	9	ASN	2.6
25	Y1	2	SER	2.6
20	QT	23	ARG	2.6
3	QC	129	ALA	2.6
4	QD	147	ALA	2.6
7	XG	7	ALA	2.6
24	Y0	7	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
44	RP	28	GLY	2.6
34	YA	1176	G	2.6
34	YA	1534	G	2.6
34	YA	2894	G	2.6
36	YD	15	PHE	2.6
50	RV	45	THR	2.6
10	QJ	61	GLU	2.6
10	XJ	61	GLU	2.6
39	YG	13	GLU	2.6
48	RT	21	GLU	2.6
8	XH	73	ASP	2.6
9	QI	113	LYS	2.6
9	QI	116	LYS	2.6
21	QU	26	LYS	2.6
45	RQ	103	MET	2.6
34	RA	265	A	2.6
34	YA	1026	U	2.6
54	RZ	121	HIS	2.5
9	XI	121	ARG	2.5
52	RX	50	LYS	2.5
7	XG	80	VAL	2.5
38	RF	133	ASN	2.5
19	XS	71	LEU	2.5
54	RZ	113	ALA	2.5
1	QA	1234	C	2.5
19	QS	57	HIS	2.5
19	XS	31	ILE	2.5
22	QV	17	C	2.5
8	QH	136	GLU	2.5
14	QN	27	CYS	2.5
16	QP	20	VAL	2.5
54	RZ	74	VAL	2.5
1	QA	622	A	2.5
1	XA	1248	A	2.5
34	RA	1090	U	2.5
37	RE	182	LEU	2.5
37	YE	78	LEU	2.5
44	YP	67	MET	2.5
19	QS	2	PRO	2.5
32	Y8	63	PRO	2.5
12	QL	13	LYS	2.5
45	RQ	21	THR	2.5

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Mol	Chain	Res	Type	RSRZ
25	Y1	40	ARG	2.5
54	YZ	60	GLU	2.5
45	YQ	7	MET	2.5
9	QI	94	ALA	2.5
25	R1	15	ALA	2.5
2	XB	26	PRO	2.5
21	QU	23	PRO	2.5
20	QT	68	LYS	2.5
45	RQ	84	GLY	2.5
34	RA	1026	U	2.5
34	YA	2797	U	2.5
9	XI	26	VAL	2.5
8	XH	132	GLU	2.5
45	RQ	112	GLU	2.5
45	RQ	139	GLU	2.5
16	QP	31	LYS	2.5
13	QM	85	GLY	2.5
45	YQ	19	GLY	2.5
12	XL	89	ARG	2.5
44	YP	61	ARG	2.5
1	QA	1103	C	2.5
1	QA	1249	C	2.5
34	RA	2145	C	2.5
34	YA	884	C	2.5
34	RA	1089	G	2.5
14	XN	61	TRP	2.5
32	Y8	48	PHE	2.5
1	XA	1537	U	2.5
3	XC	2	GLY	2.5
20	XT	22	ARG	2.5
24	R0	41	ARG	2.5
44	RP	26	GLY	2.5
44	YP	58	THR	2.5
44	RP	71	VAL	2.5
4	QD	29	PRO	2.4
17	XQ	101	ARG	2.4
21	XU	9	ARG	2.4
1	QA	1533	C	2.4
13	QM	116	THR	2.4
24	R0	53	MET	2.4
1	QA	1289	A	2.4
1	QA	1365	G	2.4

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Mol	Chain	Res	Type	RSRZ
34	RA	11	G	2.4
34	RA	1084	A	2.4
34	YA	274	G	2.4
27	R3	34	GLU	2.4
26	Y2	69	ARG	2.4
9	QI	126	SER	2.4
5	QE	137	GLU	2.4
32	Y8	50	LEU	2.4
32	Y8	62	LEU	2.4
1	QA	877	C	2.4
34	RA	2144	U	2.4
34	RA	2332	U	2.4
34	RA	2723	C	2.4
7	XG	37	ASN	2.4
46	RR	106	GLY	2.4
46	RR	108	GLY	2.4
1	QA	1516	G	2.4
4	XD	137	SER	2.4
34	RA	2334	G	2.4
36	RD	35	LYS	2.4
10	XJ	47	PHE	2.4
7	XG	33	ASP	2.4
53	RY	107	ASP	2.4
45	RQ	48	GLU	2.4
15	QO	58	MET	2.4
11	QK	117	ASN	2.4
21	XU	4	GLY	2.4
19	QS	9	VAL	2.4
24	R0	10	THR	2.4
42	RN	73	THR	2.4
34	RA	383	U	2.4
34	YA	614	U	2.4
47	YS	4	LEU	2.4
1	XA	979	C	2.4
1	XA	1367	C	2.4
4	QD	102	ASP	2.4
4	XD	144	ASP	2.4
8	XH	25	ASP	2.4
22	QV	1	C	2.4
1	QA	969	A	2.4
23	QX	15	A	2.4
26	R2	20	GLU	2.4

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Mol	Chain	Res	Type	RSRZ
54	RZ	80	ARG	2.4
6	QF	89	MET	2.4
1	QA	81	G	2.4
1	XA	331	G	2.4
34	RA	1022	G	2.4
2	QB	183	PRO	2.4
16	QP	12	LYS	2.4
12	QL	29	GLY	2.4
44	RP	66	GLY	2.4
10	QJ	49	VAL	2.4
19	QS	60	VAL	2.4
31	Y7	46	VAL	2.4
44	YP	87	ASP	2.4
51	RW	77	ASP	2.4
54	YZ	113	ALA	2.4
46	RR	9	LYS	2.4
1	XA	1065	U	2.3
5	QE	130	ASN	2.3
11	XK	117	ASN	2.3
37	RE	190	GLY	2.3
45	RQ	99	PRO	2.3
49	RU	7	GLY	2.3
54	RZ	177	PRO	2.3
1	QA	329	A	2.3
1	XA	1183	A	2.3
34	RA	1102	C	2.3
34	YA	1092	C	2.3
34	YA	2177	C	2.3
44	RP	19	VAL	2.3
16	XP	25	ARG	2.3
47	RS	13	ARG	2.3
19	QS	75	ALA	2.3
34	RA	226	G	2.3
44	YP	70	GLN	2.3
14	QN	42	ILE	2.3
19	QS	59	PRO	2.3
37	YE	130	GLY	2.3
7	QG	80	VAL	2.3
27	R3	47	VAL	2.3
13	QM	93	ARG	2.3
24	R0	44	ARG	2.3
36	RD	16	MET	2.3

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Mol	Chain	Res	Type	RSRZ
42	RN	1	MET	2.3
44	RP	79	ARG	2.3
20	QT	29	LYS	2.3
32	R8	15	LYS	2.3
1	QA	1366	C	2.3
1	XA	990	C	2.3
9	XI	15	ALA	2.3
34	RA	1086	A	2.3
34	YA	276	A	2.3
37	RE	204	ALA	2.3
10	QJ	23	ILE	2.3
47	RS	35	ILE	2.3
20	QT	98	PRO	2.3
38	YF	207	GLY	2.3
48	RT	4	GLY	2.3
20	QT	9	ASN	2.3
24	R0	5	LYS	2.3
1	QA	1370	G	2.3
34	YA	2807	G	2.3
9	QI	82	ALA	2.3
12	QL	30	ALA	2.3
3	QC	5	ILE	2.3
9	QI	12	GLU	2.3
21	QU	13	ILE	2.3
37	RE	77	ILE	2.3
46	YR	72	ASP	2.3
1	QA	133	U	2.3
14	XN	60	SER	2.3
53	RY	41	GLY	2.3
3	XC	195	VAL	2.3
2	QB	190	THR	2.3
1	QA	1111	A	2.3
34	RA	2892	A	2.3
1	XA	1369	C	2.3
37	RE	162	ALA	2.3
5	QE	77	PRO	2.3
8	XH	128	GLY	2.3
9	QI	65	VAL	2.3
9	QI	72	GLY	2.3
37	RE	74	PRO	2.3
19	XS	55	LYS	2.3
21	QU	17	THR	2.3

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Mol	Chain	Res	Type	RSRZ
1	QA	378	G	2.3
1	QA	1290	G	2.3
1	QA	1355	G	2.3
1	XA	64	G	2.3
1	XA	107	G	2.3
1	XA	1356	G	2.3
1	QA	551	U	2.3
1	XA	1532	U	2.3
23	QX	11	U	2.3
4	XD	149	ALA	2.3
34	RA	2740	A	2.3
38	RF	98	SER	2.3
39	RG	35	GLU	2.3
9	QI	11	LYS	2.3
9	XI	115	GLY	2.3
14	QN	17	LYS	2.3
32	Y8	45	GLY	2.3
34	RA	645	C	2.3
48	RT	2	ASN	2.2
52	RX	3	THR	2.2
19	QS	10	PHE	2.2
36	RD	15	PHE	2.2
9	XI	118	LYS	2.2
25	Y1	27	GLU	2.2
45	RQ	115	MET	2.2
1	QA	1028(F)	G	2.2
34	RA	2779	U	2.2
34	YA	2802	G	2.2
9	XI	105	ASP	2.2
20	XT	71	THR	2.2
47	RS	88	ASP	2.2
1	QA	1014	A	2.2
1	XA	1016	A	2.2
12	XL	13	LYS	2.2
34	RA	1574	C	2.2
48	YT	106	SER	2.2
31	R7	23	ARG	2.2
32	Y8	40	GLU	2.2
41	YI	92	VAL	2.2
50	YV	46	VAL	2.2
7	QG	38	LEU	2.2
17	XQ	30	PRO	2.2

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Mol	Chain	Res	Type	RSRZ
32	R8	32	LEU	2.2
33	Y9	21	GLY	2.2
39	RG	34	LEU	2.2
10	QJ	100	THR	2.2
1	QA	1235	U	2.2
14	QN	48	ALA	2.2
20	XT	68	LYS	2.2
44	RP	70	GLN	2.2
2	QB	101	MET	2.2
48	YT	12	SER	2.2
1	QA	111	G	2.2
1	QA	230	G	2.2
13	XM	94	ARG	2.2
34	RA	2330	G	2.2
35	RB	72	G	2.2
13	XM	98	VAL	2.2
1	QA	1493	A	2.2
34	RA	276	A	2.2
1	QA	549	C	2.2
1	XA	136	C	2.2
34	RA	2666	C	2.2
34	YA	1537	C	2.2
37	RE	121	ASN	2.2
9	XI	112	LYS	2.2
39	RG	97	ASP	2.2
9	XI	94	ALA	2.2
14	QN	61	TRP	2.2
4	XD	21	LEU	2.2
7	QG	5	ARG	2.2
10	QJ	34	VAL	2.2
11	QK	46	GLY	2.2
12	XL	16	GLU	2.2
49	RU	37	GLU	2.2
10	QJ	38	ILE	2.2
17	QQ	37	LYS	2.2
32	R8	36	LYS	2.2
37	YE	187	ALA	2.2
41	RI	1	MET	2.2
50	RV	77	ALA	2.2
1	QA	1520	G	2.2
1	XA	1064	G	2.2
1	XA	1224	G	2.2

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Mol	Chain	Res	Type	RSRZ
13	QM	96	LEU	2.2
33	Y9	34	GLN	2.2
34	RA	2318	G	2.2
34	RA	2490	G	2.2
34	YA	275	G	2.2
44	YP	68	GLN	2.2
52	RX	65	ARG	2.2
10	QJ	44	VAL	2.2
19	XS	58	VAL	2.2
1	QA	328	C	2.2
13	QM	97	PRO	2.2
25	Y1	84	GLY	2.2
34	RA	267	C	2.2
44	YP	74	GLU	2.2
50	YV	50	PRO	2.2
39	RG	162	THR	2.2
40	RH	106	THR	2.2
4	XD	117	ALA	2.1
8	XH	2	LEU	2.2
17	QQ	82	MET	2.2
54	RZ	183	LEU	2.2
34	YA	2585	U	2.1
44	YP	18	ARG	2.1
4	XD	27	TYR	2.1
9	QI	77	ILE	2.1
26	R2	50	ILE	2.1
32	R8	49	VAL	2.1
37	RE	150	VAL	2.1
17	XQ	4	LYS	2.1
17	XQ	87	LYS	2.1
32	Y8	29	LYS	2.1
36	RD	31	LYS	2.1
38	RF	71	GLY	2.1
43	RO	108	GLU	2.1
37	RE	107	THR	2.1
42	RN	43	THR	2.1
1	QA	1285	A	2.1
34	RA	6	A	2.1
34	RA	2542	A	2.1
1	QA	44	G	2.1
1	QA	791	G	2.1
1	XA	105	G	2.1

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Mol	Chain	Res	Type	RSRZ
1	XA	1370	G	2.1
4	XD	11	LEU	2.1
34	RA	271(C)	G	2.1
34	RA	530	G	2.1
34	RA	859	G	2.1
42	RN	47	ALA	2.1
29	R5	16	ARG	2.1
32	R8	46	ARG	2.1
1	QA	562	C	2.1
1	QA	1317	C	2.1
1	XA	175	C	2.1
1	XA	856	C	2.1
29	R5	4	HIS	2.1
34	RA	277	C	2.1
32	R8	3	LYS	2.1
7	QG	34	GLY	2.1
45	RQ	24	GLY	2.1
54	RZ	114	GLY	2.1
43	YO	108	GLU	2.1
1	QA	619	U	2.1
17	XQ	81	ARG	2.1
20	QT	70	SER	2.1
16	XP	13	HIS	2.1
42	RN	84	LYS	2.1
44	RP	27	HIS	2.1
47	RS	49	VAL	2.1
1	QA	1287	A	2.1
19	XS	74	PHE	2.1
4	QD	207	TYR	2.1
40	RH	157	TYR	2.1
13	XM	85	GLY	2.1
19	QS	72	GLY	2.1
20	XT	10	LEU	2.1
27	R3	48	GLU	2.1
48	YT	21	GLU	2.1
54	YZ	169	GLU	2.1
1	QA	818	G	2.1
1	QA	1233	G	2.1
1	QA	1356	G	2.1
1	QA	1530	G	2.1
1	XA	306	G	2.1
1	XA	1373	G	2.1

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Mol	Chain	Res	Type	RSRZ
1	XA	1440(L)	G	2.1
10	XJ	67	THR	2.1
19	QS	39	THR	2.1
34	RA	944	G	2.1
34	RA	2792	G	2.1
47	YS	5	THR	2.1
23	QX	3	C	2.1
34	RA	1076	C	2.1
10	XJ	60	ARG	2.1
49	YU	92	ARG	2.1
9	QI	45	ALA	2.1
9	XI	46	ALA	2.1
20	QT	44	ALA	2.1
45	RQ	18	LYS	2.1
4	QD	93	PHE	2.1
9	XI	37	PHE	2.1
19	QS	34	TRP	2.1
24	R0	15	ASP	2.1
36	YD	230	ASP	2.1
49	RU	43	GLY	2.1
3	QC	177	THR	2.1
8	QH	132	GLU	2.1
24	R0	43	THR	2.1
32	Y8	56	GLU	2.1
54	YZ	178	GLU	2.1
25	R1	21	ARG	2.1
25	R1	26	ARG	2.1
40	RH	152	ARG	2.1
34	RA	2062	A	2.1
34	YA	2327	A	2.1
19	QS	32	LYS	2.1
19	QS	50	ALA	2.1
36	RD	51	VAL	2.1
20	QT	24	LEU	2.1
1	QA	88	C	2.1
1	QA	307	C	2.1
1	QA	61	G	2.1
1	QA	727	G	2.1
1	QA	876	G	2.1
1	QA	1028(D)	G	2.1
1	QA	1353	G	2.1
32	R8	64	TYR	2.1

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Mol	Chain	Res	Type	RSRZ
35	YB	88	C	2.1
34	RA	1058	G	2.1
34	RA	2780	G	2.1
37	RE	186	GLY	2.1
45	RQ	100	GLY	2.1
14	QN	8	GLU	2.1
17	QQ	68	ARG	2.1
20	XT	8	ARG	2.1
34	RA	271(D)	U	2.1
34	RA	1420	U	2.1
49	RU	88	ILE	2.1
14	XN	48	ALA	2.1
37	RE	187	ALA	2.1
48	RT	94	ALA	2.1
49	YU	117	GLN	2.1
42	YN	138	LEU	2.1
48	YT	114	LEU	2.1
2	XB	101	MET	2.1
1	QA	978	A	2.0
4	QD	95	GLY	2.0
9	QI	8	GLY	2.0
34	RA	1129	A	2.0
45	RQ	23	GLY	2.0
40	RH	154	PRO	2.0
4	XD	65	ARG	2.0
4	XD	209	ARG	2.0
21	QU	6	ARG	2.0
21	QU	22	ARG	2.0
36	RD	211	ARG	2.0
42	YN	115	ARG	2.0
44	RP	15	ARG	2.0
44	RP	47	ASP	2.0
54	RZ	112	ARG	2.0
9	XI	77	ILE	2.0
19	QS	55	LYS	2.0
33	R9	31	LYS	2.0
44	YP	64	LYS	2.0
1	QA	623	C	2.0
7	XG	12	LEU	2.0
16	XP	6	LEU	2.0
45	RQ	37	LEU	2.0
2	QB	112	VAL	2.0

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Mol	Chain	Res	Type	RSRZ
4	QD	17	VAL	2.0
7	QG	28	ASN	2.0
1	QA	550	G	2.0
1	XA	1017	G	2.0
1	XA	1190	G	2.0
34	RA	1573	G	2.0
34	RA	2211	G	2.0
34	YA	508	G	2.0
34	YA	2833	G	2.0
1	XA	1351	U	2.0
34	YA	1931	U	2.0
35	RB	41	U	2.0
45	YQ	24	GLY	2.0
3	XC	4	LYS	2.0
4	XD	136	PRO	2.0
28	Y4	40	HIS	2.0
7	QG	30	ILE	2.0
13	XM	84	ILE	2.0
31	R7	41	ARG	2.0
37	RE	111	ARG	2.0
47	RS	39	ILE	2.0
7	QG	33	ASP	2.0
12	XL	92	ASP	2.0
13	XM	83	ASP	2.0
40	YH	53	GLU	2.0
45	YQ	80	GLU	2.0
2	QB	163	PHE	2.0
17	QQ	27	PHE	2.0
8	XH	133	LEU	2.0
37	YE	205	ALA	2.0
1	QA	1092	A	2.0
1	QA	1236	A	2.0
1	XA	134	A	2.0
1	XA	1306	A	2.0
1	XA	1440(J)	A	2.0
34	RA	2503	A	2.0
34	YA	229	A	2.0
34	YA	2117	A	2.0
34	YA	2629	A	2.0
39	RG	41	GLN	2.0
9	QI	107	ARG	2.0
20	QT	74	LYS	2.0

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Mol	Chain	Res	Type	RSRZ
45	RQ	61	GLY	2.0
49	RU	30	LYS	2.0
9	QI	114	TYR	2.0
44	RP	110	TYR	2.0
1	QA	63	C	2.0
1	QA	995	C	2.0
1	QA	1369	C	2.0
1	XA	403	C	2.0
3	XC	178	LEU	2.0
4	QD	21	LEU	2.0
14	XN	37	PHE	2.0
9	QI	106	ALA	2.0
19	XS	12	ASP	2.0
33	R9	12	ASP	2.0
47	RS	58	LEU	2.0
1	QA	5	U	2.0
36	YD	32	SER	2.0
19	XS	11	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
22	1MG	QV	37	24/25	0.72	0.13	187,197,202,203	0
22	1MG	XV	37	24/25	0.73	0.13	183,186,189,189	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, 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
55	MG	YA	3323	1/1	0.15	0.22	208,208,208,208	0
55	MG	RA	3288	1/1	0.35	0.25	110,110,110,110	0
55	MG	YA	3216	1/1	0.43	0.17	53,53,53,53	0
55	MG	RA	3221	1/1	0.44	0.14	74,74,74,74	0
55	MG	QA	1615	1/1	0.48	0.09	79,79,79,79	0
55	MG	RA	3214	1/1	0.49	0.20	43,43,43,43	0
55	MG	YA	3016	1/1	0.49	0.38	39,39,39,39	0
55	MG	RA	3185	1/1	0.50	0.11	56,56,56,56	0
55	MG	RA	3166	1/1	0.52	0.13	70,70,70,70	0
55	MG	YA	3075	1/1	0.52	0.26	56,56,56,56	0
55	MG	YA	3289	1/1	0.53	0.07	11,11,11,11	0
55	MG	XA	1660	1/1	0.54	0.14	62,62,62,62	0
55	MG	YA	3062	1/1	0.54	0.25	63,63,63,63	0
55	MG	Y2	101	1/1	0.55	0.13	79,79,79,79	0
55	MG	YA	3044	1/1	0.57	0.11	90,90,90,90	0
55	MG	YA	3175	1/1	0.58	0.17	54,54,54,54	0
55	MG	YA	3055	1/1	0.58	0.19	35,35,35,35	0
55	MG	YA	3291	1/1	0.59	0.39	64,64,64,64	0
55	MG	YA	3045	1/1	0.61	0.15	53,53,53,53	0
55	MG	XA	1674	1/1	0.61	0.14	34,34,34,34	0
55	MG	RA	3294	1/1	0.61	0.10	52,52,52,52	0
55	MG	YA	3220	1/1	0.62	0.23	47,47,47,47	0
55	MG	XA	1623	1/1	0.63	0.08	102,102,102,102	0
55	MG	RA	3371	1/1	0.66	0.12	74,74,74,74	0
55	MG	XA	1688	1/1	0.67	0.16	67,67,67,67	0
55	MG	YA	3383	1/1	0.67	0.14	47,47,47,47	0
55	MG	YA	3025	1/1	0.68	0.29	50,50,50,50	0
55	MG	YA	3422	1/1	0.68	0.10	52,52,52,52	0
55	MG	XA	1627	1/1	0.69	0.16	55,55,55,55	0
55	MG	YA	3384	1/1	0.69	0.13	66,66,66,66	0
55	MG	RA	3001	1/1	0.69	0.16	50,50,50,50	0
55	MG	YA	3195	1/1	0.70	0.19	46,46,46,46	0
55	MG	XA	1679	1/1	0.70	0.14	62,62,62,62	0
55	MG	YA	3015	1/1	0.70	0.39	76,76,76,76	0
55	MG	RA	3186	1/1	0.71	0.19	63,63,63,63	0
55	MG	YA	3419	1/1	0.71	0.10	35,35,35,35	0
55	MG	YA	3317	1/1	0.71	0.17	31,31,31,31	0
55	MG	YA	3438	1/1	0.71	0.05	13,13,13,13	0
55	MG	RA	3089	1/1	0.72	0.29	65,65,65,65	0
55	MG	RB	209	1/1	0.72	0.11	51,51,51,51	0
55	MG	RA	3042	1/1	0.73	0.09	52,52,52,52	0
55	MG	XA	1643	1/1	0.73	0.15	52,52,52,52	0
55	MG	RA	3202	1/1	0.73	0.20	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	YA	3425	1/1	0.73	0.23	11,11,11,11	0
55	MG	RA	3299	1/1	0.73	0.20	46,46,46,46	0
55	MG	YA	3126	1/1	0.74	0.13	51,51,51,51	0
55	MG	YA	3397	1/1	0.74	0.15	42,42,42,42	0
55	MG	RA	3055	1/1	0.74	0.10	53,53,53,53	0
55	MG	YA	3279	1/1	0.74	0.07	7,7,7,7	0
55	MG	YA	3368	1/1	0.74	0.21	24,24,24,24	0
55	MG	RB	210	1/1	0.74	0.08	44,44,44,44	0
55	MG	YA	3268	1/1	0.75	0.18	45,45,45,45	0
55	MG	RA	3048	1/1	0.75	0.10	52,52,52,52	0
55	MG	YA	3040	1/1	0.75	0.16	23,23,23,23	0
55	MG	RA	3330	1/1	0.75	0.29	47,47,47,47	0
55	MG	YA	3316	1/1	0.75	0.10	44,44,44,44	0
55	MG	RA	3133	1/1	0.75	0.10	76,76,76,76	0
55	MG	YA	3227	1/1	0.75	0.09	51,51,51,51	0
55	MG	YA	3330	1/1	0.75	0.14	50,50,50,50	0
55	MG	QA	1601	1/1	0.76	0.10	50,50,50,50	0
55	MG	RA	3084	1/1	0.76	0.09	61,61,61,61	0
55	MG	RA	3015	1/1	0.76	0.15	62,62,62,62	0
55	MG	RA	3365	1/1	0.76	0.13	65,65,65,65	0
55	MG	RA	3370	1/1	0.76	0.12	52,52,52,52	0
55	MG	RA	3119	1/1	0.76	0.11	48,48,48,48	0
55	MG	RA	3379	1/1	0.76	0.16	66,66,66,66	0
55	MG	QA	1645	1/1	0.76	0.15	49,49,49,49	0
55	MG	RA	3254	1/1	0.76	0.20	68,68,68,68	0
55	MG	RA	3255	1/1	0.76	0.09	57,57,57,57	0
55	MG	RA	3274	1/1	0.76	0.09	55,55,55,55	0
55	MG	R0	102	1/1	0.76	0.06	40,40,40,40	0
55	MG	QA	1679	1/1	0.77	0.07	48,48,48,48	0
55	MG	YA	3245	1/1	0.77	0.44	62,62,62,62	0
55	MG	RO	201	1/1	0.77	0.11	69,69,69,69	0
55	MG	RA	3265	1/1	0.77	0.09	66,66,66,66	0
55	MG	RA	3387	1/1	0.77	0.10	67,67,67,67	0
55	MG	RA	3424	1/1	0.77	0.20	40,40,40,40	0
55	MG	RB	202	1/1	0.77	0.10	53,53,53,53	0
55	MG	RB	207	1/1	0.77	0.27	56,56,56,56	0
55	MG	QA	1677	1/1	0.77	0.20	50,50,50,50	0
55	MG	RA	3167	1/1	0.78	0.10	48,48,48,48	0
55	MG	RA	3400	1/1	0.78	0.24	43,43,43,43	0
55	MG	RA	3423	1/1	0.78	0.34	52,52,52,52	0
55	MG	YA	3068	1/1	0.78	0.16	45,45,45,45	0
55	MG	QA	1607	1/1	0.78	0.07	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	YA	3120	1/1	0.78	0.25	27,27,27,27	0
55	MG	RA	3068	1/1	0.78	0.11	41,41,41,41	0
55	MG	XA	1689	1/1	0.78	0.17	51,51,51,51	0
55	MG	RA	3002	1/1	0.78	0.12	50,50,50,50	0
55	MG	QA	1685	1/1	0.78	0.10	56,56,56,56	0
55	MG	RA	3024	1/1	0.78	0.08	77,77,77,77	0
55	MG	YA	3224	1/1	0.78	0.20	59,59,59,59	0
55	MG	RA	3127	1/1	0.78	0.13	49,49,49,49	0
55	MG	QH	201	1/1	0.78	0.10	57,57,57,57	0
55	MG	QA	1621	1/1	0.78	0.17	65,65,65,65	0
55	MG	RA	3160	1/1	0.79	0.12	65,65,65,65	0
55	MG	QA	1614	1/1	0.79	0.07	45,45,45,45	0
55	MG	YA	3031	1/1	0.79	0.07	48,48,48,48	0
55	MG	RA	3122	1/1	0.79	0.13	37,37,37,37	0
55	MG	YA	3276	1/1	0.79	0.13	41,41,41,41	0
55	MG	RA	3049	1/1	0.79	0.10	57,57,57,57	0
55	MG	RA	3103	1/1	0.79	0.20	64,64,64,64	0
55	MG	RA	3368	1/1	0.79	0.12	45,45,45,45	0
55	MG	YA	3217	1/1	0.79	0.16	50,50,50,50	0
55	MG	RA	3135	1/1	0.79	0.10	108,108,108,108	0
55	MG	YB	206	1/1	0.79	0.10	51,51,51,51	0
55	MG	QA	1660	1/1	0.80	0.08	59,59,59,59	0
55	MG	YA	3043	1/1	0.80	0.10	33,33,33,33	0
55	MG	RA	3417	1/1	0.80	0.18	55,55,55,55	0
55	MG	RA	3304	1/1	0.80	0.09	37,37,37,37	0
55	MG	RA	3097	1/1	0.80	0.09	54,54,54,54	0
55	MG	RA	3345	1/1	0.80	0.18	64,64,64,64	0
55	MG	RA	3168	1/1	0.80	0.13	49,49,49,49	0
55	MG	RA	3098	1/1	0.80	0.15	50,50,50,50	0
55	MG	RA	3070	1/1	0.80	0.24	51,51,51,51	0
55	MG	RA	3187	1/1	0.80	0.06	81,81,81,81	0
55	MG	RA	3025	1/1	0.80	0.07	49,49,49,49	0
55	MG	RA	3211	1/1	0.80	0.15	37,37,37,37	0
55	MG	RA	3252	1/1	0.81	0.13	60,60,60,60	0
55	MG	RA	3316	1/1	0.81	0.09	41,41,41,41	0
55	MG	XA	1651	1/1	0.81	0.08	25,25,25,25	0
55	MG	RA	3121	1/1	0.81	0.24	40,40,40,40	0
55	MG	RA	3118	1/1	0.81	0.22	35,35,35,35	0
55	MG	XA	1612	1/1	0.81	0.18	61,61,61,61	0
55	MG	RA	3250	1/1	0.81	0.10	51,51,51,51	0
55	MG	RA	3010	1/1	0.82	0.17	76,76,76,76	0
55	MG	RA	3178	1/1	0.82	0.24	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	RA	3131	1/1	0.82	0.10	57,57,57,57	0
55	MG	YA	3088	1/1	0.82	0.09	34,34,34,34	0
55	MG	RA	3354	1/1	0.82	0.10	54,54,54,54	0
55	MG	RA	3032	1/1	0.82	0.25	76,76,76,76	0
55	MG	RA	3096	1/1	0.82	0.11	66,66,66,66	0
55	MG	RB	211	1/1	0.82	0.07	62,62,62,62	0
55	MG	YA	3333	1/1	0.82	0.18	44,44,44,44	0
55	MG	YA	3214	1/1	0.82	0.09	49,49,49,49	0
55	MG	RA	3158	1/1	0.82	0.20	42,42,42,42	0
55	MG	RA	3285	1/1	0.82	0.07	48,48,48,48	0
55	MG	YA	3394	1/1	0.82	0.13	34,34,34,34	0
55	MG	RA	3120	1/1	0.82	0.15	40,40,40,40	0
55	MG	QA	1669	1/1	0.82	0.27	47,47,47,47	0
55	MG	QA	1647	1/1	0.82	0.13	64,64,64,64	0
55	MG	YA	3233	1/1	0.82	0.14	62,62,62,62	0
55	MG	RA	3248	1/1	0.82	0.09	45,45,45,45	0
55	MG	RA	3421	1/1	0.82	0.21	14,14,14,14	0
55	MG	RA	3021	1/1	0.83	0.12	62,62,62,62	0
55	MG	YA	3242	1/1	0.83	0.23	27,27,27,27	0
55	MG	QA	1634	1/1	0.83	0.12	30,30,30,30	0
55	MG	QA	1676	1/1	0.83	0.07	50,50,50,50	0
55	MG	QA	1648	1/1	0.83	0.17	44,44,44,44	0
55	MG	YA	3048	1/1	0.83	0.17	36,36,36,36	0
55	MG	YA	3051	1/1	0.83	0.19	36,36,36,36	0
55	MG	RA	3184	1/1	0.83	0.11	44,44,44,44	0
55	MG	XA	1626	1/1	0.83	0.10	54,54,54,54	0
55	MG	RA	3094	1/1	0.83	0.12	54,54,54,54	0
55	MG	QA	1659	1/1	0.83	0.13	49,49,49,49	0
55	MG	YA	3087	1/1	0.83	0.16	35,35,35,35	0
55	MG	RA	3276	1/1	0.83	0.09	48,48,48,48	0
55	MG	QA	1646	1/1	0.83	0.08	63,63,63,63	0
55	MG	RA	3401	1/1	0.83	0.09	83,83,83,83	0
55	MG	RA	3416	1/1	0.83	0.12	49,49,49,49	0
55	MG	YA	3390	1/1	0.83	0.21	39,39,39,39	0
55	MG	RA	3014	1/1	0.83	0.10	55,55,55,55	0
55	MG	RA	3203	1/1	0.83	0.20	44,44,44,44	0
55	MG	RA	3143	1/1	0.83	0.16	52,52,52,52	0
55	MG	QA	1687	1/1	0.83	0.08	70,70,70,70	0
55	MG	RA	3312	1/1	0.83	0.12	64,64,64,64	0
55	MG	RA	3220	1/1	0.83	0.15	72,72,72,72	0
55	MG	RA	3060	1/1	0.83	0.07	62,62,62,62	0
55	MG	RA	3043	1/1	0.84	0.07	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	RA	3384	1/1	0.84	0.14	27,27,27,27	0
55	MG	RA	3305	1/1	0.84	0.16	48,48,48,48	0
55	MG	QA	1686	1/1	0.84	0.11	49,49,49,49	0
55	MG	QA	1637	1/1	0.84	0.08	46,46,46,46	0
55	MG	RA	3231	1/1	0.84	0.15	50,50,50,50	0
55	MG	RA	3279	1/1	0.84	0.12	28,28,28,28	0
55	MG	YA	3391	1/1	0.84	0.20	44,44,44,44	0
55	MG	YA	3107	1/1	0.84	0.09	27,27,27,27	0
55	MG	QA	1612	1/1	0.84	0.12	71,71,71,71	0
55	MG	YA	3417	1/1	0.84	0.12	39,39,39,39	0
55	MG	XA	1642	1/1	0.84	0.10	43,43,43,43	0
55	MG	RA	3035	1/1	0.84	0.16	40,40,40,40	0
55	MG	RA	3289	1/1	0.84	0.17	38,38,38,38	0
55	MG	RA	3169	1/1	0.84	0.07	44,44,44,44	0
55	MG	RA	3009	1/1	0.84	0.14	59,59,59,59	0
57	ZN	R9	101	1/1	0.84	0.13	110,110,110,110	0
55	MG	QA	1627	1/1	0.85	0.14	41,41,41,41	0
55	MG	RA	3303	1/1	0.85	0.19	47,47,47,47	0
55	MG	RA	3005	1/1	0.85	0.09	39,39,39,39	0
55	MG	RA	3207	1/1	0.85	0.10	52,52,52,52	0
55	MG	RA	3110	1/1	0.85	0.08	45,45,45,45	0
55	MG	RA	3175	1/1	0.85	0.11	51,51,51,51	0
55	MG	YA	3387	1/1	0.85	0.23	47,47,47,47	0
55	MG	Y5	102	1/1	0.85	0.12	18,18,18,18	0
55	MG	RA	3219	1/1	0.85	0.15	55,55,55,55	0
55	MG	RA	3023	1/1	0.85	0.07	28,28,28,28	0
55	MG	R0	101	1/1	0.85	0.12	69,69,69,69	0
55	MG	YA	3271	1/1	0.85	0.10	15,15,15,15	0
55	MG	XA	1632	1/1	0.85	0.12	40,40,40,40	0
55	MG	QA	1663	1/1	0.85	0.13	51,51,51,51	0
55	MG	RA	3030	1/1	0.85	0.23	57,57,57,57	0
55	MG	YA	3180	1/1	0.85	0.16	14,14,14,14	0
55	MG	YA	3183	1/1	0.85	0.09	47,47,47,47	0
55	MG	QA	1613	1/1	0.85	0.13	69,69,69,69	0
55	MG	RA	3190	1/1	0.86	0.18	61,61,61,61	0
55	MG	RA	3222	1/1	0.86	0.15	68,68,68,68	0
55	MG	RA	3427	1/1	0.86	0.10	47,47,47,47	0
55	MG	RA	3226	1/1	0.86	0.11	37,37,37,37	0
55	MG	XA	1687	1/1	0.86	0.15	47,47,47,47	0
55	MG	QH	202	1/1	0.86	0.19	45,45,45,45	0
55	MG	QA	1674	1/1	0.86	0.09	41,41,41,41	0
55	MG	RA	3181	1/1	0.86	0.15	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	YA	3143	1/1	0.86	0.08	9,9,9,9	0
55	MG	YA	3145	1/1	0.86	0.12	38,38,38,38	0
55	MG	RA	3378	1/1	0.86	0.12	53,53,53,53	0
55	MG	YA	3349	1/1	0.86	0.07	48,48,48,48	0
55	MG	RA	3296	1/1	0.86	0.16	65,65,65,65	0
55	MG	RP	201	1/1	0.86	0.27	48,48,48,48	0
55	MG	YA	3188	1/1	0.86	0.10	52,52,52,52	0
55	MG	XA	1601	1/1	0.86	0.10	69,69,69,69	0
55	MG	YA	3199	1/1	0.86	0.11	58,58,58,58	0
55	MG	YA	3201	1/1	0.86	0.21	40,40,40,40	0
55	MG	YA	3028	1/1	0.86	0.20	1,1,1,1	0
55	MG	QA	1655	1/1	0.86	0.07	44,44,44,44	0
55	MG	QA	1658	1/1	0.86	0.18	49,49,49,49	0
55	MG	RA	3218	1/1	0.86	0.18	34,34,34,34	0
55	MG	RA	3262	1/1	0.86	0.13	56,56,56,56	0
55	MG	XA	1629	1/1	0.86	0.16	41,41,41,41	0
55	MG	QA	1642	1/1	0.86	0.08	62,62,62,62	0
55	MG	RA	3269	1/1	0.86	0.16	52,52,52,52	0
55	MG	RA	3080	1/1	0.86	0.11	33,33,33,33	0
55	MG	QA	1628	1/1	0.87	0.10	40,40,40,40	0
55	MG	YA	3177	1/1	0.87	0.19	41,41,41,41	0
55	MG	YA	3034	1/1	0.87	0.21	15,15,15,15	0
55	MG	RA	3216	1/1	0.87	0.13	59,59,59,59	0
55	MG	RA	3253	1/1	0.87	0.09	28,28,28,28	0
55	MG	QA	1605	1/1	0.87	0.16	45,45,45,45	0
55	MG	RB	206	1/1	0.87	0.11	24,24,24,24	0
55	MG	YA	3336	1/1	0.87	0.14	56,56,56,56	0
55	MG	YA	3348	1/1	0.87	0.09	27,27,27,27	0
55	MG	RA	3040	1/1	0.87	0.27	53,53,53,53	0
55	MG	YA	3352	1/1	0.87	0.13	15,15,15,15	0
55	MG	RA	3258	1/1	0.87	0.06	49,49,49,49	0
55	MG	YA	3215	1/1	0.87	0.09	60,60,60,60	0
55	MG	RA	3134	1/1	0.87	0.07	83,83,83,83	0
55	MG	YA	3060	1/1	0.87	0.13	38,38,38,38	0
55	MG	RA	3195	1/1	0.87	0.22	32,32,32,32	0
55	MG	RA	3266	1/1	0.87	0.08	59,59,59,59	0
55	MG	RA	3395	1/1	0.87	0.08	54,54,54,54	0
55	MG	XE	201	1/1	0.87	0.08	53,53,53,53	0
55	MG	QA	1618	1/1	0.87	0.14	60,60,60,60	0
55	MG	XA	1604	1/1	0.87	0.08	61,61,61,61	0
55	MG	QA	1662	1/1	0.87	0.15	45,45,45,45	0
55	MG	RA	3018	1/1	0.87	0.23	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	RA	3099	1/1	0.87	0.09	32,32,32,32	0
55	MG	YA	3278	1/1	0.87	0.14	34,34,34,34	0
55	MG	RA	3346	1/1	0.87	0.12	61,61,61,61	0
55	MG	RA	3420	1/1	0.88	0.12	40,40,40,40	0
55	MG	QA	1668	1/1	0.88	0.11	53,53,53,53	0
55	MG	RA	3033	1/1	0.88	0.11	59,59,59,59	0
55	MG	YA	3004	1/1	0.88	0.18	33,33,33,33	0
55	MG	RA	3126	1/1	0.88	0.06	46,46,46,46	0
55	MG	RA	3237	1/1	0.88	0.06	39,39,39,39	0
55	MG	RA	3429	1/1	0.88	0.12	40,40,40,40	0
55	MG	QA	1617	1/1	0.88	0.18	54,54,54,54	0
55	MG	YA	3234	1/1	0.88	0.20	27,27,27,27	0
55	MG	RA	3091	1/1	0.88	0.09	36,36,36,36	0
55	MG	RA	3311	1/1	0.88	0.16	58,58,58,58	0
55	MG	QA	1670	1/1	0.88	0.07	40,40,40,40	0
55	MG	QA	1623	1/1	0.88	0.11	49,49,49,49	0
55	MG	RA	3020	1/1	0.88	0.18	38,38,38,38	0
55	MG	RF	302	1/1	0.88	0.12	46,46,46,46	0
55	MG	RA	3137	1/1	0.88	0.20	52,52,52,52	0
55	MG	YA	3281	1/1	0.88	0.09	51,51,51,51	0
55	MG	RA	3138	1/1	0.88	0.10	45,45,45,45	0
55	MG	YA	3053	1/1	0.88	0.11	25,25,25,25	0
55	MG	YA	3054	1/1	0.88	0.16	36,36,36,36	0
55	MG	RA	3351	1/1	0.88	0.10	22,22,22,22	0
55	MG	RA	3261	1/1	0.88	0.09	32,32,32,32	0
55	MG	XA	1609	1/1	0.88	0.11	53,53,53,53	0
55	MG	YA	3067	1/1	0.88	0.17	43,43,43,43	0
55	MG	QA	1638	1/1	0.88	0.09	58,58,58,58	0
55	MG	RA	3150	1/1	0.88	0.10	47,47,47,47	0
55	MG	YA	3080	1/1	0.88	0.17	52,52,52,52	0
55	MG	RA	3209	1/1	0.88	0.06	53,53,53,53	0
55	MG	YA	3357	1/1	0.88	0.15	37,37,37,37	0
55	MG	YA	3360	1/1	0.88	0.24	6,6,6,6	0
55	MG	RA	3268	1/1	0.88	0.09	62,62,62,62	0
55	MG	YA	3369	1/1	0.88	0.12	39,39,39,39	0
55	MG	YA	3377	1/1	0.88	0.12	47,47,47,47	0
55	MG	YA	3095	1/1	0.88	0.08	21,21,21,21	0
55	MG	QA	1609	1/1	0.88	0.06	46,46,46,46	0
55	MG	XA	1630	1/1	0.88	0.09	53,53,53,53	0
55	MG	YA	3388	1/1	0.88	0.11	20,20,20,20	0
55	MG	QA	1620	1/1	0.88	0.14	50,50,50,50	0
55	MG	RA	3383	1/1	0.88	0.10	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	RA	3162	1/1	0.88	0.16	47,47,47,47	0
55	MG	RA	3278	1/1	0.88	0.07	47,47,47,47	0
55	MG	YA	3412	1/1	0.88	0.11	31,31,31,31	0
55	MG	XA	1658	1/1	0.88	0.17	31,31,31,31	0
55	MG	RA	3388	1/1	0.88	0.12	41,41,41,41	0
55	MG	QA	1630	1/1	0.88	0.11	43,43,43,43	0
55	MG	RA	3284	1/1	0.88	0.12	30,30,30,30	0
55	MG	YA	3430	1/1	0.88	0.10	27,27,27,27	0
55	MG	YA	3431	1/1	0.88	0.11	31,31,31,31	0
55	MG	QA	1633	1/1	0.88	0.23	43,43,43,43	0
55	MG	RA	3069	1/1	0.88	0.16	22,22,22,22	0
55	MG	RA	3031	1/1	0.88	0.10	17,17,17,17	0
55	MG	RA	3249	1/1	0.89	0.08	58,58,58,58	0
55	MG	QA	1654	1/1	0.89	0.17	36,36,36,36	0
55	MG	XA	1638	1/1	0.89	0.12	49,49,49,49	0
55	MG	YA	3325	1/1	0.89	0.12	61,61,61,61	0
55	MG	QA	1622	1/1	0.89	0.09	43,43,43,43	0
55	MG	YA	3036	1/1	0.89	0.24	18,18,18,18	0
55	MG	RA	3059	1/1	0.89	0.06	58,58,58,58	0
55	MG	YA	3338	1/1	0.89	0.22	49,49,49,49	0
55	MG	YA	3341	1/1	0.89	0.13	32,32,32,32	0
55	MG	XA	1648	1/1	0.89	0.08	46,46,46,46	0
55	MG	XA	1649	1/1	0.89	0.13	46,46,46,46	0
55	MG	YA	3196	1/1	0.89	0.15	33,33,33,33	0
55	MG	RA	3356	1/1	0.89	0.07	47,47,47,47	0
55	MG	YA	3047	1/1	0.89	0.16	48,48,48,48	0
55	MG	YA	3361	1/1	0.89	0.13	16,16,16,16	0
55	MG	RA	3407	1/1	0.89	0.12	44,44,44,44	0
55	MG	RA	3362	1/1	0.89	0.15	67,67,67,67	0
55	MG	XA	1667	1/1	0.89	0.10	48,48,48,48	0
55	MG	XA	1670	1/1	0.89	0.06	56,56,56,56	0
55	MG	RA	3152	1/1	0.89	0.12	44,44,44,44	0
55	MG	YA	3385	1/1	0.89	0.08	32,32,32,32	0
55	MG	XA	1677	1/1	0.89	0.10	42,42,42,42	0
55	MG	XA	1678	1/1	0.89	0.17	40,40,40,40	0
55	MG	RA	3418	1/1	0.89	0.20	43,43,43,43	0
55	MG	RA	3013	1/1	0.89	0.14	66,66,66,66	0
55	MG	RA	3093	1/1	0.89	0.07	20,20,20,20	0
55	MG	QA	1606	1/1	0.89	0.26	40,40,40,40	0
55	MG	YA	3261	1/1	0.89	0.08	19,19,19,19	0
55	MG	YA	3413	1/1	0.89	0.24	62,62,62,62	0
55	MG	YA	3416	1/1	0.89	0.15	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	XA	1619	1/1	0.89	0.09	39,39,39,39	0
55	MG	XA	1620	1/1	0.89	0.19	54,54,54,54	0
55	MG	YA	3421	1/1	0.89	0.09	44,44,44,44	0
55	MG	YA	3092	1/1	0.89	0.17	38,38,38,38	0
55	MG	RA	3045	1/1	0.89	0.07	41,41,41,41	0
55	MG	RA	3286	1/1	0.89	0.16	35,35,35,35	0
55	MG	QA	1653	1/1	0.89	0.08	49,49,49,49	0
55	MG	RA	3341	1/1	0.89	0.10	52,52,52,52	0
55	MG	YB	201	1/1	0.89	0.08	17,17,17,17	0
55	MG	YA	3136	1/1	0.89	0.08	29,29,29,29	0
55	MG	YD	301	1/1	0.89	0.11	28,28,28,28	0
55	MG	YA	3304	1/1	0.89	0.17	37,37,37,37	0
55	MG	RA	3306	1/1	0.90	0.06	55,55,55,55	0
55	MG	RA	3046	1/1	0.90	0.08	56,56,56,56	0
55	MG	RA	3027	1/1	0.90	0.12	44,44,44,44	0
55	MG	RA	3376	1/1	0.90	0.12	59,59,59,59	0
55	MG	XA	1605	1/1	0.90	0.08	46,46,46,46	0
55	MG	QA	1629	1/1	0.90	0.07	41,41,41,41	0
55	MG	YA	3244	1/1	0.90	0.14	43,43,43,43	0
55	MG	YA	3370	1/1	0.90	0.07	19,19,19,19	0
55	MG	XA	1668	1/1	0.90	0.15	73,73,73,73	0
55	MG	YA	3380	1/1	0.90	0.15	34,34,34,34	0
55	MG	QA	1639	1/1	0.90	0.06	41,41,41,41	0
55	MG	YA	3139	1/1	0.90	0.15	41,41,41,41	0
55	MG	RA	3291	1/1	0.90	0.13	46,46,46,46	0
55	MG	YA	3274	1/1	0.90	0.20	38,38,38,38	0
55	MG	YA	3275	1/1	0.90	0.14	45,45,45,45	0
55	MG	RA	3293	1/1	0.90	0.09	27,27,27,27	0
55	MG	YA	3147	1/1	0.90	0.15	39,39,39,39	0
55	MG	YA	3170	1/1	0.90	0.17	17,17,17,17	0
55	MG	RA	3224	1/1	0.90	0.15	44,44,44,44	0
55	MG	YA	3176	1/1	0.90	0.16	26,26,26,26	0
55	MG	RA	3213	1/1	0.90	0.09	56,56,56,56	0
55	MG	YA	3298	1/1	0.90	0.12	28,28,28,28	0
55	MG	YA	3299	1/1	0.90	0.09	11,11,11,11	0
55	MG	RA	3394	1/1	0.90	0.08	44,44,44,44	0
55	MG	YA	3420	1/1	0.90	0.07	35,35,35,35	0
55	MG	RA	3192	1/1	0.90	0.14	48,48,48,48	0
55	MG	RA	3399	1/1	0.90	0.06	45,45,45,45	0
55	MG	YA	3423	1/1	0.90	0.18	52,52,52,52	0
55	MG	RA	3012	1/1	0.90	0.08	31,31,31,31	0
55	MG	XA	1633	1/1	0.90	0.09	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	RA	3283	1/1	0.90	0.06	49,49,49,49	0
55	MG	YA	3436	1/1	0.90	0.08	23,23,23,23	0
55	MG	RA	3008	1/1	0.90	0.13	45,45,45,45	0
55	MG	YA	3071	1/1	0.90	0.07	38,38,38,38	0
55	MG	YB	202	1/1	0.90	0.09	26,26,26,26	0
55	MG	RN	201	1/1	0.90	0.06	48,48,48,48	0
55	MG	YA	3079	1/1	0.90	0.19	18,18,18,18	0
55	MG	YF	301	1/1	0.90	0.09	26,26,26,26	0
57	ZN	QN	101	1/1	0.90	0.08	158,158,158,158	0
55	MG	XA	1646	1/1	0.90	0.06	69,69,69,69	0
55	MG	YA	3003	1/1	0.91	0.09	21,21,21,21	0
55	MG	RA	3161	1/1	0.91	0.07	39,39,39,39	0
55	MG	QA	1673	1/1	0.91	0.09	51,51,51,51	0
55	MG	RA	3163	1/1	0.91	0.04	28,28,28,28	0
55	MG	RA	3165	1/1	0.91	0.16	50,50,50,50	0
55	MG	YA	3342	1/1	0.91	0.06	59,59,59,59	0
55	MG	YA	3345	1/1	0.91	0.12	43,43,43,43	0
55	MG	RA	3406	1/1	0.91	0.06	28,28,28,28	0
55	MG	RA	3085	1/1	0.91	0.04	36,36,36,36	0
55	MG	YA	3032	1/1	0.91	0.04	60,60,60,60	0
55	MG	RA	3410	1/1	0.91	0.14	36,36,36,36	0
55	MG	RA	3415	1/1	0.91	0.10	35,35,35,35	0
55	MG	RA	3086	1/1	0.91	0.06	30,30,30,30	0
55	MG	YA	3364	1/1	0.91	0.12	16,16,16,16	0
55	MG	YA	3367	1/1	0.91	0.16	31,31,31,31	0
55	MG	RA	3217	1/1	0.91	0.08	52,52,52,52	0
55	MG	RA	3270	1/1	0.91	0.07	53,53,53,53	0
55	MG	RA	3058	1/1	0.91	0.04	63,63,63,63	0
55	MG	RA	3016	1/1	0.91	0.17	51,51,51,51	0
55	MG	QA	1682	1/1	0.91	0.08	38,38,38,38	0
55	MG	RA	3177	1/1	0.91	0.09	42,42,42,42	0
55	MG	RA	3061	1/1	0.91	0.13	25,25,25,25	0
55	MG	XA	1647	1/1	0.91	0.05	49,49,49,49	0
55	MG	RA	3364	1/1	0.91	0.08	36,36,36,36	0
55	MG	RB	201	1/1	0.91	0.11	61,61,61,61	0
55	MG	YA	3238	1/1	0.91	0.13	37,37,37,37	0
55	MG	RA	3066	1/1	0.91	0.20	43,43,43,43	0
55	MG	YA	3066	1/1	0.91	0.23	35,35,35,35	0
55	MG	RB	204	1/1	0.91	0.10	48,48,48,48	0
55	MG	YA	3404	1/1	0.91	0.09	26,26,26,26	0
55	MG	YA	3405	1/1	0.91	0.09	22,22,22,22	0
55	MG	YA	3409	1/1	0.91	0.28	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	YA	3410	1/1	0.91	0.17	45,45,45,45	0
55	MG	YA	3258	1/1	0.91	0.13	56,56,56,56	0
55	MG	RA	3067	1/1	0.91	0.10	28,28,28,28	0
55	MG	QA	1683	1/1	0.91	0.07	51,51,51,51	0
55	MG	QA	1635	1/1	0.91	0.18	50,50,50,50	0
55	MG	RA	3101	1/1	0.91	0.08	43,43,43,43	0
55	MG	XA	1672	1/1	0.91	0.07	47,47,47,47	0
55	MG	RA	3147	1/1	0.91	0.06	34,34,34,34	0
55	MG	RD	301	1/1	0.91	0.23	38,38,38,38	0
55	MG	RE	301	1/1	0.91	0.10	36,36,36,36	0
55	MG	YA	3094	1/1	0.91	0.28	40,40,40,40	0
55	MG	QL	201	1/1	0.91	0.06	55,55,55,55	0
55	MG	YA	3101	1/1	0.91	0.07	22,22,22,22	0
55	MG	XA	1685	1/1	0.91	0.18	41,41,41,41	0
55	MG	RA	3072	1/1	0.91	0.06	24,24,24,24	0
55	MG	RA	3079	1/1	0.91	0.06	40,40,40,40	0
55	MG	YA	3312	1/1	0.91	0.16	12,12,12,12	0
55	MG	RA	3006	1/1	0.91	0.11	30,30,30,30	0
55	MG	RA	3204	1/1	0.91	0.17	42,42,42,42	0
55	MG	YA	3318	1/1	0.91	0.17	40,40,40,40	0
55	MG	XA	1603	1/1	0.91	0.07	44,44,44,44	0
55	MG	RA	3257	1/1	0.91	0.11	47,47,47,47	0
55	MG	YA	3302	1/1	0.92	0.12	20,20,20,20	0
55	MG	YA	3081	1/1	0.92	0.21	51,51,51,51	0
55	MG	RA	3179	1/1	0.92	0.06	44,44,44,44	0
55	MG	YA	3315	1/1	0.92	0.04	47,47,47,47	0
55	MG	RA	3275	1/1	0.92	0.13	62,62,62,62	0
55	MG	YA	3089	1/1	0.92	0.07	19,19,19,19	0
55	MG	RA	3140	1/1	0.92	0.13	50,50,50,50	0
55	MG	RA	3363	1/1	0.92	0.17	37,37,37,37	0
55	MG	QA	1624	1/1	0.92	0.16	55,55,55,55	0
55	MG	YA	3327	1/1	0.92	0.10	26,26,26,26	0
55	MG	YA	3100	1/1	0.92	0.12	28,28,28,28	0
55	MG	RB	208	1/1	0.92	0.17	57,57,57,57	0
55	MG	YA	3103	1/1	0.92	0.05	22,22,22,22	0
55	MG	XA	1675	1/1	0.92	0.20	46,46,46,46	0
55	MG	YA	3109	1/1	0.92	0.06	36,36,36,36	0
55	MG	QA	1651	1/1	0.92	0.16	36,36,36,36	0
55	MG	RA	3280	1/1	0.92	0.13	56,56,56,56	0
55	MG	RA	3075	1/1	0.92	0.13	13,13,13,13	0
55	MG	XA	1682	1/1	0.92	0.06	33,33,33,33	0
55	MG	RA	3230	1/1	0.92	0.07	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	YA	3354	1/1	0.92	0.20	15,15,15,15	0
55	MG	RA	3374	1/1	0.92	0.10	37,37,37,37	0
55	MG	RA	3375	1/1	0.92	0.06	46,46,46,46	0
55	MG	YA	3148	1/1	0.92	0.12	32,32,32,32	0
55	MG	QA	1640	1/1	0.92	0.09	49,49,49,49	0
55	MG	RA	3236	1/1	0.92	0.18	57,57,57,57	0
55	MG	RA	3189	1/1	0.92	0.10	35,35,35,35	0
55	MG	RA	3238	1/1	0.92	0.16	23,23,23,23	0
55	MG	YA	3002	1/1	0.92	0.09	29,29,29,29	0
55	MG	YA	3375	1/1	0.92	0.09	22,22,22,22	0
55	MG	YA	3182	1/1	0.92	0.07	49,49,49,49	0
55	MG	QA	1641	1/1	0.92	0.15	41,41,41,41	0
55	MG	QA	1608	1/1	0.92	0.07	44,44,44,44	0
55	MG	RA	3029	1/1	0.92	0.16	42,42,42,42	0
55	MG	XA	1606	1/1	0.92	0.16	51,51,51,51	0
55	MG	RA	3389	1/1	0.92	0.09	46,46,46,46	0
55	MG	QA	1643	1/1	0.92	0.16	38,38,38,38	0
55	MG	YA	3206	1/1	0.92	0.22	9,9,9,9	0
55	MG	XA	1613	1/1	0.92	0.08	32,32,32,32	0
55	MG	XA	1617	1/1	0.92	0.15	36,36,36,36	0
55	MG	XA	1618	1/1	0.92	0.09	42,42,42,42	0
55	MG	YA	3401	1/1	0.92	0.11	17,17,17,17	0
55	MG	QA	1616	1/1	0.92	0.06	64,64,64,64	0
55	MG	RA	3300	1/1	0.92	0.20	13,13,13,13	0
55	MG	QA	1602	1/1	0.92	0.12	49,49,49,49	0
55	MG	QA	1678	1/1	0.92	0.09	41,41,41,41	0
55	MG	RA	3402	1/1	0.92	0.07	67,67,67,67	0
55	MG	RA	3208	1/1	0.92	0.12	27,27,27,27	0
55	MG	RA	3062	1/1	0.92	0.27	44,44,44,44	0
55	MG	YA	3050	1/1	0.92	0.04	19,19,19,19	0
55	MG	R8	101	1/1	0.92	0.14	35,35,35,35	0
55	MG	RA	3038	1/1	0.92	0.12	25,25,25,25	0
55	MG	RA	3314	1/1	0.92	0.10	37,37,37,37	0
55	MG	RA	3171	1/1	0.92	0.19	38,38,38,38	0
55	MG	YA	3057	1/1	0.92	0.10	12,12,12,12	0
55	MG	YA	3059	1/1	0.92	0.16	26,26,26,26	0
55	MG	RA	3327	1/1	0.92	0.08	47,47,47,47	0
55	MG	QA	1661	1/1	0.92	0.10	50,50,50,50	0
55	MG	RA	3337	1/1	0.92	0.18	25,25,25,25	0
55	MG	RA	3176	1/1	0.92	0.06	33,33,33,33	0
55	MG	QA	1610	1/1	0.92	0.14	54,54,54,54	0
55	MG	YA	3070	1/1	0.92	0.13	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	RA	3139	1/1	0.92	0.05	58,58,58,58	0
55	MG	YB	207	1/1	0.92	0.08	42,42,42,42	0
55	MG	XA	1657	1/1	0.92	0.12	44,44,44,44	0
55	MG	YA	3293	1/1	0.92	0.17	31,31,31,31	0
55	MG	YR	201	1/1	0.92	0.14	25,25,25,25	0
55	MG	RA	3272	1/1	0.92	0.06	53,53,53,53	0
55	MG	XA	1659	1/1	0.92	0.08	29,29,29,29	0
55	MG	YA	3114	1/1	0.93	0.22	1,1,1,1	0
55	MG	RA	3295	1/1	0.93	0.08	38,38,38,38	0
55	MG	YA	3013	1/1	0.93	0.15	15,15,15,15	0
55	MG	YA	3127	1/1	0.93	0.22	12,12,12,12	0
55	MG	QA	1681	1/1	0.93	0.06	52,52,52,52	0
55	MG	YA	3137	1/1	0.93	0.08	26,26,26,26	0
55	MG	XA	1625	1/1	0.93	0.06	56,56,56,56	0
55	MG	YA	3141	1/1	0.93	0.12	20,20,20,20	0
55	MG	YA	3024	1/1	0.93	0.09	35,35,35,35	0
55	MG	QA	1649	1/1	0.93	0.09	40,40,40,40	0
55	MG	RA	3422	1/1	0.93	0.18	37,37,37,37	0
55	MG	RA	3164	1/1	0.93	0.06	62,62,62,62	0
55	MG	YA	3149	1/1	0.93	0.15	1,1,1,1	0
55	MG	YA	3152	1/1	0.93	0.10	17,17,17,17	0
55	MG	RA	3369	1/1	0.93	0.07	41,41,41,41	0
55	MG	RA	3301	1/1	0.93	0.11	46,46,46,46	0
55	MG	QA	1650	1/1	0.93	0.14	36,36,36,36	0
55	MG	YA	3353	1/1	0.93	0.09	34,34,34,34	0
55	MG	YA	3037	1/1	0.93	0.26	8,8,8,8	0
55	MG	XA	1635	1/1	0.93	0.07	69,69,69,69	0
55	MG	RA	3372	1/1	0.93	0.06	59,59,59,59	0
55	MG	RA	3057	1/1	0.93	0.09	63,63,63,63	0
55	MG	RB	203	1/1	0.93	0.11	45,45,45,45	0
55	MG	YA	3190	1/1	0.93	0.12	32,32,32,32	0
55	MG	XA	1645	1/1	0.93	0.06	49,49,49,49	0
55	MG	RA	3198	1/1	0.93	0.09	41,41,41,41	0
55	MG	QA	1672	1/1	0.93	0.10	40,40,40,40	0
55	MG	RA	3308	1/1	0.93	0.05	26,26,26,26	0
55	MG	RA	3310	1/1	0.93	0.05	57,57,57,57	0
55	MG	YA	3378	1/1	0.93	0.13	36,36,36,36	0
55	MG	YA	3207	1/1	0.93	0.13	13,13,13,13	0
55	MG	QA	1656	1/1	0.93	0.11	46,46,46,46	0
55	MG	RA	3116	1/1	0.93	0.19	29,29,29,29	0
55	MG	RA	3242	1/1	0.93	0.16	25,25,25,25	0
55	MG	RA	3170	1/1	0.93	0.07	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	RA	3319	1/1	0.93	0.14	16,16,16,16	0
55	MG	YA	3061	1/1	0.93	0.07	14,14,14,14	0
55	MG	YA	3225	1/1	0.93	0.10	30,30,30,30	0
55	MG	RA	3392	1/1	0.93	0.09	51,51,51,51	0
55	MG	YA	3063	1/1	0.93	0.22	36,36,36,36	0
55	MG	RA	3325	1/1	0.93	0.08	23,23,23,23	0
55	MG	YA	3403	1/1	0.93	0.08	26,26,26,26	0
55	MG	YA	3235	1/1	0.93	0.15	38,38,38,38	0
55	MG	XA	1669	1/1	0.93	0.05	45,45,45,45	0
55	MG	YA	3407	1/1	0.93	0.05	29,29,29,29	0
55	MG	YA	3240	1/1	0.93	0.11	39,39,39,39	0
55	MG	RA	3019	1/1	0.93	0.14	57,57,57,57	0
55	MG	QA	1626	1/1	0.93	0.09	50,50,50,50	0
55	MG	RA	3333	1/1	0.93	0.17	22,22,22,22	0
55	MG	YA	3414	1/1	0.93	0.06	41,41,41,41	0
55	MG	YA	3073	1/1	0.93	0.26	42,42,42,42	0
55	MG	XA	1602	1/1	0.93	0.08	41,41,41,41	0
55	MG	RA	3144	1/1	0.93	0.19	25,25,25,25	0
55	MG	QA	1664	1/1	0.93	0.14	32,32,32,32	0
55	MG	QA	1665	1/1	0.93	0.07	39,39,39,39	0
55	MG	QA	1666	1/1	0.93	0.23	51,51,51,51	0
55	MG	RA	3153	1/1	0.93	0.10	33,33,33,33	0
55	MG	XA	1611	1/1	0.93	0.10	24,24,24,24	0
55	MG	RA	3411	1/1	0.93	0.17	36,36,36,36	0
55	MG	RA	3412	1/1	0.93	0.06	39,39,39,39	0
55	MG	YA	3284	1/1	0.93	0.15	9,9,9,9	0
55	MG	YA	3286	1/1	0.93	0.17	9,9,9,9	0
55	MG	XA	1614	1/1	0.93	0.07	39,39,39,39	0
55	MG	XA	1616	1/1	0.93	0.15	36,36,36,36	0
55	MG	YB	204	1/1	0.93	0.17	16,16,16,16	0
55	MG	RA	3011	1/1	0.93	0.05	66,66,66,66	0
55	MG	Y8	101	1/1	0.93	0.12	5,5,5,5	0
55	MG	QA	1632	1/1	0.93	0.07	33,33,33,33	0
55	MG	YE	302	1/1	0.93	0.17	51,51,51,51	0
55	MG	RA	3130	1/1	0.93	0.14	57,57,57,57	0
55	MG	YA	3110	1/1	0.93	0.20	29,29,29,29	0
55	MG	YA	3310	1/1	0.93	0.10	30,30,30,30	0
55	MG	YA	3111	1/1	0.93	0.17	30,30,30,30	0
55	MG	RA	3240	1/1	0.94	0.06	38,38,38,38	0
55	MG	YA	3308	1/1	0.94	0.19	15,15,15,15	0
55	MG	YA	3035	1/1	0.94	0.20	10,10,10,10	0
55	MG	YA	3138	1/1	0.94	0.14	20,20,20,20	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	YA	3313	1/1	0.94	0.14	50,50,50,50	0
55	MG	RA	3196	1/1	0.94	0.19	16,16,16,16	0
55	MG	RA	3307	1/1	0.94	0.14	33,33,33,33	0
55	MG	RA	3183	1/1	0.94	0.12	36,36,36,36	0
55	MG	XA	1655	1/1	0.94	0.14	20,20,20,20	0
55	MG	XA	1656	1/1	0.94	0.07	43,43,43,43	0
55	MG	RA	3125	1/1	0.94	0.14	50,50,50,50	0
55	MG	YA	3046	1/1	0.94	0.09	18,18,18,18	0
55	MG	YA	3329	1/1	0.94	0.07	25,25,25,25	0
55	MG	RA	3419	1/1	0.94	0.13	47,47,47,47	0
55	MG	YA	3155	1/1	0.94	0.10	42,42,42,42	0
55	MG	XA	1608	1/1	0.94	0.17	22,22,22,22	0
55	MG	YA	3171	1/1	0.94	0.15	43,43,43,43	0
55	MG	RA	3148	1/1	0.94	0.15	40,40,40,40	0
55	MG	XA	1661	1/1	0.94	0.06	48,48,48,48	0
55	MG	YA	3052	1/1	0.94	0.09	14,14,14,14	0
55	MG	YA	3178	1/1	0.94	0.08	26,26,26,26	0
55	MG	XA	1610	1/1	0.94	0.15	67,67,67,67	0
55	MG	YA	3350	1/1	0.94	0.10	35,35,35,35	0
55	MG	RA	3251	1/1	0.94	0.08	41,41,41,41	0
55	MG	RA	3281	1/1	0.94	0.17	56,56,56,56	0
55	MG	YA	3184	1/1	0.94	0.08	42,42,42,42	0
55	MG	YA	3186	1/1	0.94	0.15	28,28,28,28	0
55	MG	RA	3081	1/1	0.94	0.18	41,41,41,41	0
55	MG	YA	3058	1/1	0.94	0.15	25,25,25,25	0
55	MG	YA	3193	1/1	0.94	0.15	11,11,11,11	0
55	MG	XA	1671	1/1	0.94	0.11	47,47,47,47	0
55	MG	QA	1611	1/1	0.94	0.11	58,58,58,58	0
55	MG	XA	1615	1/1	0.94	0.05	53,53,53,53	0
55	MG	RA	3324	1/1	0.94	0.08	40,40,40,40	0
55	MG	YA	3205	1/1	0.94	0.10	18,18,18,18	0
55	MG	RA	3188	1/1	0.94	0.16	54,54,54,54	0
55	MG	YA	3065	1/1	0.94	0.16	29,29,29,29	0
55	MG	RA	3225	1/1	0.94	0.14	34,34,34,34	0
55	MG	RA	3386	1/1	0.94	0.10	41,41,41,41	0
55	MG	RA	3107	1/1	0.94	0.07	50,50,50,50	0
55	MG	XA	1683	1/1	0.94	0.07	31,31,31,31	0
55	MG	YA	3218	1/1	0.94	0.09	22,22,22,22	0
55	MG	XA	1684	1/1	0.94	0.08	37,37,37,37	0
55	MG	RA	3228	1/1	0.94	0.20	39,39,39,39	0
55	MG	XA	1686	1/1	0.94	0.15	41,41,41,41	0
55	MG	YA	3078	1/1	0.94	0.27	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	YA	3229	1/1	0.94	0.15	31,31,31,31	0
55	MG	YA	3398	1/1	0.94	0.08	42,42,42,42	0
55	MG	YA	3400	1/1	0.94	0.17	31,31,31,31	0
55	MG	YA	3230	1/1	0.94	0.16	39,39,39,39	0
55	MG	XA	1624	1/1	0.94	0.05	58,58,58,58	0
55	MG	RA	3259	1/1	0.94	0.04	30,30,30,30	0
55	MG	RA	3339	1/1	0.94	0.17	12,12,12,12	0
55	MG	YA	3086	1/1	0.94	0.21	9,9,9,9	0
55	MG	RA	3229	1/1	0.94	0.07	52,52,52,52	0
55	MG	RA	3210	1/1	0.94	0.09	35,35,35,35	0
55	MG	YA	3411	1/1	0.94	0.13	36,36,36,36	0
55	MG	RA	3263	1/1	0.94	0.17	27,27,27,27	0
55	MG	YA	3091	1/1	0.94	0.04	24,24,24,24	0
55	MG	YA	3249	1/1	0.94	0.22	13,13,13,13	0
55	MG	RA	3051	1/1	0.94	0.12	27,27,27,27	0
55	MG	RA	3234	1/1	0.94	0.08	51,51,51,51	0
55	MG	XA	1634	1/1	0.94	0.07	46,46,46,46	0
55	MG	RA	3007	1/1	0.94	0.07	34,34,34,34	0
55	MG	YA	3272	1/1	0.94	0.18	48,48,48,48	0
55	MG	YA	3273	1/1	0.94	0.19	9,9,9,9	0
55	MG	XA	1637	1/1	0.94	0.05	43,43,43,43	0
55	MG	RA	3359	1/1	0.94	0.17	36,36,36,36	0
55	MG	YA	3427	1/1	0.94	0.12	18,18,18,18	0
55	MG	YA	3428	1/1	0.94	0.17	58,58,58,58	0
55	MG	YA	3105	1/1	0.94	0.10	9,9,9,9	0
55	MG	XA	1640	1/1	0.94	0.12	54,54,54,54	0
55	MG	YA	3020	1/1	0.94	0.17	7,7,7,7	0
55	MG	RA	3193	1/1	0.94	0.09	52,52,52,52	0
55	MG	YA	3439	1/1	0.94	0.12	42,42,42,42	0
55	MG	YA	3283	1/1	0.94	0.09	3,3,3,3	0
55	MG	RA	3123	1/1	0.94	0.05	30,30,30,30	0
55	MG	XA	1644	1/1	0.94	0.10	32,32,32,32	0
55	MG	YA	3116	1/1	0.94	0.16	32,32,32,32	0
55	MG	YA	3029	1/1	0.94	0.14	17,17,17,17	0
55	MG	YA	3125	1/1	0.94	0.24	36,36,36,36	0
55	MG	YA	3295	1/1	0.94	0.19	8,8,8,8	0
55	MG	RA	3239	1/1	0.94	0.08	44,44,44,44	0
55	MG	RQ	201	1/1	0.94	0.06	34,34,34,34	0
55	MG	YX	101	1/1	0.94	0.07	37,37,37,37	0
55	MG	YA	3131	1/1	0.94	0.20	2,2,2,2	0
55	MG	YA	3303	1/1	0.94	0.11	33,33,33,33	0
55	MG	RA	3052	1/1	0.95	0.12	28,28,28,28	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	YA	3297	1/1	0.95	0.20	26,26,26,26	0
55	MG	YA	3033	1/1	0.95	0.15	12,12,12,12	0
55	MG	R3	3101	1/1	0.95	0.06	42,42,42,42	0
55	MG	RA	3071	1/1	0.95	0.07	74,74,74,74	0
55	MG	RA	3282	1/1	0.95	0.04	37,37,37,37	0
55	MG	XA	1641	1/1	0.95	0.12	37,37,37,37	0
55	MG	YA	3306	1/1	0.95	0.20	43,43,43,43	0
55	MG	YA	3307	1/1	0.95	0.15	55,55,55,55	0
55	MG	YA	3146	1/1	0.95	0.18	33,33,33,33	0
55	MG	YA	3309	1/1	0.95	0.21	33,33,33,33	0
55	MG	RA	3428	1/1	0.95	0.06	45,45,45,45	0
55	MG	YA	3042	1/1	0.95	0.12	9,9,9,9	0
55	MG	RA	3355	1/1	0.95	0.04	29,29,29,29	0
55	MG	YA	3314	1/1	0.95	0.10	30,30,30,30	0
55	MG	YA	3151	1/1	0.95	0.09	21,21,21,21	0
55	MG	RA	3095	1/1	0.95	0.08	64,64,64,64	0
55	MG	RA	3357	1/1	0.95	0.09	25,25,25,25	0
55	MG	YA	3157	1/1	0.95	0.10	25,25,25,25	0
55	MG	YA	3321	1/1	0.95	0.07	21,21,21,21	0
55	MG	YA	3159	1/1	0.95	0.14	6,6,6,6	0
55	MG	YA	3163	1/1	0.95	0.12	15,15,15,15	0
55	MG	YA	3164	1/1	0.95	0.16	5,5,5,5	0
55	MG	YA	3167	1/1	0.95	0.08	15,15,15,15	0
55	MG	RA	3197	1/1	0.95	0.07	66,66,66,66	0
55	MG	RA	3128	1/1	0.95	0.06	54,54,54,54	0
55	MG	RA	3199	1/1	0.95	0.11	30,30,30,30	0
55	MG	YA	3337	1/1	0.95	0.04	24,24,24,24	0
55	MG	RA	3287	1/1	0.95	0.09	38,38,38,38	0
55	MG	YA	3340	1/1	0.95	0.12	48,48,48,48	0
55	MG	XA	1650	1/1	0.95	0.06	43,43,43,43	0
55	MG	RA	3200	1/1	0.95	0.06	30,30,30,30	0
55	MG	YA	3179	1/1	0.95	0.11	18,18,18,18	0
55	MG	YA	3346	1/1	0.95	0.06	41,41,41,41	0
55	MG	YA	3347	1/1	0.95	0.06	26,26,26,26	0
55	MG	RA	3367	1/1	0.95	0.06	53,53,53,53	0
55	MG	RA	3129	1/1	0.95	0.05	58,58,58,58	0
55	MG	RA	3290	1/1	0.95	0.12	47,47,47,47	0
55	MG	RA	3244	1/1	0.95	0.20	45,45,45,45	0
55	MG	RA	3247	1/1	0.95	0.10	39,39,39,39	0
55	MG	QA	1657	1/1	0.95	0.10	37,37,37,37	0
55	MG	RA	3074	1/1	0.95	0.06	24,24,24,24	0
55	MG	YA	3359	1/1	0.95	0.18	22,22,22,22	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	XA	1663	1/1	0.95	0.12	41,41,41,41	0
55	MG	YA	3194	1/1	0.95	0.13	8,8,8,8	0
55	MG	QA	1625	1/1	0.95	0.19	39,39,39,39	0
55	MG	RA	3077	1/1	0.95	0.05	28,28,28,28	0
55	MG	YA	3064	1/1	0.95	0.06	42,42,42,42	0
55	MG	YA	3200	1/1	0.95	0.09	18,18,18,18	0
55	MG	RA	3078	1/1	0.95	0.15	16,16,16,16	0
55	MG	YA	3372	1/1	0.95	0.25	19,19,19,19	0
55	MG	RA	3044	1/1	0.95	0.11	35,35,35,35	0
55	MG	RA	3380	1/1	0.95	0.04	37,37,37,37	0
55	MG	RA	3382	1/1	0.95	0.07	33,33,33,33	0
55	MG	YA	3213	1/1	0.95	0.09	24,24,24,24	0
55	MG	YA	3381	1/1	0.95	0.06	11,11,11,11	0
55	MG	RA	3174	1/1	0.95	0.06	8,8,8,8	0
55	MG	RA	3212	1/1	0.95	0.09	23,23,23,23	0
55	MG	RA	3256	1/1	0.95	0.13	56,56,56,56	0
55	MG	YA	3386	1/1	0.95	0.07	35,35,35,35	0
55	MG	YA	3074	1/1	0.95	0.14	1,1,1,1	0
55	MG	RA	3104	1/1	0.95	0.09	38,38,38,38	0
55	MG	YA	3219	1/1	0.95	0.09	36,36,36,36	0
55	MG	YA	3076	1/1	0.95	0.10	28,28,28,28	0
55	MG	YA	3393	1/1	0.95	0.12	29,29,29,29	0
55	MG	RA	3106	1/1	0.95	0.07	31,31,31,31	0
55	MG	XA	1680	1/1	0.95	0.08	38,38,38,38	0
55	MG	RA	3215	1/1	0.95	0.07	17,17,17,17	0
55	MG	YA	3399	1/1	0.95	0.14	36,36,36,36	0
55	MG	YA	3228	1/1	0.95	0.13	20,20,20,20	0
55	MG	RA	3309	1/1	0.95	0.06	96,96,96,96	0
55	MG	YA	3084	1/1	0.95	0.23	16,16,16,16	0
55	MG	YA	3231	1/1	0.95	0.14	39,39,39,39	0
55	MG	RA	3260	1/1	0.95	0.09	45,45,45,45	0
55	MG	YA	3406	1/1	0.95	0.20	33,33,33,33	0
55	MG	QA	1619	1/1	0.95	0.09	56,56,56,56	0
55	MG	YA	3408	1/1	0.95	0.18	45,45,45,45	0
55	MG	RA	3003	1/1	0.95	0.04	42,42,42,42	0
55	MG	YA	3236	1/1	0.95	0.07	26,26,26,26	0
55	MG	YA	3237	1/1	0.95	0.20	39,39,39,39	0
55	MG	RA	3313	1/1	0.95	0.12	54,54,54,54	0
55	MG	YA	3239	1/1	0.95	0.08	30,30,30,30	0
55	MG	RA	3115	1/1	0.95	0.09	22,22,22,22	0
55	MG	RA	3082	1/1	0.95	0.09	57,57,57,57	0
55	MG	RA	3318	1/1	0.95	0.11	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	RA	3083	1/1	0.95	0.04	44,44,44,44	0
55	MG	RA	3149	1/1	0.95	0.12	27,27,27,27	0
55	MG	YA	3256	1/1	0.95	0.08	39,39,39,39	0
55	MG	XA	1621	1/1	0.95	0.06	45,45,45,45	0
55	MG	YA	3260	1/1	0.95	0.09	35,35,35,35	0
55	MG	XA	1622	1/1	0.95	0.13	41,41,41,41	0
55	MG	QA	1684	1/1	0.95	0.05	42,42,42,42	0
55	MG	YA	3269	1/1	0.95	0.10	32,32,32,32	0
55	MG	YA	3429	1/1	0.95	0.21	26,26,26,26	0
55	MG	YA	3270	1/1	0.95	0.16	17,17,17,17	0
55	MG	RA	3223	1/1	0.95	0.17	35,35,35,35	0
55	MG	YA	3011	1/1	0.95	0.21	13,13,13,13	0
55	MG	RA	3413	1/1	0.95	0.19	30,30,30,30	0
55	MG	RA	3329	1/1	0.95	0.15	46,46,46,46	0
55	MG	YA	3112	1/1	0.95	0.06	49,49,49,49	0
55	MG	QA	1631	1/1	0.95	0.10	35,35,35,35	0
55	MG	XA	1628	1/1	0.95	0.10	44,44,44,44	0
55	MG	YA	3023	1/1	0.95	0.10	17,17,17,17	0
55	MG	YA	3121	1/1	0.95	0.07	35,35,35,35	0
55	MG	YA	3124	1/1	0.95	0.11	10,10,10,10	0
55	MG	RA	3050	1/1	0.95	0.14	24,24,24,24	0
55	MG	RA	3334	1/1	0.95	0.20	19,19,19,19	0
55	MG	RA	3155	1/1	0.95	0.09	26,26,26,26	0
55	MG	YR	202	1/1	0.95	0.12	33,33,33,33	0
55	MG	YU	201	1/1	0.95	0.09	37,37,37,37	0
55	MG	RA	3156	1/1	0.95	0.09	18,18,18,18	0
55	MG	QA	1652	1/1	0.95	0.17	33,33,33,33	0
55	MG	YA	3294	1/1	0.95	0.20	0,0,0,0	0
57	ZN	RY	201	1/1	0.95	0.05	137,137,137,137	0
55	MG	XA	1662	1/1	0.96	0.08	26,26,26,26	0
55	MG	RA	3366	1/1	0.96	0.10	29,29,29,29	0
55	MG	YA	3117	1/1	0.96	0.09	26,26,26,26	0
55	MG	YA	3118	1/1	0.96	0.10	21,21,21,21	0
55	MG	YA	3119	1/1	0.96	0.11	36,36,36,36	0
55	MG	YA	3041	1/1	0.96	0.19	12,12,12,12	0
55	MG	XA	1666	1/1	0.96	0.04	48,48,48,48	0
55	MG	YA	3122	1/1	0.96	0.10	12,12,12,12	0
55	MG	RA	3037	1/1	0.96	0.14	26,26,26,26	0
55	MG	RA	3145	1/1	0.96	0.07	24,24,24,24	0
55	MG	RA	3026	1/1	0.96	0.06	20,20,20,20	0
55	MG	RA	3191	1/1	0.96	0.13	28,28,28,28	0
55	MG	RA	3039	1/1	0.96	0.13	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	YA	3365	1/1	0.96	0.06	6,6,6,6	0
55	MG	YA	3241	1/1	0.96	0.06	14,14,14,14	0
55	MG	RA	3315	1/1	0.96	0.10	31,31,31,31	0
55	MG	YA	3049	1/1	0.96	0.13	18,18,18,18	0
55	MG	XA	1673	1/1	0.96	0.04	33,33,33,33	0
55	MG	RA	3373	1/1	0.96	0.08	25,25,25,25	0
55	MG	YA	3373	1/1	0.96	0.16	19,19,19,19	0
55	MG	YA	3254	1/1	0.96	0.16	49,49,49,49	0
55	MG	QA	1671	1/1	0.96	0.04	34,34,34,34	0
55	MG	YA	3257	1/1	0.96	0.04	14,14,14,14	0
55	MG	YA	3379	1/1	0.96	0.13	29,29,29,29	0
55	MG	XA	1676	1/1	0.96	0.10	29,29,29,29	0
55	MG	RA	3317	1/1	0.96	0.09	20,20,20,20	0
55	MG	RA	3194	1/1	0.96	0.17	42,42,42,42	0
55	MG	YA	3264	1/1	0.96	0.15	41,41,41,41	0
55	MG	YA	3266	1/1	0.96	0.06	23,23,23,23	0
55	MG	YA	3267	1/1	0.96	0.10	9,9,9,9	0
55	MG	YA	3056	1/1	0.96	0.16	31,31,31,31	0
55	MG	RA	3087	1/1	0.96	0.07	59,59,59,59	0
55	MG	RA	3320	1/1	0.96	0.14	30,30,30,30	0
55	MG	RA	3173	1/1	0.96	0.18	34,34,34,34	0
55	MG	YA	3392	1/1	0.96	0.13	14,14,14,14	0
55	MG	RA	3073	1/1	0.96	0.06	23,23,23,23	0
55	MG	RA	3113	1/1	0.96	0.11	14,14,14,14	0
55	MG	RA	3154	1/1	0.96	0.14	17,17,17,17	0
55	MG	RA	3132	1/1	0.96	0.08	40,40,40,40	0
55	MG	YA	3160	1/1	0.96	0.14	11,11,11,11	0
55	MG	YA	3161	1/1	0.96	0.07	18,18,18,18	0
55	MG	RA	3201	1/1	0.96	0.07	38,38,38,38	0
55	MG	RA	3292	1/1	0.96	0.05	40,40,40,40	0
55	MG	QA	1667	1/1	0.96	0.15	44,44,44,44	0
55	MG	QA	1604	1/1	0.96	0.11	46,46,46,46	0
55	MG	RA	3180	1/1	0.96	0.14	31,31,31,31	0
55	MG	YA	3173	1/1	0.96	0.15	12,12,12,12	0
55	MG	RE	302	1/1	0.96	0.08	25,25,25,25	0
55	MG	Y7	101	1/1	0.96	0.11	24,24,24,24	0
55	MG	YA	3072	1/1	0.96	0.14	6,6,6,6	0
55	MG	RE	303	1/1	0.96	0.16	16,16,16,16	0
55	MG	RA	3344	1/1	0.96	0.06	39,39,39,39	0
55	MG	RA	3397	1/1	0.96	0.11	29,29,29,29	0
55	MG	YA	3181	1/1	0.96	0.07	22,22,22,22	0
55	MG	YA	3301	1/1	0.96	0.15	12,12,12,12	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	RA	3398	1/1	0.96	0.09	36,36,36,36	0
55	MG	YA	3005	1/1	0.96	0.22	26,26,26,26	0
55	MG	YA	3006	1/1	0.96	0.12	3,3,3,3	0
55	MG	YA	3185	1/1	0.96	0.05	41,41,41,41	0
55	MG	RA	3264	1/1	0.96	0.10	25,25,25,25	0
55	MG	YA	3012	1/1	0.96	0.12	7,7,7,7	0
55	MG	YA	3424	1/1	0.96	0.16	39,39,39,39	0
55	MG	RA	3298	1/1	0.96	0.11	49,49,49,49	0
55	MG	YA	3085	1/1	0.96	0.07	24,24,24,24	0
55	MG	YA	3311	1/1	0.96	0.13	18,18,18,18	0
55	MG	YA	3014	1/1	0.96	0.14	4,4,4,4	0
55	MG	RA	3206	1/1	0.96	0.10	47,47,47,47	0
55	MG	R1	101	1/1	0.96	0.22	40,40,40,40	0
55	MG	YA	3434	1/1	0.96	0.07	23,23,23,23	0
55	MG	YA	3019	1/1	0.96	0.11	1,1,1,1	0
55	MG	YA	3437	1/1	0.96	0.07	23,23,23,23	0
55	MG	RA	3404	1/1	0.96	0.17	37,37,37,37	0
55	MG	YA	3021	1/1	0.96	0.07	13,13,13,13	0
55	MG	RA	3182	1/1	0.96	0.11	39,39,39,39	0
55	MG	QA	1644	1/1	0.96	0.09	40,40,40,40	0
55	MG	YA	3096	1/1	0.96	0.18	0,0,0,0	0
55	MG	YB	205	1/1	0.96	0.14	41,41,41,41	0
55	MG	YA	3098	1/1	0.96	0.16	2,2,2,2	0
55	MG	XA	1653	1/1	0.96	0.10	41,41,41,41	0
55	MG	XA	1654	1/1	0.96	0.16	27,27,27,27	0
55	MG	YE	301	1/1	0.96	0.16	24,24,24,24	0
55	MG	QA	1675	1/1	0.96	0.07	46,46,46,46	0
55	MG	RA	3034	1/1	0.96	0.08	27,27,27,27	0
55	MG	RA	3273	1/1	0.96	0.04	63,63,63,63	0
55	MG	QA	1603	1/1	0.96	0.05	41,41,41,41	0
55	MG	RA	3414	1/1	0.96	0.08	41,41,41,41	0
55	MG	YA	3223	1/1	0.96	0.12	12,12,12,12	0
55	MG	RA	3036	1/1	0.96	0.11	32,32,32,32	0
55	MG	RA	3246	1/1	0.96	0.14	44,44,44,44	0
55	MG	YA	3226	1/1	0.96	0.22	45,45,45,45	0
55	MG	RF	301	1/1	0.97	0.10	37,37,37,37	0
55	MG	YA	3334	1/1	0.97	0.07	31,31,31,31	0
55	MG	YA	3335	1/1	0.97	0.14	2,2,2,2	0
55	MG	RA	3358	1/1	0.97	0.16	19,19,19,19	0
55	MG	YA	3222	1/1	0.97	0.14	8,8,8,8	0
55	MG	RA	3022	1/1	0.97	0.06	48,48,48,48	0
55	MG	YA	3128	1/1	0.97	0.14	10,10,10,10	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	YA	3129	1/1	0.97	0.13	10,10,10,10	0
55	MG	YA	3130	1/1	0.97	0.10	22,22,22,22	0
55	MG	YA	3343	1/1	0.97	0.06	39,39,39,39	0
55	MG	RA	3403	1/1	0.97	0.04	25,25,25,25	0
55	MG	YA	3132	1/1	0.97	0.17	1,1,1,1	0
55	MG	YA	3133	1/1	0.97	0.07	6,6,6,6	0
55	MG	YA	3134	1/1	0.97	0.10	28,28,28,28	0
55	MG	YA	3001	1/1	0.97	0.04	16,16,16,16	0
55	MG	YA	3232	1/1	0.97	0.16	24,24,24,24	0
55	MG	YA	3351	1/1	0.97	0.16	22,22,22,22	0
55	MG	RA	3361	1/1	0.97	0.14	37,37,37,37	0
55	MG	RA	3405	1/1	0.97	0.14	24,24,24,24	0
55	MG	RA	3243	1/1	0.97	0.10	17,17,17,17	0
55	MG	YA	3140	1/1	0.97	0.15	10,10,10,10	0
55	MG	RA	3076	1/1	0.97	0.04	19,19,19,19	0
55	MG	YA	3142	1/1	0.97	0.25	1,1,1,1	0
55	MG	RA	3408	1/1	0.97	0.14	21,21,21,21	0
55	MG	YA	3363	1/1	0.97	0.07	9,9,9,9	0
55	MG	YA	3008	1/1	0.97	0.09	7,7,7,7	0
55	MG	RA	3245	1/1	0.97	0.13	32,32,32,32	0
55	MG	YA	3366	1/1	0.97	0.13	25,25,25,25	0
55	MG	YA	3069	1/1	0.97	0.07	15,15,15,15	0
55	MG	QF	301	1/1	0.97	0.06	46,46,46,46	0
55	MG	RA	3017	1/1	0.97	0.12	16,16,16,16	0
55	MG	YA	3247	1/1	0.97	0.09	2,2,2,2	0
55	MG	YA	3371	1/1	0.97	0.10	21,21,21,21	0
55	MG	RA	3271	1/1	0.97	0.17	47,47,47,47	0
55	MG	YA	3250	1/1	0.97	0.22	30,30,30,30	0
55	MG	YA	3374	1/1	0.97	0.10	27,27,27,27	0
55	MG	RA	3205	1/1	0.97	0.07	40,40,40,40	0
55	MG	YA	3376	1/1	0.97	0.16	9,9,9,9	0
55	MG	YA	3255	1/1	0.97	0.08	18,18,18,18	0
55	MG	YA	3153	1/1	0.97	0.11	16,16,16,16	0
55	MG	YA	3154	1/1	0.97	0.06	21,21,21,21	0
55	MG	RA	3326	1/1	0.97	0.03	21,21,21,21	0
55	MG	YA	3259	1/1	0.97	0.08	31,31,31,31	0
55	MG	RA	3088	1/1	0.97	0.06	36,36,36,36	0
55	MG	YA	3158	1/1	0.97	0.11	8,8,8,8	0
55	MG	YA	3263	1/1	0.97	0.11	4,4,4,4	0
55	MG	RA	3328	1/1	0.97	0.15	22,22,22,22	0
55	MG	RA	3172	1/1	0.97	0.17	36,36,36,36	0
55	MG	RA	3102	1/1	0.97	0.09	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	YA	3162	1/1	0.97	0.12	20,20,20,20	0
55	MG	RA	3331	1/1	0.97	0.14	36,36,36,36	0
55	MG	RA	3136	1/1	0.97	0.09	52,52,52,52	0
55	MG	YA	3026	1/1	0.97	0.07	5,5,5,5	0
55	MG	XA	1665	1/1	0.97	0.18	34,34,34,34	0
55	MG	YA	3395	1/1	0.97	0.06	31,31,31,31	0
55	MG	YA	3396	1/1	0.97	0.11	38,38,38,38	0
55	MG	RA	3277	1/1	0.97	0.04	28,28,28,28	0
55	MG	YA	3172	1/1	0.97	0.12	3,3,3,3	0
55	MG	YA	3030	1/1	0.97	0.14	0,0,0,0	0
55	MG	YA	3174	1/1	0.97	0.04	20,20,20,20	0
55	MG	YA	3277	1/1	0.97	0.18	40,40,40,40	0
55	MG	YA	3402	1/1	0.97	0.21	44,44,44,44	0
55	MG	RA	3377	1/1	0.97	0.10	30,30,30,30	0
55	MG	RA	3335	1/1	0.97	0.07	51,51,51,51	0
55	MG	YA	3280	1/1	0.97	0.12	4,4,4,4	0
55	MG	YA	3090	1/1	0.97	0.04	27,27,27,27	0
55	MG	RA	3336	1/1	0.97	0.12	31,31,31,31	0
55	MG	RA	3028	1/1	0.97	0.05	42,42,42,42	0
55	MG	YA	3093	1/1	0.97	0.16	3,3,3,3	0
55	MG	YA	3287	1/1	0.97	0.12	31,31,31,31	0
55	MG	YA	3288	1/1	0.97	0.05	37,37,37,37	0
55	MG	RA	3338	1/1	0.97	0.12	28,28,28,28	0
55	MG	RA	3090	1/1	0.97	0.27	27,27,27,27	0
55	MG	YA	3292	1/1	0.97	0.20	29,29,29,29	0
55	MG	RA	3124	1/1	0.97	0.11	18,18,18,18	0
55	MG	YA	3097	1/1	0.97	0.17	1,1,1,1	0
55	MG	YA	3038	1/1	0.97	0.09	7,7,7,7	0
55	MG	YA	3099	1/1	0.97	0.15	0,0,0,0	0
55	MG	YA	3039	1/1	0.97	0.12	1,1,1,1	0
55	MG	YA	3189	1/1	0.97	0.13	40,40,40,40	0
55	MG	RA	3385	1/1	0.97	0.08	41,41,41,41	0
55	MG	YA	3192	1/1	0.97	0.23	50,50,50,50	0
55	MG	RA	3232	1/1	0.97	0.11	20,20,20,20	0
55	MG	RB	205	1/1	0.97	0.08	24,24,24,24	0
55	MG	YA	3305	1/1	0.97	0.14	28,28,28,28	0
55	MG	RA	3105	1/1	0.97	0.03	15,15,15,15	0
55	MG	RA	3235	1/1	0.97	0.09	35,35,35,35	0
55	MG	YA	3197	1/1	0.97	0.06	27,27,27,27	0
55	MG	YA	3432	1/1	0.97	0.08	12,12,12,12	0
55	MG	RA	3347	1/1	0.97	0.04	57,57,57,57	0
55	MG	RA	3348	1/1	0.97	0.10	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	RA	3142	1/1	0.97	0.06	11,11,11,11	0
55	MG	YA	3203	1/1	0.97	0.14	10,10,10,10	0
55	MG	YA	3204	1/1	0.97	0.11	10,10,10,10	0
55	MG	RA	3353	1/1	0.97	0.17	36,36,36,36	0
55	MG	RA	3041	1/1	0.97	0.06	46,46,46,46	0
55	MG	YB	203	1/1	0.97	0.10	13,13,13,13	0
55	MG	XA	1636	1/1	0.97	0.07	26,26,26,26	0
55	MG	YA	3208	1/1	0.97	0.07	20,20,20,20	0
55	MG	YA	3209	1/1	0.97	0.22	21,21,21,21	0
55	MG	RA	3047	1/1	0.97	0.10	37,37,37,37	0
55	MG	YA	3322	1/1	0.97	0.14	18,18,18,18	0
55	MG	RA	3064	1/1	0.97	0.08	22,22,22,22	0
55	MG	YA	3324	1/1	0.97	0.04	33,33,33,33	0
55	MG	XA	1639	1/1	0.97	0.07	38,38,38,38	0
55	MG	YA	3326	1/1	0.97	0.05	18,18,18,18	0
55	MG	RA	3056	1/1	0.97	0.08	46,46,46,46	0
55	MG	YA	3328	1/1	0.97	0.09	9,9,9,9	0
55	MG	RE	304	1/1	0.97	0.12	14,14,14,14	0
56	SF4	QD	301	8/8	0.97	0.05	96,109,113,114	0
55	MG	Y1	101	1/1	0.97	0.05	31,31,31,31	0
55	MG	YA	3331	1/1	0.97	0.08	40,40,40,40	0
55	MG	YA	3332	1/1	0.97	0.07	39,39,39,39	0
57	ZN	Y9	101	1/1	0.97	0.05	54,54,54,54	0
55	MG	RA	3381	1/1	0.98	0.04	22,22,22,22	0
55	MG	YA	3191	1/1	0.98	0.03	56,56,56,56	0
55	MG	YA	3252	1/1	0.98	0.15	1,1,1,1	0
55	MG	YA	3389	1/1	0.98	0.07	15,15,15,15	0
55	MG	RA	3100	1/1	0.98	0.06	29,29,29,29	0
55	MG	YA	3319	1/1	0.98	0.03	1,1,1,1	0
55	MG	RA	3267	1/1	0.98	0.08	10,10,10,10	0
55	MG	XA	1664	1/1	0.98	0.09	28,28,28,28	0
55	MG	RA	3111	1/1	0.98	0.05	29,29,29,29	0
55	MG	XA	1631	1/1	0.98	0.03	36,36,36,36	0
55	MG	YA	3007	1/1	0.98	0.11	1,1,1,1	0
55	MG	RA	3233	1/1	0.98	0.09	16,16,16,16	0
55	MG	YA	3144	1/1	0.98	0.06	14,14,14,14	0
55	MG	YA	3010	1/1	0.98	0.10	9,9,9,9	0
55	MG	YA	3202	1/1	0.98	0.03	17,17,17,17	0
55	MG	YA	3265	1/1	0.98	0.10	21,21,21,21	0
55	MG	RA	3151	1/1	0.98	0.20	39,39,39,39	0
55	MG	RA	3360	1/1	0.98	0.13	39,39,39,39	0
55	MG	QA	1636	1/1	0.98	0.03	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	RA	3114	1/1	0.98	0.12	6,6,6,6	0
55	MG	YA	3150	1/1	0.98	0.13	2,2,2,2	0
55	MG	RA	3390	1/1	0.98	0.07	41,41,41,41	0
55	MG	RA	3004	1/1	0.98	0.06	21,21,21,21	0
55	MG	YA	3210	1/1	0.98	0.23	25,25,25,25	0
55	MG	YA	3339	1/1	0.98	0.04	20,20,20,20	0
55	MG	YA	3211	1/1	0.98	0.16	19,19,19,19	0
55	MG	YA	3017	1/1	0.98	0.12	7,7,7,7	0
55	MG	YA	3102	1/1	0.98	0.06	1,1,1,1	0
55	MG	YA	3018	1/1	0.98	0.14	1,1,1,1	0
55	MG	YA	3415	1/1	0.98	0.15	38,38,38,38	0
55	MG	YA	3344	1/1	0.98	0.09	11,11,11,11	0
55	MG	YA	3104	1/1	0.98	0.03	26,26,26,26	0
55	MG	YA	3418	1/1	0.98	0.25	42,42,42,42	0
55	MG	RA	3393	1/1	0.98	0.04	38,38,38,38	0
55	MG	XA	1607	1/1	0.98	0.06	28,28,28,28	0
55	MG	RA	3053	1/1	0.98	0.13	23,23,23,23	0
55	MG	YA	3282	1/1	0.98	0.10	3,3,3,3	0
55	MG	RA	3141	1/1	0.98	0.06	17,17,17,17	0
55	MG	YA	3221	1/1	0.98	0.10	26,26,26,26	0
55	MG	RA	3396	1/1	0.98	0.03	29,29,29,29	0
55	MG	RA	3157	1/1	0.98	0.13	24,24,24,24	0
55	MG	RA	3117	1/1	0.98	0.07	35,35,35,35	0
55	MG	YA	3115	1/1	0.98	0.16	3,3,3,3	0
55	MG	YA	3358	1/1	0.98	0.07	13,13,13,13	0
55	MG	YA	3290	1/1	0.98	0.10	1,1,1,1	0
55	MG	YA	3168	1/1	0.98	0.05	22,22,22,22	0
55	MG	YA	3027	1/1	0.98	0.12	5,5,5,5	0
55	MG	YA	3435	1/1	0.98	0.04	17,17,17,17	0
55	MG	YA	3362	1/1	0.98	0.10	18,18,18,18	0
55	MG	XA	1681	1/1	0.98	0.14	20,20,20,20	0
55	MG	RA	3065	1/1	0.98	0.06	18,18,18,18	0
55	MG	RA	3342	1/1	0.98	0.04	31,31,31,31	0
55	MG	YA	3296	1/1	0.98	0.12	17,17,17,17	0
55	MG	RA	3343	1/1	0.98	0.12	14,14,14,14	0
55	MG	RA	3297	1/1	0.98	0.07	26,26,26,26	0
55	MG	RA	3054	1/1	0.98	0.04	21,21,21,21	0
55	MG	YA	3300	1/1	0.98	0.08	5,5,5,5	0
55	MG	YA	3123	1/1	0.98	0.23	22,22,22,22	0
55	MG	QA	1680	1/1	0.98	0.03	32,32,32,32	0
55	MG	YB	208	1/1	0.98	0.03	25,25,25,25	0
55	MG	RA	3146	1/1	0.98	0.19	18,18,18,18	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	RA	3323	1/1	0.98	0.07	11,11,11,11	0
55	MG	YA	3077	1/1	0.98	0.15	12,12,12,12	0
55	MG	RA	3349	1/1	0.98	0.05	25,25,25,25	0
55	MG	YQ	201	1/1	0.98	0.04	30,30,30,30	0
55	MG	RA	3092	1/1	0.98	0.03	50,50,50,50	0
55	MG	RA	3409	1/1	0.98	0.07	24,24,24,24	0
55	MG	RA	3352	1/1	0.98	0.05	35,35,35,35	0
55	MG	YA	3243	1/1	0.98	0.16	0,0,0,0	0
55	MG	YA	3083	1/1	0.98	0.04	11,11,11,11	0
55	MG	YA	3382	1/1	0.98	0.12	24,24,24,24	0
55	MG	RA	3302	1/1	0.98	0.03	37,37,37,37	0
55	MG	YA	3246	1/1	0.98	0.07	3,3,3,3	0
57	ZN	XN	101	1/1	0.98	0.05	144,144,144,144	0
55	MG	RA	3108	1/1	0.98	0.09	10,10,10,10	0
55	MG	RA	3227	1/1	0.99	0.06	20,20,20,20	0
55	MG	YA	3156	1/1	0.99	0.04	6,6,6,6	0
55	MG	YA	3433	1/1	0.99	0.04	18,18,18,18	0
55	MG	YA	3251	1/1	0.99	0.18	5,5,5,5	0
55	MG	RA	3159	1/1	0.99	0.04	31,31,31,31	0
55	MG	YA	3253	1/1	0.99	0.03	1,1,1,1	0
55	MG	RA	3340	1/1	0.99	0.06	11,11,11,11	0
55	MG	XA	1652	1/1	0.99	0.05	26,26,26,26	0
55	MG	RA	3426	1/1	0.99	0.04	34,34,34,34	0
55	MG	YA	3285	1/1	0.99	0.10	1,1,1,1	0
55	MG	YA	3106	1/1	0.99	0.03	18,18,18,18	0
55	MG	RA	3109	1/1	0.99	0.07	21,21,21,21	0
55	MG	YA	3108	1/1	0.99	0.10	2,2,2,2	0
55	MG	RA	3350	1/1	0.99	0.03	29,29,29,29	0
55	MG	YA	3187	1/1	0.99	0.04	22,22,22,22	0
55	MG	YA	3320	1/1	0.99	0.06	42,42,42,42	0
55	MG	YA	3262	1/1	0.99	0.20	5,5,5,5	0
55	MG	YA	3165	1/1	0.99	0.17	13,13,13,13	0
55	MG	YA	3212	1/1	0.99	0.06	22,22,22,22	0
55	MG	YA	3022	1/1	0.99	0.07	8,8,8,8	0
55	MG	YA	3356	1/1	0.99	0.03	0,0,0,0	0
55	MG	YA	3009	1/1	0.99	0.15	1,1,1,1	0
55	MG	YA	3169	1/1	0.99	0.05	15,15,15,15	0
55	MG	RA	3112	1/1	0.99	0.06	26,26,26,26	0
55	MG	RA	3241	1/1	0.99	0.18	5,5,5,5	0
55	MG	YA	3082	1/1	0.99	0.04	10,10,10,10	0
55	MG	RA	3063	1/1	0.99	0.09	17,17,17,17	0
56	SF4	XD	301	8/8	0.99	0.03	95,101,103,103	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	RA	3321	1/1	0.99	0.05	23,23,23,23	0
57	ZN	R5	101	1/1	0.99	0.04	84,84,84,84	0
57	ZN	R6	101	1/1	0.99	0.05	70,70,70,70	0
55	MG	YA	3135	1/1	0.99	0.02	32,32,32,32	0
55	MG	YA	3198	1/1	0.99	0.21	5,5,5,5	0
55	MG	RA	3391	1/1	0.99	0.07	25,25,25,25	0
57	ZN	Y5	101	1/1	0.99	0.03	66,66,66,66	0
55	MG	YA	3248	1/1	0.99	0.04	1,1,1,1	0
57	ZN	YY	201	1/1	0.99	0.02	69,69,69,69	0
55	MG	YA	3426	1/1	1.00	0.17	4,4,4,4	0
55	MG	RA	3332	1/1	1.00	0.04	4,4,4,4	0
55	MG	YA	3355	1/1	1.00	0.06	5,5,5,5	0
55	MG	YA	3113	1/1	1.00	0.07	10,10,10,10	0
55	MG	YA	3166	1/1	1.00	0.13	9,9,9,9	0
57	ZN	Y6	101	1/1	1.00	0.02	44,44,44,44	0
55	MG	RA	3425	1/1	1.00	0.02	25,25,25,25	0
55	MG	RA	3322	1/1	1.00	0.03	33,33,33,33	0

6.5 Other polymers (i)

There are no such residues in this entry.