



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 12, 2026 – 03:43 PM UTC

PDB ID : 4W4G / pdb_00004w4g
Title : Postcleavage state of 70S bound to HigB toxin and AAA (lysine) codon
Authors : Schureck, M.A.; Maehigashi, T.; Dunkle, J.A.; Dunham, C.M.
Deposited on : 2014-08-14
Resolution : 3.30 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
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

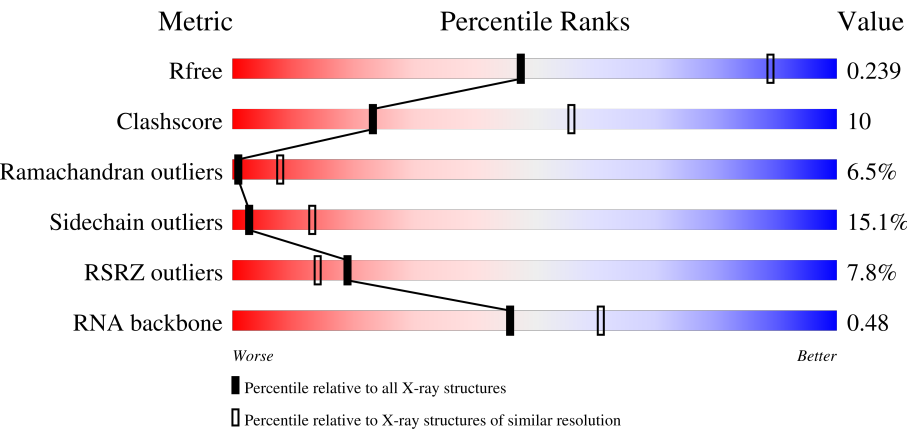
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.30 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	1169 (3.32-3.28)
Clashscore	190562	1209 (3.32-3.28)
Ramachandran outliers	187476	1188 (3.32-3.28)
Sidechain outliers	187428	1187 (3.32-3.28)
RSRZ outliers	180081	1169 (3.32-3.28)
RNA backbone	3983	1048 (3.60-3.00)

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

Mol	Chain	Length	Quality of chain
1	QA	1522	2% 56%33%10% .
1	XA	1522	2% 57%35%7% .
2	QB	256	8% 52%31%9%8%
2	XB	256	13% 50%34%8%8%

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

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Mol	Chain	Length	Quality of chain
15	XO	89	
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	25	
21	XU	25	
22	QV	77	
22	QW	77	
22	XV	77	
22	XW	77	
23	QX	20	
23	XX	20	
24	QY	118	
24	XY	118	
25	RA	2916	
25	YA	2916	
26	RB	124	
26	YB	124	

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Mol	Chain	Length	Quality of chain
27	RD	276	
27	YD	276	
28	RE	206	
28	YE	206	
29	RF	210	
29	YF	210	
30	RG	182	
30	YG	182	
31	RH	180	
31	YH	180	
32	RI	148	
32	YI	148	
33	RN	140	
33	YN	140	
34	RO	122	
34	YO	122	
35	RP	150	
35	YP	150	
36	RQ	141	
36	YQ	141	
37	RR	118	
37	YR	118	
38	RS	112	
38	YS	112	
39	RT	146	

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Mol	Chain	Length	Quality of chain
39	YT	146	
40	RU	118	
40	YU	118	
41	RV	101	
41	YV	101	
42	RW	113	
42	YW	113	
43	RX	96	
43	YX	96	
44	RY	110	
44	YY	110	
45	RZ	206	
45	YZ	206	
46	R0	85	
46	Y0	85	
47	R1	98	
47	Y1	98	
48	R2	72	
48	Y2	72	
49	R3	60	
49	Y3	60	
50	R4	71	
50	Y4	71	
51	R5	60	
51	Y5	60	

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Mol	Chain	Length	Quality of chain
52	R6	54	
52	Y6	54	
53	R7	49	
53	Y7	49	
54	R8	65	
54	Y8	65	
55	R9	37	
55	Y9	37	

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
56	MG	RA	3405	-	-	-	X
56	MG	YA	3001	-	-	-	X
56	MG	YA	3167	-	-	-	X

2 Entry composition

There are 57 unique types of molecules in this entry. The entry contains 297400 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
			32472	14453	6011	10497	1511			
1	XA	1508	Total	C	N	O	P	0	0	0
			32409	14425	6001	10475	1508			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	QB	236	Total	C	N	O	S	0	0	0
			1915	1223	343	344	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	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			
3	XC	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	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	154	Total	C	N	O	S	0	0	0
			1178	743	221	210	4			
5	XE	154	Total	C	N	O	S	0	0	0
			1178	743	221	210	4			

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	QI	128	Total	C	N	O	S	0	0	0
			1018	644	198	175	1			
9	XI	128	Total	C	N	O	S	0	0	0
			1018	644	198	175	1			

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	QK	121	Total	C	N	O	S	0	0	0
			901	560	171	167	3			
11	XK	121	Total	C	N	O	S	0	0	0
			901	560	171	167	3			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	QM	118	Total	C	N	O	S	0	0	0
			937	579	193	163	2			
13	XM	118	Total	C	N	O	S	0	0	0
			937	579	193	163	2			

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	QR	71	Total	C	N	O	0	0	0
			585	373	116	96			
18	XR	71	Total	C	N	O	0	0	0
			585	373	116	96			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	QS	82	Total	C	N	O	S	0	0	0
			656	419	121	114	2			
19	XS	82	Total	C	N	O	S	0	0	0
			656	419	121	114	2			

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

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

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

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

- Molecule 22 is a RNA chain called tRNA fMet.

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

- Molecule 23 is a RNA chain called messenger RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	QX	18	Total	C	N	O	P	0	0	0
			399	177	82	121	19			
23	XX	18	Total	C	N	O	P	0	0	0
			399	177	82	121	19			

- Molecule 24 is a protein called Host inhibition of growth B.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
24	QY	92	Total	C	N	O	0	0	0
			756	484	134	138			
24	XY	92	Total	C	N	O	0	0	0
			756	484	134	138			

There are 54 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
QY	0	MET	-	insertion	UNP Q7A225
QY	1	GLY	-	expression tag	UNP Q7A225
QY	93	LYS	-	expression tag	UNP Q7A225
QY	94	LEU	-	expression tag	UNP Q7A225
QY	95	GLY	-	expression tag	UNP Q7A225
QY	96	PRO	-	expression tag	UNP Q7A225
QY	97	GLU	-	expression tag	UNP Q7A225

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Chain	Residue	Modelled	Actual	Comment	Reference
QY	98	GLN	-	expression tag	UNP Q7A225
QY	99	LYS	-	expression tag	UNP Q7A225
QY	100	LEU	-	expression tag	UNP Q7A225
QY	101	ILE	-	expression tag	UNP Q7A225
QY	102	SER	-	expression tag	UNP Q7A225
QY	103	GLU	-	expression tag	UNP Q7A225
QY	104	GLU	-	expression tag	UNP Q7A225
QY	105	ASP	-	expression tag	UNP Q7A225
QY	106	LEU	-	expression tag	UNP Q7A225
QY	107	ASN	-	expression tag	UNP Q7A225
QY	108	SER	-	expression tag	UNP Q7A225
QY	109	ALA	-	expression tag	UNP Q7A225
QY	110	VAL	-	expression tag	UNP Q7A225
QY	111	ASP	-	expression tag	UNP Q7A225
QY	112	HIS	-	expression tag	UNP Q7A225
QY	113	HIS	-	expression tag	UNP Q7A225
QY	114	HIS	-	expression tag	UNP Q7A225
QY	115	HIS	-	expression tag	UNP Q7A225
QY	116	HIS	-	expression tag	UNP Q7A225
QY	117	HIS	-	expression tag	UNP Q7A225
XY	0	MET	-	insertion	UNP Q7A225
XY	1	GLY	-	expression tag	UNP Q7A225
XY	93	LYS	-	expression tag	UNP Q7A225
XY	94	LEU	-	expression tag	UNP Q7A225
XY	95	GLY	-	expression tag	UNP Q7A225
XY	96	PRO	-	expression tag	UNP Q7A225
XY	97	GLU	-	expression tag	UNP Q7A225
XY	98	GLN	-	expression tag	UNP Q7A225
XY	99	LYS	-	expression tag	UNP Q7A225
XY	100	LEU	-	expression tag	UNP Q7A225
XY	101	ILE	-	expression tag	UNP Q7A225
XY	102	SER	-	expression tag	UNP Q7A225
XY	103	GLU	-	expression tag	UNP Q7A225
XY	104	GLU	-	expression tag	UNP Q7A225
XY	105	ASP	-	expression tag	UNP Q7A225
XY	106	LEU	-	expression tag	UNP Q7A225
XY	107	ASN	-	expression tag	UNP Q7A225
XY	108	SER	-	expression tag	UNP Q7A225
XY	109	ALA	-	expression tag	UNP Q7A225
XY	110	VAL	-	expression tag	UNP Q7A225
XY	111	ASP	-	expression tag	UNP Q7A225
XY	112	HIS	-	expression tag	UNP Q7A225

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Chain	Residue	Modelled	Actual	Comment	Reference
XY	113	HIS	-	expression tag	UNP Q7A225
XY	114	HIS	-	expression tag	UNP Q7A225
XY	115	HIS	-	expression tag	UNP Q7A225
XY	116	HIS	-	expression tag	UNP Q7A225
XY	117	HIS	-	expression tag	UNP Q7A225

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	RA	2891	Total	C	N	O	P	0	0	0
			62269	27713	11649	20016	2891			
25	YA	2875	Total	C	N	O	P	0	0	0
			61924	27560	11583	19906	2875			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	RB	122	Total	C	N	O	P	0	0	0
			2617	1166	486	844	121			
26	YB	122	Total	C	N	O	P	0	0	0
			2617	1166	486	844	121			

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	RF	208	Total	C	N	O	S	0	0	0
			1627	1037	304	283	3			
29	YF	208	Total	C	N	O	S	0	0	0
			1627	1037	304	283	3			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	RQ	140	Total	C	N	O	S	0	0	0
			1112	710	210	185	7			
36	YQ	139	Total	C	N	O	S	0	0	0
			1107	707	209	184	7			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	RZ	176	Total	C	N	O	S	0	0	0
			1404	897	252	252	3			
45	YZ	183	Total	C	N	O	S	0	0	0
			1461	933	260	265	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	R0	83	Total	C	N	O	S	0	0	0
			657	407	139	110	1			
46	Y0	83	Total	C	N	O	S	0	0	0
			657	407	139	110	1			

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	R4	70	Total	C	N	O	S	0	0	0
			573	359	107	103	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	Y4	70	Total	C	N	O	S	0	0	0
			573	359	107	103	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	R5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			
51	Y5	57	Total	C	N	O	S	0	0	0
			442	278	88	71	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	R6	48	Total	C	N	O	S	0	0	0
			417	259	86	68	4			
52	Y6	48	Total	C	N	O	S	0	0	0
			417	259	86	68	4			

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	R9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			
55	Y9	36	Total	C	N	O	S	0	0	0
			298	183	67	45	3			

- Molecule 56 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	QA	140	Total 140	Mg 140	0	0
56	QE	1	Total 1	Mg 1	0	0
56	QL	1	Total 1	Mg 1	0	0
56	QV	5	Total 5	Mg 5	0	0
56	RA	413	Total 413	Mg 413	0	0
56	RB	4	Total 4	Mg 4	0	0
56	RD	2	Total 2	Mg 2	0	0
56	RE	1	Total 1	Mg 1	0	0
56	RF	1	Total 1	Mg 1	0	0
56	RP	2	Total 2	Mg 2	0	0
56	RQ	2	Total 2	Mg 2	0	0
56	RR	1	Total 1	Mg 1	0	0
56	RU	1	Total 1	Mg 1	0	0
56	RY	1	Total 1	Mg 1	0	0
56	R0	2	Total 2	Mg 2	0	0
56	R2	1	Total 1	Mg 1	0	0
56	R5	3	Total 3	Mg 3	0	0
56	XA	160	Total 160	Mg 160	0	0
56	XD	1	Total 1	Mg 1	0	0
56	XF	1	Total 1	Mg 1	0	0
56	XL	1	Total 1	Mg 1	0	0

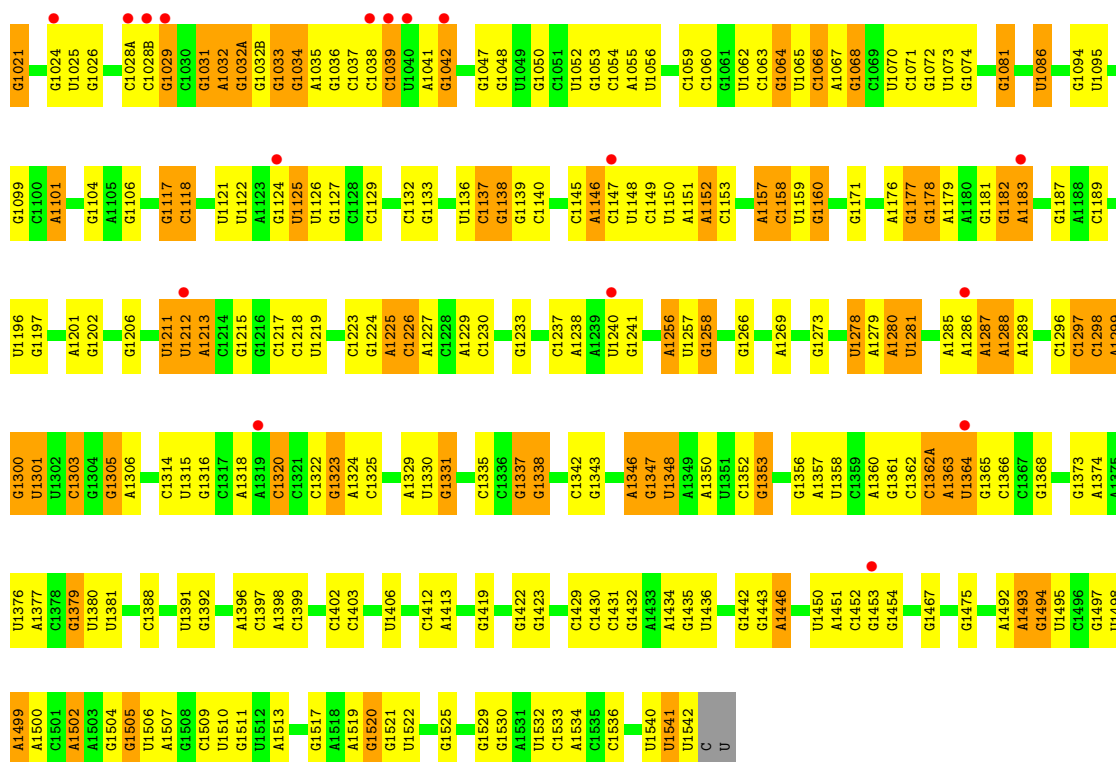
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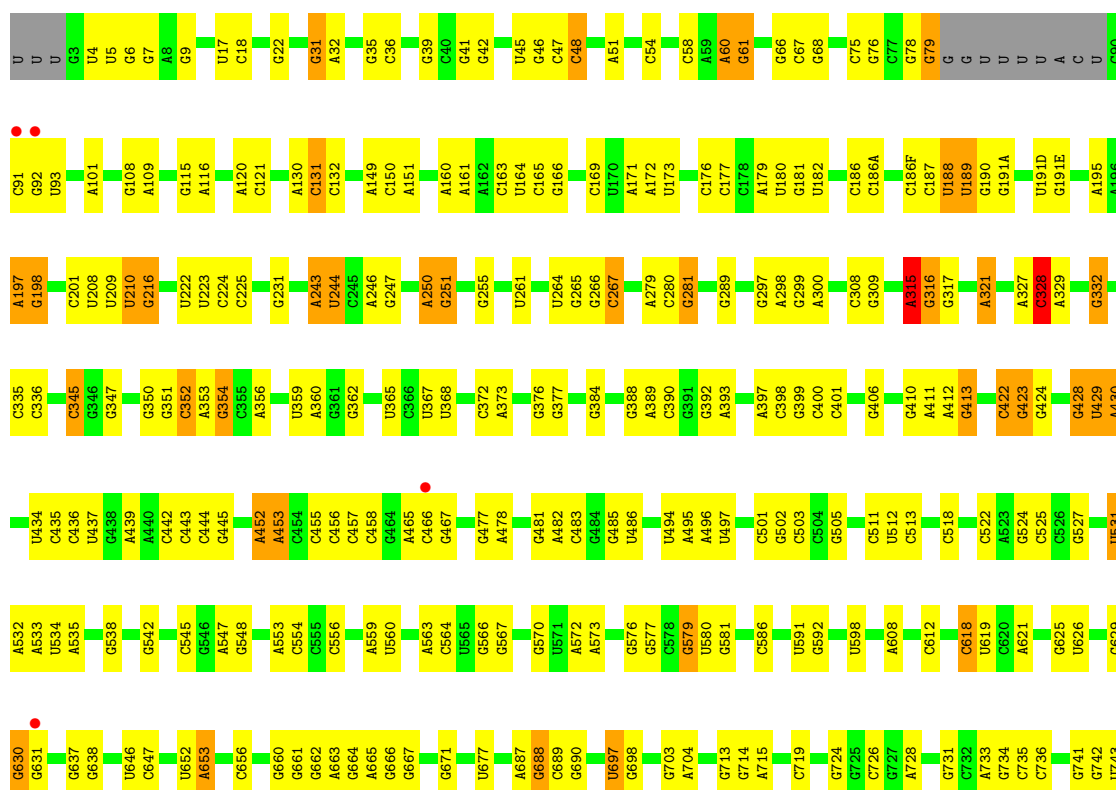
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	XN	1	Total 1	Mg 1	0	0
56	XV	4	Total 4	Mg 4	0	0
56	YA	464	Total 464	Mg 464	0	0
56	YB	5	Total 5	Mg 5	0	0
56	YD	1	Total 1	Mg 1	0	0
56	YE	2	Total 2	Mg 2	0	0
56	YG	1	Total 1	Mg 1	0	0
56	YH	1	Total 1	Mg 1	0	0
56	YN	1	Total 1	Mg 1	0	0
56	YO	1	Total 1	Mg 1	0	0
56	YP	2	Total 2	Mg 2	0	0
56	YQ	2	Total 2	Mg 2	0	0
56	YR	1	Total 1	Mg 1	0	0
56	YU	1	Total 1	Mg 1	0	0
56	YV	1	Total 1	Mg 1	0	0
56	YY	1	Total 1	Mg 1	0	0
56	Y0	3	Total 3	Mg 3	0	0
56	Y1	1	Total 1	Mg 1	0	0
56	Y5	2	Total 2	Mg 2	0	0
56	Y7	1	Total 1	Mg 1	0	0

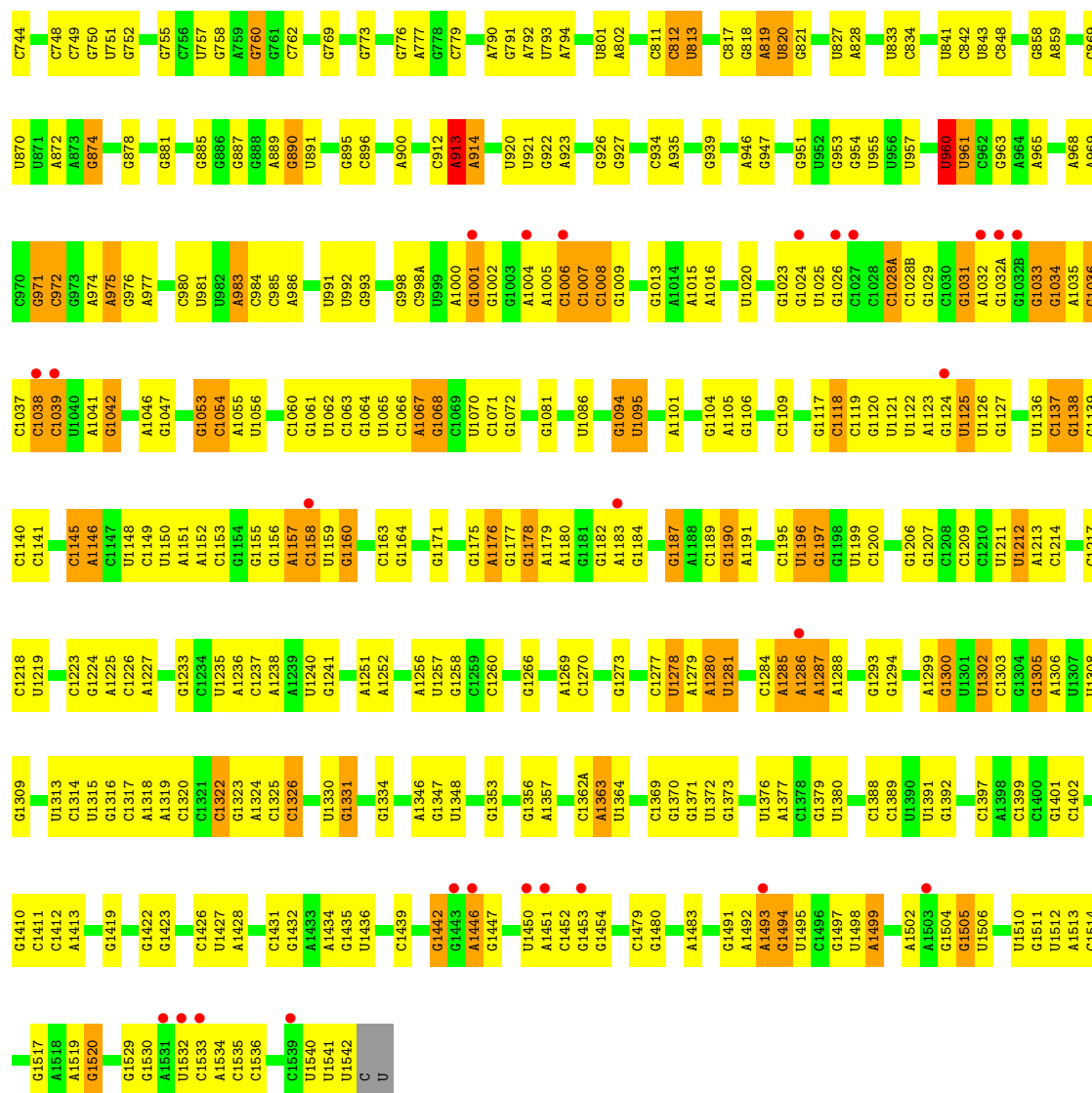
- Molecule 57 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	QD	1	Total 1	Zn 1	0	0
57	QN	1	Total 1	Zn 1	0	0
57	XD	1	Total 1	Zn 1	0	0
57	XN	1	Total 1	Zn 1	0	0



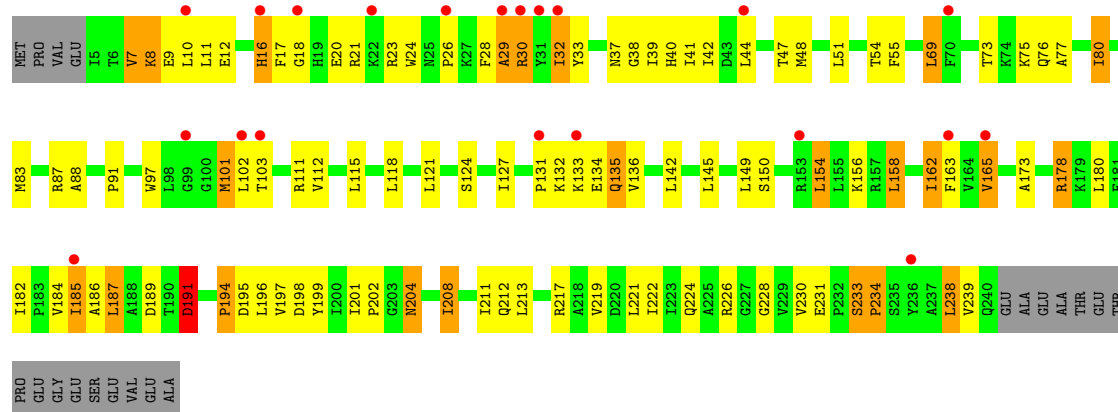
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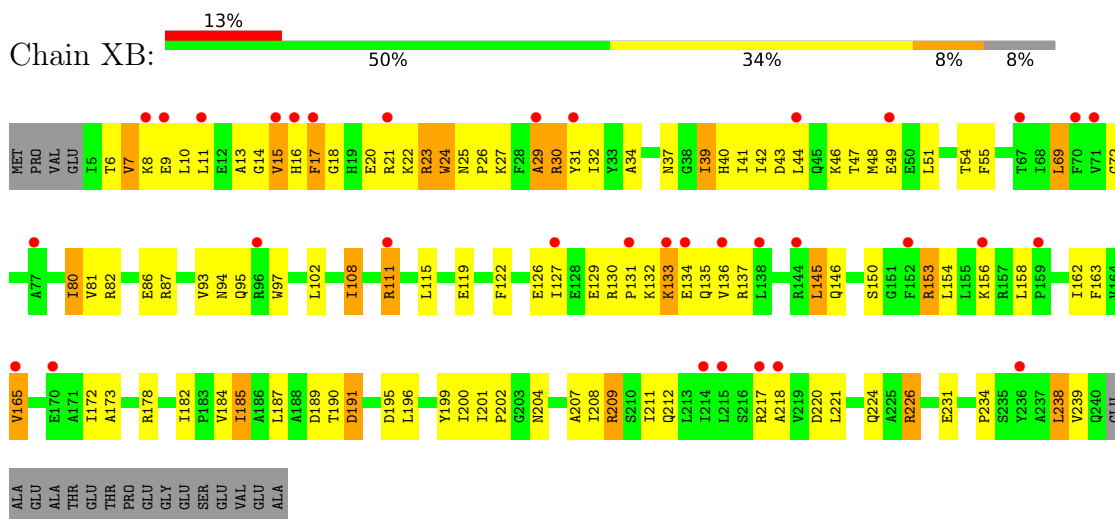


• Molecule 2: 30S ribosomal protein S2

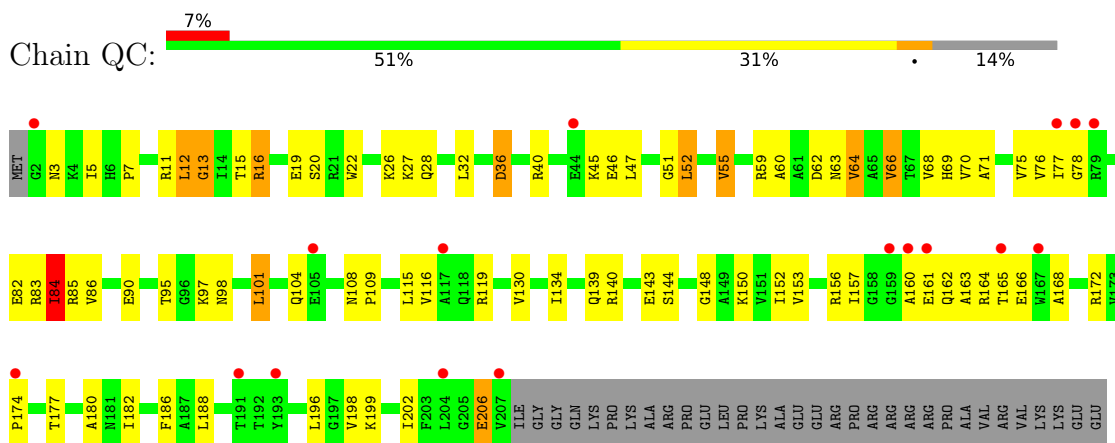
Chain QB: 8% 52% 31% 9% 8%



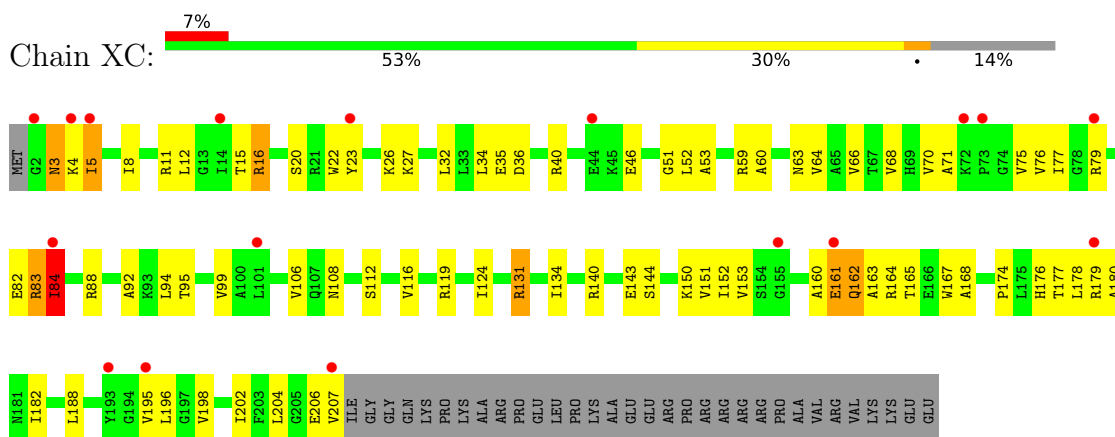
- Molecule 2: 30S ribosomal protein S2



- Molecule 3: 30S ribosomal protein S3

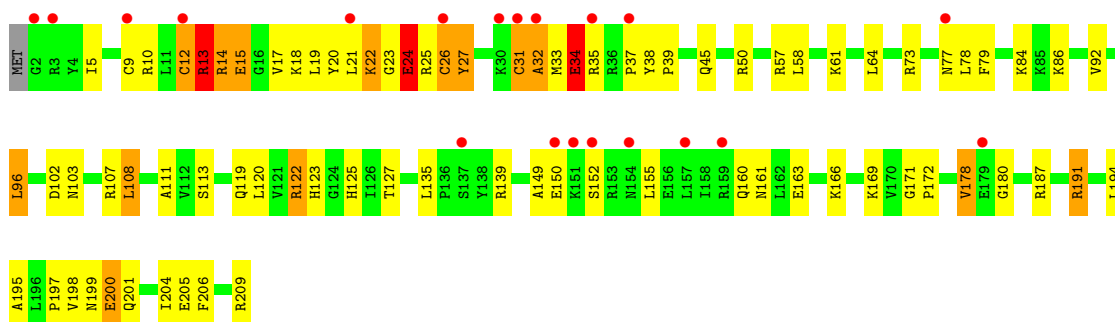


- Molecule 3: 30S ribosomal protein S3

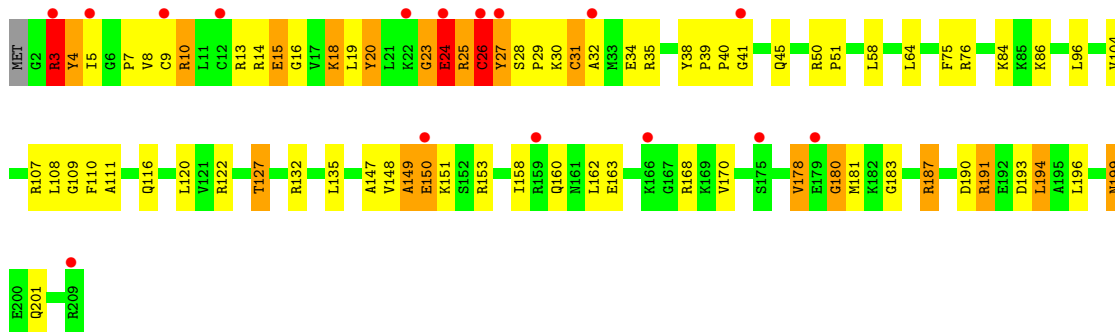


- Molecule 4: 30S ribosomal protein S4

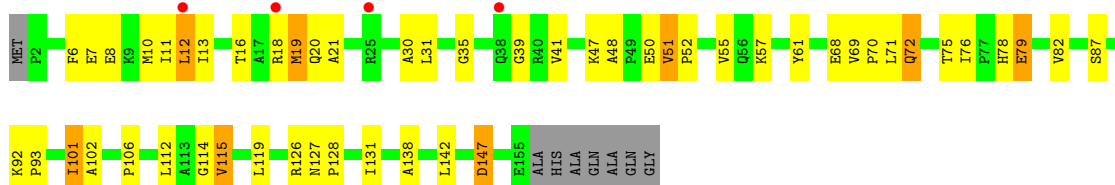




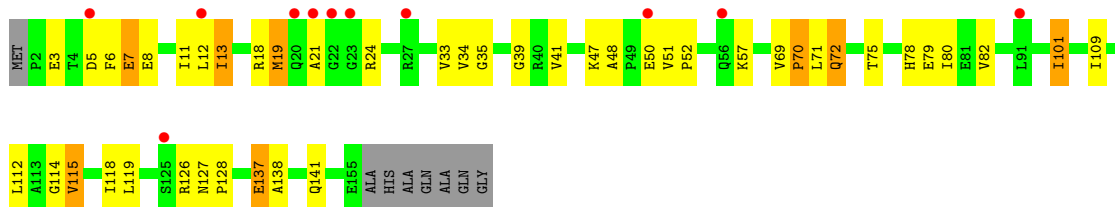
• Molecule 4: 30S ribosomal protein S4



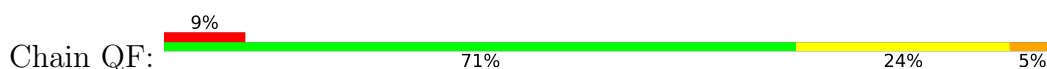
• Molecule 5: 30S ribosomal protein S5

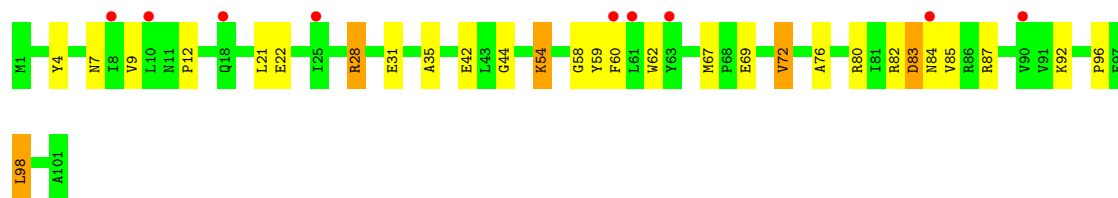


• Molecule 5: 30S ribosomal protein S5

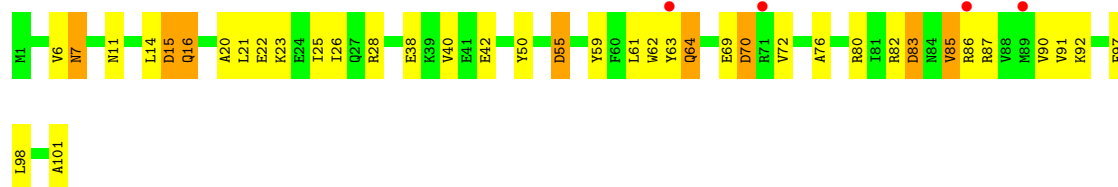


• Molecule 6: 30S ribosomal protein S6

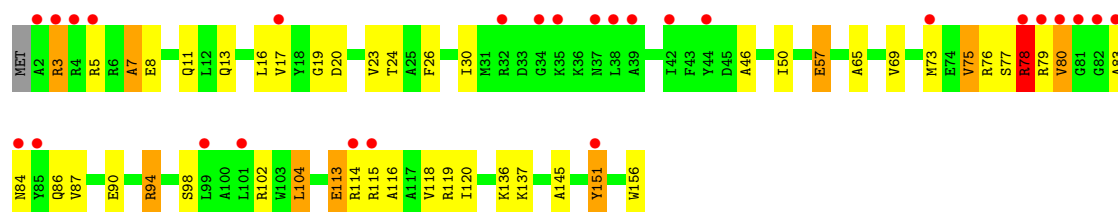




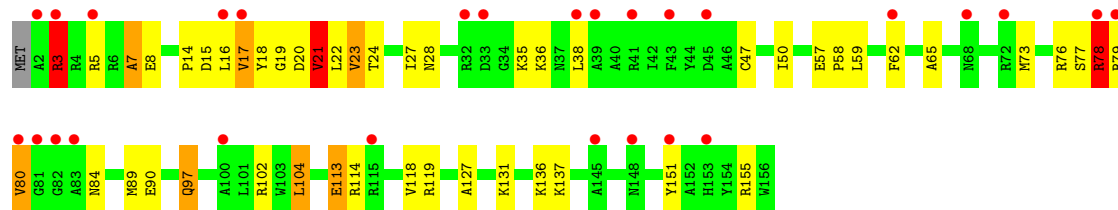
- Molecule 6: 30S ribosomal protein S6



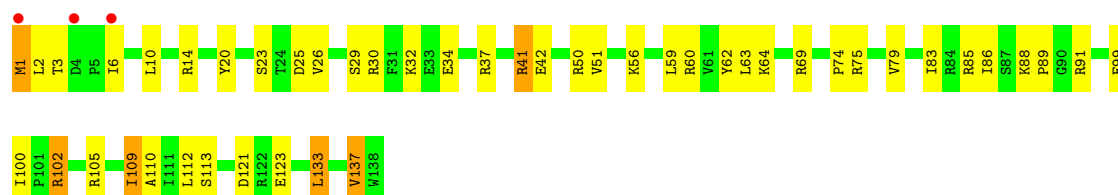
- Molecule 7: 30S ribosomal protein S7



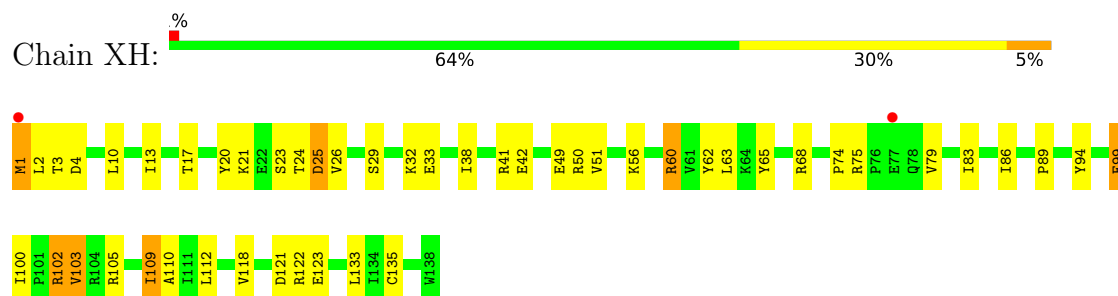
- Molecule 7: 30S ribosomal protein S7



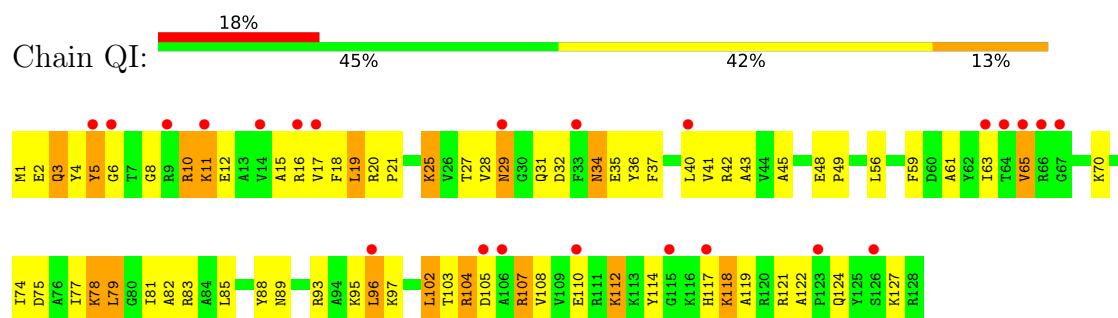
- Molecule 8: 30S ribosomal protein S8



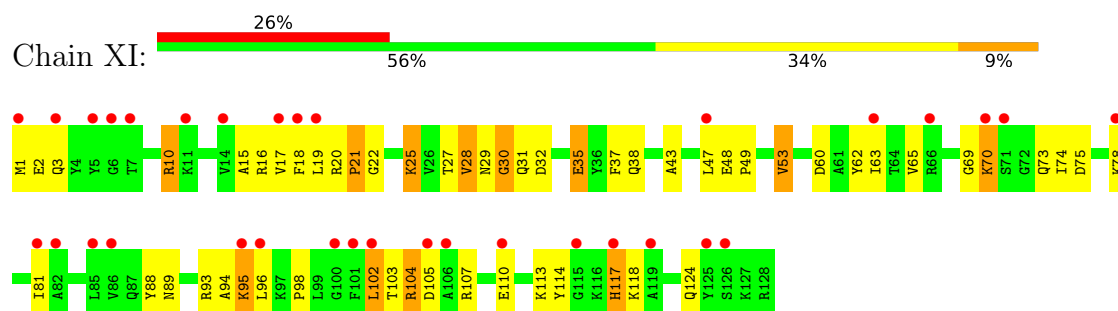
- Molecule 8: 30S ribosomal protein S8



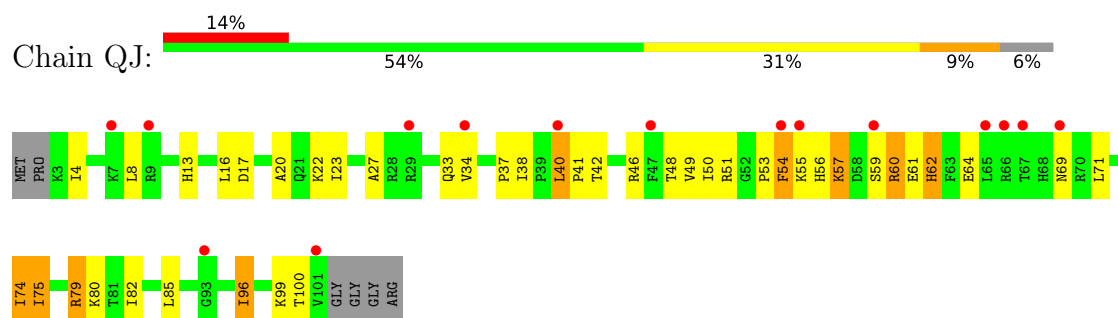
- Molecule 9: 30S ribosomal protein S9



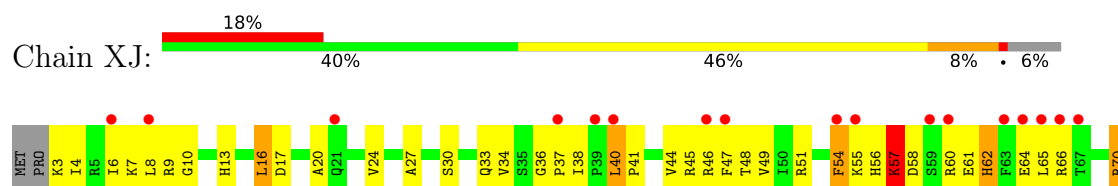
- Molecule 9: 30S ribosomal protein S9

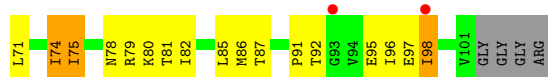


- Molecule 10: 30S ribosomal protein S10

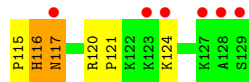


- Molecule 10: 30S ribosomal protein S10

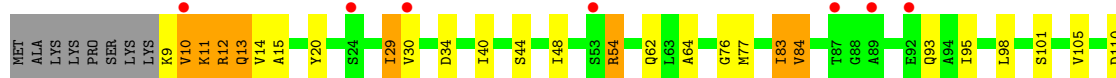




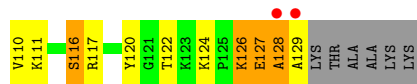
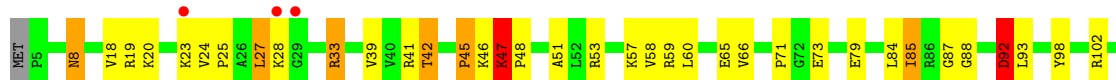
- Molecule 11: 30S ribosomal protein S11



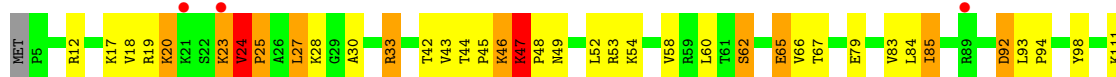
- Molecule 11: 30S ribosomal protein S11



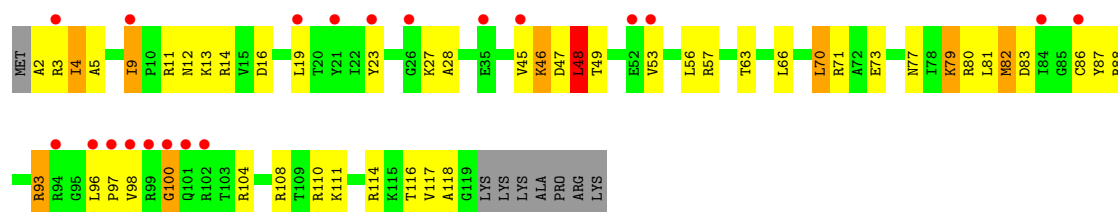
- Molecule 12: 30S ribosomal protein S12



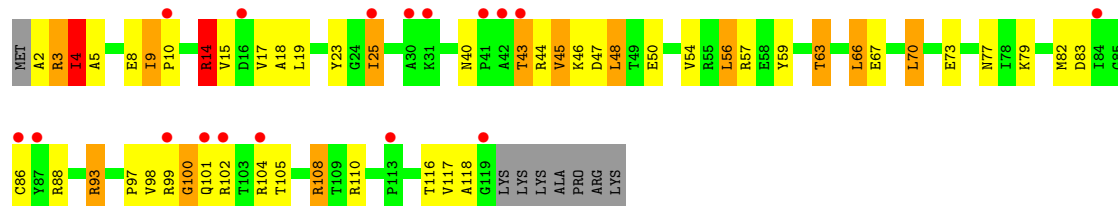
- Molecule 12: 30S ribosomal protein S12



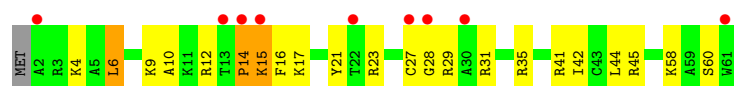
- Molecule 13: 30S ribosomal protein S13



• Molecule 13: 30S ribosomal protein S13



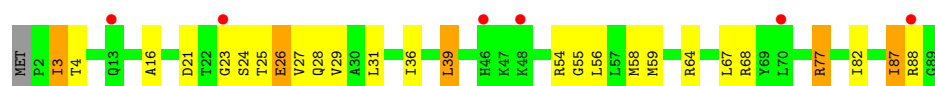
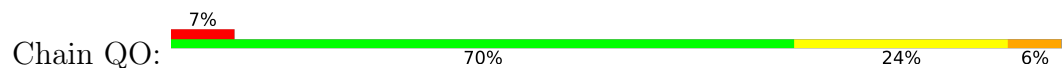
• Molecule 14: 30S ribosomal protein S14



• Molecule 14: 30S ribosomal protein S14



• Molecule 15: 30S ribosomal protein S15

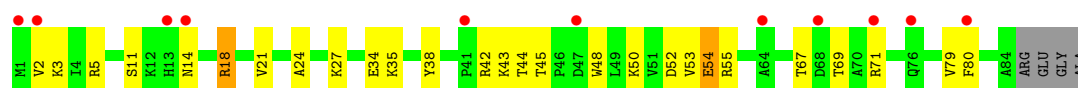


• Molecule 15: 30S ribosomal protein S15



• Molecule 16: 30S ribosomal protein S16

Chain QP: 



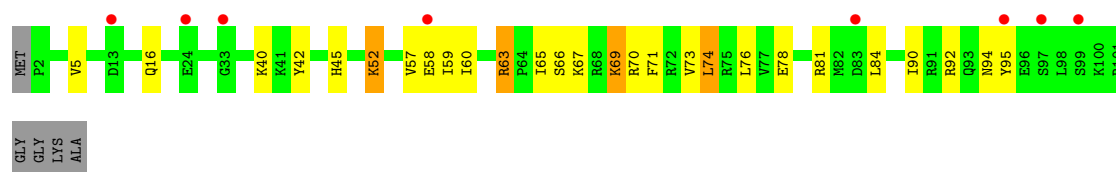
• Molecule 16: 30S ribosomal protein S16

Chain XP: 



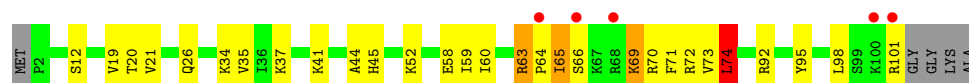
• Molecule 17: 30S ribosomal protein S17

Chain QQ: 



• Molecule 17: 30S ribosomal protein S17

Chain XQ: 



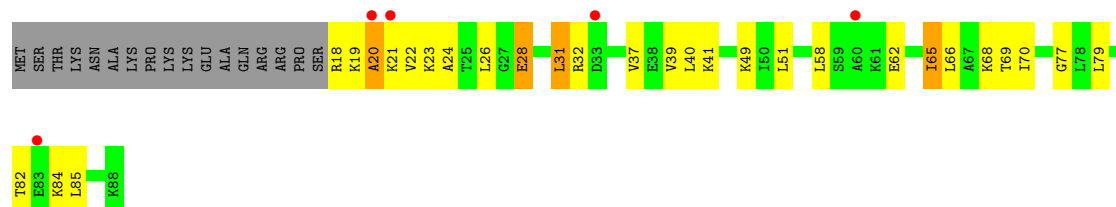
• Molecule 18: 30S ribosomal protein S18

Chain QR: 

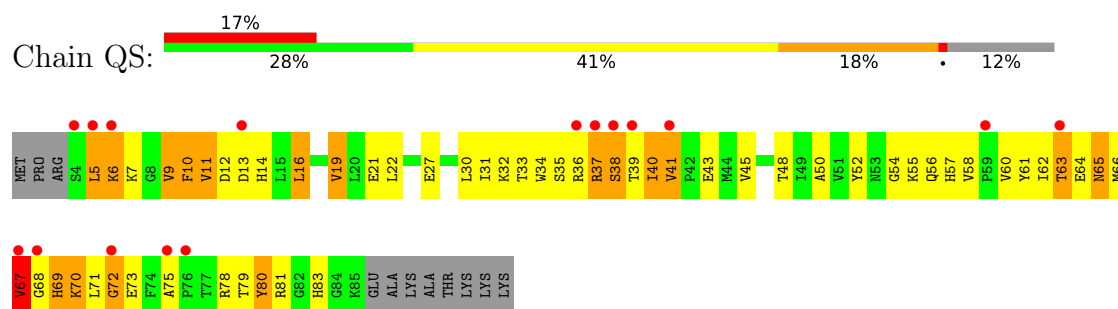


• Molecule 18: 30S ribosomal protein S18

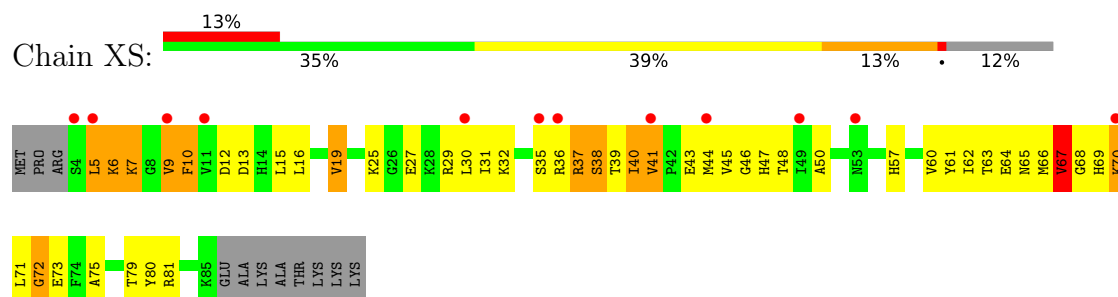
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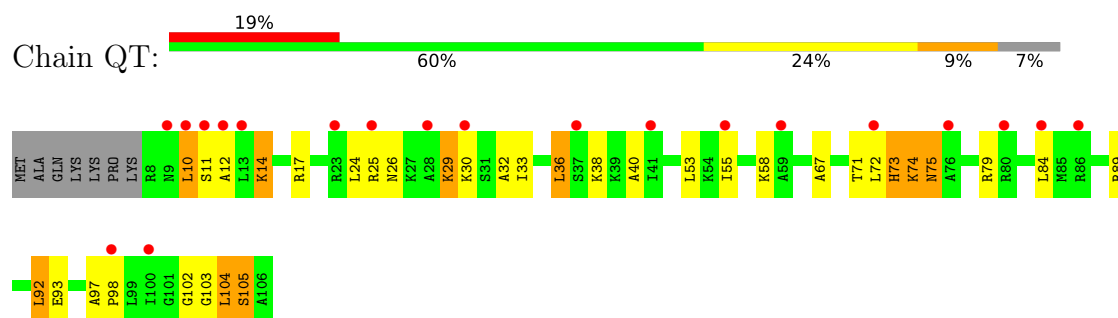
- Molecule 19: 30S ribosomal protein S19



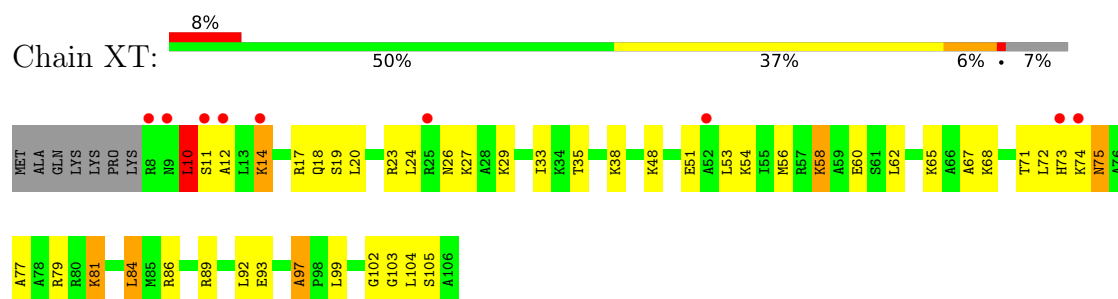
- Molecule 19: 30S ribosomal protein S19



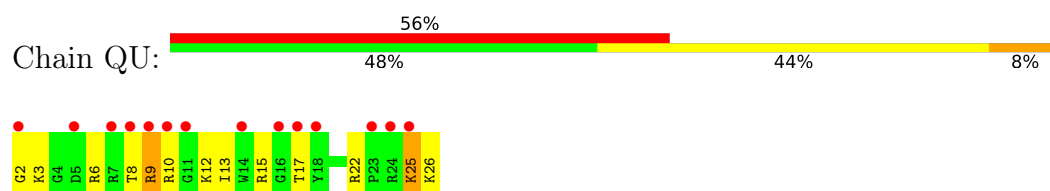
- Molecule 20: 30S ribosomal protein S20



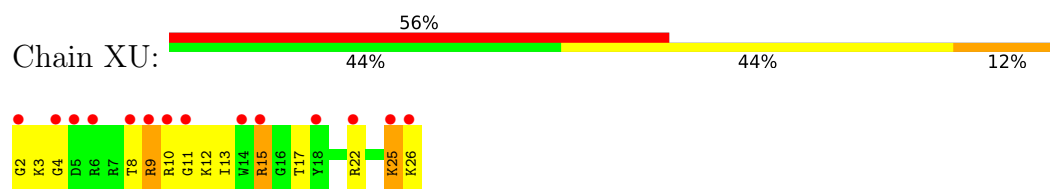
- Molecule 20: 30S ribosomal protein S20



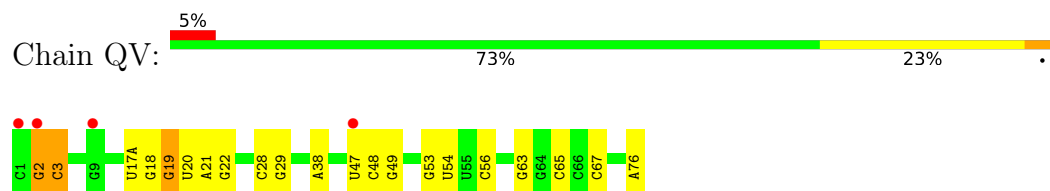
- Molecule 21: 30S ribosomal protein Thx



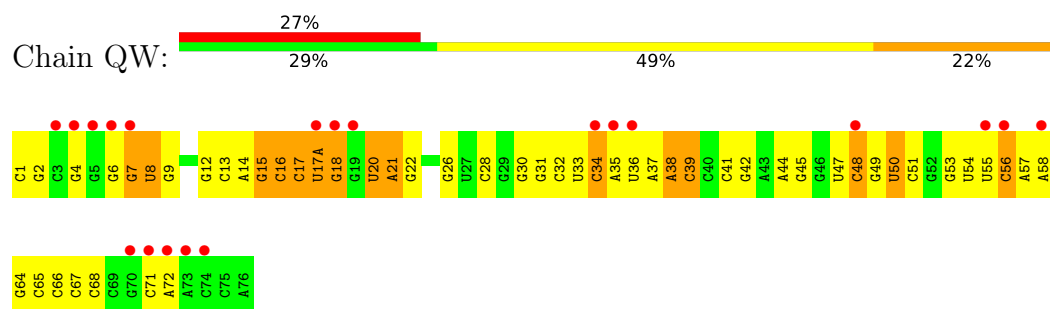
- Molecule 21: 30S ribosomal protein Thx



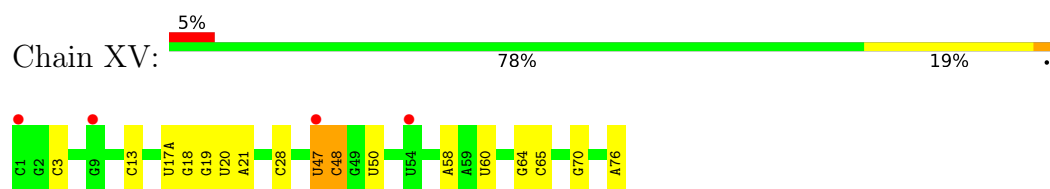
- Molecule 22: tRNA fMet



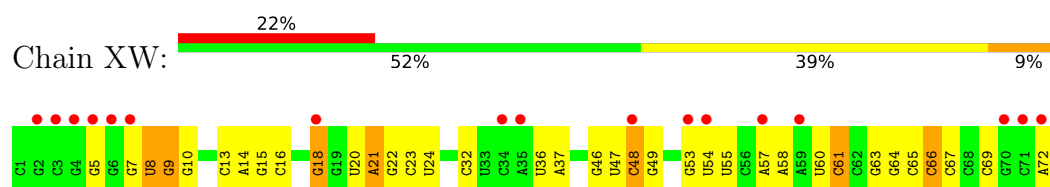
- Molecule 22: tRNA fMet



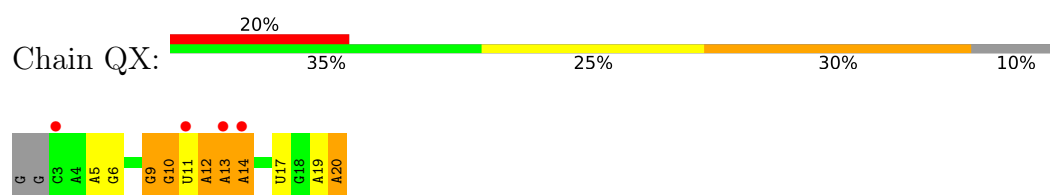
- Molecule 22: tRNA fMet



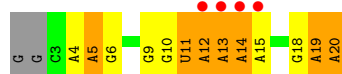
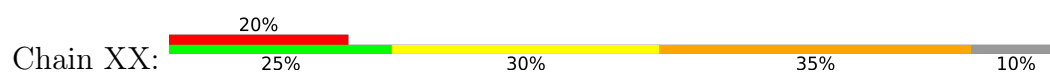
- Molecule 22: tRNA fMet



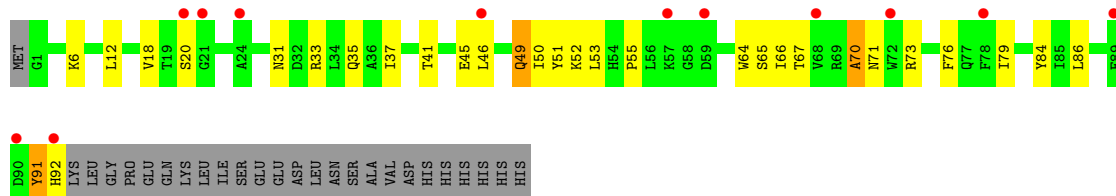
- Molecule 23: messenger RNA



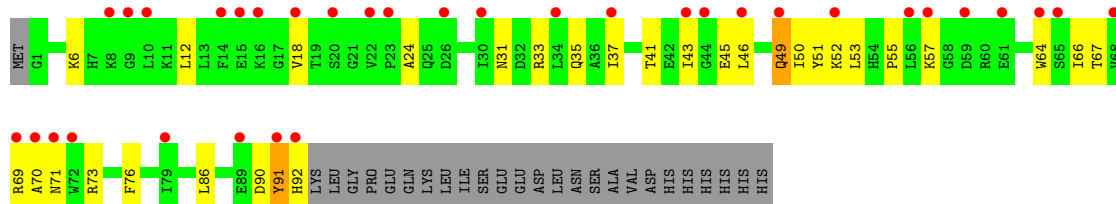
- Molecule 23: messenger RNA



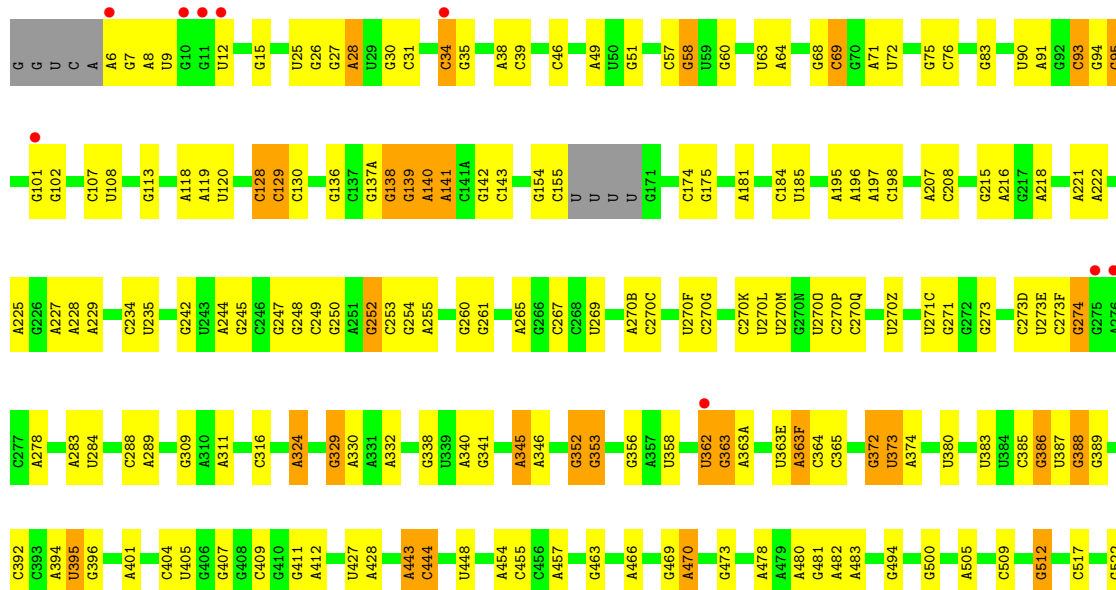
• Molecule 24: Host inhibition of growth B



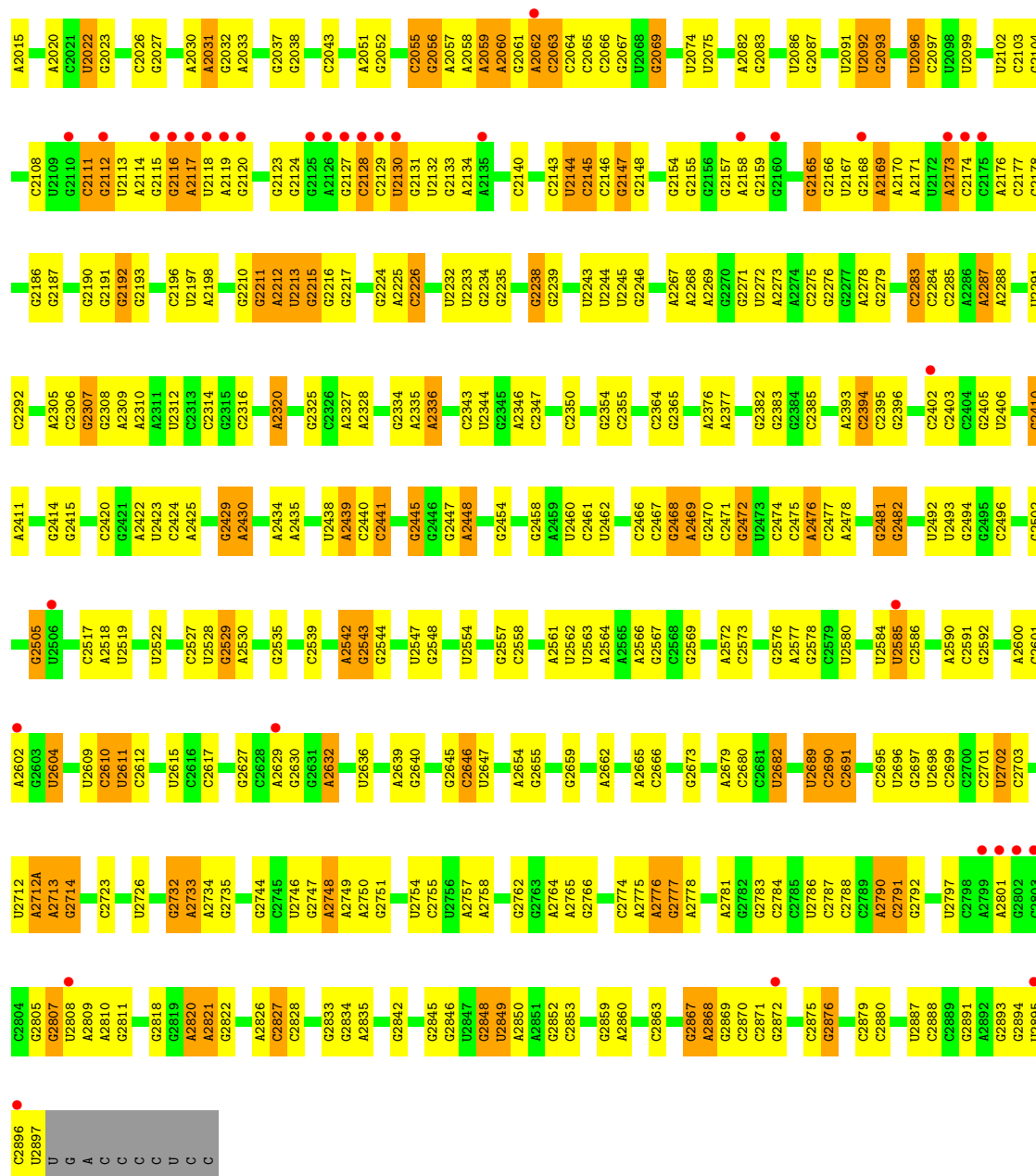
• Molecule 24: Host inhibition of growth B



• Molecule 25: 23S rRNA

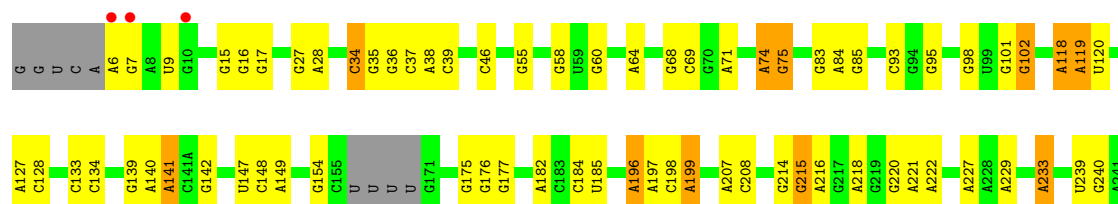


A1900	A1786	A1641	C1515	U1420	G1309	C1201	G1089	C994	U895	C796	C679	G622	C523
G1903	C1790	G1647	G1522	G1421	G1310	A1204	G1093	C995	A896	C797	G886	A627	A528
G1906	A1791	C1648	G1525	A1427	U1312	A1210	U1094	A996	C897	G628	C692	G628	A529
A1912	U1794	A1652	G1526	C1428	C1314	A1213	A1095	C1006	A900	G805	A899	A631	G530
A1913	C1795	G1653	G1534	C1437	G1319	A1220	U1105	C1007	A901	G806	A899	A632	A532
U1916	U1796	A1654	U1535	G1441	U1328	A1225	G1106	A1010	C904	U811	G700	A633	G545
A1917	C1797	A1536	A1537	G1442	U1329	C1225	G1110	C1012	U905	C812	A706	G636	C546
A1918	U1798	A1665	G1538	G1444	U1341	A1227	A1111	C1013	G906	U813	G707	A637	A547
A1919	G1800	A1668	G1542	A1444A	U1342	A1228	G1112	A1020	U907	G638	C708	G638	A548
C1920	G1801	A1669	A1543	C1445	A1342	G1233	U1113	A1021	A909	C814	U710	C640	G549
G1929	U1805	G1674	A1544	A1449	A1354	G1236	G1114	U1022	A910	A819	G710	C641	G550
U1930	U1810	U1688	A1545	C1480	G1355	U1236	G1122	U1023	A911	U827	A722	G642	G556
U1931	A1811	A1689	C1547	G1481	G1356	A1237	G1125	G1024	U828	A643	G724	A644	G563
G1935	A1812	U1693	C1548	A1453	U1357	G1238	A1126	G1025	A829	A645	G725	C645	U666
A1936	G1813	U1694	C1549	U1454	G1358	G1239	A1130	U1026	A917	U833	G726	A646	G570
A1937	G1814	G1695	C1550	G1455	A1360	U1240	U1130	A1027	A918	U839	C730	G651	G573
A1938	A1815	G1696	A1554	G1459	G1364	A1241	U1135	G1030	C921	U839	C730	G652	G574
U1939	G1816	A1700	C1557	A1460	A1365	G1244	G1136	G1033	G928	G845	G739	A654	A575
U1946	A1819	A1701	A1558	C1462	A1366	G1250	G1137	G1044	G929	G848	A746	G654A	U576
G1948	U1820	G1718	C1566	C1463	A1367	C1251	G1138	A1045	G932	G854C	U747	G654B	G577
G1949	C1827	G1725	A1566	C1464	G1368	A1252	C1140	A1046	G934	G855	G748	G654C	G581
G1950	G1828	U1677	A1567	C1467	A1373	A1254	U1141	G1047	A941	C956	A751	G654D	G582
U1951	A1829	G1726	G1568	A1471	G1374	U1255	U1142	C1048	G942	U857	A752	G654E	G583
A1952	U1727	G1728	A1569	A1471	G1379	G1256	A1142A	C1049	U945	C859	C754	C654F	G583
A1953	G1835	U1729	C1577	G1475	A1384	C1257	G1149	A1050	A946	U860	C755	G	A586
G1954	U1730	A1730	U1578	C1476	A1385	G1264	C1150	C1052	A957	A861	C756	A	C587
U1955	G1731	A1732	C1582	A1477	C1386	G1266	A1155	C1053	G956	G862	G759	C	U688
U1956	A1847	C1735	A1583	G1478	C1386	G1266	U1165	G1056	U958	A866	A761	G654N	A590
U1963	U1851	G1735	C1585	U1482	A1392	G1271	C1166	A1057	C961	G873	A764	G654O	G593
G1964	C1852	G1743	A1586	G1483	A1393	A1272	G1169	G1058	G968	G874	C772	C654P	U594
C1967	A1853	G1743	C1587	G1484	U1394	G1281	G1170	U1060	U969	G875	U773	C654R	G598
G1968	A1854	G1750	C1588	G1485	A1395	U1282	G1171	C1062	G974	C876	A774	C654S	C601
A1969	G1863	G1753	G1595	G1488	U1396	G1283	G1173	G1063	C974A	G877	G775	A654T	A603
A1970	U1864	C1754	C1598	U1489	G1400	G1285	A1174	A1070	G975	G878	G776	A654V	G604
A1971	G1869	A1759	A1503	A1490	G1401	C1286	U1175	G1071	G976	G880	U779	A655	C605
A1972	A1871	A1760	C1607	A1494	C1402	A1287	A1177	C1075	G978	G881	U779	U657	U606
A1981	G1872	C1761	A1608	A1495	C1403	U1288	C1178	C1076	G978	G882	A782	U657	U607
C1982	G1878	A1762	A1608	A1496	U1405	C1289	G1179	A1077	C978	G883	A783	C859	G607
U1991	C1880	G1763	A1614	A1496	U1406	C1290	C1180	A1077	A983	C884	A784	C859	G604
G1992	C1881	C1765	C1614	C1501	C1407	C1291	G1186	C1080	C986	C885	G785	C661	U606
U1993	C1882	G1765	G1622	C1505	U1415	U1293	G1187	A1084	G989	C888	A788	G668	U607
G1999	G1883	C1767	C1625	C1509	G1416	U1300	G1190	A1085	A990	C889	A789	G668	A616
G2000	A1889	A1773	G1626	A1510	C1417	A1301	A1086	A1087	C991	G892	A789	C673	G617
G2010	U1890	A1780	C1640	A1510	G1418	G1308	G1195	A1088	C993	C894	G792	C678	G620

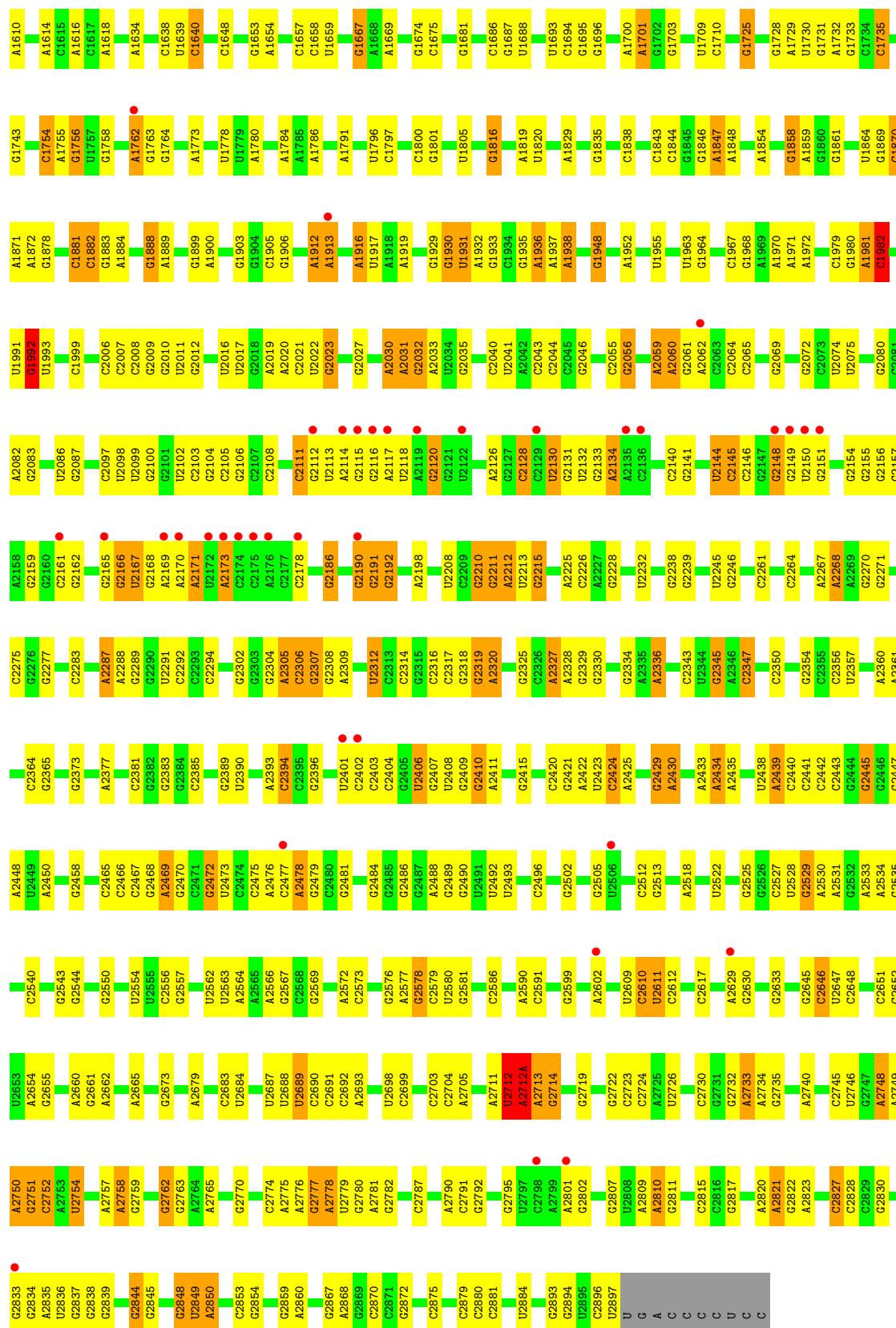


• Molecule 25: 23S rRNA

Chain YA: 2% 60% 31% 7%

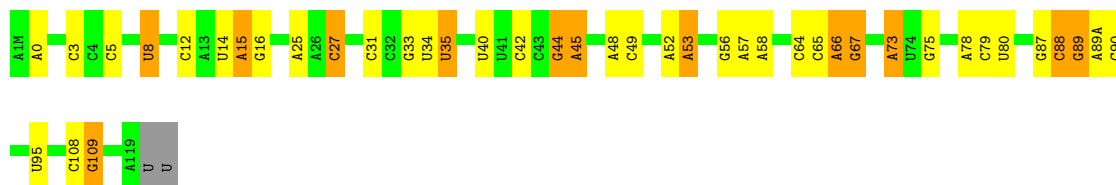


G1519	G1522	G1526	G1527	A1528	G1534	A1536	C1537	U1541	G1542	A1543	C1544	A1545	C1547	C1548	C1549	A1554	A1558	G1559	A1566	A1567	G1568	A1569	A1570	G1573	C1574	C1575	U1576	U1577	U1578	A1579	A1580	G1581	C1585	A1586	A1587	C1588	G1591	C1592	G1595	C1598	C1599	A1608	A1609							
G1417	G1418	A1419	U1420	G1421	A1427	C1428	C1432	U1433	C1437	G1444	A1444A	C1445	G1448	A1449	G1449A	C1450	C1451	U1454	G1455	C1458	G1459	A1460	G1461	C1467	A1471	G1475	U1482	G1483	G1484	G1485	G1488	U1489	A1490	C1493	A1496	C1502	C1505	C1509	A1510	U1514	C1515									
C1297	U1300	A1301	A1302	G1309	C1314	C1315	U1316	A1317	C1318	G1319	A1322	G1328	U1329	C1330	C1333	A1336	G1339	U1340	U1341	C1345	U1352	G1358	A1359	A1360	A1365	G1368	A1379	G1380	A1384	G1385	U1391	G1400	G1401	C1402	C1403	C1404	U1405	U1406	C1407	C1408	G1416									
G1203	A1204	U1205	G1206	C1207	C1217	C1218	G1219	A1220	C1225	G1226	C1230	G1231	G1239	U1240	A1241	G1245	A1246	A1247	G1250	C1251	G1252	A1253	U1255	G1256	A1262	U1263	G1264	A1265	G1266	C1270	U1271	A1272	U1273	A1274	A1275	A1278	G1279	G1280	G1281	U1282	G1285	C1289	C1290	G1291	C1292	C1293				
G1110	A1111	G1112	U1113	G1114	G1115	C1116	G1117	G1120	C1121	G1122	G1125	A1126	A1127	A1128	U1130	C1135	G1136	G1137	G1138	G1139	C1140	U1141	U1142	A1142A	A1143	A1155	U1165	C1166	U1167	G1168	G1169	G1170	G1171	G1173	A1174	U1175	A1177	C1178	C1179	C1180	G1183	U1188	A1189	G1190	U1191	G1195	C1201	C1202		
G1030	G1031	U1032	U1033	G1034	U1035	G1036	G1042	C1043	G1044	A1045	A1046	G1047	A1048	C1049	A1050	C1052	C1053	A1054	G1055	G1056	U1060	U1061	G1062	G1063	U1066	A1070	A1073	U1074	C1075	C1076	A1077	A1085	A1086	G1087	A1088	G1089	G1093	U1094	A1095	A1096	U1097	A1098	C1099	C1100	U1101	U1102	C1102	U1105	G1106	C1109
A933	G934	A941	A945	G946	A953	G956	A957	U958	A959	A960	C961	U969	C970	C971	G972	A973	G974	C974A	A980	A983	G989	A990	C991	G993	A996	G997	C998	U999	A1000	C1007	C1008	A1009	A1010	U1011	U1012	C1013	C1018	A1021	G1022	U1023	G1024	G1025	U1026	A1027	A1028	A1029				
G831	G832	U833	G848	C856	C857	U858	U859	U860	A861	G862	A866	C876	U877	A878	G879	G880	G881	G882	G883	C884	C885	C886	A887	C888	C889	A890	G892	C893	C894	U895	A896	C897	A901	C902	C903	G906	U907	A910	A911	C914	C915	G916	A918	U919	G919	U922	U926	U927	G928	G932
G725	G726	C730	G738	G739	A746	A752	C753	C754	C755	C756	A761	A764	G768	G771	C772	U773	A774	G775	G776	A782	A783	A784	G785	A788	A789	G792	A793	C796	C797	G798	G805	C806	U807	C812	C817	G818	U819	C825	U826	U827	U828									
C652	A653	A	C	G	G	C	C	C	C	C	A	C	C	C	C	C	C	C	C	A	A654V	G655	G656	U657	C658	C659	G660	G668	C669	A670	C673	G674	A685	G686	C687	U688	C691	C692	G704	A705	A706	G707	C708	U709	G710	G717	A722	G723	U724	
C537	G556	G561	U562	G563	G570	A571	A572	G573	C574	A575	U576	G577	A586	C587	U588	C589	A590	G593	A603	G604	C605	U606	U607	A608	A609	G609A	U614	G615	A616	G617	C624	G625	U626	A627	G630	A633	C634	G635	G636	A637	G642	A645	A646	G647	G651					
U421	U427	A428	A443	C444	U448	C451	A454	C455	A456	U457	A458	U459	A460	C461	C462	G463	A466	A470	G473	C481	A482	A483	C484	G494	G495	G498	A505	C509	G512	C517	G518	U524	U525	A526	C527	A528	C409	G410	C411	C531	A532	G533								
G298	U306	G307	G308	G309	A310	A311	G312	A320	A324	G329	A330	U331	A332	C335	A340	C341	A345	A346	U350	G351	G352	G356	G361	U362	G363	A363A	G363B	G363C	U363E	A363F	C364	G386	G389	C392	G396	G407	A408	C409	G410	C411	A412	C413	C414							
G242	G247	G248	C249	G250	A251	G252	C253	G254	G261	A262	C263	A265	A270B	C270C	C270D	U270E	U270F	C270G	C270K	U270L	U270M	U270N	U270O	G351	C270P	C270Q	C270R	G270S	G270T	C270U	U270Z	C271A	G271B	U271C	G271	G272	C273D	U273E	C273F	G274	C277	A278	C279	A283	C287	C288	A289	G290	C297	



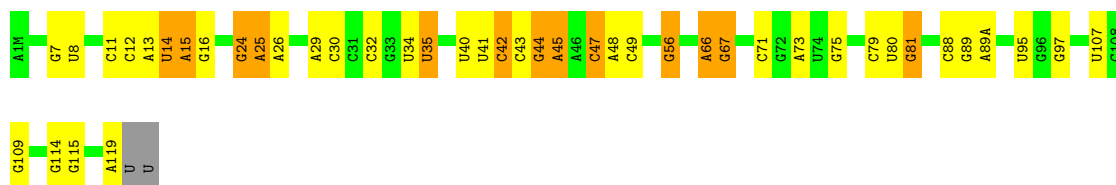
• Molecule 26: 5S rRNA

Chain RB:  65% 23% 10% .



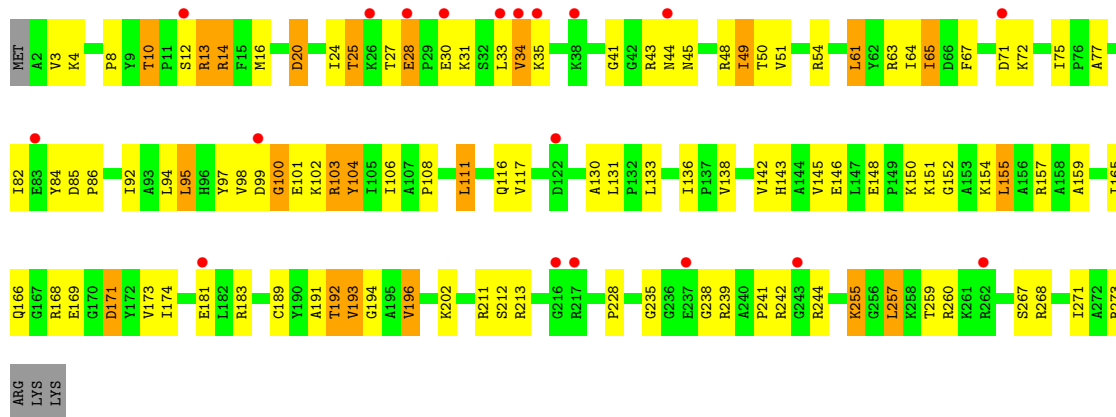
• Molecule 26: 5S rRNA

Chain YB:  63% 25% 10% .



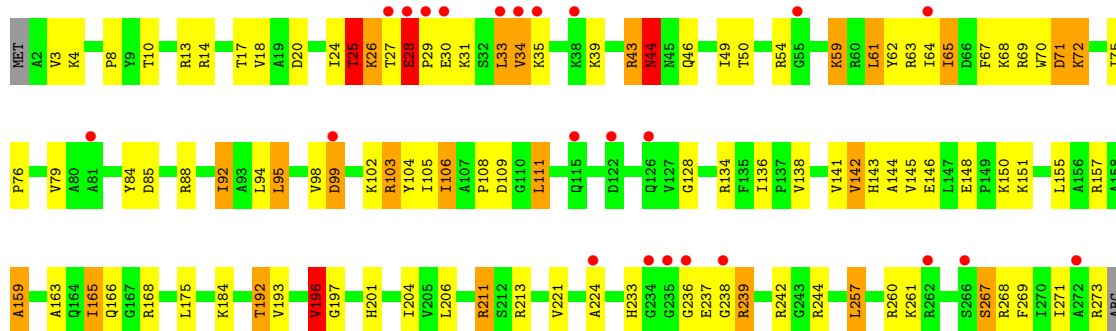
• Molecule 27: 50S ribosomal protein L2

Chain RD:  7% 60% 31% 8% .



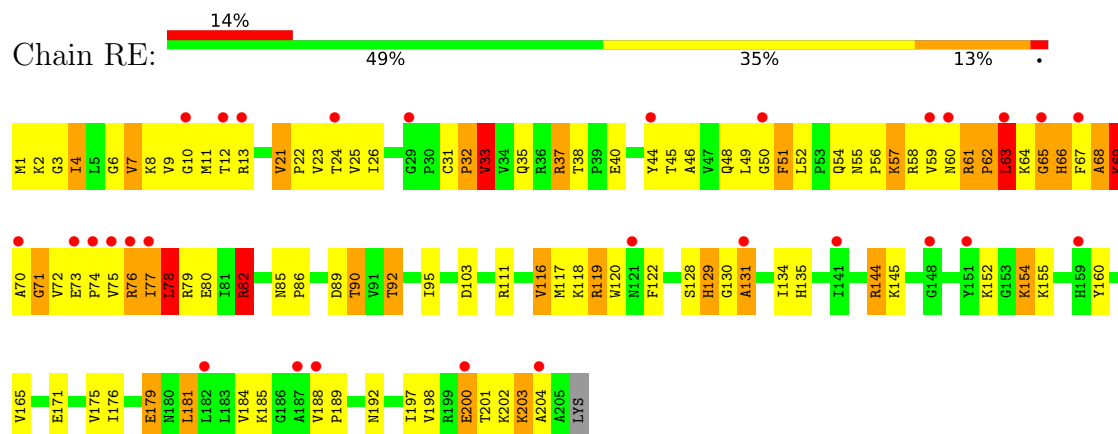
• Molecule 27: 50S ribosomal protein L2

Chain YD:  8% 60% 29% 8% ..

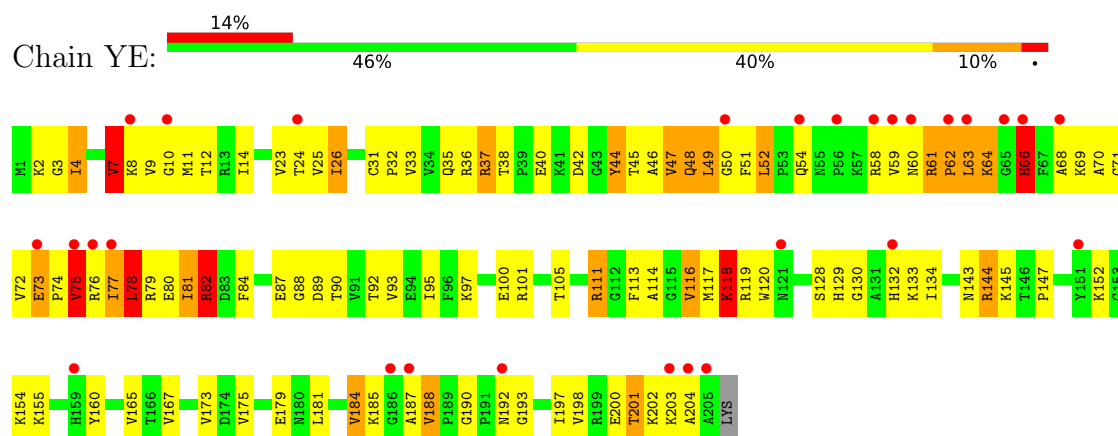


LYS
LYS

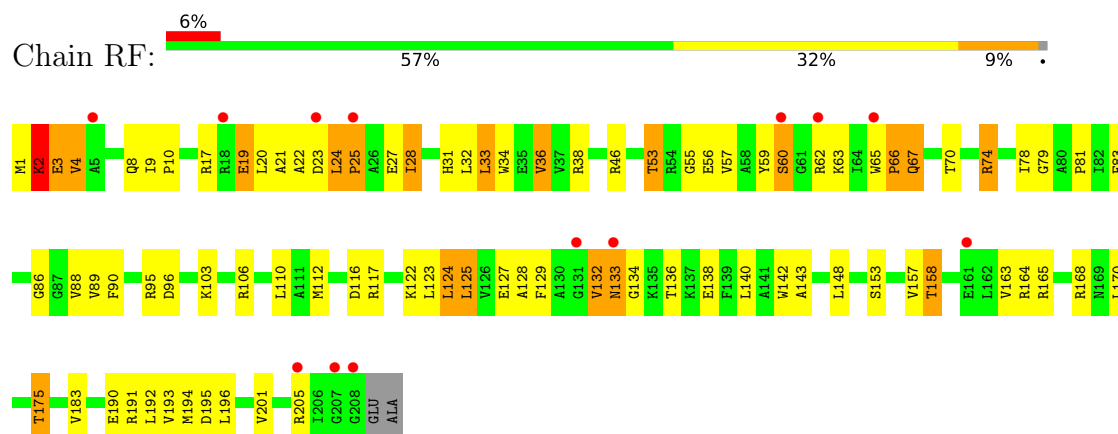
- Molecule 28: 50S ribosomal protein L3



- Molecule 28: 50S ribosomal protein L3

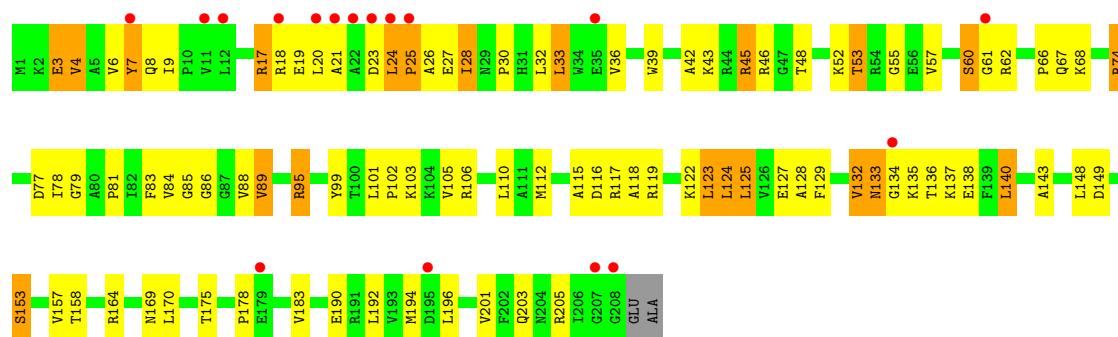


- Molecule 29: 50S ribosomal protein L4

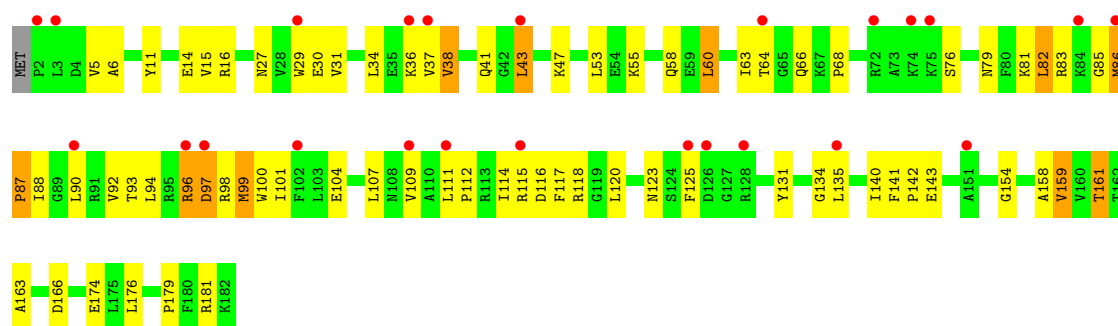


- Molecule 29: 50S ribosomal protein L4

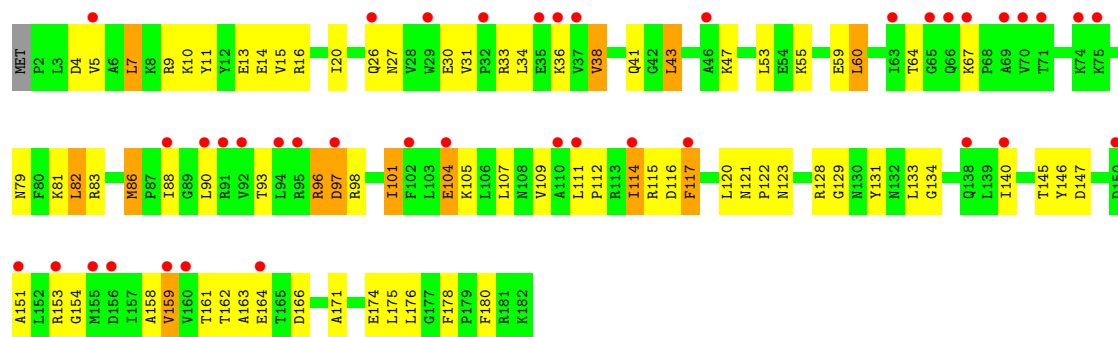




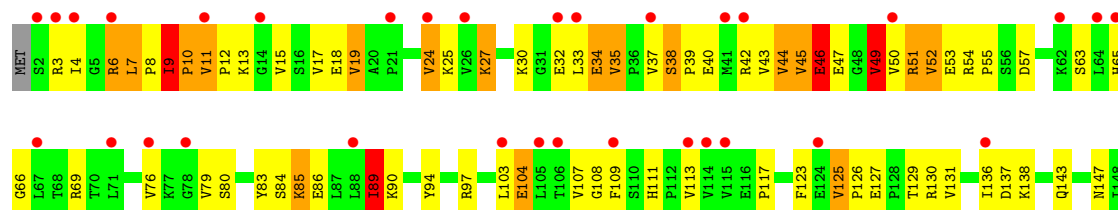
• Molecule 30: 50S ribosomal protein L5



• Molecule 30: 50S ribosomal protein L5

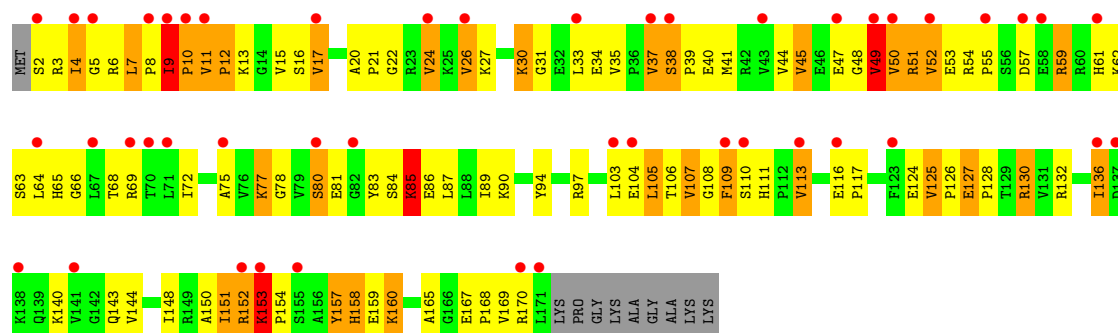


• Molecule 31: 50S ribosomal protein L6

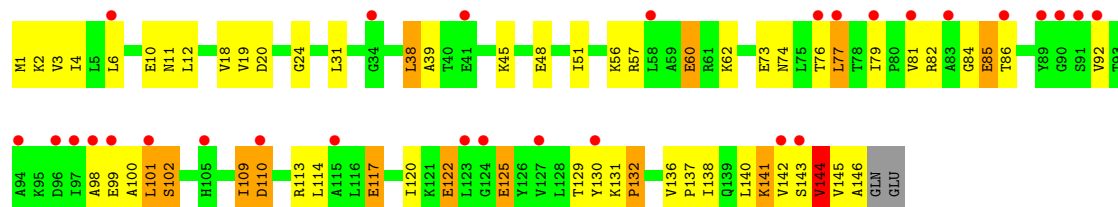




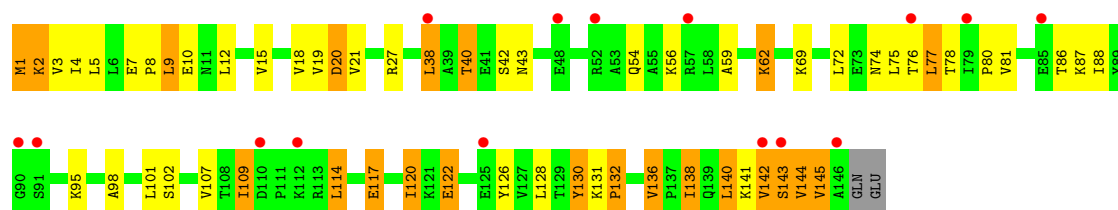
• Molecule 31: 50S ribosomal protein L6



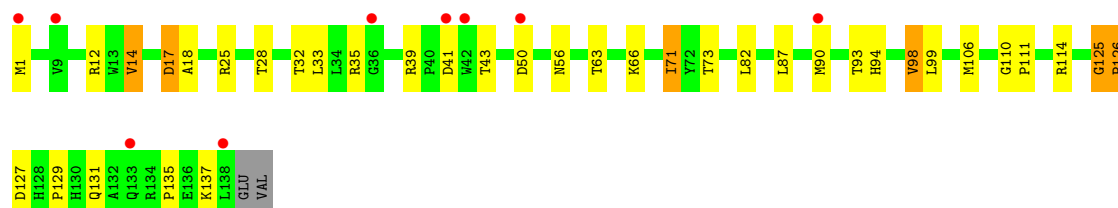
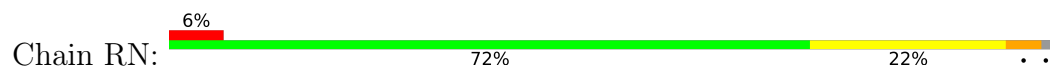
• Molecule 32: 50S ribosomal protein L9



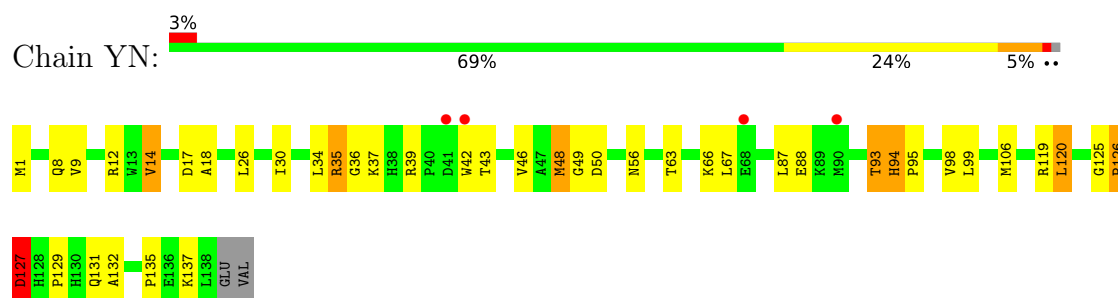
• Molecule 32: 50S ribosomal protein L9



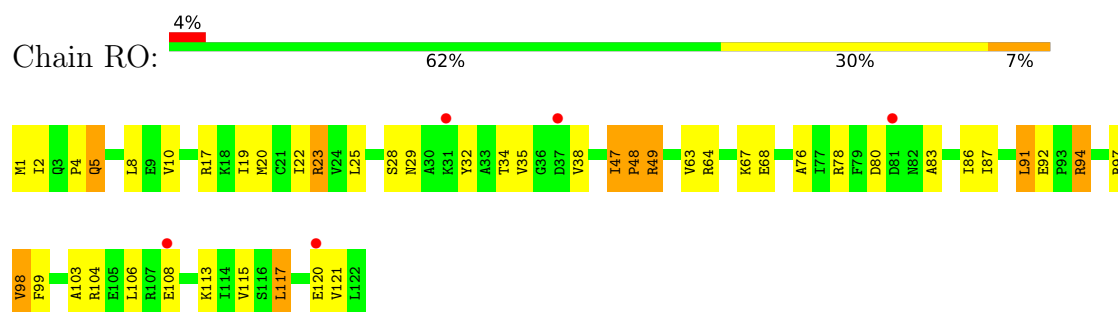
• Molecule 33: 50S ribosomal protein L13



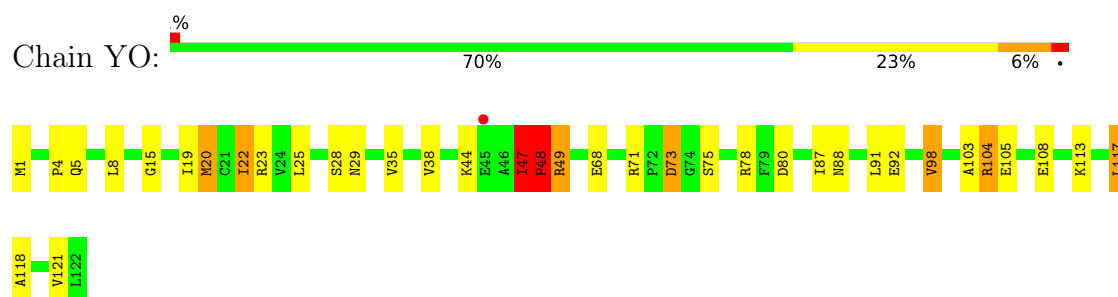
- Molecule 33: 50S ribosomal protein L13



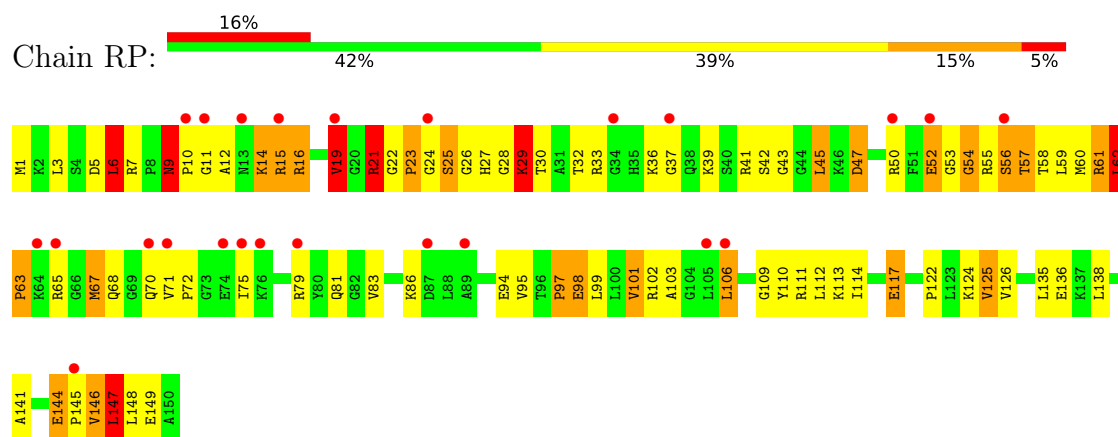
- Molecule 34: 50S ribosomal protein L14



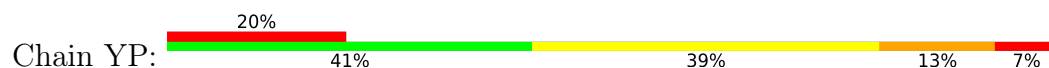
- Molecule 34: 50S ribosomal protein L14

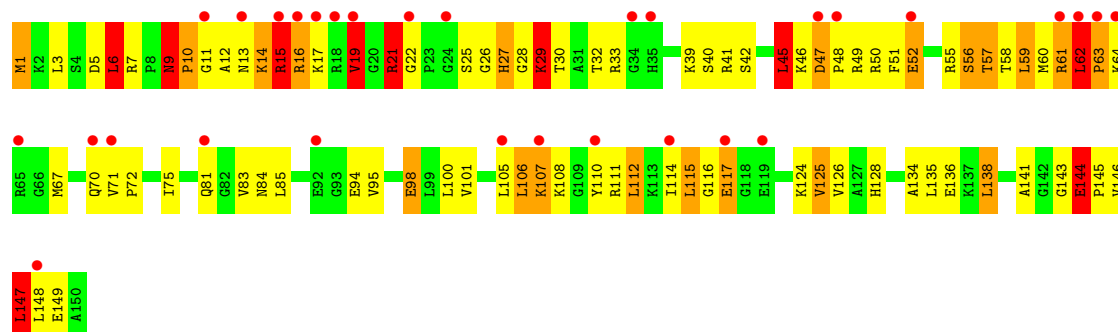


- Molecule 35: 50S ribosomal protein L15

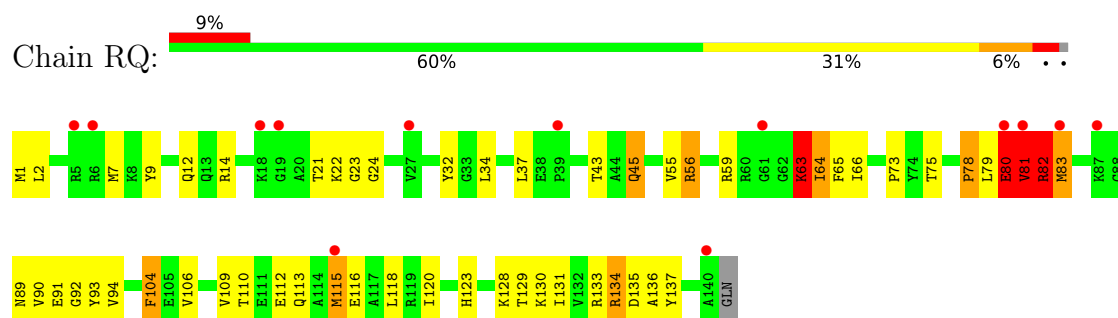


- Molecule 35: 50S ribosomal protein L15

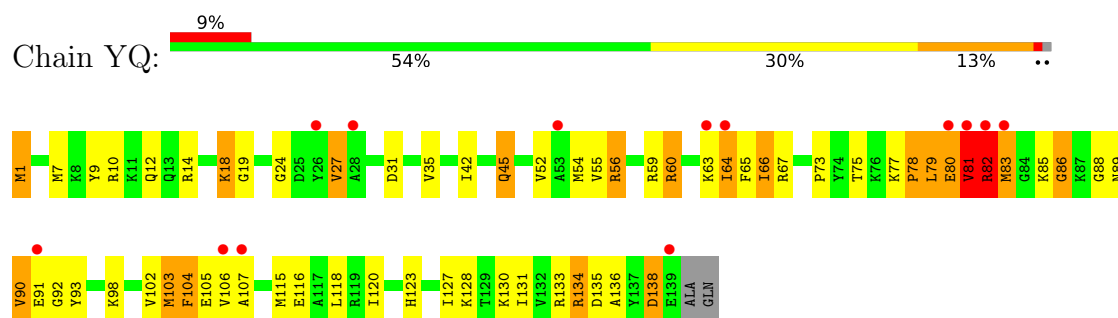




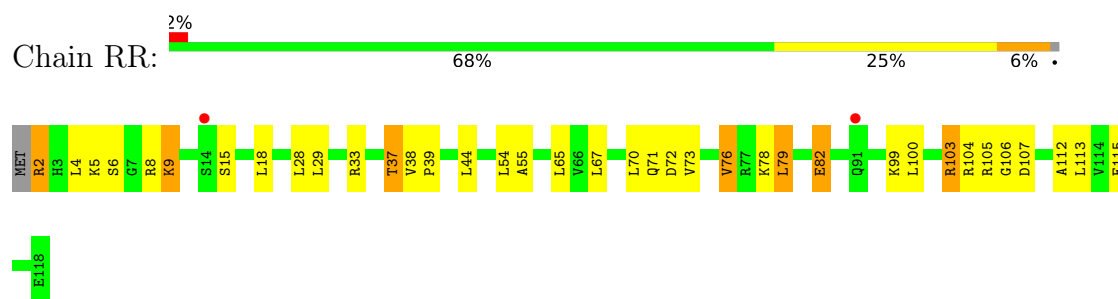
- Molecule 36: 50S ribosomal protein L16



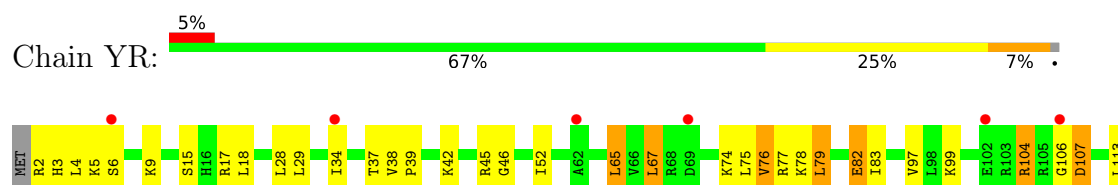
- Molecule 36: 50S ribosomal protein L16



- Molecule 37: 50S ribosomal protein L17



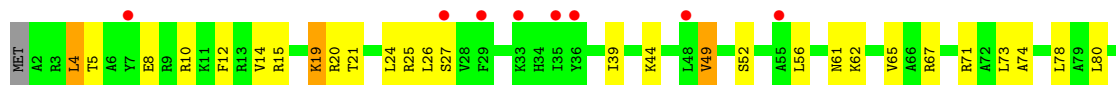
- Molecule 37: 50S ribosomal protein L17





• Molecule 38: 50S ribosomal protein L18

Chain RS: 11% 59% 33% 5% ..



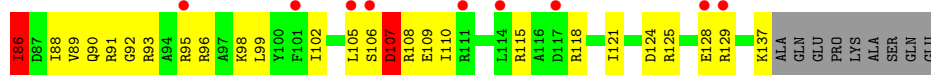
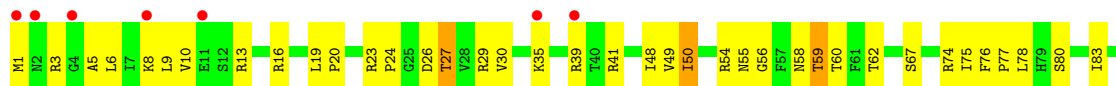
• Molecule 38: 50S ribosomal protein L18

Chain YS: 17% 54% 37% 8% ..



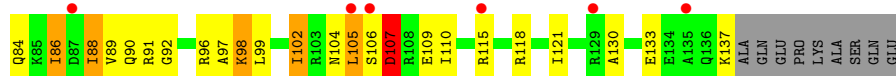
• Molecule 39: 50S ribosomal protein L19

Chain RT: 11% 50% 40% .. 6%



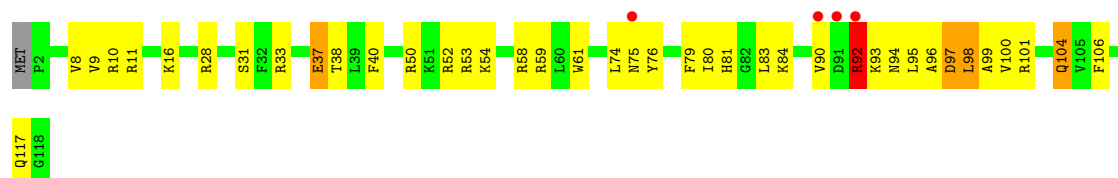
• Molecule 39: 50S ribosomal protein L19

Chain YT: 12% 53% 33% 7% • 6%

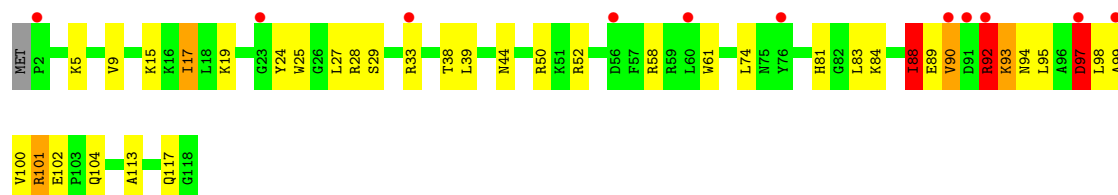


• Molecule 40: 50S ribosomal protein L20

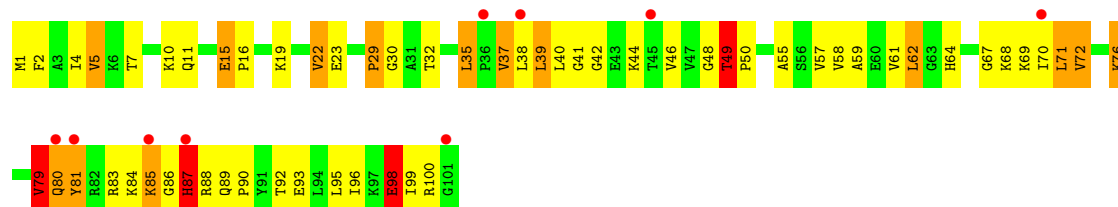
Chain RU: 3% 65% 30% ..



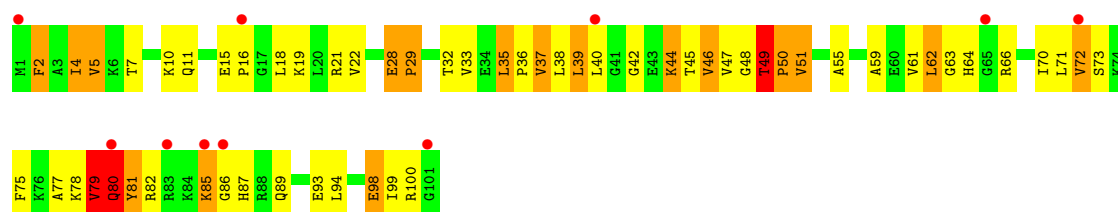
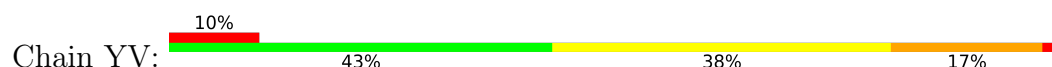
- Molecule 40: 50S ribosomal protein L20



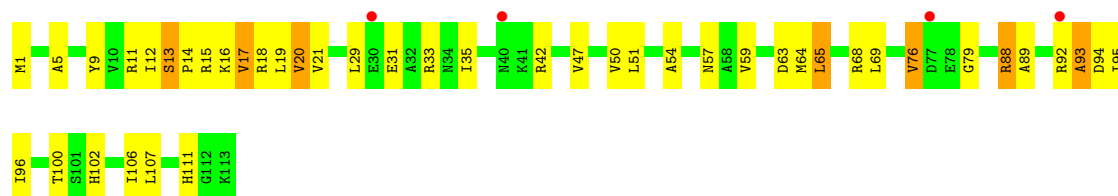
- Molecule 41: 50S ribosomal protein L21



- Molecule 41: 50S ribosomal protein L21

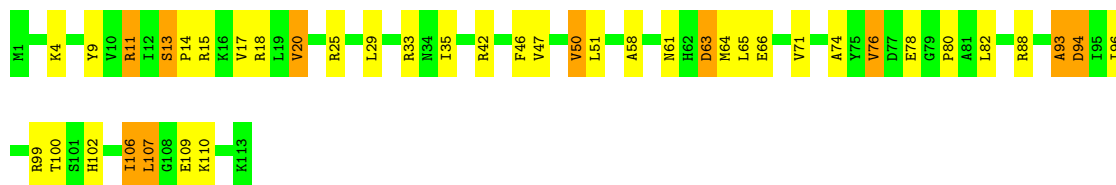


- Molecule 42: 50S ribosomal protein L22



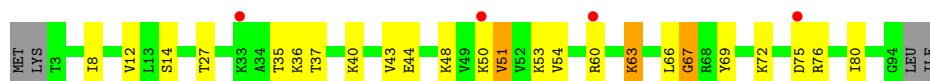
- Molecule 42: 50S ribosomal protein L22

Chain YW: 



- Molecule 43: 50S ribosomal protein L23

Chain RX: 

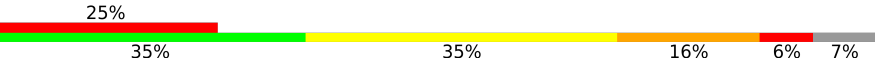


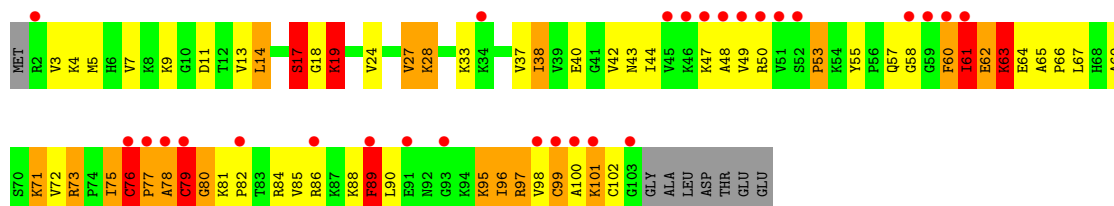
- Molecule 43: 50S ribosomal protein L23

Chain YX: 

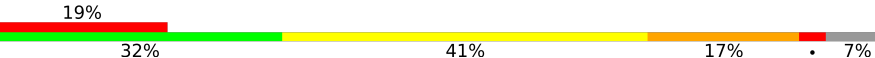


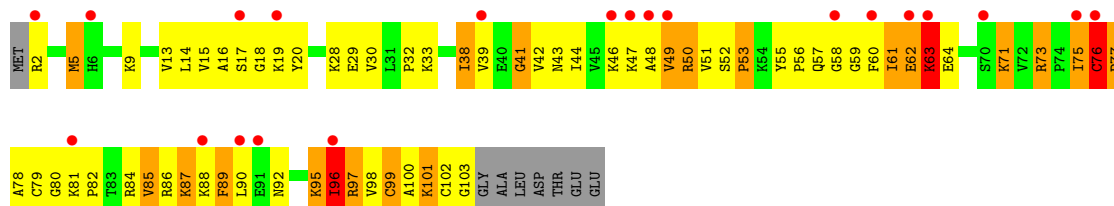
- Molecule 44: 50S ribosomal protein L24

Chain RY: 

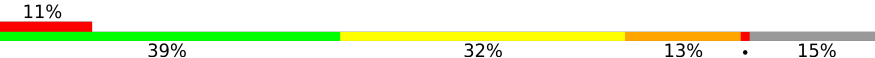


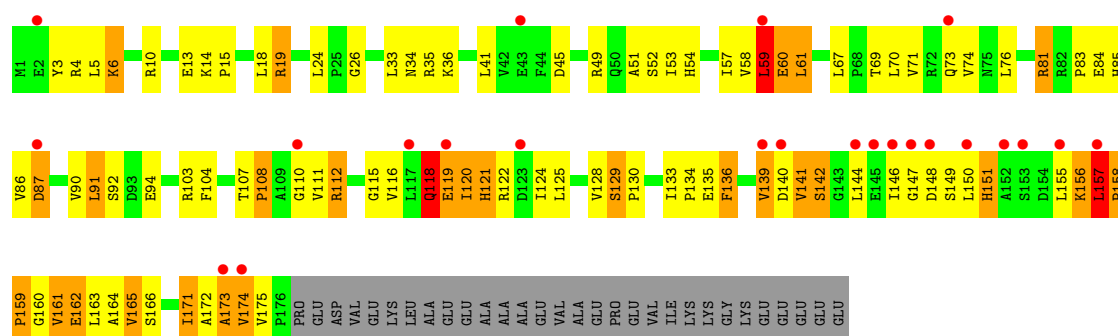
- Molecule 44: 50S ribosomal protein L24

Chain YY: 

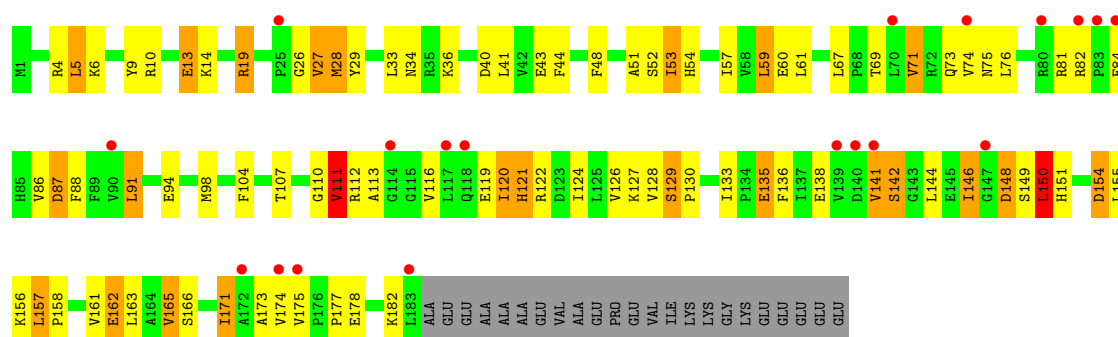


- Molecule 45: 50S ribosomal protein L25

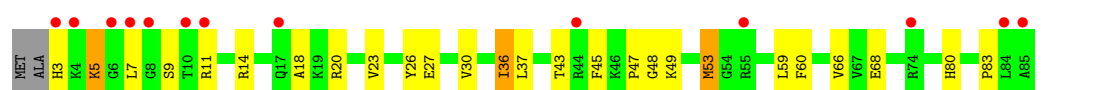
Chain RZ: 



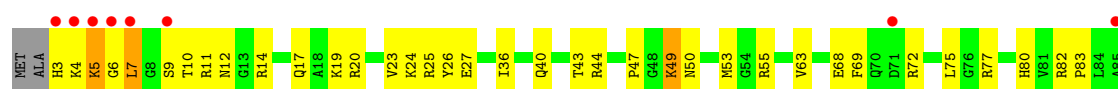
• Molecule 45: 50S ribosomal protein L25



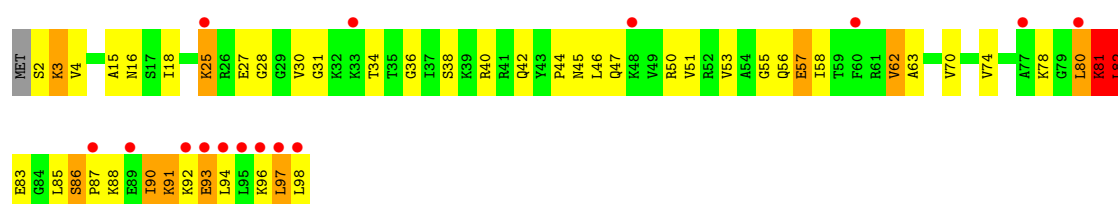
• Molecule 46: 50S ribosomal protein L27



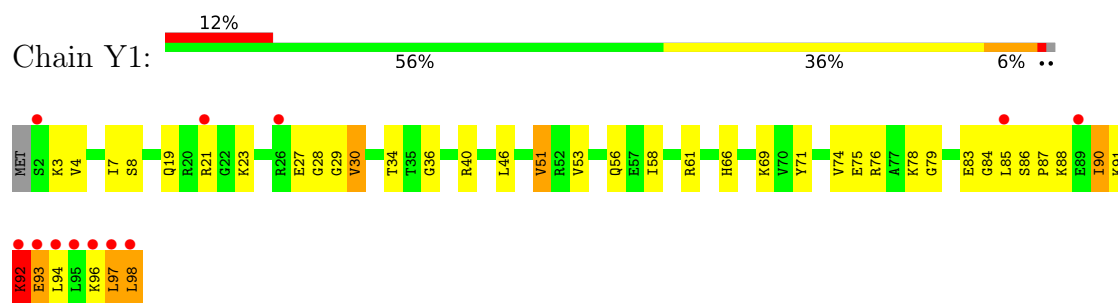
• Molecule 46: 50S ribosomal protein L27



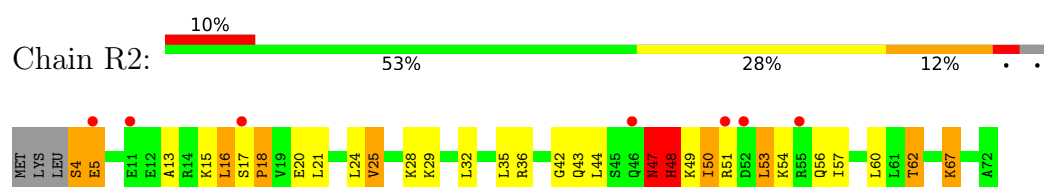
• Molecule 47: 50S ribosomal protein L28



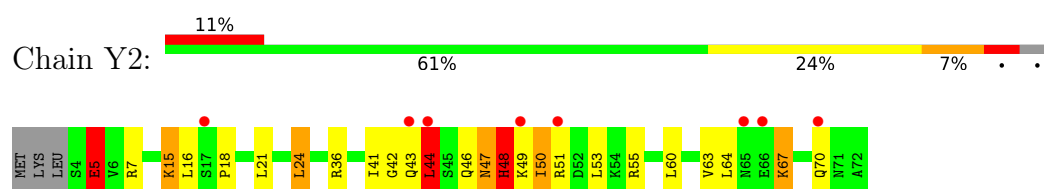
- Molecule 47: 50S ribosomal protein L28



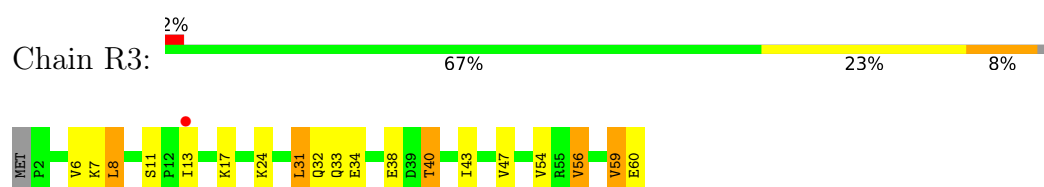
- Molecule 48: 50S ribosomal protein L29



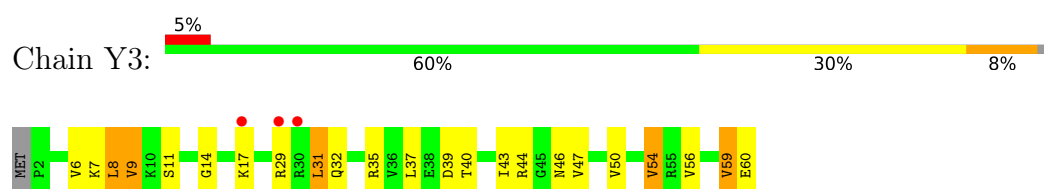
- Molecule 48: 50S ribosomal protein L29



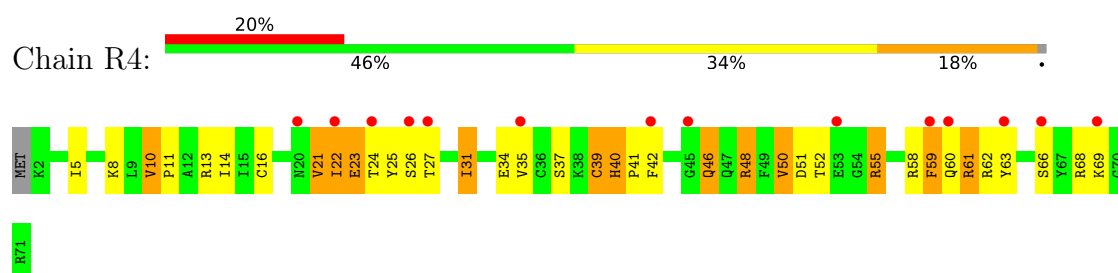
- Molecule 49: 50S ribosomal protein L30



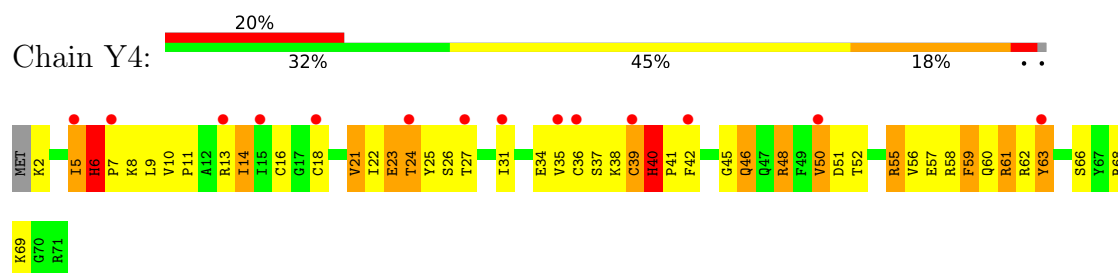
- Molecule 49: 50S ribosomal protein L30



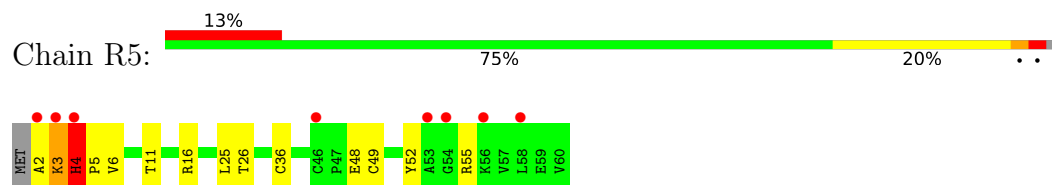
- Molecule 50: 50S ribosomal protein L31



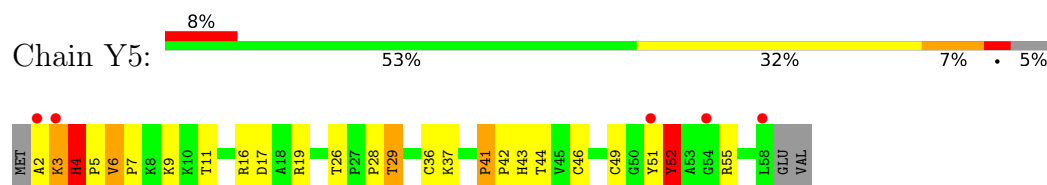
- Molecule 50: 50S ribosomal protein L31



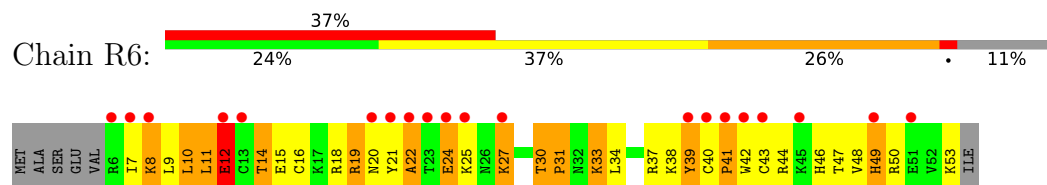
- Molecule 51: 50S ribosomal protein L32



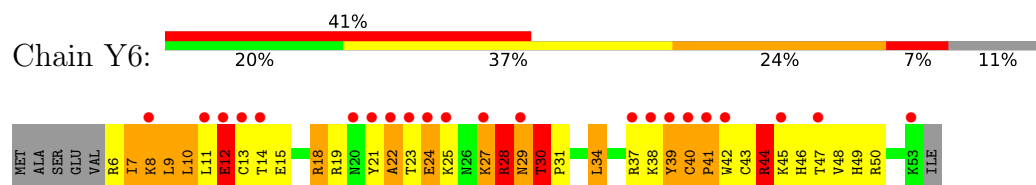
- Molecule 51: 50S ribosomal protein L32



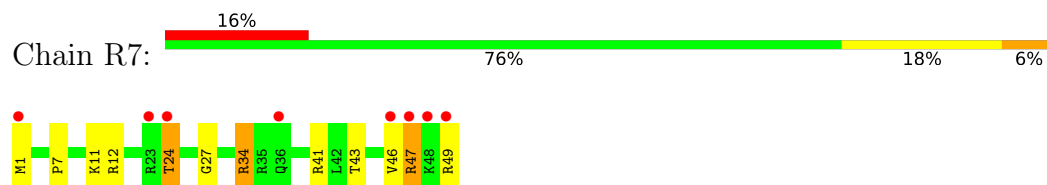
- Molecule 52: 50S ribosomal protein L33



- Molecule 52: 50S ribosomal protein L33



- Molecule 53: 50S ribosomal protein L34

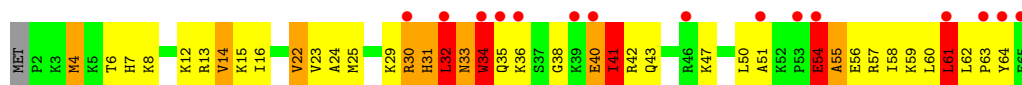


- Molecule 53: 50S ribosomal protein L34

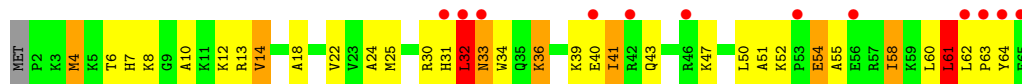




- Molecule 54: 50S ribosomal protein L35



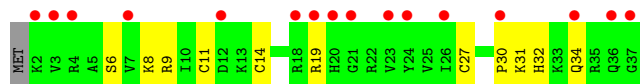
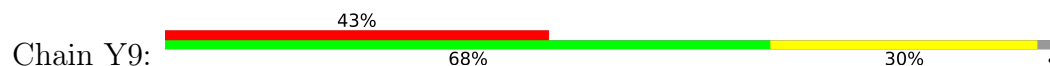
- Molecule 54: 50S ribosomal protein L35



- Molecule 55: 50S ribosomal protein L36



- Molecule 55: 50S ribosomal protein L36



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	214.11Å 453.88Å 607.59Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	34.96 – 3.30 34.96 – 3.30	Depositor EDS
% Data completeness (in resolution range)	94.3 (34.96-3.30) 94.2 (34.96-3.30)	Depositor EDS
R_{merge}	0.17	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.89 (at 3.32Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.8.3_1479)	Depositor
R, R_{free}	0.209 , 0.238 0.210 , 0.239	Depositor DCC
R_{free} test set	38567 reflections (4.39%)	wwPDB-VP
Wilson B-factor (Å ²)	75.1	Xtriage
Anisotropy	0.146	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.29 , 85.5	EDS
L-test for twinning ²	$\langle L \rangle = 0.44$, $\langle L^2 \rangle = 0.26$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.92	EDS
Total number of atoms	297400	wwPDB-VP
Average B, all atoms (Å ²)	94.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.05% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, MG, A3P

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z > 5$	RMSZ	# $ Z > 5$
1	QA	0.18	0/36346	0.37	0/56724
1	XA	0.18	0/36276	0.37	6/56615 (0.0%)
2	QB	0.33	0/1950	0.81	2/2630 (0.1%)
2	XB	0.33	0/1950	0.82	2/2630 (0.1%)
3	QC	0.33	0/1636	0.77	0/2205
3	XC	0.36	0/1636	0.79	0/2205
4	QD	0.36	0/1733	0.85	2/2318 (0.1%)
4	XD	0.36	0/1733	0.83	3/2318 (0.1%)
5	QE	0.36	0/1195	0.86	0/1609
5	XE	0.41	0/1195	0.80	0/1609
6	QF	0.31	0/856	0.74	0/1154
6	XF	0.33	0/856	0.76	0/1154
7	QG	0.33	0/1276	0.80	2/1709 (0.1%)
7	XG	0.36	0/1276	0.85	2/1709 (0.1%)
8	QH	0.33	0/1136	0.82	0/1527
8	XH	0.36	0/1136	0.81	2/1527 (0.1%)
9	QI	0.34	0/1037	0.83	1/1389 (0.1%)
9	XI	0.35	0/1037	0.83	2/1389 (0.1%)
10	QJ	0.31	0/814	0.77	0/1095
10	XJ	0.32	0/814	0.78	0/1095
11	QK	0.42	0/916	0.85	2/1234 (0.2%)
11	XK	0.38	0/916	0.86	1/1234 (0.1%)
12	QL	0.39	0/991	0.88	2/1327 (0.2%)
12	XL	0.43	1/991 (0.1%)	0.92	8/1327 (0.6%)
13	QM	0.36	0/947	0.84	0/1270
13	XM	0.35	0/947	0.85	0/1270
14	QN	0.32	0/501	0.80	0/664
14	XN	0.35	0/501	0.79	0/664
15	QO	0.31	0/745	0.70	0/992
15	XO	0.35	0/745	0.75	0/992
16	QP	0.33	0/721	0.75	0/970
16	XP	0.34	0/721	0.75	0/970

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	QQ	0.32	0/847	0.79	0/1131
17	XQ	0.34	0/847	0.74	0/1131
18	QR	0.33	0/590	0.78	0/782
18	XR	0.33	0/590	0.78	0/782
19	QS	0.37	0/670	0.86	1/901 (0.1%)
19	XS	0.41	0/670	0.88	0/901
20	QT	0.35	0/765	0.80	1/1007 (0.1%)
20	XT	0.34	0/765	0.80	1/1007 (0.1%)
21	QU	0.28	0/221	0.77	0/288
21	XU	0.29	0/221	0.74	0/288
22	QV	0.17	0/1832	0.31	0/2855
22	QW	0.15	0/1832	0.32	0/2855
22	XV	0.18	0/1832	0.32	0/2855
22	XW	0.12	0/1832	0.28	0/2855
23	QX	0.27	0/420	0.48	0/654
23	XX	0.25	0/420	0.50	0/654
24	QY	0.46	0/773	0.75	1/1043 (0.1%)
24	XY	0.45	0/773	0.73	1/1043 (0.1%)
25	RA	0.22	0/69742	0.40	5/108874 (0.0%)
25	YA	0.22	0/69356	0.40	4/108271 (0.0%)
26	RB	0.16	0/2928	0.35	0/4568
26	YB	0.17	0/2928	0.34	0/4568
27	RD	0.43	0/2165	0.88	4/2919 (0.1%)
27	YD	0.47	0/2165	0.93	5/2919 (0.2%)
28	RE	0.41	0/1601	0.88	5/2160 (0.2%)
28	YE	0.48	0/1601	0.96	6/2160 (0.3%)
29	RF	0.44	0/1662	0.92	4/2249 (0.2%)
29	YF	0.41	0/1662	0.91	2/2249 (0.1%)
30	RG	0.34	0/1499	0.78	2/2016 (0.1%)
30	YG	0.35	0/1499	0.78	0/2016
31	RH	0.41	0/1332	1.06	10/1802 (0.6%)
31	YH	0.42	0/1332	1.01	6/1802 (0.3%)
32	RI	0.35	0/1151	0.83	1/1558 (0.1%)
32	YI	0.40	0/1151	0.93	5/1558 (0.3%)
33	RN	0.36	0/1131	0.85	3/1525 (0.2%)
33	YN	0.38	0/1131	0.87	2/1525 (0.1%)
34	RO	0.39	0/943	0.87	2/1269 (0.2%)
34	YO	0.42	0/943	0.87	2/1269 (0.2%)
35	RP	0.46	0/1162	0.98	6/1544 (0.4%)
35	YP	0.48	0/1162	0.99	4/1544 (0.3%)
36	RQ	0.45	0/1133	0.88	1/1515 (0.1%)
36	YQ	0.46	0/1128	0.91	2/1508 (0.1%)
37	RR	0.39	0/974	0.80	0/1302

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
37	YR	0.42	0/974	0.80	1/1302 (0.1%)
38	RS	0.32	0/892	0.77	1/1187 (0.1%)
38	YS	0.36	0/892	0.83	1/1187 (0.1%)
39	RT	0.35	0/1155	0.78	2/1542 (0.1%)
39	YT	0.39	0/1155	0.81	0/1542
40	RU	0.42	0/982	0.86	3/1306 (0.2%)
40	YU	0.41	0/982	0.91	4/1306 (0.3%)
41	RV	0.56	0/790	1.06	6/1057 (0.6%)
41	YV	0.52	0/790	1.06	7/1057 (0.7%)
42	RW	0.43	0/911	0.84	3/1220 (0.2%)
42	YW	0.42	0/911	0.82	2/1220 (0.2%)
43	RX	0.40	0/739	0.85	0/993
43	YX	0.45	0/739	0.89	1/993 (0.1%)
44	RY	0.45	0/798	0.95	0/1064
44	YY	0.47	0/798	0.99	2/1064 (0.2%)
45	RZ	0.49	3/1435 (0.2%)	0.97	5/1947 (0.3%)
45	YZ	0.44	0/1493	0.96	6/2026 (0.3%)
46	R0	0.40	0/666	0.85	0/885
46	Y0	0.40	0/666	0.87	1/885 (0.1%)
47	R1	0.42	0/770	0.85	0/1022
47	Y1	0.49	0/770	0.84	0/1022
48	R2	0.34	0/583	0.92	1/771 (0.1%)
48	Y2	0.41	0/583	0.90	1/771 (0.1%)
49	R3	0.37	0/474	0.77	0/635
49	Y3	0.37	0/474	0.80	0/635
50	R4	0.34	0/586	0.77	0/785
50	Y4	0.37	0/586	0.85	1/785 (0.1%)
51	R5	0.44	0/473	1.07	2/639 (0.3%)
51	Y5	0.67	3/456 (0.7%)	1.15	9/617 (1.5%)
52	R6	0.41	0/424	0.99	2/565 (0.4%)
52	Y6	0.57	0/424	1.15	3/565 (0.5%)
53	R7	0.42	0/438	0.80	0/575
53	Y7	0.44	0/438	0.83	2/575 (0.3%)
54	R8	0.56	0/525	1.13	5/691 (0.7%)
54	Y8	0.54	0/525	1.13	3/691 (0.4%)
55	R9	0.33	0/310	0.72	0/407
55	Y9	0.31	0/301	0.70	0/397
All	All	0.28	7/321819 (0.0%)	0.56	197/481178 (0.0%)

All (7) bond length outliers are listed below:

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
45	RZ	157	LEU	C-N	6.41	1.41	1.33
51	Y5	4	HIS	C-N	6.37	1.41	1.33
51	Y5	6	VAL	C-N	5.54	1.41	1.33
45	RZ	158	PRO	N-CD	5.45	1.55	1.47
51	Y5	7	PRO	N-CD	5.38	1.55	1.47
45	RZ	159	PRO	N-CD	5.29	1.55	1.47
12	XL	25	PRO	N-CD	5.11	1.54	1.47

All (197) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	Y8	41	ILE	N-CA-C	-12.64	101.70	113.71
31	YH	9	ILE	C-N-CD	-11.91	94.41	120.60
54	R8	41	ILE	N-CA-C	-11.85	102.45	113.71
36	YQ	82	ARG	N-CA-C	11.18	124.86	109.54
31	RH	9	ILE	C-N-CD	-10.87	96.68	120.60
25	RA	1022	G	O3'-P-O5'	10.46	119.69	104.00
32	YI	144	VAL	N-CA-C	9.04	119.03	110.53
12	QL	47	LYS	CA-C-N	-8.70	111.02	120.94
12	QL	47	LYS	C-N-CA	-8.70	111.02	120.94
51	R5	4	HIS	CA-C-N	-8.64	111.12	119.85
51	R5	4	HIS	C-N-CA	-8.64	111.12	119.85
7	XG	78	ARG	N-CA-C	8.47	116.88	108.75
45	RZ	158	PRO	C-N-CD	8.42	139.12	120.60
25	RA	1980	G	C2'-C3'-O3'	-8.27	97.10	109.50
40	YU	89	GLU	N-CA-C	-7.87	103.47	113.23
41	RV	81	TYR	N-CA-C	7.64	120.53	109.14
48	R2	5	GLU	N-CA-C	-7.56	104.19	113.41
36	RQ	82	ARG	N-CA-C	7.50	123.49	107.67
40	YU	97	ASP	N-CA-C	-7.34	103.79	112.89
1	XA	913	A	C2'-C3'-O3'	7.33	120.49	109.50
25	YA	2712(A)	A	C2'-C3'-O3'	-7.32	102.72	113.70
48	Y2	5	GLU	N-CA-C	-7.20	103.16	112.23
1	XA	315	A	P-O3'-C3'	7.10	130.84	120.20
28	YE	26	ILE	N-CA-C	7.07	118.06	112.12
33	RN	110	GLY	CA-C-N	6.96	126.21	118.97
33	RN	110	GLY	C-N-CA	6.96	126.21	118.97
45	RZ	157	LEU	CA-C-N	-6.84	113.33	120.38
45	RZ	157	LEU	C-N-CA	-6.84	113.33	120.38
41	RV	39	LEU	N-CA-C	-6.79	104.89	113.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	RH	153	LYS	CA-C-N	-6.79	113.91	120.83
31	RH	153	LYS	C-N-CA	-6.79	113.91	120.83
27	RD	13	ARG	N-CA-C	-6.74	104.75	114.12
44	YY	76	CYS	CA-C-N	6.72	128.25	119.84
44	YY	76	CYS	C-N-CA	6.72	128.25	119.84
34	YO	47	ILE	CA-C-N	6.70	128.21	119.84
34	YO	47	ILE	C-N-CA	6.70	128.21	119.84
31	RH	89	ILE	N-CA-C	6.68	117.31	111.90
11	QK	116	HIS	N-CA-C	-6.67	104.13	113.20
41	YV	81	TYR	N-CA-C	6.67	120.05	109.65
4	QD	38	TYR	CA-C-N	6.65	127.23	120.38
4	QD	38	TYR	C-N-CA	6.65	127.23	120.38
9	XI	89	ASN	CA-C-N	6.49	126.18	119.82
9	XI	89	ASN	C-N-CA	6.49	126.18	119.82
12	XL	47	LYS	CA-C-N	-6.47	113.56	120.94
12	XL	47	LYS	C-N-CA	-6.47	113.56	120.94
54	Y8	54	GLU	N-CA-C	-6.46	105.32	113.72
27	YD	28	GLU	CA-C-N	-6.42	114.01	120.31
27	YD	28	GLU	C-N-CA	-6.42	114.01	120.31
28	RE	26	ILE	N-CA-C	6.40	117.08	111.90
51	Y5	6	VAL	CA-C-N	-6.34	113.42	119.89
51	Y5	6	VAL	C-N-CA	-6.34	113.42	119.89
52	Y6	30	THR	CA-C-N	6.31	142.14	127.00
52	Y6	30	THR	C-N-CA	6.31	142.14	127.00
20	XT	12	ALA	N-CA-C	-6.30	105.23	113.17
45	YZ	157	LEU	CA-C-N	6.27	126.83	120.38
45	YZ	157	LEU	C-N-CA	6.27	126.83	120.38
1	XA	960	U	P-O3'-C3'	6.25	129.57	120.20
28	YE	75	VAL	N-CA-C	-6.24	104.25	110.30
7	XG	155	ARG	CB-CA-C	-6.22	109.38	116.54
28	RE	21	VAL	CA-C-N	6.22	126.17	119.76
28	RE	21	VAL	C-N-CA	6.22	126.17	119.76
51	Y5	4	HIS	CA-C-N	-6.21	113.38	119.90
51	Y5	4	HIS	C-N-CA	-6.21	113.38	119.90
32	RI	113	ARG	N-CA-C	-6.20	103.00	111.56
31	YH	38	SER	CA-C-N	6.15	127.52	119.84
31	YH	38	SER	C-N-CA	6.15	127.52	119.84
25	RA	1300	U	C4'-C3'-O3'	6.12	118.58	109.40
1	XA	960	U	C2'-C3'-O3'	6.09	118.64	109.50
31	RH	38	SER	CA-C-N	6.08	127.44	119.84
31	RH	38	SER	C-N-CA	6.08	127.44	119.84
35	YP	25	SER	N-CA-C	-6.06	104.32	113.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	RO	47	ILE	CA-C-N	6.05	127.41	119.84
34	RO	47	ILE	C-N-CA	6.05	127.41	119.84
32	YI	140	LEU	N-CA-C	6.02	118.85	109.52
42	RW	57	ASN	N-CA-C	-6.00	106.00	113.55
29	RF	65	TRP	CA-C-N	5.96	127.29	119.84
29	RF	65	TRP	C-N-CA	5.96	127.29	119.84
28	YE	73	GLU	CA-C-N	5.95	126.30	119.93
28	YE	73	GLU	C-N-CA	5.95	126.30	119.93
7	QG	78	ARG	N-CA-C	5.95	117.08	108.34
20	QT	12	ALA	N-CA-C	-5.91	105.83	113.16
29	RF	4	VAL	N-CA-C	5.91	115.86	106.88
50	Y4	45	GLY	N-CA-C	-5.88	107.69	114.69
32	YI	120	ILE	N-CA-C	5.84	115.91	110.42
12	XL	124	LYS	CA-C-N	5.83	125.84	119.89
12	XL	124	LYS	C-N-CA	5.83	125.84	119.89
9	QI	5	TYR	CB-CA-C	-5.82	109.88	116.63
42	RW	13	SER	CA-C-N	5.80	125.49	119.05
42	RW	13	SER	C-N-CA	5.80	125.49	119.05
52	Y6	12	GLU	N-CA-C	5.79	118.45	109.60
41	YV	46	VAL	N-CA-C	-5.78	107.63	113.47
31	RH	6	ARG	N-CA-C	-5.75	106.10	113.23
28	YE	190	GLY	CA-C-N	5.75	125.72	120.03
28	YE	190	GLY	C-N-CA	5.75	125.72	120.03
38	YS	110	LEU	CB-CA-C	-5.75	109.93	116.54
11	XK	11	LYS	N-CA-C	5.74	115.10	108.49
29	RF	168	ARG	N-CA-C	5.73	117.53	111.28
25	YA	1982	C	C3'-C2'-O2'	-5.68	102.17	110.70
41	RV	49	THR	CA-C-N	-5.68	112.74	119.84
41	RV	49	THR	C-N-CA	-5.68	112.74	119.84
40	RU	9	VAL	N-CA-C	5.67	115.86	110.42
4	XD	38	TYR	CA-C-N	5.67	126.22	120.38
4	XD	38	TYR	C-N-CA	5.67	126.22	120.38
28	RE	131	ALA	CB-CA-C	-5.66	110.06	116.63
46	Y0	53	MET	N-CA-C	5.64	117.85	108.99
25	YA	1992	G	C2'-C3'-O3'	5.64	117.96	109.50
41	YV	49	THR	CA-C-N	-5.62	112.81	119.84
41	YV	49	THR	C-N-CA	-5.62	112.81	119.84
27	YD	44	ASN	N-CA-C	5.62	117.33	108.96
41	YV	28	GLU	CA-C-N	5.61	126.85	119.84
41	YV	28	GLU	C-N-CA	5.61	126.85	119.84
25	RA	1022	G	P-O3'-C3'	5.60	128.60	120.20
2	QB	158	LEU	CA-C-N	5.58	125.90	119.93

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	QB	158	LEU	C-N-CA	5.58	125.90	119.93
54	R8	42	ARG	N-CA-C	-5.56	106.17	113.12
52	R6	12	GLU	N-CA-C	5.55	117.08	110.19
40	RU	96	ALA	N-CA-C	-5.54	105.67	113.20
1	XA	315	A	C4'-C3'-O3'	5.52	117.68	109.40
8	XH	103	VAL	N-CA-C	5.51	115.51	108.12
11	QK	40	ILE	N-CA-C	-5.50	107.46	112.96
31	RH	153	LYS	N-CA-C	5.50	121.96	109.81
12	XL	30	ALA	CA-C-N	5.50	125.01	119.19
12	XL	30	ALA	C-N-CA	5.50	125.01	119.19
25	YA	2712	U	C2'-C3'-O3'	-5.47	105.49	113.70
25	RA	859	G	P-O3'-C3'	5.47	128.41	120.20
43	YX	5	TYR	N-CA-C	-5.45	106.22	112.92
2	XB	158	LEU	CA-C-N	5.44	125.44	119.89
2	XB	158	LEU	C-N-CA	5.44	125.44	119.89
54	R8	54	GLU	N-CA-C	-5.44	106.32	113.17
27	RD	28	GLU	CA-C-N	-5.43	114.74	120.66
27	RD	28	GLU	C-N-CA	-5.43	114.74	120.66
35	RP	62	LEU	CA-C-N	5.41	126.60	119.84
35	RP	62	LEU	C-N-CA	5.41	126.60	119.84
32	YI	143	SER	N-CA-C	5.40	118.03	109.50
40	YU	9	VAL	N-CA-C	5.39	116.02	110.36
33	YN	132	ALA	CA-C-O	5.38	121.06	117.94
51	Y5	52	TYR	N-CA-C	-5.36	106.62	114.39
35	YP	144	GLU	CA-C-N	5.34	125.75	119.99
35	YP	144	GLU	C-N-CA	5.34	125.75	119.99
52	R6	21	TYR	N-CA-C	5.33	118.23	109.76
8	XH	79	VAL	N-CA-C	-5.32	105.94	111.58
1	XA	328	C	C4'-C3'-O3'	5.31	117.37	109.40
12	XL	24	VAL	CA-C-N	-5.31	113.20	119.84
12	XL	24	VAL	C-N-CA	-5.31	113.20	119.84
28	RE	23	VAL	N-CA-C	5.27	120.30	109.34
29	YF	95	ARG	N-CA-C	5.27	116.29	108.86
35	RP	54	GLY	N-CA-C	-5.26	108.08	114.92
40	RU	97	ASP	N-CA-C	-5.25	106.13	112.54
42	YW	13	SER	CA-C-N	5.24	125.29	119.32
42	YW	13	SER	C-N-CA	5.24	125.29	119.32
35	RP	25	SER	N-CA-C	-5.23	106.29	113.30
41	RV	15	GLU	CA-C-N	-5.22	115.19	120.31
41	RV	15	GLU	C-N-CA	-5.22	115.19	120.31
31	RH	35	VAL	CA-C-N	5.21	126.36	119.84
31	RH	35	VAL	C-N-CA	5.21	126.36	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	YD	136	ILE	CA-C-N	5.21	126.35	119.84
27	YD	136	ILE	C-N-CA	5.21	126.35	119.84
7	QG	80	VAL	N-CA-C	5.20	120.16	109.34
40	YU	88	ILE	N-CA-C	5.20	115.58	107.99
54	R8	31	HIS	N-CA-C	-5.20	99.73	110.80
36	YQ	83	MET	N-CA-C	5.19	116.98	108.52
35	RP	71	VAL	CA-C-N	-5.18	113.20	118.85
35	RP	71	VAL	C-N-CA	-5.18	113.20	118.85
32	YI	62	LYS	N-CA-C	-5.18	107.01	113.38
45	RZ	129	SER	CA-C-N	5.17	126.31	119.84
45	RZ	129	SER	C-N-CA	5.17	126.31	119.84
45	YZ	129	SER	CA-C-N	5.17	125.47	119.47
45	YZ	129	SER	C-N-CA	5.17	125.47	119.47
30	RG	141	PHE	CA-C-N	5.17	125.46	119.47
30	RG	141	PHE	C-N-CA	5.17	125.46	119.47
19	QS	58	VAL	N-CA-C	5.17	112.98	107.76
45	YZ	82	ARG	CA-C-N	5.17	125.41	119.83
45	YZ	82	ARG	C-N-CA	5.17	125.41	119.83
41	YV	39	LEU	N-CA-C	-5.16	105.73	113.89
31	YH	153	LYS	N-CA-C	5.15	121.19	109.81
38	RS	110	LEU	CB-CA-C	-5.14	110.66	116.63
39	RT	13	ARG	N-CA-C	-5.14	106.60	112.92
54	R8	34	TRP	N-CA-C	5.14	121.75	110.80
39	RT	108	ARG	N-CA-C	-5.14	107.01	113.28
51	Y5	46	CYS	CA-C-N	5.13	124.75	119.56
51	Y5	46	CYS	C-N-CA	5.13	124.75	119.56
51	Y5	41	PRO	CA-C-N	5.12	125.12	119.89
51	Y5	41	PRO	C-N-CA	5.12	125.12	119.89
54	Y8	50	LEU	N-CA-C	5.11	119.86	113.43
37	YR	3	HIS	N-CA-C	5.10	117.61	109.96
35	YP	9	ASN	C-N-CD	-5.10	104.10	125.00
4	XD	180	GLY	N-CA-C	-5.09	108.00	114.16
31	YH	31	GLY	N-CA-C	5.09	122.33	112.04
27	RD	100	GLY	N-CA-C	-5.05	107.68	114.25
24	QY	70	ALA	CB-CA-C	-5.05	110.73	116.54
24	XY	70	ALA	CB-CA-C	-5.05	110.73	116.54
29	YF	4	VAL	N-CA-C	5.05	114.45	106.32
31	YH	113	VAL	N-CA-C	5.03	115.55	108.36
33	RN	71	ILE	N-CA-C	5.01	115.13	108.11
33	YN	35	ARG	N-CA-C	-5.01	103.78	110.55
53	Y7	6	GLN	CA-C-N	5.01	125.01	119.90
53	Y7	6	GLN	C-N-CA	5.01	125.01	119.90

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	QA	32472	0	16392	434	0
1	XA	32409	0	16360	369	0
2	QB	1915	0	1969	58	0
2	XB	1915	0	1969	63	0
3	QC	1612	0	1677	48	0
3	XC	1612	0	1677	39	0
4	QD	1703	0	1766	56	0
4	XD	1703	0	1766	36	0
5	QE	1178	0	1234	41	0
5	XE	1178	0	1234	24	0
6	QF	843	0	857	18	0
6	XF	843	0	857	30	0
7	QG	1257	0	1296	36	0
7	XG	1257	0	1296	36	0
8	QH	1116	0	1177	30	0
8	XH	1116	0	1177	25	0
9	QI	1018	0	1049	49	0
9	XI	1018	0	1049	44	0
10	QJ	801	0	849	38	0
10	XJ	801	0	849	43	0
11	QK	901	0	926	26	0
11	XK	901	0	926	21	0
12	QL	975	0	1062	29	0
12	XL	975	0	1062	25	0
13	QM	937	0	995	29	0
13	XM	937	0	995	55	0
14	QN	492	0	530	20	0
14	XN	492	0	529	12	0
15	QO	734	0	771	16	0
15	XO	734	0	771	17	0
16	QP	705	0	725	16	0
16	XP	705	0	725	10	0
17	QQ	834	0	904	15	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
17	XQ	834	0	904	18	0
18	QR	585	0	657	10	0
18	XR	585	0	657	19	0
19	QS	656	0	678	47	0
19	XS	656	0	678	45	0
20	QT	763	0	861	24	0
20	XT	763	0	861	28	0
21	QU	217	0	234	9	0
21	XU	217	0	234	14	0
22	QV	1640	0	837	9	0
22	QW	1640	0	837	56	0
22	XV	1640	0	837	6	0
22	XW	1640	0	837	27	0
23	QX	399	0	196	11	0
23	XX	399	0	196	17	0
24	QY	756	0	749	20	0
24	XY	756	0	749	19	0
25	RA	62269	0	31391	636	0
25	YA	61924	0	31215	620	0
26	RB	2617	0	1328	26	0
26	YB	2617	0	1328	30	0
27	RD	2115	0	2195	67	0
27	YD	2115	0	2195	75	0
28	RE	1568	0	1634	92	0
28	YE	1568	0	1634	73	0
29	RF	1627	0	1680	62	0
29	YF	1627	0	1680	58	0
30	RG	1474	0	1535	51	0
30	YG	1474	0	1535	46	0
31	RH	1307	0	1382	75	0
31	YH	1307	0	1382	71	0
32	RI	1136	0	1223	39	0
32	YI	1136	0	1223	68	0
33	RN	1104	0	1180	16	0
33	YN	1104	0	1180	22	0
34	RO	933	0	996	35	0
34	YO	933	0	996	26	0
35	RP	1145	0	1228	92	0
35	YP	1145	0	1228	85	0
36	RQ	1112	0	1170	39	0
36	YQ	1107	0	1165	42	0
37	RR	960	0	1021	16	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
37	YR	960	0	1021	24	0
38	RS	882	0	943	28	0
38	YS	882	0	943	31	0
39	RT	1141	0	1202	45	0
39	YT	1141	0	1202	39	0
40	RU	964	0	1022	37	0
40	YU	964	0	1022	31	0
41	RV	779	0	852	53	0
41	YV	779	0	852	57	0
42	RW	900	0	964	26	0
42	YW	900	0	964	23	0
43	RX	725	0	778	14	0
43	YX	725	0	778	20	0
44	RY	785	0	878	64	0
44	YY	785	0	878	51	0
45	RZ	1404	0	1437	94	0
45	YZ	1461	0	1493	51	0
46	R0	657	0	683	19	0
46	Y0	657	0	683	25	0
47	R1	763	0	848	29	0
47	Y1	763	0	848	26	0
48	R2	581	0	629	20	0
48	Y2	581	0	629	16	0
49	R3	469	0	518	11	0
49	Y3	469	0	518	10	0
50	R4	573	0	565	22	0
50	Y4	573	0	565	37	0
51	R5	459	0	480	9	0
51	Y5	442	0	465	21	0
52	R6	417	0	441	28	0
52	Y6	417	0	441	43	0
53	R7	430	0	480	6	0
53	Y7	430	0	480	11	0
54	R8	517	0	582	39	0
54	Y8	517	0	582	34	0
55	R9	307	0	338	14	0
55	Y9	298	0	326	9	0
56	QA	140	0	0	0	0
56	QE	1	0	0	0	0
56	QL	1	0	0	0	0
56	QV	5	0	0	0	0
56	R0	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	R2	1	0	0	0	0
56	R5	3	0	0	0	0
56	RA	413	0	0	0	0
56	RB	4	0	0	0	0
56	RD	2	0	0	0	0
56	RE	1	0	0	0	0
56	RF	1	0	0	0	0
56	RP	2	0	0	0	0
56	RQ	2	0	0	0	0
56	RR	1	0	0	0	0
56	RU	1	0	0	0	0
56	RY	1	0	0	0	0
56	XA	160	0	0	0	0
56	XD	1	0	0	0	0
56	XF	1	0	0	0	0
56	XL	1	0	0	0	0
56	XN	1	0	0	0	0
56	XV	4	0	0	0	0
56	Y0	3	0	0	0	0
56	Y1	1	0	0	0	0
56	Y5	2	0	0	0	0
56	Y7	1	0	0	0	0
56	YA	464	0	0	0	0
56	YB	5	0	0	0	0
56	YD	1	0	0	0	0
56	YE	2	0	0	0	0
56	YG	1	0	0	0	0
56	YH	1	0	0	0	0
56	YN	1	0	0	0	0
56	YO	1	0	0	0	0
56	YP	2	0	0	0	0
56	YQ	2	0	0	0	0
56	YR	1	0	0	0	0
56	YU	1	0	0	0	0
56	YV	1	0	0	0	0
56	YY	1	0	0	0	0
57	QD	1	0	0	0	0
57	QN	1	0	0	0	0
57	XD	1	0	0	0	0
57	XN	1	0	0	0	0
All	All	297400	0	201477	4968	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including

hydrogen atoms). The all-atom clashscore for this structure is 10.

All (4968) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:51:PHE:O	28:RE:74:PRO:HB3	1.29	1.31
13:XM:8:GLU:O	13:XM:9:ILE:HG22	1.09	1.26
5:QE:11:ILE:O	5:QE:12:LEU:HG	1.07	1.21
32:YI:78:THR:H	32:YI:142:VAL:CG2	1.54	1.19
45:RZ:163:LEU:HD11	45:RZ:165:VAL:CG1	1.72	1.19
44:RY:76:CYS:SG	44:RY:77:PRO:HD3	1.83	1.18
45:RZ:59:LEU:HG	45:RZ:60:GLU:H	1.07	1.16
45:YZ:155:LEU:HD12	45:YZ:155:LEU:O	1.42	1.16
45:RZ:59:LEU:O	45:RZ:60:GLU:HG3	1.46	1.15
45:RZ:163:LEU:CD1	45:RZ:165:VAL:HG12	1.75	1.15
44:RY:75:ILE:HG13	44:RY:80:GLY:H	1.00	1.13
1:QA:1299:A:N3	1:QA:1299:A:H3'	1.63	1.13
32:YI:78:THR:H	32:YI:142:VAL:HG23	1.04	1.12
11:QK:116:HIS:O	11:QK:117:ASN:HB2	1.46	1.12
32:YI:77:LEU:HD12	32:YI:142:VAL:CG2	1.79	1.12
25:RA:6:A:H2'	25:RA:7:G:H8	1.11	1.11
5:QE:11:ILE:O	5:QE:12:LEU:CG	1.96	1.11
28:RE:61:ARG:HB3	28:RE:62:PRO:HD3	1.11	1.10
13:XM:9:ILE:HG13	13:XM:10:PRO:HD2	1.33	1.10
32:YI:141:LYS:HB3	32:YI:142:VAL:HA	1.18	1.10
13:XM:8:GLU:O	13:XM:9:ILE:CG2	1.97	1.10
28:YE:60:ASN:C	28:YE:62:PRO:HD2	1.76	1.10
32:YI:77:LEU:HD12	32:YI:142:VAL:HG21	1.16	1.09
28:RE:60:ASN:O	28:RE:62:PRO:HD2	1.51	1.08
28:RE:61:ARG:CB	28:RE:62:PRO:HD3	1.84	1.08
32:RI:125:GLU:HA	32:RI:141:LYS:HB3	1.34	1.08
45:RZ:155:LEU:O	45:RZ:156:LYS:HG2	1.53	1.08
35:YP:9:ASN:HB2	35:YP:10:PRO:HD2	1.16	1.08
50:Y4:6:HIS:HB2	50:Y4:7:PRO:CD	1.84	1.08
32:YI:78:THR:N	32:YI:142:VAL:HG23	1.69	1.07
45:RZ:59:LEU:C	45:RZ:60:GLU:HG3	1.75	1.06
25:YA:2712(A):A:H5'	25:YA:2712(A):A:H8	1.14	1.06
5:QE:13:ILE:HD12	5:QE:51:VAL:CG1	1.85	1.06
51:Y5:4:HIS:HB3	51:Y5:5:PRO:HD3	1.37	1.06
25:YA:2777:G:H5''	25:YA:2778:A:H5'	1.37	1.05
25:YA:1021:A:H3'	25:YA:1022:G:H5''	1.38	1.05
5:QE:11:ILE:HD12	5:QE:31:LEU:HD23	1.36	1.05
32:YI:141:LYS:HB3	32:YI:142:VAL:CA	1.87	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:61:ARG:HB3	28:RE:62:PRO:CD	1.89	1.02
44:RY:76:CYS:HB3	44:RY:77:PRO:HD2	1.40	1.02
32:YI:77:LEU:HB2	32:YI:142:VAL:HG22	1.03	1.01
28:YE:63:LEU:O	28:YE:64:LYS:HB2	1.57	1.00
45:RZ:155:LEU:C	45:RZ:156:LYS:HG2	1.84	1.00
25:RA:6:A:H2'	25:RA:7:G:C8	1.97	0.99
31:RH:7:LEU:HD11	31:RH:66:GLY:HA2	1.42	0.99
44:RY:76:CYS:CB	44:RY:77:PRO:CD	2.39	0.99
45:RZ:163:LEU:HD12	45:RZ:165:VAL:HG12	1.42	0.99
32:YI:144:VAL:O	32:YI:145:VAL:HG12	1.62	0.99
45:RZ:59:LEU:CG	45:RZ:60:GLU:H	1.75	0.99
25:RA:1225:C:H4'	41:RV:85:LYS:HB2	1.44	0.99
22:QW:38:A:N7	22:QW:39:C:C4	2.31	0.98
25:YA:6:A:H2'	25:YA:7:G:H8	1.27	0.98
7:QG:77:SER:OG	22:QW:32:C:H4'	1.62	0.98
25:RA:6:A:O2'	25:RA:7:G:H5'	1.63	0.98
31:RH:8:PRO:O	31:RH:10:PRO:HD3	1.62	0.98
32:YI:77:LEU:HB2	32:YI:141:LYS:HB2	1.46	0.97
44:RY:75:ILE:HG13	44:RY:80:GLY:N	1.79	0.97
32:YI:77:LEU:CB	32:YI:142:VAL:HG22	1.93	0.97
45:YZ:121:HIS:H	45:YZ:171:ILE:HG13	1.28	0.96
45:RZ:163:LEU:HD11	45:RZ:165:VAL:HG13	1.47	0.96
44:RY:76:CYS:SG	44:RY:77:PRO:CD	2.54	0.96
4:QD:195:ALA:HB2	6:XF:20:ALA:HB2	1.44	0.96
47:Y1:87:PRO:HA	47:Y1:90:ILE:HG22	1.45	0.95
32:RI:79:ILE:O	32:RI:142:VAL:HG21	1.66	0.95
5:QE:13:ILE:HD12	5:QE:51:VAL:HG11	1.46	0.95
25:YA:2712(A):A:H5'	25:YA:2712(A):A:C8	2.01	0.95
52:Y6:28:ARG:HA	52:Y6:29:ASN:HB3	1.49	0.94
44:RY:76:CYS:HB3	44:RY:77:PRO:CD	1.94	0.94
4:QD:195:ALA:O	6:XF:16:GLN:HB3	1.65	0.94
27:RD:75:ILE:HG21	27:RD:99:ASP:OD2	1.68	0.94
25:RA:2701:C:H3'	25:RA:2702:U:H5''	1.45	0.94
29:RF:2:LYS:HG3	29:RF:24:LEU:HD12	1.46	0.94
13:XM:9:ILE:CG1	13:XM:10:PRO:HD2	1.98	0.94
25:RA:1138:G:H21	33:RN:106:MET:HE3	1.31	0.94
4:QD:195:ALA:HB3	6:XF:16:GLN:O	1.68	0.93
22:QW:38:A:C8	22:QW:39:C:C5	2.57	0.92
28:RE:61:ARG:CB	28:RE:62:PRO:CD	2.48	0.92
35:YP:9:ASN:HB2	35:YP:10:PRO:CD	1.98	0.92
41:RV:49:THR:HG22	41:RV:50:PRO:HD3	1.49	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YI:77:LEU:HB2	32:YI:142:VAL:CG2	1.97	0.91
1:XA:1157:A:O2'	1:XA:1158:C:H5''	1.71	0.91
32:YI:77:LEU:CB	32:YI:141:LYS:HB2	1.98	0.91
52:Y6:28:ARG:HD2	52:Y6:29:ASN:HB3	1.51	0.90
35:RP:60:MET:C	35:RP:61:ARG:HG2	1.96	0.90
51:Y5:4:HIS:HB3	51:Y5:5:PRO:CD	2.01	0.90
45:RZ:59:LEU:HG	45:RZ:60:GLU:N	1.87	0.90
45:RZ:157:LEU:HB3	45:RZ:161:VAL:CG1	2.02	0.90
32:YI:141:LYS:CB	32:YI:142:VAL:HA	1.99	0.90
28:YE:60:ASN:C	28:YE:62:PRO:CD	2.45	0.89
5:QE:50:GLU:HG3	5:QE:52:PRO:HD2	1.55	0.88
9:QI:11:LYS:HD2	9:QI:107:ARG:O	1.73	0.88
45:RZ:163:LEU:CD1	45:RZ:165:VAL:CG1	2.41	0.88
32:RI:79:ILE:C	32:RI:142:VAL:HG21	1.98	0.88
19:XS:67:VAL:HG21	50:Y4:59:PHE:HB3	1.56	0.88
45:YZ:148:ASP:HB3	45:YZ:149:SER:HA	1.56	0.88
35:YP:63:PRO:HB3	54:Y8:13:ARG:HG2	1.56	0.87
1:QA:1157:A:H1'	1:QA:1158:C:C4	2.08	0.87
25:RA:1204:A:H62	25:RA:1241:A:H2	1.22	0.87
35:RP:63:PRO:HB3	54:R8:13:ARG:HG2	1.55	0.87
35:RP:9:ASN:CB	35:RP:10:PRO:CD	2.52	0.87
44:RY:17:SER:HB2	44:RY:71:LYS:HE2	1.56	0.87
44:RY:75:ILE:CG1	44:RY:80:GLY:H	1.86	0.87
4:QD:197:PRO:HD3	6:XF:16:GLN:HG3	1.55	0.86
45:RZ:157:LEU:HB3	45:RZ:161:VAL:HG11	1.54	0.86
1:QA:1086:U:H3	1:QA:1099:G:H22	1.21	0.86
25:YA:6:A:H2'	25:YA:7:G:C8	2.09	0.86
32:RI:142:VAL:HG22	32:RI:143:SER:N	1.91	0.86
25:RA:2580:U:H4'	28:RE:130:GLY:HA3	1.57	0.86
25:YA:242:G:H5''	54:Y8:62:LEU:HD13	1.53	0.86
50:Y4:6:HIS:HB2	50:Y4:7:PRO:HD3	1.55	0.86
41:RV:48:GLY:O	41:RV:49:THR:O	1.92	0.86
44:YY:19:LYS:HE3	44:YY:71:LYS:HZ1	1.41	0.86
45:YZ:155:LEU:O	45:YZ:155:LEU:CD1	2.22	0.86
32:YI:78:THR:N	32:YI:142:VAL:CG2	2.32	0.86
25:YA:1138:G:H21	33:YN:106:MET:HE3	1.39	0.85
35:YP:9:ASN:CB	35:YP:10:PRO:HD2	1.99	0.85
9:QI:10:ARG:HH21	9:QI:11:LYS:HD3	1.41	0.85
39:YT:54:ARG:HA	39:YT:59:THR:HB	1.57	0.85
31:YH:9:ILE:HG22	31:YH:10:PRO:HA	1.58	0.85
19:QS:36:ARG:HD2	19:QS:71:LEU:H	1.42	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:60:ASN:O	28:RE:62:PRO:CD	2.25	0.85
1:XA:677:U:H3	1:XA:713:G:H22	1.25	0.84
52:Y6:28:ARG:HA	52:Y6:29:ASN:CB	2.07	0.84
2:XB:185:ILE:HG22	2:XB:199:TYR:HB2	1.58	0.84
1:XA:1178:G:H5'	9:XI:93:ARG:HH21	1.43	0.84
32:RI:143:SER:O	32:RI:144:VAL:HB	1.77	0.84
25:YA:2404:C:H1'	35:YP:67:MET:HE1	1.60	0.84
25:RA:2867:G:HO2'	25:RA:2868:A:H8	1.24	0.84
28:YE:63:LEU:O	28:YE:64:LYS:CB	2.24	0.83
45:RZ:156:LYS:O	45:RZ:157:LEU:HG	1.77	0.83
1:XA:1305:G:H22	1:XA:1331:G:H2'	1.43	0.83
35:YP:52:GLU:HG2	35:YP:55:ARG:HE	1.42	0.83
41:RV:49:THR:CG2	41:RV:50:PRO:HD3	2.08	0.83
54:R8:40:GLU:H	54:R8:43:GLN:HG3	1.44	0.83
32:YI:78:THR:CA	32:YI:142:VAL:HG23	2.09	0.83
51:R5:4:HIS:HB3	51:R5:5:PRO:HD3	1.58	0.83
13:XM:10:PRO:CG	13:XM:18:ALA:HA	2.08	0.83
32:YI:144:VAL:O	32:YI:145:VAL:CG1	2.26	0.82
31:YH:7:LEU:HD11	31:YH:66:GLY:HA2	1.62	0.82
41:YV:85:LYS:HG3	41:YV:87:HIS:H	1.44	0.82
7:QG:86:GLN:NE2	22:QW:31:G:H21	1.76	0.82
4:XD:31:CYS:SG	4:XD:32:ALA:N	2.52	0.82
25:YA:1204:A:H62	25:YA:1241:A:H2	1.28	0.82
25:RA:1981:A:H5''	25:RA:1982:C:OP2	1.79	0.82
1:XA:1157:A:N6	1:XA:1180:A:C5	2.48	0.82
1:QA:1225:A:H2'	1:QA:1225:A:N3	1.95	0.81
45:RZ:156:LYS:O	45:RZ:157:LEU:CG	2.29	0.81
44:YY:17:SER:HB2	44:YY:71:LYS:HE2	1.60	0.81
45:RZ:58:VAL:O	45:RZ:59:LEU:HG	1.81	0.81
35:RP:60:MET:O	35:RP:61:ARG:HG2	1.81	0.81
35:RP:19:VAL:HG13	35:RP:21:ARG:H	1.44	0.81
1:XA:1001:G:N1	1:XA:1039:C:N3	2.28	0.81
41:YV:5:VAL:HG23	41:YV:37:VAL:HG11	1.63	0.81
19:XS:36:ARG:HD2	19:XS:71:LEU:H	1.44	0.81
32:YI:140:LEU:O	32:YI:141:LYS:HG3	1.81	0.80
25:RA:660:G:H21	35:RP:12:ALA:HB2	1.45	0.80
29:RF:2:LYS:CG	29:RF:24:LEU:HD12	2.12	0.80
25:YA:2580:U:H4'	28:YE:130:GLY:HA3	1.62	0.80
25:RA:857:C:H4'	46:R0:23:VAL:HG21	1.63	0.80
1:QA:1299:A:N3	1:QA:1299:A:C3'	2.45	0.80
25:RA:1981:A:C5'	25:RA:1982:C:OP2	2.30	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RZ:58:VAL:O	45:RZ:59:LEU:CG	2.30	0.80
31:YH:8:PRO:O	31:YH:10:PRO:HD3	1.81	0.80
34:RO:97:ARG:NH2	34:RO:99:PHE:CE1	2.50	0.79
1:QA:1158:C:H3'	1:QA:1158:C:O2	1.82	0.79
25:RA:883:G:H1	25:RA:893:C:H42	1.27	0.79
44:RY:97:ARG:HH21	44:RY:98:VAL:HB	1.45	0.79
7:QG:77:SER:HB2	22:QW:32:C:O2'	1.83	0.79
25:YA:1270:C:H5''	25:YA:1271:G:H5'	1.64	0.79
1:XA:1157:A:O2'	1:XA:1158:C:C5'	2.30	0.79
25:RA:394:A:H2'	25:RA:395:U:H5''	1.64	0.79
1:QA:1158:C:O2	1:QA:1158:C:C2'	2.30	0.79
4:QD:31:CYS:SG	4:QD:32:ALA:N	2.56	0.79
29:RF:3:GLU:HA	29:RF:24:LEU:HG	1.65	0.79
22:QW:38:A:N7	22:QW:39:C:N4	2.30	0.79
25:RA:2787:C:H1'	28:RE:62:PRO:HG3	1.63	0.79
50:Y4:6:HIS:HB2	50:Y4:7:PRO:HD2	1.63	0.79
10:QJ:79:ARG:HA	10:QJ:82:ILE:HB	1.64	0.79
35:YP:63:PRO:HD3	54:Y8:13:ARG:HH11	1.48	0.79
25:RA:68:G:H3'	25:RA:69:C:O2	1.83	0.78
9:XI:10:ARG:HD3	9:XI:75:ASP:HB3	1.65	0.78
25:RA:2701:C:H3'	25:RA:2702:U:C5'	2.13	0.78
32:YI:77:LEU:CD1	32:YI:142:VAL:CG2	2.61	0.78
1:QA:677:U:H3	1:QA:713:G:H22	1.31	0.78
44:RY:76:CYS:CB	44:RY:77:PRO:HD2	2.08	0.78
44:RY:17:SER:OG	44:RY:18:GLY:N	2.14	0.78
25:YA:6:A:O2'	25:YA:7:G:H5'	1.83	0.78
4:QD:195:ALA:O	6:XF:16:GLN:CB	2.31	0.77
44:YY:97:ARG:HH21	44:YY:98:VAL:HB	1.48	0.77
34:RO:97:ARG:HH21	34:RO:99:PHE:HE1	1.29	0.77
45:RZ:59:LEU:CG	45:RZ:60:GLU:N	2.41	0.77
45:RZ:156:LYS:O	45:RZ:157:LEU:CB	2.30	0.77
25:YA:1225:C:H4'	41:YV:85:LYS:HB2	1.67	0.77
25:YA:1728:G:N7	25:YA:1731:G:N2	2.26	0.77
15:QO:39:LEU:HD12	15:QO:56:LEU:HB2	1.67	0.77
28:RE:63:LEU:HD23	28:RE:64:LYS:N	1.99	0.77
25:RA:2810:A:O3'	28:RE:61:ARG:HG3	1.85	0.77
1:QA:1178:G:H5'	9:QI:93:ARG:HH21	1.48	0.77
25:RA:655:A:H4'	25:RA:656:G:H5'	1.67	0.77
25:YA:2527:C:H5'	55:Y9:30:PRO:HB2	1.66	0.77
25:YA:2751:G:H1'	31:YH:4:ILE:HG13	1.66	0.77
12:XL:53:ARG:HG3	12:XL:93:LEU:HD21	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RU:92:ARG:HD2	40:RU:94:ASN:HB3	1.67	0.76
25:YA:2776:A:H4'	25:YA:2777:G:O5'	1.86	0.76
29:RF:4:VAL:HA	29:RF:19:GLU:HB3	1.67	0.76
36:RQ:75:THR:HA	36:RQ:89:ASN:H	1.49	0.76
54:R8:56:GLU:HA	54:R8:59:LYS:HE2	1.67	0.76
25:RA:2542:A:H8	25:RA:2542:A:H5''	1.50	0.76
2:QB:77:ALA:HB2	2:QB:211:ILE:HD13	1.67	0.76
32:RI:142:VAL:HG22	32:RI:143:SER:H	1.48	0.76
25:YA:480:A:H1'	44:YY:44:ILE:HD13	1.68	0.76
5:XE:50:GLU:HG3	5:XE:52:PRO:HD2	1.66	0.76
44:YY:102:CYS:SG	44:YY:103:GLY:N	2.59	0.76
13:QM:87:TYR:HB3	19:QS:73:GLU:HG2	1.67	0.76
29:YF:4:VAL:HA	29:YF:19:GLU:HB3	1.65	0.76
25:RA:273(E):U:H3	25:RA:363(A):A:H61	1.33	0.76
45:RZ:58:VAL:HG12	45:RZ:60:GLU:HG2	1.66	0.76
27:YD:206:LEU:HD22	27:YD:211:ARG:HG2	1.66	0.76
4:QD:195:ALA:CB	6:XF:20:ALA:HB2	2.16	0.75
45:RZ:59:LEU:O	45:RZ:60:GLU:CG	2.30	0.75
31:RH:7:LEU:HD22	31:RH:69:ARG:HG2	1.68	0.75
54:R8:30:ARG:O	54:R8:31:HIS:ND1	2.20	0.75
31:YH:11:VAL:HG23	31:YH:13:LYS:HG2	1.66	0.75
45:RZ:118:GLN:HG3	45:RZ:173:ALA:H	1.49	0.75
1:QA:328:C:C2'	1:QA:328:C:O2	2.34	0.75
28:RE:52:LEU:O	28:RE:74:PRO:HA	1.85	0.75
35:RP:125:VAL:HG13	35:RP:144:GLU:HB3	1.68	0.75
28:RE:61:ARG:O	28:RE:63:LEU:HD22	1.86	0.75
44:RY:95:LYS:NZ	44:RY:96:ILE:O	2.20	0.75
40:YU:95:LEU:HD13	41:YV:4:ILE:HG13	1.69	0.75
19:QS:62:ILE:HA	19:QS:66:MET:HE1	1.69	0.74
35:RP:9:ASN:HB2	35:RP:10:PRO:CD	2.16	0.74
5:XE:71:LEU:HD11	5:XE:114:GLY:HA3	1.69	0.74
40:YU:90:VAL:HG22	41:YV:39:LEU:HB3	1.69	0.74
25:RA:654(D):G:H1	25:RA:654(Q):C:H42	1.35	0.74
25:RA:2128:C:N4	25:RA:2159:G:O6	2.20	0.74
28:RE:38:THR:HG22	28:RE:40:GLU:H	1.51	0.74
2:QB:8:LYS:HB3	2:QB:217:ARG:HD3	1.69	0.74
43:RX:35:THR:HG22	43:RX:37:THR:H	1.52	0.74
37:RR:33:ARG:HG2	37:RR:115:GLU:HG2	1.69	0.74
32:YI:78:THR:H	32:YI:142:VAL:HG22	1.51	0.74
22:QW:37:A:H2'	22:QW:38:A:O4'	1.87	0.74
2:QB:54:THR:HG21	2:QB:201:ILE:HD11	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YY:95:LYS:NZ	44:YY:99:CYS:O	2.21	0.74
25:RA:2134:A:N6	25:RA:2157:G:O2'	2.21	0.74
12:XL:25:PRO:HD2	12:XL:98:TYR:OH	1.87	0.74
41:YV:49:THR:HB	41:YV:50:PRO:HD3	1.69	0.74
38:YS:106:ARG:NH1	38:YS:106:ARG:O	2.21	0.73
35:RP:14:LYS:O	35:RP:16:ARG:N	2.21	0.73
38:RS:62:LYS:HB3	38:RS:97:ARG:HD3	1.70	0.73
39:RT:55:ASN:H	39:RT:59:THR:HB	1.52	0.73
45:RZ:59:LEU:C	45:RZ:60:GLU:CG	2.55	0.73
27:YD:44:ASN:HB3	27:YD:49:ILE:HA	1.68	0.73
40:YU:92:ARG:HD2	40:YU:94:ASN:HB3	1.70	0.73
27:YD:85:ASP:HB2	27:YD:92:ILE:HD13	1.71	0.73
1:QA:954:G:H21	1:QA:1227:A:H62	1.34	0.73
22:QW:54:U:H3	22:QW:58:A:H62	1.34	0.73
25:YA:273(E):U:H3	25:YA:363(A):A:H61	1.34	0.73
52:Y6:28:ARG:CD	52:Y6:29:ASN:HB3	2.18	0.73
25:YA:1021:A:C3'	25:YA:1022:G:H5''	2.15	0.73
1:QA:1157:A:O2'	1:QA:1158:C:H5''	1.89	0.73
2:QB:48:MET:HA	2:QB:51:LEU:HD12	1.71	0.73
5:QE:78:HIS:HE2	5:QE:142:LEU:HA	1.54	0.73
25:RA:910:A:H62	36:RQ:12:GLN:HA	1.54	0.73
1:XA:579:G:H5'	1:XA:728:A:H1'	1.71	0.73
1:XA:954:G:H21	1:XA:1227:A:H62	1.36	0.73
52:Y6:6:ARG:HG2	52:Y6:8:LYS:H	1.52	0.73
4:QD:166:LYS:HD2	27:YD:134:ARG:NH1	2.04	0.73
34:RO:97:ARG:NH2	34:RO:99:PHE:HE1	1.85	0.73
47:R1:83:GLU:HG2	47:R1:85:LEU:H	1.52	0.73
7:QG:86:GLN:CD	22:QW:31:G:H21	1.97	0.73
1:QA:1158:C:O2	1:QA:1158:C:C3'	2.37	0.72
25:YA:1725:G:O6	25:YA:1735:C:N4	2.20	0.72
32:YI:78:THR:HA	32:YI:142:VAL:HG23	1.71	0.72
35:YP:14:LYS:O	35:YP:16:ARG:N	2.22	0.72
35:RP:9:ASN:HB2	35:RP:10:PRO:HD2	1.71	0.72
2:XB:69:LEU:HB3	2:XB:162:ILE:HG22	1.70	0.72
28:RE:1:MET:N	28:RE:200:GLU:OE2	2.23	0.72
13:XM:8:GLU:C	13:XM:9:ILE:HG22	2.10	0.72
47:Y1:83:GLU:HG2	47:Y1:85:LEU:H	1.54	0.72
29:RF:153:SER:HB2	29:RF:190:GLU:H	1.55	0.72
37:RR:100:LEU:HD21	37:RR:113:LEU:HD13	1.71	0.72
2:QB:185:ILE:HG22	2:QB:199:TYR:HB2	1.70	0.72
11:QK:116:HIS:O	11:QK:117:ASN:CB	2.30	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2393:A:H5'	35:RP:62:LEU:HD23	1.71	0.72
1:QA:1502:A:H2	1:QA:1505:G:H1	1.35	0.72
34:RO:92:GLU:OE1	34:RO:113:LYS:NZ	2.22	0.72
45:YZ:146:ILE:HA	45:YZ:174:VAL:HG23	1.72	0.72
52:Y6:28:ARG:CA	52:Y6:29:ASN:HB3	2.20	0.72
22:QW:50:U:H3	22:QW:64:G:H1	1.38	0.72
10:XJ:49:VAL:HG13	14:XN:41:ARG:HD2	1.70	0.72
39:YT:60:THR:HG22	39:YT:77:PRO:HA	1.72	0.72
25:RA:1171:G:H1	25:RA:1178:C:H42	1.38	0.72
25:YA:571:A:H5'	25:YA:2030:A:H62	1.55	0.72
29:YF:3:GLU:HA	29:YF:24:LEU:HG	1.70	0.72
1:QA:664:G:H22	1:QA:741:G:H1	1.35	0.71
1:XA:1362(A):C:H5'	1:XA:1363:A:H5''	1.72	0.71
41:RV:71:LEU:HD11	41:RV:83:ARG:HE	1.54	0.71
44:RY:76:CYS:HB3	44:RY:96:ILE:HD11	1.71	0.71
41:YV:49:THR:CG2	41:YV:50:PRO:HD3	2.20	0.71
45:YZ:150:LEU:HB2	45:YZ:171:ILE:HG22	1.72	0.71
1:QA:1266:G:N2	1:QA:1269:A:OP2	2.22	0.71
25:RA:2134:A:OP2	25:RA:2157:G:N2	2.22	0.71
25:YA:2103:C:H42	25:YA:2186:G:H1	1.37	0.71
35:RP:59:LEU:HD22	54:R8:59:LYS:HZ2	1.55	0.71
1:XA:1502:A:H2	1:XA:1505:G:H1	1.39	0.71
23:QX:12:A:H2'	23:QX:13:A:C8	2.25	0.71
25:RA:1300:U:H4'	25:RA:1301:A:C5'	2.20	0.71
25:RA:1386:C:OP2	25:RA:1396:U:N3	2.23	0.71
34:RO:25:LEU:HB2	34:RO:38:VAL:HG23	1.72	0.71
25:RA:636:G:N7	35:RP:113:LYS:NZ	2.30	0.71
25:YA:859:G:N2	25:YA:917:A:OP2	2.23	0.71
32:YI:144:VAL:C	32:YI:145:VAL:HG12	2.15	0.71
54:Y8:14:VAL:HG13	54:Y8:24:ALA:HB2	1.72	0.71
1:QA:1300:G:O2'	1:QA:1301:U:P	2.49	0.71
5:QE:13:ILE:CD1	5:QE:51:VAL:HG11	2.20	0.71
25:YA:1454:U:OP1	37:YR:77:ARG:NH1	2.21	0.71
31:YH:44:VAL:O	31:YH:51:ARG:NH1	2.24	0.71
35:YP:9:ASN:CB	35:YP:10:PRO:CD	2.65	0.71
1:QA:1028(B):C:H3'	1:QA:1029:G:H4'	1.73	0.70
22:QW:37:A:N6	22:QW:38:A:C2	2.59	0.70
25:RA:2712:U:OP1	25:RA:2714:G:H4'	1.91	0.70
29:RF:24:LEU:HD13	29:RF:25:PRO:HD2	1.71	0.70
35:RP:57:THR:HG21	35:RP:60:MET:HG3	1.73	0.70
25:YA:483:A:H5'	44:YY:49:VAL:HA	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2105:C:H2'	25:YA:2106:G:H8	1.56	0.70
41:YV:15:GLU:HG3	41:YV:16:PRO:HD2	1.72	0.70
36:RQ:89:ASN:O	36:RQ:91:GLU:N	2.24	0.70
25:RA:2119:A:N6	25:RA:2170:A:N7	2.40	0.70
44:RY:75:ILE:HG12	44:RY:76:CYS:N	2.05	0.70
13:XM:10:PRO:HG3	13:XM:18:ALA:HA	1.70	0.70
1:QA:1177:G:OP2	9:QI:97:LYS:NZ	2.21	0.70
25:RA:2466:C:H5''	55:R9:6:SER:HB2	1.73	0.70
36:RQ:89:ASN:O	36:RQ:92:GLY:N	2.25	0.70
3:XC:84:ILE:HD12	3:XC:88:ARG:HH21	1.56	0.70
20:XT:67:ALA:HA	20:XT:73:HIS:H	1.57	0.70
25:YA:2134:A:OP2	25:YA:2157:G:N2	2.24	0.70
27:YD:35:LYS:HG2	27:YD:64:ILE:N	2.05	0.70
28:YE:61:ARG:N	28:YE:62:PRO:HD2	2.06	0.70
19:QS:36:ARG:NH1	19:QS:73:GLU:HB2	2.06	0.70
45:RZ:157:LEU:HD22	45:RZ:161:VAL:HG11	1.74	0.70
52:R6:14:THR:OG1	52:R6:15:GLU:N	2.25	0.70
19:XS:50:ALA:HB1	19:XS:57:HIS:HB3	1.71	0.70
28:YE:60:ASN:O	28:YE:61:ARG:HB2	1.92	0.70
34:YO:98:VAL:HG13	34:YO:117:LEU:HB3	1.73	0.70
48:Y2:42:GLY:O	48:Y2:44:LEU:N	2.25	0.70
11:QK:10:VAL:HG12	11:QK:11:LYS:HG2	1.71	0.70
29:RF:2:LYS:HG3	29:RF:24:LEU:CD1	2.18	0.70
17:XQ:26:GLN:HG2	17:XQ:37:LYS:HG2	1.74	0.70
29:YF:53:THR:HG23	29:YF:55:GLY:H	1.57	0.70
31:YH:17:VAL:HG21	31:YH:49:VAL:HG23	1.73	0.70
35:YP:29:LYS:HD2	35:YP:30:THR:HG23	1.74	0.70
32:RI:142:VAL:CG2	32:RI:143:SER:H	2.04	0.70
25:YA:999:U:H2'	25:YA:1000:A:H5''	1.73	0.70
1:QA:1158:C:O2	1:QA:1158:C:H2'	1.92	0.70
9:QI:10:ARG:HD3	9:QI:75:ASP:HB3	1.74	0.70
12:QL:60:LEU:HD21	12:QL:66:VAL:HG22	1.72	0.70
44:YY:50:ARG:HB3	44:YY:53:PRO:HG3	1.74	0.70
32:RI:145:VAL:HG12	32:RI:146:ALA:N	2.07	0.69
54:R8:54:GLU:HG3	54:R8:57:ARG:HH21	1.55	0.69
25:YA:1728:G:H8	25:YA:1732:A:H62	1.37	0.69
25:RA:1569:A:H5'	27:RD:61:LEU:HD21	1.74	0.69
52:Y6:6:ARG:CD	52:Y6:8:LYS:HB3	2.22	0.69
5:QE:11:ILE:HD12	5:QE:31:LEU:CD2	2.17	0.69
26:RB:56:G:H5'	30:RG:27:ASN:HD21	1.57	0.69
3:QC:19:GLU:O	3:QC:40:ARG:NH2	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:195:ALA:CB	6:XF:16:GLN:O	2.40	0.69
25:RA:2015:A:H1'	51:R5:2:ALA:HA	1.74	0.69
45:RZ:59:LEU:HD12	45:RZ:60:GLU:N	2.07	0.69
19:XS:65:ASN:OD1	50:Y4:55:ARG:NH1	2.25	0.69
12:QL:53:ARG:HG3	12:QL:93:LEU:HD21	1.74	0.69
35:RP:59:LEU:HD22	54:R8:59:LYS:NZ	2.08	0.69
22:QW:34:C:H42	23:QX:14:A:H62	1.40	0.69
25:RA:1024:G:H3'	25:RA:1025:G:H5''	1.73	0.69
25:RA:2438:U:O3'	25:RA:2439:A:H3'	1.92	0.69
25:YA:2529:G:O6	55:Y9:31:LYS:NZ	2.25	0.69
27:YD:34:VAL:HG22	27:YD:35:LYS:HG3	1.73	0.69
35:YP:94:GLU:HG3	35:YP:124:LYS:HB3	1.73	0.69
19:QS:5:LEU:HD13	19:QS:9:VAL:HA	1.75	0.69
26:YB:45:A:OP2	30:YG:96:ARG:NH1	2.26	0.69
30:YG:83:ARG:H	30:YG:86:MET:HG3	1.58	0.69
5:QE:13:ILE:CD1	5:QE:51:VAL:CG1	2.68	0.69
29:RF:53:THR:HG23	29:RF:55:GLY:H	1.57	0.69
42:RW:18:ARG:HD3	42:RW:76:VAL:HG13	1.75	0.69
52:R6:9:LEU:H	52:R6:27:LYS:HA	1.58	0.69
1:XA:742:G:OP2	15:XO:35:ARG:NH2	2.25	0.69
1:XA:971:G:N2	1:XA:1363:A:OP2	2.25	0.69
25:YA:1667:G:O2'	25:YA:1669:A:N6	2.25	0.69
27:YD:25:THR:O	27:YD:27:THR:N	2.25	0.69
28:YE:60:ASN:CA	28:YE:62:PRO:HD2	2.23	0.69
29:YF:60:SER:O	29:YF:60:SER:OG	2.06	0.69
31:YH:158:HIS:HA	31:YH:170:ARG:HG2	1.75	0.69
25:RA:1416:G:N2	25:RA:1582:C:O2	2.24	0.69
31:RH:11:VAL:HG23	31:RH:13:LYS:HG2	1.75	0.69
1:XA:1157:A:C2'	1:XA:1158:C:OP2	2.41	0.69
29:YF:103:LYS:HA	29:YF:106:ARG:HG3	1.75	0.69
32:YI:80:PRO:CB	32:YI:143:SER:O	2.40	0.69
43:YX:43:VAL:HG23	43:YX:51:VAL:HG21	1.75	0.69
45:YZ:28:MET:HE1	45:YZ:67:LEU:HD13	1.73	0.69
52:Y6:6:ARG:HD3	52:Y6:8:LYS:HB3	1.73	0.69
1:QA:718:G:C8	11:QK:116:HIS:HB3	2.27	0.69
22:XW:76:A:N6	25:YA:2421:G:H2'	2.08	0.69
30:RG:16:ARG:HE	30:RG:31:VAL:HG11	1.57	0.68
35:YP:63:PRO:HB3	54:Y8:13:ARG:CG	2.22	0.68
38:YS:106:ARG:NH1	38:YS:107:GLU:OE2	2.23	0.68
1:QA:1301:U:O2	1:QA:1301:U:H2'	1.93	0.68
4:QD:13:ARG:O	4:QD:15:GLU:N	2.26	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:QQ:45:HIS:HB2	17:QQ:65:ILE:HD13	1.75	0.68
32:RI:142:VAL:CG2	32:RI:143:SER:N	2.56	0.68
1:QA:1325:C:H4'	21:QU:17:THR:HG21	1.75	0.68
1:XA:912:C:O2'	1:XA:913:A:H5'	1.93	0.68
12:XL:117:ARG:HB3	12:XL:122:THR:HB	1.74	0.68
25:RA:1056:G:H4'	25:RA:1086:A:H1'	1.76	0.68
28:RE:61:ARG:C	28:RE:63:LEU:H	2.02	0.68
25:YA:2401:U:H5'	52:Y6:18:ARG:HH12	1.58	0.68
32:YI:77:LEU:HB3	32:YI:141:LYS:HB2	1.76	0.68
1:QA:328:C:O2	1:QA:328:C:H2'	1.92	0.68
1:QA:1380:U:H5	7:QG:3:ARG:HG2	1.58	0.68
12:QL:47:LYS:HB3	12:QL:48:PRO:HD3	1.76	0.68
25:RA:2529:G:H22	55:R9:31:LYS:NZ	1.91	0.68
30:RG:66:GLN:NE2	30:RG:93:THR:O	2.26	0.68
32:RI:110:ASP:OD1	32:RI:110:ASP:N	2.26	0.68
34:RO:68:GLU:OE2	34:RO:78:ARG:NH1	2.26	0.68
1:QA:1179:A:OP2	9:QI:93:ARG:NH2	2.27	0.68
25:RA:242:G:H5''	54:R8:62:LEU:HD13	1.74	0.68
25:RA:2542:A:H5''	25:RA:2542:A:C8	2.29	0.68
31:RH:125:VAL:HG22	31:RH:126:PRO:HA	1.76	0.68
4:QD:191:ARG:NH1	4:QD:200:GLU:OE1	2.27	0.68
25:RA:2689:U:H5''	25:RA:2713:A:C2	2.28	0.68
2:QB:115:LEU:HD13	2:QB:145:LEU:HB3	1.76	0.67
1:XA:885:G:N3	1:XA:914:A:C2	2.62	0.67
52:Y6:40:CYS:HB3	52:Y6:46:HIS:CE1	2.27	0.67
3:QC:164:ARG:NH2	3:QC:166:GLU:OE2	2.27	0.67
45:RZ:156:LYS:O	45:RZ:157:LEU:HB2	1.94	0.67
10:XJ:51:ARG:HB2	10:XJ:60:ARG:HA	1.73	0.67
17:XQ:66:SER:O	17:XQ:70:ARG:NH1	2.26	0.67
25:YA:2438:U:O3'	25:YA:2439:A:H3'	1.95	0.67
33:YN:125:GLY:HA3	33:YN:126:PRO:O	1.93	0.67
2:QB:204:ASN:OD1	2:QB:204:ASN:N	2.24	0.67
25:RA:833:U:O2	35:RP:55:ARG:NH1	2.26	0.67
30:YG:161:THR:HG22	30:YG:163:ALA:H	1.57	0.67
49:Y3:8:LEU:HD13	49:Y3:31:LEU:HD12	1.76	0.67
1:QA:1152:A:H5''	10:QJ:13:HIS:CD2	2.30	0.67
19:XS:65:ASN:HA	50:Y4:55:ARG:HD2	1.76	0.67
28:RE:179:GLU:HB3	28:RE:181:LEU:HD22	1.76	0.67
9:XI:27:THR:OG1	9:XI:28:VAL:N	2.27	0.67
25:YA:389:G:H22	35:YP:72:PRO:HD3	1.59	0.67
1:QA:673:G:H2'	1:QA:674:G:C8	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:R8:56:GLU:OE1	54:R8:56:GLU:N	2.24	0.67
1:XA:912:C:C2'	1:XA:913:A:H5'	2.25	0.67
1:XA:1157:A:H2'	1:XA:1158:C:OP2	1.94	0.67
28:YE:37:ARG:HG3	28:YE:46:ALA:HB3	1.77	0.67
1:QA:376:G:H5''	16:QP:5:ARG:HB2	1.77	0.67
25:RA:642:G:H21	25:RA:646:A:H2	1.43	0.67
45:RZ:59:LEU:CD1	45:RZ:60:GLU:N	2.58	0.67
1:XA:960:U:O2	1:XA:960:U:H2'	1.95	0.67
13:XM:9:ILE:CG1	13:XM:10:PRO:CD	2.71	0.67
31:YH:9:ILE:CG2	31:YH:10:PRO:HA	2.24	0.67
5:QE:11:ILE:C	5:QE:12:LEU:HG	2.11	0.67
22:QW:33:U:H6	22:QW:33:U:O5'	1.78	0.67
29:RF:2:LYS:O	29:RF:2:LYS:HG2	1.94	0.67
31:RH:19:VAL:HG13	31:RH:43:VAL:HG22	1.77	0.67
12:XL:27:LEU:HD12	12:XL:33:ARG:HB2	1.77	0.67
54:Y8:6:THR:HG21	54:Y8:63:PRO:HD3	1.77	0.67
25:RA:1169:G:H1	25:RA:1180:C:H42	1.42	0.67
1:XA:1412:C:H2'	1:XA:1413:A:C8	2.30	0.67
52:Y6:12:GLU:HB2	52:Y6:22:ALA:HB3	1.77	0.67
22:XW:54:U:H3	22:XW:58:A:H62	1.40	0.67
30:RG:161:THR:HG22	30:RG:163:ALA:H	1.60	0.66
45:RZ:158:PRO:HB3	45:RZ:159:PRO:HA	1.76	0.66
10:XJ:79:ARG:HA	10:XJ:82:ILE:HB	1.77	0.66
20:XT:60:GLU:HG3	20:XT:81:LYS:HD2	1.76	0.66
25:YA:1056:G:H4'	25:YA:1086:A:H1'	1.77	0.66
25:YA:1566:A:OP1	27:YD:211:ARG:NH1	2.29	0.66
25:RA:974:G:O2'	25:RA:975:G:N7	2.23	0.66
32:RI:120:ILE:HG22	32:RI:122:GLU:H	1.60	0.66
54:R8:8:LYS:HB3	54:R8:12:LYS:HE3	1.77	0.66
1:XA:542:G:OP1	4:XD:10:ARG:NH2	2.28	0.66
1:XA:1061:G:OP2	3:XC:3:ASN:ND2	2.25	0.66
25:YA:686:G:H5''	53:Y7:11:LYS:HE2	1.77	0.66
29:YF:122:LYS:O	29:YF:124:LEU:N	2.27	0.66
36:YQ:89:ASN:O	36:YQ:91:GLU:N	2.27	0.66
35:RP:57:THR:HG21	35:RP:60:MET:CG	2.24	0.66
45:RZ:10:ARG:NH1	45:RZ:26:GLY:O	2.28	0.66
52:R6:15:GLU:OE1	52:R6:44:ARG:NH2	2.28	0.66
7:XG:77:SER:HB2	22:XW:32:C:H4'	1.78	0.66
19:XS:62:ILE:HA	19:XS:66:MET:HE1	1.76	0.66
10:QJ:8:LEU:HG	10:QJ:96:ILE:HG22	1.76	0.66
20:QT:75:ASN:OD1	20:QT:75:ASN:N	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:9:ASN:CB	35:RP:10:PRO:HD2	2.23	0.66
31:YH:80:SER:OG	31:YH:81:GLU:N	2.29	0.66
31:YH:86:GLU:HG3	31:YH:165:ALA:HB2	1.78	0.66
35:RP:146:VAL:HG22	35:RP:147:LEU:HD13	1.77	0.66
5:XE:19:MET:HE1	5:XE:24:ARG:HH21	1.61	0.66
27:YD:72:LYS:NZ	27:YD:99:ASP:OD1	2.28	0.66
31:YH:45:VAL:HG23	31:YH:49:VAL:HA	1.78	0.66
44:YY:76:CYS:SG	44:YY:77:PRO:HD2	2.35	0.66
30:RG:96:ARG:O	30:RG:98:ARG:N	2.28	0.66
35:RP:23:PRO:O	35:RP:25:SER:N	2.28	0.66
45:RZ:157:LEU:HB3	45:RZ:161:VAL:CB	2.25	0.66
2:XB:178:ARG:HH12	8:XH:68:ARG:HH22	1.41	0.66
3:XC:71:ALA:HA	3:XC:106:VAL:HB	1.76	0.66
22:QV:19:G:O6	30:RG:83:ARG:NH2	2.28	0.66
44:RY:50:ARG:HB3	44:RY:53:PRO:HG3	1.78	0.66
47:R1:51:VAL:HG11	47:R1:74:VAL:HG21	1.76	0.66
54:R8:14:VAL:HG13	54:R8:24:ALA:HB2	1.78	0.66
1:XA:664:G:H22	1:XA:741:G:H1	1.44	0.66
1:QA:1363:A:H4'	1:QA:1364:U:H5''	1.78	0.66
44:RY:33:LYS:H	44:RY:33:LYS:HD3	1.61	0.66
46:R0:48:GLY:O	46:R0:80:HIS:ND1	2.29	0.66
1:XA:455:C:H42	1:XA:477:G:H1	1.43	0.66
4:XD:13:ARG:O	4:XD:15:GLU:N	2.29	0.66
25:YA:2305:A:H5''	30:YG:134:GLY:HA3	1.77	0.66
36:RQ:64:ILE:HG22	36:RQ:106:VAL:HG12	1.76	0.66
1:XA:1493:A:H1'	24:XY:55:PRO:HD2	1.75	0.66
25:YA:1252:G:N3	40:YU:33:ARG:HD2	2.11	0.66
41:YV:50:PRO:HD2	41:YV:51:VAL:H	1.61	0.66
49:Y3:39:ASP:OD2	49:Y3:44:ARG:NH2	2.29	0.66
53:Y7:34:ARG:NH1	53:Y7:41:ARG:O	2.29	0.66
25:RA:857:C:H1'	46:R0:26:TYR:HE2	1.59	0.65
25:RA:888:C:H4'	25:RA:889:C:H5	1.61	0.65
29:YF:66:PRO:O	29:YF:68:LYS:N	2.29	0.65
2:QB:194:PRO:O	2:QB:196:LEU:N	2.29	0.65
23:QX:12:A:H3'	23:QX:13:A:H5''	1.78	0.65
25:RA:2127:G:O2'	25:RA:2173:A:N1	2.24	0.65
38:RS:26:LEU:HB3	38:RS:87:PHE:HA	1.79	0.65
44:RY:88:LYS:O	44:RY:90:LEU:N	2.28	0.65
1:XA:1442:G:O6	1:XA:1446:A:N6	2.29	0.65
25:YA:2777:G:C5'	25:YA:2778:A:H5'	2.21	0.65
29:YF:132:VAL:HG22	29:YF:133:ASN:H	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1443:G:H3'	1:QA:1446:A:H5''	1.79	0.65
12:QL:117:ARG:HB3	12:QL:122:THR:HB	1.78	0.65
25:RA:142:G:H4'	43:RX:35:THR:HG21	1.78	0.65
25:RA:2867:G:O2'	25:RA:2868:A:H8	1.78	0.65
35:RP:97:PRO:O	35:RP:99:LEU:N	2.27	0.65
44:RY:61:ILE:HG22	44:RY:62:GLU:HG3	1.77	0.65
44:RY:75:ILE:CD1	44:RY:79:CYS:HA	2.26	0.65
2:XB:195:ASP:O	8:XH:68:ARG:NH2	2.29	0.65
28:YE:61:ARG:N	28:YE:62:PRO:CD	2.58	0.65
1:QA:1392:G:H21	1:QA:1502:A:H8	1.44	0.65
25:RA:1653:G:C6	37:RR:9:LYS:HG3	2.31	0.65
25:RA:2527:C:H5'	55:R9:30:PRO:HB2	1.77	0.65
44:RY:89:PHE:HB2	44:RY:90:LEU:HD22	1.79	0.65
13:XM:97:PRO:HA	13:XM:110:ARG:HD3	1.79	0.65
25:YA:586:A:H5'	29:YF:89:VAL:HG21	1.78	0.65
32:YI:80:PRO:HB3	32:YI:143:SER:O	1.96	0.65
20:QT:67:ALA:HA	20:QT:73:HIS:H	1.62	0.65
44:RY:13:VAL:HG21	44:RY:72:VAL:HB	1.77	0.65
1:XA:1145:C:H4'	1:XA:1146:A:H5'	1.78	0.65
2:XB:43:ASP:HB3	2:XB:46:LYS:HB2	1.78	0.65
13:XM:10:PRO:HG2	13:XM:18:ALA:HA	1.79	0.65
25:YA:1403:C:H5''	25:YA:1471:A:H1'	1.77	0.65
25:YA:1728:G:N1	25:YA:1730:U:OP2	2.28	0.65
41:YV:49:THR:HG22	41:YV:50:PRO:CD	2.26	0.65
1:QA:1352:C:OP1	21:QU:3:LYS:NZ	2.26	0.65
25:RA:593:G:H4'	54:R8:61:LEU:HD22	1.77	0.65
25:RA:1542:G:H3'	25:RA:1543:A:H5''	1.79	0.65
28:RE:8:LYS:HB3	28:RE:192:ASN:HA	1.77	0.65
32:RI:143:SER:O	32:RI:144:VAL:CB	2.44	0.65
25:YA:1112:G:OP1	31:YH:3:ARG:NH2	2.29	0.65
32:YI:120:ILE:HG22	32:YI:122:GLU:H	1.62	0.65
40:YU:92:ARG:HH22	41:YV:10:LYS:HA	1.61	0.65
7:QG:73:MET:HG2	7:QG:90:GLU:HA	1.79	0.65
48:R2:17:SER:HB2	48:R2:18:PRO:HA	1.78	0.65
29:RF:79:GLY:HA2	29:RF:86:GLY:HA2	1.78	0.65
31:RH:9:ILE:HG22	31:RH:10:PRO:HA	1.78	0.65
45:RZ:87:ASP:OD2	45:RZ:87:ASP:N	2.30	0.65
9:XI:28:VAL:HG21	9:XI:63:ILE:N	2.09	0.65
31:YH:24:VAL:HG22	31:YH:35:VAL:HB	1.79	0.65
38:YS:26:LEU:HB3	38:YS:87:PHE:HA	1.77	0.65
41:RV:48:GLY:C	41:RV:49:THR:O	2.40	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:15:ASP:HB3	7:XG:24:THR:HG22	1.79	0.65
36:YQ:64:ILE:HG22	36:YQ:106:VAL:HG12	1.79	0.65
41:YV:49:THR:CB	41:YV:50:PRO:HD3	2.26	0.65
1:XA:422:C:O2'	1:XA:423:G:N2	2.30	0.65
27:YD:35:LYS:HD2	27:YD:104:TYR:CE1	2.32	0.65
27:RD:171:ASP:OD2	27:RD:171:ASP:N	2.29	0.64
3:XC:11:ARG:HE	3:XC:180:ALA:HB3	1.62	0.64
47:Y1:34:THR:HG22	47:Y1:36:GLY:H	1.61	0.64
7:QG:16:LEU:HD23	9:QI:41:VAL:HG12	1.80	0.64
13:XM:99:ARG:O	13:XM:101:GLN:NE2	2.30	0.64
28:YE:80:GLU:O	28:YE:82:ARG:N	2.30	0.64
1:XA:1391:U:H2'	1:XA:1392:G:C8	2.33	0.64
33:YN:49:GLY:O	33:YN:119:ARG:NH1	2.29	0.64
9:QI:34:ASN:O	9:QI:36:TYR:N	2.30	0.64
41:RV:49:THR:HB	41:RV:50:PRO:CD	2.27	0.64
29:YF:135:LYS:HB3	29:YF:138:GLU:HG3	1.78	0.64
2:QB:24:TRP:CD1	2:QB:24:TRP:H	2.16	0.64
32:RI:144:VAL:HG13	32:RI:145:VAL:N	2.10	0.64
4:XD:148:VAL:HG11	4:XD:158:ILE:HG21	1.79	0.64
7:XG:35:LYS:HB3	7:XG:38:LEU:HD13	1.79	0.64
25:YA:651:G:H5''	54:Y8:18:ALA:HB3	1.78	0.64
27:YD:39:LYS:HB2	27:YD:62:TYR:HB2	1.78	0.64
27:YD:44:ASN:OD1	27:YD:44:ASN:N	2.29	0.64
36:YQ:18:LYS:HB2	36:YQ:98:LYS:HZ1	1.63	0.64
44:YY:17:SER:OG	44:YY:18:GLY:N	2.28	0.64
31:RH:7:LEU:HD13	31:RH:69:ARG:HB3	1.80	0.64
42:RW:65:LEU:HD13	42:RW:68:ARG:HD2	1.79	0.64
1:XA:1178:G:H5'	9:XI:93:ARG:NH2	2.11	0.64
4:XD:109:GLY:O	4:XD:111:ALA:N	2.30	0.64
20:XT:56:MET:HG3	20:XT:84:LEU:HD12	1.79	0.64
25:YA:1024:G:H3'	25:YA:1025:G:H5''	1.78	0.64
25:RA:58:G:H22	25:RA:69:C:H5	1.46	0.64
25:RA:1754:C:OP1	39:RT:96:ARG:NH1	2.30	0.64
35:RP:52:GLU:OE1	35:RP:54:GLY:N	2.20	0.64
2:XB:111:ARG:HA	2:XB:111:ARG:HH11	1.63	0.64
4:XD:23:GLY:O	4:XD:24:GLU:HB2	1.97	0.64
25:YA:278:A:H61	25:YA:362:U:H3	1.43	0.64
25:YA:2292:C:OP1	38:YS:17:ARG:NH2	2.30	0.64
45:YZ:121:HIS:N	45:YZ:171:ILE:HG13	2.08	0.64
14:QN:12:ARG:HG2	14:QN:14:PRO:HD3	1.79	0.64
35:YP:146:VAL:HG22	35:YP:147:LEU:H	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:51:ARG:HH21	31:RH:53:GLU:H	1.44	0.64
31:RH:158:HIS:HA	31:RH:170:ARG:HG2	1.80	0.64
34:RO:86:ILE:HG22	34:RO:94:ARG:HG3	1.79	0.64
25:YA:2712:U:O2'	25:YA:2712(A):A:H5'	1.98	0.64
25:RA:1598:C:H5'	43:RX:36:LYS:HB3	1.80	0.64
25:RA:2849:U:OP1	39:RT:95:ARG:NH1	2.31	0.64
39:RT:19:LEU:HD22	39:RT:86:ILE:HG22	1.79	0.64
9:XI:25:LYS:HD3	9:XI:25:LYS:H	1.61	0.64
25:YA:532:A:OP1	25:YA:561:G:N2	2.27	0.64
25:YA:2010:G:H5''	42:YW:42:ARG:HB2	1.80	0.64
44:YY:73:ARG:HH21	44:YY:82:PRO:HD3	1.63	0.64
4:XD:25:ARG:O	4:XD:27:TYR:N	2.31	0.63
25:YA:1309:G:H4'	53:Y7:7:PRO:HB2	1.80	0.63
30:YG:47:LYS:HD3	30:YG:81:LYS:HB2	1.80	0.63
30:YG:114:ILE:HG22	30:YG:117:PHE:HB2	1.78	0.63
38:YS:62:LYS:HB3	38:YS:97:ARG:HD3	1.79	0.63
1:QA:1060:C:H5''	10:QJ:51:ARG:HG2	1.80	0.63
22:QW:33:U:H2'	22:QW:35:A:OP2	1.98	0.63
1:XA:261:U:OP2	20:XT:79:ARG:NH2	2.32	0.63
25:YA:1171:G:H1	25:YA:1178:C:H42	1.44	0.63
25:YA:2314:C:H5''	30:YG:38:VAL:HG11	1.80	0.63
10:XJ:46:ARG:HG2	10:XJ:64:GLU:HB3	1.80	0.63
50:R4:22:ILE:HG12	50:R4:23:GLU:H	1.63	0.63
31:YH:3:ARG:HH11	31:YH:6:ARG:HE	1.44	0.63
3:QC:156:ARG:H	3:QC:163:ALA:HA	1.64	0.63
7:QG:77:SER:CB	22:QW:32:C:H4'	2.27	0.63
22:QW:38:A:C8	22:QW:39:C:C4	2.86	0.63
25:RA:2445:G:OP1	29:RF:74:ARG:NH2	2.30	0.63
1:XA:1179:A:H5'	9:XI:102:LEU:HD22	1.80	0.63
2:XB:51:LEU:HD23	2:XB:201:ILE:HD12	1.80	0.63
16:XP:22:THR:HA	16:XP:33:ILE:HG12	1.79	0.63
28:YE:31:CYS:HB3	28:YE:49:LEU:HB3	1.80	0.63
35:YP:146:VAL:HG22	35:YP:147:LEU:HD13	1.80	0.63
36:YQ:67:ARG:NH1	36:YQ:105:GLU:OE2	2.32	0.63
8:QH:42:GLU:HG3	8:QH:109:ILE:HD12	1.79	0.63
27:RD:75:ILE:HG21	27:RD:99:ASP:CG	2.24	0.63
31:RH:44:VAL:H	31:RH:51:ARG:HH12	1.45	0.63
31:RH:97:ARG:HB2	31:RH:104:GLU:HB2	1.79	0.63
39:RT:125:ARG:O	39:RT:129:ARG:NH1	2.32	0.63
41:RV:35:LEU:O	41:RV:37:VAL:HG22	1.99	0.63
42:RW:68:ARG:NH1	42:RW:111:HIS:O	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:31:G:O2'	1:XA:48:C:N4	2.31	0.63
5:XE:78:HIS:HA	8:XH:105:ARG:HG3	1.81	0.63
13:XM:9:ILE:HG13	13:XM:10:PRO:CD	2.21	0.63
25:RA:2876:G:O2'	39:RT:3:ARG:NH1	2.32	0.63
34:YO:68:GLU:OE2	34:YO:78:ARG:NH1	2.31	0.63
41:YV:49:THR:HB	41:YV:50:PRO:CD	2.29	0.63
50:Y4:37:SER:OG	50:Y4:38:LYS:N	2.28	0.63
29:RF:116:ASP:OD2	35:RP:1:MET:N	2.32	0.63
45:RZ:119:GLU:OE1	45:RZ:122:ARG:NH2	2.31	0.63
49:R3:11:SER:OG	49:R3:13:ILE:HG12	1.99	0.63
52:R6:39:TYR:HB3	52:R6:41:PRO:HD3	1.80	0.63
1:XA:1322:C:H5''	13:XM:100:GLY:HA3	1.80	0.63
50:Y4:61:ARG:HB3	50:Y4:62:ARG:HH21	1.62	0.63
51:Y5:4:HIS:CB	51:Y5:5:PRO:HD3	2.22	0.63
45:RZ:156:LYS:N	45:RZ:156:LYS:HE3	2.14	0.63
25:YA:857:C:OP2	46:Y0:77:ARG:NH2	2.31	0.63
52:Y6:28:ARG:CA	52:Y6:29:ASN:CB	2.77	0.63
16:QP:71:ARG:HG3	16:QP:80:PHE:HE1	1.63	0.62
24:QY:73:ARG:HG2	24:QY:73:ARG:HH11	1.63	0.62
2:XB:32:ILE:HD11	2:XB:40:HIS:HB3	1.80	0.62
31:YH:125:VAL:HG22	31:YH:126:PRO:HA	1.81	0.62
35:YP:63:PRO:CB	54:Y8:13:ARG:HG2	2.29	0.62
38:YS:83:LYS:HE2	38:YS:84:GLN:HG3	1.80	0.62
1:QA:345:C:H1'	1:QA:346:G:C2	2.34	0.62
1:QA:1423:G:OP1	34:RO:49:ARG:NH2	2.32	0.62
9:QI:63:ILE:HG21	9:QI:77:ILE:HG12	1.81	0.62
9:QI:103:THR:HG22	9:QI:105:ASP:H	1.63	0.62
36:RQ:37:LEU:HD21	36:RQ:130:LYS:HD3	1.81	0.62
40:RU:90:VAL:HG22	41:RV:39:LEU:HB3	1.81	0.62
52:Y6:28:ARG:HB3	52:Y6:30:THR:H	1.63	0.62
1:QA:1499:A:H1'	1:QA:1520:G:H5'	1.80	0.62
45:YZ:87:ASP:OD2	45:YZ:87:ASP:N	2.32	0.62
45:YZ:138:GLU:OE1	45:YZ:138:GLU:N	2.30	0.62
50:Y4:40:HIS:H	50:Y4:41:PRO:HD2	1.64	0.62
46:R0:27:GLU:HG3	46:R0:68:GLU:HA	1.81	0.62
46:Y0:6:GLY:HA3	46:Y0:7:LEU:HD22	1.82	0.62
4:QD:64:LEU:HD13	4:QD:198:VAL:HG21	1.81	0.62
9:QI:25:LYS:H	9:QI:25:LYS:HD3	1.63	0.62
10:QJ:79:ARG:H	10:QJ:79:ARG:HD3	1.64	0.62
28:RE:64:LYS:O	28:RE:65:GLY:C	2.42	0.62
1:XA:78:G:O6	1:XA:91:C:N4	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1266:G:O5'	42:YW:15:ARG:NH2	2.33	0.62
25:YA:2012:G:OP1	42:YW:11:ARG:NH2	2.24	0.62
1:QA:975:A:H5''	1:QA:976:G:H5'	1.81	0.62
1:QA:1322:C:H5''	13:QM:100:GLY:O	2.00	0.62
2:QB:184:VAL:N	2:QB:198:ASP:OD1	2.33	0.62
4:QD:23:GLY:O	4:QD:24:GLU:HB2	1.99	0.62
6:QF:28:ARG:NH2	6:QF:31:GLU:OE1	2.33	0.62
9:QI:17:VAL:HG11	9:QI:81:ILE:HA	1.80	0.62
9:QI:27:THR:OG1	9:QI:28:VAL:N	2.22	0.62
28:RE:50:GLY:C	28:RE:74:PRO:HG2	2.23	0.62
19:XS:16:LEU:HA	19:XS:19:VAL:HG12	1.81	0.62
19:XS:36:ARG:NH1	19:XS:73:GLU:HB2	2.14	0.62
28:YE:70:ALA:O	28:YE:72:VAL:N	2.32	0.62
45:YZ:19:ARG:NH1	45:YZ:84:GLU:O	2.33	0.62
9:QI:8:GLY:HA2	9:QI:79:LEU:HD12	1.82	0.62
25:RA:1607:C:N4	25:RA:1622:G:OP2	2.31	0.62
25:RA:1728:G:N7	25:RA:1731:G:N2	2.48	0.62
28:RE:51:PHE:O	28:RE:74:PRO:CB	2.25	0.62
28:RE:63:LEU:HD23	28:RE:64:LYS:H	1.64	0.62
40:RU:76:TYR:OH	40:RU:93:LYS:HE2	1.99	0.62
15:XO:82:ILE:HD11	15:XO:88:ARG:HB2	1.81	0.62
25:YA:2577:A:H5''	25:YA:2578:G:H5'	1.82	0.62
1:QA:1031:G:H21	1:QA:1032:A:H1'	1.64	0.62
11:QK:115:PRO:C	11:QK:117:ASN:H	2.08	0.62
25:RA:2420:C:H41	54:R8:31:HIS:HB3	1.65	0.62
31:RH:42:ARG:O	31:RH:51:ARG:NH2	2.32	0.62
39:YT:105:LEU:HD22	39:YT:109:GLU:HG3	1.80	0.62
41:YV:85:LYS:HG3	41:YV:87:HIS:N	2.13	0.62
1:QA:189:U:O2	17:QQ:63:ARG:NH1	2.32	0.62
9:QI:17:VAL:HG22	9:QI:63:ILE:HG12	1.81	0.62
10:QJ:34:VAL:HG22	10:QJ:74:ILE:HG22	1.80	0.62
52:R6:9:LEU:HB3	52:R6:27:LYS:HA	1.82	0.62
1:QA:1348:U:H3	1:QA:1374:A:H2	1.46	0.62
5:QE:102:ALA:HB1	5:QE:106:PRO:HG2	1.81	0.62
9:QI:4:TYR:HB2	9:QI:18:PHE:O	2.00	0.62
9:QI:96:LEU:HD23	9:QI:102:LEU:HD12	1.81	0.62
29:RF:157:VAL:HB	29:RF:194:MET:HB3	1.82	0.62
44:RY:76:CYS:CB	44:RY:96:ILE:HD11	2.28	0.62
2:XB:24:TRP:HD1	2:XB:24:TRP:H	1.46	0.62
31:YH:51:ARG:HH21	31:YH:53:GLU:H	1.48	0.62
32:YI:141:LYS:HB2	32:YI:142:VAL:HG22	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:YZ:150:LEU:HD21	45:YZ:155:LEU:HD23	1.80	0.62
25:RA:68:G:C3'	25:RA:69:C:O2	2.47	0.61
48:R2:15:LYS:HA	48:R2:67:LYS:HZ1	1.64	0.61
25:YA:2836:U:H2'	25:YA:2837:G:C8	2.34	0.61
1:QA:31:G:O2'	1:QA:48:C:N4	2.33	0.61
1:QA:321:A:N6	1:QA:329:A:OP2	2.33	0.61
45:RZ:118:GLN:HG3	45:RZ:173:ALA:N	2.14	0.61
25:YA:2543:G:H21	25:YA:2646:C:C5'	2.13	0.61
1:QA:17:U:H2'	1:QA:18:C:C6	2.36	0.61
25:RA:1012:U:OP1	40:RU:75:ASN:ND2	2.24	0.61
35:RP:62:LEU:HD12	54:R8:25:MET:HB3	1.82	0.61
32:YI:141:LYS:HD3	32:YI:142:VAL:HG13	1.82	0.61
50:Y4:66:SER:HA	50:Y4:68:ARG:HH11	1.65	0.61
2:QB:29:ALA:HB1	2:QB:30:ARG:HH21	1.65	0.61
19:QS:50:ALA:HB1	19:QS:57:HIS:HB3	1.82	0.61
25:RA:877:U:H2'	25:RA:878:A:H5''	1.80	0.61
29:RF:132:VAL:O	29:RF:134:GLY:N	2.30	0.61
2:XB:47:THR:HA	2:XB:202:PRO:HG2	1.81	0.61
25:YA:2445:G:OP1	29:YF:74:ARG:NH2	2.27	0.61
25:YA:2777:G:H5''	25:YA:2778:A:C5'	2.24	0.61
25:YA:2781:A:H5''	25:YA:2782:G:H5'	1.82	0.61
15:QO:56:LEU:HA	15:QO:59:MET:HE2	1.82	0.61
45:RZ:156:LYS:C	45:RZ:157:LEU:HG	2.25	0.61
25:YA:574:C:O2	28:YE:145:LYS:NZ	2.33	0.61
25:YA:911:A:H2'	36:YQ:9:TYR:OH	2.01	0.61
25:YA:2134:A:N6	25:YA:2157:G:O2'	2.33	0.61
27:YD:35:LYS:NZ	27:YD:64:ILE:O	2.28	0.61
52:Y6:15:GLU:OE1	52:Y6:44:ARG:NH2	2.28	0.61
1:QA:973:G:OP1	10:QJ:57:LYS:NZ	2.34	0.61
3:QC:153:VAL:HG22	3:QC:198:VAL:HG22	1.82	0.61
27:RD:35:LYS:HG2	27:RD:64:ILE:N	2.15	0.61
32:RI:31:LEU:HD21	32:RI:38:LEU:HG	1.82	0.61
8:XH:33:GLU:OE1	8:XH:50:ARG:NH1	2.34	0.61
13:XM:2:ALA:O	13:XM:4:ILE:N	2.32	0.61
54:Y8:8:LYS:HB3	54:Y8:12:LYS:HE3	1.83	0.61
1:QA:1379:G:C8	7:QG:3:ARG:HD3	2.36	0.61
25:RA:252:G:OP2	35:RP:50:ARG:NH2	2.34	0.61
25:RA:686:G:N2	25:RA:788:A:H61	1.99	0.61
25:YA:141:A:C8	25:YA:1408:C:H1'	2.36	0.61
29:YF:79:GLY:HA2	29:YF:86:GLY:HA2	1.82	0.61
31:YH:26:VAL:HG11	31:YH:75:ALA:HB1	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:Y6:34:LEU:HD23	52:Y6:34:LEU:H	1.65	0.61
4:QD:197:PRO:HD3	6:XF:16:GLN:CG	2.30	0.61
1:XA:1123:A:H4'	10:XJ:36:GLY:HA3	1.83	0.61
1:QA:345:C:OP2	39:RT:39:ARG:NH2	2.33	0.61
1:QA:974:A:OP2	14:QN:29:ARG:NH2	2.33	0.61
1:QA:1223:C:P	19:QS:78:ARG:HH21	2.24	0.61
25:RA:2212:A:H4'	25:RA:2213:U:H5	1.65	0.61
25:RA:2517:C:C2	25:RA:2542:A:N6	2.69	0.61
49:R3:6:VAL:HG22	49:R3:56:VAL:HG23	1.83	0.61
1:XA:1157:A:HO2'	1:XA:1158:C:H5''	1.66	0.61
7:XG:113:GLU:HB2	7:XG:119:ARG:HG2	1.83	0.61
21:XU:25:LYS:HG2	21:XU:26:LYS:HG2	1.82	0.61
34:YO:20:MET:HE3	34:YO:44:LYS:HE3	1.83	0.61
2:QB:55:PHE:HD1	2:QB:221:LEU:HD21	1.66	0.61
25:RA:1266:G:O5'	42:RW:15:ARG:NH2	2.33	0.61
25:RA:1952:A:C6	34:RO:22:ILE:HD12	2.36	0.61
27:RD:44:ASN:HB3	27:RD:49:ILE:HA	1.82	0.61
8:XH:25:ASP:N	8:XH:25:ASP:OD1	2.33	0.61
13:XM:10:PRO:HG2	13:XM:18:ALA:CB	2.31	0.61
25:YA:297:C:H5''	44:YY:85:VAL:HG11	1.82	0.61
1:QA:218:C:H5'	1:QA:466:C:H42	1.66	0.60
4:QD:107:ARG:HH21	4:QD:194:LEU:HD12	1.66	0.60
8:QH:110:ALA:HB3	8:QH:121:ASP:HB3	1.81	0.60
25:RA:250:G:OP1	54:R8:13:ARG:NH2	2.34	0.60
25:RA:1753:G:OP2	39:RT:115:ARG:NH2	2.34	0.60
50:R4:40:HIS:H	50:R4:41:PRO:HD2	1.66	0.60
1:XA:1266:G:N2	1:XA:1269:A:OP2	2.32	0.60
25:YA:463:G:N2	25:YA:466:A:OP2	2.28	0.60
25:YA:2712(A):A:H8	25:YA:2712(A):A:C5'	2.03	0.60
34:YO:92:GLU:OE1	34:YO:113:LYS:NZ	2.34	0.60
1:QA:985:C:H2'	1:QA:986:A:H8	1.65	0.60
2:QB:24:TRP:H	2:QB:24:TRP:HD1	1.48	0.60
25:RA:6:A:N3	25:RA:7:G:C8	2.69	0.60
25:RA:270(Q):C:H5'	32:RI:45:LYS:HE3	1.83	0.60
28:RE:62:PRO:O	28:RE:64:LYS:N	2.34	0.60
31:RH:18:GLU:HB2	31:RH:25:LYS:HB2	1.84	0.60
52:R6:33:LYS:HD2	52:R6:34:LEU:H	1.66	0.60
1:XA:762:C:OP1	17:XQ:101:ARG:NH1	2.34	0.60
7:XG:73:MET:HE2	7:XG:90:GLU:HG2	1.83	0.60
25:YA:270(B):A:H5'	25:YA:270(C):C:OP2	2.02	0.60
44:YY:76:CYS:HB3	44:YY:96:ILE:HD11	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1318:A:H4'	19:QS:10:PHE:CE2	2.36	0.60
2:QB:47:THR:HA	2:QB:202:PRO:HG2	1.83	0.60
12:QL:88:GLY:H	12:QL:98:TYR:HA	1.65	0.60
32:RI:4:ILE:HG12	32:RI:18:VAL:HG22	1.82	0.60
28:YE:92:THR:OG1	28:YE:93:VAL:N	2.31	0.60
2:QB:32:ILE:HD11	2:QB:40:HIS:HB3	1.82	0.60
25:RA:859:G:O2'	25:RA:860:U:P	2.59	0.60
25:RA:1853:A:H2'	25:RA:1854:A:C8	2.37	0.60
25:RA:2875:C:H4'	39:RT:5:ALA:HB2	1.83	0.60
1:XA:186(A):C:O2'	20:XT:89:ARG:NE	2.34	0.60
11:XK:54:ARG:HB3	11:XK:54:ARG:CZ	2.30	0.60
3:QC:60:ALA:O	3:QC:63:ASN:ND2	2.34	0.60
28:RE:67:PHE:O	28:RE:68:ALA:C	2.43	0.60
41:RV:71:LEU:N	41:RV:86:GLY:HA3	2.16	0.60
4:XD:127:THR:HA	4:XD:132:ARG:HA	1.83	0.60
21:XU:12:LYS:HB3	21:XU:22:ARG:HD2	1.83	0.60
32:YI:141:LYS:HB3	32:YI:142:VAL:CB	2.32	0.60
32:YI:141:LYS:CB	32:YI:142:VAL:CA	2.67	0.60
25:RA:2666:C:N3	31:RH:152:ARG:NH2	2.48	0.60
29:RF:1:MET:O	29:RF:2:LYS:O	2.20	0.60
44:RY:13:VAL:HG23	44:RY:73:ARG:O	2.00	0.60
49:R3:8:LEU:HD13	49:R3:31:LEU:HD12	1.82	0.60
1:XA:953:G:H5'	1:XA:965:A:H61	1.66	0.60
27:YD:95:LEU:HD11	27:YD:105:ILE:HG23	1.82	0.60
50:Y4:6:HIS:CB	50:Y4:7:PRO:HD3	2.28	0.60
12:QL:23:LYS:H	12:QL:23:LYS:HD3	1.67	0.60
25:RA:2543:G:C6	25:RA:2544:G:C6	2.89	0.60
27:RD:35:LYS:HD2	27:RD:104:TYR:CE1	2.37	0.60
41:RV:69:LYS:HD2	41:RV:85:LYS:HD2	1.83	0.60
1:XA:1427:U:H2'	1:XA:1428:A:C8	2.37	0.60
9:XI:110:GLU:OE2	9:XI:113:LYS:NZ	2.33	0.60
23:XX:10:G:N2	23:XX:11:U:O3'	2.35	0.60
32:YI:131:LYS:HB3	32:YI:132:PRO:HA	1.84	0.60
25:RA:928:G:H5'	25:RA:929:G:OP2	2.02	0.60
25:RA:2310:A:N6	30:RG:79:ASN:OD1	2.34	0.60
27:RD:35:LYS:HG2	27:RD:64:ILE:H	1.67	0.60
20:XT:75:ASN:OD1	20:XT:75:ASN:N	2.31	0.60
25:YA:1859:A:N6	25:YA:1883:G:O2'	2.35	0.60
27:YD:17:THR:O	27:YD:211:ARG:NH2	2.35	0.60
1:QA:986:A:N3	19:QS:52:TYR:OH	2.35	0.60
18:QR:22:VAL:HG12	18:QR:56:THR:HA	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2031:A:O2'	25:RA:2454:G:N2	2.34	0.60
25:RA:2285:C:OP2	52:R6:27:LYS:NZ	2.35	0.60
27:RD:108:PRO:HG2	27:RD:111:LEU:HB2	1.83	0.60
1:QA:534:U:H5'	1:QA:535:A:OP2	2.02	0.60
25:RA:686:G:H21	25:RA:788:A:H61	1.49	0.60
25:RA:1283:G:N2	25:RA:1286:A:OP2	2.35	0.60
44:RY:42:VAL:HG13	44:RY:65:ALA:HB3	1.83	0.60
54:R8:29:LYS:O	54:R8:31:HIS:N	2.35	0.60
5:XE:137:GLU:OE1	5:XE:141:GLN:NE2	2.35	0.60
25:RA:247:G:H4'	25:RA:386:G:C5	2.37	0.59
44:RY:14:LEU:HA	44:RY:24:VAL:HA	1.83	0.59
52:R6:11:LEU:HD12	52:R6:53:LYS:HB3	1.82	0.59
1:XA:35:G:H2'	1:XA:36:C:C6	2.36	0.59
27:YD:237:GLU:O	27:YD:239:ARG:N	2.35	0.59
32:YI:77:LEU:CD1	32:YI:142:VAL:HG22	2.31	0.59
1:QA:1305:G:H22	1:QA:1331:G:H2'	1.67	0.59
2:QB:87:ARG:HH21	2:QB:233:SER:HB2	1.67	0.59
2:QB:132:LYS:O	2:QB:134:GLU:N	2.35	0.59
31:RH:84:SER:OG	31:RH:85:LYS:N	2.32	0.59
39:RT:27:THR:HG23	39:RT:90:GLN:HB3	1.84	0.59
45:RZ:157:LEU:HB3	45:RZ:161:VAL:HB	1.83	0.59
2:XB:25:ASN:O	2:XB:27:LYS:N	2.34	0.59
7:XG:73:MET:HG2	7:XG:90:GLU:HA	1.84	0.59
13:XM:99:ARG:HD3	13:XM:101:GLN:HG3	1.84	0.59
19:XS:48:THR:HG22	19:XS:61:TYR:HD1	1.67	0.59
25:YA:142:G:H4'	43:YX:35:THR:HG21	1.83	0.59
29:YF:116:ASP:OD2	35:YP:1:MET:N	2.36	0.59
34:YO:35:VAL:HG11	34:YO:103:ALA:HB3	1.82	0.59
39:YT:118:ARG:HA	39:YT:121:ILE:HB	1.83	0.59
52:Y6:14:THR:OG1	52:Y6:15:GLU:N	2.34	0.59
25:RA:389:G:H22	35:RP:72:PRO:HD3	1.68	0.59
28:RE:57:LYS:HZ1	28:RE:72:VAL:HG13	1.66	0.59
42:RW:19:LEU:HB3	51:R5:25:LEU:HD12	1.85	0.59
10:XJ:61:GLU:OE2	14:XN:45:ARG:NH1	2.35	0.59
25:YA:1247:A:OP1	29:YF:95:ARG:NH2	2.35	0.59
25:YA:2294:C:OP1	38:YS:89:ARG:NH2	2.35	0.59
31:YH:152:ARG:HG3	31:YH:153:LYS:HG2	1.84	0.59
44:YY:75:ILE:HG13	44:YY:79:CYS:HA	1.82	0.59
1:QA:1316:G:H5''	14:QN:17:LYS:HE3	1.84	0.59
7:QG:5:ARG:HH21	7:QG:7:ALA:HA	1.67	0.59
28:RE:61:ARG:O	28:RE:63:LEU:N	2.30	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1157:A:O2'	1:XA:1158:C:P	2.60	0.59
28:YE:111:ARG:HA	37:YR:2:ARG:NH1	2.16	0.59
35:YP:83:VAL:HG12	35:YP:112:LEU:HD21	1.84	0.59
39:YT:106:SER:HA	39:YT:110:ILE:HG13	1.84	0.59
4:QD:111:ALA:HB2	4:QD:120:LEU:HD12	1.84	0.59
2:XB:115:LEU:HD13	2:XB:145:LEU:HB3	1.85	0.59
25:YA:458:G:C8	53:Y7:37:LYS:HG2	2.37	0.59
25:YA:832:G:H5'	35:YP:45:LEU:HD21	1.83	0.59
28:YE:63:LEU:HG	28:YE:64:LYS:N	2.16	0.59
46:Y0:27:GLU:HG3	46:Y0:68:GLU:HA	1.84	0.59
25:YA:771:G:OP1	53:Y7:10:ARG:NH1	2.34	0.59
25:YA:2442:C:H2'	25:YA:2443:C:H6	1.66	0.59
25:YA:2748:A:H8	31:YH:63:SER:HB3	1.67	0.59
32:YI:141:LYS:HB3	32:YI:142:VAL:HG13	1.84	0.59
3:QC:108:ASN:HD21	3:QC:144:SER:HB2	1.68	0.59
3:XC:150:LYS:HE2	3:XC:152:ILE:HD11	1.84	0.59
25:YA:2210:G:H3'	25:YA:2211:G:C8	2.37	0.59
29:YF:132:VAL:O	29:YF:134:GLY:N	2.34	0.59
55:Y9:8:LYS:O	55:Y9:34:GLN:NE2	2.35	0.59
1:QA:579:G:H5'	1:QA:728:A:H1'	1.83	0.59
35:RP:9:ASN:HB3	35:RP:10:PRO:CD	2.33	0.59
1:XA:345:C:OP2	39:YT:39:ARG:NH2	2.35	0.59
2:XB:24:TRP:H	2:XB:24:TRP:CD1	2.19	0.59
19:XS:5:LEU:HD13	19:XS:9:VAL:HA	1.83	0.59
25:YA:956:G:OP2	36:YQ:14:ARG:NH2	2.35	0.59
29:YF:143:ALA:HB1	29:YF:148:LEU:HB2	1.84	0.59
52:Y6:13:CYS:H	52:Y6:22:ALA:HB3	1.67	0.59
1:QA:827:U:H3	1:QA:872:A:H62	1.49	0.59
25:RA:1952:A:C5	34:RO:22:ILE:HD12	2.38	0.59
31:RH:44:VAL:H	31:RH:51:ARG:NH1	2.01	0.59
39:RT:24:PRO:HA	39:RT:49:VAL:HG13	1.84	0.59
16:XP:11:SER:HB2	16:XP:14:ASN:HB3	1.84	0.59
27:YD:35:LYS:HB3	27:YD:63:ARG:HA	1.83	0.59
28:YE:37:ARG:HD3	28:YE:44:TYR:OH	2.03	0.59
30:YG:129:GLY:HA2	30:YG:166:ASP:HA	1.85	0.59
44:YY:33:LYS:H	44:YY:33:LYS:HD3	1.68	0.59
48:Y2:41:ILE:HD11	48:Y2:44:LEU:HD12	1.85	0.59
1:QA:985:C:H2'	1:QA:986:A:C8	2.38	0.59
1:QA:1358:U:OP1	14:QN:35:ARG:HG2	2.03	0.59
25:RA:345:A:O2'	25:RA:346:A:N7	2.36	0.59
25:RA:686:G:H5''	53:R7:11:LYS:HE2	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:44:VAL:HG22	31:RH:51:ARG:HH11	1.68	0.59
41:RV:49:THR:HG22	41:RV:50:PRO:CD	2.29	0.59
42:RW:59:VAL:HG23	42:RW:65:LEU:H	1.68	0.59
15:XO:87:ILE:HG22	15:XO:88:ARG:H	1.67	0.59
19:XS:45:VAL:HG13	19:XS:62:ILE:HG22	1.85	0.59
24:XY:12:LEU:HB3	24:XY:18:VAL:HB	1.85	0.59
51:Y5:2:ALA:O	51:Y5:3:LYS:HD2	2.03	0.59
20:QT:53:LEU:HB3	20:QT:102:GLY:HA3	1.85	0.58
25:RA:583:G:OP2	40:RU:10:ARG:NH1	2.34	0.58
35:RP:26:GLY:O	35:RP:28:GLY:N	2.35	0.58
45:RZ:125:LEU:HG	45:RZ:164:ALA:HB3	1.84	0.58
1:XA:7:G:H5'	1:XA:298:A:O4'	2.03	0.58
35:YP:128:HIS:O	35:YP:147:LEU:HB3	2.03	0.58
1:XA:560:U:H5'	1:XA:566:G:N2	2.18	0.58
1:XA:1118:C:OP1	9:XI:104:ARG:NH1	2.35	0.58
25:YA:1247:A:OP2	35:YP:15:ARG:NH1	2.34	0.58
45:YZ:5:LEU:HB3	45:YZ:59:LEU:HA	1.85	0.58
1:QA:1500:A:OP1	1:QA:1505:G:OP1	2.22	0.58
9:QI:28:VAL:HG11	9:QI:63:ILE:H	1.67	0.58
25:RA:2346:A:H2	52:R6:25:LYS:HB3	1.67	0.58
51:R5:4:HIS:HB3	51:R5:5:PRO:CD	2.31	0.58
13:XM:86:CYS:HB2	19:XS:73:GLU:HB3	1.86	0.58
25:YA:825:C:H1'	35:YP:55:ARG:HH21	1.69	0.58
26:YB:15:A:H5'	26:YB:16:G:C8	2.38	0.58
45:YZ:27:VAL:HG13	45:YZ:87:ASP:HB3	1.84	0.58
1:QA:1368:G:H5''	9:QI:112:LYS:HB3	1.85	0.58
1:QA:1422:G:O3'	34:RO:49:ARG:NH1	2.36	0.58
36:RQ:80:GLU:HG3	46:R0:5:LYS:HB3	1.84	0.58
22:XW:58:A:H1'	22:XW:60:U:C5	2.38	0.58
25:YA:518:G:H4'	42:YW:18:ARG:NH1	2.18	0.58
25:YA:1935:G:H1'	25:YA:1964:G:N2	2.17	0.58
28:YE:95:ILE:H	28:YE:95:ILE:HD12	1.68	0.58
41:YV:2:PHE:CD2	41:YV:42:GLY:HA2	2.38	0.58
6:QF:83:ASP:N	6:QF:83:ASP:OD2	2.36	0.58
25:RA:878:A:N6	25:RA:899:A:O2'	2.36	0.58
27:RD:169:GLU:HG2	27:RD:174:ILE:HD11	1.85	0.58
44:RY:75:ILE:HD11	44:RY:79:CYS:HA	1.84	0.58
1:XA:1068:G:H8	1:XA:1068:G:OP2	1.86	0.58
6:XF:70:ASP:OD1	6:XF:70:ASP:N	2.37	0.58
25:YA:141:A:H8	25:YA:1595:G:H21	1.51	0.58
25:YA:888:C:H4'	25:YA:889:C:H5	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:148:GLU:HB2	27:YD:151:LYS:HD2	1.86	0.58
50:Y4:55:ARG:HE	50:Y4:56:VAL:H	1.51	0.58
2:QB:32:ILE:HG12	2:QB:33:TYR:H	1.67	0.58
32:RI:125:GLU:CA	32:RI:141:LYS:HB3	2.23	0.58
35:RP:62:LEU:CD1	54:R8:25:MET:HB3	2.34	0.58
50:R4:66:SER:HA	50:R4:68:ARG:HH11	1.68	0.58
7:XG:20:ASP:OD2	7:XG:23:VAL:N	2.35	0.58
9:XI:2:GLU:O	9:XI:20:ARG:NH1	2.37	0.58
25:YA:2365:G:N7	54:Y8:39:LYS:NZ	2.51	0.58
28:YE:60:ASN:HB3	28:YE:62:PRO:HD2	1.84	0.58
25:RA:1952:A:C2	34:RO:22:ILE:HG23	2.39	0.58
35:RP:55:ARG:HG2	35:RP:56:SER:N	2.18	0.58
44:RY:47:LYS:HA	44:RY:60:PHE:HB3	1.84	0.58
1:XA:1155:G:C2'	1:XA:1156:G:H5'	2.32	0.58
2:XB:14:GLY:O	2:XB:209:ARG:NH1	2.35	0.58
13:XM:23:TYR:HB3	13:XM:67:GLU:HA	1.85	0.58
25:YA:1639:U:H2'	25:YA:1640:C:H5''	1.85	0.58
52:Y6:28:ARG:HB3	52:Y6:30:THR:N	2.18	0.58
9:QI:10:ARG:NH2	9:QI:11:LYS:HD3	2.15	0.58
13:QM:97:PRO:HA	13:QM:110:ARG:HD3	1.86	0.58
2:XB:55:PHE:HD1	2:XB:221:LEU:HD21	1.68	0.58
28:YE:52:LEU:O	28:YE:74:PRO:HA	2.04	0.58
25:RA:906:G:H5'	25:RA:907:U:OP2	2.04	0.58
25:RA:1113:U:H2'	25:RA:1114:G:C8	2.38	0.58
28:RE:11:MET:HA	28:RE:24:THR:HA	1.86	0.58
40:RU:98:LEU:C	40:RU:100:VAL:H	2.11	0.58
52:R6:42:TRP:HD1	52:R6:44:ARG:HG2	1.69	0.58
1:XA:1305:G:N2	1:XA:1331:G:H2'	2.14	0.58
19:XS:72:GLY:HA2	19:XS:75:ALA:HB3	1.86	0.58
25:YA:127:A:H5''	25:YA:128:C:C6	2.39	0.58
1:QA:250:A:H4'	1:QA:251:G:O5'	2.03	0.58
1:QA:1435:G:H2'	1:QA:1436:U:C6	2.39	0.58
10:QJ:79:ARG:NE	9:XI:94:ALA:O	2.37	0.58
21:QU:6:ARG:CZ	21:QU:15:ARG:HH21	2.17	0.58
25:RA:1416:G:H2'	25:RA:1417:C:C6	2.39	0.58
25:RA:2746:U:H5''	31:RH:138:LYS:HE3	1.85	0.58
29:RF:122:LYS:O	29:RF:124:LEU:N	2.37	0.58
29:RF:132:VAL:HG22	29:RF:133:ASN:H	1.69	0.58
13:XM:19:LEU:HB3	13:XM:25:ILE:HG21	1.86	0.58
30:YG:67:LYS:HD2	50:Y4:5:ILE:HG12	1.86	0.58
52:Y6:10:LEU:HA	52:Y6:24:GLU:OE1	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:518:C:H4'	1:QA:519:C:O5'	2.04	0.57
1:QA:924:C:O2'	1:QA:1502:A:N6	2.37	0.57
4:QD:166:LYS:HD2	27:YD:134:ARG:HH12	1.69	0.57
25:RA:309:G:N3	25:RA:329:G:O2'	2.37	0.57
25:RA:1427:A:H4'	25:RA:1428:C:O5'	2.04	0.57
30:RG:6:ALA:N	50:R4:23:GLU:OE2	2.31	0.57
32:RI:145:VAL:CG1	32:RI:146:ALA:N	2.67	0.57
35:RP:94:GLU:HG3	35:RP:124:LYS:HB3	1.86	0.57
42:RW:88:ARG:HB3	42:RW:92:ARG:HB3	1.86	0.57
1:XA:1137:C:H4'	1:XA:1138:G:O5'	2.04	0.57
8:XH:41:ARG:NH2	8:XH:123:GLU:OE2	2.37	0.57
25:YA:2105:C:H2'	25:YA:2106:G:C8	2.39	0.57
35:YP:63:PRO:HD3	54:Y8:13:ARG:NH1	2.18	0.57
45:YZ:165:VAL:HG22	45:YZ:166:SER:H	1.68	0.57
19:QS:36:ARG:O	19:QS:38:SER:N	2.36	0.57
25:RA:637:A:H5''	35:RP:117:GLU:HG3	1.85	0.57
27:RD:8:PRO:HB3	27:RD:14:ARG:HB2	1.85	0.57
35:RP:106:LEU:HD11	35:RP:112:LEU:HG	1.85	0.57
41:RV:29:PRO:HA	41:RV:61:VAL:HG13	1.86	0.57
1:XA:444:C:H2'	1:XA:445:G:H8	1.69	0.57
25:YA:2469:A:H2	25:YA:2481:G:H21	1.52	0.57
8:QH:10:LEU:HD22	8:QH:83:ILE:HD11	1.86	0.57
22:QW:71:C:HO2'	25:RA:1851:U:HO2'	1.39	0.57
45:RZ:91:LEU:H	45:RZ:91:LEU:HD23	1.69	0.57
3:XC:26:LYS:HD3	10:XJ:45:ARG:HH22	1.69	0.57
25:YA:974(A):C:OP2	25:YA:974(A):C:H4'	2.04	0.57
25:YA:2357:U:OP1	46:Y0:20:ARG:NH1	2.37	0.57
25:RA:993:G:OP1	40:RU:50:ARG:NH2	2.37	0.57
25:RA:2469:A:O2'	36:RQ:56:ARG:HG2	2.04	0.57
27:RD:85:ASP:HB2	27:RD:92:ILE:HD13	1.86	0.57
28:RE:128:SER:OG	28:RE:129:HIS:N	2.37	0.57
47:R1:50:ARG:NH1	47:R1:57:GLU:OE1	2.38	0.57
1:XA:1306:A:N6	1:XA:1331:G:H1'	2.19	0.57
25:YA:528:A:O2'	25:YA:529:A:H5''	2.05	0.57
25:YA:1028:A:N3	25:YA:2486:G:O2'	2.37	0.57
1:QA:1152:A:H2'	1:QA:1153:C:C6	2.40	0.57
25:RA:1568:G:P	27:RD:63:ARG:HH12	2.28	0.57
35:RP:57:THR:CG2	35:RP:60:MET:HB2	2.34	0.57
45:RZ:19:ARG:NH1	45:RZ:84:GLU:O	2.37	0.57
17:XQ:60:ILE:HB	17:XQ:74:LEU:HD23	1.86	0.57
27:YD:79:VAL:HG21	27:YD:111:LEU:HD11	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:105:LEU:O	35:YP:107:LYS:N	2.36	0.57
29:YF:178:PRO:HB2	29:YF:201:VAL:HG11	1.86	0.57
1:QA:1237:C:O2'	1:QA:1300:G:N2	2.38	0.57
24:QY:12:LEU:HB3	24:QY:18:VAL:HB	1.85	0.57
25:RA:775:G:H4'	25:RA:776:G:H5'	1.87	0.57
25:RA:1070:A:H5'	25:RA:1071:G:H5''	1.86	0.57
29:RF:31:HIS:HB2	35:RP:9:ASN:HD21	1.68	0.57
29:RF:143:ALA:HB1	29:RF:148:LEU:HB2	1.86	0.57
1:XA:1034:G:H2'	1:XA:1035:A:C8	2.40	0.57
19:XS:5:LEU:HA	19:XS:6:LYS:HE3	1.85	0.57
25:YA:27:G:O2'	25:YA:28:A:OP2	2.23	0.57
25:YA:807:U:OP2	35:YP:41:ARG:NH1	2.37	0.57
25:YA:2304:G:H22	25:YA:2312:U:H3	1.51	0.57
25:YA:2467:C:H4'	36:YQ:123:HIS:ND1	2.18	0.57
29:YF:153:SER:HB2	29:YF:190:GLU:H	1.70	0.57
30:YG:96:ARG:O	30:YG:98:ARG:N	2.37	0.57
39:YT:115:ARG:H	39:YT:115:ARG:HD3	1.70	0.57
25:RA:2130:U:O2	25:RA:2133:G:O2'	2.22	0.57
25:RA:2748:A:H2	25:RA:2754:U:H3	1.53	0.57
31:RH:117:PRO:HB3	31:RH:123:PHE:CE1	2.40	0.57
35:RP:52:GLU:HB2	35:RP:55:ARG:HB3	1.86	0.57
9:XI:15:ALA:HB2	9:XI:65:VAL:HG23	1.86	0.57
19:XS:36:ARG:O	19:XS:38:SER:N	2.37	0.57
31:YH:126:PRO:HB2	31:YH:127:GLU:HA	1.86	0.57
42:YW:35:ILE:HG23	51:Y5:28:PRO:HD2	1.87	0.57
1:QA:1000:A:H3'	1:QA:1001:G:H5''	1.87	0.57
25:RA:942:G:OP2	35:RP:39:LYS:NZ	2.34	0.57
1:XA:401:C:O2'	1:XA:621:A:N3	2.38	0.57
25:YA:637:A:O5'	35:YP:116:GLY:HA2	2.05	0.57
25:YA:637:A:H5''	35:YP:117:GLU:HG3	1.87	0.57
36:YQ:89:ASN:O	36:YQ:92:GLY:N	2.35	0.57
39:YT:26:ASP:HB3	39:YT:92:GLY:H	1.69	0.57
43:YX:64:LYS:HZ1	43:YX:73:ARG:NH2	2.02	0.57
4:QD:125:HIS:ND1	4:QD:152:SER:OG	2.29	0.57
25:RA:2291:U:H2'	25:RA:2292:C:C6	2.40	0.57
35:RP:12:ALA:C	35:RP:14:LYS:H	2.12	0.57
1:XA:581:G:N2	1:XA:760:G:N7	2.53	0.57
1:XA:1105:A:H2'	1:XA:1106:G:H8	1.69	0.57
1:XA:1325:C:H4'	21:XU:17:THR:HG21	1.86	0.57
4:XD:108:LEU:HD21	4:XD:183:GLY:HA3	1.86	0.57
8:XH:10:LEU:HD22	8:XH:83:ILE:HD11	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:630:G:N2	25:YA:633:A:OP2	2.33	0.57
25:YA:2030:A:H4'	25:YA:2031:A:H8	1.70	0.57
28:YE:74:PRO:HG2	28:YE:78:LEU:HD23	1.87	0.57
7:QG:151:TYR:OH	11:QK:54:ARG:NH2	2.38	0.56
25:RA:1614:A:N1	42:RW:93:ALA:HB2	2.20	0.56
25:RA:2212:A:H1'	25:RA:2215:G:C4	2.39	0.56
39:RT:74:ARG:HD3	39:RT:76:PHE:CZ	2.40	0.56
47:R1:87:PRO:HA	47:R1:90:ILE:HG22	1.87	0.56
1:XA:17:U:H2'	1:XA:18:C:C6	2.40	0.56
6:XF:101:ALA:HA	18:XR:28:GLU:HB3	1.84	0.56
1:QA:860:A:H2'	1:QA:861:G:O4'	2.06	0.56
1:QA:1224:G:N2	1:QA:1362(A):C:O2	2.35	0.56
1:QA:1305:G:OP1	21:QU:2:GLY:HA2	2.05	0.56
13:QM:53:VAL:HG12	13:QM:57:ARG:HD3	1.87	0.56
22:QW:38:A:C5	22:QW:39:C:C4	2.92	0.56
28:RE:37:ARG:HG3	28:RE:46:ALA:HB3	1.85	0.56
38:RS:49:VAL:HG22	38:RS:80:LEU:HD12	1.87	0.56
39:RT:125:ARG:NH1	39:RT:128:GLU:OE1	2.38	0.56
3:XC:131:ARG:NH2	3:XC:167:TRP:O	2.38	0.56
8:XH:103:VAL:HG21	8:XH:110:ALA:HB2	1.87	0.56
14:XN:12:ARG:HG2	14:XN:14:PRO:HD3	1.86	0.56
25:YA:1301:A:O2'	25:YA:1302:A:H3'	2.04	0.56
41:YV:4:ILE:HG22	41:YV:39:LEU:HD13	1.86	0.56
1:QA:1126:U:O2	1:QA:1280:A:H5''	2.05	0.56
1:QA:1347:G:C8	9:QL:107:ARG:HB3	2.40	0.56
12:QL:126:LYS:HD3	12:QL:126:LYS:H	1.70	0.56
19:QS:64:GLU:O	19:QS:66:MET:N	2.37	0.56
25:RA:1912:A:O2'	25:RA:1913:A:OP1	2.21	0.56
25:RA:2477:C:H2'	55:R9:1:MET:HG3	1.85	0.56
43:RX:8:ILE:O	48:R2:36:ARG:NH2	2.38	0.56
1:XA:531:U:OP2	24:XY:69:ARG:NH1	2.33	0.56
1:XA:736:C:OP1	18:XR:68:LYS:NZ	2.36	0.56
1:XA:1070:U:OP1	5:XE:18:ARG:NH1	2.38	0.56
1:XA:1126:U:O2	1:XA:1280:A:H5''	2.05	0.56
1:XA:1137:C:H5'	1:XA:1138:G:C4	2.41	0.56
1:XA:1152:A:H5''	10:XJ:13:HIS:CD2	2.40	0.56
2:XB:119:GLU:OE2	2:XB:153:ARG:NH2	2.38	0.56
2:XB:189:ASP:O	2:XB:191:ASP:N	2.39	0.56
9:XI:32:ASP:HB2	9:XI:35:GLU:HB2	1.87	0.56
22:XW:54:U:H3	22:XW:58:A:N6	2.04	0.56
23:XX:5:A:H2'	23:XX:6:G:H8	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1916:A:H5'	25:YA:1917:U:OP2	2.05	0.56
25:YA:2319:G:N7	38:YS:3:ARG:HB3	2.20	0.56
31:YH:7:LEU:HD22	31:YH:69:ARG:HG2	1.88	0.56
32:YI:98:ALA:HA	32:YI:109:ILE:HD11	1.87	0.56
40:YU:93:LYS:HD3	40:YU:93:LYS:N	2.21	0.56
46:Y0:4:LYS:H	46:Y0:5:LYS:HB3	1.70	0.56
1:QA:971:G:N2	1:QA:1233:G:H1'	2.20	0.56
11:QK:84:VAL:HG23	11:QK:110:ASP:HA	1.87	0.56
17:QQ:90:ILE:O	17:QQ:94:ASN:ND2	2.39	0.56
25:RA:1364:G:H5'	47:R1:3:LYS:HE3	1.87	0.56
5:XE:19:MET:HA	5:XE:24:ARG:HA	1.86	0.56
10:XJ:34:VAL:HG22	10:XJ:74:ILE:HG22	1.87	0.56
25:YA:220:G:O2'	25:YA:233:A:N3	2.35	0.56
25:YA:1230:C:H2'	25:YA:1231:G:C8	2.41	0.56
1:QA:448:A:OP2	1:QA:485:G:N2	2.27	0.56
10:QJ:38:ILE:HB	10:QJ:71:LEU:HB3	1.86	0.56
29:RF:125:LEU:HD23	29:RF:125:LEU:H	1.70	0.56
1:XA:1432:G:OP1	39:YT:107:ASP:HB2	2.05	0.56
3:XC:82:GLU:HG3	3:XC:83:ARG:H	1.70	0.56
5:XE:8:GLU:HG2	5:XE:34:VAL:HG22	1.87	0.56
10:XJ:48:THR:HA	10:XJ:62:HIS:HB3	1.87	0.56
25:YA:2115:G:O2'	25:YA:2171:A:N6	2.39	0.56
25:YA:2316:C:O2'	30:YG:128:ARG:NH1	2.39	0.56
25:YA:2531:A:H5''	31:YH:157:TYR:CZ	2.40	0.56
26:YB:8:U:O3'	38:YS:25:ARG:NH2	2.38	0.56
1:QA:750:G:N3	15:QO:23:GLY:HA3	2.21	0.56
25:RA:2790:A:H2'	25:RA:2791:C:H5'	1.87	0.56
27:RD:146:GLU:HB2	27:RD:189:CYS:HB3	1.87	0.56
45:RZ:124:ILE:HD11	45:RZ:165:VAL:HG11	1.87	0.56
25:YA:1693:U:O2'	27:YD:14:ARG:NH2	2.39	0.56
36:YQ:54:MET:HE1	36:YQ:118:LEU:HD23	1.86	0.56
44:YY:39:VAL:HG23	44:YY:41:GLY:H	1.70	0.56
25:RA:708:C:H5'	25:RA:709:U:OP2	2.06	0.56
25:RA:1426:G:OP2	25:RA:1427:A:O2'	2.24	0.56
25:RA:1542:G:H3'	25:RA:1543:A:C5'	2.35	0.56
31:RH:24:VAL:HG22	31:RH:35:VAL:HB	1.88	0.56
45:RZ:58:VAL:O	45:RZ:59:LEU:HD23	2.06	0.56
52:R6:34:LEU:HD11	52:R6:50:ARG:HH21	1.71	0.56
25:YA:1054:A:H61	25:YA:1105:U:H3	1.54	0.56
28:YE:66:HIS:C	28:YE:68:ALA:H	2.14	0.56
29:YF:132:VAL:C	29:YF:134:GLY:H	2.13	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:12:PRO:HG3	31:YH:48:GLY:HA2	1.88	0.56
25:RA:1418:G:OP1	25:RA:1588:C:O2'	2.24	0.56
25:RA:1754:C:P	39:RT:96:ARG:HH12	2.29	0.56
28:RE:37:ARG:HD3	28:RE:44:TYR:OH	2.06	0.56
36:RQ:7:MET:HE1	36:RQ:93:TYR:HE2	1.70	0.56
45:RZ:59:LEU:CD1	45:RZ:60:GLU:H	2.15	0.56
45:RZ:116:VAL:O	45:RZ:118:GLN:NE2	2.39	0.56
1:XA:885:G:O2'	1:XA:914:A:N1	2.38	0.56
4:XD:199:ASN:O	4:XD:201:GLN:N	2.35	0.56
6:XF:55:ASP:HB2	6:XF:86:ARG:HH12	1.69	0.56
31:YH:127:GLU:HG3	31:YH:128:PRO:HD2	1.87	0.56
35:YP:52:GLU:HG2	35:YP:55:ARG:NE	2.16	0.56
25:RA:270(B):A:H5'	25:RA:270(C):C:OP2	2.05	0.56
25:RA:517:C:OP1	51:R5:16:ARG:NH2	2.38	0.56
25:RA:1112:G:OP1	31:RH:3:ARG:NH2	2.39	0.56
25:RA:1254:A:H5''	25:RA:1255:U:H5'	1.88	0.56
30:RG:68:PRO:HA	30:RG:92:VAL:HB	1.88	0.56
44:RY:76:CYS:SG	44:RY:77:PRO:HD2	2.43	0.56
1:XA:1060:C:H5''	10:XJ:51:ARG:HG2	1.87	0.56
10:XJ:10:GLY:HA3	10:XJ:16:LEU:HD21	1.88	0.56
25:YA:2690:C:OP2	37:YR:17:ARG:NH1	2.37	0.56
25:YA:2827:C:H5'	25:YA:2828:C:OP2	2.05	0.56
27:YD:35:LYS:HG2	27:YD:64:ILE:H	1.69	0.56
27:YD:159:ALA:H	27:YD:196:VAL:HG11	1.71	0.56
42:YW:29:LEU:HD21	42:YW:33:ARG:HH21	1.70	0.56
1:QA:657:G:H4'	15:QO:28:GLN:HG2	1.88	0.56
1:QA:974:A:OP2	14:QN:41:ARG:NH1	2.39	0.56
4:QD:73:ARG:O	4:QD:77:ASN:ND2	2.39	0.56
10:QJ:4:ILE:HA	10:QJ:100:THR:HG22	1.87	0.56
13:QM:23:TYR:CD1	13:QM:71:ARG:HD2	2.40	0.56
13:QM:118:ALA:HB2	22:QV:29:G:H5'	1.88	0.56
22:QW:15:G:H2'	22:QW:59:A:C2	2.40	0.56
22:QW:37:A:C6	22:QW:38:A:C2	2.93	0.56
25:RA:774:A:H2'	25:RA:774:A:N3	2.20	0.56
25:RA:807:U:OP2	35:RP:41:ARG:NH1	2.38	0.56
28:RE:58:ARG:O	28:RE:60:ASN:N	2.38	0.56
31:RH:30:LYS:HB3	31:RH:136:ILE:HG21	1.86	0.56
40:RU:95:LEU:C	40:RU:97:ASP:H	2.14	0.56
1:XA:656:C:O2'	15:XO:28:GLN:OE1	2.23	0.56
1:XA:750:G:N3	15:XO:23:GLY:HA3	2.21	0.56
1:XA:1117:G:H4'	9:XI:104:ARG:HD2	1.85	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1376:U:H2'	1:XA:1377:A:C8	2.41	0.56
28:YE:8:LYS:HB3	28:YE:193:GLY:H	1.71	0.56
31:YH:6:ARG:HB3	31:YH:54:ARG:HH12	1.71	0.56
45:YZ:151:HIS:O	45:YZ:154:ASP:HB3	2.05	0.56
1:QA:578:C:O2'	1:QA:728:A:N3	2.33	0.55
1:QA:1297:C:O2'	7:QG:114:ARG:NH2	2.39	0.55
10:QJ:50:ILE:HD13	10:QJ:60:ARG:HD3	1.88	0.55
18:QR:22:VAL:HG22	18:QR:23:LYS:H	1.70	0.55
25:RA:1652:A:OP1	37:RR:8:ARG:NH1	2.39	0.55
1:XA:1151:A:H2'	1:XA:1152:A:C8	2.41	0.55
1:XA:1209:C:H4'	24:XY:24:ALA:HB1	1.87	0.55
2:XB:80:ILE:HD11	2:XB:211:ILE:HG22	1.88	0.55
18:XR:31:LEU:HD13	18:XR:65:ILE:HD13	1.88	0.55
25:YA:6:A:N3	25:YA:7:G:C8	2.74	0.55
25:YA:185:U:H4'	25:YA:218:A:H4'	1.89	0.55
38:YS:19:LYS:O	38:YS:21:THR:N	2.35	0.55
1:QA:1300:G:O2'	1:QA:1301:U:OP2	2.24	0.55
9:QI:2:GLU:H	9:QI:20:ARG:HH11	1.51	0.55
22:QV:56:C:N4	30:RG:83:ARG:HH12	2.04	0.55
25:RA:2748:A:H2'	25:RA:2749:A:O4'	2.06	0.55
36:RQ:80:GLU:HG2	36:RQ:81:VAL:H	1.72	0.55
1:XA:246:A:N6	1:XA:281:G:H1'	2.20	0.55
5:XE:13:ILE:HD13	5:XE:13:ILE:H	1.70	0.55
25:YA:2306:C:H5'	25:YA:2307:G:H2'	1.89	0.55
42:YW:64:MET:HE3	42:YW:109:GLU:HG3	1.88	0.55
1:QA:973:G:O6	1:QA:974:A:N6	2.39	0.55
1:QA:1015:A:N3	1:QA:1218:C:O2'	2.38	0.55
1:QA:1300:G:HO2'	1:QA:1301:U:P	2.29	0.55
25:RA:1022:G:HO2'	25:RA:1023:U:P	2.30	0.55
25:RA:1693:U:O2'	27:RD:14:ARG:NH2	2.40	0.55
25:RA:2680:C:H5'	28:RE:189:PRO:HA	1.88	0.55
27:RD:44:ASN:N	27:RD:44:ASN:OD1	2.39	0.55
27:RD:101:GLU:OE1	27:RD:103:ARG:NH1	2.39	0.55
31:RH:45:VAL:HG13	31:RH:46:GLU:H	1.71	0.55
31:RH:86:GLU:HG3	31:RH:165:ALA:HB2	1.88	0.55
1:XA:1495:U:O2'	25:YA:1919:A:N1	2.33	0.55
15:XO:26:GLU:OE2	15:XO:77:ARG:NH1	2.39	0.55
17:XQ:12:SER:HB3	17:XQ:20:THR:HB	1.89	0.55
23:XX:13:A:O2'	23:XX:14:A:H5''	2.06	0.55
30:YG:27:ASN:HB3	30:YG:30:GLU:HG3	1.88	0.55
30:YG:131:TYR:HB3	30:YG:159:VAL:HG13	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:503:C:OP2	12:QL:116:SER:HB3	2.06	0.55
15:QO:87:ILE:HG22	15:QO:88:ARG:H	1.72	0.55
25:RA:380:U:H5'	47:R1:18:ILE:HD12	1.87	0.55
25:RA:2112:G:N2	25:RA:2169:A:H61	2.05	0.55
44:RY:96:ILE:HG12	44:RY:101:LYS:HG3	1.87	0.55
45:RZ:121:HIS:H	45:RZ:171:ILE:HG12	1.72	0.55
1:XA:1316:G:N1	1:XA:1319:A:OP2	2.39	0.55
2:XB:9:GLU:HG2	2:XB:48:MET:HG3	1.88	0.55
25:YA:2748:A:H2	25:YA:2754:U:H3	1.53	0.55
29:YF:102:PRO:HB2	29:YF:105:VAL:HG23	1.88	0.55
38:YS:93:LYS:HG2	38:YS:95:HIS:HB2	1.88	0.55
1:QA:1300:G:O2'	1:QA:1301:U:O5'	2.23	0.55
9:QI:27:THR:HG21	9:QI:32:ASP:HA	1.88	0.55
22:QW:34:C:H42	23:QX:14:A:N6	2.04	0.55
25:RA:1310:G:H2'	25:RA:1311:G:H5''	1.87	0.55
25:RA:2827:C:H5'	25:RA:2828:C:OP2	2.07	0.55
42:RW:59:VAL:HA	42:RW:64:MET:H	1.72	0.55
25:YA:320:A:N3	29:YF:169:ASN:ND2	2.51	0.55
25:YA:1786:A:H1'	25:YA:1938:A:N6	2.21	0.55
36:YQ:31:ASP:H	36:YQ:107:ALA:HB2	1.70	0.55
1:QA:250:A:H5'	1:QA:252:U:O4'	2.07	0.55
1:QA:1256:A:OP2	3:QC:26:LYS:NZ	2.30	0.55
3:QC:52:LEU:HD23	3:QC:52:LEU:H	1.72	0.55
9:QI:28:VAL:HG21	9:QI:63:ILE:N	2.22	0.55
15:QO:3:ILE:H	15:QO:3:ILE:HD13	1.72	0.55
25:RA:136:G:H1	25:RA:143:C:H42	1.54	0.55
25:RA:2267:A:H5''	25:RA:2268:A:H5'	1.86	0.55
45:RZ:69:THR:HG22	45:RZ:90:VAL:HA	1.89	0.55
1:XA:1277:C:O2'	1:XA:1279:A:H1'	2.07	0.55
3:XC:134:ILE:HG23	3:XC:151:VAL:HB	1.89	0.55
25:YA:414:C:O2	25:YA:1864:U:O2'	2.21	0.55
27:YD:26:LYS:H	27:YD:26:LYS:HD2	1.72	0.55
2:QB:76:GLN:HG3	2:QB:208:ILE:HG12	1.89	0.55
2:QB:187:LEU:HA	2:QB:201:ILE:HB	1.87	0.55
2:QB:219:VAL:HA	2:QB:222:ILE:HD12	1.89	0.55
25:RA:128:C:H2'	25:RA:129:C:C6	2.42	0.55
35:RP:59:LEU:HD13	54:R8:56:GLU:HG3	1.86	0.55
3:XC:92:ALA:HA	3:XC:95:THR:HB	1.88	0.55
12:XL:126:LYS:H	12:XL:126:LYS:HD3	1.72	0.55
32:YI:76:THR:OG1	32:YI:77:LEU:N	2.39	0.55
1:QA:738:C:H5''	6:QF:69:GLU:HB2	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1157:A:H1'	1:QA:1158:C:C5	2.41	0.55
25:RA:68:G:H2'	25:RA:69:C:O2	2.07	0.55
25:RA:2124:G:H1	25:RA:2174:C:H42	1.53	0.55
39:RT:3:ARG:HG2	39:RT:6:LEU:HB2	1.88	0.55
47:R1:80:LEU:H	47:R1:80:LEU:HD13	1.72	0.55
1:XA:58:C:O2'	1:XA:388:G:N7	2.32	0.55
1:XA:243:A:H4'	1:XA:244:U:O5'	2.06	0.55
2:XB:7:VAL:HG13	2:XB:8:LYS:H	1.72	0.55
20:XT:26:ASN:HB2	20:XT:71:THR:HG23	1.87	0.55
20:XT:29:LYS:O	20:XT:33:ILE:HG12	2.06	0.55
28:YE:60:ASN:CB	28:YE:62:PRO:HD2	2.37	0.55
31:YH:64:LEU:O	31:YH:68:THR:OG1	2.23	0.55
32:YI:86:THR:HG22	32:YI:122:GLU:HG3	1.89	0.55
40:YU:92:ARG:HH12	41:YV:11:GLN:H	1.53	0.55
48:Y2:18:PRO:HA	48:Y2:21:LEU:HB2	1.88	0.55
9:QI:15:ALA:HB2	9:QI:65:VAL:HG23	1.88	0.55
28:RE:80:GLU:O	28:RE:82:ARG:N	2.39	0.55
31:RH:3:ARG:HH11	31:RH:6:ARG:HE	1.54	0.55
47:R1:53:VAL:HG22	47:R1:74:VAL:HG13	1.88	0.55
1:XA:1118:C:H2'	1:XA:1119:C:C6	2.41	0.55
12:XL:23:LYS:HD3	12:XL:23:LYS:H	1.72	0.55
25:YA:250:G:H2'	25:YA:251:A:C8	2.42	0.55
27:YD:267:SER:C	27:YD:269:PHE:H	2.15	0.55
32:YI:3:VAL:HG12	32:YI:38:LEU:HA	1.88	0.55
1:QA:666:G:H5'	1:QA:726:C:H1'	1.90	0.55
2:QB:102:LEU:HD23	2:QB:182:ILE:HD12	1.88	0.55
25:RA:68:G:C2'	25:RA:69:C:O2	2.55	0.55
28:RE:63:LEU:O	28:RE:64:LYS:CB	2.55	0.55
42:RW:18:ARG:NH1	42:RW:76:VAL:O	2.40	0.55
44:RY:43:ASN:HB3	44:RY:64:GLU:HA	1.89	0.55
45:RZ:58:VAL:O	45:RZ:59:LEU:CD2	2.55	0.55
45:RZ:157:LEU:CB	45:RZ:161:VAL:HG11	2.34	0.55
1:XA:1195:C:H5''	1:XA:1196:U:OP2	2.06	0.55
1:XA:1422:G:O3'	34:YO:49:ARG:NH1	2.39	0.55
6:XF:11:ASN:HB3	6:XF:14:LEU:HG	1.89	0.55
11:XK:98:LEU:O	11:XK:101:SER:OG	2.21	0.55
16:XP:71:ARG:HG3	16:XP:80:PHE:HE1	1.72	0.55
1:QA:1223:C:H3'	1:QA:1224:G:C5'	2.38	0.54
8:QH:69:ARG:NH1	8:QH:75:ARG:O	2.40	0.54
25:RA:1991:U:H2'	25:RA:1992:G:H5''	1.88	0.54
30:RG:125:PHE:HB3	30:RG:166:ASP:HB2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:22:GLU:O	6:XF:26:ILE:HG13	2.07	0.54
21:XU:8:THR:HG22	21:XU:10:ARG:H	1.71	0.54
25:YA:2830:G:H5'	28:YE:58:ARG:HH11	1.71	0.54
25:YA:2884:U:O2	51:Y5:52:TYR:OH	2.24	0.54
27:YD:106:ILE:HD11	27:YD:196:VAL:HG13	1.89	0.54
30:YG:16:ARG:HE	30:YG:31:VAL:HG11	1.72	0.54
47:Y1:8:SER:HB3	47:Y1:66:HIS:CD2	2.42	0.54
9:QI:2:GLU:HG3	9:QI:3:GLN:H	1.72	0.54
9:QI:121:ARG:NH1	9:QI:122:ALA:O	2.40	0.54
19:QS:72:GLY:HA2	19:QS:75:ALA:HB3	1.88	0.54
26:RB:56:G:H5'	30:RG:27:ASN:ND2	2.20	0.54
30:RG:41:GLN:NE2	30:RG:154:GLY:O	2.34	0.54
31:RH:89:ILE:HD12	31:RH:129:THR:HA	1.90	0.54
31:RH:150:ALA:O	31:RH:152:ARG:N	2.39	0.54
42:RW:12:ILE:HD13	42:RW:17:VAL:HG13	1.89	0.54
45:RZ:155:LEU:C	45:RZ:156:LYS:CG	2.68	0.54
1:XA:1157:A:N6	1:XA:1180:A:C6	2.75	0.54
1:XA:1227:A:C4	13:XM:117:VAL:HG21	2.42	0.54
1:XA:1412:C:H2'	1:XA:1413:A:H8	1.72	0.54
6:XF:7:ASN:HD22	6:XF:7:ASN:N	2.06	0.54
10:XJ:4:ILE:HB	10:XJ:74:ILE:HD11	1.88	0.54
32:YI:2:LYS:HA	32:YI:20:ASP:HA	1.89	0.54
35:YP:59:LEU:HD21	54:Y8:10:ALA:HA	1.89	0.54
1:QA:269:C:H2'	1:QA:270:A:H8	1.72	0.54
1:QA:642:A:N3	8:QH:113:SER:OG	2.41	0.54
4:QD:195:ALA:HB2	6:XF:20:ALA:CB	2.28	0.54
22:QW:4:G:H4'	25:RA:1851:U:OP1	2.08	0.54
25:RA:746:A:C5	25:RA:2611:U:H5''	2.42	0.54
27:RD:130:ALA:HA	27:RD:192:THR:HA	1.89	0.54
41:RV:49:THR:CB	41:RV:50:PRO:CD	2.85	0.54
41:RV:59:ALA:HB2	41:RV:96:ILE:HD13	1.89	0.54
25:YA:883:G:O2'	25:YA:884:C:OP1	2.23	0.54
32:YI:140:LEU:O	32:YI:141:LYS:CG	2.52	0.54
43:YX:36:LYS:HD3	43:YX:56:THR:HG23	1.90	0.54
44:YY:62:GLU:CD	44:YY:63:LYS:H	2.14	0.54
54:Y8:61:LEU:HD12	54:Y8:62:LEU:H	1.72	0.54
2:QB:80:ILE:HD13	2:QB:212:GLN:HA	1.89	0.54
3:QC:11:ARG:O	3:QC:13:GLY:N	2.39	0.54
20:QT:10:LEU:HD22	20:QT:11:SER:N	2.22	0.54
44:RY:77:PRO:O	44:RY:78:ALA:HB2	2.06	0.54
50:R4:39:CYS:O	50:R4:40:HIS:ND1	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:101:ILE:HG13	5:XE:119:LEU:HD23	1.88	0.54
25:YA:2576:G:O2'	25:YA:2579:C:OP2	2.21	0.54
25:YA:2795:G:H21	25:YA:2801:A:H62	1.54	0.54
35:YP:62:LEU:CD1	54:Y8:25:MET:HB3	2.36	0.54
49:Y3:59:VAL:HG12	49:Y3:60:GLU:H	1.72	0.54
1:QA:957:U:H4'	19:QS:79:THR:OG1	2.07	0.54
22:QW:16:C:H4'	22:QW:60:U:H4'	1.88	0.54
25:RA:1300:U:H4'	25:RA:1301:A:H5''	1.89	0.54
25:RA:2211:G:H3'	25:RA:2212:A:N3	2.22	0.54
32:RI:131:LYS:HB3	32:RI:132:PRO:HA	1.88	0.54
33:RN:39:ARG:HH21	33:RN:41:ASP:HB2	1.73	0.54
52:R6:8:LYS:HB2	52:R6:27:LYS:HB2	1.88	0.54
1:XA:1502:A:H2	1:XA:1505:G:N1	2.04	0.54
5:XE:33:VAL:HG12	5:XE:112:LEU:HD12	1.90	0.54
13:XM:44:ARG:HB3	13:XM:46:LYS:HB3	1.88	0.54
15:XO:54:ARG:HG2	15:XO:58:MET:HE2	1.89	0.54
25:YA:796:C:H2'	25:YA:797:C:C6	2.42	0.54
25:YA:2610:C:H4'	25:YA:2611:U:OP2	2.08	0.54
28:YE:8:LYS:HG2	28:YE:192:ASN:HA	1.89	0.54
29:YF:42:ALA:O	29:YF:45:ARG:HB2	2.07	0.54
44:YY:88:LYS:O	44:YY:90:LEU:N	2.39	0.54
48:Y2:47:ASN:O	48:Y2:49:LYS:N	2.32	0.54
1:QA:243:A:H4'	1:QA:244:U:O5'	2.07	0.54
1:QA:1052:U:O2'	1:QA:1055:A:OP2	2.25	0.54
1:QA:1380:U:C5	7:QG:3:ARG:HG2	2.41	0.54
25:RA:394:A:C2'	25:RA:395:U:H5''	2.33	0.54
25:RA:1400:G:H2'	25:RA:1401:G:C8	2.42	0.54
27:RD:65:ILE:HD11	27:RD:67:PHE:CE2	2.43	0.54
31:RH:9:ILE:CG2	31:RH:10:PRO:HA	2.37	0.54
36:RQ:12:GLN:HG2	36:RQ:73:PRO:HD2	1.90	0.54
45:RZ:118:GLN:O	45:RZ:120:ILE:HG22	2.07	0.54
45:RZ:158:PRO:CB	45:RZ:159:PRO:HA	2.36	0.54
18:XR:62:GLU:HA	18:XR:65:ILE:HD11	1.90	0.54
25:YA:1861:G:H1	25:YA:1881:C:H42	1.54	0.54
29:YF:101:LEU:O	29:YF:106:ARG:NH1	2.40	0.54
45:YZ:27:VAL:HG22	45:YZ:29:TYR:HD2	1.73	0.54
20:QT:67:ALA:O	20:QT:73:HIS:ND1	2.40	0.54
29:RF:74:ARG:O	29:RF:74:ARG:HG2	2.07	0.54
25:YA:1022:G:H4'	25:YA:1023:U:H5''	1.89	0.54
25:YA:2150:U:H2'	25:YA:2151:G:C8	2.42	0.54
35:YP:100:LEU:HB3	35:YP:106:LEU:HD13	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YQ:12:GLN:HG2	36:YQ:73:PRO:HD2	1.88	0.54
45:YZ:120:ILE:HG23	45:YZ:171:ILE:HA	1.88	0.54
47:Y1:23:LYS:HE3	47:Y1:28:GLY:HA3	1.88	0.54
1:QA:939:G:H5''	7:QG:102:ARG:NH2	2.22	0.54
1:QA:1223:C:H3'	1:QA:1224:G:H5''	1.90	0.54
25:RA:1225:C:H5''	41:RV:85:LYS:HE2	1.90	0.54
25:RA:2096:U:H3	25:RA:2193:G:H1	1.55	0.54
1:XA:714:G:H2'	1:XA:715:A:C8	2.43	0.54
1:XA:1278:U:H5'	1:XA:1279:A:O4'	2.08	0.54
25:YA:2815:C:O2'	51:Y5:42:PRO:HB2	2.07	0.54
41:YV:7:THR:HG23	41:YV:22:VAL:HG21	1.90	0.54
45:YZ:10:ARG:NH1	45:YZ:26:GLY:O	2.41	0.54
1:QA:1225:A:N3	1:QA:1225:A:C2'	2.70	0.54
4:QD:78:LEU:HD22	4:QD:96:LEU:HB3	1.90	0.54
5:QE:75:THR:OG1	5:QE:76:ILE:N	2.40	0.54
25:RA:2091:U:OP2	25:RA:2092:U:O2'	2.26	0.54
3:XC:60:ALA:O	3:XC:63:ASN:ND2	2.40	0.54
13:XM:46:LYS:O	13:XM:48:LEU:N	2.40	0.54
26:YB:95:U:OP2	45:YZ:14:LYS:NZ	2.38	0.54
31:YH:97:ARG:HB2	31:YH:104:GLU:HB2	1.90	0.54
39:YT:24:PRO:HA	39:YT:49:VAL:HG13	1.90	0.54
1:QA:1104:G:O3'	2:QB:111:ARG:NH2	2.40	0.54
23:QX:20:A3P:O1P	24:QY:73:ARG:NH2	2.41	0.54
25:RA:1796:U:H2'	25:RA:1797:C:C6	2.43	0.54
34:RO:115:VAL:HG13	34:RO:121:VAL:HG21	1.90	0.54
37:RR:33:ARG:HD2	51:R5:55:ARG:HD2	1.88	0.54
54:R8:34:TRP:C	54:R8:36:LYS:H	2.16	0.54
22:XW:36:U:O4	22:XW:37:A:N6	2.40	0.54
25:YA:270(Q):C:O3'	32:YI:42:SER:OG	2.25	0.54
29:YF:39:TRP:O	29:YF:43:LYS:HG2	2.07	0.54
41:YV:35:LEU:O	41:YV:37:VAL:HG22	2.08	0.54
45:YZ:69:THR:HB	45:YZ:88:PHE:HB3	1.90	0.54
1:QA:986:A:H1'	19:QS:54:GLY:O	2.07	0.53
1:QA:1050:G:O2'	24:QY:20:SER:O	2.26	0.53
25:RA:1790:C:H5''	25:RA:1791:A:OP1	2.08	0.53
26:RB:95:U:OP1	45:RZ:14:LYS:NZ	2.41	0.53
28:RE:7:VAL:HG21	39:RT:1:MET:HE1	1.90	0.53
38:RS:99:LYS:O	38:RS:103:GLU:HG2	2.08	0.53
40:RU:97:ASP:OD2	40:RU:101:ARG:NH2	2.41	0.53
1:XA:612:C:O2	1:XA:629:G:N2	2.41	0.53
1:XA:1033:G:O2'	1:XA:1034:G:OP1	2.26	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:150:GLU:HG2	4:XD:151:LYS:H	1.72	0.53
36:YQ:66:ILE:HD13	36:YQ:66:ILE:H	1.72	0.53
47:Y1:3:LYS:H	47:Y1:61:ARG:HH12	1.55	0.53
1:QA:1106:G:H5''	3:QC:172:ARG:HG2	1.89	0.53
1:QA:1152:A:H5''	10:QJ:13:HIS:HD2	1.70	0.53
4:QD:33:MET:O	4:QD:34:GLU:HG2	2.09	0.53
24:QY:71:ASN:HB2	24:QY:91:TYR:HB3	1.90	0.53
25:RA:2111:C:C2	25:RA:2118:U:H1'	2.42	0.53
25:RA:2528:U:OP1	55:R9:30:PRO:HG2	2.08	0.53
35:RP:146:VAL:HG22	35:RP:147:LEU:H	1.73	0.53
44:RY:76:CYS:HB3	44:RY:96:ILE:CD1	2.37	0.53
44:RY:97:ARG:H	44:RY:97:ARG:HD3	1.72	0.53
18:XR:18:ARG:HG2	18:XR:20:ALA:H	1.72	0.53
19:XS:43:GLU:HB3	19:XS:44:MET:HE3	1.91	0.53
20:XT:89:ARG:HB2	20:XT:104:LEU:HD21	1.90	0.53
25:YA:1657:C:H5''	28:YE:133:LYS:O	2.08	0.53
35:YP:125:VAL:HG13	35:YP:144:GLU:HB3	1.89	0.53
48:Y2:46:GLN:HB2	48:Y2:49:LYS:HZ1	1.73	0.53
3:QC:22:TRP:CG	3:QC:59:ARG:HD2	2.44	0.53
13:QM:79:LYS:HE3	13:QM:82:MET:HE2	1.91	0.53
13:QM:118:ALA:HB1	22:QV:28:C:O3'	2.08	0.53
25:RA:2564:A:C2	25:RA:2647:U:H4'	2.44	0.53
28:RE:3:GLY:HA2	28:RE:198:VAL:O	2.08	0.53
31:RH:107:VAL:HB	31:RH:153:LYS:HG3	1.91	0.53
1:XA:553:A:H5''	12:XL:24:VAL:HG21	1.90	0.53
1:XA:963:G:H21	10:XJ:55:LYS:HD3	1.73	0.53
1:XA:1435:G:H2'	1:XA:1436:U:C6	2.43	0.53
6:XF:82:ARG:O	6:XF:85:VAL:HG23	2.08	0.53
23:XX:20:A3P:P1	24:XY:73:ARG:HH21	2.32	0.53
25:YA:706:A:C2	25:YA:707:G:H1'	2.42	0.53
25:YA:1009:A:OP2	33:YN:37:LYS:NZ	2.41	0.53
25:YA:2472:G:H5'	25:YA:2473:U:H5''	1.90	0.53
35:YP:60:MET:C	35:YP:61:ARG:HG2	2.32	0.53
40:YU:92:ARG:HG3	40:YU:95:LEU:H	1.73	0.53
1:QA:1391:U:H2'	1:QA:1392:G:C8	2.44	0.53
22:QW:38:A:N7	22:QW:39:C:C5	2.68	0.53
25:RA:463:G:N2	25:RA:466:A:OP2	2.38	0.53
25:YA:2016:U:H2'	25:YA:2017:U:C6	2.43	0.53
25:YA:2059:A:H5'	25:YA:2060:A:OP2	2.07	0.53
25:YA:2543:G:H21	25:YA:2646:C:H5''	1.72	0.53
47:Y1:56:GLN:N	47:Y1:56:GLN:OE1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1298:C:H4'	1:QA:1299:A:C8	2.43	0.53
3:QC:82:GLU:HG3	3:QC:83:ARG:H	1.74	0.53
8:QH:86:ILE:HG13	8:QH:133:LEU:HD22	1.91	0.53
25:RA:857:C:H1'	46:R0:26:TYR:CE2	2.42	0.53
25:RA:1030:G:OP2	36:RQ:128:LYS:HE3	2.08	0.53
25:RA:1165:U:H2'	25:RA:1166:C:C6	2.44	0.53
30:RG:60:LEU:O	30:RG:64:THR:HG22	2.08	0.53
45:RZ:155:LEU:O	45:RZ:156:LYS:CG	2.42	0.53
47:R1:82:LEU:HD11	47:R1:86:SER:HB3	1.91	0.53
25:YA:1496:A:H8	25:YA:1577:C:O2'	1.92	0.53
32:YI:141:LYS:HB3	32:YI:142:VAL:CG1	2.38	0.53
37:YR:37:THR:HG22	37:YR:39:PRO:HD2	1.89	0.53
42:YW:80:PRO:O	42:YW:100:THR:HG22	2.08	0.53
1:QA:269:C:H2'	1:QA:270:A:C8	2.44	0.53
13:QM:11:ARG:O	13:QM:13:LYS:N	2.41	0.53
13:QM:46:LYS:O	13:QM:48:LEU:N	2.42	0.53
25:RA:586:A:H5'	29:RF:89:VAL:HG21	1.91	0.53
25:RA:956:G:OP2	36:RQ:14:ARG:NH2	2.41	0.53
1:XA:1218:C:H2'	1:XA:1219:U:C6	2.43	0.53
3:XC:108:ASN:HD21	3:XC:144:SER:HB2	1.74	0.53
6:XF:6:VAL:HG13	6:XF:90:VAL:HG22	1.89	0.53
9:XI:2:GLU:H	9:XI:20:ARG:HD3	1.73	0.53
10:XJ:49:VAL:O	10:XJ:60:ARG:HB2	2.08	0.53
25:YA:460:A:H2'	25:YA:461:C:O4'	2.09	0.53
25:YA:587:C:OP2	35:YP:21:ARG:NH2	2.41	0.53
25:YA:857:C:H4'	46:Y0:23:VAL:HG21	1.90	0.53
25:YA:910:A:H62	36:YQ:12:GLN:HA	1.73	0.53
28:YE:117:MET:O	28:YE:118:LYS:HB2	2.08	0.53
36:YQ:1:MET:HE3	36:YQ:45:GLN:HB3	1.91	0.53
41:YV:49:THR:CB	41:YV:50:PRO:CD	2.85	0.53
1:QA:375:U:OP1	16:QP:69:THR:OG1	2.20	0.53
1:QA:591:U:OP2	8:QH:30:ARG:NH1	2.41	0.53
1:QA:1350:A:OP2	9:QI:118:LYS:NZ	2.36	0.53
2:QB:162:ILE:HD11	2:QB:184:VAL:HG22	1.90	0.53
25:RA:1060:U:H3	25:RA:1088:A:H8	1.56	0.53
25:RA:2414:G:H21	35:RP:67:MET:HE1	1.73	0.53
27:RD:34:VAL:HG22	27:RD:35:LYS:HG3	1.89	0.53
28:RE:31:CYS:HB3	28:RE:49:LEU:HB3	1.90	0.53
31:RH:9:ILE:HG22	31:RH:49:VAL:HG12	1.91	0.53
45:RZ:118:GLN:HG3	45:RZ:174:VAL:H	1.72	0.53
46:R0:36:ILE:HA	46:R0:60:PHE:HA	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:XR:19:LYS:O	18:XR:21:LYS:N	2.40	0.53
32:YI:145:VAL:HG13	32:YI:145:VAL:O	2.09	0.53
36:YQ:78:PRO:O	36:YQ:79:LEU:HG	2.08	0.53
46:Y0:17:GLN:O	46:Y0:19:LYS:NZ	2.42	0.53
1:QA:765:G:N2	1:QA:813:U:OP2	2.39	0.53
1:QA:1132:C:H2'	1:QA:1133:G:H8	1.73	0.53
8:QH:51:VAL:HG11	8:QH:60:ARG:HH11	1.74	0.53
11:QK:24:SER:OG	11:QK:25:TYR:N	2.42	0.53
24:QY:65:SER:OG	24:QY:73:ARG:HD2	2.09	0.53
26:RB:31:C:H2'	26:RB:53:A:H61	1.74	0.53
44:RY:62:GLU:CD	44:RY:63:LYS:H	2.17	0.53
50:R4:10:VAL:O	50:R4:25:TYR:HA	2.09	0.53
25:YA:2016:U:H1'	51:Y5:6:VAL:CG1	2.39	0.53
35:YP:26:GLY:O	35:YP:28:GLY:N	2.42	0.53
52:Y6:28:ARG:HG3	52:Y6:30:THR:H	1.73	0.53
1:QA:422:C:O2'	1:QA:423:G:N2	2.42	0.53
1:QA:1005:A:H3'	1:QA:1006:C:O4'	2.08	0.53
1:QA:1227:A:C4	13:QM:117:VAL:HG21	2.44	0.53
3:QC:52:LEU:HD12	3:QC:55:VAL:HG22	1.90	0.53
3:QC:164:ARG:NH1	3:QC:166:GLU:OE1	2.39	0.53
4:QD:57:ARG:HB3	4:QD:206:PHE:HB2	1.90	0.53
4:QD:199:ASN:O	4:QD:201:GLN:N	2.39	0.53
10:QJ:40:LEU:HG	10:QJ:41:PRO:HD2	1.90	0.53
25:RA:1085:A:H2'	25:RA:1086:A:H8	1.73	0.53
25:RA:1963:U:H3'	25:RA:1963:U:O2	2.09	0.53
28:RE:131:ALA:HB1	28:RE:135:HIS:HE1	1.74	0.53
30:RG:55:LYS:HD2	30:RG:58:GLN:HE21	1.74	0.53
31:RH:113:VAL:HG11	31:RH:151:ILE:HG21	1.91	0.53
35:RP:9:ASN:CB	35:RP:10:PRO:HD3	2.39	0.53
36:RQ:80:GLU:HG2	46:R0:7:LEU:HD21	1.91	0.53
1:XA:1006:C:N3	1:XA:1023:G:N2	2.49	0.53
3:XC:180:ALA:HB1	3:XC:182:ILE:HG13	1.90	0.53
25:YA:1075:C:H2'	25:YA:1076:C:C6	2.44	0.53
25:YA:1139:G:O2'	25:YA:1143:A:N1	2.35	0.53
25:YA:2103:C:H2'	25:YA:2104:G:C8	2.43	0.53
54:Y8:14:VAL:HG11	54:Y8:22:VAL:HG12	1.91	0.53
6:QF:22:GLU:OE1	6:QF:84:ASN:ND2	2.37	0.53
19:QS:67:VAL:HG13	19:QS:68:GLY:H	1.73	0.53
25:RA:1094:U:O2'	25:RA:1096:A:OP1	2.27	0.53
25:RA:1227:A:OP1	41:RV:83:ARG:NH1	2.36	0.53
30:RG:53:LEU:HG	30:RG:90:LEU:HD21	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:113:LYS:O	34:RO:117:LEU:HB2	2.08	0.53
48:R2:47:ASN:O	48:R2:49:LYS:N	2.36	0.53
10:XJ:56:HIS:O	10:XJ:58:ASP:N	2.41	0.53
13:XM:88:ARG:HG3	13:XM:98:VAL:HG13	1.90	0.53
25:YA:265:A:N1	25:YA:427:U:O2'	2.35	0.53
25:YA:1932:A:H2'	25:YA:1933:G:O4'	2.09	0.53
25:YA:2267:A:H5''	25:YA:2268:A:H5'	1.91	0.53
45:YZ:94:GLU:HG3	45:YZ:129:SER:HB3	1.89	0.53
1:QA:304:U:H2'	1:QA:305:G:C8	2.44	0.52
21:QU:12:LYS:HB3	21:QU:22:ARG:HD2	1.91	0.52
25:RA:1394:U:H4'	25:RA:1603:A:H4'	1.91	0.52
27:RD:148:GLU:HB2	27:RD:151:LYS:HD2	1.90	0.52
27:RD:228:PRO:HD3	27:RD:235:GLY:CA	2.39	0.52
28:RE:37:ARG:N	28:RE:46:ALA:O	2.37	0.52
1:XA:542:G:H5'	4:XD:41:GLY:HA3	1.90	0.52
6:XF:62:TRP:CH2	6:XF:64:GLN:HB2	2.44	0.52
25:YA:329:G:N7	44:YY:19:LYS:HG2	2.24	0.52
25:YA:876:C:H2'	25:YA:877:U:O4'	2.08	0.52
25:YA:2080:G:H5'	47:Y1:19:GLN:HG3	1.90	0.52
35:YP:9:ASN:O	35:YP:10:PRO:C	2.51	0.52
1:QA:1213:A:N6	1:QA:1215:G:N3	2.57	0.52
4:QD:119:GLN:HG2	4:QD:123:HIS:CE1	2.44	0.52
13:QM:4:ILE:HA	13:QM:57:ARG:HG2	1.90	0.52
22:QW:58:A:H1'	22:QW:60:U:C5	2.44	0.52
28:RE:50:GLY:CA	28:RE:74:PRO:HG2	2.39	0.52
1:XA:1388:C:H2'	1:XA:1389:C:C6	2.44	0.52
1:XA:1513:A:H2'	1:XA:1514:C:C6	2.44	0.52
13:XM:4:ILE:HG23	13:XM:5:ALA:H	1.74	0.52
25:YA:760:G:H2'	25:YA:761:A:O4'	2.09	0.52
25:YA:833:U:O2	35:YP:55:ARG:NH1	2.42	0.52
25:YA:1329:U:H5''	25:YA:1330:C:H5	1.73	0.52
1:QA:719:C:O2'	18:QR:49:LYS:HB3	2.09	0.52
1:QA:1033:G:O2'	1:QA:1034:G:OP1	2.26	0.52
1:QA:1074:G:O2'	1:QA:1101:A:N1	2.38	0.52
1:QA:1137:C:H4'	1:QA:1138:G:O5'	2.09	0.52
1:QA:1443:G:N2	25:RA:2863:C:O3'	2.42	0.52
45:RZ:91:LEU:HD12	45:RZ:130:PRO:HB3	1.90	0.52
25:YA:1217:C:OP1	40:YU:15:LYS:HE3	2.10	0.52
25:YA:1614:A:H62	42:YW:93:ALA:HB2	1.75	0.52
25:YA:1754:C:OP1	39:YT:96:ARG:NH1	2.42	0.52
28:YE:132:HIS:O	28:YE:133:LYS:HB2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YV:2:PHE:HE1	41:YV:4:ILE:HD13	1.74	0.52
47:Y1:85:LEU:HD22	47:Y1:88:LYS:HG3	1.90	0.52
1:QA:321:A:H62	1:QA:328:C:H1'	1.75	0.52
25:RA:1918:A:O2'	25:RA:1920:C:N4	2.42	0.52
25:RA:2679:A:H4'	28:RE:165:VAL:HG11	1.92	0.52
29:RF:66:PRO:O	29:RF:67:GLN:HB3	2.10	0.52
1:XA:297:G:N2	1:XA:300:A:OP2	2.41	0.52
1:XA:1125:U:H2'	1:XA:1126:U:H2'	1.92	0.52
25:YA:247:G:H4'	25:YA:386:G:C5	2.44	0.52
25:YA:857:C:H5''	46:Y0:77:ARG:NH2	2.24	0.52
25:YA:1567:A:OP2	27:YD:84:TYR:OH	2.24	0.52
25:YA:2130:U:O2	25:YA:2133:G:O2'	2.26	0.52
29:YF:33:LEU:HD13	29:YF:112:MET:HE2	1.91	0.52
40:YU:28:ARG:NH1	40:YU:38:THR:OG1	2.36	0.52
1:QA:263:A:OP2	20:QT:79:ARG:NH1	2.42	0.52
2:QB:73:THR:HG21	2:QB:97:TRP:HB2	1.91	0.52
8:QH:34:GLU:OE1	8:QH:37:ARG:NH1	2.43	0.52
25:RA:2496:C:OP1	36:RQ:82:ARG:HD3	2.09	0.52
1:XA:1223:C:H5''	1:XA:1224:G:H5''	1.92	0.52
8:XH:29:SER:HB3	8:XH:32:LYS:HG3	1.91	0.52
25:YA:1638:C:H2'	25:YA:1639:U:O4'	2.10	0.52
27:YD:4:LYS:HE3	27:YD:20:ASP:HA	1.91	0.52
8:QH:41:ARG:NH2	8:QH:123:GLU:OE2	2.41	0.52
25:RA:1012:U:O4	33:RN:25:ARG:HA	2.09	0.52
25:RA:2211:G:H2'	25:RA:2211:G:N3	2.24	0.52
25:RA:2420:C:N4	54:R8:31:HIS:HB3	2.24	0.52
28:RE:62:PRO:C	28:RE:64:LYS:N	2.67	0.52
30:RG:118:ARG:HB3	30:RG:181:ARG:HG3	1.91	0.52
49:R3:7:LYS:HB2	49:R3:34:GLU:HG2	1.91	0.52
1:XA:315:A:H4'	1:XA:316:G:O5'	2.10	0.52
31:YH:97:ARG:N	31:YH:104:GLU:O	2.40	0.52
38:YS:67:ARG:O	38:YS:71:ARG:HG3	2.09	0.52
54:Y8:40:GLU:H	54:Y8:43:GLN:HG3	1.75	0.52
1:QA:877:C:H5''	8:QH:88:LYS:HD2	1.91	0.52
1:QA:1299:A:O2'	1:QA:1300:G:P	2.68	0.52
9:QI:45:ALA:O	9:QI:78:LYS:NZ	2.42	0.52
15:QO:64:ARG:HH11	15:QO:68:ARG:HH21	1.58	0.52
25:RA:362:U:H5'	25:RA:363:G:OP2	2.09	0.52
25:RA:2097:C:H42	25:RA:2192:G:H1	1.58	0.52
32:RI:129:THR:HA	32:RI:137:PRO:HA	1.92	0.52
33:RN:14:VAL:HA	33:RN:135:PRO:HD2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:R9:9:ARG:NH1	55:R9:14:CYS:O	2.42	0.52
1:XA:1033:G:H2'	1:XA:1034:G:C8	2.44	0.52
1:XA:1190:G:OP1	3:XC:5:ILE:HG23	2.09	0.52
13:XM:19:LEU:HD21	13:XM:56:LEU:HD11	1.91	0.52
15:XO:55:GLY:HA2	15:XO:58:MET:HE3	1.91	0.52
25:YA:242:G:C5'	54:Y8:62:LEU:HD13	2.34	0.52
25:YA:2291:U:H2'	25:YA:2292:C:C6	2.45	0.52
26:YB:24:G:H5''	26:YB:25:A:OP1	2.10	0.52
32:YI:77:LEU:HA	32:YI:141:LYS:H	1.74	0.52
52:Y6:28:ARG:HD2	52:Y6:29:ASN:CB	2.34	0.52
1:QA:345:C:O2'	1:QA:346:G:O5'	2.24	0.52
2:QB:97:TRP:HZ2	2:QB:102:LEU:HD13	1.74	0.52
3:QC:95:THR:HG22	3:QC:97:LYS:H	1.75	0.52
7:QG:77:SER:CB	22:QW:32:C:O2'	2.57	0.52
19:QS:16:LEU:HD11	19:QS:41:VAL:HG11	1.90	0.52
25:RA:644:A:H4'	25:RA:645:C:H5	1.75	0.52
27:RD:35:LYS:HZ1	27:RD:104:TYR:HB2	1.74	0.52
30:RG:47:LYS:HD3	30:RG:81:LYS:HB2	1.91	0.52
47:R1:56:GLN:OE1	47:R1:56:GLN:N	2.43	0.52
1:XA:503:C:OP2	12:XL:116:SER:HB3	2.09	0.52
1:XA:913:A:O2'	1:XA:914:A:OP2	2.22	0.52
25:YA:363(B):G:H2'	25:YA:363(C):G:H8	1.75	0.52
25:YA:686:G:N2	25:YA:788:A:H61	2.08	0.52
26:YB:24:G:H1'	26:YB:26:A:H62	1.75	0.52
43:YX:3:THR:HA	43:YX:6:ASP:OD2	2.10	0.52
1:QA:137:C:H2'	1:QA:138:G:H8	1.74	0.52
1:QA:1392:G:N2	1:QA:1502:A:H8	2.08	0.52
2:QB:118:LEU:HB3	2:QB:142:LEU:HD12	1.92	0.52
4:QD:26:CYS:HA	4:QD:31:CYS:HB2	1.91	0.52
16:QP:18:ARG:HD3	16:QP:35:LYS:HD2	1.92	0.52
17:QQ:66:SER:O	17:QQ:70:ARG:NH1	2.43	0.52
25:RA:2659:G:N2	25:RA:2662:A:OP2	2.42	0.52
40:RU:81:HIS:HD2	40:RU:84:LYS:HD3	1.75	0.52
44:RY:99:CYS:SG	44:RY:100:ALA:N	2.83	0.52
45:RZ:151:HIS:ND1	45:RZ:151:HIS:O	2.43	0.52
1:XA:173:U:O2	1:XA:197:A:N6	2.43	0.52
10:XJ:44:VAL:HG22	10:XJ:66:ARG:HG2	1.92	0.52
25:YA:605:C:O2	25:YA:657:U:O2'	2.27	0.52
25:YA:1190:G:H5'	35:YP:32:THR:HA	1.92	0.52
25:YA:2704:C:H2'	25:YA:2705:A:O4'	2.10	0.52
32:YI:27:ARG:HD2	47:Y1:71:TYR:CE1	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:34:LEU:O	33:YN:49:GLY:HA3	2.10	0.52
41:YV:49:THR:HG22	41:YV:50:PRO:HD3	1.87	0.52
44:YY:95:LYS:HA	44:YY:101:LYS:HB2	1.91	0.52
2:QB:69:LEU:HD23	2:QB:91:PRO:HB2	1.92	0.52
5:QE:13:ILE:HD12	5:QE:51:VAL:HG12	1.85	0.52
25:RA:583:G:H5''	40:RU:10:ARG:HH12	1.75	0.52
25:RA:1882:C:H5'	25:RA:1883:G:OP2	2.10	0.52
28:RE:70:ALA:O	28:RE:72:VAL:N	2.43	0.52
41:RV:4:ILE:HG22	41:RV:39:LEU:HD13	1.92	0.52
9:XI:2:GLU:H	9:XI:20:ARG:HH11	1.57	0.52
9:XI:17:VAL:HG11	9:XI:81:ILE:HA	1.92	0.52
25:YA:2870:C:H5''	37:YR:65:LEU:HD21	1.92	0.52
27:YD:8:PRO:HB3	27:YD:14:ARG:HB2	1.92	0.52
48:Y2:24:LEU:HD13	48:Y2:60:LEU:HD21	1.92	0.52
1:QA:593:G:H1	1:QA:646:U:H3	1.58	0.51
25:RA:1342:A:OP2	43:RX:36:LYS:NZ	2.43	0.51
25:RA:2590:A:OP2	27:RD:238:GLY:HA2	2.11	0.51
36:RQ:64:ILE:HD13	36:RQ:64:ILE:H	1.74	0.51
1:XA:265:G:H5'	17:XQ:64:PRO:O	2.10	0.51
25:YA:2711:A:H5''	25:YA:2712:U:H5'	1.92	0.51
27:YD:76:PRO:HG2	27:YD:98:VAL:HG21	1.92	0.51
41:YV:49:THR:HG22	41:YV:50:PRO:N	2.23	0.51
41:YV:87:HIS:NE2	41:YV:89:GLN:OE1	2.33	0.51
48:Y2:5:GLU:H	48:Y2:5:GLU:CD	2.17	0.51
1:QA:1300:G:C2'	1:QA:1301:U:OP2	2.58	0.51
25:RA:380:U:O3'	47:R1:16:ASN:HB2	2.10	0.51
1:XA:413:G:O6	4:XD:35:ARG:NH2	2.43	0.51
1:XA:1233:G:OP1	9:XI:117:HIS:HE1	1.93	0.51
3:XC:20:SER:OG	3:XC:40:ARG:NH2	2.40	0.51
5:XE:33:VAL:HG21	5:XE:109:ILE:HG12	1.93	0.51
25:YA:6:A:C2	25:YA:7:G:C5	2.98	0.51
25:YA:2011:U:OP1	42:YW:42:ARG:NH1	2.42	0.51
25:YA:2849:U:OP2	25:YA:2867:G:N2	2.43	0.51
28:YE:24:THR:HG21	28:YE:188:VAL:HG12	1.92	0.51
45:YZ:5:LEU:HD21	45:YZ:44:PHE:HA	1.92	0.51
52:Y6:28:ARG:CG	52:Y6:30:THR:H	2.23	0.51
1:QA:878:G:H5'	8:QH:89:PRO:HG2	1.92	0.51
1:QA:1510:U:H2'	1:QA:1511:G:C8	2.45	0.51
5:QE:13:ILE:HG22	5:QE:30:ALA:HB2	1.91	0.51
13:QM:88:ARG:HG3	13:QM:98:VAL:HG13	1.92	0.51
35:RP:23:PRO:C	35:RP:25:SER:H	2.18	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:59:LEU:HD13	54:R8:56:GLU:CG	2.41	0.51
1:XA:452:A:OP1	16:XP:43:LYS:NZ	2.44	0.51
5:XE:48:ALA:HB2	5:XE:57:LYS:HD3	1.91	0.51
25:YA:1225:C:O3'	41:YV:85:LYS:HD3	2.11	0.51
37:YR:78:LYS:O	37:YR:82:GLU:HB3	2.10	0.51
54:Y8:60:LEU:O	54:Y8:62:LEU:N	2.44	0.51
1:QA:309:G:O2'	1:QA:607:A:N1	2.40	0.51
12:QL:59:ARG:HA	12:QL:65:GLU:HA	1.91	0.51
15:QO:54:ARG:HG2	15:QO:58:MET:HE2	1.93	0.51
20:QT:40:ALA:HB2	20:QT:55:ILE:HG22	1.93	0.51
25:RA:469:G:P	29:RF:60:SER:HB3	2.50	0.51
25:RA:2429:G:N7	35:RP:56:SER:OG	2.43	0.51
33:RN:125:GLY:HA3	33:RN:126:PRO:O	2.10	0.51
45:RZ:149:SER:OG	45:RZ:150:LEU:N	2.43	0.51
45:RZ:156:LYS:C	45:RZ:158:PRO:HD3	2.36	0.51
1:XA:41:G:H2'	1:XA:42:G:C8	2.45	0.51
1:XA:1423:G:OP1	34:YO:49:ARG:NH2	2.44	0.51
25:YA:1379:A:H4'	25:YA:1380:G:OP2	2.10	0.51
25:YA:2191:G:O2'	25:YA:2192:G:OP1	2.25	0.51
26:YB:66:A:H61	26:YB:107:U:H2'	1.75	0.51
30:YG:151:ALA:HB3	30:YG:153:ARG:NH1	2.25	0.51
26:RB:8:U:O3'	38:RS:25:ARG:NH2	2.43	0.51
29:RF:192:LEU:HD21	29:RF:194:MET:HE3	1.91	0.51
41:RV:71:LEU:HD11	41:RV:83:ARG:NE	2.25	0.51
43:RX:63:LYS:HA	43:RX:72:LYS:HA	1.92	0.51
44:RY:95:LYS:NZ	44:RY:99:CYS:O	2.42	0.51
49:R3:59:VAL:HG12	49:R3:60:GLU:H	1.75	0.51
1:XA:436:C:H2'	1:XA:437:U:H6	1.76	0.51
1:XA:974:A:OP1	14:XN:29:ARG:NH2	2.44	0.51
25:YA:39:C:O2	29:YF:46:ARG:NH2	2.44	0.51
25:YA:248:G:H5'	25:YA:250:G:N7	2.26	0.51
25:YA:483:A:H4'	44:YY:49:VAL:O	2.11	0.51
25:YA:907:U:OP1	36:YQ:24:GLY:N	2.37	0.51
52:Y6:28:ARG:CB	52:Y6:30:THR:H	2.22	0.51
1:QA:662:G:H2'	1:QA:663:A:C8	2.46	0.51
1:QA:955:U:H3	1:QA:1225:A:H61	1.59	0.51
1:QA:1032(B):G:O2'	25:YA:2115:G:OP1	2.29	0.51
2:QB:9:GLU:O	2:QB:12:GLU:HG3	2.10	0.51
2:QB:51:LEU:HD23	2:QB:201:ILE:HD12	1.93	0.51
25:RA:1931:U:OP2	25:RA:1968:G:N1	2.36	0.51
28:RE:119:ARG:HG2	28:RE:160:TYR:HB2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:15:VAL:HG21	30:RG:176:LEU:HD23	1.93	0.51
32:RI:77:LEU:HA	32:RI:140:LEU:HD12	1.92	0.51
37:RR:38:VAL:HG22	37:RR:112:ALA:HB2	1.92	0.51
1:XA:975:A:H4'	1:XA:976:G:H5'	1.93	0.51
22:XV:58:A:O2'	22:XV:60:U:OP2	2.27	0.51
25:YA:335:C:H4'	44:YY:73:ARG:HD2	1.93	0.51
25:YA:673:C:H5''	29:YF:81:PRO:HD2	1.92	0.51
31:YH:33:LEU:HD21	31:YH:140:LYS:HE2	1.92	0.51
25:RA:873:G:O3'	36:RQ:63:LYS:NZ	2.31	0.51
25:RA:1020:A:N1	25:RA:1141:U:H2'	2.25	0.51
25:RA:1625:C:H2'	25:RA:1626:G:O4'	2.10	0.51
25:RA:2801:A:OP1	25:RA:2895:U:O2'	2.29	0.51
31:RH:137:ASP:OD1	31:RH:138:LYS:N	2.39	0.51
47:R1:44:PRO:O	47:R1:46:LEU:N	2.43	0.51
1:XA:392:G:H2'	1:XA:393:A:C8	2.46	0.51
2:XB:72:GLY:HA3	2:XB:81:VAL:HG21	1.93	0.51
9:XI:17:VAL:HG22	9:XI:63:ILE:HG12	1.92	0.51
25:YA:957:A:N1	25:YA:2458:G:H4'	2.26	0.51
28:YE:101:ARG:O	28:YE:201:THR:OG1	2.29	0.51
30:YG:60:LEU:O	30:YG:64:THR:HG22	2.09	0.51
35:YP:19:VAL:HG13	35:YP:21:ARG:H	1.76	0.51
42:YW:78:GLU:OE1	42:YW:99:ARG:NH1	2.41	0.51
54:Y8:31:HIS:CG	54:Y8:32:LEU:H	2.27	0.51
1:QA:1117:G:H4'	9:QI:104:ARG:HD2	1.91	0.51
3:QC:150:LYS:HE2	3:QC:152:ILE:HD11	1.92	0.51
8:QH:20:TYR:CE2	8:QH:75:ARG:HB3	2.46	0.51
25:RA:27:G:N2	25:RA:512:G:O2'	2.41	0.51
25:RA:1228:G:OP2	40:RU:16:LYS:NZ	2.31	0.51
25:RA:1291:C:H2'	25:RA:1292:U:C6	2.46	0.51
25:RA:2547:U:H2'	25:RA:2548:G:C8	2.46	0.51
39:RT:26:ASP:O	39:RT:49:VAL:HG12	2.10	0.51
39:RT:54:ARG:HA	39:RT:59:THR:HB	1.92	0.51
52:R6:12:GLU:HB2	52:R6:22:ALA:HB3	1.92	0.51
1:XA:1356:G:H2'	1:XA:1357:A:C8	2.46	0.51
12:XL:27:LEU:HD11	12:XL:85:ILE:HG22	1.93	0.51
13:XM:118:ALA:HB1	22:XV:28:C:O3'	2.10	0.51
20:XT:48:LYS:HB3	20:XT:51:GLU:HG3	1.93	0.51
22:XW:21:A:H61	22:XW:46:G:H2'	1.75	0.51
25:YA:660:G:H5'	29:YF:99:TYR:CE2	2.45	0.51
25:YA:1657:C:H2'	25:YA:1658:C:C6	2.46	0.51
25:YA:2208:U:H4'	27:YD:151:LYS:HG2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YR:97:VAL:HG22	37:YR:114:VAL:HG22	1.93	0.51
42:YW:25:ARG:NH2	42:YW:74:ALA:O	2.44	0.51
49:Y3:6:VAL:HG13	49:Y3:54:VAL:HG11	1.93	0.51
1:QA:62:U:OP1	1:QA:385:C:O2'	2.29	0.51
1:QA:482:A:H5'	1:QA:483:C:OP2	2.11	0.51
5:QE:147:ASP:OD2	5:QE:147:ASP:N	2.24	0.51
16:QP:53:VAL:HG12	16:QP:79:VAL:HG22	1.92	0.51
25:RA:2517:C:N3	25:RA:2542:A:N6	2.59	0.51
32:RI:101:LEU:HD23	32:RI:101:LEU:H	1.76	0.51
21:XU:12:LYS:HG2	21:XU:22:ARG:HB3	1.92	0.51
25:YA:207:A:H2'	25:YA:208:C:O4'	2.11	0.51
25:YA:2165:G:H2'	25:YA:2166:G:C2	2.46	0.51
30:YG:11:TYR:HA	30:YG:15:VAL:HB	1.92	0.51
36:YQ:115:MET:HG3	36:YQ:131:ILE:HG21	1.91	0.51
54:Y8:33:ASN:HB2	54:Y8:36:LYS:HD3	1.93	0.51
1:QA:413:G:N2	1:QA:429:U:OP2	2.32	0.51
24:QY:55:PRO:HD3	24:QY:64:TRP:CZ3	2.46	0.51
25:RA:759:G:O4'	25:RA:1981:A:C2	2.65	0.51
25:RA:1786:A:H1'	25:RA:1938:A:N6	2.26	0.51
25:RA:2051:A:H5'	25:RA:2578:G:O4'	2.11	0.51
25:RA:2701:C:C3'	25:RA:2702:U:H5''	2.31	0.51
28:RE:33:VAL:HG12	28:RE:90:THR:H	1.75	0.51
44:RY:69:ALA:O	44:RY:72:VAL:HG22	2.11	0.51
1:XA:376:G:H5''	16:XP:5:ARG:HB2	1.93	0.51
1:XA:757:U:H2'	1:XA:758:G:O4'	2.11	0.51
1:XA:1392:G:H21	1:XA:1502:A:H8	1.59	0.51
6:XF:76:ALA:O	6:XF:80:ARG:HG3	2.11	0.51
9:XI:37:PHE:HE2	9:XI:70:LYS:HG3	1.76	0.51
23:XX:11:U:O2'	23:XX:12:A:O5'	2.26	0.51
24:XY:55:PRO:HD3	24:XY:64:TRP:CZ3	2.46	0.51
25:YA:1322:A:N1	25:YA:1333:C:O2'	2.38	0.51
27:YD:35:LYS:HZ1	27:YD:65:ILE:HA	1.76	0.51
47:Y1:94:LEU:HD23	47:Y1:94:LEU:H	1.76	0.51
4:QD:9:CYS:HA	4:QD:12:CYS:HB2	1.93	0.50
7:QG:20:ASP:OD2	7:QG:23:VAL:N	2.45	0.50
10:QJ:49:VAL:O	10:QJ:60:ARG:HB2	2.11	0.50
10:QJ:54:PHE:HD2	10:QJ:56:HIS:CE1	2.29	0.50
11:QK:54:ARG:NH2	22:QW:39:C:O2'	2.37	0.50
20:QT:10:LEU:HD22	20:QT:11:SER:H	1.74	0.50
25:RA:1085:A:H2'	25:RA:1086:A:C8	2.46	0.50
25:RA:2010:G:H5''	42:RW:42:ARG:HB2	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2529:G:H5'	25:RA:2530:A:O5'	2.11	0.50
30:RG:131:TYR:HB3	30:RG:159:VAL:HG13	1.92	0.50
39:RT:62:THR:HG22	39:RT:75:ILE:HG23	1.92	0.50
39:RT:107:ASP:N	39:RT:107:ASP:OD1	2.43	0.50
1:XA:79:G:H1	1:XA:91:C:H42	1.59	0.50
1:XA:881:G:P	12:XL:12:ARG:HH22	2.34	0.50
1:XA:961:U:OP1	1:XA:961:U:H6	1.94	0.50
1:XA:1285:A:O2'	1:XA:1286:A:H5''	2.10	0.50
25:YA:184:C:H2'	25:YA:185:U:C6	2.46	0.50
25:YA:2660:A:H2'	25:YA:2661:G:O4'	2.11	0.50
27:YD:43:ARG:HH11	27:YD:44:ASN:ND2	2.09	0.50
43:YX:36:LYS:HG3	43:YX:54:VAL:HB	1.92	0.50
1:QA:701:C:OP1	1:QA:701:C:H4'	2.10	0.50
1:QA:1008:C:H3'	1:QA:1009:G:H5''	1.94	0.50
1:QA:1301:U:O2	1:QA:1301:U:C2'	2.60	0.50
25:RA:252:G:P	35:RP:50:ARG:NH2	2.84	0.50
25:RA:776:G:N7	25:RA:793:A:O2'	2.39	0.50
25:RA:1403:C:H5''	25:RA:1471:A:H1'	1.92	0.50
25:RA:1694:C:H4'	25:RA:1695:G:O5'	2.10	0.50
28:RE:68:ALA:O	28:RE:70:ALA:N	2.44	0.50
31:RH:126:PRO:HB2	31:RH:127:GLU:HA	1.94	0.50
36:RQ:34:LEU:HB2	36:RQ:118:LEU:HD22	1.92	0.50
45:RZ:58:VAL:O	45:RZ:59:LEU:CB	2.58	0.50
1:XA:1175:G:H2'	1:XA:1176:A:C8	2.47	0.50
10:XJ:79:ARG:HD3	10:XJ:79:ARG:H	1.76	0.50
13:XM:10:PRO:HG2	13:XM:18:ALA:CA	2.40	0.50
21:XU:9:ARG:HH21	21:XU:10:ARG:HE	1.59	0.50
26:YB:29:A:OP2	38:YS:32:LEU:HG	2.11	0.50
36:YQ:19:GLY:H	36:YQ:98:LYS:NZ	2.08	0.50
41:YV:49:THR:CG2	41:YV:50:PRO:CD	2.85	0.50
9:QI:82:ALA:HB1	9:QI:96:LEU:HD21	1.93	0.50
11:QK:20:TYR:CE2	11:QK:83:ILE:HD12	2.46	0.50
25:RA:859:G:O2'	25:RA:860:U:OP2	2.30	0.50
44:RY:48:ALA:O	44:RY:50:ARG:N	2.43	0.50
45:RZ:58:VAL:CG1	45:RZ:60:GLU:HG2	2.39	0.50
2:XB:132:LYS:O	2:XB:134:GLU:N	2.44	0.50
4:XD:127:THR:HG23	4:XD:147:ALA:HB3	1.92	0.50
5:XE:82:VAL:HG21	5:XE:138:ALA:HA	1.93	0.50
13:XM:10:PRO:CG	13:XM:18:ALA:CA	2.86	0.50
25:YA:1021:A:H3'	25:YA:1022:G:C5'	2.26	0.50
25:YA:1281:G:H5'	25:YA:1282:U:OP2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:86:GLU:CD	31:YH:86:GLU:H	2.19	0.50
45:YZ:74:VAL:HG13	45:YZ:86:VAL:HG22	1.94	0.50
1:QA:485:G:O2'	1:QA:486:U:O5'	2.27	0.50
1:QA:1068:G:OP2	1:QA:1068:G:H8	1.94	0.50
1:QA:1305:G:N2	1:QA:1331:G:H2'	2.25	0.50
1:QA:1541:U:O2'	18:QR:18:ARG:NH2	2.44	0.50
2:QB:18:GLY:HA2	2:QB:40:HIS:O	2.11	0.50
25:RA:2314:C:C5'	30:RG:38:VAL:HG11	2.41	0.50
25:RA:2529:G:H22	55:R9:31:LYS:HZ3	1.60	0.50
29:RF:4:VAL:HG13	29:RF:19:GLU:CD	2.36	0.50
30:RG:107:LEU:HA	30:RG:111:LEU:HD12	1.93	0.50
40:RU:74:LEU:HD13	40:RU:79:PHE:HB2	1.92	0.50
41:RV:5:VAL:HB	41:RV:37:VAL:HG21	1.93	0.50
1:XA:1306:A:H61	1:XA:1331:G:H1'	1.75	0.50
2:XB:48:MET:HA	2:XB:51:LEU:HD12	1.94	0.50
3:XC:23:TYR:HD2	10:XJ:10:GLY:HA2	1.76	0.50
9:XI:27:THR:HG21	9:XI:32:ASP:HA	1.94	0.50
13:XM:8:GLU:O	13:XM:8:GLU:HG3	2.10	0.50
13:XM:9:ILE:HG12	13:XM:10:PRO:N	2.26	0.50
22:XW:53:G:H1	22:XW:61:C:H42	1.57	0.50
24:XY:76:PHE:HB3	24:XY:86:LEU:HD13	1.93	0.50
41:YV:62:LEU:HB3	41:YV:93:GLU:O	2.12	0.50
10:QJ:53:PRO:HA	14:QN:42:ILE:HD12	1.93	0.50
19:QS:45:VAL:HG13	19:QS:62:ILE:HG22	1.94	0.50
25:RA:574:C:N3	28:RE:145:LYS:NZ	2.59	0.50
25:RA:2415:G:H4'	35:RP:67:MET:N	2.26	0.50
44:RY:73:ARG:HH21	44:RY:82:PRO:HD3	1.77	0.50
1:XA:512:U:H2'	1:XA:513:C:C6	2.47	0.50
1:XA:1002:G:N2	1:XA:1039:C:O2	2.44	0.50
9:XI:28:VAL:HG22	9:XI:29:ASN:N	2.26	0.50
10:XJ:9:ARG:HB2	10:XJ:95:GLU:HB3	1.92	0.50
11:XK:20:TYR:CE2	11:XK:83:ILE:HD12	2.47	0.50
23:XX:12:A:H3'	23:XX:13:A:H5''	1.92	0.50
33:YN:12:ARG:O	33:YN:50:ASP:HB2	2.11	0.50
52:Y6:8:LYS:HA	52:Y6:27:LYS:HA	1.93	0.50
52:Y6:28:ARG:HG3	52:Y6:30:THR:C	2.35	0.50
52:Y6:42:TRP:CD1	52:Y6:44:ARG:HH11	2.29	0.50
1:QA:501:C:H2'	1:QA:502:G:C8	2.47	0.50
1:QA:679:C:H2'	1:QA:680:C:C6	2.47	0.50
20:QT:89:ARG:HB2	20:QT:104:LEU:HD21	1.94	0.50
25:RA:958:U:OP2	36:RQ:14:ARG:NH1	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2082:A:H2'	25:RA:2083:G:O4'	2.11	0.50
25:RA:2154:G:H2'	25:RA:2155:G:H8	1.76	0.50
31:RH:7:LEU:HD12	31:RH:65:HIS:CE1	2.47	0.50
33:RN:73:THR:HB	33:RN:82:LEU:HD11	1.94	0.50
36:RQ:7:MET:HE1	36:RQ:93:TYR:CE2	2.45	0.50
1:XA:444:C:H2'	1:XA:445:G:C8	2.45	0.50
4:XD:162:LEU:HD13	4:XD:181:MET:HG2	1.92	0.50
18:XR:40:LEU:HB3	18:XR:79:LEU:HD11	1.93	0.50
25:YA:270(N):G:O2'	25:YA:270(P):C:H5''	2.11	0.50
25:YA:642:G:H21	25:YA:646:A:H2	1.59	0.50
25:YA:746:A:C5	25:YA:2611:U:H5''	2.47	0.50
25:YA:774:A:H2'	25:YA:774:A:N3	2.27	0.50
25:YA:996:A:H4'	40:YU:92:ARG:CZ	2.41	0.50
27:YD:267:SER:O	27:YD:269:PHE:N	2.45	0.50
28:YE:116:VAL:O	28:YE:117:MET:HB3	2.12	0.50
33:YN:26:LEU:O	33:YN:30:ILE:HG13	2.11	0.50
52:Y6:23:THR:OG1	54:Y8:34:TRP:O	2.29	0.50
1:QA:790:A:OP1	22:QV:38:A:O2'	2.28	0.50
19:QS:21:GLU:HG3	19:QS:22:LEU:HD22	1.93	0.50
22:QW:65:C:H2'	22:QW:66:C:C6	2.47	0.50
25:RA:352:G:HO2'	25:RA:353:G:P	2.34	0.50
25:RA:478:A:N1	25:RA:500:G:H4'	2.26	0.50
25:RA:598:G:O2'	35:RP:9:ASN:OD1	2.30	0.50
25:RA:2224:G:H4'	25:RA:2226:C:C2	2.47	0.50
25:RA:2783:G:H2'	25:RA:2784:C:C6	2.47	0.50
28:RE:63:LEU:N	28:RE:63:LEU:CD2	2.74	0.50
30:RG:47:LYS:HG3	30:RG:82:LEU:HG	1.93	0.50
43:RX:63:LYS:H	43:RX:63:LYS:NZ	2.10	0.50
1:XA:345:C:H5'	39:YT:41:ARG:NH2	2.27	0.50
1:XA:812:C:H4'	1:XA:813:U:O5'	2.12	0.50
1:XA:1157:A:C6	1:XA:1180:A:C6	3.00	0.50
2:XB:17:PHE:HA	2:XB:204:ASN:OD1	2.12	0.50
11:XK:10:VAL:HG12	11:XK:11:LYS:HG2	1.94	0.50
24:XY:71:ASN:HB2	24:XY:91:TYR:HB3	1.93	0.50
25:YA:1980:G:O2'	25:YA:1982:C:OP2	2.29	0.50
35:YP:52:GLU:HG2	35:YP:55:ARG:HH11	1.77	0.50
1:QA:718:G:N2	18:QR:82:THR:HG23	2.27	0.50
1:QA:890:G:O2'	1:QA:906:G:O6	2.29	0.50
1:QA:1521:G:H2'	1:QA:1522:U:C6	2.47	0.50
28:RE:62:PRO:C	28:RE:64:LYS:H	2.19	0.50
31:RH:54:ARG:H	31:RH:54:ARG:HD3	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RT:20:PRO:HD2	39:RT:86:ILE:HG23	1.94	0.50
45:RZ:45:ASP:O	45:RZ:49:ARG:HG2	2.12	0.50
54:R8:34:TRP:O	54:R8:36:LYS:HG3	2.12	0.50
1:XA:660:G:H2'	1:XA:661:G:O4'	2.11	0.50
1:XA:667:G:H4'	15:XO:51:HIS:ND1	2.26	0.50
1:XA:1157:A:O2'	1:XA:1158:C:O5'	2.30	0.50
7:XG:131:LYS:HB2	7:XG:131:LYS:HZ2	1.77	0.50
13:XM:9:ILE:HG12	13:XM:10:PRO:HD2	1.91	0.50
13:XM:73:GLU:O	13:XM:77:ASN:N	2.43	0.50
25:YA:959:A:N6	36:YQ:82:ARG:HH12	2.10	0.50
25:YA:1239:G:H2'	25:YA:1240:U:O4'	2.11	0.50
25:YA:2439:A:C8	25:YA:2439:A:H5'	2.47	0.50
25:YA:2563:U:H4'	34:YO:28:SER:HA	1.92	0.50
40:YU:92:ARG:HH22	41:YV:10:LYS:CA	2.25	0.50
45:YZ:110:GLY:C	45:YZ:112:ARG:H	2.20	0.50
1:QA:412:A:C6	4:QD:35:ARG:HG2	2.47	0.50
1:QA:912:C:OP1	12:QL:46:LYS:HE3	2.11	0.50
1:QA:999:U:O4	1:QA:1000:A:N6	2.43	0.50
19:QS:40:ILE:HG21	19:QS:66:MET:O	2.12	0.50
24:QY:73:ARG:HG2	24:QY:73:ARG:NH1	2.26	0.50
25:RA:38:A:H2'	25:RA:39:C:C6	2.47	0.50
25:RA:1289:C:H2'	25:RA:1290:C:C6	2.47	0.50
25:RA:1357:U:H2'	25:RA:1358:G:O4'	2.11	0.50
25:RA:1665:A:H4'	34:RO:67:LYS:HB2	1.94	0.50
41:RV:49:THR:CG2	41:RV:50:PRO:CD	2.86	0.50
44:RY:76:CYS:O	44:RY:78:ALA:N	2.43	0.50
54:R8:6:THR:HG21	54:R8:63:PRO:HD3	1.94	0.50
7:XG:76:ARG:HD2	7:XG:89:MET:HG3	1.94	0.50
11:XK:48:ILE:HD11	11:XK:64:ALA:HA	1.94	0.50
19:XS:40:ILE:HG12	19:XS:69:HIS:O	2.12	0.50
28:YE:120:TRP:CD1	28:YE:155:LYS:HB3	2.47	0.50
35:YP:138:LEU:HD11	35:YP:144:GLU:HG2	1.94	0.50
40:YU:113:ALA:O	40:YU:117:GLN:HB2	2.12	0.50
46:Y0:3:HIS:ND1	46:Y0:3:HIS:O	2.43	0.50
1:QA:142:G:H2'	1:QA:143:A:C8	2.47	0.49
1:QA:973:G:H3'	1:QA:974:A:H5''	1.93	0.49
1:QA:1314:C:OP2	19:QS:6:LYS:HD2	2.12	0.49
2:QB:103:THR:HA	2:QB:180:LEU:HD11	1.93	0.49
7:QG:86:GLN:NE2	22:QW:31:G:N2	2.55	0.49
7:QG:113:GLU:HB2	7:QG:119:ARG:HG2	1.94	0.49
24:QY:67:THR:HG23	24:QY:73:ARG:NH1	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:383:U:H2'	25:RA:385:C:H5	1.76	0.49
25:RA:1174:A:H62	25:RA:1177:A:H4'	1.77	0.49
30:RG:43:LEU:HD22	30:RG:90:LEU:HD23	1.94	0.49
31:RH:147:ASN:O	31:RH:151:ILE:HG12	2.12	0.49
34:RO:104:ARG:HG2	34:RO:121:VAL:HG12	1.94	0.49
40:RU:92:ARG:HG3	40:RU:95:LEU:H	1.76	0.49
1:XA:35:G:N3	12:XL:118:SER:OG	2.44	0.49
1:XA:377:G:OP1	16:XP:3:LYS:HD2	2.12	0.49
1:XA:563:A:H2'	1:XA:567:G:C8	2.47	0.49
1:XA:652:U:H1'	1:XA:653:A:H2	1.77	0.49
1:XA:890:G:O2'	1:XA:891:U:OP2	2.30	0.49
1:XA:1001:G:OP1	1:XA:1001:G:H4'	2.11	0.49
1:XA:1036:G:H5'	1:XA:1037:C:C5	2.47	0.49
1:XA:1287:A:H2'	1:XA:1288:A:C8	2.47	0.49
1:XA:1439:C:OP1	20:XT:38:LYS:HD2	2.12	0.49
2:XB:82:ARG:O	2:XB:86:GLU:HG2	2.12	0.49
2:XB:146:GLN:O	2:XB:150:SER:HB3	2.12	0.49
4:XD:111:ALA:HB2	4:XD:120:LEU:HD12	1.94	0.49
10:XJ:38:ILE:HB	10:XJ:71:LEU:HB3	1.94	0.49
23:XX:15:A:H8	23:XX:15:A:O5'	1.95	0.49
25:YA:1165:U:H2'	25:YA:1166:C:C6	2.47	0.49
25:YA:1169:G:H1	25:YA:1180:C:H42	1.60	0.49
27:YD:109:ASP:N	27:YD:196:VAL:O	2.44	0.49
29:YF:83:PHE:O	29:YF:85:GLY:N	2.45	0.49
44:YY:52:SER:HA	44:YY:56:PRO:HA	1.94	0.49
45:YZ:126:VAL:HG12	45:YZ:163:LEU:HA	1.94	0.49
47:Y1:7:ILE:HD13	47:Y1:69:LYS:HB3	1.92	0.49
54:Y8:6:THR:OG1	54:Y8:6:THR:O	2.26	0.49
1:QA:411:A:C4	1:QA:413:G:H1'	2.47	0.49
1:QA:1347:G:N2	1:QA:1373:G:H2'	2.27	0.49
10:QJ:48:THR:HA	10:QJ:62:HIS:HB3	1.93	0.49
25:RA:1309:G:H4'	53:R7:7:PRO:HB2	1.93	0.49
52:R6:15:GLU:OE1	52:R6:18:ARG:HB2	2.12	0.49
6:XF:83:ASP:OD2	6:XF:83:ASP:N	2.45	0.49
23:XX:12:A:H2'	23:XX:13:A:C8	2.47	0.49
25:YA:340:A:H2'	25:YA:341:G:O4'	2.12	0.49
25:YA:910:A:N3	25:YA:2264:C:O2'	2.42	0.49
25:YA:1687:G:H21	25:YA:1701:A:H62	1.60	0.49
26:YB:80:U:H2'	26:YB:81:G:H21	1.77	0.49
27:YD:65:ILE:HD11	27:YD:67:PHE:CZ	2.47	0.49
31:YH:105:LEU:HD12	31:YH:113:VAL:HB	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YS:71:ARG:HH12	38:YS:106:ARG:HH21	1.60	0.49
45:YZ:124:ILE:HD11	45:YZ:165:VAL:HG11	1.94	0.49
1:QA:8:A:N6	4:QD:209:ARG:HB2	2.27	0.49
1:QA:769:G:H4'	1:QA:1513:A:H4'	1.93	0.49
1:QA:1299:A:O2'	1:QA:1300:G:OP1	2.30	0.49
5:QE:79:GLU:HG3	5:QE:93:PRO:HD2	1.94	0.49
24:QY:76:PHE:HB3	24:QY:86:LEU:HD13	1.94	0.49
25:RA:590:A:OP1	29:RF:95:ARG:NH1	2.45	0.49
25:RA:1869:G:H5'	25:RA:1870:C:OP2	2.12	0.49
25:RA:2611:U:OP2	25:RA:2611:U:H6	1.96	0.49
25:RA:2805:G:H2'	25:RA:2807:G:C8	2.47	0.49
25:RA:2876:G:O5'	39:RT:3:ARG:HA	2.12	0.49
30:RG:114:ILE:HD11	30:RG:140:ILE:HD13	1.94	0.49
30:RG:135:LEU:HD23	30:RG:140:ILE:HD11	1.93	0.49
31:RH:6:ARG:HB3	31:RH:54:ARG:HH12	1.77	0.49
31:RH:153:LYS:HB3	31:RH:161:GLY:HA2	1.94	0.49
41:RV:2:PHE:CD2	41:RV:42:GLY:HA2	2.46	0.49
41:RV:76:LYS:HB3	41:RV:79:VAL:HG23	1.94	0.49
45:RZ:165:VAL:HG13	45:RZ:166:SER:H	1.76	0.49
7:XG:20:ASP:OD1	7:XG:23:VAL:HB	2.12	0.49
25:YA:593:G:C1'	54:Y8:4:MET:HE1	2.42	0.49
25:YA:859:G:O2'	25:YA:860:U:P	2.69	0.49
26:YB:11:C:OP2	46:Y0:72:ARG:NH1	2.45	0.49
35:YP:63:PRO:HB3	54:Y8:13:ARG:HA	1.93	0.49
45:YZ:91:LEU:HD12	45:YZ:130:PRO:HB3	1.95	0.49
2:QB:112:VAL:HG22	2:QB:149:LEU:HD13	1.95	0.49
3:QC:116:VAL:HG21	3:QC:202:ILE:HD11	1.93	0.49
5:QE:87:SER:HB3	5:QE:131:ILE:HD13	1.94	0.49
53:R7:24:THR:HG23	53:R7:27:GLY:HA3	1.95	0.49
1:XA:719:C:O2'	18:XR:49:LYS:HB3	2.11	0.49
2:XB:24:TRP:CD1	2:XB:24:TRP:N	2.80	0.49
25:YA:686:G:H21	25:YA:788:A:H61	1.61	0.49
25:YA:2406:U:C2	35:YP:72:PRO:HB2	2.47	0.49
25:YA:2564:A:OP1	25:YA:2648:C:H4'	2.12	0.49
27:YD:43:ARG:HB3	27:YD:54:ARG:HB2	1.94	0.49
44:YY:20:TYR:CZ	44:YY:42:VAL:HA	2.47	0.49
1:QA:7:G:H5'	1:QA:298:A:O4'	2.11	0.49
15:QO:16:ALA:HB1	15:QO:21:ASP:HB3	1.94	0.49
24:QY:41:THR:N	24:QY:45:GLU:OE1	2.41	0.49
25:RA:388:G:H4'	47:R1:25:LYS:HE2	1.94	0.49
25:RA:588:U:H1'	29:RF:90:PHE:CG	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:996:A:H4'	40:RU:92:ARG:CZ	2.42	0.49
25:RA:2376:A:H2'	25:RA:2377:A:O4'	2.12	0.49
25:RA:2610:C:H4'	25:RA:2611:U:OP2	2.12	0.49
25:RA:2788:C:O2'	25:RA:2809:A:N3	2.44	0.49
31:RH:94:TYR:CD2	31:RH:107:VAL:HG12	2.47	0.49
37:RR:37:THR:HG22	37:RR:39:PRO:HD2	1.95	0.49
39:RT:26:ASP:CB	39:RT:91:ARG:HA	2.42	0.49
15:XO:39:LEU:HD12	15:XO:56:LEU:HB2	1.94	0.49
25:YA:2543:G:H2'	25:YA:2544:G:C8	2.48	0.49
30:YG:9:ARG:O	30:YG:13:GLU:HG2	2.12	0.49
31:YH:54:ARG:NE	31:YH:57:ASP:OD1	2.42	0.49
35:YP:64:LYS:HB3	54:Y8:25:MET:HG2	1.94	0.49
37:YR:42:LYS:HA	37:YR:45:ARG:HE	1.77	0.49
52:Y6:6:ARG:HG2	52:Y6:8:LYS:N	2.24	0.49
52:Y6:7:ILE:HD13	52:Y6:7:ILE:H	1.78	0.49
1:QA:4:U:O2	8:QH:102:ARG:NH1	2.46	0.49
1:QA:617:G:H4'	16:QP:44:THR:O	2.13	0.49
1:QA:1392:G:N2	1:QA:1502:A:C8	2.80	0.49
4:QD:79:PHE:HE1	4:QD:204:ILE:HD13	1.76	0.49
6:QF:42:GLU:OE2	6:QF:59:TYR:OH	2.29	0.49
9:QI:19:LEU:HB3	9:QI:59:PHE:HB3	1.94	0.49
25:RA:72:U:H3	48:R2:62:THR:HG23	1.76	0.49
25:RA:352:G:O2'	25:RA:353:G:OP1	2.27	0.49
25:RA:480:A:H1'	44:RY:44:ILE:HD13	1.94	0.49
28:RE:32:PRO:HG3	28:RE:70:ALA:HB2	1.94	0.49
35:RP:57:THR:HG23	35:RP:60:MET:HB2	1.94	0.49
38:RS:24:LEU:HB2	38:RS:85:VAL:HG12	1.93	0.49
1:XA:67:C:H2'	1:XA:68:G:C8	2.47	0.49
1:XA:1158:C:O2	1:XA:1158:C:H3'	2.13	0.49
1:XA:1499:A:H1'	1:XA:1520:G:H5'	1.95	0.49
4:XD:7:PRO:HB2	4:XD:10:ARG:HD2	1.94	0.49
11:XK:13:GLN:NE2	11:XK:76:GLY:HA3	2.28	0.49
19:XS:40:ILE:HG21	19:XS:66:MET:O	2.12	0.49
25:YA:593:G:H1'	54:Y8:4:MET:HE1	1.95	0.49
25:YA:1300:U:H4'	25:YA:1301:A:H5''	1.95	0.49
25:YA:2056:G:N2	51:Y5:4:HIS:O	2.45	0.49
28:YE:128:SER:OG	28:YE:129:HIS:N	2.44	0.49
31:YH:107:VAL:HG23	31:YH:108:GLY:H	1.76	0.49
44:YY:87:LYS:HB3	44:YY:92:ASN:HB3	1.95	0.49
50:Y4:55:ARG:HH21	50:Y4:56:VAL:HG12	1.77	0.49
1:QA:254:G:O2'	17:QQ:16:GLN:O	2.31	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:108:ASN:ND2	3:QC:144:SER:HB2	2.27	0.49
11:QK:21:ILE:HG12	11:QK:30:VAL:HG12	1.94	0.49
25:RA:2750:A:OP2	31:RH:6:ARG:NH2	2.46	0.49
31:RH:7:LEU:HD13	31:RH:69:ARG:CB	2.43	0.49
39:RT:16:ARG:NH2	39:RT:19:LEU:HD21	2.28	0.49
40:RU:81:HIS:CD2	40:RU:84:LYS:HD3	2.48	0.49
45:RZ:110:GLY:O	45:RZ:112:ARG:N	2.44	0.49
52:R6:12:GLU:HA	52:R6:24:GLU:HB3	1.94	0.49
1:XA:961:U:OP1	1:XA:961:U:C6	2.66	0.49
1:XA:1118:C:H2'	1:XA:1119:C:H6	1.77	0.49
1:XA:1392:G:N2	1:XA:1502:A:H8	2.11	0.49
10:XJ:40:LEU:HG	10:XJ:41:PRO:HD2	1.94	0.49
25:YA:969:U:H2'	25:YA:970:C:C6	2.48	0.49
25:YA:2111:C:N4	25:YA:2118:U:O2	2.45	0.49
25:YA:2144:U:H4'	25:YA:2145:C:OP1	2.13	0.49
30:YG:145:THR:O	30:YG:147:ASP:N	2.43	0.49
32:YI:8:PRO:HD3	32:YI:15:VAL:HG22	1.95	0.49
34:YO:71:ARG:NH1	39:YT:74:ARG:HH21	2.10	0.49
36:YQ:19:GLY:H	36:YQ:98:LYS:HZ1	1.59	0.49
40:YU:98:LEU:C	40:YU:100:VAL:H	2.19	0.49
1:QA:397:A:H3'	1:QA:397:A:N3	2.27	0.49
1:QA:737:A:H2'	1:QA:738:C:C6	2.48	0.49
1:QA:1072:G:H2'	1:QA:1073:U:C6	2.47	0.49
1:QA:1287:A:H2	1:QA:1353:G:N3	2.11	0.49
1:QA:1379:G:N2	1:QA:1381:U:O4	2.45	0.49
4:QD:163:GLU:OE1	4:QD:166:LYS:NZ	2.45	0.49
6:QF:42:GLU:HG2	6:QF:42:GLU:O	2.11	0.49
15:QO:24:SER:OG	15:QO:25:THR:N	2.46	0.49
16:QP:52:ASP:OD2	16:QP:54:GLU:HG2	2.13	0.49
25:RA:760:G:H2'	25:RA:761:A:O4'	2.13	0.49
25:RA:2346:A:C2	52:R6:25:LYS:HB3	2.48	0.49
30:RG:120:LEU:N	30:RG:179:PRO:O	2.43	0.49
32:RI:2:LYS:HD2	32:RI:20:ASP:HB3	1.94	0.49
47:R1:85:LEU:HA	47:R1:87:PRO:HD2	1.94	0.49
54:R8:34:TRP:O	54:R8:36:LYS:N	2.42	0.49
1:XA:327:A:O2'	1:XA:328:C:O4'	2.26	0.49
1:XA:429:U:H1'	1:XA:430:A:H5''	1.95	0.49
1:XA:779:C:O2'	11:XK:120:ARG:HD3	2.13	0.49
1:XA:1293:G:H2'	1:XA:1294:G:H8	1.77	0.49
1:XA:1320:C:C2	19:XS:36:ARG:HG2	2.48	0.49
26:YB:24:G:O6	26:YB:56:G:O2'	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:36:ARG:HH21	28:YE:88:GLY:HA3	1.77	0.49
29:YF:24:LEU:HD13	29:YF:25:PRO:HD2	1.93	0.49
30:YG:97:ASP:O	30:YG:101:ILE:HG23	2.13	0.49
30:YG:104:GLU:HG2	50:Y4:23:GLU:HG3	1.94	0.49
1:QA:201:C:O2'	1:QA:208:U:OP1	2.27	0.49
1:QA:328:C:H4'	1:QA:329:A:O5'	2.12	0.49
1:QA:971:G:H21	1:QA:1233:G:H1'	1.78	0.49
3:QC:148:GLY:HA3	3:QC:172:ARG:O	2.12	0.49
7:QG:83:ALA:HB3	22:QW:33:U:C5'	2.43	0.49
9:QI:19:LEU:HD23	9:QI:61:ALA:HA	1.94	0.49
11:QK:11:LYS:NZ	25:RA:2143:C:OP1	2.36	0.49
18:QR:23:LYS:HD2	18:QR:58:LEU:HB3	1.93	0.49
23:QX:13:A:O2'	23:QX:14:A:H3'	2.12	0.49
25:RA:828:U:H2'	25:RA:829:A:C8	2.47	0.49
25:RA:873:G:H1	25:RA:904:C:H42	1.60	0.49
25:RA:1668:A:H5''	34:RO:5:GLN:HG2	1.94	0.49
34:RO:98:VAL:CG1	34:RO:117:LEU:HB3	2.43	0.49
39:RT:106:SER:HA	39:RT:110:ILE:HG13	1.95	0.49
43:RX:36:LYS:HG3	43:RX:54:VAL:HB	1.95	0.49
1:XA:586:C:OP1	17:XQ:34:LYS:NZ	2.45	0.49
2:XB:129:GLU:HB3	2:XB:130:ARG:NH1	2.27	0.49
5:XE:72:GLN:O	5:XE:75:THR:HG22	2.12	0.49
26:YB:44:G:H1'	26:YB:47:C:N4	2.28	0.49
34:YO:25:LEU:HB2	34:YO:38:VAL:HG23	1.93	0.49
36:YQ:63:LYS:H	45:YZ:178:GLU:HG2	1.78	0.49
1:QA:1147:C:H2'	9:QI:16:ARG:HD3	1.95	0.49
1:QA:1288:A:H2'	1:QA:1289:A:H8	1.78	0.49
7:QG:13:GLN:O	7:QG:24:THR:HG21	2.13	0.49
19:QS:67:VAL:HG21	50:R4:59:PHE:HB3	1.95	0.49
22:QW:32:C:C5	22:QW:33:U:C4	3.01	0.49
25:RA:388:G:H5'	47:R1:25:LYS:HB2	1.94	0.49
25:RA:1022:G:O2'	25:RA:1023:U:OP2	2.29	0.49
25:RA:2173:A:C5	25:RA:2174:C:H1'	2.47	0.49
25:RA:2591:C:H2'	25:RA:2592:G:C8	2.48	0.49
32:RI:144:VAL:HG13	32:RI:145:VAL:O	2.13	0.49
1:XA:957:U:N3	1:XA:960:U:OP2	2.40	0.49
1:XA:1151:A:H2'	1:XA:1152:A:H8	1.78	0.49
25:YA:2776:A:H4'	25:YA:2777:G:C5'	2.42	0.49
36:YQ:27:VAL:HG13	45:YZ:81:ARG:HH22	1.78	0.49
39:YT:26:ASP:CB	39:YT:91:ARG:HA	2.43	0.49
40:YU:100:VAL:O	40:YU:101:ARG:HG2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YY:48:ALA:N	44:YY:59:GLY:O	2.45	0.49
1:QA:1150:U:O4	1:QA:1151:A:N6	2.46	0.48
1:QA:1226:C:H4'	19:QS:80:TYR:CZ	2.48	0.48
1:QA:1431:C:H2'	1:QA:1432:G:O4'	2.13	0.48
3:QC:76:VAL:HG13	3:QC:84:ILE:HG13	1.94	0.48
5:QE:13:ILE:HG22	5:QE:30:ALA:CB	2.43	0.48
7:QG:83:ALA:HB3	22:QW:33:U:H4'	1.95	0.48
10:QJ:46:ARG:HG2	10:QJ:64:GLU:HB3	1.94	0.48
13:QM:2:ALA:O	13:QM:4:ILE:N	2.46	0.48
13:QM:118:ALA:CB	22:QV:29:G:H5'	2.43	0.48
28:RE:176:ILE:HB	28:RE:181:LEU:HB2	1.94	0.48
37:RR:73:VAL:O	37:RR:76:VAL:HG12	2.13	0.48
45:RZ:162:GLU:O	45:RZ:163:LEU:HB3	2.13	0.48
1:XA:1056:U:H5'	3:XC:163:ALA:HB2	1.95	0.48
6:XF:69:GLU:H	6:XF:69:GLU:CD	2.21	0.48
10:XJ:8:LEU:HD22	10:XJ:20:ALA:HB2	1.94	0.48
25:YA:655:A:H4'	25:YA:656:G:H5'	1.94	0.48
25:YA:1541:U:H2'	25:YA:1542:G:O4'	2.13	0.48
25:YA:2377:A:O2'	38:YS:111:GLU:O	2.28	0.48
25:YA:2477:C:H1'	25:YA:2481:G:O6	2.13	0.48
26:YB:14:U:H5''	26:YB:71:C:O4'	2.13	0.48
27:YD:30:GLU:HG3	27:YD:63:ARG:CZ	2.42	0.48
27:YD:71:ASP:HB3	27:YD:103:ARG:HH22	1.78	0.48
1:QA:1189:C:OP1	14:QN:58:LYS:NZ	2.43	0.48
25:RA:2468:G:N2	25:RA:2481:G:O2'	2.46	0.48
25:RA:2472:G:N1	25:RA:2477:C:OP1	2.31	0.48
27:RD:10:THR:HG23	27:RD:13:ARG:HB2	1.94	0.48
29:RF:33:LEU:HD23	35:RP:1:MET:HE2	1.94	0.48
35:RP:11:GLY:O	35:RP:12:ALA:HB3	2.13	0.48
44:RY:97:ARG:NH2	44:RY:98:VAL:HB	2.20	0.48
1:XA:443:C:H2'	1:XA:444:C:C6	2.48	0.48
1:XA:1252:A:H61	1:XA:1285:A:H61	1.61	0.48
1:XA:1493:A:H61	25:YA:1913:A:H1'	1.77	0.48
7:XG:28:ASN:OD1	7:XG:36:LYS:NZ	2.46	0.48
11:XK:44:SER:O	11:XK:48:ILE:HG12	2.14	0.48
25:YA:883:G:H1	25:YA:893:C:H42	1.61	0.48
25:YA:1846:G:H5'	25:YA:1847:A:OP2	2.13	0.48
27:YD:196:VAL:HG12	27:YD:197:GLY:H	1.78	0.48
28:YE:38:THR:HG22	28:YE:40:GLU:H	1.78	0.48
33:YN:36:GLY:H	33:YN:42:TRP:HZ3	1.60	0.48
38:YS:74:ALA:HB1	38:YS:107:GLU:HB3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:YT:26:ASP:O	39:YT:49:VAL:HG12	2.13	0.48
43:YX:26:TYR:HB3	43:YX:92:LEU:HD12	1.94	0.48
46:Y0:50:ASN:HB3	46:Y0:63:VAL:HG22	1.94	0.48
47:Y1:58:ILE:HG23	47:Y1:87:PRO:HG3	1.95	0.48
1:QA:1004:A:O2'	1:QA:1005:A:O5'	2.29	0.48
1:QA:1148:U:H2'	1:QA:1149:C:O4'	2.13	0.48
8:QH:85:ARG:HG2	8:QH:88:LYS:HG2	1.95	0.48
25:RA:1688:U:O2	25:RA:1700:A:H5'	2.12	0.48
25:RA:1766:U:H2'	25:RA:1767:C:H6	1.77	0.48
25:RA:2144:U:H4'	25:RA:2145:C:OP1	2.14	0.48
26:RB:48:A:H4'	38:RS:95:HIS:ND1	2.28	0.48
28:RE:111:ARG:HA	37:RR:2:ARG:HH12	1.78	0.48
29:RF:78:ILE:HA	29:RF:83:PHE:CD1	2.48	0.48
44:RY:19:LYS:HD2	44:RY:67:LEU:HD11	1.95	0.48
45:RZ:118:GLN:HG2	45:RZ:172:ALA:HA	1.95	0.48
1:XA:534:U:H5'	1:XA:535:A:OP2	2.14	0.48
1:XA:580:U:H2'	1:XA:581:G:O4'	2.13	0.48
1:XA:811:C:H4'	1:XA:900:A:N6	2.28	0.48
1:XA:960:U:O2'	1:XA:1223:C:H4'	2.13	0.48
2:XB:207:ALA:O	2:XB:211:ILE:HG13	2.13	0.48
4:XD:194:LEU:HB3	4:XD:196:LEU:HD12	1.95	0.48
5:XE:7:GLU:HG2	5:XE:112:LEU:HD22	1.95	0.48
5:XE:11:ILE:HD11	5:XE:33:VAL:HG23	1.96	0.48
6:XF:50:TYR:CE1	18:XR:77:GLY:HA2	2.48	0.48
10:XJ:54:PHE:CD1	10:XJ:55:LYS:HG3	2.48	0.48
25:YA:64:A:H1'	43:YX:66:LEU:HB2	1.95	0.48
25:YA:270(N):G:H1'	25:YA:270(P):C:O4'	2.14	0.48
25:YA:1797:C:H4'	27:YD:257:LEU:O	2.13	0.48
25:YA:2679:A:H4'	28:YE:165:VAL:HG11	1.95	0.48
30:YG:166:ASP:OD1	30:YG:166:ASP:N	2.35	0.48
55:Y9:9:ARG:NH1	55:Y9:14:CYS:O	2.47	0.48
1:QA:531:U:OP2	24:QY:70:ALA:HB2	2.14	0.48
1:QA:1323:G:H2'	1:QA:1324:A:C8	2.49	0.48
25:RA:1814:G:H4'	27:RD:51:VAL:HG21	1.93	0.48
25:RA:2146:C:H4'	25:RA:2147:G:O4'	2.13	0.48
27:RD:145:VAL:HB	27:RD:155:LEU:HB2	1.95	0.48
31:RH:52:VAL:HG12	31:RH:65:HIS:CD2	2.48	0.48
32:RI:84:GLY:O	32:RI:86:THR:N	2.46	0.48
33:RN:90:MET:HB3	33:RN:98:VAL:HG12	1.95	0.48
35:RP:16:ARG:HA	35:RP:16:ARG:HE	1.78	0.48
36:RQ:116:GLU:O	36:RQ:120:ILE:HG12	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1038:C:O2'	1:XA:1039:C:O5'	2.30	0.48
13:XM:9:ILE:HG12	13:XM:10:PRO:CD	2.43	0.48
15:XO:17:ARG:HD3	15:XO:26:GLU:HG3	1.94	0.48
18:XR:22:VAL:O	18:XR:24:ALA:N	2.42	0.48
25:YA:588:U:H2'	25:YA:589:C:C6	2.48	0.48
25:YA:768:G:O2'	25:YA:1379:A:N6	2.46	0.48
25:YA:2082:A:H2'	25:YA:2083:G:O4'	2.14	0.48
25:YA:2749:A:H2'	31:YH:59:ARG:HH21	1.77	0.48
25:YA:2838:G:H1'	37:YR:45:ARG:HH12	1.79	0.48
28:YE:50:GLY:HA2	28:YE:74:PRO:HG3	1.94	0.48
29:YF:7:TYR:HB3	29:YF:18:ARG:HB2	1.96	0.48
31:YH:124:GLU:HB2	31:YH:132:ARG:HG3	1.95	0.48
33:YN:30:ILE:HG21	33:YN:120:LEU:HD13	1.95	0.48
1:QA:1062:U:H2'	1:QA:1063:C:C6	2.49	0.48
10:QJ:23:ILE:HG23	10:QJ:85:LEU:HD22	1.94	0.48
22:QW:67:C:H2'	22:QW:68:C:C6	2.49	0.48
23:QX:13:A:C3'	23:QX:14:A:H5''	2.43	0.48
25:RA:566:U:OP1	35:RP:29:LYS:NZ	2.34	0.48
25:RA:1794:U:H2'	25:RA:1795:C:C6	2.48	0.48
26:RB:73:A:H2	45:RZ:34:ASN:HD22	1.60	0.48
32:RI:57:ARG:HA	32:RI:60:GLU:HB3	1.95	0.48
1:XA:222:U:H2'	1:XA:223:U:C6	2.49	0.48
1:XA:522:C:H41	12:XL:53:ARG:NH2	2.12	0.48
2:XB:54:THR:HG21	2:XB:201:ILE:HD11	1.96	0.48
10:XJ:86:MET:HG2	10:XJ:87:THR:HG23	1.95	0.48
19:XS:67:VAL:HG13	19:XS:68:GLY:H	1.78	0.48
25:YA:1025:G:H8	25:YA:1025:G:OP1	1.96	0.48
53:Y7:16:HIS:HB2	53:Y7:44:PRO:HG2	1.96	0.48
54:Y8:31:HIS:CG	54:Y8:32:LEU:N	2.81	0.48
1:QA:1001:G:H4'	1:QA:1001:G:OP1	2.13	0.48
1:QA:1347:G:H3'	9:QI:108:VAL:O	2.14	0.48
12:QL:27:LEU:HD13	12:QL:33:ARG:HB2	1.95	0.48
25:RA:270(B):A:N1	25:RA:273:G:O2'	2.42	0.48
25:RA:1171:G:O2'	25:RA:1173:G:O5'	2.28	0.48
30:RG:104:GLU:HG2	50:R4:23:GLU:HG3	1.95	0.48
36:RQ:34:LEU:HD11	36:RQ:129:THR:HB	1.96	0.48
41:RV:10:LYS:NZ	41:RV:23:GLU:OE1	2.46	0.48
44:RY:84:ARG:NH2	44:RY:97:ARG:HB2	2.28	0.48
3:XC:23:TYR:CD2	10:XJ:10:GLY:HA2	2.49	0.48
9:XI:20:ARG:O	9:XI:60:ASP:N	2.45	0.48
12:XL:53:ARG:NH2	12:XL:92:ASP:OD2	2.33	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:271(B):G:N7	25:YA:421:U:H2'	2.29	0.48
25:YA:1899:G:H2'	25:YA:1899:G:N3	2.28	0.48
25:YA:2732:G:H3'	25:YA:2733:A:O4'	2.14	0.48
34:YO:73:ASP:OD1	39:YT:32:TYR:OH	2.30	0.48
39:YT:39:ARG:NH2	39:YT:41:ARG:HG2	2.28	0.48
52:Y6:15:GLU:OE2	52:Y6:44:ARG:NH1	2.43	0.48
1:QA:142:G:H2'	1:QA:143:A:H8	1.78	0.48
1:QA:1301:U:O4	1:QA:1303:C:H1'	2.14	0.48
22:QW:17:C:H2'	22:QW:17(A):U:C6	2.49	0.48
25:RA:197:A:N6	25:RA:2430:A:H2'	2.29	0.48
25:RA:1006:C:H1'	33:RN:106:MET:HE2	1.95	0.48
31:RH:51:ARG:H	31:RH:51:ARG:HG3	1.32	0.48
32:RI:98:ALA:HA	32:RI:109:ILE:HD11	1.95	0.48
39:RT:26:ASP:HB2	39:RT:91:ARG:HA	1.96	0.48
41:RV:98:GLU:OE2	41:RV:100:ARG:NH1	2.47	0.48
1:XA:960:U:O2'	1:XA:961:U:OP2	2.30	0.48
1:XA:972:C:O3'	10:XJ:57:LYS:HG2	2.14	0.48
20:XT:14:LYS:HA	20:XT:17:ARG:HE	1.78	0.48
22:XW:66:C:H2'	22:XW:67:C:C6	2.49	0.48
25:YA:528:A:H2'	25:YA:528:A:N3	2.27	0.48
25:YA:833:U:H5''	35:YP:48:PRO:HB2	1.96	0.48
25:YA:1230:C:H2'	25:YA:1231:G:H8	1.76	0.48
25:YA:2148:G:H2'	25:YA:2149:G:C8	2.49	0.48
25:YA:2396:G:O2'	47:Y1:29:GLY:HA3	2.14	0.48
36:YQ:138:ASP:OD2	36:YQ:138:ASP:N	2.46	0.48
52:Y6:34:LEU:HD11	52:Y6:50:ARG:HH21	1.78	0.48
1:QA:186(A):C:O2	20:QT:105:SER:OG	2.30	0.48
1:QA:436:C:H2'	1:QA:437:U:C6	2.49	0.48
1:QA:748:C:H4'	1:QA:749:C:O5'	2.13	0.48
11:QK:30:VAL:HG21	11:QK:65:ALA:HA	1.94	0.48
16:QP:71:ARG:HG3	16:QP:80:PHE:CE1	2.47	0.48
19:QS:38:SER:O	19:QS:70:LYS:HB3	2.14	0.48
25:RA:1805:U:O2	27:RD:50:THR:HB	2.14	0.48
25:RA:1930:G:H1'	25:RA:1931:U:OP2	2.13	0.48
25:RA:2059:A:H5'	25:RA:2060:A:OP2	2.14	0.48
25:RA:2211:G:H3'	25:RA:2212:A:C2	2.49	0.48
34:RO:4:PRO:O	34:RO:5:GLN:HB2	2.13	0.48
39:RT:105:LEU:HD13	39:RT:109:GLU:HG3	1.95	0.48
2:XB:18:GLY:HA2	2:XB:40:HIS:O	2.13	0.48
11:XK:34:ASP:HB3	11:XK:40:ILE:HD11	1.96	0.48
22:XW:18:G:H1'	22:XW:58:A:C2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:826:U:H2'	25:YA:828:U:O4'	2.14	0.48
25:YA:859:G:HO2'	25:YA:860:U:H6	1.58	0.48
25:YA:993:G:OP1	40:YU:50:ARG:NH2	2.37	0.48
28:YE:75:VAL:O	28:YE:77:ILE:N	2.47	0.48
36:YQ:116:GLU:O	36:YQ:120:ILE:HG12	2.13	0.48
40:YU:50:ARG:HH11	41:YV:72:VAL:HG11	1.78	0.48
1:QA:399:G:H2'	1:QA:400:C:C6	2.49	0.48
3:QC:130:VAL:O	3:QC:134:ILE:HG12	2.13	0.48
20:QT:26:ASN:HB3	20:QT:71:THR:OG1	2.14	0.48
25:RA:1254:A:H5''	25:RA:1255:U:C5'	2.43	0.48
26:RB:64:C:H2'	26:RB:65:C:C6	2.49	0.48
41:RV:58:VAL:HB	41:RV:98:GLU:HB2	1.95	0.48
45:RZ:52:SER:O	45:RZ:54:HIS:N	2.46	0.48
54:R8:33:ASN:OD1	54:R8:33:ASN:N	2.47	0.48
1:XA:501:C:OP2	12:XL:124:LYS:NZ	2.34	0.48
1:XA:953:G:H2'	1:XA:954:G:O4'	2.14	0.48
1:XA:1187:G:H21	14:XN:60:SER:HB3	1.79	0.48
19:XS:9:VAL:HG11	50:Y4:63:TYR:HB2	1.96	0.48
22:XV:50:U:H3	22:XV:64:G:H1	1.61	0.48
25:YA:289:A:H5'	25:YA:290:G:OP2	2.14	0.48
25:YA:363(B):G:H2'	25:YA:363(C):G:C8	2.49	0.48
25:YA:1264:G:H3'	25:YA:1265:A:H5''	1.96	0.48
25:YA:2155:G:H2'	25:YA:2156:G:O4'	2.14	0.48
1:QA:520:A:N1	1:QA:536:C:H1'	2.29	0.48
1:QA:849:C:H2'	1:QA:850:U:H6	1.78	0.48
1:QA:1125:U:H2'	1:QA:1126:U:H2'	1.95	0.48
1:QA:1348:U:N3	1:QA:1374:A:H2	2.12	0.48
3:QC:20:SER:HB2	3:QC:40:ARG:HH12	1.78	0.48
25:RA:1025:G:H8	25:RA:1025:G:OP1	1.96	0.48
25:RA:1113:U:H2'	25:RA:1114:G:H8	1.77	0.48
25:RA:1149:G:H2'	25:RA:1150:C:C6	2.49	0.48
25:RA:1795:C:O2	27:RD:255:LYS:HE3	2.14	0.48
41:RV:38:LEU:HD12	41:RV:55:ALA:HB1	1.95	0.48
1:XA:689:C:H2'	1:XA:690:G:O4'	2.13	0.48
13:XM:10:PRO:O	13:XM:45:VAL:HG11	2.14	0.48
19:XS:36:ARG:NH2	19:XS:73:GLU:OE2	2.45	0.48
19:XS:44:MET:HG2	19:XS:47:HIS:NE2	2.28	0.48
19:XS:66:MET:HA	19:XS:69:HIS:HD2	1.79	0.48
24:XY:41:THR:N	24:XY:45:GLU:OE1	2.42	0.48
25:YA:1174:A:H62	25:YA:1177:A:H4'	1.79	0.48
25:YA:2540:C:O2'	25:YA:2740:A:N3	2.40	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2698:U:H2'	25:YA:2699:C:C6	2.49	0.48
28:YE:52:LEU:HD21	39:YT:1:MET:HE3	1.95	0.48
28:YE:68:ALA:O	28:YE:70:ALA:N	2.47	0.48
37:YR:52:ILE:HD13	37:YR:79:LEU:HD21	1.95	0.48
1:QA:1218:C:H2'	1:QA:1219:U:C6	2.48	0.47
3:QC:66:VAL:HG13	3:QC:101:LEU:HA	1.96	0.47
4:QD:178:VAL:O	4:QD:180:GLY:N	2.45	0.47
8:QH:64:LYS:HG2	8:QH:79:VAL:HG21	1.96	0.47
10:QJ:51:ARG:HE	10:QJ:61:GLU:HB2	1.78	0.47
25:RA:129:C:H2'	25:RA:130:C:H6	1.79	0.47
25:RA:589:C:H2'	25:RA:590:A:C8	2.49	0.47
25:RA:1550:C:OP1	25:RA:1727:U:O2'	2.26	0.47
25:RA:2067:G:O2'	25:RA:2069:G:H5''	2.14	0.47
29:RF:31:HIS:HB2	35:RP:9:ASN:ND2	2.29	0.47
34:RO:35:VAL:HG11	34:RO:103:ALA:HB3	1.96	0.47
1:XA:743:U:H2'	1:XA:744:C:C6	2.49	0.47
1:XA:1302:U:C5	13:XM:17:VAL:HG21	2.49	0.47
4:XD:9:CYS:HG	4:XD:26:CYS:HG	1.60	0.47
7:XG:20:ASP:CG	7:XG:23:VAL:HB	2.39	0.47
18:XR:26:LEU:HD22	18:XR:39:VAL:HG13	1.96	0.47
25:YA:147:U:H2'	25:YA:148:C:C6	2.49	0.47
25:YA:2722:G:H4'	37:YR:4:LEU:HB2	1.96	0.47
25:YA:2734:A:H5'	25:YA:2735:G:OP2	2.14	0.47
27:YD:35:LYS:HZ1	27:YD:104:TYR:HB2	1.79	0.47
28:YE:8:LYS:HB3	28:YE:193:GLY:N	2.29	0.47
29:YF:24:LEU:CD1	29:YF:25:PRO:HD2	2.44	0.47
29:YF:25:PRO:HD3	29:YF:115:ALA:HB1	1.96	0.47
1:QA:109:A:C6	1:QA:326:G:C6	3.01	0.47
1:QA:1002:G:N2	1:QA:1039:C:O2	2.47	0.47
1:QA:1028(B):C:N4	1:QA:1032(A):G:H1	2.12	0.47
1:QA:1158:C:N3	1:QA:1160:G:C8	2.82	0.47
1:QA:1280:A:H5'	1:QA:1281:U:OP2	2.14	0.47
4:QD:15:GLU:O	4:QD:17:VAL:N	2.46	0.47
10:QJ:51:ARG:HB2	10:QJ:60:ARG:HA	1.95	0.47
25:RA:6:A:O2'	25:RA:7:G:C5'	2.51	0.47
25:RA:1525:G:H2'	25:RA:1526:G:H8	1.79	0.47
43:RX:40:LYS:HG3	43:RX:51:VAL:HB	1.96	0.47
43:RX:43:VAL:HG23	43:RX:51:VAL:HG21	1.97	0.47
44:RY:40:GLU:N	44:RY:40:GLU:OE2	2.46	0.47
1:XA:734:G:C6	1:XA:735:C:C4	3.03	0.47
6:XF:42:GLU:OE1	6:XF:59:TYR:OH	2.20	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:27:ALA:HB2	10:XJ:85:LEU:HD11	1.94	0.47
25:YA:278:A:N6	25:YA:362:U:H3	2.12	0.47
25:YA:670:A:H5'	35:YP:42:SER:O	2.15	0.47
25:YA:1405:U:H2'	25:YA:1406:U:C6	2.49	0.47
27:YD:34:VAL:C	27:YD:35:LYS:HG3	2.39	0.47
28:YE:87:GLU:HG3	28:YE:89:ASP:H	1.79	0.47
31:YH:38:SER:O	31:YH:40:GLU:N	2.47	0.47
39:YT:26:ASP:HB2	39:YT:90:GLN:O	2.14	0.47
48:Y2:15:LYS:HE3	48:Y2:67:LYS:HE2	1.95	0.47
1:QA:60:A:H4'	1:QA:61:G:O5'	2.14	0.47
1:QA:1014:A:H4'	19:QS:14:HIS:CE1	2.49	0.47
22:QW:20:U:H3'	22:QW:21:A:H5''	1.94	0.47
25:RA:1384:A:N3	25:RA:1405:U:H1'	2.29	0.47
25:RA:2712(A):A:H5''	25:RA:2713:A:OP2	2.15	0.47
33:RN:63:THR:O	33:RN:66:LYS:HG3	2.13	0.47
36:RQ:21:THR:OG1	36:RQ:23:GLY:O	2.32	0.47
1:XA:953:G:N7	13:XM:104:ARG:NH2	2.52	0.47
1:XA:1155:G:H2'	1:XA:1156:G:H5'	1.97	0.47
7:XG:18:TYR:HD2	7:XG:59:LEU:HD22	1.79	0.47
10:XJ:54:PHE:CG	10:XJ:55:LYS:N	2.82	0.47
13:XM:99:ARG:O	13:XM:101:GLN:N	2.47	0.47
20:XT:53:LEU:HB3	20:XT:102:GLY:HA3	1.94	0.47
25:YA:1030:G:OP2	36:YQ:128:LYS:HE3	2.14	0.47
25:YA:1352:U:O2'	25:YA:1570:A:N3	2.45	0.47
25:YA:1598:C:H5'	43:YX:36:LYS:HB3	1.94	0.47
25:YA:2343:C:O2'	25:YA:2373:G:O2'	2.28	0.47
25:YA:2850:A:N7	25:YA:2868:A:O2'	2.43	0.47
26:YB:34:U:H5''	26:YB:35:U:OP1	2.13	0.47
28:YE:120:TRP:CD2	28:YE:155:LYS:HD3	2.48	0.47
28:YE:200:GLU:HG2	28:YE:201:THR:H	1.80	0.47
31:YH:9:ILE:HG23	31:YH:51:ARG:HA	1.95	0.47
33:YN:95:PRO:O	33:YN:98:VAL:HG22	2.14	0.47
41:YV:29:PRO:HA	41:YV:61:VAL:HG13	1.96	0.47
50:Y4:14:ILE:HG23	50:Y4:21:VAL:HG23	1.96	0.47
1:QA:1028(A):C:H2'	1:QA:1028(B):C:C6	2.48	0.47
1:QA:1412:C:H2'	1:QA:1413:A:C8	2.49	0.47
10:QJ:79:ARG:HH21	9:XI:98:PRO:HG2	1.80	0.47
11:QK:22:HIS:HB3	11:QK:29:ILE:HG12	1.96	0.47
12:QL:127:GLU:O	12:QL:129:ALA:N	2.48	0.47
19:QS:45:VAL:O	19:QS:62:ILE:HB	2.14	0.47
25:RA:1250:G:OP2	35:RP:21:ARG:NH1	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:131:LEU:HB2	27:RD:136:ILE:HD11	1.97	0.47
3:XC:32:LEU:HD22	3:XC:59:ARG:NH1	2.30	0.47
10:XJ:56:HIS:O	10:XJ:57:LYS:C	2.57	0.47
25:YA:1659:U:O2'	25:YA:2712(A):A:N1	2.43	0.47
29:YF:4:VAL:HG11	29:YF:17:ARG:HE	1.78	0.47
37:YR:78:LYS:HE2	37:YR:83:ILE:HD11	1.95	0.47
45:YZ:48:PHE:HE2	45:YZ:71:VAL:HG21	1.80	0.47
45:YZ:51:ALA:HB1	45:YZ:57:ILE:HD11	1.97	0.47
50:Y4:58:ARG:NH2	50:Y4:62:ARG:HG3	2.29	0.47
1:QA:664:G:N2	1:QA:741:G:H1	2.09	0.47
1:QA:1064:G:H1'	1:QA:1066:C:C6	2.50	0.47
1:QA:1227:A:N3	13:QM:117:VAL:HG21	2.30	0.47
8:QH:102:ARG:H	8:QH:102:ARG:HG3	1.41	0.47
22:QW:36:U:H2'	22:QW:37:A:C8	2.49	0.47
25:RA:907:U:OP1	36:RQ:24:GLY:N	2.43	0.47
25:RA:1007:C:OP1	33:RN:35:ARG:NH1	2.47	0.47
25:RA:1542:G:H5''	25:RA:1543:A:OP2	2.14	0.47
25:RA:2377:A:O2'	38:RS:111:GLU:O	2.22	0.47
25:RA:2786:U:O2	28:RE:62:PRO:HB3	2.14	0.47
27:RD:92:ILE:HD12	27:RD:104:TYR:CD2	2.49	0.47
36:RQ:83:MET:HB2	46:R0:7:LEU:HD13	1.96	0.47
38:RS:108:GLY:O	38:RS:110:LEU:N	2.48	0.47
3:XC:116:VAL:HG21	3:XC:202:ILE:HD11	1.96	0.47
35:YP:84:ASN:HA	35:YP:115:LEU:O	2.14	0.47
38:YS:3:ARG:HD3	38:YS:4:LEU:HB2	1.96	0.47
38:YS:7:TYR:CZ	38:YS:91:PRO:HG3	2.49	0.47
1:QA:963:G:H21	10:QJ:55:LYS:HD3	1.80	0.47
4:QD:33:MET:HE3	4:QD:37:PRO:HA	1.97	0.47
10:QJ:49:VAL:HG22	14:QN:41:ARG:HB2	1.95	0.47
25:RA:372:G:O2'	25:RA:373:U:P	2.72	0.47
25:RA:1285:G:N2	25:RA:1328:G:H5''	2.28	0.47
30:RG:94:LEU:HD12	30:RG:99:MET:HA	1.95	0.47
41:RV:85:LYS:HG3	41:RV:87:HIS:N	2.28	0.47
52:R6:9:LEU:HD22	52:R6:10:LEU:H	1.80	0.47
1:XA:524:G:H2'	1:XA:525:C:C6	2.50	0.47
1:XA:872:A:C4	1:XA:874:G:C8	3.02	0.47
1:XA:974:A:OP2	14:XN:41:ARG:NH1	2.47	0.47
1:XA:1260:C:O5'	1:XA:1284:C:H4'	2.14	0.47
2:XB:82:ARG:HB3	2:XB:94:ASN:ND2	2.29	0.47
10:XJ:30:SER:OG	10:XJ:81:THR:HG22	2.15	0.47
22:XV:3:C:H42	22:XV:70:G:H1	1.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:253:C:H2'	25:YA:254:G:O4'	2.14	0.47
25:YA:495:G:N3	42:YW:61:ASN:ND2	2.58	0.47
25:YA:1049:C:N4	25:YA:2751:G:O6	2.48	0.47
25:YA:2580:U:H4'	28:YE:130:GLY:CA	2.39	0.47
25:YA:2848:G:HO2'	25:YA:2849:U:P	2.36	0.47
29:YF:157:VAL:HB	29:YF:194:MET:HB3	1.97	0.47
30:YG:107:LEU:HD11	30:YG:178:PHE:CE1	2.49	0.47
33:YN:93:THR:HB	33:YN:94:HIS:CE1	2.50	0.47
40:YU:100:VAL:C	40:YU:102:GLU:H	2.22	0.47
45:YZ:119:GLU:OE1	45:YZ:122:ARG:NH2	2.44	0.47
46:Y0:24:LYS:C	46:Y0:25:ARG:HD2	2.40	0.47
1:QA:197:A:H1'	1:QA:198:G:O4'	2.14	0.47
1:QA:554:C:OP2	12:QL:23:LYS:NZ	2.41	0.47
1:QA:981:U:H5'	14:QN:21:TYR:CZ	2.49	0.47
1:QA:1330:U:H3'	1:QA:1331:G:O4'	2.15	0.47
2:QB:97:TRP:CH2	2:QB:173:ALA:HA	2.50	0.47
5:QE:101:ILE:HD11	5:QE:119:LEU:HD23	1.97	0.47
9:QI:28:VAL:HG22	9:QI:29:ASN:N	2.30	0.47
10:QJ:54:PHE:CG	10:QJ:55:LYS:N	2.83	0.47
11:QK:54:ARG:HH12	22:QW:39:C:H4'	1.80	0.47
19:QS:64:GLU:C	19:QS:66:MET:H	2.22	0.47
22:QV:2:G:H2'	22:QV:3:C:C6	2.50	0.47
22:QV:53:G:H2'	22:QV:54:U:C6	2.50	0.47
22:QW:56:C:H2'	22:QW:57:A:C8	2.50	0.47
25:RA:234:C:H2'	25:RA:235:U:C6	2.50	0.47
25:RA:374:A:C2	25:RA:401:A:C4	3.03	0.47
25:RA:1870:C:H2'	25:RA:1871:A:O4'	2.15	0.47
25:RA:2129:C:H3'	25:RA:2130:U:C5'	2.44	0.47
25:RA:2364:C:H2'	25:RA:2365:G:O4'	2.15	0.47
25:RA:2848:G:O2'	25:RA:2849:U:O5'	2.30	0.47
25:RA:2876:G:H1'	39:RT:3:ARG:CZ	2.44	0.47
27:RD:260:ARG:NH1	27:RD:267:SER:OG	2.47	0.47
28:RE:35:GLN:HE22	28:RE:37:ARG:NH2	2.12	0.47
28:RE:111:ARG:HA	37:RR:2:ARG:NH1	2.30	0.47
31:RH:32:GLU:HG2	31:RH:34:GLU:H	1.80	0.47
31:RH:76:VAL:O	31:RH:79:VAL:HG22	2.15	0.47
32:RI:2:LYS:HB2	32:RI:39:ALA:HB3	1.97	0.47
32:RI:145:VAL:CG1	32:RI:146:ALA:H	2.28	0.47
33:RN:39:ARG:HH21	33:RN:41:ASP:CB	2.27	0.47
35:RP:14:LYS:C	35:RP:16:ARG:N	2.73	0.47
37:RR:55:ALA:HB2	37:RR:79:LEU:HD13	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RZ:118:GLN:HE21	45:RZ:174:VAL:HA	1.78	0.47
45:RZ:130:PRO:O	45:RZ:133:ILE:HD11	2.14	0.47
48:R2:47:ASN:HB2	48:R2:48:HIS:H	1.56	0.47
49:R3:38:GLU:HB3	49:R3:40:THR:HG23	1.97	0.47
1:XA:1062:U:H2'	1:XA:1063:C:C6	2.49	0.47
1:XA:1401:G:C2	1:XA:1402:C:H1'	2.49	0.47
2:XB:21:ARG:HA	2:XB:39:ILE:H	1.78	0.47
3:XC:76:VAL:HG13	3:XC:84:ILE:HG13	1.97	0.47
7:XG:47:CYS:HB3	7:XG:58:PRO:HG3	1.95	0.47
9:XI:28:VAL:HG11	9:XI:63:ILE:H	1.79	0.47
10:XJ:48:THR:HG22	10:XJ:60:ARG:HD2	1.97	0.47
21:XU:9:ARG:HH21	21:XU:10:ARG:HH21	1.62	0.47
25:YA:141:A:H1'	25:YA:1408:C:O4'	2.15	0.47
25:YA:617:G:O2'	29:YF:205:ARG:NH1	2.48	0.47
25:YA:1085:A:O2'	25:YA:1086:A:OP1	2.30	0.47
25:YA:1096:A:C5	25:YA:1097:U:H1'	2.50	0.47
25:YA:1204:A:H61	25:YA:1240:U:H2'	1.80	0.47
25:YA:2442:C:H2'	25:YA:2443:C:C6	2.47	0.47
25:YA:2492:U:H2'	25:YA:2493:U:H6	1.79	0.47
25:YA:2633:G:H1'	28:YE:62:PRO:CB	2.44	0.47
25:YA:2712:U:C2'	25:YA:2712(A):A:H5'	2.44	0.47
27:YD:68:LYS:HB2	27:YD:70:TRP:CE2	2.49	0.47
30:YG:15:VAL:HG21	30:YG:176:LEU:HD23	1.96	0.47
31:YH:54:ARG:HD3	31:YH:54:ARG:H	1.80	0.47
31:YH:150:ALA:O	31:YH:152:ARG:N	2.47	0.47
34:YO:87:ILE:HG21	34:YO:91:LEU:HD13	1.95	0.47
38:YS:30:ARG:HH21	38:YS:92:TYR:HD1	1.63	0.47
41:YV:85:LYS:HD2	41:YV:86:GLY:H	1.79	0.47
45:YZ:127:LYS:O	45:YZ:162:GLU:HG2	2.14	0.47
46:Y0:27:GLU:HB2	46:Y0:69:PHE:HD1	1.80	0.47
50:Y4:46:GLN:HE21	50:Y4:48:ARG:HD3	1.80	0.47
52:Y6:42:TRP:HD1	52:Y6:44:ARG:HG2	1.80	0.47
1:QA:1158:C:N4	1:QA:1160:G:C5	2.81	0.47
9:QI:37:PHE:CE2	9:QI:70:LYS:HG3	2.50	0.47
10:QJ:50:ILE:HA	10:QJ:60:ARG:HB3	1.97	0.47
17:QQ:59:ILE:HG23	17:QQ:71:PHE:HB3	1.97	0.47
25:RA:1311:G:H5'	25:RA:1311:G:H8	1.80	0.47
25:RA:1385:G:O2'	25:RA:1386:C:O5'	2.33	0.47
25:RA:1939:U:OP1	25:RA:2604:U:O2'	2.23	0.47
25:RA:2062:A:HO2'	25:RA:2063:C:P	2.37	0.47
25:RA:2062:A:O2'	25:RA:2063:C:OP1	2.31	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:116:VAL:O	28:RE:117:MET:HB3	2.14	0.47
49:R3:40:THR:OG1	49:R3:43:ILE:HG12	2.15	0.47
1:XA:501:C:OP1	12:XL:117:ARG:NH2	2.42	0.47
1:XA:652:U:H1'	1:XA:653:A:C2	2.50	0.47
1:XA:951:G:OP2	13:XM:102:ARG:NH2	2.47	0.47
5:XE:80:ILE:HD11	5:XE:138:ALA:HB1	1.97	0.47
7:XG:104:LEU:HD13	7:XG:104:LEU:HA	1.80	0.47
14:YN:23:ARG:HD2	14:YN:28:GLY:O	2.14	0.47
18:XR:22:VAL:HG22	18:XR:23:LYS:H	1.80	0.47
23:XX:5:A:H2'	23:XX:6:G:C8	2.49	0.47
25:YA:1007:C:H5''	33:YN:35:ARG:HH11	1.79	0.47
25:YA:2154:G:H2'	25:YA:2155:G:H8	1.79	0.47
25:YA:2162:G:O2'	25:YA:2173:A:OP2	2.22	0.47
25:YA:2750:A:H2'	25:YA:2752:C:N4	2.29	0.47
28:YE:111:ARG:HA	37:YR:2:ARG:HH12	1.79	0.47
32:YI:69:LYS:HG2	32:YI:136:VAL:HB	1.97	0.47
33:YN:14:VAL:HA	33:YN:135:PRO:HD2	1.96	0.47
34:YO:98:VAL:HG22	34:YO:118:ALA:HA	1.96	0.47
38:YS:10:ARG:O	38:YS:14:VAL:HG12	2.15	0.47
40:YU:81:HIS:HD2	40:YU:84:LYS:HD3	1.79	0.47
46:Y0:4:LYS:HB2	46:Y0:5:LYS:HA	1.96	0.47
47:Y1:51:VAL:HG11	47:Y1:74:VAL:HG21	1.97	0.47
50:Y4:39:CYS:O	50:Y4:40:HIS:ND1	2.48	0.47
1:QA:1137:C:H5'	1:QA:1138:G:C2	2.50	0.47
31:RH:9:ILE:CB	31:RH:10:PRO:HA	2.45	0.47
35:RP:65:ARG:HH22	54:R8:23:VAL:HG12	1.79	0.47
40:RU:95:LEU:HD13	41:RV:4:ILE:HG13	1.96	0.47
1:XA:512:U:H2'	1:XA:513:C:H6	1.80	0.47
1:XA:751:U:H4'	15:XO:24:SER:HA	1.96	0.47
8:XH:20:TYR:HE2	8:XH:75:ARG:HD2	1.80	0.47
9:XI:28:VAL:HG22	9:XI:29:ASN:H	1.78	0.47
19:XS:45:VAL:O	19:XS:47:HIS:N	2.44	0.47
23:XX:4:A:H2'	23:XX:5:A:O4'	2.14	0.47
25:YA:1300:U:H4'	25:YA:1301:A:C5'	2.45	0.47
25:YA:2811:G:OP2	25:YA:2811:G:H8	1.98	0.47
42:YW:94:ASP:OD1	42:YW:94:ASP:N	2.47	0.47
50:Y4:23:GLU:O	50:Y4:25:TYR:N	2.47	0.47
52:Y6:9:LEU:HD22	52:Y6:10:LEU:H	1.80	0.47
1:QA:966:G:H2'	1:QA:967:C:C6	2.50	0.47
1:QA:1182:G:H4'	1:QA:1183:A:H5'	1.97	0.47
11:QK:115:PRO:C	11:QK:117:ASN:N	2.68	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:57:C:H2'	25:RA:58:G:O4'	2.14	0.47
25:RA:2233:U:H2'	25:RA:2234:G:C8	2.50	0.47
27:RD:44:ASN:HB2	27:RD:48:ARG:O	2.15	0.47
34:RO:76:ALA:HB3	39:RT:75:ILE:HB	1.96	0.47
52:R6:30:THR:HA	52:R6:31:PRO:C	2.40	0.47
1:XA:1127:G:H1'	1:XA:1280:A:C6	2.49	0.47
17:XQ:21:VAL:HG21	17:XQ:59:ILE:HD11	1.97	0.47
17:XQ:41:LYS:HB2	17:XQ:41:LYS:HE3	1.66	0.47
25:YA:792:G:N3	25:YA:2072:G:O2'	2.40	0.47
25:YA:1021:A:H5'	25:YA:1022:G:OP2	2.15	0.47
27:YD:35:LYS:HD3	27:YD:63:ARG:HG3	1.97	0.47
31:YH:9:ILE:CB	31:YH:10:PRO:HA	2.44	0.47
35:YP:15:ARG:O	35:YP:17:LYS:N	2.48	0.47
1:QA:841:U:O2'	1:QA:842:C:OP1	2.32	0.46
1:QA:923:A:OP1	5:QE:21:ALA:HB2	2.15	0.46
17:QQ:40:LYS:HD3	17:QQ:42:TYR:CZ	2.50	0.46
20:QT:29:LYS:O	20:QT:33:ILE:HG12	2.15	0.46
25:RA:582:G:H2'	25:RA:583:G:C8	2.50	0.46
25:RA:1225:C:C4'	41:RV:85:LYS:HB2	2.30	0.46
25:RA:1484:G:H1	25:RA:1505:C:H42	1.64	0.46
25:RA:2557:G:H2'	25:RA:2558:C:C6	2.50	0.46
25:RA:2600:A:H2'	25:RA:2601:C:C6	2.50	0.46
26:RB:89(A):A:N7	26:RB:90:C:H1'	2.30	0.46
30:RG:142:PRO:HB2	50:R4:31:ILE:HD12	1.96	0.46
31:RH:9:ILE:HB	31:RH:10:PRO:CA	2.45	0.46
35:RP:9:ASN:HB3	35:RP:10:PRO:HD3	1.97	0.46
35:RP:65:ARG:HE	54:R8:15:LYS:HB2	1.80	0.46
47:R1:70:VAL:O	47:R1:74:VAL:HG23	2.15	0.46
1:XA:1140:C:H2'	1:XA:1141:C:C6	2.51	0.46
9:XI:2:GLU:HG3	9:XI:3:GLN:H	1.79	0.46
9:XI:43:ALA:HA	9:XI:74:ILE:HD13	1.98	0.46
19:XS:19:VAL:HG22	19:XS:44:MET:SD	2.55	0.46
25:YA:498:G:N3	44:YY:47:LYS:NZ	2.63	0.46
25:YA:1142(A):A:O2'	25:YA:1143:A:H3'	2.15	0.46
25:YA:2019:A:H2	25:YA:2035:G:H22	1.63	0.46
27:YD:43:ARG:NH1	27:YD:44:ASN:HD21	2.13	0.46
29:YF:61:GLY:C	29:YF:77:ASP:HB3	2.40	0.46
32:YI:9:LEU:HD11	32:YI:12:LEU:HD22	1.97	0.46
40:YU:90:VAL:HG21	41:YV:48:GLY:O	2.14	0.46
52:Y6:27:LYS:HE2	52:Y6:27:LYS:HB2	1.23	0.46
3:QC:32:LEU:O	3:QC:36:ASP:HB2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:40:LEU:HB3	10:QJ:69:ASN:HB2	1.97	0.46
11:QK:34:ASP:HB3	11:QK:40:ILE:HD11	1.96	0.46
13:QM:23:TYR:CG	13:QM:71:ARG:HD2	2.50	0.46
18:QR:32:ARG:HA	18:QR:69:THR:HG21	1.97	0.46
25:RA:28:A:HO2'	25:RA:582:G:HO2'	1.63	0.46
25:RA:764:A:N3	27:RD:213:ARG:NH1	2.64	0.46
25:RA:1981:A:C4'	25:RA:1982:C:OP2	2.63	0.46
25:RA:2091:U:H1'	47:R1:47:GLN:NE2	2.31	0.46
25:RA:2243:U:H2'	25:RA:2244:U:C6	2.50	0.46
29:RF:192:LEU:HD23	29:RF:193:VAL:N	2.30	0.46
42:RW:13:SER:HB3	42:RW:16:LYS:HD2	1.98	0.46
1:XA:171:A:H2'	1:XA:172:A:C8	2.51	0.46
1:XA:662:G:H2'	1:XA:663:A:C8	2.50	0.46
1:XA:974:A:OP1	14:XN:31:ARG:HD3	2.15	0.46
1:XA:1120:G:H2'	1:XA:1121:U:C6	2.50	0.46
1:XA:1314:C:H2'	1:XA:1315:U:C6	2.50	0.46
19:XS:44:MET:HG2	19:XS:47:HIS:CE1	2.50	0.46
25:YA:307:G:N2	25:YA:309:G:H3'	2.31	0.46
25:YA:764:A:O4'	27:YD:213:ARG:HG3	2.14	0.46
25:YA:2046:G:H5'	51:Y5:19:ARG:HG3	1.97	0.46
25:YA:2572:A:N7	28:YE:144:ARG:HD2	2.30	0.46
25:YA:2778:A:HO2'	25:YA:2780:G:HO2'	1.59	0.46
28:YE:11:MET:HA	28:YE:24:THR:HA	1.96	0.46
29:YF:23:ASP:OD2	29:YF:203:GLN:NE2	2.47	0.46
31:YH:41:MET:HE3	31:YH:64:LEU:HB2	1.97	0.46
36:YQ:35:VAL:CG1	36:YQ:130:LYS:HB3	2.45	0.46
38:YS:71:ARG:NH1	38:YS:106:ARG:HH21	2.13	0.46
39:YT:74:ARG:HD3	39:YT:76:PHE:CE2	2.50	0.46
45:YZ:111:VAL:O	45:YZ:113:ALA:N	2.42	0.46
1:QA:706:A:O4'	11:QK:29:ILE:HD11	2.16	0.46
1:QA:1086:U:O5'	1:QA:1086:U:H6	1.98	0.46
1:QA:1376:U:H2'	1:QA:1377:A:C8	2.50	0.46
13:QM:93:ARG:HD3	13:QM:93:ARG:HA	1.53	0.46
44:RY:81:LYS:HD3	44:RY:97:ARG:CZ	2.45	0.46
47:R1:94:LEU:HD23	47:R1:94:LEU:H	1.80	0.46
1:XA:308:C:H2'	1:XA:309:G:H8	1.80	0.46
1:XA:939:G:H5''	7:XG:102:ARG:NH2	2.30	0.46
25:YA:859:G:H2'	25:YA:916:G:O6	2.16	0.46
25:YA:2364:C:H2'	25:YA:2365:G:O4'	2.16	0.46
25:YA:2749:A:H4'	31:YH:62:LYS:HD3	1.97	0.46
27:YD:102:LYS:C	27:YD:103:ARG:HG2	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:22:GLY:C	31:YH:37:VAL:HB	2.39	0.46
41:YV:35:LEU:HB2	41:YV:37:VAL:HG13	1.96	0.46
44:YY:88:LYS:C	44:YY:90:LEU:H	2.21	0.46
51:Y5:41:PRO:O	51:Y5:44:THR:OG1	2.23	0.46
1:QA:210:U:O2'	1:QA:216:G:O4'	2.32	0.46
1:QA:397:A:H5'	1:QA:398:C:OP1	2.15	0.46
3:QC:157:ILE:HD12	3:QC:164:ARG:HB3	1.97	0.46
22:QW:8:U:O4'	22:QW:48:C:O2'	2.33	0.46
25:RA:94:G:H2'	25:RA:95:G:O4'	2.15	0.46
25:RA:875:G:OP1	45:RZ:147:GLY:HA2	2.16	0.46
25:RA:2115:G:N7	25:RA:2117:A:H5''	2.29	0.46
25:RA:2746:U:H4'	31:RH:138:LYS:HG3	1.97	0.46
29:RF:122:LYS:HD2	29:RF:191:ARG:HG2	1.97	0.46
31:RH:9:ILE:O	31:RH:69:ARG:NE	2.49	0.46
34:RO:120:GLU:OE1	39:RT:67:SER:OG	2.32	0.46
40:RU:92:ARG:HH22	41:RV:11:GLN:N	2.14	0.46
43:RX:63:LYS:H	43:RX:63:LYS:CE	2.28	0.46
44:RY:4:LYS:HE2	44:RY:4:LYS:HA	1.96	0.46
1:XA:1060:C:H2'	1:XA:1061:G:H8	1.79	0.46
1:XA:1380:U:H5	7:XG:3:ARG:HG2	1.81	0.46
1:XA:1399:C:C2	1:XA:1502:A:N6	2.83	0.46
4:XD:18:LYS:HE2	4:XD:20:TYR:CE2	2.51	0.46
25:YA:102:G:OP1	48:Y2:7:ARG:NH2	2.45	0.46
25:YA:392:C:H5''	25:YA:409:C:H5''	1.98	0.46
25:YA:1999:C:H5''	25:YA:2723:C:O2'	2.15	0.46
25:YA:2749:A:H8	25:YA:2749:A:O5'	1.98	0.46
25:YA:2839:G:H5'	37:YR:46:GLY:HA2	1.97	0.46
30:YG:83:ARG:N	30:YG:86:MET:HG3	2.29	0.46
1:QA:1127:G:H1'	1:QA:1280:A:C6	2.50	0.46
1:QA:1229:A:H2'	1:QA:1230:C:C6	2.51	0.46
1:QA:1494:G:HO2'	25:RA:1912:A:HO2'	1.61	0.46
2:QB:91:PRO:HA	2:QB:154:LEU:HD11	1.97	0.46
20:QT:26:ASN:HB2	20:QT:71:THR:HG23	1.98	0.46
22:QV:2:G:H2'	22:QV:3:C:H6	1.79	0.46
25:RA:620:G:H8	25:RA:622:G:O6	1.98	0.46
25:RA:918:A:N3	26:RB:80:U:O2'	2.46	0.46
25:RA:1190:G:H5'	35:RP:32:THR:HA	1.97	0.46
25:RA:1853:A:H2'	25:RA:1854:A:H8	1.80	0.46
25:RA:2747:G:O6	25:RA:2755:C:H5''	2.15	0.46
34:RO:8:LEU:HB2	34:RO:19:ILE:HG13	1.96	0.46
35:RP:65:ARG:O	35:RP:68:GLN:NE2	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:91:LYS:C	47:R1:93:GLU:H	2.23	0.46
6:XF:61:LEU:HB3	6:XF:63:TYR:HE2	1.79	0.46
25:YA:2611:U:OP2	25:YA:2611:U:H6	1.99	0.46
27:YD:43:ARG:HD2	27:YD:44:ASN:OD1	2.15	0.46
33:YN:9:VAL:HG11	33:YN:39:ARG:HH22	1.80	0.46
35:YP:46:LYS:HG2	35:YP:51:PHE:CG	2.50	0.46
46:Y0:12:ASN:HA	46:Y0:14:ARG:HH21	1.79	0.46
25:RA:581:C:H2'	25:RA:582:G:C8	2.51	0.46
25:RA:583:G:H5''	40:RU:10:ARG:NH1	2.30	0.46
40:RU:98:LEU:C	40:RU:100:VAL:N	2.74	0.46
54:R8:16:ILE:HD11	54:R8:60:LEU:HD12	1.98	0.46
16:XP:54:GLU:H	16:XP:54:GLU:CD	2.23	0.46
17:XQ:58:GLU:O	17:XQ:74:LEU:N	2.46	0.46
22:XW:23:C:H2'	22:XW:24:U:C6	2.50	0.46
25:YA:1292:U:H2'	25:YA:1293:C:C6	2.51	0.46
25:YA:2287:A:C8	25:YA:2289:G:C8	3.04	0.46
28:YE:14:ILE:HD11	28:YE:173:VAL:HG11	1.97	0.46
30:YG:171:ALA:O	30:YG:175:LEU:HG	2.15	0.46
32:YI:7:GLU:HG3	32:YI:8:PRO:HD2	1.96	0.46
35:YP:12:ALA:C	35:YP:14:LYS:H	2.23	0.46
40:YU:24:TYR:HB2	40:YU:29:SER:HB3	1.97	0.46
53:Y7:5:TRP:NE1	53:Y7:7:PRO:HG3	2.31	0.46
1:QA:815:A:N7	1:QA:1509:C:O2'	2.44	0.46
1:QA:849:C:H2'	1:QA:850:U:C6	2.51	0.46
1:QA:1048:G:OP1	14:QN:4:LYS:HB2	2.16	0.46
2:QB:194:PRO:O	2:QB:197:VAL:N	2.48	0.46
12:QL:47:LYS:HB3	12:QL:48:PRO:CD	2.44	0.46
22:QW:9:G:N2	22:QW:45:G:N7	2.64	0.46
24:QY:33:ARG:O	24:QY:37:ILE:HG13	2.16	0.46
25:RA:137(A):G:H2'	25:RA:139:G:N7	2.30	0.46
25:RA:884:C:N4	25:RA:890:A:H62	2.14	0.46
25:RA:1264:G:H3'	25:RA:1265:A:H5''	1.98	0.46
25:RA:2129:C:H3'	25:RA:2130:U:H5''	1.98	0.46
25:RA:2547:U:H2'	25:RA:2548:G:H8	1.80	0.46
27:RD:77:ALA:HB2	27:RD:97:TYR:CD2	2.50	0.46
32:RI:76:THR:H	32:RI:77:LEU:HD23	1.81	0.46
35:RP:98:GLU:HA	35:RP:101:VAL:HG12	1.98	0.46
40:RU:92:ARG:HH22	41:RV:10:LYS:HA	1.79	0.46
41:RV:30:GLY:H	41:RV:61:VAL:CG1	2.29	0.46
1:XA:1237:C:HO2'	1:XA:1300:G:H22	1.63	0.46
1:XA:1483:A:H1'	25:YA:1948:G:H1'	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:84:A:N1	25:YA:98:G:O2'	2.42	0.46
25:YA:1300:U:H4'	25:YA:1301:A:O5'	2.14	0.46
32:YI:141:LYS:CD	32:YI:142:VAL:HG13	2.46	0.46
42:YW:58:ALA:HB1	42:YW:64:MET:HB2	1.98	0.46
1:QA:216:G:H2'	1:QA:217:C:C6	2.51	0.46
19:QS:5:LEU:H	19:QS:5:LEU:HD12	1.80	0.46
19:QS:36:ARG:NH1	19:QS:73:GLU:H	2.14	0.46
25:RA:389:G:N1	35:RP:70:GLN:HB3	2.31	0.46
25:RA:639:U:H2'	25:RA:640:C:C6	2.50	0.46
25:RA:2232:U:P	47:R1:40:ARG:HH12	2.39	0.46
25:RA:2689:U:H4'	25:RA:2690:C:H5'	1.98	0.46
28:RE:144:ARG:HB3	28:RE:145:LYS:H	1.44	0.46
31:RH:38:SER:O	31:RH:40:GLU:N	2.49	0.46
44:RY:96:ILE:HD12	44:RY:98:VAL:HG12	1.96	0.46
50:R4:58:ARG:O	50:R4:62:ARG:N	2.49	0.46
52:R6:9:LEU:N	52:R6:27:LYS:HA	2.29	0.46
54:R8:54:GLU:O	54:R8:57:ARG:N	2.40	0.46
1:XA:453:A:H4'	16:XP:72:ARG:HB2	1.98	0.46
1:XA:920:U:H2'	1:XA:921:U:C6	2.51	0.46
10:XJ:45:ARG:HB3	10:XJ:65:LEU:HB3	1.98	0.46
13:XM:14:ARG:HA	13:XM:43:THR:O	2.16	0.46
13:XM:73:GLU:OE1	13:XM:77:ASN:ND2	2.48	0.46
25:YA:587:C:H4'	25:YA:588:U:O5'	2.14	0.46
32:YI:12:LEU:HG	32:YI:19:VAL:HG11	1.97	0.46
32:YI:140:LEU:C	32:YI:141:LYS:HG3	2.41	0.46
38:YS:29:PHE:HB3	38:YS:36:TYR:HB2	1.98	0.46
50:Y4:5:ILE:HG23	50:Y4:6:HIS:CD2	2.50	0.46
1:QA:37:U:O2'	1:QA:500:G:H4'	2.16	0.46
1:QA:411:A:C8	1:QA:413:G:H1'	2.50	0.46
1:QA:487:A:H2'	1:QA:488:C:O4'	2.16	0.46
3:QC:71:ALA:HB1	3:QC:109:PRO:HG3	1.97	0.46
10:QJ:79:ARG:HH21	9:XI:98:PRO:CG	2.29	0.46
19:QS:33:THR:OG1	19:QS:34:TRP:N	2.48	0.46
22:QW:26:G:H1	22:QW:44:A:H61	1.64	0.46
25:RA:270(B):A:H1'	25:RA:365:C:H1'	1.98	0.46
34:RO:2:ILE:HG21	34:RO:8:LEU:HD21	1.98	0.46
42:RW:13:SER:HA	42:RW:14:PRO:HD3	1.84	0.46
1:XA:45:U:H2'	1:XA:46:G:C8	2.51	0.46
1:XA:264:U:O2'	17:XQ:64:PRO:O	2.31	0.46
17:XQ:59:ILE:HG22	17:XQ:71:PHE:CD1	2.51	0.46
22:XW:9:G:N7	22:XW:23:C:N4	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1125:G:C6	25:YA:1126:A:N6	2.84	0.46
25:YA:1171:G:H1	25:YA:1178:C:N4	2.10	0.46
25:YA:2821:A:OP2	25:YA:2822:G:OP2	2.33	0.46
26:YB:80:U:H2'	26:YB:81:G:N2	2.31	0.46
27:YD:27:THR:O	27:YD:28:GLU:HB2	2.15	0.46
31:YH:7:LEU:HD13	31:YH:69:ARG:CB	2.46	0.46
34:YO:88:ASN:OD1	34:YO:92:GLU:N	2.49	0.46
35:YP:57:THR:HG23	35:YP:60:MET:HB2	1.97	0.46
38:YS:59:LYS:HD3	38:YS:60:GLY:H	1.81	0.46
1:QA:298:A:H2'	1:QA:299:G:O4'	2.16	0.46
1:QA:639:G:H2'	1:QA:640:A:H8	1.81	0.46
1:QA:1278:U:H5'	1:QA:1279:A:O4'	2.15	0.46
3:QC:7:PRO:O	3:QC:11:ARG:NH1	2.49	0.46
3:QC:62:ASP:HA	3:QC:97:LYS:HD2	1.96	0.46
4:QD:22:LYS:O	4:QD:113:SER:HB2	2.16	0.46
6:QF:4:TYR:CE1	6:QF:92:LYS:HG2	2.51	0.46
25:RA:550:G:O2'	25:RA:1220:A:N3	2.39	0.46
25:RA:1948:G:H5'	25:RA:1949:G:OP2	2.15	0.46
25:RA:2481:G:O2'	25:RA:2482:G:P	2.74	0.46
26:RB:44:G:H5''	26:RB:45:A:OP1	2.15	0.46
28:RE:55:ASN:HA	28:RE:56:PRO:HD3	1.81	0.46
31:RH:86:GLU:H	31:RH:86:GLU:CD	2.24	0.46
35:RP:37:GLY:O	35:RP:41:ARG:HG2	2.16	0.46
38:RS:26:LEU:HD22	38:RS:87:PHE:HD1	1.81	0.46
45:RZ:150:LEU:O	45:RZ:155:LEU:HD21	2.16	0.46
1:XA:1493:A:N6	25:YA:1913:A:H1'	2.31	0.46
19:XS:38:SER:HB2	19:XS:39:THR:H	1.63	0.46
24:XY:33:ARG:O	24:XY:37:ILE:HG13	2.16	0.46
25:YA:74:A:H4'	25:YA:75:G:O5'	2.16	0.46
25:YA:755:C:H2'	25:YA:756:C:C6	2.50	0.46
25:YA:2022:U:O2'	25:YA:2617:C:H5'	2.16	0.46
25:YA:2633:G:H1'	28:YE:62:PRO:HG3	1.98	0.46
27:YD:27:THR:C	27:YD:29:PRO:HD2	2.40	0.46
39:YT:51:ARG:HG2	39:YT:98:LYS:HE2	1.98	0.46
40:YU:44:ASN:HD21	41:YV:75:PHE:HB3	1.80	0.46
44:YY:99:CYS:SG	44:YY:100:ALA:N	2.86	0.46
52:Y6:8:LYS:CG	52:Y6:27:LYS:HG2	2.46	0.46
1:QA:132:C:O3'	20:QT:74:LYS:HE2	2.17	0.45
1:QA:404:U:H5'	4:QD:122:ARG:HD2	1.97	0.45
1:QA:986:A:O2'	19:QS:55:LYS:O	2.35	0.45
1:QA:1356:G:H2'	1:QA:1357:A:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1399:C:C2	1:QA:1502:A:N6	2.84	0.45
9:QI:43:ALA:HA	9:QI:74:ILE:HD13	1.97	0.45
17:QQ:92:ARG:HA	17:QQ:95:TYR:CE2	2.50	0.45
22:QW:6:G:H2'	22:QW:7:G:H8	1.80	0.45
22:QW:18:G:H4'	22:QW:60:U:C2	2.50	0.45
25:RA:632:A:H2'	25:RA:633:A:C8	2.51	0.45
25:RA:839:U:H2'	25:RA:840:C:C6	2.51	0.45
25:RA:932:G:H4'	25:RA:933:A:O5'	2.16	0.45
25:RA:994:C:OP1	40:RU:53:ARG:NH2	2.48	0.45
25:RA:2636:U:HO2'	28:RE:44:TYR:HH	1.61	0.45
25:RA:2682:U:O2'	28:RE:13:ARG:HG2	2.16	0.45
37:RR:78:LYS:O	37:RR:82:GLU:HB3	2.15	0.45
38:RS:39:ILE:HD12	38:RS:85:VAL:HG11	1.98	0.45
44:RY:28:LYS:O	44:RY:38:ILE:HG23	2.15	0.45
45:RZ:35:ARG:HH12	45:RZ:61:LEU:HD22	1.80	0.45
45:RZ:110:GLY:H	45:RZ:142:SER:HB2	1.80	0.45
1:XA:1280:A:OP1	10:XJ:7:LYS:NZ	2.48	0.45
3:XC:161:GLU:O	3:XC:162:GLN:HB2	2.15	0.45
8:XH:51:VAL:HG11	8:XH:60:ARG:HH11	1.80	0.45
9:XI:16:ARG:O	9:XI:63:ILE:HA	2.16	0.45
11:XK:13:GLN:HE21	11:XK:76:GLY:HA3	1.81	0.45
16:XP:71:ARG:HG3	16:XP:80:PHE:CE1	2.50	0.45
25:YA:184:C:H2'	25:YA:185:U:H6	1.80	0.45
25:YA:270(E):G:H1	25:YA:270(U):C:H42	1.64	0.45
25:YA:483:A:H3'	25:YA:484:C:H6	1.81	0.45
25:YA:1488:G:H5'	25:YA:1489:U:OP2	2.16	0.45
25:YA:2815:C:H5'	51:Y5:29:THR:HG21	1.98	0.45
27:YD:43:ARG:NH1	27:YD:44:ASN:ND2	2.64	0.45
30:YG:174:GLU:HG2	30:YG:180:PHE:HD1	1.81	0.45
44:YY:46:LYS:HD3	44:YY:63:LYS:HB3	1.97	0.45
47:Y1:53:VAL:HB	47:Y1:58:ILE:HD12	1.99	0.45
47:Y1:92:LYS:HE2	47:Y1:92:LYS:HB3	1.78	0.45
51:Y5:51:TYR:HB3	51:Y5:52:TYR:H	1.51	0.45
1:QA:190:G:O2'	1:QA:191(A):G:OP1	2.32	0.45
1:QA:396:G:O2'	1:QA:398:C:OP1	2.30	0.45
1:QA:1422:G:OP1	34:RO:48:PRO:HA	2.15	0.45
4:QD:25:ARG:O	4:QD:27:TYR:N	2.47	0.45
8:QH:23:SER:HB3	8:QH:62:TYR:CD1	2.51	0.45
12:QL:87:GLY:HA2	12:QL:98:TYR:HD2	1.80	0.45
17:QQ:69:LYS:H	17:QQ:70:ARG:HD2	1.81	0.45
25:RA:1289:C:H2'	25:RA:1290:C:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1800:C:OP2	27:RD:183:ARG:NH2	2.50	0.45
27:RD:12:SER:O	27:RD:16:MET:HE3	2.15	0.45
29:RF:2:LYS:CB	29:RF:24:LEU:HD12	2.47	0.45
36:RQ:1:MET:HE3	36:RQ:45:GLN:HB3	1.97	0.45
45:RZ:24:LEU:HD22	45:RZ:41:LEU:HD23	1.97	0.45
45:RZ:94:GLU:HG3	45:RZ:129:SER:OG	2.17	0.45
1:XA:108:G:H5'	1:XA:109:A:H5''	1.97	0.45
1:XA:321:A:N7	1:XA:328:C:C2	2.83	0.45
1:XA:392:G:H2'	1:XA:393:A:H8	1.81	0.45
1:XA:1157:A:O2'	1:XA:1158:C:O2	2.30	0.45
2:XB:162:ILE:HD11	2:XB:184:VAL:HG22	1.97	0.45
25:YA:708:C:H5'	25:YA:709:U:OP2	2.16	0.45
25:YA:1024:G:C6	25:YA:1025:G:C6	3.05	0.45
25:YA:1141:U:H4'	25:YA:1142(A):A:O4'	2.16	0.45
25:YA:1427:A:H4'	25:YA:1428:C:O5'	2.15	0.45
31:YH:59:ARG:C	31:YH:61:HIS:H	2.23	0.45
31:YH:77:LYS:HD2	31:YH:77:LYS:HA	1.72	0.45
34:YO:75:SER:HB2	39:YT:74:ARG:HH12	1.81	0.45
38:YS:4:LEU:HD23	38:YS:8:GLU:HG3	1.97	0.45
45:YZ:52:SER:O	45:YZ:54:HIS:N	2.49	0.45
46:Y0:80:HIS:CD2	46:Y0:82:ARG:HH21	2.34	0.45
52:Y6:12:GLU:CD	52:Y6:12:GLU:H	2.25	0.45
1:QA:76:G:H1	1:QA:93:U:H3	1.64	0.45
3:QC:177:THR:HG23	3:QC:180:ALA:HB2	1.98	0.45
7:QG:78:ARG:HB3	7:QG:79:ARG:H	1.57	0.45
8:QH:1:MET:HE3	8:QH:3:THR:HG23	1.99	0.45
10:QJ:61:GLU:OE2	14:QN:45:ARG:NH1	2.49	0.45
14:QN:23:ARG:HD2	14:QN:28:GLY:O	2.16	0.45
21:QU:25:LYS:HG2	21:QU:26:LYS:HG2	1.97	0.45
25:RA:443:A:H5''	25:RA:444:C:OP1	2.16	0.45
25:RA:581:C:OP1	40:RU:33:ARG:HG3	2.17	0.45
25:RA:1954:G:O2'	25:RA:1956:U:O4	2.28	0.45
26:RB:89:G:OP2	26:RB:89:G:H8	1.99	0.45
28:RE:21:VAL:HA	28:RE:22:PRO:HD2	1.74	0.45
35:RP:63:PRO:C	35:RP:65:ARG:H	2.24	0.45
54:R8:30:ARG:HG3	54:R8:31:HIS:HB2	1.96	0.45
55:R9:1:MET:SD	55:R9:1:MET:N	2.89	0.45
1:XA:443:C:H2'	1:XA:444:C:H6	1.80	0.45
1:XA:1041:A:H2'	1:XA:1042:G:O4'	2.17	0.45
1:XA:1314:C:H5	19:XS:6:LYS:HE2	1.81	0.45
2:XB:7:VAL:O	2:XB:217:ARG:NH2	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:20:ASP:OD2	7:XG:22:LEU:N	2.49	0.45
14:YN:6:LEU:HD23	14:YN:9:LYS:HD3	1.98	0.45
25:YA:1316:U:H2'	25:YA:1317:A:C8	2.50	0.45
25:YA:1981:A:H5''	25:YA:1982:C:OP2	2.16	0.45
25:YA:2086:U:H2'	25:YA:2087:G:C8	2.51	0.45
25:YA:2320:A:H2'	25:YA:2320:A:N3	2.30	0.45
25:YA:2647:U:H2'	25:YA:2648:C:C6	2.51	0.45
31:YH:7:LEU:HD12	31:YH:65:HIS:CE1	2.51	0.45
54:Y8:60:LEU:O	54:Y8:63:PRO:HD2	2.16	0.45
1:QA:793:U:OP2	1:QA:794:A:C8	2.69	0.45
1:QA:1145:C:H4'	1:QA:1146:A:C8	2.52	0.45
1:QA:1289:A:OP1	21:QU:9:ARG:NH2	2.49	0.45
19:QS:11:VAL:HG13	19:QS:39:THR:H	1.81	0.45
25:RA:76:C:O2'	48:R2:62:THR:OG1	2.31	0.45
25:RA:139:G:H1'	25:RA:140:A:C2	2.52	0.45
25:RA:1138:G:N2	33:RN:106:MET:HE3	2.15	0.45
25:RA:1547:C:H2'	25:RA:1548:C:H6	1.81	0.45
25:RA:2563:U:H4'	34:RO:28:SER:HA	1.98	0.45
34:RO:64:ARG:HB2	34:RO:83:ALA:HB3	1.99	0.45
38:RS:61:ASN:O	38:RS:65:VAL:N	2.46	0.45
40:RU:50:ARG:HH22	41:RV:72:VAL:HG23	1.81	0.45
42:RW:18:ARG:HD3	42:RW:76:VAL:CG1	2.44	0.45
55:R9:1:MET:HB3	55:R9:4:ARG:CZ	2.46	0.45
1:XA:452:A:HO2'	1:XA:453:A:H8	1.63	0.45
7:XG:5:ARG:HH21	7:XG:7:ALA:HA	1.81	0.45
9:XI:28:VAL:HG21	9:XI:63:ILE:H	1.81	0.45
25:YA:725:G:C6	25:YA:726:G:N1	2.85	0.45
25:YA:1289:C:H2'	25:YA:1290:C:C6	2.52	0.45
25:YA:2115:G:OP1	25:YA:2167:U:N3	2.21	0.45
25:YA:2336:A:H61	46:Y0:43:THR:HG22	1.82	0.45
39:YT:104:ASN:O	39:YT:106:SER:N	2.49	0.45
41:YV:4:ILE:HB	41:YV:40:LEU:HB2	1.97	0.45
52:Y6:39:TYR:HB3	52:Y6:41:PRO:HD2	1.98	0.45
1:QA:8:A:N6	4:QD:205:GLU:O	2.48	0.45
1:QA:141:A:H1'	1:QA:182:U:O2	2.16	0.45
6:QF:9:VAL:HB	6:QF:87:ARG:HB2	1.97	0.45
25:RA:25:U:H5'	42:RW:79:GLY:HA2	1.99	0.45
25:RA:627:A:H4'	25:RA:628:G:H5'	1.98	0.45
25:RA:900:A:H3'	25:RA:901:A:H8	1.81	0.45
25:RA:1360:A:H5''	25:RA:1361:G:OP2	2.17	0.45
25:RA:1525:G:H2'	25:RA:1526:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1819:A:H4'	25:RA:1820:U:O5'	2.16	0.45
25:RA:2103:C:H2'	25:RA:2104:G:C8	2.51	0.45
25:RA:2517:C:C4	25:RA:2542:A:C6	3.05	0.45
28:RE:51:PHE:CE2	28:RE:52:LEU:HG	2.52	0.45
28:RE:131:ALA:HB1	28:RE:135:HIS:CE1	2.52	0.45
29:RF:33:LEU:HD12	29:RF:33:LEU:HA	1.80	0.45
31:RH:3:ARG:HH11	31:RH:6:ARG:NE	2.14	0.45
31:RH:159:GLU:HG3	31:RH:170:ARG:NH1	2.31	0.45
35:RP:36:LYS:HB3	35:RP:37:GLY:HA2	1.98	0.45
48:R2:25:VAL:O	48:R2:29:LYS:HG3	2.17	0.45
1:XA:165:C:H2'	1:XA:166:G:H8	1.81	0.45
1:XA:598:U:H4'	8:XH:94:TYR:CD2	2.51	0.45
1:XA:790:A:H2'	1:XA:791:G:C8	2.52	0.45
1:XA:1371:G:O3'	9:XI:69:GLY:HA3	2.17	0.45
2:XB:25:ASN:C	2:XB:27:LYS:H	2.24	0.45
25:YA:2032:G:O2'	28:YE:145:LYS:NZ	2.47	0.45
25:YA:2408:U:H2'	25:YA:2409:G:C8	2.52	0.45
25:YA:2439:A:H3'	25:YA:2439:A:P	2.57	0.45
25:YA:2875:C:O2'	39:YT:3:ARG:HG3	2.17	0.45
29:YF:25:PRO:HB2	29:YF:26:ALA:H	1.62	0.45
31:YH:50:VAL:HG22	31:YH:52:VAL:H	1.81	0.45
32:YI:40:THR:OG1	32:YI:43:ASN:OD1	2.33	0.45
43:YX:67:GLY:O	43:YX:69:TYR:N	2.42	0.45
44:YY:84:ARG:CZ	44:YY:97:ARG:HB2	2.46	0.45
45:YZ:150:LEU:CB	45:YZ:171:ILE:H	2.29	0.45
1:QA:261:U:OP2	20:QT:79:ARG:NH2	2.50	0.45
1:QA:603:U:H2'	1:QA:604:G:H8	1.82	0.45
1:QA:713:G:H2'	1:QA:714:G:C8	2.51	0.45
1:QA:950:U:H2'	1:QA:951:G:C8	2.52	0.45
1:QA:1118:C:H1'	1:QA:1179:A:C4	2.52	0.45
2:QB:37:ASN:O	2:QB:37:ASN:ND2	2.49	0.45
12:QL:58:VAL:O	12:QL:65:GLU:HA	2.16	0.45
22:QW:38:A:H2'	22:QW:39:C:C6	2.52	0.45
25:RA:606:U:H4'	25:RA:658:C:H4'	1.99	0.45
25:RA:1810:A:H2'	25:RA:1811:G:O4'	2.17	0.45
25:RA:1889:A:H2'	25:RA:1890:A:C8	2.51	0.45
25:RA:2478:A:C5	25:RA:2529:G:C6	3.05	0.45
27:RD:30:GLU:HG3	27:RD:63:ARG:CZ	2.47	0.45
28:RE:116:VAL:HG13	28:RE:122:PHE:HB2	1.97	0.45
32:RI:100:ALA:O	32:RI:102:SER:N	2.49	0.45
35:RP:6:LEU:HD13	35:RP:6:LEU:HA	1.72	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:131:C:H2'	1:XA:132:C:C6	2.52	0.45
1:XA:189:U:C4	17:XQ:72:ARG:NH1	2.85	0.45
1:XA:618:C:H5'	1:XA:619:U:H5''	1.98	0.45
1:XA:1314:C:OP2	19:XS:6:LYS:HD2	2.17	0.45
2:XB:172:ILE:H	2:XB:172:ILE:HD12	1.82	0.45
13:XM:15:VAL:HG12	13:XM:45:VAL:HG22	1.99	0.45
20:XT:14:LYS:O	20:XT:18:GLN:HG3	2.16	0.45
25:YA:1060:U:H3	25:YA:1088:A:H8	1.65	0.45
25:YA:1273:U:O2'	25:YA:1275:A:OP1	2.31	0.45
25:YA:2347:C:OP1	52:Y6:39:TYR:OH	2.27	0.45
25:YA:2492:U:H2'	25:YA:2493:U:C6	2.52	0.45
25:YA:2599:G:OP2	27:YD:236:GLY:N	2.47	0.45
25:YA:2692:C:H2'	25:YA:2693:A:H8	1.82	0.45
25:YA:2712(A):A:C8	25:YA:2712(A):A:C5'	2.85	0.45
31:YH:94:TYR:OH	31:YH:153:LYS:HE2	2.16	0.45
32:YI:74:ASN:HB2	32:YI:75:LEU:H	1.65	0.45
33:YN:63:THR:O	33:YN:66:LYS:HG3	2.17	0.45
41:YV:38:LEU:HD23	41:YV:38:LEU:HA	1.71	0.45
41:YV:50:PRO:CD	41:YV:51:VAL:H	2.29	0.45
43:YX:49:VAL:HB	43:YX:83:VAL:HG23	1.98	0.45
1:QA:67:C:O2'	1:QA:171:A:N3	2.40	0.45
1:QA:149:A:H2'	1:QA:150:C:C6	2.51	0.45
3:QC:59:ARG:HG2	3:QC:64:VAL:HG12	1.99	0.45
3:QC:180:ALA:HB1	3:QC:182:ILE:HG13	1.98	0.45
5:QE:57:LYS:O	5:QE:61:TYR:HD2	1.99	0.45
5:QE:78:HIS:HA	8:QH:105:ARG:HG3	1.98	0.45
9:QI:5:TYR:HB3	9:QI:6:GLY:H	1.47	0.45
25:RA:30:G:H2'	25:RA:31:C:C6	2.52	0.45
25:RA:1292:U:H2'	25:RA:1293:C:C6	2.52	0.45
25:RA:2196:C:N4	25:RA:2197:U:O4	2.50	0.45
28:RE:35:GLN:H	28:RE:48:GLN:HB2	1.82	0.45
37:RR:70:LEU:C	37:RR:72:ASP:H	2.23	0.45
54:R8:4:MET:HE3	54:R8:4:MET:HB2	1.65	0.45
1:XA:858:G:O6	1:XA:869:G:H3'	2.17	0.45
4:XD:9:CYS:O	4:XD:13:ARG:HG3	2.16	0.45
4:XD:178:VAL:O	4:XD:180:GLY:N	2.42	0.45
4:XD:199:ASN:HD22	4:XD:199:ASN:C	2.24	0.45
7:XG:65:ALA:HB1	7:XG:127:ALA:HB3	1.98	0.45
10:XJ:3:LYS:N	10:XJ:74:ILE:O	2.50	0.45
23:XX:18:G:H1'	23:XX:19:A:C8	2.52	0.45
25:YA:363:G:H5'	25:YA:363(A):A:OP2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:723:G:H2'	25:YA:724:U:O4'	2.16	0.45
31:YH:151:ILE:O	31:YH:152:ARG:HG2	2.15	0.45
36:YQ:65:PHE:O	36:YQ:104:PHE:HA	2.17	0.45
49:Y3:7:LYS:HG2	49:Y3:9:VAL:HG13	1.97	0.45
1:QA:164:U:H2'	1:QA:165:C:C6	2.52	0.45
1:QA:455:C:H42	1:QA:477:G:H1	1.65	0.45
8:QH:51:VAL:HG11	8:QH:60:ARG:NH1	2.31	0.45
19:QS:32:LYS:HE2	19:QS:32:LYS:HB2	1.76	0.45
25:RA:1935:G:H1'	25:RA:1964:G:N2	2.31	0.45
25:RA:2467:C:H4'	36:RQ:123:HIS:CD2	2.52	0.45
25:RA:2577:A:H5''	25:RA:2578:G:H5'	1.97	0.45
25:RA:2811:G:H8	25:RA:2811:G:OP2	1.99	0.45
26:RB:48:A:H2'	26:RB:49:C:C6	2.52	0.45
27:RD:35:LYS:HD3	27:RD:63:ARG:HG3	1.99	0.45
28:RE:63:LEU:HG	28:RE:65:GLY:H	1.82	0.45
28:RE:67:PHE:O	28:RE:69:LYS:N	2.50	0.45
29:RF:2:LYS:HB3	29:RF:2:LYS:HE2	1.41	0.45
29:RF:133:ASN:HB2	29:RF:138:GLU:OE1	2.17	0.45
29:RF:136:THR:HG23	29:RF:170:LEU:HD11	1.99	0.45
36:RQ:78:PRO:O	36:RQ:79:LEU:HG	2.17	0.45
38:RS:27:SER:HA	38:RS:88:ASP:HB2	1.99	0.45
52:R6:41:PRO:HD2	52:R6:49:HIS:NE2	2.32	0.45
1:XA:321:A:C8	1:XA:328:C:C2	3.04	0.45
1:XA:985:C:H2'	1:XA:986:A:C8	2.52	0.45
1:XA:1379:G:N7	7:XG:3:ARG:HD3	2.32	0.45
2:XB:97:TRP:CH2	2:XB:173:ALA:HA	2.52	0.45
3:XC:35:GLU:CD	3:XC:59:ARG:HH22	2.25	0.45
13:XM:3:ARG:HA	13:XM:8:GLU:HA	1.98	0.45
13:XM:44:ARG:C	13:XM:46:LYS:H	2.25	0.45
25:YA:37:C:H2'	25:YA:38:A:C8	2.52	0.45
25:YA:722:A:H5'	25:YA:723:G:OP2	2.17	0.45
25:YA:1341:U:O2	43:YX:80:ILE:HD13	2.17	0.45
25:YA:2030:A:H4'	25:YA:2031:A:C8	2.49	0.45
25:YA:2327:A:H2'	25:YA:2328:A:C8	2.52	0.45
32:YI:12:LEU:HD12	32:YI:12:LEU:HA	1.79	0.45
51:Y5:36:CYS:HB3	51:Y5:37:LYS:H	1.67	0.45
1:QA:560:U:O2'	1:QA:561:U:OP2	2.28	0.45
1:QA:1365:G:H2'	1:QA:1366:C:C6	2.52	0.45
2:QB:33:TYR:HB3	2:QB:41:ILE:O	2.16	0.45
3:QC:139:GLN:O	3:QC:143:GLU:N	2.49	0.45
13:QM:77:ASN:O	13:QM:80:ARG:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:QQ:81:ARG:HE	17:QQ:84:LEU:HD12	1.82	0.45
25:RA:244:A:C2	25:RA:255:A:C4	3.05	0.45
25:RA:661:C:H1'	35:RP:12:ALA:HA	1.99	0.45
25:RA:1728:G:H8	25:RA:1732:A:H62	1.65	0.45
28:RE:58:ARG:CZ	28:RE:58:ARG:HA	2.47	0.45
40:RU:92:ARG:HH12	41:RV:11:GLN:H	1.64	0.45
41:RV:67:GLY:O	41:RV:88:ARG:HD2	2.16	0.45
45:RZ:3:TYR:HB2	45:RZ:57:ILE:HA	1.99	0.45
45:RZ:107:THR:OG1	45:RZ:108:PRO:HD3	2.17	0.45
1:XA:889:A:O3'	1:XA:890:G:H4'	2.17	0.45
1:XA:913:A:H1'	1:XA:914:A:OP2	2.17	0.45
1:XA:954:G:H2'	1:XA:955:U:O4'	2.17	0.45
8:XH:102:ARG:H	8:XH:102:ARG:HG3	1.67	0.45
11:XK:9:LYS:HB2	11:XK:9:LYS:HE2	1.75	0.45
25:YA:34:C:H4'	25:YA:35:G:OP2	2.17	0.45
25:YA:709:U:H2'	25:YA:710:G:C8	2.52	0.45
25:YA:2120:G:H1	25:YA:2178:C:H42	1.65	0.45
28:YE:4:ILE:HD13	28:YE:95:ILE:HD13	1.99	0.45
30:YG:16:ARG:O	30:YG:20:ILE:HG12	2.17	0.45
35:YP:3:LEU:HA	35:YP:6:LEU:HD23	1.98	0.45
53:Y7:1:MET:HE2	53:Y7:1:MET:HB3	1.90	0.45
1:QA:718:G:H1'	11:QK:116:HIS:HA	1.99	0.45
1:QA:1256:A:H1'	1:QA:1258:G:C6	2.52	0.45
3:QC:119:ARG:HH22	3:QC:140:ARG:HG2	1.81	0.45
25:RA:746:A:C6	25:RA:2611:U:H5''	2.52	0.45
25:RA:1441:G:H2'	25:RA:1442:G:H8	1.82	0.45
25:RA:1478:G:O2'	25:RA:1558:A:N7	2.50	0.45
25:RA:2441:C:OP2	25:RA:2586:C:O2'	2.34	0.45
25:RA:2476:A:H62	25:RA:2477:C:N4	2.14	0.45
27:RD:102:LYS:C	27:RD:103:ARG:HG2	2.41	0.45
41:RV:7:THR:HG23	41:RV:22:VAL:HG21	1.99	0.45
46:R0:37:LEU:N	46:R0:59:LEU:O	2.37	0.45
46:R0:53:MET:HB2	46:R0:59:LEU:HD23	1.98	0.45
48:R2:50:ILE:HD12	48:R2:51:ARG:H	1.82	0.45
51:R5:3:LYS:HA	51:R5:3:LYS:HE3	1.98	0.45
1:XA:130:A:O2'	1:XA:131:C:O5'	2.34	0.45
1:XA:1411:C:H2'	1:XA:1412:C:C6	2.52	0.45
7:XG:22:LEU:HG	7:XG:62:PHE:HE2	1.81	0.45
22:XW:8:U:O4'	22:XW:48:C:O2'	2.35	0.45
25:YA:273(E):U:H2'	25:YA:273(F):C:H6	1.82	0.45
25:YA:817:C:H4'	25:YA:932:G:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1171:G:H8	25:YA:1173:G:H21	1.64	0.45
25:YA:1639:U:C2'	25:YA:1640:C:H5''	2.47	0.45
25:YA:2154:G:H2'	25:YA:2155:G:C8	2.52	0.45
25:YA:2466:C:H5''	55:Y9:6:SER:HB2	1.99	0.45
25:YA:2590:A:H2'	25:YA:2591:C:H6	1.82	0.45
26:YB:12:C:O4'	26:YB:15:A:N6	2.50	0.45
32:YI:76:THR:OG1	32:YI:140:LEU:HD12	2.17	0.45
43:YX:26:TYR:O	43:YX:81:VAL:HG22	2.17	0.45
4:QD:13:ARG:HB3	4:QD:14:ARG:H	1.51	0.44
4:QD:195:ALA:HB3	6:XF:16:GLN:C	2.41	0.44
6:QF:44:GLY:O	6:QF:60:PHE:N	2.47	0.44
9:QI:85:LEU:O	9:QI:89:ASN:HB2	2.16	0.44
18:QR:50:ILE:HD11	18:QR:70:ILE:HG21	1.98	0.44
21:QU:8:THR:HG22	21:QU:10:ARG:H	1.82	0.44
23:QX:12:A:H3'	23:QX:13:A:C5'	2.46	0.44
24:QY:50:ILE:HG13	24:QY:51:TYR:CD1	2.52	0.44
25:RA:373:U:H2'	25:RA:374:A:H8	1.82	0.44
25:RA:2695:C:H2'	25:RA:2696:U:C6	2.53	0.44
31:RH:54:ARG:NE	31:RH:57:ASP:OD1	2.50	0.44
32:RI:56:LYS:HE3	32:RI:57:ARG:HG3	1.99	0.44
45:RZ:157:LEU:CD2	45:RZ:161:VAL:HG11	2.45	0.44
50:R4:26:SER:OG	50:R4:27:THR:N	2.48	0.44
50:R4:60:GLN:HB3	50:R4:61:ARG:NH2	2.32	0.44
52:R6:15:GLU:OE2	52:R6:44:ARG:NH1	2.49	0.44
1:XA:316:G:H2'	1:XA:317:G:H8	1.82	0.44
1:XA:1054:C:OP2	1:XA:1197:G:OP2	2.34	0.44
1:XA:1217:C:OP1	14:YN:9:LYS:HD2	2.17	0.44
2:XB:178:ARG:NH2	8:XH:74:PRO:HB3	2.32	0.44
7:XG:78:ARG:HB3	7:XG:79:ARG:H	1.50	0.44
9:XI:65:VAL:HG21	9:XI:73:GLN:HB3	1.99	0.44
13:XM:102:ARG:HD3	13:XM:105:THR:OG1	2.17	0.44
19:XS:6:LYS:HG2	19:XS:7:LYS:H	1.81	0.44
25:YA:859:G:O2'	25:YA:860:U:O5'	2.35	0.44
25:YA:1018:C:O3'	25:YA:1120:G:N2	2.49	0.44
25:YA:2512:C:H2'	25:YA:2513:G:O4'	2.17	0.44
25:YA:2647:U:H2'	25:YA:2648:C:H6	1.82	0.44
25:YA:2751:G:H1'	31:YH:4:ILE:CG1	2.42	0.44
29:YF:127:GLU:O	29:YF:129:PHE:N	2.49	0.44
31:YH:144:VAL:O	31:YH:148:ILE:HG12	2.17	0.44
35:YP:63:PRO:HB2	54:Y8:12:LYS:O	2.17	0.44
39:YT:26:ASP:HB2	39:YT:91:ARG:HA	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:91:LYS:C	47:Y1:93:GLU:H	2.25	0.44
52:Y6:40:CYS:N	52:Y6:41:PRO:HD2	2.32	0.44
1:QA:61:G:OP1	20:QT:10:LEU:HD23	2.17	0.44
1:QA:382:A:H2'	1:QA:383:A:C8	2.52	0.44
1:QA:551:U:H2'	1:QA:552:U:C6	2.52	0.44
1:QA:1493:A:H2'	1:QA:1493:A:N3	2.30	0.44
1:QA:1521:G:H2'	1:QA:1522:U:H6	1.82	0.44
12:QL:41:ARG:HB3	12:QL:42:THR:H	1.56	0.44
19:QS:70:LYS:HB2	19:QS:71:LEU:H	1.68	0.44
25:RA:975:G:H1'	25:RA:990:A:C2	2.51	0.44
25:RA:1980:G:O2'	25:RA:1982:C:OP2	2.34	0.44
25:RA:2492:U:H2'	25:RA:2493:U:C6	2.52	0.44
25:RA:2811:G:N2	25:RA:2891:G:H1'	2.32	0.44
29:RF:128:ALA:O	29:RF:142:TRP:NE1	2.49	0.44
44:RY:17:SER:HB2	44:RY:71:LYS:HB3	1.98	0.44
45:RZ:6:LYS:HE3	45:RZ:6:LYS:HB2	1.76	0.44
48:R2:4:SER:HB2	48:R2:5:GLU:H	1.45	0.44
1:XA:666:G:H5'	1:XA:726:C:H1'	2.00	0.44
2:XB:80:ILE:HD13	2:XB:212:GLN:HA	1.99	0.44
7:XG:77:SER:CB	22:XW:32:C:O2'	2.65	0.44
7:XG:97:GLN:HE21	7:XG:97:GLN:HB2	1.60	0.44
18:XR:32:ARG:HA	18:XR:69:THR:HG21	1.98	0.44
22:XW:76:A:C2	25:YA:2421:G:C5	3.05	0.44
25:YA:1358:G:O2'	25:YA:1359:A:H5''	2.16	0.44
27:YD:43:ARG:CB	27:YD:54:ARG:HB2	2.48	0.44
29:YF:46:ARG:HB3	29:YF:48:THR:HG23	1.98	0.44
29:YF:117:ARG:HD2	29:YF:190:GLU:O	2.16	0.44
32:YI:114:LEU:HA	32:YI:130:TYR:HB2	1.98	0.44
41:YV:61:VAL:HA	41:YV:94:LEU:HD22	1.99	0.44
49:Y3:43:ILE:O	49:Y3:47:VAL:HG23	2.17	0.44
1:QA:20:U:H2'	1:QA:21:G:O4'	2.17	0.44
1:QA:190:G:H4'	1:QA:191(A):G:OP2	2.18	0.44
1:QA:377:G:OP1	16:QP:3:LYS:HD2	2.17	0.44
1:QA:909:A:H2'	1:QA:910:C:O4'	2.17	0.44
7:QG:26:PHE:O	7:QG:30:ILE:HG12	2.17	0.44
7:QG:57:GLU:H	7:QG:57:GLU:CD	2.25	0.44
8:QH:83:ILE:HB	8:QH:137:VAL:HG13	1.99	0.44
9:QI:48:GLU:N	9:QI:49:PRO:HD2	2.32	0.44
20:QT:14:LYS:HB2	20:QT:17:ARG:NH2	2.32	0.44
22:QW:56:C:H2'	22:QW:57:A:H8	1.83	0.44
24:QY:37:ILE:HD11	24:QY:66:ILE:HD11	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1058:G:N2	25:RA:1080:C:O2	2.44	0.44
25:RA:1441:G:O2'	25:RA:1442:G:H5'	2.18	0.44
25:RA:1814:G:C4'	27:RD:51:VAL:HG21	2.48	0.44
27:RD:143:HIS:HD2	27:RD:194:GLY:C	2.25	0.44
37:RR:38:VAL:HB	37:RR:39:PRO:HD3	1.99	0.44
40:RU:76:TYR:CZ	40:RU:80:ILE:HG13	2.51	0.44
40:RU:99:ALA:HB2	40:RU:106:PHE:CD1	2.52	0.44
47:R1:40:ARG:NH2	47:R1:42:GLN:HG2	2.32	0.44
1:XA:501:C:H2'	1:XA:502:G:C8	2.52	0.44
1:XA:983:A:H5''	1:XA:984:C:OP2	2.16	0.44
1:XA:1163:C:H2'	1:XA:1164:G:C8	2.53	0.44
3:XC:179:ARG:NH1	3:XC:207:VAL:HG22	2.33	0.44
8:XH:4:ASP:OD2	8:XH:89:PRO:HD3	2.18	0.44
11:XK:111:ASP:OD2	18:XR:84:LYS:HD2	2.17	0.44
24:XY:50:ILE:HG13	24:XY:51:TYR:CD1	2.53	0.44
25:YA:270(N):G:O2'	25:YA:270(O):U:H5'	2.18	0.44
25:YA:1024:G:C8	25:YA:1025:G:H2'	2.52	0.44
25:YA:1688:U:H1'	25:YA:1701:A:C6	2.52	0.44
25:YA:2661:G:H2'	25:YA:2662:A:C8	2.52	0.44
29:YF:18:ARG:HG2	29:YF:19:GLU:H	1.82	0.44
34:YO:87:ILE:HG22	34:YO:88:ASN:O	2.18	0.44
35:YP:9:ASN:OD1	35:YP:9:ASN:N	2.46	0.44
45:YZ:135:GLU:H	45:YZ:135:GLU:HG2	1.60	0.44
1:QA:45:U:H2'	1:QA:46:G:C8	2.52	0.44
1:QA:540:G:H2'	1:QA:541:G:O4'	2.18	0.44
1:QA:982:U:H5''	14:QN:6:LEU:HD11	1.98	0.44
1:QA:1306:A:N6	1:QA:1331:G:O2'	2.50	0.44
2:QB:189:ASP:O	2:QB:191:ASP:N	2.50	0.44
14:QN:27:CYS:HB3	14:QN:28:GLY:H	1.44	0.44
20:QT:92:LEU:HD13	20:QT:92:LEU:HA	1.84	0.44
23:QX:5:A:H2'	23:QX:6:G:C8	2.52	0.44
25:RA:270(F):U:H2'	25:RA:270(G):C:C6	2.53	0.44
25:RA:601:C:O2'	25:RA:605:C:H5''	2.17	0.44
25:RA:1265:A:H8	25:RA:1265:A:OP1	2.00	0.44
25:RA:1952:A:C6	25:RA:1953:A:N1	2.86	0.44
25:RA:2086:U:H2'	25:RA:2087:G:C8	2.52	0.44
25:RA:2395:C:H2'	25:RA:2396:G:O4'	2.18	0.44
29:RF:1:MET:HE2	29:RF:2:LYS:HE3	1.99	0.44
33:RN:17:ASP:OD2	33:RN:56:ASN:ND2	2.29	0.44
38:RS:14:VAL:HG21	38:RS:89:ARG:HD3	1.99	0.44
44:RY:7:VAL:HG21	44:RY:37:VAL:HG11	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RZ:52:SER:C	45:RZ:54:HIS:H	2.26	0.44
1:XA:250:A:H4'	1:XA:251:G:O5'	2.15	0.44
1:XA:998:G:H2'	1:XA:998(A):C:C6	2.53	0.44
1:XA:1434:A:H2'	1:XA:1435:G:O4'	2.17	0.44
1:XA:1494:G:HO2'	25:YA:1912:A:HO2'	1.65	0.44
3:XC:52:LEU:HD23	3:XC:52:LEU:H	1.82	0.44
8:XH:21:LYS:O	8:XH:65:TYR:OH	2.20	0.44
12:XL:45:PRO:HG2	12:XL:49:ASN:O	2.17	0.44
20:XT:10:LEU:HD22	20:XT:11:SER:N	2.32	0.44
24:XY:37:ILE:HD11	24:XY:66:ILE:HD11	1.99	0.44
25:YA:589:C:H2'	25:YA:590:A:C8	2.53	0.44
25:YA:2844:G:H3'	25:YA:2845:G:H8	1.82	0.44
27:YD:69:ARG:NH1	27:YD:128:GLY:O	2.46	0.44
29:YF:149:ASP:OD1	29:YF:149:ASP:N	2.43	0.44
31:YH:20:ALA:O	31:YH:22:GLY:N	2.51	0.44
40:YU:50:ARG:HH11	41:YV:72:VAL:CG1	2.31	0.44
44:YY:5:MET:HE3	44:YY:5:MET:HB2	1.79	0.44
47:Y1:93:GLU:HG2	47:Y1:98:LEU:HD11	1.99	0.44
50:Y4:13:ARG:N	50:Y4:24:THR:OG1	2.51	0.44
50:Y4:55:ARG:HE	50:Y4:56:VAL:N	2.16	0.44
52:Y6:15:GLU:CD	52:Y6:44:ARG:HH12	2.25	0.44
1:QA:1032(A):G:H2'	1:QA:1032(B):G:C8	2.53	0.44
1:QA:1121:U:H2'	1:QA:1122:U:C6	2.52	0.44
1:QA:1217:C:OP1	14:QN:9:LYS:HE3	2.18	0.44
2:QB:21:ARG:NH2	2:QB:38:GLY:HA3	2.32	0.44
3:QC:71:ALA:HB2	3:QC:115:LEU:HD13	1.99	0.44
8:QH:29:SER:HB3	8:QH:32:LYS:HG3	1.99	0.44
15:QO:26:GLU:OE2	15:QO:77:ARG:HD2	2.18	0.44
20:QT:32:ALA:O	20:QT:36:LEU:HB2	2.18	0.44
22:QW:15:G:H2'	22:QW:59:A:H2	1.80	0.44
25:RA:547:A:H2'	25:RA:548:A:C8	2.52	0.44
25:RA:1213:A:N3	25:RA:1238:G:O2'	2.43	0.44
25:RA:2327:A:H2'	25:RA:2328:A:C8	2.52	0.44
25:RA:2543:G:H2'	25:RA:2544:G:O4'	2.17	0.44
26:RB:34:U:H5''	26:RB:35:U:OP1	2.18	0.44
27:RD:4:LYS:NZ	27:RD:20:ASP:HA	2.32	0.44
27:RD:97:TYR:HE1	27:RD:103:ARG:HG3	1.83	0.44
30:RG:86:MET:HA	30:RG:87:PRO:HD2	1.74	0.44
42:RW:29:LEU:HD21	42:RW:33:ARG:NH2	2.32	0.44
1:XA:7:G:H2'	5:XE:119:LEU:HD22	2.00	0.44
1:XA:35:G:H2'	1:XA:36:C:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:335:C:H2'	1:XA:336:C:C6	2.52	0.44
1:XA:629:G:H2'	1:XA:630:G:O4'	2.18	0.44
1:XA:1347:G:C8	9:XI:107:ARG:HB3	2.53	0.44
25:YA:320:A:OP2	29:YF:137:LYS:HD2	2.18	0.44
25:YA:687:C:H2'	25:YA:688:U:O4'	2.16	0.44
25:YA:828:U:H4'	25:YA:831:G:N1	2.33	0.44
25:YA:2102:U:H2'	25:YA:2103:C:C6	2.53	0.44
25:YA:2145:C:H5''	25:YA:2146:C:C5	2.53	0.44
25:YA:2393:A:H5'	35:YP:62:LEU:HD23	1.98	0.44
25:YA:2469:A:O2'	36:YQ:56:ARG:NE	2.51	0.44
27:YD:144:ALA:HB3	27:YD:192:THR:HG23	2.00	0.44
36:YQ:55:VAL:HG23	36:YQ:64:ILE:HD11	1.98	0.44
36:YQ:103:MET:H	36:YQ:103:MET:HG3	1.53	0.44
42:YW:46:PHE:O	42:YW:50:VAL:HG12	2.17	0.44
45:YZ:29:TYR:CE2	45:YZ:87:ASP:HB2	2.52	0.44
45:YZ:40:ASP:HB3	45:YZ:43:GLU:HG3	2.00	0.44
1:QA:411:A:N9	1:QA:413:G:H1'	2.33	0.44
1:QA:501:C:H2'	1:QA:502:G:H8	1.81	0.44
1:QA:624:C:H2'	1:QA:625:G:C8	2.53	0.44
1:QA:737:A:H5''	6:QF:92:LYS:HG3	2.00	0.44
1:QA:1494:G:O2'	25:RA:1913:A:OP1	2.36	0.44
2:QB:87:ARG:NH2	2:QB:233:SER:HB2	2.33	0.44
2:QB:163:PHE:HA	2:QB:185:ILE:HG13	1.98	0.44
4:QD:9:CYS:SG	4:QD:32:ALA:HB2	2.58	0.44
6:QF:82:ARG:HB2	6:QF:85:VAL:HG22	2.00	0.44
12:QL:53:ARG:NH1	12:QL:92:ASP:OD2	2.40	0.44
25:RA:470:A:OP1	29:RF:59:TYR:HE2	2.00	0.44
25:RA:1688:U:H1'	25:RA:1701:A:C6	2.52	0.44
27:RD:108:PRO:HA	27:RD:196:VAL:HA	1.99	0.44
34:RO:68:GLU:HB3	34:RO:78:ARG:HB2	1.98	0.44
40:RU:100:VAL:O	40:RU:101:ARG:HG2	2.17	0.44
1:XA:912:C:H2'	1:XA:913:A:H5'	1.96	0.44
1:XA:946:A:H2'	1:XA:947:G:C8	2.53	0.44
8:XH:42:GLU:HG3	8:XH:109:ILE:HD12	2.00	0.44
13:XM:9:ILE:CG1	13:XM:10:PRO:N	2.81	0.44
16:XP:34:GLU:OE2	16:XP:55:ARG:HD3	2.17	0.44
25:YA:1805:U:O2	27:YD:50:THR:HB	2.18	0.44
25:YA:1931:U:OP2	25:YA:1968:G:N1	2.35	0.44
25:YA:2345:G:N3	25:YA:2381:C:H2'	2.33	0.44
25:YA:2712:U:OP1	25:YA:2714:G:H4'	2.18	0.44
27:YD:206:LEU:HD23	27:YD:206:LEU:HA	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:11:MET:SD	28:YE:24:THR:HG22	2.58	0.44
34:YO:104:ARG:NE	39:YT:34:VAL:HG11	2.32	0.44
44:YY:56:PRO:O	44:YY:57:GLN:HB2	2.17	0.44
1:QA:501:C:H1'	1:QA:549:C:H1'	2.00	0.44
1:QA:1008:C:H42	1:QA:1021:G:H1	1.65	0.44
2:QB:178:ARG:HH22	8:QH:74:PRO:HB3	1.83	0.44
5:QE:92:LYS:HA	5:QE:93:PRO:HD2	1.89	0.44
10:QJ:99:LYS:HD3	10:QJ:100:THR:H	1.83	0.44
12:QL:110:VAL:HG23	12:QL:120:TYR:HB3	2.00	0.44
20:QT:25:ARG:HG2	20:QT:29:LYS:NZ	2.33	0.44
22:QW:41:C:H2'	22:QW:42:G:C8	2.52	0.44
25:RA:394:A:N6	25:RA:395:U:O4	2.50	0.44
25:RA:1417:C:H2'	25:RA:1418:G:O4'	2.17	0.44
25:RA:1899:G:H2'	25:RA:1899:G:N3	2.33	0.44
25:RA:2562:U:O2'	34:RO:23:ARG:NH1	2.49	0.44
25:RA:2691:C:O3'	25:RA:2871:C:H4'	2.18	0.44
25:RA:2757:A:OP1	55:R9:19:ARG:HA	2.17	0.44
29:RF:34:TRP:HB2	35:RP:6:LEU:HD12	1.99	0.44
29:RF:140:LEU:HD13	29:RF:170:LEU:HD21	1.98	0.44
32:RI:12:LEU:HG	32:RI:19:VAL:HG11	2.00	0.44
1:XA:553:A:H2'	1:XA:554:C:C6	2.53	0.44
1:XA:1148:U:H2'	1:XA:1149:C:O4'	2.18	0.44
1:XA:1189:C:H5''	3:XC:5:ILE:HG21	2.00	0.44
19:XS:45:VAL:C	19:XS:47:HIS:H	2.24	0.44
25:YA:197:A:N6	25:YA:2430:A:H2'	2.32	0.44
25:YA:1183:G:O3'	49:Y3:29:ARG:NH2	2.40	0.44
25:YA:2467:C:H4'	36:YQ:123:HIS:CE1	2.53	0.44
25:YA:2758:A:H2'	25:YA:2759:G:O4'	2.17	0.44
29:YF:140:LEU:HD13	29:YF:170:LEU:HD21	1.99	0.44
30:YG:55:LYS:O	30:YG:59:GLU:HB2	2.17	0.44
32:YI:95:LYS:HE2	32:YI:95:LYS:HB3	1.86	0.44
32:YI:141:LYS:CB	32:YI:142:VAL:HG13	2.46	0.44
34:YO:8:LEU:HB2	34:YO:19:ILE:HG13	2.00	0.44
34:YO:47:ILE:HG13	34:YO:48:PRO:HD2	1.98	0.44
35:YP:21:ARG:HB3	35:YP:22:GLY:H	1.66	0.44
38:YS:62:LYS:HD3	38:YS:97:ARG:NH1	2.33	0.44
48:Y2:47:ASN:HB2	48:Y2:48:HIS:H	1.54	0.44
50:Y4:5:ILE:HD12	50:Y4:5:ILE:HA	1.88	0.44
53:Y7:9:ARG:HH12	53:Y7:47:ARG:HH12	1.65	0.44
1:QA:129(A):G:N2	1:QA:188:U:O2'	2.51	0.44
1:QA:1320:C:C4	19:QS:36:ARG:HG2	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:184:VAL:HG12	2:QB:197:VAL:HG13	2.00	0.44
6:QF:76:ALA:O	6:QF:80:ARG:HG3	2.17	0.44
17:QQ:57:VAL:HG12	17:QQ:76:LEU:HA	2.00	0.44
25:RA:265:A:N1	25:RA:427:U:O2'	2.49	0.44
25:RA:1255:U:H5''	25:RA:1256:G:H5''	1.99	0.44
25:RA:2287:A:H62	25:RA:2344:U:H3	1.66	0.44
28:RE:58:ARG:HA	28:RE:58:ARG:NH2	2.32	0.44
30:RG:99:MET:HE3	30:RG:99:MET:HB2	1.62	0.44
35:RP:52:GLU:CD	35:RP:52:GLU:H	2.26	0.44
35:RP:97:PRO:HD3	35:RP:126:VAL:O	2.18	0.44
41:RV:40:LEU:HD23	41:RV:40:LEU:HA	1.86	0.44
1:XA:878:G:H5'	8:XH:89:PRO:HG2	2.00	0.44
1:XA:922:G:H2'	1:XA:923:A:C8	2.53	0.44
1:XA:1028(A):C:H2'	1:XA:1028(B):C:C6	2.53	0.44
1:XA:1067:A:O2'	1:XA:1094:G:H5'	2.18	0.44
1:XA:1190:G:H5''	3:XC:176:HIS:CE1	2.53	0.44
2:XB:15:VAL:HG21	2:XB:209:ARG:HB3	1.99	0.44
4:XD:111:ALA:HB1	4:XD:116:GLN:HG2	2.00	0.44
6:XF:97:PHE:HD2	18:XR:31:LEU:HD11	1.83	0.44
7:XG:77:SER:HB2	22:XW:32:C:O2'	2.17	0.44
9:XI:103:THR:HG22	9:XI:105:ASP:H	1.83	0.44
13:XM:93:ARG:HA	13:XM:93:ARG:HD3	1.64	0.44
21:XU:2:GLY:O	21:XU:4:GLY:N	2.51	0.44
22:XV:47:U:H3'	22:XV:48:C:H5'	2.00	0.44
25:YA:531:C:H4'	25:YA:532:A:H5''	1.99	0.44
25:YA:972:G:OP1	25:YA:974:G:H5'	2.17	0.44
25:YA:990:A:H5'	25:YA:990:A:H8	1.83	0.44
25:YA:1444:G:H2'	25:YA:1445:C:C5	2.53	0.44
25:YA:2277:G:OP1	36:YQ:85:LYS:HB3	2.18	0.44
25:YA:2817:G:OP1	37:YR:99:LYS:HE2	2.18	0.44
27:YD:260:ARG:NH1	27:YD:267:SER:OG	2.51	0.44
31:YH:52:VAL:O	31:YH:65:HIS:NE2	2.42	0.44
35:YP:11:GLY:C	35:YP:13:ASN:H	2.26	0.44
1:QA:67:C:H2'	1:QA:68:G:C8	2.53	0.44
1:QA:323:U:H2'	1:QA:324:G:O4'	2.17	0.44
1:QA:437:U:H5'	4:QD:155:LEU:HD21	2.00	0.44
1:QA:836:G:C6	1:QA:851:G:C6	3.05	0.44
12:QL:85:ILE:HD12	12:QL:85:ILE:HA	1.85	0.44
25:RA:910:A:C6	25:RA:911:A:C6	3.06	0.44
25:RA:1416:G:H2'	25:RA:1417:C:H6	1.83	0.44
25:RA:1872:A:H5'	25:RA:1878:G:OP2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2022:U:O2'	25:RA:2617:C:H5'	2.18	0.44
26:RB:87:G:H2'	26:RB:88:C:H5''	2.00	0.44
27:RD:142:VAL:HG23	27:RD:193:VAL:HA	1.99	0.44
31:RH:86:GLU:OE1	31:RH:86:GLU:N	2.51	0.44
45:RZ:171:ILE:HD13	45:RZ:172:ALA:N	2.33	0.44
54:R8:54:GLU:OE2	54:R8:55:ALA:N	2.50	0.44
1:XA:413:G:N2	1:XA:428:G:H1'	2.33	0.44
1:XA:697:U:H5''	1:XA:698:G:OP2	2.17	0.44
1:XA:833:U:H2'	1:XA:834:C:C6	2.53	0.44
2:XB:119:GLU:CD	2:XB:153:ARG:HH22	2.23	0.44
2:XB:135:GLN:HG3	2:XB:136:VAL:HG23	1.98	0.44
3:XC:164:ARG:HG2	3:XC:165:THR:H	1.83	0.44
6:XF:86:ARG:O	6:XF:87:ARG:HG2	2.18	0.44
9:XI:29:ASN:HB3	9:XI:30:GLY:H	1.64	0.44
10:XJ:57:LYS:HD3	10:XJ:57:LYS:HA	1.80	0.44
15:XO:70:LEU:HD11	15:XO:77:ARG:HG3	1.98	0.44
25:YA:782:A:N7	27:YD:221:VAL:HG21	2.33	0.44
25:YA:970:C:H2'	25:YA:971:C:C6	2.53	0.44
25:YA:1101:U:H2'	25:YA:1102:C:C6	2.52	0.44
25:YA:1109:C:N3	25:YA:1110:G:N2	2.66	0.44
25:YA:1112:G:H2'	25:YA:1113:U:C6	2.53	0.44
25:YA:1681:G:O2'	25:YA:1762:A:O2'	2.31	0.44
25:YA:1754:C:H2'	25:YA:1755:A:O4'	2.18	0.44
25:YA:2128:C:N4	25:YA:2159:G:O6	2.51	0.44
25:YA:2389:G:H5''	25:YA:2390:U:O4'	2.18	0.44
28:YE:23:VAL:O	28:YE:24:THR:OG1	2.34	0.44
32:YI:56:LYS:HA	32:YI:59:ALA:HB3	1.99	0.44
35:YP:101:VAL:HG21	35:YP:108:LYS:HG2	1.99	0.44
41:YV:71:LEU:H	41:YV:86:GLY:CA	2.30	0.44
42:YW:20:VAL:HG22	42:YW:47:VAL:HG21	2.00	0.44
44:YY:97:ARG:NH2	44:YY:98:VAL:HB	2.24	0.44
52:Y6:12:GLU:HA	52:Y6:24:GLU:HG2	2.00	0.44
1:QA:570:G:H1'	1:QA:820:U:C4	2.52	0.43
1:QA:1002:G:N3	1:QA:1003:G:H1'	2.33	0.43
1:QA:1047:G:H5''	14:QN:4:LYS:HG2	1.99	0.43
1:QA:1347:G:C6	9:QI:107:ARG:NH2	2.86	0.43
4:QD:102:ASP:OD2	4:QD:103:ASN:N	2.51	0.43
15:QO:55:GLY:HA2	15:QO:58:MET:HE3	1.99	0.43
19:QS:16:LEU:HA	19:QS:19:VAL:HG12	1.98	0.43
25:RA:748:G:C8	42:RW:89:ALA:HB1	2.53	0.43
25:RA:921:G:H4'	25:RA:2269:A:C5	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2394:C:OP1	35:RP:63:PRO:HD2	2.18	0.43
25:RA:2439:A:H5'	25:RA:2439:A:C8	2.52	0.43
28:RE:8:LYS:O	28:RE:10:GLY:N	2.50	0.43
31:RH:152:ARG:C	31:RH:154:PRO:HD3	2.43	0.43
32:RI:48:GLU:HA	32:RI:51:ILE:HB	1.99	0.43
32:RI:92:VAL:HB	32:RI:120:ILE:HB	1.99	0.43
35:RP:52:GLU:OE1	35:RP:53:GLY:N	2.51	0.43
35:RP:62:LEU:HD21	54:R8:30:ARG:HD2	1.99	0.43
38:RS:110:LEU:HB3	38:RS:111:GLU:H	1.51	0.43
44:RY:75:ILE:CG1	44:RY:76:CYS:N	2.80	0.43
46:R0:11:ARG:O	46:R0:14:ARG:NH1	2.37	0.43
47:R1:62:VAL:HG23	47:R1:63:ALA:O	2.18	0.43
48:R2:47:ASN:C	48:R2:49:LYS:H	2.26	0.43
1:XA:359:U:H2'	1:XA:360:A:C8	2.53	0.43
2:XB:93:VAL:HG11	2:XB:97:TRP:CD1	2.53	0.43
17:XQ:45:HIS:HB2	17:XQ:65:ILE:HD12	1.98	0.43
25:YA:1858:G:H1'	25:YA:1884:A:H61	1.83	0.43
25:YA:1979:C:H2'	25:YA:1980:G:H5'	1.99	0.43
25:YA:2115:G:H5''	25:YA:2167:U:C4	2.53	0.43
25:YA:2712:U:O2'	25:YA:2712(A):A:C8	2.70	0.43
25:YA:2815:C:O2'	51:Y5:43:HIS:ND1	2.43	0.43
25:YA:2823:A:OP1	28:YE:113:PHE:HB2	2.17	0.43
29:YF:28:ILE:O	29:YF:30:PRO:HD3	2.17	0.43
45:YZ:150:LEU:HG	45:YZ:171:ILE:HG22	2.00	0.43
51:Y5:4:HIS:CB	51:Y5:5:PRO:CD	2.85	0.43
51:Y5:16:ARG:NH1	51:Y5:17:ASP:OD1	2.51	0.43
3:QC:7:PRO:O	3:QC:11:ARG:HG2	2.18	0.43
19:QS:71:LEU:O	19:QS:73:GLU:N	2.51	0.43
24:QY:91:TYR:C	24:QY:91:TYR:CD2	2.96	0.43
25:RA:6:A:C2	25:RA:7:G:C5	3.06	0.43
25:RA:848:G:O6	25:RA:929:G:H2'	2.18	0.43
25:RA:1076:C:H2'	25:RA:1077:A:O4'	2.17	0.43
25:RA:1688:U:H5'	25:RA:1689:A:OP1	2.18	0.43
25:RA:2439:A:H3'	25:RA:2439:A:P	2.57	0.43
25:RA:2584:U:H6	25:RA:2585:U:C5	2.37	0.43
25:RA:2639:A:H2'	25:RA:2640:G:O4'	2.17	0.43
26:RB:45:A:OP1	30:RG:96:ARG:HD2	2.19	0.43
29:RF:33:LEU:HD13	29:RF:112:MET:HE2	1.99	0.43
34:RO:10:VAL:HG22	34:RO:17:ARG:O	2.19	0.43
35:RP:52:GLU:HB2	35:RP:53:GLY:H	1.49	0.43
35:RP:126:VAL:HG22	35:RP:145:PRO:HG2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:R6:14:THR:HG1	52:R6:15:GLU:H	1.61	0.43
54:R8:34:TRP:CG	54:R8:35:GLN:N	2.83	0.43
1:XA:827:U:H3	1:XA:872:A:H62	1.66	0.43
1:XA:1251:A:N3	1:XA:1369:C:O2'	2.40	0.43
1:XA:1313:U:OP2	19:XS:6:LYS:HB3	2.18	0.43
8:XH:99:GLU:OE1	8:XH:99:GLU:N	2.51	0.43
9:XI:20:ARG:HB2	9:XI:60:ASP:HB2	1.99	0.43
12:XL:47:LYS:HB3	12:XL:48:PRO:HD3	2.00	0.43
18:XR:41:LYS:HE3	18:XR:41:LYS:HB3	1.84	0.43
22:XW:5:G:N2	22:XW:69:C:O2	2.51	0.43
24:XY:46:LEU:O	24:XY:53:LEU:HD22	2.18	0.43
25:YA:176:G:O2'	25:YA:177:G:H5'	2.18	0.43
25:YA:214:G:O2'	25:YA:215:G:O4'	2.26	0.43
25:YA:1171:G:O2'	25:YA:1173:G:O5'	2.30	0.43
25:YA:1448:G:O2'	25:YA:1528:A:N6	2.51	0.43
25:YA:2751:G:N7	31:YH:2:SER:HB2	2.33	0.43
30:YG:53:LEU:HG	30:YG:90:LEU:HD21	2.01	0.43
32:YI:141:LYS:CB	32:YI:142:VAL:HG22	2.47	0.43
33:YN:46:VAL:HG13	33:YN:48:MET:HG3	2.00	0.43
40:YU:52:ARG:HB3	40:YU:52:ARG:NH1	2.33	0.43
54:Y8:25:MET:SD	54:Y8:47:LYS:HG2	2.58	0.43
1:QA:62:U:H2'	1:QA:63:C:C6	2.53	0.43
1:QA:403:C:O2'	4:QD:122:ARG:NH1	2.52	0.43
1:QA:404:U:H2'	1:QA:405:U:C6	2.53	0.43
1:QA:826:C:H2'	1:QA:827:U:C6	2.54	0.43
6:QF:35:ALA:HA	6:QF:67:MET:HB3	2.00	0.43
12:QL:71:PRO:HD2	12:QL:102:ARG:HD2	2.00	0.43
15:QO:23:GLY:O	15:QO:27:VAL:HB	2.18	0.43
25:RA:2343:C:H2'	25:RA:2344:U:C6	2.54	0.43
25:RA:2355:C:H4'	46:R0:36:ILE:HD11	1.99	0.43
26:RB:87:G:N2	26:RB:89:G:H5''	2.34	0.43
28:RE:52:LEU:HD12	28:RE:76:ARG:HD3	2.00	0.43
32:RI:2:LYS:HA	32:RI:20:ASP:HA	1.99	0.43
35:RP:39:LYS:HG3	35:RP:45:LEU:HD22	1.99	0.43
44:RY:17:SER:CB	44:RY:71:LYS:HB3	2.48	0.43
48:R2:42:GLY:O	48:R2:44:LEU:N	2.40	0.43
54:R8:38:GLY:O	54:R8:41:ILE:HG22	2.18	0.43
1:XA:1053:G:O6	1:XA:1199:U:H2'	2.18	0.43
25:YA:738:G:H3'	25:YA:739:G:C8	2.53	0.43
25:YA:2103:C:N4	25:YA:2104:G:O6	2.51	0.43
25:YA:2533:A:H2'	25:YA:2534:A:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:117:ARG:HD3	29:YF:117:ARG:HA	1.71	0.43
1:QA:222:U:H2'	1:QA:223:U:C6	2.53	0.43
1:QA:521:G:O5'	12:QL:73:GLU:HG2	2.18	0.43
1:QA:1070:U:OP1	5:QE:18:ARG:NH1	2.52	0.43
7:QG:16:LEU:HD21	9:QI:42:ARG:HA	2.00	0.43
11:QK:15:ALA:HB2	11:QK:76:GLY:O	2.18	0.43
15:QO:36:ILE:HG23	15:QO:56:LEU:HD11	2.00	0.43
22:QW:12:G:H2'	22:QW:13:C:C6	2.54	0.43
25:RA:1759:A:C8	25:RA:2696:U:H1'	2.53	0.43
25:RA:1797:C:H4'	27:RD:257:LEU:O	2.17	0.43
25:RA:2561:A:H2'	25:RA:2562:U:O4'	2.18	0.43
25:RA:2821:A:O2'	25:RA:2826:A:N1	2.51	0.43
26:RB:57:A:H1'	30:RG:29:TRP:HB2	2.00	0.43
28:RE:12:THR:HB	28:RE:13:ARG:H	1.59	0.43
28:RE:117:MET:O	28:RE:117:MET:HG2	2.19	0.43
29:RF:46:ARG:HG2	29:RF:46:ARG:HH11	1.83	0.43
35:RP:14:LYS:C	35:RP:16:ARG:H	2.26	0.43
39:RT:125:ARG:HA	39:RT:125:ARG:HD3	1.78	0.43
42:RW:5:ALA:HB3	42:RW:54:ALA:HB2	2.00	0.43
1:XA:299:G:H2'	1:XA:300:A:C8	2.53	0.43
2:XB:6:THR:HG23	2:XB:217:ARG:HB3	2.00	0.43
10:XJ:33:GLN:H	10:XJ:75:ILE:HD11	1.83	0.43
25:YA:685:A:O2'	25:YA:773:U:O4	2.29	0.43
25:YA:2016:U:H1'	51:Y5:6:VAL:HG12	2.00	0.43
27:YD:10:THR:OG1	27:YD:13:ARG:HB2	2.18	0.43
1:QA:411:A:N6	1:QA:413:G:H21	2.17	0.43
1:QA:707:C:H2'	1:QA:708:C:C6	2.54	0.43
2:QB:135:GLN:HE21	2:QB:135:GLN:HB2	1.70	0.43
5:QE:35:GLY:HA3	5:QE:112:LEU:HB3	1.99	0.43
25:RA:546:C:H2'	25:RA:547:A:O4'	2.19	0.43
25:RA:654(T):C:H2'	25:RA:654(U):A:O4'	2.19	0.43
25:RA:1105:U:H2'	25:RA:1106:G:C8	2.53	0.43
25:RA:2410:G:C2	25:RA:2411:A:H1'	2.54	0.43
26:RB:12:C:O4'	26:RB:15:A:N6	2.51	0.43
28:RE:154:LYS:HA	28:RE:154:LYS:HE3	1.99	0.43
30:RG:82:LEU:HA	30:RG:86:MET:SD	2.57	0.43
41:RV:5:VAL:HG23	41:RV:37:VAL:HG11	2.00	0.43
41:RV:89:GLN:HA	41:RV:90:PRO:HD3	1.89	0.43
44:RY:75:ILE:CG1	44:RY:80:GLY:N	2.62	0.43
44:RY:95:LYS:O	44:RY:95:LYS:HD3	2.18	0.43
54:R8:22:VAL:HB	54:R8:50:LEU:HD12	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:176:C:H2'	1:XA:177:C:C6	2.52	0.43
1:XA:625:G:H2'	1:XA:626:U:C6	2.54	0.43
3:XC:153:VAL:HG22	3:XC:198:VAL:HG22	1.99	0.43
7:XG:47:CYS:O	7:XG:50:ILE:HB	2.18	0.43
19:XS:5:LEU:H	19:XS:5:LEU:HD12	1.84	0.43
20:XT:77:ALA:O	20:XT:81:LYS:HB2	2.18	0.43
25:YA:198:C:O2'	25:YA:199:A:H5'	2.18	0.43
25:YA:530:G:N1	25:YA:2023:G:OP1	2.30	0.43
25:YA:1578:U:C2'	25:YA:1579:A:H5'	2.48	0.43
25:YA:2270:G:H2'	25:YA:2271:G:O4'	2.18	0.43
25:YA:2687:U:H2'	25:YA:2688:U:O4'	2.19	0.43
25:YA:2774:C:H2'	25:YA:2775:A:O4'	2.18	0.43
26:YB:42:C:O2	30:YG:93:THR:N	2.51	0.43
28:YE:60:ASN:O	28:YE:62:PRO:HD3	2.18	0.43
30:YG:114:ILE:HG12	30:YG:140:ILE:HD13	2.00	0.43
32:YI:4:ILE:HG12	32:YI:18:VAL:HG22	2.00	0.43
37:YR:116:LEU:HD23	37:YR:116:LEU:HA	1.83	0.43
41:YV:71:LEU:H	41:YV:86:GLY:HA3	1.83	0.43
46:Y0:3:HIS:O	46:Y0:4:LYS:HG3	2.19	0.43
1:QA:179:A:H2'	1:QA:180:U:C6	2.54	0.43
1:QA:252:U:H2'	1:QA:275:G:N2	2.34	0.43
1:QA:1157:A:O2'	1:QA:1158:C:C2	2.72	0.43
3:QC:40:ARG:NH2	3:QC:55:VAL:O	2.51	0.43
5:QE:13:ILE:CD1	5:QE:51:VAL:HG12	2.46	0.43
11:QK:29:ILE:HB	11:QK:44:SER:HB3	2.00	0.43
13:QM:96:LEU:C	13:QM:110:ARG:HE	2.26	0.43
16:QP:43:LYS:HG2	16:QP:48:TRP:CD2	2.53	0.43
17:QQ:58:GLU:O	17:QQ:74:LEU:N	2.50	0.43
19:QS:48:THR:HG22	19:QS:61:TYR:HD1	1.82	0.43
25:RA:644:A:H4'	25:RA:645:C:C5	2.54	0.43
25:RA:1024:G:C3'	25:RA:1025:G:H5''	2.45	0.43
25:RA:1062:G:H2'	25:RA:1063:G:C8	2.54	0.43
25:RA:1085:A:O2'	25:RA:1086:A:OP1	2.34	0.43
25:RA:2000:G:OP1	37:RR:5:LYS:NZ	2.38	0.43
25:RA:2064:C:H2'	25:RA:2065:C:C6	2.54	0.43
25:RA:2505:G:O6	25:RA:2576:G:H2'	2.18	0.43
25:RA:2712:U:O2'	25:RA:2712(A):A:OP2	2.30	0.43
25:RA:2751:G:OP2	31:RH:3:ARG:HA	2.19	0.43
25:RA:2869:G:H2'	25:RA:2870:C:C6	2.54	0.43
26:RB:5:C:O2'	26:RB:27:C:O2	2.36	0.43
28:RE:61:ARG:C	28:RE:63:LEU:N	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:129:PHE:CG	29:RF:163:VAL:HG21	2.53	0.43
36:RQ:81:VAL:HG23	46:R0:7:LEU:HD11	2.00	0.43
1:XA:1330:U:H3'	1:XA:1331:G:O4'	2.17	0.43
2:XB:13:ALA:C	2:XB:15:VAL:H	2.27	0.43
13:XM:59:TYR:O	13:XM:63:THR:OG1	2.27	0.43
20:XT:23:ARG:O	20:XT:27:LYS:HB2	2.18	0.43
25:YA:443:A:H1'	25:YA:1201:C:O4'	2.17	0.43
25:YA:570:G:H2'	25:YA:2030:A:C5	2.53	0.43
25:YA:2232:U:OP2	47:Y1:40:ARG:NH2	2.50	0.43
25:YA:2261:C:OP1	46:Y0:17:GLN:HB2	2.18	0.43
25:YA:2415:G:H4'	35:YP:67:MET:N	2.33	0.43
28:YE:38:THR:O	28:YE:42:ASP:N	2.50	0.43
29:YF:125:LEU:HD12	29:YF:196:LEU:HD23	2.00	0.43
35:YP:49:ARG:HD2	54:Y8:58:ILE:CG2	2.49	0.43
39:YT:65:LYS:HE3	39:YT:67:SER:HB2	2.00	0.43
43:YX:8:ILE:O	48:Y2:36:ARG:NH2	2.52	0.43
1:QA:15:G:C4	1:QA:16:A:C8	3.06	0.43
1:QA:267:C:P	17:QQ:67:LYS:HB2	2.59	0.43
1:QA:452:A:O2'	1:QA:453:A:O4'	2.35	0.43
1:QA:518:C:H2'	1:QA:530:G:H8	1.83	0.43
1:QA:1314:C:H2'	1:QA:1315:U:C6	2.54	0.43
13:QM:16:ASP:OD2	13:QM:16:ASP:N	2.50	0.43
25:RA:69:C:O2	25:RA:69:C:O4'	2.32	0.43
25:RA:1047:G:H2'	25:RA:1110:G:N1	2.34	0.43
25:RA:1930:G:N2	25:RA:1968:G:H2'	2.34	0.43
25:RA:2887:U:H2'	25:RA:2888:C:H6	1.84	0.43
27:RD:35:LYS:HB3	27:RD:63:ARG:HA	2.01	0.43
30:RG:112:PRO:HG2	50:R4:37:SER:CB	2.49	0.43
31:RH:44:VAL:HG22	31:RH:51:ARG:NH1	2.33	0.43
33:RN:12:ARG:O	33:RN:50:ASP:HB2	2.18	0.43
35:RP:98:GLU:O	35:RP:101:VAL:HG12	2.18	0.43
37:RR:103:ARG:HD3	37:RR:103:ARG:HA	1.82	0.43
38:RS:19:LYS:O	38:RS:21:THR:N	2.50	0.43
41:RV:2:PHE:HD2	41:RV:42:GLY:HA2	1.82	0.43
53:R7:47:ARG:HH11	53:R7:47:ARG:H	1.66	0.43
1:XA:1013:G:N2	1:XA:1016:A:OP2	2.39	0.43
1:XA:1151:A:HO2'	10:XJ:70:ARG:HH12	1.66	0.43
1:XA:1163:C:H2'	1:XA:1164:G:H8	1.83	0.43
1:XA:1293:G:H2'	1:XA:1294:G:C8	2.54	0.43
2:XB:163:PHE:HA	2:XB:185:ILE:HG13	2.01	0.43
5:XE:5:ASP:N	5:XE:5:ASP:OD1	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:113:GLU:H	7:XG:113:GLU:HG2	1.57	0.43
21:XU:15:ARG:HD3	21:XU:15:ARG:HA	1.82	0.43
22:XW:16:C:H4'	22:XW:60:U:H4'	2.00	0.43
25:YA:1112:G:H5'	31:YH:3:ARG:HE	1.83	0.43
25:YA:1568:G:H4'	27:YD:59:LYS:HB3	1.99	0.43
25:YA:2074:U:H2'	25:YA:2075:U:C6	2.54	0.43
25:YA:2343:C:HO2'	25:YA:2373:G:HO2'	1.59	0.43
25:YA:2757:A:OP1	55:Y9:19:ARG:HA	2.19	0.43
26:YB:29:A:H2'	26:YB:30:C:O4'	2.18	0.43
31:YH:7:LEU:HD13	31:YH:69:ARG:HB3	2.00	0.43
31:YH:33:LEU:HD12	31:YH:33:LEU:HA	1.78	0.43
34:YO:68:GLU:H	34:YO:68:GLU:CD	2.26	0.43
37:YR:38:VAL:HB	37:YR:39:PRO:HD3	2.00	0.43
38:YS:110:LEU:HB3	38:YS:111:GLU:H	1.52	0.43
39:YT:102:ILE:O	39:YT:106:SER:HB3	2.19	0.43
44:YY:84:ARG:NH2	44:YY:97:ARG:HB2	2.33	0.43
46:Y0:40:GLN:OE1	46:Y0:44:ARG:N	2.51	0.43
47:Y1:84:GLY:O	47:Y1:87:PRO:HD2	2.19	0.43
50:Y4:26:SER:OG	50:Y4:27:THR:N	2.50	0.43
3:QC:22:TRP:CD1	3:QC:59:ARG:HD2	2.53	0.43
4:QD:171:GLY:HA2	4:QD:172:PRO:HD3	1.87	0.43
8:QH:37:ARG:O	8:QH:41:ARG:HB2	2.19	0.43
13:QM:4:ILE:HG23	13:QM:5:ALA:H	1.82	0.43
20:QT:55:ILE:HD13	20:QT:55:ILE:HA	1.87	0.43
23:QX:9:G:HO2'	23:QX:10:G:H8	1.64	0.43
25:RA:34:C:N4	25:RA:454:A:O2'	2.52	0.43
25:RA:1373:A:H2'	25:RA:1374:G:O4'	2.19	0.43
25:RA:1863:G:H2'	25:RA:1864:U:O4'	2.19	0.43
25:RA:2821:A:H2'	25:RA:2822:G:C8	2.53	0.43
27:RD:24:ILE:HD11	27:RD:84:TYR:HB2	2.01	0.43
28:RE:52:LEU:O	28:RE:75:VAL:HG23	2.19	0.43
29:RF:117:ARG:HA	29:RF:117:ARG:HD3	1.57	0.43
36:RQ:32:TYR:CD2	36:RQ:115:MET:HE1	2.54	0.43
36:RQ:65:PHE:O	36:RQ:104:PHE:HA	2.19	0.43
40:RU:8:VAL:HG12	40:RU:11:ARG:NH2	2.34	0.43
44:RY:11:ASP:O	44:RY:27:VAL:HG23	2.19	0.43
45:RZ:159:PRO:HD2	45:RZ:160:GLY:H	1.84	0.43
52:R6:40:CYS:HB3	52:R6:46:HIS:CG	2.53	0.43
1:XA:265:G:N2	1:XA:267:C:H5'	2.34	0.43
1:XA:456:C:H2'	1:XA:457:C:C6	2.54	0.43
1:XA:1104:G:H4'	2:XB:111:ARG:NH2	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1512:U:H2'	1:XA:1513:A:C8	2.54	0.43
12:XL:58:VAL:O	12:XL:65:GLU:HA	2.19	0.43
25:YA:389:G:H1	35:YP:71:VAL:HG12	1.84	0.43
25:YA:593:G:O4'	54:Y8:4:MET:HE1	2.19	0.43
25:YA:933:A:H2'	25:YA:934:G:O4'	2.18	0.43
25:YA:1206:G:C6	25:YA:1207:C:C4	3.07	0.43
25:YA:1796:U:H2'	25:YA:1797:C:C6	2.54	0.43
25:YA:2006:C:H2'	25:YA:2007:C:H6	1.83	0.43
25:YA:2097:C:H2'	25:YA:2098:U:O4'	2.19	0.43
25:YA:2801:A:H2'	25:YA:2802:G:O4'	2.19	0.43
26:YB:42:C:O2'	30:YG:67:LYS:O	2.23	0.43
39:YT:6:LEU:O	39:YT:10:VAL:HG23	2.19	0.43
43:YX:25:LYS:NZ	43:YX:82:GLN:OE1	2.51	0.43
44:YY:5:MET:HE1	44:YY:32:PRO:HA	2.01	0.43
50:Y4:5:ILE:HG13	50:Y4:6:HIS:HB3	2.01	0.43
1:QA:115:G:H4'	1:QA:116:A:O5'	2.17	0.43
1:QA:464:G:N1	1:QA:467:G:OP2	2.48	0.43
1:QA:1347:G:H1'	1:QA:1348:U:OP2	2.19	0.43
2:QB:7:VAL:HG13	2:QB:8:LYS:H	1.84	0.43
25:RA:58:G:H1	25:RA:69:C:H41	1.66	0.43
25:RA:128:C:HO2'	25:RA:129:C:P	2.41	0.43
25:RA:796:C:H2'	25:RA:797:C:C6	2.53	0.43
25:RA:1257:C:H4'	29:RF:83:PHE:CD2	2.53	0.43
28:RE:32:PRO:O	28:RE:49:LEU:HA	2.18	0.43
34:RO:87:ILE:CG2	34:RO:91:LEU:HA	2.49	0.43
36:RQ:2:LEU:H	36:RQ:2:LEU:HD12	1.83	0.43
40:RU:92:ARG:NH2	41:RV:11:GLN:HG3	2.34	0.43
50:R4:55:ARG:H	50:R4:55:ARG:NE	2.17	0.43
52:R6:11:LEU:C	52:R6:24:GLU:HG2	2.43	0.43
1:XA:819:A:H5'	1:XA:820:U:H5	1.84	0.43
1:XA:895:G:H2'	1:XA:896:C:C6	2.54	0.43
1:XA:1158:C:O2	1:XA:1158:C:C3'	2.67	0.43
2:XB:17:PHE:CD2	2:XB:41:ILE:HG23	2.54	0.43
8:XH:121:ASP:OD2	8:XH:122:ARG:HG3	2.19	0.43
9:XI:18:PHE:HB2	9:XI:62:TYR:HB3	2.01	0.43
11:XK:98:LEU:HD23	11:XK:98:LEU:HA	1.87	0.43
12:XL:46:LYS:HB3	12:XL:46:LYS:HE2	1.81	0.43
13:XM:10:PRO:HD2	13:XM:18:ALA:HB1	2.00	0.43
20:XT:58:LYS:HE2	20:XT:62:LEU:HD21	2.00	0.43
25:YA:75:G:H4'	48:Y2:55:ARG:NH2	2.34	0.43
25:YA:363(E):U:H3'	25:YA:363(F):A:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:363(F):A:H1'	25:YA:364:C:H5	1.82	0.43
25:YA:691:C:H2'	25:YA:692:C:H6	1.84	0.43
25:YA:1278:A:H2'	25:YA:1279:G:C8	2.54	0.43
25:YA:2496:C:P	36:YQ:81:VAL:HG13	2.58	0.43
30:YG:10:LYS:HE2	30:YG:175:LEU:O	2.19	0.43
34:YO:104:ARG:HG2	34:YO:121:VAL:HG12	2.01	0.43
36:YQ:63:LYS:HD2	45:YZ:175:VAL:HG21	2.01	0.43
51:Y5:9:LYS:HD3	51:Y5:9:LYS:HA	1.86	0.43
1:QA:976:G:H8	1:QA:1358:U:H2'	1.83	0.43
1:QA:1033:G:HO2'	1:QA:1034:G:P	2.40	0.43
1:QA:1145:C:O2'	1:QA:1146:A:N7	2.40	0.43
1:QA:1342:C:H2'	1:QA:1343:G:C8	2.54	0.43
10:QJ:4:ILE:HB	10:QJ:74:ILE:HG12	2.01	0.43
16:QP:11:SER:HB2	16:QP:14:ASN:HB3	2.01	0.43
23:QX:9:G:H4'	23:QX:10:G:OP2	2.16	0.43
24:QY:46:LEU:O	24:QY:53:LEU:HD22	2.18	0.43
25:RA:392:C:H5''	25:RA:409:C:H5''	2.00	0.43
25:RA:779:U:OP1	27:RD:49:ILE:HG23	2.19	0.43
25:RA:978:G:C2	25:RA:986:C:C2	3.07	0.43
25:RA:1557:C:H5''	25:RA:1558:A:OP2	2.18	0.43
25:RA:2144:U:O2'	25:RA:2145:C:O5'	2.20	0.43
25:RA:2572:A:N7	28:RE:144:ARG:HD2	2.34	0.43
30:RG:143:GLU:HG2	50:R4:26:SER:HB2	2.01	0.43
31:RH:42:ARG:HA	31:RH:42:ARG:HD2	1.78	0.43
50:R4:14:ILE:O	50:R4:21:VAL:HG23	2.19	0.43
1:XA:434:U:H2'	1:XA:435:C:C6	2.53	0.43
9:XI:37:PHE:CE2	9:XI:70:LYS:HG3	2.54	0.43
25:YA:27:G:HO2'	25:YA:28:A:P	2.40	0.43
25:YA:133:C:H2'	25:YA:134:C:H6	1.83	0.43
25:YA:587:C:N3	35:YP:33:ARG:NH1	2.66	0.43
25:YA:674:G:O2'	29:YF:74:ARG:HG3	2.19	0.43
25:YA:1028:A:N6	25:YA:1125:G:H2'	2.34	0.43
25:YA:1042:G:H2'	25:YA:1043:C:C6	2.54	0.43
25:YA:1936:A:OP1	25:YA:1937:A:H5'	2.19	0.43
25:YA:2211:G:H4'	25:YA:2212:A:OP2	2.19	0.43
28:YE:23:VAL:HA	28:YE:184:VAL:O	2.19	0.43
52:Y6:42:TRP:CG	52:Y6:43:CYS:H	2.37	0.43
1:QA:1055:A:C2	1:QA:1056:U:H1'	2.54	0.42
3:QC:19:GLU:HG2	3:QC:40:ARG:NH2	2.34	0.42
7:QG:46:ALA:O	7:QG:50:ILE:HG12	2.19	0.42
10:QJ:33:GLN:H	10:QJ:75:ILE:HG12	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:QP:5:ARG:NH2	16:QP:24:ALA:HA	2.34	0.42
25:RA:692:C:H4'	27:RD:41:GLY:O	2.19	0.42
29:RF:32:LEU:O	29:RF:36:VAL:HG23	2.19	0.42
30:RG:134:GLY:C	30:RG:135:LEU:HD12	2.44	0.42
39:RT:26:ASP:HB3	39:RT:92:GLY:H	1.83	0.42
40:RU:50:ARG:O	40:RU:54:LYS:NZ	2.40	0.42
47:R1:34:THR:HG22	47:R1:36:GLY:H	1.84	0.42
48:R2:53:LEU:O	48:R2:56:GLN:HB2	2.18	0.42
55:R9:32:HIS:O	55:R9:34:GLN:HG3	2.19	0.42
1:XA:1068:G:H5'	1:XA:1388:C:OP1	2.18	0.42
1:XA:1179:A:H2'	1:XA:1180:A:O4'	2.18	0.42
3:XC:179:ARG:HH11	3:XC:207:VAL:HG22	1.84	0.42
10:XJ:6:ILE:HG22	10:XJ:98:ILE:HA	2.00	0.42
22:XW:65:C:H2'	22:XW:66:C:C6	2.54	0.42
25:YA:999:U:C2'	25:YA:1000:A:H5''	2.43	0.42
25:YA:2688:U:OP1	25:YA:2713:A:N6	2.52	0.42
28:YE:3:GLY:HA2	28:YE:198:VAL:O	2.18	0.42
32:YI:128:LEU:O	32:YI:138:ILE:N	2.52	0.42
40:YU:98:LEU:O	40:YU:99:ALA:HB3	2.19	0.42
42:YW:9:TYR:H	42:YW:102:HIS:CE1	2.37	0.42
42:YW:18:ARG:NH1	42:YW:76:VAL:O	2.52	0.42
50:Y4:60:GLN:HB3	50:Y4:61:ARG:NH2	2.34	0.42
1:QA:130:A:H1'	1:QA:263:A:O2'	2.19	0.42
1:QA:562:C:H41	1:QA:884:U:H2'	1.84	0.42
1:QA:585:G:H4'	12:QL:8:ASN:OD1	2.19	0.42
1:QA:1324:A:O4'	1:QA:1362:C:H4'	2.20	0.42
10:QJ:8:LEU:HD22	10:QJ:20:ALA:HB2	1.99	0.42
21:QU:9:ARG:O	21:QU:13:ILE:HG13	2.19	0.42
25:RA:570:G:H2'	25:RA:2030:A:C5	2.54	0.42
25:RA:856:C:H42	25:RA:921:G:H1	1.66	0.42
25:RA:911:A:H2'	36:RQ:9:TYR:OH	2.18	0.42
25:RA:1244:G:H4'	35:RP:7:ARG:HB2	2.01	0.42
25:RA:1547:C:H2'	25:RA:1548:C:C6	2.54	0.42
25:RA:1827:C:O2'	25:RA:1970:A:N3	2.51	0.42
25:RA:2015:A:H5'	42:RW:92:ARG:HH21	1.83	0.42
25:RA:2092:U:H4'	32:RI:24:GLY:HA3	2.01	0.42
25:RA:2478:A:H5'	55:R9:31:LYS:HE2	2.00	0.42
25:RA:2698:U:H2'	25:RA:2699:C:C6	2.54	0.42
26:RB:78:A:H2'	26:RB:79:C:O4'	2.19	0.42
29:RF:164:ARG:HG3	29:RF:175:THR:OG1	2.19	0.42
30:RG:99:MET:HG3	30:RG:100:TRP:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:34:THR:OG1	34:RO:35:VAL:N	2.52	0.42
38:RS:62:LYS:HD3	38:RS:97:ARG:NH1	2.35	0.42
39:RT:91:ARG:HD2	39:RT:124:ASP:OD2	2.18	0.42
41:RV:71:LEU:HA	41:RV:71:LEU:HD12	1.63	0.42
1:XA:389:A:C6	1:XA:390:C:H1'	2.54	0.42
1:XA:1158:C:N4	1:XA:1160:G:C4	2.87	0.42
1:XA:1280:A:H5'	1:XA:1281:U:OP2	2.19	0.42
1:XA:1431:C:H2'	1:XA:1432:G:O4'	2.18	0.42
2:XB:133:LYS:HD2	2:XB:137:ARG:NH1	2.34	0.42
5:XE:69:VAL:HA	5:XE:70:PRO:HD2	1.90	0.42
19:XS:32:LYS:HE2	19:XS:32:LYS:HB2	1.60	0.42
25:YA:270(F):U:H2'	25:YA:270(G):C:C6	2.54	0.42
25:YA:1669:A:H5''	25:YA:2550:G:OP1	2.19	0.42
25:YA:1991:U:H2'	25:YA:1992:G:H5''	2.01	0.42
25:YA:2762:G:H5'	25:YA:2763:G:OP2	2.19	0.42
30:YG:7:LEU:HB2	30:YG:104:GLU:OE1	2.18	0.42
34:YO:15:GLY:O	34:YO:47:ILE:N	2.47	0.42
41:YV:70:ILE:HG13	41:YV:86:GLY:O	2.19	0.42
1:QA:376:G:H4'	16:QP:5:ARG:HD3	2.01	0.42
1:QA:951:G:HO2'	1:QA:972:C:H5	1.67	0.42
1:QA:1028(B):C:H42	1:QA:1032(A):G:H1	1.67	0.42
1:QA:1297:C:O2'	1:QA:1298:C:P	2.77	0.42
1:QA:1429:C:H2'	1:QA:1430:C:H6	1.84	0.42
4:QD:92:VAL:O	4:QD:96:LEU:HD22	2.19	0.42
12:QL:39:VAL:HG12	12:QL:41:ARG:HG3	2.01	0.42
25:RA:26:G:C6	25:RA:27:G:N1	2.87	0.42
25:RA:324:A:N6	25:RA:338:G:O2'	2.50	0.42
25:RA:1494:A:H2'	25:RA:1495:A:C8	2.54	0.42
25:RA:1790:C:H2'	25:RA:1791:A:C5	2.54	0.42
25:RA:2092:U:H4'	25:RA:2093:G:O5'	2.18	0.42
25:RA:2176:A:H2'	25:RA:2177:C:C6	2.54	0.42
25:RA:2306:C:H3'	25:RA:2307:G:H5''	2.01	0.42
28:RE:68:ALA:O	28:RE:71:GLY:N	2.51	0.42
29:RF:103:LYS:HG2	29:RF:106:ARG:NH2	2.34	0.42
30:RG:11:TYR:HA	30:RG:15:VAL:HB	2.00	0.42
40:RU:92:ARG:HH22	41:RV:11:GLN:H	1.67	0.42
41:RV:68:LYS:HD3	41:RV:68:LYS:HA	1.87	0.42
1:XA:60:A:H4'	1:XA:61:G:O5'	2.19	0.42
1:XA:160:A:H2'	1:XA:161:A:O4'	2.19	0.42
1:XA:309:G:H1'	1:XA:608:A:C2	2.54	0.42
1:XA:501:C:H2'	1:XA:502:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:637:G:H2'	1:XA:638:G:H8	1.84	0.42
1:XA:960:U:O2	1:XA:960:U:C2'	2.61	0.42
1:XA:1318:A:H4'	19:XS:10:PHE:CE2	2.54	0.42
2:XB:102:LEU:HD23	2:XB:182:ILE:HD12	2.02	0.42
3:XC:34:LEU:HD13	14:YN:25:VAL:HG11	2.00	0.42
7:XG:20:ASP:O	7:XG:21:VAL:HG22	2.19	0.42
13:XM:54:VAL:HG22	13:XM:57:ARG:NH2	2.34	0.42
13:XM:67:GLU:OE2	30:YG:115:ARG:NH2	2.53	0.42
21:XU:9:ARG:O	21:XU:13:ILE:HG13	2.19	0.42
23:XX:20:A3P:H5'2	23:XX:20:A3P:N3	2.34	0.42
25:YA:524:U:H2'	25:YA:525:U:C6	2.54	0.42
25:YA:960:A:H5''	25:YA:961:C:OP1	2.19	0.42
25:YA:1202:C:N4	25:YA:1203:G:C6	2.87	0.42
25:YA:1265:A:H8	25:YA:1265:A:OP1	2.02	0.42
25:YA:1534:G:N2	25:YA:1537:C:N3	2.68	0.42
25:YA:1586:A:C3'	25:YA:1587:A:H5'	2.49	0.42
25:YA:1930:G:N2	25:YA:1968:G:H2'	2.35	0.42
26:YB:11:C:O5'	26:YB:12:C:H5	2.02	0.42
27:YD:108:PRO:HB3	27:YD:143:HIS:NE2	2.34	0.42
29:YF:25:PRO:HB3	29:YF:28:ILE:HG12	2.01	0.42
35:YP:146:VAL:HG13	35:YP:147:LEU:HD22	2.01	0.42
47:Y1:86:SER:N	47:Y1:87:PRO:HD2	2.34	0.42
50:Y4:9:LEU:HD23	50:Y4:25:TYR:HB3	2.01	0.42
1:QA:513:C:H2'	1:QA:514:C:C6	2.54	0.42
1:QA:518:C:H2'	1:QA:530:G:C8	2.54	0.42
1:QA:1525:G:OP1	11:QK:120:ARG:NH2	2.52	0.42
25:RA:582:G:H2'	25:RA:583:G:H8	1.83	0.42
25:RA:706:A:H2'	25:RA:707:G:O4'	2.19	0.42
25:RA:811:U:H3'	35:RP:22:GLY:HA2	2.01	0.42
25:RA:860:U:H2'	25:RA:861:A:H8	1.84	0.42
25:RA:885:C:H1'	25:RA:890:A:N6	2.35	0.42
25:RA:1820:U:N3	27:RD:202:LYS:HD2	2.35	0.42
35:RP:86:LYS:HB3	35:RP:117:GLU:O	2.19	0.42
44:RY:65:ALA:HA	44:RY:66:PRO:HD3	1.90	0.42
1:XA:246:A:H61	1:XA:281:G:H1'	1.83	0.42
1:XA:570:G:H1'	1:XA:820:U:C4	2.54	0.42
1:XA:1479:C:H2'	1:XA:1480:G:H8	1.84	0.42
3:XC:8:ILE:HG23	3:XC:16:ARG:HG2	2.01	0.42
8:XH:86:ILE:HG12	8:XH:135:CYS:HA	2.01	0.42
13:XM:18:ALA:HB2	13:XM:45:VAL:HG21	2.01	0.42
19:XS:66:MET:HE3	19:XS:66:MET:HB2	1.89	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:79:THR:O	19:XS:81:ARG:N	2.52	0.42
20:XT:67:ALA:HA	20:XT:73:HIS:N	2.31	0.42
22:XW:76:A:C2	25:YA:2421:G:C6	3.07	0.42
24:XY:67:THR:HG23	24:XY:73:ARG:NH1	2.35	0.42
25:YA:17:G:H4'	40:YU:25:TRP:CH2	2.54	0.42
25:YA:85:G:P	44:YY:30:VAL:HG21	2.59	0.42
25:YA:607:U:OP1	29:YF:102:PRO:HA	2.19	0.42
25:YA:972:G:OP2	25:YA:974:G:H2'	2.20	0.42
25:YA:1116:C:H2'	25:YA:1117:G:H8	1.84	0.42
25:YA:2360:A:H2'	25:YA:2361:A:O4'	2.19	0.42
25:YA:2410:G:C2	25:YA:2411:A:H1'	2.54	0.42
25:YA:2424:C:O2	25:YA:2429:G:O2'	2.22	0.42
25:YA:2556:C:H2'	25:YA:2557:G:O4'	2.19	0.42
25:YA:2646:C:H2'	25:YA:2647:U:O4'	2.19	0.42
25:YA:2683:C:OP1	39:YT:53:ARG:NH2	2.51	0.42
27:YD:92:ILE:HD12	27:YD:104:TYR:CD2	2.54	0.42
28:YE:144:ARG:HB3	28:YE:145:LYS:H	1.42	0.42
35:YP:108:LYS:C	35:YP:110:TYR:N	2.77	0.42
41:YV:85:LYS:CG	41:YV:87:HIS:H	2.24	0.42
42:YW:82:LEU:HD23	42:YW:82:LEU:HA	1.89	0.42
44:YY:96:ILE:HD12	44:YY:98:VAL:HG12	2.00	0.42
1:QA:1059:C:O2'	10:QJ:53:PRO:HD3	2.18	0.42
2:QB:186:ALA:O	2:QB:201:ILE:N	2.50	0.42
4:QD:96:LEU:HD12	4:QD:139:ARG:NH1	2.35	0.42
7:QG:76:ARG:HH11	7:QG:78:ARG:HH12	1.67	0.42
14:QN:6:LEU:HD22	14:QN:23:ARG:HH22	1.83	0.42
17:QQ:5:VAL:HG22	17:QQ:60:ILE:HG13	2.02	0.42
22:QW:6:G:H2'	22:QW:7:G:C8	2.54	0.42
22:QW:28:C:H42	22:QW:42:G:H1	1.67	0.42
25:RA:129:C:H2'	25:RA:130:C:C6	2.53	0.42
25:RA:686:G:O6	53:R7:12:ARG:HA	2.20	0.42
25:RA:2852:G:H2'	25:RA:2853:C:O4'	2.18	0.42
28:RE:120:TRP:CE3	28:RE:155:LYS:HE3	2.54	0.42
31:RH:9:ILE:HB	31:RH:10:PRO:HA	2.02	0.42
34:RO:63:VAL:HG12	34:RO:106:LEU:HD11	2.01	0.42
36:RQ:43:THR:HG22	36:RQ:94:VAL:HG12	2.00	0.42
44:RY:42:VAL:O	44:RY:65:ALA:N	2.38	0.42
45:RZ:139:VAL:HG13	45:RZ:139:VAL:O	2.19	0.42
52:R6:18:ARG:HG3	52:R6:44:ARG:NH1	2.34	0.42
1:XA:164:U:H2'	1:XA:165:C:C6	2.54	0.42
1:XA:255:G:OP1	17:XQ:69:LYS:NZ	2.45	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:923:A:OP1	5:XE:21:ALA:HB2	2.20	0.42
1:XA:1015:A:H2'	1:XA:1016:A:C8	2.54	0.42
1:XA:1071:C:H2'	1:XA:1072:G:C8	2.54	0.42
4:XD:50:ARG:HA	4:XD:51:PRO:HD3	1.76	0.42
4:XD:190:ASP:OD1	4:XD:191:ARG:N	2.51	0.42
11:XK:124:LYS:HE2	11:XK:124:LYS:HB3	1.71	0.42
20:XT:58:LYS:O	20:XT:58:LYS:HD3	2.19	0.42
24:XY:49:GLN:O	24:XY:52:LYS:HE3	2.20	0.42
25:YA:576:U:H2'	25:YA:577:G:C8	2.55	0.42
25:YA:2393:A:H2'	25:YA:2394:C:O4'	2.19	0.42
25:YA:2420:C:H41	54:Y8:31:HIS:HA	1.84	0.42
28:YE:97:LYS:N	28:YE:100:GLU:OE1	2.48	0.42
30:YG:105:LYS:HD3	50:Y4:24:THR:O	2.19	0.42
33:YN:34:LEU:HD22	33:YN:119:ARG:HB2	2.00	0.42
35:YP:39:LYS:HB2	35:YP:45:LEU:HD23	2.00	0.42
35:YP:101:VAL:HA	35:YP:105:LEU:O	2.20	0.42
36:YQ:60:ARG:O	45:YZ:177:PRO:HB2	2.19	0.42
36:YQ:77:LYS:HG3	36:YQ:86:GLY:HA2	2.02	0.42
37:YR:104:ARG:HB3	37:YR:107:ASP:OD2	2.19	0.42
40:YU:83:LEU:HG	40:YU:88:ILE:HD11	2.01	0.42
43:YX:14:SER:H	43:YX:17:ALA:HB3	1.84	0.42
48:Y2:50:ILE:HD12	48:Y2:51:ARG:H	1.85	0.42
55:Y9:11:CYS:HG	55:Y9:32:HIS:CE1	2.33	0.42
1:QA:340:U:H2'	1:QA:341:C:C6	2.55	0.42
1:QA:484:G:H5'	1:QA:486:U:H1'	2.01	0.42
1:QA:1081:G:OP2	5:QE:16:THR:OG1	2.34	0.42
4:QD:50:ARG:HH12	5:QE:10:MET:HB3	1.84	0.42
5:QE:82:VAL:HG21	5:QE:138:ALA:HA	2.02	0.42
7:QG:20:ASP:CG	7:QG:23:VAL:HB	2.44	0.42
9:QI:16:ARG:O	9:QI:63:ILE:HA	2.18	0.42
12:QL:102:ARG:HE	12:QL:102:ARG:HB3	1.67	0.42
19:QS:65:ASN:HA	50:R4:55:ARG:HD2	2.01	0.42
25:RA:443:A:H1'	25:RA:1201:C:O4'	2.19	0.42
25:RA:1062:G:H2'	25:RA:1063:G:H8	1.85	0.42
25:RA:1668:A:H4'	25:RA:1669:A:O5'	2.18	0.42
25:RA:2842:G:H21	39:RT:3:ARG:NH2	2.16	0.42
28:RE:60:ASN:O	28:RE:62:PRO:N	2.51	0.42
31:RH:52:VAL:HG21	31:RH:69:ARG:HB2	2.01	0.42
40:RU:104:GLN:H	40:RU:104:GLN:CD	2.28	0.42
45:RZ:81:ARG:HE	45:RZ:81:ARG:HB2	1.43	0.42
46:R0:30:VAL:HG22	46:R0:66:VAL:HG22	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:R2:28:LYS:HD3	48:R2:28:LYS:HA	1.88	0.42
1:XA:776:G:N2	1:XA:802:A:OP2	2.46	0.42
1:XA:1071:C:H2'	1:XA:1072:G:H8	1.84	0.42
1:XA:1095:U:H5''	1:XA:1109:C:O2	2.18	0.42
1:XA:1219:U:OP1	14:XN:19:ARG:NH2	2.50	0.42
1:XA:1510:U:H2'	1:XA:1511:G:C8	2.54	0.42
2:XB:200:ILE:HG22	2:XB:202:PRO:HD3	2.02	0.42
7:XG:14:PRO:HB2	7:XG:19:GLY:HA2	2.01	0.42
7:XG:77:SER:CB	22:XW:32:C:HO2'	2.30	0.42
17:XQ:95:TYR:O	17:XQ:98:LEU:N	2.52	0.42
20:XT:14:LYS:HA	20:XT:17:ARG:NE	2.34	0.42
22:XW:64:G:H2'	22:XW:65:C:O4'	2.20	0.42
25:YA:263:C:H2'	25:YA:264:C:O4'	2.19	0.42
25:YA:797:C:H2'	25:YA:798:G:O4'	2.19	0.42
25:YA:1024:G:C3'	25:YA:1025:G:H5''	2.46	0.42
25:YA:1025:G:C4	25:YA:1135:C:H1'	2.55	0.42
25:YA:1952:A:C6	34:YO:22:ILE:HD12	2.54	0.42
25:YA:2009:G:N3	37:YR:107:ASP:HA	2.35	0.42
25:YA:2228:G:OP1	27:YD:261:LYS:NZ	2.52	0.42
25:YA:2329:G:H2'	25:YA:2330:G:C8	2.54	0.42
25:YA:2488:A:H2'	25:YA:2489:G:O4'	2.19	0.42
26:YB:114:G:H2'	26:YB:115:G:H8	1.84	0.42
28:YE:143:ASN:HB2	28:YE:147:PRO:HD2	2.02	0.42
36:YQ:7:MET:HE1	36:YQ:93:TYR:CE2	2.55	0.42
40:YU:58:ARG:HA	40:YU:61:TRP:CE3	2.54	0.42
41:YV:21:ARG:HG2	41:YV:93:GLU:HG3	2.01	0.42
1:QA:428:G:H4'	1:QA:429:U:O5'	2.20	0.42
1:QA:542:G:OP1	4:QD:10:ARG:NH2	2.52	0.42
1:QA:974:A:H1'	14:QN:31:ARG:HE	1.84	0.42
1:QA:978:A:O2'	1:QA:1322:C:N3	2.48	0.42
1:QA:1157:A:C1'	1:QA:1158:C:C5	3.03	0.42
2:QB:213:LEU:HD21	2:QB:217:ARG:HH12	1.84	0.42
6:QF:96:PRO:HB2	6:QF:98:LEU:HD23	2.02	0.42
9:QI:11:LYS:CD	9:QI:107:ARG:O	2.57	0.42
11:QK:120:ARG:HA	11:QK:121:PRO:HD3	1.91	0.42
19:QS:35:SER:HB3	19:QS:37:ARG:HB2	2.01	0.42
19:QS:79:THR:O	19:QS:81:ARG:N	2.53	0.42
20:QT:38:LYS:HB3	20:QT:38:LYS:HE2	1.73	0.42
25:RA:107:C:H2'	25:RA:108:U:C6	2.55	0.42
25:RA:588:U:H1'	29:RF:90:PHE:CD1	2.55	0.42
25:RA:1501:C:O4'	27:RD:100:GLY:HA2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2336:A:H61	46:R0:43:THR:HG22	1.84	0.42
28:RE:50:GLY:C	28:RE:74:PRO:CG	2.90	0.42
30:RG:27:ASN:HB3	30:RG:30:GLU:HG3	2.02	0.42
30:RG:123:ASN:C	30:RG:125:PHE:H	2.26	0.42
45:RZ:74:VAL:HG22	45:RZ:86:VAL:HG13	2.01	0.42
45:RZ:103:ARG:HG3	45:RZ:104:PHE:H	1.85	0.42
49:R3:43:ILE:O	49:R3:47:VAL:HG23	2.19	0.42
1:XA:630:G:H5'	1:XA:631:G:OP2	2.20	0.42
1:XA:1064:G:O2'	1:XA:1190:G:N2	2.53	0.42
1:XA:1206:G:C6	1:XA:1207:G:C5	3.07	0.42
1:XA:1308:U:H2'	1:XA:1309:G:H8	1.83	0.42
1:XA:1479:C:H2'	1:XA:1480:G:C8	2.55	0.42
3:XC:134:ILE:HG22	3:XC:168:ALA:HB3	2.01	0.42
9:XI:20:ARG:O	9:XI:22:GLY:N	2.47	0.42
25:YA:455:C:N3	25:YA:473:G:H5'	2.34	0.42
25:YA:918:A:H5''	26:YB:97:G:O2'	2.20	0.42
25:YA:1686:C:H2'	25:YA:1687:G:O4'	2.20	0.42
25:YA:2528:U:H2'	25:YA:2530:A:O5'	2.20	0.42
33:YN:127:ASP:OD1	33:YN:127:ASP:N	2.52	0.42
44:YY:101:LYS:HE3	44:YY:101:LYS:O	2.20	0.42
1:QA:197:A:H3'	1:QA:197:A:OP2	2.19	0.42
1:QA:955:U:H1'	1:QA:1227:A:N6	2.34	0.42
1:QA:993:G:H2'	1:QA:995:C:H41	1.84	0.42
1:QA:1068:G:H5'	1:QA:1388:C:OP1	2.19	0.42
1:QA:1299:A:C6	1:QA:1301:U:C2	3.08	0.42
1:QA:1337:G:H5''	1:QA:1338:G:OP1	2.19	0.42
2:QB:69:LEU:HA	2:QB:91:PRO:HG2	2.01	0.42
2:QB:83:MET:HE1	2:QB:234:PRO:O	2.20	0.42
3:QC:152:ILE:HB	3:QC:199:LYS:HB2	2.02	0.42
5:QE:48:ALA:HB2	5:QE:57:LYS:HD3	2.02	0.42
5:QE:127:ASN:HA	5:QE:128:PRO:HD3	1.86	0.42
8:QH:6:ILE:H	8:QH:6:ILE:HD12	1.85	0.42
25:RA:253:C:H2'	25:RA:254:G:O4'	2.20	0.42
25:RA:1354:A:H2'	25:RA:1355:G:O4'	2.20	0.42
25:RA:1401:G:H2'	25:RA:1402:C:O4'	2.20	0.42
25:RA:1729:A:N7	25:RA:1731:G:N1	2.66	0.42
25:RA:2543:G:O2'	25:RA:2544:G:H5'	2.19	0.42
25:RA:2776:A:H4'	25:RA:2777:G:O5'	2.20	0.42
30:RG:55:LYS:HD2	30:RG:58:GLN:NE2	2.34	0.42
38:RS:5:THR:OG1	38:RS:8:GLU:HG2	2.19	0.42
44:RY:60:PHE:HD2	44:RY:60:PHE:H	1.66	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RZ:26:GLY:HA2	45:RZ:85:HIS:CD2	2.55	0.42
53:R7:34:ARG:NH1	53:R7:41:ARG:O	2.53	0.42
1:XA:1152:A:H2'	1:XA:1153:C:C6	2.55	0.42
2:XB:108:ILE:HD13	2:XB:108:ILE:HA	1.80	0.42
23:XX:12:A:H2'	23:XX:13:A:C5	2.55	0.42
25:YA:270(F):U:H3	25:YA:270(T):G:H1	1.68	0.42
25:YA:481:G:OP2	44:YY:47:LYS:HB2	2.20	0.42
25:YA:2853:C:H2'	25:YA:2854:G:C8	2.55	0.42
26:YB:89:G:C6	26:YB:89(A):A:C6	3.08	0.42
31:YH:3:ARG:C	31:YH:5:GLY:H	2.28	0.42
31:YH:78:GLY:HA2	31:YH:83:TYR:CE1	2.54	0.42
33:YN:56:ASN:HA	33:YN:125:GLY:N	2.35	0.42
37:YR:5:LYS:HE2	37:YR:5:LYS:HB3	1.83	0.42
45:YZ:98:MET:HE3	45:YZ:98:MET:HB2	1.99	0.42
46:Y0:7:LEU:HD13	46:Y0:7:LEU:HA	1.93	0.42
1:QA:338:A:H2'	1:QA:339:C:C6	2.54	0.42
1:QA:411:A:C6	1:QA:429:U:C4	3.08	0.42
1:QA:591:U:H2'	1:QA:592:G:H8	1.85	0.42
1:QA:833:U:H2'	1:QA:834:C:C6	2.55	0.42
1:QA:983:A:H5''	1:QA:984:C:OP2	2.20	0.42
1:QA:1005:A:O2'	1:QA:1037:C:H1'	2.20	0.42
4:QD:21:LEU:O	4:QD:23:GLY:N	2.53	0.42
7:QG:116:ALA:O	7:QG:120:ILE:HG12	2.19	0.42
16:QP:38:TYR:CZ	16:QP:50:LYS:HB3	2.55	0.42
19:QS:36:ARG:HH22	19:QS:69:HIS:HA	1.85	0.42
25:RA:894:C:H5'	25:RA:895:U:OP2	2.20	0.42
25:RA:2055:C:OP1	25:RA:2056:G:H4'	2.19	0.42
25:RA:2102:U:H2'	25:RA:2103:C:C6	2.55	0.42
25:RA:2238:G:N3	25:RA:2238:G:H2'	2.35	0.42
25:RA:2695:C:H2'	25:RA:2696:U:H6	1.84	0.42
26:RB:75:G:H5''	45:RZ:36:LYS:HE2	2.02	0.42
27:RD:43:ARG:HB2	27:RD:54:ARG:HB2	2.01	0.42
35:RP:23:PRO:C	35:RP:25:SER:N	2.78	0.42
39:RT:56:GLY:O	39:RT:59:THR:HG22	2.19	0.42
39:RT:80:SER:HB3	39:RT:83:ILE:HG13	2.00	0.42
45:RZ:24:LEU:HB2	45:RZ:41:LEU:HG	2.02	0.42
54:R8:32:LEU:HA	54:R8:33:ASN:HA	1.88	0.42
1:XA:165:C:H2'	1:XA:166:G:C8	2.55	0.42
1:XA:321:A:N7	1:XA:328:C:O2	2.52	0.42
6:XF:23:LYS:HB3	6:XF:23:LYS:HE2	1.88	0.42
7:XG:18:TYR:CD2	7:XG:59:LEU:HD22	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:1:MET:SD	8:XH:1:MET:N	2.77	0.42
12:XL:52:LEU:HD23	12:XL:52:LEU:HA	1.90	0.42
15:XO:43:LEU:HD11	15:XO:53:HIS:HA	2.01	0.42
17:XQ:63:ARG:HG2	17:XQ:64:PRO:HD2	2.02	0.42
22:XW:7:G:H5''	22:XW:8:U:OP2	2.20	0.42
25:YA:517:C:OP1	51:Y5:16:ARG:NH2	2.53	0.42
25:YA:922:U:H1'	46:Y0:26:TYR:CD1	2.55	0.42
25:YA:1816:G:N7	27:YD:62:TYR:CE1	2.88	0.42
25:YA:2144:U:O2'	25:YA:2145:C:O5'	2.29	0.42
25:YA:2232:U:P	47:Y1:40:ARG:HH12	2.42	0.42
25:YA:2317:C:H2'	25:YA:2318:G:O4'	2.19	0.42
25:YA:2404:C:H1'	35:YP:67:MET:CE	2.40	0.42
25:YA:2651:C:H2'	25:YA:2652:C:C6	2.55	0.42
26:YB:48:A:H2'	26:YB:49:C:C6	2.55	0.42
30:YG:121:ASN:HA	30:YG:122:PRO:HD2	1.92	0.42
31:YH:49:VAL:HG22	31:YH:50:VAL:H	1.85	0.42
35:YP:134:ALA:O	35:YP:138:LEU:HD12	2.20	0.42
38:YS:44:LYS:HB2	38:YS:44:LYS:HE3	1.84	0.42
39:YT:88:ILE:O	39:YT:88:ILE:HG13	2.20	0.42
43:YX:49:VAL:HG23	43:YX:51:VAL:HG23	2.02	0.42
44:YY:29:GLU:HB3	44:YY:38:ILE:HG23	2.02	0.42
46:Y0:72:ARG:HB2	46:Y0:75:LEU:HB2	2.02	0.42
49:Y3:35:ARG:HE	49:Y3:37:LEU:HD21	1.84	0.42
1:QA:410:G:H4'	1:QA:411:A:OP1	2.20	0.42
1:QA:620:C:H2'	1:QA:621:A:O4'	2.19	0.42
5:QE:112:LEU:HD23	5:QE:112:LEU:HA	1.86	0.42
7:QG:65:ALA:O	7:QG:69:VAL:HG23	2.20	0.42
9:QI:31:GLN:HB3	9:QI:32:ASP:H	1.52	0.42
10:QJ:22:LYS:HB3	10:QJ:22:LYS:HE3	1.81	0.42
20:QT:26:ASN:O	20:QT:30:LYS:HB2	2.19	0.42
22:QW:1:C:N4	22:QW:2:G:O6	2.53	0.42
25:RA:709:U:H2'	25:RA:710:G:C8	2.55	0.42
25:RA:863:A:O5'	36:RQ:22:LYS:HE2	2.19	0.42
25:RA:909:A:H2'	25:RA:912:C:H5	1.85	0.42
25:RA:2314:C:H5'	30:RG:38:VAL:HG11	2.00	0.42
25:RA:2355:C:C4'	46:R0:36:ILE:HD11	2.50	0.42
25:RA:2732:G:H3'	25:RA:2733:A:H5'	2.02	0.42
30:RG:53:LEU:HD13	30:RG:87:PRO:HB2	2.01	0.42
36:RQ:80:GLU:N	36:RQ:80:GLU:CD	2.77	0.42
42:RW:31:GLU:O	42:RW:35:ILE:HG13	2.20	0.42
48:R2:13:ALA:HB1	48:R2:21:LEU:HD21	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:186(A):C:H5''	20:XT:86:ARG:HG3	2.02	0.42
1:XA:1211:U:H5'	1:XA:1212:U:OP1	2.20	0.42
1:XA:1326:C:OP1	21:XU:17:THR:OG1	2.36	0.42
2:XB:34:ALA:O	2:XB:41:ILE:HB	2.20	0.42
3:XC:112:SER:O	3:XC:116:VAL:HG23	2.20	0.42
4:XD:187:ARG:NH2	4:XD:193:ASP:OD1	2.53	0.42
11:XK:29:ILE:HD13	11:XK:29:ILE:HG21	1.80	0.42
12:XL:33:ARG:HD3	12:XL:62:SER:OG	2.20	0.42
15:XO:21:ASP:OD1	15:XO:24:SER:HB2	2.20	0.42
23:XX:12:A:C8	23:XX:13:A:N7	2.88	0.42
24:XY:71:ASN:ND2	24:XY:90:ASP:OD1	2.52	0.42
25:YA:345:A:O2'	25:YA:346:A:N7	2.50	0.42
25:YA:1756:G:H4'	25:YA:1758:G:O4'	2.20	0.42
28:YE:10:GLY:HA3	39:YT:8:LYS:HD2	2.02	0.42
28:YE:81:ILE:HG21	28:YE:84:PHE:CD1	2.55	0.42
31:YH:51:ARG:H	31:YH:51:ARG:HG3	1.41	0.42
36:YQ:88:GLY:O	36:YQ:90:VAL:N	2.52	0.42
38:YS:5:THR:OG1	38:YS:8:GLU:HG2	2.20	0.42
44:YY:43:ASN:HB3	44:YY:64:GLU:HA	2.02	0.42
44:YY:89:PHE:O	44:YY:90:LEU:HD22	2.20	0.42
55:Y9:11:CYS:SG	55:Y9:27:CYS:SG	3.17	0.42
1:QA:422:C:HO2'	1:QA:423:G:N2	2.18	0.41
1:QA:1229:A:OP2	13:QM:114:ARG:HD3	2.19	0.41
1:QA:1360:A:H2'	1:QA:1361:G:O4'	2.20	0.41
4:QD:200:GLU:O	4:QD:204:ILE:HG12	2.20	0.41
5:QE:71:LEU:HD11	5:QE:114:GLY:HA3	2.01	0.41
8:QH:50:ARG:HA	8:QH:59:LEU:HD23	2.01	0.41
10:QJ:54:PHE:CD2	10:QJ:56:HIS:CE1	3.08	0.41
12:QL:57:LYS:HE3	12:QL:65:GLU:HG2	2.01	0.41
25:RA:631:A:OP2	54:R8:47:LYS:NZ	2.47	0.41
25:RA:1112:G:H2'	25:RA:1113:U:C6	2.55	0.41
25:RA:1999:C:H5''	25:RA:2723:C:O2'	2.20	0.41
25:RA:2584:U:H6	25:RA:2585:U:C4	2.37	0.41
25:RA:2632:A:O2'	25:RA:2811:G:O2'	2.24	0.41
27:RD:133:LEU:HD12	27:RD:189:CYS:HB2	2.01	0.41
28:RE:103:ASP:OD1	28:RE:201:THR:HG23	2.19	0.41
30:RG:111:LEU:HD13	30:RG:120:LEU:HD21	2.01	0.41
32:RI:10:GLU:OE1	32:RI:11:ASN:N	2.53	0.41
35:RP:79:ARG:NE	35:RP:109:GLY:HA3	2.35	0.41
35:RP:144:GLU:OE1	35:RP:144:GLU:N	2.52	0.41
42:RW:17:VAL:O	42:RW:20:VAL:HG22	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:R2:15:LYS:HA	48:R2:15:LYS:HD3	1.93	0.41
55:R9:2:LYS:HD2	55:R9:33:LYS:O	2.20	0.41
1:XA:1105:A:H2'	1:XA:1106:G:C8	2.53	0.41
4:XD:20:TYR:CE2	4:XD:27:TYR:HA	2.55	0.41
4:XD:107:ARG:HH21	4:XD:194:LEU:HD12	1.85	0.41
13:XM:50:GLU:O	13:XM:54:VAL:HG23	2.20	0.41
21:XU:9:ARG:NH2	21:XU:10:ARG:HE	2.18	0.41
22:XW:36:U:H2'	22:XW:37:A:C8	2.55	0.41
25:YA:118:A:H3'	25:YA:119:A:H5''	2.02	0.41
25:YA:196:A:N3	25:YA:196:A:H2'	2.35	0.41
25:YA:704:G:H1'	25:YA:726:G:N2	2.36	0.41
25:YA:2064:C:H2'	25:YA:2065:C:C6	2.54	0.41
25:YA:2838:G:C1'	37:YR:45:ARG:HH12	2.33	0.41
26:YB:15:A:H5'	26:YB:16:G:N7	2.34	0.41
29:YF:116:ASP:OD1	29:YF:119:ARG:NH2	2.53	0.41
31:YH:152:ARG:C	31:YH:154:PRO:HD3	2.45	0.41
35:YP:70:GLN:HB3	35:YP:71:VAL:H	1.72	0.41
35:YP:144:GLU:HA	35:YP:145:PRO:HD3	1.80	0.41
44:YY:19:LYS:HB2	44:YY:20:TYR:H	1.34	0.41
1:QA:64:G:H5''	1:QA:65:U:OP1	2.20	0.41
1:QA:256:U:H2'	1:QA:257:G:C8	2.55	0.41
1:QA:316:G:OP2	1:QA:351:G:O2'	2.36	0.41
1:QA:391:G:C6	1:QA:392:G:C5	3.09	0.41
1:QA:404:U:H2'	1:QA:405:U:H6	1.84	0.41
1:QA:583:A:H2'	1:QA:584:G:O4'	2.20	0.41
1:QA:872:A:C4	1:QA:874:G:C8	3.08	0.41
1:QA:958:A:C6	1:QA:959:A:C6	3.09	0.41
4:QD:20:TYR:CE1	6:XF:15:ASP:HB2	2.55	0.41
5:QE:70:PRO:O	5:QE:72:GLN:NE2	2.53	0.41
7:QG:83:ALA:CB	22:QW:33:U:H5'	2.51	0.41
12:QL:45:PRO:HD3	12:QL:51:ALA:O	2.20	0.41
13:QM:86:CYS:HB2	19:QS:73:GLU:HB3	2.02	0.41
24:QY:31:ASN:O	24:QY:35:GLN:HG2	2.20	0.41
25:RA:141:A:H8	25:RA:1595:G:H21	1.68	0.41
25:RA:1105:U:H2'	25:RA:1106:G:H8	1.83	0.41
25:RA:1226:G:P	41:RV:85:LYS:HD3	2.60	0.41
27:RD:25:THR:HG21	27:RD:82:ILE:H	1.84	0.41
27:RD:92:ILE:HD12	27:RD:104:TYR:CE2	2.55	0.41
32:RI:73:GLU:OE1	32:RI:137:PRO:HD2	2.20	0.41
38:RS:10:ARG:O	38:RS:14:VAL:HG12	2.20	0.41
38:RS:93:LYS:HE3	38:RS:93:LYS:HB2	1.90	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:RX:60:ARG:O	43:RX:75:ASP:HB3	2.20	0.41
50:R4:13:ARG:HD3	50:R4:13:ARG:HA	1.86	0.41
1:XA:210:U:O2'	1:XA:216:G:O4'	2.35	0.41
4:XD:3:ARG:HB2	4:XD:4:TYR:H	1.54	0.41
4:XD:64:LEU:HD23	4:XD:75:PHE:HZ	1.85	0.41
4:XD:104:VAL:O	4:XD:108:LEU:HB2	2.21	0.41
7:XG:76:ARG:HB3	7:XG:78:ARG:HH11	1.84	0.41
7:XG:77:SER:OG	22:XW:32:C:O2'	2.28	0.41
15:XO:12:ILE:HG12	15:XO:31:LEU:HD11	2.01	0.41
25:YA:306:U:H2'	25:YA:307:G:O4'	2.19	0.41
25:YA:312:G:H5'	25:YA:331:A:O2'	2.19	0.41
25:YA:1586:A:H2'	25:YA:1587:A:H5'	2.02	0.41
25:YA:1979:C:C2'	25:YA:1980:G:H5'	2.49	0.41
25:YA:2838:G:H1'	37:YR:45:ARG:NH1	2.35	0.41
26:YB:79:C:H2'	26:YB:80:U:O4'	2.20	0.41
29:YF:46:ARG:HH11	29:YF:46:ARG:HG2	1.83	0.41
30:YG:111:LEU:HB2	30:YG:112:PRO:HD3	2.03	0.41
32:YI:1:MET:HB3	32:YI:21:VAL:O	2.21	0.41
35:YP:124:LYS:HA	35:YP:143:GLY:O	2.19	0.41
38:YS:93:LYS:HE3	38:YS:93:LYS:HB2	1.75	0.41
41:YV:79:VAL:O	41:YV:80:GLN:HB2	2.19	0.41
44:YY:101:LYS:HE2	44:YY:101:LYS:HB3	1.81	0.41
1:QA:160:A:H2'	1:QA:161:A:O4'	2.21	0.41
1:QA:449:C:O2	16:QP:42:ARG:HD2	2.20	0.41
1:QA:685:G:C2	1:QA:686:U:C4	3.08	0.41
1:QA:977:A:N6	1:QA:1224:G:O5'	2.53	0.41
1:QA:1432:G:OP1	39:RT:107:ASP:HB2	2.21	0.41
2:QB:97:TRP:CE2	2:QB:101:MET:HG3	2.56	0.41
5:QE:51:VAL:O	5:QE:55:VAL:HG23	2.19	0.41
7:QG:76:ARG:O	7:QG:87:VAL:N	2.53	0.41
9:QI:2:GLU:O	9:QI:20:ARG:NH1	2.53	0.41
25:RA:896:A:H3'	25:RA:896:A:OP2	2.20	0.41
25:RA:1288:U:O2'	25:RA:1647:G:N2	2.53	0.41
25:RA:1484:G:H2'	25:RA:1485:G:H5''	2.03	0.41
25:RA:1641:A:H2'	25:RA:1642:G:O4'	2.21	0.41
25:RA:2015:A:H1'	51:R5:2:ALA:CA	2.45	0.41
25:RA:2271:G:OP1	46:R0:18:ALA:HB1	2.20	0.41
25:RA:2645:G:H3'	25:RA:2646:C:C5'	2.50	0.41
25:RA:2696:U:H2'	25:RA:2697:G:C8	2.55	0.41
31:RH:170:ARG:HB3	31:RH:171:LEU:H	1.57	0.41
35:RP:6:LEU:HB3	35:RP:7:ARG:H	1.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:115:MET:HE2	36:RQ:131:ILE:HG21	2.02	0.41
36:RQ:137:TYR:CE1	45:RZ:83:PRO:HG3	2.55	0.41
40:RU:28:ARG:NH1	40:RU:38:THR:OG1	2.45	0.41
41:RV:85:LYS:HG3	41:RV:87:HIS:HA	2.02	0.41
43:RX:67:GLY:C	43:RX:69:TYR:H	2.27	0.41
1:XA:362:G:N2	1:XA:365:U:OP2	2.46	0.41
2:XB:17:PHE:HD2	2:XB:41:ILE:HG23	1.85	0.41
2:XB:126:GLU:O	2:XB:130:ARG:NH1	2.53	0.41
19:XS:35:SER:HB3	19:XS:37:ARG:HB2	2.02	0.41
19:XS:41:VAL:C	19:XS:43:GLU:H	2.27	0.41
22:XW:53:G:H1	22:XW:61:C:N4	2.18	0.41
25:YA:526:A:N3	25:YA:2044:C:H1'	2.36	0.41
25:YA:1053:C:H42	25:YA:1106:G:H1	1.68	0.41
25:YA:1168:G:H2'	25:YA:1169:G:C8	2.54	0.41
25:YA:1854:A:H62	25:YA:1888:G:H8	1.67	0.41
25:YA:1870:C:H2'	25:YA:1871:A:O4'	2.21	0.41
25:YA:2433:A:H5''	25:YA:2434:A:OP1	2.20	0.41
28:YE:60:ASN:O	28:YE:62:PRO:CD	2.68	0.41
38:YS:62:LYS:HB3	38:YS:97:ARG:CD	2.49	0.41
45:YZ:142:SER:C	45:YZ:144:LEU:H	2.28	0.41
48:Y2:21:LEU:HD11	48:Y2:63:VAL:HG12	2.03	0.41
1:QA:731:G:OP1	1:QA:766:A:H1'	2.19	0.41
1:QA:1288:A:H2'	1:QA:1289:A:C8	2.55	0.41
1:QA:1347:G:H21	1:QA:1373:G:H2'	1.85	0.41
19:QS:36:ARG:HD2	19:QS:71:LEU:N	2.21	0.41
22:QW:50:U:H2'	22:QW:51:C:C6	2.55	0.41
25:RA:195:A:H2'	25:RA:198:C:N4	2.35	0.41
25:RA:1239:G:H2'	25:RA:1240:U:O4'	2.19	0.41
25:RA:2074:U:H2'	25:RA:2075:U:C6	2.55	0.41
25:RA:2186:G:H2'	25:RA:2187:G:H8	1.86	0.41
25:RA:2539:C:H4'	55:R9:3:VAL:HG21	2.02	0.41
25:RA:2870:C:H2'	25:RA:2871:C:O4'	2.20	0.41
27:RD:108:PRO:HB3	27:RD:143:HIS:NE2	2.35	0.41
29:RF:53:THR:HG22	29:RF:56:GLU:HG3	2.01	0.41
39:RT:6:LEU:HD12	39:RT:6:LEU:HA	1.95	0.41
41:RV:1:MET:N	41:RV:16:PRO:HD3	2.36	0.41
47:R1:81:LYS:HE3	47:R1:81:LYS:HB3	1.50	0.41
1:XA:538:G:H5''	12:XL:114:LYS:HB2	2.01	0.41
1:XA:1348:U:OP1	9:XI:110:GLU:N	2.40	0.41
1:XA:1535:C:N4	23:XX:9:G:H1	2.18	0.41
2:XB:29:ALA:HB1	2:XB:30:ARG:HH21	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:93:VAL:HG11	2:XB:97:TRP:HD1	1.85	0.41
25:YA:1021:A:N3	25:YA:1022:G:H5''	2.36	0.41
25:YA:1113:U:H2'	25:YA:1114:G:C8	2.55	0.41
25:YA:1285:G:N2	25:YA:1328:G:H5''	2.35	0.41
27:YD:165:ILE:H	27:YD:165:ILE:HG12	1.61	0.41
29:YF:7:TYR:HA	29:YF:125:LEU:O	2.21	0.41
34:YO:68:GLU:HB3	34:YO:78:ARG:HB2	2.02	0.41
36:YQ:81:VAL:HG12	36:YQ:82:ARG:HG2	2.03	0.41
38:YS:11:LYS:HD3	38:YS:91:PRO:HD3	2.02	0.41
44:YY:95:LYS:NZ	44:YY:95:LYS:HB2	2.36	0.41
45:YZ:53:ILE:HA	45:YZ:71:VAL:HG13	2.03	0.41
50:Y4:58:ARG:O	50:Y4:62:ARG:HG2	2.20	0.41
1:QA:547:A:H4'	1:QA:548:G:O5'	2.19	0.41
1:QA:926:G:C6	1:QA:1505:G:C6	3.08	0.41
2:QB:221:LEU:HA	2:QB:224:GLN:HB2	2.00	0.41
3:QC:12:LEU:HD23	3:QC:12:LEU:HA	1.89	0.41
3:QC:47:LEU:HD21	3:QC:68:VAL:HG11	2.02	0.41
7:QG:104:LEU:HD13	7:QG:104:LEU:HA	1.91	0.41
9:QI:56:LEU:HD23	9:QI:56:LEU:H	1.86	0.41
9:QI:83:ARG:HH21	9:QI:102:LEU:HD21	1.86	0.41
10:QJ:27:ALA:HB2	10:QJ:85:LEU:HD11	2.03	0.41
13:QM:23:TYR:CD2	13:QM:70:LEU:HD11	2.56	0.41
16:QP:34:GLU:OE2	16:QP:55:ARG:HD3	2.21	0.41
19:QS:36:ARG:HH11	19:QS:71:LEU:C	2.29	0.41
25:RA:184:C:H2'	25:RA:185:U:H6	1.85	0.41
25:RA:363(F):A:OP2	25:RA:363(F):A:H8	2.03	0.41
25:RA:699:A:H2'	25:RA:700:G:O4'	2.21	0.41
25:RA:957:A:N1	25:RA:2458:G:H4'	2.35	0.41
25:RA:1125:G:C6	25:RA:1126:A:N6	2.88	0.41
25:RA:1291:C:H2'	25:RA:1292:U:H6	1.85	0.41
25:RA:1812:A:O2'	27:RD:45:ASN:HB2	2.21	0.41
25:RA:2037:G:H2'	25:RA:2038:G:C8	2.55	0.41
25:RA:2748:A:H8	31:RH:63:SER:HB3	1.85	0.41
25:RA:2774:C:H2'	25:RA:2775:A:O4'	2.19	0.41
25:RA:2846:G:P	39:RT:54:ARG:HB2	2.61	0.41
29:RF:125:LEU:HD23	29:RF:125:LEU:N	2.36	0.41
30:RG:76:SER:OG	30:RG:83:ARG:HA	2.19	0.41
31:RH:136:ILE:O	31:RH:137:ASP:HB2	2.21	0.41
38:RS:14:VAL:HG21	38:RS:89:ARG:HB3	2.02	0.41
41:RV:41:GLY:H	41:RV:46:VAL:HG13	1.85	0.41
47:R1:97:LEU:HD13	47:R1:97:LEU:HA	1.91	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:R5:25:LEU:HD23	51:R5:25:LEU:HA	1.88	0.41
1:XA:481:G:O2'	1:XA:483:C:N4	2.50	0.41
1:XA:769:G:H4'	1:XA:1513:A:H4'	2.01	0.41
1:XA:1007:C:H3'	1:XA:1008:C:H5''	2.03	0.41
2:XB:22:LYS:HB3	2:XB:23:ARG:H	1.70	0.41
2:XB:55:PHE:CE1	2:XB:218:ALA:HA	2.56	0.41
4:XD:9:CYS:SG	4:XD:32:ALA:HB2	2.60	0.41
10:XJ:54:PHE:CG	10:XJ:55:LYS:HG3	2.55	0.41
12:XL:93:LEU:HA	12:XL:94:PRO:HD2	1.90	0.41
13:XM:66:LEU:HA	13:XM:70:LEU:HD12	2.02	0.41
17:XQ:19:VAL:HG23	17:XQ:44:ALA:HB3	2.03	0.41
24:XY:31:ASN:O	24:XY:35:GLN:HG2	2.20	0.41
25:YA:16:G:H2'	25:YA:17:G:H8	1.86	0.41
25:YA:897:C:H6	25:YA:897:C:P	2.43	0.41
25:YA:1587:A:H2'	25:YA:1588:C:C6	2.55	0.41
25:YA:2689:U:P	25:YA:2719:G:H22	2.44	0.41
27:YD:145:VAL:HG12	27:YD:146:GLU:O	2.20	0.41
27:YD:201:HIS:O	27:YD:204:ILE:HG12	2.21	0.41
28:YE:114:ALA:HB3	28:YE:160:TYR:HB3	2.02	0.41
29:YF:32:LEU:O	29:YF:36:VAL:HG23	2.21	0.41
30:YG:114:ILE:HG12	30:YG:140:ILE:HG21	2.02	0.41
31:YH:159:GLU:HB3	31:YH:160:LYS:H	1.55	0.41
36:YQ:134:ARG:HH21	45:YZ:122:ARG:NH1	2.18	0.41
39:YT:27:THR:CG2	39:YT:90:GLN:HB3	2.50	0.41
39:YT:33:LYS:O	39:YT:82:LEU:HD23	2.20	0.41
1:QA:252:U:H2'	1:QA:275:G:H22	1.85	0.41
1:QA:452:A:H2'	1:QA:453:A:C8	2.56	0.41
1:QA:757:U:H2'	1:QA:758:G:O4'	2.20	0.41
1:QA:1004:A:HO2'	1:QA:1005:A:P	2.43	0.41
2:QB:228:GLY:O	2:QB:230:VAL:HG23	2.21	0.41
4:QD:61:LYS:HE3	4:QD:61:LYS:HB3	1.89	0.41
5:QE:69:VAL:HA	5:QE:70:PRO:HD2	1.92	0.41
6:QF:12:PRO:HD3	6:QF:58:GLY:HA2	2.03	0.41
17:QQ:52:LYS:HE3	17:QQ:52:LYS:HB3	1.81	0.41
25:RA:576:U:H2'	25:RA:577:G:C8	2.56	0.41
25:RA:1463:C:H2'	25:RA:1464:C:H6	1.86	0.41
25:RA:2057:A:H2'	25:RA:2058:A:O4'	2.20	0.41
25:RA:2848:G:H2'	25:RA:2867:G:N2	2.36	0.41
27:RD:146:GLU:HG2	27:RD:152:GLY:C	2.45	0.41
28:RE:203:LYS:HE3	28:RE:203:LYS:HB2	1.80	0.41
31:RH:103:LEU:HD13	31:RH:123:PHE:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:111:PRO:HA	33:RN:114:ARG:NH1	2.35	0.41
34:RO:1:MET:HB2	34:RO:32:TYR:HB3	2.03	0.41
38:RS:14:VAL:HG11	38:RS:90:GLY:O	2.20	0.41
38:RS:15:ARG:HD3	38:RS:15:ARG:HA	1.93	0.41
39:RT:50:ILE:HD12	39:RT:50:ILE:HA	1.88	0.41
45:RZ:15:PRO:O	45:RZ:19:ARG:HB2	2.21	0.41
48:R2:44:LEU:HD23	48:R2:44:LEU:HA	1.93	0.41
1:XA:457:C:H2'	1:XA:458:C:C6	2.56	0.41
1:XA:1410:G:H2'	1:XA:1411:C:H6	1.85	0.41
4:XD:199:ASN:O	4:XD:199:ASN:ND2	2.37	0.41
8:XH:13:ILE:O	8:XH:17:THR:HG23	2.21	0.41
9:XI:48:GLU:N	9:XI:49:PRO:HD2	2.35	0.41
11:XK:77:MET:HE2	11:XK:77:MET:HB2	1.96	0.41
11:XK:120:ARG:HA	11:XK:121:PRO:HD3	1.86	0.41
13:XM:108:ARG:HA	13:XM:108:ARG:HD2	1.89	0.41
25:YA:918:A:C5	25:YA:919:G:H1'	2.56	0.41
25:YA:969:U:H4'	49:Y3:14:GLY:O	2.21	0.41
25:YA:2881:C:H5''	37:YR:117:VAL:HG21	2.03	0.41
31:YH:85:LYS:HD2	31:YH:85:LYS:HA	1.62	0.41
40:YU:95:LEU:C	40:YU:97:ASP:H	2.29	0.41
41:YV:38:LEU:HD12	41:YV:55:ALA:HB1	2.03	0.41
44:YY:88:LYS:HA	44:YY:88:LYS:HD3	1.93	0.41
50:Y4:40:HIS:H	50:Y4:41:PRO:CD	2.31	0.41
52:Y6:14:THR:HG22	52:Y6:50:ARG:O	2.20	0.41
54:Y8:4:MET:HE3	54:Y8:4:MET:HB2	1.69	0.41
1:QA:922:G:H4'	5:QE:20:GLN:HA	2.02	0.41
1:QA:1227:A:OP2	13:QM:111:LYS:HD2	2.20	0.41
1:QA:1346:A:H5'	1:QA:1348:U:H1'	2.02	0.41
1:QA:1495:U:O2'	25:RA:1919:A:N1	2.45	0.41
15:QO:29:VAL:HG11	15:QO:67:LEU:HD21	2.02	0.41
20:QT:104:LEU:HB3	20:QT:105:SER:H	1.51	0.41
24:QY:49:GLN:O	24:QY:52:LYS:HE3	2.20	0.41
25:RA:138:G:H22	43:RX:44:GLU:CD	2.29	0.41
25:RA:273(F):C:H3'	25:RA:274:G:H5''	2.01	0.41
25:RA:678:C:H2'	25:RA:679:C:C6	2.55	0.41
25:RA:1025:G:C4	25:RA:1135:C:H1'	2.56	0.41
25:RA:1171:G:H1	25:RA:1178:C:N4	2.12	0.41
25:RA:1287:A:C5	25:RA:1288:U:C4	3.09	0.41
25:RA:1946:U:H2'	25:RA:1947:C:C6	2.56	0.41
25:RA:2522:U:O2'	25:RA:2647:U:OP1	2.24	0.41
25:RA:2572:A:C8	28:RE:144:ARG:HD2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2748:A:H8	31:RH:63:SER:CB	2.33	0.41
28:RE:77:ILE:HG22	28:RE:78:LEU:HG	2.03	0.41
31:RH:155:SER:O	31:RH:155:SER:OG	2.19	0.41
38:RS:78:LEU:HD11	38:RS:107:GLU:HG3	2.02	0.41
38:RS:106:ARG:HB3	38:RS:110:LEU:HD21	2.03	0.41
39:RT:118:ARG:HA	39:RT:121:ILE:HD12	2.02	0.41
46:R0:45:PHE:O	46:R0:59:LEU:HD11	2.20	0.41
47:R1:15:ALA:O	47:R1:40:ARG:HG3	2.21	0.41
52:R6:14:THR:OG1	52:R6:19:ARG:HA	2.20	0.41
1:XA:197:A:H1'	1:XA:198:G:O4'	2.21	0.41
1:XA:1031:G:H2'	1:XA:1031:G:N3	2.36	0.41
1:XA:1122:U:O4	1:XA:1123:A:N6	2.54	0.41
1:XA:1305:G:H5'	21:XU:4:GLY:HA3	2.02	0.41
2:XB:217:ARG:HA	2:XB:220:ASP:HB2	2.02	0.41
8:XH:49:GLU:HG2	8:XH:62:TYR:HE2	1.85	0.41
10:XJ:20:ALA:O	10:XJ:24:VAL:HG23	2.21	0.41
11:XK:11:LYS:HB2	11:XK:12:ARG:H	1.68	0.41
18:XR:51:LEU:HD23	18:XR:51:LEU:HA	1.92	0.41
25:YA:133:C:H2'	25:YA:134:C:C6	2.56	0.41
25:YA:635:C:H2'	25:YA:636:G:O4'	2.20	0.41
25:YA:1432:C:H2'	25:YA:1433:U:O4'	2.20	0.41
25:YA:1778:U:H2'	25:YA:1784:A:N6	2.36	0.41
25:YA:2008:C:H2'	25:YA:2009:G:H8	1.86	0.41
25:YA:2213:U:H2'	25:YA:2215:G:H5'	2.03	0.41
30:YG:105:LYS:NZ	50:Y4:26:SER:HB3	2.35	0.41
31:YH:109:PHE:CG	31:YH:110:SER:N	2.88	0.41
35:YP:47:ASP:OD2	35:YP:50:ARG:NH1	2.54	0.41
40:YU:104:GLN:CD	40:YU:104:GLN:H	2.28	0.41
41:YV:28:GLU:HA	41:YV:29:PRO:HD3	1.88	0.41
41:YV:33:VAL:N	41:YV:59:ALA:O	2.54	0.41
41:YV:44:LYS:O	41:YV:46:VAL:N	2.54	0.41
41:YV:71:LEU:N	41:YV:86:GLY:HA2	2.35	0.41
1:QA:160:A:H1'	1:QA:344:A:C5	2.56	0.41
1:QA:781:A:H4'	1:QA:1522:U:O2'	2.21	0.41
1:QA:1081:G:H5''	5:QE:18:ARG:HG3	2.02	0.41
1:QA:1320:C:C5	19:QS:36:ARG:HG2	2.56	0.41
1:QA:1434:A:H61	1:QA:1467:G:H1'	1.85	0.41
2:QB:16:HIS:HB2	2:QB:17:PHE:CD2	2.55	0.41
11:QK:110:ASP:HB3	18:QR:85:LEU:HG	2.03	0.41
14:QN:10:ALA:HB2	14:QN:23:ARG:HE	1.84	0.41
18:QR:22:VAL:CG1	18:QR:56:THR:HA	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:36:ARG:CZ	19:QS:73:GLU:HB2	2.51	0.41
25:RA:888:C:H4'	25:RA:889:C:C5	2.49	0.41
25:RA:969:U:OP1	49:R3:17:LYS:N	2.54	0.41
25:RA:990:A:C6	25:RA:1186:G:H1'	2.56	0.41
25:RA:1364:G:OP2	47:R1:2:SER:HA	2.21	0.41
25:RA:1496:A:H8	25:RA:1577:C:O2'	2.03	0.41
25:RA:1567:A:H3'	27:RD:86:PRO:HG3	2.03	0.41
25:RA:1614:A:H61	42:RW:88:ARG:H	1.69	0.41
25:RA:2272:U:H5''	25:RA:2273:A:OP1	2.20	0.41
25:RA:2283:C:H2'	25:RA:2284:C:O4'	2.20	0.41
25:RA:2542:A:H8	25:RA:2542:A:C5'	2.26	0.41
27:RD:35:LYS:HD2	27:RD:104:TYR:CD1	2.56	0.41
27:RD:71:ASP:OD2	27:RD:103:ARG:NH2	2.52	0.41
29:RF:195:ASP:OD1	29:RF:196:LEU:N	2.54	0.41
30:RG:47:LYS:HE3	30:RG:47:LYS:HB2	1.91	0.41
41:RV:64:HIS:CE1	41:RV:92:THR:OG1	2.74	0.41
48:R2:32:LEU:HD21	48:R2:54:LYS:HG2	2.03	0.41
1:XA:1055:A:C6	1:XA:1206:G:C5	3.09	0.41
1:XA:1235:U:H2'	1:XA:1236:A:O4'	2.21	0.41
6:XF:91:VAL:HG12	6:XF:92:LYS:O	2.20	0.41
19:XS:12:ASP:H	19:XS:38:SER:HB3	1.85	0.41
23:XX:12:A:H2'	23:XX:13:A:N7	2.35	0.41
25:YA:239:U:H2'	25:YA:240:G:O4'	2.21	0.41
25:YA:271(A):C:O2	25:YA:272:G:H1'	2.21	0.41
25:YA:1225:C:O2'	41:YV:85:LYS:N	2.41	0.41
25:YA:2692:C:H2'	25:YA:2693:A:C8	2.55	0.41
30:YG:38:VAL:HG13	30:YG:158:ALA:HB3	2.03	0.41
32:YI:77:LEU:HB2	32:YI:141:LYS:CB	2.33	0.41
35:YP:98:GLU:H	35:YP:98:GLU:HG3	1.34	0.41
39:YT:36:GLU:CD	39:YT:41:ARG:HD2	2.45	0.41
42:YW:4:LYS:HB3	42:YW:106:ILE:HG22	2.03	0.41
47:Y1:85:LEU:HD23	47:Y1:85:LEU:HA	1.90	0.41
50:Y4:46:GLN:NE2	50:Y4:48:ARG:HD3	2.36	0.41
1:QA:436:C:H2'	1:QA:437:U:H6	1.85	0.41
1:QA:496:A:H2'	1:QA:496:A:N3	2.36	0.41
1:QA:710:G:OP1	6:QF:54:LYS:HD2	2.21	0.41
1:QA:801:U:H2'	1:QA:802:A:C8	2.55	0.41
1:QA:1041:A:C6	1:QA:1042:G:C8	3.09	0.41
1:QA:1106:G:H5''	3:QC:172:ARG:CG	2.51	0.41
1:QA:1187:G:H21	14:QN:60:SER:CB	2.34	0.41
1:QA:1402:C:H2'	1:QA:1403:C:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1412:C:H2'	1:QA:1413:A:H8	1.86	0.41
2:QB:156:LYS:HD2	2:QB:156:LYS:HA	1.92	0.41
3:QC:68:VAL:HG12	3:QC:70:VAL:HG23	2.03	0.41
3:QC:134:ILE:HG22	3:QC:168:ALA:HB3	2.02	0.41
3:QC:174:PRO:O	3:QC:177:THR:HG22	2.21	0.41
3:QC:186:PHE:HA	3:QC:198:VAL:O	2.21	0.41
7:QG:94:ARG:NH1	7:QG:98:SER:OG	2.54	0.41
7:QG:115:ARG:O	7:QG:118:VAL:HG22	2.21	0.41
8:QH:25:ASP:N	8:QH:25:ASP:OD1	2.52	0.41
11:QK:93:GLN:OE1	11:QK:96:ARG:NH1	2.54	0.41
22:QW:30:G:H2'	22:QW:31:G:H8	1.85	0.41
22:QW:53:G:H1	22:QW:61:C:H42	1.68	0.41
25:RA:142:G:H2'	25:RA:143:C:C6	2.56	0.41
25:RA:455:C:N3	25:RA:473:G:H5'	2.35	0.41
25:RA:522:G:H2'	25:RA:523:C:C6	2.56	0.41
25:RA:577:G:O2'	25:RA:1254:A:OP1	2.38	0.41
25:RA:725:G:C6	25:RA:726:G:N1	2.89	0.41
25:RA:813:U:H2'	25:RA:814:C:C6	2.56	0.41
25:RA:945:A:C4	25:RA:2448:A:C2	3.09	0.41
25:RA:1798:U:H5'	27:RD:259:THR:OG1	2.20	0.41
25:RA:1799:G:O2'	27:RD:181:GLU:OE2	2.38	0.41
26:RB:66:A:O2'	26:RB:67:G:O5'	2.38	0.41
29:RF:140:LEU:HA	29:RF:140:LEU:HD12	1.78	0.41
30:RG:38:VAL:HG13	30:RG:158:ALA:HB3	2.03	0.41
31:RH:3:ARG:HD3	31:RH:6:ARG:HH21	1.85	0.41
36:RQ:81:VAL:C	36:RQ:82:ARG:HD2	2.45	0.41
40:RU:37:GLU:HA	40:RU:40:PHE:CD1	2.56	0.41
41:RV:38:LEU:HD21	41:RV:57:VAL:HG23	2.03	0.41
47:R1:58:ILE:HG23	47:R1:87:PRO:HG3	2.02	0.41
48:R2:15:LYS:HD3	48:R2:67:LYS:HZ1	1.86	0.41
49:R3:31:LEU:C	49:R3:33:GLN:H	2.29	0.41
50:R4:46:GLN:HE21	50:R4:48:ARG:HD3	1.85	0.41
1:XA:41:G:H2'	1:XA:42:G:H8	1.86	0.41
1:XA:413:G:H21	1:XA:428:G:H1'	1.86	0.41
2:XB:37:ASN:O	2:XB:37:ASN:ND2	2.47	0.41
3:XC:23:TYR:HE1	10:XJ:92:THR:HG23	1.86	0.41
3:XC:206:GLU:HB3	3:XC:207:VAL:H	1.64	0.41
4:XD:39:PRO:HA	4:XD:40:PRO:HD3	1.90	0.41
4:XD:149:ALA:O	4:XD:153:ARG:HG2	2.21	0.41
5:XE:127:ASN:HA	5:XE:128:PRO:HD3	1.93	0.41
8:XH:38:ILE:HD12	8:XH:118:VAL:HG12	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:53:VAL:HG13	9:XI:95:LYS:HE3	2.03	0.41
20:XT:97:ALA:O	20:XT:99:LEU:N	2.53	0.41
22:XW:63:G:H2'	22:XW:64:G:C8	2.56	0.41
23:XX:19:A:H5'	24:XY:57:LYS:HD2	2.02	0.41
24:XY:43:ILE:HD12	24:XY:43:ILE:HA	1.96	0.41
25:YA:196:A:O4'	35:YP:46:LYS:HE2	2.20	0.41
25:YA:273(F):C:H3'	25:YA:274:G:H5''	2.02	0.41
25:YA:287:C:H2'	25:YA:288:C:C6	2.56	0.41
25:YA:298:G:OP1	44:YY:84:ARG:O	2.39	0.41
25:YA:1035:U:H2'	25:YA:1036:G:C8	2.56	0.41
25:YA:1547:C:O2'	25:YA:1548:C:H5'	2.20	0.41
25:YA:1573:G:H2'	25:YA:1574:C:H5'	2.03	0.41
25:YA:1709:U:H2'	25:YA:1710:C:C6	2.55	0.41
25:YA:2040:C:H2'	25:YA:2041:U:C6	2.56	0.41
25:YA:2522:U:O2'	25:YA:2647:U:OP1	2.38	0.41
25:YA:2776:A:C6	25:YA:2782:G:H1'	2.56	0.41
26:YB:43:C:OP1	50:Y4:2:LYS:HB3	2.21	0.41
26:YB:66:A:O2'	26:YB:67:G:P	2.78	0.41
26:YB:75:G:H5''	45:YZ:36:LYS:HE2	2.02	0.41
27:YD:142:VAL:HG12	27:YD:163:ALA:HB3	2.03	0.41
28:YE:36:ARG:HH21	28:YE:88:GLY:CA	2.32	0.41
31:YH:30:LYS:HB3	31:YH:136:ILE:HG21	2.02	0.41
32:YI:117:GLU:H	32:YI:117:GLU:CD	2.28	0.41
32:YI:122:GLU:HB3	32:YI:126:TYR:OH	2.21	0.41
33:YN:34:LEU:HD11	33:YN:120:LEU:HB2	2.02	0.41
37:YR:67:LEU:HD13	37:YR:76:VAL:HG21	2.03	0.41
39:YT:11:GLU:OE1	39:YT:11:GLU:N	2.53	0.41
41:YV:61:VAL:O	41:YV:63:GLY:N	2.54	0.41
44:YY:15:VAL:HG12	44:YY:17:SER:OG	2.21	0.41
44:YY:96:ILE:HG12	44:YY:101:LYS:HG3	2.03	0.41
45:YZ:52:SER:C	45:YZ:54:HIS:H	2.28	0.41
48:Y2:46:GLN:HB2	48:Y2:49:LYS:NZ	2.34	0.41
1:QA:110:C:H2'	1:QA:111:G:O4'	2.20	0.41
1:QA:677:U:O2	1:QA:777:A:O2'	2.37	0.41
1:QA:831:U:H2'	1:QA:832:C:H6	1.86	0.41
1:QA:1055:A:C6	1:QA:1206:G:C5	3.09	0.41
1:QA:1070:U:H2'	1:QA:1071:C:C6	2.56	0.41
1:QA:1211:U:H5'	1:QA:1212:U:OP1	2.21	0.41
1:QA:1226:C:N4	13:QM:104:ARG:HD2	2.36	0.41
25:RA:1341:U:O2'	25:RA:1342:A:OP1	2.37	0.41
25:RA:1358:G:O2'	25:RA:1359:A:H5''	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1449:A:H5'	25:RA:1449(A):G:OP2	2.21	0.41
25:RA:1951:U:H2'	25:RA:1953:A:OP2	2.21	0.41
25:RA:2158:A:H5''	25:RA:2159:G:OP1	2.21	0.41
25:RA:2173:A:C6	25:RA:2174:C:H1'	2.56	0.41
25:RA:2627:G:O2'	25:RA:2781:A:N1	2.47	0.41
25:RA:2734:A:H3'	25:RA:2735:G:H8	1.86	0.41
30:RG:143:GLU:OE1	30:RG:143:GLU:N	2.50	0.41
31:RH:89:ILE:HD11	31:RH:129:THR:HG22	2.04	0.41
35:RP:45:LEU:HD12	35:RP:45:LEU:HA	1.83	0.41
39:RT:60:THR:HG22	39:RT:77:PRO:HA	2.02	0.41
42:RW:47:VAL:HA	42:RW:50:VAL:HG12	2.03	0.41
48:R2:16:LEU:O	48:R2:20:GLU:HB2	2.21	0.41
1:XA:556:C:OP2	12:XL:20:LYS:NZ	2.49	0.41
1:XA:646:U:H2'	1:XA:647:C:C6	2.56	0.41
1:XA:1426:C:H2'	1:XA:1427:U:C6	2.56	0.41
3:XC:174:PRO:O	3:XC:177:THR:HG22	2.21	0.41
15:XO:75:PRO:HB2	15:XO:79:ARG:HH21	1.86	0.41
20:XT:65:LYS:O	20:XT:68:LYS:HG2	2.21	0.41
20:XT:104:LEU:HB3	20:XT:105:SER:H	1.53	0.41
21:XU:8:THR:HB	21:XU:11:GLY:H	1.86	0.41
25:YA:273(E):U:H2'	25:YA:273(F):C:C6	2.55	0.41
25:YA:1062:G:H2'	25:YA:1063:G:H8	1.86	0.41
25:YA:1226:G:P	41:YV:85:LYS:HD3	2.61	0.41
25:YA:2581:G:OP2	25:YA:2581:G:N2	2.52	0.41
28:YE:105:THR:HB	28:YE:197:ILE:HG12	2.03	0.41
31:YH:35:VAL:HG11	31:YH:72:ILE:HG13	2.03	0.41
32:YI:77:LEU:CG	32:YI:142:VAL:HG22	2.49	0.41
48:Y2:21:LEU:HA	48:Y2:21:LEU:HD23	1.82	0.41
49:Y3:46:ASN:O	49:Y3:50:VAL:HG22	2.21	0.41
1:QA:327:A:O2'	1:QA:328:C:O4'	2.34	0.40
1:QA:380:G:N2	1:QA:383:A:OP2	2.54	0.40
2:QB:29:ALA:HB1	2:QB:30:ARG:NH2	2.32	0.40
13:QM:9:ILE:H	13:QM:9:ILE:HG12	1.60	0.40
25:RA:185:U:H4'	25:RA:218:A:H4'	2.02	0.40
25:RA:250:G:C5'	35:RP:60:MET:HE1	2.51	0.40
25:RA:482:A:H4'	44:RY:47:LYS:HE2	2.02	0.40
25:RA:1186:G:H2'	25:RA:1187:G:O4'	2.21	0.40
25:RA:2320:A:H2'	25:RA:2320:A:N3	2.35	0.40
28:RE:4:ILE:HG21	28:RE:92:THR:O	2.22	0.40
28:RE:6:GLY:HA2	28:RE:51:PHE:CZ	2.56	0.40
28:RE:117:MET:HG3	28:RE:122:PHE:O	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:97:ASP:O	30:RG:101:ILE:HG23	2.22	0.40
38:RS:10:ARG:C	38:RS:12:PHE:H	2.28	0.40
39:RT:6:LEU:O	39:RT:10:VAL:HG23	2.21	0.40
41:RV:62:LEU:HB3	41:RV:93:GLU:O	2.21	0.40
42:RW:9:TYR:H	42:RW:102:HIS:CE1	2.39	0.40
44:RY:101:LYS:HE3	44:RY:101:LYS:HB3	1.94	0.40
45:RZ:148:ASP:OD2	45:RZ:148:ASP:N	2.53	0.40
1:XA:352:C:O2'	1:XA:354:G:OP1	2.34	0.40
1:XA:399:G:H2'	1:XA:400:C:C6	2.55	0.40
1:XA:1372:U:H2'	1:XA:1373:G:O4'	2.20	0.40
1:XA:1379:G:C8	7:XG:3:ARG:HD3	2.56	0.40
2:XB:221:LEU:HA	2:XB:224:GLN:HB2	2.02	0.40
5:XE:7:GLU:HB3	5:XE:35:GLY:O	2.21	0.40
9:XI:20:ARG:HA	9:XI:21:PRO:HD3	1.85	0.40
11:XK:62:GLN:OE1	11:XK:93:GLN:NE2	2.54	0.40
13:XM:40:ASN:HB3	13:XM:43:THR:HG23	2.04	0.40
18:XR:22:VAL:HG13	18:XR:23:LYS:N	2.36	0.40
18:XR:66:LEU:O	18:XR:70:ILE:HG13	2.21	0.40
19:XS:36:ARG:HH12	19:XS:73:GLU:HB2	1.82	0.40
22:XV:64:G:OP1	46:Y0:11:ARG:NH1	2.52	0.40
25:YA:608:A:H2'	25:YA:609:A:C8	2.55	0.40
25:YA:1225:C:H4'	41:YV:85:LYS:CB	2.45	0.40
25:YA:1403:C:H5''	25:YA:1471:A:C1'	2.49	0.40
25:YA:1599:C:OP1	43:YX:36:LYS:N	2.48	0.40
25:YA:2478:A:H2'	25:YA:2479:G:O4'	2.21	0.40
27:YD:61:LEU:HD12	27:YD:61:LEU:HA	1.78	0.40
27:YD:224:ALA:HA	27:YD:233:HIS:O	2.21	0.40
28:YE:52:LEU:HB3	28:YE:75:VAL:HG23	2.03	0.40
30:YG:33:ARG:H	30:YG:162:THR:HG1	1.65	0.40
31:YH:9:ILE:HB	31:YH:10:PRO:CA	2.50	0.40
33:YN:43:THR:HB	33:YN:46:VAL:HG12	2.03	0.40
35:YP:6:LEU:HD13	35:YP:6:LEU:HA	1.78	0.40
41:YV:35:LEU:HD23	41:YV:37:VAL:HG21	2.03	0.40
41:YV:77:ALA:O	41:YV:79:VAL:HG22	2.21	0.40
42:YW:13:SER:HA	42:YW:14:PRO:HD3	1.87	0.40
1:QA:57:G:H2'	1:QA:58:C:C6	2.57	0.40
1:QA:523:A:H61	12:QL:53:ARG:NH1	2.19	0.40
1:QA:875:C:O2'	8:QH:14:ARG:NH1	2.52	0.40
1:QA:962:C:H1'	1:QA:1201:A:C6	2.57	0.40
1:QA:1329:A:P	13:QM:28:ALA:HB3	2.61	0.40
7:QG:75:VAL:HG13	7:QG:145:ALA:HA	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:44:SER:O	11:QK:48:ILE:HG12	2.21	0.40
22:QW:38:A:H2'	22:QW:39:C:O4'	2.21	0.40
25:RA:207:A:H2'	25:RA:208:C:O4'	2.21	0.40
25:RA:593:G:C6	25:RA:594:U:C4	3.10	0.40
25:RA:673:C:H5''	29:RF:81:PRO:HD2	2.03	0.40
25:RA:772:C:H2'	25:RA:773:U:H6	1.85	0.40
25:RA:1494:A:H2'	25:RA:1495:A:H8	1.86	0.40
25:RA:1971:A:C4	27:RD:241:PRO:HD3	2.56	0.40
25:RA:2065:C:H2'	25:RA:2066:C:C6	2.56	0.40
25:RA:2116:G:N2	25:RA:2165:G:O6	2.54	0.40
25:RA:2393:A:OP1	54:R8:30:ARG:HB2	2.21	0.40
25:RA:2645:G:H3'	25:RA:2646:C:H5'	2.03	0.40
29:RF:10:PRO:HA	29:RF:127:GLU:HB3	2.03	0.40
29:RF:25:PRO:C	29:RF:27:GLU:H	2.28	0.40
40:RU:58:ARG:HA	40:RU:61:TRP:CE3	2.56	0.40
42:RW:92:ARG:NH1	42:RW:94:ASP:OD2	2.54	0.40
49:R3:8:LEU:CD1	49:R3:31:LEU:HD12	2.51	0.40
1:XA:688:G:H2'	1:XA:689:C:H6	1.86	0.40
1:XA:1046:A:H3'	1:XA:1047:G:H8	1.85	0.40
1:XA:1308:U:H2'	1:XA:1309:G:C8	2.56	0.40
1:XA:1318:A:H4'	19:XS:10:PHE:CZ	2.56	0.40
19:XS:39:THR:HA	19:XS:70:LYS:HA	2.02	0.40
20:XT:17:ARG:HA	20:XT:20:LEU:HD12	2.03	0.40
25:YA:36:G:H4'	25:YA:451:C:C2	2.57	0.40
25:YA:270(S):G:H5'	47:Y1:76:ARG:HD2	2.03	0.40
25:YA:389:G:N1	35:YP:70:GLN:HB3	2.35	0.40
25:YA:389:G:N1	35:YP:71:VAL:HG12	2.36	0.40
25:YA:458:G:O2'	53:Y7:39:ARG:HD3	2.21	0.40
25:YA:1591:G:C6	25:YA:1592:C:C4	3.09	0.40
25:YA:1843:C:H2'	25:YA:1844:C:C6	2.56	0.40
25:YA:1881:C:H5'	25:YA:1882:C:OP2	2.22	0.40
25:YA:2141:G:H1	25:YA:2150:U:H3	1.68	0.40
25:YA:2478:A:H5'	55:Y9:31:LYS:HE2	2.03	0.40
25:YA:2684:U:OP1	39:YT:53:ARG:HD3	2.21	0.40
31:YH:116:GLU:HA	31:YH:117:PRO:HD3	1.90	0.40
34:YO:71:ARG:NE	34:YO:105:GLU:OE2	2.55	0.40
36:YQ:80:GLU:HG2	36:YQ:81:VAL:N	2.35	0.40
42:YW:71:VAL:HA	42:YW:107:LEU:HD12	2.03	0.40
44:YY:17:SER:CB	44:YY:71:LYS:HB3	2.50	0.40
1:QA:991:U:O4	1:QA:1212:U:O2'	2.38	0.40
1:QA:1224:G:O2'	1:QA:1322:C:OP1	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1396:A:H2	5:QE:19:MET:HG2	1.85	0.40
8:QH:20:TYR:HE2	8:QH:75:ARG:HD2	1.86	0.40
10:QJ:54:PHE:C	10:QJ:55:LYS:HG3	2.45	0.40
19:QS:63:THR:H	19:QS:66:MET:CE	2.34	0.40
25:RA:7:G:H2'	25:RA:8:A:O4'	2.21	0.40
25:RA:1087:G:H2'	25:RA:1089:G:O4'	2.21	0.40
25:RA:2461:C:H2'	25:RA:2462:U:C6	2.57	0.40
29:RF:22:ALA:C	29:RF:24:LEU:H	2.29	0.40
31:RH:33:LEU:HD12	31:RH:33:LEU:HA	1.96	0.40
31:RH:90:LYS:HE2	31:RH:90:LYS:HB3	1.92	0.40
31:RH:156:ALA:HB3	31:RH:159:GLU:O	2.21	0.40
35:RP:47:ASP:OD1	35:RP:50:ARG:NH1	2.55	0.40
38:RS:74:ALA:HB1	38:RS:107:GLU:CB	2.50	0.40
39:RT:102:ILE:O	39:RT:106:SER:HB3	2.21	0.40
44:RY:84:ARG:HG3	44:RY:84:ARG:O	2.21	0.40
47:R1:88:LYS:O	47:R1:91:LYS:HB2	2.21	0.40
50:R4:58:ARG:NH2	50:R4:62:ARG:HG3	2.36	0.40
50:R4:66:SER:C	50:R4:68:ARG:H	2.30	0.40
1:XA:149:A:H2'	1:XA:150:C:C6	2.56	0.40
1:XA:187:C:H2'	1:XA:188:U:O4'	2.21	0.40
1:XA:224:C:H2'	1:XA:225:C:C6	2.57	0.40
1:XA:332:G:OP2	20:XT:10:LEU:HD12	2.21	0.40
1:XA:502:G:OP1	12:XL:118:SER:HB3	2.22	0.40
1:XA:591:U:H2'	1:XA:592:G:C8	2.57	0.40
1:XA:1323:G:H2'	1:XA:1324:A:C8	2.57	0.40
3:XC:68:VAL:HG12	3:XC:70:VAL:HG23	2.03	0.40
11:XK:127:LYS:HD3	11:XK:127:LYS:HA	1.92	0.40
19:XS:29:ARG:HB2	19:XS:48:THR:OG1	2.22	0.40
25:YA:832:G:H4'	35:YP:45:LEU:HD11	2.03	0.40
25:YA:1076:C:H2'	25:YA:1077:A:O4'	2.22	0.40
25:YA:1339:G:H5''	43:YX:16:LYS:HD2	2.02	0.40
25:YA:2100:G:N2	25:YA:2190:G:H1'	2.36	0.40
25:YA:2591:C:OP1	27:YD:239:ARG:HD2	2.21	0.40
25:YA:2809:A:C6	25:YA:2810:A:C6	3.09	0.40
27:YD:165:ILE:HD13	27:YD:175:LEU:HD21	2.02	0.40
29:YF:132:VAL:C	29:YF:134:GLY:N	2.79	0.40
32:YI:72:LEU:HD21	32:YI:107:VAL:HG11	2.03	0.40
34:YO:4:PRO:O	34:YO:5:GLN:HB2	2.21	0.40
35:YP:83:VAL:CG1	35:YP:112:LEU:HD21	2.50	0.40
35:YP:106:LEU:C	35:YP:107:LYS:HG2	2.46	0.40
40:YU:17:ILE:HG23	40:YU:39:LEU:HD12	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:YZ:182:LYS:HB3	45:YZ:182:LYS:HE3	1.95	0.40
50:Y4:2:LYS:HB2	50:Y4:2:LYS:HE3	1.85	0.40
1:QA:6:G:C8	5:QE:119:LEU:HD11	2.56	0.40
1:QA:457:C:H2'	1:QA:458:C:C6	2.56	0.40
1:QA:626:U:H2'	1:QA:627:G:C8	2.57	0.40
3:QC:69:HIS:HA	3:QC:104:GLN:HB2	2.03	0.40
3:QC:86:VAL:O	3:QC:90:GLU:N	2.55	0.40
4:QD:108:LEU:HD12	4:QD:108:LEU:HA	1.77	0.40
6:QF:69:GLU:O	6:QF:72:VAL:HG12	2.21	0.40
15:QO:21:ASP:OD2	15:QO:24:SER:HB2	2.21	0.40
25:RA:340:A:H2'	25:RA:341:G:O4'	2.22	0.40
25:RA:653:A:H5''	25:RA:654:A:OP1	2.21	0.40
25:RA:723:G:H2'	25:RA:724:U:O4'	2.22	0.40
25:RA:751:A:C6	25:RA:789:A:C5	3.09	0.40
25:RA:996:A:H4'	40:RU:92:ARG:NE	2.37	0.40
25:RA:1463:C:H2'	25:RA:1464:C:C6	2.57	0.40
25:RA:1952:A:C5	34:RO:22:ILE:CD1	3.05	0.40
25:RA:2748:A:O2'	31:RH:66:GLY:HA3	2.21	0.40
25:RA:2820:A:O2'	25:RA:2821:A:OP1	2.36	0.40
26:RB:56:G:H4'	26:RB:57:A:H8	1.86	0.40
27:RD:95:LEU:HD22	27:RD:117:VAL:HG11	2.02	0.40
28:RE:35:GLN:HE22	28:RE:37:ARG:HH21	1.69	0.40
28:RE:63:LEU:O	28:RE:64:LYS:HB2	2.21	0.40
28:RE:69:LYS:HE2	28:RE:69:LYS:HA	2.04	0.40
29:RF:63:LYS:HE2	29:RF:67:GLN:HB2	2.02	0.40
31:RH:108:GLY:HA3	31:RH:152:ARG:NH2	2.36	0.40
35:RP:3:LEU:HD23	35:RP:3:LEU:HA	1.95	0.40
35:RP:30:THR:O	35:RP:33:ARG:HB2	2.22	0.40
38:RS:67:ARG:O	38:RS:71:ARG:HG3	2.21	0.40
45:RZ:69:THR:HG22	45:RZ:90:VAL:HG22	2.04	0.40
45:RZ:110:GLY:N	45:RZ:142:SER:HB2	2.35	0.40
52:R6:42:TRP:CD1	52:R6:43:CYS:H	2.39	0.40
1:XA:179:A:H2'	1:XA:180:U:C6	2.56	0.40
1:XA:1149:C:H2'	1:XA:1150:U:C6	2.57	0.40
3:XC:22:TRP:HB3	3:XC:59:ARG:HB2	2.04	0.40
10:XJ:10:GLY:HA3	10:XJ:16:LEU:CD2	2.51	0.40
25:YA:606:U:H4'	25:YA:658:C:H4'	2.02	0.40
25:YA:771:G:P	53:Y7:10:ARG:HH11	2.44	0.40
25:YA:793:A:OP2	25:YA:2072:G:H5'	2.20	0.40
25:YA:902:C:H2'	25:YA:903:C:H6	1.87	0.40
25:YA:1245:G:OP1	35:YP:13:ASN:ND2	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1336:A:P	43:YX:64:LYS:HZ2	2.42	0.40
25:YA:1400:G:H2'	25:YA:1401:G:C8	2.57	0.40
25:YA:2016:U:O4'	51:Y5:6:VAL:HG11	2.21	0.40
25:YA:2356:C:H4'	46:Y0:20:ARG:HG3	2.03	0.40
25:YA:2393:A:H4'	35:YP:62:LEU:N	2.36	0.40
27:YD:184:LYS:HE3	27:YD:269:PHE:HA	2.02	0.40
28:YE:7:VAL:HG21	39:YT:1:MET:HE1	2.03	0.40
29:YF:118:ALA:HB2	29:YF:123:LEU:HD22	2.03	0.40
30:YG:41:GLN:HB3	30:YG:43:LEU:HD13	2.02	0.40
30:YG:82:LEU:HA	30:YG:86:MET:SD	2.62	0.40
35:YP:126:VAL:HG22	35:YP:145:PRO:HG2	2.02	0.40
39:YT:130:ALA:HA	39:YT:133:GLU:HG2	2.03	0.40
45:YZ:158:PRO:HB2	45:YZ:161:VAL:HG23	2.03	0.40
50:Y4:8:LYS:HD3	50:Y4:8:LYS:HA	1.91	0.40
1:QA:767:A:H2'	1:QA:768:A:O4'	2.22	0.40
1:QA:790:A:H2'	1:QA:791:G:C8	2.57	0.40
1:QA:1034:G:H2'	1:QA:1035:A:C8	2.56	0.40
2:QB:121:LEU:HA	2:QB:124:SER:HB3	2.04	0.40
4:QD:111:ALA:HA	4:QD:161:ASN:ND2	2.37	0.40
4:QD:169:LYS:HE2	4:QD:169:LYS:HB3	1.85	0.40
6:QF:7:ASN:OD1	6:QF:62:TRP:HD1	2.04	0.40
12:QL:126:LYS:O	12:QL:128:ALA:N	2.54	0.40
24:QY:79:ILE:HG22	24:QY:84:TYR:CE2	2.57	0.40
25:RA:93:C:H5'	25:RA:94:G:OP2	2.21	0.40
25:RA:483:A:C5'	44:RY:49:VAL:HA	2.51	0.40
25:RA:755:C:H2'	25:RA:756:C:C6	2.56	0.40
25:RA:861:A:N3	26:RB:79:C:O2'	2.53	0.40
25:RA:990:A:OP2	25:RA:991:C:OP2	2.39	0.40
25:RA:1142(A):A:H4'	33:RN:25:ARG:HH22	1.86	0.40
25:RA:2216:G:H2'	25:RA:2217:G:H8	1.86	0.40
26:RB:15:A:H1'	26:RB:109:G:N9	2.36	0.40
29:RF:158:THR:HB	29:RF:195:ASP:HB2	2.04	0.40
39:RT:50:ILE:HG22	39:RT:62:THR:OG1	2.21	0.40
41:RV:86:GLY:O	41:RV:87:HIS:C	2.65	0.40
50:R4:58:ARG:HG3	50:R4:59:PHE:N	2.37	0.40
52:R6:40:CYS:N	52:R6:41:PRO:HD3	2.36	0.40
1:XA:652:U:C4	1:XA:752:G:N3	2.89	0.40
1:XA:735:C:H2'	1:XA:736:C:H6	1.86	0.40
1:XA:1379:G:C5'	7:XG:3:ARG:HH21	2.35	0.40
11:XK:84:VAL:HG23	11:XK:110:ASP:HA	2.04	0.40
20:XT:54:LYS:HB2	20:XT:54:LYS:HE3	1.95	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1188:U:H4'	41:YV:79:VAL:HG12	2.02	0.40
25:YA:1191:G:OP1	35:YP:32:THR:HB	2.22	0.40
25:YA:1274:A:N3	25:YA:1297:C:H1'	2.36	0.40
25:YA:2745:C:C4	25:YA:2746:U:C4	3.09	0.40
26:YB:11:C:OP2	26:YB:12:C:N4	2.44	0.40
30:YG:41:GLN:HG2	30:YG:154:GLY:O	2.21	0.40
33:YN:37:LYS:HB3	33:YN:37:LYS:HE2	1.95	0.40
35:YP:45:LEU:HD22	35:YP:45:LEU:HA	1.78	0.40
36:YQ:7:MET:HE1	36:YQ:93:TYR:HE2	1.85	0.40
47:Y1:97:LEU:HA	47:Y1:97:LEU:HD13	1.87	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	QB	234/256 (91%)	186 (80%)	29 (12%)	19 (8%)	1	5
2	XB	234/256 (91%)	189 (81%)	27 (12%)	18 (8%)	1	5
3	QC	204/239 (85%)	162 (79%)	26 (13%)	16 (8%)	1	5
3	XC	204/239 (85%)	160 (78%)	31 (15%)	13 (6%)	1	8
4	QD	206/209 (99%)	169 (82%)	26 (13%)	11 (5%)	1	10
4	XD	206/209 (99%)	168 (82%)	22 (11%)	16 (8%)	1	5
5	QE	152/162 (94%)	136 (90%)	11 (7%)	5 (3%)	3	19
5	XE	152/162 (94%)	137 (90%)	9 (6%)	6 (4%)	2	16
6	QF	99/101 (98%)	89 (90%)	10 (10%)	0	100	100
6	XF	99/101 (98%)	95 (96%)	4 (4%)	0	100	100
7	QG	153/156 (98%)	136 (89%)	13 (8%)	4 (3%)	4	23
7	XG	153/156 (98%)	133 (87%)	15 (10%)	5 (3%)	3	19

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	QH	136/138 (99%)	126 (93%)	7 (5%)	3 (2%)	5	26
8	XH	136/138 (99%)	123 (90%)	10 (7%)	3 (2%)	5	26
9	QI	126/128 (98%)	94 (75%)	24 (19%)	8 (6%)	1	8
9	XI	126/128 (98%)	96 (76%)	23 (18%)	7 (6%)	1	9
10	QJ	97/105 (92%)	80 (82%)	13 (13%)	4 (4%)	2	15
10	XJ	97/105 (92%)	81 (84%)	11 (11%)	5 (5%)	1	11
11	QK	119/129 (92%)	101 (85%)	13 (11%)	5 (4%)	2	14
11	XK	119/129 (92%)	105 (88%)	10 (8%)	4 (3%)	3	18
12	QL	123/132 (93%)	99 (80%)	16 (13%)	8 (6%)	1	8
12	XL	123/132 (93%)	97 (79%)	18 (15%)	8 (6%)	1	8
13	QM	116/126 (92%)	88 (76%)	17 (15%)	11 (10%)	0	3
13	XM	116/126 (92%)	88 (76%)	17 (15%)	11 (10%)	0	3
14	QN	58/61 (95%)	51 (88%)	4 (7%)	3 (5%)	1	11
14	XN	58/61 (95%)	50 (86%)	5 (9%)	3 (5%)	1	11
15	QO	86/89 (97%)	81 (94%)	5 (6%)	0	100	100
15	XO	86/89 (97%)	79 (92%)	7 (8%)	0	100	100
16	QP	82/88 (93%)	72 (88%)	10 (12%)	0	100	100
16	XP	82/88 (93%)	76 (93%)	6 (7%)	0	100	100
17	QQ	98/105 (93%)	90 (92%)	7 (7%)	1 (1%)	12	40
17	XQ	98/105 (93%)	89 (91%)	7 (7%)	2 (2%)	6	27
18	QR	69/88 (78%)	61 (88%)	8 (12%)	0	100	100
18	XR	69/88 (78%)	62 (90%)	6 (9%)	1 (1%)	9	33
19	QS	80/93 (86%)	52 (65%)	18 (22%)	10 (12%)	0	1
19	XS	80/93 (86%)	52 (65%)	18 (22%)	10 (12%)	0	1
20	QT	97/106 (92%)	79 (81%)	15 (16%)	3 (3%)	3	20
20	XT	97/106 (92%)	80 (82%)	14 (14%)	3 (3%)	3	20
21	QU	23/25 (92%)	16 (70%)	6 (26%)	1 (4%)	2	14
21	XU	23/25 (92%)	18 (78%)	3 (13%)	2 (9%)	0	4
24	QY	90/118 (76%)	82 (91%)	8 (9%)	0	100	100
24	XY	90/118 (76%)	81 (90%)	9 (10%)	0	100	100
27	RD	270/276 (98%)	224 (83%)	38 (14%)	8 (3%)	3	20

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
27	YD	270/276 (98%)	228 (84%)	32 (12%)	10 (4%)	2	17
28	RE	203/206 (98%)	137 (68%)	37 (18%)	29 (14%)	0	1
28	YE	203/206 (98%)	134 (66%)	40 (20%)	29 (14%)	0	1
29	RF	206/210 (98%)	167 (81%)	26 (13%)	13 (6%)	1	8
29	YF	206/210 (98%)	168 (82%)	22 (11%)	16 (8%)	1	5
30	RG	179/182 (98%)	141 (79%)	26 (14%)	12 (7%)	1	7
30	YG	179/182 (98%)	147 (82%)	21 (12%)	11 (6%)	1	9
31	RH	168/180 (93%)	104 (62%)	37 (22%)	27 (16%)	0	1
31	YH	168/180 (93%)	98 (58%)	42 (25%)	28 (17%)	0	1
32	RI	144/148 (97%)	109 (76%)	29 (20%)	6 (4%)	2	14
32	YI	144/148 (97%)	116 (81%)	24 (17%)	4 (3%)	4	21
33	RN	136/140 (97%)	116 (85%)	13 (10%)	7 (5%)	1	11
33	YN	136/140 (97%)	110 (81%)	19 (14%)	7 (5%)	1	11
34	RO	120/122 (98%)	111 (92%)	8 (7%)	1 (1%)	16	45
34	YO	120/122 (98%)	109 (91%)	10 (8%)	1 (1%)	16	45
35	RP	148/150 (99%)	99 (67%)	24 (16%)	25 (17%)	0	1
35	YP	148/150 (99%)	102 (69%)	25 (17%)	21 (14%)	0	1
36	RQ	138/141 (98%)	110 (80%)	17 (12%)	11 (8%)	1	5
36	YQ	137/141 (97%)	111 (81%)	15 (11%)	11 (8%)	1	5
37	RR	115/118 (98%)	107 (93%)	4 (4%)	4 (4%)	3	18
37	YR	115/118 (98%)	109 (95%)	3 (3%)	3 (3%)	4	23
38	RS	109/112 (97%)	84 (77%)	17 (16%)	8 (7%)	1	6
38	YS	109/112 (97%)	85 (78%)	13 (12%)	11 (10%)	0	3
39	RT	135/146 (92%)	109 (81%)	24 (18%)	2 (2%)	8	32
39	YT	135/146 (92%)	113 (84%)	17 (13%)	5 (4%)	2	17
40	RU	115/118 (98%)	107 (93%)	6 (5%)	2 (2%)	7	30
40	YU	115/118 (98%)	103 (90%)	9 (8%)	3 (3%)	4	23
41	RV	99/101 (98%)	73 (74%)	12 (12%)	14 (14%)	0	1
41	YV	99/101 (98%)	71 (72%)	14 (14%)	14 (14%)	0	1
42	RW	111/113 (98%)	107 (96%)	1 (1%)	3 (3%)	4	22
42	YW	111/113 (98%)	104 (94%)	3 (3%)	4 (4%)	2	17

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
43	RX	90/96 (94%)	77 (86%)	11 (12%)	2 (2%)	5	26
43	YX	90/96 (94%)	77 (86%)	11 (12%)	2 (2%)	5	26
44	RY	100/110 (91%)	56 (56%)	27 (27%)	17 (17%)	0	1
44	YY	100/110 (91%)	57 (57%)	27 (27%)	16 (16%)	0	1
45	RZ	174/206 (84%)	116 (67%)	36 (21%)	22 (13%)	0	1
45	YZ	181/206 (88%)	122 (67%)	42 (23%)	17 (9%)	0	3
46	R0	81/85 (95%)	73 (90%)	5 (6%)	3 (4%)	2	17
46	Y0	81/85 (95%)	67 (83%)	11 (14%)	3 (4%)	2	17
47	R1	95/98 (97%)	71 (75%)	12 (13%)	12 (13%)	0	1
47	Y1	95/98 (97%)	76 (80%)	13 (14%)	6 (6%)	1	8
48	R2	67/72 (93%)	54 (81%)	8 (12%)	5 (8%)	1	6
48	Y2	67/72 (93%)	56 (84%)	5 (8%)	6 (9%)	0	4
49	R3	57/60 (95%)	51 (90%)	6 (10%)	0	100	100
49	Y3	57/60 (95%)	51 (90%)	6 (10%)	0	100	100
50	R4	68/71 (96%)	43 (63%)	12 (18%)	13 (19%)	0	0
50	Y4	68/71 (96%)	38 (56%)	15 (22%)	15 (22%)	0	0
51	R5	57/60 (95%)	46 (81%)	9 (16%)	2 (4%)	3	18
51	Y5	55/60 (92%)	48 (87%)	4 (7%)	3 (6%)	1	10
52	R6	46/54 (85%)	22 (48%)	15 (33%)	9 (20%)	0	0
52	Y6	46/54 (85%)	16 (35%)	18 (39%)	12 (26%)	0	0
53	R7	47/49 (96%)	47 (100%)	0	0	100	100
53	Y7	47/49 (96%)	44 (94%)	3 (6%)	0	100	100
54	R8	62/65 (95%)	48 (77%)	7 (11%)	7 (11%)	0	2
54	Y8	62/65 (95%)	49 (79%)	6 (10%)	7 (11%)	0	2
55	R9	35/37 (95%)	34 (97%)	0	1 (3%)	3	21
55	Y9	34/37 (92%)	33 (97%)	1 (3%)	0	100	100
All	All	11649/12360 (94%)	9394 (81%)	1496 (13%)	759 (6%)	1	8

All (759) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	QB	29	ALA
2	QB	165	VAL

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Mol	Chain	Res	Type
2	QB	195	ASP
2	QB	238	LEU
3	QC	64	VAL
3	QC	77	ILE
4	QD	13	ARG
4	QD	14	ARG
4	QD	24	GLU
4	QD	34	GLU
4	QD	150	GLU
5	QE	115	VAL
7	QG	80	VAL
9	QI	34	ASN
9	QI	35	GLU
10	QJ	75	ILE
11	QK	117	ASN
12	QL	47	LYS
12	QL	79	GLU
13	QM	12	ASN
13	QM	14	ARG
13	QM	47	ASP
13	QM	83	ASP
17	QQ	69	LYS
19	QS	37	ARG
19	QS	67	VAL
19	QS	70	LYS
19	QS	72	GLY
27	RD	28	GLU
28	RE	59	VAL
28	RE	61	ARG
28	RE	78	LEU
29	RF	2	LYS
29	RF	3	GLU
29	RF	25	PRO
29	RF	132	VAL
30	RG	97	ASP
31	RH	9	ILE
31	RH	10	PRO
31	RH	15	VAL
31	RH	49	VAL
31	RH	80	SER
31	RH	152	ARG
31	RH	153	LYS

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Mol	Chain	Res	Type
31	RH	164	TYR
31	RH	168	PRO
32	RI	144	VAL
33	RN	131	GLN
34	RO	48	PRO
35	RP	6	LEU
35	RP	9	ASN
35	RP	15	ARG
35	RP	27	HIS
35	RP	29	LYS
35	RP	42	SER
35	RP	56	SER
35	RP	57	THR
35	RP	62	LEU
35	RP	63	PRO
35	RP	98	GLU
36	RQ	78	PRO
36	RQ	90	VAL
36	RQ	133	ARG
38	RS	89	ARG
41	RV	49	THR
44	RY	76	CYS
44	RY	78	ALA
44	RY	85	VAL
44	RY	89	PHE
45	RZ	53	ILE
45	RZ	157	LEU
46	R0	47	PRO
47	R1	30	VAL
47	R1	45	ASN
48	R2	47	ASN
50	R4	39	CYS
50	R4	40	HIS
51	R5	4	HIS
52	R6	19	ARG
52	R6	31	PRO
54	R8	32	LEU
54	R8	34	TRP
55	R9	2	LYS
2	XB	15	VAL
2	XB	29	ALA
2	XB	165	VAL

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Mol	Chain	Res	Type
2	XB	190	THR
2	XB	238	LEU
3	XC	12	LEU
3	XC	64	VAL
4	XD	14	ARG
4	XD	24	GLU
4	XD	26	CYS
4	XD	110	PHE
5	XE	115	VAL
7	XG	3	ARG
7	XG	80	VAL
9	XI	118	LYS
10	XJ	54	PHE
10	XJ	57	LYS
10	XJ	75	ILE
12	XL	127	GLU
13	XM	3	ARG
13	XM	14	ARG
13	XM	47	ASP
13	XM	83	ASP
14	XN	15	LYS
18	XR	20	ALA
19	XS	37	ARG
19	XS	38	SER
19	XS	70	LYS
27	YD	26	LYS
27	YD	28	GLU
28	YE	54	GLN
28	YE	61	ARG
28	YE	64	LYS
28	YE	78	LEU
29	YF	25	PRO
29	YF	67	GLN
29	YF	123	LEU
29	YF	124	LEU
31	YH	9	ILE
31	YH	10	PRO
31	YH	15	VAL
31	YH	49	VAL
31	YH	84	SER
31	YH	109	PHE
31	YH	152	ARG

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Mol	Chain	Res	Type
31	YH	153	LYS
31	YH	168	PRO
33	YN	17	ASP
33	YN	18	ALA
34	YO	48	PRO
35	YP	6	LEU
35	YP	10	PRO
35	YP	15	ARG
35	YP	16	ARG
35	YP	27	HIS
35	YP	45	LEU
35	YP	56	SER
35	YP	62	LEU
35	YP	63	PRO
36	YQ	18	LYS
36	YQ	59	ARG
36	YQ	78	PRO
36	YQ	133	ARG
38	YS	89	ARG
38	YS	107	GLU
41	YV	49	THR
41	YV	85	LYS
44	YY	77	PRO
44	YY	78	ALA
44	YY	89	PHE
45	YZ	53	ILE
45	YZ	111	VAL
45	YZ	141	VAL
45	YZ	154	ASP
46	Y0	47	PRO
47	Y1	30	VAL
47	Y1	93	GLU
48	Y2	43	GLN
48	Y2	47	ASN
50	Y4	6	HIS
50	Y4	40	HIS
51	Y5	4	HIS
52	Y6	28	ARG
52	Y6	31	PRO
54	Y8	30	ARG
54	Y8	33	ASN
54	Y8	51	ALA

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Mol	Chain	Res	Type
54	Y8	61	LEU
2	QB	16	HIS
2	QB	20	GLU
2	QB	39	ILE
2	QB	194	PRO
3	QC	12	LEU
3	QC	78	GLY
3	QC	85	ARG
3	QC	160	ALA
3	QC	162	GLN
5	QE	12	LEU
7	QG	17	VAL
8	QH	99	GLU
9	QI	119	ALA
9	QI	124	GLN
10	QJ	54	PHE
11	QK	10	VAL
11	QK	15	ALA
12	QL	45	PRO
12	QL	127	GLU
13	QM	3	ARG
13	QM	48	LEU
13	QM	63	THR
13	QM	100	GLY
13	QM	116	THR
14	QN	14	PRO
14	QN	15	LYS
19	QS	38	SER
19	QS	41	VAL
19	QS	80	TYR
27	RD	25	THR
27	RD	33	LEU
27	RD	159	ALA
27	RD	196	VAL
27	RD	239	ARG
28	RE	54	GLN
28	RE	63	LEU
28	RE	65	GLY
28	RE	68	ALA
28	RE	69	LYS
28	RE	71	GLY
29	RF	28	ILE

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Mol	Chain	Res	Type
29	RF	67	GLN
29	RF	123	LEU
29	RF	124	LEU
31	RH	12	PRO
31	RH	45	VAL
31	RH	55	PRO
31	RH	109	PHE
31	RH	151	ILE
32	RI	77	LEU
33	RN	18	ALA
35	RP	21	ARG
35	RP	24	GLY
35	RP	147	LEU
36	RQ	80	GLU
36	RQ	134	ARG
36	RQ	135	ASP
36	RQ	136	ALA
38	RS	4	LEU
38	RS	88	ASP
38	RS	94	TYR
39	RT	86	ILE
40	RU	92	ARG
41	RV	72	VAL
41	RV	80	GLN
41	RV	84	LYS
41	RV	85	LYS
41	RV	87	HIS
41	RV	98	GLU
42	RW	63	ASP
43	RX	67	GLY
44	RY	61	ILE
44	RY	63	LYS
44	RY	80	GLY
44	RY	99	CYS
45	RZ	51	ALA
45	RZ	59	LEU
45	RZ	115	GLY
45	RZ	119	GLU
45	RZ	142	SER
45	RZ	151	HIS
45	RZ	165	VAL
47	R1	27	GLU

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Mol	Chain	Res	Type
47	R1	82	LEU
47	R1	92	LYS
47	R1	93	GLU
48	R2	48	HIS
50	R4	5	ILE
50	R4	48	ARG
50	R4	51	ASP
52	R6	14	THR
54	R8	30	ARG
54	R8	55	ALA
54	R8	61	LEU
2	XB	16	HIS
2	XB	191	ASP
3	XC	84	ILE
3	XC	160	ALA
3	XC	162	GLN
4	XD	20	TYR
4	XD	23	GLY
4	XD	27	TYR
4	XD	29	PRO
7	XG	21	VAL
8	XH	99	GLU
9	XI	124	GLN
12	XL	19	ARG
12	XL	92	ASP
12	XL	128	ALA
13	XM	100	GLY
14	XN	14	PRO
14	XN	16	PHE
17	XQ	69	LYS
19	XS	25	LYS
19	XS	80	TYR
21	XU	25	LYS
27	YD	33	LEU
27	YD	196	VAL
27	YD	238	GLY
27	YD	267	SER
28	YE	9	VAL
28	YE	25	VAL
28	YE	59	VAL
28	YE	69	LYS
28	YE	71	GLY

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Mol	Chain	Res	Type
28	YE	76	ARG
28	YE	77	ILE
28	YE	118	LYS
29	YF	3	GLU
29	YF	84	VAL
30	YG	14	GLU
30	YG	96	ARG
30	YG	97	ASP
31	YH	11	VAL
31	YH	55	PRO
31	YH	80	SER
32	YI	102	SER
32	YI	145	VAL
33	YN	126	PRO
35	YP	29	LYS
35	YP	57	THR
36	YQ	81	VAL
36	YQ	86	GLY
36	YQ	90	VAL
36	YQ	134	ARG
36	YQ	135	ASP
36	YQ	136	ALA
38	YS	19	LYS
38	YS	88	ASP
38	YS	94	TYR
38	YS	96	GLY
39	YT	84	GLN
39	YT	107	ASP
40	YU	90	VAL
40	YU	101	ARG
41	YV	44	LYS
41	YV	45	THR
41	YV	62	LEU
41	YV	72	VAL
41	YV	80	GLN
42	YW	63	ASP
42	YW	93	ALA
44	YY	61	ILE
44	YY	63	LYS
44	YY	99	CYS
45	YZ	60	GLU
45	YZ	142	SER

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Mol	Chain	Res	Type
45	YZ	146	ILE
48	Y2	70	GLN
50	Y4	11	PRO
50	Y4	22	ILE
50	Y4	23	GLU
50	Y4	24	THR
50	Y4	39	CYS
50	Y4	42	PHE
50	Y4	48	ARG
50	Y4	51	ASP
51	Y5	55	ARG
52	Y6	19	ARG
52	Y6	27	LYS
52	Y6	29	ASN
54	Y8	7	HIS
54	Y8	55	ALA
2	QB	8	LYS
2	QB	28	PHE
2	QB	88	ALA
2	QB	133	LYS
2	QB	191	ASP
2	QB	239	VAL
3	QC	15	THR
4	QD	22	LYS
4	QD	32	ALA
5	QE	19	MET
8	QH	2	LEU
9	QI	21	PRO
9	QI	29	ASN
10	QJ	59	SER
12	QL	25	PRO
12	QL	128	ALA
14	QN	16	PHE
20	QT	97	ALA
20	QT	103	GLY
21	QU	25	LYS
28	RE	2	LYS
28	RE	25	VAL
28	RE	32	PRO
28	RE	76	ARG
28	RE	92	THR
28	RE	204	ALA

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Mol	Chain	Res	Type
29	RF	21	ALA
30	RG	82	LEU
30	RG	96	ARG
30	RG	116	ASP
31	RH	27	LYS
31	RH	47	GLU
31	RH	85	LYS
31	RH	160	LYS
32	RI	85	GLU
32	RI	102	SER
32	RI	117	GLU
33	RN	17	ASP
35	RP	103	ALA
35	RP	141	ALA
37	RR	107	ASP
38	RS	44	LYS
39	RT	107	ASP
40	RU	98	LEU
41	RV	44	LYS
41	RV	62	LEU
41	RV	71	LEU
44	RY	3	VAL
44	RY	17	SER
44	RY	19	LYS
44	RY	53	PRO
44	RY	79	CYS
45	RZ	13	GLU
46	R0	83	PRO
47	R1	55	GLY
47	R1	96	LYS
48	R2	43	GLN
50	R4	24	THR
50	R4	42	PHE
50	R4	52	THR
52	R6	49	HIS
54	R8	51	ALA
2	XB	20	GLU
2	XB	26	PRO
2	XB	39	ILE
2	XB	133	LYS
3	XC	15	THR
3	XC	51	GLY

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Mol	Chain	Res	Type
3	XC	53	ALA
3	XC	77	ILE
4	XD	25	ARG
4	XD	34	GLU
4	XD	150	GLU
5	XE	3	GLU
5	XE	7	GLU
5	XE	39	GLY
8	XH	2	LEU
10	XJ	91	PRO
11	XK	15	ALA
13	XM	82	MET
13	XM	116	THR
17	XQ	74	LEU
19	XS	67	VAL
20	XT	10	LEU
20	XT	103	GLY
21	XU	3	LYS
27	YD	25	THR
27	YD	159	ALA
28	YE	2	LYS
28	YE	48	GLN
28	YE	51	PHE
28	YE	187	ALA
28	YE	204	ALA
29	YF	9	ILE
29	YF	17	ARG
29	YF	62	ARG
29	YF	128	ALA
29	YF	133	ASN
30	YG	5	VAL
31	YH	12	PRO
31	YH	21	PRO
31	YH	47	GLU
31	YH	90	LYS
31	YH	130	ARG
32	YI	77	LEU
33	YN	127	ASP
33	YN	131	GLN
35	YP	5	ASP
35	YP	47	ASP
35	YP	107	LYS

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Mol	Chain	Res	Type
35	YP	141	ALA
38	YS	12	PHE
38	YS	44	LYS
39	YT	86	ILE
40	YU	92	ARG
42	YW	110	LYS
44	YY	53	PRO
44	YY	58	GLY
45	YZ	6	LYS
45	YZ	13	GLU
45	YZ	73	GLN
45	YZ	136	PHE
45	YZ	150	LEU
45	YZ	173	ALA
46	Y0	83	PRO
47	Y1	79	GLY
47	Y1	96	LYS
48	Y2	48	HIS
50	Y4	34	GLU
50	Y4	52	THR
52	Y6	11	LEU
52	Y6	49	HIS
2	QB	131	PRO
2	QB	234	PRO
3	QC	13	GLY
3	QC	16	ARG
3	QC	206	GLU
4	QD	149	ALA
5	QE	7	GLU
7	QG	7	ALA
8	QH	100	ILE
9	QI	19	LEU
11	QK	16	SER
12	QL	19	ARG
13	QM	82	MET
19	QS	43	GLU
19	QS	65	ASN
27	RD	3	VAL
28	RE	9	VAL
28	RE	33	VAL
28	RE	45	THR
28	RE	51	PHE

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Mol	Chain	Res	Type
28	RE	66	HIS
28	RE	77	ILE
28	RE	86	PRO
28	RE	90	THR
28	RE	129	HIS
28	RE	200	GLU
29	RF	17	ARG
29	RF	133	ASN
30	RG	5	VAL
30	RG	14	GLU
30	RG	36	LYS
30	RG	86	MET
31	RH	7	LEU
31	RH	34	GLU
31	RH	39	PRO
31	RH	111	HIS
31	RH	169	VAL
32	RI	132	PRO
33	RN	126	PRO
33	RN	127	ASP
35	RP	111	ARG
36	RQ	59	ARG
36	RQ	104	PHE
37	RR	82	GLU
38	RS	106	ARG
44	RY	57	GLN
44	RY	58	GLY
44	RY	73	ARG
45	RZ	6	LYS
45	RZ	118	GLN
45	RZ	136	PHE
46	R0	49	LYS
48	R2	16	LEU
50	R4	46	GLN
50	R4	50	VAL
51	R5	49	CYS
52	R6	22	ALA
54	R8	7	HIS
2	XB	95	GLN
2	XB	122	PHE
2	XB	226	ARG
3	XC	3	ASN

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Mol	Chain	Res	Type
3	XC	79	ARG
4	XD	4	TYR
4	XD	16	GLY
4	XD	149	ALA
5	XE	19	MET
7	XG	7	ALA
8	XH	100	ILE
9	XI	19	LEU
11	XK	12	ARG
12	XL	47	LYS
13	XM	45	VAL
13	XM	63	THR
27	YD	46	GLN
27	YD	239	ARG
28	YE	32	PRO
28	YE	66	HIS
28	YE	90	THR
29	YF	21	ALA
29	YF	89	VAL
30	YG	82	LEU
30	YG	109	VAL
30	YG	116	ASP
30	YG	117	PHE
31	YH	4	ILE
31	YH	30	LYS
31	YH	39	PRO
31	YH	85	LYS
31	YH	160	LYS
32	YI	132	PRO
35	YP	21	ARG
35	YP	111	ARG
35	YP	147	LEU
36	YQ	104	PHE
37	YR	82	GLU
37	YR	107	ASP
38	YS	4	LEU
38	YS	57	LYS
39	YT	105	LEU
41	YV	79	VAL
41	YV	98	GLU
42	YW	65	LEU
44	YY	50	ARG

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Mol	Chain	Res	Type
44	YY	73	ARG
44	YY	96	ILE
45	YZ	157	LEU
46	Y0	49	LYS
47	Y1	92	LYS
50	Y4	46	GLN
51	Y5	49	CYS
52	Y6	25	LYS
52	Y6	44	ARG
2	QB	150	SER
3	QC	3	ASN
3	QC	45	LYS
3	QC	84	ILE
3	QC	98	ASN
4	QD	5	ILE
4	QD	26	CYS
4	QD	39	PRO
7	QG	19	GLY
9	QI	107	ARG
10	QJ	37	PRO
11	QK	11	LYS
12	QL	92	ASP
13	QM	45	VAL
27	RD	191	ALA
28	RE	62	PRO
28	RE	73	GLU
28	RE	82	ARG
29	RF	9	ILE
29	RF	66	PRO
30	RG	117	PHE
31	RH	11	VAL
31	RH	46	GLU
31	RH	52	VAL
33	RN	125	GLY
33	RN	129	PRO
35	RP	16	ARG
35	RP	47	ASP
36	RQ	81	VAL
37	RR	103	ARG
37	RR	106	GLY
38	RS	19	LYS
38	RS	87	PHE

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Mol	Chain	Res	Type
41	RV	99	ILE
42	RW	93	ALA
43	RX	51	VAL
45	RZ	73	GLN
45	RZ	146	ILE
45	RZ	173	ALA
47	R1	81	LYS
50	R4	11	PRO
50	R4	23	GLU
52	R6	20	ASN
52	R6	27	LYS
2	XB	131	PRO
2	XB	231	GLU
2	XB	234	PRO
2	XB	239	VAL
3	XC	16	ARG
3	XC	99	VAL
4	XD	3	ARG
4	XD	5	ILE
12	XL	17	LYS
12	XL	79	GLU
19	XS	41	VAL
28	YE	44	TYR
28	YE	45	THR
28	YE	47	VAL
28	YE	62	PRO
28	YE	73	GLU
28	YE	82	ARG
29	YF	27	GLU
29	YF	28	ILE
30	YG	86	MET
31	YH	7	LEU
31	YH	52	VAL
31	YH	87	LEU
31	YH	111	HIS
31	YH	169	VAL
33	YN	8	GLN
33	YN	129	PRO
35	YP	19	VAL
35	YP	106	LEU
38	YS	87	PHE
39	YT	97	ALA

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Mol	Chain	Res	Type
41	YV	29	PRO
41	YV	36	PRO
41	YV	50	PRO
41	YV	99	ILE
43	YX	51	VAL
44	YY	16	ALA
44	YY	85	VAL
45	YZ	156	LYS
48	Y2	16	LEU
48	Y2	44	LEU
50	Y4	50	VAL
50	Y4	57	GLU
20	QT	98	PRO
36	RQ	63	LYS
41	RV	37	VAL
42	RW	65	LEU
45	RZ	67	LEU
47	R1	31	GLY
47	R1	86	SER
52	R6	11	LEU
9	XI	30	GLY
11	XK	10	VAL
11	XK	105	VAL
12	XL	65	GLU
19	XS	9	VAL
19	XS	72	GLY
30	YG	36	LYS
30	YG	146	TYR
31	YH	151	ILE
44	YY	41	GLY
45	YZ	59	LEU
45	YZ	165	VAL
47	Y1	27	GLU
52	Y6	22	ALA
52	Y6	30	THR
54	Y8	32	LEU
2	QB	231	GLU
5	QE	39	GLY
30	RG	87	PRO
35	RP	23	PRO
35	RP	122	PRO
41	RV	79	VAL

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Mol	Chain	Res	Type
45	RZ	141	VAL
47	R1	28	GLY
28	YE	81	ILE
41	YV	37	VAL
43	YX	67	GLY
52	Y6	41	PRO
35	RP	43	GLY
35	RP	97	PRO
41	RV	29	PRO
45	RZ	108	PRO
45	RZ	139	VAL
52	R6	41	PRO
9	XI	53	VAL
13	XM	9	ILE
28	YE	52	LEU
35	YP	7	ARG
37	YR	106	GLY
44	YY	49	VAL
44	YY	80	GLY
3	QC	51	GLY
30	RG	109	VAL
35	RP	19	VAL
45	RZ	134	PRO
45	RZ	161	VAL
50	R4	22	ILE
9	XI	21	PRO
10	XJ	37	PRO
13	XM	4	ILE
19	XS	46	GLY
20	XT	97	ALA
28	YE	7	VAL
2	QB	26	PRO
28	RE	7	VAL
30	RG	85	GLY
31	RH	4	ILE
5	XE	70	PRO
7	XG	17	VAL
9	XI	28	VAL
19	QS	9	VAL
35	RP	146	VAL
44	RY	77	PRO
29	YF	132	VAL

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Mol	Chain	Res	Type
48	R2	18	PRO

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	QB	204/220 (93%)	176 (86%)	28 (14%)	3	16
2	XB	204/220 (93%)	175 (86%)	29 (14%)	3	14
3	QC	160/188 (85%)	143 (89%)	17 (11%)	6	24
3	XC	160/188 (85%)	139 (87%)	21 (13%)	4	17
4	QD	180/181 (99%)	157 (87%)	23 (13%)	4	18
4	XD	180/181 (99%)	151 (84%)	29 (16%)	2	12
5	QE	119/123 (97%)	107 (90%)	12 (10%)	7	26
5	XE	119/123 (97%)	106 (89%)	13 (11%)	6	23
6	QF	90/90 (100%)	84 (93%)	6 (7%)	15	42
6	XF	90/90 (100%)	75 (83%)	15 (17%)	2	11
7	QG	126/127 (99%)	112 (89%)	14 (11%)	6	22
7	XG	126/127 (99%)	107 (85%)	19 (15%)	3	13
8	QH	119/119 (100%)	108 (91%)	11 (9%)	8	30
8	XH	119/119 (100%)	106 (89%)	13 (11%)	6	23
9	QI	99/99 (100%)	78 (79%)	21 (21%)	1	5
9	XI	99/99 (100%)	83 (84%)	16 (16%)	2	11
10	QJ	89/92 (97%)	78 (88%)	11 (12%)	4	19
10	XJ	89/92 (97%)	76 (85%)	13 (15%)	3	14
11	QK	92/99 (93%)	83 (90%)	9 (10%)	7	28
11	XK	92/99 (93%)	83 (90%)	9 (10%)	7	28
12	QL	104/109 (95%)	89 (86%)	15 (14%)	3	14
12	XL	104/109 (95%)	82 (79%)	22 (21%)	1	5
13	QM	94/101 (93%)	79 (84%)	15 (16%)	2	11

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
13	XM	94/101 (93%)	83 (88%)	11 (12%)	5	20
14	QN	49/50 (98%)	46 (94%)	3 (6%)	17	45
14	XN	49/50 (98%)	45 (92%)	4 (8%)	10	35
15	QO	79/80 (99%)	71 (90%)	8 (10%)	7	26
15	XO	79/80 (99%)	72 (91%)	7 (9%)	9	32
16	QP	72/74 (97%)	65 (90%)	7 (10%)	8	28
16	XP	72/74 (97%)	65 (90%)	7 (10%)	8	28
17	QQ	95/97 (98%)	90 (95%)	5 (5%)	20	49
17	XQ	95/97 (98%)	88 (93%)	7 (7%)	13	38
18	QR	62/77 (80%)	57 (92%)	5 (8%)	11	36
18	XR	62/77 (80%)	55 (89%)	7 (11%)	5	21
19	QS	71/80 (89%)	52 (73%)	19 (27%)	0	2
19	XS	71/80 (89%)	56 (79%)	15 (21%)	1	5
20	QT	76/82 (93%)	61 (80%)	15 (20%)	1	6
20	XT	76/82 (93%)	63 (83%)	13 (17%)	2	10
21	QU	20/20 (100%)	19 (95%)	1 (5%)	22	50
21	XU	20/20 (100%)	18 (90%)	2 (10%)	7	27
24	QY	79/103 (77%)	75 (95%)	4 (5%)	21	50
24	XY	79/103 (77%)	75 (95%)	4 (5%)	21	50
27	RD	214/218 (98%)	175 (82%)	39 (18%)	2	8
27	YD	214/218 (98%)	172 (80%)	42 (20%)	1	6
28	RE	165/166 (99%)	135 (82%)	30 (18%)	2	8
28	YE	165/166 (99%)	131 (79%)	34 (21%)	1	6
29	RF	165/166 (99%)	139 (84%)	26 (16%)	2	12
29	YF	165/166 (99%)	141 (86%)	24 (14%)	3	14
30	RG	155/156 (99%)	143 (92%)	12 (8%)	12	37
30	YG	155/156 (99%)	138 (89%)	17 (11%)	6	23
31	RH	142/148 (96%)	121 (85%)	21 (15%)	3	13
31	YH	142/148 (96%)	114 (80%)	28 (20%)	1	6
32	RI	122/124 (98%)	99 (81%)	23 (19%)	1	7
32	YI	122/124 (98%)	100 (82%)	22 (18%)	2	8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
33	RN	117/119 (98%)	104 (89%)	13 (11%)	6	22
33	YN	117/119 (98%)	105 (90%)	12 (10%)	7	25
34	RO	100/100 (100%)	88 (88%)	12 (12%)	5	20
34	YO	100/100 (100%)	86 (86%)	14 (14%)	3	15
35	RP	116/116 (100%)	84 (72%)	32 (28%)	0	2
35	YP	116/116 (100%)	82 (71%)	34 (29%)	0	2
36	RQ	110/111 (99%)	94 (86%)	16 (14%)	3	14
36	YQ	110/111 (99%)	90 (82%)	20 (18%)	2	8
37	RR	100/101 (99%)	81 (81%)	19 (19%)	1	7
37	YR	100/101 (99%)	84 (84%)	16 (16%)	2	11
38	RS	87/88 (99%)	78 (90%)	9 (10%)	7	25
38	YS	87/88 (99%)	74 (85%)	13 (15%)	3	13
39	RT	120/127 (94%)	99 (82%)	21 (18%)	2	9
39	YT	120/127 (94%)	99 (82%)	21 (18%)	2	9
40	RU	93/94 (99%)	85 (91%)	8 (9%)	10	33
40	YU	93/94 (99%)	84 (90%)	9 (10%)	8	28
41	RV	82/82 (100%)	68 (83%)	14 (17%)	2	10
41	YV	82/82 (100%)	63 (77%)	19 (23%)	1	4
42	RW	92/92 (100%)	78 (85%)	14 (15%)	3	13
42	YW	92/92 (100%)	79 (86%)	13 (14%)	3	14
43	RX	74/78 (95%)	64 (86%)	10 (14%)	4	16
43	YX	74/78 (95%)	66 (89%)	8 (11%)	6	23
44	RY	85/91 (93%)	61 (72%)	24 (28%)	0	2
44	YY	85/91 (93%)	62 (73%)	23 (27%)	0	2
45	RZ	155/179 (87%)	124 (80%)	31 (20%)	1	6
45	YZ	162/179 (90%)	132 (82%)	30 (18%)	1	7
46	R0	66/67 (98%)	60 (91%)	6 (9%)	9	31
46	Y0	66/67 (98%)	59 (89%)	7 (11%)	6	24
47	R1	82/83 (99%)	68 (83%)	14 (17%)	2	10
47	Y1	82/83 (99%)	71 (87%)	11 (13%)	4	16
48	R2	64/67 (96%)	52 (81%)	12 (19%)	1	7

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
48	Y2	64/67 (96%)	55 (86%)	9 (14%)	3	14
49	R3	51/52 (98%)	43 (84%)	8 (16%)	2	12
49	Y3	51/52 (98%)	41 (80%)	10 (20%)	1	6
50	R4	62/63 (98%)	49 (79%)	13 (21%)	1	5
50	Y4	62/63 (98%)	45 (73%)	17 (27%)	0	2
51	R5	51/52 (98%)	43 (84%)	8 (16%)	2	12
51	Y5	49/52 (94%)	43 (88%)	6 (12%)	5	19
52	R6	47/52 (90%)	34 (72%)	13 (28%)	0	2
52	Y6	47/52 (90%)	29 (62%)	18 (38%)	0	0
53	R7	42/42 (100%)	35 (83%)	7 (17%)	2	11
53	Y7	42/42 (100%)	36 (86%)	6 (14%)	3	14
54	R8	54/55 (98%)	43 (80%)	11 (20%)	1	6
54	Y8	54/55 (98%)	44 (82%)	10 (18%)	1	7
55	R9	34/34 (100%)	32 (94%)	2 (6%)	18	46
55	Y9	33/34 (97%)	33 (100%)	0	100	100
All	All	9856/10268 (96%)	8370 (85%)	1486 (15%)	3	13

All (1486) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	QB	7	VAL
2	QB	10	LEU
2	QB	11	LEU
2	QB	23	ARG
2	QB	30	ARG
2	QB	32	ILE
2	QB	42	ILE
2	QB	44	LEU
2	QB	69	LEU
2	QB	75	LYS
2	QB	80	ILE
2	QB	101	MET
2	QB	127	ILE
2	QB	135	GLN
2	QB	136	VAL
2	QB	154	LEU
2	QB	158	LEU

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Mol	Chain	Res	Type
2	QB	162	ILE
2	QB	165	VAL
2	QB	178	ARG
2	QB	185	ILE
2	QB	187	LEU
2	QB	191	ASP
2	QB	204	ASN
2	QB	208	ILE
2	QB	226	ARG
2	QB	233	SER
2	QB	238	LEU
3	QC	5	ILE
3	QC	16	ARG
3	QC	27	LYS
3	QC	28	GLN
3	QC	36	ASP
3	QC	46	GLU
3	QC	52	LEU
3	QC	55	VAL
3	QC	66	VAL
3	QC	75	VAL
3	QC	84	ILE
3	QC	101	LEU
3	QC	161	GLU
3	QC	165	THR
3	QC	188	LEU
3	QC	196	LEU
3	QC	206	GLU
4	QD	12	CYS
4	QD	13	ARG
4	QD	15	GLU
4	QD	18	LYS
4	QD	19	LEU
4	QD	24	GLU
4	QD	27	TYR
4	QD	31	CYS
4	QD	34	GLU
4	QD	45	GLN
4	QD	58	LEU
4	QD	84	LYS
4	QD	86	LYS
4	QD	96	LEU

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Mol	Chain	Res	Type
4	QD	108	LEU
4	QD	122	ARG
4	QD	127	THR
4	QD	135	LEU
4	QD	160	GLN
4	QD	178	VAL
4	QD	187	ARG
4	QD	191	ARG
4	QD	200	GLU
5	QE	6	PHE
5	QE	8	GLU
5	QE	41	VAL
5	QE	47	LYS
5	QE	51	VAL
5	QE	68	GLU
5	QE	72	GLN
5	QE	79	GLU
5	QE	101	ILE
5	QE	115	VAL
5	QE	126	ARG
5	QE	147	ASP
6	QF	21	LEU
6	QF	28	ARG
6	QF	54	LYS
6	QF	72	VAL
6	QF	83	ASP
6	QF	98	LEU
7	QG	3	ARG
7	QG	8	GLU
7	QG	11	GLN
7	QG	57	GLU
7	QG	75	VAL
7	QG	78	ARG
7	QG	84	ASN
7	QG	94	ARG
7	QG	104	LEU
7	QG	113	GLU
7	QG	136	LYS
7	QG	137	LYS
7	QG	151	TYR
7	QG	156	TRP
8	QH	1	MET

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Mol	Chain	Res	Type
8	QH	26	VAL
8	QH	41	ARG
8	QH	56	LYS
8	QH	63	LEU
8	QH	91	ARG
8	QH	102	ARG
8	QH	109	ILE
8	QH	112	LEU
8	QH	133	LEU
8	QH	137	VAL
9	QI	1	MET
9	QI	3	GLN
9	QI	10	ARG
9	QI	11	LYS
9	QI	12	GLU
9	QI	25	LYS
9	QI	40	LEU
9	QI	65	VAL
9	QI	78	LYS
9	QI	79	LEU
9	QI	88	TYR
9	QI	95	LYS
9	QI	96	LEU
9	QI	102	LEU
9	QI	104	ARG
9	QI	110	GLU
9	QI	112	LYS
9	QI	114	TYR
9	QI	117	HIS
9	QI	118	LYS
9	QI	127	LYS
10	QJ	16	LEU
10	QJ	17	ASP
10	QJ	40	LEU
10	QJ	42	THR
10	QJ	57	LYS
10	QJ	60	ARG
10	QJ	62	HIS
10	QJ	74	ILE
10	QJ	79	ARG
10	QJ	80	LYS
10	QJ	96	ILE

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Mol	Chain	Res	Type
11	QK	13	GLN
11	QK	14	VAL
11	QK	18	ARG
11	QK	29	ILE
11	QK	30	VAL
11	QK	84	VAL
11	QK	87	THR
11	QK	105	VAL
11	QK	124	LYS
12	QL	8	ASN
12	QL	18	VAL
12	QL	20	LYS
12	QL	24	VAL
12	QL	27	LEU
12	QL	28	LYS
12	QL	33	ARG
12	QL	42	THR
12	QL	84	LEU
12	QL	85	ILE
12	QL	92	ASP
12	QL	111	LYS
12	QL	116	SER
12	QL	124	LYS
12	QL	126	LYS
13	QM	4	ILE
13	QM	9	ILE
13	QM	19	LEU
13	QM	27	LYS
13	QM	46	LYS
13	QM	48	LEU
13	QM	49	THR
13	QM	56	LEU
13	QM	66	LEU
13	QM	70	LEU
13	QM	73	GLU
13	QM	79	LYS
13	QM	81	LEU
13	QM	93	ARG
13	QM	108	ARG
14	QN	6	LEU
14	QN	15	LYS
14	QN	44	LEU

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Mol	Chain	Res	Type
15	QO	3	ILE
15	QO	4	THR
15	QO	26	GLU
15	QO	31	LEU
15	QO	39	LEU
15	QO	77	ARG
15	QO	82	ILE
15	QO	87	ILE
16	QP	2	VAL
16	QP	18	ARG
16	QP	21	VAL
16	QP	27	LYS
16	QP	45	THR
16	QP	54	GLU
16	QP	67	THR
17	QQ	52	LYS
17	QQ	63	ARG
17	QQ	73	VAL
17	QQ	74	LEU
17	QQ	78	GLU
18	QR	19	LYS
18	QR	31	LEU
18	QR	58	LEU
18	QR	82	THR
18	QR	85	LEU
19	QS	5	LEU
19	QS	6	LYS
19	QS	7	LYS
19	QS	10	PHE
19	QS	11	VAL
19	QS	12	ASP
19	QS	13	ASP
19	QS	16	LEU
19	QS	19	VAL
19	QS	27	GLU
19	QS	30	LEU
19	QS	31	ILE
19	QS	40	ILE
19	QS	56	GLN
19	QS	60	VAL
19	QS	63	THR
19	QS	67	VAL

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Mol	Chain	Res	Type
19	QS	69	HIS
19	QS	83	HIS
20	QT	10	LEU
20	QT	14	LYS
20	QT	24	LEU
20	QT	29	LYS
20	QT	36	LEU
20	QT	58	LYS
20	QT	72	LEU
20	QT	73	HIS
20	QT	74	LYS
20	QT	75	ASN
20	QT	84	LEU
20	QT	92	LEU
20	QT	93	GLU
20	QT	104	LEU
20	QT	105	SER
21	QU	9	ARG
24	QY	6	LYS
24	QY	49	GLN
24	QY	91	TYR
24	QY	92	HIS
27	RD	10	THR
27	RD	14	ARG
27	RD	20	ASP
27	RD	27	THR
27	RD	31	LYS
27	RD	34	VAL
27	RD	49	ILE
27	RD	61	LEU
27	RD	65	ILE
27	RD	72	LYS
27	RD	94	LEU
27	RD	95	LEU
27	RD	98	VAL
27	RD	103	ARG
27	RD	104	TYR
27	RD	106	ILE
27	RD	111	LEU
27	RD	116	GLN
27	RD	138	VAL
27	RD	150	LYS

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Mol	Chain	Res	Type
27	RD	154	LYS
27	RD	155	LEU
27	RD	157	ARG
27	RD	165	ILE
27	RD	166	GLN
27	RD	168	ARG
27	RD	171	ASP
27	RD	173	VAL
27	RD	192	THR
27	RD	193	VAL
27	RD	211	ARG
27	RD	212	SER
27	RD	242	ARG
27	RD	244	ARG
27	RD	255	LYS
27	RD	257	LEU
27	RD	268	ARG
27	RD	271	ILE
27	RD	273	ARG
28	RE	4	ILE
28	RE	33	VAL
28	RE	37	ARG
28	RE	57	LYS
28	RE	63	LEU
28	RE	66	HIS
28	RE	69	LYS
28	RE	78	LEU
28	RE	79	ARG
28	RE	82	ARG
28	RE	85	ASN
28	RE	89	ASP
28	RE	95	ILE
28	RE	116	VAL
28	RE	118	LYS
28	RE	119	ARG
28	RE	134	ILE
28	RE	144	ARG
28	RE	152	LYS
28	RE	154	LYS
28	RE	171	GLU
28	RE	175	VAL
28	RE	179	GLU

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Mol	Chain	Res	Type
28	RE	181	LEU
28	RE	184	VAL
28	RE	185	LYS
28	RE	188	VAL
28	RE	197	ILE
28	RE	202	LYS
28	RE	203	LYS
29	RF	2	LYS
29	RF	8	GLN
29	RF	19	GLU
29	RF	20	LEU
29	RF	23	ASP
29	RF	24	LEU
29	RF	28	ILE
29	RF	33	LEU
29	RF	36	VAL
29	RF	38	ARG
29	RF	53	THR
29	RF	57	VAL
29	RF	60	SER
29	RF	62	ARG
29	RF	70	THR
29	RF	74	ARG
29	RF	88	VAL
29	RF	96	ASP
29	RF	110	LEU
29	RF	125	LEU
29	RF	158	THR
29	RF	165	ARG
29	RF	175	THR
29	RF	183	VAL
29	RF	201	VAL
29	RF	205	ARG
30	RG	34	LEU
30	RG	37	VAL
30	RG	38	VAL
30	RG	43	LEU
30	RG	60	LEU
30	RG	63	ILE
30	RG	88	ILE
30	RG	99	MET
30	RG	115	ARG

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Mol	Chain	Res	Type
30	RG	159	VAL
30	RG	161	THR
30	RG	174	GLU
31	RH	9	ILE
31	RH	17	VAL
31	RH	19	VAL
31	RH	24	VAL
31	RH	27	LYS
31	RH	37	VAL
31	RH	44	VAL
31	RH	46	GLU
31	RH	49	VAL
31	RH	50	VAL
31	RH	51	ARG
31	RH	83	TYR
31	RH	89	ILE
31	RH	104	GLU
31	RH	125	VAL
31	RH	130	ARG
31	RH	131	VAL
31	RH	143	GLN
31	RH	157	TYR
31	RH	158	HIS
31	RH	167	GLU
32	RI	1	MET
32	RI	3	VAL
32	RI	6	LEU
32	RI	38	LEU
32	RI	60	GLU
32	RI	62	LYS
32	RI	74	ASN
32	RI	81	VAL
32	RI	82	ARG
32	RI	85	GLU
32	RI	99	GLU
32	RI	101	LEU
32	RI	109	ILE
32	RI	110	ASP
32	RI	114	LEU
32	RI	117	GLU
32	RI	122	GLU
32	RI	125	GLU

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Mol	Chain	Res	Type
32	RI	130	TYR
32	RI	136	VAL
32	RI	138	ILE
32	RI	141	LYS
32	RI	144	VAL
33	RN	1	MET
33	RN	14	VAL
33	RN	28	THR
33	RN	32	THR
33	RN	33	LEU
33	RN	43	THR
33	RN	71	ILE
33	RN	87	LEU
33	RN	93	THR
33	RN	94	HIS
33	RN	98	VAL
33	RN	99	LEU
33	RN	137	LYS
34	RO	5	GLN
34	RO	20	MET
34	RO	23	ARG
34	RO	29	ASN
34	RO	47	ILE
34	RO	49	ARG
34	RO	80	ASP
34	RO	91	LEU
34	RO	94	ARG
34	RO	98	VAL
34	RO	108	GLU
34	RO	117	LEU
35	RP	5	ASP
35	RP	6	LEU
35	RP	9	ASN
35	RP	14	LYS
35	RP	15	ARG
35	RP	19	VAL
35	RP	21	ARG
35	RP	29	LYS
35	RP	45	LEU
35	RP	52	GLU
35	RP	58	THR
35	RP	61	ARG

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Mol	Chain	Res	Type
35	RP	62	LEU
35	RP	67	MET
35	RP	75	ILE
35	RP	81	GLN
35	RP	83	VAL
35	RP	95	VAL
35	RP	101	VAL
35	RP	102	ARG
35	RP	106	LEU
35	RP	110	TYR
35	RP	114	ILE
35	RP	117	GLU
35	RP	125	VAL
35	RP	135	LEU
35	RP	136	GLU
35	RP	138	LEU
35	RP	144	GLU
35	RP	147	LEU
35	RP	148	LEU
35	RP	149	GLU
36	RQ	45	GLN
36	RQ	55	VAL
36	RQ	56	ARG
36	RQ	63	LYS
36	RQ	64	ILE
36	RQ	66	ILE
36	RQ	80	GLU
36	RQ	81	VAL
36	RQ	82	ARG
36	RQ	83	MET
36	RQ	109	VAL
36	RQ	110	THR
36	RQ	112	GLU
36	RQ	113	GLN
36	RQ	115	MET
36	RQ	134	ARG
37	RR	2	ARG
37	RR	4	LEU
37	RR	6	SER
37	RR	9	LYS
37	RR	15	SER
37	RR	18	LEU

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Mol	Chain	Res	Type
37	RR	28	LEU
37	RR	29	LEU
37	RR	37	THR
37	RR	44	LEU
37	RR	54	LEU
37	RR	65	LEU
37	RR	67	LEU
37	RR	71	GLN
37	RR	76	VAL
37	RR	79	LEU
37	RR	99	LYS
37	RR	104	ARG
37	RR	105	ARG
38	RS	4	LEU
38	RS	20	ARG
38	RS	49	VAL
38	RS	52	SER
38	RS	56	LEU
38	RS	73	LEU
38	RS	98	VAL
38	RS	106	ARG
38	RS	110	LEU
39	RT	8	LYS
39	RT	9	LEU
39	RT	23	ARG
39	RT	27	THR
39	RT	29	ARG
39	RT	30	VAL
39	RT	35	LYS
39	RT	41	ARG
39	RT	48	ILE
39	RT	50	ILE
39	RT	58	ASN
39	RT	59	THR
39	RT	78	LEU
39	RT	86	ILE
39	RT	88	ILE
39	RT	89	VAL
39	RT	93	ARG
39	RT	98	LYS
39	RT	99	LEU
39	RT	107	ASP

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Mol	Chain	Res	Type
39	RT	137	LYS
40	RU	31	SER
40	RU	37	GLU
40	RU	52	ARG
40	RU	59	ARG
40	RU	83	LEU
40	RU	92	ARG
40	RU	104	GLN
40	RU	117	GLN
41	RV	5	VAL
41	RV	15	GLU
41	RV	19	LYS
41	RV	22	VAL
41	RV	32	THR
41	RV	35	LEU
41	RV	70	ILE
41	RV	76	LYS
41	RV	79	VAL
41	RV	80	GLN
41	RV	81	TYR
41	RV	87	HIS
41	RV	95	LEU
41	RV	98	GLU
42	RW	1	MET
42	RW	11	ARG
42	RW	17	VAL
42	RW	20	VAL
42	RW	21	VAL
42	RW	51	LEU
42	RW	69	LEU
42	RW	76	VAL
42	RW	88	ARG
42	RW	95	ILE
42	RW	96	ILE
42	RW	100	THR
42	RW	106	ILE
42	RW	107	LEU
43	RX	12	VAL
43	RX	14	SER
43	RX	27	THR
43	RX	48	LYS
43	RX	50	LYS

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Mol	Chain	Res	Type
43	RX	53	LYS
43	RX	63	LYS
43	RX	66	LEU
43	RX	76	ARG
43	RX	80	ILE
44	RY	5	MET
44	RY	9	LYS
44	RY	14	LEU
44	RY	17	SER
44	RY	19	LYS
44	RY	27	VAL
44	RY	28	LYS
44	RY	38	ILE
44	RY	55	TYR
44	RY	60	PHE
44	RY	61	ILE
44	RY	62	GLU
44	RY	63	LYS
44	RY	71	LYS
44	RY	75	ILE
44	RY	76	CYS
44	RY	79	CYS
44	RY	86	ARG
44	RY	89	PHE
44	RY	95	LYS
44	RY	96	ILE
44	RY	97	ARG
44	RY	101	LYS
44	RY	102	CYS
45	RZ	4	ARG
45	RZ	5	LEU
45	RZ	18	LEU
45	RZ	19	ARG
45	RZ	33	LEU
45	RZ	59	LEU
45	RZ	60	GLU
45	RZ	61	LEU
45	RZ	70	LEU
45	RZ	71	VAL
45	RZ	76	LEU
45	RZ	81	ARG
45	RZ	87	ASP

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Mol	Chain	Res	Type
45	RZ	91	LEU
45	RZ	92	SER
45	RZ	111	VAL
45	RZ	112	ARG
45	RZ	118	GLN
45	RZ	120	ILE
45	RZ	121	HIS
45	RZ	128	VAL
45	RZ	135	GLU
45	RZ	136	PHE
45	RZ	140	ASP
45	RZ	141	VAL
45	RZ	144	LEU
45	RZ	156	LYS
45	RZ	162	GLU
45	RZ	171	ILE
45	RZ	174	VAL
45	RZ	175	VAL
46	R0	3	HIS
46	R0	5	LYS
46	R0	9	SER
46	R0	20	ARG
46	R0	36	ILE
46	R0	53	MET
47	R1	3	LYS
47	R1	4	VAL
47	R1	25	LYS
47	R1	38	SER
47	R1	57	GLU
47	R1	62	VAL
47	R1	78	LYS
47	R1	80	LEU
47	R1	81	LYS
47	R1	82	LEU
47	R1	90	ILE
47	R1	91	LYS
47	R1	97	LEU
47	R1	98	LEU
48	R2	4	SER
48	R2	24	LEU
48	R2	25	VAL
48	R2	35	LEU

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Mol	Chain	Res	Type
48	R2	47	ASN
48	R2	48	HIS
48	R2	50	ILE
48	R2	53	LEU
48	R2	57	ILE
48	R2	60	LEU
48	R2	62	THR
48	R2	67	LYS
49	R3	8	LEU
49	R3	24	LYS
49	R3	31	LEU
49	R3	32	GLN
49	R3	40	THR
49	R3	54	VAL
49	R3	56	VAL
49	R3	59	VAL
50	R4	8	LYS
50	R4	10	VAL
50	R4	16	CYS
50	R4	21	VAL
50	R4	31	ILE
50	R4	34	GLU
50	R4	35	VAL
50	R4	50	VAL
50	R4	55	ARG
50	R4	59	PHE
50	R4	61	ARG
50	R4	63	TYR
50	R4	69	LYS
51	R5	3	LYS
51	R5	4	HIS
51	R5	6	VAL
51	R5	11	THR
51	R5	26	THR
51	R5	36	CYS
51	R5	48	GLU
51	R5	52	TYR
52	R6	7	ILE
52	R6	8	LYS
52	R6	10	LEU
52	R6	12	GLU
52	R6	16	CYS

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Mol	Chain	Res	Type
52	R6	24	GLU
52	R6	30	THR
52	R6	33	LYS
52	R6	37	ARG
52	R6	38	LYS
52	R6	39	TYR
52	R6	47	THR
52	R6	48	VAL
53	R7	1	MET
53	R7	24	THR
53	R7	34	ARG
53	R7	43	THR
53	R7	46	VAL
53	R7	47	ARG
53	R7	49	ARG
54	R8	4	MET
54	R8	14	VAL
54	R8	22	VAL
54	R8	32	LEU
54	R8	33	ASN
54	R8	40	GLU
54	R8	41	ILE
54	R8	54	GLU
54	R8	58	ILE
54	R8	61	LEU
54	R8	64	TYR
55	R9	1	MET
55	R9	17	ILE
2	XB	7	VAL
2	XB	10	LEU
2	XB	11	LEU
2	XB	17	PHE
2	XB	23	ARG
2	XB	24	TRP
2	XB	30	ARG
2	XB	31	TYR
2	XB	42	ILE
2	XB	44	LEU
2	XB	49	GLU
2	XB	69	LEU
2	XB	80	ILE
2	XB	87	ARG

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Mol	Chain	Res	Type
2	XB	108	ILE
2	XB	111	ARG
2	XB	127	ILE
2	XB	145	LEU
2	XB	153	ARG
2	XB	154	LEU
2	XB	156	LYS
2	XB	165	VAL
2	XB	185	ILE
2	XB	187	LEU
2	XB	196	LEU
2	XB	208	ILE
2	XB	209	ARG
2	XB	226	ARG
2	XB	238	LEU
3	XC	4	LYS
3	XC	5	ILE
3	XC	27	LYS
3	XC	36	ASP
3	XC	46	GLU
3	XC	66	VAL
3	XC	75	VAL
3	XC	83	ARG
3	XC	84	ILE
3	XC	94	LEU
3	XC	119	ARG
3	XC	124	ILE
3	XC	131	ARG
3	XC	140	ARG
3	XC	143	GLU
3	XC	161	GLU
3	XC	178	LEU
3	XC	188	LEU
3	XC	195	VAL
3	XC	196	LEU
3	XC	204	LEU
4	XD	3	ARG
4	XD	8	VAL
4	XD	10	ARG
4	XD	15	GLU
4	XD	18	LYS
4	XD	19	LEU

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Mol	Chain	Res	Type
4	XD	24	GLU
4	XD	26	CYS
4	XD	28	SER
4	XD	30	LYS
4	XD	31	CYS
4	XD	45	GLN
4	XD	58	LEU
4	XD	76	ARG
4	XD	84	LYS
4	XD	86	LYS
4	XD	96	LEU
4	XD	122	ARG
4	XD	127	THR
4	XD	135	LEU
4	XD	160	GLN
4	XD	163	GLU
4	XD	168	ARG
4	XD	170	VAL
4	XD	178	VAL
4	XD	187	ARG
4	XD	191	ARG
4	XD	194	LEU
4	XD	199	ASN
5	XE	6	PHE
5	XE	12	LEU
5	XE	13	ILE
5	XE	41	VAL
5	XE	47	LYS
5	XE	51	VAL
5	XE	72	GLN
5	XE	79	GLU
5	XE	101	ILE
5	XE	115	VAL
5	XE	118	ILE
5	XE	126	ARG
5	XE	137	GLU
6	XF	7	ASN
6	XF	15	ASP
6	XF	16	GLN
6	XF	21	LEU
6	XF	25	ILE
6	XF	28	ARG

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Mol	Chain	Res	Type
6	XF	38	GLU
6	XF	40	VAL
6	XF	55	ASP
6	XF	64	GLN
6	XF	70	ASP
6	XF	72	VAL
6	XF	83	ASP
6	XF	85	VAL
6	XF	98	LEU
7	XG	3	ARG
7	XG	8	GLU
7	XG	16	LEU
7	XG	17	VAL
7	XG	21	VAL
7	XG	23	VAL
7	XG	27	ILE
7	XG	57	GLU
7	XG	78	ARG
7	XG	80	VAL
7	XG	84	ASN
7	XG	97	GLN
7	XG	104	LEU
7	XG	113	GLU
7	XG	114	ARG
7	XG	118	VAL
7	XG	136	LYS
7	XG	137	LYS
7	XG	151	TYR
8	XH	1	MET
8	XH	3	THR
8	XH	23	SER
8	XH	24	THR
8	XH	25	ASP
8	XH	26	VAL
8	XH	56	LYS
8	XH	60	ARG
8	XH	63	LEU
8	XH	102	ARG
8	XH	109	ILE
8	XH	112	LEU
8	XH	133	LEU
9	XI	1	MET

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Mol	Chain	Res	Type
9	XI	10	ARG
9	XI	25	LYS
9	XI	31	GLN
9	XI	35	GLU
9	XI	38	GLN
9	XI	47	LEU
9	XI	70	LYS
9	XI	78	LYS
9	XI	88	TYR
9	XI	95	LYS
9	XI	96	LEU
9	XI	102	LEU
9	XI	104	ARG
9	XI	114	TYR
9	XI	117	HIS
10	XJ	16	LEU
10	XJ	17	ASP
10	XJ	40	LEU
10	XJ	47	PHE
10	XJ	57	LYS
10	XJ	62	HIS
10	XJ	70	ARG
10	XJ	74	ILE
10	XJ	78	ASN
10	XJ	80	LYS
10	XJ	96	ILE
10	XJ	97	GLU
10	XJ	98	ILE
11	XK	13	GLN
11	XK	14	VAL
11	XK	29	ILE
11	XK	30	VAL
11	XK	54	ARG
11	XK	83	ILE
11	XK	84	VAL
11	XK	95	ILE
11	XK	114	VAL
12	XL	18	VAL
12	XL	20	LYS
12	XL	23	LYS
12	XL	24	VAL
12	XL	27	LEU

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Mol	Chain	Res	Type
12	XL	28	LYS
12	XL	33	ARG
12	XL	42	THR
12	XL	43	VAL
12	XL	44	THR
12	XL	46	LYS
12	XL	54	LYS
12	XL	60	LEU
12	XL	62	SER
12	XL	66	VAL
12	XL	67	THR
12	XL	83	VAL
12	XL	84	LEU
12	XL	85	ILE
12	XL	111	LYS
12	XL	116	SER
12	XL	126	LYS
13	XM	4	ILE
13	XM	14	ARG
13	XM	25	ILE
13	XM	43	THR
13	XM	48	LEU
13	XM	56	LEU
13	XM	66	LEU
13	XM	70	LEU
13	XM	79	LYS
13	XM	93	ARG
13	XM	108	ARG
14	XN	15	LYS
14	XN	18	VAL
14	XN	32	SER
14	XN	58	LYS
15	XO	3	ILE
15	XO	26	GLU
15	XO	39	LEU
15	XO	45	VAL
15	XO	82	ILE
15	XO	84	LYS
15	XO	87	ILE
16	XP	2	VAL
16	XP	21	VAL
16	XP	27	LYS

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Mol	Chain	Res	Type
16	XP	45	THR
16	XP	53	VAL
16	XP	54	GLU
16	XP	67	THR
17	XQ	35	VAL
17	XQ	52	LYS
17	XQ	63	ARG
17	XQ	65	ILE
17	XQ	73	VAL
17	XQ	74	LEU
17	XQ	92	ARG
18	XR	28	GLU
18	XR	31	LEU
18	XR	37	VAL
18	XR	58	LEU
18	XR	65	ILE
18	XR	82	THR
18	XR	85	LEU
19	XS	5	LEU
19	XS	6	LYS
19	XS	7	LYS
19	XS	10	PHE
19	XS	13	ASP
19	XS	15	LEU
19	XS	19	VAL
19	XS	27	GLU
19	XS	30	LEU
19	XS	31	ILE
19	XS	40	ILE
19	XS	60	VAL
19	XS	63	THR
19	XS	64	GLU
19	XS	67	VAL
20	XT	10	LEU
20	XT	14	LYS
20	XT	19	SER
20	XT	24	LEU
20	XT	35	THR
20	XT	58	LYS
20	XT	72	LEU
20	XT	74	LYS
20	XT	75	ASN

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Mol	Chain	Res	Type
20	XT	81	LYS
20	XT	84	LEU
20	XT	92	LEU
20	XT	93	GLU
21	XU	9	ARG
21	XU	15	ARG
24	XY	6	LYS
24	XY	49	GLN
24	XY	91	TYR
24	XY	92	HIS
27	YD	3	VAL
27	YD	18	VAL
27	YD	24	ILE
27	YD	25	THR
27	YD	31	LYS
27	YD	33	LEU
27	YD	34	VAL
27	YD	43	ARG
27	YD	44	ASN
27	YD	59	LYS
27	YD	61	LEU
27	YD	65	ILE
27	YD	71	ASP
27	YD	72	LYS
27	YD	75	ILE
27	YD	88	ARG
27	YD	92	ILE
27	YD	94	LEU
27	YD	95	LEU
27	YD	99	ASP
27	YD	103	ARG
27	YD	106	ILE
27	YD	111	LEU
27	YD	138	VAL
27	YD	141	VAL
27	YD	142	VAL
27	YD	150	LYS
27	YD	155	LEU
27	YD	157	ARG
27	YD	165	ILE
27	YD	166	GLN
27	YD	168	ARG

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Mol	Chain	Res	Type
27	YD	192	THR
27	YD	193	VAL
27	YD	196	VAL
27	YD	211	ARG
27	YD	242	ARG
27	YD	244	ARG
27	YD	257	LEU
27	YD	268	ARG
27	YD	271	ILE
27	YD	273	ARG
28	YE	4	ILE
28	YE	7	VAL
28	YE	12	THR
28	YE	26	ILE
28	YE	33	VAL
28	YE	35	GLN
28	YE	37	ARG
28	YE	47	VAL
28	YE	48	GLN
28	YE	49	LEU
28	YE	63	LEU
28	YE	66	HIS
28	YE	75	VAL
28	YE	78	LEU
28	YE	79	ARG
28	YE	82	ARG
28	YE	111	ARG
28	YE	116	VAL
28	YE	118	LYS
28	YE	119	ARG
28	YE	134	ILE
28	YE	144	ARG
28	YE	152	LYS
28	YE	154	LYS
28	YE	167	VAL
28	YE	175	VAL
28	YE	179	GLU
28	YE	181	LEU
28	YE	184	VAL
28	YE	185	LYS
28	YE	188	VAL
28	YE	201	THR

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Mol	Chain	Res	Type
28	YE	202	LYS
28	YE	203	LYS
29	YF	6	VAL
29	YF	7	TYR
29	YF	8	GLN
29	YF	20	LEU
29	YF	24	LEU
29	YF	33	LEU
29	YF	45	ARG
29	YF	52	LYS
29	YF	53	THR
29	YF	57	VAL
29	YF	60	SER
29	YF	74	ARG
29	YF	78	ILE
29	YF	88	VAL
29	YF	110	LEU
29	YF	125	LEU
29	YF	136	THR
29	YF	140	LEU
29	YF	153	SER
29	YF	158	THR
29	YF	164	ARG
29	YF	175	THR
29	YF	183	VAL
29	YF	192	LEU
30	YG	4	ASP
30	YG	7	LEU
30	YG	26	GLN
30	YG	34	LEU
30	YG	38	VAL
30	YG	43	LEU
30	YG	60	LEU
30	YG	79	ASN
30	YG	88	ILE
30	YG	101	ILE
30	YG	104	GLU
30	YG	114	ILE
30	YG	120	LEU
30	YG	123	ASN
30	YG	133	LEU
30	YG	159	VAL

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Mol	Chain	Res	Type
30	YG	164	GLU
31	YH	9	ILE
31	YH	16	SER
31	YH	17	VAL
31	YH	24	VAL
31	YH	26	VAL
31	YH	27	LYS
31	YH	34	GLU
31	YH	37	VAL
31	YH	45	VAL
31	YH	49	VAL
31	YH	50	VAL
31	YH	51	ARG
31	YH	59	ARG
31	YH	77	LYS
31	YH	85	LYS
31	YH	89	ILE
31	YH	103	LEU
31	YH	105	LEU
31	YH	106	THR
31	YH	107	VAL
31	YH	125	VAL
31	YH	127	GLU
31	YH	130	ARG
31	YH	136	ILE
31	YH	143	GLN
31	YH	157	TYR
31	YH	158	HIS
31	YH	167	GLU
32	YI	1	MET
32	YI	2	LYS
32	YI	5	LEU
32	YI	9	LEU
32	YI	10	GLU
32	YI	20	ASP
32	YI	38	LEU
32	YI	40	THR
32	YI	54	GLN
32	YI	62	LYS
32	YI	81	VAL
32	YI	87	LYS
32	YI	88	ILE

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Mol	Chain	Res	Type
32	YI	101	LEU
32	YI	109	ILE
32	YI	114	LEU
32	YI	117	GLU
32	YI	122	GLU
32	YI	130	TYR
32	YI	136	VAL
32	YI	138	ILE
32	YI	142	VAL
33	YN	1	MET
33	YN	14	VAL
33	YN	48	MET
33	YN	67	LEU
33	YN	87	LEU
33	YN	88	GLU
33	YN	93	THR
33	YN	94	HIS
33	YN	99	LEU
33	YN	120	LEU
33	YN	127	ASP
33	YN	137	LYS
34	YO	1	MET
34	YO	20	MET
34	YO	22	ILE
34	YO	23	ARG
34	YO	29	ASN
34	YO	47	ILE
34	YO	48	PRO
34	YO	49	ARG
34	YO	73	ASP
34	YO	80	ASP
34	YO	98	VAL
34	YO	104	ARG
34	YO	108	GLU
34	YO	117	LEU
35	YP	1	MET
35	YP	6	LEU
35	YP	9	ASN
35	YP	14	LYS
35	YP	15	ARG
35	YP	19	VAL
35	YP	21	ARG

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Mol	Chain	Res	Type
35	YP	27	HIS
35	YP	29	LYS
35	YP	40	SER
35	YP	45	LEU
35	YP	52	GLU
35	YP	56	SER
35	YP	58	THR
35	YP	59	LEU
35	YP	61	ARG
35	YP	62	LEU
35	YP	75	ILE
35	YP	81	GLN
35	YP	85	LEU
35	YP	95	VAL
35	YP	98	GLU
35	YP	112	LEU
35	YP	114	ILE
35	YP	115	LEU
35	YP	117	GLU
35	YP	125	VAL
35	YP	135	LEU
35	YP	136	GLU
35	YP	138	LEU
35	YP	144	GLU
35	YP	147	LEU
35	YP	148	LEU
35	YP	149	GLU
36	YQ	1	MET
36	YQ	10	ARG
36	YQ	27	VAL
36	YQ	42	ILE
36	YQ	45	GLN
36	YQ	52	VAL
36	YQ	56	ARG
36	YQ	60	ARG
36	YQ	64	ILE
36	YQ	66	ILE
36	YQ	75	THR
36	YQ	79	LEU
36	YQ	80	GLU
36	YQ	81	VAL
36	YQ	82	ARG

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Mol	Chain	Res	Type
36	YQ	83	MET
36	YQ	102	VAL
36	YQ	103	MET
36	YQ	127	ILE
36	YQ	138	ASP
37	YR	6	SER
37	YR	9	LYS
37	YR	15	SER
37	YR	18	LEU
37	YR	28	LEU
37	YR	29	LEU
37	YR	34	ILE
37	YR	65	LEU
37	YR	67	LEU
37	YR	74	LYS
37	YR	75	LEU
37	YR	76	VAL
37	YR	79	LEU
37	YR	104	ARG
37	YR	113	LEU
37	YR	117	VAL
38	YS	12	PHE
38	YS	20	ARG
38	YS	48	LEU
38	YS	49	VAL
38	YS	52	SER
38	YS	54	LEU
38	YS	56	LEU
38	YS	58	LEU
38	YS	59	LYS
38	YS	69	VAL
38	YS	73	LEU
38	YS	106	ARG
38	YS	110	LEU
39	YT	8	LYS
39	YT	23	ARG
39	YT	28	VAL
39	YT	30	VAL
39	YT	33	LYS
39	YT	35	LYS
39	YT	41	ARG
39	YT	50	ILE

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Mol	Chain	Res	Type
39	YT	58	ASN
39	YT	59	THR
39	YT	62	THR
39	YT	74	ARG
39	YT	78	LEU
39	YT	86	ILE
39	YT	88	ILE
39	YT	89	VAL
39	YT	98	LYS
39	YT	99	LEU
39	YT	102	ILE
39	YT	107	ASP
39	YT	137	LYS
40	YU	5	LYS
40	YU	17	ILE
40	YU	19	LYS
40	YU	27	LEU
40	YU	74	LEU
40	YU	88	ILE
40	YU	92	ARG
40	YU	93	LYS
40	YU	97	ASP
41	YV	2	PHE
41	YV	4	ILE
41	YV	5	VAL
41	YV	18	LEU
41	YV	19	LYS
41	YV	32	THR
41	YV	35	LEU
41	YV	47	VAL
41	YV	51	VAL
41	YV	64	HIS
41	YV	66	ARG
41	YV	73	SER
41	YV	78	LYS
41	YV	79	VAL
41	YV	80	GLN
41	YV	81	TYR
41	YV	82	ARG
41	YV	98	GLU
41	YV	100	ARG
42	YW	11	ARG

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Mol	Chain	Res	Type
42	YW	17	VAL
42	YW	20	VAL
42	YW	50	VAL
42	YW	51	LEU
42	YW	63	ASP
42	YW	66	GLU
42	YW	76	VAL
42	YW	88	ARG
42	YW	94	ASP
42	YW	96	ILE
42	YW	106	ILE
42	YW	107	LEU
43	YX	12	VAL
43	YX	27	THR
43	YX	48	LYS
43	YX	50	LYS
43	YX	53	LYS
43	YX	66	LEU
43	YX	76	ARG
43	YX	80	ILE
44	YY	2	ARG
44	YY	5	MET
44	YY	9	LYS
44	YY	13	VAL
44	YY	14	LEU
44	YY	28	LYS
44	YY	38	ILE
44	YY	51	VAL
44	YY	55	TYR
44	YY	60	PHE
44	YY	61	ILE
44	YY	62	GLU
44	YY	63	LYS
44	YY	71	LYS
44	YY	75	ILE
44	YY	76	CYS
44	YY	81	LYS
44	YY	86	ARG
44	YY	87	LYS
44	YY	95	LYS
44	YY	96	ILE
44	YY	97	ARG

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Mol	Chain	Res	Type
44	YY	101	LYS
45	YZ	4	ARG
45	YZ	5	LEU
45	YZ	9	TYR
45	YZ	13	GLU
45	YZ	19	ARG
45	YZ	27	VAL
45	YZ	28	MET
45	YZ	33	LEU
45	YZ	34	ASN
45	YZ	41	LEU
45	YZ	61	LEU
45	YZ	71	VAL
45	YZ	75	ASN
45	YZ	76	LEU
45	YZ	87	ASP
45	YZ	91	LEU
45	YZ	104	PHE
45	YZ	107	THR
45	YZ	111	VAL
45	YZ	116	VAL
45	YZ	120	ILE
45	YZ	121	HIS
45	YZ	128	VAL
45	YZ	133	ILE
45	YZ	135	GLU
45	YZ	141	VAL
45	YZ	148	ASP
45	YZ	150	LEU
45	YZ	162	GLU
45	YZ	171	ILE
46	Y0	5	LYS
46	Y0	7	LEU
46	Y0	9	SER
46	Y0	10	THR
46	Y0	36	ILE
46	Y0	49	LYS
46	Y0	55	ARG
47	Y1	4	VAL
47	Y1	21	ARG
47	Y1	30	VAL
47	Y1	46	LEU

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Mol	Chain	Res	Type
47	Y1	51	VAL
47	Y1	75	GLU
47	Y1	78	LYS
47	Y1	90	ILE
47	Y1	92	LYS
47	Y1	97	LEU
47	Y1	98	LEU
48	Y2	5	GLU
48	Y2	15	LYS
48	Y2	24	LEU
48	Y2	44	LEU
48	Y2	48	HIS
48	Y2	50	ILE
48	Y2	53	LEU
48	Y2	64	LEU
48	Y2	67	LYS
49	Y3	8	LEU
49	Y3	9	VAL
49	Y3	11	SER
49	Y3	17	LYS
49	Y3	31	LEU
49	Y3	32	GLN
49	Y3	40	THR
49	Y3	54	VAL
49	Y3	56	VAL
49	Y3	59	VAL
50	Y4	5	ILE
50	Y4	6	HIS
50	Y4	10	VAL
50	Y4	14	ILE
50	Y4	16	CYS
50	Y4	18	CYS
50	Y4	21	VAL
50	Y4	31	ILE
50	Y4	35	VAL
50	Y4	36	CYS
50	Y4	40	HIS
50	Y4	50	VAL
50	Y4	55	ARG
50	Y4	59	PHE
50	Y4	61	ARG
50	Y4	63	TYR

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Mol	Chain	Res	Type
50	Y4	69	LYS
51	Y5	3	LYS
51	Y5	4	HIS
51	Y5	11	THR
51	Y5	26	THR
51	Y5	29	THR
51	Y5	52	TYR
52	Y6	7	ILE
52	Y6	8	LYS
52	Y6	9	LEU
52	Y6	10	LEU
52	Y6	12	GLU
52	Y6	18	ARG
52	Y6	21	TYR
52	Y6	24	GLU
52	Y6	28	ARG
52	Y6	34	LEU
52	Y6	37	ARG
52	Y6	38	LYS
52	Y6	39	TYR
52	Y6	40	CYS
52	Y6	44	ARG
52	Y6	45	LYS
52	Y6	47	THR
52	Y6	48	VAL
53	Y7	14	LYS
53	Y7	24	THR
53	Y7	43	THR
53	Y7	46	VAL
53	Y7	47	ARG
53	Y7	49	ARG
54	Y8	4	MET
54	Y8	14	VAL
54	Y8	32	LEU
54	Y8	36	LYS
54	Y8	41	ILE
54	Y8	52	LYS
54	Y8	54	GLU
54	Y8	58	ILE
54	Y8	61	LEU
54	Y8	64	TYR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (66)

such sidechains are listed below:

Mol	Chain	Res	Type
2	QB	94	ASN
3	QC	28	GLN
3	QC	108	ASN
5	QE	65	ASN
6	QF	13	ASN
7	QG	86	GLN
9	QI	58	HIS
9	QI	73	GLN
10	QJ	84	GLN
11	QK	26	ASN
11	QK	38	ASN
11	QK	104	GLN
16	QP	82	GLN
24	QY	49	GLN
27	RD	143	HIS
27	RD	164	GLN
27	RD	201	HIS
28	RE	169	ASN
28	RE	180	ASN
30	RG	58	GLN
31	RH	61	HIS
32	RI	133	HIS
34	RO	29	ASN
36	RQ	45	GLN
36	RQ	113	GLN
37	RR	50	HIS
45	RZ	118	GLN
48	R2	38	GLN
51	R5	4	HIS
51	R5	22	HIS
54	R8	43	GLN
2	XB	78	GLN
2	XB	94	ASN
3	XC	37	GLN
3	XC	102	ASN
3	XC	108	ASN
7	XG	68	ASN
7	XG	97	GLN
9	XI	38	GLN
9	XI	73	GLN
9	XI	117	HIS
10	XJ	68	HIS

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Mol	Chain	Res	Type
11	XK	13	GLN
11	XK	38	ASN
24	XY	49	GLN
27	YD	96	HIS
27	YD	201	HIS
28	YE	169	ASN
29	YF	75	HIS
32	YI	74	ASN
34	YO	89	ASN
35	YP	38	GLN
36	YQ	113	GLN
37	YR	3	HIS
37	YR	71	GLN
42	YW	60	ASN
45	YZ	50	GLN
45	YZ	75	ASN
45	YZ	118	GLN
45	YZ	132	ASN
48	Y2	65	ASN
50	Y4	6	HIS
50	Y4	46	GLN
51	Y5	23	HIS
53	Y7	36	GLN
55	Y9	29	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	QA	1509/1522 (99%)	303 (20%)	42 (2%)
1	XA	1506/1522 (98%)	291 (19%)	37 (2%)
22	QV	76/77 (98%)	15 (19%)	0
22	QW	76/77 (98%)	21 (27%)	2 (2%)
22	XV	76/77 (98%)	10 (13%)	1 (1%)
22	XW	76/77 (98%)	18 (23%)	0
23	QX	16/20 (80%)	6 (37%)	2 (12%)
23	XX	16/20 (80%)	6 (37%)	0
25	RA	2888/2916 (99%)	577 (19%)	52 (1%)
25	YA	2872/2916 (98%)	561 (19%)	39 (1%)
26	RB	121/124 (97%)	23 (19%)	1 (0%)
26	YB	121/124 (97%)	20 (16%)	2 (1%)
All	All	9353/9472 (98%)	1851 (19%)	178 (1%)

All (1851) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	QA	4	U
1	QA	5	U
1	QA	9	G
1	QA	22	G
1	QA	32	A
1	QA	39	G
1	QA	47	C
1	QA	48	C
1	QA	50	A
1	QA	51	A
1	QA	54	C
1	QA	61	G
1	QA	65	U
1	QA	66	G
1	QA	79	G
1	QA	80	G
1	QA	89	U
1	QA	90	C
1	QA	92	G
1	QA	93	U
1	QA	101	A
1	QA	116	A
1	QA	121	C
1	QA	131	C
1	QA	163	C
1	QA	182	U
1	QA	184	G
1	QA	186	C
1	QA	188	U
1	QA	189	U
1	QA	190	G
1	QA	191(A)	G
1	QA	191(D)	U
1	QA	191(E)	G
1	QA	195	A
1	QA	197	A
1	QA	198	G
1	QA	201	C
1	QA	208	U
1	QA	209	U
1	QA	210	U
1	QA	216	G

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Mol	Chain	Res	Type
1	QA	231	G
1	QA	244	U
1	QA	247	G
1	QA	251	G
1	QA	266	G
1	QA	267	C
1	QA	268	C
1	QA	280	C
1	QA	281	G
1	QA	289	G
1	QA	321	A
1	QA	328	C
1	QA	329	A
1	QA	332	G
1	QA	341	C
1	QA	345	C
1	QA	346	G
1	QA	347	G
1	QA	350	G
1	QA	351	G
1	QA	352	C
1	QA	353	A
1	QA	354	G
1	QA	356	A
1	QA	367	U
1	QA	372	C
1	QA	373	A
1	QA	384	G
1	QA	397	A
1	QA	398	C
1	QA	406	G
1	QA	411	A
1	QA	412	A
1	QA	421	U
1	QA	422	C
1	QA	423	G
1	QA	429	U
1	QA	439	A
1	QA	442	C
1	QA	443	C
1	QA	452	A
1	QA	466	C

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Mol	Chain	Res	Type
1	QA	478	A
1	QA	482	A
1	QA	483	C
1	QA	485	G
1	QA	486	U
1	QA	494	U
1	QA	495	A
1	QA	497	U
1	QA	505	G
1	QA	509	A
1	QA	511	C
1	QA	518	C
1	QA	519	C
1	QA	527	G
1	QA	532	A
1	QA	533	A
1	QA	545	C
1	QA	547	A
1	QA	548	G
1	QA	559	A
1	QA	561	U
1	QA	562	C
1	QA	572	A
1	QA	573	A
1	QA	576	G
1	QA	577	G
1	QA	579	G
1	QA	595	G
1	QA	596	C
1	QA	607	A
1	QA	623	C
1	QA	630	G
1	QA	653	A
1	QA	665	A
1	QA	666	G
1	QA	688	G
1	QA	701	C
1	QA	702	A
1	QA	703	G
1	QA	704	A
1	QA	722	A
1	QA	723	U

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Mol	Chain	Res	Type
1	QA	724	G
1	QA	731	G
1	QA	749	C
1	QA	755	G
1	QA	777	A
1	QA	786	G
1	QA	792	A
1	QA	793	U
1	QA	794	A
1	QA	813	U
1	QA	816	A
1	QA	817	C
1	QA	821	G
1	QA	828	A
1	QA	841	U
1	QA	842	C
1	QA	843	U
1	QA	848	C
1	QA	859	A
1	QA	871	U
1	QA	872	A
1	QA	884	U
1	QA	914	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	969	A
1	QA	971	G
1	QA	974	A
1	QA	975	A
1	QA	977	A
1	QA	978	A
1	QA	980	C
1	QA	983	A
1	QA	991	U
1	QA	992	U
1	QA	993	G
1	QA	999	U
1	QA	1000	A

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Mol	Chain	Res	Type
1	QA	1001	G
1	QA	1002	G
1	QA	1003	G
1	QA	1005	A
1	QA	1006	C
1	QA	1007	C
1	QA	1008	C
1	QA	1009	G
1	QA	1020	U
1	QA	1021	G
1	QA	1024	G
1	QA	1025	U
1	QA	1026	G
1	QA	1029	G
1	QA	1031	G
1	QA	1032	A
1	QA	1032(A)	G
1	QA	1033	G
1	QA	1034	G
1	QA	1036	G
1	QA	1038	C
1	QA	1039	C
1	QA	1042	G
1	QA	1053	G
1	QA	1054	C
1	QA	1064	G
1	QA	1065	U
1	QA	1066	C
1	QA	1067	A
1	QA	1068	G
1	QA	1081	G
1	QA	1086	U
1	QA	1094	G
1	QA	1095	U
1	QA	1101	A
1	QA	1117	G
1	QA	1118	C
1	QA	1124	G
1	QA	1125	U
1	QA	1129	C
1	QA	1136	U
1	QA	1137	C

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Mol	Chain	Res	Type
1	QA	1138	G
1	QA	1139	G
1	QA	1140	C
1	QA	1146	A
1	QA	1152	A
1	QA	1157	A
1	QA	1158	C
1	QA	1159	U
1	QA	1160	G
1	QA	1171	G
1	QA	1176	A
1	QA	1177	G
1	QA	1178	G
1	QA	1181	G
1	QA	1183	A
1	QA	1196	U
1	QA	1197	G
1	QA	1202	G
1	QA	1211	U
1	QA	1212	U
1	QA	1213	A
1	QA	1225	A
1	QA	1226	C
1	QA	1238	A
1	QA	1240	U
1	QA	1241	G
1	QA	1256	A
1	QA	1257	U
1	QA	1258	G
1	QA	1273	G
1	QA	1278	U
1	QA	1280	A
1	QA	1281	U
1	QA	1285	A
1	QA	1286	A
1	QA	1287	A
1	QA	1288	A
1	QA	1296	C
1	QA	1297	C
1	QA	1298	C
1	QA	1299	A
1	QA	1300	G

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Mol	Chain	Res	Type
1	QA	1301	U
1	QA	1303	C
1	QA	1305	G
1	QA	1320	C
1	QA	1323	G
1	QA	1331	G
1	QA	1335	C
1	QA	1337	G
1	QA	1338	G
1	QA	1346	A
1	QA	1347	G
1	QA	1348	U
1	QA	1353	G
1	QA	1362(A)	C
1	QA	1363	A
1	QA	1364	U
1	QA	1379	G
1	QA	1397	C
1	QA	1398	A
1	QA	1406	U
1	QA	1419	G
1	QA	1442	G
1	QA	1446	A
1	QA	1450	U
1	QA	1451	A
1	QA	1452	C
1	QA	1453	G
1	QA	1454	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	1504	G
1	QA	1505	G
1	QA	1506	U
1	QA	1507	A
1	QA	1517	G
1	QA	1519	A
1	QA	1520	G

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Mol	Chain	Res	Type
1	QA	1529	G
1	QA	1530	G
1	QA	1532	U
1	QA	1533	C
1	QA	1534	A
1	QA	1536	C
1	QA	1540	U
1	QA	1541	U
1	QA	1542	U
22	QV	2	G
22	QV	3	C
22	QV	17(A)	U
22	QV	18	G
22	QV	19	G
22	QV	20	U
22	QV	21	A
22	QV	22	G
22	QV	47	U
22	QV	48	C
22	QV	49	G
22	QV	63	G
22	QV	65	C
22	QV	67	C
22	QV	76	A
22	QW	8	U
22	QW	14	A
22	QW	15	G
22	QW	16	C
22	QW	17	C
22	QW	17(A)	U
22	QW	18	G
22	QW	20	U
22	QW	21	A
22	QW	22	G
22	QW	34	C
22	QW	38	A
22	QW	39	C
22	QW	47	U
22	QW	48	C
22	QW	49	G
22	QW	50	U
22	QW	55	U

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Mol	Chain	Res	Type
22	QW	56	C
22	QW	61	C
22	QW	72	A
23	QX	10	G
23	QX	12	A
23	QX	13	A
23	QX	14	A
23	QX	17	U
23	QX	19	A
25	RA	9	U
25	RA	12	U
25	RA	15	G
25	RA	28	A
25	RA	34	C
25	RA	35	G
25	RA	46	C
25	RA	49	A
25	RA	51	G
25	RA	58	G
25	RA	60	G
25	RA	64	A
25	RA	69	C
25	RA	71	A
25	RA	75	G
25	RA	83	G
25	RA	90	U
25	RA	91	A
25	RA	93	C
25	RA	95	G
25	RA	101	G
25	RA	102	G
25	RA	113	G
25	RA	118	A
25	RA	120	U
25	RA	129	C
25	RA	138	G
25	RA	139	G
25	RA	140	A
25	RA	141	A
25	RA	154	G
25	RA	155	C
25	RA	174	C

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Mol	Chain	Res	Type
25	RA	175	G
25	RA	181	A
25	RA	196	A
25	RA	215	G
25	RA	216	A
25	RA	221	A
25	RA	222	A
25	RA	225	A
25	RA	228	A
25	RA	229	A
25	RA	245	G
25	RA	248	G
25	RA	249	C
25	RA	252	G
25	RA	260	G
25	RA	261	G
25	RA	267	C
25	RA	269	U
25	RA	270(K)	C
25	RA	270(L)	U
25	RA	270(M)	U
25	RA	270(O)	U
25	RA	270(P)	C
25	RA	270(Z)	U
25	RA	271(C)	U
25	RA	271	G
25	RA	273(D)	C
25	RA	274	G
25	RA	278	A
25	RA	283	A
25	RA	284	U
25	RA	288	C
25	RA	289	A
25	RA	311	A
25	RA	316	C
25	RA	324	A
25	RA	329	G
25	RA	330	A
25	RA	332	A
25	RA	345	A
25	RA	352	G
25	RA	353	G

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Mol	Chain	Res	Type
25	RA	356	G
25	RA	358	U
25	RA	362	U
25	RA	363	G
25	RA	363(E)	U
25	RA	363(F)	A
25	RA	364	C
25	RA	372	G
25	RA	373	U
25	RA	386	G
25	RA	388	G
25	RA	396	G
25	RA	405	U
25	RA	407	G
25	RA	411	G
25	RA	412	A
25	RA	428	A
25	RA	443	A
25	RA	444	C
25	RA	448	U
25	RA	457	A
25	RA	470	A
25	RA	481	G
25	RA	494	G
25	RA	505	A
25	RA	509	C
25	RA	512	G
25	RA	528	A
25	RA	529	A
25	RA	530	G
25	RA	531	C
25	RA	532	A
25	RA	545	G
25	RA	549	G
25	RA	556	G
25	RA	563	G
25	RA	573	G
25	RA	574	C
25	RA	575	A
25	RA	586	A
25	RA	588	U
25	RA	603	A

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Mol	Chain	Res	Type
25	RA	604	G
25	RA	607	U
25	RA	613	U
25	RA	615	G
25	RA	617	G
25	RA	627	A
25	RA	637	A
25	RA	645	C
25	RA	646	A
25	RA	651	G
25	RA	654	A
25	RA	654(A)	G
25	RA	654(B)	C
25	RA	654(F)	C
25	RA	654(G)	C
25	RA	654(O)	G
25	RA	654(Q)	C
25	RA	654(R)	C
25	RA	654(S)	G
25	RA	654(T)	C
25	RA	657	U
25	RA	668	G
25	RA	686	G
25	RA	708	C
25	RA	722	A
25	RA	730	C
25	RA	739	G
25	RA	753	C
25	RA	764	A
25	RA	775	G
25	RA	782	A
25	RA	784	A
25	RA	785	G
25	RA	789	A
25	RA	792	G
25	RA	805	G
25	RA	812	C
25	RA	819	A
25	RA	827	U
25	RA	828	U
25	RA	845	G
25	RA	855	G

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Mol	Chain	Res	Type
25	RA	856	C
25	RA	859	G
25	RA	860	U
25	RA	866	A
25	RA	877	U
25	RA	878	A
25	RA	879	G
25	RA	881	G
25	RA	882	G
25	RA	883	G
25	RA	884	C
25	RA	888	C
25	RA	889	C
25	RA	890	A
25	RA	894	C
25	RA	895	U
25	RA	896	A
25	RA	897	C
25	RA	901	A
25	RA	906	G
25	RA	907	U
25	RA	910	A
25	RA	917	A
25	RA	928	G
25	RA	932	G
25	RA	934	G
25	RA	941	A
25	RA	945	A
25	RA	946	G
25	RA	961	C
25	RA	968	G
25	RA	974	G
25	RA	983	A
25	RA	989	G
25	RA	990	A
25	RA	991	C
25	RA	996	A
25	RA	1010	A
25	RA	1011	G
25	RA	1012	U
25	RA	1013	C
25	RA	1022	G

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Mol	Chain	Res	Type
25	RA	1023	U
25	RA	1025	G
25	RA	1026	U
25	RA	1027	A
25	RA	1033	U
25	RA	1034	G
25	RA	1044	G
25	RA	1045	A
25	RA	1046	A
25	RA	1047	G
25	RA	1049	C
25	RA	1060	U
25	RA	1061	U
25	RA	1070	A
25	RA	1071	G
25	RA	1086	A
25	RA	1087	G
25	RA	1088	A
25	RA	1089	G
25	RA	1095	A
25	RA	1096	A
25	RA	1111	A
25	RA	1122	G
25	RA	1130	U
25	RA	1135	C
25	RA	1136	G
25	RA	1139	G
25	RA	1142	U
25	RA	1142(A)	A
25	RA	1155	A
25	RA	1173	G
25	RA	1174	A
25	RA	1175	U
25	RA	1176	G
25	RA	1177	A
25	RA	1178	C
25	RA	1180	C
25	RA	1195	G
25	RA	1210	A
25	RA	1220	A
25	RA	1225	C
25	RA	1233	C

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Mol	Chain	Res	Type
25	RA	1236	G
25	RA	1250	G
25	RA	1252	G
25	RA	1253	A
25	RA	1254	A
25	RA	1255	U
25	RA	1256	G
25	RA	1265	A
25	RA	1271	G
25	RA	1272	A
25	RA	1281	G
25	RA	1286	A
25	RA	1300	U
25	RA	1301	A
25	RA	1308	A
25	RA	1309	G
25	RA	1311	G
25	RA	1312	U
25	RA	1313	U
25	RA	1314	C
25	RA	1319	G
25	RA	1329	U
25	RA	1341	U
25	RA	1342	A
25	RA	1359	A
25	RA	1360	A
25	RA	1365	A
25	RA	1367	A
25	RA	1368	G
25	RA	1379	A
25	RA	1384	A
25	RA	1385	G
25	RA	1392	A
25	RA	1406	U
25	RA	1407	C
25	RA	1414	G
25	RA	1416	G
25	RA	1420	U
25	RA	1421	G
25	RA	1428	C
25	RA	1437	C
25	RA	1444(A)	A

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Mol	Chain	Res	Type
25	RA	1445	C
25	RA	1449	A
25	RA	1449(A)	G
25	RA	1451	C
25	RA	1453	A
25	RA	1455	G
25	RA	1459	G
25	RA	1460	A
25	RA	1461	G
25	RA	1467	C
25	RA	1471	A
25	RA	1475	G
25	RA	1476	C
25	RA	1477	A
25	RA	1482	U
25	RA	1483	G
25	RA	1485	G
25	RA	1488	G
25	RA	1490	A
25	RA	1493	C
25	RA	1494	A
25	RA	1505	C
25	RA	1509	C
25	RA	1510	A
25	RA	1515	C
25	RA	1522	G
25	RA	1526	G
25	RA	1534	G
25	RA	1535	U
25	RA	1536	A
25	RA	1537	C
25	RA	1538	G
25	RA	1543	A
25	RA	1544	C
25	RA	1545	A
25	RA	1547	C
25	RA	1554	A
25	RA	1558	A
25	RA	1566	A
25	RA	1569	A
25	RA	1578	U
25	RA	1585	C

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Mol	Chain	Res	Type
25	RA	1586	A
25	RA	1588	C
25	RA	1608	A
25	RA	1640	C
25	RA	1648	C
25	RA	1654	A
25	RA	1674	G
25	RA	1695	G
25	RA	1696	G
25	RA	1700	A
25	RA	1718	G
25	RA	1725	G
25	RA	1728	G
25	RA	1729	A
25	RA	1731	G
25	RA	1735	C
25	RA	1743	G
25	RA	1750	G
25	RA	1761	C
25	RA	1763	G
25	RA	1764	G
25	RA	1773	A
25	RA	1780	A
25	RA	1791	A
25	RA	1800	C
25	RA	1801	G
25	RA	1816	G
25	RA	1820	U
25	RA	1829	A
25	RA	1835	G
25	RA	1838	C
25	RA	1847	A
25	RA	1869	G
25	RA	1872	A
25	RA	1878	G
25	RA	1880	C
25	RA	1882	C
25	RA	1900	A
25	RA	1903	G
25	RA	1906	G
25	RA	1912	A
25	RA	1913	A

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Mol	Chain	Res	Type
25	RA	1916	A
25	RA	1929	G
25	RA	1930	G
25	RA	1931	U
25	RA	1936	A
25	RA	1937	A
25	RA	1938	A
25	RA	1948	G
25	RA	1955	U
25	RA	1967	C
25	RA	1970	A
25	RA	1971	A
25	RA	1972	A
25	RA	1980	G
25	RA	1981	A
25	RA	1982	C
25	RA	1993	U
25	RA	2020	A
25	RA	2022	U
25	RA	2023	G
25	RA	2026	C
25	RA	2027	G
25	RA	2031	A
25	RA	2032	G
25	RA	2033	A
25	RA	2043	C
25	RA	2052	G
25	RA	2055	C
25	RA	2056	G
25	RA	2059	A
25	RA	2060	A
25	RA	2061	G
25	RA	2062	A
25	RA	2063	C
25	RA	2069	G
25	RA	2093	G
25	RA	2096	U
25	RA	2099	U
25	RA	2108	C
25	RA	2111	C
25	RA	2112	G
25	RA	2113	U

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Mol	Chain	Res	Type
25	RA	2114	A
25	RA	2116	G
25	RA	2117	A
25	RA	2120	G
25	RA	2123	G
25	RA	2128	C
25	RA	2130	U
25	RA	2131	G
25	RA	2132	U
25	RA	2140	C
25	RA	2145	C
25	RA	2147	G
25	RA	2148	G
25	RA	2165	G
25	RA	2167	U
25	RA	2168	G
25	RA	2169	A
25	RA	2171	A
25	RA	2173	A
25	RA	2178	C
25	RA	2190	G
25	RA	2192	G
25	RA	2198	A
25	RA	2210	G
25	RA	2211	G
25	RA	2212	A
25	RA	2213	U
25	RA	2215	G
25	RA	2225	A
25	RA	2226	C
25	RA	2235	G
25	RA	2238	G
25	RA	2239	G
25	RA	2245	U
25	RA	2246	G
25	RA	2275	C
25	RA	2276	G
25	RA	2278	A
25	RA	2279	G
25	RA	2283	C
25	RA	2287	A
25	RA	2288	A

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Mol	Chain	Res	Type
25	RA	2305	A
25	RA	2307	G
25	RA	2308	G
25	RA	2309	A
25	RA	2312	U
25	RA	2316	C
25	RA	2320	A
25	RA	2325	G
25	RA	2334	G
25	RA	2335	A
25	RA	2336	A
25	RA	2347	C
25	RA	2350	C
25	RA	2354	G
25	RA	2382	G
25	RA	2383	G
25	RA	2385	C
25	RA	2394	C
25	RA	2402	C
25	RA	2403	C
25	RA	2406	U
25	RA	2410	G
25	RA	2422	A
25	RA	2423	U
25	RA	2424	C
25	RA	2425	A
25	RA	2429	G
25	RA	2430	A
25	RA	2434	A
25	RA	2435	A
25	RA	2439	A
25	RA	2440	C
25	RA	2441	C
25	RA	2445	G
25	RA	2448	A
25	RA	2460	U
25	RA	2468	G
25	RA	2469	A
25	RA	2470	G
25	RA	2471	C
25	RA	2472	G
25	RA	2474	C

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Mol	Chain	Res	Type
25	RA	2475	C
25	RA	2476	A
25	RA	2482	G
25	RA	2494	G
25	RA	2502	G
25	RA	2505	G
25	RA	2518	A
25	RA	2519	U
25	RA	2529	G
25	RA	2535	G
25	RA	2542	A
25	RA	2543	G
25	RA	2554	U
25	RA	2566	A
25	RA	2567	G
25	RA	2569	G
25	RA	2573	C
25	RA	2585	U
25	RA	2602	A
25	RA	2604	U
25	RA	2609	U
25	RA	2610	C
25	RA	2611	U
25	RA	2612	C
25	RA	2615	U
25	RA	2629	A
25	RA	2630	G
25	RA	2632	A
25	RA	2646	C
25	RA	2654	A
25	RA	2655	G
25	RA	2665	A
25	RA	2673	G
25	RA	2682	U
25	RA	2689	U
25	RA	2690	C
25	RA	2691	C
25	RA	2702	U
25	RA	2703	C
25	RA	2712(A)	A
25	RA	2713	A
25	RA	2714	G

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Mol	Chain	Res	Type
25	RA	2726	U
25	RA	2732	G
25	RA	2733	A
25	RA	2744	G
25	RA	2748	A
25	RA	2758	A
25	RA	2762	G
25	RA	2764	A
25	RA	2765	A
25	RA	2766	G
25	RA	2777	G
25	RA	2778	A
25	RA	2790	A
25	RA	2791	C
25	RA	2792	G
25	RA	2797	U
25	RA	2807	G
25	RA	2808	U
25	RA	2818	G
25	RA	2820	A
25	RA	2821	A
25	RA	2827	C
25	RA	2833	G
25	RA	2834	G
25	RA	2835	A
25	RA	2845	G
25	RA	2848	G
25	RA	2849	U
25	RA	2850	A
25	RA	2860	A
25	RA	2867	G
25	RA	2868	A
25	RA	2872	G
25	RA	2876	G
25	RA	2879	C
25	RA	2880	C
25	RA	2893	G
25	RA	2894	G
25	RA	2896	C
25	RA	2897	U
26	RB	0	A
26	RB	3	C

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Mol	Chain	Res	Type
26	RB	8	U
26	RB	14	U
26	RB	15	A
26	RB	16	G
26	RB	25	A
26	RB	27	C
26	RB	33	G
26	RB	35	U
26	RB	40	U
26	RB	42	C
26	RB	44	G
26	RB	45	A
26	RB	52	A
26	RB	53	A
26	RB	58	A
26	RB	67	G
26	RB	73	A
26	RB	88	C
26	RB	89	G
26	RB	108	C
26	RB	109	G
1	XA	4	U
1	XA	5	U
1	XA	6	G
1	XA	9	G
1	XA	22	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	61	G
1	XA	66	G
1	XA	75	C
1	XA	76	G
1	XA	79	G
1	XA	93	U
1	XA	101	A
1	XA	116	A
1	XA	120	A
1	XA	121	C

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Mol	Chain	Res	Type
1	XA	131	C
1	XA	151	A
1	XA	163	C
1	XA	169	C
1	XA	182	U
1	XA	186	C
1	XA	186(F)	C
1	XA	188	U
1	XA	189	U
1	XA	190	G
1	XA	191(A)	G
1	XA	191(D)	U
1	XA	191(E)	G
1	XA	195	A
1	XA	197	A
1	XA	198	G
1	XA	208	U
1	XA	209	U
1	XA	210	U
1	XA	216	G
1	XA	231	G
1	XA	244	U
1	XA	247	G
1	XA	251	G
1	XA	266	G
1	XA	267	C
1	XA	280	C
1	XA	281	G
1	XA	289	G
1	XA	316	G
1	XA	321	A
1	XA	328	C
1	XA	329	A
1	XA	332	G
1	XA	345	C
1	XA	347	G
1	XA	350	G
1	XA	351	G
1	XA	352	C
1	XA	353	A
1	XA	354	G
1	XA	356	A

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Mol	Chain	Res	Type
1	XA	367	U
1	XA	368	U
1	XA	372	C
1	XA	373	A
1	XA	384	G
1	XA	397	A
1	XA	398	C
1	XA	406	G
1	XA	411	A
1	XA	412	A
1	XA	413	G
1	XA	422	C
1	XA	423	G
1	XA	424	G
1	XA	429	U
1	XA	430	A
1	XA	439	A
1	XA	442	C
1	XA	452	A
1	XA	453	A
1	XA	465	A
1	XA	466	C
1	XA	467	G
1	XA	478	A
1	XA	482	A
1	XA	485	G
1	XA	486	U
1	XA	494	U
1	XA	495	A
1	XA	496	A
1	XA	497	U
1	XA	505	G
1	XA	511	C
1	XA	518	C
1	XA	527	G
1	XA	531	U
1	XA	532	A
1	XA	533	A
1	XA	545	C
1	XA	547	A
1	XA	548	G
1	XA	559	A

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Mol	Chain	Res	Type
1	XA	564	C
1	XA	572	A
1	XA	573	A
1	XA	576	G
1	XA	577	G
1	XA	579	G
1	XA	618	C
1	XA	630	G
1	XA	653	A
1	XA	665	A
1	XA	671	G
1	XA	687	A
1	XA	688	G
1	XA	697	U
1	XA	703	G
1	XA	704	A
1	XA	724	G
1	XA	731	G
1	XA	733	A
1	XA	749	C
1	XA	755	G
1	XA	760	G
1	XA	773	G
1	XA	777	A
1	XA	792	A
1	XA	793	U
1	XA	794	A
1	XA	801	U
1	XA	813	U
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	841	U
1	XA	842	C
1	XA	843	U
1	XA	848	C
1	XA	859	A
1	XA	870	U
1	XA	874	G

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Mol	Chain	Res	Type
1	XA	887	G
1	XA	890	G
1	XA	913	A
1	XA	914	A
1	XA	926	G
1	XA	927	G
1	XA	934	C
1	XA	935	A
1	XA	960	U
1	XA	961	U
1	XA	968	A
1	XA	969	A
1	XA	971	G
1	XA	972	C
1	XA	975	A
1	XA	977	A
1	XA	980	C
1	XA	981	U
1	XA	983	A
1	XA	991	U
1	XA	992	U
1	XA	993	G
1	XA	1000	A
1	XA	1001	G
1	XA	1005	A
1	XA	1006	C
1	XA	1007	C
1	XA	1008	C
1	XA	1009	G
1	XA	1020	U
1	XA	1024	G
1	XA	1025	U
1	XA	1026	G
1	XA	1028(A)	C
1	XA	1029	G
1	XA	1031	G
1	XA	1032	A
1	XA	1032(A)	G
1	XA	1033	G
1	XA	1034	G
1	XA	1036	G
1	XA	1038	C

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Mol	Chain	Res	Type
1	XA	1039	C
1	XA	1042	G
1	XA	1053	G
1	XA	1054	C
1	XA	1066	C
1	XA	1068	G
1	XA	1081	G
1	XA	1086	U
1	XA	1094	G
1	XA	1095	U
1	XA	1101	A
1	XA	1118	C
1	XA	1124	G
1	XA	1125	U
1	XA	1136	U
1	XA	1137	C
1	XA	1138	G
1	XA	1139	G
1	XA	1145	C
1	XA	1146	A
1	XA	1157	A
1	XA	1158	C
1	XA	1159	U
1	XA	1160	G
1	XA	1171	G
1	XA	1176	A
1	XA	1177	G
1	XA	1178	G
1	XA	1182	G
1	XA	1183	A
1	XA	1184	G
1	XA	1187	G
1	XA	1190	G
1	XA	1191	A
1	XA	1196	U
1	XA	1197	G
1	XA	1200	C
1	XA	1212	U
1	XA	1213	A
1	XA	1214	C
1	XA	1225	A
1	XA	1226	C

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Mol	Chain	Res	Type
1	XA	1238	A
1	XA	1240	U
1	XA	1241	G
1	XA	1256	A
1	XA	1257	U
1	XA	1258	G
1	XA	1270	C
1	XA	1273	G
1	XA	1278	U
1	XA	1280	A
1	XA	1281	U
1	XA	1285	A
1	XA	1286	A
1	XA	1287	A
1	XA	1299	A
1	XA	1300	G
1	XA	1302	U
1	XA	1303	C
1	XA	1305	G
1	XA	1317	C
1	XA	1322	C
1	XA	1326	C
1	XA	1331	G
1	XA	1334	G
1	XA	1346	A
1	XA	1353	G
1	XA	1363	A
1	XA	1364	U
1	XA	1370	G
1	XA	1397	C
1	XA	1419	G
1	XA	1442	G
1	XA	1446	A
1	XA	1447	G
1	XA	1450	U
1	XA	1451	A
1	XA	1452	C
1	XA	1453	G
1	XA	1454	G
1	XA	1491	G
1	XA	1492	A
1	XA	1493	A

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Mol	Chain	Res	Type
1	XA	1494	G
1	XA	1497	G
1	XA	1499	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	1529	G
1	XA	1530	G
1	XA	1532	U
1	XA	1533	C
1	XA	1534	A
1	XA	1536	C
1	XA	1540	U
1	XA	1541	U
1	XA	1542	U
22	XV	13	C
22	XV	17(A)	U
22	XV	18	G
22	XV	19	G
22	XV	20	U
22	XV	21	A
22	XV	47	U
22	XV	48	C
22	XV	65	C
22	XV	76	A
22	XW	8	U
22	XW	9	G
22	XW	10	G
22	XW	13	C
22	XW	14	A
22	XW	15	G
22	XW	18	G
22	XW	20	U
22	XW	21	A
22	XW	22	G
22	XW	47	U
22	XW	48	C
22	XW	49	G
22	XW	55	U

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Mol	Chain	Res	Type
22	XW	57	A
22	XW	61	C
22	XW	66	C
22	XW	72	A
23	XX	5	A
23	XX	11	U
23	XX	12	A
23	XX	13	A
23	XX	14	A
23	XX	19	A
25	YA	9	U
25	YA	15	G
25	YA	34	C
25	YA	46	C
25	YA	55	G
25	YA	58	G
25	YA	60	G
25	YA	68	G
25	YA	69	C
25	YA	71	A
25	YA	74	A
25	YA	75	G
25	YA	83	G
25	YA	93	C
25	YA	95	G
25	YA	102	G
25	YA	118	A
25	YA	119	A
25	YA	120	U
25	YA	139	G
25	YA	140	A
25	YA	141	A
25	YA	149	A
25	YA	154	G
25	YA	175	G
25	YA	182	A
25	YA	196	A
25	YA	199	A
25	YA	215	G
25	YA	216	A
25	YA	221	A
25	YA	222	A

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Mol	Chain	Res	Type
25	YA	227	A
25	YA	229	A
25	YA	233	A
25	YA	248	G
25	YA	249	C
25	YA	252	G
25	YA	261	G
25	YA	264	C
25	YA	270(B)	A
25	YA	270(K)	C
25	YA	270(M)	U
25	YA	270(O)	U
25	YA	270(P)	C
25	YA	270(Z)	U
25	YA	271(C)	U
25	YA	271	G
25	YA	273(D)	C
25	YA	274	G
25	YA	278	A
25	YA	279	C
25	YA	283	A
25	YA	289	A
25	YA	311	A
25	YA	324	A
25	YA	329	G
25	YA	330	A
25	YA	332	A
25	YA	350	U
25	YA	352	G
25	YA	356	G
25	YA	361	G
25	YA	363	G
25	YA	363(A)	A
25	YA	363(E)	U
25	YA	363(F)	A
25	YA	364	C
25	YA	386	G
25	YA	396	G
25	YA	407	G
25	YA	411	G
25	YA	412	A
25	YA	428	A

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Mol	Chain	Res	Type
25	YA	444	C
25	YA	448	U
25	YA	454	A
25	YA	455	C
25	YA	456	C
25	YA	457	A
25	YA	470	A
25	YA	481	G
25	YA	482	A
25	YA	494	G
25	YA	505	A
25	YA	509	C
25	YA	512	G
25	YA	529	A
25	YA	530	G
25	YA	531	C
25	YA	532	A
25	YA	533	G
25	YA	537	C
25	YA	556	G
25	YA	563	G
25	YA	571	A
25	YA	573	G
25	YA	575	A
25	YA	586	A
25	YA	588	U
25	YA	603	A
25	YA	607	U
25	YA	609(A)	G
25	YA	614	U
25	YA	615	G
25	YA	617	G
25	YA	624	C
25	YA	625	G
25	YA	627	A
25	YA	637	A
25	YA	645	C
25	YA	646	A
25	YA	647	G
25	YA	652	C
25	YA	668	G
25	YA	670	A

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Mol	Chain	Res	Type
25	YA	686	G
25	YA	708	C
25	YA	717	G
25	YA	722	A
25	YA	730	C
25	YA	753	C
25	YA	764	A
25	YA	775	G
25	YA	776	G
25	YA	782	A
25	YA	784	A
25	YA	785	G
25	YA	789	A
25	YA	792	G
25	YA	805	G
25	YA	812	C
25	YA	819	A
25	YA	827	U
25	YA	828	U
25	YA	832	G
25	YA	848	G
25	YA	856	C
25	YA	857	C
25	YA	859	G
25	YA	860	U
25	YA	862	G
25	YA	866	A
25	YA	878	A
25	YA	879	G
25	YA	881	G
25	YA	882	G
25	YA	883	G
25	YA	884	C
25	YA	886	C
25	YA	889	C
25	YA	890	A
25	YA	893	C
25	YA	894	C
25	YA	896	A
25	YA	897	C
25	YA	901	A
25	YA	906	G

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Mol	Chain	Res	Type
25	YA	910	A
25	YA	914	C
25	YA	917	A
25	YA	919	G
25	YA	928	G
25	YA	932	G
25	YA	941	A
25	YA	945	A
25	YA	946	G
25	YA	953	A
25	YA	959	A
25	YA	961	C
25	YA	973	A
25	YA	974	G
25	YA	974(A)	C
25	YA	980	A
25	YA	983	A
25	YA	989	G
25	YA	990	A
25	YA	991	C
25	YA	996	A
25	YA	997	G
25	YA	998	C
25	YA	1000	A
25	YA	1010	A
25	YA	1011	G
25	YA	1012	U
25	YA	1013	C
25	YA	1022	G
25	YA	1023	U
25	YA	1025	G
25	YA	1026	U
25	YA	1031	G
25	YA	1033	U
25	YA	1044	G
25	YA	1045	A
25	YA	1046	A
25	YA	1047	G
25	YA	1051	G
25	YA	1060	U
25	YA	1061	U
25	YA	1070	A

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Mol	Chain	Res	Type
25	YA	1086	A
25	YA	1087	G
25	YA	1088	A
25	YA	1089	G
25	YA	1095	A
25	YA	1096	A
25	YA	1099	G
25	YA	1122	G
25	YA	1128	A
25	YA	1130	U
25	YA	1135	C
25	YA	1136	G
25	YA	1139	G
25	YA	1143	A
25	YA	1155	A
25	YA	1173	G
25	YA	1174	A
25	YA	1175	U
25	YA	1176	G
25	YA	1177	A
25	YA	1178	C
25	YA	1180	C
25	YA	1195	G
25	YA	1218	C
25	YA	1220	A
25	YA	1247	A
25	YA	1250	G
25	YA	1253	A
25	YA	1255	U
25	YA	1256	G
25	YA	1262	A
25	YA	1265	A
25	YA	1271	G
25	YA	1272	A
25	YA	1281	G
25	YA	1289	C
25	YA	1300	U
25	YA	1301	A
25	YA	1314	C
25	YA	1319	G
25	YA	1329	U
25	YA	1345	C

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Mol	Chain	Res	Type
25	YA	1352	U
25	YA	1359	A
25	YA	1360	A
25	YA	1365	A
25	YA	1368	G
25	YA	1380	G
25	YA	1384	A
25	YA	1385	G
25	YA	1391	U
25	YA	1407	C
25	YA	1416	G
25	YA	1417	C
25	YA	1419	A
25	YA	1420	U
25	YA	1421	G
25	YA	1428	C
25	YA	1437	C
25	YA	1444(A)	A
25	YA	1449	A
25	YA	1449(A)	G
25	YA	1451	C
25	YA	1453	A
25	YA	1455	G
25	YA	1458	C
25	YA	1460	A
25	YA	1461	G
25	YA	1467	C
25	YA	1471	A
25	YA	1475	G
25	YA	1482	U
25	YA	1483	G
25	YA	1485	G
25	YA	1488	G
25	YA	1490	A
25	YA	1493	C
25	YA	1502	C
25	YA	1505	C
25	YA	1509	C
25	YA	1510	A
25	YA	1514	U
25	YA	1515	C
25	YA	1519	G

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Mol	Chain	Res	Type
25	YA	1522	G
25	YA	1526	G
25	YA	1534	G
25	YA	1535	U
25	YA	1537	C
25	YA	1543	A
25	YA	1545	A
25	YA	1547	C
25	YA	1549	C
25	YA	1554	A
25	YA	1558	A
25	YA	1559	G
25	YA	1566	A
25	YA	1569	A
25	YA	1575	C
25	YA	1578	U
25	YA	1579	A
25	YA	1580	A
25	YA	1581	G
25	YA	1585	C
25	YA	1586	A
25	YA	1587	A
25	YA	1592	C
25	YA	1598	C
25	YA	1608	A
25	YA	1609	A
25	YA	1610	A
25	YA	1616	A
25	YA	1618	A
25	YA	1634	A
25	YA	1640	C
25	YA	1648	C
25	YA	1654	A
25	YA	1667	G
25	YA	1674	G
25	YA	1675	C
25	YA	1695	G
25	YA	1696	G
25	YA	1700	A
25	YA	1701	A
25	YA	1703	G
25	YA	1725	G

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Mol	Chain	Res	Type
25	YA	1729	A
25	YA	1733	G
25	YA	1735	C
25	YA	1743	G
25	YA	1754	C
25	YA	1756	G
25	YA	1762	A
25	YA	1763	G
25	YA	1764	G
25	YA	1773	A
25	YA	1780	A
25	YA	1791	A
25	YA	1800	C
25	YA	1801	G
25	YA	1816	G
25	YA	1819	A
25	YA	1820	U
25	YA	1829	A
25	YA	1835	G
25	YA	1838	C
25	YA	1847	A
25	YA	1848	A
25	YA	1858	G
25	YA	1869	G
25	YA	1870	C
25	YA	1872	A
25	YA	1878	G
25	YA	1881	C
25	YA	1882	C
25	YA	1888	G
25	YA	1889	A
25	YA	1900	A
25	YA	1903	G
25	YA	1905	C
25	YA	1906	G
25	YA	1912	A
25	YA	1913	A
25	YA	1916	A
25	YA	1929	G
25	YA	1930	G
25	YA	1931	U
25	YA	1936	A

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Mol	Chain	Res	Type
25	YA	1938	A
25	YA	1948	G
25	YA	1955	U
25	YA	1963	U
25	YA	1967	C
25	YA	1970	A
25	YA	1971	A
25	YA	1972	A
25	YA	1981	A
25	YA	1982	C
25	YA	1992	G
25	YA	1993	U
25	YA	2020	A
25	YA	2021	C
25	YA	2023	G
25	YA	2027	G
25	YA	2030	A
25	YA	2031	A
25	YA	2032	G
25	YA	2033	A
25	YA	2043	C
25	YA	2055	C
25	YA	2056	G
25	YA	2059	A
25	YA	2060	A
25	YA	2061	G
25	YA	2062	A
25	YA	2069	G
25	YA	2099	U
25	YA	2108	C
25	YA	2111	C
25	YA	2112	G
25	YA	2113	U
25	YA	2114	A
25	YA	2116	G
25	YA	2117	A
25	YA	2120	G
25	YA	2126	A
25	YA	2128	C
25	YA	2130	U
25	YA	2131	G
25	YA	2132	U

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Mol	Chain	Res	Type
25	YA	2134	A
25	YA	2140	C
25	YA	2145	C
25	YA	2148	G
25	YA	2161	C
25	YA	2167	U
25	YA	2168	G
25	YA	2169	A
25	YA	2170	A
25	YA	2171	A
25	YA	2173	A
25	YA	2186	G
25	YA	2190	G
25	YA	2191	G
25	YA	2192	G
25	YA	2198	A
25	YA	2210	G
25	YA	2211	G
25	YA	2212	A
25	YA	2215	G
25	YA	2225	A
25	YA	2226	C
25	YA	2238	G
25	YA	2239	G
25	YA	2245	U
25	YA	2246	G
25	YA	2268	A
25	YA	2275	C
25	YA	2283	C
25	YA	2287	A
25	YA	2288	A
25	YA	2302	G
25	YA	2305	A
25	YA	2306	C
25	YA	2307	G
25	YA	2308	G
25	YA	2309	A
25	YA	2312	U
25	YA	2319	G
25	YA	2320	A
25	YA	2325	G
25	YA	2327	A

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Mol	Chain	Res	Type
25	YA	2334	G
25	YA	2336	A
25	YA	2345	G
25	YA	2347	C
25	YA	2350	C
25	YA	2354	G
25	YA	2383	G
25	YA	2385	C
25	YA	2394	C
25	YA	2402	C
25	YA	2403	C
25	YA	2406	U
25	YA	2407	G
25	YA	2410	G
25	YA	2423	U
25	YA	2424	C
25	YA	2425	A
25	YA	2429	G
25	YA	2430	A
25	YA	2434	A
25	YA	2435	A
25	YA	2439	A
25	YA	2440	C
25	YA	2441	C
25	YA	2445	G
25	YA	2448	A
25	YA	2450	A
25	YA	2465	C
25	YA	2468	G
25	YA	2469	A
25	YA	2470	G
25	YA	2472	G
25	YA	2475	C
25	YA	2476	A
25	YA	2478	A
25	YA	2484	G
25	YA	2490	G
25	YA	2502	G
25	YA	2505	G
25	YA	2518	A
25	YA	2525	G
25	YA	2529	G

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Mol	Chain	Res	Type
25	YA	2535	G
25	YA	2554	U
25	YA	2562	U
25	YA	2566	A
25	YA	2567	G
25	YA	2569	G
25	YA	2573	C
25	YA	2578	G
25	YA	2586	C
25	YA	2602	A
25	YA	2609	U
25	YA	2611	U
25	YA	2612	C
25	YA	2629	A
25	YA	2630	G
25	YA	2645	G
25	YA	2646	C
25	YA	2654	A
25	YA	2655	G
25	YA	2665	A
25	YA	2673	G
25	YA	2689	U
25	YA	2691	C
25	YA	2703	C
25	YA	2712	U
25	YA	2712(A)	A
25	YA	2713	A
25	YA	2714	G
25	YA	2724	C
25	YA	2726	U
25	YA	2730	C
25	YA	2733	A
25	YA	2748	A
25	YA	2750	A
25	YA	2751	G
25	YA	2752	C
25	YA	2754	U
25	YA	2758	A
25	YA	2762	G
25	YA	2765	A
25	YA	2770	G
25	YA	2777	G

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Mol	Chain	Res	Type
25	YA	2778	A
25	YA	2779	U
25	YA	2787	C
25	YA	2790	A
25	YA	2791	C
25	YA	2792	G
25	YA	2807	G
25	YA	2810	A
25	YA	2820	A
25	YA	2821	A
25	YA	2827	C
25	YA	2833	G
25	YA	2834	G
25	YA	2835	A
25	YA	2844	G
25	YA	2849	U
25	YA	2850	A
25	YA	2860	A
25	YA	2872	G
25	YA	2879	C
25	YA	2880	C
25	YA	2893	G
25	YA	2894	G
25	YA	2896	C
25	YA	2897	U
26	YB	7	G
26	YB	13	A
26	YB	14	U
26	YB	15	A
26	YB	25	A
26	YB	32	C
26	YB	35	U
26	YB	40	U
26	YB	41	U
26	YB	42	C
26	YB	44	G
26	YB	45	A
26	YB	47	C
26	YB	56	G
26	YB	67	G
26	YB	73	A
26	YB	81	G

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Mol	Chain	Res	Type
26	YB	88	C
26	YB	109	G
26	YB	119	A

All (178) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	QA	31	G
1	QA	60	A
1	QA	115	G
1	QA	181	G
1	QA	190	G
1	QA	197	A
1	QA	201	C
1	QA	243	A
1	QA	250	A
1	QA	279	A
1	QA	328	C
1	QA	345	C
1	QA	410	G
1	QA	428	G
1	QA	484	G
1	QA	485	G
1	QA	496	A
1	QA	518	C
1	QA	547	A
1	QA	560	U
1	QA	687	A
1	QA	748	C
1	QA	792	A
1	QA	812	C
1	QA	841	U
1	QA	913	A
1	QA	960	U
1	QA	992	U
1	QA	1004	A
1	QA	1033	G
1	QA	1038	C
1	QA	1065	U
1	QA	1067	A
1	QA	1137	C
1	QA	1182	G

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Mol	Chain	Res	Type
1	QA	1297	C
1	QA	1299	A
1	QA	1300	G
1	QA	1346	A
1	QA	1347	G
1	QA	1498	U
1	QA	1532	U
22	QW	7	G
22	QW	60	U
23	QX	9	G
23	QX	11	U
25	RA	63	U
25	RA	90	U
25	RA	119	A
25	RA	128	C
25	RA	196	A
25	RA	227	A
25	RA	270(L)	U
25	RA	352	G
25	RA	372	G
25	RA	387	U
25	RA	395	U
25	RA	404	C
25	RA	587	C
25	RA	603	A
25	RA	614	U
25	RA	752	A
25	RA	859	G
25	RA	877	U
25	RA	883	G
25	RA	1022	G
25	RA	1085	A
25	RA	1171	G
25	RA	1300	U
25	RA	1301	A
25	RA	1311	G
25	RA	1427	A
25	RA	1653	G
25	RA	1694	C
25	RA	1819	A
25	RA	1912	A
25	RA	1930	G

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Mol	Chain	Res	Type
25	RA	1980	G
25	RA	1992	G
25	RA	2062	A
25	RA	2092	U
25	RA	2144	U
25	RA	2166	G
25	RA	2191	G
25	RA	2211	G
25	RA	2275	C
25	RA	2405	G
25	RA	2439	A
25	RA	2447	G
25	RA	2481	G
25	RA	2518	A
25	RA	2610	C
25	RA	2689	U
25	RA	2776	A
25	RA	2848	G
25	RA	2849	U
25	RA	2859	G
25	RA	2867	G
26	RB	66	A
1	XA	5	U
1	XA	31	G
1	XA	60	A
1	XA	92	G
1	XA	115	G
1	XA	181	G
1	XA	197	A
1	XA	201	C
1	XA	243	A
1	XA	250	A
1	XA	279	A
1	XA	315	A
1	XA	328	C
1	XA	410	G
1	XA	428	G
1	XA	429	U
1	XA	485	G
1	XA	547	A
1	XA	687	A
1	XA	703	G

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Mol	Chain	Res	Type
1	XA	748	C
1	XA	792	A
1	XA	812	C
1	XA	818	G
1	XA	913	A
1	XA	960	U
1	XA	991	U
1	XA	992	U
1	XA	1004	A
1	XA	1033	G
1	XA	1038	C
1	XA	1065	U
1	XA	1067	A
1	XA	1137	C
1	XA	1157	A
1	XA	1498	U
1	XA	1532	U
22	XV	17(A)	U
25	YA	74	A
25	YA	101	G
25	YA	119	A
25	YA	196	A
25	YA	345	A
25	YA	528	A
25	YA	587	C
25	YA	752	A
25	YA	856	C
25	YA	859	G
25	YA	877	U
25	YA	883	G
25	YA	1085	A
25	YA	1171	G
25	YA	1300	U
25	YA	1379	A
25	YA	1427	A
25	YA	1558	A
25	YA	1608	A
25	YA	1653	G
25	YA	1694	C
25	YA	1819	A
25	YA	1912	A
25	YA	1930	G

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Mol	Chain	Res	Type
25	YA	1992	G
25	YA	2144	U
25	YA	2166	G
25	YA	2191	G
25	YA	2211	G
25	YA	2225	A
25	YA	2406	U
25	YA	2422	A
25	YA	2439	A
25	YA	2447	G
25	YA	2610	C
25	YA	2712(A)	A
25	YA	2848	G
25	YA	2849	U
25	YA	2859	G
26	YB	24	G
26	YB	66	A

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

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
23	A3P	QX	20	23	25,28,29	1.51	3 (12%)	37,42,45	2.05	10 (27%)
23	A3P	XX	20	23	25,28,29	1.46	4 (16%)	37,42,45	2.00	9 (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
23	A3P	QX	20	23	-	5/12/30/31	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
23	A3P	XX	20	23	-	2/12/30/31	0/3/3/3

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	QX	20	A3P	C5-C4	4.86	1.47	1.39
23	XX	20	A3P	C5-C4	4.72	1.47	1.39
23	QX	20	A3P	C5-C6	3.17	1.49	1.41
23	XX	20	A3P	C5-C6	2.72	1.48	1.41
23	QX	20	A3P	C8-N7	2.47	1.36	1.31
23	XX	20	A3P	C8-N7	2.40	1.36	1.31
23	XX	20	A3P	C5-N7	-2.26	1.35	1.39

All (19) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	QX	20	A3P	C5-C4-N3	-6.30	118.04	126.72
23	XX	20	A3P	C5-C4-N3	-6.08	118.35	126.72
23	XX	20	A3P	N3-C4-N9	4.72	135.19	127.17
23	QX	20	A3P	N3-C4-N9	4.67	135.11	127.17
23	QX	20	A3P	C4-C5-N7	-4.06	105.94	110.58
23	QX	20	A3P	C2-N3-C4	4.06	121.74	111.83
23	XX	20	A3P	C2-N3-C4	3.93	121.43	111.83
23	XX	20	A3P	C4-C5-N7	-3.53	106.55	110.58
23	XX	20	A3P	N3-C2-N1	-3.52	123.25	128.58
23	QX	20	A3P	N3-C2-N1	-3.32	123.55	128.58
23	XX	20	A3P	C3'-C2'-C1'	2.99	106.47	99.89
23	QX	20	A3P	C5-N7-C8	2.87	107.97	103.45
23	XX	20	A3P	C5-N7-C8	2.65	107.61	103.45
23	QX	20	A3P	C6-C5-N7	2.53	136.97	132.09
23	QX	20	A3P	C3'-C2'-C1'	2.46	105.30	99.89
23	XX	20	A3P	C4-N9-C8	2.32	108.18	105.74
23	QX	20	A3P	O3P-P1-O2P	2.27	116.30	107.80
23	QX	20	A3P	C4-N9-C8	2.26	108.11	105.74
23	XX	20	A3P	C6-C5-N7	2.19	136.31	132.09

There are no chirality outliers.

All (7) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
23	QX	20	A3P	C2'-C3'-O3'-P1

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Mol	Chain	Res	Type	Atoms
23	QX	20	A3P	C4'-C3'-O3'-P1
23	QX	20	A3P	C3'-O3'-P1-O1P
23	QX	20	A3P	C3'-C4'-C5'-O5'
23	QX	20	A3P	O4'-C1'-N9-C8
23	XX	20	A3P	O4'-C1'-N9-C8
23	XX	20	A3P	C2'-C3'-O3'-P1

There are no ring outliers.

2 monomers are involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
23	QX	20	A3P	1	0
23	XX	20	A3P	2	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 1244 ligands modelled in this entry, 1244 are monoatomic - leaving 0 for Mogul analysis.

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.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	QA	1511/1522 (99%)	0.06	33 (2%) 62 43	47, 90, 193, 346	0
1	XA	1508/1522 (99%)	-0.04	30 (1%) 65 46	42, 85, 179, 385	0
2	QB	236/256 (92%)	0.79	21 (8%) 15 12	95, 145, 216, 283	0
2	XB	236/256 (92%)	1.05	34 (14%) 6 5	80, 127, 194, 248	0
3	QC	206/239 (86%)	0.75	17 (8%) 17 13	86, 129, 209, 279	0
3	XC	206/239 (86%)	0.72	17 (8%) 17 13	73, 111, 176, 256	0
4	QD	208/209 (99%)	0.69	20 (9%) 13 11	58, 81, 132, 231	0
4	XD	208/209 (99%)	0.69	16 (7%) 19 14	63, 92, 153, 186	0
5	QE	154/162 (95%)	0.35	4 (2%) 57 38	57, 83, 141, 207	0
5	XE	154/162 (95%)	0.54	11 (7%) 22 15	56, 83, 145, 244	0
6	QF	101/101 (100%)	0.97	9 (8%) 15 12	92, 138, 183, 203	0
6	XF	101/101 (100%)	0.44	4 (3%) 42 28	60, 90, 119, 171	0
7	QG	155/156 (99%)	1.10	27 (17%) 4 4	96, 144, 192, 282	0
7	XG	155/156 (99%)	0.97	27 (17%) 4 4	87, 115, 173, 226	0
8	QH	138/138 (100%)	0.37	3 (2%) 62 43	59, 91, 128, 188	0
8	XH	138/138 (100%)	0.36	2 (1%) 73 55	64, 88, 121, 174	0
9	QI	128/128 (100%)	1.25	23 (17%) 3 3	88, 168, 229, 293	0
9	XI	128/128 (100%)	1.32	33 (25%) 1 1	83, 136, 203, 246	0
10	QJ	99/105 (94%)	1.29	15 (15%) 5 5	92, 168, 228, 284	0
10	XJ	99/105 (94%)	1.30	19 (19%) 3 3	78, 141, 219, 279	0
11	QK	121/129 (93%)	0.97	12 (9%) 13 10	66, 117, 191, 242	0
11	XK	121/129 (93%)	0.97	9 (7%) 20 15	52, 84, 161, 197	0
12	QL	125/132 (94%)	0.46	5 (4%) 42 28	53, 71, 115, 232	0
12	XL	125/132 (94%)	0.44	4 (3%) 50 34	52, 71, 105, 204	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	QM	118/126 (93%)	1.17	20 (16%) 4 4	93, 148, 218, 278	0
13	XM	118/126 (93%)	0.94	17 (14%) 6 5	82, 126, 181, 267	0
14	QN	60/61 (98%)	1.31	9 (15%) 5 5	98, 127, 180, 208	0
14	XN	60/61 (98%)	1.11	9 (15%) 5 5	81, 102, 132, 248	0
15	QO	88/89 (98%)	0.41	6 (6%) 23 16	63, 89, 143, 153	0
15	XO	88/89 (98%)	0.41	2 (2%) 61 42	54, 80, 125, 147	0
16	QP	84/88 (95%)	0.78	11 (13%) 7 6	61, 77, 115, 213	0
16	XP	84/88 (95%)	0.61	3 (3%) 46 31	75, 98, 139, 217	0
17	QQ	100/105 (95%)	0.66	8 (8%) 18 14	60, 85, 113, 137	0
17	XQ	100/105 (95%)	0.50	5 (5%) 34 23	58, 85, 117, 209	0
18	QR	71/88 (80%)	0.78	4 (5%) 30 20	92, 124, 204, 224	0
18	XR	71/88 (80%)	0.78	5 (7%) 22 15	63, 86, 179, 224	0
19	QS	82/93 (88%)	1.33	16 (19%) 3 3	96, 159, 239, 270	0
19	XS	82/93 (88%)	1.15	12 (14%) 6 5	91, 129, 221, 278	0
20	QT	99/106 (93%)	1.17	20 (20%) 3 2	65, 99, 158, 210	0
20	XT	99/106 (93%)	0.87	9 (9%) 15 11	79, 113, 174, 201	0
21	QU	25/25 (100%)	2.22	14 (56%) 0 0	109, 136, 171, 253	0
21	XU	25/25 (100%)	2.17	14 (56%) 0 0	95, 118, 171, 181	0
22	QV	77/77 (100%)	0.55	4 (5%) 33 22	47, 91, 145, 216	0
22	QW	77/77 (100%)	1.57	21 (27%) 1 1	60, 203, 273, 298	0
22	XV	77/77 (100%)	0.28	4 (5%) 33 22	47, 90, 138, 204	0
22	XW	77/77 (100%)	1.44	17 (22%) 2 2	71, 225, 299, 354	0
23	QX	17/20 (85%)	1.41	4 (23%) 2 2	59, 207, 269, 270	0
23	XX	17/20 (85%)	1.20	4 (23%) 2 2	52, 200, 283, 301	0
24	QY	92/118 (77%)	0.91	12 (13%) 7 6	66, 123, 158, 177	0
24	XY	92/118 (77%)	1.74	34 (36%) 1 1	79, 160, 201, 212	0
25	RA	2891/2916 (99%)	-0.14	64 (2%) 62 43	35, 64, 209, 371	0
25	YA	2875/2916 (98%)	-0.19	58 (2%) 65 46	33, 60, 231, 360	0
26	RB	122/124 (98%)	0.08	0 100 100	67, 110, 153, 202	0
26	YB	122/124 (98%)	0.13	0 100 100	74, 102, 152, 201	0
27	RD	272/276 (98%)	0.59	19 (6%) 22 15	37, 65, 112, 185	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2		OWAB(Å ²)	Q<0.9
27	YD	272/276 (98%)	0.41	23 (8%)	16 13	32, 48, 92, 192	0
28	RE	205/206 (99%)	0.92	29 (14%)	6 5	41, 79, 169, 273	0
28	YE	205/206 (99%)	0.88	28 (13%)	6 5	40, 78, 163, 260	0
29	RF	208/210 (99%)	0.51	13 (6%)	26 17	35, 60, 170, 262	0
29	YF	208/210 (99%)	0.55	17 (8%)	17 13	35, 73, 172, 250	0
30	RG	181/182 (99%)	0.97	24 (13%)	7 6	85, 125, 168, 187	0
30	YG	181/182 (99%)	1.24	40 (22%)	2 2	85, 122, 183, 239	0
31	RH	170/180 (94%)	1.45	38 (22%)	2 2	99, 169, 244, 283	0
31	YH	170/180 (94%)	1.58	46 (27%)	1 1	75, 147, 231, 277	0
32	RI	146/148 (98%)	1.24	29 (19%)	3 2	70, 125, 186, 284	0
32	YI	146/148 (98%)	0.87	15 (10%)	12 10	47, 100, 178, 253	0
33	RN	138/140 (98%)	0.48	9 (6%)	25 17	49, 78, 131, 230	0
33	YN	138/140 (98%)	0.63	4 (2%)	53 35	53, 85, 143, 177	0
34	RO	122/122 (100%)	0.55	5 (4%)	41 27	48, 68, 105, 143	0
34	YO	122/122 (100%)	0.14	1 (0%)	82 68	46, 64, 92, 136	0
35	RP	150/150 (100%)	1.03	24 (16%)	5 4	37, 78, 157, 260	0
35	YP	150/150 (100%)	1.18	30 (20%)	3 2	40, 75, 139, 253	0
36	RQ	140/141 (99%)	0.63	13 (9%)	14 11	47, 77, 136, 200	0
36	YQ	139/141 (98%)	0.76	13 (9%)	14 11	50, 79, 131, 251	0
37	RR	117/118 (99%)	0.38	2 (1%)	69 50	50, 73, 111, 146	0
37	YR	117/118 (99%)	0.58	6 (5%)	33 22	48, 68, 101, 145	0
38	RS	111/112 (99%)	0.84	12 (10%)	11 9	82, 114, 162, 217	0
38	YS	111/112 (99%)	1.17	19 (17%)	4 4	78, 102, 155, 196	0
39	RT	137/146 (93%)	0.87	16 (11%)	9 8	58, 83, 174, 271	0
39	YT	137/146 (93%)	0.69	17 (12%)	8 6	55, 79, 183, 256	0
40	RU	117/118 (99%)	0.48	4 (3%)	48 32	40, 63, 130, 250	0
40	YU	117/118 (99%)	0.71	11 (9%)	14 11	47, 76, 150, 184	0
41	RV	101/101 (100%)	0.59	9 (8%)	15 12	40, 83, 148, 266	0
41	YV	101/101 (100%)	0.82	10 (9%)	13 10	46, 103, 153, 191	0
42	RW	113/113 (100%)	0.28	4 (3%)	47 31	40, 61, 127, 192	0
42	YW	113/113 (100%)	0.42	0	100 100	42, 64, 112, 207	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
43	RX	92/96 (95%)	0.38	4 (4%) 40 25	57, 77, 114, 151	0
43	YX	92/96 (95%)	0.28	2 (2%) 62 43	43, 62, 99, 124	0
44	RY	102/110 (92%)	1.48	28 (27%) 1 1	57, 88, 196, 277	0
44	YY	102/110 (92%)	1.41	21 (20%) 2 2	63, 102, 218, 267	0
45	RZ	176/206 (85%)	0.87	23 (13%) 7 6	76, 116, 207, 274	0
45	YZ	183/206 (88%)	0.95	19 (10%) 11 9	75, 120, 186, 245	0
46	R0	83/85 (97%)	0.65	13 (15%) 5 4	46, 72, 159, 246	0
46	Y0	83/85 (97%)	0.57	8 (9%) 13 11	46, 76, 141, 197	0
47	R1	97/98 (98%)	0.96	15 (15%) 5 4	44, 73, 173, 231	0
47	Y1	97/98 (98%)	0.81	12 (12%) 8 6	36, 57, 166, 259	0
48	R2	69/72 (95%)	0.70	7 (10%) 12 10	66, 99, 165, 209	0
48	Y2	69/72 (95%)	0.76	8 (11%) 9 8	52, 76, 141, 198	0
49	R3	59/60 (98%)	0.25	1 (1%) 69 50	54, 68, 118, 154	0
49	Y3	59/60 (98%)	0.53	3 (5%) 33 22	59, 86, 131, 188	0
50	R4	70/71 (98%)	1.36	14 (20%) 3 2	100, 181, 261, 319	0
50	Y4	70/71 (98%)	1.25	14 (20%) 3 2	108, 173, 248, 312	0
51	R5	59/60 (98%)	0.76	8 (13%) 7 6	32, 68, 183, 221	0
51	Y5	57/60 (95%)	1.03	5 (8%) 15 12	31, 77, 168, 220	0
52	R6	48/54 (88%)	2.30	20 (41%) 0 0	80, 144, 220, 264	0
52	Y6	48/54 (88%)	2.20	22 (45%) 0 0	84, 123, 179, 225	0
53	R7	49/49 (100%)	0.70	8 (16%) 4 4	29, 46, 128, 207	0
53	Y7	49/49 (100%)	0.69	6 (12%) 8 7	20, 42, 117, 204	0
54	R8	64/65 (98%)	1.25	15 (23%) 2 2	36, 60, 143, 194	0
54	Y8	64/65 (98%)	1.06	12 (18%) 3 3	29, 59, 98, 237	0
55	R9	37/37 (100%)	1.80	12 (32%) 1 1	97, 141, 178, 209	0
55	Y9	36/37 (97%)	1.99	16 (44%) 0 0	84, 133, 171, 215	0
All	All	21220/21832 (97%)	0.44	1647 (7%) 19 14	20, 85, 198, 385	0

All (1647) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
44	RY	103	GLY	11.4
52	R6	41	PRO	10.3

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Mol	Chain	Res	Type	RSRZ
11	QK	129	SER	9.1
28	YE	59	VAL	8.6
52	Y6	41	PRO	7.8
27	RD	262	ARG	7.5
54	R8	40	GLU	7.2
17	XQ	101	ARG	6.8
14	QN	2	ALA	6.8
35	YP	64	LYS	6.8
11	QK	128	ALA	6.7
50	R4	24	THR	6.7
10	XJ	59	SER	6.7
40	RU	90	VAL	6.7
32	RI	142	VAL	6.6
52	R6	40	CYS	6.6
2	XB	9	GLU	6.6
7	XG	2	ALA	6.5
4	XD	26	CYS	6.5
54	Y8	40	GLU	6.4
27	RD	38	LYS	6.3
36	RQ	140	ALA	6.3
28	RE	73	GLU	6.3
35	RP	65	ARG	6.3
35	RP	13	ASN	6.3
10	QJ	54	PHE	6.0
30	YG	69	ALA	6.0
52	R6	23	THR	6.0
7	XG	3	ARG	5.9
9	QI	64	THR	5.9
47	Y1	98	LEU	5.8
54	R8	65	GLU	5.8
45	YZ	175	VAL	5.8
35	RP	64	LYS	5.7
44	YY	91	GLU	5.7
47	Y1	97	LEU	5.7
52	Y6	21	TYR	5.7
31	YH	155	SER	5.7
52	R6	42	TRP	5.7
52	Y6	40	CYS	5.7
13	QM	100	GLY	5.6
11	XK	129	SER	5.5
50	R4	63	TYR	5.5
7	QG	32	ARG	5.5

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Mol	Chain	Res	Type	RSRZ
31	YH	49	VAL	5.5
14	XN	2	ALA	5.4
14	QN	27	CYS	5.4
39	YT	105	LEU	5.4
31	YH	153	LYS	5.3
22	QW	34	C	5.3
38	YS	2	ALA	5.3
40	RU	91	ASP	5.3
52	R6	43	CYS	5.2
11	QK	127	LYS	5.2
31	RH	50	VAL	5.2
21	QU	18	TYR	5.2
47	R1	96	LYS	5.2
12	QL	129	ALA	5.2
31	RH	103	LEU	5.2
32	YI	90	GLY	5.2
25	YA	2117	A	5.2
28	YE	76	ARG	5.2
46	Y0	3	HIS	5.2
10	QJ	40	LEU	5.1
10	QJ	59	SER	5.1
22	QW	35	A	5.1
3	XC	161	GLU	5.1
44	RY	60	PHE	5.1
50	Y4	63	TYR	5.1
20	XT	12	ALA	5.0
54	R8	34	TRP	5.0
52	R6	21	TYR	5.0
3	QC	161	GLU	5.0
28	RE	59	VAL	5.0
44	RY	49	VAL	5.0
53	Y7	47	ARG	5.0
13	XM	30	ALA	5.0
22	QV	1	C	4.9
9	QI	66	ARG	4.9
38	YS	108	GLY	4.9
22	XW	4	G	4.9
11	QK	89	ALA	4.9
54	R8	46	ARG	4.8
36	YQ	83	MET	4.8
19	XS	36	ARG	4.8
28	RE	60	ASN	4.8

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Mol	Chain	Res	Type	RSRZ
8	XH	1	MET	4.8
4	XD	12	CYS	4.8
44	YY	60	PHE	4.8
21	XU	5	ASP	4.8
44	RY	79	CYS	4.7
7	QG	80	VAL	4.7
28	YE	62	PRO	4.7
7	QG	2	ALA	4.7
32	RI	101	LEU	4.7
51	R5	2	ALA	4.7
55	R9	2	LYS	4.7
28	YE	63	LEU	4.7
22	QW	5	G	4.7
19	QS	38	SER	4.7
27	YD	236	GLY	4.6
30	YG	110	ALA	4.6
31	RH	24	VAL	4.6
13	QM	102	ARG	4.6
25	RA	2173	A	4.6
52	Y6	13	CYS	4.6
47	Y1	93	GLU	4.6
32	RI	123	LEU	4.6
49	Y3	17	LYS	4.5
53	Y7	49	ARG	4.5
44	RY	52	SER	4.5
28	YE	60	ASN	4.5
7	QG	85	TYR	4.5
9	QI	105	ASP	4.5
28	RE	77	ILE	4.5
4	QD	26	CYS	4.5
55	Y9	23	VAL	4.5
44	RY	48	ALA	4.5
2	QB	16	HIS	4.5
27	RD	28	GLU	4.5
31	YH	11	VAL	4.5
25	YA	2119	A	4.5
35	RP	52	GLU	4.4
7	QG	82	GLY	4.4
44	RY	47	LYS	4.4
52	R6	24	GLU	4.4
33	YN	42	TRP	4.4
24	XY	8	LYS	4.4

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Mol	Chain	Res	Type	RSRZ
45	RZ	150	LEU	4.4
52	Y6	42	TRP	4.4
32	RI	110	ASP	4.4
36	RQ	27	VAL	4.4
22	XW	5	G	4.3
47	Y1	96	LYS	4.3
10	XJ	98	ILE	4.3
21	XU	2	GLY	4.3
25	YA	2150	U	4.3
7	QG	3	ARG	4.3
35	YP	62	LEU	4.3
35	YP	13	ASN	4.3
44	RY	76	CYS	4.3
53	R7	49	ARG	4.3
31	YH	17	VAL	4.3
30	RG	97	ASP	4.3
2	XB	134	GLU	4.3
28	RE	10	GLY	4.2
35	YP	70	GLN	4.2
2	QB	31	TYR	4.2
28	RE	65	GLY	4.2
10	XJ	93	GLY	4.2
7	QG	5	ARG	4.2
32	YI	143	SER	4.2
25	RA	2125	G	4.2
54	Y8	65	GLU	4.2
25	RA	2801	A	4.2
28	YE	132	HIS	4.2
7	XG	32	ARG	4.2
45	YZ	84	GLU	4.1
9	XI	105	ASP	4.1
21	QU	2	GLY	4.1
47	Y1	94	LEU	4.1
36	RQ	83	MET	4.1
10	XJ	54	PHE	4.1
22	QW	71	C	4.1
52	R6	22	ALA	4.1
52	Y6	20	ASN	4.1
19	QS	41	VAL	4.1
45	RZ	139	VAL	4.1
9	QI	106	ALA	4.1
23	QX	14	A	4.1

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Mol	Chain	Res	Type	RSRZ
32	RI	90	GLY	4.1
44	RY	61	ILE	4.1
14	XN	3	ARG	4.1
10	XJ	55	LYS	4.0
44	YY	19	LYS	4.0
1	QA	88	C	4.0
22	XW	34	C	4.0
25	YA	1537	C	4.0
38	YS	111	GLU	4.0
13	XM	101	GLN	4.0
25	YA	2151	G	4.0
54	Y8	33	ASN	4.0
45	RZ	140	ASP	4.0
32	YI	76	THR	4.0
52	Y6	23	THR	4.0
44	RY	59	GLY	4.0
13	QM	9	ILE	4.0
45	RZ	153	SER	4.0
2	XB	165	VAL	4.0
22	QV	47	U	4.0
46	R0	8	GLY	4.0
1	XA	1026	G	4.0
53	R7	47	ARG	4.0
38	YS	110	LEU	4.0
31	RH	4	ILE	3.9
7	QG	151	TYR	3.9
35	YP	105	LEU	3.9
27	RD	99	ASP	3.9
2	XB	218	ALA	3.9
4	QD	151	LYS	3.9
27	YD	238	GLY	3.9
35	RP	105	LEU	3.9
32	RI	97	ILE	3.9
24	XY	10	LEU	3.9
3	QC	2	GLY	3.9
31	RH	78	GLY	3.9
41	RV	36	PRO	3.9
46	Y0	4	LYS	3.9
31	YH	113	VAL	3.8
8	QH	1	MET	3.8
22	QW	6	G	3.8
24	XY	49	GLN	3.8

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Mol	Chain	Res	Type	RSRZ
32	RI	91	SER	3.8
9	XI	7	THR	3.8
30	RG	2	PRO	3.8
38	YS	39	ILE	3.8
48	Y2	17	SER	3.8
35	RP	71	VAL	3.8
44	YY	47	LYS	3.8
35	YP	119	GLU	3.8
24	XY	20	SER	3.8
19	QS	13	ASP	3.8
53	Y7	48	LYS	3.8
7	XG	151	TYR	3.8
31	YH	70	THR	3.8
19	QS	75	ALA	3.8
25	YA	1536	A	3.8
22	XV	1	C	3.7
51	Y5	3	LYS	3.7
3	QC	167	TRP	3.7
31	YH	137	ASP	3.7
21	QU	9	ARG	3.7
9	XI	19	LEU	3.7
47	R1	98	LEU	3.7
51	R5	58	LEU	3.7
25	RA	2129	C	3.7
30	RG	126	ASP	3.7
18	QR	76	LEU	3.7
28	RE	70	ALA	3.7
55	R9	1	MET	3.7
44	RY	86	ARG	3.7
52	R6	6	ARG	3.7
3	XC	4	LYS	3.7
44	RY	78	ALA	3.7
54	R8	30	ARG	3.7
7	QG	38	LEU	3.7
39	YT	2	ASN	3.7
10	XJ	47	PHE	3.7
10	XJ	37	PRO	3.7
25	RA	2895	U	3.7
44	RY	77	PRO	3.7
23	XX	13	A	3.7
31	YH	4	ILE	3.7
55	R9	26	ILE	3.7

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Mol	Chain	Res	Type	RSRZ
18	XR	20	ALA	3.6
54	Y8	56	GLU	3.6
25	RA	2802	G	3.6
32	RI	76	THR	3.6
30	RG	74	LYS	3.6
20	XT	9	ASN	3.6
18	XR	83	GLU	3.6
7	QG	42	ILE	3.6
21	XU	26	LYS	3.6
55	R9	20	HIS	3.6
9	QI	33	PHE	3.6
29	RF	131	GLY	3.6
39	YT	106	SER	3.6
30	YG	114	ILE	3.6
7	QG	84	ASN	3.6
1	QA	1000	A	3.6
23	XX	14	A	3.6
27	YD	64	ILE	3.6
44	YY	75	ILE	3.6
1	XA	1533	C	3.6
40	YU	91	ASP	3.6
10	XJ	21	GLN	3.6
28	YE	54	GLN	3.6
2	XB	16	HIS	3.6
7	XG	41	ARG	3.6
7	XG	81	GLY	3.6
12	QL	29	GLY	3.6
35	RP	15	ARG	3.6
32	RI	81	VAL	3.6
35	YP	71	VAL	3.6
45	YZ	174	VAL	3.6
32	RI	6	LEU	3.6
20	XT	11	SER	3.6
2	QB	163	PHE	3.5
25	RA	2135	A	3.5
35	YP	65	ARG	3.5
52	Y6	37	ARG	3.5
9	QI	6	GLY	3.5
22	XW	71	C	3.5
31	YH	8	PRO	3.5
54	Y8	63	PRO	3.5
41	YV	1	MET	3.5

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Mol	Chain	Res	Type	RSRZ
4	QD	77	ASN	3.5
24	QY	89	GLU	3.5
13	XM	102	ARG	3.5
31	RH	152	ARG	3.5
7	QG	34	GLY	3.5
41	YV	86	GLY	3.5
24	XY	22	VAL	3.5
31	YH	10	PRO	3.5
39	RT	105	LEU	3.5
22	QW	4	G	3.5
20	QT	9	ASN	3.5
4	XD	159	ARG	3.5
24	QY	59	ASP	3.5
39	YT	4	GLY	3.5
44	YY	49	VAL	3.5
21	QU	10	ARG	3.5
3	QC	193	TYR	3.5
27	RD	44	ASN	3.5
25	YA	2402	C	3.5
9	QI	11	LYS	3.5
10	QJ	55	LYS	3.5
31	RH	115	VAL	3.5
36	YQ	81	VAL	3.5
41	RV	80	GLN	3.5
31	YH	171	LEU	3.5
31	YH	9	ILE	3.5
44	YY	62	GLU	3.5
2	XB	71	VAL	3.5
24	XY	68	VAL	3.5
25	RA	2629	A	3.5
55	Y9	37	GLY	3.5
7	QG	99	LEU	3.5
40	YU	56	ASP	3.5
6	QF	90	VAL	3.4
4	QD	2	GLY	3.4
9	XI	6	GLY	3.4
19	QS	63	THR	3.4
21	XU	4	GLY	3.4
21	XU	11	GLY	3.4
39	YT	1	MET	3.4
2	XB	96	ARG	3.4
55	Y9	7	VAL	3.4

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Mol	Chain	Res	Type	RSRZ
29	RF	207	GLY	3.4
27	RD	12	SER	3.4
38	YS	53	SER	3.4
30	YG	29	TRP	3.4
31	RH	153	LYS	3.4
52	Y6	8	LYS	3.4
24	XY	59	ASP	3.4
19	XS	11	VAL	3.4
45	RZ	144	LEU	3.4
55	Y9	21	GLY	3.4
28	YE	121	ASN	3.4
30	YG	138	GLN	3.4
29	YF	207	GLY	3.4
35	RP	89	ALA	3.4
55	R9	32	HIS	3.4
27	YD	28	GLU	3.4
30	YG	160	VAL	3.4
45	YZ	139	VAL	3.4
1	XA	1001	G	3.4
25	RA	1051	G	3.4
52	Y6	39	TYR	3.4
11	XK	128	ALA	3.4
46	Y0	6	GLY	3.4
24	QY	92	HIS	3.4
50	Y4	24	THR	3.4
9	XI	71	SER	3.3
24	QY	20	SER	3.3
25	RA	1026	U	3.3
25	RA	2175	C	3.3
27	YD	262	ARG	3.3
28	RE	63	LEU	3.3
38	RS	27	SER	3.3
7	QG	39	ALA	3.3
29	YF	61	GLY	3.3
32	RI	89	TYR	3.3
11	QK	124	LYS	3.3
53	R7	48	LYS	3.3
2	XB	67	THR	3.3
45	YZ	118	GLN	3.3
22	QW	19	G	3.3
25	YA	10	G	3.3
7	XG	5	ARG	3.3

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Mol	Chain	Res	Type	RSRZ
7	XG	80	VAL	3.3
36	RQ	80	GLU	3.3
54	R8	54	GLU	3.3
22	XW	57	A	3.3
25	RA	6	A	3.3
32	RI	143	SER	3.3
39	YT	12	SER	3.3
3	XC	2	GLY	3.3
9	QI	63	ILE	3.3
9	XI	115	GLY	3.3
21	QU	5	ASP	3.3
51	R5	54	GLY	3.3
22	QW	48	C	3.3
46	R0	3	HIS	3.3
35	YP	16	ARG	3.3
46	Y0	7	LEU	3.3
51	Y5	58	LEU	3.3
9	XI	95	LYS	3.3
22	XW	18	G	3.3
35	YP	22	GLY	3.3
29	RF	23	ASP	3.3
23	QX	13	A	3.3
31	YH	61	HIS	3.3
19	XS	9	VAL	3.3
35	YP	107	LYS	3.3
9	XI	82	ALA	3.3
13	QM	35	GLU	3.3
55	R9	37	GLY	3.3
50	Y4	36	CYS	3.3
51	R5	46	CYS	3.3
13	QM	19	LEU	3.3
46	R0	7	LEU	3.3
27	YD	38	LYS	3.3
53	Y7	1	MET	3.3
9	QI	16	ARG	3.2
45	YZ	117	LEU	3.2
52	R6	25	LYS	3.2
19	XS	41	VAL	3.2
43	YX	3	THR	3.2
52	Y6	14	THR	3.2
11	QK	117	ASN	3.2
45	RZ	173	ALA	3.2

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Mol	Chain	Res	Type	RSRZ
35	YP	11	GLY	3.2
25	YA	6	A	3.2
10	XJ	65	LEU	3.2
20	QT	37	SER	3.2
5	XE	5	ASP	3.2
7	XG	33	ASP	3.2
44	RY	98	VAL	3.2
31	RH	136	ILE	3.2
52	R6	20	ASN	3.2
2	XB	44	LEU	3.2
52	R6	8	LYS	3.2
35	YP	63	PRO	3.2
25	YA	2115	G	3.2
30	YG	92	VAL	3.2
40	YU	90	VAL	3.2
50	R4	42	PHE	3.2
7	XG	153	HIS	3.2
16	QP	1	MET	3.2
44	YY	48	ALA	3.2
51	Y5	2	ALA	3.2
21	XU	14	TRP	3.2
28	RE	29	GLY	3.2
46	R0	6	GLY	3.2
47	R1	93	GLU	3.2
52	R6	51	GLU	3.2
44	YY	46	LYS	3.2
24	XY	56	LEU	3.2
44	RY	45	VAL	3.2
28	YE	77	ILE	3.2
2	XB	133	LYS	3.2
12	QL	28	LYS	3.2
22	QW	70	G	3.2
24	XY	16	LYS	3.2
33	RN	36	GLY	3.2
22	QW	74	C	3.2
25	RA	654(G)	C	3.2
25	YA	2174	C	3.2
38	YS	112	PHE	3.2
41	RV	81	TYR	3.2
44	RY	82	PRO	3.2
50	Y4	35	VAL	3.2
24	XY	43	ILE	3.2

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Mol	Chain	Res	Type	RSRZ
48	R2	17	SER	3.2
25	RA	2585	U	3.1
31	RH	105	LEU	3.1
32	RI	58	LEU	3.1
7	XG	62	PHE	3.1
31	YH	43	VAL	3.1
52	Y6	29	ASN	3.1
19	QS	76	PRO	3.1
47	R1	87	PRO	3.1
20	XT	8	ARG	3.1
20	XT	14	LYS	3.1
29	YF	21	ALA	3.1
30	YG	90	LEU	3.1
4	QD	154	ASN	3.1
4	QD	159	ARG	3.1
52	R6	7	ILE	3.1
32	RI	98	ALA	3.1
22	QW	56	C	3.1
9	XI	96	LEU	3.1
25	RA	1089	G	3.1
25	YA	2149	G	3.1
1	XA	1450	U	3.1
24	XY	57	LYS	3.1
25	RA	362	U	3.1
35	YP	114	ILE	3.1
23	XX	12	A	3.1
28	RE	50	GLY	3.1
13	QM	99	ARG	3.1
31	RH	109	PHE	3.1
33	YN	41	ASP	3.1
25	RA	101	G	3.1
52	Y6	22	ALA	3.1
15	QO	70	LEU	3.1
19	XS	5	LEU	3.1
25	RA	2506	U	3.1
33	RN	133	GLN	3.1
2	XB	111	ARG	3.1
35	YP	15	ARG	3.1
41	YV	72	VAL	3.1
4	XD	24	GLU	3.1
13	QM	52	GLU	3.1
51	R5	56	LYS	3.1

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Mol	Chain	Res	Type	RSRZ
52	Y6	24	GLU	3.1
31	YH	55	PRO	3.1
38	RS	35	ILE	3.1
25	YA	2798	C	3.0
35	RP	79	ARG	3.0
45	YZ	82	ARG	3.0
41	RV	45	THR	3.0
11	XK	10	VAL	3.0
33	RN	9	VAL	3.0
27	RD	26	LYS	3.0
45	RZ	119	GLU	3.0
16	XP	68	ASP	3.0
4	QD	12	CYS	3.0
11	QK	19	ALA	3.0
22	QW	73	A	3.0
28	RE	131	ALA	3.0
31	RH	6	ARG	3.0
25	RA	1075	C	3.0
25	RA	2174	C	3.0
25	RA	2402	C	3.0
35	RP	76	LYS	3.0
36	YQ	106	VAL	3.0
44	RY	101	LYS	3.0
33	YN	68	GLU	3.0
11	XK	89	ALA	3.0
27	YD	272	ALA	3.0
28	YE	159	HIS	3.0
32	RI	105	HIS	3.0
29	RF	208	GLY	3.0
38	RS	33	LYS	3.0
39	RT	8	LYS	3.0
44	YY	58	GLY	3.0
52	R6	27	LYS	3.0
1	QA	1004	A	3.0
45	YZ	74	VAL	3.0
31	YH	109	PHE	3.0
13	XM	41	PRO	3.0
37	YR	6	SER	3.0
12	QL	128	ALA	3.0
14	QN	30	ALA	3.0
27	YD	81	ALA	3.0
28	YE	187	ALA	3.0

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Mol	Chain	Res	Type	RSRZ
38	RS	7	TYR	3.0
46	R0	55	ARG	3.0
51	R5	53	ALA	3.0
34	RO	81	ASP	3.0
4	QD	30	LYS	3.0
44	YY	81	LYS	3.0
55	Y9	20	HIS	3.0
1	XA	1124	G	3.0
10	QJ	69	ASN	3.0
6	XF	89	MET	3.0
1	QA	974	A	3.0
22	QW	59	A	3.0
22	QW	72	A	3.0
27	RD	33	LEU	3.0
35	RP	74	GLU	3.0
47	Y1	85	LEU	3.0
45	YZ	172	ALA	3.0
22	XW	48	C	3.0
51	Y5	51	TYR	3.0
10	QJ	34	VAL	3.0
32	RI	92	VAL	3.0
44	YY	76	CYS	3.0
50	Y4	15	ILE	3.0
30	YG	95	ARG	2.9
25	YA	2148	G	2.9
7	XG	39	ALA	2.9
13	XM	42	ALA	2.9
24	XY	65	SER	2.9
31	YH	110	SER	2.9
35	YP	34	GLY	2.9
54	Y8	31	HIS	2.9
9	XI	3	GLN	2.9
25	RA	1053	C	2.9
25	RA	2803	C	2.9
40	YU	92	ARG	2.9
21	QU	14	TRP	2.9
35	YP	92	GLU	2.9
54	Y8	64	TYR	2.9
3	XC	195	VAL	2.9
31	YH	52	VAL	2.9
24	QY	21	GLY	2.9
27	RD	216	GLY	2.9

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Mol	Chain	Res	Type	RSRZ
1	XA	1032(A)	G	2.9
20	XT	73	HIS	2.9
37	YR	69	ASP	2.9
41	YV	80	GLN	2.9
25	RA	2117	A	2.9
25	YA	1177	A	2.9
25	YA	2629	A	2.9
31	YH	69	ARG	2.9
35	RP	50	ARG	2.9
28	RE	121	ASN	2.9
52	R6	13	CYS	2.9
25	YA	2178	C	2.9
1	QA	999	U	2.9
1	QA	1364	U	2.9
13	QM	21	TYR	2.9
40	YU	76	TYR	2.9
31	RH	2	SER	2.9
35	YP	35	HIS	2.9
9	XI	1	MET	2.9
10	XJ	66	ARG	2.9
24	XY	37	ILE	2.9
4	XD	166	LYS	2.9
13	XM	16	ASP	2.9
25	RA	1093	G	2.9
25	RA	2110	G	2.9
25	RA	2115	G	2.9
30	YG	35	GLU	2.9
25	RA	2062	A	2.9
13	QM	98	VAL	2.9
31	YH	24	VAL	2.9
21	QU	11	GLY	2.9
22	QW	3	C	2.9
28	RE	148	GLY	2.9
47	Y1	21	ARG	2.9
2	XB	214	ILE	2.9
9	XI	85	LEU	2.9
24	XY	34	LEU	2.9
50	R4	66	SER	2.9
41	YV	85	LYS	2.9
50	R4	60	GLN	2.9
54	R8	35	GLN	2.9
30	YG	156	ASP	2.9

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Mol	Chain	Res	Type	RSRZ
45	RZ	152	ALA	2.9
2	XB	49	GLU	2.9
52	R6	12	GLU	2.9
17	QQ	33	GLY	2.9
1	XA	1183	A	2.9
10	QJ	47	PHE	2.9
31	YH	170	ARG	2.9
25	YA	278	A	2.9
44	RY	89	PHE	2.9
24	XY	46	LEU	2.9
29	YF	12	LEU	2.9
45	RZ	146	ILE	2.9
1	XA	1532	U	2.8
25	RA	2130	U	2.8
35	YP	47	ASP	2.8
21	QU	8	THR	2.8
29	YF	11	VAL	2.8
3	QC	78	GLY	2.8
21	XU	25	LYS	2.8
30	YG	75	LYS	2.8
36	YQ	63	LYS	2.8
28	YE	151	TYR	2.8
29	YF	7	TYR	2.8
31	YH	71	LEU	2.8
38	YS	29	PHE	2.8
9	XI	125	TYR	2.8
25	YA	2602	A	2.8
28	RE	187	ALA	2.8
1	QA	631	G	2.8
1	XA	1032(B)	G	2.8
25	RA	2127	G	2.8
42	RW	77	ASP	2.8
24	XY	18	VAL	2.8
52	Y6	12	GLU	2.8
30	YG	36	LYS	2.8
31	YH	138	LYS	2.8
39	RT	35	LYS	2.8
4	QD	31	CYS	2.8
13	QM	101	GLN	2.8
2	QB	29	ALA	2.8
46	R0	85	ALA	2.8
2	XB	217	ARG	2.8

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Mol	Chain	Res	Type	RSRZ
20	QT	98	PRO	2.8
30	YG	91	ARG	2.8
3	QC	165	THR	2.8
27	RD	35	LYS	2.8
27	YD	30	GLU	2.8
32	RI	86	THR	2.8
46	Y0	5	LYS	2.8
25	RA	1913	A	2.8
25	YA	2114	A	2.8
1	QA	1040	U	2.8
7	XG	38	LEU	2.8
20	QT	10	LEU	2.8
31	RH	71	LEU	2.8
14	QN	28	GLY	2.8
44	YY	96	ILE	2.8
24	XY	91	TYR	2.8
25	YA	1074	G	2.8
16	QP	76	GLN	2.8
29	RF	5	ALA	2.8
39	YT	135	ALA	2.8
20	QT	23	ARG	2.8
54	Y8	46	ARG	2.8
2	XB	131	PRO	2.8
44	RY	51	VAL	2.8
46	Y0	9	SER	2.8
47	R1	92	LYS	2.8
55	Y9	30	PRO	2.8
3	QC	204	LEU	2.8
5	QE	12	LEU	2.8
27	RD	181	GLU	2.8
38	RS	111	GLU	2.8
52	Y6	11	LEU	2.8
30	YG	155	MET	2.8
1	XA	1531	A	2.8
2	XB	31	TYR	2.8
25	RA	12	U	2.8
28	YE	66	HIS	2.8
1	QA	466	C	2.8
1	XA	1027	C	2.8
4	XD	32	ALA	2.8
2	XB	8	LYS	2.8
43	RX	50	LYS	2.8

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Mol	Chain	Res	Type	RSRZ
51	R5	3	LYS	2.8
1	QA	971	G	2.8
7	XG	17	VAL	2.8
16	QP	2	VAL	2.8
25	RA	2112	G	2.8
28	RE	75	VAL	2.8
35	RP	10	PRO	2.8
3	XC	14	ILE	2.8
18	QR	82	THR	2.8
20	QT	55	ILE	2.8
5	XE	23	GLY	2.7
13	QM	26	GLY	2.7
28	YE	192	ASN	2.7
21	QU	7	ARG	2.7
39	RT	95	ARG	2.7
31	RH	160	LYS	2.7
2	QB	165	VAL	2.7
32	YI	142	VAL	2.7
10	XJ	39	PRO	2.7
54	Y8	53	PRO	2.7
31	RH	64	LEU	2.7
47	R1	94	LEU	2.7
19	XS	35	SER	2.7
19	XS	49	ILE	2.7
25	YA	2136	C	2.7
24	XY	44	GLY	2.7
39	YT	56	GLY	2.7
25	RA	2120	G	2.7
25	YA	2112	G	2.7
7	QG	4	ARG	2.7
7	QG	78	ARG	2.7
19	QS	37	ARG	2.7
39	YT	115	ARG	2.7
28	RE	44	TYR	2.7
52	R6	39	TYR	2.7
32	YI	146	ALA	2.7
30	YG	37	VAL	2.7
45	RZ	174	VAL	2.7
14	QN	14	PRO	2.7
19	QS	5	LEU	2.7
47	R1	97	LEU	2.7
24	XY	14	PHE	2.7

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Mol	Chain	Res	Type	RSRZ
28	RE	200	GLU	2.7
31	YH	58	GLU	2.7
38	YS	64	GLU	2.7
19	XS	4	SER	2.7
21	QU	17	THR	2.7
28	YE	10	GLY	2.7
53	R7	24	THR	2.7
14	QN	61	TRP	2.7
21	XU	9	ARG	2.7
18	XR	21	LYS	2.7
22	XW	3	C	2.7
21	XU	18	TYR	2.7
20	QT	12	ALA	2.7
27	YD	224	ALA	2.7
31	YH	26	VAL	2.7
45	RZ	59	LEU	2.7
25	RA	275	G	2.7
30	YG	88	ILE	2.7
38	YS	35	ILE	2.7
50	R4	59	PHE	2.7
55	Y9	26	ILE	2.7
5	XE	50	GLU	2.7
34	RO	108	GLU	2.7
36	RQ	19	GLY	2.7
36	RQ	61	GLY	2.7
38	YS	60	GLY	2.7
47	Y1	89	GLU	2.7
7	XG	115	ARG	2.7
4	XD	22	LYS	2.7
9	XI	70	LYS	2.7
36	RQ	18	LYS	2.7
52	Y6	45	LYS	2.7
55	R9	8	LYS	2.7
14	XN	30	ALA	2.7
28	YE	204	ALA	2.7
4	QD	21	LEU	2.7
30	RG	90	LEU	2.7
31	RH	33	LEU	2.7
31	YH	64	LEU	2.7
23	QX	3	C	2.7
25	YA	2161	C	2.7
30	YG	140	ILE	2.7

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Mol	Chain	Res	Type	RSRZ
6	QF	60	PHE	2.7
28	RE	67	PHE	2.7
48	R2	55	ARG	2.7
2	XB	170	GLU	2.7
13	XM	119	GLY	2.7
39	RT	4	GLY	2.7
14	QN	22	THR	2.7
24	QY	72	TRP	2.7
17	QQ	97	SER	2.7
17	QQ	99	SER	2.7
14	XN	10	ALA	2.7
18	XR	60	ALA	2.7
20	QT	72	LEU	2.7
30	YG	159	VAL	2.7
31	RH	171	LEU	2.7
31	YH	67	LEU	2.7
55	R9	24	TYR	2.7
7	XG	45	ASP	2.7
3	XC	73	PRO	2.6
5	XE	56	GLN	2.6
3	QC	79	ARG	2.6
4	XD	209	ARG	2.6
20	QT	86	ARG	2.6
19	QS	6	LYS	2.6
1	QA	1038	C	2.6
25	RA	1537	C	2.6
31	YH	47	GLU	2.6
36	YQ	91	GLU	2.6
4	QD	9	CYS	2.6
4	QD	32	ALA	2.6
12	XL	129	ALA	2.6
19	XS	30	LEU	2.6
24	QY	46	LEU	2.6
31	YH	2	SER	2.6
39	YT	6	LEU	2.6
44	YY	90	LEU	2.6
7	QG	44	TYR	2.6
6	QF	25	ILE	2.6
25	RA	2168	G	2.6
25	YA	2116	G	2.6
25	YA	2165	G	2.6
25	YA	2190	G	2.6

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Mol	Chain	Res	Type	RSRZ
16	QP	80	PHE	2.6
29	RF	18	ARG	2.6
30	YG	74	LYS	2.6
48	R2	51	ARG	2.6
48	Y2	65	ASN	2.6
28	YE	65	GLY	2.6
1	QA	532	A	2.6
4	QD	179	GLU	2.6
3	QC	191	THR	2.6
9	XI	102	LEU	2.6
44	YY	17	SER	2.6
35	YP	110	TYR	2.6
55	Y9	24	TYR	2.6
12	XL	23	LYS	2.6
21	QU	24	ARG	2.6
55	R9	15	LYS	2.6
6	QF	18	GLN	2.6
16	QP	68	ASP	2.6
32	RI	96	ASP	2.6
35	RP	70	GLN	2.6
37	RR	91	GLN	2.6
4	XD	150	GLU	2.6
31	YH	116	GLU	2.6
39	YT	11	GLU	2.6
1	XA	92	G	2.6
1	XA	631	G	2.6
22	QW	18	G	2.6
25	RA	2116	G	2.6
25	YA	1093	G	2.6
54	R8	32	LEU	2.6
54	Y8	62	LEU	2.6
10	QJ	101	VAL	2.6
35	RP	19	VAL	2.6
4	XD	3	ARG	2.6
22	XW	59	A	2.6
45	YZ	80	ARG	2.6
4	QD	137	SER	2.6
35	RP	75	ILE	2.6
38	RS	36	TYR	2.6
41	RV	87	HIS	2.6
13	XM	10	PRO	2.6
24	QY	90	ASP	2.6

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Mol	Chain	Res	Type	RSRZ
27	YD	126	GLN	2.6
45	RZ	87	ASP	2.6
48	Y2	70	GLN	2.6
14	XN	28	GLY	2.6
32	RI	124	GLY	2.6
43	YX	94	GLY	2.6
9	QI	65	VAL	2.6
30	YG	46	ALA	2.6
31	YH	37	VAL	2.6
10	QJ	7	LYS	2.6
21	XU	22	ARG	2.6
24	XY	64	TRP	2.6
28	RE	13	ARG	2.6
36	RQ	87	LYS	2.6
39	RT	111	ARG	2.6
17	QQ	95	TYR	2.6
36	YQ	26	TYR	2.6
39	RT	1	MET	2.6
11	XK	24	SER	2.6
22	XW	2	G	2.6
1	XA	1451	A	2.6
25	YA	2135	A	2.6
10	QJ	93	GLY	2.6
17	QQ	13	ASP	2.6
27	RD	122	ASP	2.6
27	YD	55	GLY	2.6
32	RI	34	GLY	2.6
20	QT	13	LEU	2.6
4	QD	150	GLU	2.6
11	XK	30	VAL	2.6
20	QT	76	ALA	2.6
24	QY	68	VAL	2.6
24	XY	70	ALA	2.6
30	RG	75	LYS	2.6
32	RI	83	ALA	2.6
9	XI	101	PHE	2.5
13	QM	23	TYR	2.5
15	QO	46	HIS	2.5
54	R8	63	PRO	2.5
2	QB	99	GLY	2.5
7	QG	81	GLY	2.5
30	YG	65	GLY	2.5

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Mol	Chain	Res	Type	RSRZ
2	XB	215	LEU	2.5
4	QD	3	ARG	2.5
11	QK	10	VAL	2.5
21	XU	15	ARG	2.5
25	RA	11	G	2.5
31	RH	113	VAL	2.5
35	YP	18	ARG	2.5
42	RW	40	ASN	2.5
45	YZ	140	ASP	2.5
52	Y6	25	LYS	2.5
25	RA	1057	A	2.5
25	RA	2119	A	2.5
25	RA	2158	A	2.5
36	YQ	107	ALA	2.5
46	Y0	85	ALA	2.5
6	QF	8	ILE	2.5
13	XM	43	THR	2.5
30	YG	71	THR	2.5
50	R4	22	ILE	2.5
1	QA	1019	C	2.5
2	QB	236	TYR	2.5
17	XQ	64	PRO	2.5
24	XY	92	HIS	2.5
54	R8	64	TYR	2.5
4	QD	157	LEU	2.5
5	XE	20	GLN	2.5
30	RG	3	LEU	2.5
28	YE	58	ARG	2.5
47	Y1	92	LYS	2.5
13	QM	45	VAL	2.5
45	YZ	90	VAL	2.5
2	XB	29	ALA	2.5
3	QC	105	GLU	2.5
3	QC	160	ALA	2.5
9	XI	106	ALA	2.5
31	YH	57	ASP	2.5
32	YI	110	ASP	2.5
19	QS	39	THR	2.5
31	YH	123	PHE	2.5
1	QA	1005	A	2.5
25	RA	896	A	2.5
25	YA	1070	A	2.5

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Mol	Chain	Res	Type	RSRZ
1	QA	1453	G	2.5
22	XW	7	G	2.5
22	XW	53	G	2.5
27	YD	29	PRO	2.5
29	RF	25	PRO	2.5
35	RP	145	PRO	2.5
4	XD	41	GLY	2.5
20	QT	30	LYS	2.5
47	Y1	95	LEU	2.5
28	RE	204	ALA	2.5
22	XV	47	U	2.5
27	RD	30	GLU	2.5
44	RY	91	GLU	2.5
48	R2	5	GLU	2.5
49	R3	13	ILE	2.5
9	XI	18	PHE	2.5
16	QP	13	HIS	2.5
31	RH	154	PRO	2.5
41	YV	16	PRO	2.5
31	RH	62	LYS	2.5
52	R6	49	HIS	2.5
1	XA	1286	A	2.5
1	XA	1493	A	2.5
9	QI	67	GLY	2.5
9	QI	115	GLY	2.5
25	YA	654(V)	A	2.5
25	YA	1048	A	2.5
31	YH	82	GLY	2.5
35	RP	24	GLY	2.5
35	RP	37	GLY	2.5
9	XI	14	VAL	2.5
1	QA	1024	G	2.5
1	QA	1029	G	2.5
39	RT	106	SER	2.5
1	QA	1039	C	2.5
9	QI	110	GLU	2.5
17	QQ	58	GLU	2.5
24	XY	79	ILE	2.5
8	QH	4	ASP	2.5
38	YS	87	PHE	2.5
39	RT	2	ASN	2.5
1	QA	1240	U	2.5

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Mol	Chain	Res	Type	RSRZ
14	XN	13	THR	2.5
2	XB	144	ARG	2.5
3	XC	101	LEU	2.5
7	QG	115	ARG	2.5
13	QM	96	LEU	2.5
20	QT	80	ARG	2.5
47	R1	95	LEU	2.5
49	Y3	30	ARG	2.5
52	Y6	38	LYS	2.5
21	QU	23	PRO	2.5
31	YH	103	LEU	2.5
24	XY	9	GLY	2.5
30	YG	26	GLN	2.5
20	QT	59	ALA	2.4
44	RY	100	ALA	2.4
32	YI	91	SER	2.4
1	QA	1183	A	2.4
25	RA	2602	A	2.4
25	YA	2801	A	2.4
45	RZ	43	GLU	2.4
4	QD	35	ARG	2.4
7	QG	35	LYS	2.4
28	RE	76	ARG	2.4
29	YF	195	ASP	2.4
30	RG	36	LYS	2.4
35	YP	17	LYS	2.4
39	YT	8	LYS	2.4
24	XY	72	TRP	2.4
2	QB	102	LEU	2.4
25	RA	1052	C	2.4
25	YA	277	C	2.4
46	R0	84	LEU	2.4
31	RH	21	PRO	2.4
4	XD	27	TYR	2.4
9	QI	5	TYR	2.4
32	RI	130	TYR	2.4
31	YH	141	VAL	2.4
44	RY	58	GLY	2.4
20	QT	28	ALA	2.4
20	XT	52	ALA	2.4
24	QY	24	ALA	2.4
48	R2	46	GLN	2.4

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Mol	Chain	Res	Type	RSRZ
19	QS	4	SER	2.4
35	RP	56	SER	2.4
36	YQ	139	GLU	2.4
7	XG	43	PHE	2.4
38	RS	112	PHE	2.4
50	Y4	39	CYS	2.4
13	XM	99	ARG	2.4
47	Y1	26	ARG	2.4
54	Y8	42	ARG	2.4
32	RI	77	LEU	2.4
1	QA	1319	A	2.4
25	YA	896	A	2.4
40	YU	97	ASP	2.4
55	Y9	12	ASP	2.4
45	YZ	83	PRO	2.4
9	XI	86	VAL	2.4
27	YD	34	VAL	2.4
53	Y7	46	VAL	2.4
25	RA	2128	C	2.4
1	QA	1124	G	2.4
22	XW	6	G	2.4
25	YA	2401	U	2.4
50	Y4	31	ILE	2.4
33	RN	1	MET	2.4
36	RQ	6	ARG	2.4
38	YS	20	ARG	2.4
39	RT	129	ARG	2.4
53	R7	23	ARG	2.4
9	XI	47	LEU	2.4
11	QK	31	THR	2.4
50	R4	27	THR	2.4
24	XY	26	ASP	2.4
31	RH	11	VAL	2.4
30	YG	151	ALA	2.4
25	RA	2799	A	2.4
2	XB	156	LYS	2.4
41	RV	85	LYS	2.4
55	Y9	36	GLN	2.4
31	YH	152	ARG	2.4
32	YI	57	ARG	2.4
1	XA	1039	C	2.4
25	RA	2896	C	2.4

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Mol	Chain	Res	Type	RSRZ
25	YA	2122	U	2.4
31	RH	32	GLU	2.4
31	YH	33	LEU	2.4
35	YP	52	GLU	2.4
50	R4	53	GLU	2.4
22	QW	7	G	2.4
2	XB	159	PRO	2.4
11	QK	82	VAL	2.4
19	QS	59	PRO	2.4
30	RG	109	VAL	2.4
50	Y4	27	THR	2.4
9	XI	117	HIS	2.4
29	YF	23	ASP	2.4
38	YS	37	ALA	2.4
9	XI	78	LYS	2.4
30	RG	96	ARG	2.4
31	RH	41	MET	2.4
40	RU	92	ARG	2.4
44	RY	2	ARG	2.4
50	Y4	13	ARG	2.4
50	Y4	42	PHE	2.4
30	YG	111	LEU	2.4
45	RZ	155	LEU	2.4
22	QW	58	A	2.4
31	YH	104	GLU	2.4
47	R1	89	GLU	2.4
3	XC	207	VAL	2.4
31	RH	26	VAL	2.4
25	RA	1080	C	2.3
19	QS	72	GLY	2.3
35	RP	11	GLY	2.3
37	YR	106	GLY	2.3
17	XQ	100	LYS	2.3
19	XS	53	ASN	2.3
21	QU	25	LYS	2.3
24	XY	71	ASN	2.3
9	XI	5	TYR	2.3
13	QM	84	ILE	2.3
30	YG	67	LYS	2.3
36	YQ	64	ILE	2.3
37	YR	34	ILE	2.3
40	RU	75	ASN	2.3

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Mol	Chain	Res	Type	RSRZ
36	RQ	115	MET	2.3
1	QA	1002	G	2.3
10	XJ	8	LEU	2.3
30	YG	102	PHE	2.3
41	YV	40	LEU	2.3
45	RZ	157	LEU	2.3
3	QC	44	GLU	2.3
10	XJ	64	GLU	2.3
11	XK	92	GLU	2.3
17	QQ	24	GLU	2.3
29	YF	179	GLU	2.3
31	RH	37	VAL	2.3
31	RH	114	VAL	2.3
2	QB	131	PRO	2.3
4	XD	175	SER	2.3
16	QP	41	PRO	2.3
27	YD	266	SER	2.3
28	YE	56	PRO	2.3
19	XS	70	LYS	2.3
28	RE	12	THR	2.3
38	YS	11	LYS	2.3
6	XF	86	ARG	2.3
28	RE	141	ILE	2.3
38	YS	17	ARG	2.3
40	YU	33	ARG	2.3
3	QC	117	ALA	2.3
31	RH	65	HIS	2.3
36	YQ	53	ALA	2.3
50	R4	20	ASN	2.3
45	RZ	123	ASP	2.3
45	RZ	148	ASP	2.3
48	R2	52	ASP	2.3
10	XJ	40	LEU	2.3
29	YF	24	LEU	2.3
54	Y8	32	LEU	2.3
53	R7	36	GLN	2.3
27	RD	237	GLU	2.3
25	YA	7	G	2.3
35	YP	19	VAL	2.3
44	YY	63	LYS	2.3
20	XT	25	ARG	2.3
15	QO	23	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
18	QR	70	ILE	2.3
24	XY	30	ILE	2.3
28	YE	50	GLY	2.3
21	XU	8	THR	2.3
31	YH	38	SER	2.3
40	YU	99	ALA	2.3
46	R0	10	THR	2.3
4	XD	9	CYS	2.3
14	XN	34	TYR	2.3
7	QG	37	ASN	2.3
48	Y2	44	LEU	2.3
22	XW	35	A	2.3
30	YG	150	ASP	2.3
43	RX	75	ASP	2.3
2	XB	15	VAL	2.3
3	XC	72	LYS	2.3
9	XI	11	LYS	2.3
24	XY	52	LYS	2.3
44	YY	88	LYS	2.3
46	R0	4	LYS	2.3
53	R7	46	VAL	2.3
3	XC	79	ARG	2.3
5	QE	25	ARG	2.3
7	QG	79	ARG	2.3
21	XU	6	ARG	2.3
55	Y9	18	ARG	2.3
13	QM	97	PRO	2.3
36	RQ	39	PRO	2.3
54	R8	53	PRO	2.3
31	RH	106	THR	2.3
7	QG	101	LEU	2.3
2	XB	236	TYR	2.3
6	QF	63	TYR	2.3
9	QI	29	ASN	2.3
13	XM	86	CYS	2.3
44	RY	99	CYS	2.3
27	RD	71	ASP	2.3
35	RP	87	ASP	2.3
47	R1	33	LYS	2.3
47	R1	48	LYS	2.3
12	XL	89	ARG	2.3
21	XU	10	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
29	YF	18	ARG	2.3
30	RG	37	VAL	2.3
30	YG	104	GLU	2.3
32	YI	125	GLU	2.3
36	RQ	81	VAL	2.3
39	RT	11	GLU	2.3
45	YZ	141	VAL	2.3
50	R4	35	VAL	2.3
22	QW	36	U	2.3
25	YA	2506	U	2.3
3	XC	84	ILE	2.3
13	XM	84	ILE	2.3
32	RI	79	ILE	2.3
35	YP	48	PRO	2.3
55	R9	17	ILE	2.3
3	XC	155	GLY	2.3
7	XG	100	ALA	2.3
16	QP	64	ALA	2.3
19	QS	68	GLY	2.3
40	YU	23	GLY	2.3
1	XA	466	C	2.3
25	RA	34	C	2.3
14	QN	13	THR	2.3
2	QB	70	PHE	2.3
2	XB	152	PHE	2.3
14	XN	27	CYS	2.3
28	YE	203	LYS	2.3
5	QE	18	ARG	2.3
7	XG	79	ARG	2.3
20	QT	25	ARG	2.3
35	YP	81	GLN	2.3
45	RZ	73	GLN	2.3
9	XI	17	VAL	2.3
27	RD	34	VAL	2.3
44	YY	39	VAL	2.3
55	Y9	3	VAL	2.3
3	XC	44	GLU	2.2
15	XO	73	GLU	2.2
24	XY	15	GLU	2.2
24	XY	89	GLU	2.2
48	Y2	66	GLU	2.2
2	QB	32	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
3	XC	5	ILE	2.2
24	XY	23	PRO	2.2
28	YE	186	GLY	2.2
29	YF	25	PRO	2.2
32	RI	94	ALA	2.2
32	RI	115	ALA	2.2
47	R1	77	ALA	2.2
5	XE	12	LEU	2.2
22	XV	54	U	2.2
23	XX	15	A	2.2
25	RA	1444(A)	A	2.2
30	YG	94	LEU	2.2
35	RP	106	LEU	2.2
45	RZ	117	LEU	2.2
45	YZ	70	LEU	2.2
30	RG	29	TRP	2.2
28	RE	159	HIS	2.2
5	XE	125	SER	2.2
9	XI	126	SER	2.2
13	XM	31	LYS	2.2
14	QN	15	LYS	2.2
44	RY	46	LYS	2.2
1	QA	1028(B)	C	2.2
2	QB	30	ARG	2.2
9	QI	14	VAL	2.2
50	Y4	50	VAL	2.2
28	YE	73	GLU	2.2
30	YG	97	ASP	2.2
30	YG	164	GLU	2.2
31	RH	124	GLU	2.2
33	RN	41	ASP	2.2
36	YQ	80	GLU	2.2
39	RT	128	GLU	2.2
9	XI	81	ILE	2.2
2	XB	138	LEU	2.2
7	XG	83	ALA	2.2
9	XI	100	GLY	2.2
10	QJ	65	LEU	2.2
19	XS	44	MET	2.2
27	YD	234	GLY	2.2
45	YZ	25	PRO	2.2
35	YP	148	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
22	XW	70	G	2.2
54	R8	39	LYS	2.2
5	XE	27	ARG	2.2
10	XJ	46	ARG	2.2
1	QA	1286	A	2.2
22	XW	72	A	2.2
3	QC	207	VAL	2.2
28	RE	188	VAL	2.2
28	YE	75	VAL	2.2
30	YG	66	GLN	2.2
9	XI	110	GLU	2.2
29	YF	35	GLU	2.2
30	YG	63	ILE	2.2
35	YP	117	GLU	2.2
41	RV	70	ILE	2.2
45	RZ	2	GLU	2.2
1	XA	91	C	2.2
1	XA	1158	C	2.2
2	QB	26	PRO	2.2
3	QC	174	PRO	2.2
9	QI	40	LEU	2.2
27	YD	122	ASP	2.2
30	RG	135	LEU	2.2
39	YT	87	ASP	2.2
38	YS	109	GLY	2.2
30	RG	84	LYS	2.2
34	RO	31	LYS	2.2
52	Y6	27	LYS	2.2
55	Y9	2	LYS	2.2
24	QY	78	PHE	2.2
15	QO	88	ARG	2.2
36	YQ	82	ARG	2.2
41	YV	83	ARG	2.2
43	RX	60	ARG	2.2
44	RY	50	ARG	2.2
10	QJ	67	THR	2.2
52	Y6	47	THR	2.2
37	RR	14	SER	2.2
1	QA	1212	U	2.2
25	YA	1535	U	2.2
7	XG	148	ASN	2.2
1	XA	1446	A	2.2

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Mol	Chain	Res	Type	RSRZ
2	XB	11	LEU	2.2
6	QF	10	LEU	2.2
24	XY	61	GLU	2.2
7	QG	73	MET	2.2
25	RA	1050	A	2.2
25	RA	2126	A	2.2
25	RA	2160	G	2.2
29	RF	161	GLU	2.2
12	QL	23	LYS	2.2
16	QP	47	ASP	2.2
28	YE	8	LYS	2.2
33	RN	50	ASP	2.2
16	QP	71	ARG	2.2
30	RG	72	ARG	2.2
30	RG	128	ARG	2.2
42	RW	92	ARG	2.2
47	R1	60	PHE	2.2
44	YY	6	HIS	2.2
2	XB	136	VAL	2.2
3	XC	23	TYR	2.2
9	QI	17	VAL	2.2
10	XJ	6	ILE	2.2
55	Y9	34	GLN	2.2
28	YE	205	ALA	2.2
34	RO	120	GLU	2.2
42	RW	30	GLU	2.2
53	R7	1	MET	2.2
21	QU	16	GLY	2.2
22	XW	54	U	2.2
25	RA	2118	U	2.2
35	YP	24	GLY	2.2
40	YU	2	PRO	2.2
50	R4	45	GLY	2.2
10	QJ	29	ARG	2.2
13	XM	104	ARG	2.2
35	YP	61	ARG	2.2
39	YT	54	ARG	2.2
17	QQ	83	ASP	2.2
39	RT	101	PHE	2.2
1	XA	1004	A	2.2
1	XA	1032	A	2.2
25	RA	1048	A	2.2

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Mol	Chain	Res	Type	RSRZ
1	QA	973	G	2.2
25	RA	10	G	2.2
25	RA	2872	G	2.2
33	RN	42	TRP	2.2
9	QI	117	HIS	2.2
28	YE	24	THR	2.1
30	YG	5	VAL	2.1
31	RH	76	VAL	2.1
32	RI	127	VAL	2.1
6	XF	63	TYR	2.1
7	XG	16	LEU	2.1
4	QD	152	SER	2.1
7	QG	83	ALA	2.1
11	XK	53	SER	2.1
29	YF	22	ALA	2.1
7	QG	114	ARG	2.1
32	YI	48	GLU	2.1
34	YO	45	GLU	2.1
7	XG	82	GLY	2.1
38	RS	108	GLY	2.1
44	YY	2	ARG	2.1
45	RZ	110	GLY	2.1
45	RZ	147	GLY	2.1
46	R0	11	ARG	2.1
7	XG	68	ASN	2.1
29	RF	133	ASN	2.1
50	Y4	7	PRO	2.1
25	RA	2808	U	2.1
25	YA	2172	U	2.1
39	RT	117	ASP	2.1
46	Y0	71	ASP	2.1
50	Y4	18	CYS	2.1
7	QG	17	VAL	2.1
2	QB	103	THR	2.1
30	RG	64	THR	2.1
38	YS	47	THR	2.1
9	XI	63	ILE	2.1
13	XM	25	ILE	2.1
25	RA	276	A	2.1
25	YA	1095	A	2.1
25	YA	2062	A	2.1
11	QK	123	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
20	QT	84	LEU	2.1
31	RH	67	LEU	2.1
41	RV	38	LEU	2.1
43	RX	33	LYS	2.1
47	R1	25	LYS	2.1
55	R9	31	LYS	2.1
1	QA	3	G	2.1
1	XA	1024	G	2.1
9	XI	66	ARG	2.1
10	QJ	9	ARG	2.1
15	QO	13	GLN	2.1
25	YA	1056	G	2.1
33	RN	90	MET	2.1
29	RF	62	ARG	2.1
30	YG	153	ARG	2.1
36	RQ	5	ARG	2.1
38	RS	55	ALA	2.1
49	Y3	29	ARG	2.1
55	Y9	4	ARG	2.1
20	QT	11	SER	2.1
1	XA	1539	C	2.1
4	QD	37	PRO	2.1
32	YI	85	GLU	2.1
37	YR	102	GLU	2.1
44	YY	70	SER	2.1
48	R2	11	GLU	2.1
51	Y5	54	GLY	2.1
27	YD	99	ASP	2.1
34	RO	37	ASP	2.1
55	R9	11	CYS	2.1
2	QB	22	LYS	2.1
2	QB	185	ILE	2.1
3	QC	77	ILE	2.1
10	XJ	67	THR	2.1
11	QK	29	ILE	2.1
25	YA	1066	U	2.1
28	RE	182	LEU	2.1
30	RG	43	LEU	2.1
32	YI	38	LEU	2.1
32	YI	112	LYS	2.1
40	YU	60	LEU	2.1
50	R4	69	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
50	Y4	5	ILE	2.1
54	R8	36	LYS	2.1
2	QB	153	ARG	2.1
29	RF	205	ARG	2.1
48	Y2	51	ARG	2.1
55	Y9	19	ARG	2.1
5	XE	21	ALA	2.1
7	XG	145	ALA	2.1
9	XI	119	ALA	2.1
27	YD	115	GLN	2.1
3	QC	159	GLY	2.1
25	RA	1084	A	2.1
25	RA	1536	A	2.1
25	YA	1073	A	2.1
25	YA	1762	A	2.1
25	YA	2170	A	2.1
28	RE	74	PRO	2.1
29	YF	134	GLY	2.1
29	YF	208	GLY	2.1
14	XN	32	SER	2.1
17	XQ	66	SER	2.1
30	YG	117	PHE	2.1
47	Y1	2	SER	2.1
1	QA	190	G	2.1
1	QA	1001	G	2.1
1	QA	1042	G	2.1
25	RA	1076	C	2.1
25	YA	2477	C	2.1
18	QR	71	LYS	2.1
24	QY	57	LYS	2.1
31	RH	88	LEU	2.1
33	RN	138	LEU	2.1
39	RT	114	LEU	2.1
45	YZ	183	LEU	2.1
27	RD	217	ARG	2.1
13	XM	87	TYR	2.1
27	YD	27	THR	2.1
31	RH	149	ARG	2.1
39	RT	39	ARG	2.1
31	YH	75	ALA	2.1
22	QW	17(A)	U	2.1
22	QW	55	U	2.1

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Mol	Chain	Res	Type	RSRZ
23	QX	11	U	2.1
48	Y2	43	GLN	2.1
41	YV	101	GLY	2.1
4	XD	179	GLU	2.1
8	XH	77	GLU	2.1
9	QI	123	PRO	2.1
10	XJ	63	PHE	2.1
30	RG	102	PHE	2.1
45	RZ	145	GLU	2.1
31	YH	80	SER	2.1
1	XA	1503	A	2.1
12	XL	21	LYS	2.1
20	XT	74	LYS	2.1
25	RA	1847	A	2.1
25	YA	653	A	2.1
25	YA	2169	A	2.1
25	YA	2173	A	2.1
27	YD	35	LYS	2.1
48	Y2	49	LYS	2.1
2	QB	44	LEU	2.1
2	XB	127	ILE	2.1
5	XE	91	LEU	2.1
6	XF	71	ARG	2.1
7	XG	72	ARG	2.1
8	QH	6	ILE	2.1
10	QJ	66	ARG	2.1
20	QT	100	ILE	2.1
29	YF	20	LEU	2.1
30	RG	111	LEU	2.1
30	RG	115	ARG	2.1
39	YT	129	ARG	2.1
54	R8	61	LEU	2.1
51	R5	4	HIS	2.1
18	XR	33	ASP	2.1
3	XC	193	TYR	2.1
13	QM	86	CYS	2.1
28	RE	24	THR	2.1
30	RG	86	MET	2.1
1	QA	1147	C	2.1
25	YA	1075	C	2.1
25	YA	2175	C	2.1
22	QV	2	G	2.1

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Mol	Chain	Res	Type	RSRZ
25	YA	2833	G	2.1
36	YQ	28	ALA	2.1
37	YR	62	ALA	2.1
5	XE	22	GLY	2.1
27	RD	243	GLY	2.1
31	RH	14	GLY	2.1
45	YZ	114	GLY	2.1
46	R0	17	GLN	2.1
2	XB	70	PHE	2.1
15	XO	2	PRO	2.1
38	RS	29	PHE	2.1
15	QO	48	LYS	2.0
30	YG	70	VAL	2.0
39	YT	10	VAL	2.0
29	RF	60	SER	2.0
38	YS	31	SER	2.0
50	R4	26	SER	2.0
6	QF	84	ASN	2.0
9	QI	9	ARG	2.0
16	QP	14	ASN	2.0
20	QT	41	ILE	2.0
27	YD	33	LEU	2.0
31	RH	3	ARG	2.0
32	YI	52	ARG	2.0
32	YI	79	ILE	2.0
29	RF	65	TRP	2.0
33	YN	90	MET	2.0
2	XB	77	ALA	2.0
11	XK	87	THR	2.0
25	YA	1913	A	2.0
25	YA	2176	A	2.0
28	YE	68	ALA	2.0
30	RG	151	ALA	2.0
54	R8	51	ALA	2.0
2	QB	18	GLY	2.0
5	QE	38	GLN	2.0
27	YD	235	GLY	2.0
41	RV	101	GLY	2.0
30	YG	32	PRO	2.0
1	XA	1006	C	2.0
1	XA	1038	C	2.0
2	QB	133	LYS	2.0

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Mol	Chain	Res	Type	RSRZ
32	RI	99	GLU	2.0
13	QM	53	VAL	2.0
25	YA	2129	C	2.0
44	RY	34	LYS	2.0
52	R6	45	LYS	2.0
52	Y6	53	LYS	2.0
31	YH	50	VAL	2.0
1	XA	1443	G	2.0
1	XA	1453	G	2.0
2	QB	10	LEU	2.0
6	QF	61	LEU	2.0
9	QI	96	LEU	2.0
22	QV	9	G	2.0
22	XV	9	G	2.0
24	XY	69	ARG	2.0
38	RS	48	LEU	2.0
39	YT	13	ARG	2.0
9	QI	126	SER	2.0
31	YH	136	ILE	2.0
28	RE	151	TYR	2.0
16	XP	29	ASP	2.0
2	XB	17	PHE	2.0
30	RG	125	PHE	2.0
31	YH	5	GLY	2.0
35	RP	34	GLY	2.0
41	YV	65	GLY	2.0
44	RY	93	GLY	2.0
45	YZ	147	GLY	2.0
13	XM	113	PRO	2.0
53	Y7	36	GLN	2.0
2	XB	21	ARG	2.0
3	XC	179	ARG	2.0
7	XG	78	ARG	2.0
10	XJ	60	ARG	2.0
13	QM	3	ARG	2.0
13	QM	94	ARG	2.0
16	XP	71	ARG	2.0
17	XQ	68	ARG	2.0
19	QS	36	ARG	2.0
19	QS	67	VAL	2.0
27	RD	83	GLU	2.0
32	RI	41	GLU	2.0

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Mol	Chain	Res	Type	RSRZ
31	RH	42	ARG	2.0
46	R0	44	ARG	2.0
46	R0	74	ARG	2.0
38	RS	110	LEU	2.0
47	R1	80	LEU	2.0
4	XD	5	ILE	2.0
1	QA	1028(A)	C	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, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
23	A3P	XX	20	26/27	0.66	0.19	222,222,222,222	0
23	A3P	QX	20	26/27	0.80	0.13	175,175,175,175	0

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
56	MG	YA	3401	1/1	-0.45	0.39	166,166,166,166	0
56	MG	XA	1745	1/1	0.19	0.20	99,99,99,99	0
56	MG	XA	1692	1/1	0.25	0.22	102,102,102,102	0
56	MG	QA	1690	1/1	0.27	0.26	80,80,80,80	0
56	MG	XA	1754	1/1	0.31	0.27	119,119,119,119	0
56	MG	XA	1702	1/1	0.38	0.32	101,101,101,101	0
56	MG	YQ	202	1/1	0.46	0.18	66,66,66,66	0
56	MG	YA	3397	1/1	0.47	0.18	58,58,58,58	0
56	MG	XA	1657	1/1	0.49	0.31	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	YA	3278	1/1	0.50	0.32	75,75,75,75	0
56	MG	XA	1625	1/1	0.53	0.18	87,87,87,87	0
56	MG	YA	3224	1/1	0.53	0.21	63,63,63,63	0
56	MG	QA	1694	1/1	0.54	0.22	86,86,86,86	0
56	MG	YA	3460	1/1	0.55	0.19	82,82,82,82	0
56	MG	XD	302	1/1	0.55	0.18	86,86,86,86	0
56	MG	RA	3391	1/1	0.56	0.17	113,113,113,113	0
56	MG	RA	3259	1/1	0.56	0.19	57,57,57,57	0
56	MG	YA	3452	1/1	0.59	0.20	71,71,71,71	0
56	MG	RA	3405	1/1	0.59	0.40	74,74,74,74	0
56	MG	QA	1733	1/1	0.59	0.15	65,65,65,65	0
56	MG	RA	3216	1/1	0.60	0.30	67,67,67,67	0
56	MG	RA	3269	1/1	0.60	0.18	75,75,75,75	0
56	MG	YA	3390	1/1	0.61	0.20	92,92,92,92	0
56	MG	RA	3055	1/1	0.61	0.06	15,15,15,15	0
56	MG	YA	3438	1/1	0.63	0.22	91,91,91,91	0
56	MG	RA	3155	1/1	0.63	0.23	55,55,55,55	0
56	MG	XA	1751	1/1	0.64	0.26	58,58,58,58	0
56	MG	QA	1735	1/1	0.64	0.22	75,75,75,75	0
56	MG	RA	3165	1/1	0.64	0.18	52,52,52,52	0
56	MG	R2	101	1/1	0.65	0.25	74,74,74,74	0
56	MG	RA	3132	1/1	0.66	0.28	58,58,58,58	0
56	MG	YA	3167	1/1	0.67	0.41	91,91,91,91	0
56	MG	YA	3336	1/1	0.67	0.28	75,75,75,75	0
56	MG	RA	3126	1/1	0.67	0.09	53,53,53,53	0
56	MG	YA	3099	1/1	0.68	0.23	51,51,51,51	0
56	MG	QA	1672	1/1	0.68	0.16	49,49,49,49	0
56	MG	RA	3082	1/1	0.68	0.14	15,15,15,15	0
56	MG	YA	3461	1/1	0.68	0.27	44,44,44,44	0
56	MG	RA	3090	1/1	0.68	0.13	61,61,61,61	0
56	MG	QA	1709	1/1	0.69	0.21	59,59,59,59	0
56	MG	YA	3232	1/1	0.69	0.20	57,57,57,57	0
56	MG	RA	3262	1/1	0.69	0.12	38,38,38,38	0
56	MG	YA	3406	1/1	0.70	0.20	74,74,74,74	0
56	MG	YA	3103	1/1	0.70	0.36	62,62,62,62	0
56	MG	XA	1659	1/1	0.71	0.21	76,76,76,76	0
56	MG	YA	3351	1/1	0.71	0.19	74,74,74,74	0
56	MG	YA	3387	1/1	0.71	0.16	98,98,98,98	0
56	MG	XA	1714	1/1	0.71	0.14	81,81,81,81	0
56	MG	QA	1698	1/1	0.71	0.16	101,101,101,101	0
56	MG	YA	3335	1/1	0.71	0.14	66,66,66,66	0
56	MG	XA	1739	1/1	0.72	0.14	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	QA	1670	1/1	0.72	0.30	62,62,62,62	0
56	MG	YA	3422	1/1	0.72	0.24	63,63,63,63	0
56	MG	YA	3181	1/1	0.72	0.24	64,64,64,64	0
56	MG	RA	3331	1/1	0.73	0.23	74,74,74,74	0
56	MG	YA	3311	1/1	0.73	0.12	51,51,51,51	0
56	MG	XA	1656	1/1	0.73	0.24	51,51,51,51	0
56	MG	YA	3121	1/1	0.73	0.22	40,40,40,40	0
56	MG	RA	3336	1/1	0.73	0.16	39,39,39,39	0
56	MG	QA	1682	1/1	0.73	0.21	64,64,64,64	0
56	MG	RA	3074	1/1	0.73	0.15	33,33,33,33	0
56	MG	RA	3320	1/1	0.73	0.23	63,63,63,63	0
56	MG	QA	1683	1/1	0.74	0.14	64,64,64,64	0
56	MG	QV	105	1/1	0.74	0.25	56,56,56,56	0
56	MG	YA	3227	1/1	0.74	0.26	54,54,54,54	0
56	MG	YA	3446	1/1	0.74	0.35	68,68,68,68	0
56	MG	RA	3035	1/1	0.74	0.19	40,40,40,40	0
56	MG	XA	1694	1/1	0.74	0.17	66,66,66,66	0
56	MG	YA	3279	1/1	0.74	0.24	66,66,66,66	0
56	MG	RA	3295	1/1	0.74	0.17	58,58,58,58	0
56	MG	YA	3441	1/1	0.75	0.10	54,54,54,54	0
56	MG	RA	3208	1/1	0.76	0.16	48,48,48,48	0
56	MG	YA	3429	1/1	0.76	0.18	38,38,38,38	0
56	MG	RA	3156	1/1	0.76	0.14	63,63,63,63	0
56	MG	YA	3363	1/1	0.76	0.22	69,69,69,69	0
56	MG	RA	3223	1/1	0.76	0.19	67,67,67,67	0
56	MG	RA	3227	1/1	0.76	0.09	43,43,43,43	0
56	MG	RA	3233	1/1	0.76	0.24	50,50,50,50	0
56	MG	RA	3333	1/1	0.76	0.14	52,52,52,52	0
56	MG	QA	1725	1/1	0.76	0.17	65,65,65,65	0
56	MG	YA	3140	1/1	0.77	0.11	64,64,64,64	0
56	MG	RA	3334	1/1	0.77	0.13	55,55,55,55	0
56	MG	XA	1736	1/1	0.77	0.11	24,24,24,24	0
56	MG	YA	3221	1/1	0.77	0.19	37,37,37,37	0
56	MG	XA	1699	1/1	0.77	0.15	84,84,84,84	0
56	MG	RA	3173	1/1	0.77	0.11	52,52,52,52	0
56	MG	XA	1706	1/1	0.77	0.28	81,81,81,81	0
56	MG	YA	3374	1/1	0.78	0.18	62,62,62,62	0
56	MG	YA	3380	1/1	0.78	0.12	65,65,65,65	0
56	MG	XA	1612	1/1	0.78	0.09	46,46,46,46	0
56	MG	QA	1726	1/1	0.78	0.20	56,56,56,56	0
56	MG	YA	3129	1/1	0.78	0.21	41,41,41,41	0
56	MG	QA	1629	1/1	0.78	0.20	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	YA	3404	1/1	0.78	0.13	28,28,28,28	0
56	MG	YA	3303	1/1	0.78	0.20	60,60,60,60	0
56	MG	YA	3463	1/1	0.78	0.16	46,46,46,46	0
56	MG	YA	3420	1/1	0.78	0.16	63,63,63,63	0
56	MG	YA	3216	1/1	0.79	0.25	51,51,51,51	0
56	MG	XA	1674	1/1	0.79	0.11	50,50,50,50	0
56	MG	XA	1678	1/1	0.79	0.14	70,70,70,70	0
56	MG	RA	3050	1/1	0.79	0.31	57,57,57,57	0
56	MG	YA	3134	1/1	0.79	0.23	56,56,56,56	0
56	MG	RA	3161	1/1	0.79	0.36	71,71,71,71	0
56	MG	YA	3001	1/1	0.79	0.46	70,70,70,70	0
56	MG	RA	3327	1/1	0.79	0.26	69,69,69,69	0
56	MG	QA	1676	1/1	0.80	0.15	56,56,56,56	0
56	MG	QA	1640	1/1	0.80	0.20	76,76,76,76	0
56	MG	YA	3251	1/1	0.80	0.23	82,82,82,82	0
56	MG	YA	3354	1/1	0.80	0.29	79,79,79,79	0
56	MG	YA	3189	1/1	0.80	0.31	40,40,40,40	0
56	MG	XA	1720	1/1	0.80	0.13	53,53,53,53	0
56	MG	QA	1673	1/1	0.80	0.17	62,62,62,62	0
56	MG	YH	201	1/1	0.80	0.10	105,105,105,105	0
56	MG	YA	3150	1/1	0.80	0.41	69,69,69,69	0
56	MG	YA	3067	1/1	0.81	0.17	40,40,40,40	0
56	MG	YA	3081	1/1	0.81	0.24	35,35,35,35	0
56	MG	QA	1722	1/1	0.81	0.14	39,39,39,39	0
56	MG	RA	3400	1/1	0.81	0.24	59,59,59,59	0
56	MG	XA	1743	1/1	0.81	0.13	39,39,39,39	0
56	MG	RA	3402	1/1	0.81	0.12	61,61,61,61	0
56	MG	YA	3131	1/1	0.81	0.21	48,48,48,48	0
56	MG	RA	3101	1/1	0.81	0.18	31,31,31,31	0
56	MG	YA	3386	1/1	0.81	0.11	48,48,48,48	0
56	MG	RA	3324	1/1	0.81	0.17	62,62,62,62	0
56	MG	RA	3254	1/1	0.81	0.30	74,74,74,74	0
56	MG	XA	1689	1/1	0.81	0.14	55,55,55,55	0
56	MG	YA	3307	1/1	0.81	0.21	101,101,101,101	0
56	MG	YA	3403	1/1	0.81	0.22	36,36,36,36	0
56	MG	RA	3349	1/1	0.82	0.16	80,80,80,80	0
56	MG	RA	3355	1/1	0.82	0.13	73,73,73,73	0
56	MG	QA	1665	1/1	0.82	0.12	58,58,58,58	0
56	MG	YA	3290	1/1	0.82	0.14	78,78,78,78	0
56	MG	QA	1631	1/1	0.82	0.28	56,56,56,56	0
56	MG	RA	3068	1/1	0.82	0.20	39,39,39,39	0
56	MG	XA	1750	1/1	0.82	0.15	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	RA	3284	1/1	0.82	0.15	35,35,35,35	0
56	MG	RA	3292	1/1	0.82	0.11	38,38,38,38	0
56	MG	YA	3173	1/1	0.82	0.14	41,41,41,41	0
56	MG	XA	1604	1/1	0.82	0.22	25,25,25,25	0
56	MG	RA	3294	1/1	0.82	0.09	53,53,53,53	0
56	MG	RA	3042	1/1	0.82	0.27	48,48,48,48	0
56	MG	XA	1630	1/1	0.82	0.17	35,35,35,35	0
56	MG	YA	3088	1/1	0.82	0.21	21,21,21,21	0
56	MG	YB	204	1/1	0.82	0.18	63,63,63,63	0
56	MG	YA	3089	1/1	0.82	0.13	42,42,42,42	0
56	MG	XA	1635	1/1	0.82	0.11	45,45,45,45	0
56	MG	QA	1679	1/1	0.83	0.25	61,61,61,61	0
56	MG	YA	3180	1/1	0.83	0.21	61,61,61,61	0
56	MG	YA	3437	1/1	0.83	0.17	56,56,56,56	0
56	MG	RA	3099	1/1	0.83	0.21	68,68,68,68	0
56	MG	QA	1641	1/1	0.83	0.15	50,50,50,50	0
56	MG	YA	3057	1/1	0.83	0.11	37,37,37,37	0
56	MG	QA	1661	1/1	0.83	0.13	75,75,75,75	0
56	MG	RA	3177	1/1	0.83	0.16	42,42,42,42	0
56	MG	QA	1662	1/1	0.83	0.20	51,51,51,51	0
56	MG	YA	3340	1/1	0.83	0.22	48,48,48,48	0
56	MG	YA	3343	1/1	0.83	0.16	46,46,46,46	0
56	MG	QA	1603	1/1	0.83	0.14	83,83,83,83	0
56	MG	YA	3095	1/1	0.83	0.18	53,53,53,53	0
56	MG	RQ	201	1/1	0.84	0.12	52,52,52,52	0
56	MG	YA	3146	1/1	0.84	0.16	70,70,70,70	0
56	MG	RU	201	1/1	0.84	0.26	63,63,63,63	0
56	MG	YA	3030	1/1	0.84	0.23	21,21,21,21	0
56	MG	YA	3407	1/1	0.84	0.09	44,44,44,44	0
56	MG	YA	3331	1/1	0.84	0.14	56,56,56,56	0
56	MG	RA	3170	1/1	0.84	0.27	49,49,49,49	0
56	MG	RA	3129	1/1	0.84	0.17	41,41,41,41	0
56	MG	QA	1636	1/1	0.84	0.16	62,62,62,62	0
56	MG	RA	3141	1/1	0.84	0.08	64,64,64,64	0
56	MG	QA	1608	1/1	0.84	0.37	35,35,35,35	0
56	MG	YA	3444	1/1	0.84	0.18	56,56,56,56	0
56	MG	QA	1699	1/1	0.84	0.29	60,60,60,60	0
56	MG	RA	3125	1/1	0.84	0.34	68,68,68,68	0
56	MG	RA	3359	1/1	0.84	0.20	56,56,56,56	0
56	MG	QV	101	1/1	0.84	0.09	35,35,35,35	0
56	MG	YA	3245	1/1	0.84	0.22	57,57,57,57	0
56	MG	RA	3321	1/1	0.84	0.20	78,78,78,78	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	RA	3166	1/1	0.84	0.24	59,59,59,59	0
56	MG	RA	3325	1/1	0.84	0.17	56,56,56,56	0
56	MG	XA	1654	1/1	0.85	0.16	48,48,48,48	0
56	MG	RA	3357	1/1	0.85	0.30	47,47,47,47	0
56	MG	XA	1753	1/1	0.85	0.18	100,100,100,100	0
56	MG	RA	3048	1/1	0.85	0.13	21,21,21,21	0
56	MG	RA	3373	1/1	0.85	0.28	26,26,26,26	0
56	MG	XF	201	1/1	0.85	0.15	35,35,35,35	0
56	MG	QA	1738	1/1	0.85	0.09	67,67,67,67	0
56	MG	RA	3110	1/1	0.85	0.18	25,25,25,25	0
56	MG	YA	3393	1/1	0.85	0.22	62,62,62,62	0
56	MG	RA	3238	1/1	0.85	0.22	44,44,44,44	0
56	MG	RA	3122	1/1	0.85	0.18	36,36,36,36	0
56	MG	YA	3231	1/1	0.85	0.28	64,64,64,64	0
56	MG	YA	3078	1/1	0.85	0.20	36,36,36,36	0
56	MG	YA	3238	1/1	0.85	0.09	45,45,45,45	0
56	MG	RA	3412	1/1	0.85	0.20	34,34,34,34	0
56	MG	QA	1706	1/1	0.85	0.28	50,50,50,50	0
56	MG	YA	3252	1/1	0.85	0.29	93,93,93,93	0
56	MG	YA	3258	1/1	0.85	0.22	60,60,60,60	0
56	MG	YA	3432	1/1	0.85	0.23	53,53,53,53	0
56	MG	RA	3328	1/1	0.85	0.17	61,61,61,61	0
56	MG	QV	104	1/1	0.85	0.24	68,68,68,68	0
56	MG	QA	1724	1/1	0.85	0.10	50,50,50,50	0
56	MG	YA	3296	1/1	0.85	0.22	66,66,66,66	0
56	MG	XA	1607	1/1	0.85	0.19	37,37,37,37	0
56	MG	QA	1697	1/1	0.85	0.08	54,54,54,54	0
56	MG	YA	3458	1/1	0.85	0.10	45,45,45,45	0
56	MG	XA	1738	1/1	0.85	0.09	30,30,30,30	0
56	MG	RA	3289	1/1	0.85	0.34	27,27,27,27	0
56	MG	XA	1742	1/1	0.85	0.19	63,63,63,63	0
56	MG	RA	3133	1/1	0.85	0.09	38,38,38,38	0
56	MG	QA	1737	1/1	0.85	0.14	93,93,93,93	0
56	MG	YA	3147	1/1	0.85	0.17	43,43,43,43	0
56	MG	YY	201	1/1	0.85	0.11	42,42,42,42	0
56	MG	XA	1724	1/1	0.86	0.17	64,64,64,64	0
56	MG	RA	3304	1/1	0.86	0.24	76,76,76,76	0
56	MG	RA	3237	1/1	0.86	0.24	70,70,70,70	0
56	MG	YA	3097	1/1	0.86	0.15	78,78,78,78	0
56	MG	RA	3389	1/1	0.86	0.12	57,57,57,57	0
56	MG	YA	3101	1/1	0.86	0.25	36,36,36,36	0
56	MG	RA	3116	1/1	0.86	0.28	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	YA	3253	1/1	0.86	0.20	60,60,60,60	0
56	MG	RA	3247	1/1	0.86	0.10	41,41,41,41	0
56	MG	YA	3269	1/1	0.86	0.11	43,43,43,43	0
56	MG	YA	3276	1/1	0.86	0.24	61,61,61,61	0
56	MG	RA	3175	1/1	0.86	0.22	57,57,57,57	0
56	MG	XA	1671	1/1	0.86	0.25	56,56,56,56	0
56	MG	QA	1701	1/1	0.86	0.26	77,77,77,77	0
56	MG	RA	3206	1/1	0.86	0.26	44,44,44,44	0
56	MG	YA	3435	1/1	0.86	0.10	57,57,57,57	0
56	MG	XA	1684	1/1	0.86	0.13	48,48,48,48	0
56	MG	YA	3305	1/1	0.86	0.09	57,57,57,57	0
56	MG	QA	1702	1/1	0.86	0.20	60,60,60,60	0
56	MG	RA	3274	1/1	0.86	0.21	64,64,64,64	0
56	MG	XL	201	1/1	0.86	0.10	60,60,60,60	0
56	MG	YA	3447	1/1	0.86	0.27	97,97,97,97	0
56	MG	RA	3209	1/1	0.86	0.13	24,24,24,24	0
56	MG	YA	3174	1/1	0.86	0.14	66,66,66,66	0
56	MG	R5	103	1/1	0.86	0.07	60,60,60,60	0
56	MG	YA	3045	1/1	0.86	0.17	22,22,22,22	0
56	MG	QA	1612	1/1	0.86	0.28	51,51,51,51	0
56	MG	QA	1630	1/1	0.86	0.19	57,57,57,57	0
56	MG	QA	1644	1/1	0.86	0.21	58,58,58,58	0
56	MG	YA	3364	1/1	0.86	0.17	44,44,44,44	0
56	MG	RA	3001	1/1	0.86	0.18	73,73,73,73	0
56	MG	RA	3144	1/1	0.87	0.16	51,51,51,51	0
56	MG	XA	1615	1/1	0.87	0.17	39,39,39,39	0
56	MG	XA	1621	1/1	0.87	0.23	47,47,47,47	0
56	MG	YA	3342	1/1	0.87	0.11	54,54,54,54	0
56	MG	XA	1740	1/1	0.87	0.28	50,50,50,50	0
56	MG	XA	1622	1/1	0.87	0.28	44,44,44,44	0
56	MG	RA	3337	1/1	0.87	0.13	54,54,54,54	0
56	MG	XA	1629	1/1	0.87	0.11	83,83,83,83	0
56	MG	RA	3288	1/1	0.87	0.24	39,39,39,39	0
56	MG	RA	3094	1/1	0.87	0.30	46,46,46,46	0
56	MG	XA	1636	1/1	0.87	0.21	54,54,54,54	0
56	MG	XA	1639	1/1	0.87	0.26	63,63,63,63	0
56	MG	XA	1758	1/1	0.87	0.23	60,60,60,60	0
56	MG	RA	3065	1/1	0.87	0.20	39,39,39,39	0
56	MG	RA	3293	1/1	0.87	0.13	38,38,38,38	0
56	MG	YA	3222	1/1	0.87	0.18	42,42,42,42	0
56	MG	RA	3180	1/1	0.87	0.15	74,74,74,74	0
56	MG	RA	3182	1/1	0.87	0.20	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	YA	3228	1/1	0.87	0.18	51,51,51,51	0
56	MG	RA	3240	1/1	0.87	0.12	34,34,34,34	0
56	MG	XA	1672	1/1	0.87	0.10	12,12,12,12	0
56	MG	YA	3414	1/1	0.87	0.17	87,87,87,87	0
56	MG	RA	3314	1/1	0.87	0.21	60,60,60,60	0
56	MG	YA	3058	1/1	0.87	0.07	29,29,29,29	0
56	MG	YA	3427	1/1	0.87	0.21	99,99,99,99	0
56	MG	YA	3062	1/1	0.87	0.18	38,38,38,38	0
56	MG	RA	3190	1/1	0.87	0.11	38,38,38,38	0
56	MG	YA	3073	1/1	0.87	0.22	36,36,36,36	0
56	MG	RA	3196	1/1	0.87	0.17	40,40,40,40	0
56	MG	YA	3263	1/1	0.87	0.20	57,57,57,57	0
56	MG	QA	1632	1/1	0.87	0.23	36,36,36,36	0
56	MG	QA	1633	1/1	0.87	0.23	68,68,68,68	0
56	MG	RR	201	1/1	0.87	0.30	44,44,44,44	0
56	MG	RA	3266	1/1	0.87	0.15	42,42,42,42	0
56	MG	YA	3281	1/1	0.87	0.13	34,34,34,34	0
56	MG	QA	1732	1/1	0.87	0.28	63,63,63,63	0
56	MG	R5	102	1/1	0.87	0.22	63,63,63,63	0
56	MG	YA	3301	1/1	0.87	0.17	30,30,30,30	0
56	MG	RA	3271	1/1	0.87	0.25	55,55,55,55	0
56	MG	YB	202	1/1	0.87	0.19	49,49,49,49	0
56	MG	XA	1719	1/1	0.87	0.17	46,46,46,46	0
56	MG	YA	3114	1/1	0.87	0.12	22,22,22,22	0
56	MG	RA	3273	1/1	0.87	0.14	51,51,51,51	0
56	MG	QA	1650	1/1	0.87	0.15	34,34,34,34	0
56	MG	RA	3239	1/1	0.88	0.24	52,52,52,52	0
56	MG	RA	3393	1/1	0.88	0.20	28,28,28,28	0
56	MG	XA	1631	1/1	0.88	0.12	57,57,57,57	0
56	MG	YA	3379	1/1	0.88	0.20	87,87,87,87	0
56	MG	YA	3235	1/1	0.88	0.13	54,54,54,54	0
56	MG	YA	3382	1/1	0.88	0.10	47,47,47,47	0
56	MG	YA	3090	1/1	0.88	0.22	35,35,35,35	0
56	MG	YA	3244	1/1	0.88	0.29	76,76,76,76	0
56	MG	QA	1734	1/1	0.88	0.10	61,61,61,61	0
56	MG	RA	3040	1/1	0.88	0.13	24,24,24,24	0
56	MG	YA	3394	1/1	0.88	0.18	21,21,21,21	0
56	MG	RA	3251	1/1	0.88	0.28	59,59,59,59	0
56	MG	RA	3095	1/1	0.88	0.12	62,62,62,62	0
56	MG	YA	3256	1/1	0.88	0.26	58,58,58,58	0
56	MG	RB	204	1/1	0.88	0.17	61,61,61,61	0
56	MG	YA	3260	1/1	0.88	0.22	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	YA	3104	1/1	0.88	0.12	36,36,36,36	0
56	MG	YA	3411	1/1	0.88	0.10	53,53,53,53	0
56	MG	YA	3413	1/1	0.88	0.10	42,42,42,42	0
56	MG	YA	3265	1/1	0.88	0.18	41,41,41,41	0
56	MG	RA	3258	1/1	0.88	0.14	46,46,46,46	0
56	MG	XA	1747	1/1	0.88	0.17	88,88,88,88	0
56	MG	QA	1729	1/1	0.88	0.17	48,48,48,48	0
56	MG	QA	1606	1/1	0.88	0.20	27,27,27,27	0
56	MG	RA	3183	1/1	0.88	0.10	56,56,56,56	0
56	MG	XA	1673	1/1	0.88	0.11	49,49,49,49	0
56	MG	RA	3309	1/1	0.88	0.33	69,69,69,69	0
56	MG	RA	3079	1/1	0.88	0.20	37,37,37,37	0
56	MG	XA	1682	1/1	0.88	0.19	33,33,33,33	0
56	MG	RA	3270	1/1	0.88	0.17	49,49,49,49	0
56	MG	RA	3363	1/1	0.88	0.21	45,45,45,45	0
56	MG	RA	3368	1/1	0.88	0.12	51,51,51,51	0
56	MG	YA	3450	1/1	0.88	0.16	40,40,40,40	0
56	MG	YA	3321	1/1	0.88	0.20	71,71,71,71	0
56	MG	YA	3454	1/1	0.88	0.12	59,59,59,59	0
56	MG	RA	3191	1/1	0.88	0.20	18,18,18,18	0
56	MG	XA	1696	1/1	0.88	0.19	56,56,56,56	0
56	MG	RA	3375	1/1	0.88	0.22	39,39,39,39	0
56	MG	RA	3380	1/1	0.88	0.15	40,40,40,40	0
56	MG	XA	1623	1/1	0.88	0.10	36,36,36,36	0
56	MG	XA	1624	1/1	0.88	0.13	53,53,53,53	0
56	MG	YG	201	1/1	0.88	0.08	63,63,63,63	0
56	MG	YA	3344	1/1	0.88	0.14	66,66,66,66	0
56	MG	QA	1715	1/1	0.88	0.21	74,74,74,74	0
56	MG	YV	201	1/1	0.88	0.20	22,22,22,22	0
56	MG	YA	3079	1/1	0.88	0.33	33,33,33,33	0
56	MG	Y0	102	1/1	0.88	0.23	46,46,46,46	0
56	MG	RA	3146	1/1	0.89	0.17	28,28,28,28	0
56	MG	YA	3309	1/1	0.89	0.07	76,76,76,76	0
56	MG	YA	3116	1/1	0.89	0.22	58,58,58,58	0
56	MG	RA	3150	1/1	0.89	0.31	37,37,37,37	0
56	MG	YA	3122	1/1	0.89	0.23	21,21,21,21	0
56	MG	XA	1730	1/1	0.89	0.11	50,50,50,50	0
56	MG	RA	3153	1/1	0.89	0.14	31,31,31,31	0
56	MG	YA	3133	1/1	0.89	0.19	40,40,40,40	0
56	MG	RA	3297	1/1	0.89	0.18	68,68,68,68	0
56	MG	XA	1627	1/1	0.89	0.16	44,44,44,44	0
56	MG	YA	3145	1/1	0.89	0.16	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	RA	3300	1/1	0.89	0.14	49,49,49,49	0
56	MG	QA	1717	1/1	0.89	0.14	57,57,57,57	0
56	MG	RA	3386	1/1	0.89	0.07	44,44,44,44	0
56	MG	YA	3155	1/1	0.89	0.10	29,29,29,29	0
56	MG	YA	3156	1/1	0.89	0.07	42,42,42,42	0
56	MG	RA	3305	1/1	0.89	0.12	68,68,68,68	0
56	MG	RA	3307	1/1	0.89	0.31	60,60,60,60	0
56	MG	RA	3201	1/1	0.89	0.07	19,19,19,19	0
56	MG	YA	3177	1/1	0.89	0.11	57,57,57,57	0
56	MG	YA	3178	1/1	0.89	0.22	40,40,40,40	0
56	MG	XA	1649	1/1	0.89	0.17	60,60,60,60	0
56	MG	XA	1653	1/1	0.89	0.33	60,60,60,60	0
56	MG	RA	3009	1/1	0.89	0.21	24,24,24,24	0
56	MG	YA	3395	1/1	0.89	0.25	25,25,25,25	0
56	MG	RA	3260	1/1	0.89	0.14	57,57,57,57	0
56	MG	XA	1759	1/1	0.89	0.19	69,69,69,69	0
56	MG	RA	3015	1/1	0.89	0.17	30,30,30,30	0
56	MG	QA	1721	1/1	0.89	0.15	62,62,62,62	0
56	MG	RA	3413	1/1	0.89	0.20	24,24,24,24	0
56	MG	RB	203	1/1	0.89	0.27	52,52,52,52	0
56	MG	RA	3268	1/1	0.89	0.07	48,48,48,48	0
56	MG	YA	3036	1/1	0.89	0.22	45,45,45,45	0
56	MG	YA	3234	1/1	0.89	0.12	33,33,33,33	0
56	MG	RA	3212	1/1	0.89	0.10	44,44,44,44	0
56	MG	YA	3055	1/1	0.89	0.24	18,18,18,18	0
56	MG	QA	1619	1/1	0.89	0.12	27,27,27,27	0
56	MG	RA	3070	1/1	0.89	0.27	27,27,27,27	0
56	MG	YA	3249	1/1	0.89	0.19	40,40,40,40	0
56	MG	XA	1683	1/1	0.89	0.15	44,44,44,44	0
56	MG	RA	3071	1/1	0.89	0.24	50,50,50,50	0
56	MG	XA	1687	1/1	0.89	0.16	49,49,49,49	0
56	MG	RA	3230	1/1	0.89	0.12	41,41,41,41	0
56	MG	YA	3257	1/1	0.89	0.16	44,44,44,44	0
56	MG	RA	3278	1/1	0.89	0.10	67,67,67,67	0
56	MG	XA	1693	1/1	0.89	0.15	59,59,59,59	0
56	MG	YA	3082	1/1	0.89	0.15	36,36,36,36	0
56	MG	RA	3136	1/1	0.89	0.20	41,41,41,41	0
56	MG	XA	1695	1/1	0.89	0.15	46,46,46,46	0
56	MG	RA	3139	1/1	0.89	0.10	35,35,35,35	0
56	MG	RA	3353	1/1	0.89	0.16	85,85,85,85	0
56	MG	XA	1613	1/1	0.89	0.10	43,43,43,43	0
56	MG	YA	3098	1/1	0.89	0.25	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	YA	3287	1/1	0.89	0.26	62,62,62,62	0
56	MG	QA	1620	1/1	0.89	0.09	52,52,52,52	0
56	MG	YA	3295	1/1	0.89	0.28	56,56,56,56	0
56	MG	XA	1620	1/1	0.89	0.09	33,33,33,33	0
56	MG	YA	3298	1/1	0.89	0.45	82,82,82,82	0
56	MG	YA	3102	1/1	0.89	0.13	12,12,12,12	0
56	MG	XA	1716	1/1	0.89	0.27	58,58,58,58	0
56	MG	RA	3113	1/1	0.89	0.31	74,74,74,74	0
56	MG	YA	3338	1/1	0.90	0.18	63,63,63,63	0
56	MG	RA	3063	1/1	0.90	0.16	33,33,33,33	0
56	MG	XA	1685	1/1	0.90	0.26	65,65,65,65	0
56	MG	YA	3047	1/1	0.90	0.12	20,20,20,20	0
56	MG	YA	3185	1/1	0.90	0.21	36,36,36,36	0
56	MG	YA	3347	1/1	0.90	0.28	74,74,74,74	0
56	MG	YA	3048	1/1	0.90	0.20	12,12,12,12	0
56	MG	YA	3352	1/1	0.90	0.09	53,53,53,53	0
56	MG	YA	3197	1/1	0.90	0.13	15,15,15,15	0
56	MG	YA	3203	1/1	0.90	0.15	39,39,39,39	0
56	MG	YA	3212	1/1	0.90	0.14	17,17,17,17	0
56	MG	RA	3350	1/1	0.90	0.42	61,61,61,61	0
56	MG	XA	1609	1/1	0.90	0.08	70,70,70,70	0
56	MG	QA	1646	1/1	0.90	0.13	52,52,52,52	0
56	MG	RA	3243	1/1	0.90	0.08	54,54,54,54	0
56	MG	XA	1614	1/1	0.90	0.14	37,37,37,37	0
56	MG	RA	3244	1/1	0.90	0.13	42,42,42,42	0
56	MG	QA	1727	1/1	0.90	0.23	61,61,61,61	0
56	MG	QA	1601	1/1	0.90	0.26	44,44,44,44	0
56	MG	RA	3118	1/1	0.90	0.26	63,63,63,63	0
56	MG	XA	1705	1/1	0.90	0.12	53,53,53,53	0
56	MG	YA	3084	1/1	0.90	0.15	33,33,33,33	0
56	MG	YA	3399	1/1	0.90	0.14	61,61,61,61	0
56	MG	RA	3200	1/1	0.90	0.16	65,65,65,65	0
56	MG	RA	3154	1/1	0.90	0.07	35,35,35,35	0
56	MG	RA	3377	1/1	0.90	0.08	32,32,32,32	0
56	MG	RA	3203	1/1	0.90	0.11	42,42,42,42	0
56	MG	QA	1655	1/1	0.90	0.15	39,39,39,39	0
56	MG	RA	3319	1/1	0.90	0.57	96,96,96,96	0
56	MG	XA	1728	1/1	0.90	0.20	73,73,73,73	0
56	MG	QA	1660	1/1	0.90	0.18	40,40,40,40	0
56	MG	YA	3418	1/1	0.90	0.24	52,52,52,52	0
56	MG	XA	1632	1/1	0.90	0.17	39,39,39,39	0
56	MG	XA	1634	1/1	0.90	0.17	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	YA	3424	1/1	0.90	0.08	56,56,56,56	0
56	MG	QA	1718	1/1	0.90	0.27	72,72,72,72	0
56	MG	RA	3128	1/1	0.90	0.16	33,33,33,33	0
56	MG	YA	3268	1/1	0.90	0.15	53,53,53,53	0
56	MG	XA	1741	1/1	0.90	0.18	56,56,56,56	0
56	MG	YA	3118	1/1	0.90	0.21	56,56,56,56	0
56	MG	QA	1613	1/1	0.90	0.11	56,56,56,56	0
56	MG	XA	1648	1/1	0.90	0.06	71,71,71,71	0
56	MG	RA	3131	1/1	0.90	0.34	65,65,65,65	0
56	MG	YA	3284	1/1	0.90	0.17	52,52,52,52	0
56	MG	RA	3226	1/1	0.90	0.17	25,25,25,25	0
56	MG	RA	3329	1/1	0.90	0.11	60,60,60,60	0
56	MG	QA	1736	1/1	0.90	0.14	52,52,52,52	0
56	MG	RA	3332	1/1	0.90	0.30	87,87,87,87	0
56	MG	RE	301	1/1	0.90	0.22	21,21,21,21	0
56	MG	QA	1678	1/1	0.90	0.23	51,51,51,51	0
56	MG	QA	1621	1/1	0.90	0.15	38,38,38,38	0
56	MG	QA	1664	1/1	0.90	0.15	39,39,39,39	0
56	MG	RA	3181	1/1	0.90	0.10	67,67,67,67	0
56	MG	RA	3340	1/1	0.90	0.15	79,79,79,79	0
56	MG	YA	3158	1/1	0.90	0.29	53,53,53,53	0
56	MG	RA	3345	1/1	0.90	0.11	61,61,61,61	0
56	MG	YA	3328	1/1	0.90	0.20	27,27,27,27	0
56	MG	YA	3003	1/1	0.90	0.27	22,22,22,22	0
56	MG	YA	3013	1/1	0.90	0.18	11,11,11,11	0
56	MG	XA	1603	1/1	0.90	0.18	19,19,19,19	0
56	MG	Y0	103	1/1	0.90	0.23	57,57,57,57	0
56	MG	YA	3175	1/1	0.91	0.15	70,70,70,70	0
56	MG	RA	3002	1/1	0.91	0.12	15,15,15,15	0
56	MG	RA	3100	1/1	0.91	0.29	56,56,56,56	0
56	MG	YA	3341	1/1	0.91	0.19	41,41,41,41	0
56	MG	QA	1666	1/1	0.91	0.26	63,63,63,63	0
56	MG	RA	3395	1/1	0.91	0.10	45,45,45,45	0
56	MG	YA	3060	1/1	0.91	0.22	13,13,13,13	0
56	MG	RA	3012	1/1	0.91	0.20	12,12,12,12	0
56	MG	YA	3196	1/1	0.91	0.10	57,57,57,57	0
56	MG	XA	1708	1/1	0.91	0.24	41,41,41,41	0
56	MG	RA	3275	1/1	0.91	0.12	44,44,44,44	0
56	MG	RA	3330	1/1	0.91	0.17	45,45,45,45	0
56	MG	YA	3215	1/1	0.91	0.26	60,60,60,60	0
56	MG	YA	3371	1/1	0.91	0.10	56,56,56,56	0
56	MG	RA	3013	1/1	0.91	0.26	10,10,10,10	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	RA	3279	1/1	0.91	0.15	55,55,55,55	0
56	MG	QA	1645	1/1	0.91	0.26	75,75,75,75	0
56	MG	XA	1642	1/1	0.91	0.13	54,54,54,54	0
56	MG	XA	1646	1/1	0.91	0.18	50,50,50,50	0
56	MG	XA	1731	1/1	0.91	0.10	59,59,59,59	0
56	MG	YA	3388	1/1	0.91	0.10	49,49,49,49	0
56	MG	XA	1647	1/1	0.91	0.35	67,67,67,67	0
56	MG	RA	3148	1/1	0.91	0.13	43,43,43,43	0
56	MG	QA	1654	1/1	0.91	0.25	43,43,43,43	0
56	MG	RA	3290	1/1	0.91	0.13	59,59,59,59	0
56	MG	YA	3396	1/1	0.91	0.07	45,45,45,45	0
56	MG	YA	3236	1/1	0.91	0.20	30,30,30,30	0
56	MG	QA	1623	1/1	0.91	0.11	52,52,52,52	0
56	MG	YA	3100	1/1	0.91	0.27	33,33,33,33	0
56	MG	RA	3342	1/1	0.91	0.13	44,44,44,44	0
56	MG	YA	3248	1/1	0.91	0.07	43,43,43,43	0
56	MG	RA	3124	1/1	0.91	0.11	29,29,29,29	0
56	MG	QA	1658	1/1	0.91	0.15	46,46,46,46	0
56	MG	RA	3245	1/1	0.91	0.29	41,41,41,41	0
56	MG	RA	3045	1/1	0.91	0.17	18,18,18,18	0
56	MG	RA	3083	1/1	0.91	0.20	49,49,49,49	0
56	MG	RA	3046	1/1	0.91	0.11	14,14,14,14	0
56	MG	YA	3119	1/1	0.91	0.16	71,71,71,71	0
56	MG	QA	1659	1/1	0.91	0.07	41,41,41,41	0
56	MG	RA	3362	1/1	0.91	0.18	72,72,72,72	0
56	MG	YA	3128	1/1	0.91	0.28	36,36,36,36	0
56	MG	RA	3168	1/1	0.91	0.13	79,79,79,79	0
56	MG	QA	1713	1/1	0.91	0.23	46,46,46,46	0
56	MG	YA	3132	1/1	0.91	0.12	62,62,62,62	0
56	MG	RA	3370	1/1	0.91	0.23	41,41,41,41	0
56	MG	XA	1616	1/1	0.91	0.15	36,36,36,36	0
56	MG	XV	104	1/1	0.91	0.06	44,44,44,44	0
56	MG	YA	3142	1/1	0.91	0.36	45,45,45,45	0
56	MG	YA	3286	1/1	0.91	0.27	64,64,64,64	0
56	MG	XA	1688	1/1	0.91	0.10	39,39,39,39	0
56	MG	RA	3214	1/1	0.91	0.10	40,40,40,40	0
56	MG	YA	3011	1/1	0.91	0.33	26,26,26,26	0
56	MG	XA	1691	1/1	0.91	0.09	53,53,53,53	0
56	MG	YA	3154	1/1	0.91	0.20	25,25,25,25	0
56	MG	YA	3299	1/1	0.91	0.21	67,67,67,67	0
56	MG	YA	3027	1/1	0.91	0.12	28,28,28,28	0
56	MG	RA	3318	1/1	0.91	0.12	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	YA	3464	1/1	0.91	0.24	31,31,31,31	0
56	MG	RA	3215	1/1	0.91	0.13	36,36,36,36	0
56	MG	YB	203	1/1	0.91	0.35	52,52,52,52	0
56	MG	YA	3160	1/1	0.91	0.24	50,50,50,50	0
56	MG	YA	3165	1/1	0.91	0.08	50,50,50,50	0
56	MG	YA	3166	1/1	0.91	0.19	41,41,41,41	0
56	MG	YA	3042	1/1	0.91	0.20	30,30,30,30	0
56	MG	YA	3325	1/1	0.91	0.18	39,39,39,39	0
56	MG	YA	3168	1/1	0.91	0.15	52,52,52,52	0
56	MG	RA	3171	1/1	0.91	0.11	32,32,32,32	0
56	MG	RA	3221	1/1	0.91	0.17	40,40,40,40	0
56	MG	YA	3337	1/1	0.92	0.15	46,46,46,46	0
56	MG	QA	1716	1/1	0.92	0.25	68,68,68,68	0
56	MG	XA	1666	1/1	0.92	0.17	28,28,28,28	0
56	MG	RA	3356	1/1	0.92	0.21	54,54,54,54	0
56	MG	XA	1746	1/1	0.92	0.23	67,67,67,67	0
56	MG	YA	3217	1/1	0.92	0.18	24,24,24,24	0
56	MG	RA	3117	1/1	0.92	0.14	33,33,33,33	0
56	MG	XA	1605	1/1	0.92	0.19	23,23,23,23	0
56	MG	QA	1695	1/1	0.92	0.07	61,61,61,61	0
56	MG	QA	1728	1/1	0.92	0.16	61,61,61,61	0
56	MG	YA	3109	1/1	0.92	0.29	39,39,39,39	0
56	MG	YA	3355	1/1	0.92	0.16	34,34,34,34	0
56	MG	YA	3360	1/1	0.92	0.14	57,57,57,57	0
56	MG	XA	1611	1/1	0.92	0.20	38,38,38,38	0
56	MG	XA	1755	1/1	0.92	0.07	71,71,71,71	0
56	MG	YA	3370	1/1	0.92	0.10	62,62,62,62	0
56	MG	RA	3207	1/1	0.92	0.20	24,24,24,24	0
56	MG	RA	3021	1/1	0.92	0.25	23,23,23,23	0
56	MG	YA	3375	1/1	0.92	0.27	68,68,68,68	0
56	MG	RA	3163	1/1	0.92	0.16	51,51,51,51	0
56	MG	RA	3371	1/1	0.92	0.25	57,57,57,57	0
56	MG	YA	3125	1/1	0.92	0.23	48,48,48,48	0
56	MG	YA	3384	1/1	0.92	0.16	58,58,58,58	0
56	MG	RA	3033	1/1	0.92	0.16	32,32,32,32	0
56	MG	QA	1740	1/1	0.92	0.11	43,43,43,43	0
56	MG	RA	3167	1/1	0.92	0.12	52,52,52,52	0
56	MG	QE	201	1/1	0.92	0.27	52,52,52,52	0
56	MG	RA	3220	1/1	0.92	0.27	54,54,54,54	0
56	MG	RA	3388	1/1	0.92	0.25	84,84,84,84	0
56	MG	YA	3255	1/1	0.92	0.26	43,43,43,43	0
56	MG	RA	3080	1/1	0.92	0.15	18,18,18,18	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	QA	1705	1/1	0.92	0.25	48,48,48,48	0
56	MG	QA	1730	1/1	0.92	0.08	55,55,55,55	0
56	MG	YA	3259	1/1	0.92	0.14	50,50,50,50	0
56	MG	YA	3039	1/1	0.92	0.17	22,22,22,22	0
56	MG	XA	1701	1/1	0.92	0.16	53,53,53,53	0
56	MG	QA	1635	1/1	0.92	0.18	64,64,64,64	0
56	MG	YA	3152	1/1	0.92	0.09	27,27,27,27	0
56	MG	YA	3409	1/1	0.92	0.08	47,47,47,47	0
56	MG	RA	3135	1/1	0.92	0.25	86,86,86,86	0
56	MG	YA	3275	1/1	0.92	0.17	50,50,50,50	0
56	MG	RA	3282	1/1	0.92	0.17	40,40,40,40	0
56	MG	YA	3415	1/1	0.92	0.13	41,41,41,41	0
56	MG	YA	3277	1/1	0.92	0.47	59,59,59,59	0
56	MG	RA	3047	1/1	0.92	0.25	24,24,24,24	0
56	MG	RA	3286	1/1	0.92	0.17	43,43,43,43	0
56	MG	YA	3280	1/1	0.92	0.06	38,38,38,38	0
56	MG	QA	1689	1/1	0.92	0.22	61,61,61,61	0
56	MG	YA	3164	1/1	0.92	0.21	41,41,41,41	0
56	MG	XA	1717	1/1	0.92	0.22	39,39,39,39	0
56	MG	XA	1637	1/1	0.92	0.14	48,48,48,48	0
56	MG	YA	3288	1/1	0.92	0.18	39,39,39,39	0
56	MG	YA	3066	1/1	0.92	0.25	25,25,25,25	0
56	MG	RB	202	1/1	0.92	0.19	35,35,35,35	0
56	MG	YA	3170	1/1	0.92	0.27	45,45,45,45	0
56	MG	YA	3171	1/1	0.92	0.05	26,26,26,26	0
56	MG	YA	3068	1/1	0.92	0.10	30,30,30,30	0
56	MG	YA	3300	1/1	0.92	0.28	74,74,74,74	0
56	MG	XA	1721	1/1	0.92	0.10	46,46,46,46	0
56	MG	RA	3049	1/1	0.92	0.16	4,4,4,4	0
56	MG	YA	3304	1/1	0.92	0.14	38,38,38,38	0
56	MG	QA	1624	1/1	0.92	0.14	72,72,72,72	0
56	MG	RA	3185	1/1	0.92	0.26	36,36,36,36	0
56	MG	RA	3242	1/1	0.92	0.16	34,34,34,34	0
56	MG	RQ	202	1/1	0.92	0.14	53,53,53,53	0
56	MG	YB	201	1/1	0.92	0.16	42,42,42,42	0
56	MG	YA	3316	1/1	0.92	0.34	60,60,60,60	0
56	MG	YA	3320	1/1	0.92	0.29	39,39,39,39	0
56	MG	YA	3182	1/1	0.92	0.22	55,55,55,55	0
56	MG	YA	3323	1/1	0.92	0.13	39,39,39,39	0
56	MG	YA	3183	1/1	0.92	0.20	35,35,35,35	0
56	MG	RA	3053	1/1	0.92	0.17	35,35,35,35	0
56	MG	QA	1657	1/1	0.92	0.20	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	YA	3334	1/1	0.92	0.16	65,65,65,65	0
56	MG	RA	3352	1/1	0.92	0.87	67,67,67,67	0
56	MG	RA	3060	1/1	0.92	0.19	26,26,26,26	0
56	MG	RA	3204	1/1	0.93	0.20	33,33,33,33	0
56	MG	YA	3317	1/1	0.93	0.10	41,41,41,41	0
56	MG	YA	3318	1/1	0.93	0.18	19,19,19,19	0
56	MG	RP	202	1/1	0.93	0.10	31,31,31,31	0
56	MG	YA	3020	1/1	0.93	0.20	32,32,32,32	0
56	MG	RA	3149	1/1	0.93	0.21	60,60,60,60	0
56	MG	RA	3104	1/1	0.93	0.21	40,40,40,40	0
56	MG	YA	3326	1/1	0.93	0.20	52,52,52,52	0
56	MG	YA	3031	1/1	0.93	0.19	29,29,29,29	0
56	MG	RA	3106	1/1	0.93	0.14	23,23,23,23	0
56	MG	RA	3107	1/1	0.93	0.42	50,50,50,50	0
56	MG	YA	3041	1/1	0.93	0.18	14,14,14,14	0
56	MG	RA	3109	1/1	0.93	0.29	21,21,21,21	0
56	MG	QA	1638	1/1	0.93	0.21	58,58,58,58	0
56	MG	RA	3343	1/1	0.93	0.08	57,57,57,57	0
56	MG	QA	1611	1/1	0.93	0.14	41,41,41,41	0
56	MG	YA	3052	1/1	0.93	0.22	40,40,40,40	0
56	MG	QA	1614	1/1	0.93	0.08	55,55,55,55	0
56	MG	RA	3164	1/1	0.93	0.19	30,30,30,30	0
56	MG	RA	3351	1/1	0.93	0.17	54,54,54,54	0
56	MG	YA	3188	1/1	0.93	0.12	24,24,24,24	0
56	MG	QA	1615	1/1	0.93	0.15	44,44,44,44	0
56	MG	YA	3190	1/1	0.93	0.20	39,39,39,39	0
56	MG	YA	3353	1/1	0.93	0.23	53,53,53,53	0
56	MG	QA	1617	1/1	0.93	0.12	42,42,42,42	0
56	MG	XA	1697	1/1	0.93	0.17	50,50,50,50	0
56	MG	YA	3358	1/1	0.93	0.15	60,60,60,60	0
56	MG	YA	3201	1/1	0.93	0.12	32,32,32,32	0
56	MG	RA	3354	1/1	0.93	0.23	71,71,71,71	0
56	MG	YA	3209	1/1	0.93	0.13	25,25,25,25	0
56	MG	XA	1700	1/1	0.93	0.08	87,87,87,87	0
56	MG	YA	3069	1/1	0.93	0.23	17,17,17,17	0
56	MG	RA	3120	1/1	0.93	0.24	20,20,20,20	0
56	MG	YA	3077	1/1	0.93	0.14	17,17,17,17	0
56	MG	RA	3043	1/1	0.93	0.27	28,28,28,28	0
56	MG	RA	3123	1/1	0.93	0.11	39,39,39,39	0
56	MG	RA	3075	1/1	0.93	0.11	18,18,18,18	0
56	MG	YA	3225	1/1	0.93	0.27	38,38,38,38	0
56	MG	XA	1617	1/1	0.93	0.27	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	XA	1711	1/1	0.93	0.20	53,53,53,53	0
56	MG	YA	3086	1/1	0.93	0.14	37,37,37,37	0
56	MG	RA	3076	1/1	0.93	0.15	35,35,35,35	0
56	MG	XA	1715	1/1	0.93	0.18	43,43,43,43	0
56	MG	QA	1628	1/1	0.93	0.27	44,44,44,44	0
56	MG	RA	3366	1/1	0.93	0.25	33,33,33,33	0
56	MG	YA	3237	1/1	0.93	0.28	34,34,34,34	0
56	MG	YA	3096	1/1	0.93	0.17	24,24,24,24	0
56	MG	YA	3243	1/1	0.93	0.18	48,48,48,48	0
56	MG	RA	3367	1/1	0.93	0.14	39,39,39,39	0
56	MG	RA	3296	1/1	0.93	0.19	46,46,46,46	0
56	MG	QA	1647	1/1	0.93	0.27	56,56,56,56	0
56	MG	XA	1723	1/1	0.93	0.12	47,47,47,47	0
56	MG	RA	3178	1/1	0.93	0.20	38,38,38,38	0
56	MG	QA	1687	1/1	0.93	0.12	33,33,33,33	0
56	MG	YA	3410	1/1	0.93	0.18	61,61,61,61	0
56	MG	QA	1649	1/1	0.93	0.15	32,32,32,32	0
56	MG	RA	3089	1/1	0.93	0.17	16,16,16,16	0
56	MG	YA	3108	1/1	0.93	0.23	25,25,25,25	0
56	MG	XA	1735	1/1	0.93	0.26	27,27,27,27	0
56	MG	YA	3417	1/1	0.93	0.09	53,53,53,53	0
56	MG	YA	3110	1/1	0.93	0.10	10,10,10,10	0
56	MG	YA	3113	1/1	0.93	0.16	56,56,56,56	0
56	MG	YA	3421	1/1	0.93	0.16	38,38,38,38	0
56	MG	QA	1602	1/1	0.93	0.27	33,33,33,33	0
56	MG	XA	1633	1/1	0.93	0.17	50,50,50,50	0
56	MG	RA	3381	1/1	0.93	0.10	37,37,37,37	0
56	MG	YA	3266	1/1	0.93	0.31	71,71,71,71	0
56	MG	RA	3383	1/1	0.93	0.17	53,53,53,53	0
56	MG	YA	3434	1/1	0.93	0.43	67,67,67,67	0
56	MG	RA	3313	1/1	0.93	0.21	50,50,50,50	0
56	MG	YA	3436	1/1	0.93	0.23	52,52,52,52	0
56	MG	QA	1652	1/1	0.93	0.15	60,60,60,60	0
56	MG	QA	1667	1/1	0.93	0.14	52,52,52,52	0
56	MG	RA	3252	1/1	0.93	0.10	43,43,43,43	0
56	MG	YA	3442	1/1	0.93	0.18	77,77,77,77	0
56	MG	RA	3098	1/1	0.93	0.17	22,22,22,22	0
56	MG	RA	3255	1/1	0.93	0.09	64,64,64,64	0
56	MG	XA	1749	1/1	0.93	0.28	74,74,74,74	0
56	MG	RA	3396	1/1	0.93	0.12	49,49,49,49	0
56	MG	RA	3256	1/1	0.93	0.10	59,59,59,59	0
56	MG	YA	3136	1/1	0.93	0.15	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	YA	3456	1/1	0.93	0.12	50,50,50,50	0
56	MG	RA	3193	1/1	0.93	0.17	33,33,33,33	0
56	MG	YA	3141	1/1	0.93	0.20	41,41,41,41	0
56	MG	RA	3404	1/1	0.93	0.28	58,58,58,58	0
56	MG	YA	3291	1/1	0.93	0.23	63,63,63,63	0
56	MG	RA	3326	1/1	0.93	0.12	52,52,52,52	0
56	MG	RA	3411	1/1	0.93	0.10	35,35,35,35	0
56	MG	XA	1658	1/1	0.93	0.13	40,40,40,40	0
56	MG	QA	1637	1/1	0.93	0.17	59,59,59,59	0
56	MG	XA	1660	1/1	0.93	0.32	60,60,60,60	0
56	MG	YB	205	1/1	0.93	0.07	62,62,62,62	0
56	MG	YE	301	1/1	0.93	0.16	50,50,50,50	0
56	MG	RA	3198	1/1	0.93	0.24	45,45,45,45	0
56	MG	XV	102	1/1	0.93	0.12	36,36,36,36	0
56	MG	RA	3017	1/1	0.93	0.15	9,9,9,9	0
56	MG	YR	201	1/1	0.93	0.15	39,39,39,39	0
56	MG	RA	3061	1/1	0.93	0.20	25,25,25,25	0
56	MG	YA	3159	1/1	0.93	0.15	58,58,58,58	0
56	MG	RA	3102	1/1	0.93	0.23	54,54,54,54	0
56	MG	YA	3163	1/1	0.93	0.10	33,33,33,33	0
57	ZN	QD	301	1/1	0.93	0.24	58,58,58,58	0
56	MG	RA	3283	1/1	0.94	0.18	40,40,40,40	0
56	MG	XA	1601	1/1	0.94	0.22	43,43,43,43	0
56	MG	YA	3044	1/1	0.94	0.17	14,14,14,14	0
56	MG	YA	3322	1/1	0.94	0.10	50,50,50,50	0
56	MG	QA	1642	1/1	0.94	0.15	28,28,28,28	0
56	MG	QA	1625	1/1	0.94	0.08	35,35,35,35	0
56	MG	RA	3287	1/1	0.94	0.09	64,64,64,64	0
56	MG	RA	3041	1/1	0.94	0.12	31,31,31,31	0
56	MG	XA	1608	1/1	0.94	0.31	52,52,52,52	0
56	MG	YA	3333	1/1	0.94	0.18	63,63,63,63	0
56	MG	YA	3179	1/1	0.94	0.15	45,45,45,45	0
56	MG	RA	3119	1/1	0.94	0.07	33,33,33,33	0
56	MG	XA	1610	1/1	0.94	0.16	46,46,46,46	0
56	MG	YA	3059	1/1	0.94	0.20	23,23,23,23	0
56	MG	QA	1668	1/1	0.94	0.21	68,68,68,68	0
56	MG	YA	3184	1/1	0.94	0.17	83,83,83,83	0
56	MG	RA	3291	1/1	0.94	0.06	26,26,26,26	0
56	MG	RA	3225	1/1	0.94	0.08	51,51,51,51	0
56	MG	RA	3121	1/1	0.94	0.16	14,14,14,14	0
56	MG	XA	1704	1/1	0.94	0.29	55,55,55,55	0
56	MG	YA	3345	1/1	0.94	0.21	34,34,34,34	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	QA	1626	1/1	0.94	0.26	59,59,59,59	0
56	MG	YA	3349	1/1	0.94	0.22	58,58,58,58	0
56	MG	YA	3071	1/1	0.94	0.15	24,24,24,24	0
56	MG	YA	3072	1/1	0.94	0.22	42,42,42,42	0
56	MG	YA	3202	1/1	0.94	0.26	42,42,42,42	0
56	MG	RA	3044	1/1	0.94	0.18	13,13,13,13	0
56	MG	YA	3207	1/1	0.94	0.13	29,29,29,29	0
56	MG	QA	1671	1/1	0.94	0.07	36,36,36,36	0
56	MG	RA	3006	1/1	0.94	0.11	11,11,11,11	0
56	MG	XA	1712	1/1	0.94	0.13	41,41,41,41	0
56	MG	RA	3298	1/1	0.94	0.05	63,63,63,63	0
56	MG	YA	3366	1/1	0.94	0.14	47,47,47,47	0
56	MG	YA	3368	1/1	0.94	0.16	53,53,53,53	0
56	MG	RA	3174	1/1	0.94	0.32	64,64,64,64	0
56	MG	YA	3083	1/1	0.94	0.08	30,30,30,30	0
56	MG	YA	3372	1/1	0.94	0.15	45,45,45,45	0
56	MG	RA	3301	1/1	0.94	0.28	53,53,53,53	0
56	MG	RA	3007	1/1	0.94	0.30	40,40,40,40	0
56	MG	QA	1688	1/1	0.94	0.21	26,26,26,26	0
56	MG	RA	3378	1/1	0.94	0.07	18,18,18,18	0
56	MG	QA	1627	1/1	0.94	0.08	104,104,104,104	0
56	MG	YA	3094	1/1	0.94	0.27	58,58,58,58	0
56	MG	XA	1722	1/1	0.94	0.09	61,61,61,61	0
56	MG	YA	3233	1/1	0.94	0.29	45,45,45,45	0
56	MG	RA	3091	1/1	0.94	0.07	48,48,48,48	0
56	MG	QA	1610	1/1	0.94	0.07	64,64,64,64	0
56	MG	YA	3392	1/1	0.94	0.18	20,20,20,20	0
56	MG	XA	1727	1/1	0.94	0.28	59,59,59,59	0
56	MG	RA	3384	1/1	0.94	0.30	61,61,61,61	0
56	MG	XA	1729	1/1	0.94	0.10	37,37,37,37	0
56	MG	YA	3241	1/1	0.94	0.16	40,40,40,40	0
56	MG	RA	3052	1/1	0.94	0.12	34,34,34,34	0
56	MG	RA	3387	1/1	0.94	0.20	41,41,41,41	0
56	MG	RA	3315	1/1	0.94	0.17	62,62,62,62	0
56	MG	YA	3246	1/1	0.94	0.24	61,61,61,61	0
56	MG	YA	3247	1/1	0.94	0.07	42,42,42,42	0
56	MG	QA	1692	1/1	0.94	0.13	42,42,42,42	0
56	MG	YA	3106	1/1	0.94	0.18	17,17,17,17	0
56	MG	RA	3390	1/1	0.94	0.16	53,53,53,53	0
56	MG	XA	1638	1/1	0.94	0.11	76,76,76,76	0
56	MG	RA	3184	1/1	0.94	0.28	71,71,71,71	0
56	MG	YA	3412	1/1	0.94	0.07	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	XA	1640	1/1	0.94	0.21	54,54,54,54	0
56	MG	QA	1710	1/1	0.94	0.35	54,54,54,54	0
56	MG	YA	3115	1/1	0.94	0.14	33,33,33,33	0
56	MG	XA	1643	1/1	0.94	0.06	51,51,51,51	0
56	MG	XA	1644	1/1	0.94	0.13	34,34,34,34	0
56	MG	RA	3137	1/1	0.94	0.11	47,47,47,47	0
56	MG	YA	3262	1/1	0.94	0.27	39,39,39,39	0
56	MG	RA	3323	1/1	0.94	0.10	43,43,43,43	0
56	MG	RA	3138	1/1	0.94	0.13	21,21,21,21	0
56	MG	RA	3059	1/1	0.94	0.12	15,15,15,15	0
56	MG	YA	3428	1/1	0.94	0.10	50,50,50,50	0
56	MG	RA	3195	1/1	0.94	0.22	26,26,26,26	0
56	MG	YA	3431	1/1	0.94	0.16	36,36,36,36	0
56	MG	XA	1752	1/1	0.94	0.12	83,83,83,83	0
56	MG	YA	3270	1/1	0.94	0.20	45,45,45,45	0
56	MG	YA	3273	1/1	0.94	0.21	50,50,50,50	0
56	MG	RA	3019	1/1	0.94	0.21	13,13,13,13	0
56	MG	XA	1655	1/1	0.94	0.14	42,42,42,42	0
56	MG	RA	3408	1/1	0.94	0.20	28,28,28,28	0
56	MG	QA	1609	1/1	0.94	0.25	50,50,50,50	0
56	MG	YA	3135	1/1	0.94	0.17	29,29,29,29	0
56	MG	YA	3443	1/1	0.94	0.10	54,54,54,54	0
56	MG	RA	3199	1/1	0.94	0.25	37,37,37,37	0
56	MG	RA	3145	1/1	0.94	0.14	54,54,54,54	0
56	MG	RA	3022	1/1	0.94	0.07	56,56,56,56	0
56	MG	YA	3449	1/1	0.94	0.24	60,60,60,60	0
56	MG	YA	3285	1/1	0.94	0.13	68,68,68,68	0
56	MG	YA	3451	1/1	0.94	0.15	50,50,50,50	0
56	MG	XA	1662	1/1	0.94	0.14	34,34,34,34	0
56	MG	YA	3453	1/1	0.94	0.06	35,35,35,35	0
56	MG	YA	3143	1/1	0.94	0.13	80,80,80,80	0
56	MG	XN	102	1/1	0.94	0.09	62,62,62,62	0
56	MG	RA	3202	1/1	0.94	0.20	32,32,32,32	0
56	MG	RA	3105	1/1	0.94	0.10	36,36,36,36	0
56	MG	YA	3294	1/1	0.94	0.09	35,35,35,35	0
56	MG	YA	3149	1/1	0.94	0.07	34,34,34,34	0
56	MG	RA	3064	1/1	0.94	0.24	18,18,18,18	0
56	MG	RA	3032	1/1	0.94	0.29	25,25,25,25	0
56	MG	YA	3007	1/1	0.94	0.22	39,39,39,39	0
56	MG	RA	3151	1/1	0.94	0.13	35,35,35,35	0
56	MG	RA	3066	1/1	0.94	0.14	38,38,38,38	0
56	MG	XA	1681	1/1	0.94	0.18	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	YA	3021	1/1	0.94	0.26	24,24,24,24	0
56	MG	QL	201	1/1	0.94	0.09	63,63,63,63	0
56	MG	YA	3306	1/1	0.94	0.34	56,56,56,56	0
56	MG	YN	201	1/1	0.94	0.14	30,30,30,30	0
56	MG	YO	201	1/1	0.94	0.13	63,63,63,63	0
56	MG	YQ	201	1/1	0.94	0.10	35,35,35,35	0
56	MG	RA	3069	1/1	0.94	0.18	30,30,30,30	0
56	MG	RY	201	1/1	0.94	0.08	21,21,21,21	0
56	MG	YA	3033	1/1	0.94	0.16	19,19,19,19	0
56	MG	YA	3312	1/1	0.94	0.29	52,52,52,52	0
56	MG	Y0	101	1/1	0.94	0.11	30,30,30,30	0
56	MG	YA	3313	1/1	0.94	0.14	54,54,54,54	0
56	MG	RA	3280	1/1	0.94	0.22	43,43,43,43	0
56	MG	Y5	102	1/1	0.94	0.10	39,39,39,39	0
56	MG	RA	3115	1/1	0.94	0.17	42,42,42,42	0
57	ZN	QN	100	1/1	0.94	0.09	100,100,100,100	0
56	MG	RA	3004	1/1	0.95	0.24	10,10,10,10	0
56	MG	YA	3034	1/1	0.95	0.11	31,31,31,31	0
56	MG	YA	3035	1/1	0.95	0.17	24,24,24,24	0
56	MG	RA	3236	1/1	0.95	0.16	48,48,48,48	0
56	MG	YA	3332	1/1	0.95	0.31	43,43,43,43	0
56	MG	XA	1690	1/1	0.95	0.12	40,40,40,40	0
56	MG	QA	1675	1/1	0.95	0.13	50,50,50,50	0
56	MG	RA	3142	1/1	0.95	0.32	44,44,44,44	0
56	MG	RA	3360	1/1	0.95	0.17	31,31,31,31	0
56	MG	RA	3143	1/1	0.95	0.09	23,23,23,23	0
56	MG	YA	3046	1/1	0.95	0.16	32,32,32,32	0
56	MG	YA	3339	1/1	0.95	0.15	40,40,40,40	0
56	MG	RA	3073	1/1	0.95	0.14	31,31,31,31	0
56	MG	RA	3364	1/1	0.95	0.17	17,17,17,17	0
56	MG	YA	3049	1/1	0.95	0.06	29,29,29,29	0
56	MG	YA	3186	1/1	0.95	0.14	58,58,58,58	0
56	MG	RA	3365	1/1	0.95	0.28	43,43,43,43	0
56	MG	XA	1698	1/1	0.95	0.14	66,66,66,66	0
56	MG	YA	3346	1/1	0.95	0.10	34,34,34,34	0
56	MG	RA	3241	1/1	0.95	0.16	68,68,68,68	0
56	MG	YA	3194	1/1	0.95	0.21	39,39,39,39	0
56	MG	YA	3350	1/1	0.95	0.24	58,58,58,58	0
56	MG	RA	3188	1/1	0.95	0.16	8,8,8,8	0
56	MG	QA	1669	1/1	0.95	0.20	52,52,52,52	0
56	MG	YA	3198	1/1	0.95	0.25	27,27,27,27	0
56	MG	RA	3111	1/1	0.95	0.13	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	QA	1703	1/1	0.95	0.18	43,43,43,43	0
56	MG	YA	3063	1/1	0.95	0.19	29,29,29,29	0
56	MG	YA	3359	1/1	0.95	0.07	39,39,39,39	0
56	MG	RA	3372	1/1	0.95	0.09	21,21,21,21	0
56	MG	RA	3011	1/1	0.95	0.17	4,4,4,4	0
56	MG	RA	3308	1/1	0.95	0.22	38,38,38,38	0
56	MG	YA	3213	1/1	0.95	0.07	42,42,42,42	0
56	MG	XA	1710	1/1	0.95	0.13	63,63,63,63	0
56	MG	YA	3070	1/1	0.95	0.17	39,39,39,39	0
56	MG	RA	3250	1/1	0.95	0.23	55,55,55,55	0
56	MG	YA	3218	1/1	0.95	0.07	30,30,30,30	0
56	MG	RA	3078	1/1	0.95	0.15	13,13,13,13	0
56	MG	QA	1723	1/1	0.95	0.09	98,98,98,98	0
56	MG	YA	3376	1/1	0.95	0.10	41,41,41,41	0
56	MG	QA	1656	1/1	0.95	0.16	38,38,38,38	0
56	MG	XA	1626	1/1	0.95	0.33	51,51,51,51	0
56	MG	YA	3381	1/1	0.95	0.07	58,58,58,58	0
56	MG	YA	3226	1/1	0.95	0.31	39,39,39,39	0
56	MG	YA	3383	1/1	0.95	0.17	47,47,47,47	0
56	MG	RA	3382	1/1	0.95	0.10	49,49,49,49	0
56	MG	YA	3385	1/1	0.95	0.12	67,67,67,67	0
56	MG	RA	3317	1/1	0.95	0.07	33,33,33,33	0
56	MG	YA	3230	1/1	0.95	0.29	69,69,69,69	0
56	MG	RA	3081	1/1	0.95	0.20	17,17,17,17	0
56	MG	QA	1739	1/1	0.95	0.06	49,49,49,49	0
56	MG	QA	1691	1/1	0.95	0.05	44,44,44,44	0
56	MG	RA	3160	1/1	0.95	0.06	36,36,36,36	0
56	MG	RA	3088	1/1	0.95	0.16	24,24,24,24	0
56	MG	XA	1725	1/1	0.95	0.18	51,51,51,51	0
56	MG	XA	1726	1/1	0.95	0.29	55,55,55,55	0
56	MG	YA	3093	1/1	0.95	0.10	51,51,51,51	0
56	MG	YA	3240	1/1	0.95	0.24	47,47,47,47	0
56	MG	RA	3205	1/1	0.95	0.20	44,44,44,44	0
56	MG	QA	1707	1/1	0.95	0.10	47,47,47,47	0
56	MG	RA	3267	1/1	0.95	0.19	63,63,63,63	0
56	MG	RA	3394	1/1	0.95	0.06	57,57,57,57	0
56	MG	QA	1639	1/1	0.95	0.06	52,52,52,52	0
56	MG	XA	1732	1/1	0.95	0.14	40,40,40,40	0
56	MG	XA	1734	1/1	0.95	0.08	44,44,44,44	0
56	MG	QA	1681	1/1	0.95	0.11	35,35,35,35	0
56	MG	XA	1641	1/1	0.95	0.14	57,57,57,57	0
56	MG	RA	3092	1/1	0.95	0.17	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	RA	3401	1/1	0.95	0.07	54,54,54,54	0
56	MG	YA	3105	1/1	0.95	0.28	42,42,42,42	0
56	MG	RA	3025	1/1	0.95	0.21	34,34,34,34	0
56	MG	RA	3272	1/1	0.95	0.29	49,49,49,49	0
56	MG	YA	3419	1/1	0.95	0.21	59,59,59,59	0
56	MG	RA	3213	1/1	0.95	0.19	31,31,31,31	0
56	MG	RA	3030	1/1	0.95	0.22	35,35,35,35	0
56	MG	YA	3111	1/1	0.95	0.22	36,36,36,36	0
56	MG	YA	3261	1/1	0.95	0.13	67,67,67,67	0
56	MG	YA	3425	1/1	0.95	0.13	43,43,43,43	0
56	MG	XA	1744	1/1	0.95	0.16	50,50,50,50	0
56	MG	RA	3410	1/1	0.95	0.13	26,26,26,26	0
56	MG	YA	3264	1/1	0.95	0.15	66,66,66,66	0
56	MG	YA	3430	1/1	0.95	0.18	17,17,17,17	0
56	MG	QV	103	1/1	0.95	0.15	55,55,55,55	0
56	MG	QA	1605	1/1	0.95	0.17	36,36,36,36	0
56	MG	YA	3267	1/1	0.95	0.23	48,48,48,48	0
56	MG	RA	3219	1/1	0.95	0.22	48,48,48,48	0
56	MG	RB	201	1/1	0.95	0.15	26,26,26,26	0
56	MG	YA	3120	1/1	0.95	0.26	32,32,32,32	0
56	MG	RA	3339	1/1	0.95	0.20	55,55,55,55	0
56	MG	YA	3439	1/1	0.95	0.15	32,32,32,32	0
56	MG	YA	3440	1/1	0.95	0.17	59,59,59,59	0
56	MG	QA	1651	1/1	0.95	0.19	30,30,30,30	0
56	MG	YA	3124	1/1	0.95	0.21	33,33,33,33	0
56	MG	RA	3341	1/1	0.95	0.18	41,41,41,41	0
56	MG	YA	3126	1/1	0.95	0.05	51,51,51,51	0
56	MG	YA	3445	1/1	0.95	0.28	55,55,55,55	0
56	MG	RD	301	1/1	0.95	0.09	34,34,34,34	0
56	MG	XA	1661	1/1	0.95	0.11	39,39,39,39	0
56	MG	XA	1756	1/1	0.95	0.18	50,50,50,50	0
56	MG	YA	3283	1/1	0.95	0.10	31,31,31,31	0
56	MG	XA	1757	1/1	0.95	0.13	58,58,58,58	0
56	MG	RA	3134	1/1	0.95	0.26	50,50,50,50	0
56	MG	XA	1663	1/1	0.95	0.17	46,46,46,46	0
56	MG	RP	201	1/1	0.95	0.07	38,38,38,38	0
56	MG	XA	1670	1/1	0.95	0.21	36,36,36,36	0
56	MG	YA	3139	1/1	0.95	0.14	50,50,50,50	0
56	MG	RA	3036	1/1	0.95	0.18	14,14,14,14	0
56	MG	RA	3224	1/1	0.95	0.17	37,37,37,37	0
56	MG	RA	3347	1/1	0.95	0.23	52,52,52,52	0
56	MG	XV	103	1/1	0.95	0.25	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	RA	3037	1/1	0.95	0.16	22,22,22,22	0
56	MG	XA	1675	1/1	0.95	0.12	33,33,33,33	0
56	MG	YA	3002	1/1	0.95	0.11	6,6,6,6	0
56	MG	XA	1676	1/1	0.95	0.14	42,42,42,42	0
56	MG	YA	3005	1/1	0.95	0.17	6,6,6,6	0
56	MG	YA	3006	1/1	0.95	0.14	23,23,23,23	0
56	MG	XA	1677	1/1	0.95	0.07	49,49,49,49	0
56	MG	YA	3009	1/1	0.95	0.14	14,14,14,14	0
56	MG	YA	3010	1/1	0.95	0.16	3,3,3,3	0
56	MG	YA	3157	1/1	0.95	0.16	16,16,16,16	0
56	MG	QA	1685	1/1	0.95	0.24	38,38,38,38	0
56	MG	YA	3012	1/1	0.95	0.21	20,20,20,20	0
56	MG	RA	3179	1/1	0.95	0.25	61,61,61,61	0
56	MG	YU	3400	1/1	0.95	0.09	47,47,47,47	0
56	MG	YA	3315	1/1	0.95	0.12	47,47,47,47	0
56	MG	YA	3016	1/1	0.95	0.08	18,18,18,18	0
56	MG	R0	101	1/1	0.95	0.16	43,43,43,43	0
56	MG	RA	3228	1/1	0.95	0.40	50,50,50,50	0
56	MG	YA	3024	1/1	0.95	0.18	21,21,21,21	0
56	MG	Y1	101	1/1	0.95	0.15	26,26,26,26	0
56	MG	R5	101	1/1	0.95	0.15	27,27,27,27	0
56	MG	RA	3229	1/1	0.95	0.12	31,31,31,31	0
56	MG	QA	1674	1/1	0.95	0.13	55,55,55,55	0
56	MG	XA	1664	1/1	0.96	0.19	59,59,59,59	0
56	MG	RA	3197	1/1	0.96	0.11	28,28,28,28	0
56	MG	YA	3365	1/1	0.96	0.11	45,45,45,45	0
56	MG	XA	1669	1/1	0.96	0.14	35,35,35,35	0
56	MG	YA	3254	1/1	0.96	0.21	47,47,47,47	0
56	MG	RA	3234	1/1	0.96	0.20	38,38,38,38	0
56	MG	YA	3051	1/1	0.96	0.20	15,15,15,15	0
56	MG	QV	102	1/1	0.96	0.10	38,38,38,38	0
56	MG	YA	3373	1/1	0.96	0.19	41,41,41,41	0
56	MG	YA	3054	1/1	0.96	0.14	19,19,19,19	0
56	MG	RA	3038	1/1	0.96	0.18	47,47,47,47	0
56	MG	RA	3140	1/1	0.96	0.12	30,30,30,30	0
56	MG	RA	3054	1/1	0.96	0.26	21,21,21,21	0
56	MG	RA	3285	1/1	0.96	0.20	60,60,60,60	0
56	MG	RA	3039	1/1	0.96	0.16	14,14,14,14	0
56	MG	QA	1712	1/1	0.96	0.16	34,34,34,34	0
56	MG	RA	3172	1/1	0.96	0.28	16,16,16,16	0
56	MG	XA	1680	1/1	0.96	0.05	38,38,38,38	0
56	MG	RA	3024	1/1	0.96	0.14	28,28,28,28	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	RA	3392	1/1	0.96	0.21	16,16,16,16	0
56	MG	YA	3162	1/1	0.96	0.07	48,48,48,48	0
56	MG	RA	3103	1/1	0.96	0.14	44,44,44,44	0
56	MG	YA	3272	1/1	0.96	0.20	49,49,49,49	0
56	MG	XA	1748	1/1	0.96	0.16	57,57,57,57	0
56	MG	YA	3274	1/1	0.96	0.13	28,28,28,28	0
56	MG	QA	1677	1/1	0.96	0.25	42,42,42,42	0
56	MG	RA	3246	1/1	0.96	0.23	47,47,47,47	0
56	MG	XA	1686	1/1	0.96	0.09	40,40,40,40	0
56	MG	YA	3075	1/1	0.96	0.16	23,23,23,23	0
56	MG	RA	3176	1/1	0.96	0.11	25,25,25,25	0
56	MG	RA	3397	1/1	0.96	0.30	55,55,55,55	0
56	MG	RA	3399	1/1	0.96	0.07	42,42,42,42	0
56	MG	YA	3282	1/1	0.96	0.17	44,44,44,44	0
56	MG	YA	3405	1/1	0.96	0.11	22,22,22,22	0
56	MG	RA	3248	1/1	0.96	0.22	35,35,35,35	0
56	MG	RA	3344	1/1	0.96	0.07	43,43,43,43	0
56	MG	RA	3062	1/1	0.96	0.13	11,11,11,11	0
56	MG	RA	3403	1/1	0.96	0.09	52,52,52,52	0
56	MG	YA	3085	1/1	0.96	0.09	33,33,33,33	0
56	MG	RA	3211	1/1	0.96	0.15	16,16,16,16	0
56	MG	YA	3289	1/1	0.96	0.22	43,43,43,43	0
56	MG	XA	1760	1/1	0.96	0.05	79,79,79,79	0
56	MG	RA	3127	1/1	0.96	0.06	23,23,23,23	0
56	MG	YA	3416	1/1	0.96	0.20	79,79,79,79	0
56	MG	YA	3292	1/1	0.96	0.10	45,45,45,45	0
56	MG	YA	3293	1/1	0.96	0.26	48,48,48,48	0
56	MG	RA	3407	1/1	0.96	0.24	52,52,52,52	0
56	MG	YA	3091	1/1	0.96	0.29	29,29,29,29	0
56	MG	YA	3092	1/1	0.96	0.19	22,22,22,22	0
56	MG	RA	3253	1/1	0.96	0.18	47,47,47,47	0
56	MG	RA	3409	1/1	0.96	0.05	39,39,39,39	0
56	MG	XV	101	1/1	0.96	0.18	51,51,51,51	0
56	MG	RA	3027	1/1	0.96	0.22	24,24,24,24	0
56	MG	YA	3302	1/1	0.96	0.14	36,36,36,36	0
56	MG	YA	3192	1/1	0.96	0.22	25,25,25,25	0
56	MG	RA	3028	1/1	0.96	0.10	24,24,24,24	0
56	MG	RA	3303	1/1	0.96	0.24	55,55,55,55	0
56	MG	RA	3152	1/1	0.96	0.16	37,37,37,37	0
56	MG	RA	3130	1/1	0.96	0.16	27,27,27,27	0
56	MG	YA	3200	1/1	0.96	0.27	60,60,60,60	0
56	MG	YA	3310	1/1	0.96	0.09	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	RA	3306	1/1	0.96	0.15	40,40,40,40	0
56	MG	QA	1616	1/1	0.96	0.09	46,46,46,46	0
56	MG	XA	1707	1/1	0.96	0.23	31,31,31,31	0
56	MG	YA	3204	1/1	0.96	0.20	39,39,39,39	0
56	MG	YA	3206	1/1	0.96	0.14	38,38,38,38	0
56	MG	RA	3031	1/1	0.96	0.12	15,15,15,15	0
56	MG	YA	3008	1/1	0.96	0.06	8,8,8,8	0
56	MG	YA	3211	1/1	0.96	0.15	22,22,22,22	0
56	MG	XA	1709	1/1	0.96	0.23	45,45,45,45	0
56	MG	QA	1684	1/1	0.96	0.13	46,46,46,46	0
56	MG	RA	3310	1/1	0.96	0.05	12,12,12,12	0
56	MG	YA	3448	1/1	0.96	0.09	51,51,51,51	0
56	MG	YA	3324	1/1	0.96	0.21	33,33,33,33	0
56	MG	XA	1645	1/1	0.96	0.17	47,47,47,47	0
56	MG	XA	1713	1/1	0.96	0.20	27,27,27,27	0
56	MG	YA	3327	1/1	0.96	0.21	24,24,24,24	0
56	MG	YA	3014	1/1	0.96	0.20	25,25,25,25	0
56	MG	YA	3329	1/1	0.96	0.08	40,40,40,40	0
56	MG	YA	3330	1/1	0.96	0.22	20,20,20,20	0
56	MG	YA	3457	1/1	0.96	0.15	44,44,44,44	0
56	MG	YA	3219	1/1	0.96	0.05	38,38,38,38	0
56	MG	YA	3459	1/1	0.96	0.17	57,57,57,57	0
56	MG	RF	301	1/1	0.96	0.06	27,27,27,27	0
56	MG	YA	3019	1/1	0.96	0.18	17,17,17,17	0
56	MG	RA	3187	1/1	0.96	0.19	59,59,59,59	0
56	MG	YA	3117	1/1	0.96	0.16	36,36,36,36	0
56	MG	RA	3158	1/1	0.96	0.10	38,38,38,38	0
56	MG	RA	3159	1/1	0.96	0.20	44,44,44,44	0
56	MG	XA	1718	1/1	0.96	0.20	48,48,48,48	0
56	MG	YA	3229	1/1	0.96	0.14	32,32,32,32	0
56	MG	YA	3029	1/1	0.96	0.15	15,15,15,15	0
56	MG	YD	301	1/1	0.96	0.07	20,20,20,20	0
56	MG	RA	3316	1/1	0.96	0.12	49,49,49,49	0
56	MG	YA	3123	1/1	0.96	0.07	34,34,34,34	0
56	MG	QA	1663	1/1	0.96	0.15	38,38,38,38	0
56	MG	RA	3192	1/1	0.96	0.18	16,16,16,16	0
56	MG	QA	1686	1/1	0.96	0.17	49,49,49,49	0
56	MG	YP	201	1/1	0.96	0.06	25,25,25,25	0
56	MG	RA	3093	1/1	0.96	0.25	26,26,26,26	0
56	MG	QA	1653	1/1	0.96	0.18	41,41,41,41	0
56	MG	YA	3348	1/1	0.96	0.09	35,35,35,35	0
56	MG	YA	3130	1/1	0.96	0.15	18,18,18,18	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	YA	3038	1/1	0.96	0.15	12,12,12,12	0
56	MG	RA	3322	1/1	0.96	0.19	61,61,61,61	0
56	MG	RA	3374	1/1	0.96	0.05	34,34,34,34	0
56	MG	RA	3231	1/1	0.96	0.07	40,40,40,40	0
56	MG	YA	3043	1/1	0.96	0.26	21,21,21,21	0
56	MG	RA	3232	1/1	0.96	0.11	39,39,39,39	0
56	MG	YA	3137	1/1	0.96	0.09	21,21,21,21	0
56	MG	YA	3138	1/1	0.96	0.05	26,26,26,26	0
56	MG	RA	3276	1/1	0.96	0.05	46,46,46,46	0
57	ZN	XD	301	1/1	0.96	0.25	69,69,69,69	0
56	MG	YA	3400	1/1	0.97	0.08	11,11,11,11	0
56	MG	RA	3265	1/1	0.97	0.21	38,38,38,38	0
56	MG	RA	3005	1/1	0.97	0.04	15,15,15,15	0
56	MG	YA	3314	1/1	0.97	0.14	56,56,56,56	0
56	MG	QA	1604	1/1	0.97	0.09	33,33,33,33	0
56	MG	YA	3239	1/1	0.97	0.18	26,26,26,26	0
56	MG	YA	3161	1/1	0.97	0.10	41,41,41,41	0
56	MG	YA	3408	1/1	0.97	0.23	41,41,41,41	0
56	MG	QA	1719	1/1	0.97	0.06	38,38,38,38	0
56	MG	YA	3319	1/1	0.97	0.24	54,54,54,54	0
56	MG	YA	3242	1/1	0.97	0.10	41,41,41,41	0
56	MG	RA	3235	1/1	0.97	0.16	25,25,25,25	0
56	MG	YA	3037	1/1	0.97	0.16	33,33,33,33	0
56	MG	RA	3008	1/1	0.97	0.06	17,17,17,17	0
56	MG	XA	1651	1/1	0.97	0.23	30,30,30,30	0
56	MG	YA	3040	1/1	0.97	0.13	21,21,21,21	0
56	MG	XA	1652	1/1	0.97	0.12	38,38,38,38	0
56	MG	RA	3097	1/1	0.97	0.29	54,54,54,54	0
56	MG	RA	3029	1/1	0.97	0.14	17,17,17,17	0
56	MG	YA	3172	1/1	0.97	0.17	15,15,15,15	0
56	MG	RA	3072	1/1	0.97	0.15	6,6,6,6	0
56	MG	YA	3107	1/1	0.97	0.13	22,22,22,22	0
56	MG	RA	3312	1/1	0.97	0.26	39,39,39,39	0
56	MG	YA	3176	1/1	0.97	0.05	12,12,12,12	0
56	MG	YA	3426	1/1	0.97	0.20	66,66,66,66	0
56	MG	QA	1731	1/1	0.97	0.18	37,37,37,37	0
56	MG	RA	3398	1/1	0.97	0.05	55,55,55,55	0
56	MG	RA	3010	1/1	0.97	0.08	16,16,16,16	0
56	MG	YA	3112	1/1	0.97	0.11	32,32,32,32	0
56	MG	QA	1680	1/1	0.97	0.11	24,24,24,24	0
56	MG	YA	3050	1/1	0.97	0.23	52,52,52,52	0
56	MG	QA	1711	1/1	0.97	0.18	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	RA	3077	1/1	0.97	0.22	36,36,36,36	0
56	MG	QA	1704	1/1	0.97	0.22	60,60,60,60	0
56	MG	RA	3281	1/1	0.97	0.10	39,39,39,39	0
56	MG	YA	3187	1/1	0.97	0.22	26,26,26,26	0
56	MG	XA	1665	1/1	0.97	0.30	37,37,37,37	0
56	MG	RA	3361	1/1	0.97	0.19	40,40,40,40	0
56	MG	XA	1619	1/1	0.97	0.20	27,27,27,27	0
56	MG	YA	3271	1/1	0.97	0.10	22,22,22,22	0
56	MG	RA	3406	1/1	0.97	0.22	42,42,42,42	0
56	MG	YA	3193	1/1	0.97	0.24	35,35,35,35	0
56	MG	YA	3061	1/1	0.97	0.13	15,15,15,15	0
56	MG	RA	3014	1/1	0.97	0.28	36,36,36,36	0
56	MG	RA	3056	1/1	0.97	0.24	13,13,13,13	0
56	MG	QA	1643	1/1	0.97	0.08	47,47,47,47	0
56	MG	RA	3249	1/1	0.97	0.03	39,39,39,39	0
56	MG	RA	3162	1/1	0.97	0.10	43,43,43,43	0
56	MG	YA	3004	1/1	0.97	0.14	5,5,5,5	0
56	MG	RA	3222	1/1	0.97	0.15	19,19,19,19	0
56	MG	YA	3361	1/1	0.97	0.05	45,45,45,45	0
56	MG	YA	3362	1/1	0.97	0.19	48,48,48,48	0
56	MG	YA	3455	1/1	0.97	0.19	68,68,68,68	0
56	MG	QA	1714	1/1	0.97	0.16	33,33,33,33	0
56	MG	RA	3018	1/1	0.97	0.13	16,16,16,16	0
56	MG	RA	3112	1/1	0.97	0.14	38,38,38,38	0
56	MG	YA	3208	1/1	0.97	0.05	31,31,31,31	0
56	MG	YA	3367	1/1	0.97	0.17	43,43,43,43	0
56	MG	YA	3074	1/1	0.97	0.15	34,34,34,34	0
56	MG	YA	3369	1/1	0.97	0.41	83,83,83,83	0
56	MG	RA	3087	1/1	0.97	0.12	19,19,19,19	0
56	MG	YA	3076	1/1	0.97	0.28	43,43,43,43	0
56	MG	RA	3114	1/1	0.97	0.16	12,12,12,12	0
56	MG	YA	3214	1/1	0.97	0.16	34,34,34,34	0
56	MG	RA	3257	1/1	0.97	0.17	47,47,47,47	0
56	MG	QA	1634	1/1	0.97	0.15	33,33,33,33	0
56	MG	YA	3080	1/1	0.97	0.12	12,12,12,12	0
56	MG	RA	3020	1/1	0.97	0.20	15,15,15,15	0
56	MG	QA	1622	1/1	0.97	0.27	39,39,39,39	0
56	MG	YA	3144	1/1	0.97	0.04	21,21,21,21	0
56	MG	YA	3297	1/1	0.97	0.21	37,37,37,37	0
56	MG	RA	3379	1/1	0.97	0.18	44,44,44,44	0
56	MG	RA	3335	1/1	0.97	0.04	18,18,18,18	0
56	MG	YP	202	1/1	0.97	0.10	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	XA	1737	1/1	0.97	0.27	41,41,41,41	0
56	MG	YA	3148	1/1	0.97	0.20	18,18,18,18	0
56	MG	RA	3261	1/1	0.97	0.26	45,45,45,45	0
56	MG	QA	1708	1/1	0.97	0.17	50,50,50,50	0
56	MG	YA	3389	1/1	0.97	0.20	59,59,59,59	0
56	MG	YA	3151	1/1	0.97	0.24	26,26,26,26	0
56	MG	YA	3391	1/1	0.97	0.18	26,26,26,26	0
56	MG	YA	3025	1/1	0.97	0.08	13,13,13,13	0
56	MG	YA	3153	1/1	0.97	0.07	19,19,19,19	0
56	MG	RA	3338	1/1	0.97	0.24	51,51,51,51	0
56	MG	Y5	101	1/1	0.97	0.06	20,20,20,20	0
56	MG	YA	3308	1/1	0.97	0.17	31,31,31,31	0
56	MG	YA	3028	1/1	0.97	0.05	17,17,17,17	0
56	MG	RA	3299	1/1	0.97	0.08	44,44,44,44	0
56	MG	RA	3263	1/1	0.97	0.23	62,62,62,62	0
57	ZN	XN	101	1/1	0.97	0.05	67,67,67,67	0
56	MG	RA	3186	1/1	0.98	0.32	44,44,44,44	0
56	MG	RA	3169	1/1	0.98	0.26	53,53,53,53	0
56	MG	QA	1618	1/1	0.98	0.15	24,24,24,24	0
56	MG	YA	3205	1/1	0.98	0.07	22,22,22,22	0
56	MG	RA	3277	1/1	0.98	0.05	18,18,18,18	0
56	MG	XA	1650	1/1	0.98	0.09	21,21,21,21	0
56	MG	YA	3377	1/1	0.98	0.10	31,31,31,31	0
56	MG	YA	3378	1/1	0.98	0.13	34,34,34,34	0
56	MG	RA	3385	1/1	0.98	0.07	44,44,44,44	0
56	MG	RA	3189	1/1	0.98	0.19	25,25,25,25	0
56	MG	YA	3210	1/1	0.98	0.13	4,4,4,4	0
56	MG	YA	3053	1/1	0.98	0.25	31,31,31,31	0
56	MG	RA	3210	1/1	0.98	0.18	41,41,41,41	0
56	MG	XA	1733	1/1	0.98	0.11	33,33,33,33	0
56	MG	XA	1618	1/1	0.98	0.31	34,34,34,34	0
56	MG	RA	3096	1/1	0.98	0.30	74,74,74,74	0
56	MG	RD	302	1/1	0.98	0.10	27,27,27,27	0
56	MG	RA	3358	1/1	0.98	0.18	33,33,33,33	0
56	MG	QA	1648	1/1	0.98	0.24	43,43,43,43	0
56	MG	RA	3084	1/1	0.98	0.07	23,23,23,23	0
56	MG	YA	3220	1/1	0.98	0.23	48,48,48,48	0
56	MG	RA	3157	1/1	0.98	0.18	14,14,14,14	0
56	MG	YA	3064	1/1	0.98	0.08	15,15,15,15	0
56	MG	YA	3065	1/1	0.98	0.07	52,52,52,52	0
56	MG	RA	3194	1/1	0.98	0.19	37,37,37,37	0
56	MG	YA	3015	1/1	0.98	0.10	16,16,16,16	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	YA	3169	1/1	0.98	0.16	42,42,42,42	0
56	MG	YA	3398	1/1	0.98	0.28	34,34,34,34	0
56	MG	RA	3085	1/1	0.98	0.10	16,16,16,16	0
56	MG	YA	3018	1/1	0.98	0.14	18,18,18,18	0
56	MG	RA	3311	1/1	0.98	0.25	55,55,55,55	0
56	MG	XA	1703	1/1	0.98	0.18	50,50,50,50	0
56	MG	XA	1628	1/1	0.98	0.25	48,48,48,48	0
56	MG	YA	3022	1/1	0.98	0.31	23,23,23,23	0
56	MG	RA	3218	1/1	0.98	0.10	45,45,45,45	0
56	MG	RA	3086	1/1	0.98	0.10	23,23,23,23	0
56	MG	YA	3026	1/1	0.98	0.13	10,10,10,10	0
56	MG	XA	1667	1/1	0.98	0.25	50,50,50,50	0
56	MG	YE	302	1/1	0.98	0.08	12,12,12,12	0
56	MG	XA	1668	1/1	0.98	0.18	44,44,44,44	0
56	MG	RA	3264	1/1	0.98	0.07	28,28,28,28	0
56	MG	R0	102	1/1	0.98	0.30	53,53,53,53	0
56	MG	QA	1700	1/1	0.98	0.15	53,53,53,53	0
56	MG	YA	3032	1/1	0.98	0.07	8,8,8,8	0
56	MG	RA	3016	1/1	0.98	0.08	6,6,6,6	0
56	MG	QA	1696	1/1	0.98	0.26	33,33,33,33	0
56	MG	YA	3356	1/1	0.98	0.14	48,48,48,48	0
56	MG	RA	3147	1/1	0.98	0.28	15,15,15,15	0
56	MG	RA	3067	1/1	0.98	0.07	17,17,17,17	0
56	MG	YA	3087	1/1	0.98	0.12	14,14,14,14	0
56	MG	XA	1602	1/1	0.98	0.17	13,13,13,13	0
56	MG	RA	3058	1/1	0.98	0.13	41,41,41,41	0
56	MG	YA	3423	1/1	0.98	0.09	47,47,47,47	0
56	MG	RA	3346	1/1	0.98	0.18	43,43,43,43	0
56	MG	XA	1679	1/1	0.98	0.14	32,32,32,32	0
56	MG	RA	3376	1/1	0.98	0.21	26,26,26,26	0
56	MG	QA	1693	1/1	0.98	0.14	30,30,30,30	0
56	MG	Y7	101	1/1	0.98	0.09	51,51,51,51	0
56	MG	RA	3348	1/1	0.98	0.23	58,58,58,58	0
56	MG	YA	3199	1/1	0.98	0.14	28,28,28,28	0
56	MG	RA	3026	1/1	0.98	0.08	13,13,13,13	0
56	MG	RA	3034	1/1	0.98	0.12	33,33,33,33	0
56	MG	QA	1720	1/1	0.99	0.05	49,49,49,49	0
56	MG	RA	3051	1/1	0.99	0.10	11,11,11,11	0
56	MG	RA	3369	1/1	0.99	0.20	19,19,19,19	0
56	MG	XA	1606	1/1	0.99	0.34	31,31,31,31	0
56	MG	RA	3217	1/1	0.99	0.03	7,7,7,7	0
56	MG	YA	3433	1/1	0.99	0.04	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
56	MG	RA	3057	1/1	0.99	0.14	22,22,22,22	0
56	MG	YA	3056	1/1	0.99	0.13	15,15,15,15	0
56	MG	YA	3127	1/1	0.99	0.03	20,20,20,20	0
56	MG	YA	3017	1/1	0.99	0.14	10,10,10,10	0
56	MG	YA	3223	1/1	0.99	0.12	34,34,34,34	0
56	MG	RA	3023	1/1	0.99	0.21	12,12,12,12	0
56	MG	YA	3462	1/1	0.99	0.04	25,25,25,25	0
56	MG	YA	3357	1/1	0.99	0.12	27,27,27,27	0
56	MG	QA	1607	1/1	0.99	0.24	33,33,33,33	0
56	MG	YA	3191	1/1	0.99	0.26	32,32,32,32	0
56	MG	RA	3108	1/1	0.99	0.14	10,10,10,10	0
56	MG	RA	3302	1/1	0.99	0.22	51,51,51,51	0
56	MG	YA	3402	1/1	0.99	0.19	18,18,18,18	0
56	MG	RA	3003	1/1	0.99	0.12	10,10,10,10	0
56	MG	YA	3195	1/1	0.99	0.11	21,21,21,21	0
56	MG	YA	3023	1/1	0.99	0.09	12,12,12,12	0
56	MG	YA	3250	1/1	0.99	0.12	24,24,24,24	0

6.5 Other polymers [i](#)

There are no such residues in this entry.